

Proposal For

SOCIAL AND ENVIRONMENTAL
IMPACT ASSESSMENTS FOR
THE NORTHERN AIRPORTS
INFRASTRUCTURE
IMPROVEMENT PROGRAM

Salluit and Ivujivik

ENVIRONMENT SERVICE
MINISTÈRE des TRANSPORTS
GOUVERNEMENT du QUÉBEC

Submitted By

Research Dept.
Makivik Corporation
November 1983



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CURRICULUM VITAE

Introduction

1. INTRODUCTION

This proposal establishes the topics, methodology and organization for a field and library study of the potential impacts from the Northern Airports Infrastructure Improvement Program for the communities of Salluit and Ivujivik. The time restraints imposed on this study, coupled with the difficulty of undertaking certain elements of the site survey in mid-winter, requires that the project be divided into two phases. Specific questions and methodologies are defined in this proposal for the phase one study, but it will not be possible to provide details on the work required for phase two until information from the first phase is analysed and the results and recommendations are presented in the final report. This document presents our proposed work plan, organization, schedule of activity, methodology and personnel attached to the study for phase one. Cost estimates for this phase have been established in terms of the work plan and are presented in the budget section. The personnel and general cost estimates of phase two have been estimated but the exact work plan cannot be developed in detail at this time.

Phase one will begin on November 17, 1983, with a final report submitted on February 1, 1984. Phase one research will gather information about the social and environmental impact from the construction and operation of the airstrip and its infrastructure. The primary sources of information for the phase one study will be community interviews, the analysis of aerial photographs and maps, published or unpublished documents, and consultation with individuals who have experience or theoretical expertise about the region. This process of gathering and synthesizing information will be based on the most up-to-date construction and infrastructure plans available. A synthesis of this information will enable the potential short and long term impacts from the project to be identified and corrective measures recommended.

Phase two will be carried out in the communities from June 15 to July 30, 1984. In this phase, a technical survey of the study area will

be completed in order to verify and expand the information and conclusions gathered from interviews, air photos and documents. In phase two, the corrective measures for potential impacts suggested in phase one on the biological, physical, archeological and landscape features of the environment will be verified.

The specific orientation and objectives of the proposed research program are designed to meet the requirements and address the questions set out in the Impact Study Directive issued on April 22, 1983, by the Ministry of the Environment. These general guidelines were then expanded and made specific to the current project in the Terms of Reference for the Northern Airports Impact Studies that were issued by the Ministry of Transport's Environmental Service on November 16, 1983.

The results of the phase one field and library study will be presented as written text, maps and tables. Because of the importance of the consultation process with the Inuit of Salluit and Ivujivik, special attention must be paid to the inclusion of the knowledge, perceptions and opinions about the environmental and socio-economic conditions of northern life that may be affected by the upgrading of the airstrips, including the program of construction and maintenance. The research will also rely on community consultation in order to assess the continuing impact of the airstrip program and improved air transport, on patterns of travel, community activities and services, and on the need for integration of airstrips with other elements in community planning.

1.1 Objectives of the Research Department

The Research Department of Makivik Corporation has eight years of experience with research projects in northern Québec. We have a well developed relationship with Inuit communities and our staff includes Inuit at all levels of participation and decision-making. This enables us to provide thorough consultation with the communities and to reflect the Inuit point of view in all stages of research.

The Research Department was created within Makivik in order to accomplish two critical objectives. The first is to assure that Inuit are able to have direct participation in the design, execution and application of research projects that affect the culture, livelihood, land and resources of the north. The second objective of the Research Department is to transfer skills and expertise in scientific research from the south to the north. This process is being carried out in stages, including on-the-job training, and the development of formal educational opportunities. The long term goal is to encourage scientific expertise, improve the level of scientific understanding in a manner that does not destroy traditional knowledge and points of view, and to create local long term employment opportunities for Inuit in the field of northern research.

An important means for accomplishing the transfer of skills is the establishment of small research and training facilities in the north. In September of 1982, the Kuujjuaq Research Centre was created for training in biological research and renewable resource management. In September of 1983, a second facility was opened Kangiqsujuaq for training in social, economic and cultural research. The Inuit staff at this centre will be directly involved in the Northern Airstrip Infrastructure Improvement Program and it will provide an opportunity to develop Inuit expertise in the important field of impact assessment.

Work Plan

2. BACKGROUND AND OVERVIEW

This segment of the research program is designed to obtain data on the historical development of air services in northern Québec, on specific changes in these services that have occurred over the past five years, and on the present conditions of air transport. It will also be concerned with the role of the airstrip improvement program for present and future needs of the northern communities and other users.

2.1 Approach, Data and Methodology

In this section, a regional and comparative framework will be developed in order to provide the historical and present-day context for specific information and perceptions about the airstrip improvement program in the communities of Salluit and Ivujivik. Some of this data will be gathered from primary sources available from Air Inuit and Austin Airways. Other information will rely on the summaries of specific data that have already been prepared for negotiations on the airstrip program and for other purposes. There will be an emphasis on balancing specific statistical data with information and perceptions of both air service personnel and air service users in the North. Documents relating to the role of air transport in northern Québec may also be available in the Public Archives of Canada. Statistical data will be collected and tabulated and it will be presented, when possible, on maps and graphs. The information derived from interviews will be developed through the use of predetermined questions that will be asked in a conversational, rather than structured format. The replies to these interviews will be written in note form so that specific information can then be abstracted. The anonymity of interviews will be respected throughout this research program.

2.2 Historical Development of Air Service

This research topic will facilitate the collection and analysis of documents, personal interviews and statistical information that is concerned with the development of air services and facilities in northern Québec. It will also be concerned with the role of the airstrip improvement program in this process. The approach will attempt to balance specific details with perceptions and general information that serve to express the Inuit point of view about the development of air service and of its impact on the changing life in northern communities.

2.2.1 Specific Topics. The following topics will be used to guide the research in this section of the study:

1. The historical development of air services within northern Québec, changes in the facilities and services, and the Inuit perspective on the historical development of air travel.
2. The background to the airstrip improvement program, including a statement of the federal-provincial agreement.
3. Statistics on passenger and freight services and on air facilities for the years 1978-1982, by community and for the region.
4. Inuit perception of, and knowledge about, passenger and freight services and changes in these services during the 1978-1982 period.

2.2.2 Data Collection and Methods. Data will be collected from documents, records and statistical summaries, many of which are presently available from the negotiations on the airstrip agreement. The agreement itself will be summarized with the interpretive help of the Makivik legal staff and Inuit leadership that were responsible for the negotiations.

2.3 The Present Status of Northern Québec Air Service

This research topic will review the present conditions of air service in northern Québec and evaluate the levels, type, safety, reliability, costs, and utilization of these services. It will also serve to

demonstrate the importance of air transport to the economic, social and political development in the north, and to the health and physical well-being of Inuit. This topic will also provide an evaluation of the air-trip improvement program on the future development of air services.

2.3.1 Specific Topics. The following topics will be used to guide the research in this section of the study:

1. The number and type of planes in service; the operation of schedules, extra sections and charters with respect to passenger and freight services; and the comparison of this service with other northern areas.
2. The statistics on passenger and freight service for the current operating year (1982-1983); the cost of air travel to consumers and shippers; and the cost and level of freight carried from north to south.
3. The general characteristics of air service for each community; and problems associated with season, weather or other factors that affect the service.
4. The restructuring of air transport services and facilities on community development.

2.3.2 Data Collection and Methods. The information needed to explain these topics will be collected from records already available in summarized form or from access to the primary data of the carriers themselves. The specific characteristics and problems with service and facilities will be established from a review of flight records and from interviews that will establish the perceptions of conditions and problems held by pilots and Inuit. Information on the relationship between the restructuring of air facilities and services and on the pattern of community development will be drawn from community discussions that, in turn, will refer to the proposed municipal plans that are now completed.

3. SITE SURVEY AND ANALYSIS

This section of the research program will obtain data on the physical and biological characteristics of the site and on the social, economic, and cultural characteristics of the Inuit population for the two communities. The study area, or potential impact zone, will be determined; the profile of airline use for each community will be established; and areas of environmental, biological, social and visual resistance will be identified.

3.1 Approach, Data and Methodology

In this section, a specific data base for the community will be developed and used as the basis for determining the impacts from the airstrips and its infrastructures. It will also enable short and long term impacts from changes in air service to be defined. Data will be gathered by three methods: documentation, aerial photo and map interpretation, and interviews. Since the phase one study is to be carried out in December and January, traditional methods of site surveying and verification are not feasible. Thus, the successful completion of this phase of the study requires that specific methods of data gathering be utilized. These methods will be applied in both communities to ensure consistency in the data and its interpretation.

The most important element in the data gathering process during the field study of phase one will be interviews with experienced Inuit. The basic principle that is applied to the interview process is that the experience and observational skills of Inuit will enable them to locate and identify with accuracy many of the environmental features and processes that must be determined in order to establish the nature of impacts. The use of interviews with community members will also help determine the values that govern Inuit perception about the potential impacts and benefits that may result from the airstrip infrastructure improvement program.

The specific technical information that will be derived from interviews with Inuit will facilitate the interpretation and mapping from aerial photographs. It will also comprise a major element in defining whether or not problems may arise concerning wildlife resources and archeological sites. Although it must be recognized that Inuit knowledge and opinion about their immediate environment may not account for all of the factors necessary for understanding impacts, they provide a structure that will facilitate the usefulness of southern expertise.

Specific interpretations of the physical and biological environments, as identified by Inuit, will be carried out through literature surveys which will also be carried out in conjunction with interviews that utilized the direct field experience or theoretical knowledge of southern scientists. This type of specific information may serve to define better the general description of vegetative zones, drainage regimes, and geomorphic processes that characterize the area that is developed through literature review. Southern expertise can also be used to strengthen assumptions about the presence or absence of archeological sites. Together, these methods should be sufficient to produce a data base that is appropriate for defining potential impacts and which can then be further verified in the phase two research.

3.2 Community Profiles and Perceptions

This research topic will provide information about the utilization of airline facilities and service by Inuit and it will help define Inuit perceptions and opinions about the present and future role of air transportation in their lives and in the social and economic development of their community and region. The collection of this information will form an essential part of the consultation process since it is the only means that will enable individuals to identify their own activity and opinion in relationship to the community as a whole. The clarification of individual and group perceptions and opinions will also enable the areas of social resistance to be understood better and it will facilitate

social, economic and physical planning in relationship to the impacts of the Northern Airports Infrastructure Improvement Program.

3.2.1 Specific Topics. The following topics will be used to guide the research in this section of the study:

1. The population structure, economy and general pattern of community life; and the outlook of the community with respect to isolation and contact through air travel.
2. The role of air service, including air service to Deception Bay, to the community; and a profile of travel patterns by community members.
3. The real and perceived value of air transport in the past, present and future life of the community and of its individual members.
4. The specific perceptions of the community regarding benefits or problems of present air facilities and services and how these may or may not change as a function of the Northern Airports Infrastructure Improvement Program.

3.2.2 Data Collection and Methods. Data for this section will be derived by two means. A questionnaire with a specific set and ordering of questions will be developed, field checked and then utilized in each community. The questions in Inuktituut will be administered in a verbal interview but the questionnaire will be used to coordinate and record the responses. A section of the questionnaire will also be used to identify the travel patterns of individuals and it will enable estimates to be made of travel frequency, purpose, destination and source of payment. The results of the questionnaire will be expanded and placed in a broader context through the use of "non directed" interviews with a cross section of the population. It is expected that from 10 to 15 people will be interviewed in this manner. If field time permits, some or all of the more interesting questionnaire responses will also be followed up by a subsequent interview.

3.3 The Study Area and Zone of Impact

This research topic will define the specific boundaries for facilities and activity zones associated with the construction, maintenance and continuing utilization of the airstrip, and its infrastructure. The creation of this outer boundary and of specific impact zones within the boundary are essential for determining the environmental resistance areas and the type and location of specific impacts, and rating these resistances (high, medium, low), especially to the physical and biological environment.

3.3.1 Specific Topics. The following topics will be used to guide the research in this section of the study:

1. The location of areas of direct and continuing impacts from the airstrip, service roads and power lines; from the projected area of disturbance; from noise, dust or other features of airport use; and from landing and take off corridors.
2. The secondary areas of construction impacts, including borrow pits, machinery use and storage, and disturbance from construction activities.
3. The outer boundary of the impact zone and the classification of internal areas by type, intensity and duration of activity.
4. The general topographic features defining drainage basins, etc.

3.3.2 Data Collection and Methods. The data needed to determine the study area and zone of impact will be derived from the use of maps and air photos that locate the airstrip and infrastructure. The areas needed for construction and fill will also be located on the air photos or maps and zones of disturbance, such as noise and dust, will be estimated by conversations with individuals with respect to the location of these activities, the patterns of wind and the general perception of this type of disturbance by the community. The outer boundary of these areas will form the zone of impact which can then be subdivided into specific areas of construction or post-construction use. The base maps required for these purposes will be developed by taking the National Topographic Survey

1:50,000 series maps and enlarging them by a factor of 10 to bring the scale to 1:5,000 via photolithograph reproduction.

3.4 Areas of Technical Resistance

This research topic will examine the relationship of the Northern Airstrip Infrastructure Improvement Program to the physical environment. The map patterns of project-related land use and disturbance areas by type and intensity will be superimposed on the patterns of the physical environment. In order to identify the types of impacts that may occur within or along the project boundaries, it will be necessary to identify the primary elements of topography, local relief, drainage, soil types, and the seasonal characteristics of the wind patterns, snow cover, and other climatic features.

3.4.1 Specific Topics. The following topics will be used to guide the research in this section of the study:

1. The topographic forms and predominant seasonal geomorphic processes of the area, including the patterns of drainage or surface water accumulation and of surface instability.
2. Patterns of the microclimate and especially of wind, snow accumulation and blowing snow, as well as the topography and surface conditions under winter and spring snow cover.
3. Soil characteristics and the location, extent and characteristics of granular material for construction.
4. Accessibility of the area defined by relief, location, surface stability and sensitivity to disturbance by human activity and machinery.

3.4.2 Data Collection and Methods. Data for this section of the report will be developed from secondary sources for the phase one study. Aerial photographs and available descriptions of the area will be supplemented by consultation with professionals who can provide specific information for theoretical assessment of the environment. The inclusion of Inuit knowl-

edge about the sites will provide a basis for establishing the location and description of particular features. It may also be possible to identify certain geomorphic processes through interviews with Inuit.

3.5 Areas of Biological Resistance

This research topic will establish the relationship of the project to the biological environment. The identification of biological resistance will follow the same procedure that was outlined in 3.4 above. The zones of biological resistance, however, do not form a continuous surface and, with the exception of plant cover, the areas of interaction and potential impacts are specific in their location. Since the airstrip and its infrastructures are located within the zone of intensive village activity, it is not likely that the airstrip improvement program will have a significant impact on the local ecology and biological resource base. The flora may be more vulnerable to impact, especially from the extraction and transport of materials and the general movement of machinery during the construction phase.

3.5.1 Specific Topics. The following topics will be used to guide the research in this section of the study:

1. The wildlife potential of the study area including the habitat and behaviour of waterfowl, fish and land mammals.
2. The wildlife utilization of the immediate region adjacent to the proposed site of the airstrip
3. The characteristics of the flora, including the type, distribution density and age of ground cover. Particular attention will be paid to rare species. In addition, the utilization of plants by Inuit will be investigated.
4. The capacity of the ground cover to recolonize disturbed areas or to be artificially introduced.

3.5.2 Data Collection and Methods

The interview will be the primary means for establishing the ecological patterns and wildlife potential of the study area. Hunters will be able to describe with precision the ecological patterns, and they can estimate the potential impact from changes in the landscape associated with the airstrip. In phase one, an attempt will be made to estimate the areas where ground cover remains and to classify and map the type of surface according to the presence or absence of ground cover. In this phase, it may also be possible to determine areas that could be set aside for re-vegetation projects. Literature reviews will be conducted to collect any biological information available for this area.

3.6 Areas of Social Resistance

This research topic will examine the patterns of community land use and activity by season; identify the work force, technical human skills and equipment that are available for the airstrip improvement program; define the attitudes and economic factors that will encourage or discourage Inuit participation in work associated with the improvement program. The role of the community with respect to continuing consultation before and during the project will be established, and need and desire for special training will be determined. The work carried out under this topic will also attempt to identify the overall integration of the project with the community so that conflicts can be minimized and the potential benefits to the community can be identified.

3.6.1 Specific Topics. The following topics will be used to guide the research in this section of the study:

1. The characteristics and patterns of the cultural landscape and community plan.
2. The characteristics of the work force, available skills, and potential for training; and an inventory of available vehicles and other equipment for construction and maintenance.
3. The community attitudes towards the project and its regulation with respect to the work force and construction plans.

4. The attitudes and expectations of the community with respect to the direct and indirect benefits that may be derived from the Northern Airports Infrastructure Improvement Program.

3.6.2 Data Collection and Methods. Data for this section will be derived primarily through informal conversations with individuals community leaders and through formal meetings with community organizations. The implications and features of the airstrip infrastructure improvement program will be explained and impacts and benefits will then be discussed. Specific data on the work force, training skills and available equipment will be carried out in the community by interviews and by the use of source material currently available on labour force and technical skills.

3.7 Archeological Resistance

This research topic will provide information about the potential impact from the construction of the airstrip, including the extraction of fill and road construction, on potential archeological sites. The regional archeological environment and local potential will be described and this will be related to the historical occupation of the study area. A general pattern of cultural land use in prehistoric and historic times will be developed for the study area.

3.7.1 Specific Topics. The following topics will be used to guide the research in this section of the study:

1. The regional archeological environment and its relationship to the post-glacial history of the area.
2. The description and evaluation of immediate archeological potential in areas of potential impact within the study area.
3. The assessment of archeological knowledge about the area and the reconstruction of pre-historic and historic land use and occupancy.

3.7.2 Data Collection and Methods. The data needed to establish the potential impact of the project on archeology can best be gathered in the phase one study from two sources. The first will be from interviews with Inuit who are knowledgeable about the region and who have the skills to

identify archeological sites. In these discussions, it is reasonable to assume that more recent sites, if present, are more likely to be known than are the scattered surface sites of earlier times. The second approach will utilize the expertise of individuals in order to assess archeological potential of the impact area in terms of its location within the regional archeological pattern, its elevation above sea level, and the topographic conditions.

3.8 Areas of Visual Resistance

This research topic will determine the impact of the Northern Airports Infrastructure Improvement Program on the visible landscape within the study area. It will evaluate the location of airstrips and other zones of activity in relation to man-made or physical landscape features and it will attempt to evaluate the Inuit perception of how best to integrate the physical elements of the project into the plan and landscape of the community.

3.8.1 Specific Topics. The following topics will be used to guide the research in this section of the study:

1. The location, type and condition of activities associated with the airstrip construction, especially the extraction and transport of granular material.
2. The style and positioning of airport buildings.
3. The re-landscaping of the area after construction according to the Inuit perception of their total environment.

3.8.2 Data Collection and Methods. Data for this section will be derived from discussions of the project with the community. Particular attention will be paid to the need for re-landscaping areas of construction and for establishing criteria that will govern the areas of disturbance and paths of movement associated with extraction and hauling of the granular material. The role of the community in planning for minimum disturbance of the adjacent landscape will be established through discussion of the project with the municipal council and landholding corporation.

3.9 Summary

Once all the information for these resistance areas has been accumulated, the data will be summarized in cartographic and text format in order to rate the study area according to vulnerability in each of the main component areas.

3.10 Characteristics of Proposed Infrastructure

In this section of the report, the specific infrastructures associated with the airstrip improvement program will be described. Maps will be developed for the location of the physical facilities, including airport, airstrip, access roads and power lines, once received by the Federal Ministry of Transport, it is assumed by December 15, 1983. If sufficient technical data is available, the quality and types of granular material needed for the project will be estimated and the relationship of this project's needs to other community needs for granular materials will be determined. Information on fire control systems, fuel reservoirs and storage, and the utilization of facilities and roads for community purposes other than those directly associated with the airstrip will be discussed with the community.

3.10.1 Specific Topics. The following topics will be used to guide the research in this section of the study:

1. The physical infrastructure for the Northern Airports Infrastructure Improvement Program, including
 - A. features of the airstrip and terminal buildings;
 - B. power supply lines;
 - C. airstrip drainage system;
 - D. location and volume of burrow pits;
 - E. plan for fire control;
 - F. location and description of fuel reservoirs and storage systems;
 - G. description of equipment needed by construction and inventory.

2. The social requirements for the completion of the improvement program, including

- A. manpower requirements;
- B. construction schedule;
- C. accommodation requirements and other logistics.

3.10.2 Data Collection and Methods. Data for this section will be derived from information available from the proponent(s) on the physical parameters of the project. These physical data will be discussed with the communities in the context of municipal and town planning requirements. Recommendations will be made from the communities concerning the social aspects.

3.11 Determination of Impacts

In this section of the report, the information obtained on the previous topics will be evaluated in order to determine the type, duration and extent of environmental and social impacts. Part of this task will be accomplished by superimposing the infrastructure plans on the resistance zone maps. The consultants will be used at this stage, to review and evaluate all synthesized data. Other elements of the impact assessment will be drawn from discussions with the community. Impacts in all categories will be identified and rated in the report, i.e. positive/negative; short term/long term; high, medium, low.

Corrective measures will be identified at this stage, and a process for continuing community consultation throughout the time of construction will be established.

It is expected that certain long term impacts can be suggested prior to project startup, but some short term impacts may have to be identified and dealt with during construction.

3.12 Consultation

Careful community consultation will take place throughout all stages. This will be ensured by direct Inuit participation in all aspects of the work. Consultation in this context is seen as a two way exchange and the views and recommendations of the Inuit residents of Salluit and Ivujivik will be expressed in the report.

In this section of the report, a summary of these consultations will be prepared, identifying all concerns, opinions and recommendations. Details will be provided on the methods used for consultation and a record of all discussions, either with individuals or groups, will be maintained.

Schedule

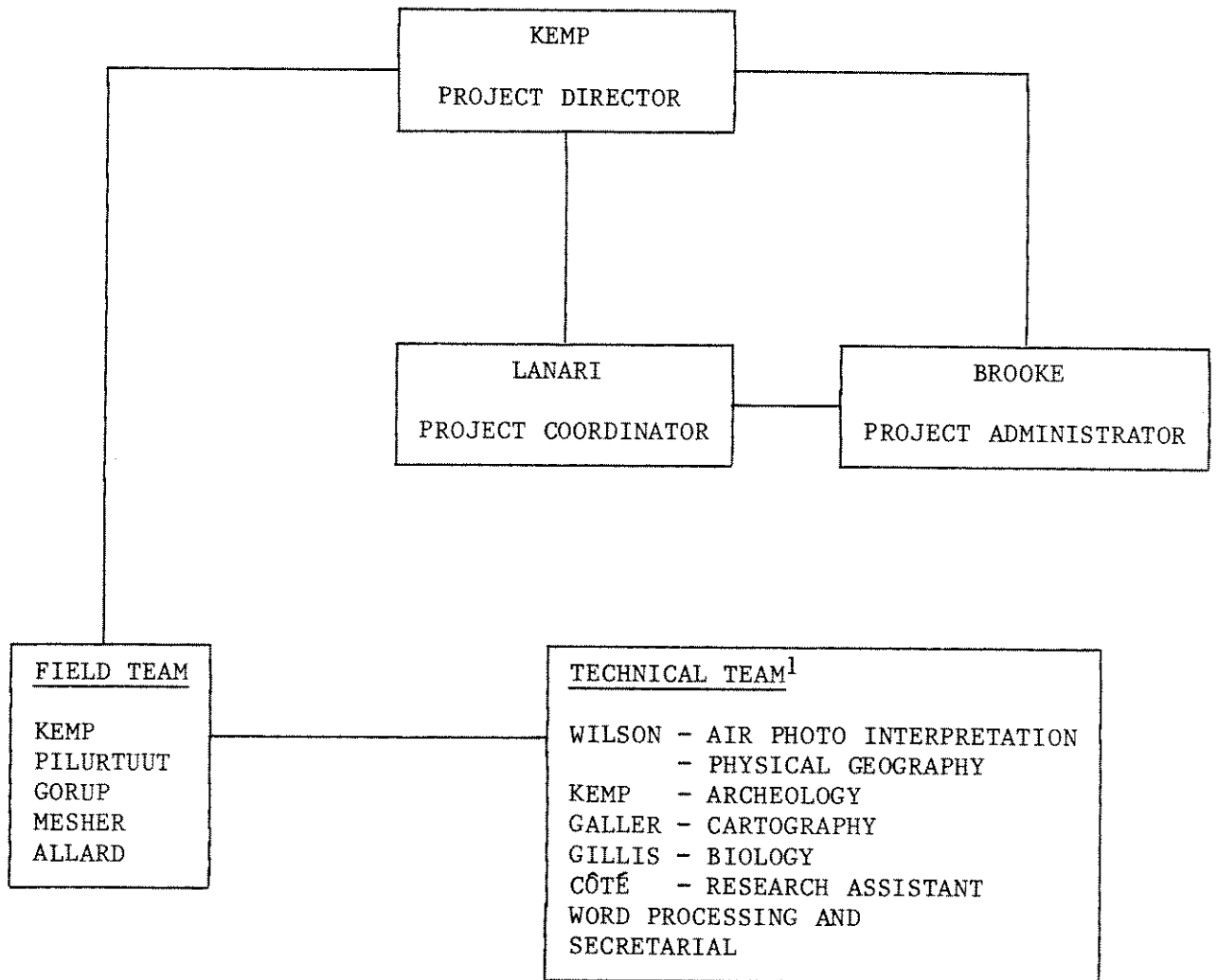
4. SCHEDULE

PHASE I		PHASE II	
NOVEMBER 17-30	DECEMBER	JANUARY	JUNE 15-30 JULY
1983		1984	
FIELD WORK - SALLUIT PRELIMINARY CONSULTATION			
BASE MAP PREPARATION/AIR PHOTO INTERPRETATION COLLECTION OF BACKGROUND DATA/DATA WORK UP			
DEVELOPMENT OF POTENTIAL IMPACTS			
		FIELD WORK SALLUIT IVUJIVIK	
		PREPARATION OF PRELIMINARY REPORT/FINAL CONSULTATION	
		PREPARA- TION OF FINAL REPORT	(1)
Meetings will be held with the Ministère des Transports officials at the end of each phase.		PHASE II FIELD VERIFICATION AND COMMUNITY CONSULTATION. AIR PHOTO MISSION. PREPARATION OF PHASE II REPORT.	

1. The details of the Phase II work schedule cannot at this time be precise. They will depend entirely on the results of Phase I and the field verification in late June 1984.

Project Personnel

5. PROJECT GROUP



1. The technical team will be assisted by consultation with a:

- Geomorphologist - to be determined
- Archeologist - to be determined
- Cartographer - to be determined
- Urban Planner - to be determined

5.1 Project Personnel

William Kemp - Project Director

Mr. Kemp will be responsible for overseeing all major aspects of the work and will be personally involved in community work in Salluit and Ivujivik. Mr. Kemp has had twenty years of extensive experience in the north in the areas of human geography, energetics and archeology. He speaks Inuktitut fluently. (C.V. attached)

Robert Lanari - Project Coordinator

Mr. Lanari will be responsible for coordinating the activities of the research personnel and government officials. He will also participate in the elaboration of specific portions of the report. As an anthropologist, Mr. Lanari has worked on various impact assessment teams over the years and has experience coordinating such activities. (C.V. attached)

Lorraine Brooke - Project Administrator

As head of the Research Department, Ms. Brooke will administer this project within Makivik Corporation. She will also supervise the collection and synthesis of data within the Montréal office. Her experience with all aspects of research projects, from fieldwork to report preparation will be drawn on as required by the Project Director. (C.V. attached)

Peter Wilson - Geographer and Air Photo Specialist

Mr. Wilson will provide all air photo interpretations, computer requirements and be responsible for synthesizing geomorphometric data. His background in geography and experience conducting air photo missions in northern Québec will be very valuable for the project. (C.V. attached).

David Gillis - Fisheries Biologist

Mr. Gillis will be responsible for preparing the biology section of the report drawing from documented information and information gathered from Inuit during the field sessions. His background in northern fisheries and community work will be particularly relevant. (C.V. attached)

Atasi Pilurttut, Souie Gorup and Edward Mesher - Researchers

Mr. Pilurttut, Ms. Gorup and Mr. Mesher will be responsible for conducting community consultations and fieldwork in Salluit and Ivujivik under the supervision of the Project Director. Mr. Pilurttut and Ms. Gorup are both presently stationed at our research facility in Kangiqsujuaq and have had extensive experience doing community fieldwork, in particular conducting

the Inuit Land Use and Ecological Mapping project which is currently underway in northern Québec. Mr. Mesher will be brought into phase two as a fieldworker. He is currently enrolled in a university in Montréal in a cartography program. (C.V.'s not available at this time. Will have them prepared and sent from Kangiqsujaq.)

Johanna Galler and Sylive Côté - Researchers/Cartographers

Ms. Galler and Ms. Côté will be responsible for data compilation related to the cartographic requirements of this project and will prepare cartographic materials. They will also provide research assistance as required. Mr. Mesher will participate in phase two cartography.

Marc Allard

Mr. Allard will participate in the field work in Salluit. He is a wildlife technician with five years of experience in biological, harvesting and health studies in northern Québec. He has a long field experience in the Salluit region and has excellent relations in the community. (C.V. attached)

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The geomorphologist, archeologist, urban planner and cartographer will act as consultants, if necessary, in the capacity of reviewing and evaluating data once it is collected and synthesized by the project team. It is not possible to identify these persons at this time. Prior to engaging any consultants, Curricula Vitae and other pertinent information will be transmitted to the Ministry for comments and approval.

Cost Estimate

6. COST ESTIMATE

The present overall cost estimate is \$97,038.00 for the work outlined in this proposal.

This budget has been estimated on the basis that:

- the proposed airstrip and infrastructure sites remain those indicated to us at November 17, 1983, by the Ministère des Transports.
- by December 15, 1983, final airstrip and infrastructure construction plans are made available to us by Transport Canada to allow for final site maps to be prepared for community consultation.

Given the uncertainties associated with the necessity, nature and extent of Phase II work, the cost estimates are understandably preliminary. Therefore, we are requiring that a maximum of \$120,000 be allocated for completion of the social and environmental impact assessments of the Northern Airports Infrastructure Improvement Program.

Prior to startup for Phase II, should it be deemed necessary, a detailed work plan and cost estimate will be submitted to the Ministère des Transports for approval consistent with the findings of Phase I and consistent with the maximum allocation of \$120,000.

Financial management will be handled by the Project Administrator and the Finance Department of Makivik Corporation in accordance with terms specified in the contract.

6.1 Summary

Phase I (November 17 - February 1, 1984)

Salaries	\$31,254.00
Consultations	3,300.00
Travel, Accommodation and Expenses	8,246.00
Materials	1,550.00
Equipment Rental	825.00
Report Production	3,890.00
Others	1,250.00
Administration 10%	<u>5,031.00</u>
	\$55,346.00

Phase II (June 15 - July 30, 1984)

Salaries	\$20,222.00
Consultations	1,250.00
Travel, Accommodations and Expenses	6,875.00
Materials	705.00
Equipment Rental	225.00
Air Photo Mission	4,455.00
Report Production	3,245.00
Others	925.00
Administration 10%	<u>3,790.00</u>
	\$41,692.00

TOTAL \$97,038.00

6.2 Phase I (November 17 - February 1, 1984)

Salaries

Kemp	50 mandays x \$205 (north + south)	\$10,250.00
Wilson	40 mandays x \$112 (south)	5,040.00
Galler	30 mandays x \$94 (south)	2,820.00
Pilurttuut	27 mandays x \$75 (north)	2,025.00
Gorup	10 mandays x \$87 (north)	870.00
Lanari	18 mandays x \$163 (south)	2,934.00
Brooke	21 mandays x \$183 (south)	3,843.00
Gillis	8 mandays x \$124 (south)	992.00
Côté	10 mandays x \$80 (south)	800.00
Allard	15 mandays x \$112 (north + south)	<u>1,680.00</u>
		\$31,254.00

Consultation (honorariums)

Geomorphologist	2 days x \$300	\$ 600.00
Cartographer	5 days x \$300	1,500.00
Urbanist	2 days x \$300	600.00
Archeologist	2 days x \$300	<u>600.00</u>
		\$ 3,300.00

Travel

Montréal/Salluit	x 3 (Kemp x 2, Allard x 1)	\$ 3,111.00
Salluit/Ivujivik	x 1 (Kemp)	102.00
Kangiqsujaq/Salluit/Ivujivik	x 3 (Gorup x 1, Pilurttuut x 2)	858.00
Montréal/Ottawa	x 2	300.00
Montréal/Québec	x 2	350.00
Accommodation + Expenses (north) - 55 days x \$55		3,025.00
Accommodation + Expenses (south)		<u>500.00</u>
		\$ 8,246.00

Materials

Air photos and enlargements		\$ 700.00
Cartographic materials		375.00
Base maps		50.00
Recording tapes		100.00
Film		75.00
Base map preparation		<u>250.00</u>
		\$ 1,550.00

Equipment Rental

Cameras	(Makivik)	\$25/week	\$ 150.00
Transfer scope	(McGill)	\$100/week	200.00
Computer time	(Makivik)		300.00
Tape recorders	(Makivik)	\$25/week	<u>175.00</u>

\$ 825.00

Printing and Report Production

Map reproduction			\$ 400.00
Preliminary report - 10 copies (Xerox)			225.00
Final report - 50 copies (Printed)			1,150.00
Translation - French summary @ 16¢/word			520.00
Translation - Inuktitut summary @ 22¢/word			715.00
Word processing - \$22/hour x 40 hours			<u>880.00</u>

\$ 3,890.00

Others

General ground transport			\$ 300.00
Translators in the field (Inuktitut)			
- \$15/hour x 50 hours			750.00
Freight and shipping			<u>200.00</u>

\$ 1,250.00

SUBTOTAL \$50,315.00

Administration and office overhead
(phones, Xerox, etc.)

10% 5,031.00

TOTAL **\$55,346.00**

6.4 Phase II (June 15 - July 30, 1983)

Salaries

Kemp	25 mandays x \$205 (north + south)	\$ 5,125.00
Wilson	22 mandays x \$112 (north + south)	2,464.00
Galler	20 mandays x \$94 (south)	1,880.00
Pilurttuut	15 mandays x \$75 (north)	1,125.00
Gorup	15 mandays x \$87 (north)	1,305.00
Meshar	35 mandays x \$75 (north + south)	2,625.00
Lanari	10 mandays x \$163 (south)	1,163.00
Brooke	5 mandays x \$183 (south)	915.00
Gillis	5 mandays x \$124 (south)	620.00
1 Archeologist	20 mandays x \$150 (north)	<u>3,000.00</u>
		\$20,222.00

Consultation (honorariums)

5 days x \$250 \$ 1,250.00

Travel

Montréal/Salluit	x 2 (Kemp, Meshar)	\$ 2,074.00
Salluit/Ivujivik	x 2 (Kemp, Meshar)	204.00
Kangiqsujaq/Salluit/Ivujivik	x 1 (Gorup, Pilurttuut)	572.00
Montréal/Ottawa	x 1	150.00
Montréal/Québec	x 1	175.00
Accommodation + Expenses (north) - 60 days x \$55		3,300.00
Accommodation + Expenses (south)		<u>400.00</u>
		\$ 6,875.00

Materials

Cartographic materials	200.00
Base maps	30.00
Recording tapes	50.00
Film	75.00
Archeology equipment	<u>350.00</u>
	\$ 705.00

1. To be identified and approved by the Ministère des Transport prior to engagement.

Equipment Rental

Cameras	(Makivik)	\$25/week	\$ 100.00
Tape recorders	(Makivik)	\$25/week	125.00
			<hr/>
			\$ 225.00

Air Photo Mission (Salluit/Ivujivik)

Aircraft charter			\$ 2,000.00
Hasselblad camera rental (Makivik)			50.00
Film			300.00
Processing (8x8, 20x20)			1,000.00
Travel to Kuujjuaq			720.00
Accommodation + expenses			385.00
			<hr/>
			\$4,455.00

Printing and Report Production

Map reproduction			\$ 200.00
Preliminary report - 10 copies (Xerox)			225.00
Final report - 50 copies (Printed)			925.00
Translation - French summary @ 16¢/word			520.00
Translation - Inuktitut summary @ 22¢/word			715.00
Word processing - \$22/hour x 30 hours			660.00
			<hr/>
			\$ 3,245.00

Others

General ground transport			\$ 175.00
Translators in the field (Inuktitut)			
- \$15/hour x 50 hours			750.00
			<hr/>
			\$ 925.00

SUBTOTAL \$37,902.00

Administration and office overhead
(phones, Xerox, etc.) 10% 3,790.00

TOTAL **\$41,692.00**

Phase II activity allocations by manday are not possible at this time but will be precised prior to Phase II.

Curriculum Vitae

WILLIAM B. KEMP

Senior Scientific Advisor, Makivik Corporation.

Research Associate, McGill University, Department of Geography.

1. EDUCATION

- | | | |
|------------|-------|--|
| 1959 | B.A. | Miami University, Oxford, Ohio. |
| 1963 | M.A. | Michigan State University, East Lansing, Michigan. |
| (in prep). | Ph.D. | Michigan State University. |

2. TEACHING EXPERIENCE

- | | |
|--------------|---|
| 1977-present | McGill University, Geography (part time). |
| 1970-1977 | McGill University, Geography (full time). |
| 1966-1970 | State University of New York, Geography. |

3. MAJOR FIELD RESEARCH AND SUPPORT

- | | |
|----------------|---|
| 1982 - present | Director, Inuit Land Use and Ecological Mapping Project in Northern Québec. |
| 1980 | Director, Studies of the Distribution, Population Size, Stock Identity and Inuit Use of the White Whales of Northern Québec. |
| 1980 | Director, Program of Research on the Location, Ecology and Nesting Population of Eider Ducks in the Inuit Territory of Northern Québec. |
| 1977 | Director, Koksoak River Fishery Study (S.E.B.J.). |
| 1976-1981 | Director, Social Economic Baseline Study, Resolute and Kuvanaluk, N.W.T. (Polar gas). |
| 1975-1977 | Director, Research to establish present levels of native harvesting in northern Québec. |

- 1974 Director, Inuit Land Use and Occupancy Project, central and south Baffin Island (D.I.A.N.D.).
- 1973 Principal Investigator, archaeological inventory and survey, to establish prehistoric land use and settlement, Davis Strait from Padloping Island to Home Bay, N.W.T. (Parcs Canada).
- 1972 Field research, cultural evolution and changing economic adaptation, southern Baffin Island Inuit, Middle Savage Islands to Markham Bay (National Museum of Canada).
- 1971 Field Research on resource harvesting and calorie potential of native foods, southern Baffin Island (McGill University Social Science).
- 1970 Field Research on economic change and energy adaptation, southern Baffin Island Inuit, Lake Harbour, Cape Tanfield, N.W.T. (National Museum of Canada).
- 1966-1968 Two years residence in Inuit hunting camp to collect quantitative data on economic behaviour and community energetics for Inuit hunters (National Museum of Canada).
- 1966 Field Research on process of economic development and cultural change, Fort Chimo, Québec (D.I.A.N.D.).
- 1965 Field Research on process of economic development and cultural change, Fort Chimo, Québec (D.I.A.N.D.).
- 1964 Field Research on village adaptation and economic development, Payne Bay and Koartak, Québec (D.I.A.N.D.).
- 1963 Field Director, southern Baffin Island, archaeological project on Pre-Dorset Eskimo (National Science Foundation).
- 1962 Assistant Director, Michigan State University and National Museum of Canada archaeological investigation of cultural adaptation (stability and change) on southern Baffin Island (National Science Foundation).
- 1961 Field reconnaissance by canoe from Lake Athabaska to Coppermine River and Coronation Gulf.

4. PUBLICATIONS AND REPORTS

- 1983 "Inuit Knowledge and Perceptions of the Proposed Great Whale River Hydro-Electric Project on the Environment, Ecology and Subsistence Economy of Kuujjuarapik". Submitted to the Kativik Environmental Quality Commission.
- 1983 "The Baffin Land Eskimo", Handbook of American Indians, Smithsonian Institute (Washington, D.C.), in press.
- 1983 The Koksoak River Fishery 1977-81: A Summary Report. Submitted to S.E.B.J.
- 1983 "A Wildlife Management Policy and Program for Northern Québec": A Discussion Paper. Submitted to Makivik Corporation.
- 1982 The Population and Ecology of the Common Eider in Northern Québec: A Field Survey and Review of Inuit Knowledge. Submitted to the Canadian Wildlife Service.
- 1982 "Inuit Land Use and Ecological Knowledge": A report on the first phase of a research project carried out among the Inuit of Northern Québec. Submitted to the International Union for the Conservation of Nature.
- 1981 Historical Development of Current Patterns of Inuit Culture and Implications with respect to Future Development - the Eastern Canadian Arctic. (Montréal) 300 pp. Submitted to Petro Canada.
- 1980 Research and Information Priorities for Implementation of Section 24 of the James Bay and Northern Québec Agreement. (Montréal) 30 pp. Submitted to the Bureau de la Baie James et du Nord Québécois.
- 1978 "The Koksoak River Fishery 1977". A report on the level of harvest and harvesting effort by the Inuit of Fort Chimo. (Montréal) 38 pp. Submitted to S.E.B.J.
- 1977 "The Communities of Resolute and Kuvanaluk", socio-economic baseline study. (Toronto) 210 pp. Submitted to Polar Gas.
- 1976 "Research to Establish Present Levels of Harvesting by Native Peoples of Northern Québec: A Report on the Harvests by the Inuit of Northern Québec", The Native Harvesting Research Committee (Montréal).
- 1975 "The Harvesting Level and Food Potential for All-Native Inuit Camps", final report, Northern Science Research Group, D.I.A.N.D. (Ottawa).

- 1975 "Energy, Behaviour and Thule Adaptation", to be published in the Mercury Series, National Museum of Canada (Ottawa).
- 1974 "Energy Flow in Inuit Communities: Theory Models and Measurement", in Energy Flow in Human Communities: Proceedings of a Workshop, P.L. Jamison and S.M. Friedman (eds), University Park, pp.35-41.
- 1973 "The Archaeology and Early History of Davis Strait from Padloping Island to Nedlusiak Fiord", Vols. I, II, III, Report to Parcs Canada, 220 pp.
- 1971 "Energy Flow in a Hunting Society", Scientific American, vol. 224, No. 3, pp. 104-115. See also Scientific American books: Energy, Horgensen, J.G. (ed.), Biology and Culture in Modern Perspective and North American Archaeology.
- 1967-1972 "The Evolution of Inuit Adaptation, Southern Baffin Island", report to the National Museum of Canada of Baffin Island Research, 105 pp.
5. SYMPOSIUM (Invited Participant with Paper)
- 1977 Canadian Archaeological Association, invited participant, paper entitled "Modern Inuit and the Reconstruction of Thule Adaptation", Ottawa.
- 1976 Organizer, Northern Demography Workshop, Nos. I and II, sponsored by D.I.A.N.D.
- 1975 The Institute of Ecology, Energy Flow Workshop II, invited speaker, Energy Flow and Cultural Change, University of Florida.
- 1974 American Association for the Advancement of Science, invited speaker, Energy Flow and Cultural Change, San Francisco.
- 1974 Social Science Research Council, N.Y.C., invited participant in workshop on Energy Flow in Non-Industrial Human Communities.
- 1973 International Biological Program, invited participant in conference on Man in the Ecosystem, Annapolis, Maryland.

- 1972 School of American Research, advanced seminar, invited participant in seminar on Prehistory of the Canadian Eskimo, Santa Fe, New Mexico.
- 1970-1972 International Biological Program, working seminars, Winnipeg and Toronto.

6. COMMITTEES AND ASSOCIATED NORTHERN WORK

- 1 - Standing Committee for Northern Demography.
- 2 - Chairman of the Native Harvesting Research Committee, a committee established under the James Bay and Northern Québec Agreement to oversee the Research to establish Present Levels of Native Harvesting.
- 3 - Advisor to the Inuit members on the Coordinating Committee for Hunting, Fishing and Trapping established under the James Bay and Northern Québec Agreement.
- 4 - Waterfowl Working Table, a joint Native and Government committee responsible for amending the existing legislation pertaining to migratory birds in Canada.
- 5 - Steering Committee on the Baffin Regional Inuit Association's Harvest Studies.

7. GRADUATE SUPERVISION

Since September 1970, I have been responsible for the supervision of the graduate students at the M.A. and Ph.D. levels. To date, six M.A. theses have been completed and three Ph.D. theses.

ROBERT E. LANARI

PERSONNEL

Date de naissance	le 22 avril 1941
Statut civil	marié, un enfant
Langues parlées et écrites	français, anglais
Résidence	3989, rue St-Hubert Montréal, Québec H2L 4A6 téléphone: (514) 522 3836
Bureau	Société Makivik Service de la recherche 4898, boul. de Maisonneuve ouest Westmount, Québec H3Z 1M8 téléphone: (514) 483 2780

INSTRUCTION

B.Sc. Anthropologie (1964-68)	Université de Montréal Montréal, Québec
M.A. Anthropologie (1969-70)	Université Memorial St-Jean, Terre-Neuve
Ph.D. Anthropologie (1972-)	Université McGill Montréal, Québec

BOURSES D'ÉTUDES

1970	Killam Project Université Memorial
1972	Samuel Lapitsky Scholarship Université McGill
1973	Bourse pour des études relatives aux groupes ethniques Université McGill

ENSEIGNEMENT

- 1969 Université Memorial
Chargé de séminaires:
- introduction à l'anthropologie (3 crédits)
- 1970-1972 Université de Moncton
Professeur chargé de cours:
- introduction à l'anthropologie (3 crédits)
- introduction à la sociologie (6 crédits)
- la société canadienne contemporaine (3 crédits)
- 1972-1974 Université McGill
Chargé de séminaires:
- stratification sociale (3 crédits)
- la famille (3 crédits)
Professeur chargé de cours:
- les inuit et les indiens du Canada (3 crédits)
- CEGEP Marianopolis
Professeur chargé de cours:
- les autochtones du Canada
- 1979 Université de Moncton
Professeur invité:
- anthropologie amérindienne (3 crédits)

CARRIÈRE PROFESSIONNELLE

- 1968-1969 Professeur, école "Our Lady of the Snow"
North-West-River, Labrador
- 1969-1970 Chargé de séminaires
Université Memorial
- 1970-1972 Professeur chargé de cours
Université de Moncton
Moncton, Nouveau-Brunswick
- 1972-1974 Assistant à la recherche
Division de la recherche sociale
Ministère des Affaires indiennes et du Nord canadien
Ottawa
- Chargé de séminaires
Université McGill
- Professeur chargé de cours
Éducation des adultes
Université McGill
- Professeur chargé de cours
Cegep Marianopolis
Montréal
- 1975-1977 * Conseiller à la recherche
Division de la Recherche nordique
Ministère des Affaires indiennes et du Nord canadien

* "Conseiller" signifie que je formulais et conduisais à terme des projets de recherche; je devais aider d'autres chercheurs à formuler leurs propres projets de recherche, les mettre en contact avec les associations autochtones et m'assurer qu'une consultation pertinente avait lieu.

1977-1979 Conseiller en matières sociales
Commission d'enquête relative au pipeline de la route de
l'Alaska

Conseiller en matières sociales
Direction des pipelines
Ministère des Affaires indiennes et du Nord canadien

1979- ** Coordonnateur de recherche
Service de la recherche
Société Makivik

** "Coordonnateur" signifie que, en plus de tâches similaires à celles de "conseiller", je dois formuler des projets de recherche, trouver les fonds nécessaires et m'assurer du bon fonctionnement de ceux-ci.

RECHERCHES

- 1967 Recherches ethnohistoriques et recherches sur le terrain relatives à la mythologie des amérindiens Montagnais-Naskapi du Labrador.
(subvention du département d'anthropologie de l'Université de Montréal) (1500,00\$)
- 1968-1969 Étude de l'organisation sociale et du pattern de l'adoption des enfants chez les Montagnais-Naskapi de North-West-River au Labrador. (2550,00\$)
- 1971 Compilation d'une bibliographie des travaux en langue française relatifs aux amérindiens Mic-Mac du Nouveau-Brunswick.
(subvention du Centre de recherche de l'Université de Moncton) (600,00\$)
- Mise sur pied d'un projet de recherche en vue d'un développement économique de la réserve de Big Cove au Nouveau-Brunswick.
- 1972 Compilation d'une bibliographie sur les communautés du Nouveau-Québec.
(subside de la division de la Recherche sociale, Ministère des Affaires indiennes et du Nord canadien)
(2000,00\$)
- 1973 Éducation urbaine et groupes ethniques. Recherche préliminaire sur les relations structurales et organisationnelles entre l'école, la commission scolaire et les membres de l'ethnie italienne de Montréal.
(recherche de doctorat)
- 1974 Compilation d'une bibliographie sur les communautés des Territoires du Nord-Ouest.
(subside de la division de la Recherche sociales, Ministère des Affaires indiennes et du Nord canadien)
(4000,00\$)

- 1974 Conseiller pour la division de la Recherche nordique, Ministère des Affaires indiennes et du Nord canadien, sur les projets suivants:
- analyse des relations inter-ethniques entre Inuit, francophones et anglophones de la Baie Déception, Nouveau-Québec.
 - analyse des règles de résidence chez les Tête-de-boule, de Weymontachinque, Québec.
- 1975 Pour le compte de la Division de la Recherche nordique du Ministère des Affaires indiennes et du Nord canadien:
1. Projets de recherche
 - mise sur pied d'un projet de recherche à propos de l'incidence du pipeline proposé dans les îles de l'Arctique sur les facteurs socio-économiques des communautés de Resolute et Spence Bay. (8000,00\$)
 - étude relative au processus décisionnel établi par le gouvernement fédéral afin d'analyser et d'évaluer les demandes d'autorisation de construction de pipelines. (1500,00\$)
 - analyse du processus décisionnel concernant le choix du tracé du gazoduc de la vallée du Mackenzie et l'achèvement de la route de Dempster. (1000,00\$)
 - analyse du contenu "social" des transcriptions de la Commission d'enquête relative aux répercussions socio-économiques de la construction d'un gazoduc dans la vallée du Mackenzie. (5000,00\$)
 - compilation d'une bibliographie concernant les études d'impact socio-économiques relatives à des projets de pipelines et à certains projets de développement nordique. (5000,00\$)

- 1975-77
2. Conseiller sur les projets suivants
- consultations préliminaires avec deux associations du Labrador, la "Labrador Resources Advisory Council" et la "Labrador Inuit Association" en rapport à un projet de recherche portant sur les besoins en termes de recherche des populations du Labrador.
 - identification des besoins en termes de recherche chez la population Inuit du Labrador.
 - "social impact of the Strathcona Sound Mining Project".
 - "a study of the social impact of the Alaska pipeline upon Alaska native communities".

1977-1978

Pour le compte de la Direction des pipelines du Nord du Ministère des Affaires indiennes et du Nord canadien:

Projet de recherche

Étude des répercussions sur l'économie de pêche, chasse et piégeage des Inuit de Resolute Bay de l'ouverture l'année durant d'un chenal dans le détroit de Barrow permettant l'acheminement par méthanier du gaz naturel liquéfié. (6000,00\$)

1979 -

Pour le compte de la société Makivik:

* Programme de recherche

Programme inuit de recherche sur les impacts du développement des ressources.
(subvention du Ministère des Affaires indiennes)
(100 000,00\$)

* L'objet de ce programme est d'ammener les Inuit à formuler un plan régional de développement. Il est composé de plusieurs projets portant sur deux (2) collectivités du Nouveau-Québec.

1979 -

Conseiller sur les projets suivants

- economic development proposal for a research program for the Inuit communities of Northern Québec. Par Ed. Weick 1980.
- niveau de récolte du saumon de la rivière Koksoak 1980, 1981, 1982. Par Bill Kemp.
- programme d'archéologie Tuuvaluk à Quartaq de l'Université du Québec à Montréal, 1980.
- analyse de la récolte de saumons effectuée par les Inuit de Kuujjuaq en 1980. Rapport de S.A.G.E. Ltée présenté au groupe d'étude conjoint Caniapiscou-Koksoak.
- biologie du saumon dans les eaux du fleuve Koksoak, en Ungava. Rapport de la firme S.A.G.E. et du Ministère du Loisir, Chasse et Pêche (Québec) présenté à Hydro-Québec. 1981.
- Pronobec. Projet de document synthèse sur le Nouveau-Québec de l'Office de planification et de développement du Québec. 1980-81.
- essai sur les modalités d'exploitation du saumon de la Koksoak. Appréciation des procédés de conservation du saumon à Kuujjuaq. Par Gilles Schooner Inc. 1982.
- les pluies acides au Nouveau-Québec. Projet de l'école Polytechnique de l'Université de Montréal, 1982.

CONFÉRENCES ET SÉMINAIRES

- 1971 Le structuralisme et la mythologie.
Séminaire présenté au département de philosophie de
l'Université de Moncton.
- Les amérindiens du Labrador.
Conférence présentée au séminaire Pascal-Poirier à
l'Université de Moncton.
- 1972 Le chômeur-acadien.
Travail présenté au sein d'une conférence pluridiscipli-
naire intitulée "les acadiens et l'union des provinces
maritimes" et tenue à l'Université de Moncton.
- 1973 "Adoption: a matter of life or death".
Conférence présentée au département d'anthropologie de
l'Université McGill.
- 1976 "Child adoption amongst the Montagnais-Naskapi of
Labrador".
Travail présenté au sein d'un séminaire relatif aux
populations autochtones et tenu à l'Université McGill.
- "Northern pipelines and social research".
Séminaire donné au sein d'un cours relatif au développe-
ment nordique et tenu à l'Université de Saskatoon,
Saskatoon, Saskatchewan.
- 1977 La communauté amérindienne de North-West-River au
Labrador.
Séminaire donné au sein d'un cours relatif aux popula-
tions autochtones et tenu à l'Université Laval.
- 1978 "The Transport of Oil and Gas to Southern Markets".
Séminaire présenté au sein d'un cours à propos du déve-
loppement nordique et tenu à l'Université McGill.
- "Tankers in the Arctic".
Conférence présentée à la National Indian Brotherhood,
Ottawa.

- 1978 Enquête sur le pipeline de la route de l'Alaska -
Commission Lysyk.
Notes préliminaires présentées aux journées anthropolo-
giques, "Anthropologie vivante: pratique du quotidien",
de l'Université Laval.
- 1980 Doit-on parler d'éthique dans les relations avec les
communautés amérindiennes?
Conférence présentée au congrès de l'ACFAS tenue à
l'Université Laval.
- 1981 "Environmental and Social Impacts of Hydro Electric
Power Projects in Northern Québec".
Séminaire présenté au sein d'un cours relatif au "déve-
loppement" du département de géographie de l'Université
McGill.
- Les Inuit du Québec et leurs relations avec le Gouverne-
ment du Québec.
Notes présentées lors de la réunion annuelle de la
société canadienne d'ethnologie tenue à l'Hôtel Skyline
à Ottawa.
- Les activités de recherches à la Société Makivik. Com-
munication présentée au colloque de 20ième anniversaire
du centre d'études nordiques de l'Université Laval et
ayant pour thème: "La recherche sur le Nord québécois:
bilan et perspectives".
- 1982 Brève description de la préhistoire des Amérindiens du
nord-est de l'Amérique du Nord.
Conférence présentée à l'Université de Moncton dans le
cadre de "l'atelier sur l'histoire et la géographie de
Moncton".

ACTIVITÉS PROFESSIONNELLES

1972 "Rencontres avec les indiens du Nouveau-Brunswick".
Initiateur et organisateur en collaboration avec l'Association des indiens du Nouveau-Brunswick d'une journée de rencontre, entre indiens et étudiants, sur le campus de l'Université de Moncton.

Participant à une table ronde intitulée "les acadiens et l'union des provinces maritimes" et présentée au réseau de télévision de Radio-Canada à Moncton.

1974 Participant à une table ronde intitulée "l'enseignement des cultures amérindiennes en milieu pré-universitaire" tenue lors du 42ième congrès de l'Association canadienne-française pour l'avancement des sciences à l'Université Laval de Québec.

Secrétaire-trésorier de la Société des recherches amérindiennes au Québec.

Organisation d'un colloque intitulé "l'anthropologue et la société québécoise". En ma qualité de secrétaire-trésorier de la Société des recherches amérindiennes au Québec, j'ai vu à l'organisation de ce colloque, tenu le 30 novembre 1974 au Cegep de St-Laurent à Montréal, et réunissant plus d'une quarantaine d'anthropologues du Québec.

Participant à la réunion de mise en place d'un comité provisoire dans le but de mettre sur pied un Conseil Consultatif de la Recherche. Cette réunion fut convoquée par l'Association des Indiens du Québec et tenue au Village Hurons, Québec.

1975 Participant à la "réunion de mise en place du Conseil Consultatif de la Recherche Amérindienne" tenue à Québec sous les auspices de l'Association des Indiens du Québec.

- 1975 Collaboré à l'énonciation du projet intitulé "classes sociales, ethnicité et rôle de l'État au Labrador central".
Ce projet de recherche était inclus au programme de recherche intitulé "les populations nordiques du Québec-Labrador face à l'intervention étatique et à l'industrialisation" (Proponord) présenté par l'Université Laval au Conseil des Arts du Canada, section des subventions concertées.
- 1976 Participant à une table ronde intitulée "traditions et modernité chez les Inuit" tenue lors du congrès annuel de la Société canadienne de sociologie et d'anthropologie à l'Université Laval de Québec.
- Participant au colloque intitulé "Population Nordique" tenu à North Hatley, Québec.
Ce colloque relatif à la démographie nordique était subventionné par le Ministère des Affaires indiennes et du Nord canadien et organisé par "l'Arctic Institute of North America".
- 1977 Membre du "Advisory Committee on Research" du "Labrador Resources Advisory Council" de Goose Bay au Labrador.
- 1978 Président de la session intitulée "les revendications territoriales des autochtones" tenue lors de la première conférence inuit à l'Université Laval.
- 1979 Participant à une table ronde intitulée "Les Amérindiens du Québec" lors du congrès de l'ACFAS tenu à l'Université de Montréal.
- 1980 Participant à l'atelier de consultation du milieu autochtone du Comité d'étude sur la recherche nordique de la Commission de la recherche universitaire du Conseil des universités du Québec.
- 1981 Participant à une table ronde intitulée: "Recherche scientifique et populations du Nord québécois" lors du colloque de 20ième anniversaire du Centre d'études nordiques de l'Université Laval et ayant pour thème "la recherche sur le Nord québécois: bilan et perspectives".

1981

Participant à un panel intitulé: "les relations entre les autochtones et Hydro-Québec et la Société d'énergie de la Baie James" lors du "colloque archéologie" organisé par Hydro-Québec et la Société d'énergie de la Baie James et tenu au Holiday Inn (Place Dupuis) à Montréal.

Participant à un atelier d'une durée de trois jours intitulé: "le financement de la recherche sur les autochtones" du Conseil de recherches en sciences humaines du Canada et tenu à Winnipeg.

COMITÉS

Membre du comité d'études conjoint
Canapiscau-Koksoak depuis 1979.
(voir annexe I)

Membre du comité de concertation sur
l'archéologie au Québec depuis sa
création en 1981.
(voir annexe II)

Membre de la table de coordination
relative aux activités de Hydro-Québec
au nord du 55ième parallèle.
(voir annexe III)

Membre du comité de négociations du
relogement des Inuit de Poste-de-la-Baleine
au lac Guillaume-Delisle.
(voir annexe IV)

ASSOCIATIONS PROFESSIONNELLES

Membre de:

La Société canadienne d'ethnologie.

La Société des recherches amérindiennes du Québec.

TRAVAUX DACTYLOGRAPHIÉS

- 1972 Le chômeur-acadien.
(15 pages)
- 1973 L'adoption des enfants chez les amérindiens Montagnais-
Naskapi de North-West-River au Labrador.
(thèse de maîtrise, 186 pages)
- 1974 Les Italiens de Montréal: ethnie, classe sociale et
éducation.
(20 pages)
- Mécanismes de digestion des études relatives à l'impact
socio-économique de la construction d'un pipeline dans
la vallée du Mackenzie, Territoires du Nord-Ouest.
(20 pages)
- 1975 Procedures used to develop terms of reference: social
and economic effects of the proposed central Arctic gas
pipeline.
(en collaboration avec Douglas Billingley)
(80 pages)
- La route de Dempster et le gazoduc de la vallée du
Mackenzie.
(11 pages)
- 1976 Étude du contenu "social" des transcriptions des audien-
ces de la Commission d'enquête Berger: les autochtones
et l'emploi dans le contexte du projet de gazoduc du
Mackenzie.
(83 pages)
- 1978 Enquête sur le pipeline de la route de l'Alaska - Com-
mission Lysyk.
Notes préliminaires.
(10 pages)
- 1979 Some considerations on the impact on Resolute Bay food
harvesting activities of LNG tankers in Barrow Strait.
(66 pages)

- 1979 Hydro-Québec projects in the Ungava Bay area: the Koksoak-Caniapiscau larch project. Briefing for discussion purposes.
(16 pages)
- 1980 Doit-on parler d'éthique dans les relations avec les communautés amérindiennes?
(18 pages)
- Recommandations relatives à la recherche au nord du 55ième parallèle.
(8 pages)
- 1981 Pour une politique amérindienne et inuit au Québec.
(35 pages)
- 1982 Les amérindiens au Québec. Politique du Parti Québécois telle qu'acceptée au VIIIième congrès national du Parti.
(3 pages)
- Brève description de la préhistoire des amérindiens du nord-est de l'Amérique du nord.
(19 pages)

PUBLICATIONS

1. AUTEUR

- 1973 Bibliographie par village.
Population Inuit du Nouveau-Québec.
Recherches amérindiennes au Québec, vol. III, no 3-4,
pp. 103-125.
- 1975 Bibliographie par communauté:
Territoires-du-Nord-Ouest.
Ministère des Affaires indiennes et du Nord canadien.
Collection au Nord du 60ième, DRN 76-2.
- 1978 L'option difficile.
Acheminement du gaz naturel liquéfié par méthanier.
Revue North/Nord, septembre/octobre, vol. XXV, no 5,
pp. 10-17.
- La "Toi du Yukon"
Un commentaire à propos de la Commission d'enquête sur
le pipeline de la route de l'Alaska.
Revue North/Nord, novembre/décembre, vol. XXV, no. 6,
pp. 18-23.

2. EN COLLABORATION

- 1977 Bibliographie:
études d'impact socio-économiques relatives à des
projets de pipelines et à certains projets de développe-
ment nordique.
Ministère des Affaires indiennes et du Nord canadien,
Division de la Recherche sociale nordique.
- Rapport de la Commission d'enquête relative au pipeline
de la route de l'Alaska.
Ministère des Approvisionnement et Services.

LORRAINE FRANCES BROOKE

1) EDUCATION

1971	CEGEP Diploma	Sir George Williams University, Montreal.
1974	B.A. (distinction)	Sir George Williams University, Montreal
1975	M.A. (course work only)	McMaster University, Hamilton, Ontario,

2) ACADEMIC AWARDS - TEACHING EXPERIENCE

1971	Full scholarship for undergraduate work. Texaco Canada Merit Award Scholarship.
1974	Graduate Scholarship, McMaster University, Department of Anthropology.
1974	Full time teaching assistantship, McMaster University, Department of Anthropology.

3) EXPERIENCE

1974	Field worker in Lake Harbour, Baffin Island, Land Use and Occupancy for Inuit Tapirisat of Canada. Archaeological reconnaissance, Cape Tanfield, Baffin Island.
1975	Researcher, ITC Land Use and Occupancy Study. Data analysis and cartographic work for the preparation of the final report for southern Baffin Island. Researcher and cartographer, The Grand Council of the Crees (of Quebec).

Field work for the "Research to Establish Present Levels of Native Harvesting", for the Northern Quebec Inuit Association in Fort Chimo and Sugluk, Quebec.

- 1975-1976 Co-ordinator and data analyst for the "Research to Establish Present Levels of Native Harvesting". Researcher, the Wildlife Department of the Northern Quebec Inuit Association.
- 1976-1978 Research Administrator for the "Research to Establish Present Levels of Native Harvesting". Advisor and researcher for the Wildlife Department of the Northern Quebec Inuit Association.
- 1979 to present Head, Research Department, Makivik Corporation. In this capacity, responsible for the coordination, supervision and initiation of research projects undertaken by Makivik Corporation. Also act as an advisor in negotiations and committees dealing with implementation of the Hunting, Fishing and Trapping Regime of the James Bay and Northern Quebec Agreement.

4) PUBLICATIONS

- 1976 Co-author, "Research to Establish Present Levels of Harvesting by the Native Peoples of Northern Quebec: A Report on the Harvest by the Inuit of Northern Quebec". June 1976.
- 1977 "Some Considerations on Population and Self-sufficiency: Northern Quebec", Proceedings: Northern populations Workshop, 1977.
- 1979 Co-author, "Research to Establish Present Levels of Harvesting by the Native Peoples of Northern Quebec: A Report on the Harvest by the Inuit of Northern Quebec - Phase II", year 1976.
- 1982 Co-author, "Research to Establish Present Levels of Harvesting by the Native Peoples of Northern Quebec: A Report on the Harvest by the Inuit of Northern Quebec - Phase II", years 1977 and 1978.

1982

Co-author, "Research to Establish Present Levels of Harvesting by the Native Peoples of Northern Quebec: A Report on the Harvest by the Inuit of Northern Quebec - Phase II", years 1979 and 1980.

PETER WILLIAM WILSON

EDUCATION:

Currently enrolled in M.Sc. program in Geography, specialization in Remote Sensing and Land Use Change, McGill University, Montreal.

B.Sc. Geography (Great Distinction), McGill University, Montreal, June 1978.

Grade 13, Ashbury College, Ottawa, June 1975.

ACADEMIC DISTINCTIONS:

McConnell Fellowship, McGill University, 1978, 1979, 1980, 1981.

Canadian Association of Geographers Undergraduate Award, 1978.

University Scholarship, McGill University, 1977.

Head of Connaught House, Ashbury College, Ottawa, 1975.

EMPLOYMENT EXPERIENCE:

Presently employed full-time with the Research Department of Makivik Corporation. Duties include the planning and flying of aerial photography missions in Arctic Québec, as well as the writing of computer programs for biological, environmental, cartographic and photogrammetric applications.

Presently employed part-time as a consultant to Planned Parenthood Federation of Canada. Responsibilities include computer programming for donor list management and mailout purposes, as well as instruction in word processing.

Previous employment experience includes the following:

President, Sky Impressions Inc., Ottawa, 1981, 1981.

Research Assistant, Defence Research Establishment Vehicle Mobility Study, Montreal, 1980.

Teaching Assistant, Department of Geography, McGill University, September 1978 to May 1980.

Project Co-ordinator, Young Canada Works Feasibility Study on Single Parent Housing, Ottawa, 1978.

Summer employment in previous years as a manual worker.

OTHER EXPERIENCE:

June 1980 to April 1981: Proposed the production of, and assisted in the research, filming, editing and publicity for the film "Just Another Missing Kid". This documentary was produced for the CBC current affairs show 'the fifth estate'. It recounts my family's efforts to locate and bring to justice the murderers of my younger brother, Eric. "Just Another Missing Kid" won an Academy Award for the best documentary of 1983, as well as an ACTRA Award for the best Canadian television show of 1981. It has also won numerous other Canadian and international awards.

1980 - 1982 (part-time): Fund raiser, Pickering Institute for Living, Ottawa.

PROFESSIONAL QUALIFICATIONS AND MEMBERSHIPS:

Private Pilot Licence, March 1974.
American Pilot Licence, October 1974.
Night Rating, August 1976.
Multi-engine Rating, October 1979.
Barbados Pilot Licence, December 1979.
Commercial Pilot Licence, July 1980.
Seaplane Endorsement, September 1981.
Canadian Owners and Pilots Association.
American Society of Photogrammetry.
Canadian Association of Geographers.
Pickering Institute for Living.

PERSONAL BACKGROUND AND INTERESTS:

Born May 29, 1957 in Montreal. Social Insurance Number: 455 164 699. Married. Health excellent.

Extracurricular activities (McGill University) included: Vice-President of University Residence Council, Member of Residence Staff Selection Committee, Member of Graduate Student Selection Committee, Member of Graduate Affairs Committee, Member of Undergraduate Affairs Committee, Member of university residence football, soccer and hockey teams.

Extracurricular activities (Ashbury College) included: Member of editorial and photographic staffs of school newspaper, Member of school hockey and soccer teams.

Enjoy photography, cinema, cycling, skiing, travel.

AERIAL PHOTOGRAPHY MISSIONS FLOWN:

<u>DATE</u>	<u>STUDY/PROJECT</u>	<u>CONTRACT</u>	<u>LOCATION</u>
Winter 1979	Winter Recreation Study	McGill University	Laurentians
Autumn 1979	Urban Land Use Study	Richard Gill and Associates	Barbados
Spring 1980	Reservation Boundary Study	Caughnawaga Indian Reserve	Montreal
Summer 1980	West Coast Land Use Study (for Masters Thesis)	McGill University	Barbados
Summer 1980	Beach Erosion Study	McGill	Barbados
Summer 1980	East Coast Park Mosaic Project	Government of Barbados	Barbados
Summer 1980	Aerial cinematography for "Just Another Missing Kid"	Canadian Broadcasting	Colorado

<u>DATE</u>	<u>STUDY/PROJECT</u>	<u>CONTRACT</u>	<u>LOCATION</u>
1980 - 1981	Numerous aerial photography contracts	Sky Impressions	Ottawa Montreal Barbados
Summer 1982	Equipment Evaluation	Makivik Corp.	Calabogie, Ont.
Summer 1982	Beluga Whale Population Survey	Makivik Corp.	Ungava Bay, Québec and N.W.T.
Winter 1983	Air Photo Instruction	Makivik Corp.	Ontario/ Québec
Summer 1983	Community and Infrastructure survey and instruction	Makivik Corp.	Northern Québec

DAVID J. GILLIS

PERSONAL INFORMATION

Date of Birth: August 2, 1954
Place of Birth: Charlottetown, Prince Edward Island
Citizenship: Canadian
Address: 3 Milverton Road, Dartmouth, Nova Scotia,
B2Y 3T3
(902) 469-5255

EDUCATION

B.Sc. (Biology), 1976, University of Prince Edward Island,
Charlottetown, P.E.I.

PROFESSIONAL AFFILIATIONS

American Fisheries Society
Canadian Society of Environmental Biologists
Canadian Conference on Fisheries Research

SPECIAL SKILLS

Certified SCUBA diver, ACUC and YMCA, 1974
Maritime Radiotelephone Operators Licence, 1979
Electronic navigation aids, including satellite navigators,
(NAVSAT), LORAN A, LORAN C, and DECCA.

LANGUAGE CAPABILITIES

English

EXPERIENCE

1981-Date Makivik Corporation, Montreal, Quebec.
Fisheries biologist - for the Director and
Head of the Research Department. Responsibi-
lities span from the initiation and prepara-
tion of proposals and the solicitation of
funds to report preparation and presentation.

This includes such duties as the planning, supervision and completion of fieldwork, analysis of laboratory material, and data workup. Responsible for training of Inuit personnel in techniques of field sampling and data analysis.

1979-1981

Imaqpiq Fisheries Inc., Halifax, Nova Scotia. Senior Research and Development Assistant - For the Research & Development Manager. Was involved in various studies relating to fisheries research and company development. Responsibilities include field preparation, procurement and maintenance of research equipment, study of laboratory and reference samples, data analysis and interpretation, and report production. Field manager of all research and experimental/commercial fishing. Involved with corporate development projects including the establishment of various shore-based, secondary-processing facilities and the procurement of commercial research and development contracts in the local and international fisheries communities.

1976-1979

MacLaren Atlantic Ltd./MacLaren Marex Inc., Dartmouth, Nova Scotia. Fisheries biologist involved in a number of major fisheries projects including a high-seas assessment of shrimp fisheries potential in the eastern Canadian Arctic, a feeding study on short-finned squid, and a study of trawl discards in the Gulf of St. Lawrence commercial fishery. Also participated in a number of oceanographic cruises to eastern Arctic waters, several in the capacity of cruise leader. Responsibilities included cruise preparation/demobilization, exploratory fishing including fish eggs and larvae, feeding studies, bird and mammal identifications, ice observations, ice biota sampling, and scientific navigation. Involved in analyses of raw data and laboratory samples as well as preparation of reports and proposals.

- 1975-1976 Prince Edward Island Dept. of Fisheries,
Charlottetown, P.E.I.
Seasonal fisheries technician involved in
qualitative and quantitative studies of sea-
plants. Also involved in mechanical seaplant
harvester development and large-scale estua-
rine and marine coastal surveys of sessile
organisms.
- 1973 Crew member of a two-man commercial lobster
boat, Prince Edward Island.

PUBLICATIONS

- A note on the stomach contents of adult Atlantic Salmon
(*Salmo salar*, L.) from Port Burwell, Northwest Territo-
ries. Canadian Journal of Zoology, 57:1502, 1979
(co-author).
- Food and feeding of the short-finned squid (*Illex illece-
brosus*) of the Scotian Shelf in 1978. I.C.N.A.F. Res.
Doc. 79-02-11, 1979 (co-author).

TECHNICAL REPORTS

- (Contributing biologist and/or co-author for all)
- Life History and Subsistence Use of Arctic Char in Northern
Quebec: with Case Studies in Payne Bay, Akulivik and
George River. Makivik Research Department (in prep.)
- Feasibility analysis for a shore-based prawn processing
plant and freezer storage facility in Nova Scotia.
Imaqpiq Fisheries Inc. (IFI), January, 1981.
- Research and development report on exploratory/experimental
fishing by the F/V TORSEBUGVIN in Ungava Bay and eastern
Hudson Strait during August 14 -October 19, 1979. IFI,
1981.
- Feasibility analysis for the development of commercial
offshore fishery in the Ungava Bay/Davis Strait region.
MacLaren Marex Inc. (MMI), April, 1979.

Literature review of pink shrimp fishery potential in northeastern Canadian waters. MMI, March, 1979.

Primary productivity studies in the water column and pack ice of Davis Strait, April, May and August, 1978. MMI, February 1979.

Report on Cruise 78-1. Environmental studies in the pack ice zone of Davis Strait. MMI, January, 1979.

"Oilspill Contingency Plan for Offshore Labrador, 1979 Campaign, Action Plan and Appendix". MMI, 1979.

"Contingency Plan, Hudson's Bay Oil and Gas Ltd., Prince Edward Island Operation 1979; Vol. 1, Response Data; Vol. 2, Reference Data". MMI, 1979.

"Oilspill Contingency Plan for Well Sites in the Gulf of St. Lawrence; Vol. 2, Supplementary Information". MMI, 1979.

"Biological Information Summary - Flemish Pass Area". MMI, 1979.

Food and feeding of short-finned squid (*Illex illecebrosus*) of the Scotian Shelf during October-November, 1978. MMI, January 1979.

Exploratory fishing assessment of pink shrimp fishery potential in north-eastern Canadian waters. MMI, November 1978.

CANSO CONDOR - Shrimp and groundfish cruise of July 28 - September 4, 1978. MMI, October 1978.

Miramichi Channel Study, Supplementary report. MacLaren Atlantic Ltd. (MAL), March, 1978.

Report on biological studies, offshore Cruise 77-4 through 77-7, July-December, 1977, in the Davis Strait. MAL 1977.

Report on biological studies, Cruises 77-2 and 77-3, April-June, 1977, in the Davis Strait. MAL 1977.

Report on Cruise 77-1, February 1977. Environmental aspects of the cruise to Davis Strait. MAL, 1977.

Study of trawl discards in the Gulf of St. Lawrence plaice fishery. MAL, 1976.

MARC ALLARD

1) SCOLARITÉ

Cours techniques

Kelsey Institute of Applied Arts and Sciences
Idylwild Drive and 33rd Ave. West
Saskatoon, Saskatchewan

- Diplôme en Techniques des Ressources Renouvelables 1975-1977.

Cours Secondaire

Collège Mathieu
Gravelbourg, Saskatchewan

- Certificat d'études secondaires (12e année)

2) EXPÉRIENCE EN BIOLOGIE

- De juin 1979 jusqu'à ce jour, j'ai travaillé à la Société Makivik comme technicien de la faune et des pêcheries et j'ai participé aux travaux de recherche de la Société.

- De mai à octobre 1978, j'ai travaillé comme technicien des pêcheries à Lac Laronge, Saskatchewan, pour le "Department of Tourism and Renewable Resources, Province of Saskatchewan".

- De juin à août 1977, j'ai travaillé comme guide de pêches à Laronge, Saskatchewan, pour la pourvoirie "Van's Camps".