

ANWR
REPORT,
5-19-87,
DNR

MEMORANDUM
DEPARTMENT OF NATURAL RESOURCES

State of Alaska
DIVISION OF OIL AND GAS

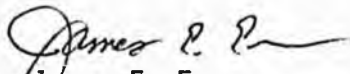
TO: See Distribution

DATE: May 19, 1987

FILE NO:

TELEPHONE NO: 762-4241

FROM:


James E. Eason
Director

SUBJECT: ASRC ANWR Exchange

Enclosed for your review are several documents compiled by the division which relate to the 1983 exchange agreement between the Arctic Slope Regional Corporation and the Department of the Interior. Depending upon your background, training and familiarity with the 1983 exchange and the current proposed exchanges in ANWR, I believe these documents will offer something of interest to each of you.

The sparse details of the "Kaktovik Subsurface Valuation Report" (Tab 6) will be particularly interesting to anyone who has lingering doubts about whether Interior's subsurface valuation procedures are technically deficient.

I suspect that everyone (but particularly the attorneys) will enjoy reading the "Process" section of the Valuation report, wherein Interior's appraiser speculates that there is an 85% chance that Congress will honor the commitment to share revenues from ANWR at the 10/90 split defined by the Mineral Leasing Act. After adjusting the "value" of the Kaktovik subsurface lands to reflect the likelihood of this outcome, and the consequent effect on federal retained revenues, Interior determined that the income value of the ANWR subsurface to the United States was \$5.9 million! (emphasis added) That's right--93,360 acres overlying portions of the three largest and most prospective subsurface anomalies in the Coastal Plain of ANWR were valued by Interior for exchange purposes at less than \$6.0 million.

The letter from BLM's former Alaska Branch Chief Jim Callahan (Tab Number 7) provides independent documentation that technical staff other than those within the Department of Natural Resources have concerns about the subsurface valuation methods, and whether they are defensible. It appears from the record that, at least in 1983, others within Interior, including Bill Horn himself, may have shared those concerns.

In his August 9, 1983 recommendation to Secretary Watt (Tab 1, at page 8), then Deputy Undersecretary Bill Horn concluded "...It is difficult to evaluate the value to ASRC of the exclusive right to the seismic and exploratory well data, but this information is significant and will provide ASRC with a competitive edge in oil and gas activities in the general area. Although this value is speculative, it may be substantial. Due to the considerable difficulty, if not impossibility, of accurately appraising the fair market value of the benefits to be received by ASRC from the interests to be conveyed to it, BLM did an appraisal of the transaction in terms of the federal interest in the subsurface lands." (emphasis added)

ASRC AWRW Exchange
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There is more than a little smoke and plenty of mirrors contained within the pages of the enclosed materials. I believe they confirm many of the flaws which we have maintained were inherent in the procedures used to value and justify the earlier exchange, and they provide excellent examples to document the bases for the state's continuing concerns over the proposed land exchanges.

Distribution: Judith Brady
Lennie Boston Gorsuch
John Katz
Tom Koester
Mark Worcester
Martha Fox

Enclosure

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Referenced to Tabs

Tab Number 1:

Memo from William Horn to James Watt detailing the land exchange between ASRC and the U.S. DOI. Executed and signed 8/9/83.

Tab Number 2:

Letters of recommendation from the National Park Service and Fish and Wildlife.

Tab Number 3:

Agreement between ASRC and U.S. government. Executed and signed.

Tab Number 4:

Appendices 1 through 4 of Agreement and Warranty Deed executed 8/5/83 by ASRC President Jacob Adams.

Tab Number 5:

Surface Appraisal of ASRC lands. Includes Analysis and Conclusions, Addenda, and Qualifications of Appraiser.

Tab Number 6:

Subsurface Valuation Report of oil, gas and gravel.

Tab Number 7:

Letter listing questions of former BLM Branch Chief Jim Callahan. February, 1987. Questions refer to current Horn trade proposal.

Tab Number 8:

National Wildlife Federation Report and Recommendations to Congress regarding ANWR. March, 1987. Includes geologic report by Tom Marshall.



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

AUG 9 1983

Memorandum

To: Secretary

From: Deputy Under Secretary

Subject: Proposed Acquisition of Chandler Lake Through Land Exchange with Arctic Slope Regional Corporation (ASRC)

In recognition of the goal of four Administrations to include the lands in and around Chandler Lake as parklands within Gates of the Arctic National Park, early this year ASRC proposed to convey to the United States approximately 92,160 acres of surface estate which it owns within the park. In exchange for these lands, ASRC sought to acquire approximately 92,160 acres of subsurface estate underlying the surface estate conveyed or to be conveyed to the Kaktovik Inupiat Corporation (KIC), the village corporation for the Village of Kaktovik, Alaska. As a result of negotiations between ASRC and departmental representatives, the interests in lands to be conveyed by ASRC have been increased to approximately 101,272 acres plus access and recreation easements on the Killik River, Lake Udrivik, Imiaknikpak Lake, and Shainin Lake for the benefit of the general public. The interests in lands to be conveyed by the United States have been expanded to cover its remainder interests in the subsurface beneath the townsite of Kaktovik and approved Native allotments within the exterior boundaries of the subsurface estate to be conveyed to ASRC (up to 1800 additional acres). The exchange of the subsurface under the village townsite is the sole consideration for the easements on the Killik River, Lake Udrivik, Imiaknikpak Lake, and this part of the exchange is severable from the remainder of the exchange.

The subsurface estate to be conveyed to ASRC under the proposed exchange lies within the Arctic National Wildlife Refuge (ANWR). Section 22(f) of the Alaska Native Claims Settlement Act (ANCSA) and § 1302(h) of the Alaska National Interest Lands Conservation Act (ANILCA) authorize you to make exchanges on the basis of equal value or the public interest or both.

Description of Proposal

The terms and conditions of the proposed exchange are set forth in the attached "Agreement Between Arctic Slope Regional Corporation and the United States of America" and its four appendices.

1. Lands to be conveyed to the United States.

ASRC will convey to the United States, as its part of the exchange, the following described lands or interests in lands:

ASRC Parcel A: The surface estate in the following lands previously conveyed by the United States to ASRC, excepting therefrom certain access easements for the benefit of ASRC, its shareholders and invitees and subsistence use easements for the benefit of the local rural residents of the Village of Anaktuvuk Pass:

Umiat Meridian

Township 13 south, range 4 west, sections 1, 2, 11-14, 23-26, 35, 36;
Township 14 south, range 2 west, sections 29-32;
Township 14 south, range 3 west, sections 4, 19, 25-36;
Township 14 south, range 4 west, sections 2, 11, 13, 14, 21-28, 33-36;
Township 14 south, range 2 east, section 32;
Township 15 south, range 2 west, sections 1-5, 8-12;
Township 15 south, range 1 west, sections 7-10, 13-18, 21-26, 35, 36;
Township 15 south, range 1 east, sections 1-4, 9, 10, 15-16, 21, 22, 29, 30, 31;
Township 16 south, range 2 east, sections 1-12, 16-21, 28-33;
Township 16 south, range 4 east, sections 5-8, 17, 18; and
Township 17 south, range 1 west, sections 3, 4 (partials);
aggregating approximately 75,150 acres.

ASRC Parcel B: By relinquishment, all right, title and interest which ASRC has under § 22(f) of ANCSA and § 1431(c)(1) of ANILCA to receive the surface estate of the following lands, but reserving the right to an interim conveyance of easements for the benefit of access by ASRC and subsistence uses by local rural residents of the Village of Anaktuvuk Pass:

Umiat Meridian

Township 16 south, range 3 east, sections 1-3, 6, 7, 9-16, 18-30; and
Township 15 south, range 4 east, sections 6, 7, 18, 21-28, 33-36;
aggregating approximately 26,122 acres.

ASRC Parcel C: Public access and recreation easements on Lake Udriulik and Imiaknikpak Lake and along the Killik River from the boundary of Gates of the Arctic National Park to its confluence with the Colville River, the boundary of the National Petroleum Reserve -

Alaska, in consideration for the subsurface under the Village of Kaktovik townsite patent.

ASRC Parcel D: By relinquishment, all right, title and interest which ASRC has under § 12(c) of ANCSA to receive the surface estate of any lands within the lands described in Parcel A in the event that any of such lands become available for conveyance to ASRC as the result of the denial of a native allotment application.

ASRC Parcel E: Public access and recreation easements on Shainin Lake will remain in place by ASRC waiving its right to have the existing easements vacated, modified, altered or relocated.

The interests in lands described in ASRC Parcel A are owned by ASRC and are located entirely within the boundaries of Gates of the Arctic National Park. The lands are surrounded by federally-owned parklands, other lands owned by ASRC and lands owned by Nunamiut Corporation, the village corporation for the Village of Anaktuvuk Pass. Following the exchange, the interests in lands conveyed by ASRC will automatically become a part of Gates of the Arctic National Park and administered by the National Park Service (NPS). Interests in lands described as ASRC parcel B are currently owned by the United States under a contractual and statutory obligation to convey the same to ASRC pursuant to § 22(f) of ANCSA and § 1431(c)(1) of ANILCA. These interests in lands will remain part of Gates of the Arctic National Park following relinquishment by ASRC of its rights.

Portions of the Chandler Lake subsurface estate retained by ASRC have been leased to an energy company. Upon termination of these leases, the United States may acquire the subsurface by condemnation (to which ASRC consents), or by an equal value exchange for public lands in the Arctic Slope Region.

Parcels C and E will assure that public recreational benefits in this area are increased, and access to the park and other public lands are significantly improved. These easements will be administered under the jurisdiction of BLM.

Parcel D is a technical provision to assure that ASRC relinquishes its selections in the subsurface of pending native allotment claims, should the claims be declared invalid.

2. Lands to be conveyed to ASRC.

The United States shall convey, subject to valid existing rights and the provisions of the stipulations and covenants in the agreement, to ASRC, as its part of the exchange, the subsurface estate of the following described lands:

U.S. Parcel A: All right, title and interest of the United States in the subsurface estate of the following lands:

Umiat Meridian

Township 7 north, range 32 east, section 1;
Township 8 north, range 32 east, sections 1-3, 7-16, 18-33, 36;
Township 8 north, range 33 east, sections 1-21, 29-32;
Township 8 north, range 34 east, sections 1-17;
Township 8 north, range 35 east, sections 1-18, 24, 25, 36;
Township 8 north, range 36 east, sections 1-13, 18, 19, 30;
Township 9 north, range 32 east, all;
Township 9 north, range 33 east, all, except lands within P.L.O. No. 715, as amended by P.L.O. No. 5448;
Township 9 north, range 34 east, all, except lands within P.L.O. No. 715, as amended by P.L.O. No. 5448;
Township 9 north, range 35 east, all; and
Township 9 north, range 36, all.

U.S. Parcel B: All right, title and interest of the United States in the subsurface estate of the following lands:

Township 8 north, range 33 east, sections 22-24; and
Township 8 north, range 34 east, sections 18-20.

U.S. Parcel C: All right, title and interest of the United States in the subsurface estate beneath all lands conveyed to KIC pursuant to the provisions of § 1431(g)(3) of ANILCA.

U.S. Parcels A, B and C aggregate approximately 92,160 acres.

U.S. Parcel D: All right, title and interest of the United States in the subsurface estate beneath all lands conveyed to KIC to satisfy its entitlement under §§ 12 and 14 of ANCSA and § 1431(g) of ANILCA, provided that if the gross acreage conveyed to ASRC exceeds 92,160 acres, then ASRC shall convey an amount of surface acreage within Gates of the Arctic National Park equal to the excess above 92,160 acres.

U.S. Parcel E: All right, title and interest of the United States in the subsurface estate beneath the Kaktovik townsite patent and under any valid Native Allotments which are surrounded by KIC conveyances.

Parcel E aggregates up to approximately 1800 acres.

U.S. Parcel F: An easement on certain lands in Gates of the Arctic National Park, identical in effect to the easements reserved by ASRC in ASRC Parcel A, to assure access for continued subsistence uses by local rural residents of the Village of Anaktuvuk Pass.

The subsurface estates in lands described as U.S. Parcel A, B, C, D, and E are within ANWR. The surface overlying U.S. Parcel A subsurface is currently owned by KIC and is subject to ANCSA § 22(g) concerning application of laws and regulations on use and development of refuge lands. The surface estate overlying U.S. Parcels B, C, and D are to be conveyed to KIC pursuant to §§ 12 and 14 of ANCSA and ANILCA § 1431(g). KIC is entitled to select an additional township of surface estate within the original area withdrawn for selection by KIC under § 11(a)(1) of ANCSA, or within one township east or west of that area. The location of these lands is the subject of ongoing negotiations between KIC and the Fish and Wildlife Service (FWS). Upon conveyance of the surface estate to KIC, the subsurface will be conveyed to ASRC as part of this exchange. The surface estate in U.S. Parcel E consists of lands conveyed under a townsite patent and lands conveyed or to be conveyed to individual Natives pursuant to the Native Allotment Act. The remaining interest of the United States in the subsurface estate beneath these lands would be conveyed to ASRC under this agreement.

3. Stipulations and covenants applicable to lands to be conveyed to ASRC.

As a condition of the proposed exchange, the Department has negotiated detailed stipulations, modeled in part on the ANILCA § 1002 regulations, and other covenants that will run with the lands to be conveyed to ASRC, designed to ensure that any activities undertaken by ASRC will not significantly adversely affect the fish and wildlife, their habitats, or the environment of either the lands conveyed to ASRC or ANWR lands. Stipulations and covenants are also included in the agreement that will protect cultural resources and subsistence uses and resources.

Basis for Exchange

Under the provisions of §§ 22(f) of ANCSA and 1302(h) of ANILCA, exchanges of lands may be for other than equal value, if it is determined that the exchange is in the public interest. Considering the interests being exchanged, the estimated and speculative value of those interests, and the beneficial purposes achieved by this exchange, I recommend that you base the exchange on a determination that it is in the public interest, for the reasons set forth in this memorandum and in the supporting administrative record. Stated summarily, the exchange clearly benefits and protects the interests of the United States and is, therefore, in the public interest because it accomplishes the acquisition of invaluable and integral private holdings in Gates of the Arctic National Park; ensures that the disposition of ANWR subsurface interests does not undermine the essential integrity of refuge values or frustrate refuge purposes; preserves the integrity of the ANILCA § 1002 program; provides easements benefiting the general public for access to and recreational use of public lands and waters and easements aiding the administration of federal lands and interests; puts FWS in a position comparable to what it would be in if ASRC were to acquire the ANWR subsurface estate under § 1431(o) of ANILCA rather than this exchange; and plans for future contingencies.

The basic rationale for proceeding with the agreement is that it gives the United States the opportunity to acquire now lands which the Department has long sought. If we do not take this opportunity and the conditions precedent occur that entitle ASRC to acquire the ANWR subsurface lands under § 1431(o) of ANILCA, we will not be able to acquire a surface estate in and around Chandler Lake under that exchange. Because § 1431(o) requires the lands traded for the ANWR subsurface to be in-lieu subsurface lands selected by ASRC under § 12(a)(1) of ANCSA, the Chandler Lake lands would not be eligible for a § 1431(o) exchange. We cannot acquire the surface in Lake Chandler and adjacent lands through condemnation because § 1302(b) precludes the acquisition of a native corporation's inholdings without the corporation's consent. Moreover, the public interest is served by the proposed exchange because § 1431(o) entitles ASRC to acquire the ANWR subsurface lands on the basis of equal acreage, rather than equal value. We must presume that ASRC will choose its least valuable acreage for trading stock in the exercise of its ANILCA § 1431(o) option. The BLM has estimated the value of these substitute lands at approximately \$10,800. In addition, there is no certainty that they would be in or adjacent to a conservation system unit, as their identification would be at ASRC's discretion. Simply, we do not know when we will again have an opportunity to acquire the Chandler Lake lands.

The precise determination of the market value of lands and interests therein for the remote areas of the Arctic Region is difficult. The appraisal information provided by BLM and NPS represents their best professional estimates of fair market value. As a result of reviewing the appraisal information and the hybrid nature of the estates being exchanged, it can be concluded that the values are nearly equal.

The values involved in the exchange are as follows:

The NPS will receive approximately 101,272 acres of recreational land (the subsurface is retained by ASRC) in and around Chandler Lake within Gates of the Arctic National Park, the value of which is discounted by the retained access easements for ASRC and the local rural residents of the Village of Anaktuvuk Pass. The value of the interests in land in the park that ASRC is giving up and the government is receiving is appraised at approximately \$5,001,500.

BLM will receive access and recreational easements along the Killik River, Lake Udrivik, and Imiaknikpak Lake to provide greater recreational opportunities for Alaska residents and recreational users. In addition, these easements will greatly facilitate access to Gates of the Arctic National Park and the National Petroleum Reserve - Alaska and serve other public purposes. The value of these easements is informally estimated by NPS at between \$60,000 and \$100,000.

ASRC will waive its right to enforce the revocation of the easements contained in its interim conveyance for Shainin Lake, and therefore BLM will retain the public use easements originally impressed upon the land. This waiver has a nominal value.

Accordingly, the estimated value of the combined interests that ASRC is conveying or waiving is approximately \$5.1 million.

ASRC will receive in exchange for the above lands and interests up to approximately 93,960 acres of subsurface lands and remainder interests located under the surface ownerships of KIC, the townsite of Kaktovik and valid Alaska Native allotments. The major benefits to be received by ASRC from the exchange are (1) the right to develop sand and gravel, discounted by the stipulations to protect ANWR and the right of FWS to use sand and gravel for its public use and access easements, and (2) the exclusive right to gather, use and control data about the oil and gas potential of the lands outside of the ANILCA § 1002(b)(1) coastal plain study area, to be developed

from seismic surveys and the drilling of exploratory wells, again discounted by the stipulations, easements, and covenants to protect and preserve ANWR, if ASRC obtains the necessary federal, state and local permits.

It is difficult to evaluate the value to ASRC of the exclusive right to the seismic and exploratory well data, but this information is significant and will provide ASRC with a competitive edge in oil and gas activities in the general area. Although this value is highly speculative, it may be substantial. Due to the considerable difficulty, if not impossibility, of accurately appraising the fair market value of the benefits to be received by ASRC from the interests to be conveyed to it, BLM did an appraisal of the transaction in terms of the federal interest in the subsurface lands. BLM's income approach was used for analytical purposes, with the understanding that commercial oil and gas development cannot occur in ANWR as a matter of law, unless Congress passes legislation authorizing that activity. Nevertheless, the income value of these lands to the United States is estimated to be about \$5.9 million after discounting for various factors.

On the basis of this information, which establishes that the values are of the same magnitude, and the broad public benefits which will be achieved by this exchange, I recommend that you conclude that the exchange is in the public interest. Although ASRC may in the future receive a greater financial benefit from the transaction, should its subsurface lands contain oil and gas in paying quantities and Congress decide to open its lands to production, these benefits would not exceed the benefits ASRC would receive under § 1431(o). The potential income value of these lands to ASRC is not an accurate measure of the potential income value of these lands to the United States, because of ASRC's option under § 1431(o) of ANILCA to exchange its in-lieu subsurface lands outside of ANWR for the subsurface below the KIC's lands if Congress opens nearby ANWR lands to commercial oil and gas development. Although the NPS and BLM analyses lead to the conclusion that the values given up by the parties to the exchange are comparable, I am recommending that you base the exchange on the "public interest" criterion for the reason that this criterion is clearly satisfied.

Effects on Subsistence

Section 810 of ANILCA requires (1) that in determining whether to dispose of public lands under his jurisdiction, the agency head or his designee shall evaluate the effect of such action on subsistence

uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the disposition of public lands needed for subsistence purposes, and (2) that no disposition which would significantly restrict subsistence uses shall be effected until certain procedural requirements are met. Pursuant to § 810, a subsistence evaluation has been prepared and is attached. It leads to the conclusion that the exchange will not significantly restrict subsistence uses. ASRC's potential developmental activities will be primarily localized in nature and subject to strict environmental safeguards and restrictions; significant displacement of fish and wildlife is, therefore, not expected to occur, and any relocation of resources utilized for subsistence purposes will not result in those resources becoming unavailable to the residents of Kaktovik. In view of this conclusion, the exchange is therefore excluded from the procedural requirements of § 810(a)(1)-(3).

Other Considerations

1. Section 7 of the Endangered Species Act. Formal consultation was undertaken with the Alaska Regional Office of the FWS and a biological opinion was provided. The opinion concluded the Arctic peregrine falcon is the only endangered species in the area of the proposed exchange, and that the exchange is not likely to jeopardize the continued existence of the species. That office also concluded, after informal consultation with the National Marine Fisheries Service, that the exchange will not affect the endangered bowhead and gray whales occurring offshore of ANWR in the Beaufort Sea.

2. Section 106 of the National Historic Preservation Act. In order to assure that the exchange and the activities resulting from the exchange will not adversely affect properties on or eligible for inclusion on the National Register of Historic Places, consultation was initiated with the Alaska State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation. Because, among other reasons, of the significant restrictions on ASRC's exploration activities, including those covenants in the agreement (adopted from suggestions of the SHPO) designed to preclude damage to cultural sites, both the SHPO and the Advisory Council concluded that the exchange would have no adverse effect.

3. OMB Cir. A-95. In order to provide the State of Alaska with notice of the exchange and comply with the provisions of the OMB Cir. A-95, the State of Alaska was advised by the NPS of the proposed exchange and comments were solicited. No comments were addressed to the Department from the State through this process.

4. Section 307 of the Coastal Zone Management Act. As a matter of comity, the State was advised of the exchange and our conclusion that the exchange is consistent to the maximum extent practicable with the Alaska Coastal Management Program. Although the State did not agree that the exchange was consistent, it indicated that, if certain additional provisions were included in the exchange, it would be consistent with the state program and the exchange could proceed. These recommended changes have been adopted and included in the exchange. In addition, the North Slope Borough, in commenting to the State, supported the exchange as in the best interest of the Borough and its residents.

5. Section 910 of ANILCA. Because this exchange is governed by the procedural requirements of § 910, an environmental impact statement is not required. In addition, the Solicitor's Office has concluded that no other NEPA compliance is required. Nonetheless, as a matter of sound administrative practice and in order to understand fully the environmental impacts associated with this exchange, NPS and FWS prepared a biological ascertainment, which is the functional equivalent of an EIS. This document demonstrates that there are no significant environmental impacts associated with the land exchange and that the essential integrity of ANWR's resources and values will not be undermined by the exchange.

6. The Alaska Land Use Council. The Council was formally advised of the proposed exchange by the NPS and the president of ASRC, who is a member of the council, and was given an opportunity to comment. The Council had the proposed exchange under advisement for the 30-day waiting period. No formal comments were received from the Council. Comments were, however, received from another member of the Council, generally supportive of the exchange, provided that ASRC's subsequent uses and activities on the lands conveyed to it do not significantly adversely affect coastal resources and recommending that the exchange be explained at public hearings in the affected Alaska communities prior to our reaching a final decision on the exchange.

7. Public comments. Special consideration should be given to the fact that KIC, which owns the surface estate of most of the lands which ASRC will receive, and the Village of Kaktovik, the residence of the local subsistence users within ANWR, have expressed in writing their support of this exchange. Also, a town meeting was held with the people of the Village of Anaktuvuk Pass on July 19, 1983. As a result of the meeting, NPS agreed to the reservation of

access and subsistence easements by ASRC to Chandler Lake and nearby lands to assure continued access to subsistence use areas.

Recommendations

Both the Directors, NPS and FWS recommend that you execute the exchange agreement. Their separate recommendations are attached for your reference. Because this exchange will bring under NPS management significant recreational resources at Chandler Lake, one of the unique areas of Gates of the Arctic National Park, the exchange is strongly supported by NPS. In addition, NPS notes that the easements to be administered by ELM will greatly enhance access to the park and further the general public recreational needs of the State of Alaska. Because this exchange will bind ASRC's uses and activities to the no significant adverse effect standard that applies to oil and gas exploration on ANWR lands, require ASRC to submit its oil and gas exploration plans and its sand and gravel development plans to the FWS Regional Director for review, require ASRC to submit its plans for any other subsurface uses to the Regional Director for his approval, permit the Regional Director to close special caribou, snow goose and waterfowl areas during sensitive biological periods, and grant FWS free use of sand and gravel for certain easements crossing ASRC's lands, as well as result in the acquisition of the Chandler Lake lands, FWS also supports this exchange. I concur with the conclusions and recommendations of both Directors.

While taking advantage of this present opportunity to acquire the Chandler Lake lands and the access and recreation easements, it has also been our negotiating objective not to impair other program goals and responsibilities. As indicated earlier, ANWR's resources and values are protected by several independent covenants running with the land and binding on ASRC, its successors and assigns. These include detailed land use stipulations designed to preserve the integrity of the refuge, safeguard refuge purposes, and implement our responsibilities under the second sentence of § 22(g) of ANCSA. At the same time, the proposed agreement preserves our option of promulgating regulations and taking other administrative actions in the future to further extend and enforce refuge laws and regulations relating to use and development by ASRC of its subsurface estate, should the need arise.

The "no significant adverse effect" standard of environmental protection reflected in the land use stipulations is derived from the standard of protection legislatively mandated for the adjacent, § 1002 refuge lands. The specific oil and gas exploration

stipulations found in paragraphs B.4(a)-(d) and B.5 of Appendix 2 to the proposed agreement are modeled after, but are in some respects more stringent than, the § 1002 guidelines governing exploratory activities on adjacent refuge lands.

The stipulations require oil and gas exploration and sand and gravel operations to be conducted in accordance with plans reviewed by the FWS Regional Director. They require ASRC and its operator to adopt the recommendations of the Regional Director unless certain good cause showings are made. Either party can require the other to enter into good faith negotiations to arrive at a plan mutually acceptable to the parties. In the event of a disagreement, the stipulations contain certain procedural delays giving us sufficient time to seek injunctive relief. Moreover, once field operations are commenced, the Regional Director can, by following certain procedures, cause ASRC's operator to correct plan violations and, if necessary, suspend operations. No uses of subsurface resources, other than those expressly contemplated by the stipulations, can be undertaken by ASRC or its operator without the Regional Director's prior written approval, and they will be subject to additional, specific stipulations negotiated by the parties to ensure no significant adverse environmental effects. In addition, the land use stipulations provide a level of protection to cultural resources comparable to the protections afforded to these resources on public lands.

Beyond these detailed stipulations, the proposed agreement contains a separate and unconditional covenant not to use the subsurface lands conveyed to ASRC, or their surface, in any manner that significantly adversely affects the fish and wildlife, their habitats, or the environment, as well as separate covenants to comply with applicable laws to protect floodplains and wetlands. Given all of these restrictions, we believe that ANWR's resources, values, and purposes are fully and adequately protected.

Moreover, in negotiating with ASRC, it has been our strategy to achieve, vis-a-vis the refuge, results comparable to what might be achieved if ASRC were to exercise its ANILCA § 1431(o) rights. The proposed agreement allows us to impose by contract the kinds of environmental safeguards that the FWS would seek to impose by regulation should ASRC exercise its rights under § 1431(o) of ANILCA, and it provides the added advantage that these safeguards are embodied in covenants running with the land and binding on ASRC, its successors and assigns.

We have also been careful to ensure that the proposed exchange does not negate or prejudice the outcome of the § 1002 program. ASRC has agreed to preserve for Congress the decision of whether or not oil and gas leasing and production will occur on the conveyed subsurface lands, even if oil and gas are found there in commercial quantities, and thereby to preserve the congressional scheme of deferring legislative action on the future use and development of ANWR until submission of the Department's findings and recommendations to the Congress pursuant to § 1002(h) of ANILCA. Moreover, ASRC's agreement to allow the Department to inspect seismic data acquired on its lands will enhance the quality of the § 1002(h) report. The bulk of the subsurface lands proposed for conveyance to ASRC lie outside of the § 1002 study area. The proposed agreement maintains the Regional Director's right to approve, under certain conditions, exploration of those subsurface lands to be conveyed to ASRC in the future, which are, however, within the boundaries established by § 1002(b)(1) of ANILCA. This provision preserves the value of such lands for the purpose of obtaining information needed for the § 1002(h) report. Furthermore, the agreement adheres to the intent of Congress that lands within the coastal plain study area be explored by means other than exploratory drilling by prohibiting exploratory drilling to be conducted on lands conveyed to ASRC within the study area until subsequently authorized by Congress.

If in the future Congress decides to enact legislation that has the effect of permitting leasing or production on ASRC's lands, or exploratory drilling on ASRC's lands within the § 1002(b)(1) study area, the proposed agreement provides that the land use stipulations on oil and gas exploration will continue in effect until superseded by self-executing provisions of such legislation or its implementing regulations. This provision guarantees the avoidance of any regulatory hiatus that might otherwise occur and thereby assures continuing control of further oil and gas exploration and development until any statutory and regulatory scheme intended by Congress is in place, should it decide to open ASRC's lands to such activities.

Lastly, whereas the oil and gas reserve estimates to be included in the § 1002(h) report are required to be made on the basis of data retrieved by means other than drilling, ASRC's opportunity to allow exploratory drilling on its lands, outside of the § 1002(b)(1) study area, may provide us with information and experience enhancing the quality of the report. The stipulations of Appendix 2 contain specific environmental safeguards for the conduct of exploratory drilling, where it is allowed. If ASRC decides to permit drilling and its operator obtains the necessary federal, state and local

authorizations to do so, the FWS' opportunity to evaluate the efficacy of such stipulations, through its access and monitoring rights, will help it in evaluating the potential adverse effects of further exploration and development and the need for additional authority to avoid or minimize such effects in preparing the § 1002(h) report to Congress.

In planning for future contingencies, thought has been given to what the positions of the parties should be should the agreement be set aside in whole or in part. ASRC has agreed not to exercise its rights under § 1431(o) of ANILCA with respect to the subsurface lands conveyed to it pursuant to the agreement unless the parties have returned to their positions prior to the execution of the exchange or ASRC has elected to rescind the exchange in accordance with the terms of the agreement. In the event that ASRC exercises its § 1431(o) option, the covenants in Appendices 1 and 2 shall apply to the ANWR lands acquired by ASRC. This provision assures that the environmental safeguards made applicable to ASRC's lands at that time shall be no less stringent than the level of protection achieved under the proposed agreement. Moreover, the United States will retain certain surface interests received from ASRC, depending on the degree of frustration suffered by ASRC due to causes beyond the parties' control. These two provisions should ensure that any decision that ASRC may consider to rescind the agreement will not be made lightly.

Attachments

For your further reference, the following documents are included in the attached file:

1. NPS recommendations.
2. FWS recommendations.
3. Photographs of the lands to be exchanged.
4. Subsistence evaluation and determination.
5. NPS surface and BLM subsurface appraisals.
6. Public interest determination.
7. Biological ascertainment.
8. Endangered Species Act correspondence.
9. Historic Preservation Act correspondence.
10. Coastal Zone Management Act correspondence.
11. Alaska Land Use Council correspondence.
12. OMB Cir. A-95 correspondence.
13. Kaktovik Inupiat Corporation and Village of Kaktovik correspondence.

- 14. Congressional correspondence.
- 15. Waiver of intent to convey notice.
- 16. Opinion of counsel regarding ASRC's authority to enter into exchange.
- 17. Agreement and appendices.

Conclusion

Based on a review of the above considerations, I strongly recommend that you execute the agreement and related documents on the bases that it is clearly in the public interest, that it promotes the purposes of ANILCA and of § 22(f) of ANCSA, while preserving the essential integrity of ANWR and its purposes and without significantly restricting subsistence uses and activities. Please indicate your decision by checking the appropriate line below. If you decide to execute the proposed agreement, this memorandum and its attachments will constitute the record of decision.

William P. How

Secretarial Decision

JW

I adopt the recommendations to execute the agreement between ASRC and the United States, and related documents.

I do not adopt the recommendations to execute the agreement between ASRC and the United States, and related documents

8/9/83
Date

James G. Watt
SECRETARY



United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

IN REPLY REFER TO:

L1425 (767)

MAY 31 1983

Memorandum

To: Chief, Branch of Legislation
Attn: Randy Jones

From: Chief, Branch of Appraisal

Subject: Review of appraisals, Gates of the Arctic National Park
and Preserve

We have reviewed the enclosed appraisals of tracts No. 1 and No. 4 owned by the Arctic Slope Regional Corporation to be exchanged to the National Park Service. The appraisals were found acceptable. These together with approved appraisals for parcels No. 2 and No. 3 are bound in one volume.

We have been asked by the Pacific Northwest Region to furnish the above-referenced appraisals and the appropriate appraisal reviews directly to you. If you have any questions please contact Chuck Haslet at 523-5172.

Charles Haslet

Enclosures:
Appraisal
Appraisal Review



United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

REPLY REFER TO:

AUG 1982

Memorandum

TO: Secretary

FROM: Director

RE: Chandler Lake Acquisition, Gates of the Arctic National Park, Alaska

For the past several months representatives of the National Park Service have participated with officials of the U.S. Fish and Wildlife Service, the Bureau of Land Management, and the Department in negotiations with Arctic Slope Regional Corporation (ASRC). This effort has resulted in the proposed exchange of lands and interest in lands between the United States and ASRC for the purposes of acquiring Chandler Lake and surrounding lands within Gates of the Arctic National Park for the benefit of the public. If approved, this would be the largest single acquisition in the history of the National Park System.

Under the terms of the proposed exchange, approximately 101,272 acres of surface estate in and around Chandler Lake within the Gates of the Arctic National Park would be acquired by the United States to benefit the purposes of the Park. Recreation and access easements would be acquired by the United States for BLM administration at Lake Udrivik, Imiaknikpak Lake and the Killik River, all of which are adjacent to the Gates of the Arctic National Park, for the benefit of the public under section 903 of ANILCA. Recreation easements previously retained pursuant to section 17(b) of ANCSA at Shainin Lake would be retained by the United States, and ASRC would waive any rights it may have to vacate the easements from its interim conveyance. Restrictive covenants and land use stipulations would be imposed by the United States on the interests conveyed to ASRC on any exploration activities undertaken by the corporation to protect the environment, subsistence uses, resources and habitats of the Arctic National Wildlife Refuge. Developed as covenants to the deed of conveyance, the restrictions remain permanent.

In exchange for the above, approximately 92,150 acres of subsurface estate underlying the surface estate conveyed or to be conveyed to the Kaktovik Inupiat Corporation, the village corporation for the Native Village of Kaktovik (hereinafter "KIC"), would be conveyed to ASRC. In addition, ASRC would receive those subsurface interests of the United States underlying the townsite of the City of Kaktovik, approximately 300 acres, and underlying those Native allotments which are or may be conveyed within the exterior boundaries of KIC's lands, which approximate up to 1,800 acres. All of these interests to be conveyed to ASRC are within boundaries of the Arctic National Wildlife Refuge. ASRC would also receive or retain limited easements in the Gates of the Arctic National Park to ensure adequate access for continued subsistence uses in the Park.

Conveyance of the subsurface underlying the KIC surface estate was originally prohibited by provisions of ANCSA that precluded regional corporations from acquiring subsurface lands within wildlife refuges. As a result of section 1431(o) of ANILCA, however, ASRC may acquire this subsurface at any time within 5 years of an action by Congress, occurring by not later than December 2, 2020, which opens to oil and gas leasing lands within the Refuge and within 75 miles of KIC lands. Thus, ASRC currently holds an option to acquire the subsurface estate at a future date if certain conditions are met. If ASRC exercises this option, it must convey to the United States, as payment for the subsurface under KIC lands, an equal acreage, of its own choosing, from the in-lieu subsurface lands it acquired under section 12(a)(1) of ANCSA. As the selection of land to be conveyed to the United States under this option is within the sole discretion of ASRC, it can be presumed that the corporation would choose its least valuable lands for conveyance to the United States. The Bureau of Land Management estimates that the value of the lands the United States would acquire if section 1431(o) is triggered to be only \$10,800. Furthermore, since none of the Chandler Lake lands proposed for acquisition under the exchange are ANCSA section 12(a)(1) lands, the United States would not be able to acquire any of these lands by an exchange pursuant to section 1431(o).

The Department, by trading now, is able to obtain valuable inholdings within the National Park System, rather than obtaining virtually valueless lands later. Thus, the goals of four Administrations to protect and manage the valuable Chandler Lake lands as part of the Gates of the Arctic National Park and to provide public use and enjoyment of the Killik River will be realized through the implementation of this exchange.

The acquisition of the Chandler Lake innholdings and their management as part of Gates of the Arctic National Park represents a significant addition to the National Park System. Chandler Lake is a spectacular mountain rimmed lake. It is a major nationally significant resource whose geologic, cultural, scenic, recreation, wildlife and wilderness resources make a major contribution to furthering the purposes for which Gates of the Arctic National Park was established.

Chandler Lake is one of only eight major glacially formed lakes located in the northern foothills of the Brooks Range. The lake and related valleys to be conveyed to the United States provide an essential access corridor for park visitors, including hikers, campers, and fishermen, to the north central and northwestern reaches of the Park, which has few access points. At five miles in length, the lake is one of the largest lakes in the northern Brooks Range, and provides critical float plane access to this region of the Park. The scenic beauty of the lake and its surroundings provide a major contribution to the wilderness values of an area regarded as the greatest remaining wilderness in North America.

The Anaktuvuk River and Kollutarak Creek are major hiking valleys through the Park which provide access not only for visitors but wildlife. Consistent with the purposes of Section 201(4)(a) of ANILCA, the acquisition of the Chandler Lake and Kollutarak valley will protect critical wildlife populations as these areas serve as major migration routes for the Arctic caribou herd on its spring and fall movements through the Brooks Range. Chandler Lake is home for lake trout, Arctic char, whitefish, burbot and grayling. The mountainous areas to be acquired contain Dall Sheep.

The lands also encompass mountainous terrain, which in addition to great scenic beauty provide critical watershed protection for three major park rivers, the Chandler, John and Anaktuvuk Rivers. A segment of the John River, which is designated a wild river in the National Wild and Scenic River System, would also be acquired under the exchange.

The Chandler Lake and Kollutarak Creek drainages fall within a significant cultural resources zone which offers very high potential for archeological site discovery.

Of major consideration are the benefits obtained through improved management of the Park with the implementation of the exchange. Federal land holdings will be consolidated with the elimination of isolated tracts of Federal land. Land ownership patterns will be improved, facilitating the protection of Park resources, thus improving the ability to fulfill the purposes of the Park as defined in ANILCA.

The importance of Chandler Lake and related mountains and valleys has long been recognized. In 1972, the area was proposed by the National Park Service for withdrawal under section 17(d)(2) of ANCSA. While subsequent negotiations between the Department and ASRC resulted in the eventual withdrawal of these lands under section 11(a)(3) of ANCSA for ASRC selection, these lands have remained a major concern to the National Park Service. Both the legislative recommendations of Secretary Morton in 1973 and Secretary Andrus in 1977 included these lands within a proposed national park. Congress responded to this continued recognition of the area's values through the establishment of the Gates of the Arctic National Park in 1980, including these lands within exterior boundaries of the Park. The Congress, through section 1302 of ANILCA authorized the acquisition of these lands with the consent of ASRC. Now the goal of four Administrations and the Congress will be achieved as the Chandler Lake lands become federally owned and managed as part of the Park.

The Chandler Lake area is also important for the subsistence lifestyle of the Anaktuvuk Pass people. Isolated in a mountain pass, the local people are dependent upon the fish of the lake and the caribou and other mammals of the area. The Village of Anaktuvuk Pass and ASRC supported the inclusion of their lands, and the Village itself, within the Park to facilitate the protection of those fish and wildlife resources critical to the subsistence lifestyle of the local people.

Title VIII of ANILCA guarantees and protects the rights of the Anaktuvuk Pass people to continue to hunt and fish for subsistence purposes in the Park. Title 36 C.F.R. Part 13 designates Anaktuvuk Pass as a resident zone under Title VIII of ANILCA, thus assuring that all rural residents of the Village may continue subsistence activities on Federal park lands. Access to Chandler Lake and through the mountain valleys is assured through access easements which are retained by ASRC under this Agreement for the benefit of the Village.

The Killik River was recommended by the Department for designation as a wild river component of the Wild and Scenic Rivers System in 1973 and again in 1977. In the legislative history of ANILCA, the Congress indicated that the river was not so designated because of the private lands (owned by ASRC) which controlled access and use of the river. The Killik River today retains its nationally significant values and the acquisition of the recreation and access easements along the river and its associated lakes will open this beautiful Arctic river to public use and enjoyment.

Shainin Lake serves as an important access point to that portion of the Park east of Anaktuvuk Pass. The retention of

the access and recreation easements here will facilitate use of the Park and the lake itself.

On July 19, 1983, the National Park Service, Arctic Slope Regional Corporation, and the North Slope Borough attended a town meeting in the Village of Anaktuvuk Pass. The proposed exchange was explained to the local people, who expressed several concerns about the exchange and now it would effect subsistence uses and access to Chandler Lake and other traditional hunting areas. Based upon input from this meeting, clarifications and changes were made in the agreement to address those issues.

The acquisition of these important lands by the National Park Service and the acquisition of the recreation and access easements together make a significant contribution to the purposes of the Alaska National Interest Lands Conservation Act and the National Park System. We strongly support this proposed land exchange and recommend its approval.

Russell E. Dickenson



United States Department of the Interior

FISH AND WILDLIFE SERVICE

WASHINGTON, D.C. 20240

ADDRESS ONLY THE DIRECTOR
FISH AND WILDLIFE SERVICE

Memorandum

To : Secretary

From : Director, U.S. Fish and Wildlife Service

Subject: Proposed Land Exchange Between the Department of the Interior
and Arctic Slope Regional Corporation

We have reviewed the proposed exchange agreement and appendices that would provide for approximately 100,000 acres of surface estate in and around Chandler Lake within the Gates of the Arctic National Park to be conveyed to the U.S. by the Arctic Slope Regional Corporation (ASRC). In exchange, ASRC would receive approximately 92,160 acres of subsurface estate within the Arctic National Wildlife Refuge (ANWR), the surface of which has been or is to be conveyed to the Kaktovik Inupiat Corporation (KIC).

The Service has reviewed this exchange in light of the provisions of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA), the Alaska Native Claims Settlement Act (ANCSA), and on the basis of the several documents listed below:

- (1) Public Interest Evaluation;
- (2) Ascertainment Evaluation;
- (3) Subsistence Evaluation for Section 810 of ANILCA;
- (4) Intra-Service Biological Opinion prepared under Section 7 of the Endangered Species Act;
- (5) FWS evaluation on endangered species managed by the National Marine Fisheries Service;
- (6) Coastal Zone Management Consistency Determination; and,
- (7) Section 106 of the National Historic Preservation Act of 1966 Evaluation.

Under Section 1431(o) of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA), ASRC is entitled to exchange subsurface lands selected under 12(a)(1) of ANCSA for subsurface lands beneath the lands selected by the Kaktovik Inupiat Corporation within 5 years of such time as Congress opens public lands within 75 miles of Kaktovik's lands to commercial oil and gas development. Given such Congressional action, ASRC would acquire the subsurface, without covenants for land use restrictions but subject to discretionary land use regulations, in exchange for an equal amount of subsurface

lands elsewhere. However, earlier this year, ASRC approached the Department regarding its desire to effect an exchange on a more timely basis. As a result, the Service had the opportunity to participate in negotiating the conditions of such an agreement, including land use stipulations and other restrictive covenants running with the land.

As a result of the negotiations process, ASRC has agreed to:

- Be bound by the "no significant adverse impact" ^{threshold is 6 x 12 mi in 1002 area} standard that applies ^{to oil and gas exploration operations on the ANWR} to oil and gas exploration operations on the ANWR;
- Grant the Service free use of sand and gravel for certain easements that cross its lands;
- Submit a plan of operations for oil and gas exploration to the Regional Director for review;
- Submit a plan of operations for the use of sand and gravel to the Regional Director for review;
- Permit the Regional Director to identify special caribou, snow goose, and waterfowl areas to be closed during seasons of sensitive use; and,
- Submit to the Regional Director, for his approval, plans of any other uses of the subsurface.

It should be recognized that these benefits are in addition to the significant acreage in and around Chandler Lake that ASRC has agreed to convey to the Gates of the Arctic National Park.

It is our recommendation that this agreement be signed. Given the benefits that will accrue to the United States from the exchange, we believe that the exchange is in the public interest, promotes the purposes of ANILCA without undermining the essential integrity of ANWR or frustrating its purposes, and will not significantly restrict subsistence uses.

Robert C. [Signature]

AGREEMENT BETWEEN ARCTIC
SLOPE REGIONAL CORPORATION
AND THE UNITED STATES OF AMERICA

THIS AGREEMENT entered into this 9th day of August, 1983, is by ARCTIC SLOPE REGIONAL CORPORATION (hereinafter "ASRC"), a corporation authorized pursuant to the Alaska Native Claims Settlement Act (hereinafter "ANCSA"), 85 Stat. 688, as amended, 43 U.S.C. §§ 1601, et seq., and duly organized under the laws of the State of Alaska, and the UNITED STATES OF AMERICA, acting through James G. Watt, the Secretary of the Interior (hereinafter "Secretary"). ASRC and the Secretary are collectively referred to as "the parties."

W I T N E S S E T H:

WHEREAS, the Secretary desires to acquire private inholdings in Gates of the Arctic National Park in the Chandler Lake and nearby areas currently owned by ASRC, which lands, upon acquisition, would become, and be administered as, a part of Gates of the Arctic National Park; and

WHEREAS, the Secretary also desires to acquire easements for public purposes, including access and recreation, along the Killik River and on associated lakes between Gates of the Arctic National Park and the National Petroleum Reserve-Alaska; and

HEREAS, the Secretary has determined that the acquisition of lands owned by ASRC in the Chandler Lake and nearby areas will enhance the protection of the outstanding natural values of the areas as a part of Gates of the Arctic National Park and will further the purposes set forth in §§ 101 and 201(4) of the Alaska National Interest Lands Conservation Act (hereinafter "ANILCA"), Pub. L. 96-487, 98 Stat. 2374 and 2378, 16 U.S.C. §§ 311 and 410hh(4); and

HEREAS, § 22(f) of ANCSA, 43 U.S.C. § 1621(f), and § 130(h) of ANILCA, 16 U.S.C. § 3192(h), authorize the Secretary to acquire lands or interests therein by exchanging public lands in Alaska, including lands, or interests therein, within conservation system units, including the Arctic National Wildlife Refuge (hereinafter "ANWR"); and

HEREAS, ASRC desires to acquire at this time the subsurface estate of lands the surface estate of which is owned or hereafter is owned, by Kaktovik Inupiat Corporation (hereinafter "KIC"), the Village Corporation established by the Native residents of the Village of Kaktovik, Alaska, and desires to acquire the remainder of the subsurface estate of lands the surface estate of which is owned, or hereafter is owned by holders of Alaska Native allotments and the townsite trustee for the benefit of the occupants of the Townsite of Kaktovik, Alaska; and

WHEREAS, ASRC has a right under the provisions of § 1431(o) of ANILCA to exchange in-lieu subsurface lands which it selected pursuant to the provisions of § 12(a)(1) of ANCSA for an equal acreage of the subsurface estate beneath those lands selected by KIC within ANWR, contingent only upon the opening of ANWR lands within 75 miles of lands selected by KIC for purposes of commercial development of oil or gas; and

WHEREAS, under the provisions of §§ 1002 and 1003 of ANILCA, ANWR lands within 75 miles of the lands selected by KIC cannot be opened for purposes of commercial development of oil or gas until authorized by an Act of Congress; and

WHEREAS, ASRC desires to obtain at this time the subsurface estate beneath the surface estate owned by KIC, rather than to wait to exercise its rights under § 1431(o) of ANILCA, pursuant to which ASRC, at its sole option, could exchange its least valuable in-lieu subsurface lands for the subsurface estate beneath KIC lands; and

WHEREAS, the Secretary desires to obtain valuable inholdings within Gates of the Arctic National Park in the Chandler Lake and nearby areas which are not eligible for acquisition under § 1431(o) of ANILCA by exchanging the subsurface estate beneath the surface estate owned or to be owned by KIC and the remaining interest of the United States in lands owned or to be owned by Native allottees and the townsite trustee for the benefit of the occupants of the Townsite of Kaktovik, Alaska; and

WHEREAS, both KIC and the Village of Kaktovik have expressed in letters to the Secretary their strong support for an exchange in which ASRC would receive the subsurface estate beneath lands conveyed to KIC; and

WHEREAS, the Secretary has determined that the exchange of lands set forth in this Agreement is in the public interest;

NOW, THEREFORE, in consideration of their mutual promises and other good and valuable consideration, the parties hereto covenant and agree as follows:

1. The parties agree to the land exchange specified in the following paragraphs and to be bound thereby. The parties agree that this exchange of lands is authorized and undertaken pursuant to the Secretary's authority under § 22(f) of ANCSA and § 1302(h) of ANILCA.

2. ASRC shall convey to the United States, subject to the conditions set forth in subparagraph 5(b) of this Agreement, as its part of the exchange, the following described lands or interests in lands:

(a) by warranty deed, the surface estate in the following lands previously conveyed by the United States to ASRC, excepting therefrom the easements reserved and described in Appendix 3 attached to and incorporated as a part of this Agreement:

Umiat Meridian

Township 13 south, range 4 west, sections 1, 2, 11-14, 23-26, 35, 36;

Township 14 south, range 2 west, sections 29-32;

Township 14 south, range 3 west, sections 4, 19, 25-36;

Township 14 south, range 4 west, sections 2, 11, 13, 14, 21-28, 33-36;

Township 14 south, range 2 east, section 32;

Township 15 south, range 2 west, sections 1-5, 8-12;

Township 15 south, range 1 west, sections 7-10, 13-18, 21-26, 35, 36;

Township 15 south, range 1 east, sections 1-4, 9, 10, 15, 16, 21, 22, 29, 30, 31;

Township 16 south, range 2 east, sections 1-12, 16-21, 28-33;

Township 16 south, range 4 east, sections 5-8, 17, 18; and

Township 17 south, range 1 west, sections 3, 4 (partials); aggregating 75,150 acres;

(b) by relinquishment, all right, title and interest which ASRC has under § 22(f) of ANCSA or § 1431(c)(1) of ANILCA to receive the surface estate of the following lands, ASRC's right to receipt of which has vested by virtue of previous satisfaction by ASRC of the conditions precedent set forth in the first sentence of § 1431(c)(1) of ANILCA:

Umiat Meridian

Township 16 south, range 3 east, sections 1-3, 6, 7, 9-16, 18-30; and

Township 15 south, range 4 east, sections 6, 7, 18, 21-28, 33-36;

aggregating 26,122 acres, excepting therefrom the right to receive an interim conveyance of an easement for access or for subsistence uses, or both, identical to the easements excepted from the lands conveyed by ASRC to the United States pursuant to subparagraph 2(a) of this Agreement and described in paragraph 1 of Appendix 3 of this Agreement, which easement shall extend: (i) easterly along that portion of the Anaktuvuk River in Township 15 south, range 4 east, sections 21-23, 25-27 (Umiat Meridian), and (ii) southerly along those portions of the tributaries of the Anaktuvuk River in Township 16 south, range 3 east, sections 13, 16, 20, 21, 24, 25, 27, 28 (Umiat Meridian), and shall be subject to all the terms, conditions and limitations set forth in paragraph 1 of Appendix 3 of this Agreement. Nothing in this Agreement shall affect ASRC's right to a conveyance of the subsurface estate of the lands described in this subparagraph 2(b);

(c) by warranty deed, the easements described in Appendix 4 attached to and incorporated as a part of this Agreement, provided, that, in the event of any inconsistency between the provisions of Appendix 4 and the provisions of the warranty deed issued by ASRC pursuant to subparagraph 5(b) of this Agreement, the provisions of Appendix 4 shall control, and ASRC shall promptly issue a reformed warranty deed to correct the inconsistency; and

(d) by relinquishment, all right, title and interest which ASRC has under § 12(c) of ANCSA to receive the surface estate of any lands within the lands described in subparagraph (a) of this paragraph 2 in the event that any of such lands become available for conveyance to ASRC as the result of the denial of an allotment application adjudicated pursuant to the Act of May 17, 1906, 34 Stat. 197, as amended, or § 905 of ANILCA. Nothing in this Agreement shall affect ASRC's right to a conveyance of the subsurface estate of the lands described in this subparagraph 2(d).

3. The Secretary shall convey, subject to valid existing rights and the provisions of subparagraphs (f) and (g) of this paragraph 3 and the provisions of paragraph 4 of this Agreement, to ASRC, as his part of the exchange, the following:

(a) all right, title and interest of the United States in the subsurface estate of the following lands:

Umiat Meridian

Township 7 north, range 32 east, section 1;

Township 8 north, range 32 east, sections 1-3, 7-16, 18-33, 36;

Township 8 north, range 33 east, sections 1-21, 29-32;

Township 8 north, range 34 east, sections 1-17;

Township 8 north, range 35 east, sections 1-18, 24, 25, 36;

Township 8 north, range 36 east, sections 1-13, 18, 19, 30;

Township 9 north, range 32 east, all;

Township 9 north, range 33 east, all, except lands within P.L.O. No. 715, as amended by P.L.O. No. 5448;

Township 9 north, range 34 east, all, except lands within P.L.O. No. 715, as amended by P.L.O. No. 5448;

Township 9 north, range 35 east, all; and

Township 9 north, range 36 east, all;

(b) all right, title and interest of the United States in the subsurface estate of the following lands:

Township 8 north, range 33 east, sections 22-24; and

Township 8 north, range 34 east, sections 18-20;

(c) all right, title and interest of the United States in the subsurface estate beneath all lands conveyed to KIC pursuant to the provisions of § 1431(g)(3) of ANILCA;

(d) all right, title and interest of the United States in the subsurface estate beneath all lands conveyed to KIC to satisfy its entitlement under §§ 12 and 14 of ANCSA and § 1431(g) of ANILCA, provided, that, if conveyance of the subsurface estate to ASRC pursuant to the provisions of subparagraphs (a), (b), (c) and (d) of this paragraph 3 results in gross acreage conveyed to ASRC in excess of 92,160 acres, then ASRC shall promptly convey to the United States the surface estate of lands it owns within the exterior boundaries of Gates of the Arctic National Park in an amount equal to the number of acres conveyed to ASRC in excess of 92,160 acres, the identification of lands to be conveyed to the United States to

be solely at the discretion of ASRC, and provided further, that the conveyance by ASRC to the United States pursuant to this subparagraph (d) shall be in whole sections or in aliquot part thereof with respect to the last section so conveyed, and shall not result in isolated tracts of federal ownership, and provided further, that the remaining pattern of ASRC ownership following such conveyance to the United States shall be in compact and contiguous tracts of not less than 5,760 acres in size; and

(e) all right, title and interest of the United States remaining in the subsurface estate: (i) beneath Kaktovik Townsite Patent No. 50-68-6022; and (ii) beneath all allotments adjudicated and heretofore or hereafter approved pursuant to the Act of May 17, 1906, 34 Stat. 197, as amended, or § 905 of ANILCA, within the exterior boundaries of lands conveyed to KIC to satisfy its entitlement under §§ 12 and 14 of ANCSA and § 1431(g) of ANILCA.

(f) The Secretary shall convey to ASRC the subsurface estate of those lands described in subparagraphs (a), (b), (c) and (d) of this paragraph 3 only when the surface estate of those lands has been conveyed to KIC. If, upon the satisfaction of the full land entitlement of KIC pursuant to §§ 12 and 14 of ANCSA and § 1431(g) of ANILCA, any of the surface estate of the lands described in subparagraphs (a) and (b) of this paragraph 3 is not conveyed to KIC, the subsurface estate of those lands shall not be conveyed to ASRC.

(g) The full extent and legal boundary of the interest of ASRC, its successors or assigns, in the subsurface estate of the lands conveyed to ASRC pursuant to this paragraph 3 shall be coterminous with the interest in the surface estate of those lands conveyed to KIC pursuant to § 14(a) of ANCSA and § 1431(g) of ANILCA and with the interest in the surface estate of those lands conveyed pursuant to subparagraph (e) of this paragraph 3. ASRC's interest in the subsurface estate shall increase or decrease in the same manner and to the same extent as the surface estate increases or decreases by operation of law, including, but not limited to, processes such as accretion or erosion.

4. The subsurface estate of the lands to be conveyed by the Secretary to ASRC pursuant to paragraph 3 of this Agreement shall be subject to (i) the terms, conditions, covenants, limitations, exceptions and reservations set forth in Appendix 1 attached hereto and incorporated herein as part of this Agreement, except that, with respect to conveyances pursuant to subparagraph 3(e) of this Agreement, paragraphs 5 and 13 of Appendix 1 shall not apply; and (ii) the stipulations and limitations on ASRC's activities and uses set forth in Appendix 2 attached hereto and incorporated herein as a part of this Agreement. All of the provisions of Appendices 1 and 2 shall run with the land and shall be binding upon ASRC, its successors and assigns. The Secretary shall insert in any

conveyance to ASRC of the subsurface estate of the lands described in paragraph 3 of this Agreement the language set forth in Appendix 1.

5. The parties mutually agree that each can perform his or its respective obligations under paragraphs 1 through 4 of this Agreement in a series of transactions, but that:

(a) the Secretary shall exercise his best efforts to convey to ASRC, on or before September 1, 1983, the subsurface estate of the lands described in paragraph 3 of this Agreement the surface estate of which has previously been conveyed to KIC. The Secretary shall then convey to ASRC the remaining subsurface estate of the lands described in subparagraphs 3(a), (b), (c) and (d) of this Agreement at the time that the Secretary conveys the surface estate of such lands to KIC. The Secretary shall make a good faith effort to convey to ASRC the interests in lands described in subparagraph 3(e)(i) of this Agreement and those interests in lands described in subparagraph 3(e)(ii) of this Agreement beneath any allotment heretofore approved within one year of the effective date of this Agreement, and to convey to ASRC those interests in lands described in subparagraph 3(e)(ii) of this Agreement beneath any allotment hereafter approved upon the date of approval of the allotment, provided, that the conditions set forth in subparagraph 3(e)(ii) have been satisfied. The Secretary shall make a good faith effort to convey to ASRC the easement

described in subparagraph 2(b) of this Agreement within eight (8) months of the effective date of this Agreement.

(b) ASRC shall convey to the United States the surface estate of the lands described in subparagraph 2(a) of this Agreement by warranty deed, shall relinquish to the United States its rights to the surface estate of the lands described in subparagraph 2(b) of this Agreement by letter from an authorized officer of the corporation, shall convey the easements described in subparagraph 2(c) of this Agreement by warranty deed, and shall relinquish to the United States its rights to the surface estate of the lands described in subparagraph 2(d) of this Agreement by letter from an authorized officer of the corporation, such deeds, letters of relinquishment, appropriate corporate resolutions and opinions of counsel to be delivered to the Department of the Interior at the time of the delivery to ASRC of the conveyance of the lands described in the first sentence of subparagraph (a) of this paragraph 5. ASRC shall also deliver to the Department of the Interior all documents necessary for the review, approval and acceptance of title or relinquishment from ASRC to the United States.

6. The parties agree that the Secretary shall convey to ASRC the easement described in subparagraph 2(b) of this Agreement and the subsurface estate of the lands described in paragraph 3 of this Agreement by patent or by interim

conveyance, as authorized in § 22(j) of ANCSA, as amended by § 1410 of ANILCA. Recognizing that the subsurface estate to be conveyed to ASRC pursuant to this Agreement is coterminous with the surface estate conveyed, or to be conveyed, to KIC and with the interest in the surface estate of those lands conveyed pursuant to subparagraph 3(e) of this Agreement, as set forth in subparagraph 3(f) of this Agreement, ASRC hereby accepts the survey, if any, of lands conveyed to KIC pursuant to § 14(a) of ANCSA and § 1431(g) of ANILCA and the surveys, if any, of Kaktovik Townsite Patent No. 50-68-6022 and of Alaska Native allotments approved under the Act of May 17, 1906, 34 Stat. 197, as amended, or § 905 of ANILCA. If KIC elects to receive patent to its lands under § 909 of ANILCA, ASRC waives any right that it may have to require an independent survey. ASRC further waives any right that it may have to require a survey of the easement to be conveyed to ASRC pursuant to subparagraph 2(b) of this Agreement.

7. The Secretary shall convey the subsurface estate of the lands described in paragraph 3 of this Agreement and the easement described in subparagraph 2(b) of this Agreement subject to valid existing rights, including, but not limited to, the unexpired term of any outstanding lease, license, permit or contract, provided, that the Secretary shall terminate or suspend, if terminable or suspendable in the judgment of the Secretary without liability to the United

States, that portion of any such lease, license, permit or contract which authorizes activities on the lands the subsurface estate of which has been conveyed to ASRC pursuant to paragraph 3 of this Agreement, and provided further, that, with respect to the subsurface estate to be conveyed to ASRC pursuant to subparagraph 3(b) of this Agreement and the subsurface estate to be conveyed to ASRC pursuant to subparagraph 3(e)(ii) of this Agreement within the exterior boundaries of the subsurface estate described in subparagraph 3(b) of this Agreement, the Secretary shall be authorized to approve any application for a permit to conduct geological or geophysical surveys that was filed on or before the effective date of this Agreement, and provided further, that, with respect to the subsurface estate to be conveyed to ASRC pursuant to subparagraph 3(c) of this Agreement and the subsurface estate to be conveyed to ASRC pursuant to subparagraph (3)(e)(ii) of this Agreement within the exterior boundaries of the subsurface estate described in subparagraph 3(c) of this Agreement, the Secretary shall be authorized to approve any application for a permit to conduct geological or geophysical surveys that was filed with the Department of the Interior on or before the date of identification of lands pursuant to § 1431(g)(3) of ANILCA or the effective date of this Agreement, whichever last occurs, and provided further, that, with respect to the subsurface estate to be conveyed to

ASRC pursuant to subparagraph 3(d) of this Agreement and the subsurface estate to be conveyed to ASRC pursuant to subparagraph 3(e)(ii) of this Agreement within the exterior boundaries of the subsurface estate described in subparagraph 3(d) of this Agreement, the Secretary shall be authorized to approve any application for a permit to conduct geological or geophysical surveys that was filed with the Department of the Interior on or before the date of conveyances of such estates to ASRC to the extent that those estates are located within the area identified by § 1002(b)(1) of ANILCA, and provided further, that the Secretary shall terminate on September 1, 1984, if terminable in the judgment of the Secretary without liability to the United States, that portion of such permits for geological and geophysical surveys that is outstanding on the date of the conveyance to ASRC of the subsurface estate of the lands described in subparagraphs 3(b) and (c) of this Agreement and which authorizes activities on such lands. Identification of lands pursuant to § 1431(g)(3) of ANILCA shall be deemed to have occurred when KIC finally and irrevocably identifies in writing to the Secretary the lands it desires to acquire, and the Secretary has concurred in that identification as provided in § 1431(g)(3) of ANILCA and the provisions of paragraph 8 of this Agreement.

8. The Secretary hereby concurs in any identification of lands that KIC makes pursuant to § 1431(g)(3) of ANILCA within

the former withdrawal made by § 11(a)(1) of ANCSA, as more particularly described in § 1431(g)(3) of ANILCA, provided, that the lands identified by KIC shall be compact and contiguous with lands previously conveyed to KIC in accordance with the provisions of 43 C.F.R. § 2651.4(b), and provided further, that the concurrence of the Secretary pursuant to this paragraph 8 in such identification by KIC is conditioned upon KIC irrevocably identifying not more than 105 percent of its remaining entitlement under § 1431(g)(3) of ANILCA and listing the identified sections of land in order of priority for conveyance. Nothing in this paragraph 8 shall be construed as exercising or waiving the Secretary's discretion to concur in the identification by KIC of lands outside the former withdrawal made by § 11(a)(1) of ANCSA.

9. ASRC agrees to waive its right pursuant to Paragraph 10 of the Agreement of August 6, 1976, between the parties to Arctic Slope Regional Corporation, et al. v. Kleppe, Civil Action No. A75-218, United States District Court for the District of Alaska, to have Easements EIN 15-C5 (15a) and EIN 17-C5 (17a), which were excepted and reserved to the United States in the lands conveyed to ASRC in Interim Conveyance No. 048, vacated, modified, altered or relocated, provided, that the waiver of ASRC pursuant to this paragraph 9 shall not be construed to restrict the right of ASRC, its successors and assigns, to use or develop any resources in the area of the

above-described easements, including without limitation, oil and gas, valuable minerals, and sand and gravel, and provided further, however, that ASRC will ensure adequate access around any obstructions placed upon the bed of Shainin Lake or the bank thereof.

10. ASRC agrees to utilize its best efforts to assist the United States to obtain from KIC an easement for access to conduct scientific research and studies on lands conveyed, or to be conveyed, to KIC. ASRC agrees that its subsurface estate shall be subject to any easement, license or other authorization for scientific research and studies so granted by KIC, and further agrees that, in the event that KIC grants such an easement, license or other authorization, ASRC shall grant the United States a conforming easement, license or authorization for use of the subsurface estate to a depth of three feet for scientific research and studies. Any easement, license or authorization granted by ASRC pursuant to this paragraph 10 shall not interfere with ASRC's full use and enjoyment of the subsurface estate of the lands conveyed to ASRC pursuant to paragraph 3 of this Agreement. Nothing in this paragraph 10 shall be construed to diminish any rights of access of the United States.

11. The Secretary hereby finds that he has evaluated the effects of the exchange set forth in this Agreement on subsistence uses and needs, the availability of other lands for

the purposes sought to be achieved, and other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes and has determined, in accordance with the provisions of § 810(a) of ANILCA, that the exchange set forth in this Agreement will not significantly restrict subsistence uses.

12. The Secretary hereby finds that the conveyance to ASRC of the subsurface estate of the lands described in paragraph 3 of this Agreement, subject to the stipulations, covenants and limitations set forth in paragraph 4 of this Agreement, will not undermine the essential integrity of ANWR, will not frustrate the purposes of ANWR, and will not significantly adversely affect the fish and wildlife, their habitats, or the environment of ANWR.

13. The Secretary hereby finds that the acquisition of lands and interests in land in the Chandler Lake and nearby areas will enhance the protection of the outstanding natural values of the areas and further the purposes of ANILCA, including the purposes set forth in §§ 101, 201(4) and 1302 of ANILCA, by: the preservation of unrivaled scenic and geological values associated with natural landscapes; the protection of habitat for, and the populations of, fish and wildlife, including those species dependent on vast, relatively undeveloped areas; the preservation in its natural state of an extensive unaltered arctic environment; the preservation of

wilderness resource values and related recreational opportunities and the maintenance of the wild and undeveloped character of the area, including opportunities for visitors to experience solitude, and the natural environmental integrity and scenic beauty of the mountains, lakes, rivers and other natural features of the area; the exercise of an opportunity to eliminate substantial inholdings within Gates of the Arctic National Park; the facilitation of access to lands within Gates of the Arctic National Park and other public lands; and the consolidation of Federally-owned lands in Gates of the Arctic National Park. The Secretary further finds that the conveyance to ASRC of the subsurface estate of the lands described in paragraph 3 of this Agreement will further the purposes of ANILCA, including the purposes set forth in §§ 101, 303(2), and 1302 of ANILCA, by: the conveyance pursuant to paragraph 3 of this Agreement or § 1431(o) of ANILCA (in the event that the provisions of subparagraph 19(d) of this Agreement are triggered) to ASRC of those lands subject to covenants running with the land, assuring that the conveyance will not undermine the essential integrity of ANWR, will not frustrate the purposes of ANWR, and will not significantly adversely affect the fish and wildlife, their habitats, or the environment of ANWR; the conservation of fish and wildlife populations and habitats in their natural diversity; the contermination of Native-owned lands within ANWR; the provision of the

opportunity for continued subsistence uses by local residents; and the provision of an adequate opportunity for satisfaction of the economic and social needs of the Native people of the Arctic Slope Region. For these reasons and because this exchange enables the United States presently to acquire valuable National Park inholdings and other interests of significant public value in return for conveyance to ASRC of an interest in the land which ASRC may in the future be entitled to acquire for far less consideration and to impose by contract the kinds of environmental safeguards that the Secretary would seek to impose by regulation should ASRC exercise its rights under § 1431(o) of ANILCA, the Secretary concludes that the exchange set forth in this Agreement is in the public interest and therefore does not require equalization of values.

14. With respect to the lands conveyed or relinquished by ASRC to the United States pursuant to paragraph 2 of this Agreement, nothing in this Agreement, other than the easements excepted to ASRC from the lands conveyed by ASRC to the United States pursuant to subparagraph 2(a) of this Agreement and reserved and described in Appendix 3 attached to this Agreement and the easement excepted to ASRC from the lands relinquished by ASRC pursuant to subparagraph 2(b) of this Agreement, shall be construed to enlarge, diminish, alter or affect in any manner the rights of the rural residents of the Village of Anaktuvuk Pass, Nunamiut Corporation or ASRC, as the context

requires: (1) to access pursuant to §§ 811, 1109, 1110, and 1111 of ANILCA and any other applicable authority; and (2) to engage in subsistence uses pursuant to Title VIII of ANILCA. It is expressly stipulated and agreed that the lands conveyed or relinquished by ASRC to the United States pursuant to paragraph 2 of this Agreement shall be public lands within the meaning of § 102(3) of ANILCA and as that term is used in the provisions of Title VIII of ANILCA.

15. Nothing in this Agreement shall be construed to enlarge or diminish ASRC's rights of access under Title XI of ANILCA or other applicable authority.

16. The parties agree that the land conveyances and relinquishments authorized under this Agreement, if consummated, shall not affect the entitlement of ASRC under § 12(c) of ANCSA. The parties agree that those lands previously conveyed to ASRC pursuant to § 12(c) of ANCSA, the surface estate of which is to be conveyed to the United States by ASRC pursuant to subparagraph 2(a) of this Agreement, aggregating 75,150 acres of surface estate, and those lands which ASRC has a right to a conveyance under § 22(f) of ANCSA and § 1431(c)(1) of ANILCA, the right to a conveyance of the surface estate of which is to be relinquished to the United States pursuant to subparagraph 2(b) of this Agreement, aggregating 26,122 acres of surface estate, for a total of 101,272 acres of surface estate, will remain or be charged to

ASRC against its entitlement under ANCSA. The parties recognize that a portion of these lands has not been surveyed and mutually agree upon the acreage figures set forth above to remain or be charged to ASRC against its entitlement under ANCSA and that ASRC shall receive any gain or bear any loss of acreage due to errors, if any, in such figures, and notwithstanding a change in the method of computing the acres charged to entitlement when land is conveyed. The parties further agree that ASRC will receive no credit or reduction against those acres conveyed or to be conveyed to it as a result of its reconveyance or relinquishment of the surface estate of those lands described in subparagraphs 2(a) and (b) of this Agreement and the conveyance to ASRC of the subsurface estate of the lands described in paragraph 3 of this Agreement and of the easement described in subparagraph 2(b) of this Agreement.

17. The parties recognize that, upon the consummation of this Agreement, ASRC will retain the subsurface estate of the lands in the Chandler Lake and nearby areas, the surface estate of which will be conveyed by ASRC to the United States pursuant to subparagraph 2(a) of this Agreement. ASRC has leased a substantial portion of this subsurface estate to Shell Oil Company, but ASRC is not aware at this time of any plans of Shell Oil Company to conduct exploration or development activities on the leased subsurface. The parties further

recognize that leases held by Shell Oil Company are scheduled to terminate in 1991, but may be terminated, at the option of Shell Oil Company, prior to that time. Within sixty (60) days of the termination of the leases held by Shell Oil Company, ASRC shall notify in writing the Regional Director of the National Park Service, Alaska, of the termination. The parties agree that, upon the termination of the leases held by Shell Oil Company, the parties will enter into good faith negotiations to seek an exchange, on an equal value basis, of the subsurface estate of the lands in the Chandler Lake and nearby areas, as well as the subsurface estate of the lands the surface estate of which is to be relinquished to the United States pursuant to subparagraphs 2(b) and (d) of this Agreement, for other lands, or interests therein, owned by the United States in the Arctic Slope Region. If, after a period of six months following the termination of the leases held by Shell Oil Company, the parties have failed to reach an agreement on an exchange by which ASRC will convey these subsurface estates to the United States, the United States may initiate a condemnation proceeding to acquire from ASRC these subsurface estates. ASRC hereby waives any right that it may have to object to such a condemnation proceeding, and expressly consents to the acquisition of these subsurface estates through such a condemnation proceeding if the parties are unable to reach an agreement on an exchange pursuant to the provisions of this paragraph 17.

18. Nothing in this Agreement shall be construed as a permit to conduct any particular activity on any lands to be conveyed to ASRC under this Agreement; nor shall this Agreement be construed as relieving ASRC of any obligations it may have under Federal, State and local laws and regulations with respect to obtaining necessary permits prior to commencing any activity on its lands.

19. (a) In the event that the exchange of lands provided for in this Agreement is set aside because of a final order of a court of competent jurisdiction, the parties shall return to their status and rights prior to the execution of this Agreement and the parties agree to take whatever actions and to execute whatever documents are necessary to restore the status quo ante the exchange, provided, that, if ASRC has been able to complete the drilling of an exploratory well or wells on the lands conveyed to ASRC pursuant to subparagraph 3(a) of this Agreement prior to the time that the exchange is set aside and ASRC is not deprived of the economic benefits obtained or to be obtained from the drilling of an exploratory well or wells, then the setting aside of the exchange shall be treated as a frustration of purpose and the provisions of subparagraph (c) of this paragraph 19, rather than the provisions of this subparagraph (a), shall apply.

(b) In the event that the Secretary is prevented, by judicial or legislative action, from conveying any portion of

the subsurface estate of the lands described in paragraph 3 of this Agreement within one year of the conveyance to KIC of the surface estate of those lands pursuant to the provisions of § 14(a) of ANCSA or § 1431(g) of ANILCA, ASRC shall be entitled to designate lands conveyed or relinquished to the United States pursuant to paragraph 2 of this Agreement, equal in acreage to the lands which have not been conveyed or relinquished to ASRC beneath surface estate conveyed to KIC, provided, that the lands so designated by ASRC shall be in compact and contiguous tracts of not less than 5,760 acres in size, or the total number of acres that the Secretary is prevented from conveying to ASRC, whichever is smaller, and provided further, that ASRC shall not be entitled to designate any of the following described lands for reconveyance pursuant to the provisions of this subparagraph (b):

Umiat Meridian

Township 14 south, range 4 west, sections 13, 14, 21-28, 33-36; and

Township 14 south, range 3 west, sections 19, 30, 31.

The Secretary shall reconvey to ASRC the surface estate of the lands so designated.

(c) At its sole option, ASRC may rescind this exchange if, as a result of judicial, legislative or administrative action beyond the control of ASRC, ASRC is denied the necessary permits or authorizations to drill, or is otherwise prohibited

from completing, by May 1, 1987, up to three exploratory wells on the lands conveyed to it under this Agreement at locations of its own choosing, or within one mile of the locations selected by ASRC, notwithstanding timely applications and vigorous good faith efforts on the part of ASRC to obtain the necessary permits and authorizations to drill such wells. For purposes of this subparagraph (c), no application filed after May 1, 1985, shall be deemed timely. Any well, the drilling of which is commenced by May 1, 1987, and which ASRC is not thereafter prohibited from completing by judicial or legislative action, shall be deemed to have been completed by May 1, 1987, for purposes of this subparagraph (c). In the event of rescission of this exchange by ASRC pursuant to the provisions of this subparagraph (c), the parties shall take all steps and execute all documents necessary to restore the status quo ante the exchange, except that:

- (i) the United States may retain title to the following described lands if frustration occurs prior to completion of the first well:

Umiat Meridian

Township 16 south, range 2 east, sections 31-33;
and

Township 17 south, range 1 west, sections 3, 4
(partials).

- (ii) the United States may retain title to the following described lands if frustration occurs prior to completion of the second well:

Umiat Meridian

Township 16 south, range 2 east, sections 31-33;

Township 17 south, range 1 west, sections 3, 4
(partials); and

Township 15 south, range 4 east, sections 22-27,
34-36.

- (iii) the United States may retain title to the following described lands if frustration occurs prior to completion of the third well:

Umiat Meridian

Township 16 south, range 2 east, sections 31-33;

Township 17 south, range 1 west, sections 3, 4
(partials);

Township 15 south, range 4 east, sections 22-27,
34-36; and

Township 14 south, range 4 west, sections 13, 14,
22-24, 26-28, 33, 34.

The option of ASRC to rescind pursuant to this subparagraph (c) shall terminate upon completion of the third exploratory well on the lands conveyed to ASRC pursuant to paragraph 3 of this Agreement. ASRC shall notify the Secretary of its decision to elect to rescind the exchange pursuant to this subparagraph (c) within six (6) months of the occurrence of any event constituting frustration under this subparagraph (c). For purposes of this subparagraph (c), frustration will not exist if it results from the failure of ASRC to comply with any term or condition of this Agreement.

(d) ASRC agrees that it will not exercise its rights under § 1431(o) of ANILCA with respect to the subsurface estate of any lands conveyed to it pursuant to this Agreement unless the parties have returned to the status quo ante pursuant to subparagraph (a) of this paragraph 19 or ASRC has elected to rescind the exchange pursuant to subparagraph (c) of this paragraph 19. In the event that ASRC exercises its rights under § 1431(o) of ANILCA to acquire the subsurface estate of any lands covered by this Agreement, ASRC agrees that the provisions of paragraph 4 of this Agreement shall apply to the lands so acquired.

20. The United States Fish and Wildlife Service, or the Department of the Interior acting on its behalf, shall not oppose any application to any Federal, State or local government agency for permits or other approvals necessary to conduct activities on the lands conveyed to ASRC pursuant to paragraph 3 of this Agreement that is consistent with the provisions of this Agreement. Nothing in this paragraph 20 shall be construed to affect the Secretary's responsibilities under § 7 of the Endangered Species Act, 87 Stat. 892, as amended, 16 U.S.C. § 1536.

21. Any failure by either party to this Agreement to object to or to seek a remedy of any violation by the other party of any provision of this Agreement shall not be deemed a waiver of or estop any future right to object to or to seek a

remedy of a subsequent violation, whether the later violation is of the same or another provision of this Agreement.

22. A copy of this Agreement shall be attached to and incorporated in the first conveyance issued to ASRC pursuant to paragraph 3 of this Agreement, and shall be recorded by ASRC with the conveyance. In any subsequent conveyance issued to ASRC pursuant to paragraph 3 of this Agreement, this Agreement shall be incorporated by reference to the place, date, volume and page of recordation. ASRC agrees that it will refer to the applicability of the provisions of this Agreement in any document relating to a subsequent sale, transfer or other disposition of the subsurface estate, or any interest therein, of the lands conveyed to ASRC pursuant to paragraph 3 of this Agreement. ASRC further agrees to provide a copy of this Agreement to any person that ASRC permits to use in any manner the subsurface estate of the lands conveyed to ASRC pursuant to paragraph 3 of this Agreement.

23. Nothing in this Agreement shall be construed as creating any rights of enforcement by any person or entity that is not a party to this Agreement.

24. This Agreement shall become effective only upon its execution by both of the parties, and the effective date of the Agreement shall be the date upon which the last of the subscribed parties signs the Agreement.

25. For purposes of expediting execution of this Agreement, it may be signed in separate counterparts by the parties, which, when all have so signed, shall be deemed a single Agreement.

26. The parties agree that this Agreement may be amended by mutual consent of the parties.

27. For purposes of this Agreement, the easements to be conveyed by ASRC to the United States pursuant to subparagraph 2(c) of this Agreement and described in Appendix 4 attached to and incorporated as a part of this Agreement and the subsurface estate to be conveyed by the United States to ASRC pursuant to subparagraph 3(e)(i) of this Agreement are mutual and exclusive consideration one for the other. In the event that the exchange of the above-described interests in lands is set aside because of a final order of a court of competent jurisdiction, the above-described exchange shall be severable from the remainder of this Agreement, and the parties agree to immediately commence good faith negotiations to enter into a new agreement to exchange the above-described interests in lands.

28. The following general provisions shall apply to each of the provisions of this Agreement, except to the extent specifically provided otherwise in such provision:

(a) The parties mutually covenant and agree not to sue each other challenging the legal authority or capacity of

the Secretary or ASRC to enter into this Agreement or to effectuate any provision herein, provided, that nothing herein shall be construed to prevent either party from suing to enforce this Agreement or seeking any other available remedy for breach of this Agreement.

(b) ASRC agrees not to assign to any third party its right under this Agreement to receive the conveyance of the subsurface estate of the lands described in paragraph 3 of this Agreement.

(c) The parties mutually covenant and agree not to encumber property proposed to be exchanged or conveyed to the other party under this Agreement, except to the extent provided in paragraph 7 of this Agreement or otherwise required by law.

(d) No member of or delegate to Congress, or resident Commissioner, shall be admitted to any share or part of this Agreement or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this Agreement if made with a corporation for its general benefit.

(e) As used in this Agreement, the term "Secretary" shall include the Secretary of the Department of the Interior or his authorized representative.

(f) As used in this Agreement, the term "Arctic Slope Regional Corporation" shall include ASRC, its successors and assigns.

(g) As used in this Agreement, the term "Kaktovik Inupiat Corporation" shall include KIC, its successors and assigns.

(h) As used in this Agreement, the term "Agreement" shall refer to this "Agreement Between Arctic Slope Regional Corporation and the United States of America", the terms, conditions, covenants, limitations, exceptions and reservations set forth in Appendix 1 attached hereto and incorporated as a part of this Agreement pursuant to the provisions of paragraph 4 of this Agreement, the "Land Use Stipulations, ASRC Lands, Kaktovik, Alaska" attached hereto as Appendix 2 and incorporated as a part of the Agreement pursuant to the provisions of paragraph 4 of this Agreement, the easements excepted to ASRC from the land conveyed by ASRC to the United States pursuant to subparagraph 2(a) of this Agreement and reserved and described in Appendix 3 attached hereto and incorporated as a part of the Agreement pursuant to the provisions of subparagraph 2(a) of this Agreement, the easements conveyed by ASRC to the United States pursuant to subparagraph 2(c) of this Agreement and described in Appendix 4 attached hereto and incorporated as a part of the Agreement pursuant to the provisions of subparagraph 2(c) of this Agreement, or all of the foregoing, as the context requires.

(i) As used in this Agreement, an allotment shall not be deemed to be approved until the issuance of the

Certificate of Allotments, provided, however, that the United States shall make a good faith effort to expedite the issuance of Certificates of Allotment within the exterior boundaries of lands conveyed to KIC to satisfy its entitlement under §§ 12 and 14 of ANCSA and § 1431(g) of ANILCA.

(j) The parties agree that clerical and typographical errors contained herein may be corrected upon notice to the other party. Unless such errors are deemed substantive or otherwise objected to by either party within sixty (60) days by written notice, correction may be made without formal ratification by the parties.

IN WITNESS WHEREOF, the parties have set their hands and seals as of the date herein written.

ARCTIC SLOPE REGIONAL CORPORATION

Date: August 9, 1983

By Jacob Adams
Jacob Adams
President

UNITED STATES OF AMERICA

Date: August 9, 1983

By James G. Watt
James G. Watt
Secretary of the Interior

APPENDIX 1

RESERVING TO THE UNITED STATES from the lands so granted:

An easement pursuant to which the United States shall have reasonable rights of access as may be necessary to properly monitor and ensure compliance with the provisions set forth in the Agreement Between Arctic Slope Regional Corporation and the United States of America of August 9, 1983.

THE GRANT OF THE ABOVE-DESCRIBED LANDS IS SUBJECT TO:

1. The requirements of the second sentence of § 22(g) of the Alaska Native Claims Settlement Act, 43 U.S.C. § 1621(g).
2. The easements and rights-of-way reserved to the United States pursuant to § 17(b) of the Alaska Native Claims Settlement Act, 43 U.S.C. § 1616(b), in the conveyance of the surface estate of those lands to Kaktovik Inupiat Corporation.
3. Any site-specific road or trail easement acquired by the United States in the surface estate of those lands after the effective date of the Agreement Between Arctic Slope Regional Corporation and the United States of America of August 9, 1983, provided, that the above-described lands shall only be subject to such road or trail easement to the extent of the lesser of either its actual width or thirty (30) feet on either side of its centerline, and provided further, that, prior to acquiring any such future easement, the Department of the

Interior shall consult in good faith with Arctic Slope Regional Corporation concerning the location and proposed use of such easement, and provided further, that any such future easement acquired by the United States shall not interfere with the reasonable use and enjoyment of the subsurface estate by Arctic Slope Regional Corporation.

4. Any site-specific easement reserved to or acquired by the United States in the surface estate of those lands which is relocated pursuant to an agreement between the Department of the Interior and the surface owner after the effective date of the Agreement Between Arctic Slope Regional Corporation and the United States of America of August 9, 1983, provided, that, prior to acquiring any such relocated easement, the Department of the Interior shall consult in good faith with Arctic Slope Regional Corporation concerning the location and proposed use of such easement, and provided further, that any such relocated easement reserved to or acquired by the United States shall not interfere with the reasonable use and enjoyment of the subsurface estate by Arctic Slope Regional Corporation, and provided further, that the above-described lands shall only be subject to any relocated acquired road or trail easement to the extent of the lesser of either its actual width or thirty (30) feet on either side of its centerline.

5. The covenant that Arctic Slope Regional Corporation, its successors and assigns, shall make sand and gravel within

the confines of any easement or right-of-way reserved to the United States pursuant to § 17(b) of the Alaska Native Claims Settlement Act, 43 U.S.C. § 1616(b), in the conveyance of the surface estate of those lands to Kaktovik Inupiat Corporation and within the confines of any site-specific road or trail to the extent of the lesser of either its actual width or thirty (30) feet on either side of its center line acquired by the United States in such surface estate after the effective date of the Agreement Between Arctic Slope Regional Corporation and the United States of America of August 9, 1983, available at no cost to the United States for the purposes of construction or maintenance of the easement and adjoining easements, if any, provided, however, that Arctic Slope Regional Corporation shall enjoy reasonable access to, and the reasonable opportunity to use, remove or sell, such sand and gravel insofar as such use, removal or sale does not interfere with the existing use of the easement at the time of such use, removal or sale. In the event that the use, removal or sale by Arctic Slope Regional Corporation of sand and gravel makes the same unavailable for the purposes of the easement or otherwise interferes with the present or future use of the easement, then Arctic Slope Regional Corporation shall make available in reasonably proximate locations sufficient quality and quantity of sand and gravel to alleviate the need or interference. The right of Arctic Slope Regional Corporation to use, remove or sell sand

and gravel applies to all easements referenced in this covenant, including streamside and marine shoreline easements, and it shall not be deemed an interference with the present or future use of an easement that such use or removal may detract from the aesthetics of the easement area.

6. The covenant that Arctic Slope Regional Corporation, its successors and assigns, shall use those lands in conformance with the "Land Use Stipulations, ASRC Lands, Raktovik, Alaska" attached as Appendix 2 to the Agreement Between Arctic Slope Regional Corporation and the United States of America of August 9, 1983, and incorporated herein.

7. The covenant that Arctic Slope Regional Corporation, its successors and assigns, shall not use those lands, or the surface of those lands, in any manner that significantly adversely affects the fish and wildlife, their habitats, or the environment of those lands or Arctic National Wildlife Refuge lands.

8. The covenant that Arctic Slope Regional Corporation, its successors and assigns, shall use any portion of those lands that lies beneath a floodplain in compliance with the valid applicable provisions of Federal, State and local law relating to floodplains and shall not utilize any such portion of those lands in any manner that will violate the valid applicable restrictions of Federal, State or local law with respect to floodplains.

9. The covenant that Arctic Slope Regional Corporation, its successors and assigns, shall use any portion of those lands that lies beneath wetlands in compliance with the valid applicable provisions of Federal, State and local law relating to wetlands and shall not utilize any such portion of those lands in any manner that will violate the valid applicable restrictions of Federal, State or local law with respect to wetlands.

10. The covenant that Arctic Slope Regional Corporation, its successors and assigns, shall take no action on those lands that significantly restricts subsistence uses on such lands, the surface thereof or adjacent public lands. For purposes of this covenant, the term "subsistence uses" shall have the meaning ascribed to it in § 803 of the Alaska National Interest Lands Conservation Act, 16 U.S.C. § 3113.

11. The covenant that Arctic Slope Regional Corporation agrees that the full extent and legal boundary of the interest of Arctic Slope Regional Corporation, its successors and assigns, in those lands shall be coterminous with the interest in the surface estate of those lands conveyed to Kaktovik Inupiat Corporation pursuant to § 14(a) of the Alaska Native Claims Settlement Act, 43 U.S.C. § 1613(a), and § 1431(g) of the Alaska National Interest Lands Conservation Act, 94 Stat. 2371, 2538, and with the interest in the surface estate of those lands conveyed pursuant to subparagraph 3(e) of the

Agreement Between Arctic Slope Regional Corporation and the United States of America of August 9, 1983, and that the interest of Arctic Slope Regional Corporation, its successors and assigns, in those lands shall increase or decrease in the same manner and to the same extent as the surface estate increases or decreases by operation of law, including, but not limited to, processes such as accretion or erosion.

12. The covenant that Arctic Slope Regional Corporation, its successors and assigns, will permit on the above-described lands, and will not interfere with, such reasonable rights of access as may be necessary to enable the United States to properly monitor and ensure compliance with the provisions set forth in the Agreement Between Arctic Slope Regional Corporation and the United States of America of August 9, 1983.

13. The covenant that Arctic Slope Regional Corporation, its successors and assigns, shall reconvey to the United States by limited warranty deed any portion of the lands above-described determined by the Secretary of the Interior to be subject to a meritorious claim(s) of valid existing rights; the claim(s) will then be adjudicated and the lands will be reconveyed to Arctic Slope Regional Corporation if the claimant(s) cannot establish the claimed valid existing rights. If any valid existing right is approved and conveyed, then the Secretary shall reconvey to Arctic Slope Regional Corporation

those rights reserved to the United States in the subsurface estate, if any.

APPENDIX 2

LAND USE STIPULATIONS ASRC LANDS, KAKTOVIK, ALASKA

A. INTRODUCTION

1. Purpose.

Activities on, and uses of, lands conveyed to Arctic Slope Regional Corporation ("ASRC") pursuant to paragraph 3 of the Agreement Between Arctic Slope Regional Corporation and the United States of America ("the Agreement") of August 9, 1983, shall be conducted in accordance with these stipulations. The purpose of these stipulations, which shall apply to ASRC, its successors and assigns, is (1) to implement the Secretary's responsibility under § 1302(h) of the Alaska National Interest Lands Conservation Act, 94 Stat. 2475, to ensure that the conveyance to ASRC of the subsurface estate of those lands described in paragraph 3 of the Agreement ("ASRC Lands") will not undermine the essential integrity of the Arctic National Wildlife Refuge ("the Refuge") and will not frustrate the purposes of the Refuge, and (2) to implement, based on presently available information respecting the fish and wildlife resources and the environment of the ASRC Lands and the Refuge, the Secretary's responsibility under the second sentence of § 22(g) of the Alaska Native Claims Settlement Act

("ANCSA"), 43 U.S.C. § 1621(g), as it relates to uses and activities occurring on ASRC Lands, including oil and gas exploration, until, as to such exploration, these stipulations are superseded in accordance with the provisions of Paragraph B.9 of these stipulations, and to sand and gravel extraction, processing, transportation and storage.

2. Definitions.

The following definitions are applicable to these stipulations:

(a) "Adequate protective cover" means snow or a frostline, or both, sufficient to protect the vegetation and soil from significant adverse effects due to the operation of surface equipment.

(b) "ANILCA" means the Alaska National Interest Lands Conservation Act, 94 Stat. 2371 et seq., as amended.

(c) "ASRC Lands" means, as the context requires, the subsurface estate conveyed to ASRC beneath lands conveyed to Kaktovik Inupiat Corporation ("KIC") pursuant to § 14(a) of ANCSA and § 1431(g) of ANILCA and the subsurface estate conveyed to ASRC pursuant to the provisions of subparagraph 3(e) of the Agreement, or the surface of such lands.

(d) "Coastal plain" means that portion of the Arctic National Wildlife Refuge defined by § 1002(b)(1) of ANILCA and 50 C.F.R. § 37.2(d) or as amended.

(e) "Cultural resource" means any district, site, building, structure, or object significant in American history, architecture, archeology, engineering or culture included on or eligible for inclusion on the National Register of Historic Places.

(f) "Department" means the Department of the Interior and any of its component bureaus and offices.

(g) "Exploration activities" means geological exploration or geophysical exploration or both, including exploratory drilling, and all related activities and logistics associated with either or both.

(h) "Exploratory drilling" means the drilling of any well to a sufficient depth to measure the geologic, geophysical and engineering parameters used for determining an area's oil and gas potential.

(i) "Gas" means any fluid, either combustible or noncombustible, which is produced in a natural state from the earth and which maintains a gaseous or rarefied state at normal temperature and atmospheric pressure conditions.

(j) "Harass" means to pursue, hunt, take, capture, molest, collect, harm, shoot or kill or attempt to engage in any of the preceding by either intentional or negligent act or omission.

(k) "Hazardous substances" means petroleum, petroleum products, toxic materials, chemical effluent,

explosives, or other materials which are likely to cause significant adverse effects to the wildlife, its habitat, or the environment of the ASRC Lands or the Refuge lands.

(l) "Oil" means any viscous combustible liquid hydrocarbons or solid hydrocarbon substance easily liquifiable on warming which occurs naturally in the earth, including drip gasoline or other natural condensates recovered from gas, without resort to manufacturing process.

(m) "Operator" means a person, designated by ASRC, who conducts or proposes to conduct exploration activities pursuant to a plan of operations.

(n) "Person" means any individual, firm, partnership, corporation, association, organization or agency.

(o) "Plan of operations" means detailed procedures proposed for conducting exploration activities.

(p) "Reclamation" means the act of restoring the landform and vegetation as nearly as practicable to its preconveyance shape and condition.

(q) "Refuge" means the Arctic National Wildlife Refuge.

(r) "Regional Director" means the director of that region of the U.S. Fish and Wildlife Service responsible for overseeing the administration of the Refuge, or his authorized representative.

(s) "Waste" means all material for discard from exploration activities, including, but not limited to, human waste, trash, garbage, refuse, fuel drums, shot wire, survey stakes, explosives boxes, ashes, and functional and nonfunctional equipment.

(t) "Wildlife" means fish or wildlife or both.

3. Activities Covered by Stipulations.

These stipulations shall apply to uses of, and all activities conducted with respect to, ASRC Lands.

B. OIL AND GAS EXPLORATION

1. Exploratory Drilling.

Exploratory drilling conducted on ASRC Lands by the operator shall be conducted in accordance with these stipulations, but in no event shall exploratory drilling be conducted on the surface of lands the subsurface estate of which is conveyed to ASRC pursuant to subparagraph 3(b) or (c) of the Agreement or pursuant to subparagraph 3(d) or (e)(ii) of the Agreement to the extent that the subsurface estate conveyed pursuant to subparagraph 3(d) or (e)(ii) is beneath the coastal plain until Congress hereafter enacts legislation that permits exploratory drilling within the coastal plain or that permits production, or leasing or other development leading to production, of oil and gas from the coastal plain or the ASRC Lands, or both.

2. Prohibition on Development.

Production of oil and gas from ASRC Lands is prohibited and no leasing or other development leading to production of oil and gas from ASRC Lands shall be undertaken until Congress authorizes such activities on Refuge lands within the coastal plain or on ASRC Lands, or both.

3. Plan of Operations.

(a) No oil and gas exploration activities shall be conducted by an operator on ASRC Lands in the absence of a plan of operations covering the activities to be carried out thereunder which shall be reviewed by the Regional Director.

(b) The plan of operations shall include information necessary for the Regional Director to determine that the operations will not significantly adversely affect the wildlife, its habitat, or the environment of the ASRC Lands and Refuge lands. The information shall include, as appropriate, the following:

(1) The names and legal addresses of the following persons: the operator, contractors, subcontractors and the owner(s) or lessee(s) other than the operator;

(2) A copy of the instrument by which the operator's right to conduct operations was granted;

(3) A map or maps showing: (i) the location of a point of reference selected by the operator within the area covered by the plan of operations showing, in relation to that

point, existing and proposed access routes or roads within the area, the boundaries of proposed surface disturbance and location of all survey lines; (ii) the location of proposed drilling sites, wellsite layout and all surface facilities including but not limited to sumps, reserve pits and ponds; (iii) sources of construction materials within the area including but not limited to gravel; and (iv) the location of ancillary facilities including but not limited to camps, sanitary facilities, water supply, disposal facilities, pipelines, fuel storage facilities, storage facilities, base of operations and airstrips. A point of reference selected by the operator within the area of operations shall be marked with a ground monument;

(4) A description of (i) all surface facilities, including but not limited to sumps, reserve pits and ponds, and ancillary facilities, including but not limited to camps, sanitary facilities, water supply, disposal facilities, pipelines, fuel storage facilities, storage facilities, base of operations and airstrips, and (ii) the major equipment to be used in the operations, including but not limited to equipment and methods for the transport of all waters used in or produced by operations, and of the proposed method of transporting such equipment within the area covered by the plan of operations, including to and from the site;

(5) An estimated schedule for any phase of operations of which review by the Regional Director is sought and the anticipated date of operation completion;

(6) The geological name of the surface formation;

(7) The proposed drilling depth, and the estimated tops of important geological markers:

(8) The estimated depths at which anticipated water, brines, oil, gas, or other mineral bearing formations are expected to be encountered;

(9) The nature and extent of proposed operations including:

(i) The proposed casing program, including the site, grade, and weight of each string, and whether it is new or used;

(ii) The proposed setting depth of each casing string, and the amount and type of cement, including additives, to be used;

(iii) The operator's minimum specifications for pressure control equipment which is to be used, a schematic diagram thereof showing sizes, pressure ratings, and the testing procedures and testing frequency;

(iv) The type and characteristics of the proposed circulating medium or mediums to be employed for rotary drilling and the quantities and types of mud and weighting material to be maintained;

(v) The testing, logging, and coring programs to be followed; and

(vi) Anticipated abnormal pressure or temperatures or potential hazards to the environment, such as hydrogen sulfide gas or oil spills, along with plans for mitigation of such hazards;

(10) Provisions for proposed reclamation;

(11) A detailed estimate of the various cost elements to be incurred during implementation of the proposed reclamation plan;

(12) Methods for disposal of all wastes and hazardous substances;

(13) An affidavit stating that the operations planned will be in compliance with these stipulations and all applicable Federal, State, and local laws and regulations; and

(14) Contingency plans in case of spills, leaks or other accidents.

(c) The Regional Director shall complete his review and provide any comments that he may have on the plan submitted by the operator promptly, but in any event within forty-five (45) days from the date of submission of the plan. If the Regional Director notifies ASRC and the operator that the proposed plan complies with the Agreement and these stipulations, the operator may commence operations under the plan immediately. If the Regional Director believes that any

provision of a proposed plan would significantly adversely affect the wildlife, its habitat, or the environment of the ASRC Lands or Refuge lands or would otherwise be inconsistent with any provision of the Agreement or these stipulations, he shall immediately (but not later than the 45th day following submission) notify ASRC and the operator in writing of the basis for his belief and recommend those technically and economically feasible alternatives and modifications, if any, that would make the plan acceptable.

(d) ASRC and the operator shall adopt all recommendations received from the Regional Director unless ASRC or the operator responds to the Regional Director, within forty-five (45) days of the receipt of his recommendations, explaining in writing either: (i) why the plan of operations as submitted or modified by ASRC or the operator will not significantly adversely affect the wildlife, its habitat, or the environment of the ASRC Lands or Refuge lands or otherwise will not be inconsistent with the Agreement and these stipulations; or (ii) why the Regional Director's recommended alternatives and modifications are based on erroneous information, are technically or economically infeasible, or are inconsistent with recognized safety standards or legal requirements. The response may propose alternatives to the Regional Director's recommendations. The Regional Director shall accept any proposed alternatives that are consistent with

the Agreement and these stipulations. The response shall state how ASRC or the operator intends to proceed in implementing the plan of operations as originally proposed or subsequently modified.

(e) Following the Regional Director's receipt of the response of ASRC or the operator, the parties shall, if requested by ASRC, the operator or the Regional Director, enter immediately into good faith negotiations to arrive at a plan of operations acceptable to the parties. However, unless the United States obtains an order from a court of competent jurisdiction restraining implementation of the plan of operations, ASRC and the operator shall have the right to implement the plan of operations, as originally proposed or as subsequently modified as a result of review and comment by the Regional Director, provided that the Regional Director has been notified of such modifications.

(f) ASRC or the operator shall not commence operations prior to the earliest of: (1) the expiration of forty-five (45) days from the submission of the plan of operations, if the Regional Director fails to provide any comments or recommendations on the plan to ASRC or the operator; (2) the adoption by ASRC and the operator of the Regional Director's recommendations; or (3) the expiration of thirty (30) days from the receipt of the written response of ASRC or the operator to the Regional Director's

recommendations. Notwithstanding the time periods set forth in the preceding sentence, in no event shall ASRC or the operator commence operations for five (5) days following the receipt of notification to the Regional Director that ASRC or the operator proposes to modify the plan of operations as a result of review and comment by the Regional Director.

(g) Any judicial proceeding initiated by the United States in accordance with the procedures of subparagraph (e) of this Paragraph B.3 to restrain implementation of a plan of operations shall be de novo and the burden shall be on the United States to establish that the planned operations would significantly adversely affect, or are significantly adversely affecting, the wildlife, its habitat or the environment of the ASRC Lands or Refuge lands, or would be or are otherwise inconsistent with the provisions of the Agreement or these stipulations.

(h) The Regional Director shall have such reasonable access to the area of operations as is necessary to properly monitor and ensure compliance with the plan of operations.

(i) Upon the completion of exploration activities, the operator shall submit a reclamation plan for approval of the Regional Director, acting in consultation with ASRC, and shall implement the plan according to its terms.

(j) A proposal to supplement or revise a plan of operations may be made by ASRC, the operator or the Regional

Director to adjust the plan to changed conditions or to address conditions not previously contemplated by notifying the appropriate party in writing of the proposed alteration and the justification therefor. The parties shall negotiate in good faith concerning any proposed revision. ASRC and the operator shall accept any proposed revision that will not jeopardize the overall success of the plan of operations or unreasonably increase the cost of completing the plan. The Regional Director shall accept any proposed revisions that will not significantly adversely affect the wildlife, its habitat, or the environment of the ASRC Lands and Refuge lands and are otherwise consistent with these stipulations and the Agreement.

(k) To the extent necessary to allow the Regional Director to determine compliance with the plan of operations and these stipulations and consistent with Paragraph B.7 of these stipulations, technical data gathered during the drilling of any well, including daily drilling reports and geological reports which are submitted to the State of Alaska pursuant to State regulations or to any other bureau or agency of the Federal government, shall be made available by ASRC and the operator for inspection by the Regional Director upon his request.

(l) If an operator violates its plan of operations, and if the violation does not pose an immediate threat of significant adverse effect on the wildlife, its habitat, or the

environment of the ASRC Lands or Refuge lands, the Regional Director may notify the operator in writing to correct the violation in the shortest practicable time, not to exceed thirty (30) days. If the violation is not corrected within thirty (30) days, the Regional Director may suspend operations until the violation is corrected; provided, however, that upon a showing of good cause why the violation cannot reasonably be corrected within a thirty (30) day period, the Regional Director may extend this period for an additional time not to exceed ninety (90) days.

(m) If a violation poses an immediate threat of significant adverse effect on the wildlife, its habitat, or the environment of the ASRC Lands or Refuge lands, the Regional Director may immediately suspend operations until such time as the violation is corrected.

4. Environmental Protection.

All oil and gas exploration activities shall be conducted so as not to significantly adversely affect the wildlife, its habitat, or the environment of the ASRC Lands or Refuge lands, so as not to unnecessarily duplicate exploration activities, and shall be subject to the following stipulations for environmental protection of the ASRC Lands and Refuge lands:

(a) Terrestrial Environment.

(1) Vehicles shall be operated in a manner such that the vegetative mat or soil is not significantly damaged or displaced. Blading of snow on trails or campsites shall be limited so as to maintain an adequate protective cover.

(2) Ground vehicles shall be of the type causing the least practicable harm to the surface, such as track type vehicles, Rolligon type vehicles, mobile camps on flexible tracks or skids, vibrator units on flexible tracks or wheels, D-7 tractors, or their equivalent. They shall be operated only in the winter and where there is adequate protective cover.

(3) Exploration activities will be supported only by ice roads, winter trails, existing road systems and air service.

(4) Except for stream crossings identified in the plan of operations, movement of equipment through riparian willow stands in, or adjacent to, streams is prohibited, except where no feasible and prudent alternatives exist and prior approval of the Regional Director has been given.

(5) Above ground explosive charges shall be utilized in a manner to minimize damage to the vegetative mat.

(6) Campsites may be located on lakes which are frozen throughout, including bottom sediments, on durable ground, and on lagoons which are frozen to sufficient depth to

ensure safety of personnel, but shall not be located on river ice. Durable ground can include gravel or sand bars or vegetated frozen ground with adequate protective cover.

(7) Campsites and trails shall be kept clean of waste.

(8) Gray water may be discharged to the surface provided it is filtered, disinfected, and not discharged directly into lakes and rivers.

(9) All precautionary measures shall be taken to prevent and suppress man-caused tundra fires.

(10) Reclamation of disturbed surface areas shall be accomplished by the operator, in accordance with schedules and a plan approved by the Regional Director in consultation with ASRC.

(11) Wildlife shall not be harassed in any manner, including, but not limited to, close approach by surface vehicles or aircraft. Aircraft should maintain an altitude of 1,500 feet above ground level whenever practicable.

(12) No explosives shall be detonated within 1/2 mile of any known denning brown or polar bear or any muskoxen or caribou herd.

(13) The operations shall be conducted in such a manner as not to impede or restrict the free passage and movement of large mammals, including caribou, muskoxen, moose, polar bear, and brown bear.

(14) Feeding of wildlife is prohibited. This includes the leaving of garbage or edibles in a place which would attract wildlife. Garbage shall be kept in covered animal-proof containers while awaiting incineration.

(15) Hunting, fishing, and trapping by the operator and its employees on ASRC Lands and Refuge lands are prohibited during the conduct of exploration activities except this prohibition shall not apply to local residents engaged in subsistence uses. As a condition of employment, the operator shall advise employees of the foregoing prohibition. Use of firearms in defense of life and property is allowed.

(b) Aquatic Environment.

(1) The operator shall not significantly alter the banks of streams, rivers, or lakes while conducting exploration activities. Crossings of stream, river, or lake banks shall utilize a low angle approach or, if appropriate, snow bridges. If snow bridges are utilized for bank protection, they shall be free of dirt and debris and shall be removed after use or prior to breakup each year, whichever occurs first.

(2) No water shall be removed from any stream, lake, river or subsurface source except in accordance with a plan of operations. No water may be removed from any lake or stream identified by the Regional Director as necessary for the support of overwintering fish.

(3) To protect fish and other aquatic fauna, high explosives shall not be detonated within, beneath, on or in close proximity to fish-bearing waters unless prior drilling indicates that the water body, including its substrate, is solidly frozen. The minimum acceptable offset from fish-bearing waters for various size charges is:

1 pound charge	--	50 feet
2 pound charge	--	75 feet
5 pound charge	--	125 feet
10 pound charge	--	150 feet
25 pound charge	--	250 feet
100 pound charge	--	500 feet

No charge in excess of 100 pounds shall be detonated unless approved by ASRC after consultation with the Regional Director.

(4) All operations shall be conducted in a manner that will not impede the passage of fish, disrupt fish spawning, overwintering or nursery areas identified by the Regional Director or block or change the character or course of, or cause significant siltation or pollution of, any stream, river, pond, pothole, lake, lagoon, or drainage system.

(5) Operation of equipment in unfrozen water areas of water bodies shall be prohibited during the winter, provided, that this subparagraph (5) shall not be construed as precluding appropriation of water from any water body in accordance with a plan of operations consistent with the environmental safeguards of these stipulations.

(c) Human Environment.

(1) Prior to implementing any plan of operations, the operator shall obtain from the Regional Director copies of pertinent cultural resource reconnaissance reports, maps and other available documents. Exploration activities shall be conducted in a manner to mitigate, minimize or avoid any adverse effects on known cultural resource sites and areas of predicted high probability of containing cultural resources. The following prohibitions shall be in effect:

(i) No land vehicle of any type shall pass over or through a known cultural resource site; and

(ii) No seismic train shall camp, nor shall a drill pad and associated facilities be located, on a known cultural resource site.

(2) If any exploration activities require entry into areas known to contain historic or archeological resources, high probability areas, or areas previously unsurveyed for cultural resources, prior to the initiation of such activities, the operator shall so advise ASRC and, if ordered by ASRC in consultation with the Regional Director and the State Historic Preservation Officer, locate, identify and evaluate properties for eligibility to the National Register of Historic Places and take appropriate measures to avoid or mitigate adverse effects to eligible properties. Pads, wells, structures, or other facilities may be established within 250

yards of the seacoast, on banks and stabilized gravel bars of major streams, high eminences with a view or stabilized areas at the deltas of major rivers only after a field examination conducted under snow- and ice-free conditions. Such efforts shall be without expense or liability to the Department.

(d) General.

(1) All spills or leakages of any hazardous substance, fires and any other conditions which threaten the resources or the environment of ASRC Lands or Refuge lands shall be reported by the operator to ASRC and the Regional Director. Other notifications shall be made by the operator as required by applicable laws.

(2) All combustible solid waste shall be incinerated or returned to the operator's base of operations for disposal in accordance with applicable Federal, State and local standards. All non-combustible solid waste, including, but not limited to, fuel drums and shot wire, shall be returned to the operator's base of operations for disposal in accordance with applicable federal, state and local standards.

(3) No discharge of petroleum, petroleum products, or toxic materials shall be made on ASRC Lands or Refuge lands. Changing oil in, and refueling of, vehicles shall be performed in such locations and by such methods, and maintenance personnel shall be appropriately trained, to prevent such discharges. All hazardous substances utilized or

generated in conducting exploration activities shall be contained, controlled, and cleaned up in accordance with the operator's hazardous substances control and contingency plan, as reviewed by the Regional Director. Such measures shall take precedence over all other matters except human safety.

(4) No fuel storage facilities shall be placed within the annual floodplain of fish-bearing watercourses or within 100 feet of any other water body, and no vehicle refueling shall occur within such areas. Fuel containers shall be properly stored and marked with the operator's name, type of fuel, and last date of filling. All fuel containers with a storage capacity greater than 55 gallons shall be of double-wall or equivalent construction. All fuel containers, including those emptied, shall be capped when not in actual use. All fuel containers placed within the annual floodplain of fish-bearing watercourses shall be removed prior to breakup.

(5) The operator shall not disturb or damage any geodetic or cadastral land survey monuments. If any monument is disturbed or damaged, the operator shall re-establish it in a manner acceptable to the Secretary or other competent authority.

(6) The type and location of all structures and facilities, permanent and temporary, including but not limited to drill pads, camp pads, ice roads and ice airstrips, for use in support of exploration activities shall not significantly

adversely affect the wildlife, its habitat, or the environment of ASRC Lands or of Refuge lands.

(e) Exploratory Drilling--Environmental Protection.

In addition to the environmental safeguards set forth in subparagraphs B.4(a) through (d) of these stipulations, exploratory drilling activities shall be subject to the following special environmental safeguards:

(1) A minimum distance of 200 feet shall be maintained between the toe of the gravel pads used for housing, or for storage of materials other than vehicles, hydrocarbons or toxic compounds, and any adjacent lake or stream bank;

(2) A minimum distance of 300 feet, except 600 feet from anadromous fish streams, shall be maintained between the toe of the gravel pads used for drilling, pits, and storage of vehicles, fuels and hydrocarbons or other toxic compounds and any adjacent lake or stream bank;

(3) If natural surface drainage is disrupted by any non-natural surface disturbance, drainage structures shall be installed and maintained that are adequate to maintain natural surface drainage and fish passage, and culverts shall be maintained in good repair, replaced or upgraded during the same thaw season in which inadequate drainage occurs;

(4) Reserve pits shall be designed to hold 150 percent of design discharge and anticipated snow melt or the well head shall be equipped with an annulus to allow for

subsurface discharge of drilling fluids in an environmentally acceptable manner;

(5) Reserve pits shall be rendered impermeable by a design of the operator's choice, other than reliance upon permafrost;

(6) All hydrocarbons discharged into flare and relief pits shall be removed and properly disposed of as soon as practicable during the winter but prior to spring breakup, except that during periods of thaw such removal shall occur within 72 hours of discovery;

(7) Fuel pits shall be designed to hold 110 percent of the maximum anticipated volume of stored fuel and shall be lined with an impermeable membrane;

(8) Fuel lines shall not be buried unless all joints are exposed for daily inspection;

(9) Snow removed from pads shall not be pushed more than 100 feet from the toe of the pad;

(10) When natural spits and islands are used as drilling structures, vehicle engines and gear housing shall be equipped with sorbent diapers, and drilling cuttings shall be bagged and shall not be discharged in the adjacent natural waters or used as a berm to protect drilling structures;

(11) When an exploratory well bottom hole depth will not exceed 10,000 feet true vertical depth, the well shall be drilled from an ice pad with piling support for the drill rig; and

(12) Drill pads, roads and other facilities must be sited outside of productive Class IV, VI and VIII wetlands (as defined in Bergman, et al, Water Birds and Their Wetlands Resources in Relation to Oil Development at Storkerson Point, Alaska, USFWS Resource Publication 129, 1977) when feasible. If facilities are sited within or in close proximity to productive Class IV, VI and VIII wetlands, such facilities must be sited, designed, constructed and operated so as to maintain natural hydrological patterns and to prevent oil contamination.

(13) After testing, exploratory wells shall be shut in, capped and marked as on State of Alaska lands, except abandoned wells shall be cut off below the surface and the drill pad, if any, shall be subject to the reclamation requirement of these stipulations.

5. Special Areas.

(a) Caribou Calving and Post-Calving.

The Regional Director is authorized to designate within ASRC Lands specific caribou calving and post-calving special areas that will be closed to all exploration activities for such periods from May 1 through August 31 of each year as are designated by the Regional Director to ensure that exploration activities do not significantly adversely affect caribou calving and post-calving activities, including but not limited to relief from insects. The Regional Director may

shorten the period of closure or reduce the area closed if it is determined that caribou are not using the area.

(b) Snow Goose Staging.

The Regional Director is authorized to designate within ASRC Lands specific snow goose staging special areas that will be closed to all exploration activities for such periods from August 20 through September 10 of each year as are designated by the Regional Director to ensure that exploration activities do not significantly adversely affect snow goose staging. The Regional Director may shorten the period of closure or reduce the area closed if it is determined that snow geese are not using the area.

(c) Waterfowl Nesting Habitat.

The Regional Director is authorized to designate within ASRC Lands specific waterfowl nesting habitat special areas that will be closed to all exploration activities for such periods from May 25 through August 1 of each year as are designated by the Regional Director to ensure that exploration activities do not significantly adversely affect waterfowl nesting habitat. The Regional Director may shorten the period of closure or reduce the area closed if it is determined that waterfowl nesting is not occurring within the area.

6. Damages.

The operator agrees that it will save and hold harmless the United States and its employees from any damages

or claims for injury or death of persons and damage or loss of property by any person or persons arising out of any acts or omissions by the operator, its agents, employees or subcontractors done in the course of operations.

7. Document Non-Disclosure.

Any document or information provided to, or otherwise acquired by, the Regional Director with respect to operations or proposed operations on ASRC Lands shall not be made available to the public if such document or information may be withheld from the public under the Freedom of Information Act or other federal law unless ASRC consents to such disclosure.

8. Seismic Data Inspection.

For the sole purpose of verifying and enhancing the geologic interpretations and conclusions drawn from the seismic data submitted to the Regional Director by permittees under 50 C.F.R. §§ 37.51 et seq. with respect to lands within the coastal plain, not more than two representatives of the Department of the Interior shall be entitled on a date between March 1, 1984 and June 1, 1984, if such data is available, and on a date between September 1, 1985 and November 1, 1985, to inspect, at a place and location designated by ASRC, any seismic data acquired prior to the respective dates of inspection by ASRC or its operator with respect to the lands conveyed pursuant to paragraph 3 of the Agreement and necessary to verify and enhance the geologic interpretations and

conclusions drawn from the seismic data submitted to the Regional Director. No notes, maps or other written documentation with respect to the seismic data of ASRC or its operator or with respect to ASRC Lands, as distinct from Refuge lands, may be made at the time of inspection or prepared subsequent thereto. For purposes of this paragraph, "seismic data" means any data or information which results from the initial processing of raw data and information. For purposes of this paragraph, "raw data and information" means all original observations and recordings in written or electronic form and samples obtained during field operations. Neither the report submitted by the Secretary of the Interior to Congress pursuant to § 1002(h) of ANILCA, nor any other material provided to Congress therewith, nor any material otherwise made available to the public shall contain references or implications concerning the ASRC Lands drawn from the information obtained pursuant to this paragraph or provide any inferences drawn from the inspection of the seismic data of ASRC or its operator concerning the ASRC Lands. All information inspected pursuant to this paragraph shall be treated as confidential and proprietary business data, and shall be withheld from public disclosure.

9. Subsequent Event.

If hereafter Congress enacts legislation that permits exploratory drilling within the coastal plain or that permits

production, or leasing or other development leading to production, of oil and gas from the coastal plain, or the ASRC Lands, or both, Paragraphs B.1 through B.5 of these stipulations shall remain in effect until superseded by self-executing provisions of such Act or by rules and regulations governing oil and gas exploration, including exploratory drilling, leasing or other development leading to production, or production, and thereafter Paragraphs B.1 through B.5 of these stipulations shall no longer have any force or effect, except as otherwise provided in this Paragraph B.9, and any oil and gas exploration or development and production activities undertaken by ASRC, its successors and assigns, on ASRC Lands shall be in accordance with the substantive statutory and regulatory requirements governing oil and gas exploration, including exploratory drilling, and development and production that are designed to protect the wildlife, its habitat, and the environment of the coastal plain, or the ASRC Lands, or both. At such time as Paragraphs B.1 through B.5 of these stipulations are superseded as provided in the preceding sentence of this paragraph, an operator shall submit a plan of operations to the Regional Director prior to conducting any exploration activities (other than exploration pursuant to a plan of operations under which operations have been commenced in accordance with these stipulations), production or leasing or other development

leading to production. Notwithstanding the first sentence of this Paragraph B.9, the provisions of Paragraph B.3(c)-(m) of these stipulations shall remain in effect and shall apply to any such plan and to any plan submitted pursuant to Paragraph C.1 of these stipulations. Nothing in this Paragraph B.9 shall be construed to affect the continued operation of the provisions of Paragraphs A, B.6-B.8, C, D, E and F of these stipulations.

C. SAND AND GRAVEL

The extraction, processing, transportation and storage of sand and gravel on ASRC Lands shall be conducted so as not to significantly adversely affect the wildlife, its habitat, or the environment of ASRC Lands or of Refuge lands, shall be conducted in accordance with the provisions of Paragraph B.3(c)-(m) of these stipulations, and shall be subject to the following special stipulations for environmental protection of ASRC Lands and Refuge lands:

(1) Sand and gravel extraction, processing or storage sites shall be located a minimum distance of 300 feet from all water bodies containing anadromous fish, arctic grayling or white fish.

(2) Sand and gravel extraction, processing or storage sites and overburden removed from such sites shall not interrupt natural drainages.

(3) Sand and gravel extraction, processing or storage sites shall not be located within the active floodplains of water courses as defined in the Gravel Removal Guidelines Manual for Arctic and SubArctic Floodplains (USFWS 1980), unless there are no feasible and prudent alternatives. In the event that there is no feasible and prudent alternative to sand and gravel extraction, processing or storage within the active floodplain of water courses, and in the event that such sand and gravel extraction, processing or storage otherwise satisfies the environmental protection safeguards of these stipulations, sand and gravel extraction, processing or storage in active floodplains shall be undertaken in accordance with the provisions of the above-referenced Guidelines, to the extent practicable.

(4) Sand and gravel and associated overburden shall not be extracted from, processed in or stored on productive coastal wetlands Class VIII (as defined in Bergman, et al, Water Birds and Their Wetland Resources in Relation to Oil Development at Storkerson Point, Alaska, USFWS Resource Publication 129, 1977).

(5) Sand and gravel extraction from barrier islands shall be prohibited unless it is demonstrated to the satisfaction of the Regional Director, after consultation with the State of Alaska Departments of Fish and Game and Environmental Conservation, that sand and gravel extraction

from barrier islands will not adversely affect the environment and there are no feasible and prudent alternatives.

(6) The preferred method of transport of sand and gravel is on ice roads. If sand and gravel will be hauled from the same site over a period of years, permanent roads may be constructed, but must adhere to the following conditions:

(a) roads shall be sited to avoid, to the maximum extent practicable, all spring areas, streams and river systems (except for crossings) and productive wetlands Classes IV and VIII (as defined in Bergman, et al, Water Birds and Their Wetlands Resources in Relation to Oil Development at Storkerson Point, Alaska, USFWS Resource Publication 129, 1977); and

(b) if natural surface drainage is disrupted by any roadway, drainage structures shall be installed during construction and maintenance to provide natural surface drainage and fish passage, and culverts shall be maintained in good repair or replaced or upgraded during the same thaw season in which inadequate drainage occurs.

(7) The authority of the Regional Director to designate within ASRC Lands special areas pursuant to Paragraph B.5(a), (b) and (c) of these stipulations shall also apply to sand and gravel extraction, processing, transportation and storage.

D. OTHER EXPLORATION AND DEVELOPMENT

No exploration, development or use of subsurface resources, other than oil and gas exploration, oil and gas development consistent with the provisions of Paragraph B.9 of these stipulations, and the extraction, processing, transportation and storage of sand and gravel, shall be undertaken by ASRC, its successors and assigns, without first securing the written approval of the Regional Director. Should ASRC desire to undertake any such exploration, development or use, the proposed exploration, development or use shall be subject to stipulations to be negotiated by the parties to ensure that any such exploration, development or use does not significantly adversely affect the wildlife, its habitat, or the environment of the ASRC Lands or Refuge lands.

E. COORDINATION WITH STATE OF ALASKA

1. At such time as ASRC or any person authorized to conduct activities on the ASRC Lands acquired pursuant to the Agreement is required to submit a plan of operations to the Regional Director for oil and gas exploration, development or production, or the extraction, processing, transportation and storage of sand and gravel, it shall simultaneously submit to the Office of the Management and Budget of the State of Alaska ("the Alaska OMB") copies of all Federal and State permit applications required for operations under the proposed plan for the ensuing operating season, together with a copy of the

plan of operations. In the event that the plan of operations covers more than one operating season, ASRC or the operator shall identify in its submission those permits it reasonably believes will be necessary for operating in subsequent seasons. Thereafter, ASRC or the operator shall submit all Federal and State permit applications for each ensuing season in a single submission prior to September 1 of the season in question. Within 45 days of receipt of the submission, the Alaska OMB shall forward its comments to ASRC or the operator and within 60 days of receipt of the submission the Alaska OMB shall render a single, conclusive consistency determination, as provided in Sec. 20, Chapter 63 SLA 1983 amending AS 44.19.145(a)(13), with respect to any such Federal and State permits. The Alaska OMB shall supply ASRC or the operator with a mailing list of public entities to receive copies of the submission and ASRC or the operator shall promptly distribute copies of the submission to all listed entities at no expense to the Alaska OMB. The time deadline set forth herein shall not commence until three days from the date on which ASRC or the operator mails the submission to listed entities.

2. In the event litigation is necessary to interpret the scope of consistency review under the terms of the agreement between the State of Alaska and ASRC dated August 1, 1983, as incorporated in the Agreement, ASRC, its successors and assigns, and all takers of future interests in ASRC property,

in whole or in part, shall have the burden of establishing that the scope of any State review for consistency is outside of the scope of review allowable under the Alaska Coastal Management Program, regulations promulgated thereunder, the Coastal Zone Management Act (16 U.S.C. §§ 1451 et seq.) and relevant Alaskan judicial determinations.

3. This Paragraph E is pursuant to an agreement dated August 1, 1983, between ASRC and the State of Alaska. Nothing herein shall be deemed to impose any additional obligations upon the United States. To the extent relevant to any State or Federal permit applied for by ASRC or its operator, the State may request incorporation of any such relevant stipulations, and ASRC agrees to the inclusion of any such stipulations in the permit, and the State may seek enforcement of such stipulations.

F. WAIVER

For good cause shown, the Regional Director in his discretion may waive in writing any provision of these stipulations, except for the provisions of Paragraphs B.2, B.6, B.7, B.8 and E. and the provisions of Paragraph B.1, insofar as Paragraph B.1 relates to exploratory drilling conducted on the surface of lands the subsurface estate of which is conveyed to ASRC pursuant to subparagraph 3(b), (c), (d) or (e)(ii) of the Agreement. Any such waiver shall be limited to the express waiver provided therein and shall not be construed to provide a

waiver of any provision of these stipulations not specifically set forth therein.

APPENDIX 3

EXCEPTING TO ARCTIC SLOPE REGIONAL CORPORATION from the lands so granted:

1. The following easements, referenced by an easement identification code (ASRC-) on the attached map depicting the easements for illustrative purposes only, except that with respect to the Kollutarak Pass portion of Easement ASRC-A, the map shall be the controlling evidence of the location of that portion of the easement. The easements described below: (i) are solely for access by Arctic Slope Regional Corporation, its shareholders and invitees, to lands, or interests therein, owned by Arctic Slope Regional Corporation or for subsistence uses (as herein used, the phrase "subsistence uses" refers to the term defined in § 803 of the Alaska National Interest Lands Conservation Act, 94 Stat. 2371, 2423) on such lands and the above-granted lands by the local rural residents of the Village of Anaktuvuk Pass, or both; (ii) shall be deemed appurtenant to lands, or interests therein, owned by Arctic Slope Regional Corporation and described in Interim Conveyance Nos. 048, 068 and 070, and lands, or interests therein, owned by Nunamiut Corporation and described in Interim Conveyance No. 069; (iii) shall not be transferred in whole or in part to any party other than Nunamiut Corporation, and if transferred to Nunamiut

Corporation shall remain appurtenant to lands, or interests therein, described in (ii) above and shall not be deemed to increase the burden upon the above-granted lands; (iv) shall remain as an unimproved trail and shall not be used by any vehicle that causes substantial harm to the terrain, provided, however, that off road vehicles as defined in 36 C.F.R.

§ 13.1(1), 46 Fed. Reg. 31854 (June 17, 1981), other than those having metal lug tracks, or those exceeding a gross weight of 2,000 pounds or an empty vehicle weight of 1,200 pounds, may use the easements; (v) shall be limited to an area between the outermost banks of the river or creeks identified below, except that (1) the Kollutarak Pass portion of Easement ASRC-A shall be fifty (50) feet in width; (2) the portion of Easement ASRC-A connecting the westerly flowing creek referred to in such easement and the shore of Chandler Lake shall be one hundred (100) feet in width; and, (3) the shore of Chandler Lake portion of Easement ASRC-A shall extend from the line of ordinary high water of Chandler Lake to a line fifty (50) feet inland therefrom and parallel thereto; (vi) shall include the right of departure from the easements: (1) for the purposes of protecting life or property in a manner, if possible, not destructive of vegetation adjacent to the easements, (2) if authorized by the National Park Service, (3) by mutual agreement of the National Park Service and Arctic Slope Regional Corporation or Nunamiut Corporation, or (4) when

conditions in the area of the easement hinder the free passage of the above-described vehicles, or render passage hazardous to equipment or safety of the operator, provided, that departure from the easement may extend no greater distance than minimally necessary to avoid the obstruction or hazardous condition, and shall use existing trails to the maximum extent practicable, and provided further, that the operator shall return to the easement at the earliest possible opportunity consistent with the nature of the obstruction or hazard as appropriate; and (vii) shall include the right of temporary cessation of travel and parking of the above-described vehicles within the easements for the purpose of engaging in subsistence uses. The United States, as owner of the servient estate, shall have jurisdiction over lands and waters within the easements and the easements shall not preclude uses of such lands and waters for authorized Park purposes, provided, however, that such jurisdiction and uses shall not interfere with the rights heretofore set forth. The easements are defined as follows:

- a. (ASRC-A) An easement along Kollutarak Creek to its headwaters, thence westerly across the pass designated herein as Kollutarak Pass, thence westerly to the headwaters of, and along, the creek flowing toward Chandler Lake to the point of intersection of such creek and the westerly boundary of Township 14 south, range 3 west, section 19 (Umiat Meridian), thence northerly to the shore of Chandler Lake, and thence easterly along the shore of Chandler Lake, terminating in Township 14 south, range 3 west, section 18 (Umiat Meridian);
- b. (ASRC-B) An easement along the three tributaries of Kollutarak Creek limited to those tributaries

entering such creek in Township 15 south, range 2 west, section 4 (Umiat Meridian), and Township 15 south, range 1 west, sections 15 and 26 (Umiat Meridian);

- c. (ASRC-C) An easement along Contact Creek and the tributaries thereto;
- d. (ASRC-D) An easement along Inukpasugruk Creek and the tributary thereto;
- e. (ASRC-E) An easement along Anaktuvuk River and the tributaries thereto.

2. The following easement, referenced by an easement identification code (ASRC-) on the attached map depicting the easement for illustrative purposes only. The easement described below: (i) is solely for float or ski plane access to Chandler Lake by the local rural residents of the Village of Anaktuvuk Pass for subsistence uses on such land and the above-granted lands; (ii) shall be deemed appurtenant to lands, or interests therein, owned by Arctic Slope Regional Corporation and described in Interim Conveyance No. 048 and lands, or interests therein, owned by Nunamiut Corporation and described in Interim Conveyance No. 069; (iii) shall not be transferred in whole or in part to any party other than Nunamiut Corporation, and if transferred to Nunamiut Corporation shall remain appurtenant to lands, or interests therein, described in (ii) above and shall not be deemed to increase the burden upon the above-granted lands; and (iv) shall include the right of a float or ski plane to land or take off upon, and to taxi upon, Chandler Lake, and to beach such float or ski plane upon the

shore of Chandler Lake. The United States, as owner of the servient estate, shall have jurisdiction over lands and waters within the easement and the easement shall not preclude uses of such lands and waters for authorized Park purposes, provided, however, that such jurisdiction shall not interfere with the rights heretofore set forth. The easement is defined as follows:

(ASRC-F) An easement for float or ski plane access to that portion of Chandler Lake and its shoreline that is within the above-granted lands.

APPENDIX 4

1. An easement for recreational purposes, including, without limitation, boating, hiking, fishing and camping, but expressly excluding hunting, on and over the bed of the Killik River and to provide access between the Killik River and Udrivik Lake and Imiaknikpak Lake, respectively.

2. A linear streamside easement for recreational purposes as defined in Paragraph 1 hereof, extending one hundred (100) feet upland of and parallel to the ordinary high watermark on both banks of the Killik River, including any lakes that are an integral part thereof.

3. An easement for float plane access to Lake Udrivik, Imiaknikpak Lake and the Killik River within one mile of its confluence with the Colville River for recreational purposes as defined in Paragraph 1 hereof, including the right of float planes to land or takeoff upon, and to taxi upon, the aforementioned lakes and river and to beach float planes upon their shores.

4. The easements granted herein shall not be construed as restricting the right of Arctic Slope Regional Corporation, its successors and assigns, to use or develop any resources in or under the bed of the Killik River, upon or under its banks within the area of the easements, under the beds of Lake

Udrivik or Imiaknikpak Lake, or upon or under the shores of the lakes within the area of the easements, including, without limitation, oil and gas, valuable minerals and sand and gravel, provided, however, that Arctic Slope Regional Corporation will ensure adequate access around any obstructions placed upon the beds or banks.

5. The easements granted herein shall be for the benefit of the public.

6. With respect to Township 5 south, range 3 west, section 13 (Umiat Meridian), Arctic Slope Regional Corporation warrants only that it has validly selected said section, believes that it is entitled to receive a conveyance to same, will not relinquish or otherwise dispose of said selection prior to conveyance, and when the said section is conveyed this warranty deed shall operate to convey to the United States of America the above-described easements with respect to such section of land.

WARRANTY DEED

The Grantor Arctic Slope Regional Corporation, for and in consideration of the exchange of lands and rights as authorized by Section 1302(h) of the Alaska National Interest Lands Conservation Act, Pub. L. 96-487, 94 Stat. 2371, 2475, and Section 22(f) of the Alaska Native Claims Settlement Act, as amended, 43 U.S.C. § 1621(f), and as provided in "Agreement Between Arctic Slope Regional Corporation and the United States of America" entered into August 9, 1983, conveys and warrants to the United States of America easements, as set forth below, which shall run with the land in the following described real estate located in the State of Alaska:

Umiat Meridian

Township 12 south, range 9 west, sections 4-8, 17-20;
Township 11 south, range 9 west, sections 3-5, 8-10,
15-17, 20-22, 27-29, 32;
Township 10 south, range 9 west, sections 24, 26, 34-36;
Township 10 south, range 8 west, sections 4-8, 17-20, 30;
Township 9 south, range 8 west, sections 1, 2, 10, 11,
14-16, 21, 22, 27, 28, 32, 33;
Township 8 south, range 8 west, section 36;
Township 8 south, range 7 west, sections 4, 8, 9, 17, 19,
20, 30, 31;
Township 7 south, range 7 west, sections 13, 24-26, 33-35;
Township 7 south, range 6 west, sections 5-8, 17-19, 30;

Township 6 south, range 6 west, section 31;
Township 6 south, range 7 west, sections 2-4, 10-14,
23-26, 36;
Township 5 south, range 7 west, sections 27-35;
Township 5 south, range 8 west, sections 17-21, 25, 26,
28, 29, 33-36; and
Township 5 south, range 9 west, section 13.

1. An easement for recreational purposes, including, without limitation, boating, hiking, fishing and camping, but expressly hunting, on and over the bed of the Killik River.
2. A linear streamside easement for recreational purposes as defined in Paragraph 1 hereof, extending one hundred (100) feet from the ordinary high watermark on both banks of the Killik River.
3. An easement for float plane access to Lake Udrivik, Imiaknikpak Lake and the Killik River within one mile of its confluence with the Colville River for recreational purposes as defined in Paragraph 1 hereof, including the right of float planes to land or takeoff upon, and to taxi upon, the aforementioned lakes and river and to beach float planes upon their shores.
4. The easements granted herein shall not be construed as restricting the right of Arctic Slope Regional Corporation, its successors and assigns, to use or develop any resources in or under the bed of the Killik River, upon or under its banks within the area of the easements, under the beds of Lake Udrivik or Imiaknikpak Lake, or upon or under the shores of the lakes within the area of the easements, including, without limitation, oil and gas, valuable minerals and sand and gravel, provided, however, that Arctic Slope Regional Corporation will ensure adequate access around any obstructions placed upon the beds or banks.
5. The easements granted herein shall be for the benefit of the public.
6. With respect to Township 5 south, range 3 west, section 13 (Umiat Meridian), Arctic Slope Regional Corporation warrants only that it has validly selected said section, believes that it is entitled to receive a conveyance to same, will not relinquish or otherwise dispose of said selection prior to conveyance, and when the said section is conveyed this warranty deed shall operate to convey to the United States of America the above-described easements with respect to such section of land.

This conveyance of the above-described easements is executed under the authority of and pursuant to Resolutions 83-2NE and 83-9NB of the Board of Directors of Arctic Slope Regional Corporation.

DATED this 5th day of August, 1983.

ARCTIC SLOPE REGIONAL CORPORATION

By Jacob Adams

STATE OF ALASKA)) ss.
THIRD JUDICIAL DISTRICT)

On this 5th day of August, 1983, before me, a Notary Public in and for the State of Alaska, personally appeared Jacob Adams, to me known to be the President of Arctic Slope Regional Corporation, the corporation that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed thereto is the corporate seal of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

Everett W. Sweeney
NOTARY PUBLIC in and for the State
of Alaska, residing at Anchorage



United States Department of the Interior

NATIONAL PARK SERVICE

Pacific Northwest Region
Westin Building, Room 1920
2001 Sixth Avenue
Seattle, Washington 98121

IN REPLY REFER TO:

L1425(PNR-ML)

May 18, 1983

Memorandum

To: Chief, Land Resources Division, National Park Service
Attention: Chief Appraiser

From: Chief, Division of Lands, Pacific Northwest Region

Subject: Appraisal Review - Arctic Slope Regional Corporation
Property, Gates of the Arctic National Park and Preserve

Enclosed for your review is an appraisal of approximately 100,000 acres of land within Gates of the Arctic National Park and Preserve. This report was prepared by Rex E. Daugherty, Chief Appraiser, and recommended for approval by H. Les Parnell, Review Appraiser.

The property being appraised is to be acquired by the National Park Service in exchange for the mineral estate under certain lands outside the boundaries of a National Park Service conservation unit. The valuation of the mineral estate has been assigned to the Minerals Management Office of the Bureau of Land Management.

We understand the Secretary's office wishes to make a public announcement regarding the exchange in mid-June and sign an agreement by August 1. Accordingly, your early review would be appreciated.

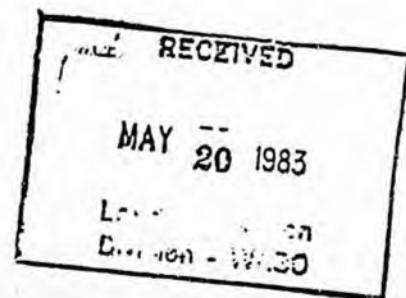
We are also enclosing an extra copy of the appraisal. Presuming the appraisal is approved as written, please send this extra copy to Randy Jones in the Office of Legislation. Randy is coordinating the Service's involvement in this exchange with the Secretary's office.

If you have any questions or need additional information, please advise.

Keith M. Watkins
Keith M. Watkins

W. D. C.

Enclosures



APPRAISAL REVIEW

Project: Gates of the Arctic National Park and Preserve proposed exchange.

<u>Tracts:</u> Parcel No. 1	55,274 acres
Parcel No. 4	43,403 acres

Owner: Arctic Slope Regional Corporation

Interest: Surface rights only, minerals are reserved.

Highest and Best Use: Recreation

Purpose: Exchange between the NPS and the ASRC.

<u>Market Values:</u> Parcel No. 1	\$3,593,000
Parcel No. 4	\$1,032,000.

Appraiser: Rex Daugherty, Chief Appraiser, Pacific Northwest Region

Appraisal Date: March 1, 1983

Reviewer: Charles Haslet, SRPA, MGA

Approved: May 26, 1983

Comments

The four appraised parcels are within the boundaries of the Gates of the Arctic National Park. ASRC tracts 1 through 4 have been appraised separately but contained in the same appraisal report of the ownership. ASRC tracts 2 and 3 have been approved by Appraiser Les Parnell as of May 16, 1983. Both tracts Number 2 and Number 3 were appraised as a part of the proposed NPS/ASRC exchange, which also includes the much larger tracts ASRC Number 1 and Number 4. The later tract appraisals exceed the reviewing authority of Mr. Parnell, but have been recommended for approval. His recommendation is valued since Mr. Parnell is generally familiar with the properties as he was a contributing appraiser in the valuation of prior exchanges between the National Park Service (Gates of the Arctic National Monument) and the Arctic Slope Regional Corporation in 1979 and was also the appraiser of parcels in an exchange between these same parties in 1981.

This is a desk review without benefit of visual inspection of the subject properties or sales.

Parcels ASRC No. 1 and No. 2 are non-contiguous tracts of land (excluding retained mineral rights) containing 55,274 acres and 43,403 acres respectively. The land is located within the very remote Brooks Range about 250 air miles southeast of Barrow and about 250 air miles northwest from Fairbanks, Alaska.

The appraiser explains in the "Assumption and Limiting Conditions" found on page 1 that inspection by aircraft was required together with use of topographic maps and aerial photos.

It was explained on pages 3 and 4 of the report that ASRC tract 1 is an irregular shaped parcel spread across 5 ranges. Within the parcel are 6 native allotments (which are excluded from the appraisal and transfer) containing approximately 650 acres. A legal description of each of the four appraised tracts is found on page 4.

Regional Data

On pages 6 - 20 is complete in all respects which may reflect on the valuation of the very large acreage in the appraisal assignment. Minerals are unquestionably the most important economic factor influencing the subject region.

Neighborhood Data

Neighborhood Data on pages 21 and 22 is adequate for the properties being appraised. The subject properties are in the Brooks Range of mountains, which are barren steep mountains north of the Arctic Circle. Extreme cold climate resulting in barren permafrost lands dominate the economics of the area. Most of the year the area is ice-covered, winds reach 100 miles per hour and there are no frost-free periods, even in summer.

The nearest population is Anatuuvuk Pass, a native village of 51 households and 203 people. There are no roads, with access only by air. Hunting and fishing or government work is the only source of income in the immediate area.

Site Data

Tract No. 1, which contains about 55,274 acres has its eastern boundary 3 or 4 miles northwest of Anatumuk Pass in the Soakpak Mountains and runs northwesterly therefrom to Chandler Lake encompassing portions of the lake. Portions of the property lie both north and south of the Continental Divide, which runs through the Brooks Range. Tract No. 4 lies about 3 miles southerly of Anatumuk Pass and runs about 18 miles easterly including portions of the Anatumuk River. About 2/3 of this tract is on the north side of the Continental Divide. The tract contains approximately 43,403 acres. Tracts 1 and 4 have no established access except by foot or air. There are no utilities or improvements. Topography is characterized as 75% steep mountainous lands.

Highest and Best Use

Tracts 1 and 4 have a highest and best use for recreation and scattered recreational homesites. Minerals were not part of the estate being appraised.

Market Data Approach

Only the market approach was applicable to this valuation. The appraiser searched extensively for recent market evidence but I must agree with his statement that Northern Alaska is sparse in transactions, especially for large blocks of ownership. In the past 10 years there were only 16 sales in the north slope area.

Most sales which have occurred are in the areas around established communities. The appraiser has knowledge of 50 sales throughout Alaska, most of which he has verified and many he has personally inspected (page 28). Most of these sales are quite old, most are very small and well located. Four of the sales were finally chosen for direct comparison as most nearly comparable to parcels 1 and 4. Those sales were personally inspected and verified by the appraiser.

Market price trends over the period of sales was based on a study by the BLM and from the appraisers own analysis. The four sales selected were most comparable based on access, general location, general topography and highest and best use. They are much smaller in acreage size.

Each of the sales No. 1 through No. 3 had minerals conveyed with the surface. The owner retained the minerals in sale No. 4. The appraiser told this reviewer on May 24, 1983, that in sales No. 1 and No. 3 the minerals were insignificant as part of the sale price, that in these two sales the properties were old mining claims that no longer had positive mineral value contributions as part of the sale price.

In the case of sale No. 2, the purchaser attributed 5 - 10% of the sale price to speculative mineral value according to the appraiser. This factor was considered in the valuation process of comparing the sale to the individual subject tracts.

In the sales comparison process factors of size, access, topography, and location were directly compared to each of the subjects. The minerals were given only brief comparison analysis as a summary in the correlation of sales. Minerals were not a contributing factor to the sale prices (per Rex Daugherty) except as noted above in sale No. 2.

Sale No. 2 was clearly the most superior of all the sales used due to jeep access along an old railbed, location 40 miles from Nome, and some mining potential. Sale No. 2 sold in the amount of \$200 per acre after adjustment for elapsed time.

Sale No. 3 was cited as a "term purchase" involving exchange of stock for \$30,000 or the equivalent of \$140 per acre. The problem with this sale is that special tax advantages may have contributed to this sale (actually an exchange) which could have indicated a higher price per acre than reflected by the \$30,000. No discussion of tax implications in this unusual sale was given.

Sale No. 4 was on the market for 2 years before selling. The property is only 8 miles from Nome, has good access, and has river frontage. Sale No. 4 is clearly superior to the subject tracts.

The direct comparative analysis concludes a value of \$65 per acre is applicable to tract No. 1 or \$3,593,000 (RD).

Tract No. 4 is considerably less desirable than tract No. 1 due to much more rugged mountainous terrain and lack of Chandler Lake acreage. The subject tract is more than 75% mountainous. All sales used were very much superior in location, access, topography and of smaller size. Sales No. 1 and No. 3 each had

mineral rights, however, minerals did not have significant contribution value to the sales except for a 5 - 10% bonus for potential minerals attributed to sale No. 2. The appraiser concludes a value of \$1,302,000 (RD) or \$30 per acre.

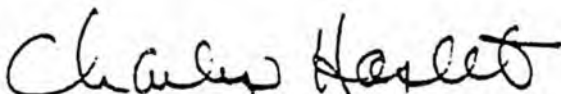
Summary

Due to very few sales which could be considered comparable, the adjustment process was almost entirely judgemental by the appraiser (except for the factor of time, which was provable in the market). The results, after very sizeable adjustments to the sales, was found to be reasonable and consistent with values reported in the general area for similar large blocks of north slope mountainous lands.

The appraisals were found to meet the "Uniform Appraisal Standards for Federal Land Acquisitions" to the extent possible for this type of property. I concur in the value conclusions of the appraiser.

Tract No. 1 is approved in the amount of \$3,593,000.

Tract No. 4 is approved in the amount of \$1,302,000.



Charles Haslet, SRPA, MGA
Chief Appraiser
National Park Service

GATES OF THE ARCTIC NATIONAL PARK/PRESERVE

FAIR MARKET VALUE APPRAISAL OF (surface right

ARCTIC SLOPE REGIONAL CORPORATION

TRACTS 1, 2, 3, and 4

Valuation Date: March 1, 1983

Legislation

GATES OF THE ARCTIC NATIONAL PARK/PRESERVE

FAIR MARKET VALUE APPRAISAL OF (surface rights)

ARCTIC SLOPE REGIONAL CORPORATION
TRACTS 1, 2, 3, and 4


Valuation Date: March 1, 1983

Report and Analysis prepared by:

Rex E. Daugherty
Pacific Northwest Region
National Park Service

Estimate of Fair Market Value:

	<u>Acres</u>	<u>Total Value</u>
ASRC TRACT 1	55,274	\$ 3,593,000
ASRC TRACT 2	640	70,500
ASRC TRACT 3	582	67,000
ASRC TRACT 4	43,403	1,302,000


Rex E. Daugherty
Chief Appraiser, PNR
National Park Service

GATES OF THE ARCTIC NATIONAL PARK AND PRESERVE
ARCTIC SLOPE REGIONAL CORPORATION TRACTS 1, 2, 3, and 4

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REVIEW STATEMENT

Project: Gates of the Arctic National Park and Preserve - Alaska Exchange

Review Date: May 16, 1983

Review Appraiser: H. Les Parnell, NPS (office review) and recommendation

Appraiser: Rex E. Daugherty

Report Purpose: Exchange between the United States and the Arctic Slope Regional Corporation

Acreage:	<u>ASRC TRACT NUMBERS</u>	<u>Acres</u>	<u>Total Value</u>
	Tract 1	55,274	\$ 3,593,000
	Tract 2	640	70,500
	Tract 3	583	67,000
	Tract 4	43,403	1,032,000

Interest Appraised: This report values the fee surface rights only.

Highest and Best Use: Potential Recreation Use

Comments:

This appraisal has been written for an exchange between Arctic Slope Regional Corporation and the United States.

The appraiser did an aerial inspection of the subject properties and most of the sales. Due to the unique ownership patterns having few privately-owned lands in northern Alaska, and few sales (particularly of large acreage), the appraiser was compelled to use the best available market evidence. That evidence was found scattered throughout northwest Alaska and Kodiak Island. Sales are often old patented mining claims which are no longer considered valuable for mineral development. All sales found were superior to the Brooks Range hills and valleys where the subject properties are located.

The most difficult type of appraisal is one where good data is sparse or unavailable. Since sales are so sparse, in smaller units, and are superior in location and access, a great deal of professional judgement was required to make valuation inference for the subject tracts. The market data approach was the only applicable approach to value.

Accepted appraisal methodology was employed and it meets the "Uniform Appraisal Standards for Federal Acquisition" to the maximum extent possible for this type of property.

The appraisals for tracts 2 and 3 are approved and the appraisals for tracts 1 and 4 are recommended for approval.

H. Las Parnell
Review Appraiser
National Park Service
Pacific Northwest Region

INTRODUCTION

This appraisal report of the four noncontiguous tracts is provided in response to a request from the Office of the Secretary, Department of the Interior, to the National Park Service. Further instructions and guidance were provided by Mr. Randy Jones of the Legislative Division, United States Department of Interior.

The valuation found in this report is for surface rights, only, without any values attributed to minerals, oil, or gas.

It should be noted that the minerals and oil and gas rights will be retained by Arctic Slope Regional Corporation. The value of these retention rights is not contained in this report.

ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal report is subject to the following limiting conditions:

1. No responsibility is assumed for matters legal in nature, nor is this report to be construed as rendering opinions of title, which are assumed to be free, clear and marketable.
2. I believe the information provided by others to be reliable. All sales data were confirmed either by the appraiser or other competent authority. I have no reason to doubt its accuracy, but I assume no responsibility for information provided by others.
3. The maps and exhibits provided in this report are to assist the reader to visualize the property. The appraiser has made no survey of the property and assumes no responsibility in such matters. Most areas are unsurveyed and only protractations are available for locating the properties.
4. The properties have not been surveyed on the ground and the exact locations of each tract has not been determined. The USGS topographic maps and aerial photographs have been used for visual control and property locations. It is assumed that they are an accurate projection of what will ultimately be surveyed on the ground.
5. The property has been examined from the air using frozen lakes, streams, and USGS topographic maps for visual control. I believe that this has not greatly limited our making a proper appraisal, but, it is possible that some factors could be overlooked because of snow cover.
6. This report is to be considered in its entirety and the information cannot be used out of context.
7. It is assumed that all the sales are cash or equivalent transactions.
8. As directed, this report deals only with the surface rights of the Arctic Slope Regional Corporation TRACTS 1, 2, 3, and 4.

REFERENCES

The appraiser obtained market data from buyers, sellers, real estate appraisers, and brokers whose names are included on the individual sales located in the Addenda. Initially, market data was obtained from various recording districts, information provided by real estate brokers, and Borough records. Whenever possible, the appraiser personally researched and confirmed the market data used in this report.

Market demand was analyzed based upon information provided by buyers, sellers, and a current market demand study completed by Real Estate Services Company of Anchorage, Alaska. This study is entitled "Assessment of Market Demand for State Land" and was completed January 11, 1982 for the Division of Land and Water Management, Department of Natural Resources, State of Alaska.

APPRAISAL PROBLEM

PURPOSE AND FUNCTION OF APPRAISAL

To estimate Fair Market Value for the use of the National Park Service for a proposed land exchange between the Arctic Slope Regional Corporation and the National Park Service.

FAIR MARKET VALUE

The definition of Fair Market Value, adhered to in this report, is "The amount in cash, or on terms reasonably equivalent to cash, for which in all probability the property would be sold by a knowledgeable owner willing but not obligated to sell to a knowledgeable purchaser who desired but is not obligated to buy." 1/

TYPE OF REPORT REQUESTED

Narrative

ESTATE TO BE APPRAISED

Surface rights, only

DATE OF INSPECTION

March 1, 1983

DATE OF APPRAISAL

March 1, 1983

1/ Uniform Appraisal Standards for Federal Land Acquisition, 1973, page 3

PROPERTY IDENTIFICATION

Arctic Slope Regional Corporation (ASRC)

For identification purposes, the subject property's common name is referred to as the ASRC TRACTS 1, 2, 3, and 4.

Ostensible Owner

The total fee ownership is assumed to be vested in the Arctic Slope Regional Corporation (ASRC).

The ASRC TRACTS are to be exchanged to the United States of America (SA) from the Arctic Slope Regional Corporation.

Location

The subject properties to be transferred from the Arctic Slope Regional Corporation (ASRC) to the National Park Service (NPS) is located within the Brooks Range approximately 250 air miles southeast of Barrow and approximately 170 air miles southwest of Prudhoe Bay on the Arctic Ocean. The subject properties are also located about 85 air miles northerly of Bettles, Alaska and around 250 air miles northwesterly from Fairbanks, Alaska. The subject properties also lie on both sides of Anaktuvuk Pass.

Rights to be considered

The surface rights, only, are valued, since the subsurface rights are being retained by the Arctic Slope Regional Corporation (ASRC). There are six native allotments within the boundaries of ASRC TRACT I which have been excluded from this appraisal.

Legal Description

SEE FOLLOWING PAGE

Legal Description

ASRC TRACT I

Sections 1, 2, 11 through 14, 23 through 26, 35 and 36, Twp. 13 S, Rge 4 W, Sections 2, 11, 13, 14, 21 through 28, and 33 through 36, Twp. 14 S, Rge 4 W, excluding N/A FF17885 Partial B, N/A FF16309, N/A FF 16434 Partial B and N/A FF 16425, consisting of 330 acres, more or less, Sections 19 and 25 through 36, Twp. 14 S, Rge 3 W, Sections 29 through 32, Twp. 14 S, Rge 2 W, Sections 1 through 5 and 8 through 12, Twp. 15 S, Rge 2 W, Sections 7 through 10, 13 through 18, 21 through 26, 35 and 36, Twp. 15 S, Rge 1 W, excluding N/A FF16431 and N/A FF17889 consisting of 320 acres, more or less, and Sections 1 through 4, 9, 10, 15, 16, 21, 22, and 29 through 31, Twp. 15 S, Rge 1 E, all within the Umiat Meridian, Alaska, consisting of 55,274 acres, more or less.

ASRC TRACT 2

Section 4, Twp. 14 S, Rge 3 W, Umiat Meridian, Alaska, consisting of 540 acres, more or less.

ASRC TRACT 3

Sections 3 and 4, Twp. 17 S, Rge 1 W, Umiat Meridian, Alaska, consisting of 582 acres, more or less.

ASRC TRACT 4

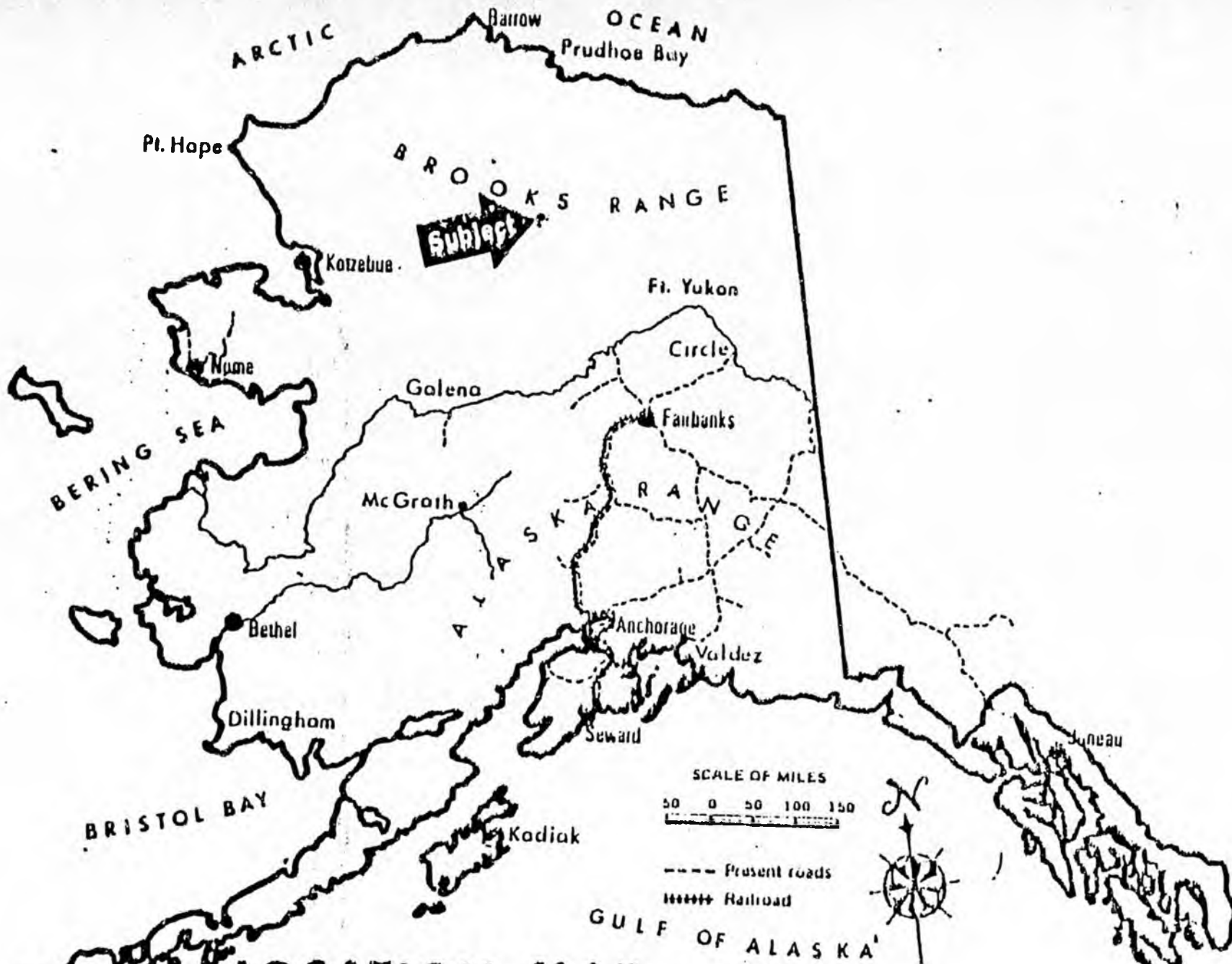
Sections 1 through 12, 16 through 21 and 28 through 33, Twp. 16 S, Rge 2 E, Sections 1 through 3, 6, 7, 9 through 16, 18, and 19 through 30, Twp. 16 S, Rge 3 E, Sections 21 through 28 and 33 through 36, Twp. 15 S, Rge 4 E, and Sections 5 through 8, 17 and 18, Twp. 16 S, Rge 4 E, Umiat Meridian, Alaska, consisting of 43,403 acres, more or less.

THE FOLLOWING PAGES CONSIST OF:

Subject Location Map

Quad Maps

Subject Pictures



LOCATION MAP

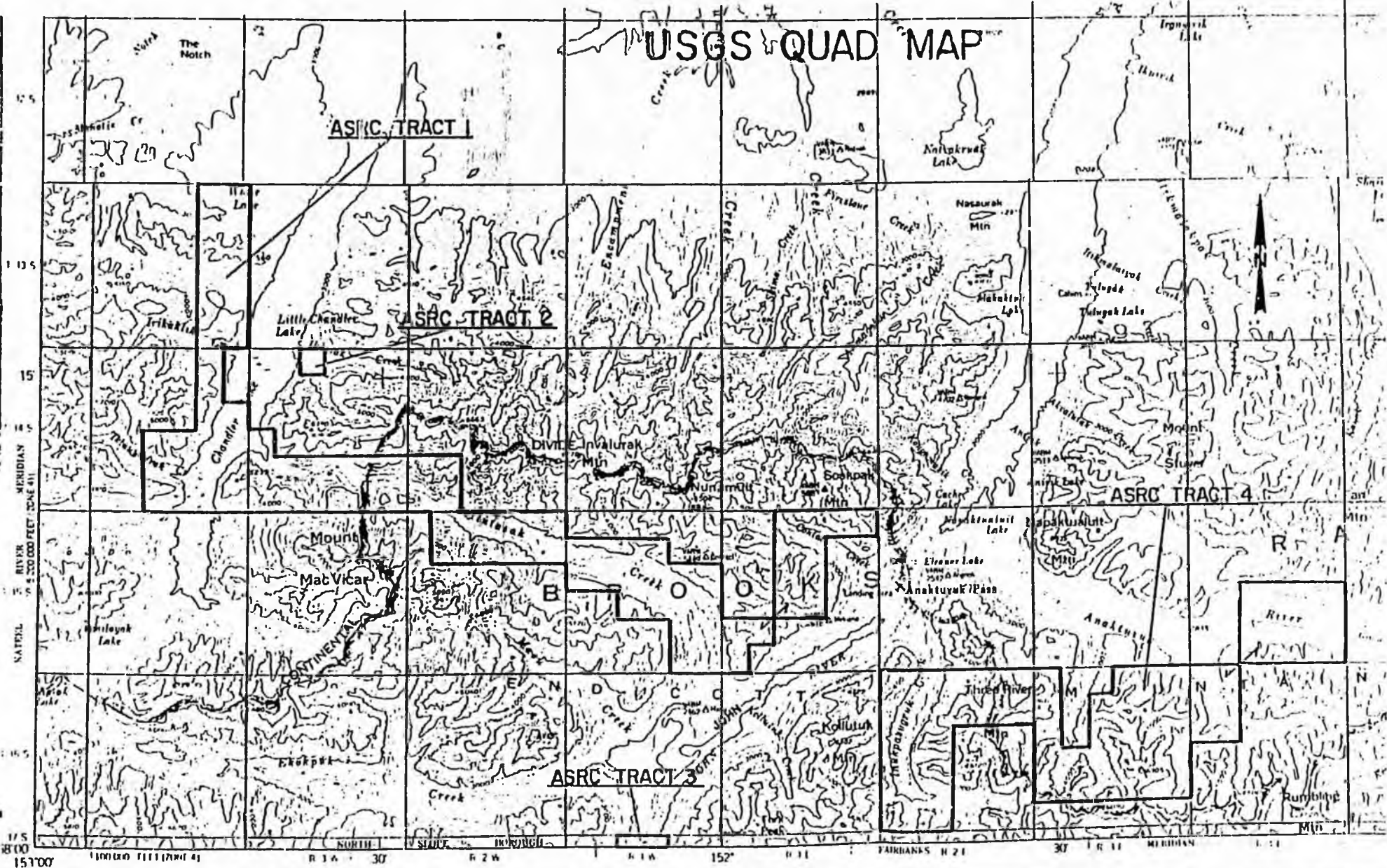
USGS QUAD MAP

ASRC TRACT 1

ASRC TRACT 2

ASRC TRACT 4

ASRC TRACT 3



Taken 3/1/83

ASRC TRACT 1



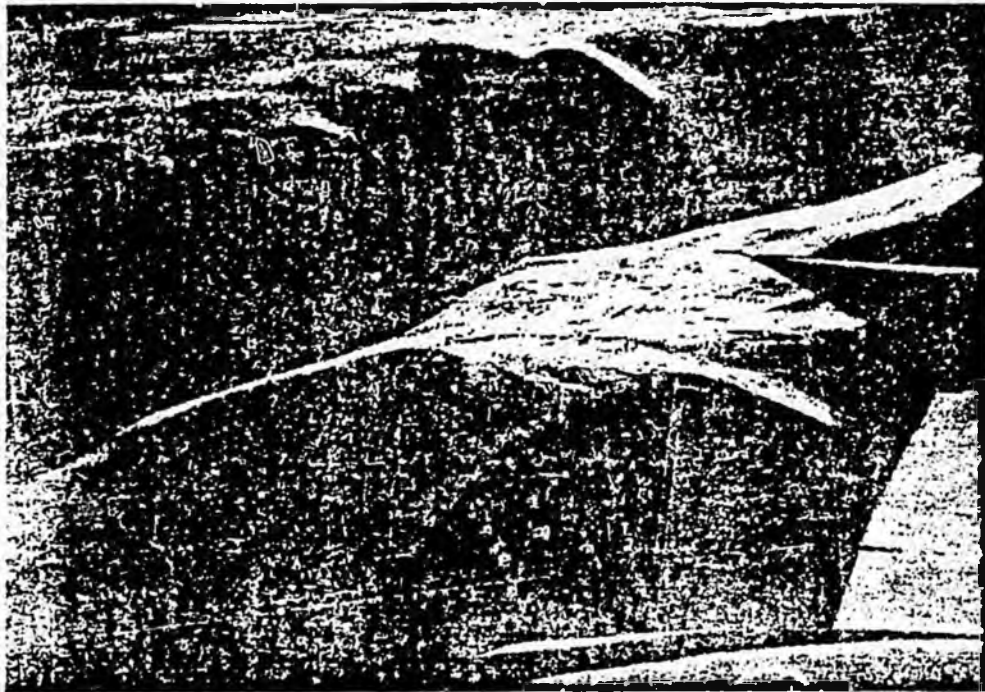
Tract 1 looking northwesterly between Chandler Lake and Little Chandler Lake



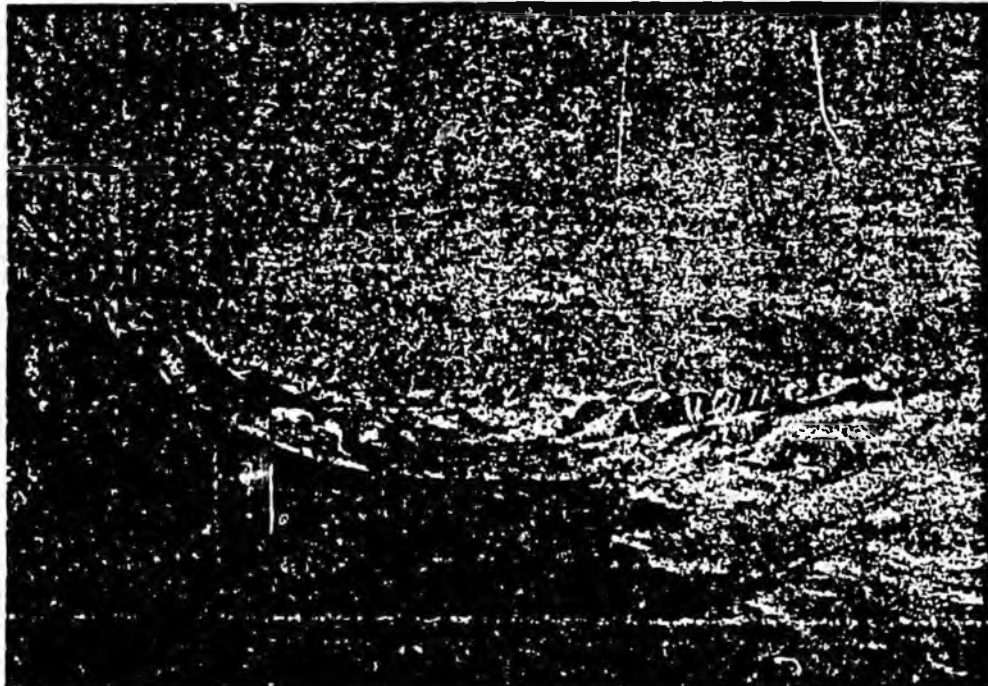
Tract 1 looking northerly from south end of Lake Chandler

Taken 3/1/83

ASRC TRACT 1



Tract 1 looking northeasterly near Continental Divide



Tract 1 looking northwesterly and east from Continental Divide

Taken 3/1/83

ASRC TRACT 1



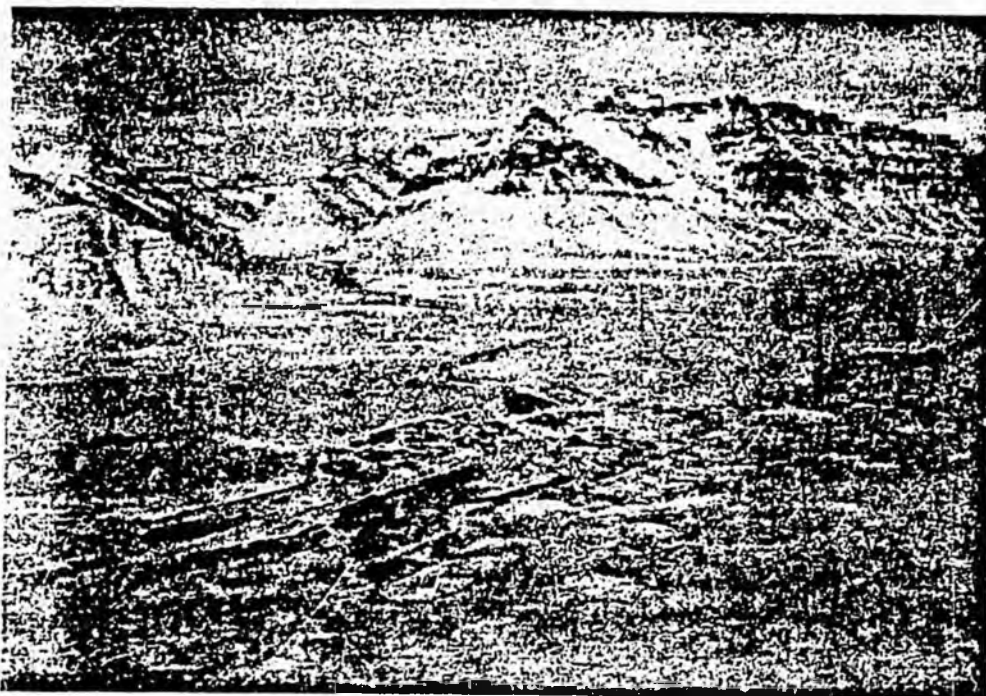
Tract 1 looking northwesterly from extreme south part of tract and mouth of Kollutarak Creek drainage



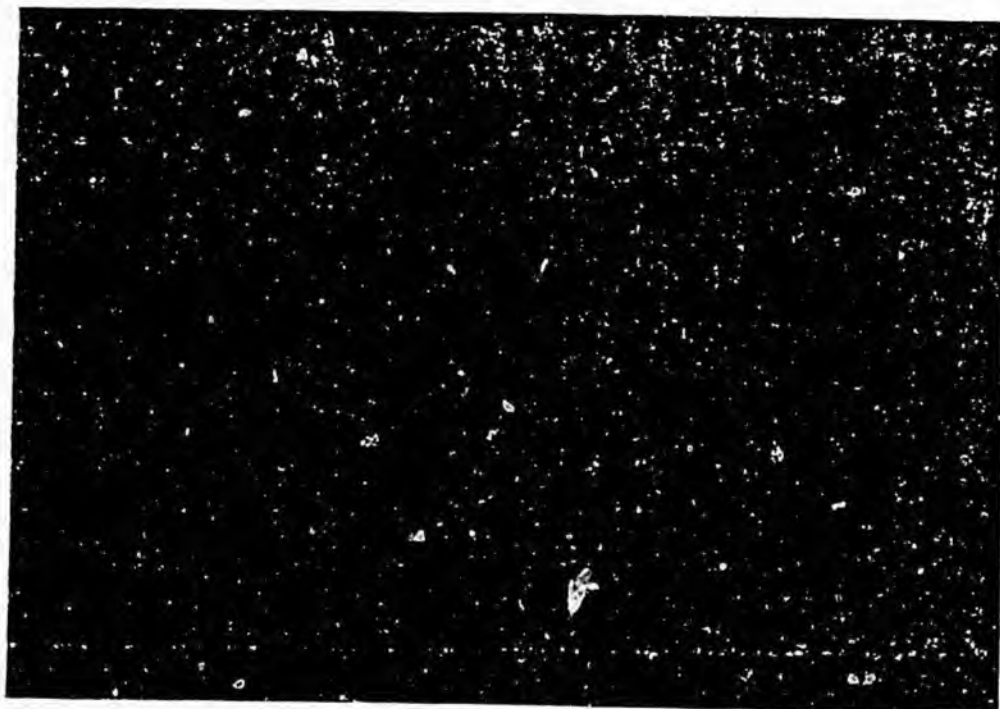
Tract 1 looking westerly from 2 miles SW of Anaktuvuk Pass

Taken 3/1/83

ANAKTUVUK PASS AND ASRC TRACT 1



Anaktuvuk Pass Village looking northwesterly with
Contact Creek and Tract 1 in upper left corner



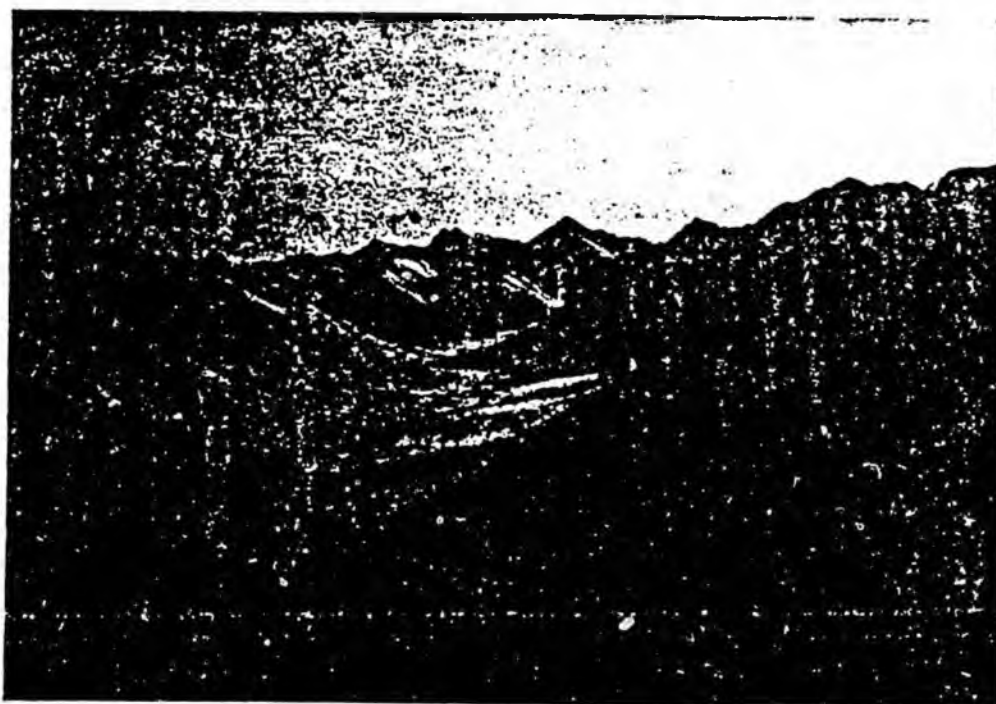
Tract 2 looking northerly from south end of
Chandler Lake

Taken 3/1/83

ASRC TRACT 4



Tract 4 looking southeasterly from just north of
Three River Mountain



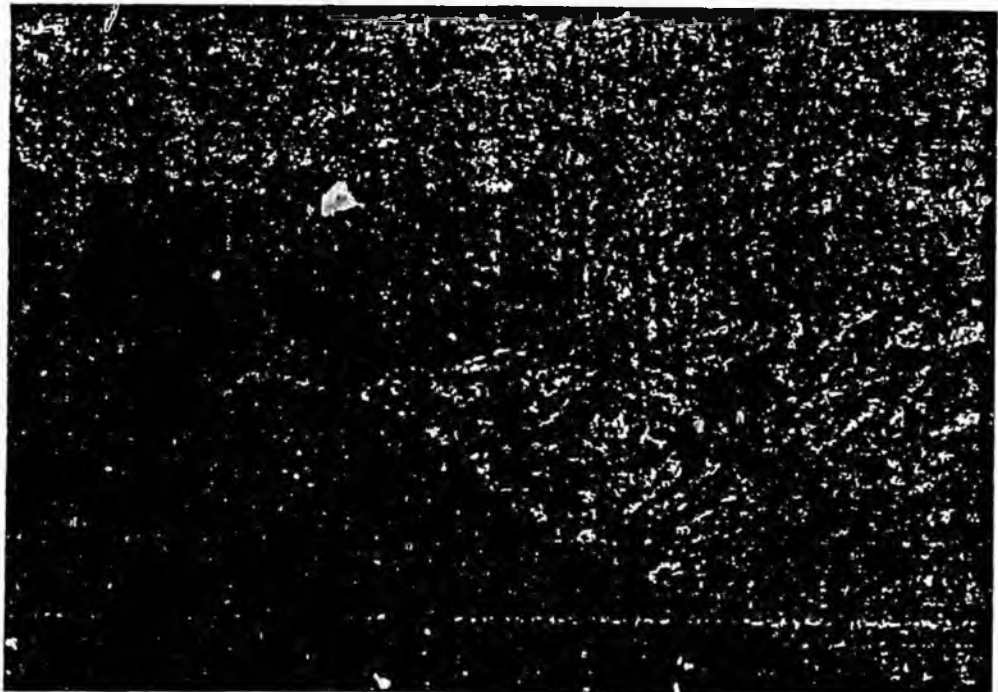
Tract 4 looking southeasterly at large drainage
located in NW corner of T 16 S, R 4 E

Taken 3/1/83

ASRC TRACT 4



Tract 4 looking westerly at Anaktuvuk River located
in southcentral part of T 15 S, R 4 E



Tract 4 looking westerly from extreme east side
of tract at Anaktuvuk River drainage

REGIONAL DATA

The subject property is located in the Arctic Region of Alaska which consists of approximately 81,000 square miles or 51.84 million acres. This region encompasses the drainage basins of all rivers that flow north from the divide of the Brooks Range into the Chukchi and Beaufort Seas. It is approximately 600 miles east and west and approximately 250 miles north and south.

This portion of the State of Alaska is very sparsely populated due primarily to the physical and climatic factors that combine to have a profound effect on varying economic conditions. These factors have greatly influenced settlement throughout the state, also.

As economic conditions change and access routes are opened, physical and climatic factors will have a lessor effect but they still will exert considerable influence, particularly the climatic factors.

POPULATION

The Alaskan population is rural with approximately 40 percent of the people living in urban places of 2,500 or more.

Anchorage, the State's largest city, accounts for over one-half of the urban population, with six (6) smaller cities of Fairbanks, Juneau, Ketchikan, Sitka, Kenai and Kodiak accounting for most of the balance. Two major regions, the southeast and northwest, with over 100,000 persons, have almost no urban population. The southcentral region contains Anchorage and Kenai, which has the major portion of the Alaskan population.

Fairbanks is the major population center in the northwestern part of Alaska, with Fairbanks having only about 1/3 the population of the number one city of Anchorage.

The development of the Prudhoe oilfield and the TransAlaska pipeline to Valdez has created a very strong economic effect on Alaska. This has been especially true for Fairbanks and Anchorage.

GENERAL PHYSICAL FEATURES

A general explanation of physical features is necessary to comprehend the extreme variations and vastness of the State. Its east-west span covers a distance of about 1,000 miles and from north to south a distance of about 2,000 miles. The State's coast line is 33,000 miles in length, which is 50 percent longer than that of the continental United States.

Hundreds of islands, mostly undeveloped, are found along the Gulf of Alaska coast, the Alaska Peninsula, and the Bering Sea coast, in addition to the Aleutian Islands.

Alaska contains 375 million acres of land and over 3 million lakes. Twelve major river systems, plus 3 additional major rivers as tributaries of the Yukon, drain two-thirds of the State. Two vast mountain systems divide the State into four major physiographic divisions.

The two longest mountain ranges are the Brooks Range, which separates the Arctic region from the Interior, and the Alaska Range, which extends westward along the Alaskan Peninsula and Aleutian Islands and northward about 200 miles along the peninsula, then eastward to Canada.

Other shorter, but also important ranges, are the Chugach Mountains forming a rim to the central north coast of the Gulf of Alaska, and Wrangell Mountains lying to the northeast of the Chugach Range and south of the Alaska Range. Both of these shorter ranges merge with the St. Elias Mountains in Canada extending southeastward over southeast Alaska as the Coastal Mountains. Numerous peaks in excess of 10,000 feet are found in all but the Brooks Range. The highest peak in the North American Continent at 20,320 feet is Mt. McKinley, which has several adjacent towering peaks above 16,000 feet.

CLIMATE

The state divides into four major climatic zones - Arctic, Western, Interior and Maritime. The subject properties are within the Arctic Zone. The Arctic Zone extends from the Arctic Ocean southerly to just south of the crest of the Brooks Range. From there south to about Thompson Pass, near Valdez, is the Interior Zone. Further south is the Maritime Zone.

In the Arctic Zone, summer temperatures generally are cool, ranging from 40° F. to 60° F.; freezing temperatures and snow may occur any month; light rains are common, cloudy, foggy weather is common near the coast, along with winds 40 to 50 miles per hour. Winter temperatures are extremely cold, ranging from -20° F. to -30° F., with occasional lows of -50° F.; precipitation occurs as snow two to five days each month and weather is generally clear with winds of 50 to 60 miles per hour common along the coast.

The sun is above the horizon for 84 consecutive days in the summer at Point Barrow and is below the horizon for 67 consecutive days from November 18 until January 24. There is, however, twilight of 1 to 2 hours duration with each of these 67 days of no sunshine with approximately 12 days of twilight.

Summer temperatures are warm in the Interior Zone, generally ranging from high 40's or low 50's to high 70's or 80's and occasionally reaching 90° F. or higher. Precipitation is generally light rain with occasional showers about 6 to 8 days each month. Winds are generally light. Winter temperatures in the Interior Zone generally range from 0° F. to -10° F. with normal minimum of -20° F. to -30° F., and extreme lows occasionally to below -70° F. Precipitation, generally as snow, occurs about 10 to 14 days each month. Ice fogs are frequent and winds generally light.

In the Maritime Zone, summer temperatures are cool - generally ranging from normal minimums of about 45° F. to maximum in the low 60's and extreme maximums to about 80° F. Precipitation occurs as frequent light to heavy rains about 15 to 20 days each month. Cloudy, foggy weather is common. Winter temperatures are cool ranging from 10° F. to 30° F. Precipitation ranges widely in amounts and types, always as snow in the mountains and snow or rain in the lower areas. Precipitation occurs 15 to 20 days each month and cloudy, foggy weather is common. Winds 60-70 miles per hour are common in the southern part of this zone.

SOILS

The soils of Alaska are generally deep in lowland and major valley areas and are shallow to deep in the mountain and hill areas. Coarse-ground soils are predominate throughout the state. These however, are mantled by one to six feet of loessial silt, and in more poorly drained areas by one to thirty feet of peat and other highly organic soils. Where these surfaces of silt and peat layers are absent, the coarse-drained soils are usually mantled by one to twelve inches of vegetative mat. Base soils or bedrock are generally restricted to areas of active flood plains and outwash plains, beaches, active sand dunes, and rugged uplands and mountains with steep unstable slopes.

Permafrost (perennially frozen ground) is widespread over Alaska. Normal permafrost thicknesses range from 1300 feet near Barrow in northern Alaska to less than a foot on the southern margin of the permafrost region. The distribution of permafrost is controlled by climatic, geologic, hydrologic, topographic, and botanic factors.

Permafrost is defined exclusively on the basis of temperature. It is rock or soil material, with or without included moisture or organic matter, that has remained below zero degrees centigrade (32° F.) continuously for two or more years. In most areas, it has remained frozen for many thousands of years; however, permafrost can be quite young in areas where very recent changes in the location of water bodies have taken place, and where man has disturbed the terrain.

The permafrost table is the upper boundary of permanently frozen ground. The area above that is called the suprapermfrost layer. The active layer is that part of the suprapermfrost zone that freezes in the winter and thaws in the summer. When the soil does not freeze all the way down to the permafrost table in the winter, there is some unfrozen soil between the permafrost table and the winter freeze. This is called talik.

Permafrost zones may be continuous or discontinuous, depending on climatic terrain, and silt factors. The continuous zone is underlain by permafrost nearly everywhere. Within the discontinuous zone the extent of permafrost-free areas increases progressively from north to south. South of the discontinuous zone permafrost generally is absent, except for a few isolated occurrences, usually at high altitudes. The distribution of permafrost is largely controlled by temperature variations related to differences in latitude, altitude, and major climatic patterns.

The Alaskan pipeline route bisects the state from north to south and is a good reference for changes in soil types. Permafrost underlies some 85 percent of the state.. Except for a very short segment at Valdez, the pipeline route crosses varying degrees of permafrost. Beginning at Prudhoe, continuous permafrost occurs southward to the southern edge of the Brooks Range. Discontinuous permafrost is found from there south to just out of Valdez. Variations do occur within the discontinuous zone.

Numerous engineering problems are encountered in any use of land underlain by permafrost. The effects of permafrost disturbance are directly related to type of basic soil material involved. Time and space do not permit detailed description of the effects. Suffice it to say that permafrost places significant limitations on land use. These must be considered for any contemplated use which will disturb the permafrost. This effect has a direct relationship to the subject properties, which are located in the Arctic Range.

VEGETATION

The vegetative cover over Alaska is divided into 9 general types. Very high evergreen (hemlock, Sitka Spruce) types occur directly along the Pacific coast. High evergreens (White Spruce) types are found on flat to nearly flat, broad flood plains and low river terraces with well-drained, deeply thawed summer soils in the Interior. Moderately high mixed evergreen and deciduous (White Spruce, Aspen, Poplar, and Birch) types occur on better drained soils of the hills and small valleys in the Interior. Tree line decreases proceeding east to west, from about 2,000 feet to 3,500 feet elevation along the Alaska-Yukon border and southern slopes of the Brooks Range, and central hills and northern slopes of the Alaska Range.

Low mixed evergreen and deciduous forest, (Black Spruce, Birch, Aspen and Poplar) occurs on flat to rolling intermountain basins throughout the Interior that are largely underlain by poorly drained silty soils and shallow permafrost. High brush (Willow, Alder and Dwarf Birch) 5 to 20 feet high forms a transition zone between forests and tundra. North and west of the tree line, brush is most common on flood plains and on south-facing slopes; in the Interior, brush generally occurs on hills, low mountains, and in alpine valleys in a narrow zone just above the tree line and elevations mostly below 4,000 feet.

Low brush muskeg (Willow, Alder, Dwarf Birch, Heath Shrubs, and berry bushes 3 to 5 feet high, with set spongy ground cover of sedges and moss) is found on wet treeless portions of basins, high river terraces, and along broad, flat, low-gradient valleys in central Alaska. Soil is generally saturated, silty peat (up to 10 feet thick in potholes) commonly overlying permafrost.

Moist tundra meadows, made up of varied vegetation 1 to 5 feet high completely covering the ground (cotton grass, moss, lichens, low heath shrubs, sedges and low willows) occur on old beach lines and rolling foothills in northern Alaska at varying elevations. Wet tundra coastal march (Sedge grasses, aquatic plants generally 1 to 2 feet high, and low willow brush) are found along the coast in shallow water, or on saturated ground of flat coastal plains and deltas with numerous lakes, generally less than 500 feet above sea level. Soils are mainly wet sedge, sod over peat, with high permafrost tables in north and deeper peat with no permafrost in the south.

Alpine, barren and sparse dry tundra (scattered low plants) occurs on northern coastal areas, rocky ridges and mountain tops above 2,500 feet in the Brooks Range, above tree level in Central Alaska, and above 5,000 feet in the Alaska Range. It should be noted that the vegetative production of these areas have very little direct economic value.

TRANSPORTATION

Transportation is a major factor in the overall picture. The large size of the state, isolation, physical factors, climatic factors and population centers greatly influence the transportation picture. A combined transportation system involving air, ground, and water is necessary where almost all essential commodities are imported. By the same token, the same is true for exporting commodities out of the state. Transportation is one of the chief limiting factors for exporting commodities that provide support for the state economy.

Ocean-borne transportation is a lifeline of the Alaskan economy. Ocean carriers transport millions of tons of construction materials, feed, consumer goods, machinery and many other items in and out of Alaska ports. Production of forest products, minerals, fisheries, and other Alaskan industries requires ocean transportation. The busiest Alaskan ports are Ketchikan, Sitka, and Anchorage. Valdez has joined this list as the pipeline was finished in June 1977 and the oil started flowing from Prudhoe Bay. On November 11, 1981, two billion barrels of oil have passed through the pipeline. It takes approximately 8 days for a barrel of oil to pass through this line. In 1968 it was estimated that there was 9.6 billion barrels of recoverable oil there. Development is continuing in this area. Kenai is also expected to become a major port for oil and gas.

Air transportation plays a vital role in the Alaskan economy along with ocean and land-surface transportation. Commercial air routes, together with charters and private planes, provide the means for getting around Alaska quickly and conveniently, and in and out of the state also. A network of airfields ranging from international airports to bush strips blanket the state. This network provides an essential transportation service to numerous out-of-the-way spots in the state. This is particularly true for the area north of Fairbanks, where the subject property is located.

There are 794 airports and seaplane bases in Alaska, two of which are international airports at Anchorage and Fairbanks. Sixteen major airlines (4 intrastate), together with numerous charter outfits.

Air freight is a major item in the Alaska air transportation picture, especially for outlying communities. Again, the oil development on the North Slope provides an example. Most of the material for the entire layout has been transported by air freight. It is likely that this will continue well into the future from both Anchorage and Fairbanks. Air traffic, both freight and passengers, is causing expansion of the Anchorage and Fairbanks airport facilities. Jet service connects these airports, for both freight and passengers, with smaller communities around the state. Where jet airplanes are impractical, several airlines provide bush service with a variety of aircraft. In a nutshell, air service now provides vital links throughout the state, where dog sled, snow mobiles and winter vehicle roads formerly were the chief means of transportation.

Air transportation is important in the state's tourism as well as other aspects of the economy. Airlines transport tourists in and out of the state in ever increasing numbers. Many of these same people fan out across the state by trunk airlines and charters to remote areas for various recreational pursuits. The same holds true for resident Alaskans, who utilize the same service to get around.

The Alaska Railroad provides another link in the surface transportation picture. This railroad, operated by the Federal Government, extends from the deep water ports of Whittier and Seward in southcentral Alaska through Anchorage to just north of Fairbanks. It has 537 miles of track in use.

The capacity of the railroad is not fully utilized and, therefore, offers potential in providing additional transportation for the state's expanding economy. There is a continuing trend toward containerized shipping in vans and railcars.

The state highway system, 2,800 miles of hard surface primary road and 3,800 miles of secondary road, is largely confined to the general Anchorage, Fairbanks and Valdez areas with short segments elsewhere in the state. This system connects to the "Lower 48" over the Alaska Highway. Even within this area, though, most localities are either not served or are poorly served by roads. The royalties received from the oil will help improve and maintain these road systems.

A recent addition to the Alaska Highway system is 53 miles of road from Livengood to the Yukon River recently completed by TAPS. This road generally follows the pipeline and will serve as a surface transportation route. Prudhoe Bay is now open to public travel with some limitations. Maintenance and repair of this road has now become a major problem and a tremendous expense for the state.

Abundant natural resources await development because economical transportation is not available for much of the state, particularly in the inland areas. Although tremendous quantities of oil are available on the North Slope, a means of transportation was needed to realize economic gain from the area - so a pipeline has been built.

Otherwise, the oil would have no economic value, unless other transportation means were developed. The same holds true of other natural resources such as timber. Transportation, thus, is a key factor in the overall economic picture, including the influence it has on population centers and land settlement in the state.

MINERALS

Minerals have always been important in the Alaskan economy, notably gold and copper. Metallic mineral production has declined sharply since the 1940's. On the other hand, oil and gas production has risen sharply during the past 10 to 15 years, and further development is planned.

Inflationary costs of mining operations, coupled with very stationary prices in gold and some other minerals, have contributed to the decline. However, this picture is now changing with gold and silver

allowed to fluctuate. The extraction of minerals may become more profitable. Another factor is previous extraction of high grade, readily available mineral deposits, primarily gold and copper, with present market demands not strong enough to compensate for the higher cost of extracting lower grade minerals. However, mineral deposits have by no means been depleted by past mining; many remain untouched or unfound waiting economic conditions which will permit extraction. Interest continues to run high in mineral deposits such as gold, copper, tin, nickel, mercury, platinum and iron.

The major interest at this time is directed toward oil and gas. The growth of the petroleum industry in Alaska has been spectacular in the last 10 years. The first commercial oil discovery was made on the Kenai Peninsula in 1957. Huge oil reserves were found on the North Slope (Prudhoe Bay) in 1968. On September 10, 1969, a lease auction by the state brought \$900,000,000, with more to come in royalties as the wells continue production.

Many of the Alaskan population centers resulted from mineral strikes - Nome, Fairbanks, and Skagway to name a few. They have persisted in the face of mining decline. Some, Fairbanks for instance, have received a shot in the arm from minerals again--oil. However, the completion of the pipeline construction as created a recession for Fairbanks when compared to the 1976-78 construction boom. It is expected that the continuing exploration and development in the North Slope will sustain Fairbanks as a major jumping off place for the distributive industry.

Others, such as Valdez, are enjoying the benefits from the completion of the TransAlaska Pipeline. This should have become even more apparent when Alaska Petrochemical Company (ALPETCO), was to build its new \$2.5 billion refinery in Valdez. This company was selected by the state administration to receive 150,000 barrels per day of royalty oil from Prudhoe Bay on a twenty-seven year contract. This contract called for a \$1.5 billion in financing and contracts for sale of products by mid-December, 1979. This project did not materialize, due primarily to high interest rates in 1979-81. Just recently, November, 1981, four new companies are being considered for processing all or part of the royalty oil.

The impact of land settlement and development has been variable on the three major cities along the TransAlaska Pipeline route.

First, due to governmental restriction and the lack of settlement of (d)(2) lands, neither the Native Claims nor the state land selections have been completed. This simply means that there are no new lands available for development. However, the demands do not greatly exceed the present base.

A new community has developed at Prudhoe Bay consisting of approximately 3,000 persons and Barrow has expanded to help accommodate the oil and gas exploration and development crews. These will continue and probably will expand in the future as new exploration continues offshore between and near these two settlements. No analysis of the mineral, gas and oil, could be complete without commenting on the magnitude of the new oil discovery and development in Alaska.

Alaska is now the third largest oil producing state in the United States and the 1.5 million barrels per day production rate of the Prudhoe Bay field represents about 15 percent of the total oil produced in the United States. There are approximately 230 wells with 90 percent of them producing oil.

At the present time, ARCO is analyzing its potential forty-well Kuparuk development. The Kuparuk field measures about 200,000 acres, the same size as Prudhoe Bay. The producing formation, however, is smaller and shallower, which would require more drilling sites than Prudhoe Bay. Drilling would thereby be more expensive, but the surface facilities would be somewhat less expensive. An oil line from the Kuparuk field to the Prudhoe Bay line is expected to carry 250,000 barrels per day by 1986.

Exploration is continuing on the North Slope with Exxon continuing at Point Thomson east of Prudhoe Bay and Husky Oil still working on wells in the National Petroleum Reserve. Drilling in the NPR-A has set Alaska depth records. There are no new exploratory permits issued by the State of Alaska for areas other than the North Slope area and Cook Inlet. The North Slope has obtained many times more development permits than Cook Inlet.

The Federal sale of offshore leases in 9-square-mile tracts outside the 3-mile limit is tentatively scheduled for early 1983 and will continue for several years. These will be north of and in the general vicinity of Cape Halkett along the geological Barrow Arch axis. The prime areas will be on the continental shelf. This area is referred to as the Diapir Field.

In summary, Alaska produced about \$5.5 billion in oil and gas during 1979, almost eighteen thousand times the value produced in 1958 at Statehood. Exploratory and development drilling will continue on the North Slope and an expansion of drilling will continue in Lower Cook Inlet.

FISHERIES

Fisheries are a major industry in the state and a mainstay of a significant segment of the populace. The industry directly employs 26,000 to 30,000 fishermen and shore-based workers, with many more employed in related services. It is Alaska's largest industry in employment and was the largest in production value until crude oil production surpassed it in 1967. The industry still is very seasonal in nature with most fishing in the summer months. It is estimated that 1981 has been the third largest catch of salmon in history, superseded only by 1934 and 1936.

In the past, salmon has accounted for the bulk of the fisheries industry. However, the industry is rapidly expanding to include scallops, shrimp, tanner and dungeness crab, in addition to king crab and various bottom fish. This trend, resulting in more diversified products, will provide a broader base for the industry and should increase year-long employment.

The major part of the fisheries industry is ocean-based. However, subsistence fisheries also are found along major streams in the state.

Like minerals, fisheries have contributed to the Alaska settlement pattern with cannery sites and associated communities along the coast. Inland villages and individual sites associated with subsistence fishing are found along the major rivers at strategic locations.

AGRICULTURE

Statewide, agriculture is a minor item in the overall economy. The broad spectrum of Alaskan agriculture includes reindeer, beef cattle and sheep grazing; dairying; poultry and eggs; and crop land. Land area devoted to intensive farming (dairying, cropping and the like) is a mere fraction of the total land area in the state. The bulk of such farm land is situated in the Matanuska Valley near Anchorage, the Tanana Valley near Fairbanks, and on the Kenai Peninsula.

Estimates of potentially tillable lands run between 3,650,000 and 18,250,000 acres, but climatic extremes, transportation difficulties, and marketing problems severely limit the economic feasibility of crop-land agriculture. Grain, hay, potatoes, milk, eggs, and certain truck crops have been produced for years and still are being produced. However, the farmers face stiff competition from products which can be imported cheaper, year-long from the "Lower 48". At its best, agriculture in most of the state is a highly risky proposition.

TIMBER

Alaska's forest industry has had steady and substantial growth since the early 1950's. From a \$6 million a year industry in 1950, the industry rose to a production of \$78 million in 1967. Production has doubled since Statehood in 1959.

However, Alaska's forest products industry is highly dependent upon foreign markets and has recently undergone several flat years due to the slow recovery in foreign economics, especially Japan which buys 90 percent of Alaska's lumber and log production. Also, the regulations imposed by various government authorities intertwined with the undetermined status of timberlands has made progress slow with the industry and the future is uncertain.

There are approximately twenty million acres of national forests in Alaska with an annual cut of 500 million board feet. The cut, which has declined every year since 1973, dropped substantially in 1975 and since that time has remained near levels of the mid-1960's. In 1978, the cut on Alaska national forests was down 6 percent from the previous year during the first half of the year. In 1981, production is still down.

Due to the present depressed housing starts and high into timber rates, the industry is not in a healthy position and is suffering a very major unemployment problem. There is no indication that this will improve in the immediate future.

Over 95 percent of the forest industry is centered in southeast Alaska with some small operations near Fairbanks in the interior, and on the Kenai Peninsula producing cants and lumber. Concentration of the industry in southeast Alaska results from the large stands of commercial timber along the Pacific Ocean. Here, the timber stands are composed chiefly of Hemlock, Sitka Spruce and Western Red Cedar.

At the present time, Alaska Native Corporations in southeastern Alaska could control 500,000 acres of forest lands with an annual harvest of 100 million board feet. Currently, the annual capacity of southeast Alaska forest products industry is about 660 million board feet, only about one-third of which is being utilized. As private landowners, the Native Corporations will be exempt from state and federal restrictions. This means there is a potential for exporting most of the total Alaska log production.

Alaska's interior forest covers about 105 million acres of which 22 million acres may be classified as commercial. The commercial stands are primarily mixtures of White Spruce, Paper Birch, Aspen and Balsam Poplar. Transportation difficulties and marketing problems presently restrict economic feasibility of commercial timber cutting over most of the interior. This situation, however, is not likely to change until a more healthy economic and export situation has developed in southeastern Alaska.

TOURISM

Tourism in Alaska is a major industry with tourist volume increasing at a rate of about 14 percent per year since 1964. It is highly seasonal, mostly coming between June and August. This seasonal trend is beginning to change with increased airline promotion of winter tours.

Two basic problems face expansion of tourism. First, there is a need for adequate facilities close to major tourist attractions to accommodate the rapidly expanding volume of tourists. Second, the extreme seasonal nature of Alaska tourism leaves existing facilities, with the exception of major hotels in large metropolitan areas, generally under-utilized for eight months of the year. This situation makes operation of a large, high-quality tourist facility difficult outside of metropolitan areas.

Tourist travel by the Alaska Highway is still a very popular mode of transportation. The challenge appeals to many people, and the changing scenery is fabulous.

EMPLOYMENT

Alaska ranks in the top few states in per capita income, substantially higher than the national average. The state's per capita income is increasing at a slower rate than that of the total United States. However, the economy is in a state of flux like the rest of the United States due to the present economic recession.

The slower increase in per capita income is due primarily to two important factors. First, Alaska's population is getting younger; therefore, a smaller proportion of the population is working males. With an average of about 23 years (7 years below United States average) and a high birth rate, a high percentage of Alaskans are not in the labor force. Second, employment in Alaska since 1960 shows the sharpest increase in the trade, finance, service, and government categories. These fields are generally lower paying than construction, mining, and manufacturing, which have not increased as sharply.

The cost of living is not as high as it used to be for the majority of Alaskans. Better and cheaper transportation has brought the cost of goods down. Increased population has created more business volume and competition in the larger cities. Competition in turn demands greater efficiency and lower costs. The competition in large sales volume, which encourages lower prices, is absent in most of Alaska's smaller towns.

Housing is a crux of Alaska's higher living costs. Construction materials, labor, heating, and upkeep are higher in Alaska. The cost of housing, though proportionately higher than other goods and services, is generally declining in relation to Seattle, based upon cost of living figures. State supported financing has helped, but there is still a recession in housing.

Unemployment in Alaska still remains somewhat seasonal with a large number of persons employed in the fishing and construction industries. Employment analysis by major regions shows that the economic activity centers in south central, southeast, and interior Alaska, with an average annual unemployment in these areas at less than 8 percent. On the other hand, the southwest and northwest regions, with economic activity minimal and highly seasonal, have unemployment rates of about 20 percent of the work force. A still significant share of the Native population in these regions live in a subsistence manner and do not participate in the money economy. These people are not considered in the employment figures.

Seasonal employment fluctuations are not as severe as 10 years ago because of the previously mentioned increase in trade, service and government work, which generally offer year-round jobs. An expanding economy that is providing more jobs of all types also contributes to some modifications in seasonal employment. Construction work has declined, primarily due to the completion of the TransAlaska Pipeline. The 1978 construction employment has continued its decline from the peak years of TransAlaska Pipeline construction of 1975 and 1976. However, the 1978 level was two-thirds above the pre-pipeline years. It is expected that the employment in the construction business will continue at its present rate which is low because of the fewer housing starts. Residential housing is financed mostly by the Alaska Housing Financial Corporation which has money available at 10-3/8 percent depending on amount financed for single family and duplex building with a limit of \$147,000.00. This is mostly limited, however, to the larger metropolitan areas.

It is anticipated that 1983 would be very similar to 1982, with no new economic development expected to spur large increases. Also, there are no negative events to bring about a significant decline.

EDUCATION

Alaska has its two universities, with six associated community colleges and one junior college. Both universities are continually expanding facilities to accommodate increased enrollment and research activities.

The chief problem arises with elementary and high schools. Widely scattered population in remote areas and associated transportation difficulties, together with lack of funds, has hampered elementary and high school education. However, the production of revenue from the oil royalties of Prudhoe Bay have resulted in the implementation of educational facilities. As an example, the Anaktuvuk Pass village has expanded its school program from kindergarden through twelfth grade. This has occurred since 1974 with three new teachers added to make a staff of six professionals in 1979. The student body has expanded from 26 to 53 since 1974 to 1979. Similar type programs have occurred throughout Alaska, with a brightening of the educational picture.

GOVERNMENT

There are large areas outside taxing units in Alaska. However, most of these have very few people with little need for additional governmental services. The following are some of the organized boroughs in the state: North Slope Borough, Bristol Bay, Fairbanks North Star, Gateway, Greater Anchorage Area, Greater Juneau, Greater Sitka, Kenai Peninsula, Kodiak Island and Matanuska-Susitna.

In addition, there are about 75 incorporated city and/or village jurisdictions that have taxing authority. Outside the organized jurisdictions, no property taxes are paid. Most private land ownerships in remote Alaskan areas fall into unorganized boroughs and outside the incorporated cities.

The State of Alaska maintains jurisdiction over the unorganized areas for police protection, furnishing schools, and other governmental services. Coupled with this are various services (health, education and welfare) provided for Natives by the federal government.

LAND OWNERSHIP

The land ownership in Alaska is predominately federal. There are 375 million acres and under the 1958 statehood act, Alaska was given twenty-five years to select 103,350,000 acres plus 1,100,000 acres for mental health and university grant purposes. To date, the state of Alaska has received title to approximately 71,000,000 acres. These selections have been concentrated in high value areas such as the oil-rich Prudhoe Bay and Cook Inlet. Basically, the selection pattern outside of mineralized (oil) areas have been concentrated around population centers such as Anchorage.

The state selection patterns tend to follow similar patterns started by early land settlement in Federal lands in Alaska under various public land laws. Patented homesteads and homestead entries

particularly are concentrated along surface transportation routes. Other entries and resultant patented lands under trade and manufacturing homesite and headquarters claims tend to be more scattered across the entire state in varying concentrations. Again, settlements on such claims are largely transportation oriented, in effect. They typically are located on or near water, either streams or lakes, where float planes can land in the summer and ski-equipped planes in the winter. These sites of course may also be served by boat. The important aspect though is a ready means of transportation which is vital to Alaskan remote areas in today's economy. The settlement pattern includes numerous Native towns or villages scattered across the entire state.

The Alaska (d)(2) matter has been called one of the most important issue since statehood. It concerns Section 17 (d)(2) of the Alaska Native Claims Settlement Act of 1971 which granted forty-four million acres and \$965.5 million to Alaska Natives. As of March 1983, 22,000,000 acres have been conveyed to the Native Village and Regional Corporation.

The controversial (d)(2) section authorized the study of up to eighty million acres of Alaska land for possible inclusion in four federal land management systems: national parks, national forests, national wildlife refuges, and wild and scenic rivers. In 1972, the Secretary of the Interior withdrew eighty-three million acres of land for study. Congress was to decide by December 18, 1978, which lands were to be designated within the four system. However, no decision was reached by Congress within the deadline and the original eight-three million acres of preliminary withdrawals from 1972 reverted back to (d)(1) status. These (d)(1) lands can be studied for the same reasons for which (d)(2) lands are studied until the classification process is completed. Also, (d)(1) lands can be open to state selection and mineral entry.

However, on November 16, 1978, the Secretary of the Interior exercised extraordinary powers under the Federal Land Policy Management Act and withdrew, for three years, 105 million acres of Alaska land as possible additions to the four federal systems. Of the 105 million acres under study, eighteen million acres are Native selected lands and over nine million acres are State selected lands. Complicating the situation even more, on December 1, 1978, the President invoked the Antiquities Act creating fifty-six million acres of new national monuments in Alaska, almost all of which overlap the aforementioned 105 million acres.

The actions by the President and the Secretary of the Interior notwithstanding, Congress has now taken action to completely resolve the Alaska lands issue, PL 96-487, December 2, 1980. This matter is extremely complex involving a myriad of conflicting interests. The implementation of this bill will take many years before it is finalized.

At the present time, there are about 200,000 acres of private lands, most of which are in areas of heavy population. Outside of such areas, private land ownership generally involves widely scattered small parcels.

The potential land ownership, by area, under the present unresolved status, is federal government 59 percent, State of Alaska 29 percent, Native 11.7 percent, and other private 0.3 percent. Obviously, the economic value of the various segments would be substantially different.

On December 2, 1980, Public Law 96-487, the Alaska National Interest Land Conservation Act became law. This Act established or added to many national parks, national wildlife refuges, national forests and other systems, including modification or implementation of Native Claims Settlement Act and Alaska Statehood Act and other acts pertaining to Alaska. The full effect of this law has not been realized in the economy, at this time. However, it should stabilize the land ownership in Alaska and development will proceed.

NEIGHBORHOOD DATA

The neighborhood of the subject property is determined primarily by the physical and climatic factors.

The most influential physical factor is the Brooks Range of mountains that cross northern Alaska from the Yukon Territory to the Chukchi Sea. They are, in general, an east-west range of mountains that lie near or above the Arctic Circle with many peaks above 8,000 feet and the tallest, Mt. Michelson (9,329 feet), is located near the Canadian border.

The entire range is conspicuously devoid of trees. The slopes are mainly covered with mountain meadows and tundra. Trees grow only in protected valley bottoms with none growing on the north slopes. There are a profusion of flowering plants that cover the slopes during the brief Arctic summer, which lasts only two to three months. Even in July, ice is still apparent in Beauford Sea.

The subject properties lie on the southern edge and beyond the Arctic Slope, frequently called the North Slope, and is described as including the Arctic Coastal Plains and the low-lying hills fronting the north slopes of the Brooks Range. It is easily distinguished by considering that it includes all of the drainages that flow northerly from the Brooks Range. The drainage lying south of the north slope generally runs southerly into the Yukon River.

The climate is the main controlling factor in this neighborhood and obviously cannot be changed by man.

The climate of the North Slope and the Brooks Range is cool even in the summer and freezing can occur during any month of the year. During the summer, the sun moves around and around the horizon without setting. Most of the year, the area is covered by ice and snow and the cold Arctic winds can blow like maddened banshees across the white barren coastal plains. Many times, these winds will reach 100 miles per hour.

The subject properties, referred to as the ASRC TRACTS 1, 2, 3 and 4 are located on both north and south sides of the Continental Divide along the Brooks Range which runs generally east and west across northern Alaska. Within the immediate neighborhood lies a native village called Anaktuvuk Pass. The statistics from the State Department of Labor indicate a population of 203 people and 51 households. There is no road access. The main access to the village is air travel. A small gravelled landing strip is available at the village site. The main economics of the village is hunting and fishing. Several government agencies, including the National Park Service, have seasonal offices at Anaktuvuk Pass.

Within the general neighborhood is Point Barrow, which, at one time, was a major Native whaling point due to the relatively ice-free channel next to the mainland in the Chukchi Sea. This is a natural whaling migration route. Barrow has now become an important location for the military's early warning system, and the Native North Slope Borough headquarters.

Prudhoe Bay, which has grown to be a small city of approximately 3,000 oil company workers is, also, located within this neighborhood. Wein Airlines now has a scheduled flight from Anchorage to Prudhoe Bay. The indications are that a future gas pipeline is a good possibility. In addition, future oil or gas development will be delivered by a connecting line to the Prudhoe Bay-Valdez TransAlaska pipeline.

Within the whole neighborhood, there is oil and gas and possibly other minerals yet to be discovered. At the present time there is a great amount of exploration and development work for oil and gas occurring.

Transportation connections, primarily by air, are to Barrow and Prudhoe Bay. Bettles, Alaska, about 55 miles southerly via air, is a main refueling stop for small planes in the area and has FAA service, trading post, restaurant, hotel and a small native village.

Tract 1 includes a portion of a large lake called Chandler Lake.

PROPERTY DATA

SITE DESCRIPTION

Location: The general location has been described previously for the ASRC TRACTS 1 through 4. (See "property identification" and "neighborhood data").

The immediate location of each tract is described as follows:

ASRC TRACT 1: As depicted on the USGS quadrangle map, this tract starts just north and west of Anaktuvuk Pass and runs in a west and northwesterly direction some 25 miles to and including a part of Chandler Lake and includes part of the Contact Creek Drainage Basin and most of the Kollutarak Creek Drainage Basin. It then runs north about 12 miles on the westerly side of Chandler and Little Chandler Lakes to just west of White Lake. The Continental Divide cuts through Tract 1 in Township 14 South, Range 3 West, with the eventual southerly drainages leading to the Yukon River and the northerly drainages to Colville River which empties into the Arctic Ocean.

ASRC TRACT 2: This tract lies about 22 miles, more or less, northwesterly of Anaktuvuk Pass on the north side of the Continental Divide. The tract is just east of Little Chandler Lake with the Ikagiak Creek meandering through the northern part.

ASRC TRACT 3: Anaktuvuk Pass lies about 14 miles northeasterly of this tract and is south of the Continental Divide. The John River runs southerly through the central portion of the tract.

ASRC TRACT 4: As depicted on the USGS quadrangle map, this tract starts about three miles south of Anaktuvuk Pass and runs about 18 miles easterly and includes portions of the Inukpasugruk Creek and Anaktuvuk River Drainage Basins. About two-thirds of this tract lies on the north side of the Continental Divide; however, that portion with the Inukpasugruk Creek lies on the south side.

Size and Shape:

ASRC TRACT 1: The size consists of 55,274 acres, more or less. The shape is an irregular rectangle type tract as depicted on the USGS Quad map.

ASRC TRACT 2: The size consists of 640 acres, more or less. The shape is square.

ASRC TRACT 3: The size consists of 582 acres, more or less. The shape is rectangular.

ASRC TRACT 4: The size consists of 43,403 acres, more or less. The shape is an irregular rectangular type tract as depicted on the USGS quadrangle map.

Access:

ASRC TRACT 1: There is no legal ground access to the subject property. However, winter and summer foot trails have been used to traverse the property within its boundaries from Anaktuvuk Pass. The western portion of the subject would be accessible by ski plane or float plane on Chandler Lake.

ASRC TRACT 2: This tract would have similar access, only you would have to travel or land on other owned lands and lakes.

ASRC TRACT 3: This tract's access would be ground or foot type by winter or summer trails over other owned lands.

ASRC TRACT 4: There is no legal ground access to the subject property. However, winter and summer foot trails over other owners have been used from Anaktuvuk Pass for access to the various portions of the subject property.

When discussing foot or ground type access, this would include possibly dog sledding, float or boat, ATV's or snowmobiling where terrain and creeks permit.

Of course access is available to all tracts via helicopter where terrain and topography permit.

Utilities: ASRC TRACTS 1 through 4 have no developed utilities. The closest to all the tracts would be Anaktuvuk Pass which generates its own electricity through large generators. However, it is very unlikely any of the subject properties could tap this source due to maintenance, costs, and legalities in running power lines to them.

Topography and Soils:

ASRC TRACT 1: This tract has varied topography ranging from mountainous areas with steep slopes to a lake area with much of the property being valley and drainage area. The soils are mountainous rock with alluvial washed gravel in the lower valley access with some fairly level wet tundra areas. Elevations range from 5200 plus feet down to around 3000 minus feet.

ASRC TRACT 2: The general elevation of the tract is about 3000 plus feet. The Ikagiak Creek traverses the northern portion of the property. It is generally an undulating tundra type property with alluvial washed soils.

ASRC TRACT 3: The general elevation of this property is slightly less than 3,000 feet and has the John River running north to south through the eastern central portion.

ASRC TRACT 4: This property has varied topography ranging from mountainous areas with steep slopes to valley drainages. The elevations range from a high of 6,300 feet, plus, down to 3,000 feet, plus or minus. The areas consist of the barren tundra type vegetation with mountainous rock and alluvial coarse drained type soils.

The mountains within the Brooks Range, where the 4 tracts are located, are called the Endicott Mountains.

IMPROVEMENTS AND EQUIPMENT

No improvements or equipment were observed on the aerial flight inspection. Consequently, no improvements or equipment are considered in this appraisal.

HISTORY

Available records indicate that all four tracts under appraisal were originally under Federal ownership. Then all of TRACTS 1, 2, 3, and a portion of 4 were withdrawn for selection under the "Alaska Native Claims Settlement Act" (ANCSA) and was subsequently conveyed to the Arctic Slope Regional Corporation. ASRC acquired its interest in the remaining portion of Tract 4 as a result of an exchange agreement with the Department of Interior.

ASSESSED VALUE AND TAXES

The subject four tracts are not assessed. There are no borough assessments or taxes on these tracts.

ZONING

No current zoning exists for the subject four tracts.

SUB-SURFACE RIGHTS

The subsurface rights are owned by the Arctic Slope Regional Corporation on all four tracts and will be retained by them. Consequently no sub-surface rights are considered or valued in this appraisal.

ANALYSIS AND CONCLUSIONS

HIGHEST AND BEST USE

Fundamental to the concept of value is the theory of highest and best use. Highest and best use can be defined as that use which at the time of this appraisal, is most likely to produce the greatest net return to the land over a given period of time.

At the present time, this land is owned by the Arctic Slope Regional Corporation and has not been used to produce a meaningful economic return.

The subject properties, located in the Brooks Range, have a potential highest and best use for the following purpose:

ASRC TRACT 1: This tract, consisting of 55,274 acres, more or less, would have to be considered an exceptionally large tract to place on the market at one time. Plus factors for the subject property are having Chandler Lake included in part of the western portion with lake frontage, the central portion having a fairly wide valley on the Kollutarak Creek and the extreme eastern portion being only a few miles from the small village of Anaktuvuk Pass. These plus factors for the subject property tends to make a fairly attractive large property.

Although there is waste-type land such as sheer mountainous slopes, lake area and wet creek areas, there would still be many potential building site areas available. Also, as an informational note, this tract has 4 native allotments within its outer boundary around Chandler Lake and 2 in Twp. 15 S, Rge 1 W. This indicates interest in the area. After studying and analyzing all factors, the highest and best use of ASRC TRACT 1 is considered to be for recreational hunting, fishing, hiking, camping and for potential recreational homesites.

ASRC TRACT 2: This tract, consisting of 640 acres, more or less, would be considered a fairly normal sized tract for Alaska, although still slightly larger than the history of typical sales. The subject tract does not have direct lake access; however, it is relatively close, about a mile away. Much of the property is undulating and sloping towards Ikagiak Creek and would have potential building sites. After studying and analyzing all information and factors available, it is the appraiser's considered opinion that the highest and best use of ASRC TRACT 2 is for recreational hunting, fishing, hiking, camping, and potential recreational homesites.

ACRC TRACT 3: This tract, consisting of 582 acres, more or less, would be just slightly larger than the typical sales in Alaska. The John River traverses this tract which means some wet areas, but most of the area is undulating and gently sloping towards the river leaving potential building sites. After studying and analyzing all pertinent factors, it is the appraiser's considered opinion the highest and best use of ASRC TRACT 3 is for recreational hunting, fishing, hiking, camping, and potential recreational homesites.

ACRC TRACT 4: This tract, consisting of 43,403 acres, more or less, would have to be considered an exceptionally large tract to place on the market at one time. Other concerns would be that approximately 75% or more is very mountainous leaving few potential building sites in relation to the size of the property. The plus factor would be the relatively short distance, 3 miles plus, on the western portion to Anaktuvuk Pass. After studying and analyzing all pertinent factors, it is my opinion that the highest and best use of ASRC TRACT 4 is for recreational hunting, fishing, hiking, camping, and a few potential recreational homesites.

Cost Approach

The cost approach is not applicable in this appraisal because of the absence of existing improvements on the four tracts.

Income Approach

This approach is also not considered to be applicable. The subject four tracts are not income producing properties in the appraisal sense of the term.

MARKET APPROACH

The estimate of value of a property in the Market Data Approach is ordinarily based upon recent sales and listings. If similar properties can be purchased, I must assume that the subject four properties will have a market value in the same range.

The search for comparative market data has been exhaustive. All possible sources have been contacted, including Bureau of Land Management, Fish and Wildlife Service, Borough records, and private real estate sources. The problem common to remote real estate valuation is lack of abundant sales for analysis. Northern Alaska is especially sparse in transactions, due mostly to state and federal ownership and inhospitable lands for homesteading which is a source of private ownership.

In 1981 a contract was awarded to James Price and Associates of Fairbanks, Alaska, to provide any and all known sales that had occurred within the past 10 years on the North Slope and near Nome. The sales search produced 15 sales and one listing which has now sold and is included in this report.

The bulk of the sales found were southerly from the North Slope in areas around Fairbanks, Bettles, Nome, Tanana and southerly. Additionally, due to the pattern of patented lands, sales parcels are generally 160 acres or less leaving few sales of larger sizes. Size differences compound the analytical process. Some analysis has been done by appraisers in Alaska which indicate little size adjustment is necessary after 160 acres, however, around 400 to 600 acres have generally been the largest acreages sold. This gives only a little valid support to the adjustments that will be required for the two large subject properties. It is impossible for the appraiser to bracket the subject properties values without making judgemental adjustments for size, location, access and topography.

Thus, all sales searches conducted over the past several years, including a current search, has resulted in the consideration of over 50 sales for comparative analysis and evaluation of the four subject Tracts as well as other tracts in the Brooks Range and North Slope area.

All of the 50 plus sales have been either verified by this appraiser or other qualified appraisers over the past few years. Many of those sales have been inspected by myself. A few on the ground with most via air.

The net result, for comparative purposes, is four sales that were reasonably comparable.

The four sales utilized in this report have been verified and all were currently inspected by myself via air except sale #1 which was flown several years ago.

The following tabulation is a listing of the four sales utilized as the most recent and comparable to the subject four tracts:

COMPARABLE SALE SUMMARY

<u>Characteristics</u>	<u>Sale No. 1</u>	<u>Sale No. 2</u>	<u>Sale No. 3</u>
Location	Head of Utak Bay	6 mi. NW Nome & 40 mi. NE Nome	160 mi. W. Fairbanks
Access	Boat/Float Plane	poor - 4-wheel drive	Boat or float plane
Neighborhood	Rural	Rural	Rural
Elevation	0 to 1000'	500'	500'
Topography	Gentle to steep	river bottom & hillside	banks of Yukon River
Soil	Marshy to coarse ground soils	Thin Organic underlain/ gravel tundra	Thin Organic
Vegetation	Marsh to high brush	Low Tundra	Small crees brush
Highest and Best Use	Vacant	old mining claims	old mining claims
Improvements	-	-	No value
Total Size	318.56 acres	505 acres	214.56 acres
Waste	-	-	-
Net Size	318.56 acres	505 acres	214.56 acres
Total \$	\$ 40,000	\$ 80,000	\$ 30,000*
Land \$	\$126/acre	\$158/acre	\$139.82/acre
Improvement \$	-	-	-
Date	2/19/76	11/79	6/78

*outstanding
stock purchase

COMPARABLE SALE SUMMARY

<u>Characteristics</u>	<u>Listing for over 2 years (now sold - sale #4)</u>	<u>Sale No. 4</u>
Location	8 mi. NE Nome	8 mi. NE Nome
Access	Road	Kovgorak Road
Neighborhood	Rural	Rural
Elevation	200'	200'
Topography Nome River bottom	Nome River bottom	
Soil	River bottom	River bottom
Vegetation	low tundra	low tundra
Highest and Best Use	speculation mining or subdivision and resold	small acreage subdividing for resale
Improvements	-	-
Total Size	2,000 + acres	2,053.71 acres
Waste	50 percent	50 percent
Net Size	1,000 acres	1,000 acres +
Total \$	asking \$500,000 with 25% down	\$350,000 with \$10,000 down & \$65,000 at closing
Land \$	\$250/acre	\$170.50/acre
Improvement \$	-	-
Date	Listed for over 2 years	10/22/82

TIME TRENDS

There are four comparable sales that have been selected from a very wide area.

A study by the Bureau of Land Management for their TransAlaska Pipeline update indicated that the annual rate of appreciation for 1968 to January 1978 was 30 percent annual compound interest. From January 1978 through December 1981, a 5 percent rate was utilized for all sales except in the Nome area. The lower rate is primarily due to the fact that the pipeline construction was completed in 1977 and the demand dropped drastically. Due to the slow economic times throughout the United States, Alaska included, the rate of appreciation has been slow since 1979.

Sale No. #4 was listed on the market for more than two years at \$250 per acre and sold for \$170 per acre recently, which tends to indicate a slow market and possibly too high an asking price. This tends to support a current slow market for the Nome area as well as other areas of Alaska.

In analyzing escalation studies, discussions with real estate brokers and knowledgeable appraisers familiar with the Alaska area, my final conclusions for upward application of the time adjustments for each sale is as follows:

Southern, AK	Sale #1	overall average per year	6%	from 2/76
Nome, AK	Sale #2	overall average per year	8%	from 11/79
Fairbanks, AK	Sale #3	overall average per year	5%	from 6/78
Nome, AK	Sale #4	overall average per year	6%	from 10/82

Time adjusted price per acre for each of the four sales above is indicated as follows:

Sale #1	2/76 to 3/83	= 7 yrs x 6%	= +42% or about	<u>\$179 per acre</u>
Sale #2	11/79 to 3/83	= 3-1/2 yrs x 8%	= +26.7% or about	<u>\$200 per acre</u>
Sale #3	6/78 to 3/83	= 4-3/4 yrs x 5%	= +23.8% or about	<u>\$173 per acre</u>
Sale #4	10/82 to 3/83	= 5/12 yrs x 6%	= +2.5% or about	<u>\$175 per acre</u>

Market Data Analysis

A very extensive and intensive search for comparable sales has been done covering the whole state of Alaska. From this extensive land search, only four sales were found that are comparable at least in some respect to the subject properties. Due to the scarcity of data, a period of 11 years was obtained for first consideration. When the older sales were adjusted for time, a real question of validity became apparent. Consequently, this list was reduced to four sales that have sold within the last several years.

It should be noted in this appraisal report that not all the sales have been examined on the ground by the appraiser. However, both the physical characteristics and the sales terms and conditions have been provided by persons that I believe are reliable. All have had winter aerial inspections by myself.

One of the characteristics of the subject properties is that they are extremely remote, both by air and land, and very low productive land with permafrost subsurface. The climatic conditions in the Arctic region are probably the most severe in the United States, which creates many difficulties for economic utilization of either the surface or the subsurface resources.

The history of the settlement of Alaska clearly indicates that only where man has been tempted by gold or other valuable minerals, wildlife, and fish, has man been willing to survive the hardship of the severe climatic conditions.

There are only a few comparative factors, in my opinion, that would be reflected in the market place between the subject four properties and sales. These are general location, access, size, general topography and utility of the surface. By comparison, the sales would have the strongest use for recreational homesites or recreational hunting, fishing, camping, and hiking. The subject four tracts are considered to have similar uses in varying degrees.

Sales - Comparison to ASRC TRACT 1 (55,274 acres)

Sale #1: 318.56 acres. Time adjusted indicates \$179 per acre.

Location: The sale is located at the head of Utau Bay on Kodiak Island in the Maritime climate zone of southern Alaska. The subject is located in the Arctic climate zone. The sale is considered to be located in a superior location for possible year-round activities and possible uses indicating a downward adjustment. The sale is slightly inferior in location to a portion of the subject in regard to distance from a small native village and this is considered in the overall downward adjustment.

Access: The sales access is by boat and float plane and the subject has ski and float plane access. Ground access is difficult on both sale and subject properties and would be considered similar in this respect, although the accessible distance of the sale from main populations would be slightly superior to that of the subject property.

Size: The sale has 318.56 acres while the subject has 55,274 acres, more or less. It is reasonable to assume that the market would consider something far less per acre for the subject tract due to the exceptionally large size difference.

The sale property is considered to be far superior in size indicating a great downward adjustment.

Topography and Utility of Surface: The sale is variable from sloping to steep with marsh-type vegetation to high brush. Some portions of the sale property could be used for recreational building sites.

The subject property slopes toward the lake with a few steeper areas. The subject's preparation of the useable surface would be similar. There is less useable land on the subject in relation to the whole property due to the lake, steep sides on some areas, some mountainous areas and wet river areas. Overall, this factor would indicate that some downward adjustment would be required.

In the overall comparison of Sale #1 to the subject property, the sale property is superior requiring downward adjustments and in my opinion would indicate about \$55 per acre for the subject property.

Sale #2: 505 acres. Time adjusted indicates \$200 per acre.

Location: The sale is composed of two parts. One portion consisting of about 105 acres is located about six miles northwest of Nome, Alaska, on the Nome-Teller Road with the Snake River running north and south through the center of the property. The second part consisting of about 400 acres is located about 40 miles northeast of Nome part on the Cordouray Road with the Casadepaga River bisecting the property easterly and westerly. The sale is in the Western climate zone with milder but similar characteristics as the subject's Arctic zone.

The 105-acre portion of the sale is more valuable than the 400-acre portion. Both portions of the sale are substantially superior to the subject property due to being near an old, larger, established community indicating a downward adjustment.

Access: Access is via road and considered to be very much superior to the subject property indicating a downward adjustment to the sale property.

Size: The sale property has one smaller tract which normally would be adjusted for size; however, the property was sold as one unit consisting of 505 acres and the subject's property is still much larger indicating a substantial downward adjustment.

Topography and utility of surface: The sale is an undulating valley with much of the land sloping and draining in to the Casadepaga River which runs for about 2-1/2 miles through much of the property. A good portion of the sale property, both small and large tracts, could be used for recreational building sites. The more remote larger tract has 4-wheel drive road access during the milder season and at one time there was an old railroad in the area for mining operations. The mining is no longer active. Placer mining was a strong consideration at the time of purchase.

The sale property would require less cost of preparation for utilizing the surface in comparison to the subject properties surface due to the distance from Nome. The sale property would be slightly inferior in overall topography and utility of the surface.

The overall comparison of Sale #2 to the subject property indicates that the sale is superior to the subject. A substantial downward adjustment is required for the sale and would indicate about \$65 per acre for the subject property.

Sale #3: 214.56 acres. Time adjusted indicates \$173 per acre.

Location: The sale is located about 160 air miles westerly of Fairbanks on the Yukon River and has approximately 1/2 mile of river frontage. The sale is located in the Interior climate zone while the subject is in the Arctic climate zone.

The location of the sale is considered to be superior to that of the subject property indicating a downward adjustment is required to the sale.

Access: Access is via float plane and foot trail. A trail leads through the sale property but does not appear to lead to any roads since there are no year-round roads for many miles.

The actual physical access to the sale and the subject would be considered fairly similar.

Size: The sale is far smaller in size than the subject property. Due to the extreme size difference, a substantial downward adjustment is required.

Topography and utility of Surface: The sale has about 1/2 mile of frontage along the Yukon River with about a 50-foot bluff, but has accessible areas to reach the river. The sale has undulating topography that slopes mainly towards the river but has some fairly level areas also. Most of the sale property could be utilized for recreational building sites and potential recreational hunting and fishing. However, access would limit the demand for potential purchasers. The subject has a less useable surface ratio to the whole property than the sale, although because the subject does incorporate a portion of Chandler Lake and many acres of good topography, some of the negative ratio would be offset.

Therefore, it is considered that only a slight downward adjustment would be needed for this factor.

Note: Although there is some question as to whether or not this sale is arms-length due to the type of transaction, it appears in line with other older sales of this type.

In analyzing the overall comparison between the sale and the subject, I find that the sales location, size, topography and utility of the surface is superior. The access is fairly similar. This indicates that a downward adjustment is necessary and is considered to indicate about \$70 per acre for the subject property.

Sale #4: 2,053.71 acres. Time adjusted indicates \$175 per acre.

Location: The sale is located about 8 miles northeasterly of Nome, Alaska, on the Nome River. The sale is in the Western climate zone of Alaska, with milder but similar characteristics as the subject's Arctic climate zone.

The sale property is substantially superior in location to the subject property indicating a downward adjustment.

Access: Access is via Beam Road out of Nome, Alaska. Most all parts of the sale has excellent or fairly good access from a main road. The subject does not have good access. This indicates a definite downward adjustment to the sale.

Size: The sale property has 2,053 acres, more or less, and the subject has 55,274 acres. A downward adjustment is considered necessary.

Topography and utility of Surface: The sale is located in a wide, undulating valley with the Nome River meandering through the center from north to south. The property is made up of mining claims on the Nome River. Approximately 50 percent of the site is unuseable because of the river; however, the river enhances the remaining property even though it is low lying with some wet areas. Both sides of the property drain toward the river.

The sale is only about 8 miles northeast of Nome and has good potential for acreage building sites. A few homes have already been built along the river near the sale property. The surface and soils are adaptive for site preparation. The mineral rights are all reserved by the Grantor.

Preparation of the subject property for utility of the surface would be slightly more costly than the sale due to the sales access and location near Nome, Alaska.

This indicates that the sale is superior to the subject and would require some downward adjustment.

The overall comparison of Sale #4 to the subject property indicates that the sale is superior in location, access, topography, utility of surface and size. A downward adjustment is required and is considered to indicate about \$65 per acre for the subject property.

CORRELATION AND FINAL ESTIMATE OF VALUE FOR ASRC TRACT 1

There are no direct utilities available to any of the sales or subject, therefore, no adjustments were made. The subsurface rights for minerals are available to the sales if any exist, except sale No. 4, and the subject which have rights to only the surface. This has been considered in the overall adjustments of the sales.

The sales used are considered, by this appraiser, the best information available for comparison.

The sales indicate a fairly close range from \$55 to \$70 per acre for the subject property.

Based on the foregoing data, after studying, comparing, and analyzing all the comparable sales, as well as all other information available, it is the considered opinion of this appraiser that the estimated market value of the surface of the subject property, known as ASRC TRACT 1 is \$3,593,000, or \$65 per acre.

Sales Comparison to ASRC TRACT 2 (640 acres)

Sale # 1: 318.56 acres. Time adjusted indicates \$179 per acre.

Location: The sale is considered to have a superior location weather-wise and for possible year-round activities and uses indicating a downward adjustment.

Access: Actual access to the subject is inferior to the sale due to no on-site air landing except by helicopter; however, Chandler Lake is about one mile and may be used for ski and float planes. This indicates a downward adjustment.

Size: Both fairly similar and no adjustment is considered necessary.

Topography and Utility of Surface: The general topography is similar as well as the utility of surface; however, it is considered that the cost of preparing the surface of the subject would be more costly because of the distance from supply sources. This indicates a slight downward adjustment to the sale.

In the overall comparison I find all downward adjustments are indicated to the sale except for size. In my opinion, this would indicate about \$110 per acre for the subject.

Sale No. 2: 505 acres. Time adjusted indicates \$200 per acre.

Location: The sale is superior in location to the subject due to the short distance from Nome, Alaska and the weather. This indicates a large downward adjustment to the sale.

Access: The sale is far superior in access due to road access. This indicates a large downward adjustment.

Size: The size is considered similar and no adjustment necessary.

Topography and utility of surface: The sale is considered superior due to cost of site preparation because of the distance from Nome, Alaska, indicating a downward adjustment to the sale.

The overall comparison of sale #2 to the subject indicates that downward adjustments are required on all factors except size. It is my considered opinion that the sale indicates about \$110 per acre for the subject property.

Sale #3: 214.56 acres. Time adjusted indicates \$173 per acre.

Location: The location of the sale is considered somewhat superior to the subject. The Interior climate zone indicates a downward adjustment.

Access: The actual physical access is considered fairly similar, however, the sale is considered slightly superior because of access by ski or float plane immediately adjacent on the Yukon River.

Size: The sales size is considered slightly superior.

Topography and Utility of surface: The topography and utility of surface are considered fairly similar with the sale having a slight edge.

In the overall comparison, I find that the sale is generally slightly superior in all factors. It is my opinion that the sale indicates about \$125 per acre for the subject property.

Sale #4: 2,053.71 acres. Time adjusted indicates \$175 per acre.

Location: The sale has a slightly superior climate and is far superior in location being located just out of Nome, Alaska, and indicates a downward adjustment.

Access: The sale has direct road access indicating a substantial downward adjustment to the sale in comparison to subject's access.

Size: The sale has 2,053 acres, more or less, while the subject has only 640 acres. Although a general study of Alaska sales indicates little change on a per unit basis after 160 acres, there are not enough large sales such as sale #4 to draw an absolute conclusion. It is reasonable to assume the market would consider something slightly more per acre for the subject tract. This would indicate a slight upward adjustment to the sale.

Topography and Utility of surface: Physical preparation of the sale and subject would be fairly similar, however, the cost of preparation due to location would be less on the sale and year-round use is more probable on the sale property. This indicates a downward adjustment to the sale.

The overall comparison of sale #4 to the subject property indicates that the sale is superior in location, access and topography and utility of surface indicating a sizeable downward adjustment. The sales size being slightly inferior indicating a slight plus adjustment to the sale. After adjustments, it is considered that sale #4 indicates about \$105 per acre for the subject property.

CORRELATION AND FINAL ESTIMATE OF VALUE ASRC TRACT 2

There are no direct utilities available to any of the sales or subject property, therefore, no adjustments were made. The sub-surface rights for minerals are available to the sales if any exist, except sale No. 4, and the subject property. This has been considered in the overall adjustments of the sales.

The sales used are considered by this appraiser the best information available for comparison.

The sales indicate a fairly close range from \$105 to \$125 per acre for the subject property.

Based on the foregoing data, after studying, comparing, and analyzing all the comparable sales as well as all other information available, it is the considered opinion of this appraiser that the estimated market value of the surface of the subject property, known as ASRC TRACT 2 is \$70,500, or \$110 per acre.

Sales Comparison to ASRC TRACT 3 (582 acres)

Sale # 1: 318.56 acres. Time adjusted indicates \$179 per acre.

Location: The sale is considered to have a superior location weather-wise and for possible year-round activities and uses indicating a downward adjustment.

Access: Actual access to the subject is inferior to the sale due to no on-site air landing except by helicopter. This indicates a downward adjustment.

Size: Both within a reasonable range and no adjustment required.

Topography and Utility of Surface: The general topography of the sale and the subject is fairly similar as well as the utility of surface. This indicates no adjustment to the sale is necessary.

In the overall comparison I find that downward adjustments are indicated to the sale for location and access. In my opinion, this would indicate about \$110 per acre for the subject.

Sale No. 2: 505 acres. Time adjusted indicates \$200 per acre.

Location: The sale is superior in location to the subject due to distance from Nome, Alaska. This indicates a large downward adjustment to sale.

Access: The sale is far superior in access due to road access. This indicates a large downward adjustment.

Size: The size is considered to be similar and no adjustment necessary.

Topography and utility of surface: The sale is considered superior due to cost of site preparation because of the distance from Nome, Alaska, and the topography of subject similar indicating a downward adjustment to the sale.

The overall comparison of sale #2 to the subject indicates that downward adjustments are required on all factors except size. It is my considered opinion that the sale indicates about \$120 per acre for the subject property.

Sale #3: 214.56 acres. Time adjusted indicates \$173 per acre.

Location: The location of the sale is considered somewhat superior to the subject due to the sales, interior climate zone indicating a downward adjustment.

Access: The actual physical access of the sale is considered superior to the subject property indicating a downward adjustment is necessary.

Size: The size is considered to be within a reasonable range, but the sale is considered slightly superior.

Topography and Utility of surface: The utility of surface is considered slightly superior to the subject property because of subject's ratio of useable land to the whole property. The subject has the John River traversing across it. The topography is similar.

In the overall comparison, I find that the sales access, location, size, and utility of surface is superior to the subject. It is my opinion that the sale indicates about \$125 per acre for the subject property.

Sale #4: 2,053.71 acres. Time adjusted indicates \$175 per acre.

Location: The sale has a slightly superior climate and is far superior in location being located just out of Nome, Alaska, and indicates a downward adjustment.

Access: The sale has direct road access indicating a substantial downward adjustment to the sale in comparison to subject's access.

Size: The sale has 2,053 acres, more or less, while the subject has only 582 acres. It is reasonable to assume the market would be considered something slightly more per acre for the subject.

Topography and Utility of surface: The sales topography is similar to the subject property. The cost of preparation due to location would be less on the sale and year-round use is more probable on the sale property. This indicates a downward adjustment to the sale.

The overall comparison of sale #4 to the subject property indicates that the sale is superior in location, access and utility of surface indicating a downward adjustment. The subject is slightly superior in size indicating an upward adjustment. After adjustment it is considered that sale #4 indicates about \$115 per acre for the subject property.

CORRELATION AND FINAL ESTIMATE OF VALUE FOR ASRC TRACT 3

There are no direct utilities available to any of the sales or subject property, therefore, no adjustments were made. The subsurface rights for minerals are available to the sales if any exist, except sale No. 4, and the subject property. The sub-surface rights of the sales and subject have been considered in the overall final estimated market value.

The sales used are considered by this appraiser the best information available for comparison.

The sales indicate a fairly close range from \$110 to \$125 per acre for the subject property.

Based on the foregoing data, after studying, comparing, and analyzing all the comparable sales as well as all other information available, it is the considered opinion of this appraiser that the estimated market value of the surface of the subject property, known as ASRC TRACT 3 is \$67,000, or \$115 per acre.

Sales Comparison to ASRC TRACT 4 (43,403 acres)

Sale # 1: 318.56 acres. Time adjusted indicates \$179 per acre.

Location: The sale is considered to have a superior location weather-wise and for possible year-round activities and uses indicating a downward adjustment.

Access: Actual access to the subject is inferior to the sale due to no on-site air landing except by helicopter. This indicates a downward adjustment.

Size: The sale property is considered to be far superior to the subject in size.

Topography and Utility of Surface: The general topography of the subject property is 75% plus mountainous which would be substantially inferior to the sales topography and utility of surface and indicates a great downward adjustment.

In the overall comparison I find downward adjustments are indicated to the sale for all factors. In my opinion, this would indicate about \$25 per acre for the subject.

Sale No. 2: 505 acres. Time adjusted indicates \$200 per acre.

Location: The sale is superior in location to the subject due to distance from Nome, Alaska. This indicates a large downward adjustment to sale.

Access: The sale is far superior in access due to road access. This indicates a large downward adjustment.

Size: The size is considered to be superior and a downward adjustment is necessary.

Topography and utility of surface: The sale is considered superior due to cost of site preparation because of the distance from Nome, Alaska, and the topography of subject is inferior indicating a downward adjustment to the sale.

The overall comparison of sale #2 to the subject indicates that downward adjustments are required on all factors. It is my considered opinion that the sale indicates about \$25 per acre for the subject property.

Sale #3: 214.56 acres. Time adjusted indicates \$173 per acre.

Location: The location of the sale is considered somewhat superior to the subject due to the sales, interior climate zone indicating a downward adjustment.

Access: The actual physical access of the sale is considered superior to the subject property indicating a downward adjustment is necessary.

Size: The sales size is considered to be substantially superior indicating a downward adjustment to the sale.

Topography and Utility of surface: The utility of surface is considered superior to the subject property because of subject's ratio of useable land to the whole property. The subject is 75% plus mountainous.

In the overall comparison, I find that the sales access, location, size, topography, and utility of surface is superior to the subject. It is my opinion that the sale indicates about \$35 per acre for the subject property.

Sale #4: 2,053.71 acres. Time adjusted indicates \$175 per acre.

Location: The sale has a slightly superior climate and is far superior in location being located just out of Nome, Alaska, and indicates a downward adjustment.

Access: The sale has direct road access indicating a substantial downward adjustment to the sale in comparison to subject's access.

Size: The sale has 2,053 acres, more or less, while the subject has 43,403 acres. This indicates a downward adjustment to the sale.

Topography and Utility of surface: The sales topography is superior to the subject property. The cost of preparation due to location would be less on the sale and year-round use is more probable on the sale property. Also, the subject is very mountainous. This indicates a downward adjustment to the sale.

The overall comparison of sale #4 to the subject property indicates that the sale is superior in all factors indicating a downward adjustment. After adjustments, it is considered that sale #4 indicates about \$30 per acre for the subject property.

CORRELATION AND FINAL ESTIMATE OF VALUE FOR ASRC TRACT 4

There are no direct utilities available to any of the sales or subject property, therefore, no adjustments were made. The subsurface rights for minerals are available to the sales if any exist, except sale No. 4, and the subject property. The sub-surface rights of the sales and subject have been considered in the overall final estimated market value.

The sales used are considered by this appraiser the best information available for comparison.

The sales indicate a fairly close range from \$25 to \$35 per acre for the subject property.

Based on the foregoing data, after studying, comparing, and analyzing all the comparable sales as well as all other information available, it is the considered opinion of this appraiser that the estimated market value of the surface of the subject property, known as ASRC TRACT 4 is \$1,302,000, or \$30 per acre.

SALE NO. 1

Location: Head of Utak Bay on Kodiak Island and in the Maritime Climate Zone of southern Alaska

Legal Description: NW 1/4 NW 1/4 Section 5, NE 1/4 NE 1/4 Section 6, Township 34 South, SE 1/4 SE 1/4, N 1/2 SE 1/4, NE 1/4 SW 1/4 and lots 4, 5 and 6, Section 31, Township 33 South, all in Range 27 West, Seward Meridian

Grantor: Ulah M. Leininger

Instrument: Deed

Grantee: Jeffery Porelite, Thomas Truitt,
Terence Barker and Eric Sprade

Book/Page: 23/951

Sale Price: \$40,000

Date of Sale: 2/19/76

Terms: \$500 with agreement
\$7,500 on acceptance of
deed & \$32,000 in 30 days

Assessments: None

Size: 318.56 acres

Zoning: None

Shape: Irregular

Use: vacant at time
of sale

Anticipated Use: Recreational--to sell off possibly some acreage
building sites

Access: Via boat or float plane. Ground access would be extremely
difficult

Utilities: None

Easements/Restrictions: None

Confirmed with: Eric Sprade and G. McWilliams, an appraiser with BLM

Property Description: This tract is variable from sloping to steep with marsh-type vegetation to high brush and is located on the Utak Bay with water frontage.

Analysis: \$40,000 div. by 318.56 acres = \$126 per acre

SALE NO. 2

Location: Approximately 40 miles northeast of Nome on the Casadepaga River and part is 6 miles northwest of Nome on the Snake River

Legal Description: U.S.M.S. 1281 bounded by Quartz Creek on the west and Dixon Creek on the East, Township 7 South, Range 28 West, Katelle River Meridian

Grantor: Billy Smith Instrument: Deed of Trust

Grantee: Casa Six Book/Page: N/A
(Mick Killion/General Partner)

Sale Price: \$80,000 Date of Sale: 11/79

Terms: \$25,000 down payment D/T: \$55,000 - payable
in 5 years

Shape: Irregular Zoning: None

Size: 505 acres Use: vacant at time
of sale

Anticipated Use: Buyer acquired property for mineral development
and possible resale for recreational uses

Access: air, river, or road Assessments: None
access during summer months

Utilities: None Easements/Restrictions: None

Confirmed with: Billy Smith

Property Description: The large tract of about 400 acres is relatively remote with approximately 2-1/2 miles of river running across it. There are areas of wet ground due to the rivers. Based on discussions with Billy Smith and investigation by George Moerlein, a consulting geologist, a good portion of the value was contributed by the strong possibility of placer value. The smaller tract of about 105 acres is only about 6 miles northwest of Nome and has the Snake River running through it. Both tracts have potential for recreational building sites, especially the smaller tract.

Analysis: \$80,000 div. by 505 acres = \$158 per acre


ESTIMATED MARKET VALUE SUMMARY OF THE 4 TRACTS

	<u>Acres</u>	<u>Total Value</u>
ASRC TRACT 1	55,274	\$3,593,000
ASRC TRACT 2	640	70,500
ASRC TRACT 3	582	67,000
ASRC TRACT 4	<u>43,403</u>	<u>1,302,000</u>
Overall Totals	99,899	\$5,032,500

APPRAISER'S CERTIFICATION

The undersigned does hereby certify that:

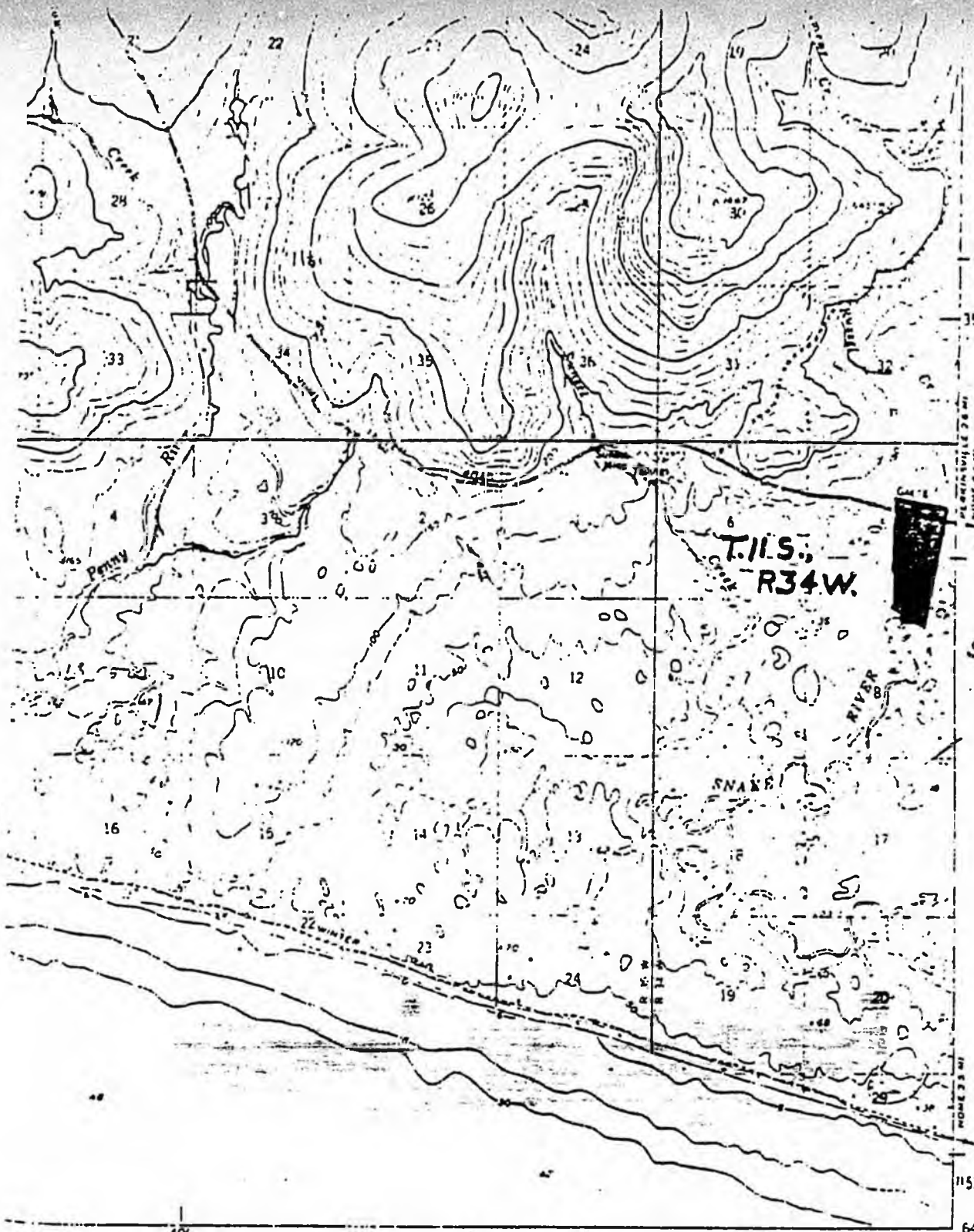
1. I have no present or contemplated interest in the real estate which is the subject of this appraisal report.
2. I have no personal interest or bias with respect to the subject matter of the report or the parties involved.
3. The appraisal report has been made in accordance with the "Uniform Appraisal Standards for Federal Land Acquisition."
4. I personally and thoroughly inspected the subject property by air under winter conditions on 3/1/83.
5. The value conclusions presented in this report is the opinion of the appraiser and none other.



Rex E. Daugherty
Chief Appraiser
Pacific Northwest Region

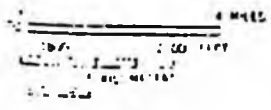
ADDENDA



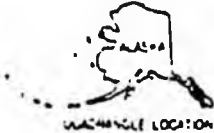


Ptn. of
Sale 27

See - T. 75.,
 R. 28. W. for
 other ptn of
 sale.



ROAD CLASSIFICATION
 Light-duty ————— Unimproved dirt



NOME (C-2). ALASKA
 N6430-716530/15x30

1950
 MAP 11-24 (17)

GINIA 22092
 4151

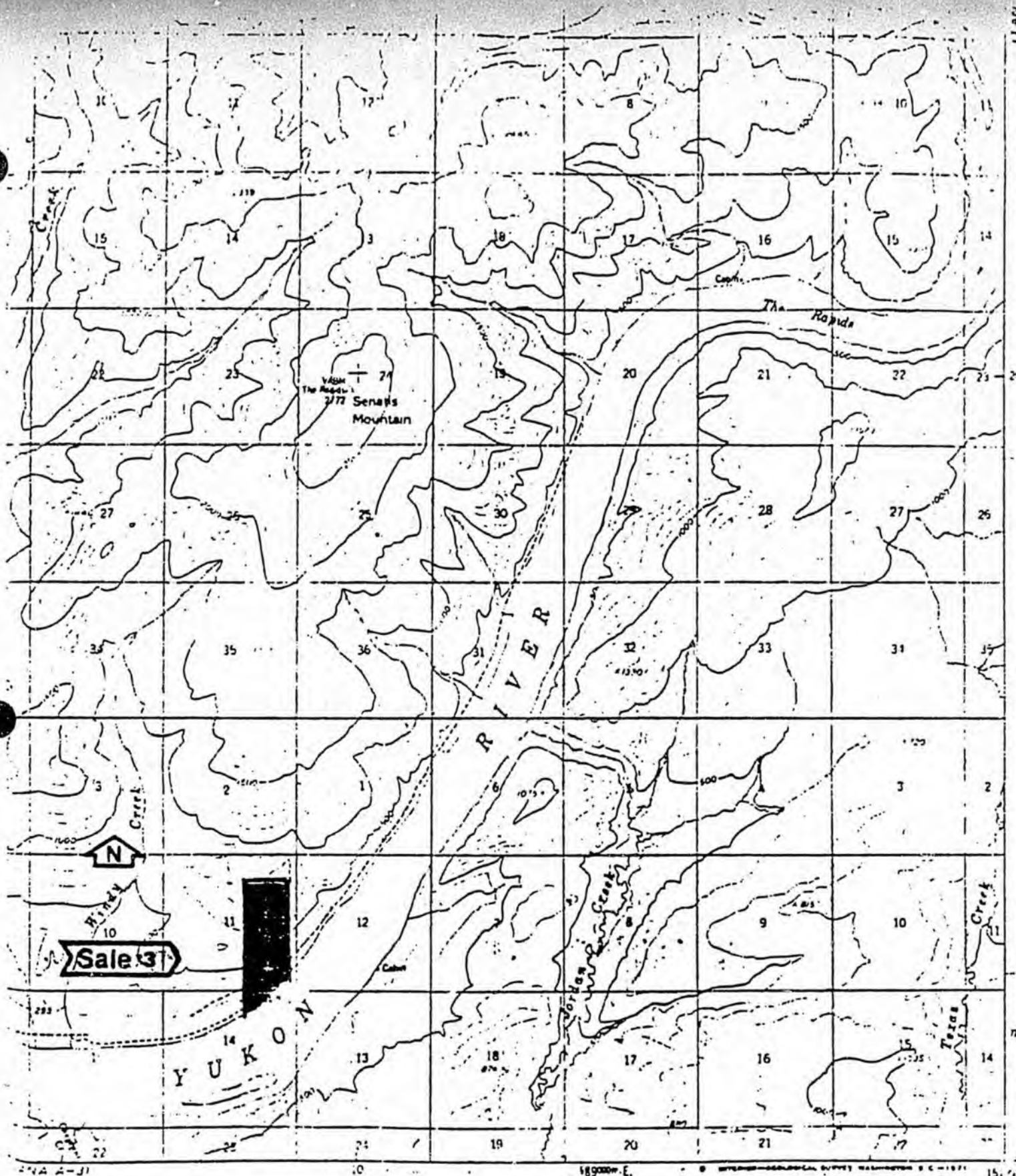
1153000 N

475000 E

64°30'

165°30'

(NOME B-1)



View
The Road to
777 Sena's
Mountain

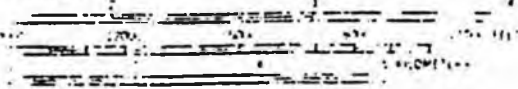
N
Sale 3

YUKON

RIVER

The Road

62360 1890000 E. 77390



SCALE 100 FEET
TO SEA LEVEL

ROAD CLASSIFICATION
Trails

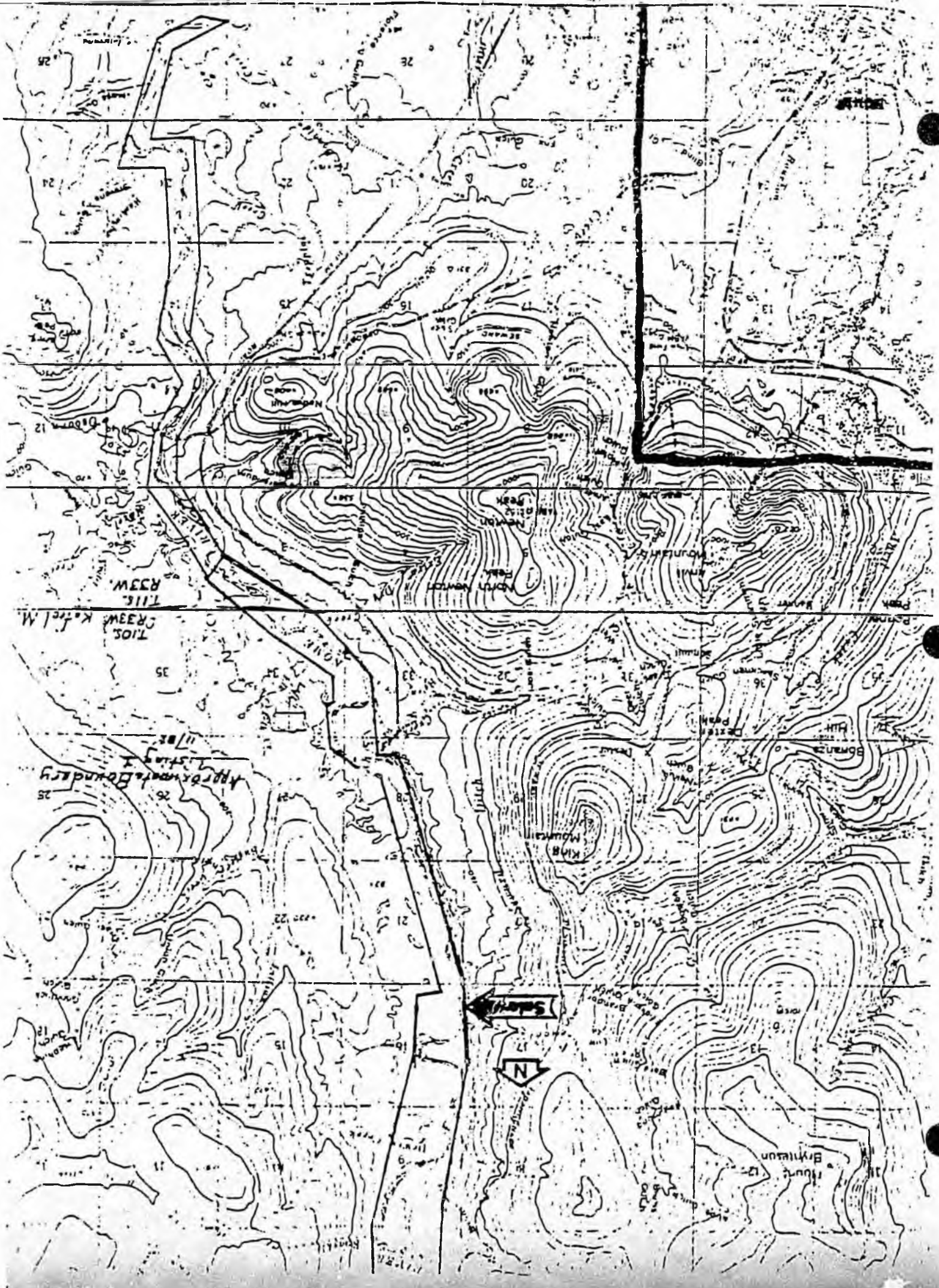


QUADRANGLE LOCATION

TANANA (B-3), ALASKA
N6515-415100/15230

1956
GEOLOGICAL SURVEY

GEOLOGICAL SURVEY
WASH DC 20242
AND SYMBOLS IS AVAILABLE ON REQUEST



T105
CRAW K. J. M.

T116
R33W

Approximate Boundary

Slope

N

40 miles NE of Nome

400 acre part

Looking Northerly



40 miles NE of Nome

400 acre part

Looking Easterly

6 miles NW of Nome

105 acre part

Looking Northerly
on Snake River



SALE NO. 3

Location: Old Jordon Homestead, north side of Yukon River below the T.A.P.S. Bridge. About 160 air miles westerly of Fairbanks

Legal Description: U.S.S. 1471, Township 5 North, Range 18 West, Fairbanks Meridian

Grantor: Jim Smith (Rampart Investment Corporation)

Instrument: Purchase of Corp.

Grantee: Joseph Vogler

Book/Page: not recorded as a land sale

Sale Price: \$30,000

Date of Sale: 6/78

Terms: property was purchased by obtaining all the outstanding stock in a corporation. The number of outstanding stock for the \$30,000 was not obtained

Assessments: None

Size: 214.56 acres

Zoning: None

Shape: Rectangular

Use: vacant at time of sale

Anticipated Use: Could be used for recreational subdivided acreage sites

Access: Via float plane and foot trails. No year-round roads or seasonal roads are near property.

Utilities: None

Easements/Restrictions: None

Confirmed with: Joseph Vogler

Property Description: The property is on a bluff about 50 feet above the river but has accessible areas to reach the 1/2 mile of river frontage. It has undulating topography and generally slopes toward the river with some fairly level areas. This parcel is located in the Interior Climate Zone

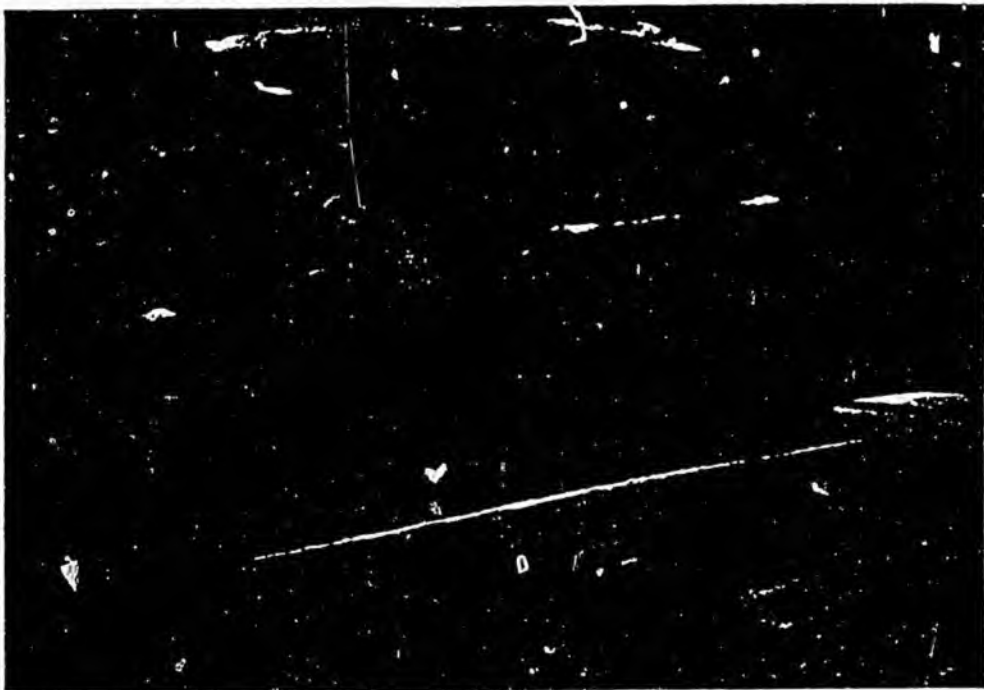
Analysis: \$30,000 div. by 214.56 acres = \$139.82 per acre

S A L E N O 3

Date Taken: 3/1/83

Yukon River
in foreground

Looking Northerly



Yukon River
in background

Looking Southerly



SALE NO. 4

Location: Approximately 8 miles northeast of Nome on the Nome River

Legal Description: Easterly portion of U.S.M.S. 498, 499, 500, 1110, 1118, 1119, 1120, 1140, 1161, 1285, and 1286.
(T10&11S, R33W, Katoel River Meridian)

Grantor: Robert Ackor
P.O. Box 217 - Mt. Dora, FL
Instrument: Statutory
Quitclaim Deed

Grantee: Nome 2000, AK. Limited partner-
ship, P.O. Box 195, Fairbanks, AK
Book/Page: 303/138

Sale Price: \$350,000
Date of Sale: 10/22/82

Terms: \$10,000 down - \$65,000 at closing. 11% interest, \$3,000/month, increase to \$4,500/month on 25th month & \$5,000/month on 37th month. On 7th month and 13th month after closing, a \$10,000 balloon payment will be made

Shape: Irregular
Zoning: None

Size: 2,053.71 acres
Use: vacant at time
of sale

Anticipated Use: Subdividing acreages for building sites

Access: via Kougerak Road & Beam
Road out of Nome, AK
Assessments: None

Utilities: None
Easements/Restrictions: Grantor
has reserved all mineral rights

Confirmed with: Bob Bean/Realtor in Nome, AK

Property Description: The property involves patented mining claims on Nome River which bisects the property. Approximately 50% of the site is useable. The remainder consists of some wet and low-lying ground. Access is good to about 1/2 of the property. George Moerlein, consulting geologist, places a very low possibility of placer value on this acreage. The property is located in the Western Climate Zone.

Analysis: \$350,000 div. by 2,057.71 acres = \$170.50 per acre

5 1/2 miles E
of Nome

Southerly end of sale

Looking Northerly



About middle of
sale

old, abandoned
dredge

other homesites
not on sale

Looking Westerly

Bridge about 1/4 mile
NW of sale

Looking Southwesterly



QUALIFICATIONS OF APPRAISER

REX E. DAUGHERTY
Chief Appraiser, PNR, NPS

Appraisal Training

Two week concentrated course in the "Appraisal of Real Property," sponsored by the Montana State Highway Commission, March 1961

AIREA Course I, "Basic Appraisal," University of Missouri, Columbia, Missouri, two weeks - August 1967

AIREA Course IA, "Basic Appraisal," Seattle Pacific College, Seattle, Washington, two weeks - July 1974

Appraisal Experience

May 1953 to May 1957 (4 years), appraiser for Doane Agricultural and Appraisal Service. Appraisals included residential, commercial and farm properties for tax assessment.

May 1957 to December 1957 (8 months), appraiser for Linn County Assessor, Cedar Rapids, Iowa. Appraisals of residential property for tax assessment purposes.

October 1960 to August 1962 (1 year, 11 months), appraiser for Montana State Highway Commission, Billings, Montana. Appraisals included ranch, farm, and commercial properties. Also qualified as expert witness in condemnation cases.

August 1962 to June 1970 (7 years, 10 months), appraiser for U.S. Army Corps of Engineers in the states of Montana, Missouri, Iowa, and New Mexico. Appraisals included farm, ranch, residential, recreational acreage, and commercial properties. Also qualified as expert witness in condemnation cases.

June 1970 to February 1972 (1 year, 8 months), appraiser for Department of Housing and Urban Development, FHA, Spokane, Washington. Appraisals of residential properties.

February 1972 to present, Chief Appraiser for National Park Service. Appraisals included residential, recreational, commercial, farm, timber lands, and legislative land cost estimates; also, the total review and approval of all types of properties of staff and fee appraisers. Assisted U.S. Attorney's office in condemnation cases. Areas included in appraisal assignments include Washington, Oregon, Idaho, Alaska and Florida.



United States Department of the Interior

IN REPLY REFER TO

9300 (940)

BUREAU OF LAND MANAGEMENT

Alaska State Office
701 C Street, Box 13
Anchorage, Alaska 99513

AUG 4 1983

Memorandum

To: Director (311)
From: State Director, Alaska
Subject: Kaktovik Exchange Valuation Report

Subject report is attached as per your request. Please contact Ben Olson,
State Appraiser if you have further questions.

Enclosures (1)
Encl. 1 - Kaktovik Report

Kaktovik Subsurface Valuation Report

Background

As a step in estimating the value of the Kaktovik lands, the Division of Minerals provided an estimate of the fair market value of the mineral resources within the Kaktovik lands. That value, \$388,522,450, was determined by analyzing a set of comparable sales to determine the expected bonuses and by doing a discounted cash flow analysis to estimate the government's share of production revenues (royalties). The government's interest in those mineral resources is limited by law. The government may never be able to capture fair market value because of these legal contingencies. To determine the value to the federal government of the Kaktovik lands, a three step contingency adjustment process was employed. That process is discussed below.

Process

The first step in determining the value of the government's interest in Kaktovik minerals is shown in Table One. The calculations in this table speak to the fact that the federal government does not receive the total fair market value of the minerals it sells. In Alaska, depending on which of several laws apply, the federal government either receives only ten or receives fifty percent of the value of bonuses and royalties. Congress has not yet stated which of these revenue sharing approaches would apply if federal lands in the Arctic National Wildlife Refuge were leased. At the present time, Alaska, under the Statehood Act is entitled to 90 percent of the reserves if minerals are leased under the Mineral Leasing Act. Therefore, Table One assumes that both approaches are likely, however, because of the existing laws it is calculated that the 10/90 split has a greater probability of occurring. A probability factor of 85 percent is assigned to the 10/90 split occurring and 15 percent probability that the 50/50 split would occur.

Table One
Estimating the Federal Interest

<u>Fair Market Value</u>	<u>Revenue Allocating System</u>	<u>Federal Share</u>	<u>Weighting Factor*</u>	<u>Weighted Value*</u>
\$388,522,450	50/50	\$194,261,225	.15	\$29,139,183
	10/90	38,852,245	.85	<u>33,024,408</u>
Expected Oil Value -				\$62,163,591
Expected Gravel Value -				<u>7,018,000*</u>
TOTAL				<u>\$69,181,091</u>

*The analysis of the resource value of possible gravel deposits proceeded in four steps. First, the likely abundance of gravel was estimated. Second, the value (price times quantity) based on comparable sales was developed. Third, the estimated value was inflated to year-of-sale dollars (based on the assumption that the highest and best use of the gravel was to support future oil and gas and/or village development). Finally, these future cash flows were discounted back to the net present worth shown in the table.

Table One indicates that the federal interest in the Kaktovik minerals approximates at most, \$62,163,591 of expected value. Table Two adjusts the Table One value to reflect the fact that Congress may be unwilling to allow oil production in ANWR because of its important environmental amenities. If Congress refused to allow oil development, then the oil and gas leases could not be marketed and would, in fact, be valueless. Again, lacking clear indications of Congressional intent we must assume that closure of ANWR has a probability of .5 and opening also has an equal probability.

Table Two
Adjusting for ANWR Closure

<u>State of Nature</u>	<u>Value of Federal Interest</u>	<u>Probability</u>	<u>Expected Values</u>
ANWR Open	\$69,181,591	.50	\$34,590,795.5
ANWR Closed	0	.50	0
			<u>\$34,590,795.5</u>

Finally, the Arctic Slope Regional Corporation has a right to claim the Kaktovik lands at some future date under separate ANILCA exchange provisions (Section 1431(0)). Thus, the government must adjust the \$31,081,795 figure to reflect the fact that the government may have to exchange the Kaktovik subsurface eventually under ANILCA 1431(0) if the lands are not exchanged for Chandler Lake surface. Section 1431(0) of the Alaska National Interest Lands Conservation Act (ANILCA) sets forth some practical limitations on the government's interest in the Kaktovik minerals. That section gives ASRC an option to acquire the Kaktovik subsurface at any time within five years of a decision by Congress to open ANWR to commercial development. Should ASRC exercise the 1431(0) option, then the government would forego title to the Kaktovik minerals in exchange, on an acre-for-acre basis for in lieu subsurface lands which it selected pursuant to section 12(a)(1) of the Alaska Native Claims Settlement Act. The government should adjust its subjective evaluation of the current worth of the Kaktovik minerals to reflect the fact that it may, under 1431(0), pass title to those minerals to ASRC at some future date. If it does not do so under the pending exchange, the only approach for this adjustment process was to multiply the government's share of the Kaktovik minerals times the probability that the minerals would remain in Federal ownership. To do this,

it is necessary to consider the probabilities of three separate events and then multiply them together to estimate the joint probability of all three occurring (more correctly, the conditional probability that event C will occur, given event B had occurred, given event A had occurred). Those three events are (a) that Congress will not alter, restrict, or withdraw ASRC's 1431(0) option, (b) that ASRC will choose to exercise its 1431(0) option, and (c) that the Kaktovik Village Corporation will concur in the exercise of the option. The probability that Congress will not abridge ASRC's option was set at .94 because of the 14 substantive sections of ANILCA as passed into law in December of 1980, Congress has only attempted to revise one section (hunting on the National Preserve) for a probability of .06 (1/14) any Congressional revision(s). The probability that ASRC would exercise its 1431(0) option was set at .99 (99 chances in 100 that ASRC would exercise the option); 1 chance in 100 was reserved for the fact that nothing is certain about the future. To say that there were 100 chances in 100 that ASRC would exercise the option would be to argue that ASRC must do so and the law does not require an exchange. The probability that the Kaktovik Village Corporation would concur was set at 90 percent because Kaktovik has stated, in a letter to the Secretary, that they support the proposed exchange. There is a small possibility of Kaktovik changing its mind and not concurring. The joint probability of all three events occurring was, therefore, set at .84 (.94 x .99 x .90).

Table Three
Outcome When Either (A) the Chandler Lake Exchange had
not Occurred Subsequently ASRC Exchanges Under 1431(0) or (B) ASRC had
not Exchange for Chandler Lake and is Unable to Exchange Under 1431(0).

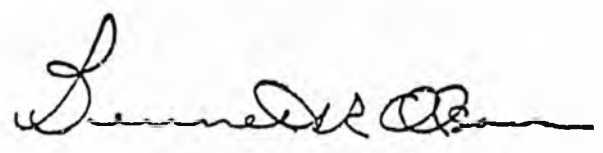
<u>Outcome</u>	<u>Value of this outcome States of Nature</u>	<u>Probability This Outcome</u>	<u>Expected Value</u>
No Chandler Lake Exchange and No 1431(o) Exchange; Therefore, Kaktovik Lands Retained by the Federal Government	\$34,590,795.5	.16	\$5,534,527.28
1431(o) Exchange; Takes Place and Other Subsurface is Acquired by the Federal Government	464,430.8*	.84	391,121.87
			<u>\$5,924,649.15</u>

*Assumes that the federal government acquired 92,000 acres of subsurface from ASRC under Section 1431(0). This further assumes that the acquired acreage is offered in 1986 at a noncompetitive sale in 640 acre tracts earning, at a \$75.00 filing fee per tract, \$10,800 for the 144 tracts with a present worth of \$7,376.40 at 10 percent discount. This figure includes a 10 year lease at \$100 per acre per year with a 10 percent discount rate.

This valuation considers approximately 300 acres of Kaktovik townsite subsurface and 1600 acres of subsurface beneath Native allotments in the exchange area.

Conclusion

Based on the analysis presented above, we estimate the value of the federal interest in the Kaktovik land to be \$5,924,649.15 (1983 dollars).



Bennett R. Olson
Chief State Appraiser

FIGURE USING BONUS ONLY

Valuation Using Bonus Only

Values adjusted by same process as shown in the three-step process of the report.

\$111,855,000.00	\$55,927,500.00	\$ 8,389,125.00
	11,185,500.00	<u>9,507,675.00</u>
		\$17,896,800.00
\$17,896,800.00	.50	\$12,457,400.00
<u>7,018,000.00</u>		
\$24,914,800.00		
\$12,457,400.00	.16	\$1,993,184.00
\$464,430.80	.84	<u>\$390,121.87</u>
		<u>\$2,383,305.87</u>



United States Department of the Interior

9380 (010)

BUREAU OF LAND MANAGEMENT

Anchorage District Office
4700 East 72nd Avenue
Anchorage, Alaska 99507

IN REPLY
REFER TO:

August 3, 1983

Memorandum

To: State Director (940)

From: District Manager

Subject: Kaktovik Inupiat Corporation Exchange Lands - Errors in Calculation of Subsurface Value

We have noted several arithmetic errors in the calculation of royalty value furnished to you on July 25. Also, the earlier calculation did not take into account the fact that the land would not be available for leasing prior to 1987 under terms of ANILCA. Assuming a 10-year delay between lease acquisition and first production, the royalty income would be delayed 14 years from the present. This results in a considerable reduction in the estimate of royalty value, which is only partially offset by the inflation in oil prices.

The corrected value is as follows:

Bonus bid value (Enclosure 3 of July 25 memorandum)	=	111,855,000
Royalty value (See enclosed calculation)	=	<u>276,667,450</u>
		388,522,450

Richard J. Vermeil
District Manager
Acting

Enclosure

ESTIMATED ROYALTY VALUE - KAKTOVIK INUPIAT CORPORATION EXCHANGE LANDS

Assumptions for Royalty Calculation:

Reserve Base:	570 Million Barrels (Bascle, 07/15/83)
Recovery Factor:	0.31
Recoverable Reserves:	177 Million Barrels
Oil Price, 1983:	\$17/BBL
Oil Price Inflation Rate:	0.065 -
Discount Rate:	0.09 -
Earliest Availability for Leasing:	1987
First Production:	1997 (10-year Delay)
Peak Production:	1998-2002
Abandonment:	2015

<u>Year</u>	<u>Oil Price</u>	<u>Production</u>	<u>Royalty Production</u>	<u>DCF to Government</u>
1997	\$ 41.03	11,151,000	1,858,871	20,691,909
1998	43.70	14,868,001	2,478,495	26,850,106
1999	46.54	14,868,001	2,478,495	26,138,119
2000	49.57	14,868,001	2,478,495	25,444,098
2001	52.79	14,868,001	2,478,495	24,767,965
2002	56.22	14,868,001	2,478,495	24,105,991
2003	59.87	13,098,000	2,183,436	20,667,198
2004	63.76	11,328,000	1,888,377	17,518,624
2005	67.90	10,089,000	1,681,836	15,073,960
2006	72.31	9,027,000	1,504,800	13,133,618
2007	77.01	7,965,000	1,327,765	11,278,305
2008	82.02	7,079,999	1,180,235	9,777,090
2009	87.35	6,372,000	1,062,212	8,536,148
2010	93.03	5,664,000	944,188	7,378,376
2011	99.07	5,133,000	855,671	6,527,392
2012	105.51	4,602,000	767,153	5,665,962
2013	112.36	4,071,000	678,635	4,880,091
2014	119.66	3,717,000	619,623	4,374,501
2015	127.44	3,363,000	560,612	3,857,997
		177,700,004	29,505,889	276,667,450



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Anchorage District Office
4700 East 72nd Avenue
Anchorage, Alaska 99507

IN REPLY REFER TO

9380 (015)

COPY

Memorandum

To: State Director (940)

From: District Manager, Anchorage District Office (015)

Subject: Appraisal of Assumed Gravel Resources, Kaktovik Inupiat Corporation (K.I.C.) Exchange Lands

Enclosed is an appraisal of gravel resources of the subject lands by Robert Bascle of the District Minerals staff. Please note the disclaimer in paragraph one, regarding the lack of information on the existence of gravel in the area, to say nothing of the volume or quality.

As in the case of subsurface data on the oil and gas resource, more definitive information on the gravel resources of the coastal plain of the Arctic National Wildlife Refuge should be forthcoming as a result of the ANILCA Sec. 1002(h) studies.

The District Minerals Division plans to have a geologic field party in the section 1002 study area during the latter part of this month. A cursory examination of possible gravel deposits could be included in this program, but any such activity on the KIC lands would probably require permission from the village or regional corporation. In any case, the primary objective of this years field work is to examine and sample bedrock outcrops for hydrocarbon source and reservoir properties, and the time available for examination of surficial deposits would be limited.

Enclosure



United States Department of the Interior

9380 (015)

BUREAU OF LAND MANAGEMENT

Anchorage District Office
Division of Mineral Resources
411 West 4th Avenue, Suite 2A
Anchorage, Alaska 99501

AUG 02 1983

IN REPLY
REFER TO

Memorandum

To: Assistant District Manager for Mineral Resources

From: Robert Bascle, Geologist, Branch of Resource Evaluations

Subject: Gravel Appraisal Report, Proposed Exchange with Kaktovik Inupiat Corporation

The existence of mineable gravel deposits in the proposed exchange area is unknown. The only apparent gravel deposits are the offshore barrier islands and the beds of the rivers flowing through the proposed exchange area. Knowledge of the existence of deposits other than these would require on-site field examinations to first identify the deposits. This examination would then have to be followed by a drilling and trenching (probably with a bulldozer) program to measure the quantity and quality of gravel present. Once the deposits have been identified and measured, the value would then depend upon the existence of a market for the gravel. Possible markets include the construction of roads, the development of building sites, airfields, docks, and drill pads if the area is opened to oil and gas exploration.

Use of the gravel from the barrier islands and/or river beds would require political decisions and the changing or reinterpretation of regulations. The North Slope Borough Coastal Zone Management Plan (part 5-5.6) "prohibits the mining of beaches, barrier islands, or offshore shoals unless no alternatives exist for extraction of the resource. In those circumstances, substantial alteration of shoreline dynamics is prohibited."

As pointed out by this office in the resource appraisal for the proposed exchange in the Barrow area, the value of North Slope gravel deposits is a matter of speculation. Roberts and Tremont, in Minerals Management Service Technical Paper 7, of October 1982, estimated the cost of moving fill in the Beaufort Sea as varying between \$15 and \$20 per cubic yard. This, however, does not establish a value on in situ gravel. The nearest gravel appraisal is at Prudhoe Bay. Leland P. James, a professional appraiser, in a report for the State of Alaska Department of Natural Resources, estimated the in-place value for the first user-developer at \$.25 per cubic yard. As for the total value of the gravel in the Kaktovik area, I do not know how much is there nor how much would be allowed to be removed.

Based on U.S. Geological Survey topographic maps, I estimate about 3,400 acres could be underlain by gravel deposits in the firmly established exchange area. In addition, up to about 2,400 acres of gravel deposits could underlie the additional, unspecified township to which the Kaktovik Inupiat Corporation

is entitled. As a hypothetical case, if the top 3 feet of gravel were removed in these areas, at 25 cents per cubic yard, they could be worth about \$4,114,000 and up to \$2,904,000, respectively.

This appraisal is based on the unverified assumption than mineable gravel is present. Undoubtedly, this will be challenged. The alternative, however, is to assume no value simply because there is no information available to determine value. We think that neither approach is justified.

Robert J Bascle

Robert J. Bascle

FEB 12 1987

Memorandum

To: DSD (980)

From: J. E. Callahan

Subject: Tract Evaluation Review Process - ANWR Coastal Plain

I have listed below a few questions that might be appropriate for the Review Panel to consider. It might be worthwhile to get some responses on the record.

1. Would you use the values from this analysis as the basis for acceptance or rejection of bids in a competitive lease sale?
2. If not, why do you feel that a different type of analysis (and different values) are appropriate for this land exchange evaluation, as opposed to a normal lease-sale situation?
3. Given the current level of knowledge about the 1002 area, how would you proceed in evaluating tracts for a competitive lease sale? That is, what would you do differently from the process currently under review?
4. Do you feel that it would be in the interests of the State of Alaska to understate the resource potential of the 1002 area?
5. What do you think of the State's area and conditional deposit probabilities? Do you think they apply to the minimum possible resource levels? Is the State wrong, too, in this respect?
6. Do you agree or disagree with the State's comments on the adequacy of data for a tract evaluation at this time (see enclosure 1)?
7. If you agree with State's comments about data adequacy, do you believe that the levels of certainty implied by the risk factors used in the analysis under review are appropriate?
8. Having reviewed the analyses and assumptions, in what category would you place prospects in the 1002 area, using the qualitative criteria used in the Gulf of Mexico OCS, assuming the Ellesmerian section is the "productive trend"? (See enclosure 2). Should ANWR prospects be risked at the same level as drainage or development tracts?

9. If you believe that the Gulf of Mexico criteria are inappropriate for the area under review, could you provide some reasons, and possible alternatives?
10. What do you think the National Academy of Sciences means by a "significant field" (see enclosure 3)? How should that be defined for the 1002 area?
11. How should a "significant field" be risked? Would the Gulf of Mexico criteria be appropriate, once a "significant field" has been defined?
12. Do you believe that it would be worthwhile to review one or two prospects a little more detail, possibly to define some realistic minimum volumetric parameters that would be consistent with a producible oil field on the north slope, while still remaining within the existing ranges of values?

If comments on the draft 1002 report indicate a legitimate technical (not political) reason for re-examining the resource estimates, some well thought out answers to the above questions might be useful for that purpose as well as the tract evaluation.

/s/ Jim Callahan

cc: Kareia
Schrott
Horton
Berman
McHullin
SD
Henge
Broughan

**THE ARCTIC
NATIONAL WILDLIFE REFUGE
COASTAL PLAIN:
A PERSPECTIVE
FOR THE FUTURE**

**MARCH
1987**

A Report to the United States Congress



**National Wildlife Federation
1412 Sixteenth Street, N.W.
Washington, D.C. 20036-2266**




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RECEIVED

MAR 20 1987

Alaska Oil & Gas Corp. C. - 100000
Anchorage

SUMMARY OF REPORT AND RECOMMENDATIONS

The Alaska National Interest Lands Conservation Act (ANILCA), passed in 1980, created a variety of natural resource lands in Alaska, but it did not resolve a pressing problem concerning the possible presence of oil and gas resources in the coastal plain of the 19-million-acre Arctic National Wildlife Refuge in northeastern Alaska.

Congress determined that more information should be available before decisions about the conflicting recommendations could be made -- one for oil and gas leasing and the other, the protection of extraordinary fish and wildlife resources. The Department of the Interior was instructed to conduct a study of the various resources of the area and frame a recommendation to Congress, which would make the final decision (Section 1002(h), ANILCA).

The draft results of the five-year study were released in November, 1986, with a recommendation that the whole of the study area be leased immediately for oil and gas development. Written as a resource assessment and an environmental impact statement, the study does not provide information adequate for making such a far-reaching a decision.

The National Wildlife Federation finds the study to be seriously flawed in a number of ways. It does not provide answers to many of the critical resource questions involved and because of the questionable process by which the conclusions were reached. Information clearly indicating oil and gas development would have environmental impacts that could not be accommodated without jeopardizing fish and wildlife resources, including the internationally important Porcupine caribou herd, was discounted or disregarded by appointed officials of the Interior Department.

Because there is such a great disparity between the information available and the assumptions upon which the full lease recommendation was based, the National Wildlife Federation has prepared a detailed report for the use of Congress and the general public outlining the most obvious shortcomings of the Interior study.

The fundamental conflict is between the possibility of finding oil and gas reserves in the Arctic coastal plain and the known values of a large and productive arctic ecosystem providing benefits important to native subsistence users, to citizens of several nations, and to a world-class national wildlife refuge set aside more than a quarter-century ago for all citizens of the nation.

The National Wildlife Federation proposes legislation that would establish a nine member Commission charged with the responsibility for reviewing the information presently available, securing additional information as necessary, and making a report and recommendations of its own to the Congress.

The National Wildlife Federation advocates an orderly, thoughtful, and scientifically-based consideration and recommendation, based on the accumulation of sound information.

The Federation recognizes, also, that there are parts of the study area of overwhelming value because of the natural resources involved, including the principal calving and insect-relief areas for the Porcupine caribou herd. We recommend this key part of the study area be set aside immediately as legislatively-designated Wilderness, to protect these irreplaceable resources, and to complement Wilderness designation already made of adjacent lands of the Arctic National Wildlife Refuge.

III. CRITICAL CONCERNS: GEOLOGY

The geologic information presented by the Department of the Interior in the Draft Assessment is limited. The detailed data supporting Interior's geologic evaluation of the coastal plain area are not presently available, and are not scheduled for publication until August, 1987. Without this information, any review of the geologic conclusions of the Draft Assessment is limited to the summary geological and geophysical information provided in Chapter III.

Due to these shortcomings, the National Wildlife Federation retained the services of a respected consulting geologist to review the geologic information and conclusions of the Draft Assessment. The report by Mr. Thomas R. Marshall, Jr., a former chief geologist for the State of Alaska, is in the Appendix of this report.

The Department of the Interior both exaggerates and understates the oil and ~~gas~~ potential of the coastal plain. The Draft Assessment exaggerates the probability of recoverable oil being present in the coastal plain. At the same time, its estimate of potential hydrocarbon resources appears conservative.

The Executive Summary, as well as the public pronouncements of the Department, do not stress the fact there is only a 19% probability (or a one-in-five chance) that any economically recoverable oil is present in the area studied. Instead, the public has been encouraged to believe that major oil and gas reserves exist under the coastal plain, a conclusion not supported by the existing information.

The Draft Assessment is based largely upon seismic exploration and some shallow stratigraphic drilling. Such efforts may be able to identify potential oil- and gas-bearing geologic formations, but they cannot determine whether oil and natural gas is present in commercial quantities in those formations. It is usual for only a few of these kinds of formations to hold producible hydrocarbons. Nationally, the Bureau of Land Management estimates that only 1 in 16 wells drilled into identified structures in unproven areas (so-called "wildcat" wells) produce significant amounts of oil or gas. It should be noted also that the presence of oil seeps in the area of some of these formations and the proximity to Prudhoe Bay does not guarantee that producible oil and gas will be found.

Without access to the detailed information supporting the conclusions the Draft Assessment reaches about oil and gas potential, it is difficult to determine exactly how the study team determined there is a 19% probability (a one-in-five chance) of finding economically producible oil and gas in this area. This estimate, which is optimistic, appears to make the most of all the known and inferred geologic factors.

? Is this their interpretation of 16%?

While the Draft Assessment exaggerates the probability that producible hydrocarbons are present, it appears conservative in its assessment of the "potential" hydrocarbon resources. The potential hydrocarbon resources of the coastal plain would appear to be greater than stated for three reasons: (1) the conclusion that any natural gas found would be economically recoverable is questionable, (2) the potential resources of "stratigraphic traps" were not considered in estimating recoverable resources, and (3) no prospects were defined in the detached Mesozoic and Tertiary rocks.

The most significant oversight is the first – the fact that the report ignores potential natural gas production. Given the potential lifetime of any development in this area, natural gas production would appear to be a possibility. However, neither the economic nor the environmental consequences of producing natural gas from the coastal plain have been examined.

To date, the geologic studies of the coastal plain have been of a reconnaissance nature. In order to determine fully the nature and extent of the coastal plain's potential hydrocarbon resources, a series of additional steps would have to be taken. Additional seismic work could help define some structures, particularly smaller structures. Stratigraphic test wells could help determine whether oil-bearing rock formations exist in the identified structures.

Such steps would help refine the prospect areas, reduce the uncertainty of the resource estimates, and perhaps eliminate some areas from consideration for further exploration. Exploration wells would be necessary eventually to determine whether hydrocarbons are present in the structures identified. If oil or gas is present, delineation wells would be necessary to define the extent of producible reserves.

The first issue which Section 1002(h)(1) mandates the Department of the Interior to address regarding the coastal plain – whether oil and gas are present, where, and in what quantities – is not resolved by the Draft Assessment. Moreover, the Department of the Interior fails to examine and recommend any responsible course of action to determine the oil and gas potential of the area. Instead, it simply sidesteps critical issues and recommends that the entire area should be leased for development.

Information which is not presently available will be critical to determine the hydrocarbon resources of this area. Obtaining that information, however, will require additional exploration and exploratory drilling. Yet, as the Draft Assessment notes, even one exploratory well would pose significant adverse environmental impacts to the resources of the coastal plain.

The 1.5-million-acre study area contains 75% of the coastal plain of the Arctic National Wildlife Refuge and is the most productive biological component of the refuge. The productivity of the coastal plain is, in large part, because 99% of the area is a wetland and is rich in variety and zones of transition. According to the Draft Assessment, the 1002 area is "the only conservation system that protects, in an undisturbed condition, a complete spectrum of the various Arctic ecosystems in North America."

Permafrost underlies the region, but few data are available on ground ice and permafrost. Only one well has been drilled through the permafrost in the 1002 area and the results are held as proprietary information. The well was drilled by private interests on the Kaktovic Inupiat Corporation (KIC) subsurface ownership tract within the study area.

Annual precipitation is slight, although comprehensive meteorological records for the study area are not available. Likewise, there are few air quality data for the 1002 area, but the Draft Assessment reports that temperature inversions occur frequently.

Fresh water resources on the Arctic National Wildlife Refuge generally are limited and are confined largely to the surface as a few large lakes. Most of these lakes freeze solid during the winter months. In contrast, water is abundant during early spring as meltwater is released.

Water resources on the coastal plain are more limited. According to the Draft Assessment, the river environments on the coastal plain are among the most complex in the area. Because the rivers are shallow and rely on spring melt for most of their flow, they are dry throughout the winter. Numerous intermittent springs dot the study area and are a seasonal water source. The exception is Sadlerochit Spring, which flows year-round and maintains fish throughout the winter.

Gravel: According to the Draft Assessment, gravel resources -- which are critical to all phases of oil development on the Arctic coastal plain for roads, drilling pads, and waste disposal pits -- are in short supply and are not readily available. Potential sources of gravel include upland sites that could be mined, and river terraces, streambeds, and lagoons. Extracting the amounts of gravel necessary for development to proceed would impact the local environment and many of these (i.e., mining upland sites) may be difficult, if not impossible, to mitigate.

Not only does the Draft Assessment concede that "the availability of adequate gravel supplies on the 1002 area is uncertain", but it fails completely to quantify the amount of gravel needed for all phases of development, or identify gravel sources. Furthermore, the report is silent on the environmental impacts related to the development, extraction, and transportation of gravel. There is no explanation of how upland areas will be restored;

the Draft Assessment admits it "will be extremely difficult to rehabilitate to pre-project natural conditions."

There is no indication of what the impacts of gravel removal from floodplain environments will be. According to the Alaska Fish and Game Department, this activity disrupts flow patterns, contributes to siltation, causes fish blockage and entrapment, reduces protective cover, and diminishes fish populations. Experiences at Prudhoe Bay do not suggest that gravel extraction sites can be rehabilitated for fish and wildlife. The Alaska Department of Fish and Game noted in their comments that no sites in the Prudhoe Bay/Kuparuk development areas yet have been rehabilitated to improve the site for fish and wildlife. Until such rehabilitation is attempted, an accurate assessment of impacts of gravel extraction to fish and wildlife cannot be made.

As reported throughout the Draft Assessment, fresh water resources on the 1002 study area are extremely limited. This is especially true for groundwater since permafrost barriers prevent the infiltration of what little surface water there is. Furthermore, much of the groundwater in the 1002 area is saline. Given the lack of fresh water, developers must look to the Beaufort Sea as a potential source of water for oil development on the coastal plain.

As with gravel, abundant water supplies are critical to all phases of oil development on the coastal plain. According to the Draft Assessment, the water needed for a single exploratory well is estimated to be 15 to 20 million gallons during the period of drilling. As with gravel, there is uncertainty as to the source of this water. The Interior Department admits that locating water resources for exploration alone, "poses a major problem on the area"; that "ideas on how to overcome the problem ... must be innovative"; and that the lack of water presents a "major engineering obstacle."

The lack of specificity that plagued the Draft Assessment's discussion on gravel also colors the report's narrative on water. Whereas estimated water needs are provided for certain phases of a full lease option (e.g., ice roads require 1.5 acre-feet/mile; seismic trains require 2,000 gallons/day; production camps require 10,000 to 30,000 gallons/day), the report fails to evaluate total water requirements for full-scale development. The estimates provided in the Draft Assessment are vulnerable to the same problems described for gravel.

The lack of a comprehensive review of water requirements precludes meaningful discussion and an objective assessment of whether or not oil development on the area is even physically possible. Indeed, by reporting that "the large quantities of water required to develop drilling on 1002 are not available," the Interior Department implies, but does not make a part of its decision, that full-scale production from the Arctic National Wildlife Refuge is unrealistic.

pre-project

The Draft Assessment makes no effort to reconcile these inconsistencies. Instead, various engineering solutions are proposed that "might" overcome the obstacle of water availability. At this juncture, Interior views pits and the excavation of catchments as the most likely means to resolve the water issue. This is suggested despite little or no state-of-the-art information with which to judge whether such catchments are realistic, from a physical and an economic perspective. The Draft Assessment is disquietingly uncertain about meeting the water requirements for oil development, a pivotal defect, considering the overwhelming importance of water.

More importantly, the Draft Assessment only superficially explores the environmental trade-offs and consequences of such a strategy. For example, the Interior Department concludes that streambed-pool development will cause only minor impacts to fishery resources, and at the same time observes that taking the quantity of water necessary for oil development will result in major adverse impacts. According to the Draft Assessment, "overwintering habitat is probably the greatest limiting factor for arctic anadromous and freshwater fish populations," yet these very habitats will be affected by oil development. Studies conducted by the Alaska Fish and Game Department have shown that water available in winter is likely a limiting factor for arctic cisco and that overwintering freshwater habitat in large rivers is reduced 95% from summer conditions. At this time too little is known about how pit construction adjacent to or in streambeds will affect fish and wildlife resources. It is therefore inappropriate that pit and catchment construction precede comprehensive investigations to assess the potential impacts this activity will have on arctic biota in the region.

The Draft Assessment has two major deficiencies related to the critical issues of land and water resources. First, it fails to predict the quantity of water that would be required for full-scale oil development on the area. Equally important, the report does not address the issue of how gravel and water requirements are to be met, let alone whether a full development scheme can be supplied. Second, the Draft Assessment provides little information and credible evidence with which to evaluate environmental impacts which might result from developing the land and water resources to support oil exploration and field development.

VIII. CONCLUSIONS AND RECOMMENDATIONS

In Section 1002(h) of ANILCA, Congress provided instructions to the Secretary of the Interior to guide him in the preparation of information and recommendations that would be useful to Congress in making the final decisions about the coastal plain of the Arctic National Wildlife Refuge. Those instructions were:

"Not earlier than five years after December 2, 1980, and not later than five years and nine months after such date, the Secretary shall prepare and submit to Congress a report containing:

- (1) the identification by means other than drilling of exploratory wells of those areas within the coastal plain that have oil and gas production potential and estimate of the volume of the oil and gas concerned;
- (2) the description of the fish and wildlife, their habitats, and other resources that are within the area identified under paragraph (1);
- (3) an evaluation of the adverse effects that the carrying out of further exploration for, and the development and production of, oil and gas within such areas will have on the resources referred to in paragraph (2);
- (4) a description of how such oil and gas, if produced within such area, may be transported to processing facilities;
- (5) an evaluation of how such oil and gas related to the national need for additional domestic sources of oil and gas; and
- (6) the recommendations of the Secretary with respect to whether further exploration for, and the development and production of, oil and gas within the coastal plain should be permitted and, if so, what additional legal authority is necessary to ensure that the adverse effects of such activities on fish and wildlife, their habitats, and other resources are avoided or minimized (16 U.S.C. Section 3142(h)).

As has been pointed out in this report, the Draft Assessment does not, in fact, provide this information, yet proposes that a dramatic risk be taken in the process of going from the incomplete level of information now available to the leasing for exploration and possible development the whole of the 1002 study area. This recommendation does not serve the Congress well and is a clear abrogation of responsibility to the people of the

United States -- not to mention obligations to citizens of nations with whom the United States has arranged treaties for the mutual protection of the very resources the Arctic National Wildlife Refuge was established to protect.

Even in light of the array of deficiencies evident in the process by which the Assistant Secretary's recommendations were developed, the National Wildlife Federation recognizes there are several options at hand for the future use of the coastal plain area. We believe those options remain available and should be pursued -- or closed off -- only as credible, well-documented, and appropriately-focused information is available.

As we have suggested, there are many areas in which further information is necessary, and several key elements must be weighed carefully. These include the fundamentally critical issue of cumulative impacts studied against the background of worldwide arctic development.

A second important issue is that of viewing the Arctic Refuge coastal plain and its as-yet-uncertain oil and gas resources in the context of a total national energy policy. Without thoughtful consideration of these elements, it will be impossible to gauge the merits of decisions that will affect a singular and widely-recognized natural treasure of the kind represented by the Arctic National Wildlife Refuge and its varied resources.

Recognizing it is in the national interest to continue to consider the questions raised by Congress at the passage of ANILCA, and reflected in Section 1002(h), the National Wildlife Federation proposes the establishment of a Commission to guide a process of identifying information needs, securing that information, and making a recommendation or recommendations to Congress about the use of the resources of the coastal plain of the Arctic Refuge.

The Commission

We propose that a nine-member Commission be established by an Act of Congress to review the critical issues surrounding the potential development of petroleum resources on the Arctic Refuge, and to make recommendations to Congress regarding the future management of the Refuge and the disposition of any oil and gas resources which may exist there. The Commission should be comprised of nine members, with three appointed by the House of Representatives, three by the U.S. Senate, and three by the President. One Commissioner should be designated Chair of the Commission, and that person should be authorized to assure overall responsibility for executing the Commission's work and hiring staff. Funds necessary for the Commission to conduct its work should be authorized and appropriated by Congress.

The Commission's charter should set forth the following responsibilities for the Commission:

1. The Commission shall review the provisions of Section 1002(h) of ANILCA, plus all data developed by Department of the Interior agencies, other government agencies, and private interests, in their efforts to fulfill the requirements of Section 1002(h). Based upon this review the Commission should determine the extent to which the requirements of Section 1002(h) have been or have not been fulfilled by the Department of the Interior, and the additional information that is needed to fulfill the mandate set forth by Congress in Section 1002(h).

2. Upon determining the data needs that must be fulfilled to satisfy the requirements of Section 1002(h), the Commission will establish a process for acquiring the needed information. In addition to its own staff, the Commission will be authorized to seek the guidance of outside experts to assemble existing information, or direct studies to provide that information, and to hold hearings to ascertain the views of the public.

3. The Commission shall consider the implications of oil and gas exploration and development in the context of the cumulative impacts that the entire range of oil and gas exploration and development activities has upon the attributes of the total ecosystem of the Refuge, including its land and marine mammals, migratory birds, aquatic life, and marine and atmospheric resources. Furthermore, the Commission should be especially cognizant of the special environmental characteristics of the arctic ecosystem, and the fact that the arctic environment responds to human alterations of the environment in a manner far different from that experienced in more temperate climates.

4. After acquiring the data necessary upon which to base decisions, and after the Commission has considered the potential impacts of oil and gas exploration and development activities on the environmental values of the Refuge, and upon the arctic biome as a whole, the Commission shall make its recommendations to Congress regarding whether and to what extent exploration and/or development activities should proceed within the coastal plain. These decisions must provide reasonable assurance that all environmental and habitat values will be fully protected from adverse impacts. This recommendation shall be made recognizing: (1) the unique wildlife values presented in the Arctic Refuge; (2) the special problems posed by industrial development upon the arctic environment; (3) the cumulative impacts of industrial development in other nations within the arctic biome; and (4) the nation's national security needs.

5. The Commission shall initiate a public process for the review of the procedures, merits, and benefits of any proposed land exchanges with any entity or related proposals for the disposition of publicly-owned subsurface mineral rights in the Section 1002 study area in exchange for surface rights elsewhere in Alaska.

6. The Commission should make its findings and recommendations to Congress within two years of its creation. The Commission's charter may be extended by Congress, if necessary. The Commission shall have no authority to execute any of its recommendations, or alter the current management mandate of the Arctic National Wildlife Refuge, or take other actions inconsistent with the law. These prerogatives shall remain the responsibility of Congress.

The Commission can reach a number of conclusions, including one that advises nothing be done at this time. On the other hand, it is possible that an informed decision can be reached regarding orderly and cautious exploration, development and extraction of petroleum resources that may be found in the area. The most important responsibility, however, will be to ascertain that recommendations made are based upon long-term interests of the nation and that no premature judgments are made.

The National Wildlife Federation believes a Commission to which are appointed individuals of the highest caliber who have a strong sense of the long-term needs and values of the country, and who are able to view the broad context of their complex decisions, will reach conclusions and make recommendations to Congress that will represent the best interests of the Nation and fulfill our responsibilities to present and future generations to be stewards of economic and environmental resources.

Special Protection

At present, the Section 1002(b) study area is subject to the provisions of ANILCA requiring it to be managed as if it were a Wilderness Area until a decision is made about the use of the sub-surface resources. If no decision is made by the Congress the status quo continues. The Congress may also decide formally to designate the coastal plain as part of the National Wilderness System. The area would be contiguous to areas to the south and east that were designated as wilderness at the passage of ANILCA.

In addition, the coastal plain is a part of the National Wildlife Refuge System and is subject to the controls and protections provided in law to that System. A significant feature of that protection is the requirement that a determination be made as to the compatibility of proposed uses with the purposes for which the refuge was established. If these purposes and the proposed uses are not compatible, the use cannot be permitted.

The varied fish and wildlife and habitat resources of the coastal plain are intertwined and interdependent. They form a natural system bound together by the requirements of the organisms and the complex processes affecting the system. It would be inaccurate biologically to suggest that one part of the area is more important than another.

since all parts of it represent habitats suited to and important for an array of fish and wildlife.

Furthermore, the entire coastal plain has characteristics of wildness and the absence of disturbance that qualify it for designation as Wilderness. Even so, as Congress recognized in 1980, there are mixed values in the coastal plain and it was the charge of Section 1002(h) that these values be assessed and weighed.

However, within the study area there is what might be termed "prime" Wilderness. This is in the southeast segment of the plain, including Sadlerochit Spring and extending northeastward to Angun Point on the Beaufort Sea coast (see Map 4). This should be designated as Wilderness, immediately, and be managed in accordance with the provisions of the Wilderness Act of 1964.

This area embraces values of special importance, including the Sadlerochit Spring and its important wintering water; key staging areas for geese and other migratory birds; the upper reaches of several rivers; and the important core calving area for the Porcupine caribou herd, along with much of its insect-relief area. This is a part of the coastal plain so important to fish and wildlife resources that it should be protected, without compromise, into the future.

The proposed Wilderness Area includes four of the 26 petroleum prospect areas identified in the Draft Assessment, and are not among those noted as being of particular interest geologically.

Final Comments

The coastal plain of the Arctic National Wildlife Refuge has become the classic environmental dilemma of this century: a potential direct conflict between living natural resources and a perceived opportunity to recover energy resources at great profit. It is unfortunate that it is here, in the high arctic region, where little is known about the resources involved and even less about the natural systems, that a conflict of this magnitude is emerging.

It has been the good fortune of our country that, in most resource conflicts, it has been possible to have a full measure of both values: oil and gas and whooping cranes on the Texas Gulf coast; migratory birds and space exploration activities at Cape Canaveral in Florida; timber management and wild turkeys in Georgia. In most cases the real conflicts have been minor.

Now we face a conflict that is poorly understood, so its resolution is far from clear. We know enough so that we should be properly cautious and more concerned than ever before about the possible consequences of the actions we may elect to undertake. The lure of a resource that may be worth billions of dollars is an overpowering one. The value of a remarkable natural heritage that can be handed down to the future may be at least as important.

This critical balancing has not been done and recommendations have been formulated with no strength in fact. The actions taken thus far have been flawed and the issues for the nation (and for at least some of the rest of the world as well) are so important that the National Wildlife Federation has found it necessary to point out many of these shortcomings in this report submitted directly to the Congress. At the same time, we cannot in good conscience simply criticize and do no more.

Therefore, we have recommended an approach to resolving the issue in a logical, orderly, objective way. There are other methods, of course. The nation deserves a better approach than has been followed so far. The National Wildlife Federation speaks for 4.6 million members and supporters. In the case of the coastal plain of the Arctic National Wildlife Refuge, we believe we speak for the entire nation and for generations yet to come. We believe this is a unique and important opportunity to pursue a responsible course of action to resolve a series of nationally important public policy issues.