

RESEARCH DEPARTMENT

PRELIMINARY REPORT

SOCIAL IMPACT ASSESSMENT
FOR THE NORTHERN AIRPORTS
INFRASTRUCTURE IMPROVEMENT PROGRAM
POVUNGNITUK

Prepared by

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SOMER

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1. INTRODUCTION

This report presents a summary of the information that has been collected in Povungnituk on the social impact assessment for the Northern Airports Infrastructure Improvement Program. The information and findings on social impact contained in this document will be integrated into a Final Report that is being prepared by the consulting firm SOMER. The final report will also include findings of SOMER researchers on the bio-physical environment and urban landscape, and conclusions from a study on the archeological potential of Povungnituk that was completed by the consulting firm Aménatech under contract with the Québec Ministry of Transport.

The airstrip that is proposed for Povungnituk is part of a larger program of community development that includes the construction and operation of a regional hospital and social service centre. The plans evaluated in this impact assessment are for a paved airstrip 1,370 meters (4,500 feet) on a new site west of the community. The airstrip will provide jet service for the Hudson Bay regional hospital and social service centre and replace the 280 meter (800 feet) unpaved strip currently in use. Construction is scheduled to begin in the summer of 1985 and to continue for two years.

The requirements for an impact assessment study were introduced to the community in a meeting on September 11, 1984, that was organized by Transport Québec and included the Municipal Council and personnel from SOMER and the Makivik Research Department. In this meeting, the Municipal Council made it clear that the minimum length of the airstrip should be 1,370 meters paved, but they also raised questions about lengthening the proposed airstrip an additional 350 to 500 meters so that it could accommodate 737 jet service. At a meeting held on November 12, 1984, with Juusipi Illimasaut and William Kemp, the Municipal Council stated that, although they would pursue the question of building a 737 jet airstrip, they wanted the impact assessment to focus on the original proposal of a

1.370 meter paved airstrip.

Field research for the social impact assessment was carried out in Povungnituk from November 12 to 23, 1984. by Juusipi Illimasaut and William Kemp of the Makivik Research Department. The information collected in Povungnituk was obtained from a series of meetings with the Municipal Council and with representatives from the other community organizations. These meetings were supplemented by individual interviews, by discussions on the FM radio and by many informal contacts that were made possible because the researchers were provided with work space in the municipal office building. In Povungnituk, the approach preferred by the community was based on a set of questions developed by Juusipi Ilimasaut, which were then discussed and answers formulated. This question and discussion format gave rise to the data and conclusions that are presented in this report.

The Povungnituk report is divided into two parts. Part I provides a background and perspective on the Northern Airports Infrastructure Improvement Program and it summarizes the development of air service in northern Québec. Much of the information is based on a substantial revision and updating of material presented in the final report entitled "Social and Environmental Impact Assessment for the Northern Airports Infrastructure Improvement Program: Ivujivik" that was submitted to Le Service de l'Environnement, Ministère des Transports, Gouvernement du Québec, on March 30, 1984. Part I also reviews the methodology used in the social impact assessment study and it summarizes the Inuit point of view about the entire process of impact assessment. In order to advance the long term development of impact assessment procedures and their applications to planning and constructing airstrips, a review of the Ivujivik findings in light of the community's actual experience with construction is included in Part 1.

Part II presents the specific data and findings from the Povungnituk study that resulted from the question and answer format. In this section, Inuit knowledge and concerns about the bio-physical

environment. community infra-structure, economy and social life are described. The real or perceived impacts from the airstrip program on the community and environment are identified and appropriate corrective measures as developed by Inuit are defined. In order to assure that community concerns continue to be represented and possible impacts averted as specific planning decisions are made after submission of the Impact Study to the Kativik Environmental Quality Commission, a process for continued consultation and community participation in decision making is suggested. The need for such a process is clearly evident from the Ivujivik experience. Community consultation and the participation of the Inuit must keep pace with the finalization of project plans, the selection of contractors and with the organization and carrying out of the construction.

2. THE NORTHERN AIRSTRIP PROGRAM

2.1 Project Justification

The fundamental need for the Northern Airports Infrastructure Improvement Program is based on the reality that air travel is the only feasible transportation alternative for the Inuit communities of northern Québec. This justification is strengthened by the fact that the airstrips now in use are both unsafe and unable to accommodate any improvement in services that are based on the use of larger aircrafts. The construction of airstrips and airport facilities that are safe, and which have the capacity to accommodate different aircraft and expanding local needs, is vital for the health, safety and development of every northern Québec community. There are no other means of public transport available to the Inuit, and the future expansion and delivery of services within the region is fully dependent on the quality of air service.

In the world of today's Inuit, it is the airplane that saves lives, delivers essential goods and personnel, and facilitates the movement of travellers within the north and between north and south. Air travel has become a way of life for many Inuit who are active in the social, educational, political and economic development of northern Québec. This mode of transportation is gradually becoming more accessible to those Inuit wishing to travel for personal or professional reasons and to tourists or other southern based travellers. The adventures and delays of the "bush pilot" should be over, at least when flying on regularly scheduled service. However, many serious problems with northern air travel still exist. Most of these problems relate directly to poor quality of the airport infrastructure that characterizes every municipality north of the 55th parallel, except Kuujuaq and Kuujuarapik.

Community airstrips present a constant danger to pilots and air travellers. The runways are too short and too narrow, with soft and uneven surfaces that cannot be improved or easily maintained with the equipment and budgets available to the communities. Lighting and navigational

aids are poor or non-existent and there are no passenger or freight facilities. Night landings often require the aid of snowmobile lights; beacons can guide a plane to the community but not get it to the ground; wind conditions and ceiling are guess work; and patients, passengers or freight may either freeze or get wet, depending on the season. Nevertheless, these airstrips are all there is, so they are used day in and day out, good weather and bad. They must accommodate the long dark of winter, the fog of summer and the rapidly changing weather conditions that can occur at any time. Most northern flyers soon realize that their only margin of safety lies in the technology of the Stoll aircraft and in the skill and direct northern experience of the pilots.

Individuals, communities and northern organizations are all vitally concerned that the present conditions of air travel be greatly improved. Northern air service still involves frequent delays and many anxious moments, especially while flying at night or in bad weather. The skill and experience of pilots and the remarkable adaptability of the Twin Otter aircraft have reached the limits of their capacity to overcome poor and unsafe facilities. This can only be accomplished by upgrading the physical infrastructure and navigational aids.

The standards for improvement that have been set out in the Northern Airports Infrastructure Improvement Program will, in the mind of Inuit, create a significant and positive change in the quality of air service, that is already long overdue. Inuit state that the most important change will be the safety of air travellers and the improved conditions for evacuating the sick and injured. Inuit also realize that improvements in the airport infrastructure will have significant implications for the economic, social and political development of their communities and the region.

2.2 The Infrastructure Program

The precarious state of the airports was an important subject for negotiations related to the James Bay and Northern Québec Agreement.

Before the signing of the Agreement, the then-Minister of Indian Affairs and Northern Development, Mr. Judd Buchanan, in a letter dated November 15, 1974, addressed to Mr. Charlie Watt, President of the Northern Québec Inuit Association, stated Canada's commitment to undertake the construction of adequate airstrips for permanent northern communities. Negotiations began in 1975, and from 1981 until the fall of 1983, long and complex negotiations were needed to reach an acceptable agreement on the improvement of community airstrips.

On September 27, 1983, a comprehensive agreement was signed by the federal and provincial governments, creating the Northern Airports Infrastructure Improvement Program. The stated objective of this program is to promote the economic and social development of northern Québec. The program calls for Québec and Canada to jointly plan and carry out the construction of new, or upgrading of present, airstrips and other infrastructures in eleven Inuit communities north of the 55th parallel. At a meeting held in March 1983, the mayors of all eleven communities established the following priority list* for airport construction: Salluit, Ivujivik, Povungnituk, Kangirsuk, Tasiujaq, Inukjuak, Kangiqsujaq, Quaataq, Kangiqsualujuaq, Akulivik and Aupaluk. This list was formally ratified by a resolution of the Council of the Kativik Regional Government. The mayors also indicated that the planned community of Umiujaq (Richmond Gulf) and the proposed community of Taqpangayuk (Singer Inlet) would have to be included on their priority list when relocation agreements are signed and funding provided.

The program began in August 1984, at Ivujivik and it is scheduled to continue for approximately 10 years. As of January 1985, the program has not followed the schedule since the location of the Salluit airstrip has caused major problems. This delay means that the most dangerous situation for air travel in northern Québec will not be resolved as quickly as needed for the safety of air travellers. A decision to proceed with Salluit was made on December 13, 1984. The new schedule now calls for Ivujivik to be completed in early summer 1985, and Salluit and Kangirsuk to be started in the summer of 1985.

The cost of the Northern Airports Infrastructure Improvement Program is estimated to be \$68.5 million. This amount will not be indexed over the duration of the program. Québec will pay 40% of the total and the Federal government, 60%. The Federal government will be responsible for the selection of each airstrip site, technical studies and engineering plans, project costing, and for the purchase, installation and maintenance of navigational aids. Transport Québec, as the proponent, is responsible for the environmental and social impact studies; the purchase and maintenance of mobile equipment required for the construction and operation of the airports; and for obtaining the required rights and authorizations needed for construction. Transport Québec will also be responsible for the long term operation and maintenance of airport facilities and equipment, with the exception of navigational aids.

The program is the same for each community except Povungnituk and will include: a gravel runway, 1,065 m (3,500 ft) long and 30 m (100 ft) wide, a taxi way and parking area, a system of airstrip lights and navigational aids; facilities for passengers, freight, equipment, and airport operations. An access road to the airstrip will be built or improved and power transmission lines will be erected. At Povungnituk, a 1,220 to 1,370 m (4,000 to 4,500 ft) paved airstrip will be constructed to provide jet ambulance service for the new hospital. A program for training Inuit to operate heavy equipment during the construction phase is now underway and further training will be provided to assure permanent employment of Inuit in the operation and maintenance of the completed airport infrastructure.

2.3 Development of Air Services in Northern Québec

The utilisation of the airplane in northern Québec has a history that began in 1927, when a major air survey was undertaken in the vicinity of Ivujivik and Kangiqsujuaq. In the 1940's, major airstrips were built at Kuujjuaq and Kuujjuarapik in support of the military effort of World

War II. In the early 1950's, a sophisticated airport infrastructure associated with the Direct Early Warning (DEW) radar system was established in the Northwest Territories. This sophisticated air network did nothing to ameliorate the severe problems that were facing eastern Arctic Inuit at that particular time in their history. Personnel, material and fresh foods could be routinely delivered to remote radar sites, but the needs of the Inuit population of Québec and the Northwest Territories could not be met. Although there were many discussions and an active exchange of memos and correspondence about the critical need for an improved northern air service, no general policies nor specific programs were put forward. Thus it seemed quite easy to overcome the obstacles of getting airlifted supplies into a defense establishment but almost impossible to routinely move vaccines or other critical materials into Inuit settlements.

Charter service using single engine aircraft with float or ski landings, characterized air travel from 1955 to around 1970 for most communities. Flights were erratic and at its best, single engine charter service could never respond to the changing needs of northern people or to the growing responsibility of government to provide improved health and other services. During these years, no one was able to depend on air service as a reliable means of northern travel. Chartering a plane could secure priority of use and determine destinations but it could never guarantee the actual completion of a northern air journey. Until the development of land-based airstrips, there was no service during freeze-up and break-up; each of which could last from four to six weeks. At other times of the year, poor weather, especially fog, caused prolonged delays. There was no regularity to freight or mail and no assurance that even the most critical circumstances of sickness or other community problem could be alleviated by calling in an aircraft. Throughout the mid-1950's to the late 1960's, there were occasional air borne miracles, but there were also many tragedies occasioned by the fact that no infrastructure was developed for community air service.

In the 1960's, charter service for the Ungava region was based in Kuujjuaq and relied on single engine Beavers, Norsemen or Otters equipped with skies or floats. For special purposes, such as the movement of personnel or heavy equipment, Cansos were available for water landings and DC-3's could be used on the winter ice. Wheeler Airlines and St-Félicien Air Service were common names in the Ungava Bay region. On the Hudson Bay coast, Austin Airways established charter and mail service as far north as Povungnituk, basing their operation in Timmins and Moosonee, Ontario.

In the early 1970's, small community airstrips started to be built, and it was hoped that 'charter only' air service could eventually be replaced by some type of scheduled flights. From 1972 to 1977, some of the airstrips were extended and, in 1978, a federal-provincial agreement on airstrips provided \$100,000 per community for upgrading. In the late 1970's, the use of Twin Otter aircraft became more common, and regularly scheduled air service was established by Austin Airways on the Hudson Bay coast and by Survair in Ungava bay.

2.4 Present and Future Air Service

In 1977, Air Inuit was incorporated and began scheduled service for the Ungava Bay and Hudson Strait routes. On January, 16, 1984, Air Inuit acquired the Austin Airways route and mail contract for all points from Kuujjuarapik north to Salluit and across Hudson Strait to Cape Dorset. Since January 1984, Twin Otter air service operated by Air Inuit is available to every municipality north of the 55th parallel. The development of essential airport and navigational facilities have not however, kept pace with improved air service and this fact has had a serious negative impact on the delivery of safe and efficient air travel. Characteristics of airstrips in Northern Québec are summarized in Table 1, and comparisons with Eastern Arctic communities of the Northwest Territories are described in Table 2. The air service network for Québec and the Eastern Arctic is illustrated in Figures 1 and 2.

TABLE 1
NORTHERN QUEBEC AIRSTRIPS

	LENGTH		WIDTH		EVALUATION OF CONDITION	ACCESS
	Meters	Feet	Meters	Feet		
INUKJUAQ	610	2000	34	111	sandy and very soft	adjacent to the village
POVUNGNITUK	280	800	20	63	bad	5 km of road in bad condition
AKULIVIK	366	1200	30	96	bad	adjacent to the village
IVUJIVIK	250	810	25	81	good	adjacent to the village
SALLUIT	458	1500	23	73	dangerous	1.5 km of road to be constructed
KANGIQSUJUAQ	400	1300	20	63	good (soft)	approximately 500 m. from the village
QUAQTAQ	400	1300	25	81	pitiful	300 m. from the village
KANGIRSUK	350	1100	20	63	bad	1.7 km from the village, on the hillside, bad condition
AUPALUK	450	1500	20	63	very soft	adjacent to the village
TASIUJUAQ	750	2400	30	96	good	0.7 km of good road
KANGIQSUALUJJUAQ	650	2100	25	81	dangerous	300 m. to the village

Note: These statistics were gathered by Transport Québec and reflect the size and condition as of 1980.

TABLE 2
NORTHWEST TERRITORIES AIRSTRIP INFRASTRUCTURE

	LENGTH (Feet)	WIDTH (Feet)	BEACON	LIGHTS
FROBISHER BAY	9000	200	X	X
LAKE HARBOUR	1700	50	X	X
RANKIN INLET	5000	150	X	X
PELLY BAY	3524	110	X	X
IGLOOLIK	3500	75	X	X
HALL BEACH	5400	150	X	X
REPULSE BAY	3400	100	X	X
CORAL HARBOUR	5200 6000	140 200	X X	X X
CAPE DORSET	4000	100	X	X
RESOLUTE BAY	6500 4000	200 150	X X	X X
PANGNIRTUNG	2500	100	X	X
NANISIVIK	6400	150	X	X
POND INLET	4000	100	X	X
CLYDE RIVER	3500	100	X	X
BROUGHTON ISL.	3475	98	X	X

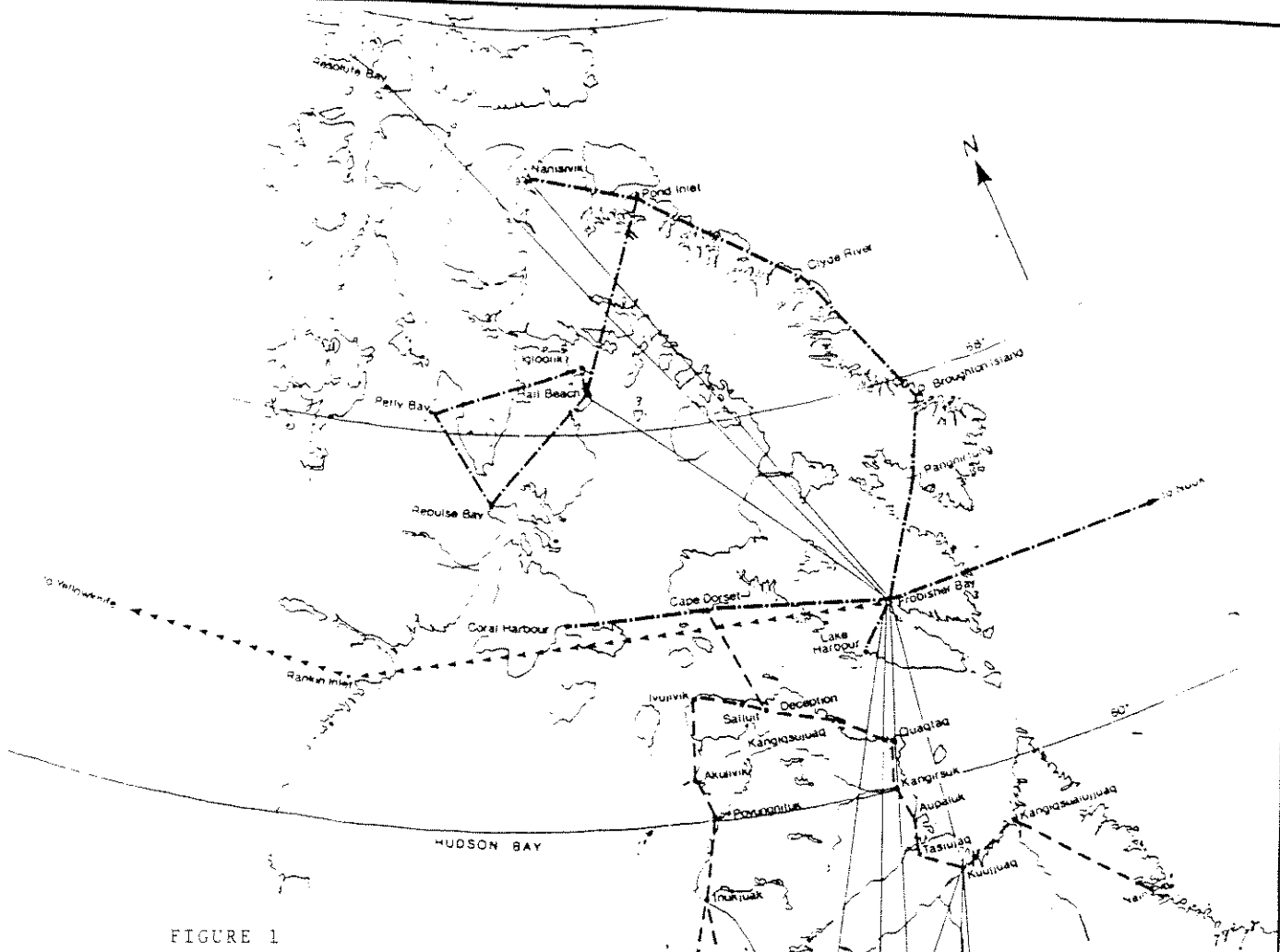
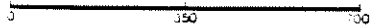


FIGURE 1

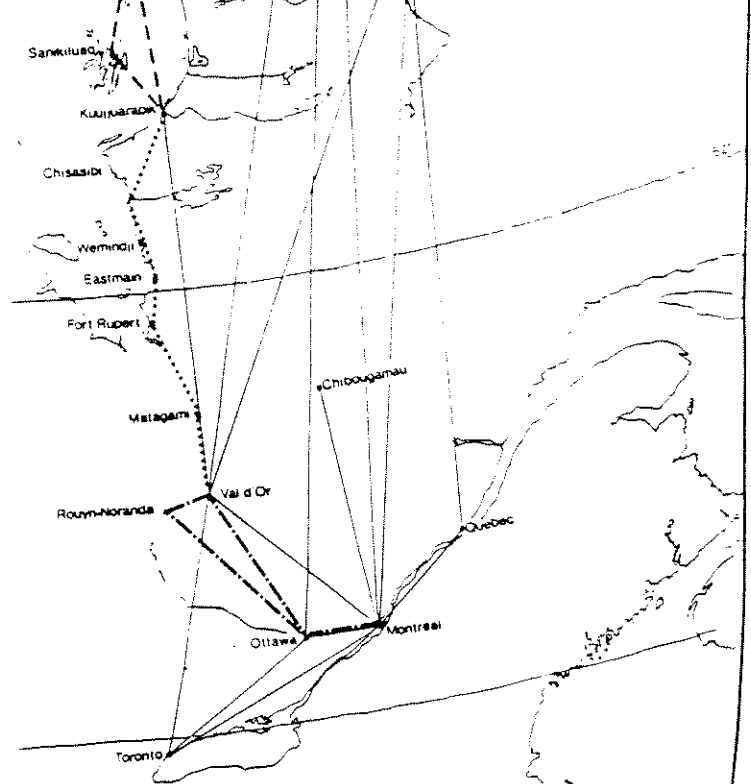
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 SERVICES AÉRIENS DE L'EST DE L'ARCTIQUE
 EASTERN ARCTIC AIR SERVICES

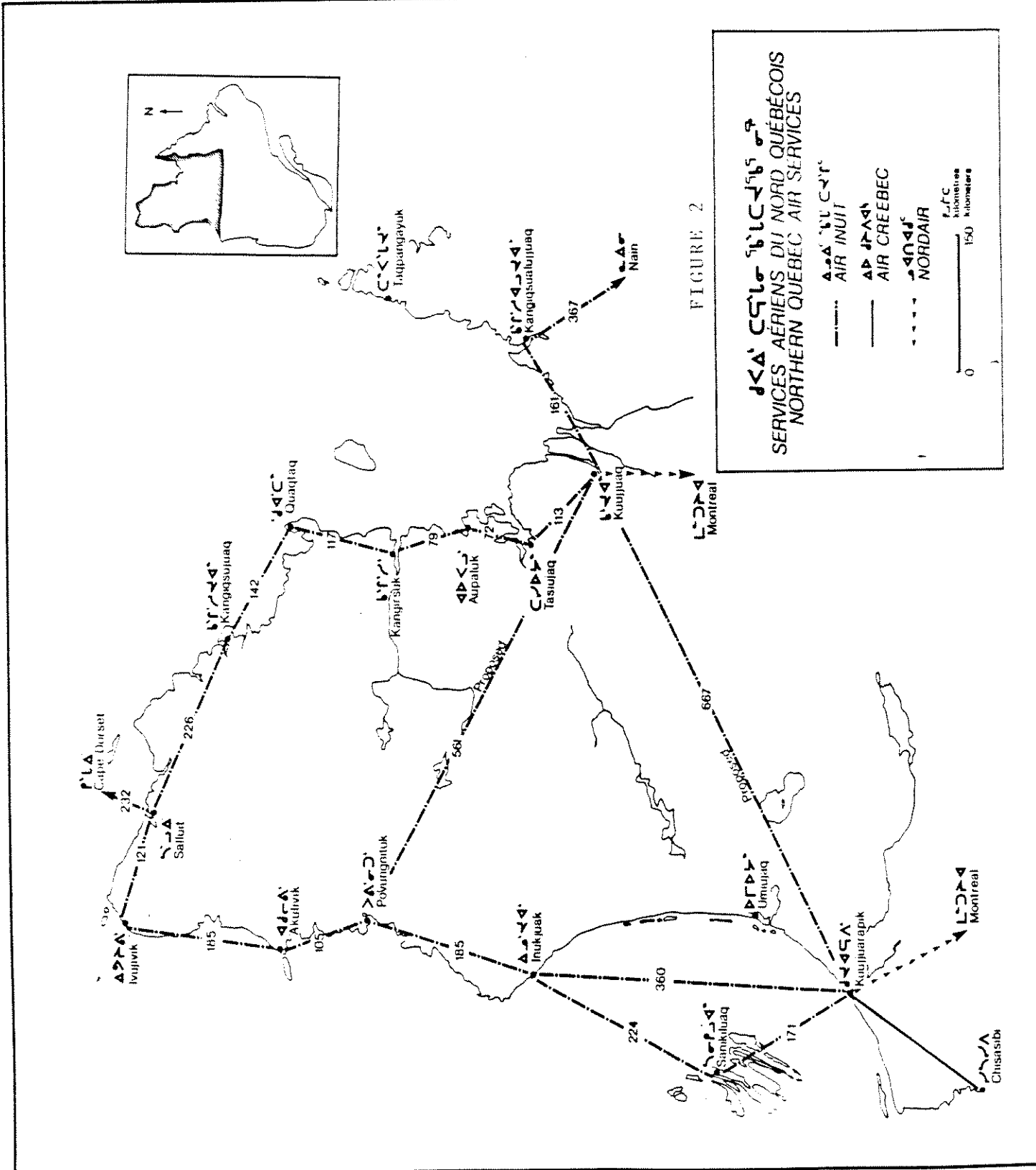
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NORTHWEST TERRITORIAL AIRWAYS

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Air Inuit operates De Havilland Twin Otter aircraft out of Kuujjuarapik and Kuujjuaq. Overnight bases are maintained at Povungnituk and Quaqtaq to facilitate early morning travel south to Kuujjuaq or Kuujjuarapik for connections to Nordair. The planes stationed at Povungnituk are used to service Akulivik, Ivujivik and Salluit to the north, Inukjuak and Sanikiluaq to the south, and to provide once a week service between Salluit and Cape Dorset. In the summer of 1984, once a week air service was initiated between Kuujjuaq and Kuujjuarapik, using a Hawker-Siddley 748 aircraft. Movement from the Ungava to the Hudson Bay coast can also take place on Saturdays by travelling north to Salluit and connecting with the flight for Povungnituk. Weather conditions, however, can often make such a trip very risky, with long delays. Consequently, movement between coasts frequently requires travelling.

Pilots, users and management all express confidence in the role of Twin Otter aircraft for northern service. It was this development in technology (short take-off and landing capability), rather than any significant upgrading of the airport infrastructure, that has enabled the present level of air service to be established and maintained. The Twin Otter aircraft, however, is both expensive to purchase and to operate. The freight payload is 1,134 Kg (2,500 lbs.) maximum and it can carry 20 passengers with 2 pilots. It is considered to be slow with a cruising speed of 130 nautical miles per hour, which is significantly reduced when strong headwinds are encountered. Since the planes are constantly combining freight and passenger service, it is impossible to have any on-board facilities for passenger comfort. Space is often cramped and the seats uncomfortable for long distance travel. It should be noted that the flight from Kuujjuaq to Salluit is 616 km and takes 4 hours when stopping in other communities. Kuujjuarapik to Salluit, is 800 km and takes 5.5 hours. Time spent in the air is often greatly extended when a destination cannot be reached and the flight has to return to its point of departure.

Precise information on passenger and freight volume is not available for either the Hudson Bay or Ungava Bay coast. Tables 3 and 4 provide an indication of the volume of passengers movement between

communities for 1984. These figures only represent scheduled passenger service, not charter flights that comprise approximately 20 per cent of Air Inuit business and which move a considerable number of people and pounds of freight.

Air Inuit is currently able to meet passenger demand as it exists on a day to day basis, although there are problems of overcrowded flights, schedule delays and poor connections. Special situations requiring the transport of large groups of people medical evacuations or off schedule travel can only be accomplished by charter service. Estimates of total air service are more accurate therefore when using total hours flown. This figure has increased steadily from 1979 to 1983. In 1979, Air Inuit flew 2,928 hours. By 1983, this figure almost doubled to 5,650 hours. The 1984 figure illustrates almost a 100% per cent increase to 11,000 hours. In order to meet the demand represented by these hours, eight Twin Otters are now in use. Early in 1985, Air Inuit will purchase an HS-748.

Travel patterns in the north are dependent on many factors. Travelers can be divided into two groups: those that travel for business or professional reasons and those that travel for personal reasons. The majority of those in the first group have their airfares paid by an organization, and most of their travel is to the south via Kuujjuaq - Kuujjarapik. The figures in Table 3 and 4 show that a total of 22,061 individuals departed the 18 communities and that 7,295 or 33 per cent of them travelled to either Kuujjuaq or Kuujjarapik. For all other departures the overwhelming majority or approximately 70 per cent only travelled one community away. Part of this fact reflects individuals business who move through the region community by community. Most, however, probably represents the travelling northern public that has a more limited range of either travel need or affordability. A review of passenger information from Salluit for 1983 supports these generalizations. For those travelling from Salluit to either Kuujjuaq or Kuujjuarapik, 78 per cent were paid for by an agency. For the two closer communities, only 14 per cent were paid for by an agency.

TABLE 3

HIDSON BAY COAST
AVERAGE PASSENGER
VOLUME 1984

	KUJJUARAPIK	SANIKILUAQ	INUKJUAK	POVUNGNITUK	AKULIVIK	IVUJIVIK	SALLUIT	CAPE DORSET	LA GRANDE	QUAQTAQ	KUJJUAQ
KUJJUARAPIK	---	639	1116	991	161	76	141	0	11	0	19
SANIKILUAQ	711	---	111	13	0	1	11	4	0	0	0
INUKJUAK	1223	101	---	613	65	21	89	13	0	0	0
POVUNGNITUK	1265	33	699	---	379	139	203	16	0	0	0
AKULIVIK	10	4	59	436	---	44	88	8	0	0	0
IVUJIVIK	116	0	16	233	75	---	201	15	0	0	0
SALLUIT	115	1	59	269	101	160	---	72	0	1	0
CAPE DORSET	1	1	4	15	5	13	95	---	0	0	0
AUPALUK	0	0	4	0	0	0	0	0	0	0	0
KANGIQSUALUJUAQ	0	0	0	0	0	0	1	0	0	0	0
KUJJUAQ	35	0	0	0	0	0	0	0	0	0	---
QUAQTAQ	0	0	0	0	0	0	0	1	0	---	0
KANGIRSUK	0	0	0	0	0	0	0	1	0	0	0

TABLE 5

CARGO MOVEMENT 1984
(AVERAGE PER POUNDS)

	KUUJUAQ	TASUAQ	AUPALUK	KANGIRSUQ	QUARTAQ	KANGIRSUUAQ	SALLUIT	KANGIQSUALUUAQ	DECEPTION BAY	TOTAL
KUUJUAQ	-----	51,111	32,740	75,070	43,310	50,685	62,291	94,619	1,953	411,779
TASUAQ	8,011	-----	1,144	100	96	776	0	0	0	10,127
AUPALUK	6,767	573	-----	628	442	327	0	0	0	8,737
KANGIRSUQ	15,293	806	2,018	-----	1,395	60	1,445	48	0	21,065
QUAQTAQ	14,182	517	185	3,136	-----	309	185	142	0	18,656
KANGIQSUJUAQ	6,586	56	590	524	1,296	-----	5,699	0	0	14,751
SALLUIT	6,384	40	0	38	33	265	-----	0	0	6,760
KANGIQSUALUUAQ	27,745	0	201	1,168	33	55	0	-----	98	29,300
DECEPTION BAY	1,080	0	0	0	0	0	0	229	-----	1,309
TOTAL	86,048	53,103	36,878	80,664	46,605	52,477	69,620	95,038	2,051	522,484

A major source of charter business for the Ungava Bay region is the fishing and caribou hunting camps that operate from mid-July to late September. The Ungava Bay region has sixteen active tourist camps and there are five areas where permits have been issued for future development. At the present time, there are no active outfitting camps on the Hudson Bay or Hudson Strait coast, although three permits have been issued for sites in the Povungituk region. One of the problems that is said to limit tourist camp operations on the Hudson Bay coast is the unreliable 737 flights into Kuujjuarapik.

2.4.1 Future Planning

Northern residents are outspoken about the problem with air travel and they are determined to make their voice heard. The Inuit accept the fact that major changes can not be accomplished until the physical infrastructure is greatly improved. They also insist that the improvements must be to the same standards in every community to assure that decisions on equipment used and the facilities required, do not have to vary because of different requirements in each community. This, they say, would be expensive and therefore slow the process of improvement.

The terms of reference for the impact assessment focuses primarily on the construction of an airstrip, but this is not a narrowly defined subject in the minds of Inuit. The terms of reference for this airstrip impact assessment define specific topics with respect to the bio-physical, social and urban environment, but Inuit are equally concerned with many other airstrip related issues that are more likely to have an impact on their lives. Service, schedules, fares and freight rates; safety and the personnel treatment and respect for Inuit passengers; access to specific information about flights and more general information about the operations and priorities of northern air service; and the availability of adequate personnel and ground support within each community are the issues most frequently raised in the community meetings.

A major limitation for the development of future air service is the inability to provide efficient cargo service. Cargo shipments are the lifeline of each community and it is not possible to carry enough combined passenger/cargo loads with Twin Otters to be economical. At the same time, Air Inuit cannot maintain enough Twin Otters to run cargo only. Larger aircraft would greatly improve the situation and it is assumed by Air Inuit that the capacity to carry greater payloads would generate a growth in the demand for air service. The HS 748 aircraft, for example, has an average freight payload of 5,215 kg (11,500 lbs). Even the utilisation of the McDonnell Douglas DC-3 in all seasons provides a freight capacity that averages 2,945 kg (6,500 lbs). Both of these aircrafts can operate on an airstrip of 1,065 m (3,500 ft). A summary of the characteristics and requirements for aircrafts used in the north are illustrated in Table 5.

The need for greater freight capacity of aircraft must, in the future, be integrated with plans to decrease the volume transported by the annual sealift. It is becoming more apparent that some of the cargo now sent north by ship once a year, would be sent by air, alleviating long delays in receiving items such as building materials, equipment, parts, vehicles and food. This service would also significantly reduce warehousing costs and enable organizations to carry smaller inventories and thus plan more efficiently. Management personnel of Air Inuit felt the larger payloads would help slow down the fare and rate increases over time which, according to airline management, would mean savings to the consumer.

The new 3500' airstrips and their supporting infrastructure will allow Air Inuit to expand its operations to include the acquisition of more appropriate and cost efficient aircraft and to develop new staging points which will increase the efficiency of service for passengers. This could, for example, mean that planes are stationed in one of the Ungava Bay communities, thus dividing the present "long run" up the Ungava coast from Kuujuaq to Salluit into a different arrangement of routes.

TABLE 6

CHARACTERISTICS OF AIRCRAFT USED IN NORTHERN OPERATIONS						
TYPE OF AIRCRAFT	FREIGHT CAPACITY (FULL TANK)	PASSENGER CAPACITY (FULL TANK)	RANGE OF AIRCRAFT (FULL TANK)	FUEL TYPE	REQ'D RUNWAY LENGTH	REQ'D TWIDTH
BOEING 737	22,000 lbs.	119	5 hours	JET	6,000 ft.	
F 27	26,000 lbs.	20 30	8 hours 6.5 hours	JET	4,500 ft.	
HS-125	20,000 lbs.	6	3.5 hours	JET	4,500 ft.	
HS-748	11,500 lbs.	52	6 hours	JET	3,500 ft.	
DC-3	6,500 lbs.	28	10 hours	AVGAS	3,500 ft.	
DHC-4 CARIBOU	5,608 lbs.	30	7-9.8 hours	AVGAS	2,030 ft.	
DHC-6 TWIN OTTER	3,000 lbs.	16	5.25 hours	JET	1,500 ft.	
SINGLE OTTER	2,003 lbs.	11	n/a	AVGAS	1,600 ft.	
BEAVER	1,000 lbs.	4-5	6 hours	AVGAS	1,200 ft.	
AZTEC	1,000 lbs.	5	6 hours	AVGAS	1,500 ft.	
CESSNA 185	800-900 lbs.	3	6 hours	AVGAS	800 ft.	

3. METHODS OF STUDY AND COMMUNITY FIELD WORK

3.1 Methodology

The social impact assessment study for Povungnituk began on November 12 and terminated on November 23, 1984. The most intensive work was carried out from November 19 to 23. Prior to the arrival of the researchers, the Mayor and Municipal Council were informed about the study by Juusipi Illimasaut. In a telephone conversation, he explained what the study was, why it was needed, and how it would be conducted and the findings used. The community was also informed of Juusipi Illimasaut's visit to Ivujivik where he would discuss with that community the actual problems that were encountered with the planning and construction of the first airstrip under the improvement program. The findings from this trip were then reported directly to Povungnituk as part of the impact assessment study that he himself animated and led. Discussions were in Inuktituk, and a general record of all discussions was kept by the Municipal Secretary.

The information exchange required for the social impact assessment study was carried out through formal meetings with the Municipal Council, group discussions and individual interviews. The project was physically located in the Municipal Council building because this is where most people have an opportunity to come in contact with the researchers, look at their maps and other reference material and exchange information. Communication was based on asking and answering questions.

A detailed description of the airstrip program, coupled with an explanation of the assessment and review process, was presented on the community F.M. radio, and was followed by an open line discussion to answer specific questions or provide additional information. The general information obtained from these discussions was then incorporated into the questions that were discussed with the Municipal Council and representatives of the other major organizations in the community.

A basic approach for the Povungnituk study was the question and answer format that is described on page 1 of this report. Since the questions were themselves devised by an Inuk and presented in Inuktituk, it allowed for a much freer flow of information. Yet they also required the discussion to focus on the issue of the question and they forced the drawing of conclusions in the form of specific answers. If answers were not forthcoming, then it was possible to identify areas where more information and clarification was required. The questions began on a very general level, simply asking the community what they knew about the project. They then became more specific and focused on issues identified in the terms of reference and in the findings from Ivujivik and in the first discussion held with the Municipal Council.

3.2 General Principles of Inuit Involvement

The research methodology applied to impact assessment studies in the north must identify problems and address issues that are relevant to the current conditions and long term needs of Inuit. In order to help accomplish this task, the methods used in the Povungnituk study are part of a larger program within the Makivik Research Department that is concerned with the use of Inuit knowledge as an essential element in northern research. The program is also concerned with the development of Inuit expertise in the design and execution of research, and in the evaluation and application of research findings. This approach can best be accomplished through the creation of a cooperative association between Inuit and southern-trained scientific personnel. Both groups have the capacity to act as teachers rather than lose themselves in endless argument over "who knows best".

The effective participation of Inuit in cooperative research involves five basic principles. First, each group must respect the knowledge of the other. Inuit knowledge is reflected in the vast amount of information that has been acquired over time about the behaviour, patterns, cycles and eccentricities of the biological and physical environment. Such an

approach to learning is significantly different from the formal, often very imperical and precisely structured studies that characterize southern science. Second, both groups must also respect the means by which information is collected, organized and arranged in a coherent structure. For Inuit, the nature of this structure differs considerably from that which characterizes southern scientific thought. Third, the specific information and organized knowledge of both Inuit and southern scientists is bounded by certain restraints and limitations that must be identified and respected. Cooperative research should act as one important catalyst for creating a new integration between northern and southern frames of reference that is required by the first three principles.

The fourth and fifth principles involve certain political as well as scientific implications if they are to be acted on. Fourth. The quality and accuracy of both northern and southern knowledge need not be evaluated on the degree to which they correspond. At times, the knowledge of one group can provide answers to the questions asked by the other group. At other times, the explanations of both group may differ significantly yet both explanations can be equally correct in explaining the problem under investigation. Finally, the conflict in knowledge and explanation may be very real. At times, cooperation will allow for a common answer to be found or it may mean that both groups must maintain a separate understanding of the problem and its resolution. The fifth principle applies primarily to the utilization Inuit knowledge. What Inuit know will only assume its rightful place in the larger framework of explanation if the rules that govern the conduct of inquiry and if the hierarchy that controls these rules are modified to accomodate and give equal value to the Inuit way of viewing and understanding the world.

The development and application of these principles to northern research requires time. The impact assessment studies provide an opportunity to develop the process yet another step and, at the same time, to provide the Inuit of northern Québec with a series of community studies that reflect their ideas and concerns about the airstrip program and its

impact. Overtime a new methodology will emerge and new research associations will be created. As the impact assessment process changes and evolves so will its relevance for the Inuit of northern Québec.

3.3 Research Schedule

Juusipi Illimasaut arrived in Povungnituk on November 10. From November 12 to November 16, he had informal discussions with the Municipal Council and other individuals. He also summarized the information obtained during his trip to Ivujivik so that it could be presented to Povungnituk in meetings and on the F.M. radio. William Kemp arrived in Povungnituk on November 19. From November 19 to 23, the following events related to the social impact assessment study took place.

November 19 : full Municipal Council meeting to discuss the project and the assessment study (6:30 to 11:15 P.M.).

November 20 : individual interviews on bio-physical environment and community infrastructure (9:30 A.M. to 12); interviews with Hudson Bay Company and Co-op personnel (1:15-3:30); meeting with Municipal Council to discuss the prepared questions and establish impacts (4 to 6:50 P.M.); reviewing information from the previous meeting and summarizing the findings for review (8 to 11 P.M.).

November 21 : meeting with Mayor (9:45 to 10:30); discussions with representative appointed by the Council to work on the study about the information and its interpretation (9:45 to 11:45); meeting with Municipal Council and representatives of community organizations to discuss airstrip, corrective measures (1:30 to 7:15).

November 22 : meeting with Air Inuit agent to discuss service and as related to the airstrip and other problems that affected the quality, volume and safety of air travel (10:15 to 12:40); F.M. radio phone show on the proposed airstrip and its extension for Nordair 737 jet service (11:00 A.M. to 2:00 P.M.); community vote on whether to ask for extension (3:00 P.M.); discussion of vote result with Council and review of the information and findings that would be presented in the social impact report (4:00 to 5:50 P.M.).

December 12: meeting of Povungnituk Mayor and Council Secretary with Transport Québec and Transport Canada representatives in Kuujjuaq on the community plans to discuss further the length of the airstrip and its implications.

4. INUIT PERCEPTION OF IMPACT ASSESSMENT AND PLANNING

4.1 An Overview of the Inuit Perspective

Social impact assessment in the north can only be effective if it incorporates the perspectives, values and participation of Inuit in each of the four phases that comprise the assessment process. These phases are: establishing the terms of reference for impact assessment studies; participating in the planning and execution of these studies; maintaining membership in the Environmental Quality Commission; and exercising a control over decisions that occur during the final stage of project planning and throughout actual construction.

Access to information and decision-making, through the Environmental Quality Commission, is the cornerstone of Inuit involvement in impact assessment. At the present time the Inuit hold three positions on the Commission and, consequently, they have the opportunity to contribute specific knowledge, perspective and values to the deliberations and decisions on the merits and conditions of development projects. Inuit have also have the opportunity to participate in the design and execution of research and data analysis for impact assessment studies the airstrips, through the Makivik Research Department and through the archeological program between Transport Québec and Avataq Cultural Institute.

The most important problem that must be resolved, is how Inuit can participate more effectively in Phases 1 and 4 of the assessment process. Participation in Phase 1 requires that a well-defined procedure be established to assure that Inuit have a continuing voice in determining the content for the terms of reference that must be submitted by project proponents. The need for establishing this role is demonstrated by the fact that Inuit do not feel they are presently able to make any significant contribution towards setting the principles, questions and priorities for impact assessment studies. To this end, the Inuit are adamant in their opinion about what elements in the life of their communities are

communities are most important with respect to potential impact from projects. They also cautioned researchers not to try to establish the only value system around which the positive and negative impacts from airstrips or other projects should be evaluated.

Inuit question who controls the assessment procedure; what type of protection impact assessment actually provides for the bio-physical and socio-economic environment of their community and region; why these protections are needed; and how specific impacts are determined and corrective or remedial measures established. In order to answer these questions, appropriate terms of reference must be developed so that they identify problems and address issues that are relevant to the current conditions and long term needs of Inuit.

Such an approach does not mean that southern-based concerns are disregarded, or basic principles of research and analysis ignored. It simply means that the context for identifying and solving problems must be enlarged and the time frame, methods and statement of results made accountable to Inuit. What these questions imply is that the proponent of a development project must be able to interact with Inuit values and points of view in a manner that enables a cross cultural understanding of problems and their solutions to be addressed in the terms of reference in the research and in the recommendations. An excellent model of how Inuit can be included is illustrated by the way in which the archeologists of Transport Québec have worked with Avataq Cultural Institute. Appropriate terms of reference for the archeological surveys required for the airstrip program have been designed; a structure for training Inuit to undertake the research is being put in place; and a means for Inuit to evaluate the findings and implement the recommendations has been established.

Closely tied to the question of social impact assessment is the question of planning and of establishing a better framework for coordinating all of the different decisions that are made on behalf of the community by outsiders who are themselves usually not knowledgeable of one another.

Fieldwork on social impact assessment for the northern airstrips has now been carried out in four communities and there is a coalescing of Inuit opinion about their roles and their rights in this process. Ideas first stated at Salluit and Ivujivik were heard again in Povungnituk and Kangirsuk, and the experiences of Ivujivik are being heard in the other communities. In particular, questions are raised about how the Inuit can gain an effective sharing of control over a process that in itself has such a strong potential for negative impact.

The Inuit considered that impacts resulting from the airstrip or other community infrastructure developments are often related to ineffective planning. They questioned why it seemed to take impact assessment for a project to create a concern about planning. The problem as stated by Inuit is that no one is really in control of community planning and thus, every mandate is treated in isolation. They called upon the different organizations that were proposing projects to coordinate their plans and specific requirements prior to coming to the community. It was felt that the municipal councils or other bodies could never make rational decisions since they never knew the full range of issues.

The Inuit felt that certain groups were very naive about the requirements of northern projects and the type of planning that was necessary to make them successful. They also said they felt that some of the people sent to do studies are unaware of how to work in the north, and do not ask the proper questions or seem to understand the issues. These people are said to bother the community and it is felt they can not write strong reports if they are unprepared and do not have the time to understand.

The Inuit stated that, although it may be the mandate of project proponents to identify planning requirements and impact assessment, it is the communities that are penalized when improper studies and poor consultation lead to the failure of a project to meet the criteria necessary for the review process. If a project needed by the community is rejected because of poor planning, or because the people were not able to do a proper study, it is the community that is the big loser.

because the people were not able to do a proper study, it is the community that is the big loser.

These concerns are well summarized in the statements that were made in a formal meeting of the Kangirsuk Municipal Council on November 12, 1984.

You say that you are here to find out how the new airstrip will affect our lives, and we don't know why you bother to ask that question because it should be clear to anyone who knows our problems. But it always seems that people down south know more about our problems than we do because their answers are stronger than ours. (...)

If everybody in all the governments is worried about all that is going on up here in this community, why do they come to us the very last, after everything is done, to ask what we think; - does it matter to them anyway if we like something or are against something. You are asking all these questions about a little airstrip, but are people busy asking why all those caribou were killed by one of those projects your people had to have. If we cooperate and tell you what we think or what we worry about, will anybody down south pay attention if they think we should be thinking or worrying about something else?

4.2 Inuit Concern with Ivujivik Project

The acquisition of a better understanding about the meaning of impact assessment, the role of assessment studies, and the responsibilities of both the communities, the proponent and the other interest groups, comes about through actual experiences with, and evaluation of, the process. Thus the Inuit wanted to know more about Ivujivik before they started reviewing another community airstrip. The idea was raised and acted upon by Juusipi Illimasaut as a way to increase community knowledge and to animate the upcoming field studies. A three-day trip to Ivujivik has provided important insights about the project in relationship to the assessment study, the post assessment study planning and the actual construction. The following comments are derived from the taped and written notes in Inuktitut that resulted from formal discussion with the Council and other individuals. The notes assembled by Juusipi Illimasaut

included a series of topics that were classified as comments from the Municipal Council; problems voiced by the people of Ivujivik; and problems arising from construction activities.

4.2.1 The Council Viewpoint

The Municipal Council of Ivujivik expressed that the construction of their airport will greatly improve that facility and that they are very pleased with a long airstrip. However pleased that they are, they feel that there have to be some improvements made to the procedures of making airstrips in the Inuit territory so that other communities might benefit from the Ivujivik experience. There are certain problems. Therefore, the other communities must prepare themselves in advance in order to be ready for the renovation of their airstrips. The organizations should be concerned over this and Makivik Corporation and Transport Québec should always know exactly what is going on. And also, the president of the construction company building the airstrip should come to the community often to see construction of the airport before it is completed.

4.2.2 Dynamiting Problems

The construction of the Ivujivik airstrip has required dynamiting, the explosions are noisy and the Municipal Council said it was bothersome but could not be helped because rock is needed. The wildlife usually follow certain routes, but even though there has been blasting, there don't seem to be any changes in usual wildlife behaviour.

4.2.3 The Land After Construction

When the Ivujivik Airport is completed, some parts of the hills of Ivujivik will have been removed. The long time community look-out point will not be there anymore and the people of Ivujivik are sorry about

it. However, the aspect of getting a better airstrip is greater than that loss. Another impact that the new airstrip will have when completed is that it is right on the hunters' route when leaving or arriving at Ivujivik. This means that they will have to find another route.

4.2.4 The Council Viewpoint on Employment

The Council expressed that they are very pleased with the airport construction at Ivujivik. However, there are some very noticeable problems. Before the construction of the airport, they were told that the Inuit would get employment and that there would not be enough local men to fill all the jobs. They were told to be prepared to receive people from the other communities coming to work at Ivujivik. And then when the construction started, there were very few Inuit working and very many white people. Therefore, because of this, the people of Ivujivik kept mentioning that they were not told the truth.

4.2.5 Other Unemployment or Employment

The employment of Inuit and non-native people is causing some uneasiness and this is due to their salary differences. This problem should be corrected by the organizations concerned. The reason for this is that the white people come to work in the Inuit territory. They are a source of great expense, their airfare has to be paid, their food and lodging, and they also bring a lot of equipment for which transportation has to be paid.

The salaries of the non-natives and all the other expenses could be better suited for people of the territory. We feel very sorry for the Inuit because of this. This also does not look good because most of these jobs they do could be filled by the Inuit, like driving vehicles and such, although it is fine in areas of work which cannot be performed by the Inuit.

One of the reasons they do not like this situation is that the people who live in the Arctic face very high prices whereas in the south, the goods are a lot less expensive. In the north also, there are not often many jobs and the Inuit are not happy if too many of the jobs are not done by them, because after construction, there will not be the chance to earn money because the work goes away and the Inuit cannot follow. This situation has to be solved by the Inuit before the next airstrips are started.

Also, there is a kitchen at the lodging house of the white people who come to work. The cook has an Inuk helper who had this to say, "The Inuit work very hard, seven days a week. Why are they so underpaid? And why are the white people being paid a lot more? Why is this so?"

4.2.6 Concern with Shipping of Crushed Rock

The hills of Ivujivik are dynamited, removing parts of them, then the shattered rock is crushed by a crusher and then washed. Some of the crushed rock is put in small bags and sent south. The people would like to know why this rock is shipped south and if it is valuable. Do the white people keep it for themselves or will they sell it or make an exchange?

4.2.7 Food and the Co-op

The white people mainly brought up their own food because we said that there was never enough in our store for such a large group. This worked pretty good except that the construction would fill up plane after plane and this would mean we could not get our own fresh food in. Maybe we lost about \$1,400 from food spoiling. But we were also glad for all of the other business from the workers for our Co-op.

4.2.8 Selection of Contractors

The people want to point out that when the organizations are looking for contractors to build for them, they should not look for the cheapest contractors. When an organization finds the least expensive contractor, it can turn out that a cheap contractor will do a much more inferior work and a more expensive one do a much better job. This should be taken into consideration. And also, when the Ivujivik Airport is completed, they want it reviewed to see if it was done properly.

4.2.9 Bothering the Municipal Council

The Council and the secretary and Mayor want to say that they sometimes had problems getting the work of the community done because they often had to be finding parts and many other things for the contractor's equipment, housing and other things. The contractor should try to have more of these things with him. Sometimes it was a real bother, but they needed everything they asked for and they were very careful to make sure they always returned or replaced anything they borrowed.

4.2.10 Equipment Breakdowns and Borrowing

The construction company is also to bring up their equipment that is in good working order because we told people in Québec that the community did not have equipment to use for the airstrip because it was always busy in doing other jobs in the community. The front end loader was hard for the community to use when it was at the airstrip and even more the water truck was there because they didn't have one to start with. The equipment people bring up should not be too old and in need of repair before the work starts because then the Inuit are asked to stop working and parts must be brought up. We never minded lending equipment or anything else as long as we were able to get our own work done and not always be delayed.

PART II - FINDINGS FROM POVUNGNITUK

1. THE POVUNGNITUK COMMUNITY

The community of Povungnituk is located on the east coast of Hudson's Bay at approximately 60°3' north and 77°15' west. The settlement is situated approximately 5 kilometres from the open waters of Hudson Bay and its position on the north shore of an inlet of Povungnituk Bay provides a safe harbour. Povungnituk has a population of 900 Inuit and 45 non-natives, making it the second largest settlement in northern Québec. It is a major centre for the Hudson Bay coast and the site for a new regional hospital and social service complex that will be completed in 1985. Residents of Povungnituk have refused to recognize the James Bay and Northern Québec Agreement and, therefore, the community has had limited participation in many of the programs and activities that have greatly influenced the pattern of growth in other communities over the last nine years.

Povungnituk is supplied by the Federation of Cooperative Store, and by the Hudson Bay Company and, until January of 1984, it was the northern operations base for Austin Airways. This function has now been taken over by Air Inuit. During the early 1970's, Povungnituk was the home of many individual families that have now returned to their original settlement area of Akulivik at Cape Smith.

Hunting, fishing and trapping continue to be important economically and there are a variety of wage labour and other economic opportunities for Inuit which include municipal government services, both administrative and labor; teaching; social and health services; regional, provincial and federal government programs; native political and cultural organizations; the Hudson Bay Company and Co-op stores and restaurant; Air Inuit; privately owned taxi, snowmobile repair, fish smoking facility, snack bar, pool room and gas and oil. For many years, carving and

handicrafts were the major source of earned income and only recently has their importance been eclipsed by permanent employment. Seasonal labor in construction activities is still a significant source of income and government transfer payments continue to give critical financial support.

Povungnituk, as a community, expresses a strong concern for maintaining the Inuit cultural heritage both through formal structures such as a museum, language commission and Inuit encyclopedia project and through less formal means such as the rebirth of dog teams, adherence to Inuktituk and the continual utilization of wildlife resources. On the other hand, adherence to strong cultural values has not isolated the community from changes. French is growing as a second language, television has become a part of life, trucks and speed boats are more common, and 10 students now attend C.E.G.E.P. in the south. All of this activity creates a variety of linkages with the outside world and a demand for air services.

1.1 Present and Future Air Service

The general pattern of scheduled air travel into and out of Povungnituk is illustrated in Table 3 (Page 16). In 1984, the number of passengers was 5,304. Of this total, 2,734 passengers left the community and 1,265 or 46 per cent of these travelled directly to Kuujjuarapik many for connections to Montréal. The remaining passengers followed the pattern common to other modern settlements, travelling only one community away to either Inukjuak (47 per cent) or to Akulivik (25 per cent). Of the conditions that influence local travel patterns into and out of Povungnituk, the two most important are the traditional links to Akulivik and Inukjuak and the political linkage between Povungnituk, Ivujuvik and Salluit.

The people of Povungnituk had many specific comments and recommendations about the way in which the air service network of northern Québec should be developed and improved. They agree that significant changes

cannot occur until there is a physical upgrading of all the airstrips, but they also raised some very specific points about how the operations under the present conditions could be improved. They asked the researchers to forward these comments to Air Inuit.

The major problem that now affects air travel out of Povungnituk especially to the north is the volume of people who want to travel. It is often difficult to obtain space and people planning to travel to Akulivik must often wait for extra sections, which makes scheduling difficult for the passenger. People indicated that they want to travel more to Salluit, but since they feel the airstrip is unsafe and weather delays frequent, they will only plan this trip for the winter months when the ice strip is in use making landing safer and weather not restrictive. The general outlook for Povungnituk which request to the future development of air service involves three primary points raised by the community. First they feel that there must be a more dependable jet service connection into the Hudson Bay region. They feel that if this is not available it will slow the overall economic growth of the region particularly the tourist industry, and it complicates the ordering of fresh foods and other materials. The second element involves the community's perception of their own airstrip and facilities. They note that even with a minimum of 4,500 feet they are in a very good position to become the major transport mode for the Hudson Bay coast. It was noted that there is no small plane charter service for the Hudson Bay Coast. Since Povungnituk is centrally located for many areas along this coast line, a local charter business using smaller less expensive airplanes would provide an extremely valuable service for hunters, tourists and other individuals who would work in the area.

The third element noted were the connections to other communities. They felt that the most important link that had to be created was to the north so that there could be more frequent all season air service to Salluit. It was felt that it is this connection that should be emphasized when plans are formulated to establish more regular air travel between the Hudson Bay and Ungava Bay coast. This statement was based on

the assumption of maximizing the importance of northern points in the air network rather than centralizing the east-west movement of people and materials within Kuujuaq.

A second major problem that the Povungnituk people must resolve is the more efficient movement of foods and other freight into the community. The Hudson Bay Company and Federation of Cooperatives both stated that their operations are restricted by the difficulties of getting materials into the community without long delays. This is a critical factor for the delivery of fresh foods but it also relates to many other aspects of their inventory planning.

The magnitude of freight requirements is illustrated by the fact that between 6,000 to 8,000 pounds of fresh meat and produce should be delivered weekly from Val-d'Or to the Hudson Bay Company and Co-op. These foods are delivered by mail at 22 cents a pound from Val-d'Or. In addition to fresh meat and produce, the Hudson Bay Company imports an additional \$25,000 of shelf stock per week. It can be probably assume that this figure is at least doubled when the Co-op is included.

The major factor that should be considered when planning future freight service into Povungnituk is a possibility of a substantial shift from a sea lift to an air lift of goods. The Hudson Bay Company, for example, now ships 350 tons of freight per year by ship. One scenario that is been considered is shifting to a 3 months inventory of all goods, most of which will be delivered by air. This would enable warehousing operations to be minimized, thus allowing for the inventory to reflect more closely the shifting demands of a developing community. Even with the sea lift it is difficult to predict a year in advance the consumer needs measured against their disposable income. As a late November 1984, for example, the demand for snowmobiles at the Hudson Bay Company exceeded their inventory by approximately 25 units. Under the conditions of current freight rates from Montréal it will cost northern consumers \$1,300 just for delivery. This problem must then be coupled with the long delays

for receiving large items since only one snowmobile can be shipped by Twin Otter aircraft.

It must be recognized that passenger activity and demand for freight will increase significantly once the regional hospital and social service center is in full operation. This installation is not designed to accommodate long term stocking of basic supplies, and its existence will create additional demands in other sectors of the Povungnituk economy.

1.2 Characteristics of Proposed Infrastructure

The basic characteristics of the proposed infrastructure for Povungnituk are similar to that of other communities, except for the size and surfacing of the airstrip. The airstrip is situated to the northeast of the community and it will be reached by a road approximately 2.7km long. The planned airstrip is 1,370 meters and will be paved, which is a requirement for the jet ambulance.

The airstrip will have permanent lighting and navigational aids, and be supported by passenger facilities and freight warehouse. The airstrip and facility will be supplied in energy either by a powerhouse on site or by a line from the community, either above or below ground.

The cost estimate for the Povungnituk airstrip is \$ 9,3 million to complete the infrastructure as planned.

2. COMMUNITY IDENTIFICATION OF IMPACTS AND CONCERNS

The questions that were used to discuss the potential impact from the proposed airstrip were first developed in the Kangiqsujaq Research Center by Juusipi Illimasaut. The questions were based on ideas developed from a review of the Ivujivik report and from a meeting in Kangirsuk to introduce impact studies that was attended by Juusipi Illimasaut. These questions were then modified after the Ivujivik trip and a further modification took place after the study was introduced in Povungnituk. The questions were typed in Inuktituk and distributed to the members of the Municipal Council and to others who attended the meetings.

2.1 Community Questions and Discussions

2.1.1 Does the Municipal Council agree to a social impact study?

The Council doesn't mind that this study will go on here. You say that it has Inuit working on it and Juusipi Illimasaut will make it easier for us to work out the problems and have the discussions in our own language. The Council can act for the community but other people and representatives will be brought in and the entire community is informed about what is going on by the F.M. radio.

2.1.2 What topics or issues should be included?

We are mainly concerned that our ideas can be heard and we can only learn what else we want to say as we think about the project. You said that we can ask each other questions, so that will start us thinking of more things to say. It is very important for you to put down the ideas we tell you, especially those things we really know must be done for the new airstrip. We worry to make sure that the people are working and the builder must know something about this construction so that the work is done properly and everything goes without too much trouble.

2.1.3 What should the study emphasize?

We know that it is important to protect the environment but sometimes it is hard to show that something like an airstrip isn't going to really bother the animals because most of us travel farther away when we hunt seriously. Probably we have to think more about jobs and about being able for the construction to benefit our community so that not so much of the money goes back south. It is also important for us to work with the contractor because things can always go wrong if there is not cooperation, especially if the foreman is not good to work with or does not really think about the people just the money and always hurry up, or if he really always thinks we are not doing our best because we work differently than white people. But we can go on and tell other things when we talk about each special topic.

2.1.4 Who proposed the airstrip for Povungnituk?

The people of our community have been asking for a better airstrip for many years. We were always willing to construct our own but, to build a real airstrip, takes big machinery and other equipment that we have never had here at Povungnituk. It's hard to believe that the airstrip that is now being used and the other one which isn't used at this time, were built by us with almost no equipment except a small bulldozer and a truck. We are lucky here at Povungnituk because the land is not rough so it is not a problem in building and it's also easier for the planes to fly in because there are no dangerous hills when the weather isn't good or it's night.

After many times of asking the government about airstrips, we were contacted about this program and our mayor attended a meeting of other mayors that decided to make our community the third on the list. We know that, because of the hospital, it is important to have an airstrip and it was probably the hospital people that made sure our strip would be longer than the others and also paved. We have had meetings with

Transport Canada and Transport Québec and we know that they are responsible to the community for making sure this program will work out okay.

2.1.5 Do the Inuit people agree?

The people of Povungnituk were anxious to agree to have a new airstrip, since that is what they have been asking for, maybe for even more than 10 years. In our community, there are some problems about how long the strip should be and what it should be used for and these are now being discussed in the community. Nobody in this community is saying that we don't need a new airstrip; some people want it longer and some people don't. That's what the talk is about, not about stopping any kind of building. After all, we strongly agreed to the hospital and this is going to bring changes to our community, but we know it is for the best and we also know that if we didn't agree to have a better airstrip, it would make it difficult for the hospital to carry out its work.

2.1.6 How long should the new airstrip be?

That is kind of like the problem we just talked about, because the big question in peoples' minds is how long do we want an airstrip and what do we want to use it for. More and more people are beginning to say that the strip that we now have is good but why not make it a little better so that a big jet can land on it. When we first heard about a strip that would be good for jets, we were thinking they meant Nordair and that worried some people. Then we found that it was a jetstrip for another kind of plane used by the hospital but many people are still remembering that maybe the big jets are a good idea for our community and even for the hospital.

We want you to understand that all of the talk about this new airstrip does not mean that we have rejected the original length of 4,500 feet. This is our starting point as a community and we would not want

anything smaller than that. The council is busy consulting with the community and we may soon be asking to talk about an extension that will be 6,000 feet long. Whatever is done, we will have to do soon. We are searching for ideas from everybody about lengthening the airstrip or keeping it at 4,500 feet. Earlier today we had a FM radio show and 34 people called in to express their opinion about this problem.

2.1.7 Should this study refer to longer strip?

You must remember when you (Bill Kemp) came to have a meeting with us very late one night, I think maybe in September or October, we said then that we did not object to 4,500 feet but nothing smaller than that. We also advised people at that meeting that we were interested in a longer strip and the man from Transport Québec (Clément Tremblay) said that once we were prepared to talk about it, he would bring the people together in a meeting in Povungnituk. We told him that we will continue to talk about it but it was okay to go ahead with the other work. That's why those other guys stayed after the meeting (SOMER researchers) and I guess that's why you are here, because you said that you would be back to talk again with the community in about a month.

This week we are on the radio and maybe even taking a vote and it will be known what the people are thinking and we will ask you to put it in the report.

2.1.8 Is the Impact Study acceptable for 4,500 feet?

That's what we want you to do; we know the people came and located where the airstrip should be for 4,500 feet and we know those other people were there to look at the land and ask questions about the environment and now you are also asking questions and talking with us about other things on the airstrip. We can put a resolution down if it's necessary but it's best to do your work at 4 500 feet but to remember that

there may be changes once we meet with officials on this subject. But even if we want that airstrip will it really mean much more because the place is already known and the problems for building it won't change not much.

2.1.9 Did the community agree on the location?

The new airstrip is going to be built in the place where one has already been partly built. It was the community that had selected this site a few years ago and planned to build there. It never worked out because we didn't have the equipment we needed to make it good. When the people came from Montréal to make the airstrips plans, they looked at other places and we even took them to a spot on the other side of the community. This place seems to be good for airplanes and we already have a road going in that direction and it is convenient to getting water in summer. We passed a resolution when Transport Canada was here stating we agreed (Table 7). What some people worry about is the river and they want to make sure that there isn't any pollution that goes to the river because everyone depends on that for fishing. If we had to say just one thing about location we would say be very careful about the river.

2.1.10 Will there be problems with archaeological sites?

We don't think this will be a problem but nobody has really come to look at the area, except in the summer when a person was here to ask some questions and he probably walked over to look at the place where the new airstrip will be. We have a museum that the co-op has in the building that looks like a snow house and if there is anything over there at the airstrip, then it can be put into our community museum so that everybody will be able to see it and to find out more about what went on a long time ago.

COMMUNITY COUNCIL OF POVUNGNITUK

MEETING OF THE COUNCIL

RESOLUTION NO: 84-8

Re: Approval of airstrip location

WHEREAS under the Northern Québec Airports Improvement Program, Canada and Québec proposed to build an airstrip and airport facilities in the Community;

WHEREAS the proposed location of the airstrip has been identified and is shown outlined in red on a plan attached to the present resolution;

WHEREAS the location of the said airstrip meets with the approval of the Council;

WHEREAS Canada and Québec request that the said location be approved by the Community before the undertaking of preliminary studies during the coming summer;

WHEREAS the said attached plan has been signed this day by Transport Canada's representative Mr. Rhéaume Allard for purposes of identification and reference;

WHEREAS it is in order to approve the location shown on the said plan subject to certain safeguards;

THEREFORE IT IS RESOLVED:

THAT the location of the proposed airstrip as shown outlined in red on the attached plan be and it is hereby approved, subject to the following:

a) That whatever conditions the Kativik Environment Quality Commission may impose be fully respected by all parties involved; and

b) that the design and standards as well as the construction of the said airstrip comply with the Canada-Québec Agreement for the construction of such airstrips signed in Kuujuaq on September 27, 1983, as a minimum.

MOVED BY: ALI NOVALINGA

SECONDED BY: TOMASSIE TUKALUK

IN FAVOUR: 6

ABSENT: 5

ADOPTED: JUNE, 7, 1984

Ali Novalinga
ALI NOVALINGA, PRESIDENT

Thomasie Tukuluk
TOMASSIE TUKALUK, VICE-PRESIDENT

The problem is that we know there are four old graves in that area and we know exactly where two of them are, but we have to ask some older people about the other two and find them before starting the airstrip. We don't know if they are in the way but they can be moved to a better spot if that's a problem.

2.1.11 Is the location good for weather and winds?

We're not really concerned about the winds on this airstrip because it runs in the right direction for the times when the winds are strongest, which is usually from the southeast or from the northwest. Once in a while there are strong winds from the west that will blow across the strip but not very often. There are no real hills around where the airstrip will be, so that this isn't like Salluit where the winds are always blowing in different directions when you just move a little bit away from one place. Since the winds aren't tricky, and there are no dangerous hills, this is never going to be a problem for us. The road is another problem. The winds will blow directly across the road and it will always be drifting in and need big equipment to keep it clear. Most of the problem will be in March and April when there is the most snow. Some places its just as to be good enough for the skidoos but the hospital will always be moving sick people and they can not stand a rough trip on the road.

2.1.12 Where is best place for gravel and blasting rock?

Let's look at your map again and start putting some of our answers on that, because there are some places that we think would be the best for getting the rock and we will mark these on the map. Sometimes people come and think that there's a lot of sand and other materials to build with here, but when you start digging, you find out that it's not very good underneath. We have a large area to get sand and gravel for the community but it is better for us if they use dynamite to take down the

rock and then crush it. The places we mark on the map are close to where the water trucks travel and also, where some people go by canoe. We don't want it to be dangerous for workers or people that are walking nearby or in the area, so we will want a warning system and we will also have to let people know how far the rocks will fly and be dangerous after the dynamite goes off. You should find that out for us and you (Bill Kemp) should find out how large an area is dangerous from falling rock and let us know and make sure that the contractor plans the work safely. We think maybe a full time inspector would be a good job to make sure there are no problems with blasting and other activities.

2.1.13 When the airstrip is being built and after it's finished, will it disturb the animals?

Our community sits in the middle of a big place that people use for hunting, some from the land and some out on the sea, and also for fishing, especially from the river that is not far from the airstrip. The land around the airstrip is pretty good hunting for snow geese and also for some Canada geese, when both these birds start to migrate south in the fall. We can usually find geese in that area for about two or three weeks, if the conditions are right. It's hard to say how important it is, but it can be used by working people and others who don't travel too far from the community. The birds like to be near the water and they rest and feed. Maybe it will be a problem while there is a lot of noise and activity when the airstrip is being built, but after that is over, the geese will come back because the lakes are still going to be there and, as long as they are not polluted or filled up, it will be like it is now. Hunting is even sometimes better because when you're waiting and the plane comes, you can shoot the geese as they start to fly.

More and more caribou are coming up towards our community over the last few years and even last year, there were some caribou that were near where they are planning the airstrip. If caribou come to this area, it's not a trail for them. it's just where some individuals or groups move

across to feed, so there'll never be a problem from this airstrip in destroying caribou. It's not like the dam and the problems they had in Kuujjuaq last month. Maybe it won't be a problem for the caribou, but if many come, maybe it could be a problem for the airplane. There are lots of berries all over that area and especially lots of women and children go there, but they will be able to use the road to get to the best berry-picking areas. Its lucky that Joseph Illimasaut is here to tell people in the south what goes on. Maybe they think if they build the airstrip, the berries will be scared away by the planes.

2.1.14 Will construction of the airstrip damage the river and fresh water?

This is a real serious problem and is much more important to us than the land because we know that not much hunting takes place there and, anyway, the disturbance won't cause any great damage. There is lots of land that we are always moving to, but if anything happened to disturb the river in a serious way, it could be very sad for this community. We can mark all of those fishing spots for you and you can see that the water is always important to the people of Povungnituk. There are arctic char in the spring and fall and also, important places for brook trout fishing. The people would have to make sure that nothing goes into the river to disturb the water while the airstrip is being built and we would also have to make sure that the river is protected from any kind of pollution that might happen after the airstrip is finished and planes start to land. That is why some of the people are nervous about having an airstrip in that area and, especially if big planes were landing, because we have heard they spill a lot of oil or gas when they come in or go out. We also see the smoke from the jets that land in Kuujjuarapik and maybe that pollution would be very bad for our river.

2.1.15 Could the airstrip construction harm the drinking water?

The water we get comes from the river and we have had problems in making sure it is always fresh. The water point has to be moved anyway, because when the wind blows towards the sea, salt water moves in the opposite direction and, in the summertime, the water may not be fresh for a few days. We're not sure where the water point should be moved because the airstrip will interrupt the road that was planned to get there. If things go in the river that would hurt the fish, then that would also hurt the people when they drink the water and that cannot happen. If there's any doubt about pollution, the water point should be placed towards the end of the strip, so that the water trucks would follow the strip to get water and not cross it.

Maybe there are some other ideas that we should also talk about, in order to get water once the airstrip is finished. In the meeting in the fall, we asked about crossing the strips with our truck and we were told that it's very dangerous and even a person was killed while doing that in Kuujjuarapik. We can point out on the map where we built our road (Figure 3) but we stopped it until we know exactly what we have to do because of the airstrip. We have talked this over and would suggest that a pipeline could be built to bring the water all the way to this side of the airstrip where the trucks could then pick it up and take it to the community. This shouldn't be a problem, because in the wintertime, we get our water closer to the community at the same place we use every year.

2.1.16 Who will work on the airstrip?

We know that employment is always a big problem for Inuit, but we will try to make sure that our community people have the opportunity to work as much as they can. When we are looking for work it is not just for the shit jobs, also the good jobs should go to Inuit unless they are impossible for us to learn on the job maybe like setting the blasting.

There was quite a few of our people who worked very hard in the south to get the licence for heavy equipment and they can work for the airstrip or another things. But they should have the first chance to work, before a job given to the south.

We want to build it good and to work with our people to keep things going with the contractor and Transport Québec. Maybe this information that we are giving to your for the report can give everyone a better understanding to know how we are thinking about what to do.

2.1.17 How much will the new airstrip cost?

We always know that everything usually costs more than they say it will and in the north this is always the case and we do not want it to cause big problems when it starts costing a lot and then they say that the plans have to be changed and make it cheaper. This can always happen without the community even knowing. But if people are careful and select good contractors it shouldn't happen and it is always not as expensive to hire Inuit as to bring everyone from the south and keep them here with food and housing.

We were told that the airstrip of 4,500 feet can cost about 10 million. We think that if this is a good figure the 6,000 feet strip should cost about 13.3 million.

2.1.18 How do you want to look after the workers?

Housing is always a problem and we don't know how many people will be working or how long and when they will be here. The summer can always be very crowded if we are not able to plan ahead. But we know that the community organizations should make some profit on construction activity not just the people from getting paid. We have buildings here

that can be used if they are fixed up and that is going to be much cheaper than bringing in trailers or building new places.

The Council will be able to look after the contracts for services needed by the contractor for water and garbage as long as they know what is expected ahead of time and can make plans.

We can also look after the food for the workers and would like to work the same way that you told us about at Kangirsuk that would use the Federation to supply the food for the contractors and that will also help create income for Inuit organizations and there are the things that workers will buy and help out the local stores.

2.1.19 Who is responsible for problems during construction?

If the problem is not too big then between the contractor and the Council it can be solved. If it is really large then it can include Transport Québec because at Ivujivik they had someone there all the time to look after the problems. Most of the problems are for drinking and drugs when workers come in and they can scare the people and especially the women if they are not controlled by someone.

The community must first meet the foreman and tell them what our rules are and that they can drink and do what they want when they are alone, but alcohol and things cannot be given to local people. We also try to look after the others because sometimes people really try to ask for it and can make trouble.

The Council will make a strong by-law about drugs. This is a problem and they would also like the company to have a very strong law against drugs like sending a worker home and making him pay for the ticket.

2.1.20 Will the finished airstrip change the community?

Everything brings change, but it does not mean that the change will always bring problems. It can also keep problems from happening - things like sickness and emergencies have always worried us very much and even when we have air service like today it still does not always work in the best interest of a community. Not all of the problem for airplanes is the airstrip, but that certainly must be improved and along with this we can worry about making the service work for the Inuit people because we don't really think it always does.

We have had airplanes here for a long time and we never saw life get worse because of them. Sometimes it got worse because you know they could help but they were not here.

Only if we really change what is happening, get a big airstrip of 6,000 feet for the Nordair, then we could have different problems. The Council here and also the other groups and the people are very strong. We would all have to talk much more about by-laws and other things to prevent problems with a different air service than we have known in the past.

2.2 The Question of Airstrip Length

A major topic that has already had an impact on the community is the question of airstrip length. Although the Municipal Council specifically stated that the impact study should address the original proposal for 1,370 meters (4,500 feet) paved, they did request, however, that the social impact study address this issue, since it is a major topic for community discussion.

The issue was first raised in the meeting held on September 11, 1984, with members of Transport Québec and the SOMER and Makivik researchers present. The question of length was again raised by the Municipal Council on November 19, 1984, and a decision was made to

publically raise the issue with the community via F.M. radio. It was also decided that a vote should be taken to determine the extent of community support for or against a 737 jet airstrip.

The question is complex and there is a wide range opinion held by individuals and organizations. The following brief summary provides review of those concerns that were voiced for and against. These are by no means a final or complete statement, but they represent the range of opinions.

2.2.1 Community Opinion

2.2.1.1 The community considers that the 737 jet service to Kuujjuarapik is very irregular because a poor weather conditions. It was not possible to obtain exact figures on major flight delays or cancellations, but a very unofficial figure of 30 per cent of flights has been suggested. This figure is not supported and should be verified. Povungnituk, it is argued has better weather and it would significantly reduce the cancellations. *Again there is no exact information to confirm or deny this assumption.

2.2.1.2 A major concern is economic with respect to improved freight service and cost. It is argued that a direct flight to Povungnituk would eliminate the akward and costly flight from Kuujjuarapik to Povungnituk. It would eliminate long delays for delivery, significantly reduce spoilage and the council estimates it could lower the cost for non-mail freight by perhaps \$1.50 per pound.

2.2.1.3 The second major economic factor relates to the irregularity of Nordair service into Kuujjuarapik. This is a situation that is of particular concern to the Federation of Cooperatives. The Federation also feels that jet service directly to Povungnituk would reduce the problems of weather caused delays and cancellations of 737 jet service into Kuujjuarapik. This would in turn, they argue, solve one of the critical problems that has forced the Federation to abandon their

plans for the development of outfitting camps along the Hudson Bay Coast: The record indicates that the two tourist camps that operated on the coast have now been closed and no new applications are pending for any of the river systems north of Kuujjuarapik. Nevertheless the Federation believes that the Hudson Bay region has a far greater potential for tourism than Ungava but until there is better air service it can never be realized.

2.2.1.4 A Federation spokesman stated that transportation and the method of transport were the real problems with getting tourists into the Povungnituk area. Ninety five per cent of clients were never even booked on Nordair because of the unreliable schedule. The Federation noted that when you have clients booked for a week starting Saturday, you need them in on Saturday and cannot back them up into the next week's booking. Therefore, the Federation used scheduled service with Austin out of Timmins. A typical trip for a fisherman from Philadelphia looked like this: Air to Toronto; Air, bus or car to Timmins; overnight in Timmins; board Austin for a 6 to 8 hour unserviced flight to Povungnituk. People arrived in Povungnituk tired and rather annoyed and even this troublesome trip could be further delayed and disrupted by poor summer weather.

2.2.1.5 Some community members also stated concern that 737 jet service may be a cause of pollution as planes land and take off and this could have an impact on the fresh water of the Povungnituk river on both the northern and southern approach to the airstrip. They mention that if a jet strip was built perhaps the location should be changed.

2.2.1.6 Some individuals at Povungnituk noted that it may not be good to open the subject of an extended runway since they have already signed a Municipal Council Resolution about the proposed strip. They felt that it is not good to always be changing your mind about what you agreed to earlier especially if people wanted to change the location to avoid potential problems from pollution.

2.2.1.7 Other individuals were outspoken about the potential problems that could be caused from having regular 737 jet service into a

community like Povungnituk. Although some people were stronger in their opinion the entire community registered concern that indeed this change would have to be carefully considered in terms of its impact on the social life of the community. It was noted that strong Municipal Council actions would have to be taken in order to prevent social disruption such as that occurring in Kuujjuarapik or Kuujjuaq and people from the Federation indicated that a community based and controlled development plan could help prevent the potential for negative impact.

2.2.1.8 Comments were also put forward stating that a decision of this magnitude should also include consultation with the mayors and other representatives of the Hudson Bay communities since they would be significantly affected by this change in air service.

2.2.1.9 There is not yet any official response from either government on whether or not they will support a request from Povungnituk to lengthen the airstrip. They have agreed to meet and discuss the issue in detail. Certain problems have been suggested, for example, an extended airstrip would probably not be paved, and this would prevent the government air ambulance from landing since it requires a smooth surface. This could seriously affect the operation of the regional hospital. It was also pointed out that the irregularity of Nordair flights into Kuujjuarapik is partly a function of weather but also a function of inadequate navigational equipment. If the instrumentation for navigation were brought to the standards of the Kuujjuaq installation the ability to land in marginal weather would be greatly improved.

2.2.1.10 Finally, it is noted by Air Inuit that they must be directly involved with any decision to change the location of jet service. Their operation is based on the need to carry freight and passengers out of Kuujjuarapik. Although they want to see major changes in the infrastructure they feel that northern air routes should stay under the control of smaller carriers. Company officials say that their arguments towards this issue will be greatly expanded once its possibility is more clearly established.

2.2.2 Community Vote

The question of airstrip length has been widely discussed in the community for several months. It is not a new issue although the conduct of the social impact study became a catalyst for moving the discussions towards a more formal definition of the community point of view. It is obvious that in a community as large and diverse as Povungnituk, there will always be differences of opinion. The formal discussions by the Municipal Council in which representatives of other community organizations participated were then presented to the community by F.M. radio. An openline discussion of the issue was held so that individuals throughout the community could present their personal opinion on this issue. A total of 34 people called in and discussions over the radio lasted approximately for 2 hours.

This radio show was followed by a formal vote. The question simply asked if the voter was in favor of a 6,000 or 4,500 foot airstrip. For the vote, 268 people cast a ballot. Of this total, 225 favored 6,000 feet; 39 favored 4,500; and 4 ballots were spoiled. The results of this vote were considered by the Municipal Council to be adequate for them to pursue formal discussions with Transport Québec, Transport Canada and with neighboring Hudson Bay communities.

3. PERCEIVED IMPACTS AND CORRECTIVE MEASURES

From the questions and discussions presented in Section 2, the following impacts were identified. The description of each impact was reviewed by the Municipal Council and specific correctives measures were evaluated and recommendations made.

3.1. Impacts and Corrective Measures on Physical Environment

3.1.1 Granular Resources

3.1.1.1. Description. The Inuit stated that they would prefer to have blasting rather than large scale excavations of sand and gravel. The largest deposit for community use is west of the community (A on Figure 3). This deposit is approximately 8 km away from the airstrip, and would require the constant movement of heavy trucks through the community. The Council feels that this would create noise, dust and a constant danger to the children that are always playing in the streets.

The gravel and sand deposits close to the proposed airstrip are not extensive and the community notes there are many localized deposits that are scattered and shallow. There are some deposits around the shoreline of the small lakes but there is no large single source.

The community has expressed a preference for blasting and they have designated two potential rock outcrops that could be blasted and crushed (C-1; C-2 Figure 3). The community prefers to begin with C-1 since it will improve the road if the land is not as high at that spot. Potential blasting area C-2 is closer to the river and more difficult to reach. It is also considered not to have as much rock as C-1.

3.1.1.2 Perceived Impacts. The community stated that the utilisation of gravel deposits west of the community would have a significant impact on the local supplies that would be needed for community projects over the next few years.

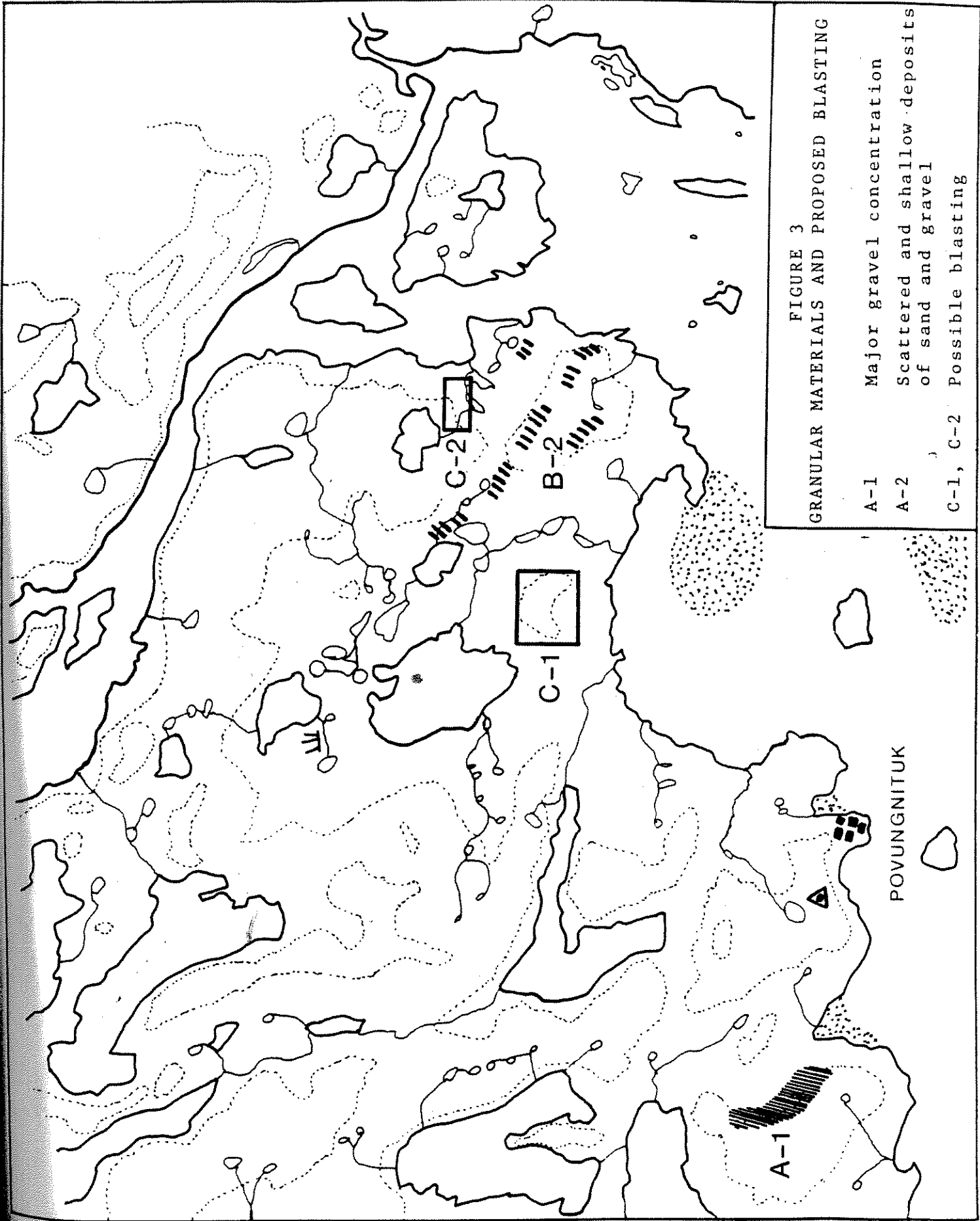


FIGURE 3
GRANULAR MATERIALS AND PROPOSED BLASTING

A-1 Major gravel concentration
A-2 Scattered and shallow deposits of sand and gravel
C-1, C-2 Possible blasting

The community stated that the use of the western gravel supplies would also create a road hazard as well as general disturbance throughout the summer as trucks travel between the gravel deposit and the airstrip.

The community stated that the scattered sand and gravel deposits closer to the airstrip and especially those bordering the small lakes would, if exploited, create many disrupted areas that would destroy the natural surface of the environment. There would be also many scattered trails to these deposits that would also destroy the appearance of the environment. Consequently, they would prefer that these deposits were not used unless they are within the construction area.

The community stated that blasting and rock crushing would not have any negative impact on the environment and that it would provide a better source of material which could be also be stockpiled for special community use. They prefer to blast first in area C-1.

3.1.1.3 Corrective Measures. The following corrective measures are suggested by the community in order to mitigate or prevent any negative impacts.

The contractor should clearly define the exact needs for sand and gravel from local deposits and discuss this requirement with the Municipal Council or their representatives for construction related issues. A plan for exploitation should be developed that will assure adequate reserves for future community use.

The contractor should be made aware that the community wants to minimize the excavation of smaller deposits. Any of these deposits that the contractor wishes to use should be indentified, and all excavation should be graded and smoothed. The community wants to minimize this type of excavation.

The contractor should also minimize using machinery across the landscape in order to excavate and haul granular material.

The contractor should make a full evaluation of the proposed blasting areas and attempt to use these areas and this method as fully as possible.

The contractor should establish a proper system of alarms for blasting and in area of direct danger and potential danger from falling rocks should be clearly marked.

The contractor should be able to blast on a required schedule except for special times that will be defined by the community.

3.1.2. Drainage and Snow Accumulation

3.1.2.1 Description. The community stated that many of the small river systems that are shown on the maps of the impact area do not carry much water except during spring runoff. At this time certain of these streams and the surrounding land are poorly drained and there are certain places where flooding occurs. Figure 4 illustrates 2 areas on the airstrip road that have drainage problems during the spring of some years (A-1; A-2). They noted another area further east that has extremely poor drainage and a high potential for spring floods (A-3). This area will also pose a problem to road construction and maintenance.

Drifting snow will occur along the airstrip road throughout the winter and especially in March and April. An area of heavy snow accumulation is also indicated west of the airstrip and north of the proposed road (B-1).

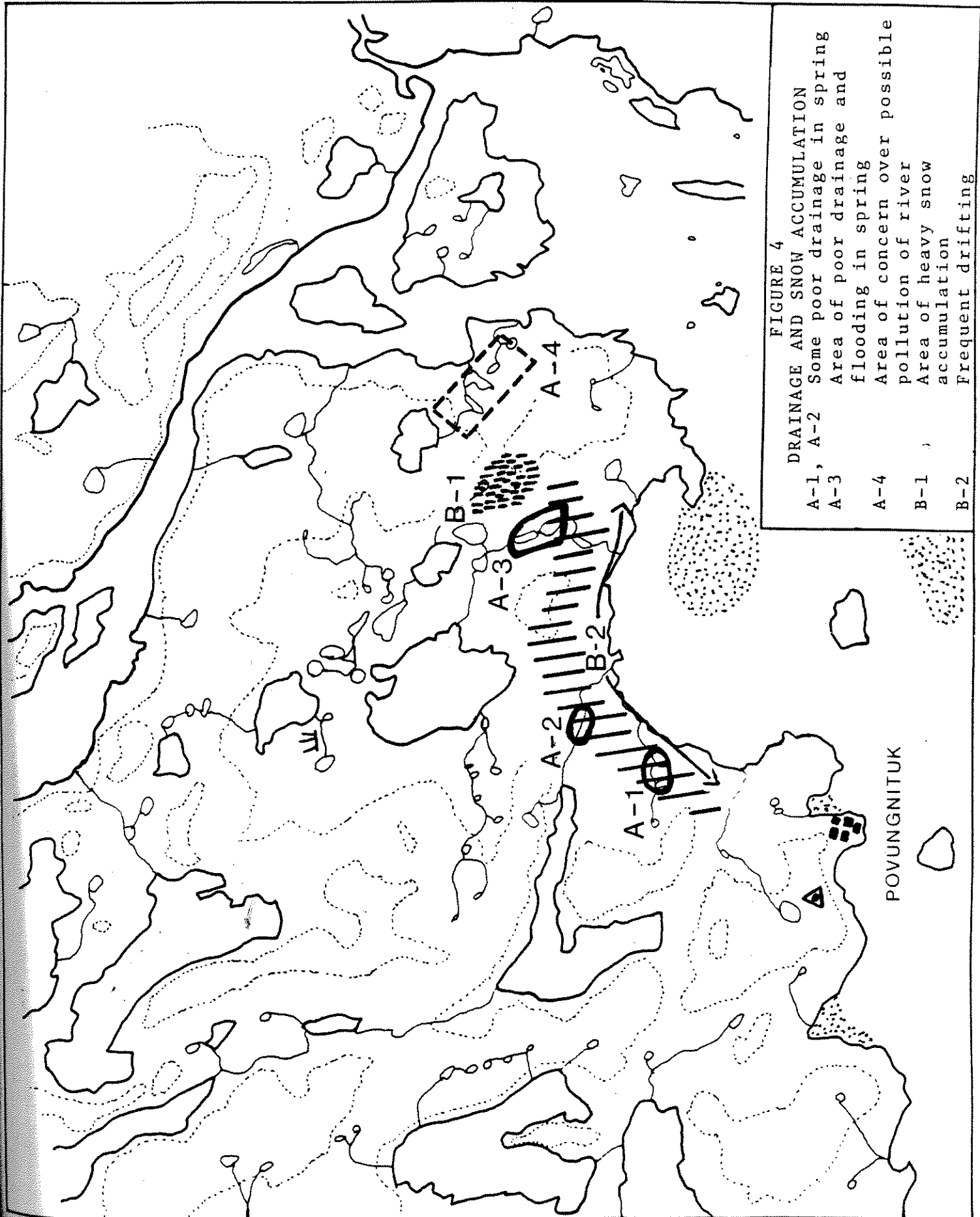


FIGURE 4

DRAINAGE AND SNOW ACCUMULATION

- A-1, A-2 Some poor drainage in spring
- A-3 Area of poor drainage and flooding in spring
- A-4 Area of concern over possible pollution of river
- B-1 Area of heavy snow accumulation
- B-2 Frequent drifting

3.1.2.2 Perceived Impacts. The community stated that winter and early spring snow would pose a constant problem for road maintenance. Airstrip maintenance for blowing snow will not be difficult except when intensive storms occur with either a east or west wind. This impact will not be severe because these storms are not frequent in most years.

The community stated that poor drainage could have a limited impact on road maintenance in area A-1 and A-2. Area A-3 could have a significant and continuing impact on road maintenance every spring, unless steps are taken to divert the severe runoff in spring.

3.1.2.3 Correctives Measures. The following corrective measures are suggested by the community in order to prevent any negative impacts.

Transport Québec should make sure that adequate snow removal equipment is available for constant maintenance of the road in the winter. In addition to equipment a permanent position would have to be created.

The contractor should make sure that adequate drainage pipes are available for road construction at A-1 and A-2. At A-3, special plans must be developed that might include a bridge and a network of drains in order to prevent severe washout. In event that this could still occur a stock pile of gravel crushed rock and other required materials should be placed near by for road repair.

3.1.3. Freshwater and Povungnituk River

3.1.3.1. Description. The community stated that their freshwater resources must be protected during construction. Their major concern is the Povungnituk River which must not be disturbed by any form of pollution. The utilization of the river is illustrated in Figure 5, that shows the fishing patterns and in Figure 6 that show the water points and infrastructure. There are small lakes used for swimming in summer, but

they are not in the area of expected impact. The other concern with the lakes and streams is if they drain into the Povungnituk river system near fishing or water intake areas (See Figure 4. A-4).

The community stated that the proposed airstrip is close to the water on both its northern and especially southern ends. They are concerned if jet planes will "spill" fuel as they land or take off that could pollute the fresh water and affect the fishery.

3.1.3.2. Perceived Impacts. The community stated that the small streams that flow east of the proposed airstrip drain into the Povungnituk River. If these streams pick up any type of toxic substance used on the airstrip, it could flow into the river near fishing areas and the water point. The community notes that the natural drainage systems that are east of the airstrip may have an impact on the quality of water in the Povungnituk river if the snows are polluted by chemicals or other substances used on the airstrip which could then be carried into the river system.

3.1.3.3. Corrective Measures. The contractor should obtain more information on the substances that may be used on the airstrip for the safety of aircrafts and their passengers. This should then be discussed with the community and if there is apparent danger to the environment further corrective steps should be taken.

The contractor should if the situation requires, attempt to divert any potential drainage of toxic or potentially harmful substances used on the airstrip for safety purposes away from any drainage system that flows east to the Povungnituk river. This will have to be done by proper installations that are established by the contractor and the engineer.

The contractor or Transport Québec should send a knowledgeable person to the community to talk over this problem with the Municipal Council (See 3.2.3.3).

3.1.4 Prevailing Winds and Weather

3.1.4.1 Description. The community stated that although there is no impact from winds and weather, they wanted to make certain problems known to the contractor and the workers. The prevailing winds are not seen to be a problem for carrying dust from the area of construction or blasting towards the community. They say that strong easterly winds are not common in summer, and if they occur, blow more on the water than on the land. The winds and poor weather can, however, affect the workers because of cold and wet.

3.1.4.2 Perceived Impacts. The community stated that construction workers from down south will face strong cold winds during the fall, since the area of the airstrip can be quite windswept at that time of the year. The winds are usually accompanied by mist, rain or wet snow. These poor weather conditions will have an impact on the workers and on the project, especially if it is a "bad" fall with long periods of bad weather.

3.1.4.3 Correctives Measures. The community stated that since the construction workers from down south will face strong cold winds especially during the fall and often accompanied by mist, rain and wet snow early in the fall, and blowing and drifting snow later in the fall they must be properly equipped with clothing that can be comfortable when working long shifts during the bad weather.

The Inuit should also have access to the proper clothing for work since if they will have to work the same long hours there are often not enough rugged clothes in the store to buy. This is especially true for steel-toed rubber boots for construction.

3.2 Impacts on the Biological Environment

3.2.1 Migratory Birds

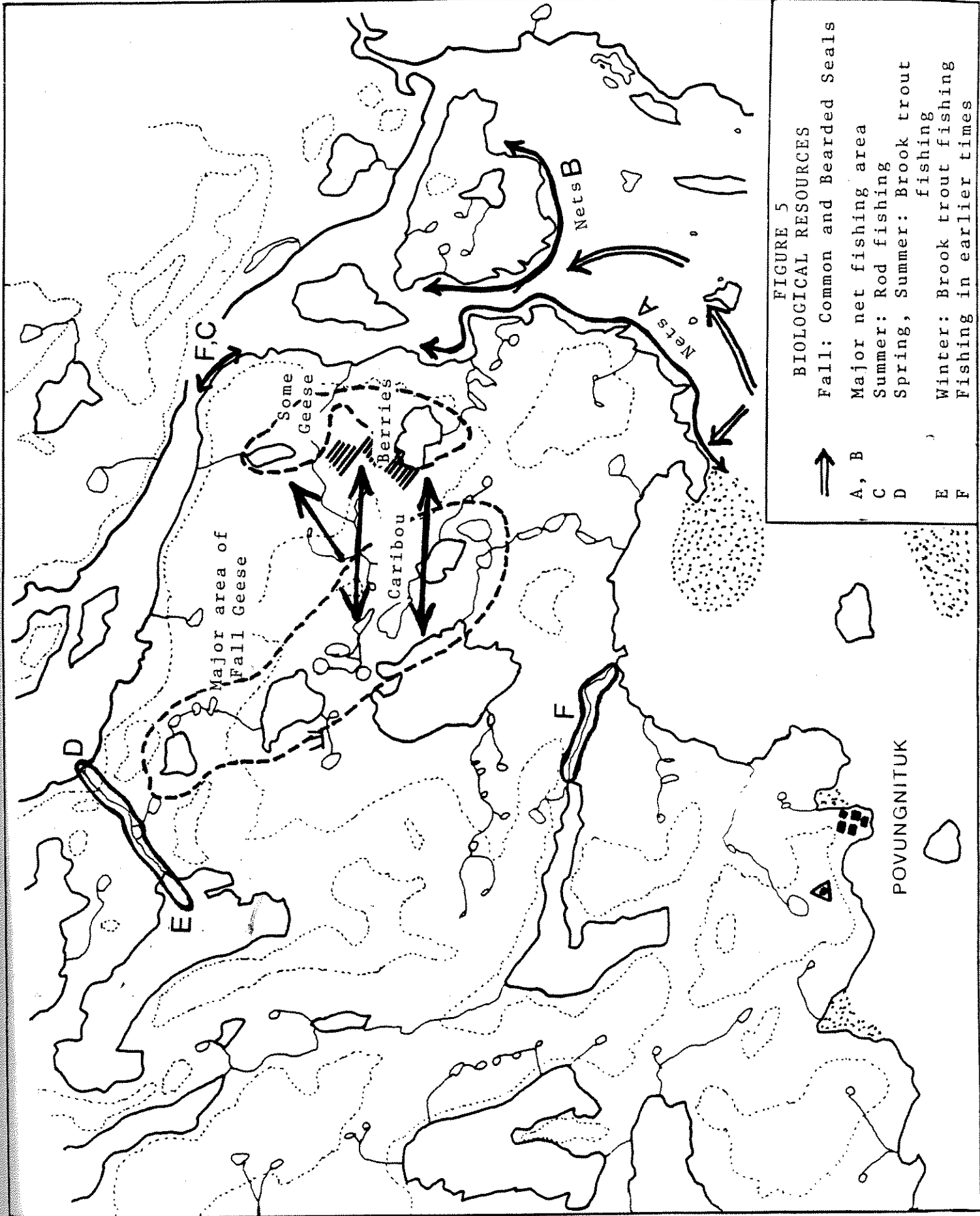
3.2.1.1 Description. The land east of the community is frequently used in the fall by Canada geese and Snow geese. Canada geese are more numerous occurring in scattered small groups along the margins of the lakes and in the wet areas. These areas are used for about two weeks usually by just a few hunters who cannot travel long distances to reach more productive areas. No one zone is noted for particular concentrations except for the region designated (A-1; figure 5).

3.2.1.2 Perceived Impact. The community stated that they would want to maintain good hunting conditions in this area for the benefit of community people, but they felt that airstrip construction would not drive the geese away especially if the blasting occurs in August and early fall before the birds arrive.

The community stated that more impact would occur from machinery moving into the zone for excavation and disturbing the habitat. This should be avoided on the zone noted on Map 5.

3.2.1.3 Corrective Measures. The community stated that no specific corrective measures need to be taken at this time. The contractor will have instructions about areas not to disturb by machinery.

The community stated that if the blasting must continue into the fall, then if it diverts the geese for one season, they will accept that and hope that after construction disturbances cease, the geese will again use the area.



3.2.2 Caribou

3.2.2.1 Description. The community stated that more caribou are moving into the Povungnituk area even close to the community. In 1983, two or three were spotted east of the community, but by the fall of 1984, much larger groups were found to the west and northwest, less than an hour's travel by snowmobile or three-wheeled vehicle. Inuit hunters expect these numbers to grow and the distribution in late fall and early winter to "drift" further east towards the Povungnituk River and then "move around" just west or north of the community. Over the next few years, the hunters feel that the peninsula around the community will be utilized more and more and that the groups will be larger.

3.2.2.2 Perceived Impacts. The community stated that once caribou start to grow in numbers and move into new areas, they are not really affected by many types of disturbances. They note that individual groups will move away from hunters but not leave the area.

The community stated that blasting and construction in 1985 may mean that the caribou remain further to the west in the fall of 1985, but when they are ready they will move east.

The community stated that if numbers continue to grow, the airstrip zone will never be heavily used, but there is the danger of caribou moving occasionally onto the airstrip and causing a safety problem when landing in restricted visibility.

3.2.2.3 Corrective Measures. The community stated that no corrective measures can be taken with respect to construction. They asked about hunting regulations for non-natives and said they must be respected by the workers (Table **).

Table 8

Non-Native Sport Hunting and Fishing Regulations - Zone 23 for 1985 - (specific to the Povungnituk area)		
<u>SPECIES</u>	<u>SEASON</u>	<u>DAILY OR POSSESSION LIMIT</u>
Arctic Char	May 17 - Sept.8	10
Brook Trout	May 17 - Sept.8	25
Lake Trout	May 17 - Sept.8	4
Caribou	Aug. 1 - Oct.31 Feb.15 - April 15	2 2
Ptarmigan	Aug.25 - April 30	10 30
Geese	Sept.1 - Dec.10	5 15
Eider Duck	Sept.1 - Dec.10	6 12
Old Sqaw	Sept.1 - Dec.10	6 12
Other Ducks	Sept.1 - Dec.10	6 12

- Notes:
1. Fishing is by angling only.
 2. Trapping is reserved for Native people.
 3. Whitefish is a reserved species for Natives people.
 4. Wolf is a reserved species for Native people.
 5. Polar bear is a reserved species for Native people.
 6. Marine mammal hunting is not permitted by non-natives.
 7. Section 39 of an Act Respecting Hunting and Fishing Rights in the James Bay and New Quebec Territory (Bill 28) provides for special controls to be implemented in the event of large influxes of non-native labour forces.

The community stated that at a later time when the airstrip is fully operational, if caribou become a danger, even a little one, that there will have to be a control to keep them off of the airstrip and a warning system to pilots.

3.2.3 Arctic Char and Brook Trout

3.2.3.1 Description. The most important resource is the arctic char. The fishery is noted on Figure 5, and extends along the entire shore of the Povungnituk River east of the zone of airstrip construction. This is a vital resource to the economy of almost every household in the community and it must be maintained. Netting areas are clearly defined and there are areas used only for rod fishing north-east of the airstrip construction site. An important small river system flows into the Povungnituk River north-west of the airstrip construction zone (Figure 5). This is an area used for brook trout and (probably speckled trout). The lake that feeds that system is the only one that has fish. All of the other small lakes no longer have any fish, although the hunters pointed out that the only important small river used to be the one that will now flow under the road to the airstrip.

3.2.3.2 Perceived Impact. The community noted that the Arctic char fishery could have an impact from the runoff of substances used on the airstrip. They also stated that fuel spilled from jets landing and taking off must be controlled if they cause any serious problem.

3.2.3.3 Correctives Measures. The community stated that correctives measures identified in 3.1.3.3 are to protect the Arctic char and should be respected.

The community stated that they would like someone who is knowledgeable about the substances used on airstrips and about the potential problems from fuel spilled by jets on landing and take off to come to the community and to explain what potential problems could occur. This information could then be used for an F.M. radio discussion since it is a concern that was frequently voiced by hunters and fishermen (See 3.1.3.3).

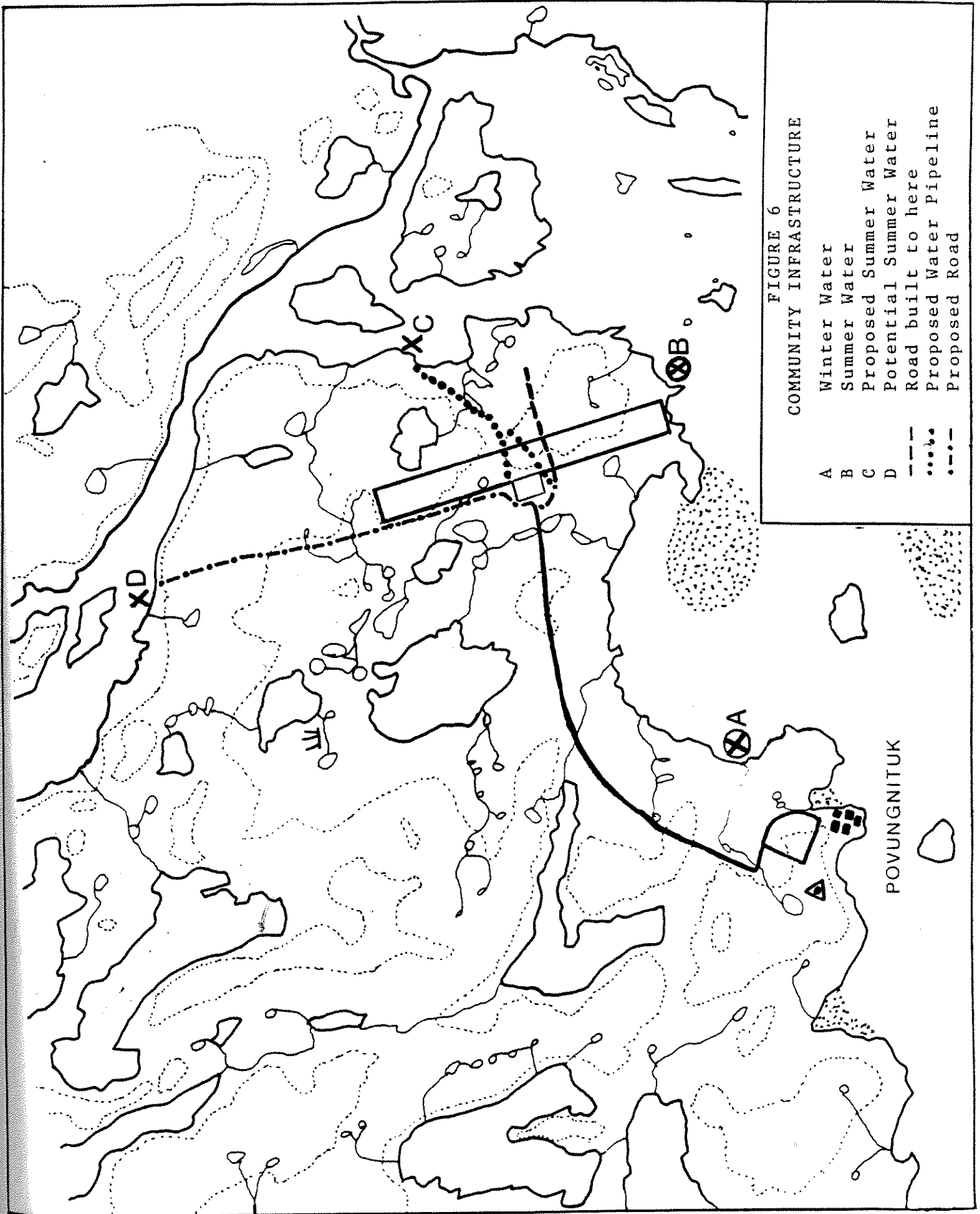
3.3 Impacts on Community Infrastructure

3.3.1 Community Road System

3.3.1.1 Description. The only major road in the community will lead east for 3.7 km. to the airstrip. The upgrading and widening of this road will take place early in the project and provide road access in an east-west direction for almost 10 km. The road to the airstrip will be integrated with any extension east of the airstrip that is required for water delivery in the summer months.

The community stated that they would have to have a road for summer water and they indicated that it could also extend north along the proposed airstrip and continue to the river. This is the preferred road if one must be built.

3.3.1.2 Perceived Impact. The community stated that the road east to the airstrip would be a valuable asset. It will be used by three wheel vehicles and trucks, but snowmobiles will go further to the north or across the sea ice. It will eventually be used by individuals, especially women and children, who can benefit by having easier access to berry-picking areas.



The community stated that a proposed road east of the airstrip would have to be built for access to the water point. This road must be built around the north end of the airstrip to avoid crossing.

The community stated that Transport Québec told them at a meeting on September 11, 1984 that no road crossing of the airstrip would be permitted.

The community stated that if a long road was required it might serve the community interest more, if it ran north for 2.5 km to the river. This would provide access to the river for canoes.

The community stated that some individuals might be opposed to such a road and it would have to be discussed further once the final plans are drawn up and a decision on the length is made.

3.3.1.3 Corrective measures. The community stated that no corrective measures other than those dealing with the construction and service maintenance of the road that were described in section 3.1.2.3 on page 64.

The community stated that other corrective measures about the location of the road extension to summer water points depended on what the planners would decide for water access (see 3.3.2).

The community stated that a road north to the river, if it is a possibility should be discussed further and a community vote taken.

3.3.2 The Summer Water Point

3.3.2.1 Description. The community stated that it was absolutely essential to relocate the summer water point since the location near the village is subject to salt water intrusion, especially when there is a

strong easterly wind. It is to be moved north either east of the proposed airstrip or on the north bank. The site presently selected is east of the airstrip. It must be reached by a new road that will be approximately 1 km in length.

The community noted that this water point is not subject to salt intrusion, but it could be subject to pollution. No specific site has been selected as an alternative further on the north shore of the river.

3.3.2.2 Perceived Impacts. The community stated that the quality of water and the safety of the supply has a strong impact on the community and causes many people to worry.

The community stated that the road to the summer water point will be difficult to build because of the drainage and terrain east of the proposed airstrip.

The community stated that since the water point could possibly be polluted from airstrip drainage and precautions must be taken against this potential impact (See 3.1.3.2).

3.3.2.3 Corrective Measures. The community stated that two corrective measures are possible. The first and most important is to see if a pipeline could be built to the water point and not a road they thought this would be less expensive and also not a complicated. Freezing is not a problem since it is for summer use only.

The community stated that the second alternative would be a road north as described in 3.3.1.1 The road would enable Inuit to reach the river but before building its impact would have to be evaluated. Consequently community opinion favored a pipeline or a road to the east.

3.4 Impact on Employment and Local Economy

3.4.1 Inuit Employment

3.4.1.1 Description. The community stated that they expect the contractor to employ Inuit for both skilled and unskilled labor. They insist that all Inuit willing to work shall be given an opportunity. The community stated that the demands on available Inuit work force can be great during and fall and they also noted that the contractor must have an adequate work force. The individuals who have had heavy equipment training must be considered as prime candidates for employment but the entire range of jobs and required skills must be identified.

3.4.1.2 Perceived Impacts. The community stated that employment is a critical element in this type of project and it must be considered as an important benefit for the community. If the Inuit are ignored or passed over this potential benefit will turn into a negative impact.

The community stated that the problems that occurred in Ivujivik should not be repeated in any other community. Thus they feel that negative impacts will also occur if there is an unequal rate of pay or an attempt to relegate Inuit to unskilled labor.

The community stated that an impact will occur by slowing down airstrip construction if the community promised to supply more labor than was available locally.

3.4.1.3 Corrective Measures. The community stated that potential impacts resulting from problems with the work force could be minimized by careful planning. Consequently it will be essential for the contractor to come to Povungnituk and explain the potential employment opportunities prior to the start of the construction. The community stated that the contractor should be aware of the Inuit desire to work and should be pleased to accept Inuit rather than forced to accept them.

The community stated that Inuit workers from other communities that have special skills should also be considered especially from the neighbouring communities. A list of job descriptions should be produced and sent to the community and to other nearby communities in order to alert people. The rate of pay should be clearly stated and so should the expected qualifications.

The community stated that the individuals who have qualified for a heavy equipment operator's license be identified to the contractor. The contractor should be also aware of any special rights that Inuit might have at respect to employment and on the job training. Table 9 identifies the Inuit who have received their license from the heavy equipment operator training program.

3.4.2 Service Contracts

3.4.2.1 Description. The community stated that they expect the airstrip to provide other types of economic opportunities to the community. They especially noted that the Municipal Council is prepared to provide service contracts for garbage, water and maintenance. They indicated that it would not be possible to provide service or maintenance for the machinery although space could probably be rented when require.

3.4.2.2 Perceived Impacts. The community stated that two possible impacts could occur from service contracts. The first would be the negative impact from the community not being able to take advantage of possible economic benefits associated with the construction. This would occur if they were not prepared or if the contractor was not aware of this possibility and able to define his needs precisely.

The community stated a second possible impact would result from a situation that they are aware of from Ivujivik in which the demands of the

TABLE 9

HEAVY EQUIPMENT OPERATOR PROGRAM	
Moses Alaku	Salluit
Noah Angutijivk	Salluit
Arngnatuk Kopergualuk	Salluit
Lyiatuk Ajiaruk	Ivukivik
Jimmy Qunnilaaluk	Ivujivik
Levi Ammarualik	Povungnituk
Irquaq Kumarluk	Povungnituk
Sam Willie Kumarluk	Povungnituk
Charlie Kunvaquak	Povungnituk
Adamé Alaku	Kangiqsujuaq
David Tukkiapik	Kangiqsujuaq
Tommy Annahatak	Quaqtaq
Elijah Tukkiapik	Kangisuk
Mark Yates	Kangirsuk
Charlie Iggyook	Aupaluk
Peter Kudluk	Kuujjuaq
Jobie Munick	Kuujjuaq
Billy Saunders	Kuujjuaq
Tommy White	Kuujjuaq
David Baron	Kangiqsualujjuaq

contractor exceeded the capacity, skills or supplies of the community and consequently problems could arise.

3.4.2.3 Correctives Measures. The community stated that the only possible corrective measure to first assure the awarding of contracts to the community and to assure that the community could meet the terms of the contract would be to meet with the contractor and to define precisely what is expected from the community. This would include the schedule of activities, the commitment of manpower and the required supplies needed to meet the contract.

3.4.3 Housing the work force

3.4.3.1 Description. The community stated that they are prepared to find the facilities that are required to house the non-native work force.

3.4.3.2 Perceived Impacts. The community stated that they must have the first opportunity for providing housing and other related facilities. If the contractor brings in his own housing without first consulting with the community, the people would not be happy.

The community stated that the Co-op has a hotel but that it is usually full during the summer months. If this is over-utilized by airstrip construction it will prevent other individuals or representatives of organizations from having living space while on shorter community visits.

3.4.3.3 Corrective Measures. The community stated that housing demands will be minimized if the contractor hires more local Inuit. For those non-natives that must be housed the contractor should contact the

Federation in Povungnituk and also the community Council to determine the availability of structures that could be used for housing and feeding the non-native work force. All local possibilities should be investigated before any plans are made to construct special quarters. If renovations are necessary the cost should be evaluated against bringing the needed housing from the south. Renovations should be considered as a real community benefit since they will create a facility that could have continued a use to the community.

3.4.4 Feeding the Work Force

3.4.4.1 Description. The non-native work force must be fed and the purchasing of supplies should benefit the community without creating local food shortages. The buying of smaller food or non-food items from local merchants should be encouraged.

3.4.4.2 Perceived Impacts. The community stated that care should be taken not to prevent the normal movement of freight and fresh foods into the community because air service is over burdened by the requirements of the contractor. They noted that this occurred in Ivujivik but since Povungnituk is not as far this problem should not create a significant impact.

The community stated that a positive impact would occur if there is an opportunity for a local supplier to provide the required foods. This would involved fish obtained locally and foods brought in from outside.

3.4.4.3 Corrective Measures. The community stated that Povungnituk should follow the example described by Kangirsuk and established a contract for required foods to the Federation of cooperatives .

This must be done through the Montréal office and contact should be made with Mr. Peter Murdoch.

3.5 Other Perceived Impacts

The Municipal Council and other community members had other suggestions that relate to the impact and corrective measures for environmental, social and infrastructure topics. Three topics are noted below.

3.5.1. Electrical Service

The community stated that the powerhouse is over 3 km from the airstrip site. They felt that this distance was too long for above ground transmission wires. On the FM radio, two people also questioned if the wires might affect the geese that fled to the north of the road. The community requested that Transport Canada look into two possibilities. The first is locating a smaller generator at the airstrip itself and the other is using underground or on-ground cable. The use of underground or on-ground cable has been suggested in other communities; it should be given serious technical consideration in a formal request to Hydro-Québec for their opinion.

3.5.2. Passenger Facilities

The community stated that since the Povungnituk airport facilities are to service the hospital, certain modifications may have to be made to the passenger waiting room to make sure that it can accommodate patients that are in transit. It was also stated that since the airstrip is distant from the community, certain problems may be encountered when passengers are waiting for connections to other flights, especially when coming or

going to Akulivik and the other northern communities. The passenger facility should be able to have comfortable space and the possibility of a snack-bar and food service operated by the community.

3.5.3. Utilization of Machinery

The community stated that the large machinery that will be used for the airstrip construction will probably never be available again. Therefore, the Municipal council would meet with the contractor to discuss if there are certain small jobs that the community could have done with this machinery. It was stated that this should not interfere with the construction schedule. Improving parts of the lower beach, stockpiling granular material at several strategic locations and relandscaping and leveling out certain places near the community for safety, aesthetics or recreation, were mentioned.

3.5.4. Stockpiling Crushed Rock

The community stated that crushed rock should be a better building material than sand and gravel. An attempt should be made to provide crushed rock for future community use. If the rock is blasted while the technical people are available, crushing could take place in the winter after the airstrip construction is finished, as long as Inuit are trained to run the crusher.

4. PROJECT SUPERVISION AND CONSULTATION

The need to clarify and formalize the process of community involvement after the social impact assessment and review is a major concern for the Municipal Councils. The experience from Ivujivik illustrates that the findings and recommendations of the Impact Study, coupled with the specific directives from the Kativik Environmental Quality Commission are not necessarily built into all of the plans and decisions that follow the impact assessment review. It is at this post-assessment stage that many of the conditions set out by the community and approved by the K.E.Q.C. can be ignored in the rush of accepting bids, selecting a contractor and preparing final plans. If the contractor is not fully aware of all the procedures, conditions and responsibilities that should be followed, then serious problems can occur. If this situation occurs, then most of the care that was taken during the research and project evaluation phase will never be reflected in the actual project.

Procedures are in place for preventing certain problems from arising, especially those that relate to the environmental recommendations, but even these could be strengthened. Throughout the Ivujivik project, Transport Québec maintained a full-time supervisor in the community and the Inuit stated that this individual was important, and helped make sure that problems did not get too complicated. Suggestions have been made about how to strengthen this position.

Additional procedures must now be established, and the communities of Povungnituk and Kangirsuk have both reviewed the problems that arose at Ivujivik and made recommendations. As well, Juusipi Ilimasaut has, in consultation with the Municipal Council of Kangiqsujuaq, established a set of questions that could easily be used to structure phase four of the impact assessment process. This phase is defined on page 29, as exercising a shared control over decisions that occur during the final stage of project planning and throughout actual construction. The Municipal Council and citizens of Ivujivik, Salluit, Povungnituk and Kangirsuk, have

all pointed out, however, that all four phases of the impact assessment process must work together, and that problems with phase four can not be separated from what is happening in the first three phases.

4.1 The Impact Studies (Phase 1)

The communities have expressed a continuing concern over the purpose and actual process of carrying out impact assessment in the north. The only consistently strong voice has been that of Avataq Cultural Institute which has maintained a close working relationship with Transport Québec in all archeological matters and especially in the formulation of the terms of reference, and in reviewing the work that has been carried out. Some problems still remain, but Avataq reports that they are satisfied with the direction of the program and with the cooperation they receive from Transport Québec and from the ministry of Cultural Affairs.

The environmental and social segments of the impact assessment process have not yet been as well defined, as in archeology. The means for establishing Inuit participation in the creation of the terms of reference and in the utilization of consultants or other groups for research must be clarified. At this time, the communities must simply accept whoever comes for the study and respond to whatever terms of reference the researchers present. Formal meetings must soon be convened with Transport Québec and their Service de l'Environnement, to change this situation and to work out a protocol that reflects a more cooperative approach for defining the terms of reference, research procedures and presentation of findings.

4.2 Project Supervision

Transport Québec should again provide a full time supervisor for the Povungnituk project. This individual will be responsible for overseeing compliance to technical and environmental requirements by the contractor, and act as a much needed coordinator between parties. This position,

however, should be supplemented by a new position that will be incorporated within the general airstrip budget. This position would be held by an Inuk from the community who would be responsible for assuring that all of the many details that are required if the contractor is to meet the conditions set out in the social impact study and by the K.E.Q.C. This should be a full-time employee that should be hired as soon as the project is evaluated by the K.E.Q.C.

The community of Povungnituk stated that the Municipal Council will be responsible for dealing with all of the issues that involve the community in the final planning and actual construction of the airstrip. The hiring of an Inuk coordinator, as suggested above, will greatly facilitate the ability of the Council to meet their own responsibilities on behalf of community interests.

4.3. Selection of the Contractor

The Municipal Council of Povungnituk has expressed the same concerns as Ivujivik, Salluit and Kangirsuk councils about the importance of their participation in selecting the contractor. They realize that the system of bids limits their influence at a certain level, but they feel that prior to the submission of bids, they should be able to express their expectations and requirements to the candidates. In Ivujivik, the Inuit stated that the person that provides lowest bids may not always do the best job. In Kangirsuk, they stated that contractors are looking for work, and they must be willing to meet the terms set out by the communities in order to get this work. In Povungnituk, they said that the selection of the contractor should not be the cheapest but rather the best for the community. "We want to build it good and for them to work with our people."

In order to accomplish a better working relationship between the community, the project proponent and the contractor, a set of questions was prepared by the Kangiqsujaq Research Center, in conjunction with their

Municipal Council. It is felt that these questions provide the basis for informing the contractor about the expectations of the community and the responsibilities associated with the airstrip construction.

1) Before you prepare your bid for the airstrip, what factors will you consider?

2) Before you prepare your plans for the airstrip, will you consult with the Inuit to find out how they feel?

3) How will you proceed to find out how the Inuit feel about airstrip construction and what conditions they have set out for the contractor to follow?

4) When you will make the plans for the airstrip, how will you proceed to find out how many workers you will need?

5) Before you hire the workers, will you take into consideration the Inuit that have been trained for operating heavy equipment?

6) Will you be prepared to train Inuit for certain types of work on construction or with the equipment?

7) What is your policy concerning licensed and unlicensed employees?

8) Will there be equal pay between non-native and Inuit workers?

9) Have you read the Environmental and Social Impact Assessment Report that defines what should be done to protect the environment and the community?

10) Will the president of the company be willing to travel to the community when necessary to settle problems and meet with the Inuit and other responsible people?

5. THE TASK AHEAD

This report has attempted to summarize as precisely as possible the knowledge and perceptions of the Povungnituk Inuit about the airstrip and airport infrastructure that is planned for their community. The topics and issues highlighted in this study have been drawn from the community itself, although both the general orientation and specific topics the impact assessment studies reflect the responsibilities and point of view of the project proponent.

A more active involvement of Inuit is not intended to override the responsibility of the project proponent, but to contribute well defined ideas and approaches about how this responsibility could incorporate Inuit participation more effectively in phase One, Two and Four of the impact assessment process. It is clear that the community expects the impact studies to reflect their concerns and values, while at the same time respecting basic principles for protection of the environment.

Over time, the ideas and experience of one community begins to coalesce with those of another community, so that a more consistent and widely held point of view about airstrip impacts and corrective measures emerges. In this report, the inclusion of the Ivujivik experience is a start to the process and there were important discussions between the Municipal Council of Povungnituk and Kangirsuk. The development of a research format that represents an Inuit initiative about presenting topics and collecting information is a positive step, and in the following studies, this method will be revised and improved.

It is hoped that the results of the Social Impact Assessment for Povungnituk will facilitate the integration of community values and concerns with the conditions and priorities of the Northern Airports Infrastructure Improvement Program.