

Northwest Territories Mixed Economy Case Study: Dome Petroleum 1976-1979

- Changes in Skill level in northern employees 1976 – 1979 (p.6)
- Beaufort Sea Drilling Program – Earned income 1976 – 79 (p.8)
- Employment and Income Beaufort Sea Drilling Program 1976 – 1979 (p.9)
- Earned Income from fur sales (p.13)
- Beaufort Sea Drilling Program – Training 1976-1979 (p.14)

Reference info:

Dome Petroleum, 1979, *Socio-economic overview of drilling in Beaufort*, p. 1, 5-42.

LIST OF TABLES - TEXT

TABLE 1 -	Dome/CanMar Business Expenditures in Northern Communities.	Page 3
TABLE 2 -	Beaufort Sea Drilling Program - Changes in Northern Employment Levels 1976 to 1978.	Page 5
TABLE 3 -	Changes in Skill Level of Northern Employees 1976 to 1979.	Page 6
TABLE 4 -	Comparison of CanMar's 5 Year Employment Projections with Actual Hires.	Page 7
TABLE 5 -	Beaufort Sea Drilling Program - Earned Income - 1976-1979.	Page 8
TABLE 6 -	Employment and Income Beaufort Sea Drilling Program 1976-1979.	Page 9
TABLE 7 -	Average Length of Employment - Beaufort Sea Drilling Program - 1976 - 1979.	Page 11
TABLE 8 -	Earned Income from Fur Sales.	Page 13
TABLE 9 -	Beaufort Sea Drilling Program Training 1976/1979.	Page 14
TABLE 10 -	Average Number of Child Care Cases per Month.	Page 16

LIST OF FIGURES - TEXT

FIGURE 1	- Inuvik Liquor Store Sales, and Social Assistance Case Month, Beaufort Sea Communities - 1975/1979	Page 15
FIGURE 2	- Inuvik Liquor Store Sales - 1972 Constant Dollars, 1975-1978 Gallonage 1977-1979	Page 17
FIGURE 3	- Crimes/1,000 - Beaufort Sea Communities	Page 18
FIGURE 4	- Inuvik Liquor Store Sales and Non-Liquor Offences - Beaufort Sea Area 1975-1979	Page 19
FIGURE 5	- Inuvik Liquor Store Sales and Liquor Offences - Beaufort Sea Area	Page 20

LIST OF TABLES - APPENDIX I

TABLE A -	Population Estimates - Beaufort Sea Communities	Page 28
TABLE B -	Population - Inuvik Region 1975-1979	Page 29
TABLE C -	Social Assistance (Economic Reason) Case months by Quarter 1975-1979	Page 30
TABLE D -	Inuvik Liquor Store Sales 1972-1979 in 1972 Constant Dollars and Gallons	Page 31
TABLE E -	Absolute Gallons Alcohol Sold - Inuvik Liquor Store 1977-1979	Page 32
TABLE F -	Liquor Sales - Inuvik Liquor Store - Constant Dollars/Gallonage - Per Capital/Per Thousand	Page 33
TABLE G1	Actual Crimes/Quarter - Beaufort Sea Communities	Page 34-35
TABLE G2	Liquor Offences/Quarter - Beaufort Sea Communities	Page 36-37
TABLE G3	Non Liquor Offences/Quarter - Beaufort Sea Communities	Page 38-39
TABLE H -	Final Employment Status of Northern Employees - 1976- 1979 Drilling Seasons	Page 40
TABLE I -	Number of Employees by Length of Employment 1976-1979	Page 41
TABLE J -	Liquor Sales to Coppermine in 1972-1973 Constant Dollars	Page 42

A. INTRODUCTION

Following the detailed review of the 1978 drilling season further detailed reviews of each season were deemed unnecessary unless some significant event occurred. Evidence gathered from the statistical record, company sources and employees and residents from the Beaufort Sea Communities indicated a general satisfaction with the operation. A mid-season tour of the communities in 1979 indicated no large formal review would be required. Two communities, Holman Island and Coppermine, were surveyed in October and November of 1979 largely confirming this view.

Meetings with individuals in both Coppermine and Holman Island revealed no new information regarding Dome/CanMar operations, which suggests that detailed reviews are no longer required. Those interviewed in Coppermine agreed but felt that the Government of the Northwest Territories should continue to monitor social and economic changes in the area, leaving the community to deal with the Company on matters related directly to Coppermine. The attitude was somewhat different in Holman where the general feeling was that visits by field workers should continue. If this was not possible one person suggested contact should be made with the community council to ascertain community views.

Because a comprehensive review of the 1979 drilling season was not undertaken this report largely utilizes statistical information whereas in previous years a substantial amount of information gathered in the field was used. This report presents a socio-economic overview of the four years of drilling in the Beaufort Sea, emphasizing economic aspects more than social.

The economic and social impact of any sizeable development is impossible to determine without detailed fieldwork over time. This has not been possible. As an alternative generally acceptable indicators have been monitored. In theory, abrupt changes in the indicators suggest economic and social change. These indicators are presented in the following pages.

III. Employment

In 1976, the first season of offshore work in the Beaufort Sea, 127 northerners were employed in the operation in 67 positions. By 1979, with substantial increases in the workforce in intervening years, 224 northerners were employed in 130 positions.

In 1979 the greatest portion of northern labour was drawn from Tuktoyaktuk and Inuvik (60%) with 32% coming from other Beaufort Sea Communities. Eight (8) percent were recruited from outside the area. This has generally been the recruitment pattern since 1976. (See Table 2).

The northern workforce working in the offshore operations has become progressively more skilled each year. Through formal and on the job training and as a result of experience the number of skilled and semi-skilled employees has increased from 22 in 1976 to 113 in 1979, an increase of 414%. The number of unskilled workers has remained constant at slightly over 100 persons. In 1976, 17% of the Company's northern workers were considered skilled or semi-skilled. By 1979 this proportion of the workforce had increased to 50%.

TABLE 2

BEAUFORT SEA DRILLING PROGRAM - CHANGES IN NORTHERN EMPLOYMENT LEVELS 1976 to 1978

Community	Number of Employees and Changes						
	1976	1977	% Change	1978	% Change	1979	% Change
Aklavik	7	22	+214	18	-18	27	+50
Coppermine	3	15	+400	18	+20	19	+6
Holman Island	0	4		8	+100	6	-25
Inuvik	15	28	+87	35	+25	54	+54
Paulatuk	3	8	+167	11	+38	11	NC
Sachs Harbour	1	5	+400	5	NC	8	+60
Tuktoyaktuk	87	103	+18	76	-26	80	+5
Other Centres	11	9	-19	14	+56	19	+36
TOTAL	127/67	194/97	+53	185/98	-5	224/130	+21

NOTE: Under Total: Hires/Positions

SOURCE: Dome/CanMar

TABLE 3

CHANGES IN SKILL LEVEL OF NORTHERN EMPLOYEES - 1976 TO 1979

Skill Level	Number of Employees in each Skill Level			
	1976	1977	1978	1979
Skilled	6 (5%)	19 (10%)	33 (18%)	66 (29%)
Semi-Skilled	16 (12%)	58 (30%)	50 (27%)	47 (21%)
Unskilled	105 (83%)	117 (60%)	102 (55%)	111 (50%)
TOTAL	127 (100%)	194 (100%)	185 (100%)	224 (100%)

SOURCE: 1976 - Collins, Mary - 1978
 1977 - Social/Economic/Cultural Report
 1978 - CanMar
 1979 - CanMar

During the 1976 drilling season CanMar analyzed the impact of its operation in the region and as a result a five (5) year action plan covering employment and training, local business opportunities and social and cultural considerations was drawn up. In terms of employment the company placed emphasis on increasing the level of skilled personnel while keeping the number of unskilled employees constant. As in evidence in Table 3 the objectives have essentially been met and in most instances exceeded during the 1976-1979 period.

Dome/Canmar's original objective for their northern employment program projected a 100% increase, between 1976 and 1979, in positions filled as regular complement for the majority of the season (See Table 4). During the first year of operations positions filled exceeded positions projected by twenty (20). In each succeeding year positions filled also exceeded projections.

Because of the increase in the number of skilled employees, higher wage scales, and a lengthening of the drilling season, the average seasonal earnings have increased dramatically from \$2,896 in 1976 to \$9,119 in 1979. Average weekly earnings in 1979 amounted to \$554 compared with average weekly earnings of \$348 in firms in the Northwest Territories employing 20 or more people (See Table 6).

TABLE 4
COMPARISON OF CANMAR'S 5 YEAR EMPLOYMENT
PROJECTIONS WITH ACTUAL HIRES

	Positions Projected	Positions Filled	Individuals Hired	Ratio-Hires to Positions
<u>Skilled</u>				
1976	6	6	6	1:1
1977	14	19	19	1:1
1978	24	21	33	1.6:1
1979	32	40	66	1.7:1
<u>Semi-Skilled</u>				
1976	19	16	16	1:1
1977	33	34	58	1.7:1
1978	36	28	50	1.8:1
1979	38	29	47	1.6:1
1980	38	-	-	-
<u>Unskilled</u>				
1976	21	45	105	2.3:1
1977	22	38	117	3.1:1
1978	23	36	102	2.8:1
1979	24	61	111	1.8:1
1980	25	-	-	-
<u>Totals</u>				
1976	47	67	127	1.89-1
1977	69	97	194	2.00-1
1978	89	98	185	1.88-1
1979	94	130	224	1.72-1

SOURCE: Dome (CanMar)

TABLE 5

BEAUFORT SEA DRILLING PROGRAM
EARNED INCOME
1976-1979

COMMUNITY	1976			1977			1978			1979		
	NO	AVERAGE	NO	AVERAGE	NO	AVERAGE	NO	AVERAGE	NO	AVERAGE	NO	AVERAGE
Aklavik			21	5,197	17	8,363	21	10,191				
Coppermine			15	3,549	18	8,459	19	13,673				
Holman Is.			4	3,684	8	4,559	6	2,963				
Inuvik			25	5,423	30	6,691	47	9,317				
Paulatuk			8	4,129	11	2,681	11	2,568				
Sachs Harbour			5	6,549	4	9,422	8	9,700				
Tuktoyaktuk			94	3,951	43	6,710	72	7,355				
Other												
Including:	6	10,844	13	10,012	19	15,577						
Arctic Red River					2		2					
Cambridge Bay					1		1					
Fort Good Hope					-		2					
Fort McPherson					5		8					
Fort Smith					-		1					
Hay River					2		5					
Yellowknife					2		-					
Miscellaneous	13	4,441	2	included above								
TOTALS	127	2,896	19	4,522	181	6,307	203	9,119				
TOTAL EMPLOYEES 127	194		181		224							

NOTE: 1. No. equals number of employees for which income data applies
2. 1979 figures are preliminary and will change

SOURCE: 1977, 1978 Beaufort Sea Drilling Reviews
1979 Canmar - Roger Allen, Personal Communication

TABLE 6
EMPLOYMENT AND INCOME
BEAUFORT SEA DRILLING PROGRAM
1976-1979

	1976	1977	1978	1979
TOTAL EMPLOYMENT	127	194	181	224
MANDAYS WORKED	4,650	13,540	14,793	16,718
EARNINGS	\$367,825	\$872,708	\$1,141,478	\$1,851,111 ¹
AVERAGE EARNINGS/ MAN DAY	\$ 79	\$ 64	\$ 77	\$ 111
AVERAGE EARNINGS/ MAN WEEK ⁶	\$ 396	\$ 322	\$ 383	\$ 554
% CHANGE	-	-19	+19	+45
AVERAGE WEEKLY EARNINGS - NWT ²	\$ 262	\$ 291	\$ 313	\$ 348 ⁴
% CHANGE	-	+11	+ 8	+11
AVERAGE WEEKLY EARNINGS - CANADA ³	\$ 228	\$ 250	\$ 265	\$ 285 ⁵
% CHANGE	-	+10	+ 6	+ 8

NOTES:

1. Preliminary Earnings
2. Average Weekly Earnings - Industrial Composite
(Firms over 20)
3. Average Weekly Earnings - Industrial Composite
(Firms over 20)
4. Preliminary - Average of January - September
5. Preliminary - Average of January - September
6. 5 Man days = 1 man week

Since the completion of this report it has been learned that total earnings (northern employees) reached \$2,048,957. Of this amount \$181,189 was season end bonus paid to those who completed the season. The average season end bonus amounted to \$1,523.

In 1976, Dome/CanMar's northern employees worked an average of 36.6 days. Average days worked increased to 69.8 in 1977, 82.3 days in 1978 but dropped to 74.6 in 1979 (See Table 7). The reason for the drop is unknown but was likely a result of a number of short term employees taken on to the fourth drillship and icebreaker towards the end of the season and onto the dredging operations at McKinley Bay.

Although the number of individuals taken on by CanMar and sub-contractors has increased steadily (other than in 1978) there have been no major labour shortages in the Beaufort Sea communities. It was reported, though, in 1977, that CanMar wages forced local wage scales upwards. Generally, more jobs are required, particularly for young people who do not know how to live off the land, or do not have a desire to do so.

Viewed from the Company's perspective the employment program has been very successful. As reported in the review of the 1978 season northerners feel the program is a good one. The majority of employees interviewed rated their employers - CanMar, Mercator and Challenger - very highly.

TABLE 7
AVERAGE LENGTH OF EMPLOYMENT
BEAUFORT SEA DRILLING PROGRAM
1976-1979

	1976	1977	1978	1979
TOTAL EMPLOYMENT	127	194	181	224
MANDAYS WORKED	4650	13540	14893	16718
AVERAGE MANDAYS WORKED/EMPLOYEE	36.6	69.8	82.3	74.6

SOURCE: Dome/CanMar

IV. Other Economic Benefits

a. Spin-offs

The availability of new goods and services in Tuktoyaktuk as a result of Dome/CanMar activity was apparent in 1977. No new product lines were noted in 1978 but there seemed to be a wider range of goods available. There was also a marked improvement in the quality and quantity of fresh produce available to all Tuktoyaktuk residents when Dome/CanMar started buying its fresh food requirements through local stores. This prevailed during the 1978 season as well. The contract for fresh produce was awarded to a Yellowknife contractor in 1979 but the results on local supplies is unknown.

During the first year of offshore work Dome/CanMar allowed Tuk residents to ride between Inuvik and Tuktoyaktuk on company owned or chartered aircraft. The effect of this free riding was to reduce the volume of Northward Airline's business in the community of Tuk to the point that on many occasions Northward cancelled scheduled flights. This reduced freight service to the community and the availability of passenger service. In 1977, as a result of local stores supplying fresh produce and Dome/CanMar's new policy of not permitting casual riders on their aircraft, air transportation service increased from two (2) Twin Otter flights a week to three (3) F27 flights and seven (7) Twin Otter flights. The situation remained the same in 1978 and it is reported that service in 1979 has remained good.

Other spin-offs include an increase in the number of taxis operating in Tuktoyaktuk and the bank operation during the summer months.

It seems that improved availability of goods and services largely coincides with the Company's operating seasons, and there is no evidence to indicate that Dome/CanMar is placing a strain on the availability of goods and services in the one.

b. Effect on Hunting and Trapping

Offshore oil exploration appears to have had little negative impact on the number of persons in the Beaufort Sea communities who engage in trapping. Between the 1975/1976 and 1978/1979 trapping seasons the number of trappers increased by twelve (12) percent.

The drilling season, by and large, has tended to complement renewable resource harvesting activities in the communities. Most lay offs have tended to occur just prior to the opening of the trapping season. Those who continued to work after the commencement of the trapping season have been able to utilize time off to trap part time.

Employees interviewed in previous years indicated that much of the money earned was utilized to purchase hunting and trapping equipment. This information has been supported by comments from non-trappers and merchants. To be a successful trapper good equipment is required. Employment during the drilling season provides cash to purchase the equipment.

V. Education and Training

Training-on-the-job is the chief means employed by Dome/CanMar to ensure the development of a skilled labour force. In addition, in co-operation with the Government of the Northwest Territories, Department of Economic Development and Tourism, and Canada Manpower the Company sponsors formal training courses such as drilling schools at the Petroleum Industry Training School and marine training through nautical training courses. Specialized training in other fields is also encouraged through the Apprenticeship Program. Table 9 summarizes training offered to date. In total 95 training positions have been utilized in 17 fields ranging from cooks to drilling activities to office training.

TABLE 8

EARNED INCOME FROM FUR SALES

Community	1975-1976		1976-1977		1977-1978		1978-1979	
	No. of Trappers	Earnings	No. of Trappers	Earnings	No. of Trappers	Earnings	No. of Trappers	Earnings
Aklavik	146	\$166,794	153	\$ 228,997	169	\$217,037	166	232,934
Coppermine	148	98,749	141	164,533	133	82,632	156	320,400
Holman Island	48	96,565	55	241,184	52	108,272	53	74,806
Inuvik	124	153,427	127	159,887	141	220,946	150	325,684
Paulatuk	26	17,643	18	42,423	17	7,603	27	73,272
Sachs Harbour	28	92,552	40	110,387	39	85,697	35	98,346
Tuktoyaktuk	83	71,744	79	122,518	75	76,154	88	232,664
TOTAL	603	697,474	613	1,069,929	626	798,341	675	1,358,106
Average		1,157		1,745		1,275		2,012

SOURCE: Fish and Wildlife Service, Government of the N.W.T.

TABLE 9

BEAUFORT SEA DRILLING PROGRAM TRAINING 1976/1979

	1976	1977	1978	1979 *
Data Entry Operator	3 (2)	2 (2)	-	-
Seamen (Long Course or Tour)	-	4 (2)	4 (0)	-
Seamen (Short Course)	5 (2)	2 (1)	8 (1)	1 (1)
Cost Accountant	-	2 (1)	2 (2)	1 (1)
Apprentice Electrician	-	3 (1)	2 (1)	1 (1)
Radio Operator	-	2 (1)	-	-
Electronics Technician	-	1 (1)	1 (?)	-
Mechanic	-	2 (2)	3 (1)	-
Sub Sea Engineer	-	1 (0)	-	1 (0)
Expediter	-	2 (1)	-	-
Crane Operator	-	17(10)	-	-
Welder	-	2 (1)	4 (1)	-
Drilling Trainee	7 (1)	-	3 (1)	24 (10)
Oilers			4 (2)	-
Cooks			4 (2)	-
Administration (Asst. Yard Foreman)			1 (1)	-
Equipment Operators			4 (?)	-
Total Trainees	15	40	40	28

SOURCE: CanMar

NOTE: * Employees taking formal training only.

C. SOCIAL IMPACT

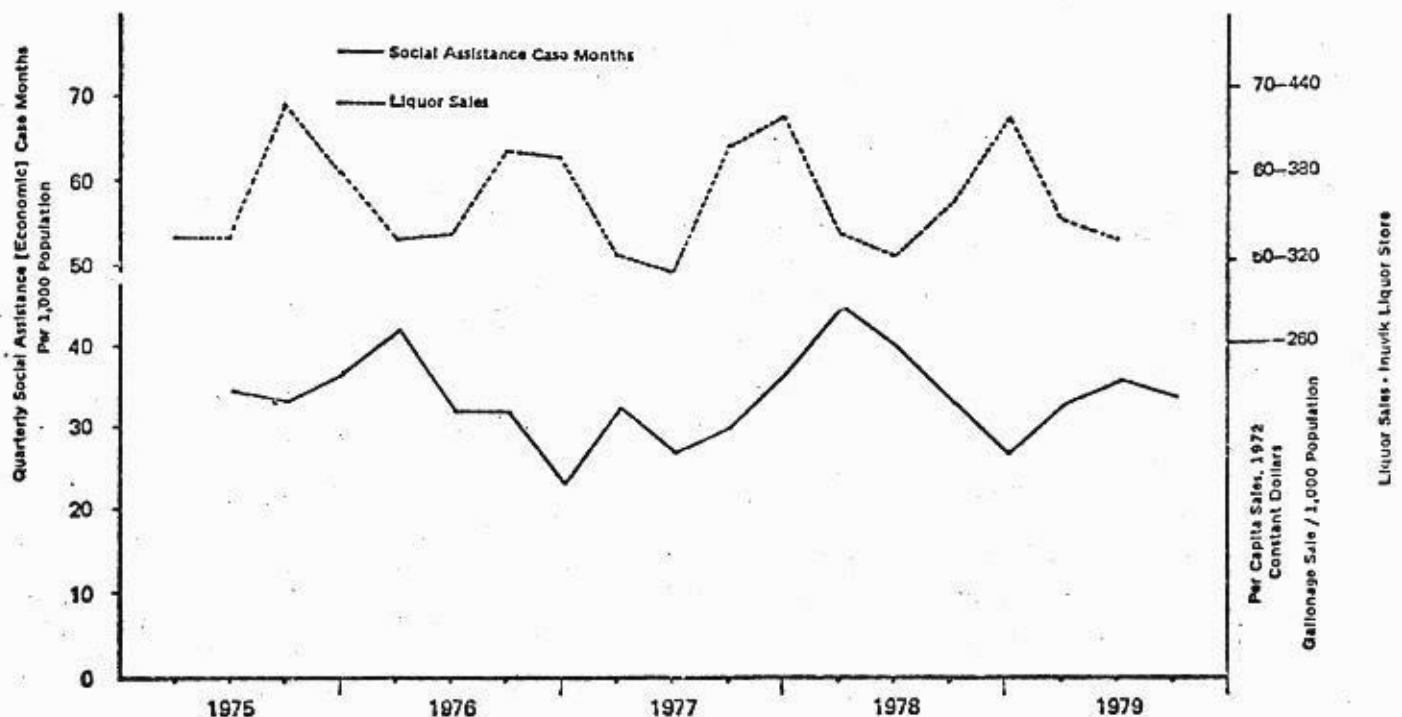
I. Social Services

a. Social Assistance (Economic Reasons)

The number of social assistance cases in the Beaufort Sea communities varies with the season. During the summer months, a period of high employment, the number decreases only to increase again in the winter. The number of social assistance case months per 1,000 population has not changed significantly since 1975. See Figure 1 and Table C, Appendix I.

Figure 1

INUVIK LIQUOR STORE SALES, AND SOCIAL ASSISTANCE CASE MONTHS,
BEAUFORT SEA COMMUNITIES - 1975 - 1979



SOURCE: Table C ; Appendix I
Table F , Appendix I

b. Social Service Workloads

In 1978, Department of Social Services personnel reported that Dome/CanMar had had negligible social impact on the Beaufort Sea Communities with the exception of Tuktoyaktuk. In Tuktoyaktuk activity resulting from the presence of Dome/CanMar's logistics base is seen as having a direct social impact on the community.

Day care in Tuktoyaktuk was identified as a problem in 1978. Parents were finding it difficult to find babysitters to take advantage of expanded opportunities. As a result Dome/CanMar has encouraged and assisted in the establishment and operation of a Daycare Centre. Based on findings in the 1978 review of Dome/CanMar's impact there does not seem to be any increase in demand for other social services available in the communities such as financial counselling and alcohol counselling.

Partially updated child care statistics (see Table 10) indicate an increase in child care cases in Aklavik. The largest number of cases occur in the summer months in all the communities. In 1978 social workers attributed this to increased employment and less parental supervision combined with boredom on the part of the children which leads to delinquency and other problems.

TABLE 10

AVERAGE NUMBER OF CHILD CARE CASES PER MONTH

Community	1975/1976	1976/1977	1977/1978	1978/1979	1979/1980
Aklavik	4	6	4	7	11
Inuvik	77	89	105	74	?
Paulatuk	0	0	1	0	1
Sachs Harbour	1	1	-	-	1
Tuktoyaktuk	3	1	8	7	6
Holman Island	0	0	0	0	?
Coppermine	6	4	6	6	?

SOURCE: Department of Social Services.

II. Liquor Consumption

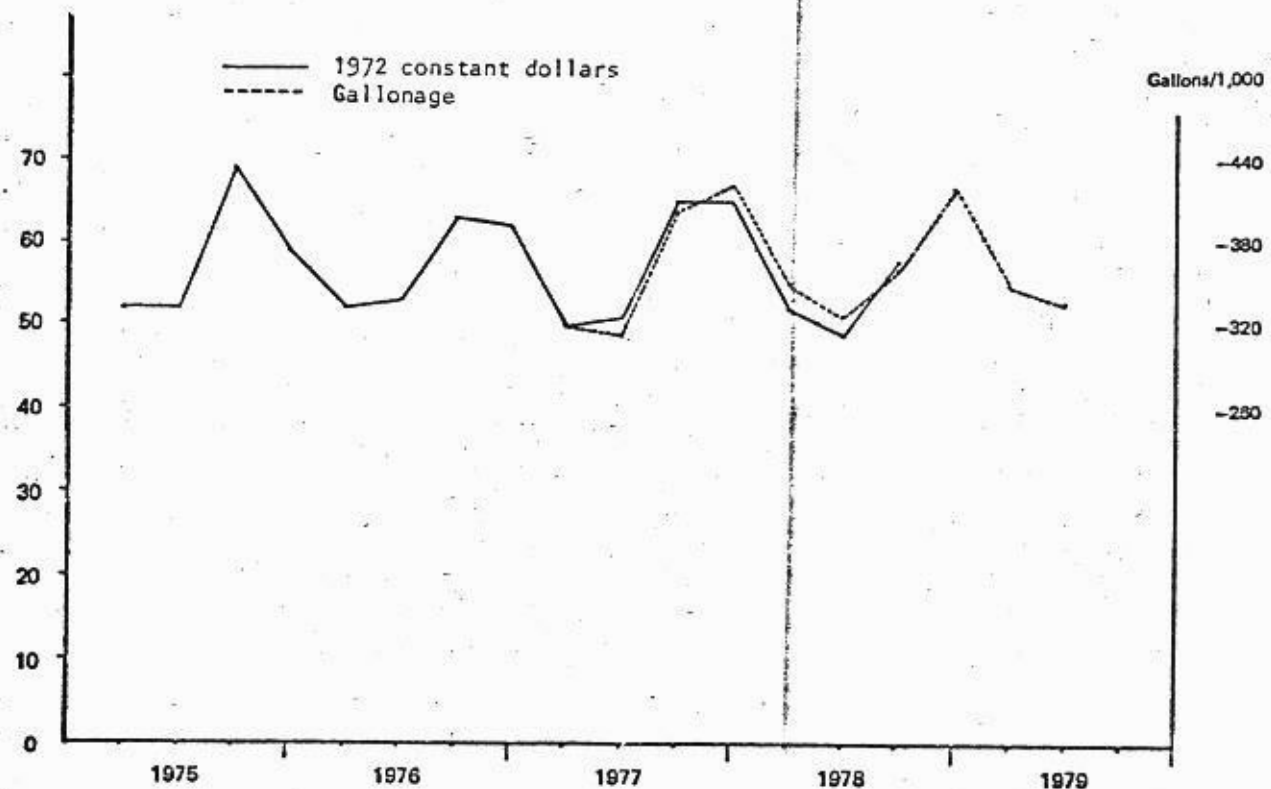
During the review of Dome/CanMar's 1978 operations almost half those interviewed in Tuktoyaktuk indicated that a significant portion of community income earned through Dome/CanMar employment was used to purchase alcohol. In Coppermine informants indicated that the proportion of income spent on alcohol remained the same throughout the year. When people earned more money they bought more liquor and inversely, smaller earnings lead to fewer liquor purchases.

If it is assumed that an increase in the number of social assistance recipients indicates higher unemployment thus lower community income then liquor sales from Inuvik Liquor Store and social assistance statistics from the Beaufort Sea Communities support the observation of Coppermine informants. As is indicated in Figure 1 during periods when the number of social assistance recipients is highest, liquor consumption is generally lowest. Liquor sales are highest in summer, lowest in winter. Although the geographic areas used as a base to compare liquor sales and social assistance are not the same they do overlap. Evidence from Frobisher Bay indicates that during the four years preceding the closure of the Territorial Liquor Store the same pattern prevailed. It is likely that if we detailed liquor purchases in each of the Beaufort Sea Communities the data would still indicate the same pattern.

Per capita liquor consumption in the Inuvik Region (where 5 of the 7 communities are located) have not changed significantly in the last 5 years (see Figure 2). In Coppermine per capita liquor consumption increased gradually between 1975 and 1978. (See Appendix 1, Table J).

Figure 2

INUVIK LIQUOR STORE SALES - 1972 CONSTANT DOLLARS, 1975-1978
GALLONAGE 1977-1979

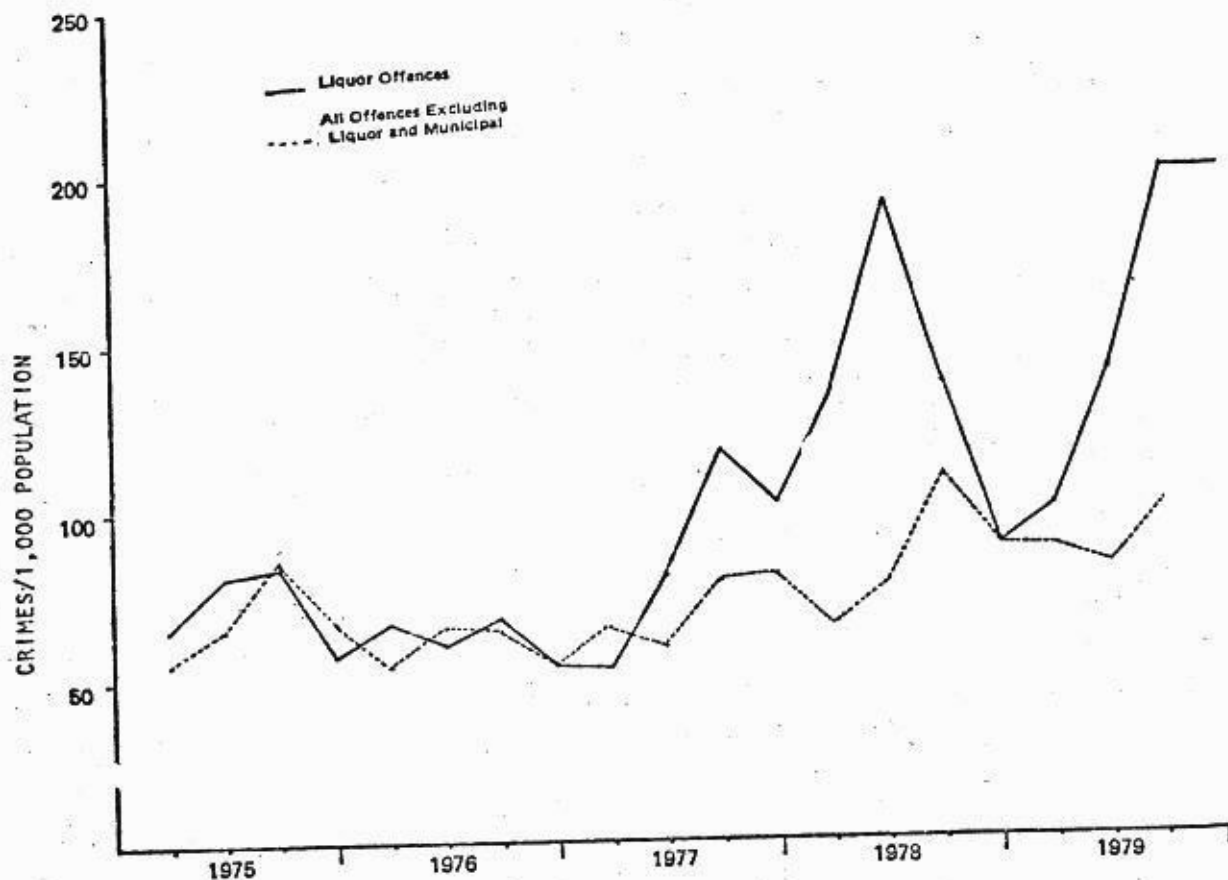


SOURCE: Table F , Appendix 1

III. Crime

Crime (excluding liquor and municipal offences) in the Beaufort Sea communities has been increasing gradually from a low annual rate of 236 offences/1,000 persons in 1976 to 338/1,000 in 1978. The crime rate for the first three quarters of 1979 is slightly ahead of that in 1978. (See Figure 3).

Figure 3 CRIMES/1,000 -- BEAUFORT SEA COMMUNITIES

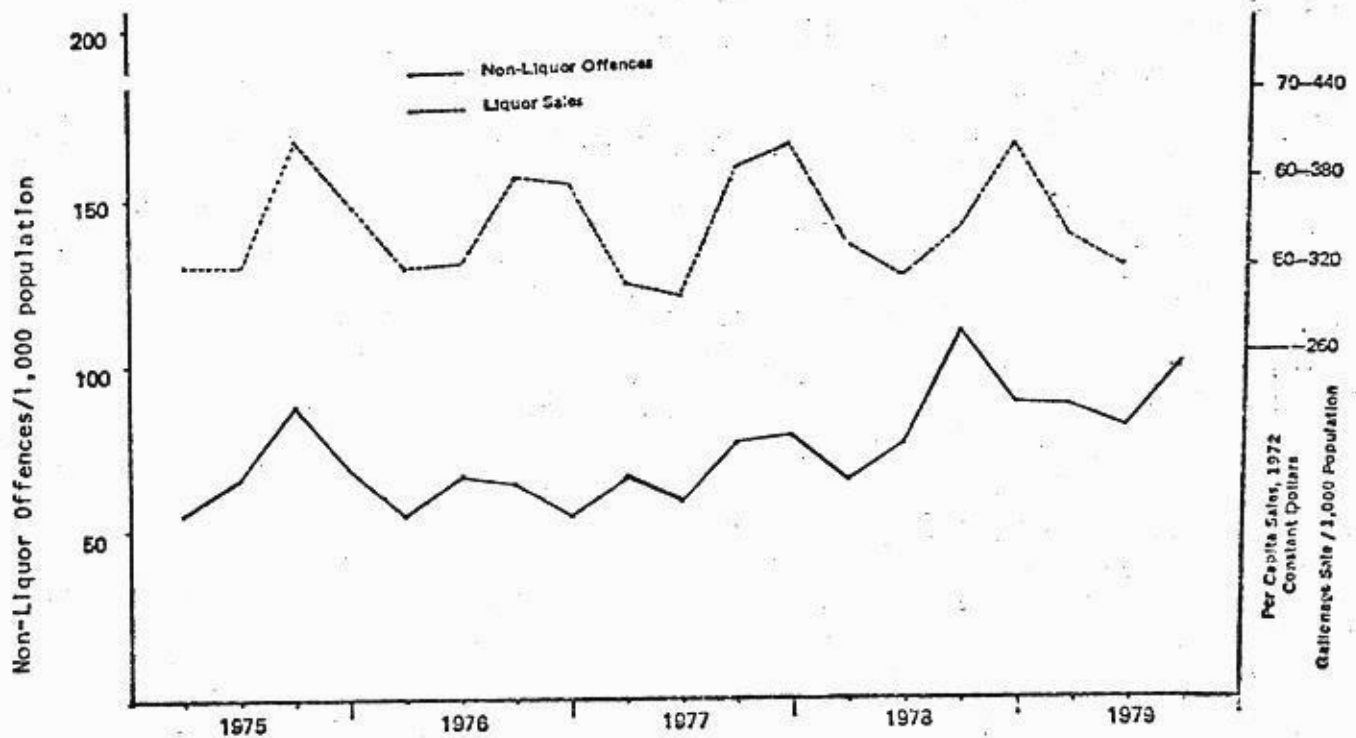


SOURCE: Tables G2 and G3

The crime rate is generally highest during the July to September period, that period when employment and alcohol sales are at their highest point. As is indicated in Figure 4 there is a positive relationship between non-liquor offences and liquor sales indicating a "cause and effect" relationship.

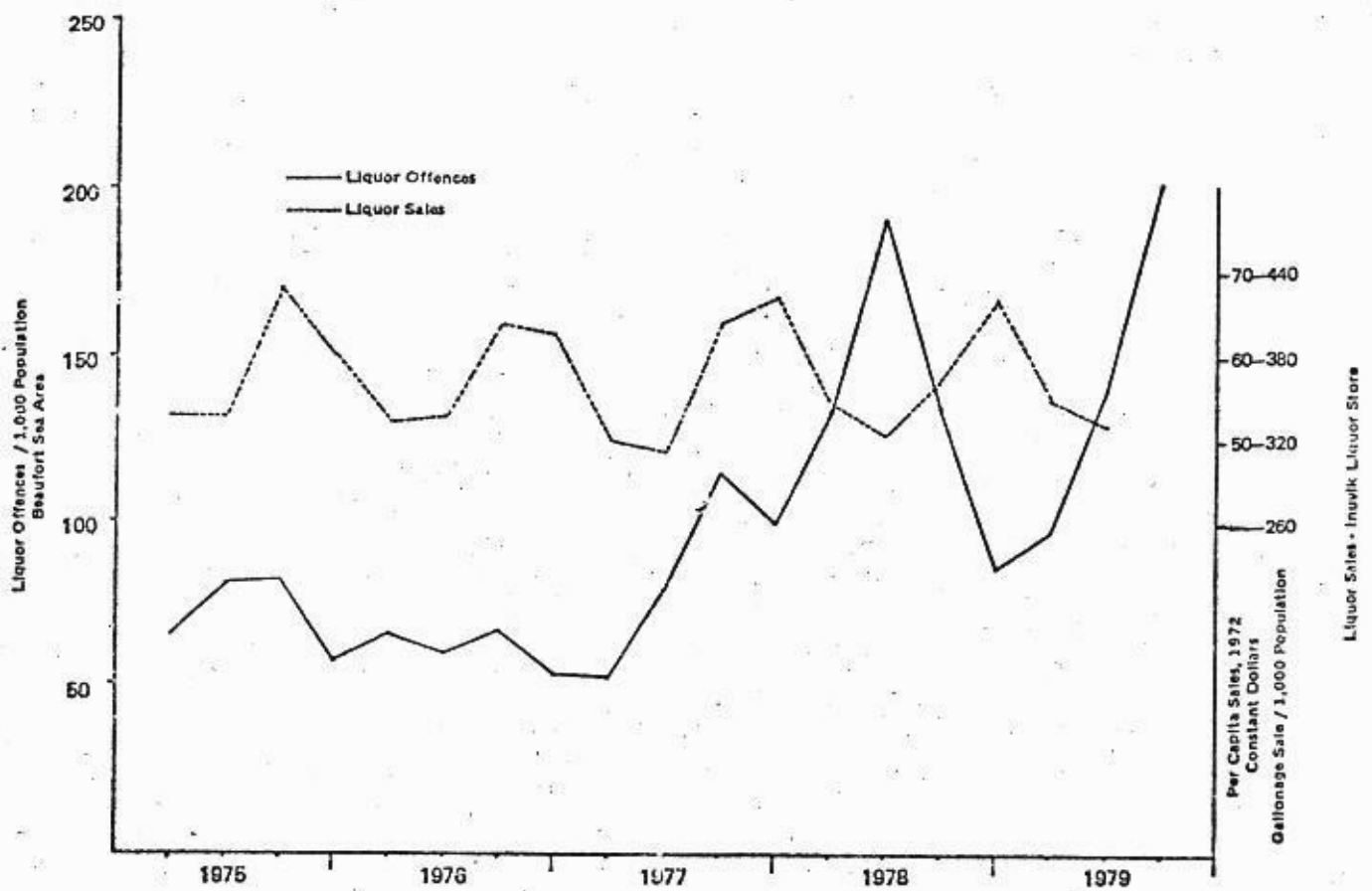
Between 1975 and the end of the first quarter of 1977 a similar positive relationship existed between liquor sales and liquor offences. (See Figure 5). Following the first quarter in 1977 the pattern of liquor offences of liquor offences changed with the rate increasing dramatically. During previous reviews informants indicated that there was no more crime than in previous years but there was more R.C.M. Police vigilance. The statements by those interviewed were supported by R.C.M. Police personnel. Thus the change in crime rate is likely largely as a result of enforcement and not necessarily an increase in actual crime.

Figure 4 INUVIK LIQUOR STORE SALES AND NON-LIQUOR OFFENCES - BEAUFORT SEA AREA 1975-1979



SOURCE: Table G3, Appendix I
Table F, Appendix I

Figure 5 INUVIK LIQUOR STORE SALES AND LIQUOR OFFENCES - BEAUFORT SEA AREA



SOURCE: Table G2, Appendix I

IV. Population Shifts

There has been no significant increase in population or shifts in population as a result of offshore exploration. It has been reported that a few families have returned to Tuktoyaktuk and a small number of southerners have purchased lots from the Hamlet Council. (See Table A, Appendix 1).

D. INFORMATION/LIAISON/COMMUNITY RELATIONS

I. Information Program

Dome/CanMar continued and expanded the Information Program in 1979 resulting in an apparent improvement in communications.

1. The Beaufort Sea Community Advisory Committee

The Company continued to sponsor the Beaufort Sea Community Advisory Committee. To improve BSCAC operations an Information Co-ordinator, resident in Inuvik, was contracted to improve liaison and dissemination of information.

In the past there has been a communications gap between BSCAC members and the Community Councils/HTAs to whom they were to report. To reinforce this reporting relationship the method of issuing per diem payments to members was changed. In 1979 some members received their per diem payments from the Council or HTA which they represented.

The desired effect of these two changes was to speed up information dissemination to members and to improve communications between the BSCAC and communities. Information dissemination was speeded up but it is not known if communications improved.

The Committee as a whole made two (2) complete community tours and met with company officials once. The Committee also toured development and production operations at Cook Inlet in order to familiarize themselves with offshore work in the development and production stages.

A sub-Committee of BSCAC members was formed to assist in the planning and preparations for under ice oil spill experiments. Some of the members also attended an environmental workshop in Fairmont, British Columbia.

2. Other Information Mechanisms

Dome/CanMar field workers visited the Beaufort Sea communities nine (9) times in 1979.

Date	Tour participants
1. January 8, 1979	Operations Manager, Employee Relations Manager, and Northern Relation Coordinator
2. February 9, 1979	Northern Employee Relations Officer
3. April 17, 1979	Beaufort Sea Advisory Committee tour with support from four Dome/CanMar people; Operations Manager, Environmental Protection Manager, Research Worker, and Northern Relations Coordinator.
4. April 17, 1979	Northern Employee Relations Officer and two crew managers from Challenger Drilling and Mercator Enterprises Ltd.
5. June 20, 1979	Employee Relations Officer and Northern Relations Coordinator.
6. July 27, 1979	Northern Relations Coordinator.
7. August 22, 1979	Aklavik Enterprises Ltd., CanMar Environment Field Worker, BSCAC Information Coordinator.
8. October 8, 1979	BSCAC tour with support from CanMar: Vice President, Environment Protection Manager, Environment Field Worker, Northern Employee Relations Officer, and Northern Relations Coordinator.
9. December 2, 1979	Northern Relations Officer and two Crew Managers from Mercator Enterprises and Challenger Drilling Ltd.

In addition to Dome/CanMar representatives visiting the communities, thirteen groups of people from the Beaufort Sea Communities toured company operations. The tours were aimed at acquainting areas residents with the many aspects of offshore oil exploration. Informants in Coppermine indicated that more frequent visits of CanMar personnel to the settlement improve information flow.

Date	Number	Group
1. July 14, 1979	15	Beaufort Sea Advisory Committee
2. July 22, 1979	13	Coppermine Community
3. July 29, 1979	14	Holman Island Community
4. August 5, 1979	15	Paulatuk Community
5. August 12, 1979	12	Sachs Harbour community
6. August 19, 1979	13	Aklavik Community
7. Sept. 2, 1979	10	Tuk Councillors
8. Sept. 8, 1979	13	Tuk Community
9. Sept. 9, 1979	14	Inuvik Hunters and Trappers
10. Sept. 14, 1979	18	Tuk Teachers and others
11. Sept. 29, 1979	16	Inuvik Clergy
12. Oct. 13, 1979	15	Beaufort Advisory Committee
13. Nov. 4, 1979	10	Inuvik Group

Various other groups from southern Canada were also given tours of the operations.

Dome/CanMar continued to operate the Information Centre in Tuktoyaktuk this year, on a part time basis, and 12 issues of the CanMar Bulletin were published. The Company's practice of attending Tuktoyaktuk Council meetings continued and Company fieldworkers attended some council meetings in other communities. To help keep people in the communities informed of research activities local residents were included in various projects as observers and monitors.

3. Community Relations and Support

Dome/CanMar continued, in 1979, to support community oriented action designed to enhance the economic benefits offered through employment and local purchasing of supplies.

a) Recreation and Entertainment

Logistics support was provided to participants from the costal communities attending the Northern Games. Donations and support was given in support of the July 1st Sports Day in Tuktoyaktuk and Kids Day (September 2). The Company also provided helicopter rides for the children of Tuktoyaktuk. Transportation assistance was given to school teams.

In co-operation with the Hudson's Bay Company, Dome/Canmar sponsored a fashion show. The money raised went to local projects.

b) Social Programs

The Company reports it continued to enhance its dry camp policy in 1979, following the pattern of previous years.

The Special Leave Policy which allows hunters and trappers to take extended periods of leave to go out on the land was continued in 1979. During the drilling season at least 4 employees took advantage of the policy provisions.

Support in the form of materials and supplies was provided to the alcohol committee in Tuktoyaktuk for the renovation of a building to be used as an AA Centre. Transportation was also provided for the Committee.

Transportation was provided for 15 delinquent teenagers and their counsellors to assist in a back-to-the-land type rehabilitation project.

The 1978 review indicated a need for Day Care facilities in Tuktoyaktuk to enable more women to take advantage of employment opportunities. In 1979 Dome/CanMar assisted the Day Care Centre by arranging to have hot meals available to the children as well as cold snacks, lunches, a crib and mattresses. Female employees were encouraged to use the facility.

The Tuktoyaktuk Hunters' and Trappers' association was compensated for inconvenience caused by keeping the harbour open part of the winter. Imperial Oil and Dome/CanMar each gave the Association \$5,000. A reindeer corral was built for the Canadian Reindeer Company at Atkinson Point because of the herds proximity to the McKinley Bay dredging operations.

4. Company/Territorial Government Liaison

Dome/CanMar officials met with the Government of the Northwest Territories officials in Yellowknife and Inuvik to review problems in the social area and to review the Company's Social Economic Action Plan. The Territorial Government and the Company also co-operated in preparing an infrastructure study "Beaufort Sea Development - An Analysis of Future Infrastructure Requirements". The report documents existing infrastructure and future requirements for future offshore oil and/or gas developments.

E. CONCLUSIONS

1. In 1979 Dome/CanMar, as in previous years, complied with the Terms set out in the 1979 Memorandum of Understanding.
 2. As a result of Dome/CanMar's exploration program the business community in the Mackenzie Delta, particularly those businesses dependent on exploration, were cushioned from possible serious financial difficulties.
 3. Dome/CanMar has exceeded projected employment forecasts during each operating season.
 4. Social indicators do not indicate any substantial negative social impact in the Beaufort Sea area.
 5. Unless there is a significant change in Dome/CanMar's drilling program or significant occurrence in the Beaufort Sea area there is no need for detailed socio-economic reviews.
-

F. RECOMMENDATIONS

It is recommended that:

1. Because the net social and economic effects of Dome/Canmar's exploration efforts appear to be positive the company should be encouraged to continue operations in the Beaufort Sea.
2. Other resource development companies, as a condition of any permits issued, should be required to develop social and economic programs similar to Dome/CanMar's programs.
3. Indicators of the social and economic impact of Dome/Canmar's operation be monitored by the members of the Resource Development Committee, Government of the Northwest Territories.

APPENDIX I

TABLE A
POPULATION ESTIMATES - BEAUFORT SEA COMMUNITIES

Community	1975	1976	1977	December 1978	December 1979
Aklavik	758	781	791	763	779
Inuvik	2991	3116	3085	2938	2973
Paulatuk	123	127	147	163	168
Sachs Harbour	157	162	169	177	181
Tuktoyaktuk	676	697	684	760	781
Coppermine	746	769	785	803	825
Holman Island	255	263	290	328	337
Total Area	5706	5915	5951	5932	6044

Source: 1975-1976: GNWT (See 1977 Beaufort Sea Drilling Review)
1977 : GNWT (See 1978 Beaufort Sea Drilling Review)
1978-1979: GNWT Population Projections - Statistics Section

TABLE B
POPULATION - INUVIK REGION
1975-1979

1975	-	7,201
1976	-	7,356
1977	-	7,514
1978	-	7,435
1979	-	7,548

Source: 1975: Used some growth rate for 1975 to 1976 as is evident between 1976-77.

1976-1979: G.N.W.T. Population Estimate.

TABLE B
POPULATION - INUVIK REGION
1975-1979

1975	-	7,201
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1979	-	7,548

Source: 1975: Used some growth rate for 1975 to 1976 as is evident between 1976-77.

1976-1979: G.N.W.T. Population Estimate.

TABLE C

SOCIAL ASSISTANCE (ECONOMIC REASON)
CASE MONTHS BY QUARTER 1975-1979

	Aklavik	Coppermine	Holman Island	Inuvik	Paulatuk	Sachs Harbour	Tuktoyaktuk	Totals
1975								
Jan-Mar	46	32	2	47	5	1	61	194 (34)
Apr-Jun	35	33	-	61	4	6	27	180 (32)
July-Sept	44	50	-	70	2	1	36	208 (36)
Oct-Dec								
1976								
Jan-Mar	64	46	1	50	2	1	76	240 (41)
Apr-Jun	35	56	2	33	3	1	56	186 (31)
July-Sept	38	49	-	46	1	1	49	184 (31)
Oct-Dec	27	50	3	31	1	3	24	139 (23)
1977								
Jan-Mar	38	24	2	75	6	2	44	191 (32)
Apr-Jun	22	25	4	51	0	0	57	159 (27)
July-Sept	40	40	4	61	1	5	25	176 (30)
Oct-Dec	56	39	4	71	0	0	47	217 (36)
1978								
Jan-Mar	65	62	2	56	7	2	75	269 (45)
Apr-Jun	51	82	3	43	2	0	54	235 (40)
July-Sept	46	53	3	44	1	0	16	163 (27)
Oct-Dec	47	56	0	44	3	1	44	195 (33)
1979								
Jan-Mar	57	75	3	26	1	1	55	218 (36)
Apr-Jun	35	97	3	21	3	2	44	205 (34)
July-Sept								
Oct-Dec								

Source: G.N.W.T. - Department of Social Services

NOTE: Figures in brackets represent case months/1,000 population.

TABLE D

INUVIK LIQUOR STORE SALES 1972-1979 IN 1972 CONSTANT DOLLARS AND GALLONS

Quarter	1972/1973	1973/1974	1974/1975	1975/1976	1976/1977	1977/1978	1978/1979	79/80
April-June	394,172	403,206	421,344	375,956	388,103	385,084(2346)	366,247(2413)	(2536)
July-Sept.	434,501	438,490	453,314	480,829	466,835	492,078(3020)	435,813(2681)	
Oct.-Dec.	447,172	450,530	484,375	424,818	454,645	487,924(3193)	---(3134)	
Jan.-Mar.	403,117	414,318	371,374	382,828	376,790	384,404(2531)	---(2638)	
TOTALS	1,678,962	1,706,544	1,730,407	1,664,431	1,686,373	1,749,490(11095)	---(10866)	
% Change		+2%	+1%	-4%	-3%	+1%	-2%	
Per Capita Sales				231	229	233 (1.47)	(1.46)	

SOURCE: N.W.T. Liquor Control System.

NOTE: Figures in brackets represent gallonage sold.

TABLE E
ABSOLUTE GALLONS ALCOHOL SOLD - INUVIK LIQUOR 1977-1979

	Spirits	Wine	Beer	Total	Spirits	Wine	Beer	Total	Spirits	Wine	Beer	Total
April	730.04	37.99	33.96	802	669.47	54.14	29.92	753	902.72	52.91	9.38	965
May	725.30	45.39	44.25	814	671.22	36.34	34.68	742	648.73	44.55	52.32	746
June	650.01	34.74	45.16	730	844.59	51.10	21.60	918	743.10	49.61	31.88	825
July	792.04	59.33	43.79	895	710.96	54.65	58.56	825	828.20	52.86	65.43	
August	1194.08	105.38	72.21	1371	1119.70	83.14	63.78	1267				
September	639.76	79.73	33.59	754	506.85	41.64	39.70	589				
October	760.27	76.43	34.67	871	892.34	73.55	61.51	1028				
November	912.30	91.08	42.33	1045	690.15	52.60	29.91	773				
December	1134.74	106.52	39.67	1282	1209.78	77.88	44.76	1333				
January	594.30	31.68	26.95	643	682.94	49.39	29.04	761				
February	777.00	41.89	32.08	851	731.70	52.97	33.26	818				
March	935.17	56.03	36.21	1027	939.44	72.75	46.90	1059				
Total	9845.01	766.19	484.87		9669.14	700.15	493.62		3122.75	199.93	159.01	

TABLE F

LIQUOR SALES - INUVIK LIQUOR STORE
Constant Dollars/Gallonage
Per Capita/Per Thousand

	1975	1976	1977	1978	1979
January/March	\$52	\$52	50	52 (340)	(349)
April/June	\$53	53	51 (312)	49 (325)	(336)
July/September	\$67	63	65 (401)	<u>58 (361)</u>	
October/December	\$59	62	65 (426)	(422)	

- Notes:
1. Constant dollar figures represent sales per capita
 2. Gallonage figures (in brackets) represent sales per 1000 population
 3. Because recent increases in liquor prices have not been across-the-board increases conversions to constant dollars (to show changes in volume sold) have become difficult to do. In 1977 the liquor control system began keeping detailed gallonage records. In order to compare consumption (volume sales over time) both constant dollars and gallonage sales are used.

TABLE G1
ACTUAL CRIMES/QUARTER
BEAUFORT SEA COMMUNITIES

	Aklavik	Inuvik	Sachs Harbour	Tuktoyaktuk/ Paulatuk	Coppermine/ Holman
1975					
Jan-Mar	112	486	6	58	30
Apr-June	152	559	11	76	25
July-Sept	140	657	8	92	63
Oct-Dec	102	509	9	75	37
1976					
Jan-Mar	112	453	7	88	44
Apr-June	144	496	11	45	48
July-Sept	77	543	7	89	61
Oct-Dec	49	468	8	62	59
1977					
Jan-Mar	46	456	5	123	84
Apr-June	62	581	17	86	89
July-Sept	97	769	6	166	116
Oct-Dec	89	787	4	107	82
1978					
Jan-Mar	88	920	8	109	65
Apr-June	92	1288	4	110	91
July-Sept	172	1017	6	154	123
Oct-Dec	137	633	2	152	110

	Aklavik	Inuvik	Sachs Harbour	Tuktoyaktuk/ Paulatuk	Coppermine/ Holman
1979					
Jan-Mar	151	691	3	125	91
Apr-June	196	837	2	164	101
July-Sept	309	1166	0	157	144
Oct-Dec	N/A	N/A	N/A	N/A	N/A

NOTE: The actual number of crimes documented in this table differs from those presented in the 1977 review. The cause of the discrepancy is not known. The figures presented here have been double-checked with the RCMP and are accurate.

TABLE G2
LIQUOR OFFENCES/QUARTER
BEAUFORT SEA COMMUNITIES

	Aklavik	Inuvik	Sachs Harbour	Tuktoyaktuk/ Paulatuk	Coppermine/ Holman	Total
1975						
Jan-Mar	55	280	2	33	1	371 (65)
Apr-June	64	348	5	38	9	464 (81)
July-Sept	74	334	0	42	22	472 (83)
Oct-Dec	32	250	3	37	16	338 (59)
TOTAL	225	1212	10	150	48	1645 (288)
1976						
Jan-Mar	60	269	0	47	16	392 (66)
Apr-June	38	287	1	25	6	357 (60)
July-Sept	29	318	1	30	18	396 (67)
Oct-Dec	12	279	2	16	15	324 (55)
TOTAL	139	1153	4	118	55	1469 (248)
1977						
Jan-Mar	17	261	0	21	28	327 (53)
Apr-June	30	368	6	33	46	483 (81)
July-Sept	41	534	1	59	59	694 (117)
Oct-Dec	14	558	1	25	4	602 (101)
TOTAL	102	1721	8	138	137	2106 (353)
1978						
Jan-Mar	23	702	1	53	25	804 (136)
Apr-June	41	996	1	68	30	1136 (192)
July-Sept	83	629	0	62	44	818 (138)
Oct-Dec	74	346	0	66	31	517 (87)
TOTAL	221	2673	2	249	130	3275 (552)

	Aklavik	Inuvik	Sachs Harbour	Tuktoyaktuk/ Paulatuk	Coppermine/ Holman	Total
1979						
Jan-Mar	65	404	0	46	91	606 (100)
Apr-June	109	592	0	68	101	870 (143)
July-Sept	154	894	0	71	144	1218 (201)
Oct-Dec	N/A	N/A	N/A	N/A	N/A	
TOTAL						

SOURCE: Uniform Crime Reporting System

NOTE: Figures in brackets represent offences/1,000 population

TABLE G3
NON LIQUOR OFFENCES/QUARTER
BEAUFORT SEA COMMUNITIES

	Aklavik	Inuvik	Sachs Harbour	Tuktoyaktuk/ Paulatuk	Coppermine/ Holman	Total
1975						
Jan-Mar	57	206	4	25	29	321 (56)
Apr-June	98	211	6	38	16	369 (65)
July-Sept	66	323	8	50	41	488 (86)
Oct-Dec	70	259	6	38	21	394 (69)
TOTAL	291	999	24	151	107	1572 (275)
1976						
Jan-Mar	52	184	7	41	28	312 (53)
Apr-June	106	207	10	20	42	385 (65)
July-Sept	48	225	6	59	43	381 (64)
Oct-Dec	37	189	6	44	44	320 (54)
TOTAL	243	805	29	164	157	1398 (236)
1977						
Jan-Mar	29	195	5	102	56	387 (65)
Apr-June	32	213	11	53	43	352 (59)
July-Sept	56	235	5	1207	57	460 (77)
Oct-Dec	75	231	3	82	78	469 (79)
TOTAL	192	874	24	344	234	1668 (280)
1978						
Jan-Mar	65	218	7	56	40	386 (65)
Apr-June	51	292	3	42	61	449 (76)
July-Sept	89	388	6	92	79	654 (110)
Oct-Dec	63	287	2	86	79	517 (87)
TOTAL	268	84	18	276	259	2006 (338)

	Aklavik	Inuvik	Sachs Harbour	Tuktoyaktuk/ Paulatuk	Coppermine/ Holman	Total
1979						
Jan-Mar	86	287	3	79	67	522 (86)
Apr-June	89	245	2	96	65	497 (82)
July-Sept	155	272	0	86	95	608 (101)
Oct-Dec	N/A	N/A	N/A	N/A	N/A	N/A N/A
TOTAL	N/A	N/A	N/A	N/A	N/A	N/A N/A

SOURCE: Uniform Crime Reporting System

NOTE: Figures in brackets represent offences/1,000 population

TABLE H

FINAL EMPLOYMENT STATUS OF NORTHERN EMPLOYEES - 1976 - 1979 DRILLING SEASONS

Final Employment Status	Number of Employees by Final Status			
	1976	1977	1978	1979
Resignations	?	66 (35%)	63 (34%)	57 (26%)
Laid Off (completed season)	35	(28%)	83 (39%)	119 (45%)
Fired	?	35 (19%)	19 (10%)	25 (11%)
Casual	?	14 (7%)	0 (0%)	18 (8%)
Unknown	?	0 (0%)	16 (9%)	0 -
Other	?	0 (0%)	4 (2%)	- -
TOTAL	127	187 (100%)	185 (100%)	219 * (100%)

SOURCES: 1977 - Social/Economic/Cultural Report

1978 - Challenger Payroll

- G. Norberg, Personal Communication

* Employees of three companies not used in totals that were included in all other tables.

TABLE I
NUMBER OF EMPLOYEES BY LENGTH OF EMPLOYMENT
1976-1979

	1976	1977	1978	1979
	(June-October)	(May-November)		
< 1 week	19	19	7	(4%)
1 - 2 weeks	21	7	8	(4%)
2 - 4 weeks	18	34	25	(14%)
1 - 2 months	31	41	33	(18%)
2 - 3 months	19	25	30	(16%)
3 - 4 months	11	20	23	(12%)
> 4 months	8	48	56	(30%)
Unknown	-	-	3	(2%)
TOTAL	127	194	185	(100%)

SOURCE: Collins, Mary

TABLE J

LIQUOR SALES TO COPPERMINE IN 1972/1973 CONSTANT DOLLARS

Quarter	1974/1975	1975/1976	1976/1977	1977/1978	1978/1979
April-June	5,214	4,577	3,837	5,120	5,379
July-September	4,848	4,799	3,569	4,135	7,107
October-December	6,451	2,009	3,968	4,827	---
January-March	2,902	2,790	4,917	4,423	---
TOTALS	19,415	14,175	16,291	18,527	12,486
Per Capita		19	21	24	
<hr/>					
Inuvik Actual \$					
	= <u>Coppermine Actual \$</u>				
Inuvik Constant \$	X				

The above formula was used to determine constant dollars for Coppermine since October 1978. This method was used because Sales by Type of liquor sold to Coppermine are not available.

SOURCE: A & A Distributing Limited.