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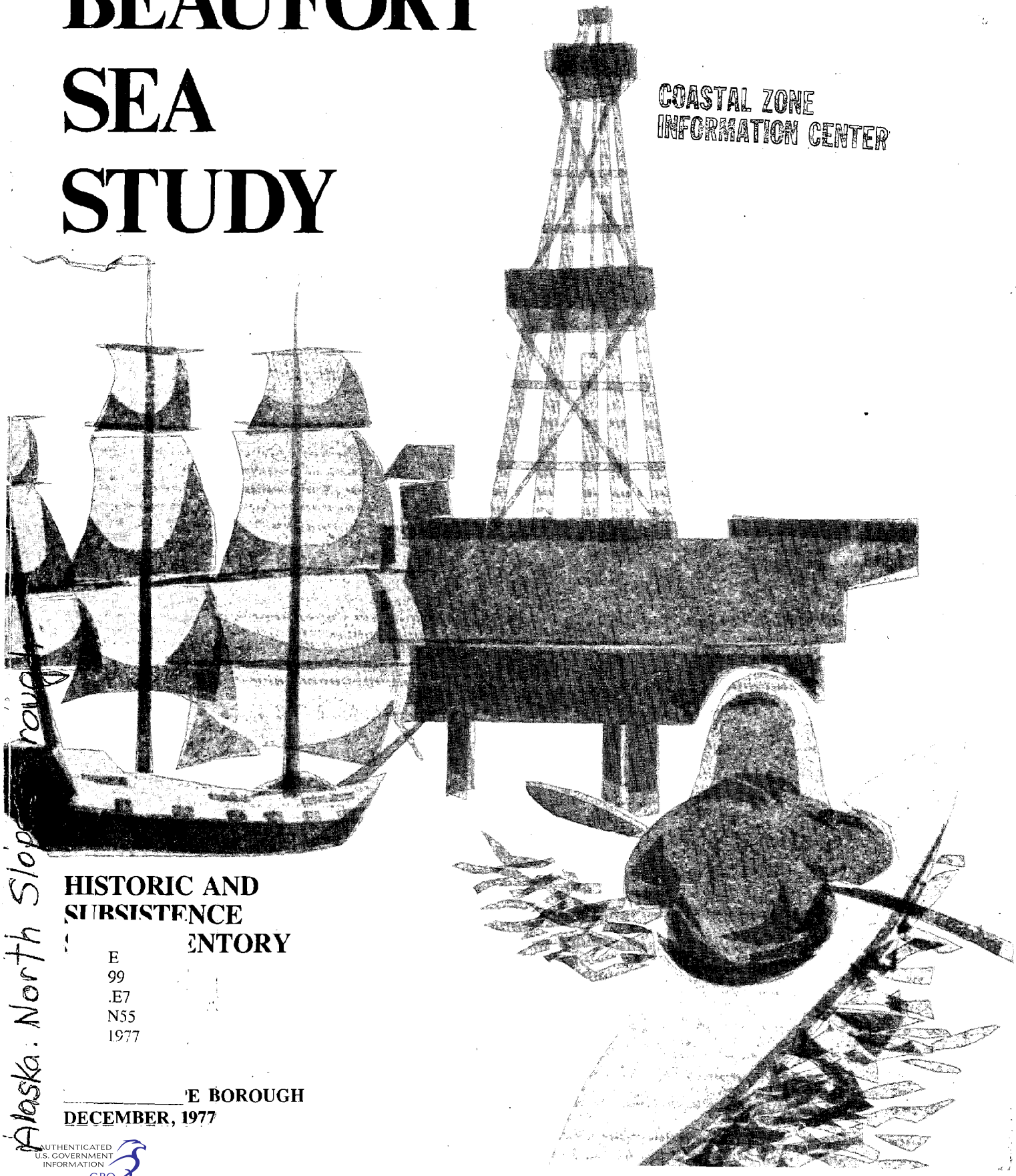

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Beaufort Sea Study—Historic and Subsistence Site Inventory: A Preliminary Cultural Resource Assessment

E99.E7N55 1977

Jon M. Nielson
North Slope Borough
Barrow, Alaska
December, 1977

Alaska. North Slope Borough.

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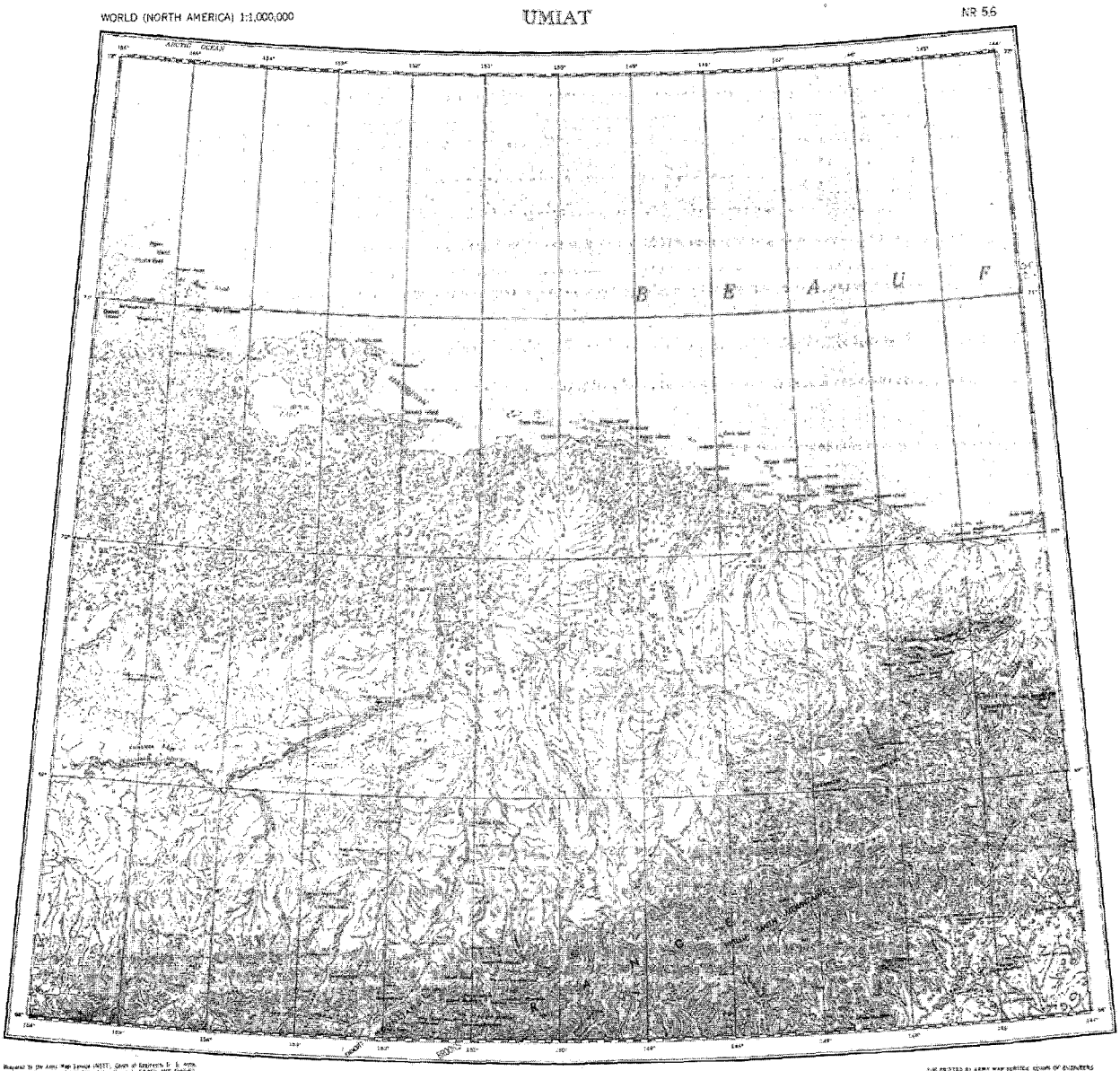

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PROJECT VITA

Sponsoring Agency: North Slope Borough, Barrow, Alaska.

Project Definition:

Beaufort Sea historic site and cultural resource study. Literature search.

Project Rationale:

1. To identify historic sites, cultural resources and subsistence patterns required for the Coastal Management Program.*
2. To assess the significance of historic sites, cultural resources and subsistence patterns of the Beaufort Sea region that may be impacted by Outer Continental Shelf Development, scheduled for lease sale by the State of Alaska in 1977.

Project Detail:

1. To compile literature relevant to a study of the Beaufort Sea region, from the Colville to the Canning Rivers, for the purpose of identifying historic sites, describing traditional subsistence practices and considering certain locations or areas for nomination to the National Register of Historic Sites.
2. To integrate the results of the literature search with Eskimo oral and ethnographic accounts of the Beaufort Sea region and its history.
3. To present a series of maps locating historic sites and areas of subsistence activities based upon the literature and Eskimo oral accounts.
4. To compile a substantive bibliography of sources as a guide to the literature of the Beaufort Sea region.

INTRODUCTION TO THE PROJECT

In 1975 the Department of the Interior published a study: *Alaska Sea Grant Project: The Social and Economic Impact Assessment of Alaska Outer Continental Shelf Petroleum Development*, in which it established a tentative framework for the selection and sale of oil leases in the State of Alaska to recover the oil and gas reserves of the Outer Continental Shelf (OCS). According to the proposed schedule the State of Alaska may conduct sales of offshore-nearshore tracts as early as October of 1977.[1]

These proposed lease sales will impact three major areas of Alaska: 1) the southcentral region 2) The south Bering Sea-Bristol Bay region and 3) the North Slope region including the Beaufort Sea and arctic coast east of Pt. Barrow to the Canadian border. In terms of its general impact on the State of Alaska, OCS development, as contemplated, will likely have major long range effects on the entire Continental Shelf area of Norton Sound; the Chukchi Sea and the Beaufort Sea; the huge area encompassed by the North Slope, including the Barrier Islands, Arctic Plain and Arctic Foothills; and the area of the Kobuk River basin, the Seward Peninsula and the St. Lawrence Islands.

OCS development will be guided by the cooperative efforts of federal, state and local governments, Native corporations, and industry toward a development consensus regarding leasing, exploration and production. In determining the scale of developing OCS resources at least four major considerations would seem necessary: 1) social and cultural analysis 2) economic and demographic studies 3) physical and environmental assessments and 4) technological feasability. Based upon an assessment by cooperating agencies of these considerations, OCS development will then likely conform to four possible alternatives; from a high level of production to no production.[2]

The purpose of this study is to consider one proposed area of OCS development—the Beaufort Sea region (delineated by the Colville River on the west to the Canning River on the east to a point inland at approximately 70° latitude), in terms of an historical and cultural analysis. As part of such an analysis it is essential to develop historical narratives, within a regional context, of areas likely to be impacted by OCS or other development utilizing documented and local sources.

Clearly such studies are needed and particularly so in this northern region, where so little is known of its history and archaeology. The legal requirements, guidelines and legislative history pertinent to resource management will be discussed below. May it suffice here to say that any scenario for development activities in the far north of Alaska (and Canada) will significantly affect and possibly destroy the cultural, historic and archaeological resources possessed by its Eskimo occupants. Furthermore, this impact will not be something new, but merely a continuation and acceleration of precedent already firmly established.

We are reminded by Dr. Robert Weeden, Division of Policy Development and Planning, Office of the Governor, that

> OCS is more than oil and fish. OCS development means a series of extraordinary changes (only a few of which we dare label as good or bad) in Alaskan life, particularly for sparsely inhabited regions destined to host major onshore petroleum development facilities.[3]

Moreover, areas of OCS development will affect man's (primarily Eskimo and other Native people's) use of the land and the physical environment. It will surely continue the process, begun over a century ago, of altering local economic and social patterns. In attempting to calculate the

* The Coastal Zone Management Act was passed by Congress in 1972 primarily for the purpose of coordinating, at the national level, the use of the coastal waters of the United States. The North Slope Borough is concerned because the Act does not extend to areas beyond Borough coastal jurisdiction (three mile limit), and these areas are of considerable importance to subsistence, cultural and environmental values. The Borough should have a voice in the management of these areas.

impact of major petrochemical development on the North Slope, for example, it is essential to recognize that

> Rural Alaska differs culturally not only from the dominant western industrial [white] society, but regions and areas within the state present a wide diversity among themselves.[4]

This picture of things to come is one which takes on a different light depending on who is considering it, what criteria is being used and for what purpose. Obviously there is a wide variance of opinion regarding possible benefits as opposed to possible liabilities of such development, and these founded on dissimiliar assumptions and conflicting cultural values.[5]

No direct attempt will be made in this study to reconcile these often adverse positions as that is beyond both its scope and purpose. There remains, however, the incontestable fact that this region north of the Brooks Range is rich in history and culture and exists today as one of the world's largely untouched ecological habitats, where man and nature exist, as they have for thousands of years, in delicate balance. It is, therefore, well worth considering the far north for its established historical and cultural values as well as for its real and potential petroleum resources, in the interest of all concerned[6]

ENDNOTES

1. Also see Resource Planning Associates, *Onshore Impacts of Oil and Gas Development in Alaska,* Prepared for the United States Environmental Protection Agency, Cambridge, Mass., 1975; U. S. Department of Commerce, Office of Coastal Zone Management, *Rules and Regulations of the Coastal Zone Impact Program,* Staff Working Draft, Washington, D. C., 1976; U. S. Department of Interior, Bureau of Land Management, *Draft Envrionmental Statement: Proposed Increase in Acreage to be Offered for Oil and Gas Leasing on the Outer Continental Shelf,* Bureau of Land Management, Washington, D. C. (nd); and U. S. Senate, Committee on Commerce, *Outer Continental Shelf Oil and Gas Development and the Coastal Zone,* . . . National Ocean Policy Study (GPO, 1974).
2. Alaska Sea Grant Project, *Social and Economic Impact of Alaska Outer Continental Shelf Petroleum Development,* U.S. Dept. of Interior, College, Alaska, 1975.
3. *Ibid.*, i; See also Outer Continental Shelf Lands Act, 1953 (43 U.S. code 1331-1343); J. C. Reed and J. C. Slater eds., Beaufort Sea Coast and Shelf Symposium, *The Coast and Shelf of the Beaufort Sea,* Proceedings, Arctic Institue of North America, San Francisco, 1974; G. Gryc, *History of Petroleum Exploration in Northern Alaska,* Geology Seminar on the North Slope of Alaska, Proceedings, 1970.
4. *Ibid.*, 3.
5. See for example, G. M. Collins Jr., "13 Billion bbl. Potential for Beaufort Sea Area," *Oil Week* Vol. 17 no. 27 (1966) 43–46; L. J. Carter, "North Slope Oil Rush," *Science* Vol. 169 (Oct., 1969) 85-92; Carey Ford, "Is Alaska's Wildlife Doomed?," *Field and Stream* LVII no. 2,3 and 4 (Feb., March, April, 1953) 32-33+, 40-42, 63-65+; G. Laycock, "Kiss the North Slope Goodby?," *Audubon* Vol. 77 no. 5 (1970) 68-75; and R. B. Weeden, "Arctic Petroleum Development and Environmental Degradation," in George W. Rogers ed., *Change in Alaska: People, Petroleum and Politics,* 20th Alaska Science Conference, Univ. of Alaska, 1970: 153-163.
6. Norman Chance. "Directed Change in Northern Peoples," *Ibid.*, 180–195.

Land Use And Historic Preservation: A Legislative Perspective

Concern for the physical environment and natural beauty of the United States has increased in recent years; and this trend has influenced public thinking about wilderness areas, pollution and historic sites and their preservation. As awareness in these areas expanded, however, so too did the realization that the world's nonrenewable energy resources were being severely depleted, and that exploration and production must be accelerated to meet current needs, while long range solutions are being sought. The unpredictables of history have brought these two, at times conflicting views, into sharp focus. Issues critical to each have tended to polarize proponents into their respective camps. The challenge of this decade will be to arrive at some consensus through compromise which serves the interests of both, while fulfilling those of the nation at large. The struggle to reconcile these approaches to land and resource use will be most sharply drawn in Alaska, where the contrasts come into such bold relief and the interests are so clearly evident. Upon what legislative basis are these decisions to be made and who is to make them?

THE FEDERAL GOVERNMENT

The government of the United States first adopted a substantive policy for the recognition and care of historic sites with the passage of the Antiquities Act of 1906. In the years since this policy was announced, subsequent legislation expanded the national program with the passage of the Historic Sites Act of 1935 and the National Historic Preservation Act of 1966, which highlighted similar legislation in related areas such as environmental quality and pollution. All of this legislation, in one way or another, was designed in recognition of certain aspects of the national heritage expressed in terms

> of a national policy to preserve for public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States.[1]

When land becomes a matter of policy, however, it is inevitable that conflicting interests emerge over questions of development, where ideas such as preservation "stand in the way" of projects that may adversely impact or destroy historical values. Definitions of terms like "significance", "necessity" and "progress" receive much attention. Such broad issues as these, occurring at all levels of government, raised questions which demanded action from Congress to create guidelines and procedures for defining such terms as *historic value* and *national priority*.

The first major action taken by Congress came in 1966 with the passage of the Historic Preservation Act. Heretofore, under provisions of the Acts of 1906 and 1935, only limited protection was accorded lands owned or controlled by the federal government and most of the prerogatives lay with the President.[2] It was pointed out, however, that these statutes failed to protect privately-owned sites or properties from destruction or degradation, through the development by private owners or government authorities of surrounding properties, while they did nothing to restrain the federal government itself from destroying these properties.[3]

It was largely to answer such critics that Congress was able to pass the landmark legislation of 1966, which directly addressed the issue of governmental accountability and responsibility for protecting the national heritage. In a general statement of principle Congress declared

> that the historical and cultural foundations of the nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people.[4]

The significant implication it seemed was that historic sites could be dynamic rather than static museum properties, and that they should, where possible, be integrated with contemporary development programs.

This was an ambitious undertaking that went far beyond previous efforts and reflected the work of many committees, as well as significant public support for such legislation. Indicative of the philosophy underpinning these joint efforts, and having important implications for remote areas such as Alaska, was the conviction that

> if we wish to have a future with greater meaning, we must concern ourselves not only with the historic highlights, but we must be concerned with the total heritage of the nation and all that is worth preserving from our past as a living part of the present.[5]

Beyond these general statements of principle, the Historic Preservation Act established a framework within which these principles could be effectively applied. Clearly the most important link in this structure was the Advisory Council on Historic Preservation created to advise the President on preservation matters and to oversee development

projects which might pose a threat to historical sites.[6] Section 106 of the Act, for example, required that

> any federal or federally supported undertaking including licensing actions, prior to the approval of federal fund expenditures or prior to the issuance of a license, must take into account the effect of the undertaking on any district, site, building, structure or object that is included on the National Register. Federal construction and licensing agencies must attempt to avoid damage to or impairment or destruction of properties which should be preserved.[7]

Other important features designated the National Park Service, Department of the Interior, to provide administrative services and to compile, maintain and expand the National Register; authorized the Secretary of the Interior to initiate a program of matching grants to the states for the preservation of "significant" historical, archaeological, cultural and architectural sites; and further authorized matching grants to the National Trust for Historic Preservation, chartered by Congress in 1949 as a private organization.

Closely following the passage of the Preservation Act were three other laws designed to further expand the concepts of preserving the national heritage. These were the Department of Transportation Act (P. L. 89-754), the Demonstration Cities and Metropolitan Development Act (P. L. 89-670) and the Federal Aid Highway Act (P. L. 89-574). Simply stated this legislation provided mandatory guidelines for all undertakings of the federal government and for all projects in which federal funds were utilized within these jurisdictions.

Moreover the three agencies involved were required to provide matching funds to the states, municipalities, and through the National Trust, to private individuals for surveys, maintenance, acquisition and rehabilitation of historic sites.[8] It is significant that while the Historic Preservation Act prohibits unrestricted development of National Register land, Section 2 (b) 2 of the Department of Transportation Act prohibits such misuse of any historic site "of national, state, or local significance," if determined to be such, by another appropriate authority such as a state or local commission. Again it appears that such prerogatives may have important implications for a state like Alaska, where comparatively few sites have been placed on the National Register.[9]

As authorized by the Historic Preservation Act of 1966, the National Register of Historic Sites was created to provide an index to the tradition and varied cultural heritage of the United States. The state rationale for creating such an index was to

> 1) provide the opportunity, as a national policy, to establish land utilization priorities 2) to exercise a constructive influence on the character of the environment and 3) to determine what is significant from our history around which plans for the future may be shaped.[10]

As a function of its administrative services, the National Park Service was given the responsibility of formulating criteria for determining the "significance" of historic sites and overseeing the process of nominating historic sites to the Register.[11] This established criteria model serves as the basis upon which the Advisory Council makes its recommendations regarding the possibly adverse effects certain development may have on a specific site or district. A negative decision may result if it can be shown that development may occasion:

> 1) destruction or alteration of the property 2) isolation from or alteration from its surrounding environment or 3) the introduction of visual, auditory, or atmospheric elements that are out of character with the property and its setting.[12]

Above all, however, it was recognized that historic, prehistoric, and archaeological sites should be determined at the local level, not in Washington. Realizing that sites of this nature have both intrinsic and associative values, the procedure was to be subject only to these general federal guidelines.

With regard to federal legislation on the question of historic preservation, two supplemental statutes bear heavily on the concept; the National Foundation on the Arts and the Humanities Act of 1965 and the National Environmental Protection Act of 1969. The Humanities Act actually predated the 1966 Preservation Acts, but dealt more specifically with the study of history and archaeology than with the preservation of areas or artifacts. Nevertheless, its stated principle

> ...that a high civilization must not limit its efforts to science and technology alone, but must give full value and support to the other branches of man's scholarly and cultural activity in order to achieve a better understanding of the past, a better analysis of the present, and a better view of the future....[13]

would seem to capture the essence of the historic preservation ethic.

A traditional ally of historic preservation has been the environmentalist movement with its concern for man's habitat on earth. The National Environmental Policy Act of 1969 (NEPA) established strict guidelines for development and heavy industry, requiring that environmental statements must be filed to accompany all proposals or recommendations for legislation "and other major federal actions significantly affecting the quality of human environment." It has been clearly demonstrated in cases such as the Alaska Pipeline Injunction that development, the environmental impact of which is likely to be adverse and therefore controversial, must be covered by a NEPA impact statement "in all cases".[14]

The NEPA adds considerable muscle to the Historic Preservation Act, and other similar legislation, by clearly establishing historical preservation as a national environmental objective through procedures such as requiring impact statements. Moreover, the NEPA has declared it a

> continuing responsibility of the federal government to use all practical means, consistent with other essential considerations of national policy [to] preserve important historical, cultural, and natural aspects of our national heritage.

Environmental legislation, supplemented by the Archeological and Historic Preservation Act of 1974, represent the federal commitment to the concept of historic and natural resource preservation.[15]

THE STATES

Before considering Alaska's response to the problems of land-use and historic preservation and its implications for Outer Continental Shelf petroleum development, it would be pertinent to consider briefly the programs of states, in general, as they relate to the federal statutes we have just discussed and to Alaskan legislation.

We have observed that state and local preservation efforts predated federal legislation by a considerable period. What we describe as "preservation" first occurred during the mid-1800s, and before, with the setting aside of old homes or special buildings as historic museums, where artifacts could be stored and displayed to the public by private citizens or local historical societies.

Although the federal government first codified its interests in historic preservation in 1906, it was the states that led the way in the movement and initiated innovative programs to protect historic sites through the use of selective zoning. In this manner development, potentially or actually harmful to these special places, was restricted, while constraints were placed on the use-prerogatives of individual property owners. By 1964 fourteen states and over seventy communities had established "historic districts" to preserve certain areas and important sites within them.[16]

Generally speaking, however, the response of state legislation for historic preservation has been varied and few clear generalizations can be made in assessing their programs. Apparently there is at least a general awareness that currently, as in the past, state programs tend to be oriented to the specific requirements of each, determined under different circumstances and with dissimilar objectives. However all are equal in sharing certain delegated powers "most useful in achieving preservation objectives—the police power, the power of eminent domain, and the power of taxation."[17]

A fundamental problem experienced by most states, until recently, was the lack of coordination of effort and the organizational framework necessary to create a comprehensive preservation program with the appeal capable of uniting conflicting positions and use priorities. Since the late 1960s, however, many states have taken major steps to alleviate such problems and to establish effective procedures for dealing with local preservation issues. Certainly the national program as introduced in 1966 has served as a catalyst to this process.

The most significant difference between federal and state programs is that the federal government is most often concerned with large areas of the public domain—federal land held "in trust" for the American people—while state governments are most often dealing with much smaller areas, with architectural artifacts and with artifacts of primarily local rather than national significance. The distinctions are not always clearly drawn, however, and there is a basic difference between a national park that may contain historic sites and a state historical park specifically designated for that purpose. The unique and complicated relationship between Alaska and the federal government creates numerous problems in attempting to arrive at a rational solution of land use policy disputes and a program acceptable to a majority.[18]

The programs of two states, one which has a relationship similar to Alaska's with the federal government, may serve as examples of the trend in historic preservation at the state level. For example, the state of Arkansas created a planning commission to coordinate and implement a statewide historic preservation approach. The commission enjoys broad powers to plan and cooperate with federal agencies and reviews those "districts, sites, buildings, structures, and objects significant in historical, archaeological, architectural, and cultural preservation," for possible nomination to the National Register.[19] The statute also specifically protects

> all relics, specimens, or objects of an historical, prehistorical, archeological or anthropological nature, which may be found above or below the surface of the earth and which have scientific or historic value as objects of antiquity, as aboriginal relics, or as archeological specimens. . .

as well as specific sites to include "all aboriginal mounds, forts, earthworks, village locations, burial grounds, historic or prehistoric ruins, mines or caves, which are or may be the source of artifacts. . . ."[20]

Closer to Alaska, geographically and historically, the state of Hawaii initiated a program of identifying and protecting historic sites during the early 1960s, and established a state register indicative of a policy that was further expanded in 1969, with the creation of the Hawaii Foundation for History and the Humanities.[21] This foundation serves as the administrative agent in guiding procedures commensurate with provisions of the Hawaii Act Relating to Preservation and Protection of Prehistoric and Historic Sites and Archeological Remains, from which it originates.[22] Development guidelines closely parallel those of the federal government and those of other states in requiring.

> that before any public construction is begun, the head of the responsible agency shall determine whether the improvement will encroach upon any designated prehistoric or historic sites. When such encroachment is found, the project may not be begun until it has been approved by the Department of Land and Natural Resources with consent of the Governor.[23]

Of particular relevance to Alaskan history and culture, particularly of Native peoples, is the protection of archaeological, and possible archeological, sites within certain areas of the state. Alaska has a heritage that is unique among the fifty-five states and territories of the United States and unlike most still retains much of its "untouched" nature. While other states do not possess these advantages, they have passed legislation protecting both land and underwater sites, or possible sites, which suggests an awareness that sub-surface artifacts—land and water—may prove, as they have in the past, invaluable to the study of past cultures. Such policy has particular significance in Alaska where the entire arctic coast, from Kotzebue Sound to Demarcation Point, has experienced constant erosion from sea and ice; and the coastal shallows may contain important clues to an obscure Eskimo prehistory in the Beaufort Sea region.[24]

To protect these archaeological resources various state statutes require strict adherence to certain guidelines. Although they vary to a great extent in language and specifics, some general provisions are evident. These are

> 1) declaration of the state's interest in preserving all antiquities 2) vesting title to archaeological sites on public land in the state 3) closely controlling exploration and excavation of public lands 4) providing penalties for unauthorized excavations or other violations 5) coordinating activities with other agencies 6) identifying persons or agencies eligible for permits and the conditions imposed on such permits 7) retaining the power to issue or deny permits for field archaeology on public lands in one specified agency 8) requiring procedures for reporting archaeological discoveries and 9) discouraging or controlling field archaeology on privately owned lands.[25]

Unquestionably state programs have been influential in shaping a national policy toward historic preservation and land-use management; and they should continue to do so as long as there is sufficient public support for such commitments. It is also true that efforts on the national level, such as the 1966 preservation legislation and the Historic Trust, have pulled together programs of individual states into a shared awareness of responsibilities.

In considering the status of historic preservation and land-use in Alaska, there is no question that the severest test of the "preservation ideal" and national resource priorities will occur in this state. The changes which have altered or affected Alaska, both good and bad, in the ten years since 1967 have been far reaching and in some cases irrevocable. The recent history of the "land freeze", the land claims settlement and the pipeline has established precedents for evaluating priorities, choosing between alternatives and setting policies; while it has also demonstrating that a basic paradox may exist in the fabric of a nation which demands both unhindered supplies of energy and unimpaired enjoyment of nature.

ALASKA

"Preservation" in Alaska is an important word and is used by many different people to mean many different things: Alaskans want to preserve their unique Alaska lifestyle, Native peoples want to preserve their traditional culture, conservationists want to preserve the wilderness areas, biologists would like to preserve the rare northern ecosystems, the state would like to at least preserve what autonomy it now possesses, and federal agencies want to preserve their prerogatives in Alaska. Indeed historic preservation, a relative newcomer to the scene, is only one of many preservation impulses now operative in the state that will influence final decisions on land-use policies and who will direct them. The question is how much influence historic preservation concepts will have, how those concepts are perceived and by whom, and to what extent they will be compatible with other preservation interests. Ultimately, the answer may be determined by the state's success in retaining the power to shape its own future, and the ability of Native corporations to exercise a strong voice in the decision-making process.

Given Alaska's peculiar territorial experience and relationship to the federal government, it is not surprising that what had been done in the area of historic preservation prior to statehood in 1959 emanated from Washington and specifically from two agencies: The United States Forest Service and the National Park Service. Their contribution was limited to restoring southeastern totems and recognizing certain features and buildings as national landmarks, in a low key program that had little impact or public support.

With Alaska statehood a new and promising era opened for this vast territory. The constitution that was drafted was in many ways uniquely tailored to Alaska's future needs, but, at the time, it didn't seem critical to protect Alaska's equally unique past. Rather than writing into the Constitution a substantive provision for the acquisition and preservation of historic sites, the members simply implied that something could be done in this area should the legislature ever consider it necessary.[26]

Although a minor issue in the early 1960s, the legislature did enact certain statutes pertaining to historic preservation, and designated the Alaska Department of Natural Resources as the primary administrator. To aid the department in these efforts, the Alaska State Museum and the State Historical Library also assumed some responsibilities.[27]

Briefly, the two statutes administered under the Department of Natural Resources (AS 38.12 and AS 38.25) constituted a dual approach to historic preservation, dealing with 1) state antiquities and preserves and 2) state historic and natural sites and monuments respectively. Various sections of these statutes focused on specific restrictions and jurisdictions. For example: the designation of historic or scientific preserves, the issuance of excavation

permits, penalties for and seizure of artifacts illegally obtained, gubernatorial power to declare state ownership of historic sites and various other stipulations together provided the main body of law and mechanisms for historic preservation in Alaska.[28]

To a lesser extent the Alaska State Museum, office of the governor participated in typical preservation activities, such as the collection, presentation, and interpretation of artifacts of importance to Alaskan history and culture; and it functions today as a resource for local museums throughout the state. Through the auspices of the state museum and the Alaska Native Brotherhood, the old federal program to preserve the southeastern totems was continued, beginning in 1971, as one example of state efforts to protect historic-cultural resources. Other programs were begun at Valdez, Skagway, Sitka, Eagle, Fort Abercrombie and the Chilkoot Trail area.

Other agencies were given jurisdiction in preservation matters as well and these included the Department of Economic Development, division of tourism; the State Area Redevelopment Program and the Rural Development Agency, none of which exercised specific powers with regard to historic preservation, although they were given broad prerogatives within their areas of responsibility. As one would imagine, this rather disjointed structure did not function smoothly or effectively toward even modest preservation goals, primarily due to lack of funding from the state, insufficient federal funds, and apparent public disinterest.

The one post-statehood, prepipeline attempt to fashion a more responsive program came in 1967 with the creation of the Alaska Historical Society. The society was founded on the principle of cooperation between the various public and private preservation interests in the state, and dedicated to "encourage the preservation of Alaska's historic resources as a cultural, economic and educational asset. . . .[29]

Although a beginning, many serious problems remained that seemed to grow in complexity with the impending settlement of the Alaska Native land claims and the increasing probability that major oil and gas development would occur within certain areas of the state, where virtually nothing had been done to assess the cultural, historical or archeological values. Many of these problems were merely procedural or structural, but the question of federal-state-Native jurisdiction was an issue that could not be resolved by modifying statutes.

Faced with these problems and the likelihood of dramatic changes in the concepts of land-use and resource priorities, the legislature passed the Alaska Historic Preservation Act in 1971, which immediately brought the state and the federal preservation programs into a cooperative relationship based upon a broad consensus for the protection of "historic, prehistoric and archeological resources."

This legislation provided the governor with broadened powers in the area of site selection, and guaranteed protection against their destruction from any state funded or licensed project. It also created an Historic Sites Advisory Committee, Department of Natural Resources, which was given authority to administer the statewide historic survey, as required by the Federal Preservation Act of 1966, to develop "criteria for the evaluation of state monuments and historic sites . . . which may be considered to be of . . . significance."[30]

In addition to expanded powers of acquisition the state

> reserv[*ed*] to itself title to all historic, prehistoric and archeological resources situated on land owned or controlled by the state, including tidelands and submerged lands, and reserv[*ed*] to itself the exclusive right of field archeology on state owned or operated lands.[31]

Speaking for the state, the legislature justified expanded authority in areas of preservation because it was

> . . . concerned over the fact that the most recent past has seen the neglect, desecration, loss and destruction of the historic, prehistoric and archeological resources of Alaska with a resulting loss to the people of the state of knowledge concerning their heritage.[32]

Cognizant of the actions of other states in this area, the legislature took care to specify the resources it considered essential to protect under the Act and these included:

> deposits, structures, ruins, sites, buildings, graves, artifacts, fossils, or other objects of antiquity which provide information pertaining to the historical or prehistorical culture of people in the state as well as to the natural history of the state.[33]

In accordance with federal guidelines the state historic preservation officer is the key liaison between the state, federal and local governments and his office, within the Alaska Division of Parks, has primary responsibility for:

> 1) compiling the statewide inventory 2) nominating sites to the National Register 3) researching Alaska's heritage resources 4) developing the state historic preservation plan 5) enforcement of the Preservation Act and 6) advising the Governor of his activities.[34]

Since the passage of the 1971 Preservation Act, Alaska has indeed experienced the major changes foreseen by many—in and outside of the legislature. Provisions of that Act have been slowly developed and it, in conjunction with federal programs, has fulfilled the purpose for which it was enacted. This joint-legislation, supplemented by environmental statutes, constitute a powerful check to unrestricted exploration of natural resources and a caution to legitimate development which, nevertheless, must now take historical and cultural resources into consideration before proceeding.[35]

Alaska's history is much more than colorful stories of the gold rush, World War II battles or the fight for statehood as reflected in most Alaskan historiography. Native, Eskimo and Aleut histories and historians present Alaskan history in a completely different perspective, and the

desirability of such a view of Alaska's past, collected from aboriginal sources, is essential to a fuller understanding of Alaska and its people and for a scholarly approach to historic preservation.

Under Section 14(h) of the Land Claims Settlement Act, Native regional and village corporations were allowed to select two million acres of previously unappropriated land for preservation as historic sites and cemeteries. As in other states, the creation of historic districts may be an effective way in which to protect the integrity of historic sites, by zoning out undesirable development. Moreover the state has recognized that "preservation and protection of village historic and archaeological sites is essential if [*Alaskans*] are to preserve the total Alaskan heritage."[36] Now that the Native regional corporations are progressing in their site selections in historic areas, perhaps a greater emphasis on native history and culture can be expected.[37]

Both Native and non-Native Alaskans will be affected by the larger issue of land-use management, of which historic preservation is only a part—albeit an important one. Soon the federal government, state and local governments, representatives of industry and the Native corporations will have to reach decisions on this issue. This issue is already a continuing and growing source of discord between those who favor management of an industrial/development nature and those who favor management of a conservation/preservation nature.

It is not within the scope of this paper to attempt a substantive discussion of the host of complex issues, alternate proposals and legal ramifications of these positions. It is pertinent, however, to indicate the general context within which future decisions will have to be made.[38]

In 1867 when the United States purchased Alaska, the federal government assumed title to all of the district's 556,432 square miles, or approximately 363 million acres. Nothing changed for ninety years until Alaska became a state and then only very slowly. Today the federal government still owns or manages approximately 250 million acres; the remainder being split between the state (104,000,000 acres guaranteed by the Statehood Act to be chosen by 1985), the Native corporations and villages (40,000,000 acres guaranteed by the Land Claims Settlement Act, selections to be completed in 1978) and the several hundred thousand acres owned privately throughout the state. Of the federal government total, the Bureau of Land Management, the United States Forest Service, The Department of Defense, the National Park Service, and the Department of Housing and Urban Development represent the agencies with vested interests in land management. By far, however, the great portion of federal land is held as public domain (200,000,000 acres); and it is the future of this land which forms the nexus of the problem that will most directly affect the future of the state and its people.

Of all recent legislation affecting Alaska, the Land Claims Settlement Act of 1971 has had and will continue to have the greatest significance, although the full ramifications of major petroleum development remain unclear. According to the highly controversial Section 17 (d) 2 of the settlement, the Secretary of the Interior was authorized to

> ...withdraw from all forms of appropriation under public land laws, including mining and mineral leasing laws, and from selection under the Alaska Statehood Act, and from selection by Regional Corporations pursuant to Section 11, up to, but not to exceed, 80 million acres of unrestricted public lands in the state of Alaska, including previously classified lands...for addition to or creation as units of the National Parks, forest Wildlife Refuges, and Wild and Scenic Rivers Systems.....[39]

This 80 million acre portion of the public domain was to be administered by those federal agencies responsible for managing federal land for resource development and recreational use; the United States Forest Service, the Bureau of Land Management, the National Park Service and the Fish and Wildlife Service. Initial proposals for withdrawals under the d-2 concept were made in March of 1972 totaling 78 million acres in twenty-six parcels scattered throughout the state.[40] In August of the following year the Secretary of the Interior, based upon recommendations from the Joint Federal-State Land Use Policy Commission, proposed additional withdrawals which brought the total to 83 million acres—exceeding the limit established by the Settlement Act and causing considerable opposition within the state and within Congress. By 1976 this figure had increased to over 100 million acres (the Udall proposal).

However a source of controversy more fundamental than acreage totals was the question of the use of these lands beyond their recreational or scenic values; in short the concept of "multiple use." In Congress the Committee on Territories, headed by Senator Henry Jackson, produced a majority report which suggested that unless prohibited by subsequent legislation:

> 1) exploration and extraction of locatable minerals should be allowed in each of the d-2 units under a permit and lease system that requires mineral exploration and production be conducted in a manner which will prevent or substantially reduce the adverse environmental consequences of such activity and 2) Unless prohibited, exploration and production of oil, gas and other so-called leasable minerals should be allowed under existing laws and regulations.[41]

The Committee, cognizant of environmental and preservation laws, further observed that

> there are public lands in Alaska, which because of their unique scenic, wildlife, or other values [historic-archaeological], should be closed to mineral exploration and extraction, [42]

and admitted that in certain areas of the state where proposed d-2 lands were located, "archaeological possibilities have not yet been assessed." [43]

In the five years since the d-2 concept was first proposed, the question has been further complicated by the introduction of no less than six major Alaska public land bills in

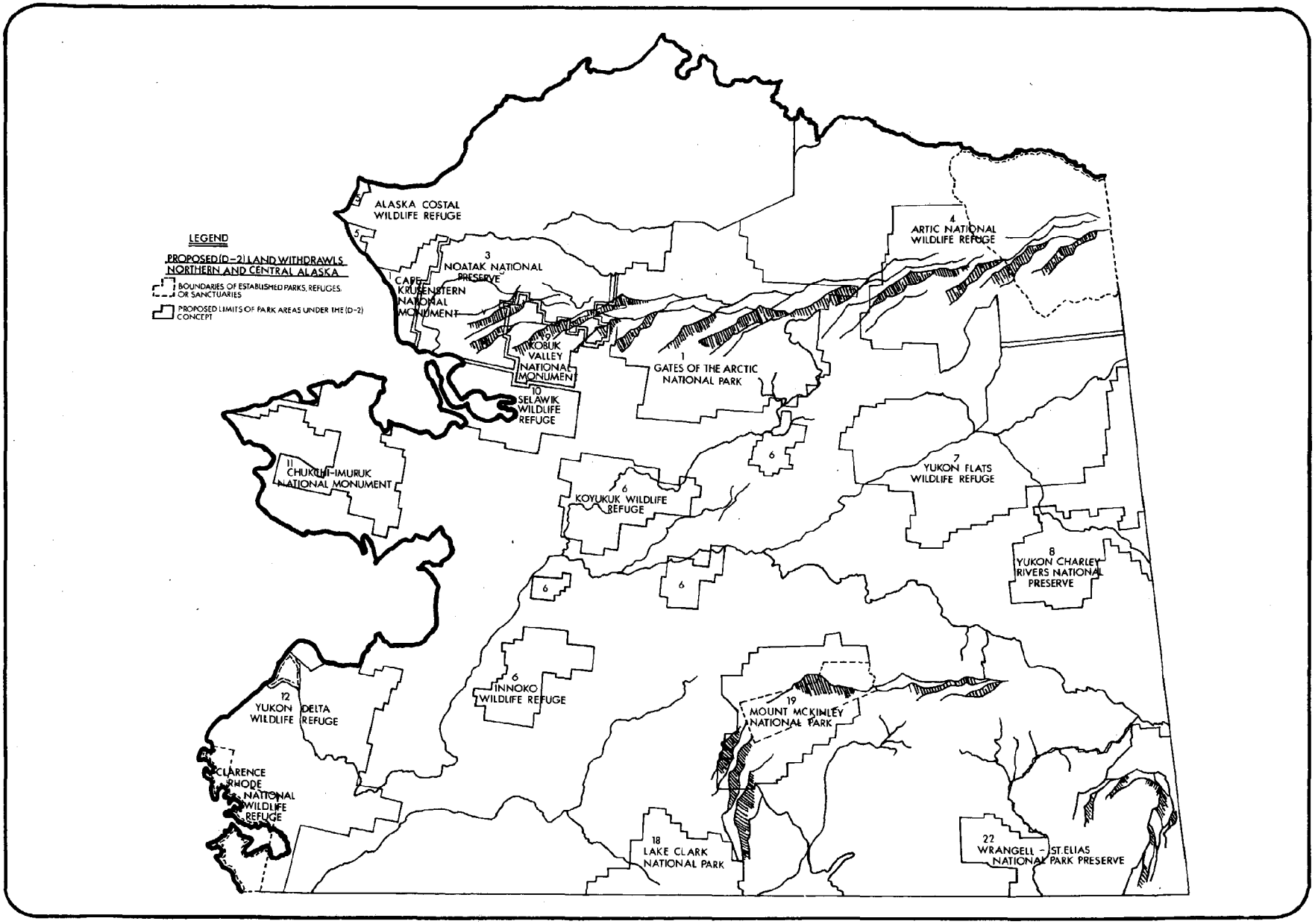


Fig. 1—Proposed d-2 Withdrawals.

Congress, and various other proposals by the state, Native corporations and private research agencies. The deadline for final selection is scheduled for December of 1978 and although it is possible that this date will be moved back, there is an urgent need for the state and for the Native regional and village corporations to formulate comprehensive land-use positions, based upon the most reasonable estimate of priorities and realistic assessment of what is attainable as measured against what would ideally be desirable.[44]

With recent developments in the continuing energy crisis, both in this country and abroad, it is almost certain that proposed d-2 legislation will be discussed in terms of the larger questions of non-renewable energy production policy. Although not as dramatic an issue as the question of energy, the preservation of traditional culture and historic patterns of subsistence, is of major concern to the people of the North Slope and Arctic coastal regions, who will most certainly suffer the effects of expanded development, and is certain to have a significant influence on final d-2 decisions.

It is because of the importance of attempting to minimize the impact of impending resource development through an appreciation for the history and culture of the Eskimo of the North Slope and arctic coast that the present study has been undertaken, for as one spokesperson of Barrow reminds us:

> The fact remains that we, the Inupiat People, base our culture on the environment, nature and the land around us.[45]

Indeed this statement not only applies to the Inupiat of Barrow, Wainwright and other remote villages of the North Slope, but to many villages located in other areas of the state as well. Studies are now underway in eleven of the twelve regional corporations as part of the 14 (h) program to ascertain cultural values and traditional land-use patterns as a guide to the disposal and classification of Native lands and their management. This is being done under the auspices of the National Park Service, Bureau of Land Management and the University of Alaska Department of Anthropology.

In the political sphere, the Arctic Slope and the Chulista Regional Corporations have both sponsored legislation in Congress designed to protect the integrity of lands awarded to them in 1971. The Nunamiut National Park (SB 3599) in the central Brooks Range, as proposed, would incorporate lands selected by the corporation and the village corporation of Anaktuvuk Pass in the park to guarantee traditional subsistence practices and curtail development and certain recreational uses. While to the south, the Nunam Kitlutsisti or "Protectors of the Land" has been organized as a Native conservation lobby to initiate legislation that would prohibit the sanction of transportation corridors and protect subsistence and cultural values in the lower Yukon and Kuskokwim River region.

In its most recent action, the state legislature has passed a joint resolution that recognizes, among other provisions, the necessity to protect "certain scenic or cultural values" and the importance of "resource inventories and land-use studies." It has determined that all members of the House and Senate Interior Committees should be urged to visit Alaska and to acquaint themselves personally with the issues "before determining what disposition should be given to land in our state."[46]

It now appears likely that the entire maze of land-use policy issues will hinge upon the ability of the State of Alaska to arrive at a consensus position regarding the (d-2) question and to forcefully take the initiative in demanding its rights as guaranteed under provisions of the Alaska Statehood Act. Initial steps have been taken recently by the governor in this direction, and it remains now for both the public and the elected officials of the state to support or reject the consensus approach. If such a position is achieved, it appears that final decisions will have to be hammered out between two major proposals: the state's consensus position and the so-called Udall Bill (Alaska's National Interest Land Conservation Act) which contains significant points of conflict.

Other legislation which will likely influence the final formula include: The Alaska Conservation Act of 1974 (S 2917), The Submerged Lands Act of 1953, The 1976 Organic Act which established BLM guidelines for National Resource management, and Municipal Code (AS 29.18.190) which entitles borough governments to ten percent of vacant, unappropriated, or unreserved state land locted within borough boundaries. Specifically, the North Slope Borough's decisions will be influenced by the fact that the state of Alaska has filed patent claim to land along the Beaufort Sea between the Colville and Canning Rivers, inland approximately sixty miles from the coast, and centered on Prudhoe Bay (PLO 5814, March 15, 1974; 3,440,700 acres and approximately forty townships and land in tentatively approved status).

Therefore, the Arctic Regional Corporation, the North Slope Borough and the eight village corporations, which now represent the interests of the 3,759 permanent residents of this vast region (figures by North Slope Borough, January, 1977) portentous of great change, are now faced with decisions of utmost importance regarding the future of traditional land-use and dynamic cultural resource patterns. As major land managers, co-equal with the federal and state agencies heretofore exclusively charged with this responsibility, strong united input from Eskimo organizations regarding Beaufort Sea-North Slope lease sales and (d-2) land management decisions will be absolutely essential in order to preserve the integrity and traditional use of historic sites and to protect cultural resource values.

NATIONAL REGISTER OF HISTORIC SITES, ALASKA

Interior District

1. Eagle Historic District, left bank of the Yukon River at the mouth of Mission Creek.

Northwestern District

1. Barrow vicinity, Birnirk Site, five miles northeast of Barrow.
2. Cape Denbigh Peninsula, Iyatayet Site, Norton Sound.

3. Cape Prince of Wales vicinity, Wales Sites adjacent to Cape Prince of Wales on Seward Peninsula.
4. Nome vicinity, Anvil Creek Gold Discovery Site, four and one quarter miles north of Nome on the Seward Peninsula at Anvil Creek.
5. Point Hope Peninsula, Ipiutak Site, tip of Point Hope at latitude 68° 70′ N, longitude 167° 50′ W.
6. St. Lawrence Island, Gambell Sites, Northwest Cape.

Southcentral District

1. Dutch Harbor, Unalaska Island, Church of the Holy Ascension, Unalaska.
2. Kenai, Russian Orthodox Mission Church, east shore of Cook Inlet.
3. Kodiak, Kodiak Island, Erskine House, Main Street and Mission Street.
4. Kodiak vicinity, Fort Abercrombie State Historic Site, Kodiak Island.
5. Nikolski vicinity, Chaluka Site, Umnak Island, Aleutians.
6. Pribilof Islands, St. Paul Island, Fur Seal Rookeries.
7. Rip Rock vicinity, Hawkins Island, Palugvik Site, three and three quarters miles east of Rip Rock on Prince William Sound.
8. Yukon Island, Yukon Island Main Site, Kachemak Bay, Cook Inlet.

Southeastern District

1. Ketchikan vicinity, Totem Bight State Historical Site, west coast of Revillagigedo Island.
2. Sitka, American Flag Raising Site, Castle Hill.
3. Sitka, St. Michael's Cathedral, Lincoln and Maksoutoff Streets.
4. Sitka, Baranov Island, Sitka National Monument.
5. Sitka vicinity, Old Sitka Site, six miles north of Sitka on Starrigavan Bay.
6. Skagway and vicinity, Skagway Historic District and White Pass, head of Taiya Inlet on Lynn Canal.
7. Wrangell, Chief Shakes Historic Site, Shakes Island.

(Eight additional sites have been tenatively accepted for nomination to the National Register in the NPR-4 Region as a result of recently compiled cultural resource surveys and more nominations throughout the North Slope region can be expected.)

THE NATIONAL REGISTER— STATEMENT OF PROCEDURE (State Level)

The state liaison officer supervises a professional survey staff in conducting a statewise historic sites survey. From the survey findings a comprehensive statewide historic preservation plan is prepared. The plan must be reviewed and approved by a high-level professional review committee. The state liaison officer, in accordance with the plan, may then nominate properties for inclusion in the National Register. The nominated properties which are approved by the National Park Service are entered in the National Register of Historic Places by the chief, Office of Archaeology and Historic preservation, National Park Service.

CRITERIA

The following criteria have been judged appropriate in considering properties for nomination to the National Register, in the belief that the quality of significance in American History, architecture, archaeology, and culture is present in districts, sites, buildings, structures and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling and association. And furthermore:

1) That are associated with events that have made a significant contribution to the broad patterns of our history; 2) That are associated with the lives of persons siginficant in our past; 3) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; 4) That have yielded, or may be likely to yield, information important in prehistory or history.

Eligibility

Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance witnin the past fifty years shall not be considered eligible for the National Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall into the following categories:

1) A religious property deriving primary significance from architectural or artistic distinction or historical importance; 2) A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with an historic person or event; 3) A birthplace or grave of an historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life; 4) A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; 5) A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; 6) A property primarily commemorative in intent, if design, age, tradition, or symbolic value has invested it with its own historical significance; and 7) A property achieving significance within the past fifty years if it is of exceptional importance.

ENDNOTES

1. *Historic Sites Act*, 21 August, 1935, 49 Stat. 666-668.
2. The President was authorized to "declare by public proclamation historic landmarks, historic structures, and other objects of historic or scientific interest...to be national monuments. Also, certain government officials, the Secretaries of Army, Interior and Agriculture could grant permits to scientific and educational institutions for historical and archaeological field work in areas under their jurisdiction.
3. Oscar S. Gray, "The Response of Federal Legislation to Historic Preservation," *Law and Contemporary Problems*, vol. XXXVI no. 3 (summer, 1971) 314-328.
4. *Historic Preservation Act*, 1966, Public Law 89-665.
5. *Historic Preservation in Alaska*, Alaska Legislative Council, January, 1970, Juneau, Alaska: 3.
6. The Council consists of twenty members. Eight are from federal agencies and ten are appointed by the President from outside the government, in addition to the Chairman for the National Trust and the Secretary of the Smithsonian Institution. The federal agencies are represented by the Secretaries of Treasury, Agriculture, Interior, Transportation, Housing and Urban Development, Commerce, the Attorney General and the Administrator of the General Services Administration.
7. *The National Historic Preservation Act* as cited.
8. See *With Heritage So Rich*, Committee on Historic Preservation United States Conference of Mayors, 1966.
9. Pages 27-28 contains National Register sites in Alaska.
10. *Historic Preservation in Alaska*, 4.
11. Pages 29-31 contain the nominating criteria for the National Register.
12. Gray, *The Response to Federal Legislation*, 317.
13. As quoted in, *A Message From the President of the United States on the State of the Nation's Environment*, House Executive Document no. 92-46, 92d Cong., 1st Sess. 16 (1971).
14. As in the Case of The Wilderness Society vs Hickle, 1970; Gray, 327.
15. As quoted from *42 U.S. Code 4321-47 (1970);* and (P.L.93-291,1974).
16. See De. William Murtagh, "The National Historic Preservation Act: Its Background," Summary Report of the 1967-1968 Regional Conferences on The New Preservation, Department of the Interior, 1968.
17. See Paul E. Wilson and H. James Winkler, "The Response of State Legislation to Historic Preservation," *Law and Contemporary Problems*, Vol. XXXVI no. 3 (summer, 1971) 329-347.
18. See for example *Alaska's Land-1975*, Annual Report of the Joint Federal-State Land Use Commission For Alaska, Anchorage, 1975.
19. Wilson and Winkler, 334.
20. *Ibid.*, 346.
21. *Hawaii Revised Statutes 6-16.1 (supp. 1970).*
22. *Hawaii Revised Statutes 6-11 (supp. 1970).*
23. Wilson and Winkler, 345.
24. See J. L. Giddings, "The Tenuous Beaufort Sea Archaeology," *Proceedings* of the 5th Alaska Science Conference, 1954: 94-100.
25. Wilson and Winkler, 346
26. *Alaska State Constitution*, Article .VIII, Section 7: The Legislature may provide for the acquisition of sites, objects, and areas of natural beauty or of historic, cultural, recreational, or scientific value. It may reserve them from the Public Domain and provide for their administration and preservation for the use, enjoyment and welfare of the people.
27. Department of Natural Resources (AS 41.20.030); the Alaska State Museum (AS 44.19.023), The State Historical Library (AS 14.56.080).
28. For a concise description of these statutes see *Historic Preservation in Alaska*, 11-24.
29. *Ibid.*, 25-36. See also *Alaska's Plan for the Management and Conservation of Heritage Resources, 1971-1976*, Alaska Division of Parks, Anchorage, 1971; *Alaska's Outdoor Recreation and Historic Preservation Report*, Division of Parks, Juneau, 1971; and Linda Kay Thompson, *Alaska's Abandoned Towns; A Case Study for Historic Preservation and Interpretation, Division of Parks, Juneau, 1972* as indictive of increased awareness of preservation in State policy.
30. *Alaska Historic Preservation Act*, 1971, Section 41.35.180.
31. *Ibid.*, Sec. 41.35.020.
32. *Ibid.*, Sec. 41.35.010.
33. *Ibid.*, Sec. 41.35.320.
34. See *A Guide to Historic Preservation*, Research and Preservation Planning in Alaska, Liljblad and Brown, Alaska Historical Commission, Division of Parks, 1976.
35. Many examples may be cited. See *Alaska Heritage Resource Survey*, Office of the State Archeologist, Miscellaneous Publication, History and Archeology Series no. 4, Anchorage, 1971; *Alaska Sea Grant Project, Social and Economic Impact of Alaska Outer Continental Shelf Petroleum Development*, United States Department of Interior, College, Alaska, 1975; *Alaska's Land*, Annual Report of Joint Federal-State Land Use Planning Commission For Alaska, Anchorage, 1975; Alaska Office of the Governor, Division of Policy Development and Planning, *Environmental Assessment: Proposed Beaufort Sea Nearshore Petroleum Leasing*, Juneau, 1975; *Report of the Archaeological Survey and Excavations Along the Alyeska Pipeline Service Company Pipeline*, College, Alaska, 1971: David Hickok, *Proposed Study Plan for the NPR in Alaska*, Information and Data Center, Anchorage, 1976: *Alaska Aboriginal Culture, National Survey of Historic Sites and Buildings, Theme XVI, Indigenous People and Cultures Special Study*, National Park Service, 1962; and William Schnieder and Peter Bowers, *Preliminary Cultural Assessment: National Petroleum Reserve in Alaska (NPR-4)*, National Park Service, 1976.
36. *Guide to Historic Preservation* as cited, 47.
37. For example, the work of the North Slope Borough Planning Commission and Historical Commission is indictive of such efforts.
38. For example see North Slope Borough, *Coastal Zone Management Program Considerations*, Alaska Consultants, Inc., Anchorage, 1976; North Slope Borough, *Issues Overview, Ibid.*, 1976; and Jeff Richardson, "What Hands Shall Shape Alaska's Land," in *Alaska Today*, vol. IV (1976) 49-57.
39. For a discussion of d-2 lands in Alaska see *United States Congress (Jackson) Committee on Territories: Land Planning and Policy in Alaska, 93d Cong., 2d Sess. (GPO, 1974), and Alaska's National Interest Lands (d-2): A Survey of Current Congressional Proposals*, Cooperative Extension Service, University of Alaska, 1976.
40. Pages 32-33 show the proposed d-2 lands in Alaska.
41. *Jackson Committee*, 14.
42. *Ibid.*, 15
43. *Ibid.*, 51

44. Numerous studies are now in progress funded by the State and by Native Regional and Village Corporations in an effort to arrive at such estimates, the present study included. Pioneer studies in this area would include, Karen W. Workman, *Alaskan Archaeology: A Bibliography* 2nd ed., Division of Parks, Anchorage, 1974; Michael E. Smith, comp., *Alaska's Historic Road Houses*, Office of Statewide Programs, Division of Parks, Boulder, Colorado, 1974; *Lower Coper and Chitina Rivers: An Historic Resource Study*, History and Archaeology Series no.5, Division of Parks, Juneau, 1974; and Pamela Rich, *The National Park System in Alaska, an Economic Impact Study*, Institute for Social, Economic and Government Research, Report no. 75, University of Alaska, 1973.
45. Flossie Hopson, *Traditional Land Use Inventory, North Slope Borough, National Petroleum Reserve in Alaska*, Barrow, Alaska, 1976.
46. Senate Joint Resolution No. 12, Legislature of the State of Alaska, Tenth Legislature, 1st Sess., "Relating to the forthcoming action by the U.S. Congress regarding (d) (2) land withdrawals, February 2, 1977: 1-3.

The Sources

Our knowledge of the peoples of the North Slope interior and arctic coast—that vast area north of the Brooks Range, between Point Barrow and Demarcation Point—is derived from sources usually associated with investigations of remote regions of the world and the settlement of "frontier" wilderness areas.

For the purposes of this particular study, the record begins toward the middle of the nineteenth century and continues into the period following the Second World War. It was during this hundred year span that the major impact of white western culture upon aboriginal culture occurred.

Those who have contributed to the literature and lore of northern Alaska include explorers, military personnel, traders, missionaries, whalers, prospectors, scientists and educators. As the architects of this written record, these people were representative of diverse backgrounds and motivations; whose observations, impressions, judgements and actions helped to build our understanding of this unique part of the world and establish our cultural influence over it and its people.

The Tareumiut (people of the sea) and Nunamiut (people of the land) Eskimo, who are the aboriginal occupants of this region, have conveyed their story to us largely through the expertise of anthropologists, archaeologists, linguists, and historians, who have worked from the literature left them by eighteenth and nineteenth century writers; from spoken accounts and artifacts of the Eskimos themselves; and from their own investigations, in which they have attempted to interpret all this data and fashion it into a body of empirical and intuitive knowledge as a significant historical and cultural resource.

Because Inupiaq is a spoken, rather than a written language, the great majority of literature concerning the arctic regions (and the rest of Alaska as well) is of Western origin. It has been only recently that either whites or Eskimos have been interested in a "Native" literature and then, only because it facilitated the settlement of issues of interest to both parties.

It becomes evident very quickly in this disparity of literature resources that, until recently, a distinct separation characterized Alaska; one white and one Native. The one evolved independently of the other until the mid-seventeenth century in some areas and the mid-eighteenth century in others. The contact between these different worlds set in motion a rapid and uneven process of cultural degradation for one and the assertion of superiority and dominance by the other. While this process was neither unusual nor exclusively harsh by the standards of the day, it did reflect a recurring theme in our association with non-white peoples, a theme that was not substantially changed until 1971 with the passage of the landmark Native Land Claims Settlement Act. This Act provided at least legislative and legal recognition of Native culture and history.

When Alaska was purchased from Russia in 1867, the federal government, while not assuming its legal responsibilities for administering the new acquisition, did take a keen interest in determining the possible resource values of the region. For the next fifty years or so, representatives of various government agencies administering Alaska amassed a huge amount of data in reports and investigations of almost every aspect of Alaska and its inhabitants; both Native and white. This resource of published documents has proven to be invaluable for the study of Alaskan history dating from the period of Russian Occupancy.

Supplementing and in some cases predating this resource is the literature originating or associated with exploration, scientific investigation and commercial exploitation of natural resources; dating from the early 1800s and extending to the 1950s. It is from this resource that we derive important information regarding Eskimo activity along the arctic coast and in the interior regions, from which comparisons and assessments of acculturation can be made. This period of early contact between Eskimos and whites established the foundations upon which subsequent relationships have been built and are valuable for what they reveal of both cultures.

British, American and European explorations in search of a Northwest Passage were almost yearly occurrences between 1820 and 1900. The celebrated search for Sir John Franklin, lost in the Arctic in 1845, resulted in over thirty voyages from many countries to the north polar seas and much information was gained concerning the arctic coast and its people.

American whaling ships operated in the Arctic Ocean off Pt. Barrow and east to Herschel Island beginning in the 1850s and continuing until just before the First World War, when the industry collapsed. Records of these ships such as logbooks, maps and charts, cargo manifests and records of

their activities recorded by vessels of the Revenue Cutter Service, provide another valuable source for studying the effects of Western cultural intrusion into the Arctic.

Finally, but most significant, were the expeditions and investigations conducted north of the Brooks Range by men whose interest was primarily in acquiring knowledge of arctic conditions and Eskimo culture and lifestyle. Such investigations by Vilhjamur Stefansson, Knud Rasmussen, Helge Larsen, Peter Dease, John Simpson, Ernest Leffingwell, Rudolf Anderson, Storker Storkerson, Ejnar Mikkelson and others have provided by far the most valuable literature source, essential to an understanding of the Eskimo and his way of life and the effects of Western culture upon it.[1]

More recently we owe a debt of gratitude to those scholars who have specialized in the study of northern cultures and their history. Their virtue and service to us all has been in their ability to successfully reconstruct events and human behavior which occurred in the past and to call attention to the need for much greater efforts. A difficult and tedious job at best, it is further complicated by the language barrier and the fact that many of those people, who could have been of inestimable help to increasing our knowledge, were not asked and are now gone.[2]

To a large extent material for this study has been drawn from the research and field work of such men as Ralph Solecki, Robert Spencer, William Irving, Alfred Brooks, Helge Ingstad, John Campbell, R. L. Raush and many others who were, or are, authorities in their fields. In this regard it seems appropriate to quote one scholar who reminds all those with an interest in the North that

> . . .active field researchers who collectively have devoted. . .years to work on the tundra and in the northern forests. . .enjoy certain intellectual advantages over writers who essay to interpret hunting societies, but who have never seen one, either extinct or alive.[3]

In other words, passive research in the literature can never alone accomplish what needs to be accomplished in the North or, by itself, stand as a model for establishing policy. It serves merely as a point of departure and should be regarded as such.

Therefore the period of Alaskan history commonly associated with exploration, frontier settlement, whaling and gold rushes is also a period when dramatic and more significant events, for the northern Eskimos, were ocrurring in remote areas of the northern interior and arctic coast. Here they had lived for centuries in a delicate balance with nature, but were soon to experience a drastic alteration of their lifestyle, cultural values and traditional subsistence practices. To guide decisions for the future an awareness of the significance of this era of Alaskan history is needed.

For this story the source must be those people who are able to remember "the old ways" and from those younger people who have an interest in preserving a cultural heritage and the best features of traditional living. Furthermore it must come from those who feel a responsibility to see that such values are preserved through common interest and not destroyed through common indifference.

And finally there is the problem of the origin and source of place names encountered in Alaska.[4] Obviously the aboriginal inhabitants —the Eskimo, Indian and Aleut peoples—identified their surroundings for hundreds of years in their respective languages, and U. S. Geological Survey maps have relied heavily on this source.

Native names were practical and descriptive and tended to evolve in meaning or translation as they became influenced by the English language, or as certain areas were occupied by different groups. As a result, particular features often have several names which may describe various associations and uses. In addition the northern Eskimo tended to assign these names to seemingly insignificant features, while leaving more obvious landmarks unnamed; such as a large mountain or valley.

With the coming of the white man to Alaska in the 1730s other variables were introduced; Russian, Spanish, French and English (British and American), which further increased the difficulty of precisely identifying geographic features. Inevitably Native oral identifications were given foreign language equivalents according to various orthographic standards, so that most geographic dictionaries include multiple listings in offering place name identification.

In the far north the foreign influence was limited to broad English usage introduced by American whalers, explorers and traders and by their British counterparts. There was, of course, a smattering of other languages; European, Asian and Polynesian, but the place names scattered across the North Slope are English. Often explorers would honor a benefactor or statesman by naming some feature; mountain, river, lagoon, etc., for him in the ancient prerogatives of "discovery." But such a name would have little meaning for the Tareumiut or Nunamiut, who still prefer Inupiaq to English and find significance within their own culture. However the incidence of names of English derivation is, in itself, an indication of the historical nature of the Beaufort Sea region.

ENDNOTES

1. Full reference to particular works or individuals will be found in the bibliography.
2. Edwin S. Hall Jr. (ed), *Contributions to Anthropology: The Interior Peoples of Northern Alaska*, National Museums of Canada, Ottawa, 1976.
3. J. M. Campbell, "The Nature of Nunamuit Archaeology," in *Ibid.*, 50.
4. See Orth, 2-7 for a discussion of place names and their origins; and M. Baker, *Geographic Dictionary of Alaska*, U.S Geological Survey Bulletin no. 299, Series F, Geography, 1906.

History and Historic Sites

DEFINITION

What is an historic site? Even the definition of this term is problematical; there are those who interpret the word "site" literally and there are others who consider it in its broader historical and cultural context. The criteria for selection and evaluation of historic sites is clearly stated in the pertinent state and federal legislation, and it serves to indicate what is to be specifically identified and protected. But this is not entirely sufficient to meet the needs of northern arctic Alaska.

While it is of the utmost importance to collect as much site specific data as possible, within every North Slope quadrangle, there must be a recognition that there are associative and intangible cultural values attached to sites or areas of Eskimo habitation or visitation. These values can extend the limits far beyond a certain location defying the standard boundary classifications employed elsewhere in historic preservation programs designed to protect "specifics."

Heretofore it has often been common procedure when dealing with historic sites to classify them as "things", "structures," or "objects"; place fences and signs around them and make them accessible to the public. Sites such as these are almost entirely representative of white Western culture and history and they comprise the majority of sites listed on the National Register.[1] There are, of course, exceptions to this as in the case of national historic parks, the historic districts of certain states, and the Skagway Historic District in southeast Alaska, for example.

Alaska, however, is far from being culturally homogeneous. Because of its dual heritage, and because this heritage is continuing to be defined in the daily lives of the Native village people living on the coast and in the interior, much that we consider "historic" is still being utilized in an evolving dynamic process that integrates the past with the present.

The Tareumiut and the Nunamiut Eskimo identify "sites" in an associative context that, in name, designates not only a specific stream, or fish camp, or lookout point, but perhaps all the surrounding country and features that may relate to that particular place, its uses and its history. Therefore the "place of Inualurak", besides referring to a dwelling or camp, might very well refer to all the country that was hunted or trapped by Inualurak for miles around. Historic sites for the Eskimo are often defined by their natural features and use and are not thought of in terms of set boundaries. Furthermore it is not reasonable to expect that a once semi-nomadic hunting culture would think of their relationship to the land and to nature in terms of boundaries.[2]

Indeed the traditional and the present day realities of subsistence hunting, whether for caribou or for sea mammals, clearly demonstrates the historic continuity of the relationship between the Eskimo and his environment and preserves the integrity of those specific sites referred to in this study.

It is perhaps not too much to suggest that the entire North Slope and Coastal Plain is, in fact, one huge historic district where man survived for thousands of years only because of his wise management of the land and its natural resources. The significance of this expansive area does not alone rest in the physical remains to be found there, but in its continuing occupancy and use as an integral feature within an ancient context.

The separation of "history and historic sites" from "subsistence and subsistence sites" is, of course, artificial and reflects only an organizational framework. Historic sites and subsistence sites are quite often the same thing, and traditional or historical uses of these sites is frequently defined by subsistence practices. Nevertheless a distinction can be made between those sites or geographic features that derived signficance from white exploration, whaling, trading, and other activities from those which were of importance to northern people exclusive of white cultural intrusion.

THE PHYSICAL ENVIRONMENT

Tareumiut and Nunamiut peoples, although they were of the same culture and spoke a language (Inupiaq) common to both, were nevertheless separate societies; one dependent upon the whale (and other sea mammals) and the other dependent upon the Caribou (and other land animals) for their existence within two complementary ecological systems.[3] As such they occupied regions where the habitats contrasted markedly.[4]

The Beaufort Sea

Tareumiut people (Ipiutak culture) have occupied the northern Alaska coast for at least two to three thousand

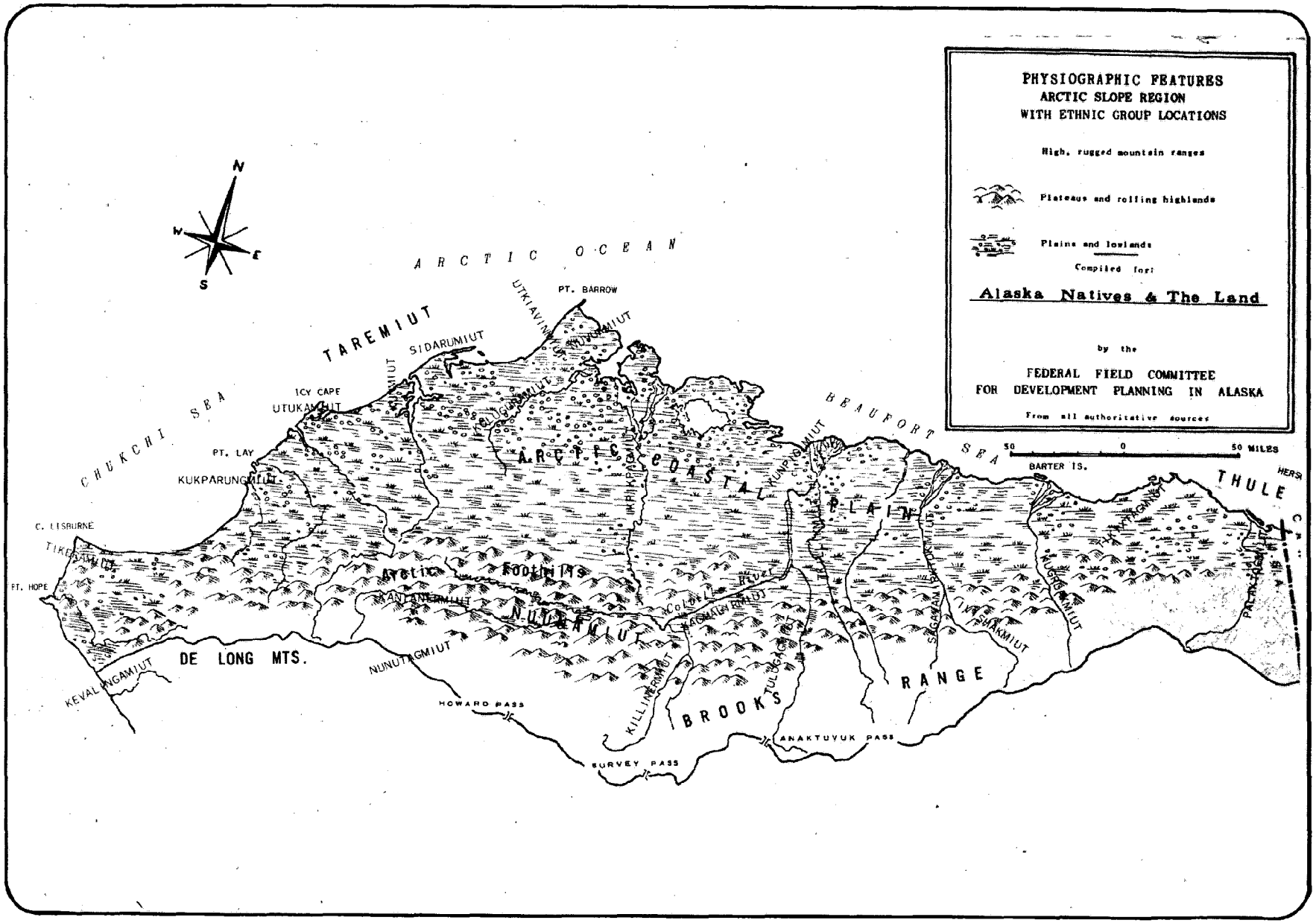


Fig. 2—Physiographic Features of the Arctic Slope with Eskimo Groups.

years, from Norton Sound on the northwest (named by Captain James Cook in 1778: S 64°, N 164°) northeast to Demarcation Point (an important Eskimo winter rendezvous known as *pataktak* or "place where ducks fly low"; identified as Point Demarcation by Sir John Franklin in 1826: 69°, 41′ N, 141°, 19′ W). Their way of life was determined almost entirely by their relationship with the Bering, Chuckchi, and Beaufort Seas.[5]

Historically the principal settlements and camps of the Tareumiut were located from Pt. Hope (known as "Ipiutak" or "Tikarahk": 68°, 21′ N, 166°, 47′ W) to the vicinity of the Colville River Delta (*Nigaleg-Kok* meaning "goose river"; named by Dease and Simpson in 1837: 70°, 27′N, 150°, 07′W) where the ancient trading site of Nirlik was located.[6]

The Beaufort Sea (named by Sir John Franklin in 1826) extends from Pt. Barrow (*Nuwak;* named by Captain Beechy in 1831) on the west, to the vicinity of Banks and Prince Patrick Islands to the east in the Canadian archipelago. The sea is characterized by shallow water that extends as far as seven miles offshore at a depth of only ten fathoms, to much deeper water beyond the so-called "barrier islands", which lay just offshore and extend along the entire coast between Pt. Barrow and Demarcation Point. The bottom drops off sharply at the outer limits of the continental shelf.[7]

The dominant current throughout the year runs from east to west along the coast in a typically clockwise motion known as the Beaufort Sea Gyre, although strong easterly currents can occur near the islands.[8] Pack ice is found most of the year laying offshore at distances which vary between three and thirty miles, often leaving an ice-free zone offshore (early June to late September). Seasonal ice formed during the winter usually closes the open and shallow coastal waters and freezes to depths of sixty feet or more. Such features as ice islands (often 100 feet thick), floes, pressure ridges and land-fast ice are common to the Beaufort Sea, and are moved along the coast by the current.[9]

During the spring thaw and break-up the major rivers of the coast—the Colville, Sagavanirktok, and Canning—dump large quantities of silt and gravel into the shallow waters of their deltas; while offshore, old ice melts and deposits other sediments and sea bottom material. This action in combination with the local currents is responsible for the formation of the barrier islands in a process known as littoral drift. Furthermore these islands, as well as the entire arctic coast, experience a constant erosion and building, which can amount to considerable loss or gain of area in a period of a very few years.[10]

THE ARCTIC COASTAL PLAIN

Numerous Tareumiut tribes occupied this coastal tundra plain and were identified by their proximity to its major rivers.[11] Rising slowly and smoothly from the Arctic Ocean toward the foothills and mountains of the Brooks Range to the south, the Coastal Plain represents the northwestern extension of the interior plains, and is geologically similar to the Great Plains region of the United States and Canada.[12] It forms the shore that extends 3,500 miles from the mouth of the Ugashik River, Bristol Bay to Demarcation Point.

A generally flat region consisting of wet sedge meadow tundra and sod, this fifty-mile-wide plain is underlain by permafrost 1,000 feet thick which extends out under the Beaufort Sea to the barrier islands. Here it can exceed 2,000 feet in thickness. Here and there claybanks and bluffs and scattered willows break the otherwise monotonous contour of the plain; dotted everywhere with small lagoons, lakes and ponds. During winter this interior water provides an excellent traveling suface. The remainder of the year, however, the entire region is a swampy bog very difficult to traverse.

The larger rivers and their tributaries, which head in the mountains to the south, flow sluggishly down to the Arctic Ocean, almost without exception in a south to north direction. Historically they have provided the main transportation and navigation routes from the interior to the coast. Along their floodplain little vegetation exists; while the banks are often deeply cut and exposed.[13] These watercourses tend to flow in shallow "ribbon" patterns that bisect the tundra plain and terminate in broad alluvial fans, shallow deltas, mud flats and numerous channels with small islands.

The snow which covers the plain from September to late May begins to melt by the first week in April. By the end of June, the ground is exposed and thawed to a depth of a few feet. Flowers begin to bloom and the temperature can climb to forty or fifty degrees Fahrenheit, transforming the normally barren plain into a region of bright color and activity.[14]

THE ARCTIC FOOTHILLS AND BROOKS RANGE

The Arctic Foothills region is delineated by the rising Arctic Plain on the north and the Brooks Range on the south. It is characterized by broad east-west trending ridges and mesa-like hills, buttes, knobs and pingos, separated by intervening tundra plains.[15]

The northern section of these foothills, near Demarcation Point, gradually rises toward the south from 600 to 1,200 feet in height; while the southern section, nearer the De Long Mountains (named in 1886 by Lt. George M. Stoney, USN), rises to a height of 1,200 to 3,500 feet. The southern foothills are more irregular in contour and rise back from the coast opposite Pt. Barrow at a distance of sixty to eighty miles; whereas near Demarcation Point, the northern hills approach to within a few miles of the Beaufort Sea.

As the Arctic Plain rises toward the northern slopes of the Brooks Range, the vegetation changes from sod and sedge meadow tundra to cotton grass, dwarf birch, heath and willow shrubs. The foothills are generally free of snow

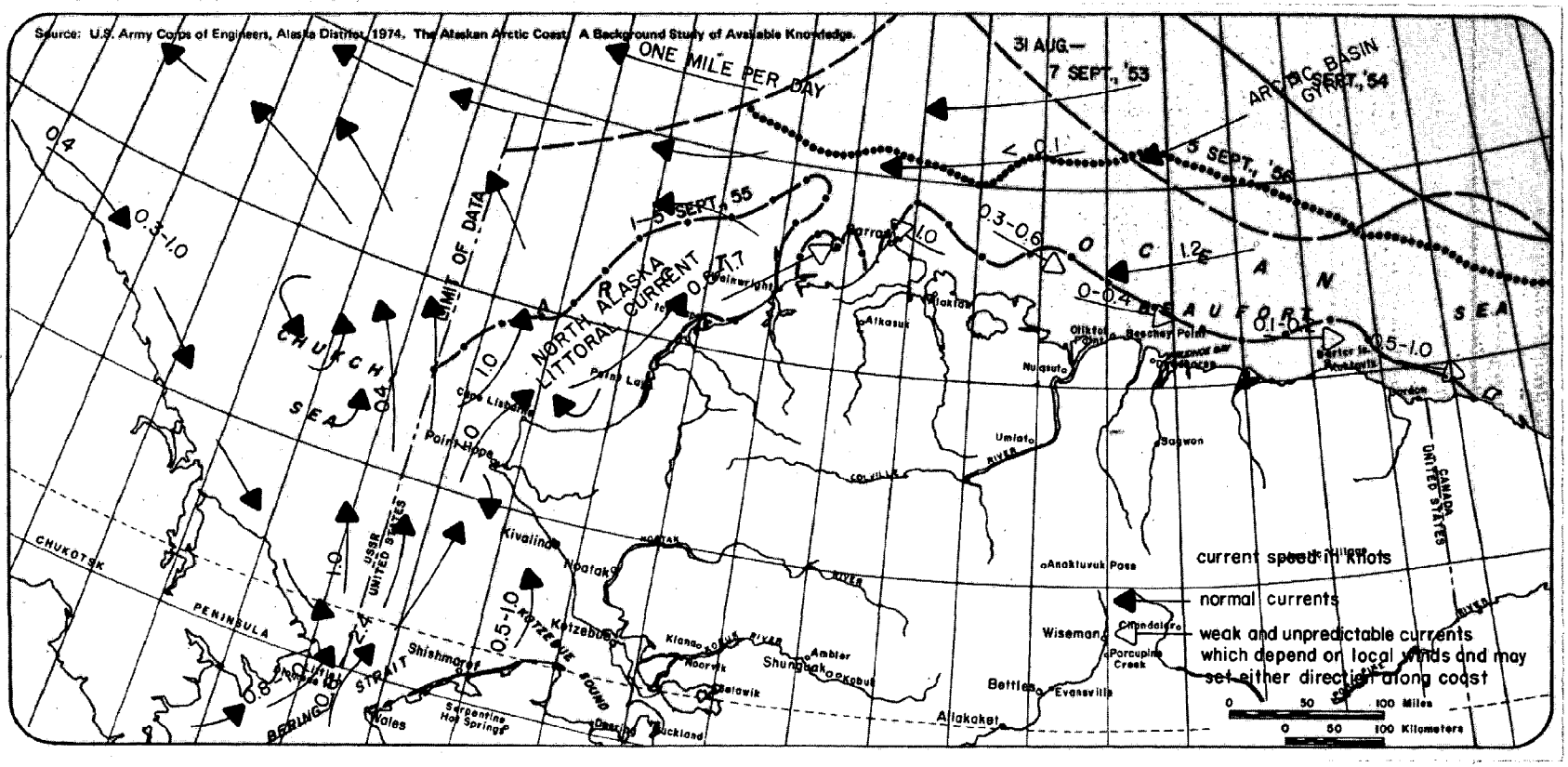
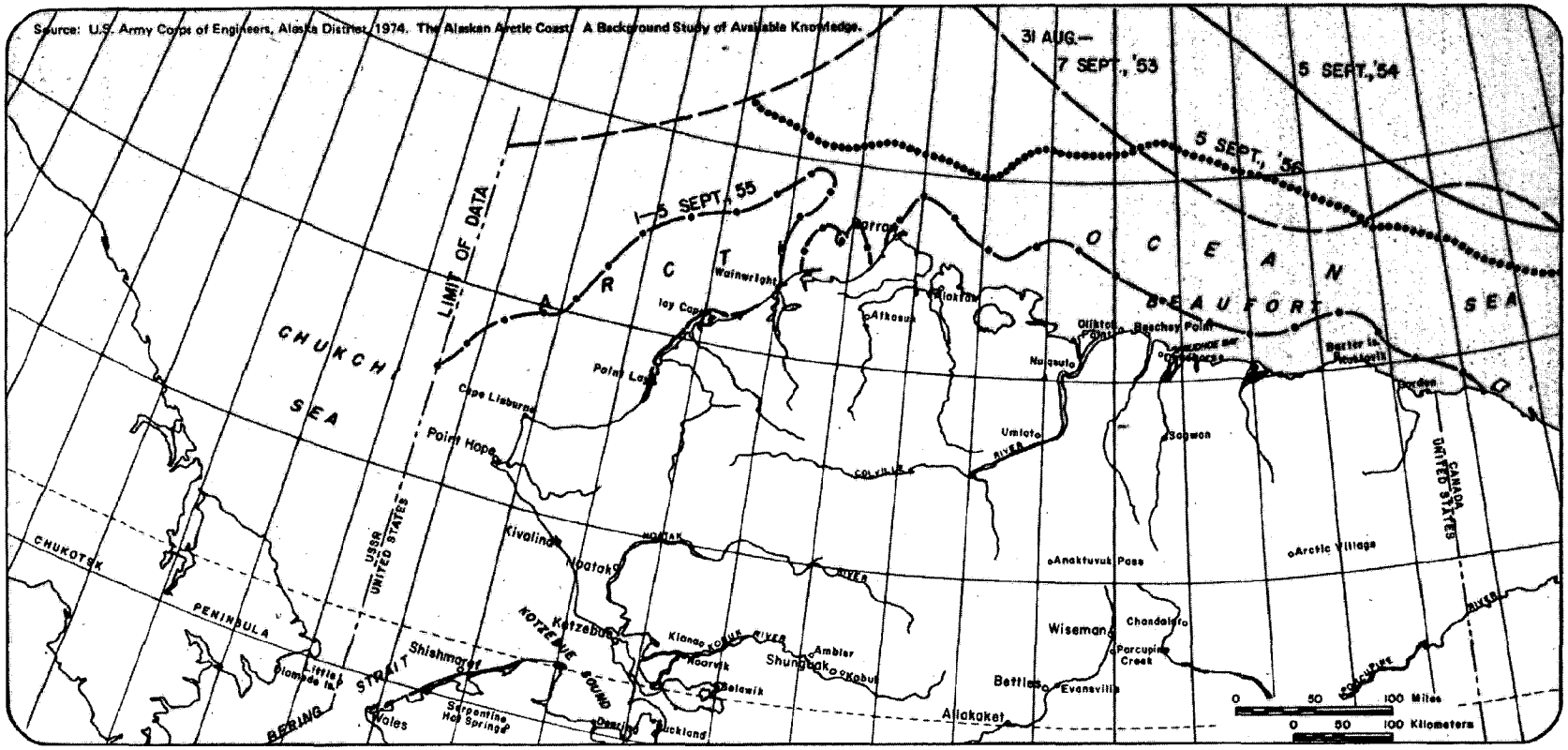
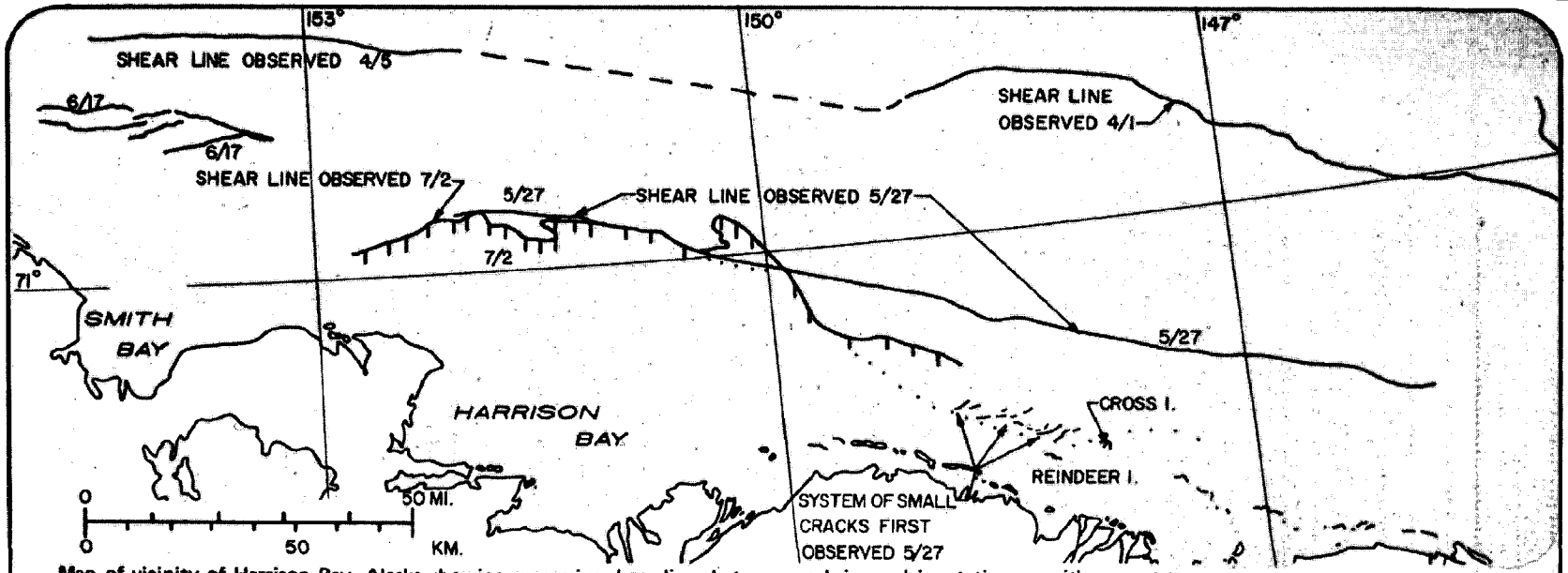


Fig. 3—Beaufort Sea and Chukchi Sea Currents.



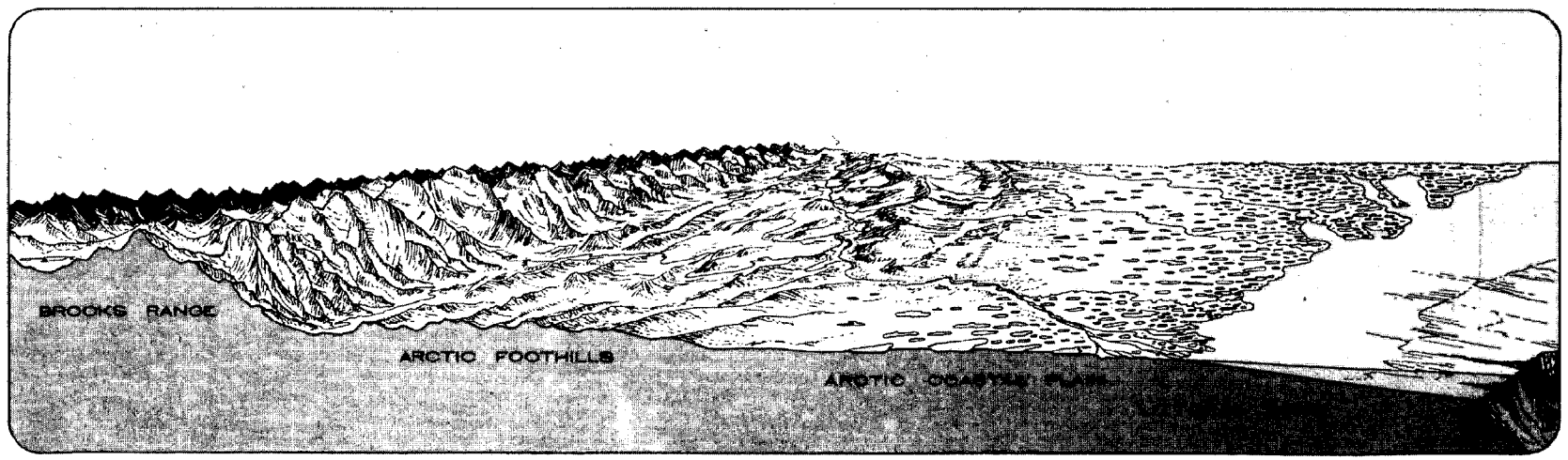
Source: National Weather Service

Fig. 4—Summer Boundaries of Polar Pack, 1953–1965.



Map of vicinity of Harrison Bay, Alaska showing successive shear lines between pack ice and ice stationary with respect to shore during the spring of 1973. Shear line labeled 7/2 for July 2 is believed to be limit of shore-fast ice.

Fig. 5—Offshore Shearline Between Pack Ice and Shorefast Ice, Spring, 1973.



Source: Alaska Regional Profiles, Arctic Region. Division of Policy Development and Research, Juneau, 1975.

Fig. 6—Cross Section of Physiographic Provences of the North Slope.

and ice for the three months, June to September; but there is considerable permafrost, ice wedges, and polygonal ground typical of the North Slope region.

Immediately adjacent to the foothills rise the northern slopes of the Brooks Range, the northern extension of the Rocky Mountain system, which continue to a height of 4,000 to 6,000 feet (named for Alfred Huse Brooks in 1925 and first seen by Sir John Franklin in 1826). [16] Standing above the Arctic Circle, this range extends in a southwest to northeast direction for 600 miles, slanting diagonally toward the coast from the southwest, where it comes within six to seven miles of the Beaufort Sea. Four passes provide access through its 100-mile width to the Arctic Plain beyond: Howard, Anaktuvuk, Survey, and Ulo.

Significantly the Arctic Mountain System drains in three directions; south to the Bering Sea through the Yukon River, west to the Arctic Ocean at Kotzebue Sound via the Kobuk, Noatak and Selawik Rivers, and north across the North Slope to the Beaufort Sea via the Colville, the Sagavanirktok and the Canning Rivers among others. As we shall see, these mountain passes and their major river systems were essential to the subsistence economy and culture of the Northern Eskimo.[17]

THE RIVERS

"Rivers were the primary avenues of inland transportation in aboriginal Northwest Alaska," and this was true for the entire North Slope during the summer travel months.[18] Although for the purpose of this study we are concerned primarily with the area between two of these rivers: the Colville and the Canning, each of these navigation routes (see page 28) was used at one time or another for hunting, trading or transportation purposes. The major divisions or societies of Tareumiut and Nunamiut were often known by their traditional use or occupation of certain areas. Because river navigation was so important, the various societies were commonly known by their proximity to rivers and streams within these areas, in the same way that Tareumiut means "people of" or "inhabitants of" the sea because of the suffix "miut." Thus there were Kobukmiut, Noatakmiut, Killikmiut and Sagavanirktokmiut; there were the Colville People, and there were other groups identified with specific sites or villages such as the Tikiragmiut, the Nuvukmiut, and the Kaktovigmiut.[19]

Within the North Slope and Brooks Range region there are fifty rivers and numerous streams and creeks which comprise this vast interior navigation system; all of them north of the Arctic Circle. [20] Not all of these were as important as others and many were used only infrequently, and particularly so toward the east approaching Demarcation Point.[21] However, several were of historical significance to the northern Eskimo and these included: the Noatak, Kobuk, Utukok, Meade and Ikpikpuk Rivers to the northwest; the Colville, Killik, Anaktuvuk, Chandler, Kuparuk, Ivishak and Sagavanirktok Rivers in the central North Slope-Brooks Range; and the Chandalar, Sheenjek, Coleen, Jago, Hulahula, Sadlerochit, Canning, and the Wind Rivers to the northeast.[22]

THE PEOPLE

There are four major national divisions of the Eskimo: Greenlandic, Asian, Canadian, and Alaskan. Twenty-one groups or societies of Alaskan Eskimo have been identified and of these, eight are Inupiaq speaking, or northern Eskimos.[23] We have discussed above a traditional separation between these groups into two reciprocal societies; the *Tareumiut* and the *Nunamiut*. [24] The remaining major Northern Alaskan Eskimo groups were:

1) *Noatagmiut*, who historically occupied the region inland from the Noatak River and numbered perhaps 400 in the 1880s.
2) *Selawikmiut*, who historically occupied the region inland from Selawik Lake along the Selawik River and numbered perhaps 300 in the 1880s.
3) *Malemiut*, who historically occupied the Kotzebue Sound region and portions of the Seward Peninsula and numbered perhaps 600 in the 1880s.
4) *Kauwerak* or *Kaviaqmiut*, who historically occupied nearly all of the Seward Peninsula and numbered perhaps 900 in the 1880s.
5) *Kovagmiut*, who historically occupied the Kobuk River country and numbered perhaps 500 in the 1880s.
6) *Kingikmiut* (related to the Kaviagmiut), who historically occupied the northwest tip of the Seward Peninsula and the King Islands and numbered perhaps 650-700 in the 1880s.[25]

Of our two main groups the Tareumiut historically occupied the arctic coast from Pt. Hope northeast almost to Demarcation Point and were divided into smaller village subsistence groups normally of 100 to 150 people. These sub-groups were: 1) *Tikragmiut* 2) *Killimmiut* 3) *Kaiakiravigmiut* 4) *Utikiagmiut* 5) *Nuvukmiut* 6) *Tullimanirkmiut* 7) *Kaktovigmiut* and 8) *Palaktokmiut*.[26] Based on information from three nineteenth century explorations of the arctic coast from Cape Prince of Wales to Demarcation Point, the entire Tareumiut population numbered between 1,500 and 2,000 in the 1830s. [27]

The Nunamiut historically occupied the huge interior region north of the Brooks Range and were also divided into various sub-groupings primariily for subsistence purposes. These were 1) *Kanianigmiut* [Colville People] 2) *Killikmiut* 3) *Kanmalikmiut* and 4) *Itkillikmiut* which represented the traditional regional societies. Other smaller groups such as *Ivishakmiut, Ikpikpugmiut,* and *Sagavanirtokmiut* represented only temporary or seasonal Nunimiut societies.[28] It has been suggested that "...in 1800 just over 1,000 Nunamiut were living in the northern Brooks Range [and] this figure probably represents the peak of Nunamiut population in the past hundred years."[29] while others have suggested that the population of the inland regions between 1895–1905 was nearly 3,000.[30] Based on reports from explorations of the northwest interior between 1881 and 1885, the estimated population was 2,380, as compared to the nearly 10,000 inhabitants of the 1700s.[31]

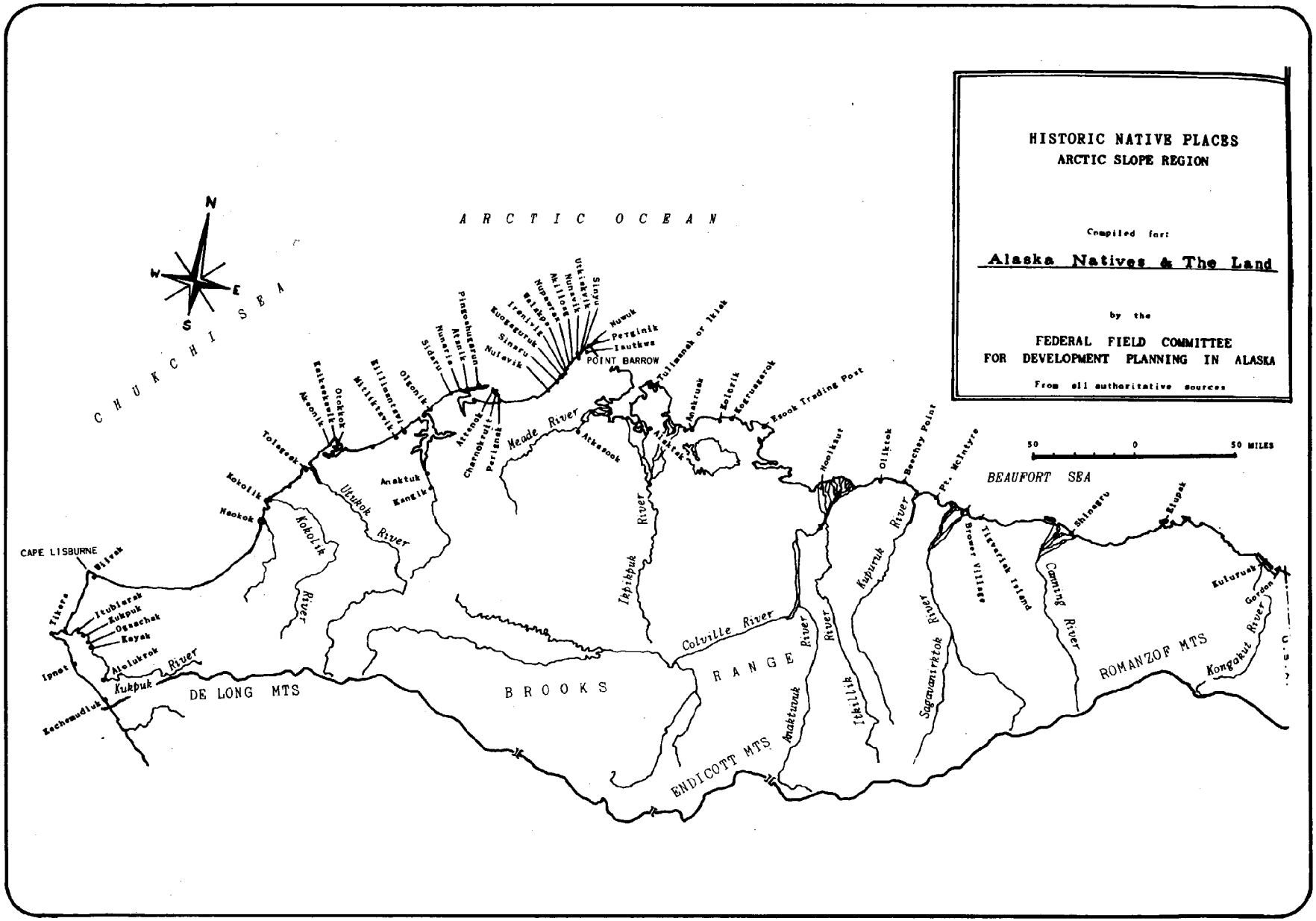


Fig. 7—Historic Native Places, Arctic Slope.

These estimates are significant in reflecting the impact of white Western culture on regional Eskimo populations. Such estimates for the nineteenth century can only be approximate at best and particularly so for the Nunamiut, who were highly mobile and semi-nomadic in their lifestyle as late as the last decade of the nineteenth century. The effects of Western culture in this context and others will be discussed further below.

Because white culture had such a profound influence on the northern Eskimo societies, the history of this process of acculturation has been divided into three or four periods that correspond to certain distinct or important changes within Eskimo culture. These in turn are set against the continuum of alteration that occurred during the hundred year period 1850–1950 in traditional cultural and social values, economy and subsistence practices. These divisions are: 1) precontact and early contact to 1850 2) middle contact, 1850–1914 3) late contact, 1914–1940 and 4) contemporary to present day, 1945–.[32]

PRE-CONTACT AND EARLY CONTACT, 10,000 B.C. to 1850

We know appreciably more about the early cultures of northwestern Alaska than we do about those that must certainly have inhabited the eastern region—the subject area of the present study. As one authority has observed:

> ...the northwestern Arctic is noted archaeologically for its important role in the development of early American cultures and, in more recent periods, the development of Arctic Eskimo culture...[33]

It is possible here to only touch briefly upon these early cultures.

The arctic coast and North Slope region have produced artifacts and sites which indicate that ancient cultures inhabited this area as long ago as 12,000 years B.C. and perhaps as long ago as 30,000 years B. C.[34] These artifacts and sites suggest that several pre-Eskimo cultures such as the Thule, Norton, Choris, Denbigh, Pearyland Dorset and Kahroak existed here in ancient times, as representatives of the Arctic Small Tool Tradition.[35]

Between 9,000 and 2,200 B. C. the occupants of the coastal and adjacent areas were full-time tundra hunting and coastal fishing peoples, dependent entirely upon what the land and the sea offered them. Sites excavated from the upper Utukok River, from the Walakpa Bay region (noted by Comdr. Maguire, RN in 1854 as the "sixth camp site below Nuwuk" on the Chukchi Sea: 71°,08′, 25″ N, 157°, 02′, 45″ W), and from Amak at Onion Portage (Kobuk River, thirty-five miles NW of Shungnak: 67°, 07′N, 158°, 18′W) have provided significant data regarding this period. These sites have demonstrated that ancient cultures have been present in northwest Alaska since the period of sea level stabilization approximately 4,500 years ago.[36]

Other sites uncovered at Denbigh ("Nuklit," east end of Norton Sound in the Reindeer Hills: 64°, 23′N, 161°, 32W), Birnirk ("Pirginik" four miles SW of Pt. Barrow: 71°, 20′, 50″N, 156°, 36″ W), Ipiutak (1.8 miles NE of Pt. Hope: 68°, 21′, 25″N, 166°, 45′, 45″W), Norton (sites on shore of Norton Sound: 64N, 153W) and Choris (Kotzebue Sound, named by Otto Kotzebue, IRN, in 1816: 66°, 17′N, 166°, 53′W) represent later cultures of the period 2,000 B.C. to A.D. 500.[37]

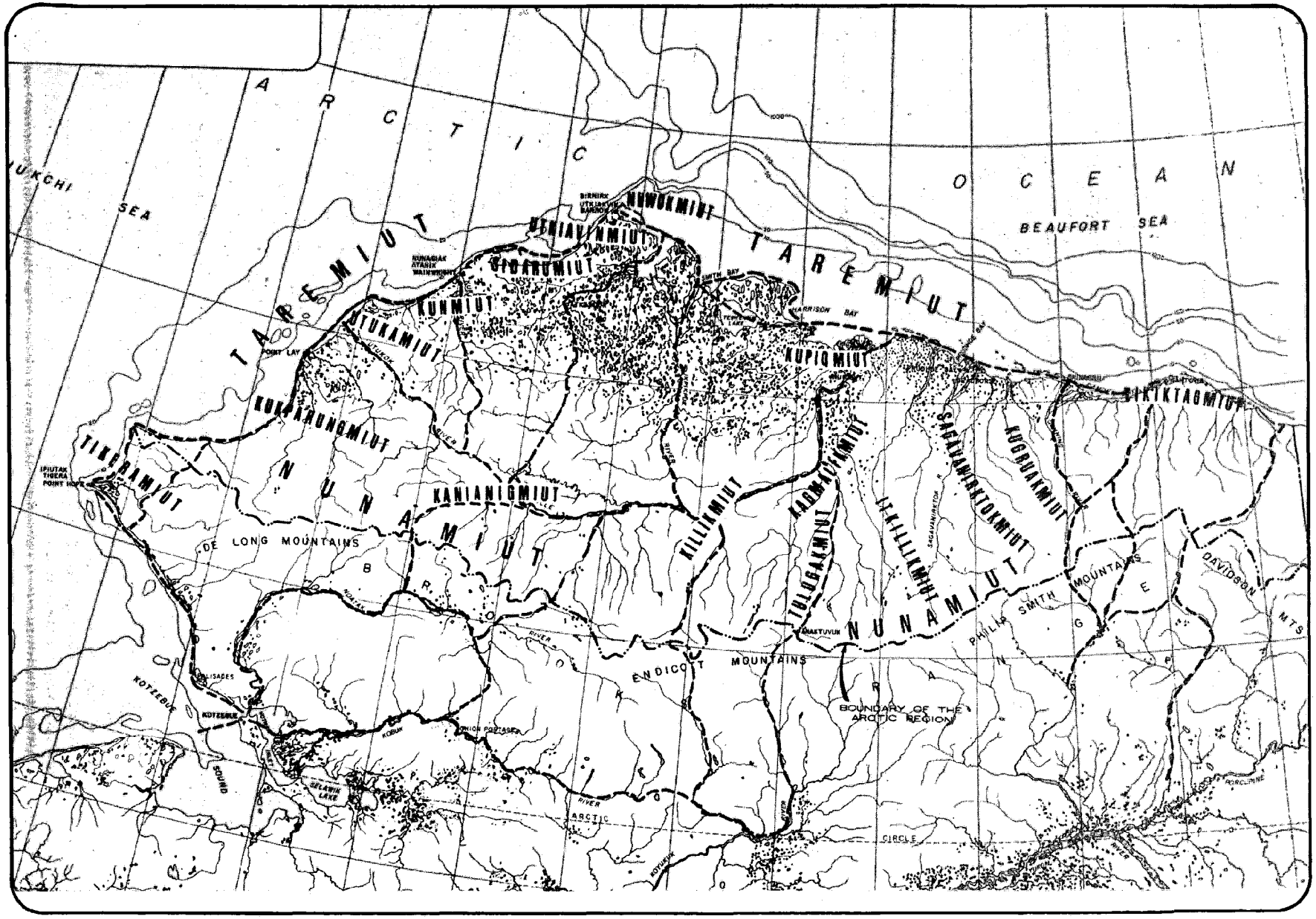
The Eskimo prehistoric period may be traced from approximately A. D. 500 to the era of the Russian intrusions into the Bering Sea (late 1700s), and the archaeological remains unearthed at Birnirk seem to date from the Bering Sea-Siberian culture and help to document the transitional links between North America and the Siberian mainland. An understanding of this cultural progression through several millennium helps us to see these Folsom, or Paleo-Eskimo cultures as predecessors of the pre-Columbian Indian Tribes of North and South America.[38] Because the western North Slope contains the few remaining portions of the Bering Sea Bridge that remain above water, the archaeological remains which may be found there are likely to be extremely important in reconstructing the history of early man.[39]

The ancient northwestern and arctic coastal cultures were the ancestors of the Tareumiut Eskimos of the historic period with which we are concerned. Nunamiut archaeology, however, poses more difficult problems of identification and interpretation. What was the origin of the Nunamiut and when did they first occupy the North Slope interior? Unfortunately at present, no chronological outline of a Nunamiut cultural continuum is available.[40]

From archaeological remains collected in the early 1960s in the Noatak, Koyukuk, and Kobuk River basins; in the late 1960s from the northern tundra region of the Killik River west to Pt. Hope, from the Noatak Valley north to the southern edge of the Arctic Coastal Plain, and from the Tukuto Lake region ("Nioqtun," 20 miles north of Howard Pass); and during the early 1970s in the Atigun and Sagavanirktok River Valleys, and in the Prudhoe Bay region, it is reasonably certain that the people we know as Nunamiut settled in the Arctic Slope and north Brooks Range between A. D. 1500 and A. D. 1600, having migrated from the coast and from the Noatak and Kobuk River regions. While in the eastern arctic interior, migrants from the Beaufort Sea coast (rather than central Alaska) settled there in the late eighteenth century.

> Nearly all the sites east of the Killik River imply that Nunamiut were not present here or to the eastward [*ie. Chandler Lake, Anaktuvuk Pass, Itkillik Lake and the Atigun Valley*] until about A.D. 1800.[41]

Our other source of archaeological and historical data for the eastern interior and Beaufort Sea coast, is the earlier work of explorers and scientists, who were active in this and adjacent regions during the nineteenth and twentieth centuries. These would include: the 1884-1886 expedition of George Stoney and William Howard in the treeless regions of the central and western Brooks Range; to some extent the



Source: *Arctic Regional Profiles*, Division of Policy Development and Research, Juneau, 1975.

Fig. 8—Tareumiut and Nunamiut Territorial Associations.

studies of John Murdoch, who worked among the Barrow people in 1892; Vilhjalmur Stefansson's six year, 1906 1912, explorations and travels among the North Slope Eskimo, in which he traversed the Arctic Coastal Plain inland to the mouth of the Itkillik River; R. M. Anderson's explorations of 1908-1909 which took him into portions of the eastern Brooks Range, from the Romanzof Mountains to the Itkillik; and Ernest de K. Leffingwell's studies of the eastern arctic Nunamiut, up the Canning River from his base on Flaxman Island, 1906-1914.[42]

Despite the pioneering work of these early explorers, and the more recent efforts of archaeologist, anthropologists and historians, knowledge of Nunamiut culture is highly tentative; it has merely lain a foundation for further research and field work. In a call for such studies one authority has observed that

> ...the archaeology, ethnology and natural history of the Nunamiut geographical area relate to an impressive range of research objectives which, while they embrace much, and perhaps all, of the total span of Eskimo history, also include numerous other problems having to do with the lives of hunting peoples in general.[43]

Implicit in such language is the awareness that many questions remain to be answered such as: 1) What other cultures, if any, occupied Nunamiut areas? 2) If there were migrations from the Kobuk and Noatak country, what prompted these people to move and why did they settle beyond the tree line instead of in the highlands? And why, as it appears, did the Tareumiut migrate inland from the eastern Arctic coast to occupy the Arctic Plain, and then not until centuries after the western migrations?[44]

Answers to these questions and others can only come from extensive and long-term field work and research in regions left as undisturbed as possible; in areas preserved for such work; and in localities protected from degradation or destruction by industry or development projects. Relevant to these needs is the observation by one archaeologist that

> Beginning in 1959, intensive private explorations of U. S. oil reserves lying north of the Brooks Range Divide resulted in the looting of numerous archaeological sites by often well meaning but nevertheless highly destructive souvenir hunting members of airborne exploration crews,

and by another who reported that at Chandler Lake

> ....a considerable amount of unauthorized digging has occurred....resulting in destruction of much of the site.[45]

Certainly such activities cannot be attributed only to those involved in oil production and related activities, but these observations stand to illustrate what has already occurred in areas where such development has taken place.

The Interior-Coastal Relationships

Between the coastal Tareumiut, the Malemiut of the Kobuk region, the Noatakmiut, and the interior Nunamiut there was considerable cultural, social and economic interaction from the early historic period through the early twentieth century. The historic Nunamiut also came into contact with the Indians of the southern Brooks Range and the eastern Arctic, and referred to them as Koyukon "Uyagamiut" and Kutchin, or "Tagagavik."[46]

The Nunamiut lived in the region of Survey Pass at the head of the Alatna River and slowly migrated northeast to the Colville River, while others settled in the Brooks Range and on the North Slope. Disputes between the Kobuk people and the Kutchin forced the Indians eastward to the Howard Pass, Nigu River region, where they encountered the Numaniut. The resulting hostility forced the Kutchin still further eastward during the early 1800s. About 1850, according to oral traditions, a great battle was fought at the mouth of the Itikmalakpak River (20 miles NE of Anaktuvuk Pass: 68°, 24′, 15″N, 151, 28′, 00″W) where the Kutchin were beaten and driven south.[47]

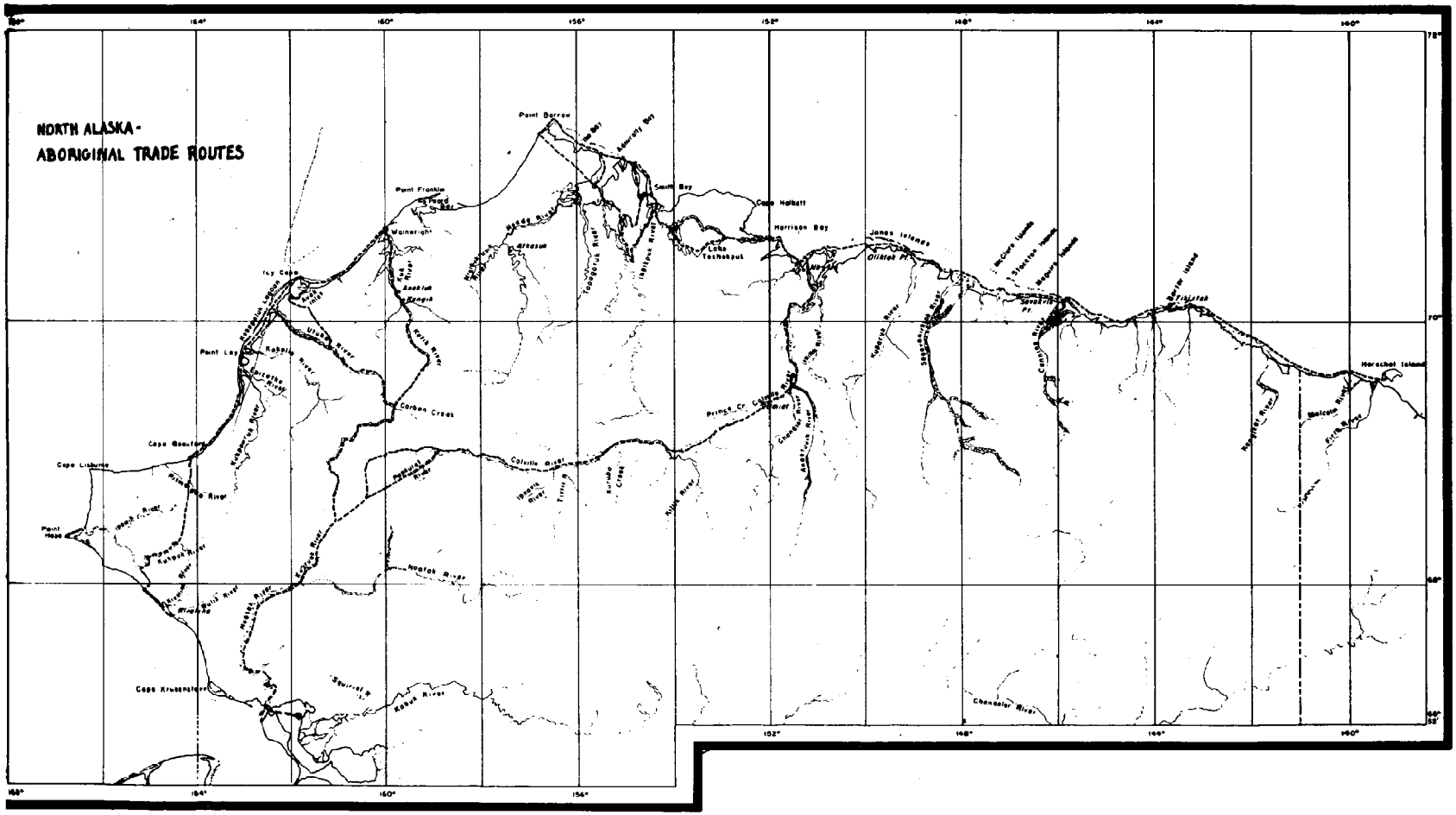
Between the Nunamiut and the Koyukon there apparently was not much contact, although trade goods were exchanged betwen the two via the Kobuk people. Occasional trade fairs and feasts were held, such as the one at Hunt Fork (40 miles South of Anaktuvuk Pass Summit) in the 1880s.[48]

Prior to white contact Nunamiut also migrated to the Arctic Plain and coastal regions in the form of seasonal hunting forays and reconnaissance. It was probably in this manner that the Numamiut first encountered the Barrow people. According to oral accounts, territorial disputes resulted in a large battle between them sometime during the mid to late 1700s near the Colville River delta, where again the Nueamiut were narrowly successful.[49]

It was by such contacts that a well-developed trading interrelationship had been established between the Tareumiut, the Nunamiut and various other Eskimo and Indian groups by the time the Russian voyages of exploration to northern Alaska occurred during the late 1700s. Moreover these contacts included a substantial trade with Siberian Eskimos across the Bering Sea and Arctic Ocean, and these articles circulated along the arctic coast and into the interior.[50]

The Russians only once (in 1838) ventured as far north as Beechey Point, but their trade goods had preceded them even as far eastward as the Mackezie, where they were in use prior to the British explorations of the late 1700s. Such items as copper kettles, tobacco, knives and tinware were traded by Barrow people to Mackezie people for wolverine skins. This exchange occurred at the great Arctic trading site of Negalik (Nirlik) at the mouth of the Colville.[51]

Nirlik was the nexus for the interior and coastal trade of the arctic Eskimos, and as such, it heavily influenced social



Source: Robert F. Spencer, *The North Alaska Eskimo: A Study in Ecology and Society* (GPO, 1959).

Fig. 9—Aboriginal Trade Routes.

and cultural interaction between the peoples of various regions. The Kobuk and Noatak people traveled down the Colville in the spring to trade and returned in the summer to the interior to hunt (details in the chapter on Subsistence). The Barrow people came to Nirlik for the great trade fairs and some even went further east to Oliktok and Barter—and later to Herschel Island. At Barter they were met by the Mackenzie and the Coppermine Eskimo and the Kutchin Indians, who traveled the east fork of the Chandalar through the Brooks Range, and down the Hulahula River to Barter Island.[52]

During the winter months, Barrow people often traded into the interior via the Colville system, and they visited Nunamiut villages and family sites on the *Kongakut, Sagavanirktok, Itkillik, Ikpikpuk, Utukok, Kukpuk, Canning, Kuparuk, Anaktuvuk, Meade,* and *Kokolik* Rivers.[53]

The influence of white culture spread slowly from the Kotzebue Sound region beginning in the 1700s across the interior and along the arctic coast, primarily in the form of trade goods and technology. News of Russian and British explorations of the Bering Sea, interior Alaska, and Canada had most likely reached the interior by 1815, via the contracts between the Nunamiut and the coastal groups and through their trade to the east.[54]

But there was no actual contact with Western civilization until the British navy rounded Pt. Barrow and entered the Beaufort Sea in 1826. Moreover, those articles of Western civilization that had reached these northern people had very little impact on the Tareumiut east of Barrow or the Nunamiut of the interior. Western goods were sought as prestige items as well as for their utilitarian values, but their introduction into Eskimo society had no appreciable effects on their social structure or subsistence hunting culture in this early period.

Exploration and Cultural Intrusion

The exploration of the arctic coast began with the voyage of Captain W. F. Beechey, RN, in 1826, a voyage which took him as far north as Pt. Franklin (near 71°, 23′, 31″N, 156°, 21′, 30″W). There a long boat was sent to explore the coast northward when the *Blossom* could proceed no further because of ice. This small boat reached the point of land on which the Eskimo village of Nuwuk was located, but Beechey decided to rename it "Point Barrow" in honor of Admiral Sir John Barrow "to mark the progress of northern discovery."[55]

For the next eighty-six years the exploration impulse brought at least fifty separate expeditions to the arctic coast beyond Pt. Barrow (east to the Mackenzie Delta and from the Atlantic west toward Siberia), as Englishmen, Danes, Norwegians, and Americans searched for the fabled Northwest Passage.[56]

How did the Eskimo react to this sudden appearance of Western civilization? At first there was mutual apprehension and some hostility. Beechey was afraid of the "natives" and did not go ashore; while the Russians, under Kashevarof, were actually driven from Beechey Point in 1838 and apparently harassed all the way back to Kotzebue Sound.[57]Within a few years, however, this adjustment period had ended and relations began to improve, primarily because in the initial trade between white and Eskimo "quality" goods were exchanged of mutual satisfaction to both parties. The hostility of the environment also necessitated at least a working relationship conducive to cooperation and survival.[58]

Perhaps the one feature that emerges clearly from the accounts of early explorers is the activity and evidence of habitation they encountered all along the coast between Pt. Barrow and Demarcation Point. Fortunately we have evidence that the arctic coast at one time supported a substantial population; for now it is virtually deserted and has been since the 1940s. In 1953 only one family lived permanently along the 500 mile coast between Barrow and Barter Island. Moreover, this reconnaissance of the coast revealed that

> ...there was a great deal of evidence of past habitation. House sites and camp sites, some only a few years old, were situated on almost every ideal hunting point. Refuse in abundance attested to the amount of former activity...only scattered camp debris and the sod walls of roofless houses remain as a mute testimony of all this activity...where have all these people gone?[59]

The answer lies essentially in the cultural impact of Western civilization and the drastic economic and social changes it produced among the northern Eskimo. To be sure the seasonal nature of the Tareumiut and Nunamiut hunting culture, and the harsh realities of a subsistence economy, meant that large numbers of people were on the move during the spring and summer months and that villages or camps had to be small to insure adequate food for the inhabitants. This, in addition to the Eskimo habit of frequently changing house location, accounts for the numerous sightings of traveling Eskimos and observations of apparently abandoned tents, karigi, umiaks, and ikirraks throughout the early contact period.

Also in 1826, Sir John Franklin traveled down the Mackenzie River to the Beaufort Sea and then west toward Pt. Barrow, but was forced to abandon the effort at Return Island ("Oloiktome": 70°, 27′N, 148°, 47′W, 13 miles north-east of Gwydyr Bay). During his expedition Franklin noted Eskimo huts, tents, camps and umiaks all along the coast from Demarcation to the west of Barter Island in Camden Bay.[60]Later explorers such as Thomas Simpson, Peter Dease, William Pullen, Thomas Moore, Robert M'Clure, Richard Collinson, Rochfort Maguire, John Simpson, and M.A. and C.L. Hooper all confirmed the habitation of the coast.[61] For example, these sightings are representative of their observations:

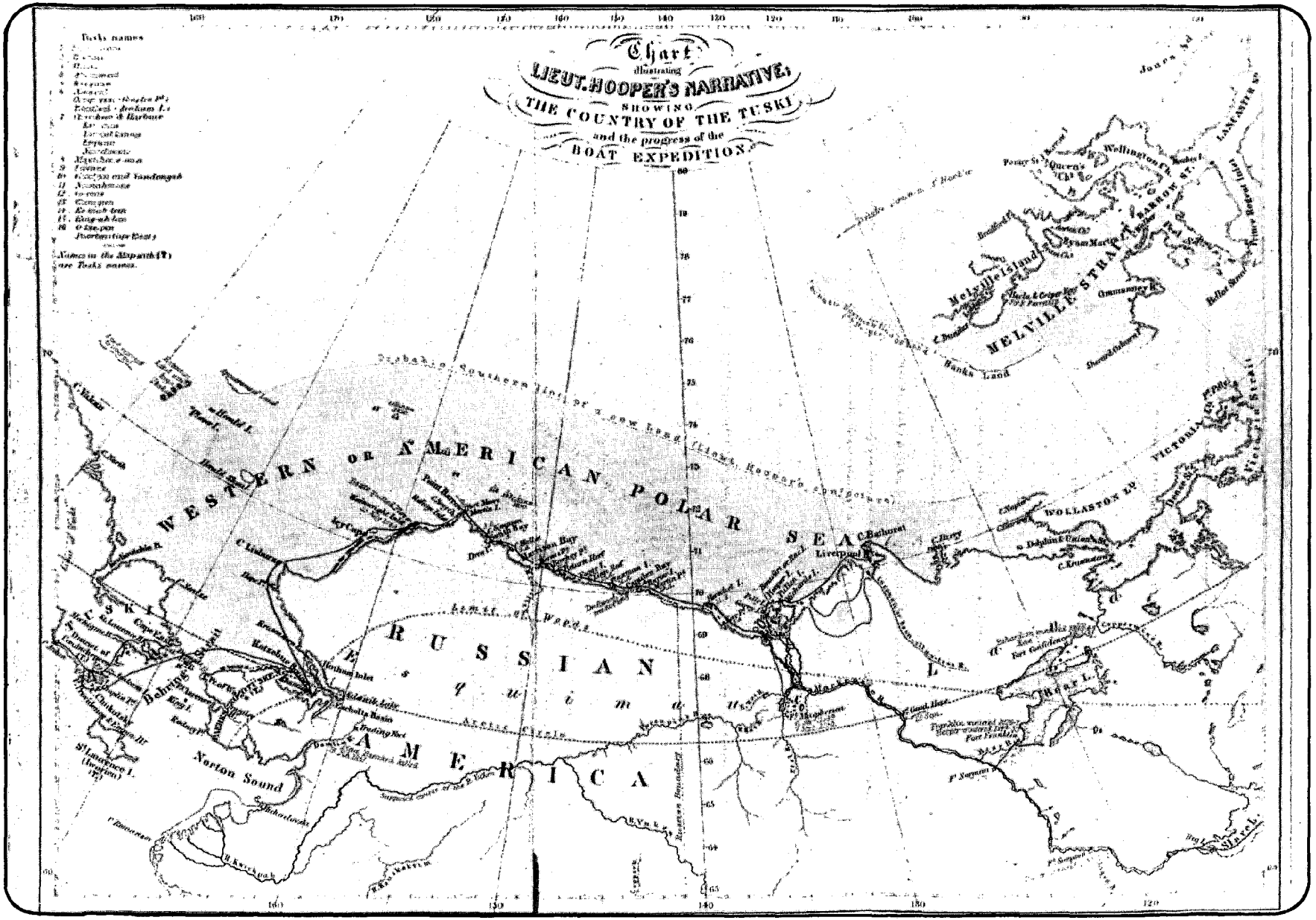


Fig. 10—Map of W. H. Hooper's Explorations.

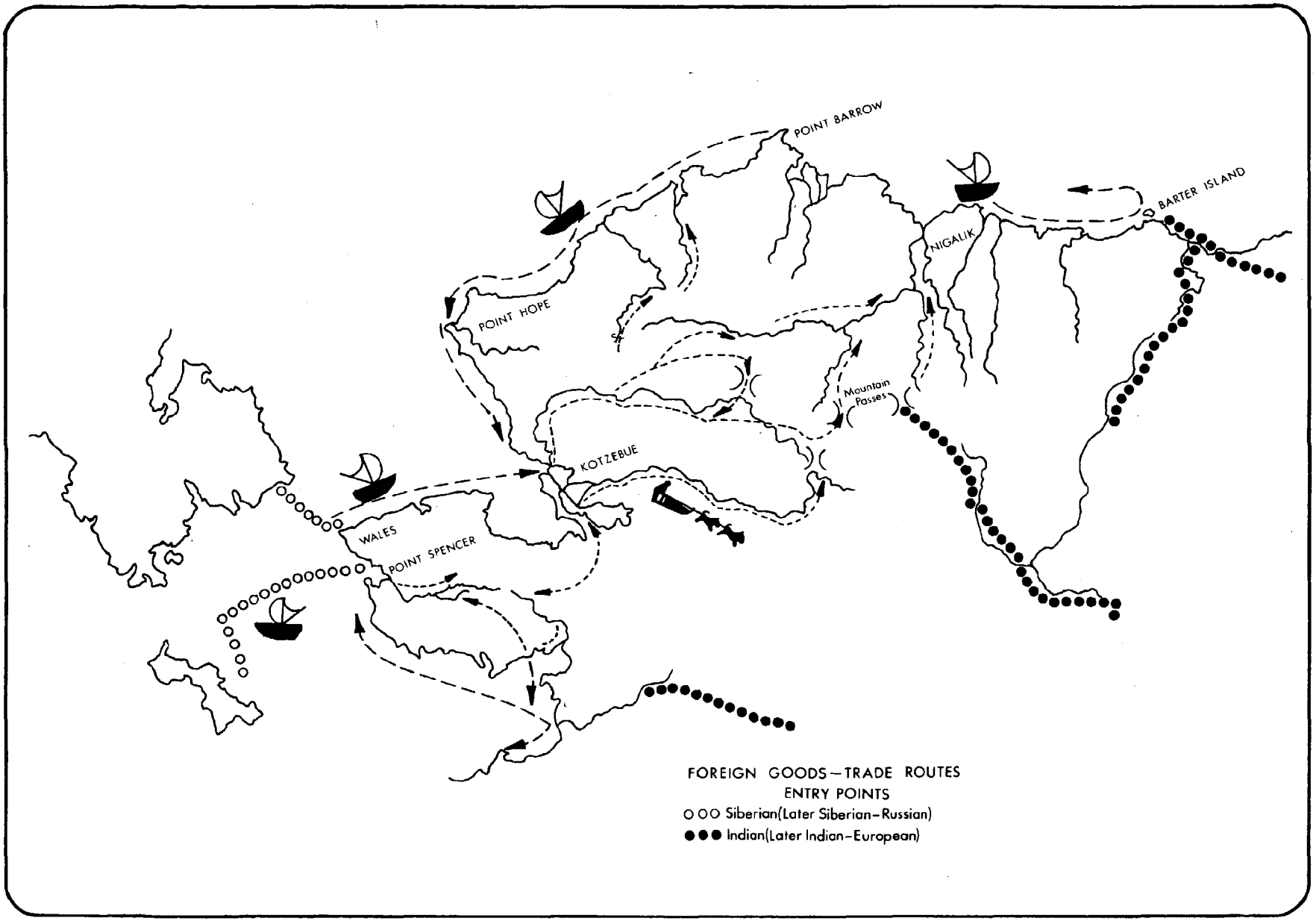


Fig. 11—Introduction of Foreign Trade Goods.

Table 1
Mid-Nineteenth Century Sightings of Eskimos in the Beaufort Sea Region

July, 1826	Franklin	W of Barter	"large tent, 18 sleds".
Aug., 1837	Simpson	Barter	"one tent".
		Canning R.	"large camp".
Aug., 1849	M. A. Hooper	E of Barter	"eight tents, one driftwood hut".
		Humphrey Pt.	"four tents, 24 people".
		Icy Reef	"two boats, several huts".
		Pt. Berens	"Barrow People, 100. 13 tents, going west".
		E of Berens	"One umiak, 24 men, one woman".
		E end of Jones Is.	"native party and two goodly collections of tents, five boats, 16-20 in each".
		Beechy Pt.	"84-85 men".
		Return Reef	"three boats from village".
Aug., 1849	Pullen	near Beechy Pt.	"100 men".
		W end Return Reef	"two boats, 40 men".
		E end Jones Is.	"four boats, 80 men".
Aug., 1850	Simpson	Pt. Berens	"Barrow people here after July 26, Colville people have then gone inland".[62]

These observations were not merely isolated contacts, but rather are indicative of the traditional use and lifestyle of the northern Eskimo during the summer months of seal, walrus, and whale hunting and of their established trading activities.

In 1852 Surgeon John Simpson, a member of the British naval search expedition to the Arctic looking for traces of the Franklin party, observed that

> Fourteen parties, fourteen boats, and 74 persons passed ship [*Plover*] on 3 July, 4th day at Dease Inlet. They cross the river at Dease Inlet [*Mayoriak*] and cross by umiak, and at Smith Bay they leave their sledges and take to boats. The route was probably up the Ikpikpuk River, across Teshekpk Lake to Harrison Bay and the Colville River. They net fish, catch a few birds, and occasional deer on the route.[63]

Simpson also noted that a regular trading network existed and that between the major centers "there is a yearly communication."

> At the Colville meet the nu-na-tang-meun about 26 July. The 6-8-10 days of barter terminated, [Noatakmiut] back down Colville. Barrow People to Pt. Berens [*Oliktok*], then on the Barter Pt. [*Kaktovik*].[64]

In 1850 *HMS Investigator,* Commander Robert M'Clure, sailed arctic waters in search of Franklin, and on board was a Moravian missionary (and Eskimo interpretor) named Johann Miertsching. M'Clure is credited with discovering the Northwest Passage, which he reached from the Atlantic, and both he and Miertsching recorded their observations of the northern coast.[65]

Fig. 12—Whalemen in Fur Suits.

> At the mouth of the Colville a depth of 3-6 fathoms was recorded seven miles offshore, [and Miertsching noted that] today in the bitter wind no Eskimos came to the ship. We saw many of their tents on this coast.[66]

The *Investigator* sailed on until at 70°, 36'N, 150°, 16'W they came upon a

> ...low island of gravel, devoid of vegetation, but covered with driftwood, containing trees 56 feet long, and two-and-one-half feet in diameter towards the root. Of men or of their dwellings no trace could be seen [*this must have been either Thetis or Leavitt Island; the trees either from the Mackenzie* or the *Siberian coast*]. 9 am. came two umiaks full of Eskimos bringing small fish and sea fowl to barter with, for these they were paid well and received an assortment of gifts....[67]

As they approached "Johns Island" (Jones Island) they encountered "many Eskimos who had hoisted a flag on a pole":

> These Eskimos had a very pleasing appearance; they were well clad and clean. . . .Their fine clean tents with their families stood on a sandy knoll at a little distance from the beach. During the winter, they told us, they live three day's journey inland; for three months only in the summer do they bring their families to live in tents on the seashore. Some of these families travel each summer to Nuniwokingok along the coast, where they meet and do business with the Eskimo who dwell farther to the east [*no precise location obtained*].[68]

Miertsching was told that not far from Jones Island lived the "Nunatarmiuts," but that no meeting had as yet taken place. Before leaving, Captain M'Clure gave the chief a boat's flag and asked him to "forward a letter to the Russian traders on the Colville River," and this the chief promised to do.[69]

MIDDLE CONTACT: 1850-1914

Whalers

It was during this span of nearly seventy years that the eastern Arctic regions were opened to Western culture, primarily through the commercial whaling industry, but also through the activities of traders, scientists and missionaries. These years witnessed the rise and fall of the New England and west coast based whaling industry, which began sending ships into the Arctic Ocean to fish in the 1850s. By 1880 more than 300 vessels were likely to be operating off Pt. Barrow and to the east, with a few even wintering on the ice because they failed to get south in time.[70]

If the Tareumiut and other groups with whom these whalers interacted were "uncivilized," they as their opposites, were often little better. Despite the tall tales there was no glamour in the life of a whaler. Crews often consisted of "illiterate, ignorant New England farmers, convicts, Figians, Kanakas, and Hawaiians," who lived by the harsh code of the sea and were notorious hell raisers. In the Arctic it was no different.[71]

But a whaler's life also had its dangers. In the years prior to the industry's zenith in the Arctic, fleets suffered three major disasters, and almost yearly lost ships to the floes and storms of the Bering, Chukchi and Beaufort Seas.[72]

In the loss of thirty-one ships off Belcher Point in 1871 (13 miles northeast of Wainwright: 70°, 47', 40"N, 159°, 32', 02"W) an incident occurred which illustrated the effects of the introduction of alcohol into Eskimo-Native society and what happened when ships were abandoned to the ice:

> . . .as soon as the crews were clear of the stranded ships the natives hastened on board in search of the esteemed beverage. Everything they could find in bottles they took along with them, contents of the medicine chest and all, and returned home to enjoy the plunder. It ended in poisoning the whole village. At the present day in their underground houses, may be seen the remains of whole families who died just as they sat, poisoned by the medicine, which in their ignorance, they mistook for whiskey.[73]

But the introduction of whiskey and other alcoholic beverages into northern Eskimo society was perhaps only the most obvious of those features of white culture so destructive to the Eskimo. Indeed,

> . . .in almost all major aspects; such as physical appearance, village organization, dwellings, social organization, social relationships, and economic status, the Eskimo [has] been negatively affected by early contact with whalers.[74]

Although the whalers were clustered at first near Pt. Barrow (Cape Smyth or "Utkiakvik" as the town was called), and then only during the short summer season, they soon pushed eastward into the Beaufort Sea, skirting the shallow waters of the barrier islands, and on to Barter Island (Kaktoavik or "whaling place") and Herschel Island (35 miles east of Demarcation Point), where the bowhead whale were numerous.

In examining the diaries and logs of the whalers, it can be easily seen that they soon became expert in their knowledge of the coast and the islands east of Barrow. They frequently went ashore or stopped to trade with the inhabitants. However, it is often difficult to establish identity of various sites because as Leffingwell noted, "there is no settled usage among the whalers."[75] Nevertheless, a glance at the map reveals the age-old practice of naming geographic features after those things most closely associated with them at the time of their "discovery." This was certainly the case in the Beaufort Sea and those named below serve to remind us of the mixed historic character of the arctic coast: Eskimo and white.[76]

As one explorer phased it, "every whaling captain that ever visited these waters, every trader, every squaw man on this coast has his island or that point."[77]

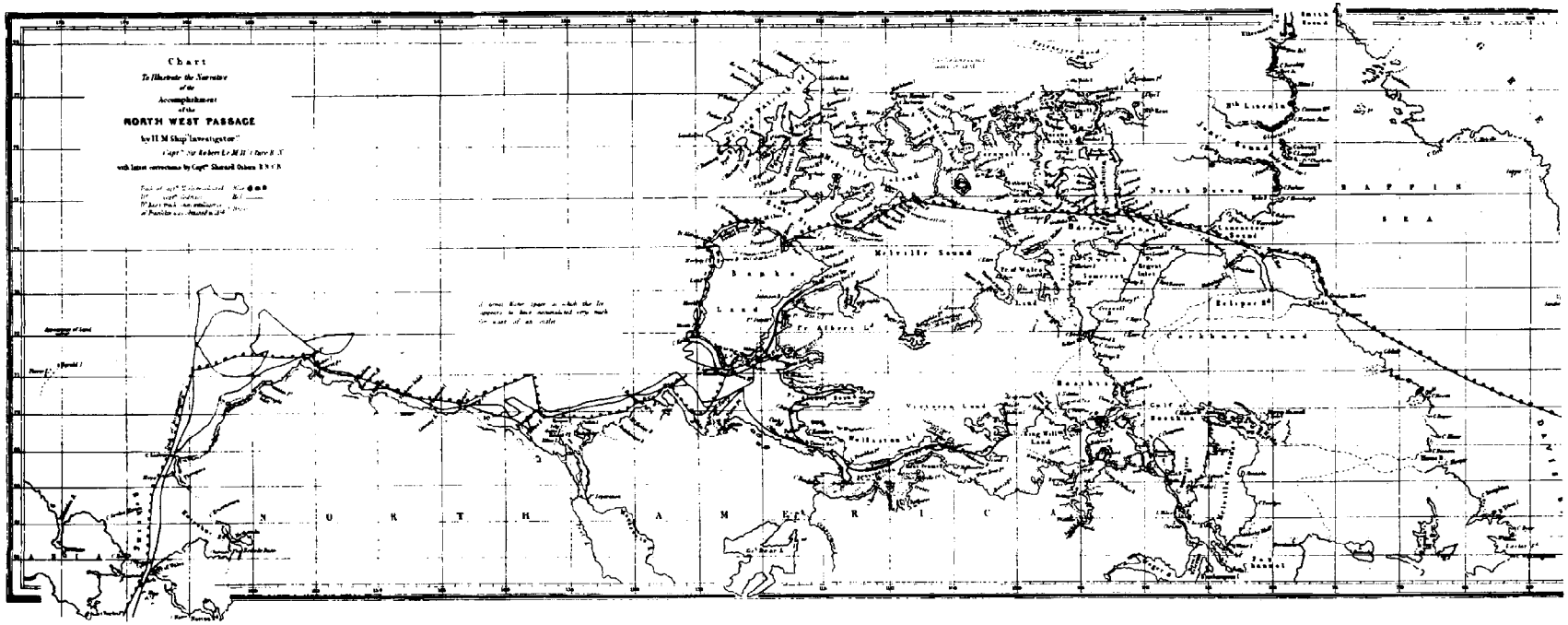


Fig. 13—Ship Tracks of HMS Investigator.

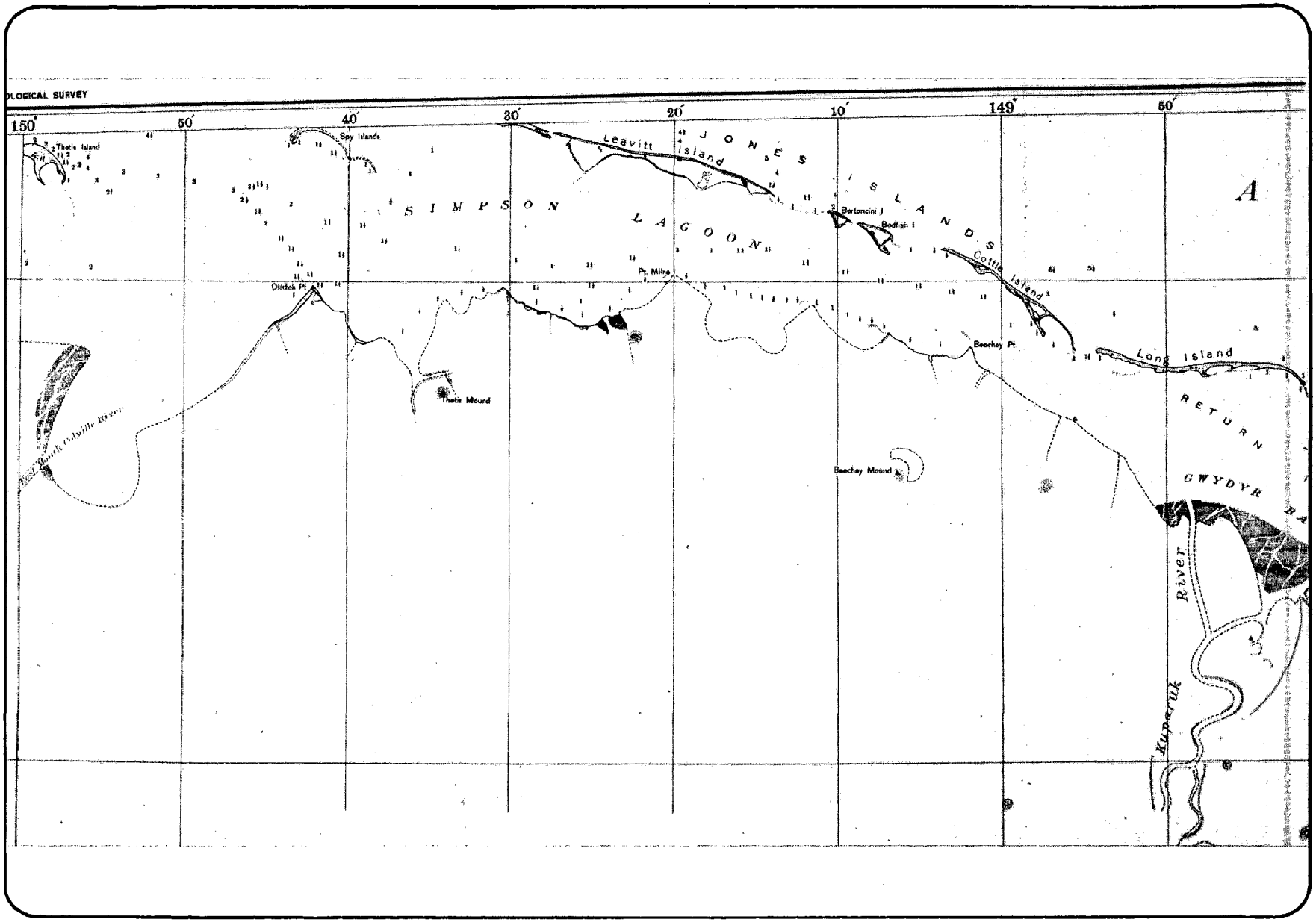


Fig. 14a—Leffingwell's Map of the Beaufort Sea Coast.

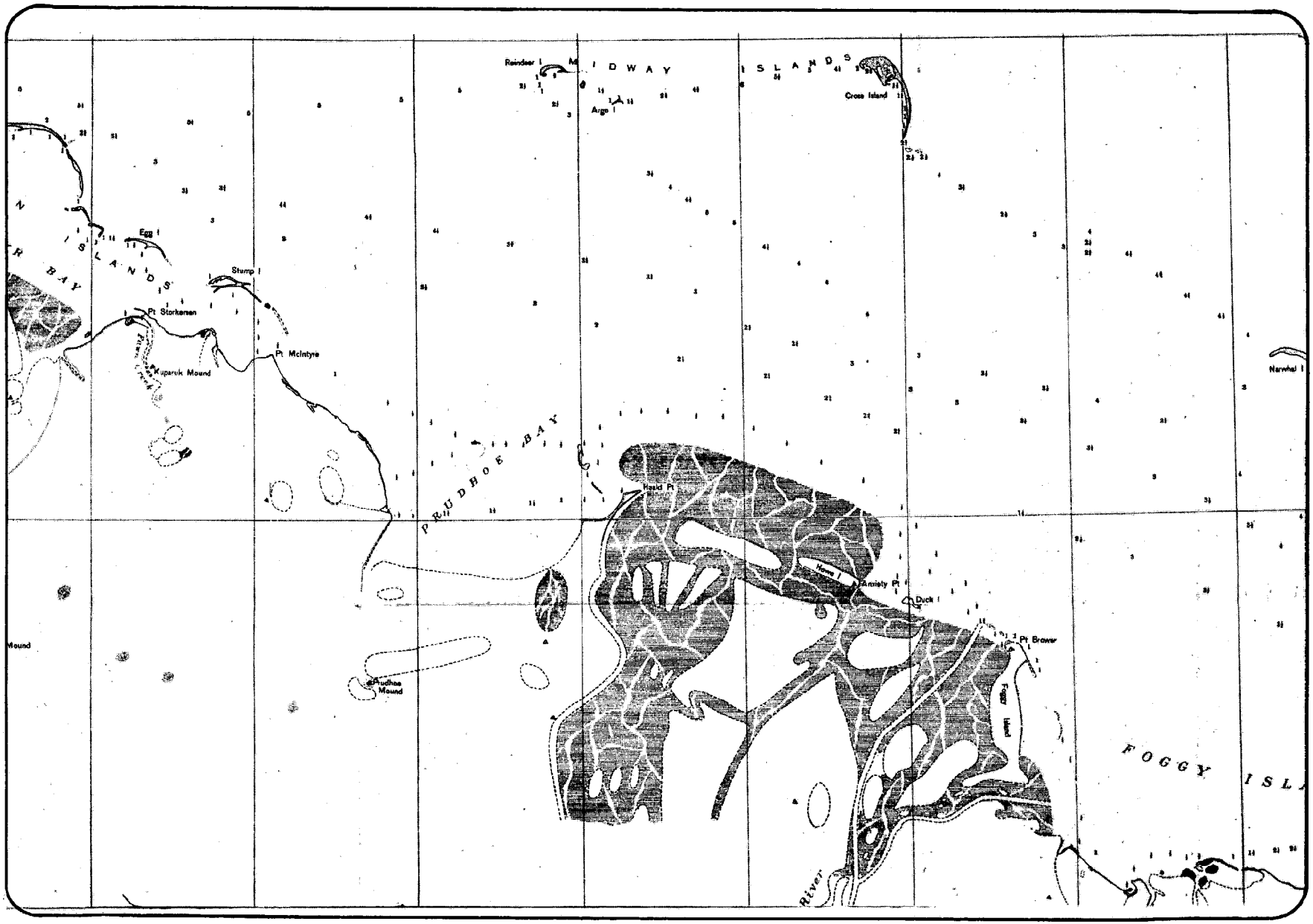


Fig. 14b—Leffingwell's Map of the Beaufort Sea Coast.

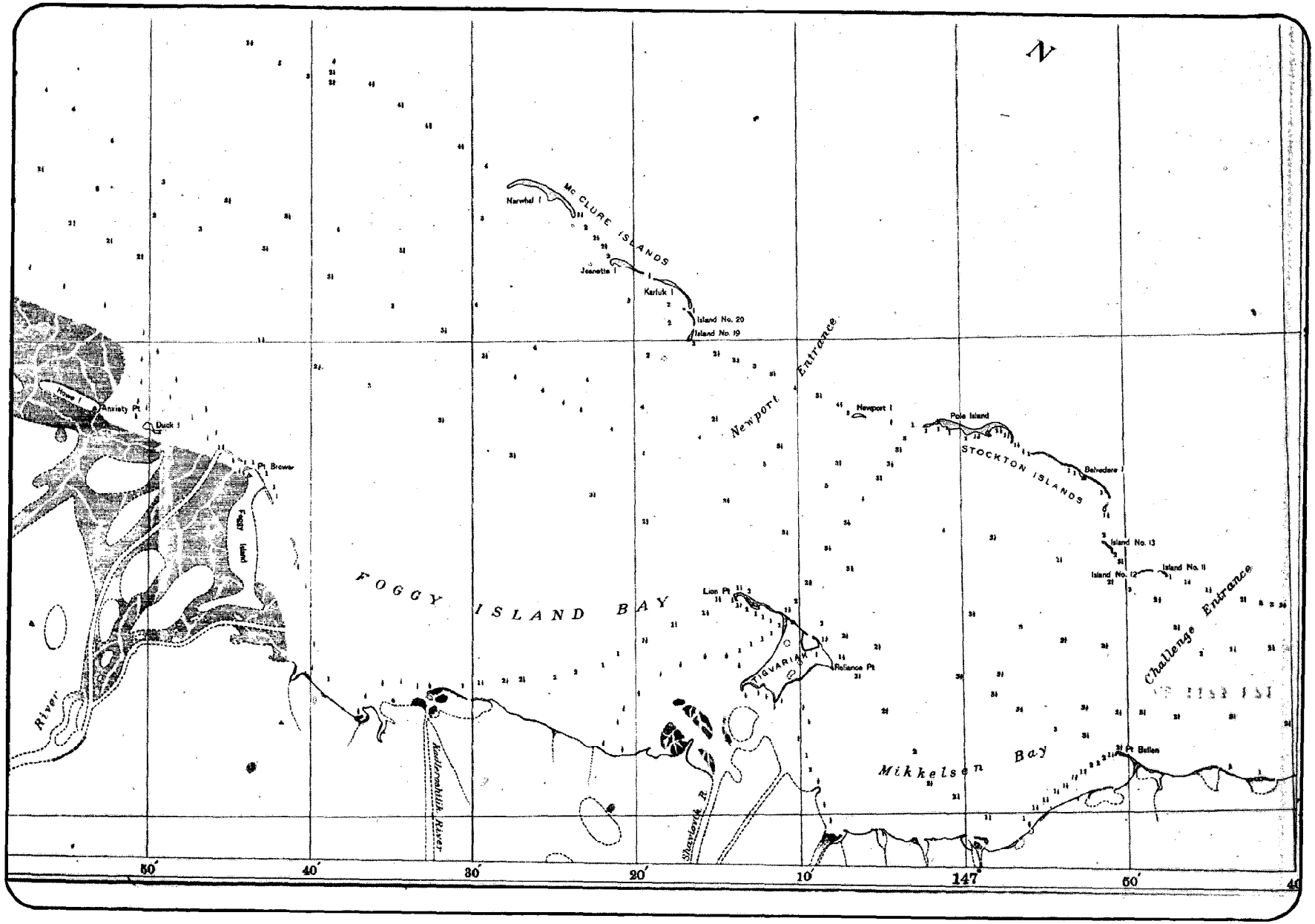


Fig. 14c—Leffingwell's Map of the Beaufort Sea Coast.

Table 2
Origin and Historic Significance of Barrier Island Place Names East of the Colville River

Long Island	for Capt. Long of the whaling fleet.
Pole Island	for direction pole erected by whalers.
Cross Island	for grave of whaler marked by cross.
Cottle Island	for Capt. Steven Cottle, whaler.
Bodfish Island	for Capt. Hartson Bodfish, whaler.
Leavitt Island	for Capt. George Leavitt, whaler.
Bertoncini Island	for Capt. John Bertoncini, whaler—"Johny the Painter".
Jones Island	for Reverend Davis Jones of Red River, Canada, NWT.
Reindeer Island	for the ship wrecked near there.
Narwhal Island	for Capt. Leavitt's ship.
Challenge Entrance	for ship of Canadian Arctic Expedition of 1913.
Karluk Island	for Capt. Cottle's ship.
Belevedere Island	for the whaler Belevedere.
Alaska Island	for the schooner of the Canadian-Arctic Expedition.
Duches Island	for the ship Duchess of Bedford, Anglo-American Expedition, 1906–07.
North Star Island	for vessel of Canadian Arctic Expedition.
Mary Sachs Island	for vessel of Canadian Arctic Expedition.
Stockton Islands	for Rear Admiral C. H. Stockton, USN.
Maguire Island	for Comdr. Rochfort Maguire, RN.
Flaxman Island	for the sculptor John Flaxman.

COMMERCIAL INFLUENCES

During the winter of 1894-95, eighteen ships wintered at Herschel Island, or north of it; and their crews, numbering nearly 1,000 men, made the island their home for the long cold winter months. Charles Brower, the well known trader of Pt. Barrow, noted that "Eskimos are now wintering at Herschel. . .Barrow Eskimos went with them to hunt."[78] In effect the economic and social foundations of Eskimo society had already undergone irrevocable alteration. With this establishment of a permanent base, the whalers soon began to carry large inventories of trade goods east on their voyages to the Arctic in anticipation of lucrative exchange at Barrow, Flaxman, Beechey Point, Barter Island and other posts operated by Brower and a few independents in competition with the Hudson's Bay Company posts at Herschel and the Mackenzie Delta.[79]

Illustrative of such trade was the voyage of the whaler *Beluga* in 1902 which carried, among other things: forty-nine rifles, five shotguns, 39,000 cartridges, reloading tools, powder, lead, and shot; and such things as denim, calico, foot and hand sewing machines, chewing gum, tobacco, bread, flour, molasses, sugar, tea, dried apples, three phonographs, 110 records, clocks, primus stoves, scissors, hammers, spy glasses, screw drivers, boat compasses suspenders, paint, playing cards, and "one house 30 X 20 feet cut and fitted."[80]

But there were also others who traded in the Arctic, whose cargo consisted mainly of liquor and firearms. They outfitted in Hawaii, San Francisco or Santa Barbara and even further north, and made their runs into the Bering and Chukchi seas. Of course the customs laws forbad such trade; but unless caught, these traders made tremendous profits. Enforcement of the customs laws was entrusted to vessels of the Revenue Cutter Service which regularly patrolled coastal and offshore waters, in the attempt to at least discourage illicit trafficking. The cutters *Bear*, *Corwin* and *Thetis*, in particular, were regular sights in the Arctic for most Eskimos and whalers, and now and then they were successful in seizing a contraband cargo.

In 1886 the *Bear* boarded the *Clara Light* of San Francisco Registry at 63°, 42'N latitude, and found the crew drunk and in possession of 8,000 Winchester cartridges. As the *Bear* approached, twenty-six barrels of whiskey and two cases of rifles were thrown overboard. Such incidents were indicative of the kind of exploitation that had been occurring for years since Alaska was purchased. Seven years before, traders outfitted in Santa Barbara and Hawaii had cleared port with over 11,000 gallons of "spirits," many stands of arms and thousands of cartridges.[81]

Captain Bodfish remarked of their business:

> As for trading it [liquor] to the Natives, it was done certainly. . .but no man would ever enjoy good fortune who gave the Natives liquor. . . .If I knew anyone who was going into the Arctic I would certainly advise him to peddle no liquor to the Eskimos.[82]

The effects of this trade among the inland people and those who lived on the coast were tragic. Again Bodfish noted:

> There used to be five or six hundred Natives on St. Lawrence Island before my time, but when I went there a very few were left. The whiskey traders had been there and had kept the Natives drunk all through the summer, so that they couldn't hunt and lay up food for the winter. The result was they starved.[83]

The larger question of the significance of these influences, and the one that is most relevant to this study, will be discussed in the chapter on "Subsistence," but there is no question that: "The changes introduced by the white man were profound. The Eskimo. . .almost completely adopted his methods and materials.[84]

Besides liquor, disease had the greatest local effects on Tareumiut and Nunamiut Eskimos of the North Slope regions. Disease in the Arctic was practically unknown in epidemic form prior to 1855 when American whalers and

traders arrived. According to Petroff, the French Explorer La Perouse noted pox marks among the Natives as early as 1786.[85] Siberian epeidemics spread eastward with trade in 1653, 1691, 1768 and 1774 to the central Alaskan coast. Syphilis was introduced at Unalaska in 1778, and Zagoskin noted the reluctance of the Natives to trade out of fear of disease in 1838. However he observed that it did not appear as though the disease existed north of the Kuskokwim-Yukon region as of the 1840's.[86]

Measles was also a killer among Natives and major epidemics struck Sitka and north to Unalaska in 1848-50, but the disease was unknown in the Arctic prior to 1855.[87] However influenza, cold, and pneumonia ravaged Pt. Barrow in 1848, and in a particularly bad winter, killed forty people (ten percent) of the population in 1851-52.[88] Disease was not confined to the coast, but also spread inland through trading contacts.

In 1900 the Barrow people invited the Colville people to a huge feast and trade fair in celebration of a good whaling season. Over fifty umiaks journeyed down the Colville to Pt. Barrow bringing several hundred people. Much trading occurred, as always, but the whalers were now at Barrow and from them the Nunamiut obtained large amounts of whiskey. Unfortunately, the ships also brought influenza against which the Eskimo had no resistance. Shamans directed that they return to the interior quickly, but "perhaps 200 died before they reached home."[89]

Again this was not an isolated incident, but merely a repetition of a condition which had existed for years from at least the 1880s. Around 1890 a flu and fever epidemic killed over 100 Nunamiut at a feast and trade fair on the upper Noatak River. Apparently only isolated families were able to escape the ravages of veneral disease, flu, measles and tuberculosis.[90]

In the early 1880s a Nunamiut woman estimated that 7,000 "people of the land" had camped at Nigalik one summer, although it seems unlikely that the number was this large.[91] There is no question, however, that the population of both the coastal and the interior regions were drastically reduced during the peak years of whaling and trading activities; only 200 people arrived at Nirlik in 1900 to trade with the Barrow people. By 1906 only three or four families lived along the coast, one family was living on the Sagavanirktok, very few were living on the Colville, and fifty were counted at Herschel Island in 1913-14.[92]

By contrast Cape Smyth, or Barrow as it was then called, slowly grew in population after 1890, as more and more coastal and interior Eskimo were drawn to the relative security and economic advantages of the centralized village or town life. The coast and much of the interior was deserted by 1905-06, except for a few families and perhaps a hundred or so who remained in the Brooks Range in isolated solitude. Those who had not died of starvation or disease had either moved west to Barrow, east to the Mackenzie Delta, or in some cases, south into central Alaskan cities. Indicative of this movement were the census returns for 1890 which revealed the population decline on the coast:

Table 3
Coastal Population Decline

	1828	1890
Pt. Barrow	1,000	100
Pt. Hope	2,000	350[93]

Economic exploitation of the Eskimo was also characteristic of white cultural intrusion into the arctic regions. It is not uncommon when reading accounts of traders and whalers to find mention of the keen or shrewd trading ability of the northern Eskimo. While it is true that by the 1880s the Eskimo knew the value of money and had developed a feel for barter and exchange from years of experience, it has also been shown that the average profit margin of whaling station and post operators was between 500 and 1,000 percent after expenses.[94] Furthermore these stores and posts often advanced gear and provisions to the Eskimo, in an arctic version of the crop-lien system, which by 1912-13, for example, and most of the men at Pt. Hope $750 to $2,000 in debt. Meanwhile, their main source of income, whalebone (baleen) dropped in value from $8.00 per pound in the 1880s to $.50 to $.25 per pound in 1912.[95]

Captain Bodfish described a typical transaction in which perhaps $7,000–8,000 in trade goods was exchanged for "3,353 lbs. of whalebone, 39 white fox pelts, 6 deer, 1 seal coat," and various other items during the 1902 season.[96] The average price paid for baleen was then about $5.00 per pound and for Arctic white fox between $2 and $15 per pelt on the American, Canadian and European markets. Thus, $8,000 in trade goods was exchanged for bone and fur worth at least $17,000.[97] Moreover, it was not uncommon for over $200 in furs and other goods to be exchanged for one bottle of whiskey.[98]

Perhaps even more significant were the ecological and economic effects of commercial whaling and the excessive harvesting of other sea mammals and land animals, with the islands and coast of the Beaufort Sea serving as hunting and slaughtering depots in support of the industry. Between 1848 and 1912 American whalers decimated the whale stock in the Arctic Ocean and Beaufort Sea, reducing the bowhead population from over 5,000 to a few hundred; the peak catch occurring in 1893 when 309 whales were taken.[99]

Huge numbers of other species were taken by whalers for subsistence, or killed by the Eskimos for them under contract. Captain Bowhead recorded that on one voyage, "Captain Owen," of the whaler *Napoleon*, "killed 250 walrus on the cake ice," in a few minutes, while the total for the season surpassed 600.[100] On these voyages one vessel could easily account for several thousand ptarmigan and other birds, in addition to as much as 50,000 pounds of meat per vessel.[101] While caribou supplied the greater por-

tion of this total, other animals such as musk oxen were taken as well. Of the musk ox, which was virtually extinct in the Arctic by 1900, Bodfish noted that

> ...Natives had not, apparently, hunted musk oxen much before the ships wintered in the north and they did not know much about the habits of the animals.... While we wintered in the Arctic they killed all the musk oxen in an area of 150 miles...I don't know if there are any left.[102]

Although such practices continued, and even accelerated, throughout the period 1880-1910, the industry declined rapidly just prior to the First World War. But while the bowhead and other whales were plentiful and the market for corset stays remained stable, commercial whaling returned as much as a million dollars a year to the San Francisco based fleet alone.[103] When the market collapsed, not only the whalers but the Eskimos suffered and they to a much greater extent. The Eskimos had been suddenly exposed, in only a few years, to a rich and dynamic economic windfall, which when it collapsed left them in an economic and cultural vacuum with no foundation or future.

THE MISSIONARY INFLUENCE

In addition to the influence of whalers and traders, the Tareumiut and Nunamiut Eskimos were also exposed to Western cultural values through Christianity and the missionary during this middle period of contact. While most of the coastal people had known white men for years by 1900, younger people could still be found in the interior who had only heard of them or never seen one at all.[104] However, there was a general knowledge of white customs, manners and morals gained through trading contacts in the interior, and a somewhat more intimate knowledge along the coast.

Many of the explorers at this time noted that certain principles or fragments of Christian teachings had been adopted by the northern Eskimos, but this varied considerably from the western to the eastern Arctic. While it is only possible here to briefly touch upon certain cultural influences of Western religion on Eskimo society, it should be recognized that the larger impact of Christianity altered much of the structure and cultural traditions of the Eskimo, as part of the desire to "Westernize" him.[105]

In the 1890s the Federal Council of Churches divided Alaska into several districts and the villages of Wainwright, Barrow and later Anaktuvuk Pass were assigned to the Presbyterians. There were additional influences derived from the activities of Episcopal, Moravian, and Quaker missionaries, but the North Slope and arctic coast were most influenced by Presbyterian missionaries.[106]

When these missionaries first arrived they encountered an aboriginal society which centered around the immediate or the extended family in the village. In villages such as Barrow or in smaller assemblages of the coast and interior, traditional authority was shared by the umialik (hunting group leader) and the shaman (often an umialik as well), and social interaction occurred in various associations such as hunting parties and the ceremonial karigi or dance house. Their "religion" then consisted essentially of superstitions and supernatural beliefs centered in the two most important forms of subsistence—the whale and the caribou—and the more socially oriented Messenger Feast. There was no concept of the social practice of religion or community worship; religion was of highly individual provenience. Needless to say, the world view or cosmology of the Eskimo differed considerably from Western concepts, and his belief in demons and other beings was more akin to medival cosmology than modern Christian belief.[107]

The establishment of missions and proselytism to Christian beliefs effectively challenged, undermined and finally overcame Eskimo religious beliefs, although in some cases not completely. The missionaries were successful in this largely because they effectively weakened the power and influence of the shaman. In this they were aided by the whalers, who ignored traditional taboos against whaling and hunting and suffered no ill effects; and by the economic impact of Western goods, which undermined the importance of the umialik and the entire subsistence based culture. Furthermore as Eskimos were exposed to various dogmatic themes and biblical teachings, they tended to apply them to their daily lives in the most literal terms.

Illustrative of such strict interpretation was the nature of the Sabbath, which in most cases the Eskimo was taught was a day when no labor was permitted. Thus no whaling was done on Sundays for many years, resulting in the loss of up to one-sixth of the short, six-week summer season spent in idleness. In another instance, the word was spread from Kotzebue Sound to the interior that God forbad the use of fishnets on Sunday, so the Nunamiut of the Colville region pulled out their nets and resorted to using hooks, which substantially reduced their catch and disrupted subsistence practices.[108]

Many examples could be cited in the area of morals, marriage, social and personal conduct, but these are not particularly germane or within the scope of this study and they have been more than adequately covered elsewhere.[109] But there were other influences of an associative nature which should be noted.

Charles Brower of Barrow noted how the missionaries attempted to prevent Eskimo trapping along the coast and in the interior, because such "dispersion" would hinder their ability to influence the Eskimo residents.[110] Furthermore the abandonment of coastal and interior settlements can be attributed in part to the influence of missionaries who convinced the Eskimos that their salvation depended upon close proximity to the mission, mission school and store. It has even been suggested that the rationale for establishing mission schools in the villages was the contention that the best way to reach the parents was through the children.[111]

Additional cultural impact which can be traced directly to

religious influences was the entire concept of central village living, focused on the mission and the school. This concept was not too unfamiliar to the more village-oriented Tareumiut, but was completely contrary to Nunamiut society. It compelled many people to leave, at least temporarily, the old traditional family hunting, fishing and camping sites.

In their desire to centralize Eskimo society, missionaries and teachers discouraged reindeer herdsmen from taking their herds long distances to graze, because they would be away from the village for extended periods. This practice resulted in serious overgrazing in areas of northwestern Alaska, where the western arctic caribou herd also foraged, and the disruption of animal migrations and subsistence hunting patterns.[112]

However the impact of Western religion is viewed, it combined with other facets of Western cultural intrusion to disrupt and transform traditional Eskimo society. As one interior village chief noted in 1915:

> Before the school came we never spent more than one year in the same house. If we decided to remain in the same locality a second year, we would move across the river or half a mile in some direction. We never lived in one great village, but in camps along the river....Before school there was no regular store. Some supplies came from miners, some from Native traders who visited the salt water each summer.[113]

SCIENTIFIC INFLUENCE

It was also during this period of middle contact that the pioneering scientific explorations were conducted in the arctic regions of the North Slope and the Beaufort Sea. These included:

1) The International Polar Expedition to Barrow, 1881-85.
2) The Alaska Boundary Survey, U. S. Coast and Geodesic Survey, J. H. Turner, 1890.
3) Frederick Funston's expedition to the eastern boundary of Alaska in 1894.
4) The reconnaissance of F. C. Schrader and W. J. Peters to the arctic coast via the Anaktuvuk and Colville Rivers, 1901.
5) The explorations of S. J. Marsh, F. G. Carter, and H.T. Arey in the interior from Barrow to the Canning River, 1901-1903.
6) The Anglo-American Polar Expedition to the Flaxman Island region, 1906-07; Ejnar Mikkelson and Ernest de K. Leffingwell. Leffingwell subsequently returned, 1909-11, 1913-14.
7) The Arctic expedition of Hudson Stuck, archdeacon of the Episcopal missions of Alaska, 1901-1920.
8) The Canadian Alaska Boundary Survey of 1912.
9) The Canadian Arctic Expedition of 1913.

By the time these expeditions took place the interior and coastal regions had already been nearly depopulated by disease, starvation and the migrations to the Mackenzie Delta or Barrow. Nevertheless a reading of any one of them reveals that the coast, islands and interior were dotted with sod huts, caribou and canvas tents, fishing and hunting camps, lookout points, fish racks, abandoned boats and sleds, graves above and below ground, dog posts and other signs of civilization, which were still on occasion being used by individuals and families for shelter or for subsistence activities. For the purpose of this study these explorations are significant because they identify sites by their use and often by their location, and provide primary source accounts of Tareumiut and Nunamiut utilization of cultural and historical resources.

Vilhjalmur Stefansson recorded that from Icy Cape (48 miles southwest of Wainwright, "Utikok" or old and ancient place: 70°, 20'N, 161°, 52'W) to Pt. Barrow, "the trip is a very simple one to make, for Eskimo houses are scattered along the beach every twenty miles or so...."[114] and that from Barrow east, "we found no Eskimos, although of course the old, ruined houses which indicate the large population that has vanished are scattered along the coast."[115] He also noted an Eskimo camp site ten miles SW of Pitt Point, near a "well-known fishing lake," and also a village of five houses at the junction of the Itkillik and Colville rivers.[116]

On July 31, 1908 Stefansson recorded that at the once great trading center of Nirlik (Nigalik) there were forty-six people waiting for the Barrow traders, and that the Eskimo trading village at Flaxman Island was still in operation and numerous families huddled there. [117] Further he observed that "Alaska in the last ten years has become 'poor country' through the depletion of its resources by the extermination of the caribou," and that,

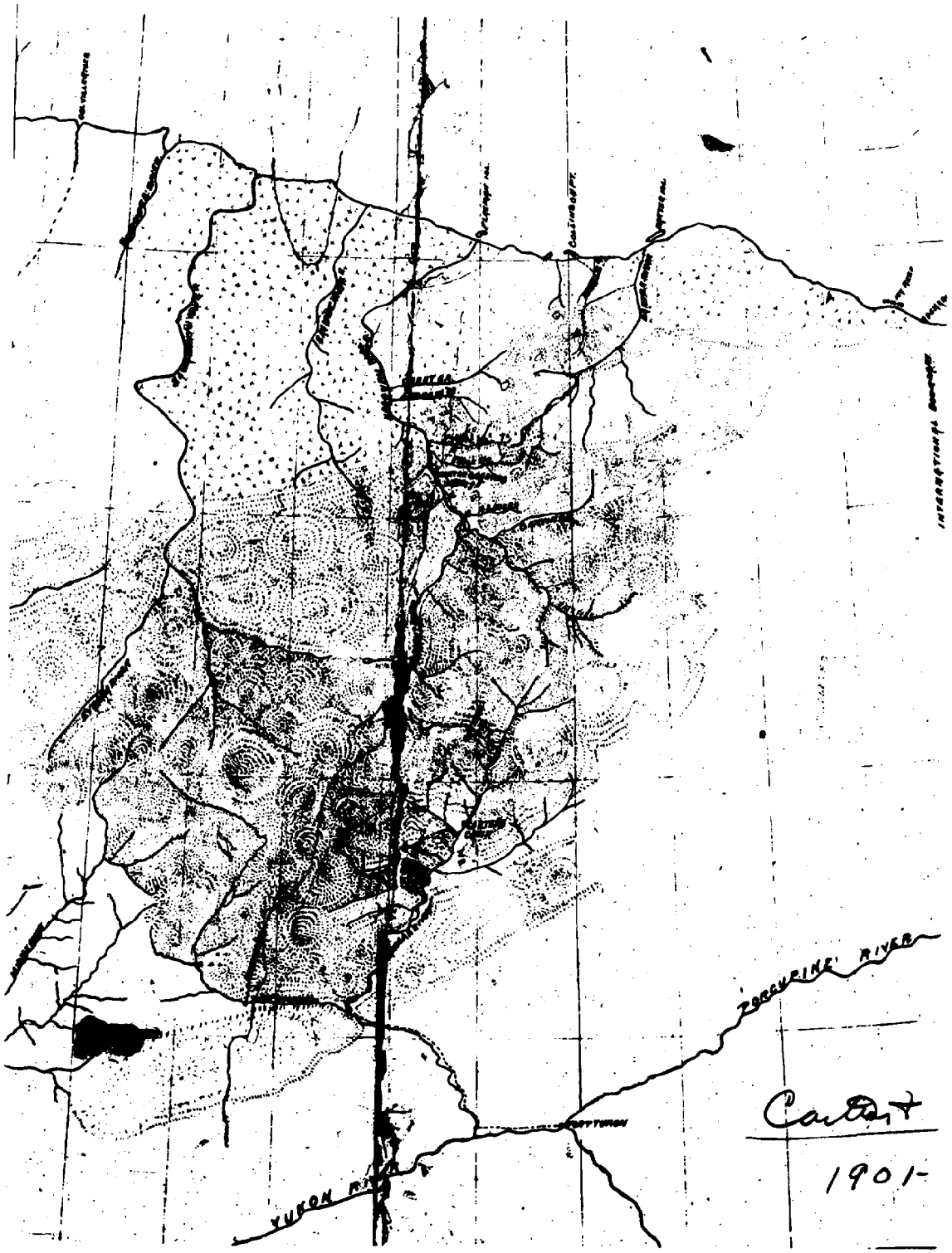
> ...the day has long gone when the Pt. Barrow people were economically independent. There was a time when they got from their own land and ice covered sea all their food, clothing, fuel, and other necessities of life, but now they import tea, clothing, phonographs, jewelry, chewing gum, perfumeries, and a hundred other things of which they formerly had no need.[118]

Ejnar Mikkelson went to the Arctic and explored the Beaufort Sea region in 1908, in hopes of finding land to the north of Alaska. His travels revealed other interesting things about this region. For example: at Collingson Point (Collinson Point, 30 miles southwest of Barter Island "Nuwuak" : 69°,59', 30"N, 144°, 54', 90"W) "were numerous Eskimo houses and

> ...ruins, and judging from the number of ruins the village must have been pretty large... skulls and other human bones are scattered all over the place, a picture of utter desolation.[119]

The Eskimos referred to this place as "where Barrow people met the Kokmoliks" (people living to the east). Mikkelson's fellow explorer, Ernest de K. Leffingwell, had his base camp located at Flaxman Island and they spent several years there and in the Canning River region to the south. Mikkelson noted:

> on the extreme west end of Flaxman Island there were some houses in ruins, while some tombs showed that the last inhabitants had died, caught, as we learned later, in a blizzard and froze to death.[120]



Source: Donald Orth, Dictionary of Alaska Place Names. (U.S.G.S. Professional Paper no. 567, GPO, 1967).

Fig. 15—Map by S. J. Marsh and F. G. Carter: Ft. Yukon to Flaxman Island, 1901–1902.

He and Leffingwell also determined that Flaxman was actually a huge section of ice or ancient glacier covered by only a few feet of soil deposits.

On trips to the interior, hunting and fishing camps were located. Several days were spent at one camp approximately seventy miles up the Koogaro River; a similar site was visited on a small island fifty miles up the Hulahula River;[121] and an old Kokmolik village was discovered on the east shore of the Sadlerochit River near the beach. This particular site was remembered as the place where a man burned himself and his daughter to death in grief over the death of his wife.[122]

In Elson Bay (between Plover Islands and mainland just to the southeast of Pt. Barrow: 71°, 15'N, 155°, 31'W) Mikkelson investigated an ancient Eskimo burial ground known as "Dead Man's Island," and to the east of Elson, they visited an old village site at the mouth of the Sagavanirktok River. [123] Mikkelson was fascinated by the Eskimo and sensitive to their plight. At a "hulahula" given at Flaxman for the local people, he noted that these people:

> Were all born in the neighborhood of Pt. Barrow or on the west shore as far down as Kotzebue Sound, from whence they have immigrated because they were not willing to tolerate the superiority of the average white man, because they knew that they could not hold their own if they remained where they were born, and realized that their children would be still more under the white man's bondage than they were... some went along the coast, some overland, and finding the country of the Kokmoliks deserted, they claimed it as theirs and settled there....[124]

The years spent by Leffingwell at Flaxman Island were productive of a great deal of information on the geology of the arctic coast, barrier islands and the eastern interior. He was responsible for the correction of inaccurate maps and place names; and he standardized English-Eskimo usage in many cases. He also noted, as had others, that "formerly the inland Eskimos were abundant on every large river," and cited the 1910 census as an indication that only sixty-five Eskimos lived along the coast between Barrow and the 141st meridian.[125]

His summary of the early nineteenth century explorations is helpful in reconstructing their specific routes and activities, and for extracting specific site locations, such as those of Arey Island ("Nalageavik," just west of Barter Island: 70°, 07"N, 143°, 54"W), where a village of forty houses was located; Leavitt Island ("Pingok," one of the Jones group: 70°, 34"N, 149°, 35"W), where there were remains of twelve-fifteen houses; and the Eskimo camp located one mile east of Beechey Point, where Lt. Pullen received a hostile welcome in 1849: (70°, 29', 20"N, 149°, 09', 30"W).[126]

According to Leffingwell, who had intimate knowledge of whaling operations in the Beaufort Sea, the whalers did not restrict themselves to the floes or the immediate coast. They ranged far inland from Herschel Island, west to the Aichillik River (twenty-two miles northwest of Demarcation Point: 69°, 51'N, 142°, 08'W), [127] and even south to the Yukon River via the Firth.

LATE CONTACT TO CONTEMPORARY PERIOD, 1914-1945

With the decline of the whaling industry and the closing of the trading posts at Herschel and elsewhere, activity in the Arctic east of Barrow declined also; the interior experiencing even greater isolation. Fur trapping replaced sea mammal and caribou hunting as a source of money and employment for Eskimos, and the number of whites living along the coast from Pt. Hope to Demarcation Point was less than forty in 1915.

By 1920 there were only twenty Numaniut people still living in the Brooks Range or on the North Slope east of Barrow, and within a few years they too had nearly all moved to the coast or to the Yukon-Tanana valleys in search of jobs. Only a handful remained in isolated spots along the Beaufort Sea coast near the Colville River delta, Flaxman Island and Camden Bay.

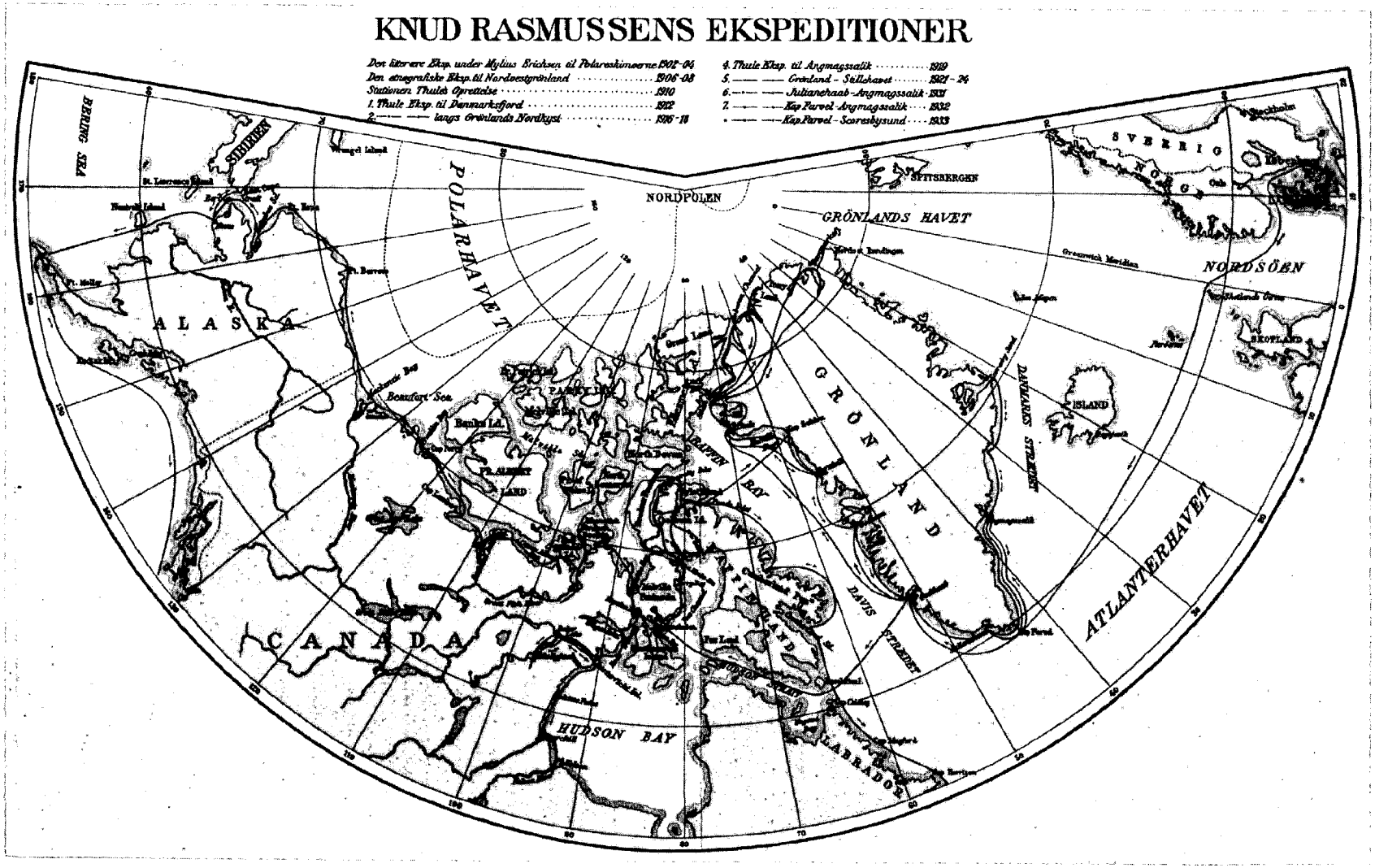
Reindeer had been imported to Alaska from Siberia in 1898, in part as an effort to provide the northern Eskimos with a cash and subsistence source to supplement the decimated caribou herds. At first restricted to Eskimo ownership, the Lomen Brothers bought into the industry in 1920, and ten years later they had become the controlling interest and main source of employment for Eskimo herders.[128]

For a decade, between 600 and 1,000 Eskimos throughout the North worked as reindeer herders, with the last great drive taking place in December of 1929, when 3,000 deer were driven the 1,200 miles to the Mackenzie River. After 1935 when this drive ended and prices for deer meat fell in the general gloom of the Depression, this industry, like contract hunting and trapping before it, also collapsed and was taken over by the government in 1940.

Times were hard too along the coast as money and employment opportunities dwindled and many Tareumiut and Nunamiut had to once again depend heavily upon traditional practices to survive. In 1937-38 several Nunamiut families returned inland to the central Brooks Range, where the caribou were beginning to return also and where few whites ventured. These people initially settled in their ancestral areas; the Killik River valley and Chandler Lake region. Subsequent moves brought them to Anaktuvuk Pass and the valley of the Anaktuvuk River, where they and their descendents live today.[129]

The 1924 expedition of Knud Rasmussen, traversing the arctic coast as part of the Fifth Thule Expedition, was the last of the great exploratory treks across the North Slope until the late 1960s.[130] He found that although conditions were bad, some people were also beginning to return to the old coastal sites as well.

There were a few resident whites living along the coast, and as conditions worsened in Barrow, Wainwright, Pt. Hope and elsewhere, they too began to notice that Eskimos were reestablishing themselves in historically occupied



Source: Rasmusen, *Across Arctic America: Narrative of the Fifth Thule Expedition*, 1927.

Fig. 16—Knud Rasmusen's Map of the Fifth Thule Expedition, 1921–1924.

areas. One excellent source of knowledge of this period and the people living in the Beaufort Sea Region is provided by the Reverend Fred G. Klerekoper of the Presbyterian Mission at Barrow.[131]

In April of 1937 Reverend Klerekoper and his Eskimo driver, Vincent Nageak, journeyed to Demarcation Point by dogsled in order to minister to people along the coast. His observations provide examples of coastal habitation and subsistence activities as they existed at that time. At Tangent Point ("Kulgurak," thirty-nine miles southeast of Barrow: 71°, 08′, 50″N, 155°, 05′, 30″W) they came upon a village site "of several old houses," which they were not able to identify. But Vincent had heard about the people living there.[132] Within several miles they came to the house of Roy Ahmaogak on Cape Simpson. Near Kokruagarok (eighty-eight miles southeast of Barrow near Pitt Point: 70°, 55′N, 153°, 05′W) they stopped at George Leavett's place, located on the site of an old Eskimo camp.

They next reached Cape Halkett, where a white man, Willie Morris, had established a small trading post ("Atliggaru" or "Isuk," west entrance to Harrison Bay: 70°, 48′, 10″N, 152°, 40′, 05″W), where there were many things from old ships, including the floor of the cabin. They learned that Ollie had gone up the Colville trapping and buying fox pelts. Klerekoper estimated that they were traveling fifty miles offshore on the pack ice and it was difficult to get their bearings and direction. Turning inland, their next stop was at "Cyrus' camp," an hour from coordinates 71°, 23′N latitude where a large family lived. Then it was on to "Takpuk's camp" near Beechey Point, where they overnighted with Jack and Lucy Smith and a Mr. Seegard.

Continuing along the coast they crossed Prudhoe Bay and noted that "many deserted camps were passed." They met a man who agreed to take them to his sod and driftwood house on Foggy Island (thirty-five miles southeast of Beechey Point in the Sagavanirktok Delta: 70°, 16′N, 147°, 48′W). The next day they passed on by Return, Midway, Maguire and Flaxman Islands and arrived at Brownlow Point, where Henry Chamberlin operated a small post (between Camden and Lion Bay near the mouth of the Canning River: 70°, 10′n, 145°, 51′W). Here they found "many deserted igloos."

Fifteen miles west of Barter Island they came to "Richard's camp" at the mouth of the Sadlerochit. At Barter they met Tom Gordon, Andrew Akutckuk, Mildred Keaton and a Mrs. Daughtery (the school teacher and reindeer advisor from Barrow). Here Reverend Klerekoper held a regular service:

> The congregation sits on the floor, the preacher leans against a saw horse. Half a reindeer carcass, sleeping bags, and skins of caribou for mattresses, camp stoves, pans for dog feed, oil drum stove, and about a hundred souls make up the meeting place and congregation.

The Reverend baptised twenty babies and noted that it was the first time an ordained minister ever conducted a service there.

Continuing east they found Andrew Akuckuk's home and his family of thirteen children. Andrew had been recently elected head of the reindeer company. Toward Beaufort Lagoon they came to the trading post of John Olson (seventeen miles northwest of Demarcation Point : 69°, 52′n, 142°, 12′W), where Klerekoper found "foxskins...sealskin lashing in coils, caribou legs, outboard motors, oil skin raincoats, dogfeed, everything from soup to nuts in the warehouse."

A half hour's sledding from Icy Reef brought them to the homes of Micky Gordon and his wife and several Eskimos located on the Kongakut River (sixteen miles northwest of Demarcation Point: 69°, 46′N, 141°, 37′W).

On their return trip the route was a little different and other places were visited. They heard that things were bad that year:

> ...food is scarce, not many foxes this year. Foxes live on lemmings and this season they seem to be scarce or have migrated to better feeding grounds.

Near Oliktok Point (sixteen miles west of Beechey Point "Point Berens": 70°, 30′, 45″N, 149°, 51′, 30″W) one of Leffingwell's triangulation posts was found and examined; it read "please do not disturb this post L1911." They reached Cape Halkett on May 1, 1937, and most of the village was out on the ice hunting. Klerekoper noted that a short railroad ran from the beach to the storehouse, apparently to expedite the unloading of supplies. On May 5 the journey ended with their return to Barrow after a month on the trail.

It is obvious from this description of conditions along the coast in 1937 that indeed many people, a few hundred at least, had returned to traditional hunting and habitation sites and were living in the traditional manner, supplemented by the few "luxuries" available from scattered trading posts.

The 1930s were notable also because of the beginnings of airplane and airship explorations of the Arctic and the interior Brooks Range. This meant the elimination of the trading journey to the coast, because now supplies could be flown in directly on a delivery schedule. Suddenly Western culture and products were much more accessible, although it was not until after the World War II that such flights became a regular feature of "bush" living.

Prior to the Second World War the only major intrusions of Western culture and technology into the interior regions came as the result of an executive order in 1923, which created the 23 million acre Naval Petroleum Reserve no. 4, better known as "PET-4."[133] Explorations of this vast reserve began almost immediately via the Kukpowruk, Utukok, Kokolik and Noatak rivers. After the war these explorations were continued, while others proceeded along the coast betwen Pt. Lay and Cape Lisburne.

Overshadowing the development of a petrochemical industry in Alaska, however, and its impact on Eskimo Cul-

ture, were the more far-reaching changes effected by the massive military build-up which occurred in Alaska in 1942-43, and continued through the early 1950s with construction of the DEW Line network.[135] As these changes were most clearly revealed in their impact on traditional subsistence hunting patterns, village economy, lifestyle and culture, they will be discussed in the chapter which follows.

ENDNOTES

1. See *Federal Register, Department of the Interior, National Park Service, National Register of Historic Sites*, Washington, D. C., 1966 by volume and number.
2. See Ernest S. Burch, Jr., "The Eskimo Trading Partnership in North Alaska: A Study in Balance Reciprocity," *Antropological Papers of the University of Alaska* Vol. 15 (1970) 49-80; and Burch and T. C. Correll, "Alliance and Conflict: Inter-Regional Relations in North Alaska," in D. L. Gumple, ed., *Alliance in Eskimo Society. Proceedings of the American Ethnological Society*, Supplement, (Seattle: University of Washington Press, 1972) 17-39. There were, of course, traditional tribal boundaries between Eskimo groups and between Eskimo and Indian tribes to the south.
3. Robert Spencer, *The North Alaskan Eskimo: A Study in Ecology and Society*, Smithsonian Institution, Bulletin 171 (GPO, 1959) 441.
4. See for Example Clyde Wahrhaftig, *Physiographic Features of Alaska*, Geological Survey Professional Paper 482 (GPO, 1965) 18-22.
5. Unless otherwise noted place names and locations are as reported in Donald J. Orth, *Dictionary of Alaskan Place Names*, Geological Survey Professional Paper 567 (GPO, 1967).
6. Many sources may be cited, see Vilhjamur Stefansson, *My Life With the Eskimo* (N. Y. : Macmillan, 1913) 117-18.
7. See D.C. Burrell, comp., *Beaufort Sea Environmental Data*, USCGC Northwind, 1968 (1970).
8. See L. K. Coachman, "Physical Oceanography in the Arctic Ocean," *Arctic* vol. 22 no. 3 (1969) 214-24.
9. See Louis Shapiro, *A Preliminary Study of the Formation of Land Fast Ice at Barrow, Alaska*, Geophysical Institute, University of Alaska, 1975.
10. See the study of Naidu A. Sharma, *Texture and Chemistry of Arctic Ocean Sediments*, Institute of Marine Sciences, University of Alaska, 1972; *Environmental Studies of an Arctic Estuarine System*, Final Report, V, *Ibid.* (Sea Grant Program Report 73-16); Ernest De K. Leffingwell, *The Canning River Region, Northern Alaska*, U. S. Geological Survey Professional Paper 109 (GPO, 1919); and W. G. McIntire et al., *Alaskan Arctic Coastal Process and Morphology, Coastal Studies Institute, Louisiana State Univ., 1973.*
11. *See Gubser, 337.*
12. *Wahrhaftig, 1.*
13. See for example N. J. Gubser, *The Nunamiut: hunters of the Caribou*, (New Haven and London: Yale University Press, 1965); and Stefansson, *My Life With the Eskimo* (1919).
14. See L.L. Selkregg, ed., Arctic Environmental Information and Data Center, *Alaska Regional Profiles: Arctic Region*, University of Alaska, 1975; and J. J. Koranda, "The North Slope; its physiography, fauna, and flora," *Alaska Geographic* vol.1 no.1 (1972) 1-37.
15. In addition to the sources previously cited, see Alfred H. Brooks, *The Geography and Geology of Alaska*... USGS Professional Paper no. 45 (GPO, 1906).
16. Also known as the Arctic Mountain System, Brooks (1906).
17. See also Ernest S. Burch Jr., "The Eskimo Trading Partnership in North America: A Study in Balanced Reciprocity," *Anthropological Papers of the University of Alaska* vol. 15 (1970) 49-80; and Don C. Foote, *Exploration and Resource Utilization in Northwestern Alaska before 1855* (Ph.D., McGill University, Montreal, 1965—The Don Foote Papers, University of Alaska, College).
18. Burch, "Inter-Regional Transportation in Traditional Northwest Alaska," *Anthropological papers* vol. 17 no. 2 (1975) 5.
19. N. J. Gubser, *The Nunamiut Eskimos: Hunters of Caribou* (New Haven: Yale University Press, 1965) 337-344.
20. Reference: Orth, Map no. 2 following p. 1084.
21. Gubser, 341.
22. Much of our knowledge of the eastern North Slope was provided by Leffingwell, as previously cited; and by S. J. Marsh, F. G. Carter, and H. T. "Ted" Arey who, as prospectors, spent twelve years in the area (u.s.g.s. maps for 1903) as discussed in Orth, 19.
23. See for example Edward Wyer, *The Eskimos: Their Environment and Folkways* (New Haven: Yale University Press, 1932); and Kaj Birket-Smith, *The Eskimos*. (London: Methune and Co. Ltd., 1936).
24. On this division there is some disagreement on how much of a distinction there was between the two; particularly in terms of their origins, as discussed in Irving, Solecki, Campbell, Giddings and others (complete citations below).
25. See Ivan Petroff, *Population, Industry and Resources of Alaska*, U. S. Department of Interior, Census Office (1882); Robert P. Porter, *Population and Resources of Alaska at the Eleventh Census, 1890, Ibid*, (1893); and Arthur E. Hippler, *A Selected Annotated Bibliography of Alaskan and other Eskimo Acculturation Studies*, ISEGR, University of Alaska, College, 1970: Report no. 28.
26. See Wendell H. Oswalt, Alaskan Eskimos (San Francisco: Chandler Publishing Co., 1969): 2-10.
27. The explorations of Beechey and Franklin, 1826-27 in F.S. Beechey, *Narrative of a voyage to the Pacific and Bering Strait* (London: H. Colburn and R. Bently, 1831) and Sir John Franklin, *Narrative of a Second Voyage to the shores of the Polar Sea in* 1825, 26 and 27 (London and Philadelphia, 1828); Simpson, 1837 in Thomas Simpson, ...*Discoveries on the North Coast of America*...*During the years 1836-39* (London: R. Bently , 1843) and the British Naval Expedition of 1949-50 in T.E.L. Moore, Comdr, RN, *Narrative* ...of HMS Plover, Sept., 1849–Sept. 1850, British Blue Books, 1851 Vol. 33:28–40.
28. See Gubser, Appendix A: 337-352.
29. *Ibid.*, 52.
30. See Helge Larsen and F.G. Rainey, *Ipiutak and the Arctic Whale Hunting Culture*, Anthropological Papers, American Museum of Natural History, no. 42 (N.Y., 1948) 31.
31. See the reports of P.H. Ray, *Report of the U.S. Expedition to Point Barrow, 1881-1884*, U. S. War Department, House Exec. Doc no. 4, 48th Cong., 2d Sess. (Washington, 1885) George Stoney, Lt., USN, *Naval Explorations in Alaska*, U.S. Naval Institute, Annapolis, 1900; and M. A. Healy et al., *Report of the Cruise of the Revenue Steamer Corwin in the Arctic Ocean*... *1885* (Washington, 1887).
32. Hippler, iv. John and Irma Honigmann, *Arctic Townsmen: Ethnic Backgrounds and Modernization*, Canadian Research Center for Anthropology, Ottawa, 1970, define them as the Formative Period, the Florescent Period, and the period of Planned Development: 17.
33. D. Anderson, *The Archaeology of the Northwestern Arctic* (ms), 1973:1.
34. *Ibid.*, 2-23 passim.
35. See the summary by John M. Campbell, "The Nature of Nunamuit Archaeology," in Hall, Contributions to Anthropology...as previously cited: 1-25; and W.R. Irving, "Evidence of Early Tundra Cultures in Northwestern Alaska," *Anthropology Papers*, vol.1 no.2 (1953) 55-85.
36. See William S. Schneider and Peter M. Bowers, *Preliminary Cultural Resource Assessment: National Petroleum Reserve in Alaska*, National Park Service, Univ. of Alaska: 1-10.
37. Spencer, 13 and Ralph Solecki, "Archaeology and Ecology of the North Slope of Alaska," *Smithsonian Institution, Annual Rpt. for 1950:* 469–495.
38. See James A. Ford, "Eskimo Pre-history in the Vicinity of Point Barrow, Alaska," *Anthro. Papers, AMNH*, Vol. 47 no. 1 (1959).
39. Campbell summary.
40. See Edwin S. Hall Jr., "The Late Prehistory/ early Historic Eskimo of Interior Northwestern Alaska: An Ethno-archaeological Approach,?" *Anthropology Papers*, Vol. 15 no. 1 (1970) 1-4; J. L. Giddings, *The Arctic Woodland Culture of the Kobuk River*, Museum Monographs no.9, Univ. of Penna, Philadelphia, 1962,——*Forest Eskimos*, Museum Bulletins 20(2), Univ. of Penna., Phil., 1956,——*Kobuk River Peoples*, Univ. of Alaska, Studies of Northern Peoples 1, College, 1961; John C. Cook, *Final Rpt. of the Archaeological Survey and Excavation along the Alyeska Pipeline Service Co., Pipeline Route*, Dept. of Anthropology, Univ. of Alaska, 1971; H. L. Alexander Jr., "Archaeology in the Atigun Valley,"

Expedition Vol. 1 no. 2 (1968) 35-37; and D.E. Derry, "The Archeology and Anthropology of a Recent Eskimo Habitation at Prudhoe Bay, Alaska," in *Final Rpt.* ...as cited above: 6-116. Some work has been done in the Itivlik, Itkillik, and the Sadlerochit and Franklin Mountains which has produced artifacts of the Arctic Small Tool tradition.

41. Campbell, 31. Although a stone projectile point found in the Itkillik River Valley in 1959 dates to A.D. 1400, *loc cit.*
42. See Stoney, *Explorations in Alaska* as cited above; William L. Howard, *Diary of the Point Barrow Expedition, 12 April to* 9 August, 1886 (unpublished ms, Houghton Library, Harvard Univ.); John Murdoch, *Ethnological Results of the Point Barrow Expedition*, 9th Annual Rpt., Bureau of Ethnology (GPO, 1892); Stefansson, *My Life With the Eskimo* as cited above; R.M. Anderson, *Rpt. on the Natural History Collection of the Expedition "My Life With The Eskimo*, supra.; and Ernest De K. Leffingwell, *The Canning River Region* as cited above.
43. Campbell, 25.
44. Ibid., 22-23.
45. *Ibid.*, 3; and see Edwin S. Hall Jr., "An Archaeological Survey of Interior Northwest Alaska,"*Anthropological Papers* .... Vol. 17 no. 2 (1975) 17.
46. See Gubser, 47.
47. Gubser, 43. Apparently heaps of human bones discovered in this area would confirm this account.
48. *Ibid.*,50.
49. *Ibid.*,49
50. See Spencer, *The North Alaskan.Eskimo*, 193-209; Burch, "The Eskimo Trading Partnership...," as cited previously; and The Don C. Foote Papers, Archives, Univ. of Alaska, College, Box 9.
51. Gubser, 233, Stefansson, *My Life*..., 117–118, and George H. Bancroft, *History of Alaska, 552-553.*
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53. *Ibid.*,11.
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Subsistence and Subsistence Sites

DEFINITION

As in the case of historic sites, those places or regions which derive their significance from "subsistence" use are the subject of differing assumptions and priorities.

On one side of the issue are those people who are most interested in wilderness areas for their recreational and sport hunting and fishing qualities. Much of Alaska's wilderness areas, particularly north of the Brooks Range, are within the public domain or have been reserved according to certain use priorities which do not necessarily preclude such "sport" use. Many advocates feel, therefore, that they are entitled to enjoy the resources of these areas, within the established guidelines of state and federal land management practices. These people, representing the white resident majority in Alaska, derive their livelihood almost entirely from a wage-labor, market economy based primarily upon a cycle of year-round, employment. Their access to wilderness areas is restricted, by the nature of this employment cycle, to several weeks during the summer months, to an occasional weekend or to the regular fall hunting seasons.

On the other side of this question are the Alaska Natives—Indians, Aleuts and Eskimos—who possess historical and traditional (and now in some regions legal) ties to the land, lakes, rivers and coastal areas of Alaska. The Natives have been dependent for at least 10,000 years on these areas for the great majority of their subsistence, livelihood and well-being; and have assumed a protective view of these natural resources. They would restrict or prohibit the introduction or expansion of sport-interest activities within these areas, or would provide for more liberal regulations and management of wilderness regions supportive of their subsistence requirements.

Clearly "traditional" uses of land and water have changed in the process of acculturation. In 1972 a preliminary report on Native subsistence values noted that:

> Natives today...combine subsistence with jobs...self-employment benefits, social security, National Guard pay, unemployment benefits, welfare and anti-poverty programs to survive...if one of the props to this existence is weakened—such as a poor harvest, lessening of seasonal job opportunities, a drop in fur/hide prices—then he [or she] slips to a lower level of living unless cushioned by the very poor alternative of increased welfare benefits.[1]

This precarious existence was further indicated a year later in a report compiled by the Arctic Slope Regional Corporation and the North Slope Borough which indicated a "strong inclination to traditional diet which will require a continuing level of subsistence hunting."[2]

In 1974 the Department of Interior released a Final Environmental Impact Statement concerning the proposed Gates of the Arctic National Park.[3] In the section on social and economic considerations it was noted that:

> The social and cultural patterns of these [Indian and Eskimo] groups of Native Peoples are intimately tied to their relationship to the land and its resources. The small remote interior villages participate only minimally in the cash economy of northern Alaska....Anaktuvuk Pass continues important social and cultural ties with the arctic coastal communities.[4]

Furthermore, the statement accepted the principle that, "traditional subsistence use of the park will be allowed to continue. This is recognized as a dynamic cultural activity not directly related to economics."[5]And that

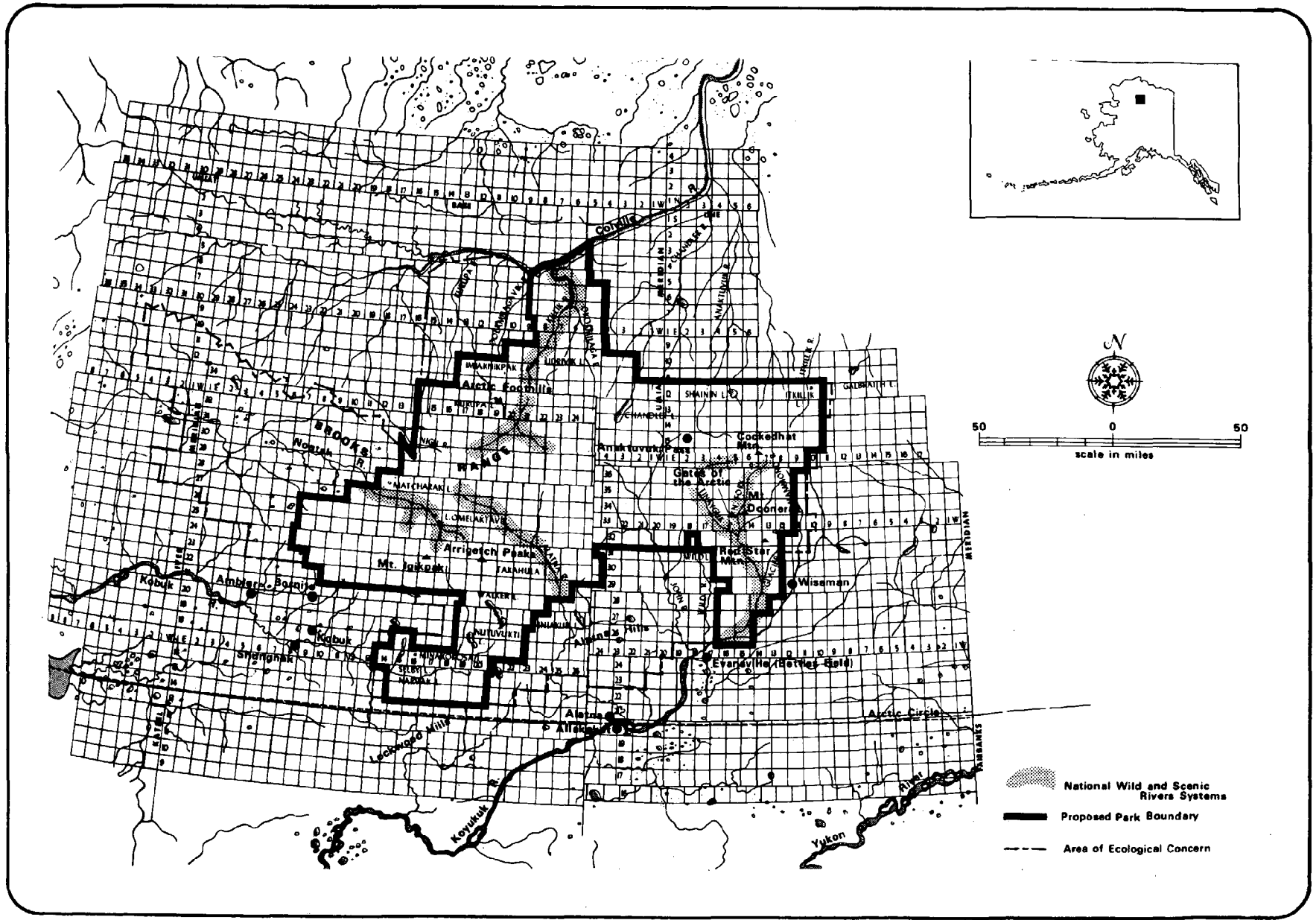
> in the event conflicts occur among uses or in cases where a resource cannot support all demands for its use, subsistence needs will be given priority over other demands on natural resources, such as demands imposed by sport hunting pressure...[6]

Similar language may be found in other park proposals for the North Slope and Brooks Range with regard to subsistence. In its analysis of the proposed Noatak National Arctic Refuge, the government planning group recognized that:

> Most people of the area are economically, socially and culturally oriented to the subsistence utilization of the resources of the land and water which provided a livelihood for their ancestors. Historically, the Inupiat of the Noatak and Kobuk River basins have followed a subsistence pattern focused on caribou hunting and to a lesser extent, on fishing.[7]

The planning group has also considered the proposal for a Porcupine National Forest and in its statement said flatly: "Subsistence income is the economic mainstay of the Native population." Of the approximately 1000 inhabitants of the region, not more than sixty are permanently employed.[8]

In reaching a settlement on the Alaska Native land claims in 1971, Congress recognized that white and Native Alaska



Source: *Final Environmental Statement Proposed Gates of the Arctic National Park*, 1974.

Fig. 17—Proposed Gates of the Arctic National Park.

differed significantly in how each viewed their source of livelihood, and on the basis of its own investigations admitted that:

> Given the relationship between living in a Native village and the maintenance of subsistence pursuits, it is not unexpected that residents of small and medium villages most frequently name hunting and fishing as the aspect of village life which they like best. And no other problem facing Natives elicited such extensive replies as those dealing with the future of subsistence activity.[9]

Finally, despite the alterations which have occurred in Eskimo subsistence patterns and the dependence of some of the villages and towns on these changes for increasing proportions of their livelihood, it is mainly in the areas which have experienced the greatest impact and where the family unit or unique Eskimo "identity" has been disrupted, that traditional methods and cultural values are being eroded.[10] Generally in the smaller more isolated villages the traditional lifestyle continues, with only marginal change being effected by Western influences. It appears that these "bush" villages and isolated coastal communities have maintained a large degree of their cultural identity, and may continue to do so for a long time to come. For as one study has observed:

> Popular opinion now holds that these villages are in the process of disappearing. Recently available population data, however, suggests that contrary to this widely held notion, Alaska Native villages are neither disappearing nor depopulating. In fact the reverse may be true....[this] suggests that villages will not only remain for the indefinite future—but they will probably increase in size as well.[11]

Therefore, in light of the attitude the federal government has taken as its minimum position on the issue of subsistence guarantees in the proposed national parks, forests and refuges; the evidence which shows that most Natives (especially Indians and Eskimos) remain dependent upon traditional subsistence hunting and food procurement for their well-being; and the studies which have indicated that Native villages will likely remain as a permanent feature of Alaska's socio-economic and political fabric; it is reasonable to assume that subsistence sites, and those things which may affect subsistence-related activities will continue to be an essential aspect of Native-Eskimo culture and well-being in the years to come. They are a reality which cannot be ignored by federal, state, local government or industry.

Fundamental to the issue of how subsistence practices are to be planned for and protected within the jurisdiction of federal and state land management agencies is the concept of subsistence itself. What are traditional subsistence practices and how, if at all, have they been altered by Western culture?

Subsistence is generally considered to mean obtaining or manufacturing from natural resources the food, shelter, and clothing necessary to sustain life. It is defined in Alaska statutes as

> the taking of fish and game for use and consumption by the person taking the fish or game and his family or household or for the consumption of his domestic animals; however, by-products of fish and game may be used in the construction of Native handicrafts (but this precludes the sale or barter of fish and game resources).[12]

Since precontact, the traditional Eskimo subsistence hunting and fishing patterns have been faithfully maintained; not merely out of sentiment for the "old ways," but from continuing subsistence needs. It is important to recognize that it is not the necessity to hunt which has changed, but rather the means employed in achieving the harvest of sea and land animals that so clearly separates the modern Eskimo hunter from his ancestors. Furthermore it was this very alteration of the technological and material foundations of Eskimo culture, both Tareumiut and Nunamiut, which created first the need and then the social pressures for a stable cash economy to pay for and to maintain Western technology and material culture. Such items in a relatively short period of time became "necessities" rather than "luxuries," and the result was a trade-off, a mixed blessing at best. As one authority has noted:

> The technological changes that have occurred over the past twenty years have resolved some of the basic economic insecurities of the Eskimos. At the same time, they have changed the whole structure of community social life.[13]

Unlike the chronological divisions which were used in the previous section to discuss the history and some of the historic sites of the North Slope and Beaufort Sea region, traditional or established subsistence practices, and sites specifically or generally related to them, must be considered within the broader context of Eskimo culture as a whole. We have already established that the generic northern Eskimo culture was distinguished by two major societies, the Tareumiut and Nunamiut, and these in turn were divided into smaller groups which historically occupied specific geographic areas of the interior and coastal regions.

The Tareumiut and Nunamiut Eskimo were in many ways complementary societies which depended upon one another in certain ways through the exchange of basic commodities necessary to the well-being of each. One society derived its subsistence from the whale and other sea mammals; the other from the caribou and other land animals. Therefore each year, when the Kobuk or Noatak people traveled to the Colville region or the Nunamiut voyaged down the Colville to Nirlik for the huge trade fairs with the Barrow people, this relationship was renewed and strengthened in the exchange of commodities peculiar to each; and the human ecology of this vast northern expanse was brought, once again, into a dynamic interaction.

In the commodity exchange and social interaction of these two societies a "subsistence economy" was created which served both well, provided there were no major shocks to the environment such as a fall in the lemming population, a change in caribou migration or an unusually

long winter that restricted spring whaling and hunting. Indeed, subsistence economies and subsistence patterns themselves are very sensitive to any change in the natural environment disruptive to established land uses. Although large numbers of sea and land animals had been taken for subsistence over thousands of years, there occurred no wanton exploitation of the resource prior to the 1870s and 80s; the sea and land continued to provide everything necessary for survival.

As we have seen, by 1900 this ancient subsistence economy had collapsed in response to a number of external and internal influences. It was no coincidence that this thirty or forty year period coincided with the influx of Western culture via the whaler, the trader, the government official and the missionary. The scientist-explorers are excluded from this group because they, unlike the others, in their attempt to understand the Eskimo and his culture, tended to assume the Eskimo life-style for their own and to live for years by Eskimo cultural standards.

As for those of the preceding groups, only an initial effort was made to understand rather than to exploit the Eskimo, during that brief period when their knowledge of the Arctic was needed for survival and their hunting expertise needed for food. After these techniques had been mastered, however, the Eskimo was often no longer of any concern, except for what he could be bribed to exploit from the land that had once supported him. For better and for worse this meeting of the two cultures marked a point of no return for the northern Eskimo.

For thousands of years the life of the northern Eskimo revolved around the seasons as, to a diminished degree, it does today. The oldest of the two major subsistence cycles occurred along the arctic coastal areas occupied by various Tareumiut sub-groups, from Pt. Hope, around to Pt. Barrow and east into the Canadian archipelago.

THE TAREUMIUT

For the Tareumiut, spring and fall were the most important of the seasons; and spring more so than fall. The entire winter was spent in spiritual and material preparation for the spring whaling. Much ritual and social activity occurred in the various karigi, or ceremonial houses of the village. The karigi were of great significance to the whaling crews and to the entire village. By March everyone was engaged in whaling related work; the men cleaned or repaired equipment and the women sewed new clothes and umiak covers, because tradition and taboo required that the whale could only be taken by those who were newly clothed.[14] By mid-April ice conditions favored whaling and the bowhead was beginning its migration to the east. The men of the crews congregated in the karigi, where they prepared themselves in four days of rituals before going out on the sea.

On the evening of the fourth day the crews emerged and made their way to the shore near an open lead and, after much ceremony and singing, launched the umiaks and they were off to the hunt. When a whale was taken it was towed back to the village by the crews which had participated in the kill, and was formally welcomed into the community with much ceremony and appreciation. The whale was then butchered and divided according to tradition, so that the hunters and the rest of the village benefited from the good fortune.

This ritual was repeated throughout the season and might last into June if conditions were excellent. At the official termination of the season huge celebrations were held in the karigi, where everyone danced and sang and ate prodigious amounts of food. At the end of several days of feasting and dancing, preparations were made for the outdoor festival, or "nalukataq." The various crews participated in all manner of games, competitions and other physical activities, including the walrus-hide blanket toss in honor of the successful hunters. The remainder of the short summer was spent in sea and land hunting and fishing activities and in the important trading journeys to meet the Nunamiut and Coppermine Eskimo to the east.

The Barrow people also engaged in fall whaling to catch the return migration of the bowhead. If conditions were right, this might occur well into September and October to be followed with a less elaborate feast. While the crews were out the rest of the village would be at the interior fishing camps, on the tundra hunting caribou, or at the ponds and lagoons shooting or snaring ducks, ptarmigan and geese. As winter approached and new ice began to form along the shore, the village busied itself in cutting blocks of ice and storing them in their ice cellars for the next summer's meat storage.[15]

Although the Tareumiut took certain species of inland game, fowl and fauna to supplement their diet, the sea, ice, lagoons and barrier island habitats provided their principal source of nutrition and sustenance.

In addition to the bowhead, several other species of whale occurred off the Arctic coast including the beluga, or white whale, the narwhale, the killer whale, and the right whale. Of these, however, the bowhead was of much greater subsistence value and the only one that occurred in large numbers east of Barrow. The average annual harvest at Barrow was between twenty and twenty-five whales, of a precommercial whaling population of approximately 5,000. As with all game taken for subsistence purposes, every part was utilized in some fashion. The meat, oil, blubber, internal organs and even the entrails were eaten; and because wood was scarce in the coastal areas, the bones were often used as house supports and frames. At approximately 48,000 pounds each, a harvest of twenty bowhead would yield the village over 900,000 pounds of meat, muktuk, bone and oil. Even one bowhead could yield as much as 3,200 pounds of bone and 327 barrels of oil.[16]

Next to the bowhead, the seal and the walrus were the most important subsistence mammals. Of the four species of seal which are found in the Arctic—the ringed seal, the bearded seal, the harbor seal, and the ribbon seal, the ringed seal was preferred for its meat and the harbor seal for its

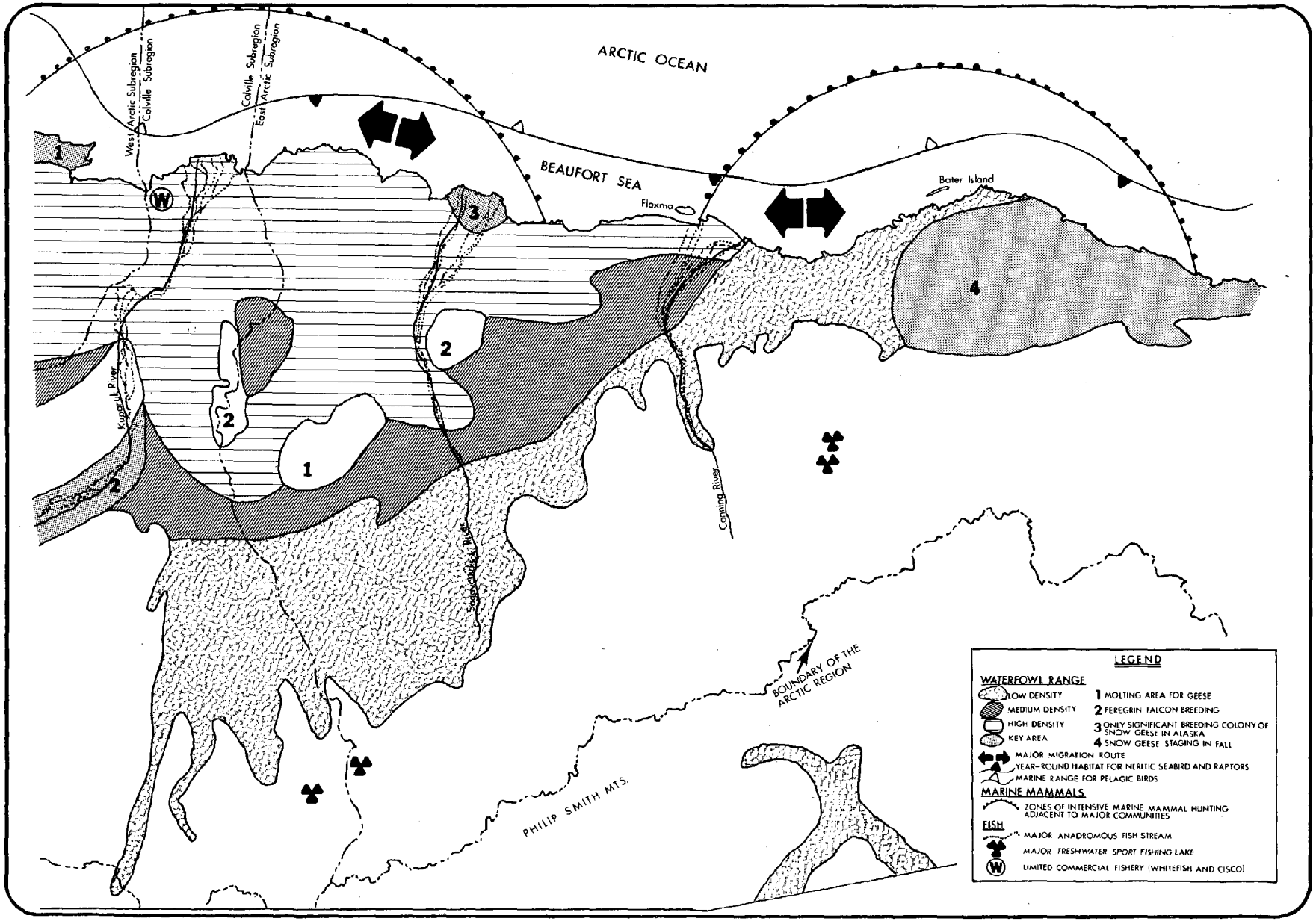


Fig. 18—Fish, Waterfowl and Marine Mammals: Range and Migration.

skin. The ringed seal was an important source of food for polar bear, fox and wolves and was by far the most numerous. The entire animal was used: the meat was eaten, the skins were used for clothing of all kinds and for umiak covers and the valuable oil was used for fuel, light, food and as a trade item.[17]

The walrus was important also, but only rarely seen east of Barrow and therefore not commonly utilized locally in the Beaufort Sea region. Only certain parts were considered appropriate for human consumption, but it was commonly fed to dogs and, of course, had great value because of its ivory. The young calfskins were often used for making rope and that of the old bulls for umiak covers.[18]

Fish taken from the Beaufort Sea included tom cod, capelin, arctic char, whitefish, and candlefish; but the great majority of fishing was done inland in fresh water lakes, rivers, streams and ponds, where grayling, lake trout, humpback salmon and polar cod were plentiful. Because of its low fat content, fish was never thought of as more than a secondary food source and supplement to the regular diet of the maritime Tareumiut. Even so, a large village would take over 100,000 pounds annually by seining.[19]

Prior to the introduction of Western technology and exploitive harvest philosophies, the Tareumiut utilized only materials from the animals they hunted and other natural materials, in the design and construction of tools, weapons, conveyances, household articles and other items, and took only what was necessary to insure subsistence needs. As one authority has noted:

> Prior to the nineteenth century Eskimo hunting was based upon sound conservation principles....The total capture of killed game, the total escape of living game and killing only to meet the needs of the immediate group.[20]

The weapons and materials used in sea mammal hunting included the wooden harpoon, spear and lance (which had a point of bone, flint, ivory or slate attached to it by seal or walrus thongs) and the long-bladed knife. The umiak was constructed of a driftwood frame, dovetailed and lashed together with sealskin ropes or strips of baleen, and was large enough for a crew of six to ten men and two to three metric tons of cargo. It was covered with six to eight walrus and eight to ten bearded sealskins which had to be replaced every season or two. Inflated bladders of sealskin were utilized as floats to keep whales or other mammals afloat while being towed back to the village. Hundreds of feet of seal, walrus and moosehide/caribou rope were required, and perhaps ten to twenty caribou hides were needed for tent coverings and for bedding. Seal oil or blubber was used for light, fuel and heat, and various chisels and axes were also used.[21]

By comparison, Tareumiut house and settlement patterns were more established and elaborate than those of the Nunamiut, largely because of the differences in subsistence practices and materials. While Nunamiut settlements were almost always temporary, those of the Tareumiut were of a more permanent nature and consisted of both seasonal and year-round dwellings.

Permanent Tareumiut coastal dwellings were constructed of natural materials such as whalebone or ribs, driftwood and sod. Every household had its ice cellar dug in the ground and an "ikirrak" (or rack) of driftwood stood near the house, upon which was stacked sleds, umiaks or other gear. Adjacent to the dwelling were the driftwood dog posts which were sunk into the ground as far as permafrost would permit. Other dwellings constructed along the coast, as noted by early explorers, consisted of sod houses, hide or skin-covered domes (later, canvas-covered tents) and occasionally, ice houses or igloos. These places were used as hunting, fishing, trapping or stopover shelters depending on the season and the need. They might also go unused for years at a time. It is these locations and similar sites which, in part, comprise the subsistence sites of the Beaufort Sea coast. Many of these, in addition to the historic sites of the previous section, have been identified and plotted on the maps which accompany this study.[22]

Besides the umiak, the dogsled was the most important conveyance and was indispensable during the winter and early spring. Two basic sled designs were utilized; the "qamun," which was a flatbed of cross pieces lashed between two thick wooden runners, and the "umapiaq," which was the familiar stanchion and runner design and the one most used in northern Alaska. The dog traces were made from walrus hide and the sled itself of birch or spruce.[23]

THE NUNAMIUT

The subsistence environment of the inland peoples was considerably different from that of the coastal peoples; and these differences meant that there existed certain cultural contrasts between the two societies. Heretofore in this study, the term Nunamiut has been used in a manner which denotes a rigid division between coastal and interior peoples. There has been considerable discussion in recent years regarding this term, its precise meaning and just how substantially these Eskimo societies differed culturally. Anthropologists have disagreed on the rigidity of the distinctions between the two, and it has been shown that there is disagreement among the Eskimos themselves.[24]

The question may seem merely academic today because the Nunamiut have, except for a small group of families at Anaktuvuk Pass, ceased to exist. Nevertheless there apparently were considerable variations from one region to another among groups in both societies, and recently Nunamiut groups have been broken down into eastern and western and even riverine and mountain sub-groups. Archaeological remains, house types and other artifacts suggest that differences occurred, and there is no question that in the Eskimo world view this dichotomy existed. As one chief declared:

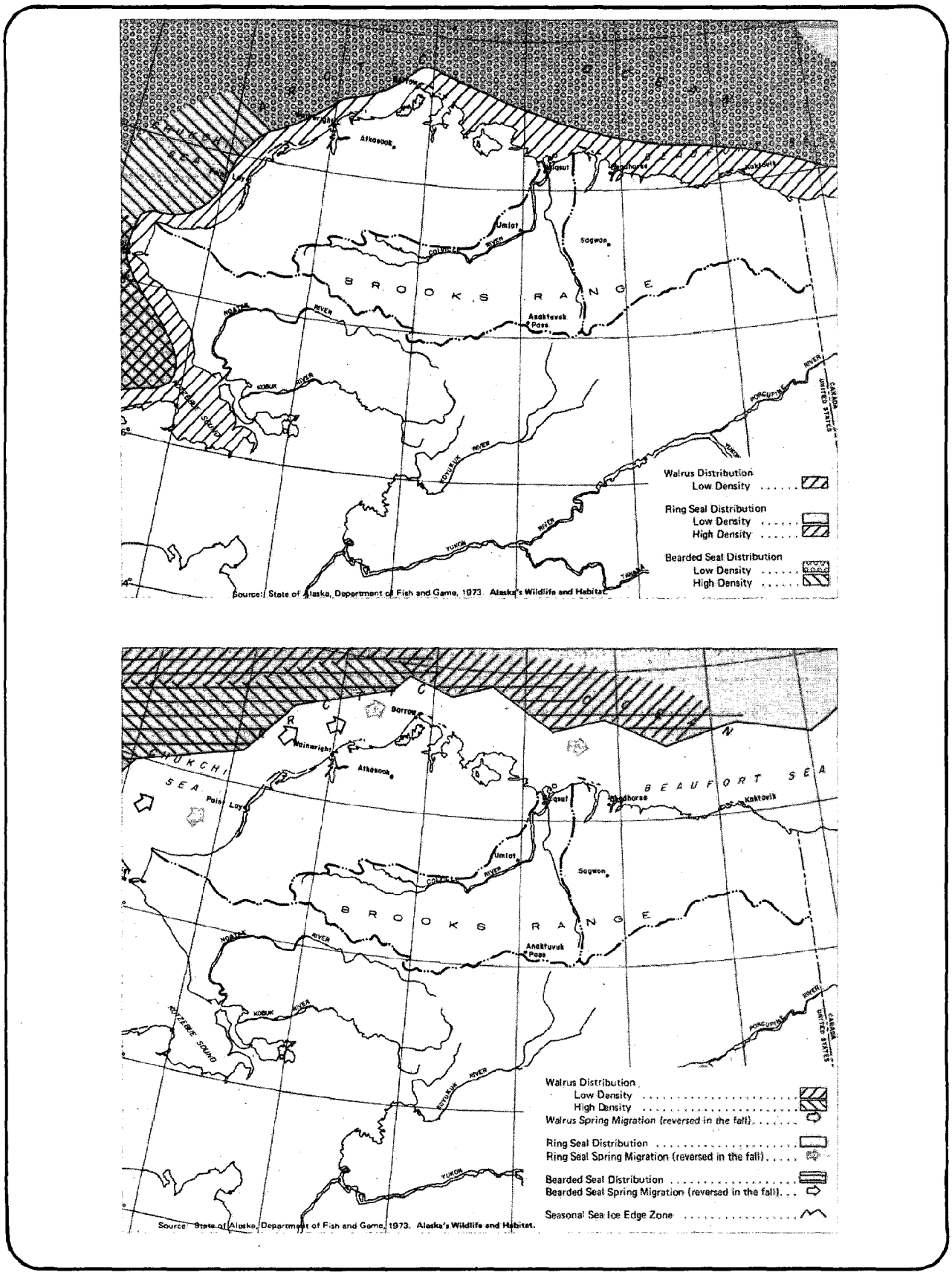


Fig. 19—Winter and Summer Distribution of Walrus and Seal.

> ...we are a different people as we are mixed Indian and Eskimo blood. The coast people concentrated toward where seafood was plentiful. We scattered to find the game and caribou and bears that roamed about the hills and tundra. Our fishing places could not support more than a few families, as we had not the material to make proper nets. Each family had its own lakes and creeks. We only came together at times when we wished to trade or dance or to make war. We fought the Eskimo and the Indian, we also fought among ourselves....[25]

Like the Tareumiut of the coast, the life of the Nunamiut revolved around the seasons, but it was a life sensitive to an ecology different from that of the arctic coast biota. Spring usually arrived in March with high winds and often heavy snowfalls, but the interior slowly began to thaw in response to the long hours of daylight. With the beginning of April many animals had emerged from their winter hibernation, the caribou had begun their migration toward the Arctic Plain, and the ice on the rivers had begun to weaken until by early May the rivers ran free to the coast.[26]

This was the most important time of the year for the Nunamiut, because the caribou was the keystone of religious, economic and social activity in the northern interior; and the hunt brought hundreds of people together in this communal enterprise. In many ways the "cult" of the caribou resembled that of the whale in its ceremony and ritualism and it brought the semi-nomadic and scattered inhabitants of the interior together in a social, economic and religious interaction. As on the coast, activity centered in the karigi and prestige was accorded to the "umealit," or hunting leader, who directed the winter preparations for the hunt.[27]

A karigi was erected at the site chosen for the hunting camp and the prescribed four-day rituals were observed, presided over by the shaman or shamans of the various hunting groups. However no sewing or cutting of meat with a knife was allowed during this period. At the end of four days the hunting party left the karigi and set out in reconnaissance of the migrating herds. The next three to four months would determine the well-being of the Nunamiut; historically few societies have been so dependent upon one resource for their survival.

With the change of season the Nunamiut knew that the caribou moved in huge herds through the Brooks Range passes toward the Arctic Plain for calving. However they apparently had little conception of why this occurred and could never be sure which route would be taken, because these could vary each season. For at least 1,000 years there had been two and possibly three separate herds occupying the Brooks Range and North Slope region; and they could be found at any time of the year from the Noatak to the Mackenzie River. In precontact times the number of caribou inhabiting these northern regions may have numbered as many as one million animals. Most of the hunting by the Nunamiut was done in the central Brooks Range and the Anaktuvuk, Killik and John River valleys. This herd seemed to migrate from its winter grounds near the headwaters of the Koyukuk, Chandelar and Kobuk Rivers north to the plain, and summered in the Colville region. Another herd apparently could be found in the Utukok and Kokolik River drainage. A third roamed far to the east along the Porcupine and lower Chandalar rivers. It wintered there and moved into the Romanzof Mountains during the spring and summer, but in aboriginal times not much hunting was done very far east of the Colville.[28]

Nunamiut subsisted primarily on caribou meat and thousands of caribou were harvested in a season that might last from March through October, although caribou were taken at any time during the year. A distinction was made between the caribou of each season according to their meat and hide value.

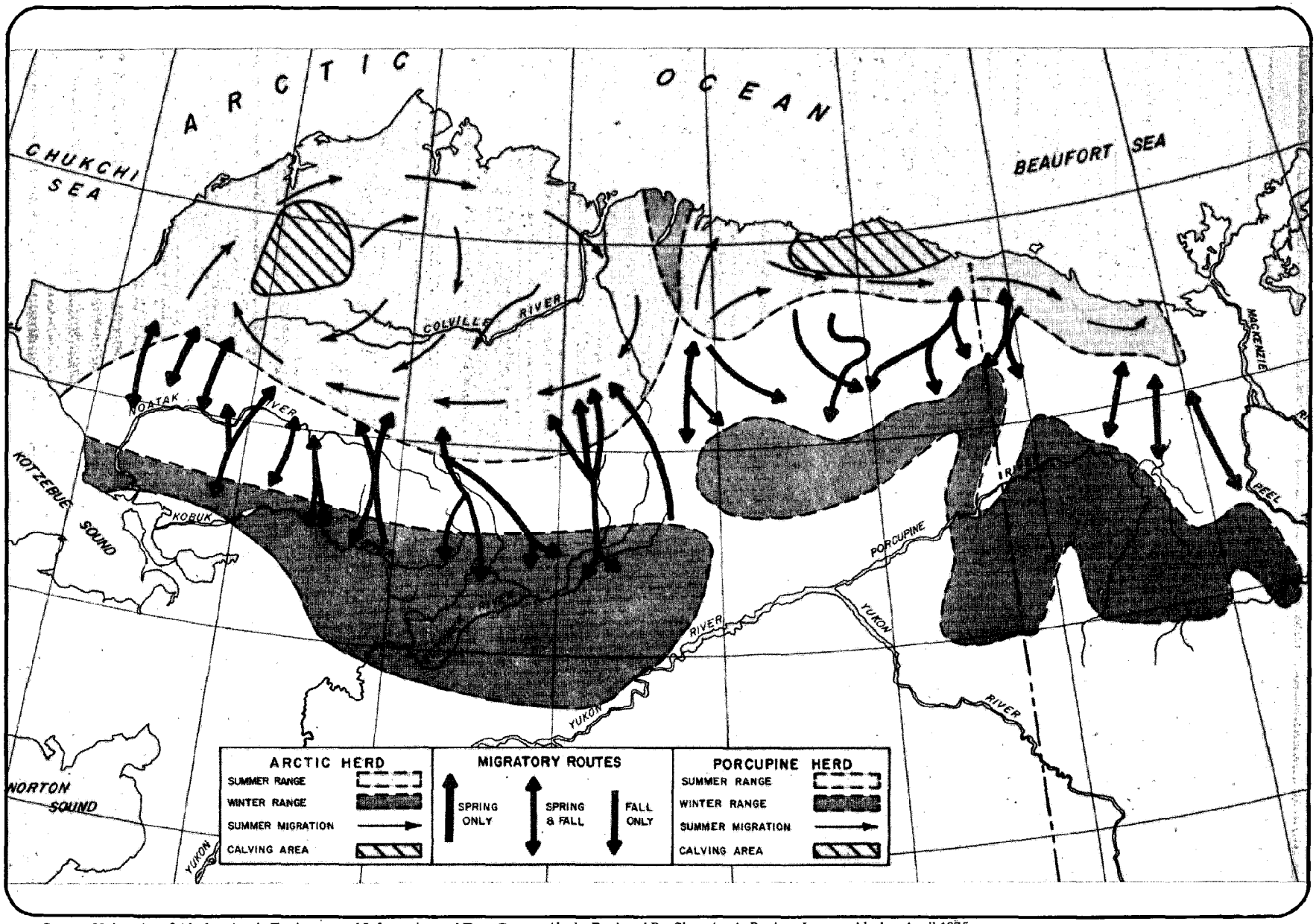
Before the introduction of the rifle, caribou were taken generally in one of two ways; corralled and killed or herded into the water and killed. In the corral the animal was ingeniously snared and then killed with bow and arrow. A similar technique was used in the water, only in this case from a kayak.

When the arrows had been exhausted and the lances all thrown, any surviving animals were allowed to escape and any of the wounded were killed. On a good day the kill could exceed 200 to 300 animals for one hunting party.

As on the coast, all animals hunted for subsistence were accorded a reverence which demanded that they be properly welcomed and thanked for allowing themselves to be killed. When this had been done the women began the butchering and cleaning of hides and every part of the carcass was utilized in some way. Before steel knives, slate and then flint single-edged knives were used and scrapers of similar material were employed to clean the hides.

The meat was butchered and distributed and then hung to dry. The bones were cracked and the marrow extracted, the contents of the stomach were removed (assorted flora) and eaten, and even fetuses were boiled and eaten. Sewing needles were made from bone and antler; fish nets from sinew; rope from summer hides unfit for anything else; punches and awls from antler; water bags from stomachs; and clothing of all kinds, tent and house covers, and kayak covers were made from the hides. Scraps and other unusable parts went to the dogs.[29] If the hunt was successful the Nunamiut could be sure of having enough to make it through the long winter months. But as one Nunamiut by the name of Maptiraq remembered, "Times were often difficult. If the caribou came to an end, life came to an end too".[30]

Although of the greatest importance to the subsistence needs of the Nunamiut, the caribou was not the only animal hunted or depended upon. Like the Eskimo of the coast, there was a secondary source of sustenance which supplied a welcome addition to the Nunamiut diet. Moose could be found in the Colville and Sagavanirktok drainages; arctic fox were common and numerous on the plain, the sea ice and in the dunes and foothills; the grizzly bear was found to



Source: University of Alaska, Arctic Environmental Information and Data Center, *Alaska Regional Profiles: Arctic Region*, Juneau, Alaska, April 1975.

Fig. 20—Caribou Migration Patterns.

the east in larger numbers around the Canning River as were the musk oxen prior to the 1880s. Other ungulates, carnivores and rodents were common throughout the region such as mountain sheep, polar bear, wolf, coyote, wolverine, lynx, marten, mink, otter, weasel, porcupine, marmot, ground squirrel, lemming, vole and shrew. Fish were plentiful in the varieties already noted and there were at least 170 species of birds common to the coast, the islands and the interior. A normal summer population would include 800-1,000 whistling swan, 15,000 Canada geese, 35,000 black brant, 50,000 white fronted geese, 1,000 snow geese and tens of thousands of different varieties of ducks.[31]

We can only speculate what the seasonal harvest of these animals, fish and fowl, amounted to during the 1800s. However, the following figures might be considered representative of interior Eskimo subsistence needs prior to Western contact.

Table 4.
Suggested Interior Eskimo Subsistence Harvest, 1850

Caribou	9,527
Grizzly Bear	74
Mountain Sheep	224
Marmot	2,900
Squirrel	5,250
Varying Hare	1,000
Bearded Seal	397
Harbour Seal	390
Ringed Seal	356
Ducks	4,273
Ptarmigan	9,253
Whitefish and Grayling	156,000 lbs.
Salmon and Trout	236,150 lbs.
Willow Leaves	4,522 lbs.
Berries	25,174 lbs.
Sourdock	5,315 lbs.[32]

This table suggests the possible mid-nineteenth century subsistence harvest for the Naupaktomiut and Noatagmiut based upon census returns, seasonal caloric intake and current population figures, including dogs.[33] In terms of the dependence on caribou alone, a 1948 study estimated the northern interior population in the 1850s at 3,000 and the average household at seven persons. Using an average harvest figure of sixty-four caribou per household per year, a total harvest of 27,428 animals is suggested as the possible annual take during this period of nearly total dependence on subsistence hunting.[34]

Along the coast it was much the same, but with a greater dependence upon sea mammals. The suggested figures for the Tigeragmiut (Pt. Hope) are indicative of coastal subsistence patterns in the Arctic at the time of major Western contact.

Table 5.
Suggested Coastal Eskimo Harvest, 1850

Caribou	1,719
Grizzly Bear	16
Mountain Sheep	x
Marmot	1,050
Squirrel	5,250
Varying Hare	x
Bowhead Whale	11
White Whale	147
Walrus	69
Polar Bear	43
Bearded Seal	623
Harbour Seal	249
Ringed Seal	4,469
Ducks	4,430
Murres	3,909
Ptarmigan	2,920
Murre Eggs	13,120
Whitefish and Grayling	72,400 lbs.
Salmon and Trout	45,050 lbs.
Polar Cod	13,086 lbs.
Willow Leaves	x
Berries	7,720 lbs.
Sourdock	x[35]

A four year subsistence survey of the Arctic Slope Native region conducted between 1969–1973 revealed that present day subsistence needs still remain high along the coast and much higher in the one remaining Nunamiut village of Anaktuvuk Pass. The figures for four villages are of particular relevance to this study: Anaktuvuk Pass, Pt. Hope, Pt. Barrow, and Kaktovik.

These figures may then be broken down further to indicate specific animal totals for the Nunamiut and for the Tareumiut from Pt. Barrow east to Kaktovik in the Beaufort Sea:

In addition to these totals as much as 70,000–90,000 pounds of berries and other plant products were harvested as well. In terms of human consumption these figures indicate annual per capita subsistence requirements to be: Anaktuvuk Pass, 1,299 pounds; Pt. Barrow, 710 pounds; Pt. Hope, 1,616 pounds and Kaktovik, 816 pounds. The higher figure at Anaktuvuk Pass reveals the heavier dependence on subsistence resources than is the case at the coastal villages, due to the greater degree of Western cultural impact and cash economy. Pt. Hope, although it experienced a major mid-nineteenth century cultural impact, is not now the site of any significant white settlement, research or military activities.

SUBSISTENCE METASTASIS

In rhetoric "metastasis" denotes a radical transition from one point to another; this is literally the process which the

Table 6.
Nunamiut Harvest
totals: Mammals, Fish, Fowl

	Pop.	Mammals	Fish	Fowl	Total
Anaktuvuk Pass	97	156,555	3,950	540	161,045
Point Hope	369	537,600	40,000	19,300	596,900
Point Barrow	1,904	1,284,550	61,550	7,600	1,353,700
Kaktovik	108	91,500	15,500	2,300	109,300

(pounds in dressed weights)

Table 7.
Harvest Inventory by
Species Taken

Animal	Anaktuvuk	Barrow	Kaktovik
Brown Bear/Grizzly Bear	5	2	2
Polar Bear	x	6	5
Caribou	1,000	3,500	100
Fox, Arctic	15	2,000	100
Fox, Red	100	60	15
Hare, Arctic	30	x	x
Hare, Snow	10	x	x
Marmot	x		
Moose	5	6	5
Porcupine	15	x	5
Sheep, Dall	200	x	30
Squirrel		1,000	250
Weasel	x	10	12
Wolverine	15	15	5
Wolf	75	30	10
Seal, Bearded	x	150	30
Seal, Hair	x	1,000	75
Walrus	x	33	1
Whale, Beluga	x	5	x
Whale, Bowhead	x	12	1
Auk, Puffin	x		50
Murre			
Ducks	x	5,000	1,100
Ptarmigan	500	1,000	750
Harvest Eggs	x	x	few
Geese	10	400	100
Arctic Char	100	100	2,500
Ling Cod	30	100	x
Tom Cod	x	500	x
Grayling	1,000	2,500	x
Herring	5,000	10,000	x
Coho, Silver	x	200	x
Humpy, Pink	x	200	x
King, Chinook	x	200	x
Smelt	x	x	x
Trout	500	50	1,000
Whitefish, large	x	8,000	x
Whitefish, small	500	8,000	2,500[36]

Eskimos of northern Alaska experienced in their traditional subsistence practices and culture during the late 1800s and for a number of years into the twentieth century.

We have already mentioned or discussed some of the ways in which commerical whaling, technology and fur trapping; traders, government officials, explorers and scientists; the military and the missionary affected the cultural foundations of Tareumiut and Nunamiut culture. We have suggested that alcohol and disease virtually depopulated the North Slope and Mackenzie Delta in only a few years and, furthermore, the Eskimo conceptions of community, family, and personal relationships, morals and values were irrevocably compromised or destroyed.

Changes of such magnitude were bound to have equally severe effects on traditional subsistence practices and, of course, all of these influences are merely parts of the larger phenomenon of acculturation. The two most decisive influences occurred in technology and in economics, with the introduction of firearms and a cash/commodity exchange system. The rifle, shotgun, pistol and harpoon gun enabled Eskimo hunters to kill easily, at great distances and in huge numbers. The incentive for such mass slaughter were the cash and trade goods offered by whalers and traders in exchange for the products of Eskimo labor. An intelligent and adaptive stone age culture was virtually catapulted technologically and materially several thousand years ahead in time in one whirlwind decade.

By the 1880s and 90s Eskimo and white hunting pressure on caribou and other animals rose to unsupportable levels. This external influence combined with a natural cycle which had apparently begun in the 1850s, when the western arctic herd began to decline drastically in health and numbers, and made it impossible for the Nunamiut and other interior groups to exist anywhere except on the coast. Explorations were made to the east in the Sheenjek, White, Kongakut annd Hulahula River valleys, where large numbers of caribou were found. This discovery induced many to move east from the central Brooks Range and Colville River region, while others settled at Pt. Hope and at Barrow. Those who migrated to the east to Barrow, Kaktovic and Herschel Island met many families and individuals who had been carried north by the whalers to work as hunters and feminine "companions". In this way not only was the interior evacuated, but also many coastal inhabitants were dislocated and moved about from one village to another.[37] As Charles Brower noted in 1894:

> Almost every Eskimo from Pt. Hope was here working for [John W.]Kelly or us. We had only a few. Most of our men were at Pt. Barrow from the villages near Wainwright and Icy Cape.[38]

Brower also reveals the effects of the extreme hunting pressure on caribou. Although his comments are of conditions at Pt. Barrow, much the same existed further east, particularly along the coast. In the spring of 1892 he remembered that

> Deer were plentiful coming in close to the coast. Most any time I could leave the house in the morning and shoot a deer or two and be back before dark.[39]

But seven years later he observed that there had "not been many caribou since 1897-98, although the winter of '98 Eskimos brought in 1,200 caribou and 30,000 lbs. of fish".[40]

FIREARMS

Ironically the essential tool in the destruction of traditional subsistence practices was apparently introduced by accident by the British in 1828 at Barter Island, when a musket was inadvertently left behind by the Franklin party.[41] A similar musket was seen and examined by Pullen and Hooper in 1849 which was stamped "Barnet. 1843", identifying it as being of Hudson's Bay Company issue.[42] Because the Russians expressly forbade the sale or trade of guns to Natives, and apparently enforced it; Eskimos, in particular, obtained their firearms from British posts on the Mackenzie and Yukon Rivers. Some of these had reached Nuwak by the 1840s.[43]

However no significant quantities were introduced into the northern country until the 1850s or later, and these guns were obtained through trade from Fort McPherson, Lapierre House, Fort Yukon, and possibly the Russian posts at St. Michael and Nulato. During the summer of 1848 Alexander Murray, factor at the Hudson's Bay Post at Fort Yukon, noted that "he could dispose of any quantity of guns if he could be supplied".[44] That they began to reach the Beaufort Sea coast in the early 1850s is substantiated by Collinson. In 1854 he encountered a group of forty-one Eskimo armed with three muskets dated 1850; and later that summer he encountered the same group, which had somehow obtained eleven more. Indications were that they had come from the Fort Yukon post to Camden Bay as the result of a trading venture.[45]

The Hudson's Bay Company paid one musket for twenty beaver pelts or their equivalent, while the Russian-American Company's price varied between ten and twenty. However Russian guns were of modern percussion design, while the British were of the outdated flintlock pattern.[46] Breech-loading rifles came into general use along the arctic coast in the 1880s and a little later in the interior, a favorite being the standard military issue .45-70 Springfield. From then on Eskimos were able to obtain quality firearms of .44-40, .30-30 and .25-20 caliber. After the Second World War these older models were replaced by smaller caliber high velocity rifles and small gage shotguns. At subsistence and habitation sites of the historic period many of these older cartridges may be found, and provide one way of determining the age and use of a specific location.[47]

Along the coast the introduction of firearms and the general influence of the whalers completely altered traditional whaling methods. Soon the old harpoon and lance were replaced by the darting gun, shoulder gun and bomb lance, while in many cases the umiak was discarded altogether.

Eventually gasoline and the outboard motor provided the hunter a far greater range and mobility, but it also tied him to a dependence on gas and oil, motors, repairs, tools and the money required to support them; one more step away from self-sufficiency.

SOCIAL AND ECONOMIC DEGRADATION

These technological changes were exacerbated by some misguided missionary influences and outright commercial exploitation, and soon the ritual and community significance of the hunt had largely disappeared. The karigi were condemned as evil and torn down for firewood as traditional subsistence practices lost much of their religious meaning and social function. Cold frame houses replaced the warm, efficient, but squalid looking sod structures of the past. In 1928 Charles Brower commented of Barrow people:

> They seem as if they had forgotten how to whale. Whales were plentiful close along the ice. Many were struck and bombed, but only two small ones had been taken up to the 14th of May.[48]

Furthermore he observed that the Barrow Eskimos were digging up artifacts to sell to the whalers, even "skeletons from oil lakes", and that most of the old graves and remains on Dead Man's Island had been exhumed and their contents sold or traded to the whalers.[49]

Liquor had become such a problem by 1892 that Brower recalled that

> we did not go much to the village these days, everyone was making hootch; all were getting poorer, there was no one that seemed to want to acquire any wealth as had been the custom.[50]

Early explorers had generally praised the kindness, intelligence, and appearance of the Tareumiut Eskimo, and later explorers such as Stefansson, Stuck and Rasmussen confirmed these traits of the interior people as well. In 1893 Robert Porter observed:

> Generally I find that those natives who have been brought into contact with whaling ships and the class of uneducated white residents at the stations are the worst to have dealings with. On the whole, the people are hospitable and good-hearted and are, in the situation that nature has placed them, on a par with any uncivilized race.[51]

Thus, when Captain C.L. Hooper cruised northern waters in the *Corwin* in 1881 and observed the people of Pt. Hope—long a stopover for whalers and traders, he noted:

> The natives came on board in large numbers during our stay at Pt. Hope. They are lazy, filthy, worthless, and dishonest and require constant watching.[52]

However, Captain Bodfish condemned white excesses and concluded harshly that "natives never stole until the white man taught them to."[53]

In addition to the direct influence whalers had upon the subsistence patterns of the northern Eskimos, they may also be credited with the introduction of the indirect and long term changes resulting from an exploitative cash economy and commodity exchange practices. For example, whaling captains often required that their crews be supplied with large amounts of winter clothing. One such captain procured 500 pairs of caribou boots, reindeer coats, fawnskin and squirrel shirts for his crew for two summers and one winter, in exchange for trade goods valued at between fifty cents and two dollars.[54]

Perhaps the clearest picture of the impact that the development of the commercial whaling industry at Herschel Island had on northern Eskimo society has been provided by Vilhjalmur Stefansson. By 1892 most of the Barrow people and others along the coast had gone to Herschel for the winter to hunt for the whalers, who were perhaps "as hardy, brave, lecherous and murderous a crowd of toughs as ever walked the earth or sailed the seven seas," and Herschel Island,

> the world's last jumping-off place where no law existed and no writs ran, a paradise of those who reject all restraint upon appetite and all responsibility for conduct.[55]

Within such an environment and in the company of such men as these, the northern Eskimos became caught-up in a bewildering progression of changes and influences. As Stefansson observed:

> This had a sudden effect on the fortunes of the Eskimo. Before that time they had been in the habit of making summer trading voyages up to Ft. McPherson to buy a few small things, but now, when this large whaling fleet came, all their conditions of life were changed.... All of the articles which they had been used to buying [from the Hudson's Bay Company] they could now get cheaply, or for nothing, from the whalers, and they soon learned the use of a great many other articles, the very names and appearance of which were unknown to them before—articles which even the Hudson's Bay Company factor at McPherson had been compelled to do without. The ships too brought an abundance of provisions. At first the Eskimo would have nothing to do with any of these, but in the course of a few years they learned the use of flour, molasses, sugar, etc, which became first luxuries and then necessities.

As to the impact on traditional subsistence practices Stefansson noted:

> It was important for the whaling ships to get fresh caribou to keep the crews from getting scurvy and they employed practically the whole population in the pursuit of caribou, fish and ptarmigan. Such things as flour, hard bread, sugar, canned meats and vegetables, butter, etc., they gave with a free hand to the Eskimo urging them to save meat. The Eskimo, of course, preferred meat as an article of diet, and now they were further impressed with the fact that the white men seemed to consider meat of priceless value and the other food articles of little value or none. Meat, therefore, came to have a fabulous price compared to other commodities.[56]

As Eskimos received small amounts of money for hunting and trapping, they could afford to buy more and more and the "little extras", which had little or no subsistence or utilitarian value, assumed a disproportionate prestige and social value. Such buying, of course, was encouraged by whalers, traders, store operators and others in what amounted to a policy of "created want". In this manner the old trade relationship, based primarily on quality goods, was quickly undermined by the introduction of such things as calico flannelette, phonographs, enamelled pails, opera glasses, suspenders, ladies coats and scores of other items of a specialty nature.[57]

With the more permanent establishment of Western culture along the coast, Eskimos were encouraged to discard items of a traditional nature for "modern" goods, often at the insistence of missionaries, traders, store operators and teachers, who soon were sitting on village councils advising the conduct of village affairs. Obviously there were exceptions to these practices. Western trade and commerce did much to raise the material standard of living, and considering the distances these cargoes traveled and the dangers involved, there may have been justification for charging exorbitant prices. Also many whites went north for reasons other than greed or exploitation. Unfortunately the negative cultural influences have had more persistent and long range effects than the material benefits.

FUR TRAPPING

The collapse of the whaling industry was followed by a period of depression and unemployment for many coastal and interior Eskimos which lasted for two or three years. There was some inclination and necessity to return to traditional subsistence living, but the North Slope had been so depleted of subsistence resources that few could now survive outside of the larger communities.

Then for a period of twenty to thirty years fur trapping replaced contract hunting in another phase of the boom or bust cycle becoming peculiar to Alaska's economy as a whole. Many former whalers converted their ships to floating trading posts and small isolated posts were maintained along the Beaufort Sea coast by white resident entrepreneurs, who traded goods and credit for furs. Once again Eskimos had a source for cash and the material and subsistence goods to which they had become accustomed. While the industry lasted, many Eskimos not only survived but prospered as well, and the period 1909-1939 witnessed an acceleration in the process of cultural and economic assimilation.

Charles Brower had anticipated the decline in whaling and had begun to encourage Eskimos to trap as a means of maintaining and advancing their newly assumed standard of living. There was some reluctance at first, but in 1909 he noted that:

> Finally word got around that we were a surefire market. This brought Natives from all over the east and far inland. All came loaded with skins which we bought... our business increased so that the time came when I opened up a branch station at Wainwright and another far to the east of us at Beechey Point.[58]

Soon trading posts sprang up along the coast at Shingle Point, Herschel Island, Demarcation Point, Barter Island, Collinson Point, Flaxman Island, Beechey Point (at the mouth of the Itkillik) Cape Halkett, Cape Simpson, and, of course, Pt. Barrow, where the headquarters of the Cape Smyth Whaling and Trading Company was located.[59] The Mackenzie Delta and Ballie Island posts also became important fur trade centers, and many Alaskan interior and coastal Eskimos migrated to this region for jobs and markets. One hundred left Pt. Barrow in 1918.[60]

Fox, mink, marmot and wolverine were so plentiful that a number of Eskimos cashed in to become what amounted to a middle class, with incomes exceeding $8,000–$10,000 annually, substantial bank accounts and even their own schooners.[61] However credit was also easy to come by when times were good and store managers would often outfit a hunter or trapper on a yearly basis with the harvest serving as collateral. If the harvest was plentiful the account might be settled, but if not, indebtedness resulted and the lien increased accordingly.

During the Fifth Thule Expedition, 1921-24, Knud Rasmussen observed the change that now characterized the Northern Eskimo:

> At Cape Lyon [NWT] we encountered the first Eskimo immigrant from Alaska, who like the white trapper, were now seeking their fortune in the country of their "wild" kinsmen. They were extremely hospitable, spoke fluent English and soon proved to be throughly business like. A joint of caribou meat, such as would have been given us freely further east, here cost $8.00.
>
> But the principle here was unquestionably right; the Eskimo had now to compete with the white men, and if they were to make ends meet, it was necessary to ask fair payment for services rendered.[62]

However certain benefits of Western material culture may have accrued to Tareumiut and Nunamiut Eskimos, it brought with it pejorative consequences. Trapping for a living represented a form of subsistence in contrast to traditional hunting, fishing and social practices, because it required men to be out and away from the village during the long winter months—traditionally a special time of family and village activity. An individual skill, trapping conflicted with the cooperative hunting practices formalized over centuries in the harvest of sea mammals and caribou; and village, family and personal identity blurred as family units became dispersed.

Ironically two external developments made trapping both highly profitable and, within twenty years, defunct as a significant subsistence resource. The steel trap allowed Eskimos to trap large numbers of animals at a high rate for several years, along a trapline which might be 150 miles long. At the same time the high fashion industry was

severely depleted by the First World War and its aftermath, and a large part of the European market was lost or disrupted. American companies quickly took over from the German dye firms and had soon perfected the dying of cheap imitation furs. Furs, like whales, had been ousted from their place of prominence by technology, and although the market never recovered completely, it still remains an important subsistence source for the Eskimo.

REINDEER HERDING

With trapping, reindeer herding provided the economic mainstay for the northern Eskimo prior to the Second World War. In 1891–92 the deer was introduced into the North from Siberia under the auspices of the General Agent for Education in Alaska, Dr. Sheldon Jackson. This had been done in an attempt to provide Eskimos with an abundant subsistence resource to replace the decimated caribou and sea mammal populations. Reindeer were distributed from Pt. Barrow south to Metlakatla, but they were of greatest importance in the northern regions.

After serving a short apprenticeship with Lap herdsmen imported to teach Eskimos herding techniques, Eskimos were provided with a small herd of their own, which they paid back with new stock. Between 1892 and 1916 all herds were kept separate and each owner had his own mark or brand; close management techniques kept the quickly growing herds under control. By 1917 there were ninety-eight herds totaling nearly 99,000 animals tended by 1,938 herders and owners.

At this time the reindeer industry was primarily a Native owned and operated industry with nearly 66,000 of the 99,000 deer owned by Eskimo, Aleut and Indian herdsmen. They recieved $97,515.00 income from this resource in 1917, prompting the Secretary of the Interior to remark:

> the one constructive thing done by the government on behalf of Alaska, in nearly half a century, was the importation of reindeer for the benefit of the Eskimo on the border of the Arctic Ocean.[63]

By 1935 the original Pt. Barrow herd of 125 animals had grown to number 30,000 animals and the total growth increase had been from 1,250 to approximately 600,000. This great expansion was only possible because the deer had no serious competition from caribou, which also depended upon tundra for nourishment, and huge expanses of range within which to forage. However the very presence of large numbers of deer tended to retard the recovery of the caribou herds until the late 1940s. By that date, due to government and private exploitation, mismanagement and predation, deer herds had decreased by one-third, until by 1950 fewer than 25,000 remained and many of these were absorbed into wild caribou herds.

Several influences combined to effectively put an end to reindeer herding as a subsistence resource for northern Eskimos. Certainly the decision by the government to open the industry to white ownership marked the beginning of the decline, but there were also cultural aversions felt by Eskimos placed in the role of herdsmen. By the late 1930s initial enthusiasm turned to disdain. These influences combined with the Depression, a revival in subsistence hunting interest and new job opportunities presented by the war construction and service boom of the 1940s and 50s insured the collapse of yet another northern enterprise based upon Western economic schemes and private investment interests.

With the passing of the trapping and reindeer industries came an increased awareness by the federal government of the problems of Alaska Natives in general and northern Eskimos in particular. New federal programs were initiated at Barrow, Kaktovik and other Eskimo villages in a paternalistic effort to bring these culturally distinguished people into the multifarious mainstream of Western/North American society.[64]

Although a great deal of legislation has been enacted at both the federal and state level since 1924 when Alaska Natives were granted American citizenship, a subtle and sometimes unrecognized cultural arrogance has made the task of finding an entry into this mainstream an elusive and altogether tragically discouraging proposition for the majority of Natives who have tried. As a report by the federal government in 1969 noted:

> A great contrast exists between the high income, moderate standard of living and existence of reasonable opportunity of most Alaskans and the appallingly low income and standard of living, and the virtual absence of opportunity for most Eskimos, Indians and Aleuts of Alaska.[65]

Furthermore at the root of this contrast is the success federal and state programs and public attitudes have had in placing the northern Eskimo and other Native peoples in a cultural netherland. This netherland is based upon concepts of "equality" which unfortunately ignore the fundamentally disadvantageous and unequal nature of the historical relationship between North American and Native culture. Rather than extending real possibilities for assimilation into American society, government has chosen instead to throw out the sop of welfare and social programs; and to set Eskimos, Indians and Aleuts apart by preferential treatment which only serves to exacerbate the problems of identity loss, depression and self-degradation.

Despite the two most recent "boom" periods in the cycle we have seen dominate in Alaskan economics to varying degrees since the late 1800s, defense development and now oil development, the problems of Native subsistence within a cash economy have not been seriously addressed much less solved. The experience of Eskimos and other Natives, particularly in oil development training programs, have been far from satisfactory or productive. These problems for Natives occur at a time when "the leading growth industry—oil and gas—is one of the most capital intensive and technology intensive of all commodity-producing industries and employs almost no unskilled or semi-skilled labor."[66] Moreover the same Federal study suggests that

future employment opportunities in Alaska, requiring minimum qualifications, will be neutralized by "the disappearance of unskilled and semi-skilled jobs in declining industries or trades... resulting from automation, modernization and upgrading of work in general." It appears that Natives may be caught in the middle, or excluded altogether, and faced with a debilitating situation where cash and its acquisition is in direct competition with subsistence, and where Natives have no choice but to choose between one or the other. This for many Natives is no choice at all.

With the passage of the Native Land Claims Settlement Act in 1971, Native peoples in Alaska received belated recognition of their aboriginal rights to certain traditional lands and of their desire to continue subsistence practices. This occurred in part because it was realized that there were many villages and people for whom assimilation was not a desirable or practicable goal.

However since the passage of the claims act there has been a growing concern among many village residents, who fear that protection of the land and subsistence practices will be jeopardized by what has been termed the "Brooks Brothers" leadership guiding the fortunes of many Native corporations.[67] As one advocate of this position commented:

> The claims act protects the Native who wants to live in Anchorage and make bucks, but not aunts and uncles who want to live from the land.... When I came back from the service in 1971, I knew nothing of the claims act. Some leaders got us into this whole thing and now we must live with it.... The real reason seems to me to give up being Eskimo and to get some lands, [but] we are trying to find ways to still continue subsistence living and keep from developing all the land.[68]

Another village resident observed:

> Substantial pressures now force the villages of this region [Chulista Corporation] to hook up to hard, alien imported technologies for the energy and food required to survive there, and also to the cash economy which must be present in the village to support these technologies.... Rather than continuing the practice of gathering natural fuels traditional to the Yu'pik culture, the Eskimo has been forced into a fuel oil economy by virtue of the growing presence of government housing, schools and related services, In effect these programs have curtailed seasonal movement and much of the way of life which accompanied it. Now in the present day, those migrations have been terminated by permanent, year-round residences [and] the hunter has to strike a compromise: summer is best to harvest natural, subsistence foods for which he must now travel further than ever before—but summer is also the best time for the seasonal employment, which is now needed by that same hunter to pay for his imported fuels and foods....

And he concluded:

> What has now become evident is that the coastal Eskimo who was self-sufficient in gathering foods and fuels and who provided his own transportation—gradually became dependent upon imported energy, and more and more upon imported foods—even though at present 80% of this region's gross nutrition and 95% of its protein, are still derived from local sources.[69]

These are the very real paradoxes which exist in northern Alaska which, perhaps sooner and to a much greater extent, is likely to experience the trauma of major development. It remains as the great challenge to the northern Eskimo people to place the historical character of their relationship with Western culture in proper perspective, to reaffirm their own cultural heritage and to formulate policies of self-sufficiency, recognizing both traditional needs and the political and economic realities of the contemporary Alaskan setting.

ENDNOTES

1. In Art Patterson, *Subsistence Harvests in Five Native Regions*, Joint Federal-State Land Use Planning Commission for Alaska, Anchorage, 1974: 2.
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3. See map on following page.
4. *Final Environmental Statement, Gates of the Arctic*, 69.
5. *Ibid.*, 5.
6. *Ibid.*, 2.
7. *Final Environmental Statement, Proposed Noatak National Arctic Range, Ibid.* (1974): 103.
8. *Final Environmental Statement, Proposed Porcupine National Forest*, Ibid. (1974): 79,93.
9. As quoted from *The Alaska Native Land Claims Settlement Act*, 1971, Section 2 (c), 89.
10. See Norman Chance, "The Dynamics of Change," in Chance, *The Eskimo of Northern Alaska* (N.Y.: Holt, Reinhart and Winston, 1966) 80-99 (Kaktovik);_____,"Cultural Change and Integration,: An Eskimo Example," *American Anthropologist* Vol. 66 (1960) 1028-1044 (Kaktovik); Palmer W. Roberts, "Employment of Eskimos by the Navy at Point Barrow," *Proceedings*, Third Alaska Science Conference (1954) 4-43; James W. Van Stone, "A Successful Combination of Subsistence and Wage Economics on the Village level," *Economic Development and Cultural Change* Vol. 8 (1960) 174-191 (Pt. Hope); and Charles C. Huges, "The Patterning of Recent Cultural Change in a Siberian Eskimo Village," *The Journal of Social Issues* Vol. 14 (1958) 25-35.
11. See Arthur E. Hippler, "Some Observations on the Persistence of Native Village Populations," Institute of Social, Economic and Government Research, Report No. A1, Univer. of Alaska, College, 1969: 1-2.
12. Sec. 16.05. 940(17) Alaska Statutes.
13. Chance, *The Eskimo of North Alaska*, 45.
14. For this summary many sources could be cited. See for example, Spencer, *The North Alaskan Eskimo*, 332-353; M. Lantis, "The Alaskan Whale Cult and its Affinities," *American Anthropology* Vol. 40 (1938) 438-464; H. Larsen and F.G. Rainey, *Ipiutak and the Arctic Whale Hunting Culture*, Anthropological Papers, American Museum of Natural History no. 42 (N.Y., 1948); and J. Murdoch, "The Animals known to the Eskimo of Northwestern Alaska," *American Nature* Vol. 32 (1898) 719-734.
15. See Brower, *Fifty Years Below Zero*, 45-55; J. Murdoch, "Whale Catching at Point Barrow," *Popular Science Monthly* Vol. 38 (1891) 830-836; and Laurel L. Bland, *The Northern Eskimos of Alaska: A Source Book*, Alaska Methodist Univ., (1972).
16. Spencer, 340-353; and Bodfish, 95.
17. See J. Murdoch, "Seal Catching at Point Barrow," *Smithsonian* Misc. Collections Vol. 34 (1893) 102-108; V. Stefansson, "Food of the Ancient and Modern Stone Age Man," *Journal of American* Dietary Association Vol. 13 no. 2 (July, 1937) 102-119; and for a gen-

eral survey, J.A. Allen, *History of North American Pinnipeds: A Monograph of the Walruses, Sea Lions, Sea Bears, and Seals of North America*, U.S. Geologic and Geographic Survey, Misc. Pub. 12, 16+ (Wash., 1880).

18. See John L. Burns, *The Walrus in Alaska: Its Ecology and management*, Alaska Department of Fish and Game, Division of Game, Juneau, 1965.
19. John Murdoch, "Fish and Fishing at Point Barrow, Arctic, Alaska," Trans-America Fish Cultural Assoc. 13th Annual Meeting (1884) 111-115; and Norman Wilimousky, *The Utilization of Fishery Resources by the Arctic Alaska Eskimo*, Natural History Museum, Stanford Univ. Occasional Paper no.2 (1956).
20. Don C. Foote, *Changing Resource Utilization by Eskimos in Northwest Arctic Alaska, 1850-1952*, Paper read before Arctic and Sub-Arctic Section VII, International Congress on Anthropology and Ethnology, Moscow, August, 1964; and Chance, *Eskimos of Northern Alaska, 35-45*.
21. See C. Wissler, "Harpoons and darts in the Stefansson Collection," Anthropology Papers of the American Museum of Natural History Vol. 14 no. 2 (1919) np; Murdoch, 335-344; and Beechey, Vol. 1 398, 404-405.
22. See Spencer, 43-61; and Edwin S. Hall Jr., "A Preliminary Analysis of House Types at Tukuto Lake, Northern Alaska," in Hall ed., *Contributions to Anthropology*... as previously cited, 98-134.
23. See Gubser, 289-291; Spencer, 465-469; Murdoch, 205-215; and Edward Nelson, "The Eskimo About the Bering Strait," *18th Annual Rpt. of the Bureau of American Ethnology* (GPO, 1899).
24. See the discussion by Ernest S. Burch Jr., "The Nunamiut Concept and the Standardization of Error," in Hall, ed., *Contributions to Anthropoplogy*, 52-97.
25. The Report of Fred G. Sickler, Village of Shungnak, 1915-1916 as previously cited. Testimony of a local chief.
26. See particularly Gubser, 353-356; Helge Ingstad, *Nunamiut: Among Alaska's Eskimos* (N.Y.: W.W. Norton Co., 1954); and Burch, "Inter-Regional Transportation in Traditional Northwest Alaska," *Univ. of Alaska Anthropology Papers* Vol. 17 no.2 (1976) 1-12.
27. As described in Spencer 27-32, 353-357; and Gubser 295-333.
28. *Loc. cit.;* and Rausch, "Notes on the Nunamiut Eskimo and the mammals of the Anaktuvuk Pass Region, Brooks Range," *Arctic* Vol. 4 no. 3 (Dec., 1951) 147-195; Burch, "The Caribou/Wild Reindeer as a Human Resource," *American Antiquity* Vol. 37 no. 3 (1972) 339-348; and Helge Larsen, *The Material Culture of the Nunamiut and its Relation to Other Forms of Eskimo Culture in Northern Alaska*, Proceedings of the 32d International Congress of Americanists, Copenhagen, 1958.
29. Gubser, 295–333.
30. Ingstad, 288.
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34. Larsen and Rainey, 31.
35. Don Foote Papers
36. See *Inventory, Subsistence Harvests in Five Native Regions*, "Arctic Slope", Resource Planning Team, Joint Federal-State Land Use Planning Commission, Anchorage, Feb., 1974. It should be noted that the totals for all these villages showed a declining trend.
37. See Burch, "The Caribou/Wild Reindeer as a Human Resource," *American Antiquity* Vol. 37 no. 3 (1972) 339–368.
38. Brower, Autobiographical Notes, Don Foote Papers.
39. *Ibid.*; 418
40. *Ibid.*; 517. See also Mayor Eben Hopson's Testimony Before The Alaska Board of Game, March 23, 1976 for an interesting assessment based on the "one herd" concept.
41. Franklin, 148
42. W. H. Hooper, RN, *Ten Years Among the Tents of the Tuski*..., (London; J. Murray, 1853) 237.
43. John Simpson, 235.
44. Alexander Murray, *Journal of the Yukon, 1847–48* (Ottawa; Gov. Printing Bureau, 1910) 100.
45. Collinson, 315
46. Murray, 48; W.H. Hooper, 272; and Berthold Seeman, *Narrative of the Voyage of HMS Herald During the Years 1845–51 Under Command of Captain Henry Kellett*... (London: Reeve and Co., 1853) 143.
47. *See Final Rpt. of the Archaeological Survey and Explorations Along the Alaska Pipeline Service Co. Pipeline*, College, 1971, particularly the sites uncovered at Prudhoe Bay.
48. Brower, 845.
49. *Ibid.*, 865.
50. *Ibid.*, 418.
51. Porter, 11th Census, 152.
52. Hooper, *Cruise of the Revenue Cutter Thomas Corwin in the Arctic Ocean*, 1881 (GPO, 1884) 41.
53. Bodfish, 51.
54. Riccidelli, 45.
55. Alex Stevenson, "Lawless Land," *North* Vol. 16 no. 1 (1969) 45–50; and_____, "Whaler's Wait," *Ibid.*; Vol. 15 no. 5 (1968) 28.
56. Stefansson, *My Life With the Eskimo*, 39–40.
57. Bodfish, 195.
58. Brower, Autobiographical Notes, 94.
59. Originally the Pacific Steam Whaling Company, the new firm was established in 1893.
60. In *Work of the Bureau of Education For the Natives of Alaska*, Bull. of the Dept. of Interior no. 40 (1917) 73.
61. See R.N. Hourde, "Sophisticated Eskimos," *Beaver* (September 1952) 36.
62. Knud Rasmussen, *Across Arctic America*....(N.Y., London: P. G. Putnam, 1927) 189.
63. C. L. Andrews, "Reindeer History," *Eskimo* Vol. 9 no. 3 (1942) 3.
64. See George W. Rogers ed., *Change in Alaska: People, Petroleum, and Politics* (College: Univ. of Alaska Press, 1970) 180–194.
65. As quoted in Chance, "Directed Change and Northern Peoples," *Ibid*, 188.
66. As quoted in Chance, "Directed Change," 190.
67. See Peter Gruenstein, "Alaska Natives, Inc., *"The Progressive* (March, 1977) 33–38.
68. Quoted in *Rural Alaska Newsletter* Vol. 3 no. 3 (Fall, 1976) 2.
69. *Ibid.*, 4–5.

Plates

I. Harrison Bay
II. Teshekpuk Lake
III. Beechey Point
IV. Sagavanirktok
V. Flaxman Island
VI. Barter Island
VII. Mt. Michelson
VIII. Demarcation Point

On the USGS 1:250,000 maps which follow, historic and subsistence sites of the Beaufort Sea region have been located. While often supportive of references made to specific sites in the sections, *History and Historic Sites* and *Subsistence and Subsistence Sites*, these site locations and the accompanying inventory represent ethnolocations and oral accounts of generations of Eskimo residents of the Beaufort Sea coast and interior regions. They have been collected and interpreted by Flossie Hopson of the North Slope Borough Planning Department, Commission on History and Culture.

The dots on the maps indicate site locations and each has been given a reference number which corresponds to the inventory. The inventory contains three general headings: Site, Location, and Significance. Under the heading, "Significance", there are eleven explanatory categories identified as: 1) cabin/shelter cabin today, 2) grave/cemetery, 3) ruins/bones/sodhouses, 4) fishing a. iuagniksmelts b. iqaugruak-salmon c. anaaik-white fish d. iqaukpik-lake trout e. qaaktaq-small white fish f. tittaalikling cod g. sulukpaugak-grayling h. iqaluapak-arctic char 5) trapping, 6) hunting/camping/stopover place, 7) cellars, 8) other/ nesting area, seals, roots, 9) whaling settlement, 10) important events/old sites, 11) kunilaat (reindeer herding).

Plates I and II (Harrison Bay and Teshekpuk Lake) have been included but not inventoried in this study. A comprehensive report, *Traditional Land Use Inventory North Slope Borough: National Petroleum Reserve in Alaska* (August 1, 1976), provides a complete reference to site identification within these two quadrangles, and should be used as a supplement to this study in any assessment of North Slope-Beaufort Sea cultural resources. These two plates were included, however, to indicate the extent of historic and subsistence sites in the entire region—Pt. Barrow to Demarcation Point.

Other studies in progress will provide further data in the above quadrangles (I-VIII) and in the remaining quadrangles of the greater North Slope region. References to the Barrier Island sites may be found on page 35.

Broadly speaking, any place or setting that has been the site of human habitation, contact, or interaction may be considered "historic". After all, history implies that something has been written or remembered about a particular place or location which makes it significant in terms of why or by whom it was recorded or remembered. What determines the greater significance of one site over another, or its "unique" qualities, is both an objective and a subjective value judgement and an issue sensitive to interpretive frameworks—sometimes at odds with one another. Indeed it must be recognized that the history and culture of aboriginal Alaska is perhaps unmatched in this respect and that in certain cases it may be impossible to quantify (on a scale of 1-10) or put a particular label on the quality or degree of "significance". Above all, however, the question must be approached from both the dominant and the aboriginal culture.

Because of the nature and traditional substance of Northern Eskimo culture, many of these sites are still used, as indicated in the inventory, in addition to representing historic, archaeological, architectural, ecological and environmental values.

Inventory

Tiiyugak (Mrs. Annie Ologak) who is one of two oldest residents in Kaktovik gives us a brief account of her years on the North Slope, whether it be in the Kaktovik, Barrow, Killik River, Ikpikpuk River, Demarcation Point, Beechey Point, areas. She is now eighty-four years old, born in 1893 at Ikpikpuk River. This is the time when people used to travel by boat downstream (ataaq). She remembers some travel accounts when her grandparents and parents were still living around the middle 1800's. Her father's name is Takpaan, her mother Pallanana. Her grandmother's name is Alivruna and grandfather is Anupkana. Her husband Richmond died while at Herschel Island, Canada (they had lived there for five years, then back to Kaktovik). She has eight children; she uses the number of children she has for a time frame.

She grew up in the Killik River area with her parents. She remembers that there were Kovakmiut (kobuk-Noatak

River area) who she knew when she grew up in this area. People (families) went to Kikikragruk (Kotzebue) through the headwaters of a river (kangik of the Colville, Noatak River). At this point the Kovakmiut traded with them for such things as tobacco. (This area is Killik River south).

The family was at Barrow for a number of years. She was a young woman then. They left Barrow after she married and had three children (Soplu, Taipana, and Asiyak), and the year after 1917 they went back to Kaktovik. There were a few families in that area, but they were one of the first families at Kaktovik, although there were some families not far from Kaktovak at Ugruktalik (Griffin Point). They were first there when she was a little girl. The first families that settled in Kaktovik included: Kunuyuk (Dorothy Gordon's father) who first lived there with them, Pipsuk's grandfather, Tigutaak, who also had a trapping cabin in the Tamayagiak River area. Other families were Tigluk, Ikkagiñ, Akootchook (Isaac Akootchook's Father), Tom Gordon, Ilgutchiak (Kiatun's father), Tukkayak, Tuigan (Matumeak's mother). Other families moved there from smaller settlements (old sites). The area that these families knew includes: the Salgutchi River, Hula Hula River, Jago River, sites of Kanignivik, Sannisaaluk. They have some old ruins (sod) at Nuvvuak (Pt. Collinson), Analaak (Anderson Point). While their great-grand-parents were still living, they had old houses at Okpilurak and Killik River area. Niglik known as Kisik (Woods) Inaat is the old time place where the coastal and the inland people used to trade goods:caribou skins for seal oil, meat for fish, berries for dried meat.

They traded with the Barrow people, Killikmiut River people, Kuupikmiut people on the Colville River and Kagmaliit. The Kagmaliit also traded with Herschel Island (Qikitag) people for what they didn't have after they traded at Niglik. Other items traded were rope, musso-roots and the basic foods that were from the ships—flour, molasses, beans, oatmeal, prunes and raisins bought from the trading posts. They traded their foxes for these goods or whatever skins of catch they had. Before any trading took place, they had no guns and therefore used snares for ptarmigan, they gathered roots, berries, some squirrels. There were some reindeer around but they had certain times for butchering them. Fishing was the major activity along the rivers.

Tom Gordon had the first trading post at Kaktovik; that was his chain store from Demarcation Point. Jack Smith had a trading post in Nuvvuak. Henry Chamberlin has a store at Aliguaruk (Brownlow Point).

Charles Edwardsen (Etuk) or Charles Brower had a trading Post at Beechey Point, Uuliktuk. (This was just before Annie got married in the early 1900s). Most of these trading posts closed down because no credit was allowed and the price of fox was very low. (1930's)

To list some utensils that she used until metal: One wooden bowl, one wooden water bowl made from tree stumps (muniknaq) and usually a pair of snowshoes (taglu). As a young woman, she first used fabric clothing at Barrow. The point for this is that there were no metals; no cans, no utensils, no pots and pans—just wood before ships or traders came.

The above mentioned were settlements of families who used to live there until the 1930s and 1940s before they permanently settled at Kaktovik, Barrow area, (Qikiktag) Herschel Island and other parts of the Canadian Beaufort Sea coast. There are family relations between Kaktovik and the Canadian villages. Eventually when customs at the border began to be troublesome and expensive, traveling occurred less and less between the islands.

Special Event

When the sun sets for the winter, people gathered together as families and relatives (a number of family settlements) to have a feast, play competitive games (especially soccer), dance Eskimo dances, clean homes by placing new willows on the floor, and make new clothes and parkas. They prepared all kinds of foods. Aklavik was one such place where this took place. This was later referred to as the Christmas days when the missionaries and doctors came (every five years) to Aklavik in northern Canada. We still celebrate Christmas in the same manner.

MASTER LIST

1. Pattaktuq (Demarcation Point)
2. Gordon
3. Kaniqłuaqpiat
4. Kuvluuraq (kuviurak)
5. Piŋuqsraaluk (Pingokraluk)
6. Siku (Icy Reef)
7. Atchalik (Aitchilik)
8. Anŋun (Angun Point)
9. Imaigñauraq (Humphrey Point)
10. Igluġruatchiat
11. Pukak (Pokok)
12. Uqsruqalik (Griffin Point)
13. Tapquaraq (Tapkaurak)
14. Pipsuk Point
15. Qaaqtuġvik 1st. (Kaktovik)
16. Qaaqtuġvik 2nd
17. Qaaqtuġvik Present
18. Igluqpak (Elupak)
19. Naalagiaġvik (Arey Island)
20. Ukpiilam paaŋa (Mouth of Okpilak)
21. Sanniqsaaluk
22. Aanallaaq (Anderson Point)
23. Kanigñiivik (Konganwvik)
24. Agliġuaġruk (Brownlow Point)

25. Point Hopson
26. Point Gordon
27. Sivuġaq
28. Fish Hole 1
29. Fish Hole 2
30. Paaqta (Fish Hole 3)
31. Kaŋi
32. Nuvuaq (Point Collinson)
33. Iqniq (Iqnik Valley)
34. Navraq (Lake from Shublik Hills)
35. Tikiġaaġruk (Heald Point)
36. Inaat Kisim Inaa
37. Kakianaam Inaa
38. Pole Island
39. Sikiaġruum Inaa
40. Imialat
41. Ninŋulit
42. Siiqsiññiq

Beechey Point Quad of Tasikpak Nuiqsut Inventory with Additions

91. Uuliktuk
(7) Sanniaruk
94. Piŋgu
95. Mouth of Ugruknavik
96. Milne Point
97. Ugruknavik
98. Qaviarat
(12) Takpam Inaat
100. Nukatpiat (Bodfish)
101. Tapkakturuak
102. Beechey Point
103. Sakvagayak
104. Aquvlaak
(11) Ikpikpaurak
106. Sigłaktitaq
107. Kaŋigłuk
108. Niaquq
110. Napagsralik
111. Foggy Island
(14) Point Brower
112. McClure Island
(8) Ekooloo Inaat
113. Qałgusilik
(9) Koganak Inaat
114. Point Lookout
115. Tigvagiak Island
116. Savvivgvik

Additions to Beechey Point Quad from Beaufort Sea

35. Tikigaaruk
36. Kisim Inaat
37. Kakianaam Inaat
38. Pole Island
39. Sikiagruum Inaa

SITES	LOCATION	SIGNIFICANCE
1. Pattaktuq (Demarcation Point) (Demarcation Point, A)	1. 141 19'05" 69 41'01" 2. 141 17'20" 69 38'40"	1,3, 6,10. Old site. Cabins were built by Tom Gordon *in* 1916. Trading post location where goods used to be brought from ships.
2. Gordon (Demarcation Point, A)	1. 141 12'00" 69 40'00" 2. 141 12'00" 69 40'20"	2,3,6,10. Old site. Old graves. Ruins located about 4 miles west, at the edge of a lake on the trail. Named after Tom Gordon, father of the Gordon Family who lived in this area.
3. Kaniqluaqpiat (Demarcation Point, A)	1. 141 16'00" 69 38'00" 2. 141 14'30" 69 37'40"	1,3,6,10. Old site. Cabin location about 1.5 miles from Turner River-built in 1916. Old ruins.
4. Kuvluuraq (Demarcation Point, A)	1. 141 24'30" 69 43'30" 2. 141 23'00" 69 42'50"	1,3,4,6,10. Old Site. Ruins. Cabin location. Fishing-Kaktaq, Iqalukpik. It means a small thumb-located in the spit.
5. Piŋuqsraaluk (Demarcation Point, A)	1. 141 42'00" 69 42'00" 2. 141 31'20" 69 33'00"	1,2,3,5,6,10,11. Old graves on top of the hill (piŋu). Three cabins belonging to Gordon Family. Old reindeer herding area—Kaŋigak ruins still there. Old site.
6. Siku (Icy Reef) (Demarcation Point, A)	1. 141 37'00" 69 46'00" 2. 141 51'00" 69 48'40"	1,3,6,8,10. Old site. Old and present campsite. 2 cabins built in 1918. Old ruins. Goosenesting area.
7. Atchalik (Demarcation Point, A)	2. 143 26'00" 69 03'00"	3,4,5. Old ruins.
8. Aŋŋun (Demarcation Point, C)	1. 142 23'00" 69 56'00" 2. same as 1.	3. It means an oil seep. Old ruins off Nuvagapak Lagoon.
9. Imaigñauraq (Humphrey Point) (Demarcation Point, C)	1. 142 31'30" 89 58'45" 2. 142 30'00" 69 58'00"	2,3,10. Old graves located at the mouth of Kimikruak River. 5 old sod house ruins.
10. Iglugruatchiat (Demarcation Point, C)	2. 142 34'00" 69 59'30" 1. same as 2.	2. Old graves located about 2.5 miles from this site.
11. Pukak (Barter Island, D)	1. 142 46'00" 70 02'00" 2. same as 1.	3,10. Old ruins. 1 old sod house ruin of Steve Hopson. Old store used to be owned by Paneak, now of Amaktuvuk Pass. Old site—this place was left around the 1930s when families headed west to Barrow and east to Kaktovik and Anaktuvuk Pass.
12. Uqsruqtalik (Griffin Point) (Barter Island, D)	1. 142 54'00" 70 04'00" 2. 142 52'00" 70 03'51"	1.3.6. Cabin owned by Fred Gordon, still being used today as a shelter cabin. Old ruins located about 1.5 miles from the mouth of the John River.

SITE	LOCATION	SIGNIFICANCE
13. Tapqauraq Barter Island, D)	1. 143 01′00″ 70 05′00″ 2. 143 12′00″ 70 07′20″	1,2,3,4,6,7,10. A cabin is still being used—it is located about 5 miles upstream on the Kallukagvik creek. Old graves located on the south side of the lagoon. Old sod house ruins of 2, one of Dan Gordon. On the spit are also old ruins and about 3.5 miles east near a jutting point from Ologak River. Old cellars. At Jago spit, fishing of qaktaq, iqalukpik on the sand bars.
14. Pipsuk Point (Barter Island, F)	1. 143 35′45″ 70 07′45″ 2. 143 34′00″ 70 07′35″	2,3,4,6,10. Old site. Old ruins. 1 grave of Pipsuk. Summer camping. The very reason of the name of Kaktovik is linked here. Pipsuk, grandson of Tigutaak, one of the permanent settlers in this area, had drowned in the lagoon and they qaaktuq him out with a seining net. This point is named as his namesake (name importance).
15. Kaktovik (1st. location) (Barter Island) (3,5,7,9,10)	1. Same as 2. 2. 70 08′10″ 143 36′17″	Kaktovik was relocated the first time in 1947 when the DEW Line started construction of the Air Force airport. Reference is made to Nelsaluk location of this original village. Old houses and cellars were left there for move, which was 1650 yards away. The DEW Line started the road construction and the relocated village was at the site of the road so it was relocated the 2nd time in 1953. Excavations were made along the airport road and the location of what was dug up is not known. The original trail to and from the location became the DEW Line road. Because of another DEW Line relocation, Kaktovik was relocated the 3rd time in 1964, its present location. The DEW Line site is on the Old Kaktovik village site and this is verified by the old cemetery site located right on military withdrawal of land. Cellars are still seen in this area. (The Village has asked to fence or withdraw the cemetary as part of the village site.) The present cemetery is on the south side of the village. The whaling-butchering site used to be on the Beaufort Sea coast. Recently the Kaktovik Lagoon is used for whaling festivities and the docking area for boats. Of interest are some buildings that have survived the moves. Fred Gordon's house has been standing since 1923. It used to be the old trading post that traded goods with the ship, Norseman. One half of the house is now Gordon's home and the other half is the local store, Mark Sims house. The other house is the village corp, which they bought from Harold Kaveolook, who used the house as the first schoolhouse.
16. Kaktovik (2nd. Location) (Barter Island, F) (2,3,5,7,9,10)	1. Same as 2. 2. 70 08′10″ 143 36′17″	
17. Kaktovik (present location) (Barter Island, F.) (1,2,5,7,9,10)	1. Same as 2. 2. 70 08′30″ 143 37′00″	
18. Igluqpak (Elupak) (Barter Island, F)	1. 143 42′00″ 70 07′00″ 2. 143 43′00″ 70 07′30″	2.3.10. Old ruins and old graves on the west side. C. Gordon's house used to stand here until relocated. Old ruin of Tigluk. Old Site.
19. Naalagiaġvik (Arey Island) (Barter Island, F)	1. 143 54′00″ 70 07′00″ 2. 143 54′12″ 70 07′00″	2,3,4,11. Means where you go to listen. Old graves located near the bigger lake. Old reindeer herding camp—Kaŋigak, fishing.

SITE	LOCATION	SIGNIFICANCE
20. Ukpillam paaŋa (Mouth of Okpilak) (Barter Island, F)	1. 143 59′00″ 70 04′35″ 2. 144 28′00″ 70 03′42″	3,6,8,10. The Hopson family used to live here. Squirrel hunting. Old ruins.
21. Sanniqsaaluk (Flaxman Island, B)	1. 144 17′00″ 70 02′20″ 2. 144 08′10″ 70 02′20″	3,8,10. Ruins. Sod ruins of Ologak family. Goose hunting located about 3 miles E. Old site.
22. Aanallaaq (Anderson Point) (Flaxman Island, B) (1,2,3,10)	1. 144 28′30″ 70 00′50″ 2. same as 1.	1,2,3,10. Old site. Ruins. Graves, shelter cabin. Graves and ruins are located about 2.5 miles south coast, near the creek. The families that used to live here include: Itchuagak, Patkotak, Koganak.
23. Kanigñiivik (Flaxman Island, D) (1,2,3,6,10)	1. 145 10′30″ 70 01′30″ 2. 145 12′00″ 70 01′30″	1,2,3,6,10. Old site. Graves. Ruins. Ruins also located across on the coast. Winter Camp. Some families that used to stay here include: Nashanik, Ekoolook families, Ologak cabin location.
24. Agilġuaġruk (Brownlow Point) (Flaxman Island, D) (2,3,6,10)	1. 145 51′00″ 70 10′00″ 2. 145 50′00″ 70 08′10″	2,3,6,10. Old trading post site which was one of Jack Smith's chain stores, run by Henry Chamberlin. This was left in the 1930s. Gravesite of the Panningona family—grandparents and couple of kids; John Akurak-Morry who was the son of Maptigak was the first one to be buried there. The present family now lives in Anaktuvuk Pass. There are more graves about 1.5 miles south of Agliguaruk (Delta). From this place people went to the Shublik means here the water flows through and into a lake here.
25. Point Hopson (Flaxman Island, F)	1. 70 11′25″ 146 30′45″ 2. 70 11′00″ 146 32′00″	Old Cabin site of Fred Hopson. (ruin) (3,10.)
26. Point Gordon (Flaxman Island, F)	1. 70 11′10″ 146 37′30″ 2. 70 10′30″ 146 36′40″	(2,10.) Named after Tom Gordon, father of the Gordon Family, who lived in this area.
27. Sivuġaq (Mt. Michelson)	1. same as 2. 2. 69 57′00″ 144 03′00″	(3,4,) Ruins. Main trail starts into the river. Bluff area.
28. Fish Hole 1 (Mt. Micheakson, A)	1. same as 2. 2. 144 15′02″ 69 45′00″	(4,6,10.) This is one of the main fishing spots for iqaluaqaak, dolly varden sulukpaugak, iqalukpik. It is located in the Hula Hula River. Camping and sheep hunting area.

SITE	LOCATION	SIGNIFICANCE
29. Fish Hole 2 (Mt. Michelson, A)	1. same as 2. 2. 144 23′10″ 69 29′20″	4,6,10. One of the fishing spots for iqáluaqak, dolly varden, Sulukpaugak, iqalukpik. A story is linked to this location about an old man and a woman (aŋayukaġsrak, akuaġsrak). Camping area, stopover. Sheep hunting area.
30. Fish Hole 3 (Paqta) (Mt. Michelson, B)	1. 144 36′00″ 69 10′00″ 2. 144 36′00″ 69 10′00″	(4,6,10) Same fish as 29. Camping area. Sheep hunting area.
31. Kaŋi (Mt. Michelson, B)	1. 144 35′00″ 69 02′00″ 2. 69 02′00″ 144 35′00″	(4,6,10.) Means where the river has its headwaters. Same fish as 29. Camping. Sheep hunting area.
32. Nuvuaq (Point Collinson) (Mt. Michelson, A)	1. 144 54′00″ 69 59′30″ 2. 144 52′00″ 69 58′25″	(3,4,5,6,10.) Location of DEW Line Pow D. Another reference name is Sallute, used by Indians. A legend is connected to this place in which two Indian kids got swallowed by fish. Trapping area. Duck hunting area. Ruins of Ologak family who used to live there. Ruins about 1 mile from Nuvuak spit on Simpson Cove, west of Marsh Creek.
33. Igniq (Mt. Michelson, C)	1. 146 04′00″ 69 36′30″ 2. 146 04′00″W 69 36′30″N	This is considered a natural landmark. This is an area where it was constantly on fire—associated with sulphur. It is out now. Well known by Nashanik of Barrow.
34. Navraq (Lake from Shublik Hills) (Mt. Michelson, C)	1. same as 2. 2. 145 58′00″W 69 15′15″N	4. Lake well-known for jigging anaalik, sulukpaugak, tittaalik, iqaluaqpak (same fish as the Kugruak River).
35. Tikigaagruk (Beechey Point, B)	1. same as 2. 2. 148 12′32″ 70 21′00″	3,6,7,10. Old site. Mr. Andrew Oeegna has applied for a native allotment in this area. He left this place in the years before 1940. Spring caribou migration route. Ice cellars still there, still usable.
36. Kisim Inaa (Beechey Point, B)	1. 147 28′00″ 70 11′10″ 2. 147 28′00″ 70 11′10″	6,10. Old site, well-known and used for camping by woods (Kisik), now the family lives in Nuiqsut area.
37. Kakianaam Inaa (Beechey Point, B)	1. 147 19′30″ 70 11′00″ 2. 147 19′30″ 70 11′00″	2,5,10. Referred to also Qallinik Inaat Kakianak is Qallihik (Elizabeth Griest's father) Putuliayuk-grandfather. This was a family settlement—old site. Gravesite of Kakianak, Kivgirak.
38. Pole Island (Beechey Point, B)	1. same as 2. 2. 70 18′15″ 147 02′10″	3,4,6,8,9. Whaling, camping, hunting seals. Seining (qaaqtuk) ikalukpik. Nesting and isaa—where ducks get so fat they can't fly anymore. Ruins.
39. Sikiagrum Inaa (Beechey Point, B)	1. 70 11′20″ 147 36′00″ 2. 70 11′20″ 147 36′00″	4,6,10. Located at the mouth of Kalgusilik River. Old family site of Sikiagruk—Mrs. Eli Solomon's father.

SITE	LOCATION	SIGNIFICANCE
40. Imialat (Sagavanirktok, B)	2. 147 38′29″ 69 12′10″ 1. same as 2.	2,4,6,10. Siiksinik. Fishing of iqalusaak titaalik, sukukpaurak, iqalukpik. Mrs. Elizabeth Griest was born here in 1902.
41. Niŋulit (Sagavanirktok, B)	1. same as 2. 2. 147 44′30″ 69 07′20″	2,4,6,10. Siiksinik. Fishing of iqaluksaak, tittaalik, sulupaurak, iqalukpik. Mr. Henry Nasanik and his family lived in this area till they headed to the coast in 1938. Nashanik's mother (Nauyak), also reference to the place name Nauyalik, is buried here who died from the famine accounted there.
42. Siiksinik (Sagavanirtok, D)	1. same as 2. 2. 69 12′40″ 148 43′00″	4. Means water seepage. Fishing—iqaluksaak, saviunak, tittaalik, sulukpaurak, iqalukpik.

LAKES, RIVERS, CREEKS

Kaŋigak River (Kongakut) -4, Old reindeer herding area, kanigak, 11
Igaksrak River (Egaksrak) -4
Atchalik River (Aichilik) -4
Jago River -4, qaaqtak, iqaluaqpak
Okpikurak (Okpilak) —Ruins of Richmond Ologak, 3
Saɬgutchi River (Sadleroohit)-4 iqaklupik, sulukpaugak
Kugruak (Canning) River -4 Titaalik, iqalukpik, sulukpaurak, sheephereding area
Hula Hula River -4 iqaluqapak, anaalik, dollyvarden, sulukpaugak, 6, sheepherding
Caribou Migaration
Old Man and Old Woman Creeks, Paqta, Arctic Creek
Ignik Creek, Lake Schrader and Peter Lake
ulukpaugak, Iqalukpik, iqaluaqpa, 6

Lake (Unnamed) in T25 R26- off Kugruak -4
Kavik River -4
Ivishak River -4
Sagavanirktok River -4 iaalugruak, Sulukpaugak, iqalukpik
Camden Bay -4
Clarence River -3,4. Known to the Tom Gordon family
Ologak Creek -3, Well-known area to the Ologak family, one of the first families to settle there.
Kallukavvik Creek -3,7, cellar of Richmond Ologak
Nigvanak River -4

SITE	LOCATION	SIGNIFICANCE
91. Uuliktuk (it shakes) (Beechey Point, F)	70° 30′45″ 149° 57′00″	The Navy's construction of Pow 2 on this site destroyed grave sites and cellars by covering them with gravel and bulldozing. Old store site; Ruins of a cabin used as a store which was owned by Etuk still stand; Graves of Amaġuaġnaat, Taalak, Ahsogeak member, grave of Martha Woods—four miles west of Qulvi 1940. Patsy Tukle's frame house. Cabin of Baxter Adams. Salmon fish.
92. Mitqutialaqtuuq (Missing in map) 2nd group of Islands (Beechey Point F)	70° 33′00″ 150° 00′00″	2, 3, 4 Arctic Char during the summer; Old sod house ruins belonging to families that lived there around 1920s. 8 (seals)

SITE	LOCATION	SIGNIFICANCE
93. Thetis Island (Harrison Bay, B)	70° 33′25″ 150° 10′00″	2, 3, 8 (seals, nesting)
94. Piŋgu (Beechey Point F)	70° 31′10″ 149° 31′30″	2, 3 Numerous "old" whaling bones; Whales and seals caught in this sea; three graves of Billy Kinneaveak (Saglu) from Point Hope, Ikayuak, Nalikak.
95. Ugruŋnavik (Beechey Point, F)	70° 28′10″ 149° 47′00″	7
96. Milne Point (Beechey Point, F)	70° 31′00″ 149° 27′30″	1, 2 Graves of Ahkivgak family members—Kuunik, Kisiilaaq and Nashaknik's father.
97. Ugrugnavik (abundancy of Ahaliks) River (Beechey Point, F)	70° 29′30″ 149° 46′30″	1, 2, 3, 6 Between Ugrugnavik & Beechey Point, three graves of Kunaknana & Aġnuk; one frame house, three sod houses, one cellar.
98. Kaviarat (Sagavanirktok, D)	69° 17′52″ 148° 08′48″	2, 5 At the mouth are located old graves.
99. Kataktugvik (Kaviarat) (Beechey Point, F)	70° 30′00″ 149° 04′00″	3, 4, 6 Camping site of Kasak family, "old site"
100. Nukatpiat (Bodfish Is.)	70° 32′00″ 149° 07′00″	
101. Tapkakturuak (Long Island) (Beechey Point, D)	70° 29′00″ 148° 55′00″	8
102. Beechey Point (Beechey Point, F)	70° 29′20″ 149° 09′30″	2, 3, 5, 8 One of the larger settlements in the area; Old trading post owned by Kastialurak in 1924, one of Etuk's chain stores, then given to Jack Smith and Lucy Ahvakana; 15 graves.
103. Sakuŋauyak (Beechey Point, D)	70° 26′40″ 149° 01′00″	2, 4, 5, 6 Grave of Qutuq from Paneak family; Well-known gathering place for Nunamiut people.
104. Aquvlaak (Beechey Point, D)	70° 27′40″ 149° 00′45″	3
105. Kukpaagruk (meaning big river) (Beechey Point, D)	70° 23′00″ 148° 52′00″	1, 2, 4, 5 Salmon berries (Anugviat) are found in the area. Grave of 1905.
106. Sigłaktitaq (Beechey Point, D)	70° 24′00″ 148° 35′00″	3, 7 Ahmaogak, Nashaknik, Samarualuk, Agnik. Cabins, 7 cellars.
107. Kaniqług (Beechey Point, D)	70° 19′10″ 148° 16′05″	1, 4, 5, 8 Begins fishing trail near Prudhoe; Cabin storage for fish of Pausanna family.
108. Niaquq (Beechey Point, D)	70° 20′40″ 148° 11′00″	
110. Napagsralik a. (Cross Islands) (Beechey Point, B)	70° 29′30″ 147° 56′30″	1, 5, 6 Whaling, seal, Uugruk; Taakpak (2) whales; Marked with wooden cross; 1921—Woods, Pausanna, Savgaq, Ulaak, Ahsoak, Ikpikpak.
b. Napagsraligarak (Reindeer Island) (Beechey Point, B)	70° 29′10″ 148° 27′00″	b. place.
111. Foggy Island (Beechey Point, B)	70° 16′00″ 147° 48′00″	2, 3 Site of Ekoolook, Woods, Kisiilaak, Ahgook; 10 graves; Whaling.

SITE	LOCATION	SIGNIFICANCE
112. McClure Island (Beechey Point, B)	70° 24′00″ 147° 30′00″	3, 5, 6 Whaling
113. Qalgusilik (means it has something on top, a cover) (Beechey Point, B)	70° 12′00″ 147° 35′05″	3, 4, 6 Graves are unidentified. Sod ruins.
114. Point Lookout on Tigvagiak Island (Beechey Point, B)	70° 13′15″ 147° 20′55″	2, 3, 4, 6
115. Tigvagiaq Island (Beechey Point, B)	70° 13′15″ 147° 20′55″	2, 3, 4, 6 Grave of Kakianak; Old immemorial graves including Ekolook's son and daughter.
116. Savviagvik River Savvakvik (Beechey Point, B)	70° 11′30″ 147° 15′00″	Kiłgirak, Greist, Utuan's cabin on the other side one mile off. One sod house still standing on land across.
117. Bullen Point (Flaxman Island)	70° 11′10″ 146° 52′00″	3, 4
118. Flaxman Island) (Flaxman Island)	70° 11′15″ 146° 03′14″	1, 2, 3, 5, 6, 8, 9, 10. Additional information is in the Beaufort Sea Inventory. One sod house belonging to Otuayuk, Kunaknana, and Kunutchiak.
119. Point Thompson (Flaxman Island)	70° 11′15″ 146° 19′45″	
(2) Ittiglak (refer to #81 on list)	70° 04′00″ 151° 22′00″	
(3) Itkillikpaat (refer to #77)		
(4) Qanaak		4, 6 Fishing done especially in winter.
(5) Anayuk	70° 20′05″ 150° 39′00″	
(6) Wood's Inaat (Kisim Inaa)	70° 26′00″ 150° 26′00″	1, 2, 3, 4, 6, 7. Nannie Wood's Camp—Cabin and smokehouse. Original settlers in this area.
(7) Sanniaruk (Spy Islands) (Beechey Point, F)	70° 34′00″ 149° 50′00″	5, 6, 8, 10. Whaling, summer camping and seal-hunting area, especially during the summer months. 2, 3 Has three graves and three sod houses.
(8) Ekoolook Inaat (Beechey Point, B)	70° 12′20″ 147° 31′00″	
(9) Koganak Inaat (Beechey Point)	70° 13′20″ 147° 31′00″	3, 6 Two Sod houses.
(10) Siisinik	69° 46′40″ 147° 43′00″	3, 4 Bubbling water, no ice.
(11) Ikpikpaurak (Pow 3) (end of shoal)		3, Three Sod houses one mile away on Kunuatchiak, one is still standing.
(12) Takpam Inaat (Beechey Point, F)	70° 30′00″ 149° 25′30″	1, 2, 3, 6, 8, 9. A well-known whaler of the north (Takpak). Old house now belongs to Abe Stine. Old ruins. Old whaling area by Takpak.
(13) Aivigiak (Aivik)		2 Tukle grave near Island.
(14) Point Brower (Beechey Point, B)	70° 17′20″ 147° 47′00″	addition to this site in Beaufort Sea Inventory.

REFERENCE TO BARRIER ISLANDS

All of the barrier islands were used for whaling areas, hunting seals, hunting and nesting of several species of ducks. People from the coastal areas camped on the islands seasonally during the summer months.

1. McClure Islands—112
2. Napagsralik (Cross island)—110
3. Napagsraligarak (Reindeer Island)—110
4. Tapkakturuak—101
6. Mitkutiałaktuuq (Jones Island)—94
7. Sanniaruk (Spy Islands)—(7)
8. Pole Island—38
9. Flaxman Island—118
10. Naalagiaġvik (Arey Island)—19
11. *Qikiktaq (Herschel Island)—3,4,6,10.
    Canadian Island used historically and culturally by both Alaskan and Canadian Inupiats, especially those from Kaktovik area.

118. Tikigak (Flaxman Island)	70 11′15″ 146 03′14″
(1,2,3,5,6,8,9,10.)	(Flaxman Island)

Cabin owned by Samuel Panningona, of Barrow. It was built in 1924. Mr. Panningona and his family headed towards Barrow in 1949. His daughter, Mary Akootchook, was born on this island in 1921. Some of the families that used to live here includes: Sagviatchiak (who moved to Nuvuk), Virat, Sagmaliurak, Okpik, Nashanik, Okomailak, Oegna, Kunvatchiak, Ekoolook. During the summer months, there were more people camping here for whaling, seal hunting. Number of people died from the flu epidemic of 1945. National Register site.

14. Agligvurak (Point Brower)	147 47′00″ 70 17′20″
(Beechey Point, B)	(2,3,5,6,9.)

Agligvurak was the name of the whole island of Foggy Island (III). Jack Smith had a trading post there. One of the well-known men, Saglu used to live there. During the flu epidemic, a number of people died here.

LOCAL RESOURCE PEOPLE

KAKTOVIK

Tiiyugak (Mrs. Annie Ologak)

Land Selection Committee

Fred Gordon
Archie Brower, Land Chief
Tom O. Gordon
George Agiak
Nora Agiak
Herman Rexford
Mildred Rexford
Isaac Akootchook
Mary Akootchook

Alice Agiak

BARROW

Levi Griest
Elizabeth Griest
Henry Nashanik
Etta Ekolook
Samuel Panningona
Andrew Oeenga

Kaktovik City Council
Kaktovik Village Corporation

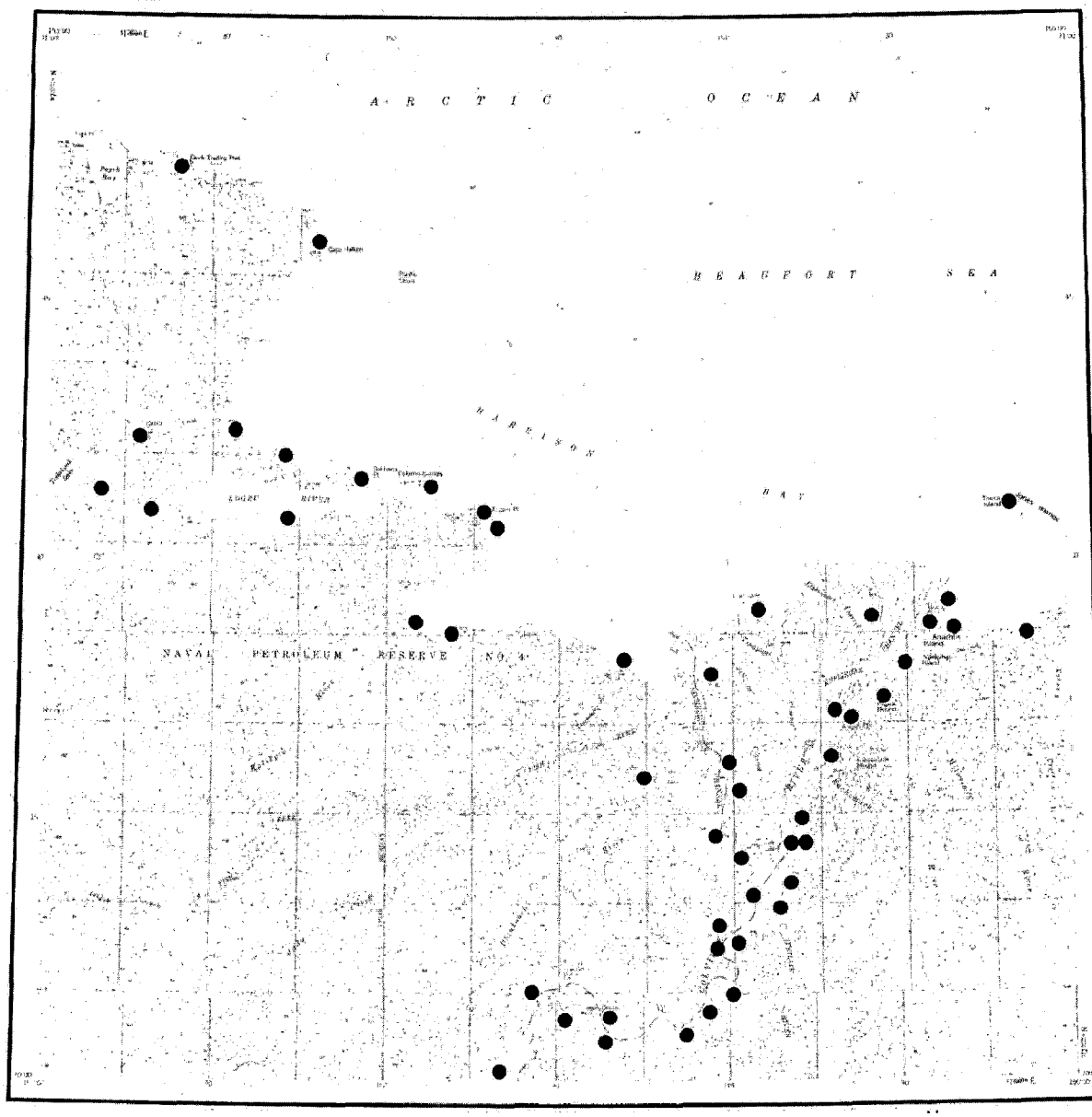
Commission on History and Culture
Plant Office
Bart Ahsogeak

NOTE: Number 1 place name locations have been referenced from:
Orth, Donald. DICTIONARY OF ALASKA PLACE NAMES U.S. Dept. of Interior, Geological Survey, Professional Paper 567

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

HARRISON BAY

ALASKA
TOPOGRAPHIC SERIES

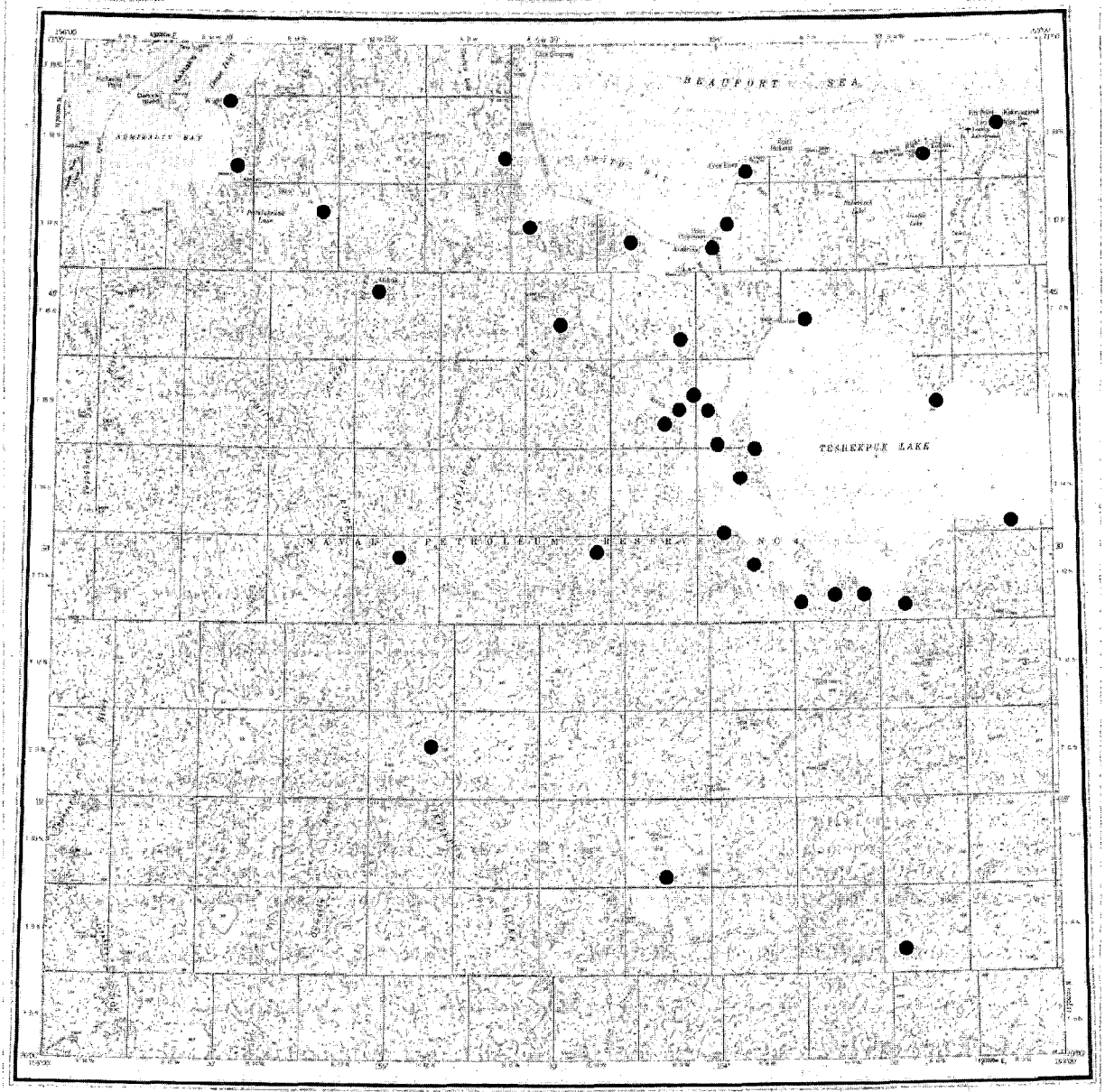


HARRISON BAY, ALASKA

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

TESHEKPUK

ALASKA
TOPOGRAPHIC SERIES



TESHEKPUK, ALASKA

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BEECHEY POINT
ALASKA
TOPOGRAPHIC SERIES
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B E A U F O R T S E A
BEECHEY POINT, ALASKA

UNITED STATES
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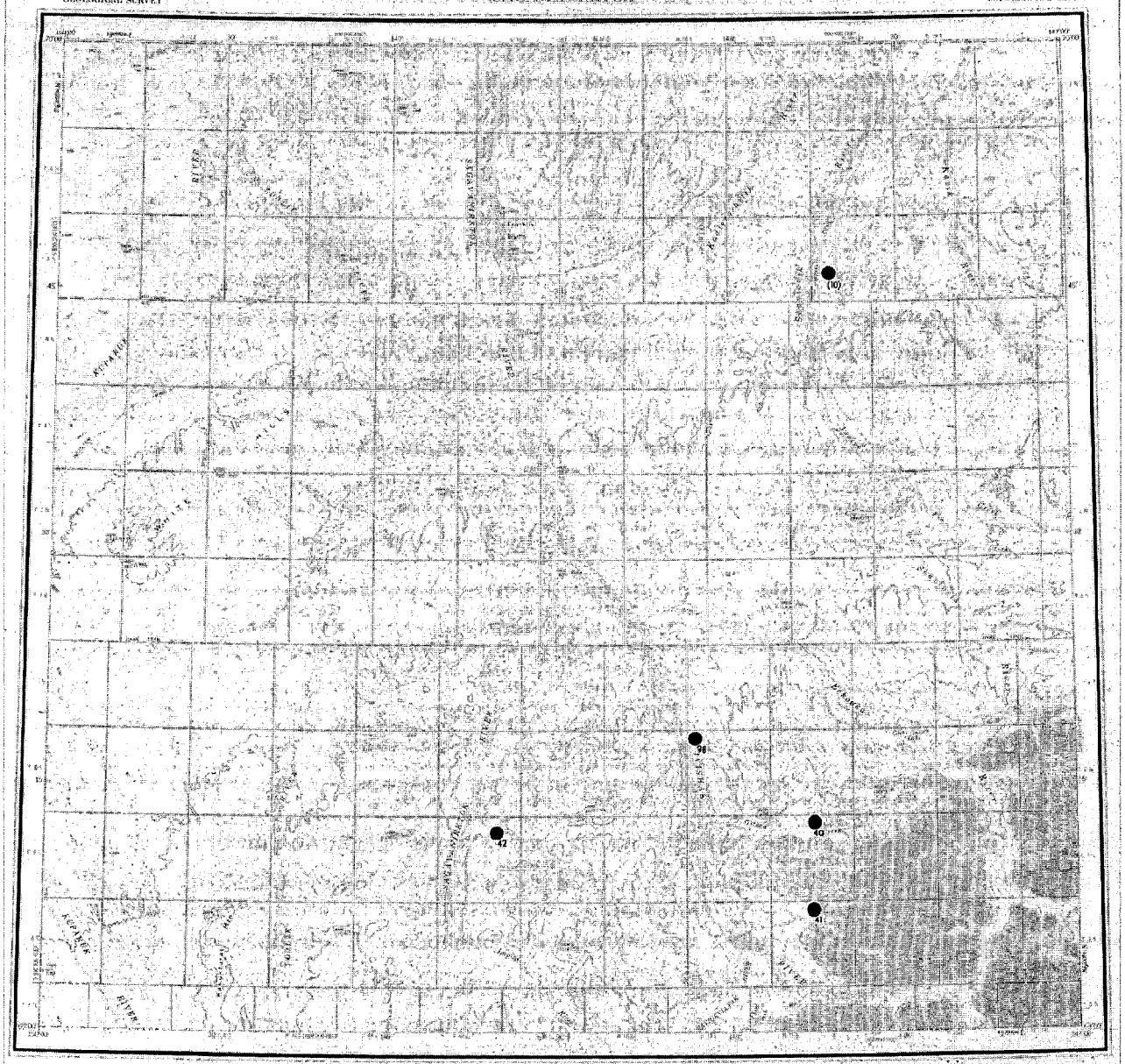
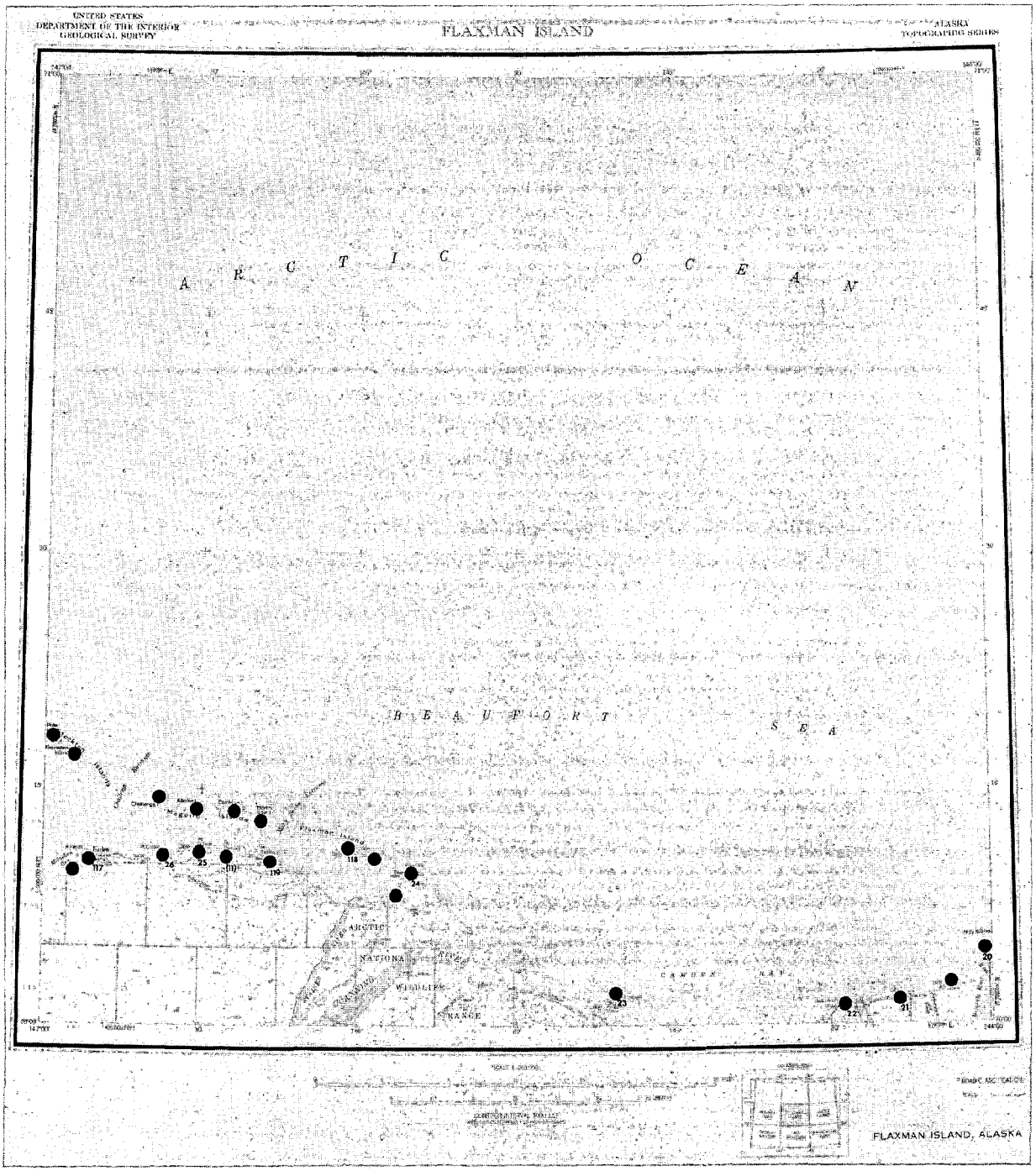
SAGAVANIRKTOK

ALASKA
TOPOGRAPHIC SERIES



SAGAVANIRKTOK, ALASKA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FLAXMAN ISLAND
ALASKA
TOPOGRAPHIC SERIES
A R C T I C O C E A N
B E A U F O R T S E A
ARCTIC
NATIONAL
WILDLIFE
RANGE
CAMDEN BAY
FLAXMAN ISLAND, ALASKA

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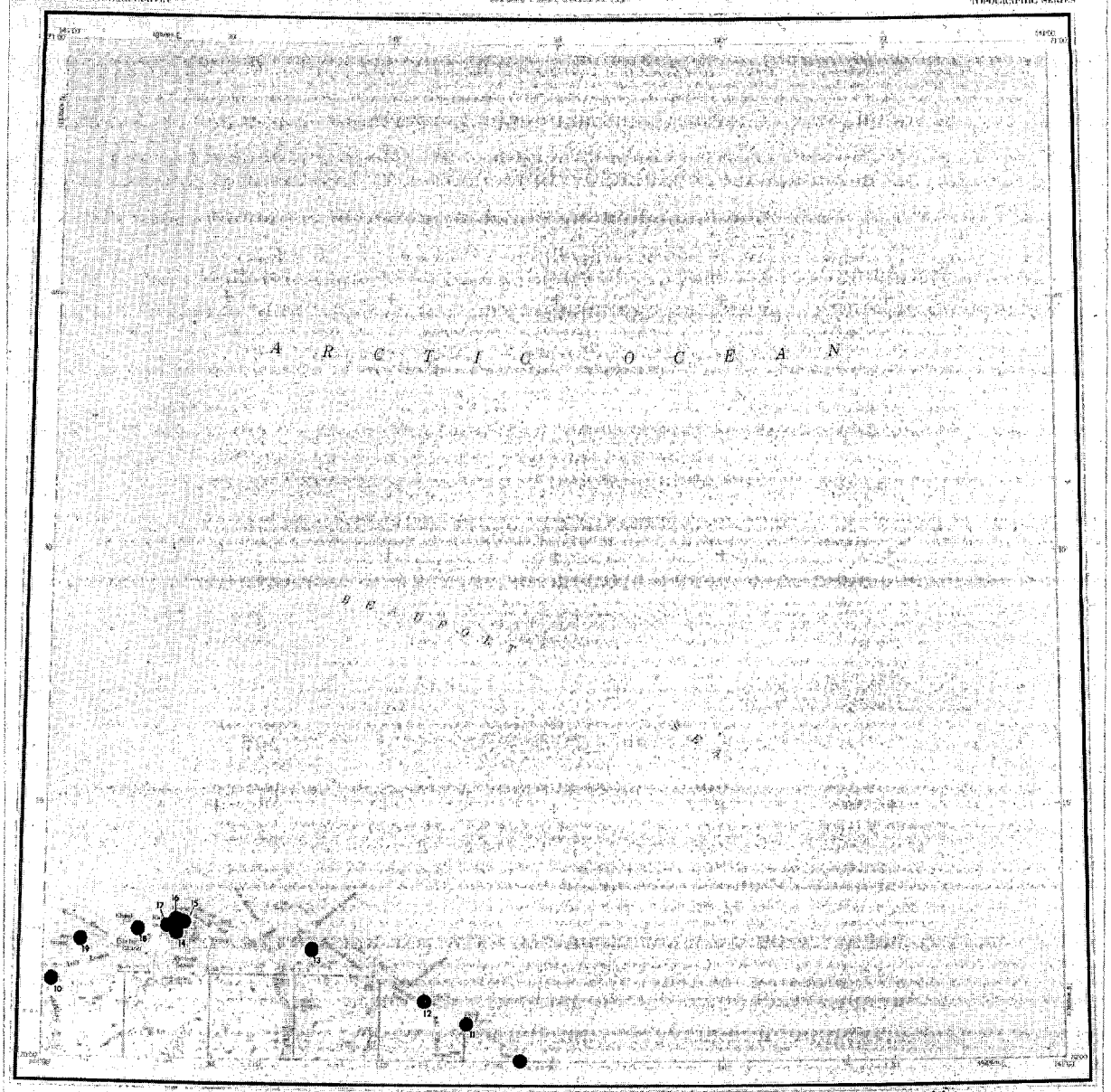
GEOLOGICAL SURVEY

BARTER ISLAND

ALASKA
TOPOGRAPHIC SERIES

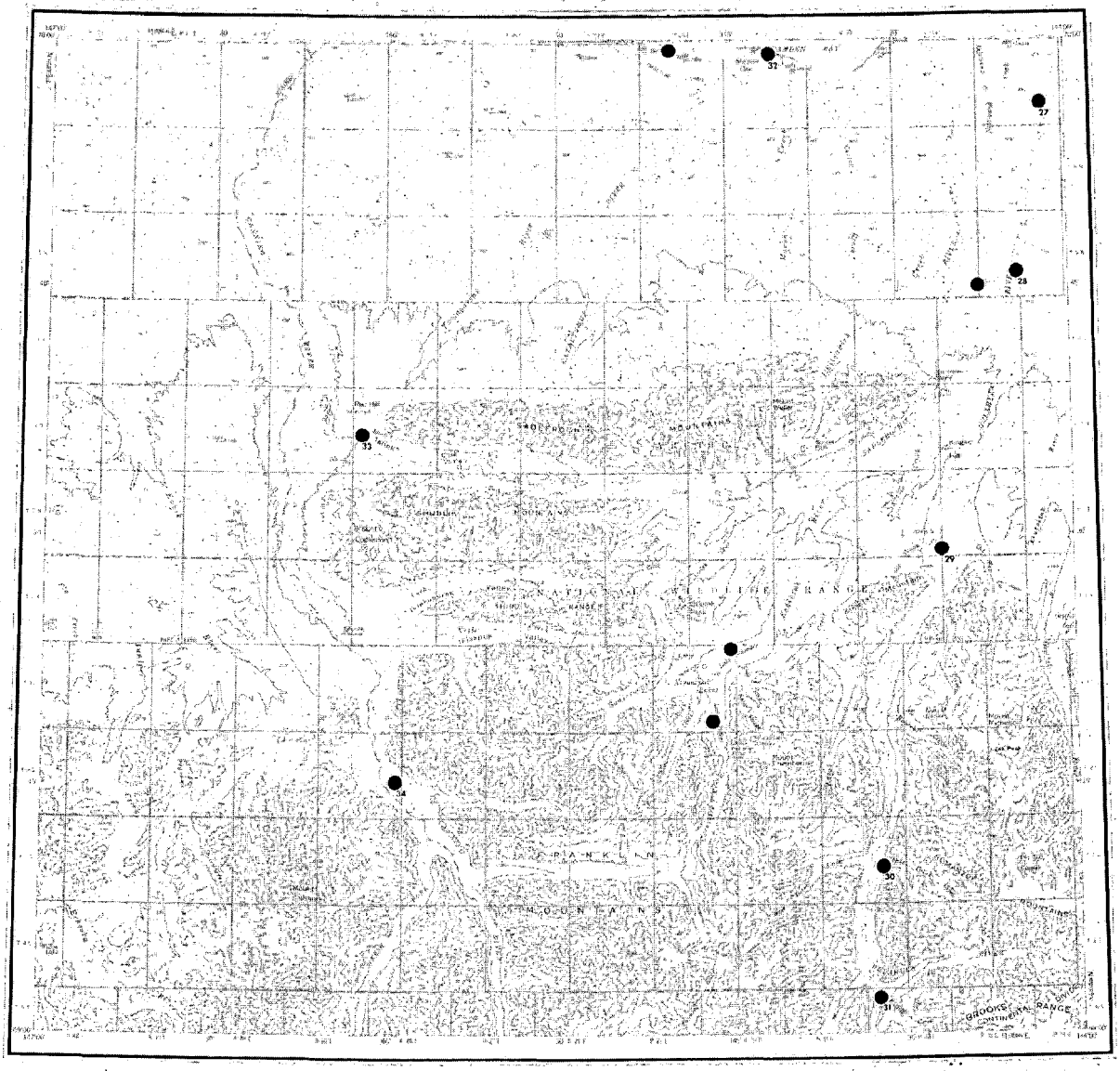


BARTER ISLAND, ALASKA

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

MT. MICHELSON

ALASKA
NORTH SLOPE BOROUGH
TOPOGRAPHIC SERIES



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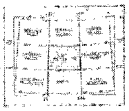


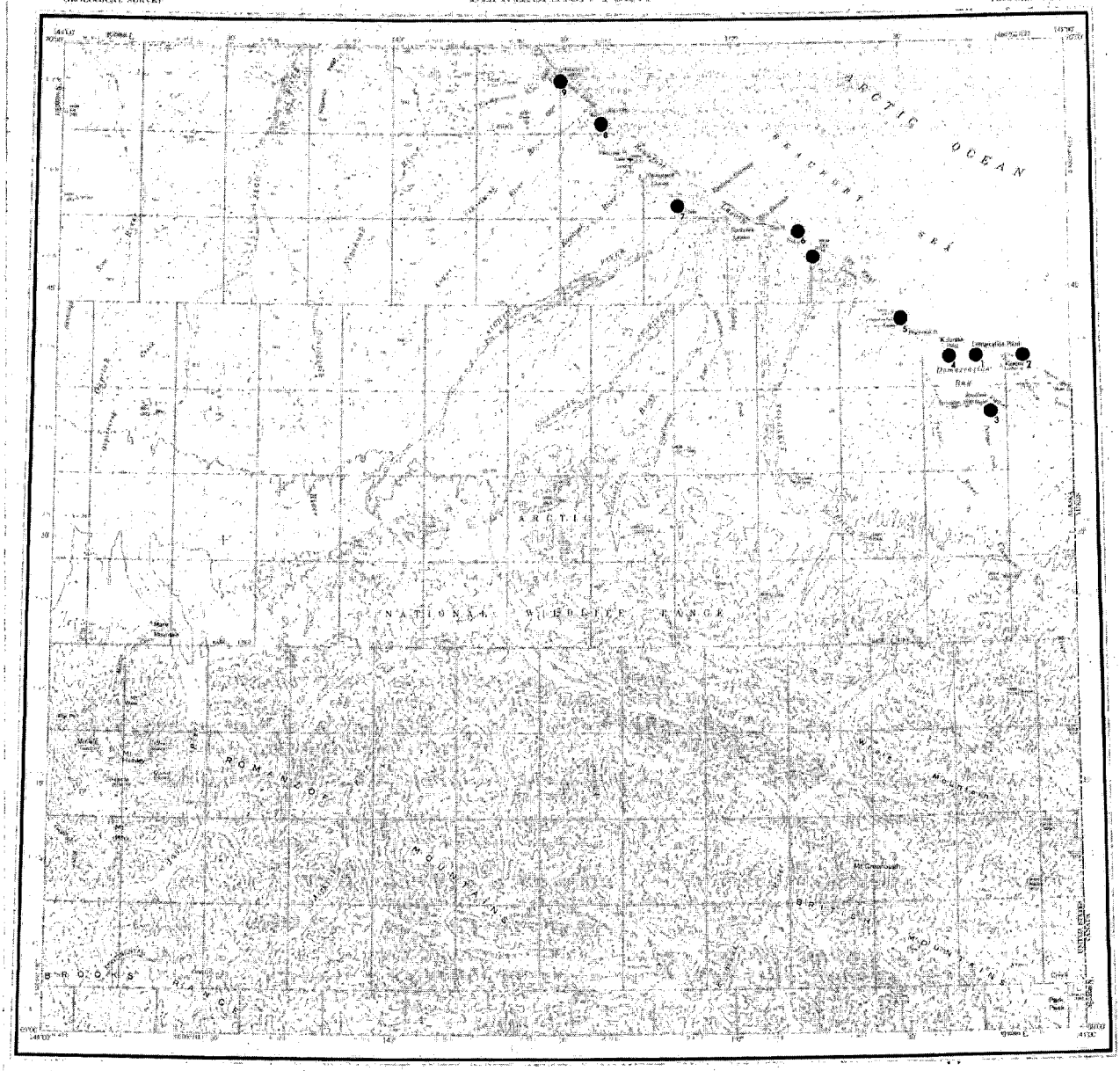
ROAD CLASSIFICATION

MT. MICHELSON, ALASKA

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEMARCATION POINT

ALASKA
TOPOGRAPHIC SERIES



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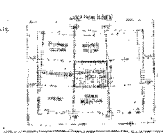
CONTOUR INTERVAL 200 FEET
DATUM IS MEAN SEA LEVEL



ROAD CLASSIFICATION

TRAIL

DEMARCATION POINT, ALASKA

Conclusion

Almost forty years ago Robert Marshall, chief of the division of recreation and lands, United States Forest Service, proposed that all of the land north of the Yukon River, with the exception of a small area adjacent to Nome, be "zoned as a region where the federal government will contribute no funds for road building and permit no leases for industrial development."[1] He reasoned that

> economically, the population is so scattered that airplane transportation is the only feasible means of mechanical conveyance, and auto roads could not possibly justify the cost. At the same time, the country is far too remote from markets for successful industry. Sociologically, the country of northern Alaska is inhabited chiefly by Native populations, which would be much happier, if U.S. experience is any criterion, without either roads or industries.[2]

Conditions in Alaska have changed dramatically since 1939 when Marshall expressed his views on the future of the Brooks Range and its North Slope. A forty-eight inch diameter pipeline and a winter haul road, flattered by the title "Hickle Highway", now cut across the range and connect the oil and gas rich fields of Prudhoe Bay with Fairbanks and Valdez. The industry that could not be "successful" is firmly established and expanding out beyond the tundra, to near-shore and off-shore sites in the form of man-made drilling platforms and support facilities in the Beaufort Sea. Indeed, the intensity of military and petroleum related development, extending over the past twenty-five years and concentrated in the only arctic taundra region of its kind in the United States, has been so intrusive that one authority has ventured the opinion that:

> Except in some of the mountain vastnesses of the Brooks Range, I doubt that one can find a 100 Square mile plot of ground east of the Colville River—including the Arctic Wildlife Range—that does not show some irreparable sign of man's activities.[3]

Perhaps in only one respect did Robert Marshall's prophecy accurately forecast the character of northern Alaska; many of the aboriginal inhabitants of this historically and culturally rich expanse would indeed have been happier "without either roads or industries".

The purpose of this study has been to broadly outline the continuum of change which has occurred on the North Slope and the Beaufort Sea coast of Alaska, since the white man first encountered the northern arctic Eskimo. From this overview and admittedly selective discussion, an historical pattern can be deduced which demonstrates the long and short term effects of development via Western/North American culture.

Furthermore, it is suggested that current petrochemical industrial development, as envisioned in the proposed Beaufort Sea Outer Continental Shelf oil and gas exploration, is only the most recent variation of a well established theme in northern history, the general and local effects of which are predictable based upon historic and economic precedent.

Preceeding sections of this study have been devoted to 1) past and current legislation designed to deal with questions of historic preservation, environmental integrity and land management in Alaska; 2) the history of the North Slope and Beaufort Sea region and specific sites which recall that history; and 3) the nature and significance of traditional subsistence activities, the changes which have occurred in these established patterns as the result of white contact and those sites or areas which were, and continue to be, important to northern Eskimos for subsistence purposes.

These three broad areas of concern—preservation, history, and subsistence—share a common denominator. Underlying each are fundamental values and issues which must be considered in any discussion of land and resource management in northern Alaska. Consideration of these and associative issues was not, and indeed could not be, restricted to the primary study area of the Colville to Canning River corridor as outlined in the Project Vita. Historically speaking hunting, trade, social interaction and village habitation, particularly in the interior, were dynamic phenomena which were sensitive to larger regional changes as well as to local influences. The arctic environment is delicate and easily disrupted by human activity. An external influence that may be introduced in one area is likely to be eventually felt in others. For example, there is every reason to believe that continuing major North Slope oil and gas development, even if confined to certain areas, will have a profound impact on the entire North Slope region, much the same that the interior Nunamiut were affected by the introduction of the whaling industry at Herschel Island.

Therefore, the expansion of oil and oil related industy north of the Brooks Range and in the Beaufort Sea cannot

be restricted or isolated by legislation or lease sale restrictions. The nature of the industry and the nature of the land do not permit of a mutually beneficial relationship between the two; and by any yardstick, the land is the exploited host in a parasitic association. Ecology, environment, historical significance and subsistence value of areas contiguous and noncontiguous to industry or developed sites may suffer irreparable damage. An already severely pressured northern Eskimo culture is likely to be further endangered, if not destroyed. For in the opinion of one authority:

> The oil companies may hire all the ecologists they can find, back-haul every stick of trash to Fairbanks and beyond, and practice the finest housekeeping they know. They may deal firmly with their sub-contractors as they must, and cooperate fully with state inspectors. But the fact remains that they will scar the land irreparably. In short, these lands which have been turned over to oil are, in no sense, multiple use areas. This is oil country, and a brief two years of oil work has proved that the scars can neither be erased nor repaired.[4]

However, despite the wide acceptance of such views outside the oil industry, no position is likely to be seriously considered by the state or federal government and certainly not by the industry, which advocates the curtailment of plans to expand oil and gas development on the North Slope in order to protect subsistence, historical or ecological/environmental resources. Historically the politics of oil have not mixed well with such issues of public concern. As Robert Weeden, game biologist with the Alaska Department of Fish and Game, admits:

> I have no illusions about how often we will bar the gate to oil development. Despite Prudhoe, however, where government did not even build a gate let alone decide whether to open or close it, I think the question has relevance for the future.[5]

Indeed it has, for the primary issue confronting the people of the North Slope is not whether there will be expanded oil development, but under what guidelines this expanded development will be allowed to occur.

I accept the premise that taking oil from under the tundra is a worthwhile activity," Dr. Weeden concludes:

> I accept the fact that some disturbance of the whole organism, 'land', is inevitable. Some is economically acceptable. I deny, however, that oil is the only significant Arctic resource or that private industry should be allowed to degrade public values at will while it extracts oil.[6]

What are the public values of the North Slope which must be protected? In this study we have focused primarily on those values of significance to the Eskimo inhabitants; their history, culture and subsistence traditions. In 1974 the resource planning team of the Joint Federal-State Land Use Planning Commission, published an inventory of the Arctic region in an attempt to define recreation and preservation opportunities of general public interest.[7]

The study divided the North Slope into three major regions: the West Arctic (Utvkok and Barrow, 31,000 sq. miles), the Colville (Umiat, 24,000 sq. miles), and the East Arctic (Sagavanirktok and Barter Island, 36,000 sq. miles). Within the category of preservation interests these regions were classified according to 1) Natural Areas, 2) Primitive Values, 3) Wilderness Potential, 4) Ecological Preserves, and 5) Cultural Areas.

The following observations were made regarding the regions of concern to the present study. (They should only be considered as fragmentary).

WESTERN ARCTIC, POINT BARROW

1) Natural Areas
   a) Teshekpuk Lake
   b) Ikpikpuk River
   c) Middle section of the Mead River
   d) Kasegaluk Lagoon
2) Primitive Areas
   a) Rates "good". General lack of intrusions.
3) Wilderness Potential
   a) Related to recreation, "low"; in terms of ecosystem preservation "high".
4) Ecological Reserves (Statewide System)
   a) Point Barrow, 10,000 acres
   b) Teshekpuk Lake, 150,000 acres
   c) Kuk River fossil amber, 20,000 acres
   d) Valley of Willows/old village site on Ikpikpuk River
5) Cultural Areas
   a) Birnirk "and perhaps others near Barrow".

COLVILLE, UPPER COLVILLE AND UMIAT

Upper Colville

1) Natural Areas
   a) Area bordering Colville River
   b) Area bordering the Killik drainage
   c) The Kurupa-Cascade Lakes and Upper Nigu River
2) Primitive Areas
   a) Quality high. Some oil exploration, but most of land in natural state.
3) Wilderness Potential
   a) Most of Killik drainage and Kurupa-Cascade Lakes region, high potential.
4) Ecological Reserves (Statewide System)
   a) Colville River Bluffs, 100 miles
   b) Killik Tundra fire area, 8,000 acres (for research)
   3) Noluck Lake, for arctic ecosystems research
5) Cultural Areas
   a) "No sites or features are presently identified for intensive preservation and interpretation." (viewed in light of the present study this is the best evidence possible that substantial work remains to be done in all regions).

Umiat

"There are important archaeological sites associated with prehistoric man in the Arctic."

1) Natural Areas
   a) Chandler Lake
   b) Shainin Lake
   c) Castle Mountain
   d) Itkillik and upper Nanushuk and Kanayut Rivers.
2) Primitive Values
   a) Good to high. Lack of intrusions; remoteness from population centers.
3) Wilderness Potential
   a) Lowlands, low to poor "due to previous and current exploration activities. Upland areas "high" potential.
4) Ecological Reserves (Statewide System)
   a) Colville Bluffs
   b) Colville Delta, sand dunes
   c) Similar area on Sagavanirktok Delta "lost to development needed to support oil development".
5) Cultural Areas
   a) "The Anaktuvuk Pass archaeological district has potential for intensive preservation and interpretation efforts. To maintain intergity of the area, developments should be rustic and kept to a minimum."

EAST ARCTIC, SAGAVANIRKTOK RIVER

Barter Island

"The protected lagoons and bays provide habitat for nesting waterfowl of many varieties of birds. The lake-dotted plain also is important habitat for both birds and animals."

Sagavanirktok

1) Natural Areas
   a) Elusive and Galbraith Lakes
   b) Ribdon River (south fork) and Accomplishment Creek
2) Primitive Values
   a) "low" value in lowlands due to oil development. Uplands, "high".
3) Wilderness Potential
   a) Upper Ivishak and Ribdon Rivers
4) Ecological Reserves (Statewide System)
   a) Prudhoe Bay; as a control site
   b) Echooka Springs and balsam poplar stands, 30,000 acres
   c) Franklin Bluffs; peregrine falcons
   d) Atigun Canyon; dall sheep
   e) Prudhoe Bay; pingos
   f) Galbraith Lake; fish, archaeology and revegetation
5) Cultural Areas
   a) Leffingwell's camp, Flaxman Island; archaeological values of Galbraith Lake likely to be impacted.

Barter Island

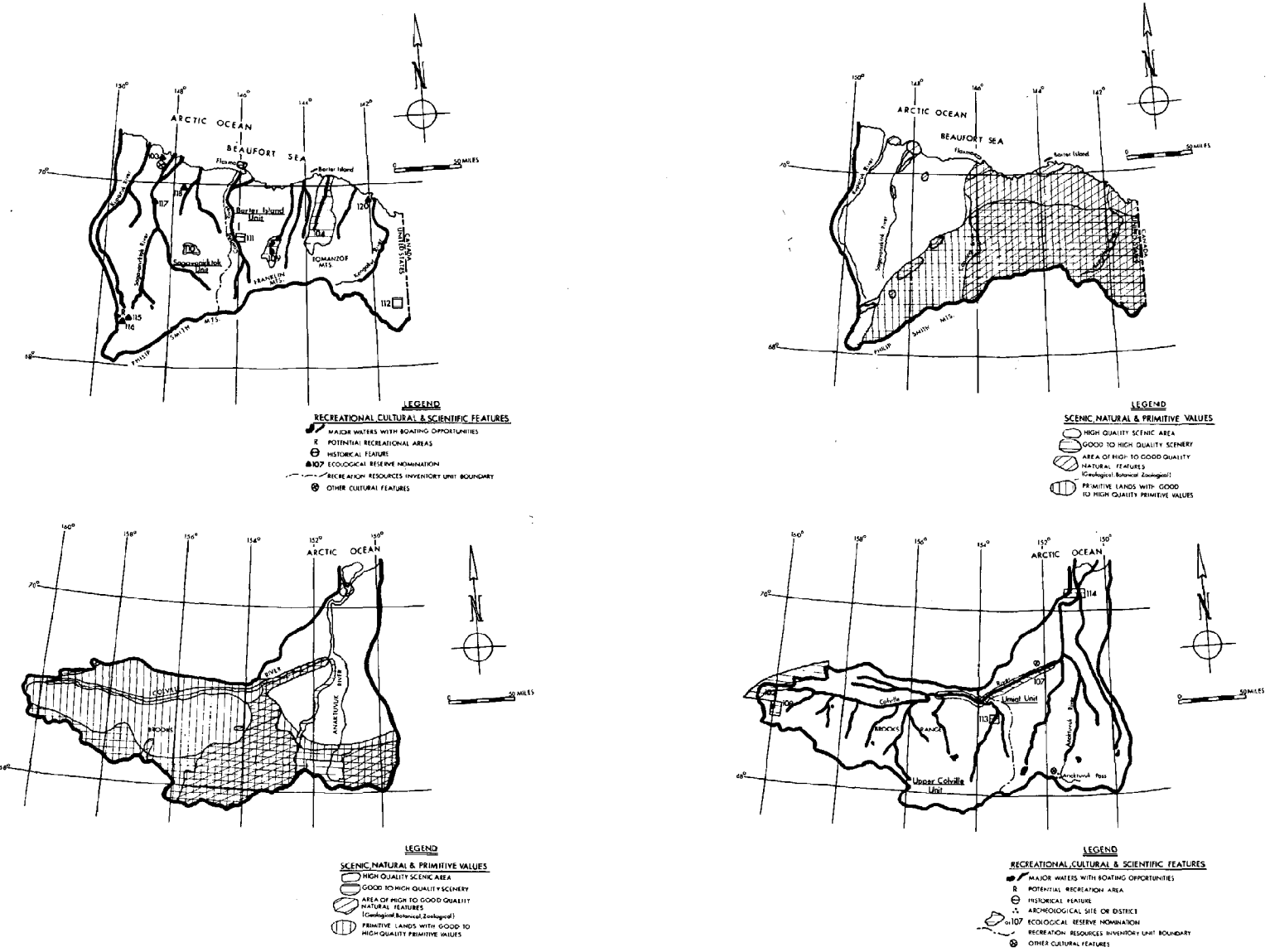
"The diversity of mountains and the isolation of the area make this entire unit above average for scenic and primitive ratings when considered on a statewide basis."

1) Natural Areas
   a) An "extremely fine complex". Porcupine caribou herd calving grounds.
2) Primitive Values
   a) Good to high, except on the arctic slope near village and military installations.
3) Wilderness Potential
   a) "The entire unit has high potential for wilderness designation."
4) Ecological Reserves
   a) Jago River; tundra and floodplain vegetation
   b) Neruokpuk Lakes; arctic aquatic ecosystems
   c) Shublik Springs; balsam poplar
   d) Firth River Valley; northernmost stands of white spruce in Alaska, alpine tundra ecosystems.
5) Cultural Areas
   a) "no areas or sites are presently identified." (again, much work remains to be done. See map section)

Such preliminary studies must be continued and expanded in an ongoing program of cultural resource assessments in those areas subject to withdrawl as oil or gas production lands. As Dr. William Schneider, National Park Service cultural anthropologist, notes:

> Data collected from cultural resources, be they archaeological...or historic...are important in understanding not only the past, but in helping to make reasonable assumptions about the future...Archaeological, paleoenvironmental, and historical data can be utilized in establishing such things as population dynamics, changes in vegetation and climate, variations prehistorically in game distribution movements, and subsistence patterns...This information...is vital in making intelligent land-use planning decisions....[8]

For cultural and other resources to exert a positive influence in the decision-making process, guidelines must be established to insure that these resources are identified, inventoried, interpreted and preserved. They must be fully documented in the literature and this material integrated and compared with Eskimo oral accounts. Finally, but most importantly, exhaustive fieldwork must be undertaken to determine exact site locations and to analyze material which may be uncovered. Close monitoring of construction activities must be maintained to insure that sites of possible significance are not degraded or destroyed completely.



Source: Inventory Arctic Region, Recreation and Preservation Opportunities, Joint Federal-State Land Use Planning Commission, May, 1974.

Fig. 21—Arctic Region Inventory: Recreation and Preservation Opportunities.

Comparatively much less is known of the cultural resources and ecological relationships in the eastern Arctic than is known in the western regions of the North Slope. However there is every reason to believe, based upon this preliminary assessment and corroborative data from other sources, that the eastern Arctic contains substantially more data fundamental to our knowledge of arctic environments, as well as cultural and subsistence values essential to the well-being of the northern Eskimo people. Of this region it has been written:

> There is a conviction among the few students who have some knowledge of the [eastern Arctic] that our study area does contain significant evidences of early people, although this remains to be proved. That it is unique ecologically and bears striking circumstantial evidence of being a place of profound historical significance already is granted.[9]

In all likelihood the fate of the eastern Arctic and perhaps the entire expanse of the Brooks Range and North Slope as well will be determined within the next two years.

ENDNOTES

1. In George Marshall ed., Robert Marshall, *Alaska Wilderness: Exploring the Central Brooks Range* (Berkeley: Univ. of California Press, 1970) xxxiv.
2. *Loc Cit.*
3. Dr. Tom Cade, Research Director, Laboratory of Ornithology, Cornell Univ., as quoted in Rogers, ed., *Change in Alaska*, 157. For the effects of oil development on Alaska and a discussion of pertinent issues see for example, Mary C. Berry, *The Alaska Pipeline: The Politics of Oil and Native Land Claims* (Bloomington: Indiana Univ. Press, 1975); Tom Brown, *Oil on Ice: Alaskan Wilderness at the Crossroads* (San Francisco: The Sierra Club, 1971); Harvey Manning, *Cry Crisis: Rehearsal in Alaska* (San Francisco: Friends of the Earth, 1974).
4. In G. Laycock, "Kiss the North Slope Goodby," *Audubon Magazine* Vol. 77 no. 5 (1970) 75.
5. Robert Weeden, "Arctic Petroleum Development," in Rogers ed., *Change in Alaska*, 157; and see also Richard Rohmer, *The Arctic Imperative: An Overview of the Energy Crisis* (Toronto: McClelland and Stewart Ltd., 1973) for a Canadian perspective; and Vern Vigoren, *The Politics of Environmental Action Groups and the Effect on Alaska's Oil Industry* (M.A., Univ. of Alaska, Anchorage, 1973) arguing for development and "controlled preservation".
6. As quoted in J. P. Milton, *Nameless Valleys; shining Mountains: The Record of an Expedition to the Vanishing Wilderness of Alaska's North Slope* (N.Y.: Walker, 1970) xxii.
7. Richard J. Stenmark and T.H. Schroder, Anchorage.
8. Schneider and Bowers, *Preliminary Cultural Resource Assessment: National Petroleum Reserve in Alaska* (NPR-4) 21.
9. George L. Collins, *Northeast Arctic: The Last Great Wilderness*, Sierra Club Bull., nd.

Statement of Significance and Recommendations

The North Slope Borough has a vital interest in preserving from destuction or detrimental impact those sites or areas of historic, architectural, archaeological and general cultural significance which occur in substantial and documented numbers within the borders of the North Slope and Beaufort Sea coast of Alaska. These sites are unique in the United States because of their intrinsic values and because they represent in situ examples of dynamic historical evolution, as evidenced by their continued use in traditional practices and Eskimo culture.

Concern has been expressed by the northern Eskimo people and others who feel that such unique sites and cultural resources are endangered by proposed State oil and gas leases. These leases would affect land within this region of the North Slope and Beaufort Sea, particularly between the Colville and Canning rivers, but including the entire coastline to the Canadian border.

Those who share such a concern are convinced that certain legislative provisions of both the federal and state governments regarding historic preservation and environmental protection support a position which seeks to restrict or prohibit undesirable development in this region, contrary to the best interests of northern Eskimos, Alaskans and the people of the United States. Some of the legislation and legal precedents which have a direct bearing on questions of historic preservation and environmental (subsistence) protection in Alaska are:

Federal

Historic Preservation

1) The Antiquities Act of 1906.
2) The Historic Sites Act of 1935.
3) The National Historic Preservation Act of 1969.
4) Executive Order 11593 of 1971.
5) The Historic Preservation Act of 1974.
6) Section 14 (h) of the Alaska Native Land Claims Settlement Act of 1971.

Environmental Protection (subsistence)

1) Rivers and Harbors Act of 1899; 33 USC-401 et seq.
2) Submerged Lands Act of 1953.
3) National Environmental Policy Act of 1969; PL 91-190.
4) Clean Air Act Amendments of 1970; 42 USC-1857 et seq. as amended PL 91-604.
5) The Fish and Wildlife Conservation Act.
6) The Deleware Coastal Zone Act of 1971; title 7 Deleware Code, 7001-7014.
7) The Federal Water Pollution Control Act of 1972; 33 USC-1251 et seq.
8) The Organic Act of 1976.
9) The Coastal Zone Management Act of 1971.

State

Historic Preservation

1) The Alaska Historic Preservation Act of 1971; AS 41.35.240.
2) Alaska Statutes: 41.35.20, 41.35.70, 41.35.80, 41.35.90, 41.35.200.

Environmental Protection (subsistence)

1) The Alaska Conservation Act of 1974; S 2917.
2) Alaska Statutes: 46.03.050, 46.03.140, 46.03.160, 46.03.170, 46.03.020, 46.03.040, 46.03.710, 46.03.740, 46.03.760, 46.03.770, 46.03.780, 46.03.800, 46.03.810.

Legal Precedents (federal)

1) Huron Portland Cement Co. vs City of Detroit; 362 US 440 (1960). State Powers and Preemption.
2) Zabel vs Tabb; 430 F. 2d. 199 (1970).
3) Askew vs American Waterways Operators; 411 US 325 (1973).

Furthermore, the North Slope Borough is of the opinion that in seeking such protection of historical, cultural and subsistence resources it is acting in the best interests of the Eskimo people of the North Slope and Beaufort Sea region. Such an opinion is based upon the following observations: 1) Final determination of land status and management priorities will not be made until December of 1978, 2) The state of Alaska is still in the process of selecting lands under provisions of the Alaska Statehood Act of 1958, 3) The North Slope Borough, Regional Corporation and village corporations will assume major land management responsibilities within the Beaufort Sea region, 4) Local and re-

gional government and the people of the North Slope have an historic and on-going vital cultural, subsistence and economic interest in the offshore and coastal zone management of the Beaufort Sea region, 5) The North Slope Borough will have a significant influence in decisions regarding the development of natural resources and associative industries on the North Slope, and 6) The North Slope Borough and people of the region will likely be impelled by an "energy imperative" to reach critical decisions without the benefit of sufficient time necessary to insure sound management policies and priorities.

In light of these observations, the North Slope Borough appears to have certain alternatives to choose from in its efforts to assure the protection of local, regional and national interest values. These could include the following:

1) Based upon precedent established in the designation of Eagle and portions of Skagway as historic districts and upon the principles of district zoning, the Borough might want to consider the feasibility of creating historic districts within the North Slope and Beaufort Sea region, and the funding of an Historic District Commission to research, oversee and coordinate the protective zoning process;

2) Based upon precedent established in the designation of Ketchikan, Wrangell, Hatcher Pass, The Chilkoot Trail, Fort Abercrombie and the so-called Gold Rush Trails (the Iditarod and the Valdez-Eagle Trail) as state historic parks, sites, or areas of historic significance, the Borough might want to consider the possibilities of approaching the state with nominations to the State Park and Historic Site or Monument System, to include extraordinary provisions recognizing the dynamic and cultural significance of these sites and related subsistence priorities;

3) Based upon this study, *The Final Cultural Resource Assessment* conducted in the NPR-4 region (ms. National Park Service, 1977) and the results of the 14(h) program, the Borough might want to consider the submission of individual nominations to the National Register of Historic Sites based upon criteria models outlined in Part One of this study. Such initiative would accomplish both the protection of specific sites already identified and interpreted, while allowing the badly needed time for further studies and field-work necessary to an intelligent approach to cultural resource assessment and protection policies.

Possible Historic District Nominations

1) The Upper Colville River region
2) The Colville River Delta
3) The Camden Bay region
4) The Barrier Islands (to include the region Thetis Island to Icy Reef)
5) The Sadlerochit Mountains region

Possible Historic Site Nominations

1) Many of those sites shown on the USGS 1:250,000 maps could possibly meet National Register criteria. However in many cases substantial fieldwork is needed to fully realize the historic potential of the Beaufort Sea region, to interpret these sites in greater detail, and to guarantee that historic preservation and environmental requirements are completely met. Precedent exists in the designation of sites such as Birnirk, Iyatayet, Whales, and Ipiutak.

Specifically, the following sites have been indicated as being of particular concern in the Teshekpuk, Colville, and eastern coastal areas.

Teshekpuk Lake Quadrangle

Alaktak	Qalluvik	Taglii
Igsinat	Isuk	Saktui
Imagruak	Sikulik	Atigruk
Cape Halkeet	Ikaluuruak	Kanigluq

Lower (west) Colville River

Niglik (nirlik)	Tulugaluk	Ilanikruak
Apkugaruk	Uyagagvik	
nanuq	Kuugruatchiak	

Upper (east) Colville River

Anayuk	Sigiaruk	Nauyatuuq
Woods Inaat	Putu	Nuiqsutpiat
Kayuktusiluk	Napaun	Niglnaat
Agki	Qakimak	Amauliqtuuq (Thetis Island)
Puviksuk	Pisiktagvik	Uulugsrak
Tiagruak	Milugiak	

Eastern Coastal Areas

Uuliktuk
Mitkutialaqtuuq (Jones Island)
Kataktugvik (also Takpam Inlet)
Beechey Point
Sakuagayak
Napagsralik (Cross Island)
Foggy Island
Tigvagiaq Island

Bibliography and Literature Search

It should be emphasized again that one of the primary objectives of the *Beaufort Sea Study* was to explore the literature available on the subject in the areas pertinent to the interests of the North Slope Borough: history, culture, and subsistence. While these subjects have been emphasized and therefore overlie the thesis, they should be viewed within the context of impending oil and gas development of the North Slope and Beaufort Sea reserves.

This being the case, it was felt that issues caught up in the debate over the demonstrated and potential impact of such development on this region and its people, must receive some attention as well. Therefore, while an attempt has been made to address the questions of history, culture, and subsistence, the necessity of bringing into the discussion environmental, ecological and administrative issues was both unavoidable and imperative.

On the basis of this decision a formidable number of complex and thorny issues have been mentioned in a cursory and unavoidably tenuous manner requiring much greater emphasis and substance. It is to be hoped that forthcoming studies will more adequately fulfill such a need.

The following bibliography is intended to be a guide to literature representative of what is available and relevent to Beaufort Sea issues. Primary and secondary material for history, culture and subsistence has generally been brought together under the heading *History*. Material for scientific studies in the Beaufort Sea region, as they bear on questions of environment, ecology, and arctic petroleum development have been brought under the heading *Scientific Studies*. This listing is, however, by no means intended to be substantive and those seeking a more complete bibliography are directed to the heading *Bibliographies*.

Material dealing with questions of historic preservation, land management, legislation and the official reports and publications by government agencies may be found under the headings *Federal Government* and *State Government*. Two smaller headings *Theses* and *Collections* will contain references to material of a more specialized nature.

A listing of contributors and those consulted has been included, to acknowledge the assistance of many libraries and agencies in locating material for this study, which in some cases, supplemented the resources of the Rasmusen Library, University of Alaska and to provide a convenient guide to these resources.

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