

ALASKA LEGISLATIVE COMMITTEE FILES 1987 - 1988 86/Z

4868 HRES ANWR REPORTS 5-19-87 DNR

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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);

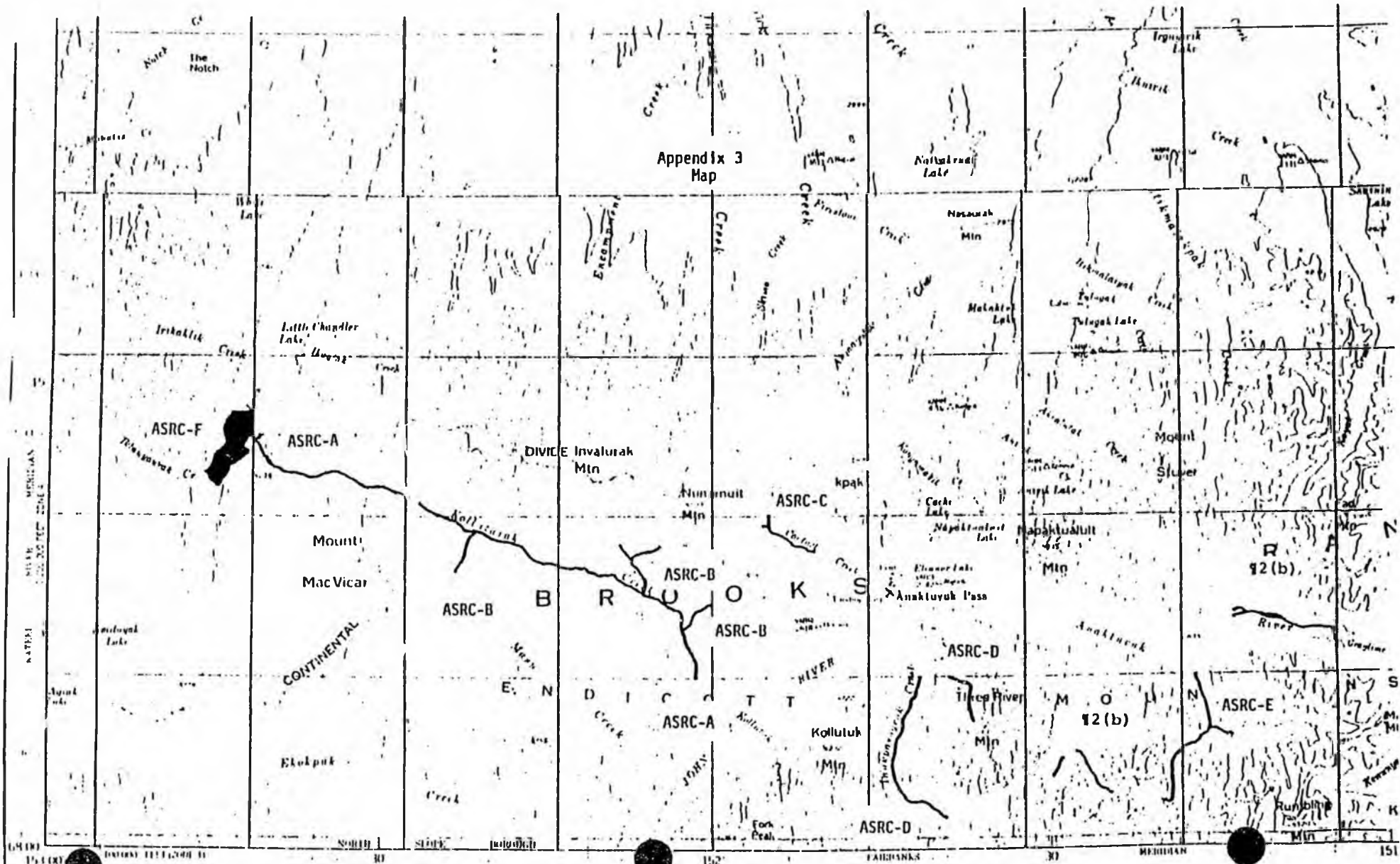
- c. (ASRC-C) An easement along Contact Creek and the tributaries thereto;
- d. (ASRC-D) An easement along Inukpasugruk Creek and the tributary thereto;
- e. (ASRC-E) An easement along Anaktuvuk River and the tributaries thereto.

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 3
Map



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.

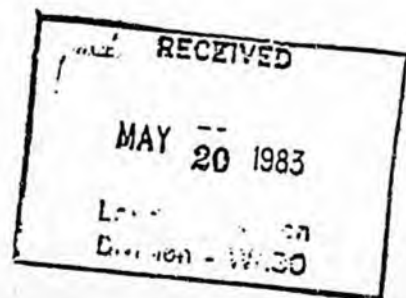
We are also enclosing an extra copy of the appraisal. Presuming the appraisal is approved as written, please send this extra copy to Randy Jones in the Office of Legislation. Randy is coordinating the Service's involvement in this exchange with the Secretary's office.

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.

Tracts: 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.

Market Values: 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.

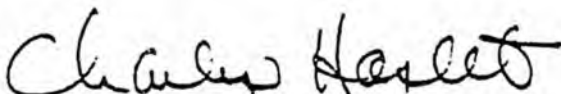
Summary

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

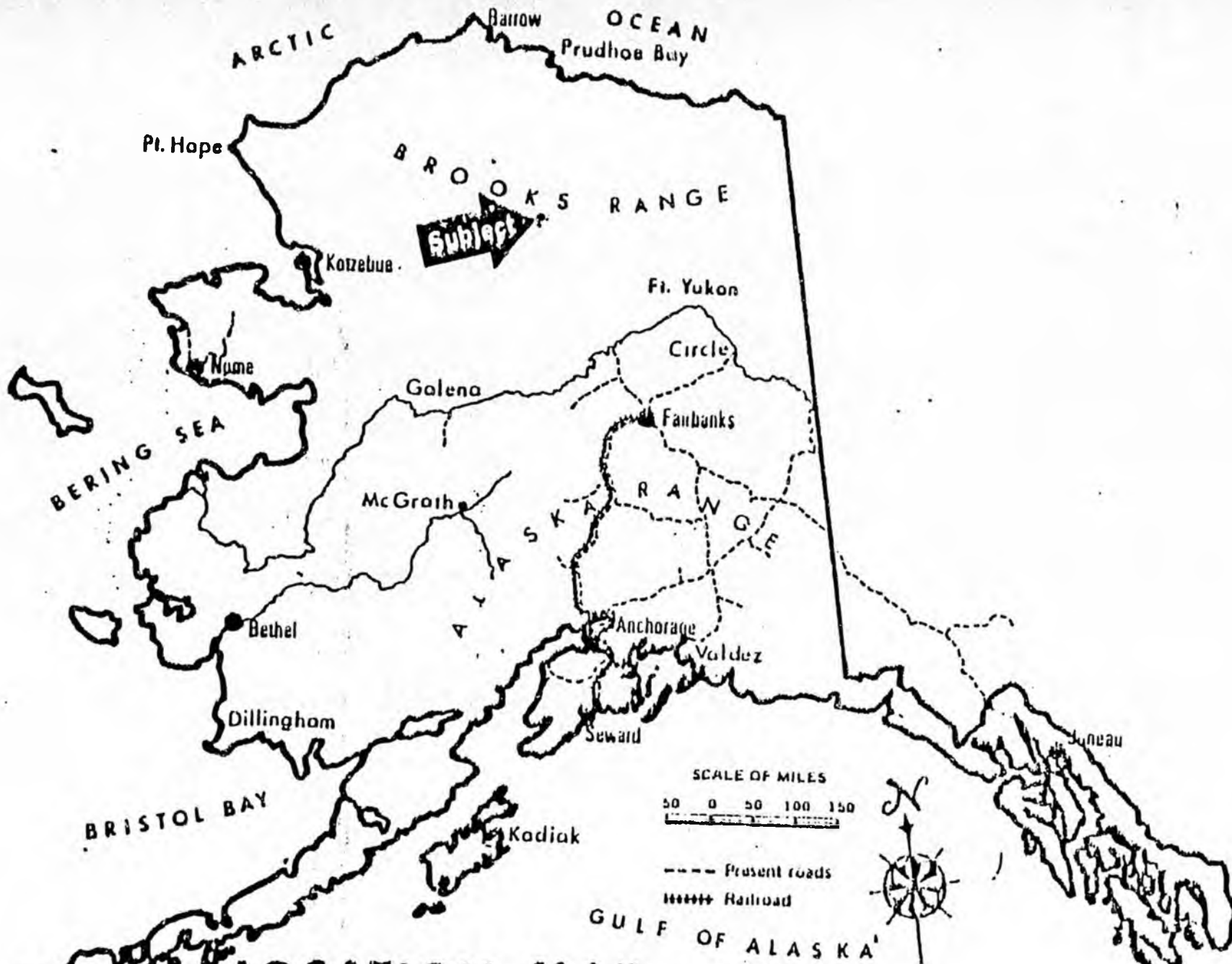
Sections 1 through 12, 16 through 21 and 28 through 33, Twp. 16 S, Rge 2 E, Sections 1 through 3, 6, 7, 9 through 16, 18, and 19 through 30, Twp. 16 S, Rge 3 E, Sections 21 through 28 and 33 through 36, Twp. 15 S, Rge 4 E, and Sections 5 through 8, 17 and 18, Twp. 16 S, Rge 4 E, Umiat Meridian, Alaska,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

THE FOLLOWING PAGES CONSIST OF:

Subject Location Map

Quad Maps

Subject Pictures



LOCATION MAP

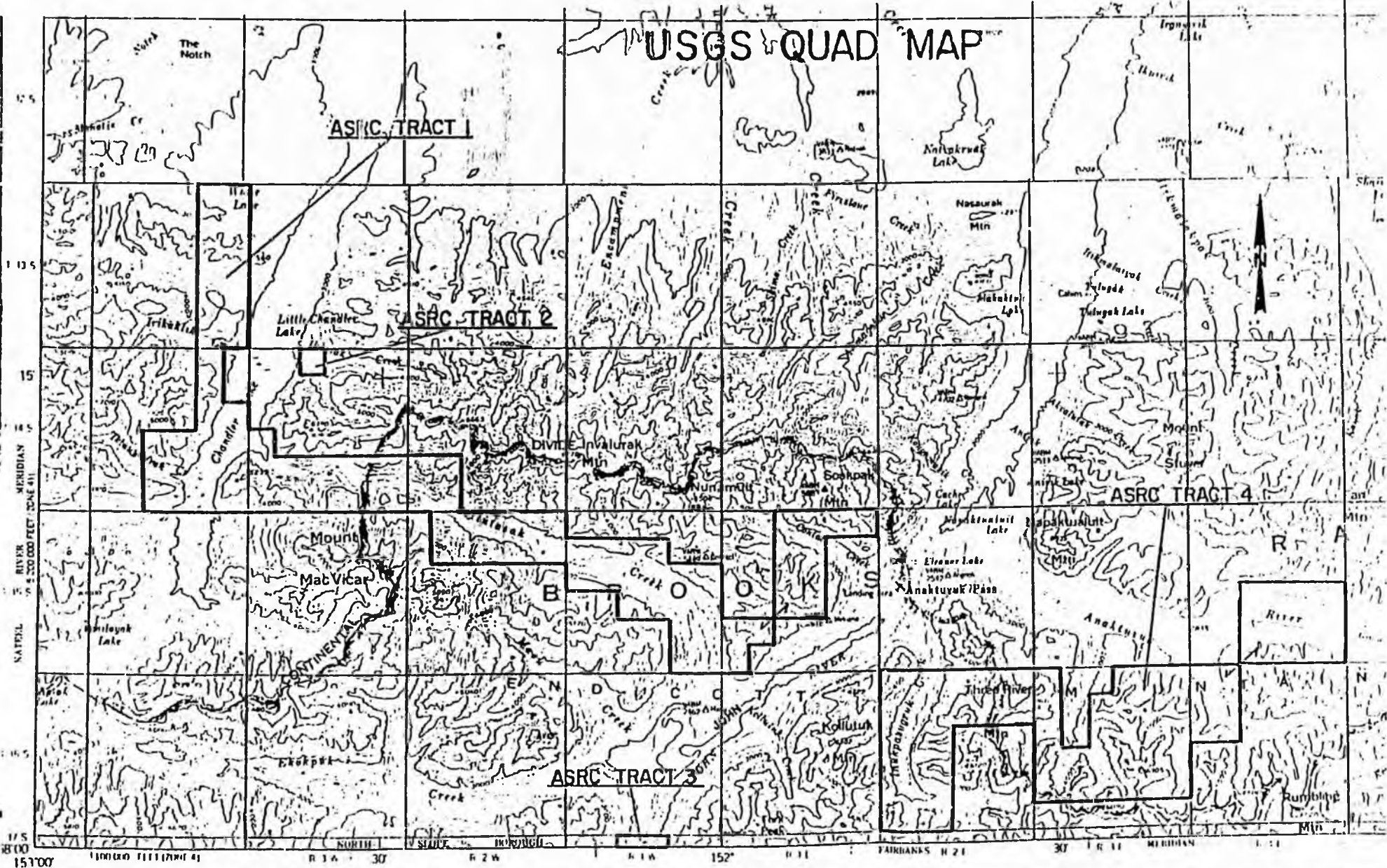
USGS QUAD MAP

ASRC TRACT 1

ASRC TRACT 2

ASRC TRACT 4

ASRC TRACT 3



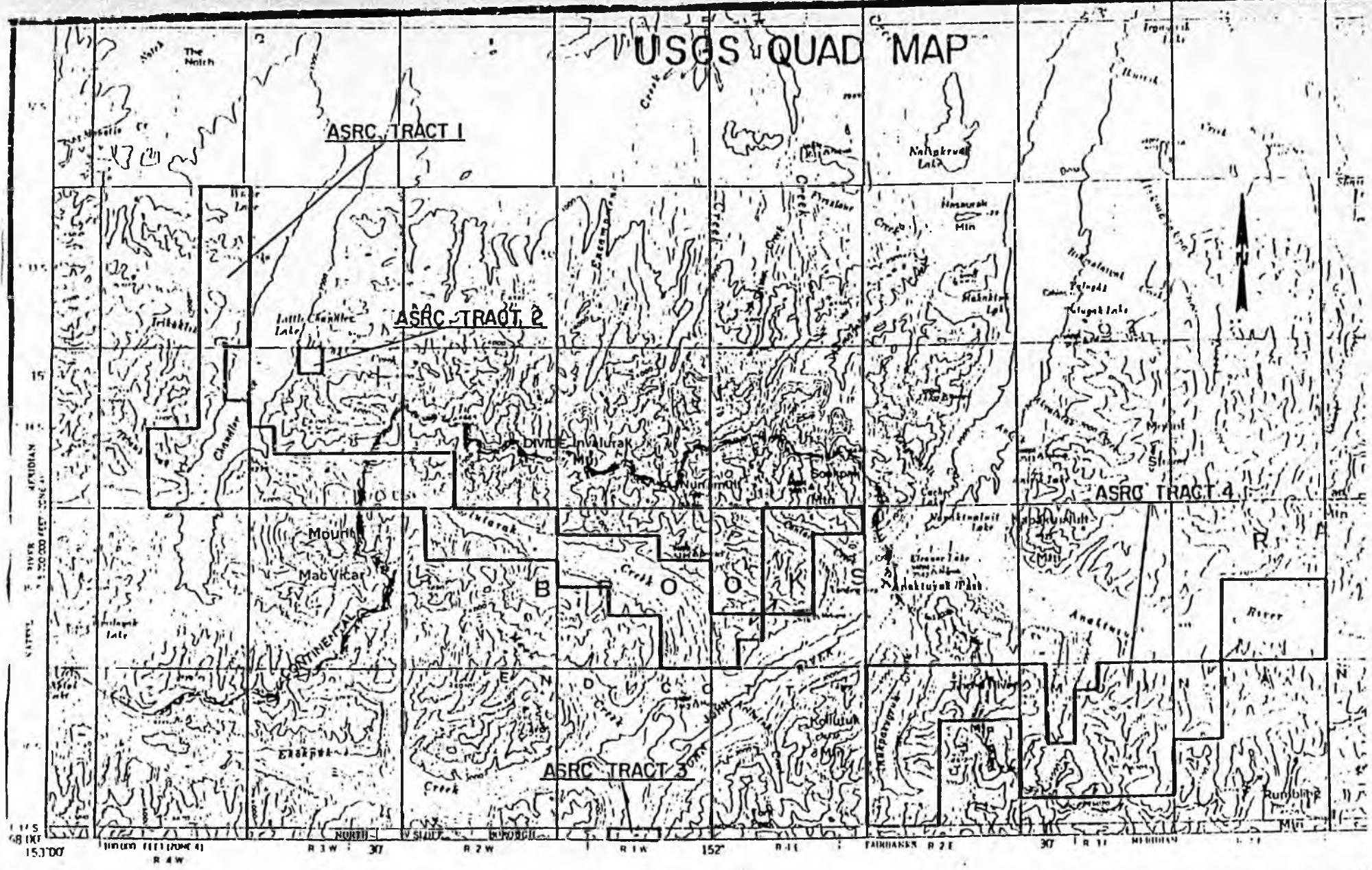
USGS QUAD MAP

ASRC TRACT 1

ASRC TRACT 2

ASRC TRACT 4

ASRC TRACT 3



68 15' N 68 30' N 68 45' N
151 30' W 152 00' W 152 30' W 153 00' W
R 4 W R 3 W R 2 W R 1 W 152° R 1 E FAIRBANKS R 2 E R 3 E R 4 E
NORTH
RIVER

Taken 3/1/83

ASRC TRACT 1



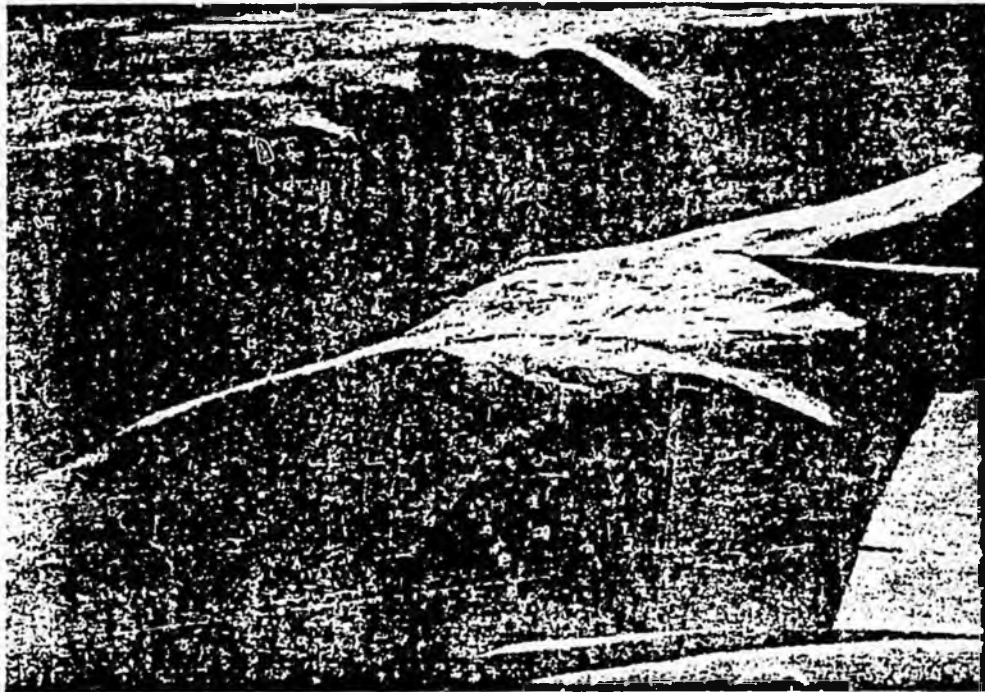
Tract 1 looking northwesterly between Chandler Lake and Little Chandler Lake



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



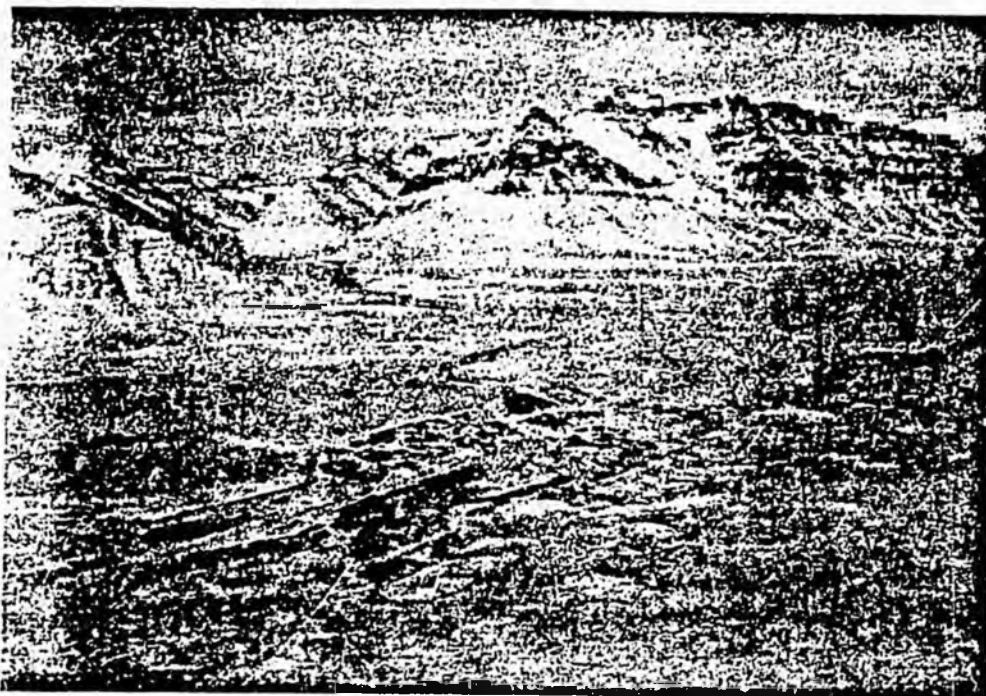
Tract 1 looking northwesterly from extreme south part of tract and mouth of Kollutarak Creek drainage



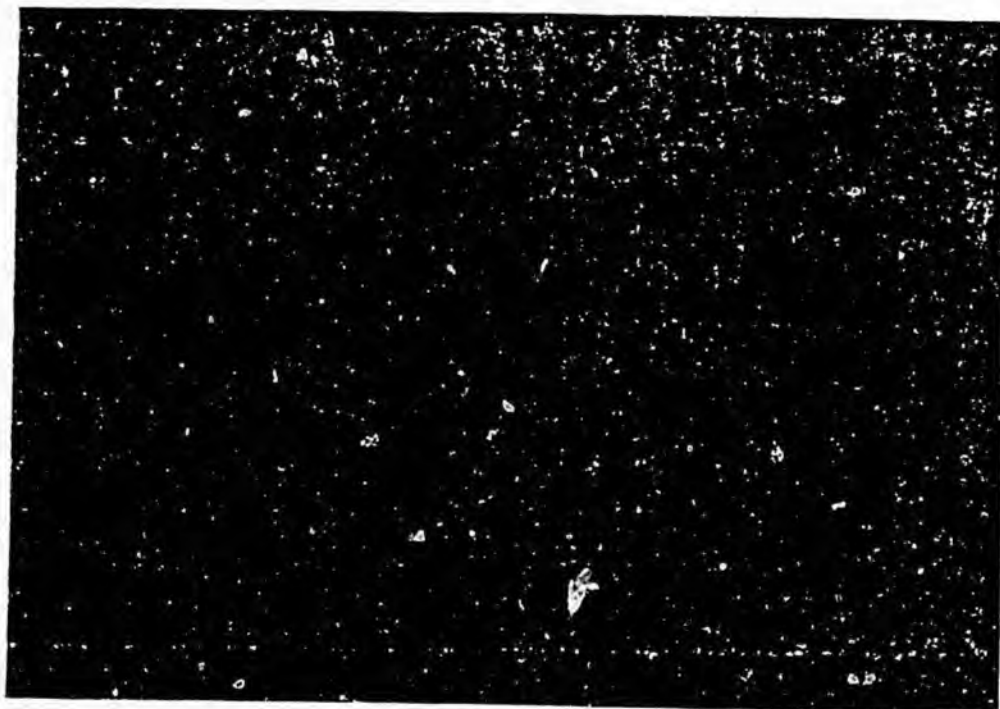
Tract 1 looking westerly from 2 miles SW of Anaktuvuk Pass

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



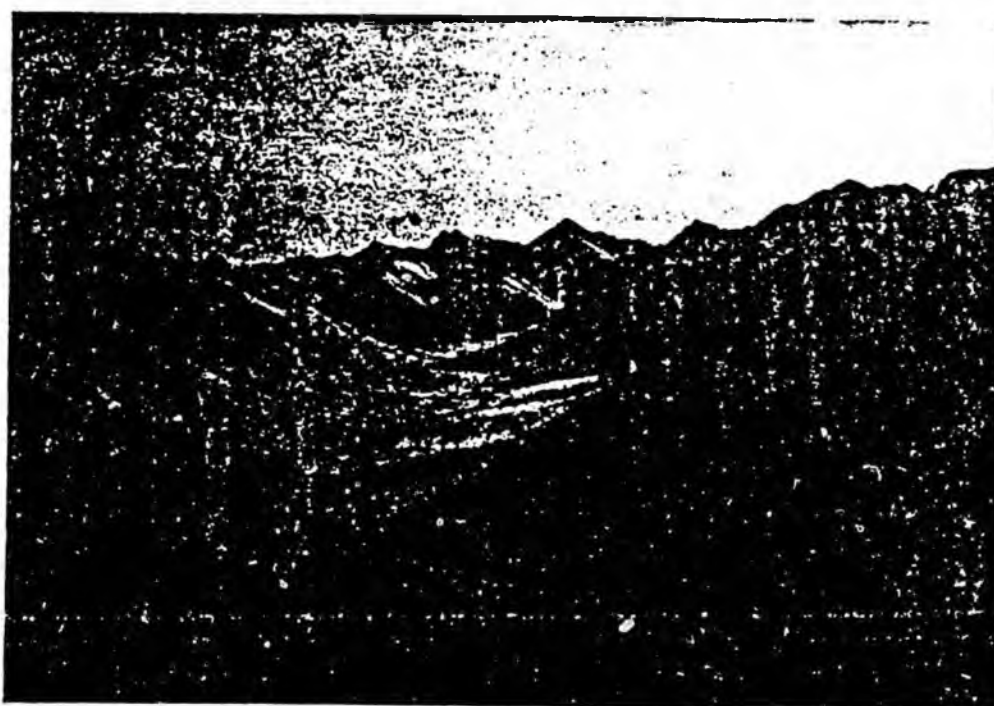
Tract 2 looking northerly from south end of
Chandler Lake

Taken 3/1/83

ASRC TRACT 4



Tract 4 looking southeasterly from just north of
Three River Mountain



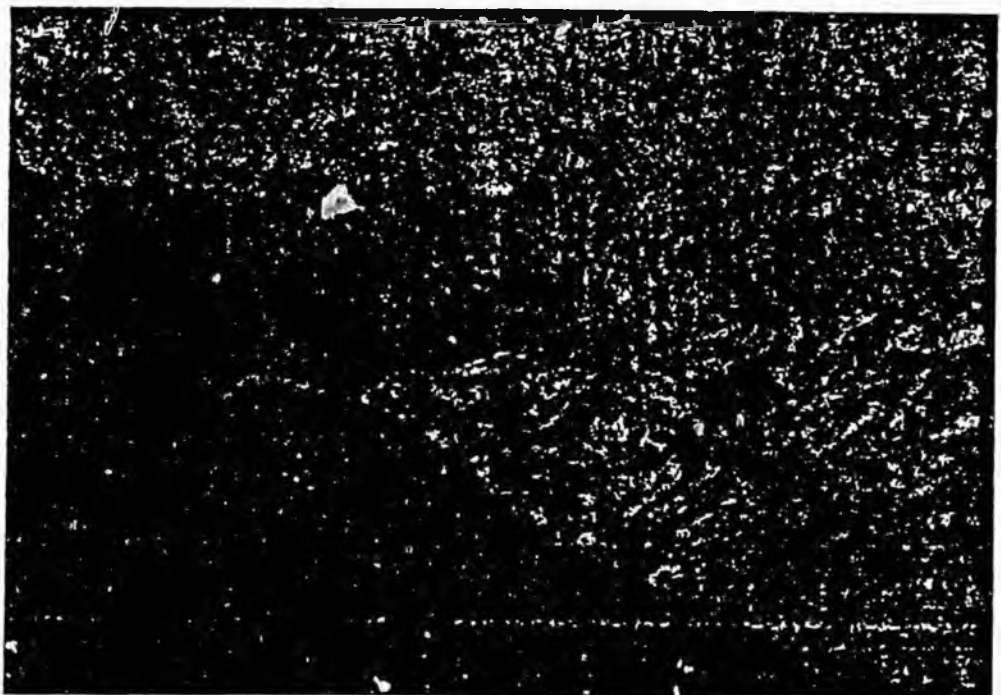
Tract 4 looking southeasterly at large drainage
located in NW corner of T 16 S, R 4 E

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.