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Employment On Families And Workers In  
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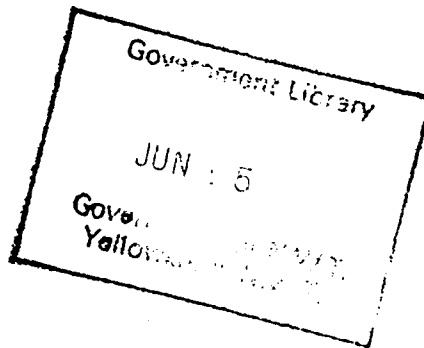
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NOGAP - THE EFFECTS OF ROTATIONAL WAGE  
EMPLOYMENT ON FAMILIES AND WORKERS IN  
THE BEAUFORT- MACKENZIE DELTA AREA  
Sector: Mining/Oil/Energy

6-1-85  
Analysis/Review

TBE DEPARTMENT OF SOCIAL SERVICES  
NORTHERN OIL AND GAS ACTION PROGRAM

1985/1986



THE EFFECTS OF ROTATIONAL WAGE  
EMPLOYMENT ON FAMILIES AND WORKERS  
IN THE BEAUFORT - MACKENZIE DELTA AREA

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1986



THE EFFECTS OF ROTATIONAL WAGE EMPLOYMENT ON WORKERS AND  
THEIR FAMILIES IN THE BEAUFORT SEA - MACKENZIE DELTA AREA:

An Annotated Bibliography, Indicators, Employment **Data** and  
Recommendations For Further Research.

Prepared for:  
Department of **Social Services**  
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THE EFFECTS OF ROTATIONAL WAGE EMPLOYMENT ON WORKERS AND THEIR  
FAMILIES IN THE BEAUFORT SEA - **MACKENZIE** DELTA AREA.

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## INTRODUCTION

### BACKGROUND TO ROTATION STUDY

In 1982, the Department of **Social Services submitted** a number of project proposals **to** the NOGAP Coordinator for NOGAP funding through the Federal government. One such proposal was a study on the effects of **rotation on** families and workers in the Beaufort Area. Funding was provided for the Rotation Study through NOGAP and the Department of Social Services developed a workplan for the **implementation of** the study in 1985/86. The objectives of the Rotation Study were identified as follow:

1. To determine the effects of rotation on families and workers in the Beaufort Area.
2. To assess the effects and devise appropriate solutions.

### PROJECT OUTLINE

Following some preliminary research in the summer and fall of 1985 by P. Johnson, Acting NOGAP **Project Manager**, NOGAP hired a Research Officer (January 13/86) on a **three month** term position to carry out the following research **regarding** the effects of rotational wage employment on workers and **their families in** the **Beaufort** Sea - Mackenzie Delta Area:

1. Assemble an annotated bibliography on rotational wage employment and resource development.
2. A **preliminary identification of social indicators** to effectively measure and monitor the impacts of **rotational** wage employment on workers and **their** families.
3. If **time** permitted, gather historical **oil** and gas employment **data**, by community, (covering the 9 NOGAP communities), for the purpose **of a preliminary investigation into** the degree **to which individual communities** have **participated in** rotational **oil** and gas employment.

## BACKGROUND TO NATIVE EMPLOYMENT IN THE RESOURCE DEVELOPMENT INDUSTRY IN THE ARCTIC SINCE 1970

For the past 15 years **Native** People in **Canada's** Arctic have been involved in wage employment in the oil and gas and mining industry as rotational (commuting) employees. Rotational (commuting) employment refers to "**all** employment in which the work place is so isolated from the **workers'** homes that food and lodging accommodations are provided for them at the work site and schedules are established whereby employees spend a fixed number of days working at the site, followed by a fixed number of rest days at **home**" (Hobart, 1979).

Northern Native employment in the oil and gas and **mining** industry as rotational (commuting) wage employees began in 1971 with Pan Arctic Oil's employment of **Inuit** from Arctic Bay and Pond Inlet for their High Arctic exploration program. This was followed by Gulf **Oil's** 1972/73-1978 employment of **Inuit** from **Coppermine** in their Mackenzie Delta oil and gas exploration program. Beginning in 1974, **Inuit** workers from Arctic Bay, Pond Inlet, and **Igloolik**, as well as smaller numbers from other communities, were hired for the construction and operation of Nanisivik mine. Finally, with the growing exploration activity by the major oil companies (Dome, Gulf, and **Esso**) in the Beaufort Sea and Mackenzie Delta, (also **Esso's** Norman **Well's** expansion project), from the mid 1970s to the present, **Inuit** and Dene from the **Beaufort/Mackenzie** Area have in significant numbers become involved as rotational (commuting) wage employees with the oil and gas industry.

### NATURE OF THE PROBLEM

Industry, government, and native organizations have produced reams of material documenting the **socio-economic** and environmental impacts of hydrocarbon exploration in the **Beaufort/Delta** Area over the past 10 years. However, other than research carried out in the Central and Eastern Arctic on the effects of rotational employment on workers and their families, (**ie.**, **C.W.** Hobart, **E. Gourdeau**, **G. W. Wenzel**, **L.W.** Roberts, and The Baffin **Regional Inuit** Association), no research has been carried out on the topic in the **Beaufort/Delta** Area. This excludes **D. Erickson's** Day Care Study, (see bibliography), that looked at day care needs associated with hydrocarbon development in three Beaufort Sea communities.

There may be two primary reasons for the lack of research in this area. The first involves the particular way in which industry and government view the regional impacts of Northern hydrocarbon projects. **"There** is a underlying assumption, rarely tested, that the more local employment generated, the **better...**"(Usher, 1982) . Secondly, adequate base line data on employment and income, by community, has been unreliable and sketchy at best. However, the latter situation is in the process of being improved with the implementation of the NOGAP Data Base Study. The intent of this report is to identify current research on the topic of rotation, and the need to conduct further studies relevant to the Beaufort Sea - Mackenzie Delta Area.





SECTION I: AN ANNOTATED BIBLIOGRAPHY OF LITERATURE RELEVANT TO  
THE ROTATION STUDY .

INTRODUCTION

Before research could be conducted on the effects of rotational employment on workers and their families in the Beaufort Sea - Mackenzie Delta Area, a literature search was required to identify existing documents/sources on the topic of rotation. From this literature search the following eight (8) thematic areas of research were identified as relevant to investigating and monitoring the effects of rotational wage employment on workers and their families in the Beaufort Sea - Mackenzie Delta Area.

The documents that follow will be presented in an annotated format; however, for those documents the Research Officer considered relevant but was unable to obtain either the document or an abstract of it, only a bibliographic reference will be included.

SELECTED THEMES RELEVANT TO **THE ROTATION STUDY**

1. The effects of oil and gas rotational wage employment on workers and their families in the Northwest Territories.
  - 1.1 Native Workers
  - 1.2 Non-Native Workers
  
2. The effects of mining rotational wage employment on workers and their families in Northwest Territories.
  - 2.1 Native Workers
  - 2.2 Non-Native Workers

3. The effects of oil and gas rotational wage employment on workers and their families in other parts of Canada.
  - 3.1 **Native** Workers
  - 3.2 Non-Native Workers
4. The effects of mining rotational wage employment on workers and their families in other parts of Canada.
  - 4.1 Native Workers
  - 4.2 Non-Native Workers
5. The effects of offshore employment in the oil and gas industry on Non-Native People in Scotland and Norway.
6. The effects of energy development and wage employment on Alaskan **Inuit** and Native Americans.
7. The effects of relocation and migration for wage employment in the Mining Industry on Native People in the Northwest Territories.
8. Resource Development in the Beaufort Sea - MacKenzie Delta and Norman Wells: A selected bibliography of Government, Industry, and Consultants' reports relevant to the Rotation Study .

Note: (Au) at the end of a summary denotes author generated summary.

(Text) at the end of a summary denotes that the summary was abstracted from the text.

## SELECTED ANNOTATED BIBLIOGRAPHY

1. THE EFFECTS OF OIL AND GAS ROTATIONAL WAGE EMPLOYMENT ON WORKERS AND THEIR FAMILIES IN THE NORTHWEST TERRITORIES.

### 1.1 Native Workers

ERICKSON, D. and S. VEIT (1985) "Caring For Children: Child Care Needs Associated With Hydrocarbon Development in the Beaufort Region," a report prepared for the Department of Social Services, Government of the Northwest Territories.

suMMARY: **As** part of a broad research and planning program to prepare for further hydrocarbon development in the Beaufort, the Government of the Northwest Territories commissioned this study to examine the child care needs associated with development. The study focused on three communities in the Beaufort Area: **Aklavik, Inuvik, and Tuktoyaktuk.** On the basis of the study results, four main conclusions *were* reached:

1. Rotation employment is not the most critical factor in determining whether or not **child care arrangements** are problematic.
2. The presence of onshore facilities adjacent to Tuktoyaktuk presents many employment opportunities to residents but it is also associated with significant child care problems.
3. The Government of the Northwest Territories has not assumed an adequate support role for families who require day **care** services.
4. Industry has not been sufficiently active in examining alternative work arrangements for Tuktoyaktuk residents to help reduce work/family conflicts. (Text)

GOURDEAU, K.A. (1973) "**The Social Impact of Panarctic's** Employment Policy in Arctic Bay and Pond Inlet," Arctic Institute of North America.

SUMMARY: At the end of **1972, Panarctic** Oils Limited inaugurated a scheme designed to employ native people from two communities of the Canadian north for its exploration activities. A year and a half later, the author went to these villages to question the local people on the main economic and social effects of this initiative. He concluded that **at the time of his visit, the impact was clearly positive.** He attributed this principally to the circumstance of the communities playing a key role in the selection and placing of native workers, and to the fact that these workers can **continue to** be involved in the economic activities which culturally define their ethnic group. (Au)

HOBART, C.W. (1985) "Impact of Community Employment on **Coppermine** in the **NWT,**" proceedings: International Workshop on Population Issues in Arctic Societies. Montreal, Quebec: University of Montreal.

SUMMARY: . . . **Coppermine** is one of three communities in the Northwest Territories which have had particularly extensive experience with commuting employment. The other two communities are Arctic Bay and Pond Inlet. Between **November** 1972 and May 1977, men from Coppermine were employed by Gulf Oil Canada in its exploration program in the Mackenzie Delta **during the** November to May drilling season. This paper describes briefly the circumstances of that employment and the work performance of the men involved. The bulk of the paper is devoted to describing the impacts of the employment experience on the workers, their families and the community. (Au)

HOBART, C.W. (1982) 'Industrial Employment of Rural Indigenes: The Case of Canada,' in HUMAN ORGANIZATION. 41 (1).

SUMMARY: . . . **We** must assume that resource development activity will continue, because between 1960 and 1981 the **Canadian** government, through tax incentives, encouraged investment of **\$3.5 billion** in hydrocarbon exploration in the north; because the Supreme Court of Canada in a November 1979 decision upheld the right of mining companies to prospect in northern areas despite **Inuit** efforts to block this activity; and because no less than six major development projects in the Arctic have been approved since **1979,** or are on the verge of gaining approval.

Accordingly, this paper takes as its starting point the facts that much industrial employment is currently available in the Canadian Arctic, that numbers of northern Indigenes are already involved in this employment, and that opportunities for more native employment will probably come swiftly with the six **projects** now afoot. . . .

This paper analyzes the consequences of industrial employment experiences of Indian and **Inuit** people in Canada during the past 20 years. Special emphasis is given to relocation and rotation or commuting employment experiences. There are brief discussions on the native **workers'** mastery of industrial skills; on the stressful effects of industrial employment; on the workers and on the worker's family with particular reference to support, child rearing, and conflict; on the community, with emphasis on the maintenance of cultural traditions and community viability; on the harvesting of traditional resources; and on the maintenance of traditional cultural patterns. (Au)

HOBART, **C.W.** and WALSH and ASSOCIATIVE CONSULTANTS (1980)  
"Rotational Employment of **Coppermine Inuit** Men: Effects and Community Perspectives," Ottawa: Environmental Social Program, Northern Pipelines.

SUMMARY: This report contains the results of a broad gauge study of the effects of employment by Gulf Oil Canada Ltd. on Coppermine, a predominantly **Inuit** settlement of about 800 people, located on the arctic coast about 600 km due north of **Yellowknife**. During the winters of 1972-73 through 1976-77 Gulf Oil employed between 54 and 90 of the men of this community in its oil exploration activity in the Mackenzie Delta. . . . The following pages first present an overview of the methodology of the study, the background of the **Coppermine** settlement, and the origins and organization of the employment program. This followed by a brief summary of the major findings of the study.  
(Au)

HOBART, **C.W.** (1979) "Commuting Work in the Canadian North: Some Effects on Native **People**," Proceedings: Conference on Commuting and Northern Development, University of Saskatchewan, Institute For Northern Studies, Feb. 15/16.

SUMMARY: . . . This discussion seeks to provide a broad **overview** of what **is known** about the effects of commuting employment, with particular reference to the northern native people of Canada. First, a definition of commuting employment is offered. This is followed by a review of the relevant literature. Thereafter five contrasting commuting employment situations which have existed in northern Canada are described, and some of the effects of these situations are briefly discussed. The five situations are: Collins Bay mine (Gulf Minerals), Gulf Oil drilling in the Mackenzie Delta, Pan Arctic drilling projects in the High Arctic (especially effects on Pond Inlet and Arctic Bay), the Hire North employment program, and Nanisivik Mine. (Au)

HOBART, **C.W.** (1978) "**Work Aspirations and Physical Mobility Interests of Young Inuit in Gjoa Haven, NWT**," prepared for Polar Gas **Limited's** Social-Economic Program. Toronto, Ontario.

SUMMARY: The study explores the current residential and employment circumstances, -the vocational aspirations, and the attitudes toward rotation employment and toward relocation to distant work sites of young **Inuit** in Gjoa Haven in the Central Arctic region of the Northwest Territories. The data come from the **(T.E.R.I.S.)** file of the Government of the Northwest Territories and from an interview **survey** conducted among information supplied by Gjoa Haven informants concerning young people who had left the community. (Au)

HOBART, **C.W.** (1976) 'Rotation Work Schedules in the NWT: A study of Variations and Consequences,' a report to the Planning and Development Division, Department of Economic Development and Tourism, **GNWT**.

SUMMARY: This report discusses the effects of differing work rotation schedules in isolated locations on workers, their families and their communities. Based on data from existing literature and from original research Hobart concluded that there were no consistent implications that work periods of up to 20 days had ill effects on workers, their families or their communities. This data provided the basis for making

recommendations on ways in which work rotation employment might be regulated to best safeguard the welfare of the native workers and their families. (Au)

HOBART, **C.W.** and G. **KUPFER** (1974) "**Employment** Adjustment and Effectiveness: Arctic Oil Explorations of Gulf Oil Canada, **1973-74**," vol. 1: Sociological Analysis, Westrede Institute, Edmonton.

SUMMARY: This study presents the results of a continuing study of the efficiency of the Gulf Canada northern exploration employment program, and of the impact of its Northern Native Employment program on native communities. . . . The present report, (includes) . . . a comparative analysis of the work effectiveness Employment program . . . . The study of the economic costs to Gulf Canada of its Northern Native Employment program is separately bound in a report by Depage and White entitled Employee Adjustment and Effectiveness: Arctic Oil Exploration of Gulf Oil Canada, 1973-74 vol. 2 Economic Analysis. . . . (Au)

HOBART , **C.W.** AND G. **KUPFER** (1973) "**Inuit** Employment by Gulf Oil Canada: Assessment and Impact on Coppermine, **1972-73**," Edmonton: Westrede Institute.

SUMMARY: This report presents the results of an impact study assessing the consequences **of** the employment of **Inuit** men from Coppermine, NWT by Gulf Oil Canada and its contractors in the Mackenzie River Delta during the period from November 1, 1972 until May 1, 1973. .\* This report assesses the effects of the **Inuit** employment program on the Gulf Oil operation, and the social and economic impact of the work and wages on the settlement, and the lives of the **Inuit** workers and their families. . .because of the number of men employed in the program, and the substantial financial input into the community, the potential for impact on the community was very great . . . . This was also a unique project in that a considerable number of men from a small **Inuit** settlement in the Fort Smith Region moved to a distant work site in the **Inuivik** Region without going through or dealing with other NWT settlements. . . . this project may provide guidelines for the continued employment of the Northern Native peoples. . .(Au)

ROBERTS, R. (1985) "**Exodus:** Local Employment Combined with Rotational Shifts May Prove a Mixed Blessing For Northern Communities," in POLICY OPTIONS. 6 (3).

**SUMMARY:** The last decade has seen a continuing trend toward local and native employment *on* new energy projects in Canada. A number of companies have developed their own corporate policies and operating practices to implement their local employment programs. Their rationale has varied from seeing it as good business practice to good corporate social **reponsibility**. Much of the emphasis has been placed on employment in the north, not only in the territories but in the northern regions of **the** provinces. Many of these companies have looked at rotational shift programs as one of the best methods to achieve northern employment goals. . . . maybe industry, all levels of government and the communities should be on guard against looking on local employment/rotational shifts as the untimate panacea for all their concerns. (Au)

## 1.2 NON-NATIVE WORKERS

The Research Officer was unable to identify any research carried out on the effects of rotational wage employment on Non-Native workers, and their families in the Northwest Territories. However, **Erickson's** Day Care study did discuss briefly the Day Care needs of the Non-Native population in **Inuvik**.



2. THE EFFECTS OF MINING ROTATIONAL WAGE EMPLOYMENT ON WORKERS AND THEIR FAMILIES IN THE NORTHWEST TERRITORIES.

2.1 NATIVE WORKERS

**BAFFIN REGION INUIT ASSOCIATION (1979) "Socio-Economic Impacts of the Nanisivik Mine on North Baffin Region Communities,"** prepared for: **Nanisivik Mines Ltd.**, Government of the Northwest Territories, and The Government of Canada.

suMMARY : This study was proposed by the Baffin Region **Inuit** Association, in accordance with a stipulation in the Master Agreement governing the establishment of the Nanisivik Mine which specified that a **socio-economic** impact study should be made after the mine had been in operation for a few years to assess its impact on the welfare of the native communities in the area. Specific questions looked at in the study were the effects of the mine employment on: 1. the **Inuit** workers and their families, 2. traditional harvesting, 3. consumption of store-bought goods, 4. community health, 5. violence and crime in affected communities, 6. school retention rates and 7. vocational aspirations among young people.

Conclusions of the study:

1. . .Much ambivalence of the **Inuit** workers, former workers and members of their families toward employment at the Nanisivik Mine. Two basic conflicts were: long work periods (6 weeks), and their need to earn money which conflicted with their need to hunt.
2. . .Perceived unfair treatment by foremen; perceived inequalities in computation of pay checks; problems experienced by wives in communication with their husbands; complaints by some **Inuit** about the food served in the mine cafeteria.
3. The contribution of the wage income to the total cash flow of the community can be considered substantial only in the case of Arctic Bay.
4. No significant indications that the mine employment has adversely affected any of the traditional sources of livelihood.

5. No consistent or creditable evidence of increases in social assistance payments, liquor importation, criminal convictions, personal injuries, child neglect, and early school leaving.
6. . . . **Little** doubt that the prolonged absences from home of Inuit workers while at the mine are having adverse affects on the marriages of some of them.
7. Some mothers reported difficulty in managing children while their husbands were away... some reported that father working at the mine spent less time teaching land-living skills to their sons than they normally would have. . . . **some** evidence that sons of fathers working at the mine may be favorably influenced toward that type of employment.
8. Complaints by some wives of difficulties in contacting their husbands at work, and feelings among workers of unfair treatment by the company. (Text)

BARRET, (J.E.) and ASSOCIATES (1976) "**The** Polaris Project and the **Inuit**," West Vancouver, B.C.: J.E. Barret and Associates.

suMMARY : . . . The purpose of this study was to explore more fully **Inuit** views regarding **labour** and living practices at the projected mine which would be most acceptable to them as well as up-dating the communities regarding the status of the Project.  
(Au)

BOREALIS EXPLORATION LTD. (1983) "**The Socio-Economic** Impacts of the Borealis **Roche** Bay Magnetite **Project**," prepared for Borealis Exploration Ltd., Calgary, Alberta.

suMMARY : The purpose of this study was to examine the socio-economic impacts of the Borealis **Roche** Bay Magnetite Project. The areas of study, in decreasing order of concentration are: 1. the Melville **Pennisula** communities of Hall Beach and **Igloolik**, 2. other communities in the **Baffin** and **Keewatin** regions from which mine employees are likely to be recruited, 3. the "**north**" - defined to include northern communities in the **central** and eastern provinces as **well** as a the entire Northwest Territories, 4. Canada as a whole. (Au)

CONDON , **A. (1975) "Summaries** and Commentaries of Some Literature Possibly Relating to the Job Rotation Mechanism and Native Employment in the North," (publisher and location published not listed).

suMMARY : The purpose of this report is to present summaries of six publications listed by the International Labour Office in Geneva as bearing on the subject of the job rotation mechanism. As well, this report may possibly contain assessments of each article in terms of its usefulness in evaluating the Canadian experince of the job rotation mechanism in the north. . .(Au)

**DAHL, J. (1984) "Mining and Local Communities: A Short Comparison of Mining in the Eastern Arctic and Greenland," in ETUDES/INUIT/STUDIES. 8(2)**

suMMARY : This article compares major experiences of mining in two arctic regions. . .**employment** of Greenlanders in the lead and zinc mine at **Marmorilik** and the social and economic consequences **for** the local population in the district of Uummannaq. The second employment experience was in Arctic Bay where the author went to the community to get a very general impression of experiences gained by the community after 6-7 years of mining in Nanisivik, and to get some general background information regarding employment of **Inuit** in Nanisivik (and by Panarctic Oil). (Text)

**GRAHAM, F.A. (1982) "Eastern Arctic Study Case Study Series: The Development of the Polaris Mine,"** Kingston, Ontario: Institute of Local Government and the Centre For Resource Studies at Queens University.

SUMMARY : This case reviews the history of the Polaris mine, from the initial discovery of lead/zinc deposits on Little **Cornwallis** Island in **1960** to the conclusion of the development agreement between the Government of Canada and **Cominco** Ltd. in **1980**. There are several issues that emerge from the development of the Polaris mine. These may be broadly categorized as follows: 1. environmental issues; 2. issues related to employment and training northerners; 3. issues concerning the nature of the workplace; 4. issues related to the process for consultation and approval of the Polaris mine and for monitoring its operation and

impact; 5. issues concerning the impact of the mine on northern communities; 6. issues concerning the economic spinoffs from the mine in northern and southern Canada; 7. the **issue** of the Polaris mine as part of the accumulated development of Canadats north. . . . (Au)

HOBART, C.W. (1982) "**Inuit** Employment at the **Nanisivik** Mine on **Baffin** Island," in **ETUDES/INUIT/STUDIES**. 6 (1).

SUMMARY : This paper reports on fours years of employment of **Inuit** during the construction and **opertion** of the Nanisivik mine on Northern **Baffin** Island. A distinctive feature of this employment is that native employees must work for six weeks before taking a rest break at home, while employees from southern Canada have a work period twice that long.

The employment records show **that** the **Inuit** turnover has been high, with many working no more than one or two months. However, their work performances have typically been rated as above average. **Interviews** with workers and their wives showed clearly that while they wanted and needed the money earned at the mine, the wives did not like the lengthy absences of the men from home that this work necessitated. Workers wives were particularity negative toward this employment, complaining about meat shortages and other problems they experienced during their husbands absences.

It **was** concluded that the six week work period confronts **Inuit** with a dilemma. **On** the one hand, is their need for wage employment so that they *can* defray the increasing heavy capital and operating costs associated with **harvesting** local natural resources. On the other hand, the long work imposed absences are in conflict with both the traditional closeness of the **Inuit** family, and the **hunters'** ingrained sense of responsibility to provide meat for their families. Resolution of these dilemmas, recruitment of higher proportions of **Inuit** workers, and reduction of their turnover rates and providing **Inuit** with increased employment opportunities and reduced welfare dependency will all depend upon reducing the length of the work period. (Text)

OUTCROP LTD. and THE DPA GROUP INC. (1980) "Potential Social-Economic Impacts of the Polaris Mine Project: An Examination of the Potential Impacts on the Community of Resolute Bay, the Arctic Coastal Communities, and the NWT in General, " **Yellowknife**, NWT.

suMMARY : The purpose of this study is to examine the socio-economic impacts of the Polaris Mine on the communities within the Polaris **Mine's** planned hiring area. The intention is also to provide an overview of the impacts of the mine on the NWT economy. The study was conducted during a four month period from late January to late May, 1980. The field work, which involved visits to most of the communities, was completed in March and early April. Interviews were held with community councils, governments officials, business owners/operators and individual residents. . ..(Au).

ROBERTS, **L.W.** (1977) "**Wage** Employment and its Consequences in Two Eastern Arctic **Communitites**," unpublished PH.D. thesis, University of Alberta, Edmonton, Alberta.

SUMMARY : The effects of wage employment on the **Inuit** from two Eastern Arctic communities *are* investigated (Arctic Bay, Pond Inlet). Two aspects of the issue are studied: how the **Inuit** workers react to the on-the-job demands of oil exploration wage employment; and what effect the massive influx of wage **employment** is having on the home communities of native workers. (Au)

WENZEL, **G.W.** (1983) "**The** Integration of '**Remote**' Site Labour into the **Inuit** Economy of Clyde River, **NWT**," in ARCTIC ANTHROPOLOGY. 20 (2).

suMMARY : The early years of the 1970s saw the expansion of large-scale industrial interests, primarily **minerial** and hydrocarbon development, into parts of the Northwest Territories. **Inuit** from villages scattered across the NWT were brought into the sphere of non-local industrial employment via the phenomenon of commuter or remote site labor. The **Inuit** of Clyde River, a settlement on the northeast **coast** of Baffin Island, became involved with the Nanisivik Mine project in 1975, a relationship which has since persisted sporadically. A key year for Clyde **Nanisivik** employment was 1976 when eight men, four of whom were

excellent hunters, chose to work at the mine site. This paper discusses the circumstances which contributed to this decision and focuses primarily on the uses to which **"windfall"** cash, earned at the mine, was directed within Clyde River. (Au)

## 2.2 NON-NATIVE WORKERS

The Research Officer was unable to obtain any research studies that looked specifically at the effects of mining rotational wage employment on Non-Native workers and their families in the Northwest Territories. Some of the above studies that look at communities with a large white population ie. Resolute Bay, would possibly fit into this category.

3. THE EFFECTS OF OIL AND GAS ROTATIONAL WAGE EMPLOYMENT ON WORKERS AND THEIR FAMILIES IN OTHER PARTS OF CANADA .

3.1 NATIVE WORKERS

LARSON, **L.E.** (1979) "The Impact of Resource Development on Individual and Family Well-Being," prepared for Alberta oil Sand Environmental Research Program by Family Research and Consulting Limited. AOSERP Project HE 1.2.1.

suMMARY : Although **this report** does **not** deal specifically with Native workers and rotational **employment** it does have a section on the impact of rapid resource development on family and community well-being in the context of Native communities in Northern Alberta that are being impacted by the development of the Athabaska Tar Sands. The Study draws on work that has been done in the Canadian Arctic by **C.W.** Hobart. The report concludes that the literature suggests that resourceful resource development is difficult in both procedure and consequence, short-run negative consequences are inevitable -- long-run detrimental consequences are inevitable in the absence of carefully executed native programs, and the end consequences can be favorable. The establishment of and provision for alternative life styles within native communities and among natives in resource towns will need to be an explicit goal. In this sense, natives who prefer the traditional life style should be able to pursue this option as readily as those who aspire to change. (Text)

HOUSE, **J.D.** (1982) "**Big** Oil and Small Communities in Coastal Labrador: The Local Dynamics of **Dependency**," in **R.T. Bowles** (ed.) LITTLE COMMUNITIES AND BIG COMMUNITIES. Toronto: Butterworths.

suMMARY : This paper does not deal with rotational employment of native people per se, however it does look at the dynamics of oil industry-community relations at the micro-level and strategic policy decisions that influence these dynamics. . . The paper is based upon an analysis of contacts between big oil and small Labrador communities during the decade of the 1970s. It assesses the process so far within a moderate dependence theory perspective and suggests some general policy directives for increasing local benefits from offshore oil. (Text)

### 3.2 NON-NATIVE WORKERS

BAIRD, I. (1985) "Women in the Offshore in Newfoundland," paper presented to the International Conference on Women and Offshore Oil, St. **John's** Newfoundland. September 5-7.

SUMMARY : This paper looks at who the offshore working women are, what jobs they are doing, and their levels of satisfaction with their work. The first section of the paper provides a demographic overview of the female offshore **labour** force. This is followed by discussions of the offshore workplace, in terms of **womens'** career motivations, levels of mobility, and finally, the social and work relations affecting and affected by females in a male environment.

The author concludes that despite the institutional and interpersonal barriers women experience in the offshore workplace it is our impression that they have adapted well to the work environment and their presence is welcomed, **at** least in **"traditional"** roles, by their male counterparts.  
(Text)

FUCHS, **R.P.** (1981) **"The** Adaptation of Rural Residents to the Offshore Oil and Gas (exploration phase) Labour Force, Newfoundland and **Labrador,**" paper presented at: Psycho/Social Impacts of Resource Development in Canada: Research Strategies and Applications. A Symposium Sponsored by the Mental Health **Divison** of Health and Welfare Canada and the Consultative Committee on Mental Health.

SUMMARY : The research issue focused on in this paper concerns the impacts of oil industry development on the renewable resource sector in the province. . . It was intended that research relating to the offshore labour force involved in the oil industry would provide an initial **"snapshot"** of residents' adaptations to oil industry employment. Projections for future accelerated development could be based, in part, on the patterns which had emerged in the early exploration phase of the industry in the province.

The study found that Newfoundland participants in the offshore oil and gas industry are generally new to the industry,, **occupy** junior positions within the occupational hierarchy, **are less well** educated and more often unmarried than their non-resident co-



workers. They have been attracted out of water transportation and construction occupations and have a strong career attachment to the industry. Residents of rural communities within the industry are generally satisfied with their offshore work in that their jobs provide them with regular income, an identifiable career path and social status. The conflicts which occur between nationalities and linguistic groups in the offshore affect job satisfaction and the perception of safety in the workplace.  
(Text)

FUCHS, R. P. et al. (1981) "The Steel Island: Rural Resident Participation in the Exploration Phase of the Oil and Gas Industry, Newfoundland and Labrador, Department of Rural, Agriculture and Northern Development, Government of Newfoundland and Labrador.

**SUMMARY :** This research project into Newfoundland resident participation in the exploration phase of the oil industry was designed to assess the early social impacts which employment in the offshore was having on Newfoundland oil workers. The research also served to document the distribution of employment in the industry throughout the province, to establish the baseline social and economic characteristics of early interaction with the oil industry and to identify the way in which rural residents employed in the offshore were adapting to their work.  
(Text)

JOHNSON, P. (1985) **"A** Report Prepared for the Department of Social Services, Government of the Northwest Territories on: The International Conference on Women and Oil, St. Johns, Newfoundland, September 5-7.

**SUMMARY :** This paper summarizes the authors participation at the above conference, and in particular, provides the Department of Social Services with a summary of the various presentations that were delivered at the conference. The theme of the conference was twofold. The sessions presented on the first day explored the complex employment issue of why women do not, cannot, and in some cases will not, work offshore. On the second day of the conference the impact of offshore work and rotational employment on women and the family structure was examined. (Text)

TAYLOR, R. (1983) **"Offshore** Work and Family Life, " seminar presented at **Queen's** College, St. Johns, Newfoundland.

4. THE EFFECTS OF MINING ROTATIONAL WAGE EMPLOYMENT ON WORKERS AND THEIR FAMILIES IN OTHER PARTS OF CANADA.

4.1 NATIVE WORKERS

**BEVERIDGE, J.** (1979) "The Rabbit Lake Commuting Operation: A Case For Mutual Adaptation?" proceeding: Conference on Commuting and Northern Development, University of Saskatchewan, Saskatoon, February 15/16.

suMMARY : This study argues that there is a common tendency to view the traditional and the modern as polar opposites. We frequently hear of the "dilemma" of choosing between the old and the new, or of the difficult "transition" from traditional to modern ways. The relationship between northern native peoples and the mining industry has often been viewed from this perspective.

Although there is some evidence that cultural disintegration and social disorganization have been repeatedly reported among northern native populations newly exposed to mining employment. ..there are contrary indications as well. Under some conditions at least, mining employment and traditional culture appear to be compatible, even mutually reinforcing. Where this has **occured**, both native employees and mine supervisors have rejected the **notion** that satisfactory employment adjustment can be attained only at the expense of traditional values and ways of life. Instead a process of selective adaptation has taken place, incorporating elements of both worlds. The process has perhaps been particularly effective where the adaptation has been **mutua** l, mining companies adjusting to the particular requirements and circumstances of the northern native population as well as vice versa. (Text)

**BONE, M.** and **M. MOUGEOT** (1979) "Overview of the Conference ," proceedings: Conference on Commuting and Northern Development, Institute For Northern Studies, University of Saskatchewan, Saskatoon, Saskatchewan, February 15/16.

suMMARY : This paper concludes that the advantages of commuting to the company and government outweigh the disadvantages, especially in the case of extracting non-renewable resources. The establishment of a permanent settlement necessitates large capital expenditure for mining companies and governments. A

commuting approach does away with the need for a new settlement because the workers return **to** their communities and their families. An adequate support base for the workers consisting of the basic amenities is thus more easily established. A commuting work situation reduces the emotional and cultural tension which is part, of uprooting workers and families to isolated small settlements. For native people, the opportunity to work at the mine site and to reside in their home community is especially important, allowing them to engage in traditional activities such as hunting and trapping. The establishment of a commuting schedule is also something which is best done with a degree of flexibility. **..the** shorter schedules are better suited to the workers and appear most beneficial to the companies in terms of turnover rates. (Text)

**CHENARD, P.** (1979) "Native Workers' **Experience**," proceeding: Conference on Commuting and Northern Development, Institute For Northern Studies, University of Saskatchewan, Saskatoon, Saskatchewan.

SUMMARY : The author is a **Councillor** for Area 1, Northern Municipal Council, Stoney Rapids, Saskatchewan, and bases his remarks on familiarity with **Cree** and Chipewyan people working in northern Saskatchewan, employed at Gulf Minerals, Amok, Uranerz and several other companies. Topics include: the need for indenture programs, commuting, anticipated closing of mines, the role of the Department of Northern Saskatchewan, the AMOK agreement, and trades training. Chenard concludes: there is not, and probably never will be, an economical commuting **system** totally satisfactory to both the employer and the employee. The seven-day in/seven day out system adopted by several of the mining companies seems to fit best the **northerner's** needs culturally and economically; new employees confronted with rather large pay **cheques** tend to blow their money on alcohol first, taper off, and then spend more on the home and family; marriage breakdown, caused primarily by alcohol and absenteeism from the home is a prevailing ailment in the younger generation; and there is a need for marriage **counselling** in the training process. (Text)

**FOSTER, T.W.** (1974) "Notes on Commuting to the Rabbit Lake Uranium Mine at Rabbit Lake, **Saskatchewan**," University of Saskatchewan, Institute For Northern Studies.

suMMARY : The Gulf Mineral Resources Company Project at Rabbit Lake is part of the resource surge occurring in Canada. **Gulf's**

Uranium mine is much the same as any other open pit mine with one exception. Instead of building a town, Gulf Mineral Resources Company plans to commute workers from the south and nearby communities to the mine. Commuting is the prime topic of this paper. (Au)

**FULCHER, J.** (1985) "Company's Experience," proceedings: International Workshop on Population Issues in Arctic Societies, Montreal, Quebec: University of Montreal.

SUMMARY: . . . Rabbit Lake mine has been in operation for about four years. . . It employs people from Uranium City, Fon du Lac, **Stoney** Rapids, Black Lake, **Wollaston** Post, **Saskatoon**, Prince Albert and the surrounding areas. . . . employees are transported to the site by charter aircraft on **Norcanair Nipawin** Airlines. hours, from seven in the morning until seven in the evening until seven in the morning, with an hour off for a hot meal. . . . In the four years that (we) have been operating, ( we) have been pioneers in Saskatchewan in commuting. We are also open to suggestions as to how we may improve our situation. Other companies coming on stream may take this commuter approach, and change it in some ways, possibly improve it. . . (Au)

**LAZORE, G.** (1977) "**Native** People and Mining: The opportunity for an untapped resource," Department of Energy, Mines and Resources. Ottawa.

SUMMARY : Increasingly, jobs within the mineral industry remain vacant at a time when native peoples, often living adjacent to mineral developments, suffer from the effects of high unemployment in communities deeply rooted in poverty. By fostering conditions within the mineral industry which would make employment more attractive to Indian and **Inuit** peoples, a substantial contribution could be made toward solving not only the manpower issue which industry faces but the problem of poverty within native communities as well. . . . This report tries to identify the types of obstacles which currently hinder native employment and suggests to all interested parties how these can be overcome. (Au)

SCOTT, C. (1975) "A Preliminary Evaluation of the Gulf Minerals Rabbit Lake Commute as Regards Native **Employment**," occasional papers on Northern Saskatchewan, by DNS #1, 'Planning and Research, DNS, La **Ronge**, Saskatchewan.

NOGAS, **F.R.** (1978) "Fly-in Program at Rabbit Lake," proceedings: Fourth CRS Policy Discussion Seminar, November 22-24, Kingston: Queens University.

**SUMMARY :** The Rabbit Lake Mine, in common with other northern mining enterprises, faced a difficult problem in the recruitment of an adequate work force. . . . Concern over the problems of staffing the Rabbit Lake facility for the expected ten years of production led Gulf to establish certain objectives in the process of selecting a 'life style' for employees. First, (we) wanted to minimize the factors creating negative attitudes toward employment in remote areas. Secondly, (we) wanted to establish an effective employee relations program. . . . A third objective . . . was the provision of job opportunities for northern native employees. A fourth objective . . . was to have a very flexible program that would minimize the disruptions resulting from the eventual shut-down of the mine. (Au)

#### 4.2 NON-NATIVE WORKERS

ARMSTRONG, T. (1976) "The Shift Method in the Arctic," in POLAR RECORD. 18 (114).

**suMMARY :** This paper examines an example of the functioning of the shift method . . . of working mineral resources in remote northern locations. The *essence* of the method is that the workers have their home and families at some established centre in the south, and are flown in to their place of work **in** the north for shifts of a few weeks, during which long hours are worked. Thus at the northern end living accommodation can be very simple, with no need for elaborate social facilities, and substantial economies should accrue. . . . (Au)

5. THE EFFECTS OF OFFSHORE EMPLOYMENT IN THE OIL AND GAS INDUSTRY ON NON-NATIVE PEOPLE IN BRITAIN AND NORWAY.

CAIRNS, **W.J.** and P.M. (**eds.**) (1983) ONSHORE IMPACTS OF OFFSHORE OIL. London: Applied Science Publications Limited.

SUMMARY : This book contains the proceeding of the Oil and International Environment Conference. The intention of the conference was to create a friendly confrontation between **socio-economists**, environmentalists and oil industry professionals. The collection of papers includes discussions on the effects of rapid population **fluctions** due to boom/bust oil related projects; escalated housing and living costs; and oil related employment increases. (Text)

CARSON , **W.G.** (1982) THE OTHER PRICE OF **BRITAIN'S** OIL. **Martin** Robertson.

**HANN**, H. (1985) "Offshore Women, " Work Research Institute, Oslo Norway.

SUMMARY: An interesting account of the social benefits and consequences of women working offshore. Major problems are experienced when roles are shifted from **labourer** to housewife. The prescence of women in the offshore work environment has been observed to decrease the transition impact when men return home to their families. (Text)

MOORE, R. (cd.) (1981) LABOUR MIGRATION AND OIL. Panel Occasional Paper No. 7, Social Science Research Council.

PARSLER, R. and D. SHAPIRO (**eds.**) (1980) THE SOCIAL IMPACT OF OIL IN SCOTLAND. Westmead, Hants, England: **Gawer**.

PEREZ, L. (1979) "Working Offshore: A Preliminary **Anaylsis** of Social Factors Associated With Safety in the Offshore Workplace, " Sea Grant Publication No. **LSU-T-79-001**.

SOLBERG, A. (1984) "Dads Working Offshore," College of Social Services, Norway.

suMMARY: The dual role is cited as a major source of stress if the husband perceives the wife as the discipliner within the family. Networking is an important aspect of rural life, which must be reinforced if the family structure is to remain intact.  
(Text)

SOLHEIM, J. (1985) "Offshore Commuting and Family Adaptation in the Local **Community**," paper presented at the International Conference on Women and Offshore **Oil**," St. **Johns'**, Newfoundland, September 5-7.

suMMARY : This paper addresses the effects of the offshore industry on the symbiotic relationship between work and family members. The author concludes that the offshore worker lives in two cultures, two worlds, which are partly incompatible, and where social experience from one context is difficult to translate into the other. But - and this is a main point - the wife and family is split between two forms of social existence, which have their own contradictions. In a sense the wife is also commuting, back and forth between a single and a married state, which entails different forms of behavior, different social networks, activities, and values. (Text)

SUNDE, A. (198?) "Psycho-Social Aspects of Offshore Work," paper presented at the International Symposium, Safety & Health in the Oil and Gas Extraction Industries.

suMMARY : The offshore industry in Norway is a relatively young industry, nevertheless of crucial importance to the economy. Around 12,000 people are directly employed on the Norwegian Continental Shelf. This paper examines some of the demographic and environmental factors relevant to the health of the offshore population. The need for further and immediate medico-social research is stressed. (Text)

WYBROW, P. (1984) "North Sea Oil: Public Concern - Private Knowledge," paper prepared for the Scottish Government Year Book.

**WYBROW, P.** (1985) "Equal Opportunities in the North Sea," paper prepared for the International Conference on Women and Oil, St. John's Newfoundland, September 15/16.

**SUMMARY :** This was a study commissioned by the EOC at Aberdeen University to investigate whether there was a sufficient level of discrimination against women to make a case for the implementation of Section 10 (5) of the Sex Discrimination Act. The **report's** major findings were that there was conclusive evidence of widespread - almost universal - discrimination against women in employment in the British sector of the North Sea Oil industry. **Wybrow** discovered that well-educated and highly motivated women wishing to work offshore who are denied the opportunity to do so simply because they are women - and for no other reason. (Text)



6. THE EFFECTS OF ENERGY DEVELOPMENT AND WAGE EMPLOYMENT ON ALASKAN **INUIT** AND NATIVE AMERICANS.

JORGENSEN, **J.G.** et al. (eds. ) (1978) NATIVE AMERICANS AND ENERGY DEVELOPMENT. Cambridge, Mass. : Anthropology Resource Center.

**KLIENFIELD, J.** et al. ( 1983) "**Inupiat** Participation in the Wage Economy: Effects of Culturally Adapted **Jobs,**" in ARCTIC ANTHROPOLOGY. 20 (1).

suMMARY: This study examines the effects of high paying, culturally adapted local jobs on Inupiat participation in the wage economy. Using tax revenues from Prudhoe Bay oil properties, the North Slope Borough created large numbers of jobs in construction and in government operations services. A 1977 survey of the **Inupiat** population found that **Inupiat** female labor force participation rates were quite high, approximating national norms. However, Inupiat men participated in the wage economy at levels substantially below national norms. **Inupiat** men of varying ages continued to maintain a **bicultural** pattern of economic activity in both the wage and subsistence economies. This study suggests that for northern Native men, much more than for women, cultural as well as economic factors explain low labor force participation.

**KRUSE, J.A.** et al (1982) "**Energy** Development on Alaska's North Slope: Effects on the **Inupiat Population,**" in HUMAN ORGANIZATION. 41 (2).

SUMMARY: . . . We organized this report around four research questions. These are: 1. What is the economic importance of subsistence? 2. Aside from economic importance, are the **Inupiat** interested **in** pursuing subsistence **activities?** 3. Is the **time** spent on wage employment reducing the **time** available for subsistence? 4. Are subsistence activities still tied to Inupiat social well-being? . . . In summary, we found that expanding wage opportunities have resulted in real income growth on the North Slope. Despite this growth, however, a large proportion of **Inupiat** households receive incomes too low to support a moderate standard of living by American standards. Thus, subsistence activities still play an important economic role on the North Slope. . . . our results suggest that local part-time employment,

the current pattern among most **Inupiat** men, does not conflict with subsistence pursuits. Based on the experience of **Inupiat** men who pursued year-round work, it appears that **Inupiat** men would continue to find the time to engage in subsistence activities even if a year-around pattern of **local** wage work becomes predominant. We are able to bring only a limited amount of data to bear on a the question of whether there is a link between **Inupiat** social well-being and subsistence. The information we do have suggests that subsistence activities play an important role in maintaining social ties among the **Inupiat** at a time when rapid social change appears to be causing high levels of stress among individuals on the North Slope. . . . (Au)

LANE, T. (1982) "A New Approach to Hiring Native Workers," in ALASKA NATIVE NEWS. November

suMMARY: This article advocates respect for traditional cultural norms in the hiring practices of oil companies. **..cites** Hobart and **Kupfer's** study of Gulf Canada using **Inuit** for oil exploration in the Mackenzie Delta.

ROBBINS, L A. (1980) "Native Americans Experince with Energy **Development**," in J. Davenport and **J.A.** Davenport (**eds.**) THE BOOM TOWN : PROBLEMS AND PROMISES IN THE ENERGY VORTEX. The University of Wyoming.

suMMARY: This research paper summarizes Native American involvement with large energy projects in the Western United States and is divided into three parts:

1. A review of some of the past Native American experiences with energy projects, proposed and existing, **near** and on **reservations**.
2. A summary analysis of some of the present developments (mineral energy and **non-energy** mineral projects) and the measures now taken to remedy some of the inequities, miscalculations and errors of the past.
3. Some obstacles faced by Native Americans in future energy developments, and the remedies sought by Native Americans in their desire to prevent serious environmental degradation, and to maintain community stability and integrity. (Text)

TRAVIS, R. (1984) "Suicide and Economic Development Among **Inupiat** Eskimo," in WHITE CLOUD JOURNAL. 3(3).

SUMMARY: In the **1970s** the suicide rates of two culturally similar **Inupiat** Eskimo regions differed by a factor of **5:1**. Several **Durkheimian** hypotheses were tested to determine the nature of this difference. The results indicate, most notably, that an interaction effect between economic development and modern education is significantly associated with the sharp rise in the suicide rate among the NANA **Inupiat** Eskimo in the 1970s. The depressed economic structure within this **Inupiat** Eskimo region could not 'facilitate the achievement of goals and aspirations fostered by modern education and an extremely high rate of suicide resulted. (Text)

WOLFE, **R.J.** et al. (1984) "Subsistence Based Economies in Coastal Communities of Southwest Alaska," Technical Report Number 95, prepared for: Division of Subsistence Alaska Department of Fish and Game, Juneau, Alaska and Minerals and Management Service, Alaska Region, U.S. Department of the **Interior**, Anchorage, Alaska.

SUMMARY: This report describes and analyzes the systems of subsistence and remunerative employment in four traditional Yup'ik communities in southwestern and western Alaska. The report analyzes the influences of cash and cash participation on traditional patterns of economy and social life in the study communities. The report examines what happens to traditional activities with the infusion of cash through commercial and wage employment opportunities. A theory of culture **change is** developed to account for the observed changes **occurring** in the economy and society of the four communities. The theory suggests that only under certain sociopolitical organizations is increased cash market participation associated with the reinforcement of traditional subsistence activities.

The study found that increased incorporation of cash-related activities **in** and of themselves do not appear **to** be transforming agents of subsistence based systems. Instead, **it is** the structural reorganization of production relations **that** may accompany **certain** types of commercial-wage development **which** hold the greatest potential for disrupting subsistence based systems **in** southwestern Alaska. As the form of production relations are directly influenced by **legislation** and **policy of the urban** government, the future **viability** of subsistence based economies

in the four communities (Goodnews Bay, New Stuyahok, Oinagak, and **Togiak**) may be primarily determined in the sociopolitical arena, not the economic, if the communities can preserve traditional local control over the sociopolitical organization of the commercial-wage sector. (Text)

7. THE EFFECTS OF RELOCATION FOR WAGE EMPLOYMENT IN THE MINING INDUSTRY ON NATIVE PEOPLE IN THE NORTHWEST TERRITORIES.

DAILEY , **R.C.** and **L.A.** DAILEY (1961) "The Eskimo of Rankin Inlet: A Preliminary Report," Northern Coordination and Research Centre, Department of Northern and National Resources, Ottawa.

SUMMARY: This report is an ethnographic description of the "Eskimo" living at Rankin Inlet in the early 1960s. The report describes how minimally acculturated the **Inuit** were at the time, how abjectly poverty stricken (by white standards) was their way of life, and how ill adapted this way of life was to conditions of community existence and industrial employment. The report provides an assessment of the impact of employment at the Rankin Inlet **Nickle** Mine of 80 Eskimo men and women, on the way of life of these people, and their response to this employment. The Dailey's conclude that on the whole, the adjustment the Eskimo has made has been a successful one. (Text)

DEPREZ , P. (1973) "The Pine Point Mine and the Development of the Area South of **Great Slave Lake,**" Series 2, Research **Report** no. 16. Winnipeg, Manitoba: Centre **For Settlement Studies,**The University of Manitoba.

SUMMARY: This report includes the effect of Pine Point mine on indigenous employment in the area of Great Slave Lake. Deprez argues that the initial concern of the **Cominco** mine development was with exploitation of the ore resources and not with using the development to maximize the employment opportunities for the native people in the area. **Deprez's** employment data show that, despite little effort made by **Cominco** to facilitate native employment at the mine, native employees generally proved to be more persistent in remaining on the job than the white employees. (Text)

INSTITUTE FOR NORTHERN STUDIES (1973) "Eskimo Relocation in **Canada,**" Institute For Northern Studies, University of Saskatchewan, Saskatoon, **Saskatchewan.**

SUMMARY: The object of the research was to isolate problems associated with past relocations and analyze them in detail. The analysis led to recommendations for a preparatory program for

Eskimo people planning to move from small northern settlements to centres of wage employment. The study investigated the training, educational, and counseling needs of such a program, the evaluation and screening of applicants where appropriate? and the content of an effective information **service** which would enable migrants to develop a realistic understanding of what they can expect after relocation. On the basis of work carried out by **D.S. Stevenson**(1968) and **J.S. Matthiasson** and **W.S. Chow** (1970) the following hypothesis had been structured: that those Eskimo who have the following characteristics would be most willing to relocate and would probably be successful in new environments: people who have previous wage labour experince, some academic education and working knowledge of English, some technical training, and have previous relocation **experince**. That the following factors would influence any decision to relocate and would have an influence on adjustment in a new EuroCanadian environment: the extent of kinship linkages and the emotional significance of such attachments, the length of residence in the community, age, present income, dependence - psychological or economic - on hunting and fishing, sex, **maritial** status, and personal occupation and life style aspirations. A third primary objective of the research was to test the statement that past relocation have been largely failures. (Au)

LLOYD, **H.G.** (1974) "Report on Review of Northern Native Relocation Programs," Task Force on Northern Oil Development (Canada) Report.

**SUMMARY:** This report describes the work carried out locating and organizing material on previous relocation for employment programs. Research findings were checked with individuals in western Canada and the Northwest Territories who had been involved in the programs, and other information not available in Ottawa was obtained. Research findings of a detailed nature were organized for each program listed. **Overview** summaries for each program listed were prepared with reference to documentation, documented research and experience on past "permanent" relocation for employment programs involving the movement of family groups to southern type communities. Lloyd concludes that the current predominance of "semi-permanent" or rotational style relocation in northern resource development suggests that this type of relocation for employment requires further study. (Au)

STEVENSON, **D.S.** (1968) "Problems of Eskimo Relocation for Industrial Employment: A Preliminary Study," Ottawa: Northern Science Research Group.

suMMARY: Research was conducted during 1967 into possible reasons **for** variable success in relocating Eskimo families to centres of industrial employment. A number of interim conclusions were drawn. Where the migrants lack comprehension of the informal rules governing behavior that is acceptable in southern communities, and where attempts are made by the migrants to retain former life patterns, assimilation and/or acceptance into the community is seriously retarded. Further, although technical training and grade-school education are necessary for migration, by themselves they *are* not sufficient for successful adjustment to community life-styles. Stevenson concludes that the migrant is unaware of the informal rules governing acceptable behavior in southern communities, and because his only recourse is to assume that the actual behavior he **observes** is acceptable, he models his own behavior accordingly and, in consequence, is rejected by the community. (Au)

WILLIAMSON, **R.G.** and **T.W.** FOSTER (1974) "**Eskimo** Relocation in Canada," Institute For Northern Studies, University of Saskatchewan, Saskatoon, Saskatchewan.

WILLIAMSON, **R.G.** (1974) "Eskimo Underground: **Socio-Cultural** Change in the Canadian Central **Arctic**," Uppsala, Institutionen for **Allman** och Jamforande Etnograaft vid **Uppsala** Universitet.

suMMARY: This study provides a description of the difficulties which the **Inuit** in Rankin Inlet suffered during the late 1960s when they were relocated to Rankin to work in the Nickel Mine. Williamson presents information relevant to the need for rotation employment. First, he describes the difficulties experienced by the **Inuit** men, particularly those on shift work, who often reported to work ill-nourished -- because they did not know how to put together well-balanced meals from the range of "junk foods" attractively displayed in the store -- and unrested from their over-crowded shacks or small houses because the others in these houses had no appreciation of the needs of the working men for rest. By contrast, the whites living in bunkhouses were well fed and rested. Secondly, Williamson discussed the psychological and material need of the Eskimo workers to hunt. He also noted that most of the **Inuit** workers found the enclosed and noisy work-life depressing after a time, and the **hunting** forays were satisfying, whether materially successful or not. (Text)

8. RESOURCE DEVELOPMENT IN THE BEAUFORT SEA - MACKENZIE DELTA, AND NORMAN WELLS. A SELECTED BIBLIOGRAPHY OF GOVERNMENT INDUSTRY, AND CONSULTANTS' , REPORTS/ARTICLES RELEVANT TO THE ROTATION STUDY.

**BRODY, H.** (1977) "Industrial Impact in the Canadian North," in POLAR RECORD. 18 (115).

SUMMARY: This article is based on material contained in two papers, entitled "Industrial **Impact**" and "**An** Overview", presented at the (**Berger**) Inquiry . . . in August 1976. Brody argues that Industrial employment has an impact on the distribution of income within a **small** community: Inuit hunters share their catch with their neighbors, while wage earners tend to regard wages as their own private property, spending it on their immediate families' personal needs. Consumer durable goods cannot easily be divided among neighbors. The shift towards a money economy thus creates a possibility for poverty that previously did not exist: those in want are more likely to stay in want, and substantial inequalities introduce themselves into native communities. (Text)

CANADA DEPARTMENT OF REGIONAL ECONOMIC EXPANSION (1979) "Economic Development Prospects in the Northwest **Territories**," Government of Canada, Regional Economic Expansion, Ottawa.

SUMMARY: This study indicates that the physical and social differences among regions of the Northwest Territories suggests that a variety of approaches may be required to promote development: an emphasis on traditional activities, training and WORK ROTATION where the economic base is limited and previous exposure to wage economy minimal; development of a transportation infrastructure to support development where major resource development potential occurs; and strengthening of the local economy where major income and population centres now exist. The territorial economy has a unique duality. There is a developing modern economy based on government and mining which, in terms of its effects, is concentrated in the larger centres . . . The traditional economy of hunting, fishing, and trapping is crucial to many small settlements. The major factor in development for the Northwest Territories will be the linking of the modern economy and the traditional economy without destroying the latter and eliminating one of the options presently available to residents. (Au)



**CARELY, M.J.** (1984) "Cumulative Socioeconomic Monitoring: Issues and Indicators for the Beaufort Region," A report prepared for: Energy, Mines and Resources Secretariat, GNWT and The Northern Economic Planning Branch, Department of Indian Affairs and Northern Development.

suMMARY: This report is the result of research jointly and equally funded by the Northern Economic Planning Branch of **DIAND** and the Energy, Mines, and Resources Secretariat of the **GNWT**. It reflects their mutual concern for understanding cumulative social, economic, and cultural change in regions undergoing rapid resource development. The purpose of this study has been to develop a framework for monitoring cumulative change in the Beaufort Region. The report addresses two related questions. First, what would constitute a realistic, effective socioeconomic monitoring program for the Beaufort region? Second, how would such monitoring best be undertaken, that is, what are the organizational and data problems which would have to be overcome for effective monitoring to take place? (Au)

**DELANCEY, D** and **P.J. USHER** (1986) "Identification of Impact Indicators for Renewable Resource **Harvesting**," prepared for: Environmental Planning and Assessment, Department of Renewable Resources, **GNWT**.

suMMARY: This project stems from a workshop sponsored by the Government of the Northwest Territories, Department of Renewable Resources, Environmental Planning and Assessment Division, in March, **1985**. That workshop identified several research priorities, including the need to propose and evaluate possible indicators for monitoring impacts of development on renewable resource **harvesting**. This project also builds on two papers prepared for that workshop: the background paper by Staples (1985), and the summary report by Allison and Fleck (1985). (Text)

**ENERGY, MINES, AND RESOURCES SECRETARIAT, GNWT** (1986) "**Beaufort Region Cumulative Monitoring Indicator Catalogue, Yellowknife**, NWT.

SUNMARY: A study by **Rolf** (1985) looked at the issues of demography, urbanization and industrialization, municipal issues, wage employment, business development, pricies and incomes, renewable resource **harvesting**, education, community control, and

the mass media. A second study by **Elkin-Hall** (1985) dealt with the issues of welfare dependency, family life, health, alcohol use, public safety, and housing. The two studies have been combined to create this package. The purpose of these studies was to identify data already being collected by various government departments which could be used as quantitative indicators of the various issues. These indicators are intended, initially, for use by government personnel and are not a substitute for either community produced data or monitoring activity. (Au)

ECONOMIC STRATEGY DIVISION OF THE NORTHERN ECONOMIC PLANNING DIRECTORSHIP (1983) "**Beaufort** Sea Hydrocarbon Exploration -A Federal Perspective," Northern Affairs Program, Northern Resources and Economic Planning Branch, **DIAND**, Ottawa.

SUMMARY: This report is a working document which provides a brief overview of hydrocarbon exploration undertaken in the Beaufort Area, describes the environmental and **socio-economic** milieu, and cites federal accomplishments in introducing and administering environmental legislation and monitoring oil and gas activities. In addition, it sets forth some broad objectives and guidelines intended to facilitate hydrocarbon exploration, and to ensure that it can proceed in a socially and environmentally responsible manner. (Au)

FOSTER, T. (1980) "**Socio-Economic** Review of the Beaufort Sea Drilling Program, 1976-1979," prepared for: Northern Affairs Program, **DIAND**.

SUMMARY : This report provides a detailed review of the 1978 drilling season plus a **socio-economic** overview of the period between 1976-1979. Evidence gathered from statistical records, company sources, employees, and residents from the Beaufort Sea Communities indicated a general satisfaction with the operation. (Text)

GREENHALL, W. (1985) "**Social-Economic** Impact Assessment: Some Lessons From the Oil and Gas Sector in the NWT, 1975-1985," A paper prepared for a Special North American Conference on the International Association for Impact Assessment, Calgary, Alberta, September 19-20.

SUMMARY: This paper provides some background to the current arrangements for project planning, **socio-economic** impact assessment and impact management in the **NWT**, and reviews the lessons that can be drawn from the social-economic impact experience of the past decade in the Northwest Territories. The author argues that there are numerous lessons to be learned. 1. Less emphasis should be given to detailed **socio-economic** impact assessment activities; 2. More emphasis should be placed on arrangement to co-operatively prepare for and cope with project impacts; 3. The planning and management processes implemented must provide communities with a major role; 4. Wherever possible, the planning and management process should be community driven; 5. The realities of community life must not be overlooked; 6. The tendency to view communities simply as components of larger regions must be avoided; 7. The communities must receive the funds they need to participate in planning and management activities; 8. A focus must be provided for government's involvement; 9. Roles and responsibilities should be set out in development impact management agreements; 10. The need for and purpose of monitoring must be re-examined. (Text)

MARY COLLINS CONSULTANTS LIMITED (1977) "**Social** and Economic Aspects of **Dome/Canmar's** Beaufort Sea Project," Calgary, Alberta.

SUMMARY: This review of **Canmar's socio-economic** impacts focuses on seven communities in the Beaufort Area. They are Aklavik, Coppermine, **Holman**, **Inuvik**, **Paulatuk**, **Sachs Harbour**, and Tuktoyaktuk. Short term boom type industrial activities as they affect the native, non-native northerner and the transient workers are analyzed and suggestions and options for the future are given. (Au)

MARY COLLINS CONSULTANTS LIMITED (1977) "The Social and Economic Impacts of Canadian Marine Drilling Ltd.'s 1976 Operations on the Beaufort Sea **Communities**," Canadian Marine Drilling Ltd., Calgary,

SUMMARY: This is a study of the social and economic effects of **Canmar's** drilling operations on the communities of **Inuvik**, Tuktoyaktuk, **Aklavik**, Sachs harbour, **Paulatuk** and **Holman**. **Short-term boom type industrial activities** as they affect the native, the non-native northerner and the transient workers are analyzed and suggestions and options for the future are given. **Canmar's** training program for northerners for Beaufort **Sea** operations (for 14 Native and 1 non-native northerner) is reviewed for the summer of 1976. (Au)

NOGAP (1985) "**Social** Monitoring of Cumulative Impact in the **Beaufort/Delta** Area: a Comprehensive Critique of Available Indicators and an Introduction to Community **Issues**," prepared for: Department of Social Semites, Government of the Northwest Territories.

SUMMARY: **...This** report critiques the issues and indicators currently available that may assist in the assessment and monitoring the impacts of the hydrocarbon industry on the Beaufort Sea - Mackenzie Delta communities. (Text)

OUTCROP LTD. and DPA GROUP INC. (1981) "**Dome/Canmar** Beaufort Sea Operations: An Economic **Analyses**, 1976-1980: An Examination of the Economic Impact, Particularity the Impacts on the Communities of Tuktoyaktuk and **Inuvik**."

SUMMARY: The purpose of this study is to examine and quantify the economic impacts of **Dome/Canmar's** drilling operations in the Beaufort Sea on the economy of the **NWT** in general, and more specifically on the economies of Tuktoyaktuk and Inuvik. (Au)

**RMC** RESOURCE MANAGEMENT CONSULTANTS (m) LTD. (1983 ) "Community Base Line Reports: Fort Simpson, Wrigley, Trout Lake, and Jean-Marie River," prepared for: **Interprovincial** Pipe Line (NW) Ltd.

**suMMARY :** The purpose of the Base Line Reports was to provide a comprehensive quantitative and qualitative **socio-economic** data baseline for the above communities in 1982 prior to the construction of the Norman Wells to Zama pipeline by **Interprovincial** Pipelines (NW) Ltd. A survey that considered community concerns and issues was an important component of the Base Line Study. In one section of the survey the question was asked: "Would you rather have a full-time job in this community working 5 days a weeks, every week, or would you rather have a full time job on ROTATION (for example, two weeks working elsewhere and then two weeks at **home**)?" Reponses to this question, by community, are provided below:

**WRIGLEY :** Among the 49 people who responded to this question; 21 percent said they would **like** a job in their home community; 45 percent, including about equal proportions of men and women, said they would like rotation employment, 22 percent said they would want neither, 4 percent said it made no difference to them, and 6 percent said they did not know.

**FORT SIMPSON:** The largest number, 34 people or 47 percent, said they would prefer a job in the community. 12 people (16 percent) said neither, 10 people (14 percent) said they would prefer rotation employment, 7 people (10 percent) said they felt the same about both alternatives, and nine people said they did not know.

**TROUT LAKE:** The largest number, 14 people (61 percent), said they felt the same about both alternatives. Six people, (26 (percent) said they preferred a job in their home community, two people (9 percent) said they would prefer rotation **employment**, and one person **said** she did not know.

**JEAN-MARIE RIVER:** The largest number, 8 people or 53 percent of the total, said they wanted "a job in this **community**". Two people said they would like to have rotation employment and one said he felt the same about both. Two people, both women, said they wanted neither. Two more women said they did not know. (Text)

ROBERTS, R. (PRAXIS, INC.) and G. **KUPFER** (1985) "Growth Management Strategies: Recommendations to Assist **in the Management of Boom/Bust in the Beaufort,**" prepared for: Energy, Mines and Resources Secretariat, **GNWT.**

suMMARY: The primary focus of the study is to investigate boom/bust cycles, assess their potential effects, and develop strategies to control in-migration and reduce the potential economic and **social** disruption associated with these cycles.

The study develops policy recommendations and implementation strategies which are appropriate to the needs of the Government of the Northwest Territories (**GNWT**), agencies and departments responsible for program delivery, local and regional groups and organizations, and companies working **in** the Northwest Territories. (Text)

STAPLES, **W.L.** (1985) "**Impact** Assessment and Renewable Resource Harvesting: An Overview," prepared for: Environmental Planning and Assessment, Department of Renewable Resources, Government of the Northwest Territories.

suMMARY: This study examines the treatment of renewable resource harvesting **activities in** impact assessments, through a survey of the available literature pertaining to the effects of industrial development on hunters, trappers and fishermen. The environmental impact statements of four northern Canadian projects proposals were reviewed, **to** identify the impacts predicted and the indicators employed for assessment of development effects on **harvesting** activities. The projects were the Lancaster Sound Drilling Program, the Arctic Pilot Project, the Norman Wells **Oilfield** Expansion and Pipeline Project, and the Beaufort Sea - Mackenzie Delta Region Hydrocarbon Development Proposal. (Text)

USHER, J. et al. (1985) "An Evaluation of **Native Harvest Study Methodology in Northern Canada,**" prepared for: Environmental Studies Revolving Fund (IAND), Government of Canada, **Ottawa.**

SUMMARY : ' The purpose of this study is to evaluate the methodologies employed **in** counting and estimating **Native harvests,** to assess the utility of existing data, and to recommend improvements for future data collection, management, analysis and use. The primary geographic focus of this study is the N.W.T., because that is where comprehensive surveys are currently underway. Special reference is made to northern Quebec, because earlier surveys there provided the model for current ones. (Text)

USHER, J. (1982) "Assessing the Impact of Industry in the Beaufort Sea Region," prepared for: Beaufort Sea *Alliance,* **Ottawa.**

suMMARY : In the eyes of Canadian public policy makers, the North stands out as an underdeveloped region. The chief remedy is seen to be wage employment, because it brings higher incomes and new skills to individuals. As well, a growing wage economy is a sure index of modernization and development, and creating job opportunities in the North, have therefore been the foundations of northern development policy for many years now. Major resource development projects in the North will greatly expand the local opportunities for wage **employment.** Hence these projects are seen as the means by which both national and northern development objectives will be fulfilled. (Au)

## SUMMARY OF THE ANNOTATED BIBLIOGRAPHY

This section of the report provides a summary of the literature contained in the Annotated Bibliography. Specifically, the advantages and disadvantages of rotational (commuting) wage employment, as found **in the** literature, are cited. It will not be the intent of the summary to interpret these findings, as this analysis will be conducted in the second year of the Rotation Study .

### ADVANTAGES:

1. The home community is buffered from direct contact with industry induced **influences** (C.W. Hobart).
2. Native workers are in a controlled situation, so that possibilities of "**tardiness**" and "**absenteeism**" are not available (C.W. Hobart).
3. Provides the workers with frequent large blocks of time, allowing for hunting and other resources harvesting excursions (C.W. Hobart and **Baffin Region Inuit Association**).
4. Enables Native people to adapt to interaction with EuroCanadians, while at the same time their traditional community support system remains intact (C.W. Hobart) .
5. Provides income for traditional harvesting activities (C.W. Hobart, **Baffin Regional Inuit Association**, and **G.W. Wenzel**).
6. Lessens dependence on government transfer payments (C.W. Hobart).
7. Provides Native people with training and job skills (C.W. Hobart).
8. Workers are better able to provide food, **housing**, and clothing for their families (C.W. Hobart and **Baffin Regional Inuit Association**).



DISADVANTAGES :

1. **Emotional** cost of separation (C.W. Hobart, **Baffin** Regional **Inuit** Association, and A. Sunde).
2. Due to unfamiliarity with the workplace, workers experience loneliness at the workplace while families worry about parents/spouses absence (C.W. Hobart, **Baffin** Regional **Inuit** Association, A. Sunde, and J. **Solheim**).
3. During the early transition period some workers are suspicious of the fidelity of their wives (C.W. Hobart).
4. Less time to spend hunting, trapping, and fishing (D. **Delancey** **W.L.** Staples).
5. Increased use of alcohol and drugs and related social problems (C.W. Hobart and **Baffin** Regional **Inuit** Association).
6. Native workers diet changes away from their home communities (**Baffin** Regional **Inuit** Association).
7. Prejudice and discrimination against Native workers at the job site (**Baffin** Regional **Inuit** Association).
8. Increase in wage income breaks down traditional modes of community sharing and support (**H. Brody**).
9. Impacts the distribution of income in the Community and creates possibility for poverty that did not previously exist (**H. Brody**).
10. The boom/bust nature of the resource industry provides those communities that have become overly dependent on it with an unstable source of employment and income (R. Roberts Praxis Inc.)
11. Child neglect and discipline problems due to absence of one or more parent (D. Erickson and J. **Solheim**).
12. Conflict between husband/wife on **child** rearing, management of household, etc. (J. **Solheim**).



13. School enrollment declines due to dropout of students seeking employment with oil companies. Many see their parents, siblings and peers obtaining lucrative employment with minimal education (C.W. Hobart and **Baffin** Regional Inuit Association) .
14. Loss of traditional skills due to integration into job market (**Delancey** and Staples).
15. Economic benefits of wage **labour** not fully realized because of lack of money management skills (**C.W.** Hobart).
16. Mental and physical health problems due to wage culture (A. Sunde ) .
17. Increases in cost of living due to increase in community income (H. **Brody**) .

## SECTION 2: INDICATORS FOR IMPACT ASSESSMENT

### INTRODUCTION

Hydrocarbon exploration in the Beaufort Sea - Mackenzie Delta Area over the past 10 years has effected changes in the social life and economy of the communities and people. In order to understand what role rotational employment has played in transforming the social and economic life in the **Beaufort/Delta** communities, a number of social and economic indicators are presented below as possible quantitative constructs to assess, and to measure the relationship between rotational employment and the existing social problems.

Specifically, this report will provide indicators that may be reflective of the impacts/effects of rotational oil and gas employment on Income Support Programs, Crime and Public Justice, Education, Alcohol and Drugs, Young Offenders, Mental Health, Health, Family Life, and Fur and Game Harvest Returns. Finally, in order to determine the patterns of oil and **gas** rotational employment, employment indicators are included.

All but the last two indicators (fur and game harvests and rotation employment) are taken from NOGAP's "A Critique of Social Indicators and Issues in the Beaufort Sea-Delta **Area.**" Those indicators that have been taken from the above report will be listed schematically and the reader will be referred to the appropriate page number for further detail. A more detailed presentation will be the case for fur and game harvest returns and rotation employment indicators as they are not contained in the NOGAP Data Base Report. Fur and game harvest returns are included as the NOGAP research team is interested in knowing what effect participation in rotational wage employment has on the traditional practice of fur and game harvesting. Rotational wage employment indicators are included as it is necessary to know the extent of community participation, in this type of employment, in order to measure/monitor its effects.

**It** should be noted that the indicators presented are only one type of data set and are not to be viewed as a substitute for community generated primary social indicators (PSI). To collect the latter (PSI) would require the research team to conduct in person interviews in the communities selected for investigation.

INDICATORS FOR IMPACT ASSESSMENT

1. INCOME SUPPORT PROGRAMS

INDICATOR: Welfare-Social Assistance

- DATA :
1. Dollars **Paid** by Reason (p. 28)
  2. Number of **Applicatanst** and Dependents Accepted by Reason (p. 29)
  3. Applicants **Rejected** (p. 30)
  4. Age and Sex of Applicant and Spouse (p. 31)
  5. Marital Status of Applicants (p. 32)
  6. Employment Pattern and Usual Occupation of Applicant and Spouse (p. 35)
  7. Monthly Income of Recipient (p. 36)
  8. Type of Assistance (**p.37**)
  9. Monthly Need of the Recipient (p. 38)

INDICATOR: Unemployment Insurance

- DATA :
1. Payments-Dollars by Reason (p. 39)
  2. *Number* of Weeks **Paid** by Reason (p. 40)
  3. Insured Weeks (weeks worked **in** order to **claim**) and Weeks on **Claim** (p. 43)
  4. Sex and Age Range of Recipients (p. 45)

## 2. CRIME AND PUBLIC JUSTICE

INDICATOR: **Offences** Reported

DATA : 1. The Number of **Offences** Reported by Category (p. 154)

INDICATOR: **Offences** Cleared

DATA : 1. The Number of **Offences** Cleared by Charge by Category (**p.156**)

INDICATOR: **Admissions** to **NWT** Correctional Centres

DATA : 1. The **Number** of Sentenced Admissions to **NWT** Correctional Centres by **Offence (p.159)**

INDICATOR: Intakes to Probation Services

DATA : 1. Number of Intakes to Probation and Parole Services by **Offence (p.160)**

INDICATOR: Probation and Parole Cases

DATA : 1. Number of Cases on Probation and Parole by Age, Sex and Ethnicity (p. 161)

INDICATOR: Dispositions of Probationers

DATA : 1. Disposition Data of Probationers who Require Probation Service (**p.163**)

### 3. EDUCATION

INDICATOR: School Enrollment

DATA : 1. The Number of Students Enrolled  
in School (p. 92)

INDICATOR: School Attendance

DATA : 1. Percentage of Students Attending  
School (**p.93**)

### 4. ALCOHOL AND DRUGS

INDICATOR: Alcohol Sales

DATA : 1. Volume in **litres** of Alcohol Sales  
at **Inuvik/Yellowknife** Liquor Store (p. 202)

2. Dollar Value of Alcohol Sales  
at **Inuvik/Yellowknife** Liquor (p. 203)

INDICATOR: Drug Charges and Convictions

DATA : 1. Number and Type of Drug Charges  
and Convictions (p. 206)

INDICATOR: Alcohol Projects in the **Beaufort/Delta** Area

DATA : 1. Staffing and Budget and Volume of  
Alcohol and Drug Projects in the Area  
(p. 210)

INDICATOR: Substance Abuse Among Children

DATA : 1. Percentages of Children who Inhale  
Glue/Gas/Solvent (p. 212)

5. YOUNG OFFENDERS

INDICATOR: Young Offenders Convictions

DATA : 1. Number of Young Persons Convicted by  
Age and Ethnicity (p. 174)

INDICATOR: Young Offender Data

DATA : 1. Young Offender Personal Data  
(p. 176)

6. MENTAL HEALTH

INDICATOR: Suicide

DATA : 1. Number of Suicides by Age and Sex  
(p. 134)  
2. Number of Reported Suicide Attempts  
by Age and Sex (p. 135)

7. HEALTH

INDICATOR: Teenage Pregnancy

DATA : 1. Number of delivers by Age (p. 114)



INDICATOR: Health **Services**

DATA : 1. Medical Care: Number of Services and Patients Treated (p. 118)

INDICATOR: Industrial Accidents

DATA : 1. Number of Industrial Injuries

INDICATOR: Death

DATA : 1. Causes of Death by Category

8. FAMILY LIFE

INDICATOR: Child Welfare Investigations

DATA : 1. Number of Investigations of Child Abuse and Neglect (p. 66)

INDICATOR: Children Entering Child Welfare System

DATA : 1. Number of Children Entering Child Welfare System (p. 67)

INDICATOR: Children Admitted to Care

DATA : 1. Number of Children Admitted to Care by Personal Data (p. 68)

INDICATOR: Legal Status of Children in Care

DATA : 1. Number of Children Admitted to Care by Legal Status (p. 70)

INDICATOR:

Children **in** Care

DATA :

1. Number of Children in Care-Placement and Plan (p. 71)

9. FUR AND GAME HARVESTS

INDICATOR: Fur Sales

DATA : Fur Sale Value: number of trappers by category and earnings

LEVEL: Community

SOURCE : Field Services  
Department of Renewable Resources  
Rupert **Tinling:** 920-8716

FREQUENCY: Annual - available in September each year for previous fur year (July 1 - June 30).

BASE YEAR: 1954

NOTES : There are only about 3,000 - 4,000 fur sellers out of approximately 10,000 General **Hunting Licence (GHL)** holders in the NWT. The information **is bases** on export **licence** data and private sales are missing. No information exists on the value of fur domestically. These two conditions effectively eliminate polar bear data, for example, and it is estimated that 1/2 of all polar bear skins are used domestically. Results of the harvest study in **Kitikmeot** communities show that 90% of seals are not sold. Fur sale value and trapper income are also dependent on market conditions and species. Changes in this indicator should be interpreted in light of this kind of information.

INDICATOR: FISH HARVEST

DATA : Freshwater fishery of whitefish, herring, **inconnu**, arctic char, lake trout, **cisco**, **burbot**, and northern **pike**.

LEVEL : **Inuvik/Kitikmeot** Region

SOURCE : Federal Department of Fisheries and Oceans  
**Yellowknife**  
Brian **Wong**: 873-5831

FREQUENCY: Annual based on fiscal year

BASE YEAR: 1982 though records go back to 1975 **in** disaggregate form

NOTES : These are commercial quotas only. None exist for domestic fishing. Anyone with a commercial **licence** must enter the catch where it is sold. Accuracy would depend on how well this system is enforced and there were no suggestions of systematic enforcement problems.

INDICATOR: **BELUGA WHALES**

DATA : **Beluga Whales harvested**

LEVEL : Coastal communities

SOURCE : Federal Department of Fisheries and Oceans  
**(Inuvik)**  
Richard Barnes: 979-3314

FREQUENCY: Annual after the hunt which is usually  
between late June and early September

BASE YEAR: 1975

NOTES : The number of whales harvested is affected  
by the number that come in each year.

INDICATOR: GENERAL HARVEST BY HUNTERS AND TRAPPERS

DATA : Number of **marine** mammals, terrestrial animals by species, and migratory birds (not by species) harvested

LEVEL: Community: **Holman** and Coppermine only

SOURCE : Department of Renewable Resources  
(Cambridge Bay)  
Don **Vicent:** 983-2139

FREQUENCY: Annual report available in March for previous calendar year

BASE YEAR: 1982

NOTES : This information is not yet available for other Beaufort communities, but a study may begin in 1986. No breakdown for commercial and domestic use is provided and definitions for those uses differ by species. The study also provides a good indication of the number of active trappers.

INDICATOR: COMMERCIAL HARVEST BY NATIVE HUNTERS

DATA : Number of polar bear, **muskox**, Bluenose caribou **harvested** according to commercial quotas

LEVEL : Community

SOURCE : **Wildlife** Services  
Department of Renewable Resources  
Ron Graf: 873-7778

FREQUENCY: Annual based on **licence** year (June 30 - July 1)

BASE YEAR:

NOTES : Commercial harvest information is available only for animals with commercial quotas.

10. OIL AND GAS ROTATIONAL EMPLOYMENT

INDICATOR: EXPLORATION AGREEMENT EMPLOYMENT

DATA : Number of positions and position types allocated to northerners employed under Exploration Agreement activity; duration of northern employment; turnover rate for all employees and for northern employees.

LEVEL: Regional and Community - Beaufort Area

SOURCE : Economic Development  
Department of Indian and Northern Affairs  
Helen Young: 920-8565

FREQUENCY: Annual - based on annual reports filed by oil companies with **COGLA**

BASED YEAR: 1982/83

NOTES : See Section 3: **Oil** and Gas Employment Data.





SECTION 3: OIL AND GAS EMPLOYMENT DATA.

INTRODUCTION

Historical oil and gas employment data is collected by **COGLA** from each of the major companies in their annual Canada Benefits Submissions. However, no one has the responsibility or has taken the initiative to aggregate the data on a territorial or northern basis. This situation is further hampered by employment reporting by oil and gas companies that is often not broken down by communities, does not specify length of time an individual worked, and does not indicate whether workers were Native or Non-Native.

In addition, the number of northerners reported employed will be inflated for three reasons: 1) the number includes terminations, 2) Yukon employees are not always separated from NWT residents, and 3) there is a double counting problem. The latter occurs because a company might use the same crew for two separate Exploration Agreements and is able to count the crew twice.

The above employment reporting problems have been recognized by **COGLA** and they have "moved to rectify this in the past year with two new format **specifications:**" Format of Annual Canada Benefits Report, and Canada Benefits Procedures For Small On-Land Programmed. The Annual Reports for the 1985/86 season, to be released at the end of March, will contain a complete list of northern communities from which workers are recruited with numbers and duration specified.

In short, then, if NOGAP plans to assemble a complete picture of community participation in rotational wage employment since 1980, (Annual **Benifits** Reports go back to 1982/83), each company must be contacted and asked to supply a complete list of northern communities from which workers were recruited; the number of workers hired from each community and the duration of their employment; and workers ethnic/gender background. It is not certain at this point, after discussions with people from **COGLA**, **EMR**, **DIAND**, and **RMC**, whether the companies in question have a complete picture of community employment since 1980, and if they do, whether they would be willing to provide it.

Appendix A outlines oil and gas employment data available through the Annual Canada **Benifits** Submissions covering the period 1982/3 to 1985. Employment data for the period 1971/72 to 1977/78 as reported by the Petroleum Industry Committee on Employment of Northern Residents (**PICENR**) has also been included.

The latter data is included because it indicates the extent to which the communities being investigated participated in rotational wage employment in the Beaufort Sea prior to 1980. The PICENR ceased its reporting functions in 1977/78, thus no disaggregated data is available until 1982/83 with the commencement of the Annual Canada Benefits Submissions. In **"Child Care Needs Associated With Hydrocarbon Development in the Beaufort Region,"** Erickson presented relevant employment data on the communities of **Inuvik, Aklavik,** and Tuktoyaktuk between 1982 and 1985. For the purpose of this report, this data has been included in Appendix A. Included as well in Appendix A is a table taken from an Energy, Mines, and Resources (**GNWT**) Report **"Effects of Activity of the Oil and Gas Industry on the Inuvik Region."** This table describes the effects of an Industrial downturn on the **Inuvik** Region in terms of employment and business income through a presentation of community employment in the oil and gas industry and business expenditures in the communities, over the summer 1985 to spring 1986 season.

#### SECTION 4: RECOMMENDATIONS

1. **As** outlined in the report, material/literature on rotational wage employment in the Beaufort Sea - Mackenzie Delta Area is limited. It is the recommendation of this report that the Department of Social Services NOGAP Program continue research on the effects of rotational wage employment on workers and families in the **Beaufort/Mackenzie** Delta Area. The second year of the rotation study would include primary research and community consultation.
2. The Annotated Bibliography should be further researched and updated. This is necessary to enable NOGAP to accurately study the effects of rotation in the **Beaufort/Delta** Area. The Annotated Bibliography would be an important component in the Resource Development Library that Social Services NOGAP Program is in the process of compiling.
3. Fur and game harvest indicators should be included when measuring/monitoring the effects of rotational employment on workers and their families in the Beaufort Sea - Mackenzie Delta Area. This should be of interest to the NOGAP research team, for, among the strongest indicators of the survival of traditional **Inuit** and Dene culture is the role that hunting, trapping, and fishing and of living "on the **land**" play in the social and economic life of the communities.

Past research **in** the Eastern and Central Arctic on **the** effects of rotational employment on fur and game harvest returns (**ie.**, Hobart, **Wenzel**, and the **Baffin** Regional Inuit Association) found that there was no significant conflict between rotational employment and the traditional economic activities of fur and game **harvesting**. Further research should be done to **question** whether **in** fact **this** applies to the communities **in** the **Beaufort/Delta** Area.

The addition of economic indicators measuring the extent of community participation in rotational employment over the **last five** years should be included, **as** it is necessary to know the extent of community participation **in this** type of employment **in** order to measure/monitor its effects.

4. As indicated in Section 3, if NOGAP is to obtain an accurate and comprehensive picture of the extent of community involvement as rotational wage employees with the major oil companies in the **Beaufort/Mackenzie** Delta area, then, the companies must be contacted and requested to release this data.
  
5. Research should be **carried** out, in conjunction with the Rotation Study, on the effects/impacts of a turn down (Bust Cycle) in the oil and gas **industry's** exploration activities on **Beaufort/Delta** communities. It has been suggested that the effects of no wages may be **more** severe than the effects of wages. In other words, the social problems associated with the Bust Cycle may be more severe than those associated with the Boom Cycle.

## APPENDIX A

## OIL AND GAS EMPLOYMENT DATA

Appendix A presents oil and gas employment data that is available from public sources. Data sources and the type of data are listed by page number below. The reader is referred back to Section 3 for a discussion of some of the problems associated with interpreting this data.

### CONTENTS:

- Page 1: Effects of Industrial Downturn on **Inuvik** Region. (taken from: Energy, Mines, and Resources, **GNWT** (1985) "Effects of Activity of the Oil and Gas Industry on the **Inuvik** Region, summer 1985 to spring 1986).
- Page 2: Dome, Esso, and Gulf Employment Data of **Aklavik, Inuvik,** and Tuktoyaktuk residents between summer 1982 and winter 1985. (taken from: Dianne Erickson (1985) "Caring For Children: Child Care Needs Associated with Hydrocarbon Development in the Beaufort **Region**").
- Page 3: Man-Months and **Total** Income Derived From Oil Industry Employment for the **Beaufort/Delta** Zone Communities, 1971-72 - **1982**. (taken from: Beaufort Sea - Mackenzie **Delta** Environmental Impact Statement Supplementary **Information** (1983). **Socio** Economic Issues. Prepared by: **Dome, Esso, and Gulf**).
- Pages 4, 5: Dome Petroleum Employment Data By Community.
- Page 4: Estimates for summer 1985 to spring 1986. (taken from: Energy, Mines, and Resources, **GNWT** (1985) "Effects of Activity of the Oil and Gas Industry on the **Inuvik** Region, Summer 1985 to Spring **1986**").
- Page 5: Employment Data By Community Between 1976-1984. (taken from: Canada Benefits Submissions Annual Report).

Pages 6, 7, 8: Esso Resources Canada Limited Employment Data.

**Page 6 :** Estimates for Summer 1985 to Spring 1986. (taken from: Energy, Mines, and Resources, **GNWT** (1985) "Effects of Activity of the Oil and Gas Industry on the **Inuvik** Region, Summer 1985 to Spring 1986) .

Page 7: Employment by Month/Community for 1984 and 1985. (Data received from Esso Resources Canada **Liminted**, Calgary).

Page 8: Employment by Month/Community for 1982. (taken **from:** Canada Benefits Submissions Annual Report).

Pages 9, 10: Gulf Canada Resources Inc. Employment Data.

Page 9: Estimates for Summer 1985 to Spring 1986. (taken from: Energy, Mines, and Resources, **GNWT** (1985) "Effects of Activity of the Oil and Gas Industry on the **Inuvik** Region, Summer 1985 to Spring 1986).

Page 10: Summary of Employment by Community for 1983 and 1984. (taken from: Canada Benefits Submissions **Annual** Reports).

Page 11: Chevron and Shell Employment by Community. (taken from: Energy, Mines, and Resources, **GNWT** (1985) "**Effects** of Activity of the Oil and Gas Industry on the **Inuvik** Region, Summer 1985 to Spring 1986).

Page 12: **Esso**, Dome, Gulf Employment Data by Community and wages paid, 1985. This table was adapted from report prepared by Doug Mathews (March, 1986) **GNWT, Inuvik.**



**EFFECTS OF INDUSTRIAL MONITORING ON INUVIK REGION**

	Number of Employees	Total Work Months	Employment Income	Business Expenditures	Business Expenditure & Income Total	Spinnoff Effect Multiplier of 4	Total Direct and Spinnoff Effect
<b>Inuvik Region</b>							
Aklavik	106	730	\$ 2,180,643	\$ 232,345	\$ 2,412,988	\$ 96.20	\$ 2,509,508
Fort McPherson	64	606	1,088,401	70,760	1,159,161	46.366	1,205,527
Inuvik	212	1,594	4,611,590	19,287,920	23,899,510	955.980	24,855,490
Tuk	162	1,202	3,907,386	23,756,675	27,664,061	1,106,562	28,770,623
Paulatuk	6	12	42,900	352,060	394,960	15,798	410,758
Sachs Harbour	9	16	53,050		53,050	2,122	55,172
Holman	3	16	56,160	56,160	56,160	2,247	58,427
<b>Subtotal</b>	<b>562</b>	<b>3,976</b>	<b>\$11,940,150</b>	<b>\$43,699,760</b>	<b>\$55,639,910</b>	<b>\$2,225,595</b>	<b>\$57,865,590</b>
Other NWT							
Subtotal	72	449	\$ 1,656.6M	\$25,944,580	\$27,410,214	\$1,096.605	\$28,506,622
Total NWT	634	4,429	\$13,405,784	\$69,644,340	\$83,050,205	\$3,222,007	\$86,372,212
Tukon	114	169	2,478,897	3,819,025	6,297,922	251.916	6,549,839
Total Northern	748	5,194	15,884,681	73,463,365	89,348,046	3,573,924	92,921,969

Table 1 -- DOME PETROLEUM--# of Male & Female Employees, by Community & Yr.

Community	1982		1983		1984		1985	
	Summer Season	Winter Season	Summer Season	Winter Season	Summer Season	Winter Season	Summer Season	Winter Season
AKLAVIK	21	8	11	11	not operating	not operating	not operating	not operating
INUVIK # and	16							
INUVIK	40	19	12	13				
Female	18		12	13				
Male	22	19						
TUKTOYAKTUK	37	11	25	6				
Female	21		6	6				
Male	16	11						
TOTAL	153	38	77	21				

Table 2 -- ESSO RESOURCES--# of Male & Female Employees, by Community & Yr.

Community	1982		1983		1984		1985	
	Summer Season	Winter Season	Summer Season	Winter Season	Summer Season	Winter Season	Summer Season	Winter Season
AKLAVIK	9	9	9	9	15	3	15	3
Female	3	1	3	3	3	3	3	3
Male	6	8	6	6	12	0	12	0
INUVIK	37	64	42	80	27	80	27	80
Female	19	25	22	27	27	27	27	27
Male	18	39	20	53	0	53	0	53
TUKTOYAKTUK	5	7	9	12	12	12	12	12
Female	3	0	3	3	3	3	3	3
Male	2	7	6	9	9	9	9	9
TOTAL	76	105	108	108	108	108	108	108

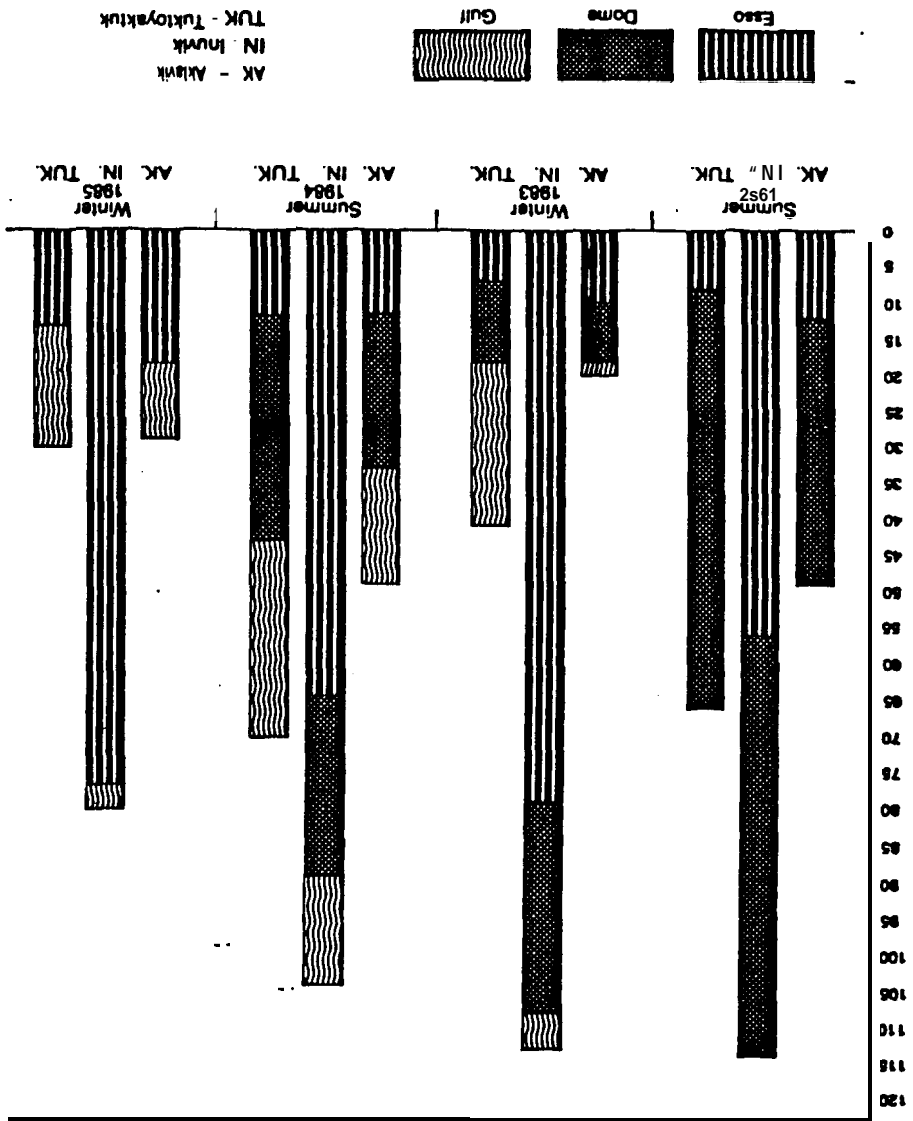
Table 3 -- GULF CANADA RESOURCES--# of Male & Female Employees, by Community & Yr.

Community	1982		1983		1984		1985	
	Summer Season	Winter Season	Summer Season	Winter Season	Summer Season	Winter Season	Summer Season	Winter Season
AKLAVIK	2	2	13	13	11	0	11	0
Female	0	0	3	3	0	0	0	0
Male	2	2	10	10	11	0	11	0
INUVIK	0	0	12	12	1	1	1	1
Female	0	0	5	5	1	1	1	1
Male	0	0	7	7	0	0	0	0
TUKTOYAKTUK	14	14	20	20	6	6	6	6
Female	9	9	5	5	1	1	1	1
Male	5	5	15	15	5	5	5	5
TOTAL	30	30	58	58	30	30	30	30

Table 4 -- GULF CANADA RESOURCES--# of Male & Female Employees, by Community & Yr.

Community	1982		1983		1984		1985	
	Summer Season	Winter Season	Summer Season	Winter Season	Summer Season	Winter Season	Summer Season	Winter Season
AKLAVIK	2	2	13	13	11	0	11	0
Female	0	0	3	3	0	0	0	0
Male	2	2	10	10	11	0	11	0
INUVIK	0	0	12	12	1	1	1	1
Female	0	0	5	5	1	1	1	1
Male	0	0	7	7	0	0	0	0
TUKTOYAKTUK	14	14	20	20	6	6	6	6
Female	9	9	5	5	1	1	1	1
Male	5	5	15	15	5	5	5	5
TOTAL	30	30	58	58	30	30	30	30

SUMMARY OF PERSONNEL



AK - Akavik  
IN - Inuvik  
TUK - Tuktoyaktuk

Area	1971-72 man months	total wages	1972-73 man months	total wages	1973-74 man months	total wages	1974-75 man months	total wages	1975-76 man months	total wages	1976-77 man months	total wages	1977-78 man months	total wages	1978-79 man months	total wages	1979-80 man months	total wages	
AKLAVIK	111	\$136,700	154	\$153,100	123,25	\$137,090	132,5	\$173,200	166,100	\$166,100	154,25	\$266,100	102,25	\$197,300	331	\$1,181,500	0	0	
ARCTIC	2.5	1,840	35	20,000	23	16,740	10.5	8,490	12,500	12,500	4.75	8,200	6.75	13,300	140	499,700	0	0	
FT. MCPHERSON	40	63,400	66.25	71,400	86.75	93,020	59.25	69,500	123.75	615,800	155	630,000	109	210,400	328	1,170,800	44	157,100	
HOLMAN ISLAND	0	0	0	0	3	3,700	62	86,800	123.75	1,881,000	103	1,77,700	109	210,400	44	157,100	44	157,100	
INVUIK	50	441,500	63	591,600	430.75	514,000	60	822,900	56	1,453,100	1,080.75	1,864,700	56	1,084,700	1,456	5,197,300	18	64,300	
PAULATUK	16.75	21,240	22.25	26,000	7.25	9,000	9.300	9,300	5.25	8,000	9.25	16,000	46,700	34,700	18	64,300	18	64,300	
SACHS HARBOUR	0	0	1	1,800	0	0	0	0	5.25	8,000	9.25	12,900	46,700	34,700	18	64,300	18	64,300	
TUKTOYAKTUK	254	317,700	280.25	331,000	23	302,450	206	1,789,090	29	442,300	86	839,000	801,400	2,729,800	917	3,273,300	917	3,273,300	
ZONE TOTAL	977.25	1,033,100	1,391.5	1,357,400	1,00.75	1,349,700	1,53.35	1,789,090	1,444	2,885,900	2,001	3,814,600	2,729,800	2,729,800	1,444	2,598,500	1,444	2,598,500	
1979-80 man months	total wages	1978-79 man months	total wages	1977-78 man months	total wages	1976-77 man months	total wages	1975-76 man months	total wages	1974-75 man months	total wages	1973-74 man months	total wages	1972-73 man months	total wages	1971-72 man months	total wages	1970-71 man months	total wages
1980	total wages	1981	total wages	1982	total wages	1983	total wages	1984	total wages	1985	total wages	1986	total wages	1987	total wages	1988	total wages	1989	total wages
1872	\$544,200	2168	\$7,429,000	3,290	\$11,744,000	3,290	\$11,744,000	3,290	\$11,744,000	3,290	\$11,744,000	3,290	\$11,744,000	3,290	\$11,744,000	3,290	\$11,744,000	3,290	\$11,744,000

Disaggregated data not available.

1. Totals may vary due to rounding  
 Sources: Reports of the Petroleum Industry Committee on Employment of Northern Residents for the years 1971-72 through 1977-78, and data supplied by Dome Petroleum, Esso Resources and Gulf Canada.

**DOME**

EFFECTS OF INDUSTRIAL DOWNTURN

**ON WAGE ECONOMY**

BEAUFORT SEA/MACKENZIE DELTA

<b>COMMUNITY</b>	<b>TOTAL NORTHERN EMPLOYEE</b>	<b>TOTAL WORK MONTHS</b>	<b>TOTAL INCOME</b>
<u>Inuvik Region</u>			
Aklavik	23	46	\$ 160,713
Fort McPherson	23	46	97,249
Inuvik	26	52	183,200
Tuktoyaktuk	38	76	275,526
Paulatuk	6 "	12	42,900
Sachs Harbour	7	14	50,050
Holman Island	2	4	14,300
Subtotal	<u>125</u>	<u>250</u>	<u>\$ 823,938</u>
<u>Other NWT</u>			
Subtotal	32	<u>64</u>	<u>223,916</u>
<u>Total NWT Employment</u>	<b>157</b>	<b>314</b>	\$1,047,854
Yukon	17	<u>34</u>	<u>118,650</u>
<u>Total Northern Employment</u>	<b>174</b>	348	<u>\$1,166,504</u>

Northern Employment 1976-1984 "

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	
Tuktoyaktuk	<b>N</b>	<b>103</b>	76	80	119	85	70	59	38	
Inuvik	<b>O</b>	28	35	54	89	83	77	65	26	
Aklavik	<b>R</b>	22	<b>18</b>	27	34	66	50	<b>31</b>	23	
Paulatuk	<b>E</b>	8	11	<b>11</b>	4	12	6	7	6	
Coppermine	<b>C</b>	15	18	19	17	29	37	24	20	
Sachs Harbour	<b>O</b>	5	5	8	8	14	20	12	7	
Holman Island	<b>R</b>	4	8	6	6	7	16	3	2	
Fort McPherson	<b>D</b>		7	10"	27	37	46	27	23	
Yellowknife	<b>A</b>				15	25	21	2	5	
Other N.W.T.	<b>V</b>	9	7	9	9	18	16	16	7	
Yukon	<b>A</b>				10	13	19	13	17	
	<b>I</b>									
	<b>L</b>									
	<b>A</b>									
	<b>B</b>									
	<b>L</b>									
	<b>E</b>									
<b>TOTAL</b>		<b>127</b>	<b>194</b>	<b>181</b>	<b>224</b>	<b>338</b>	<b>389</b>	<b>388</b>	<b>269</b>	<b>174</b>

ESSO

EFFECTS OF INDUSTRIAL DOWNTURN  
ON WAGE ECONOMY  
BEAUFORT SEA/MACKENZIE DELTA

COMMUNITY	TOTAL NORTHERN EMPLOYEE	TOTAL WORK MONTHS	TOTAL INCOME
<u>Inuvik Region</u>			
Aklavik	40	470	\$1,292,970
Fort McPherson	28	332	913,332
Inuvik	101	1,190	3,273,690
Tuktoyaktuk	31	360	990,360
Paulatuk			
Sachs Harbour			
Holman Island			
Subtotal	<u>200</u>	<u>2,352</u>	<u>\$6,470,352</u>
<u>Other NWT</u>			
Subtotal	12	138	<u>379,638</u>
<u>Total NWT Employment</u>	212	2,490	\$6,849,990
Yukon	<u>24</u>	<u>277</u>	<u>762,027</u>
<u>Total Northern Employment</u>	<u>236</u>	<u>2,767</u>	<u>\$7,612,017</u>

**PLACEMENTS BY COMMUNITY 1984**

	AR.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	Y. T. (U)
<b>AKLAVIK</b>	7	10	8	7	1		9	15	4	3	6	8	78
<b>ARCTIC RED RIVER</b>	6					1							7
<b>FORT GOOD HOPE</b>			10						1				11
<b>FT. McPHERSON</b>	10	6	9	4		1	2	7	8	5	3	1	56
<b>INUUVIK</b>	23	24	12	10	12	12	12	25	33	17	11	12	203
<b>PINE POINT</b>					1								1
<b>TUKTOYAKTUK</b>	4	7	3	2		1	13	6	11	6	3	3	59
<b>WHITEHORSE</b>		1	2		2	2	4	8	15	4	2	6	46
<b>YELLOWKNIFE</b>		1				2	1	1	1	1			7
<b>SOUTH</b>						6							6
<b>SAY RIVER</b>										1			1

**PLACEMENTS BY COMMUNITY - 1985**

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	Y.T.D.
<b>AKLAVIK</b>	8	4	7	14	4	2	11	4	6	5			63
<b>ARCTIC RED R</b>	2	2	2						4	2			12
<b>FT. McPHERSON</b>	13	6	10	9	8	10	10	4	3	7			80
<b>INUUVIK</b>	27	11	18	21	12	10	24	29	21	26			189
<b>TUKTOYAKTUK</b>	14	4	3	6	1	3	2	7	7	7			54
<b>OLD CROW</b>	1												1
<b>WHITEHORSE</b>	9	9	6	8	2	4	18	20	7	2			55
<b>YELLOWKNIFE</b>	1	1			1	1			5	1			10
<b>FT. GOOD HOPE</b>			1										1
<b>SAY RIVER</b>			1							1			2
<b>FT. SIMPSON</b>							1						1
<b>ROMAN WELLS</b>							1						1
<b>EDMONTON</b>							1						1
<b>FT. SMITH</b>									1				1
<b>MONTHLY TOTALS</b>	75	37	48	58	28	30	68	64	54	41			503

NORTHERN EMPLOYEES BY MONTH/COMMUNITY(1982)

	<u>INUVIK</u>	<u>AKLAVIK</u>	<u>FORT MCPHERSON</u>	<u>TUK WELLS</u>	<u>NORMAN GOOD</u>	<u>FORT HOPE</u>	<u>SACHS HARBOUR</u>	<u>FORT FRANCIS</u>	<u>HAY RIVER</u>	<u>MONTHLY TOTAL</u>
JANUARY	47	8	3	5	2	0		0	0	65
FEBRUARY	42	19	3	4	2	1		1	0	12
MARCH	43	9	5	5	3	1		1	0	67
APRIL	49	9	3	4	3				0	68
MAY	55	8	2	5	1				1	72
JUNE	52	11	3	5	1				1	78
JULY	58	121	6	8	1				1	191
AUGUST	57	13	5	7	1				1	84
SEPTEMBER	59	13	9	9	1				1	92
OCTOBER	54	12	3	7	1				1	78
NOVEMBER	60	10	4	10	0		1		1	86
DECEMBER	63	9	6	6	1		0		0	85

Average number of Northern Casual & Arctic Permanent employees per month is 77  
 Average number of Esso Regular employees per month is 9.  
 Average number of Female Northern employees per month is 13.



**GULF**

EFFECTS OF INDUSTRIAL DOWNTURN  
ON WAGE ECONOMY  
BEAUFORT SEA/MACKENZIE DELTA

<b>COMMUNITY</b>	<b>TOTAL NORTHERN EMPLOYEE</b>	<b>TOTAL WORK MONTHS</b>	<b>TOTAL INCOME</b>
<u>Inuvik Region</u>			
<b>Aklavik</b>	33	204	\$ 711,960
<b>Fort McPherson</b>	3	18	62,820
<b>Inuvik</b>	47	315	1,099,200
<b>Tuktoyaktuk</b>	77	750	2,617,500
<b>Paulatuk</b>	0		
<b>Sachs Harbour</b>			
<b>Holman Island</b>	1	12	41,880
Subtotal	<u>161</u>	<u>1,299</u>	<u>\$4,533,360</u>
<u>Other NUT</u>			
Subtotal	28	<u>247</u>	<u>862,080</u>
<u>Total NUT Employment</u>	189	1,546	\$5,395,440
<b>Yukon</b>	73	458	<u>1,598,220</u>
<u>Total Northern Employment</u>	<u>262</u>	<u>2,002</u>	<u>\$6,993,660</u>

SUMMARY OF EMPLOYMENT BY COMMUNITY IN 1983

<u>COMMUNITY</u>	<u>NUMBER OF PEOPLE HIRED AT PEAK SEASON</u>	<u>TOTAL PERSON-MONTHS OF EMPLOYMENT</u>	<u>ESTIMATED AVERAGE MONTHLY WAGE PER COMMUNITY</u>
			\$
Aklavik	16	99	12,785
Fort McPherson	2	12	1,550
Yellowknife	7	45	5,810
Inuvik	28	188	24,285
Holman Island	1	1	130
Tuktoyaktuk	45	439	56,700
Sachs Harbour	1	6	775
Whitchoy	49	308	39,785
Dawson City	1	6	775
Hay River	11	83	10,720
Fort Good Hope	1	12	1,550
Paulatuk	0	4	515
Coppermine	11	120	15,500
Fort Smith	1	12	1,550
Pine Point	1	8	1,035
Frobisher Bay	1	4	515
Old Crow	9	36	4,650
<b>GRAND TOTAL</b>	<b>185</b>	<b>1,383</b>	

SUMMARY OF EMPLOYMENT BY COMMUNITY IN 1984

<u>COMMUNITY</u>	<u>NUMBER OF PEOPLE WORKING AT PEAK SEASON</u>	<u>ESTIMATED WORK MONTHS OF EMPLOYMENT</u>	<u>ESTIMATED AVERAGE MONTHLY WAGE PER COMMUNITY</u>
			\$
Aklavik	33	204	59,330
Fort McPherson	3	18	5,235
Yellowknife	7	45	13,100
Inuvik	47	315	91,600
Holman Island	1	12	3,490
Tuktoyaktuk	77	750	218,125
Whitehorse	64	402	116,900
Hay River	8	60	17,450
Fort Good Hope	1	12	3,490
Coppermine	12	130	37,800
Old Crow	9	56	16,285
<b>TOTAL</b>	<b>262</b>	<b>2,004</b>	<b>\$ 7.1 million</b>

CHEVRON AND SHELL  
(Estimates)

EFFECTS OF **INDUSTRIAL DOWNTURN**  
ON **WAGE ECONOMY**  
BEAUFORT SEA/MACKENZIE DELTA

<b>COMMUNITY</b>	<b>TOTAL NORTHERN EMPLOYEE</b>	<b>TOTAL UDRK MONTHS</b>	<b>TOTAL INCOME</b>
<b><u>Inuvik Region</u></b>			
<b>Aklavik</b>	10	10	\$15,000
Fort McPherson	10	10	15,000
<b>Inuvik</b>	3B	37	55,500
Tuktoyaktuk	1      6	16	24,000
<b>Paulatuk</b>			
Sachs Harbour	02	02	3,000
<b>Holman Island</b>			
Subtotal	<u>76</u>	<u>75</u>	<u>\$112,500</u>
<b><u>Other NWT</u></b>			
Subtotal			
<b><u>Total NWT Employment</u></b>			
Yukon			
<b><u>Total Northern Employment</u></b>	<u>76</u>	<u>75</u>	<u>\$112,500</u>

## EMPLOYMENT by COMMUNITY &amp; COMPANY: 1985

TOWN	ESSO	DOME	GULF	TOTAL
INUVIK REGION				
AKLAVIK	71	13	31	115
ARCTIC RED RIVER	9			9
PT. MCPHERSON	64	16	3	83
INUVIK	514	12	35	561
TUKTOYAKTUK	95	9	36	140
SACH'S HARBOUR		4		4
PAULATUK				4
COPPERMINE	2	1	13	31
HOLMAN ISLAND		2		2
<b>TOTAL</b>				<b>949</b>

NOTE: These figures represent the number of people from each community hired by industry during 1985, they do not represent total man years worked. Owing to the seasonality of the industry and the work rotation system followed by each company, many of the jobs, in some cases work, for example, are short term, while the rotation system that several people would periodically at the same job.

## WAGES by COMMUNITY, 1985 (estimated)

TOWN	ESSO	DOME	GULF	TOTAL
AKLAVIK	\$800,000	\$314,133	\$ 9 0 8 , 8	\$2022,933
ARCTIC RED	45,000			45,000
FT. MCPHERSON	600,000	235,600	70,574	906,174
INUVIK	4,300,000	277,671	1,057,655	5,635,326
TUKTOYAKTUK	600,000	226,765	1,544,250	2,371,015
PAULATUK		73,625		73,625
SACH'S HARBOUR		75,728		75,728
<b>TOTALS</b>	<b>6,345,000</b>	<b>1,203,612</b>	<b>3,581,279</b>	<b>11,029,901</b>

## EMPLOYMENT EXPENDITURES by COMMUNITY, 1985

For the purposes of this analysis, Esso were able to provide community approximations of both workers and wages, while Gulf and Dome provided only worker numbers on a community basis, with wages paid shown as territorial total.

In order to obtain some idea of the 1985 wages paid to each community by these latter two companies, we have calculated the percentage of the work force and that of the total wages paid received by each community in 1984, the last year for which both were available on a community basis. We then calculated the percentage of the work force held by each community in 1985 and multiply the change in workforce from year to year, expressed as a fraction, by the 1984 gross wage percentage times the 1985 gross wage bill to get the community income for that year.

while this cannot give us a exact reading of the total wages going to each community, it can, if we assume little change in the job levels held by each community, provide some indication of the total income levels for 1985. Given that much of the activity by industry is similar from one year to the next, and that many seasonal workers return to the position they held the previous year, this may be a fairly safe assumption to make on a year to year change. Over time, many workers may advance to more skilled, higher paying jobs, but on a one year basis, this is not likely to occur in the majority of cases.

APPENDIX B

POPULATION PROFILES - BEAUFORT COMMUNITIES.

Appendix ` B presents population profiles on the Beaufort communities for the years 1981 and 1984.

CONTENTS:

Page 1: population Profile - Beaufort Communities - **1981.**

Page 2: population **Profile** - Beaufort Communities - **1984.**

## POPULATION PROFILE - BEAUFORT COMMUNITIES - 1981

COMMUNITY	NATIVE	OTHER	TOTAL
<b>AKLAVIK</b>	630	75	705
ARCTIC RED RIVER	115	5	120
COPPERMINE	755	55	810
FORT MCPHERSON	565	65	630
HOLMAN ISLAND	270	25	295
INUVIK	1115	2010	3125
PAULATUK	165	10	175
SACHS HARBOUR	155	10	165
TUKTOYAKTUK	705	<b>65*</b>	770
TOTAL	3845	2245	6090

\* EXCLUDES BASE CAMP POPULATIONS

SOURCE: BUREAU OF STATISTICS, **GNWT**, 1981 CENSUS

NOTES: STATISTICS CANADA FIGURES ARE RANDOMLY ROUNDED THEREFORE  
THERE IS A CERTAIN ERROR FACTOR

## POPULATION PROFILE - BEAUFORT COMMUNITIES - 1984

COMMUNITY	NATIVE	OTHER	TOTAL
<b>AKLAVIK</b>	713	73	786
ARCTIC <b>RED</b> RIVER	120	5	125
COPPERMINE	821	59	880
FORT MCPHERSON	650	66	716
<b>HOLMAN</b> ISLAND	325	28	353
<b>INUVIK</b>	1368	2113	3481
<b>PAULATUK</b>	188	10	198
SACHS <b>HARBOUR</b>	153	11	164
<b>TUKTOYAKTUK</b>	830	69*	899
TOTAL	5168	2434	7592

\* EXCLUDES BASE CAMP POPULATIONS

SOURCE: **BUREAU** OF STATISTICS, **GNWT**, 1984 CENSUS