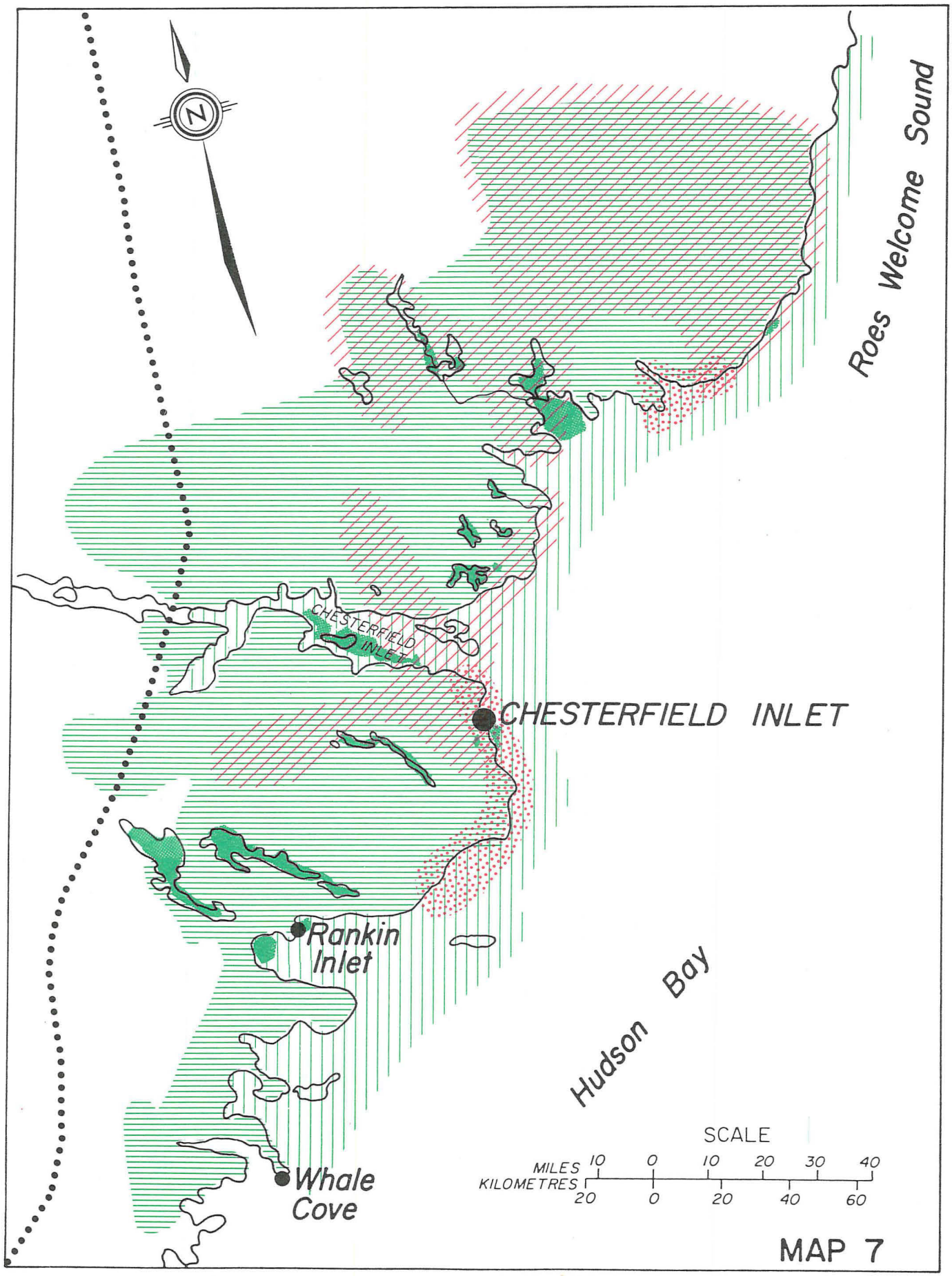


7. Chesterfield Inlet

There is a camp in Daly Bay operated by two families from Chesterfield Inlet and one family from Rankin Inlet.

9.3.2 Trapping

The most intensive trapping area is within 30 to 50 km of the community. Traplines also extend west to McManaman Lake, northwest to Richards Lake, north to Winchester Inlet, around Daly Bay and inland, and along the coast from Bernheimer Bay north to Roes Welcome Sound and inland.

9.3.3 Land Mammal Hunting

Important caribou hunting areas are west along Chesterfield Inlet, the Barbour Bay-McManaman Lake area, the Josephine Lake area, and along the coast from Cape Silumiut north to Daly Bay (Welland 1976). Caribou are hunted in all areas of the land mammal hunting zone (see Map 7).

Wolves are hunted inland, often in conjunction with caribou hunting. Important areas are south of Chesterfield Inlet towards Josephine Lake, north of Chesterfield Inlet towards Fehet Lake, and around Daly Bay.

9.3.4 Wildfowl Hunting

Ducks and geese are hunted along the floe-edge or along the coast from Baker Foreland to Chesterfield Inlet and around Bernheimer Bay. Eggs are collected along the coast as far as Daly Bay (Welland 1976).

9.3.5 Marine Mammal Hunting

Polar Bears

Polar bear are hunted between Cape Silumiut and Daly Bay and in the mouth of Chesterfield Inlet.

Seals

Seals are hunted throughout the marine-mammal hunting zone (Map 7). Most spring hunting of ringed and bearded seals is done along the coast from Baker Foreland to Cape Fullerton and in the mouth of Chesterfield Inlet. Cape Silumiut is an important area for weekend hunting trips. The coast from Rankin Inlet to Cape Fullerton and towards Farther Hope Point in Chesterfield Inlet is an important area for harp seal hunting in summer. Important areas for harbour seal hunting in summer are Cape Silumiut, from Daly to Bernheimer Bay and around Severin Harbour, Ranger Seal Bay, and Barbour Bay in Chesterfield Inlet (Welland 1976).

Whales

Whales are hunted throughout the marine-mammal hunting zone from Corbett Inlet to Daly Bay and to Farther Hope Point and Barbour Bay in Chesterfield Inlet.

Walrus

Walrus are hunted along the coast from Marble Island and Baker Foreland north to Bernheimer Bay; however, walrus are not abundant in this area. The main hunting area in this zone is around Daly Bay. Occasionally Chesterfield Inlet hunters go to Walrus Island off Southampton Island to hunt walrus where they are much more abundant (Welland 1976).

9.3.6 Fishing

Important spring and fall fishing areas are the inland lakes around Cape Silumiut, Chesterfield Inlet, Winchester Inlet, and Daly Bay. Josephine Lake, McManaman Lake, and Diana, Peter, and Meliadine Lakes near Rankin Inlet are also fished (Welland 1976).

Important areas for fishing the spring char runs are the streams and rivers along the coast and along Chesterfield Inlet including the Connery and Lorillard Rivers to the north. Important areas for summer fishing with sea nets are along the coast from Baker Foreland to Winchester Inlet and Daly Bay, and in Chesterfield Inlet west to Big Island (Welland 1976). Other areas fished are in Bernheimer Bay and Rankin Inlet.

Char is the most important fish with some lake trout and whitefish caught in inland lakes. Water bodies with commercial quotas for char in 1976 were: Big River (Barbour Bay) - 20,000 lbs; Chesterfield Inlet (Fish Bay) - 5000 lbs; East Point (Chesterfield Inlet) - 10,000 lbs; Hanaway River (Barbour Bay) - 10,000 lbs; Merle Harbour (Chesterfield Inlet) - 5,000 lbs; Ranger Seal Bay (Chesterfield Inlet) - 25,000 lbs; Robin Hood Bay (Chesterfield Inlet) - 15,000 lbs; Steep Bank Bay (Chesterfield Inlet) - 10,000 lbs; and the Stony Point Area (Chesterfield Inlet) - 15,000 lbs. Of these, Big River, Chesterfield Inlet (Fish Bay), Hanaway River, Ranger Seal Bay, Robin Hood Bay, and the Stony Point area have records of recent commercial harvest. However, most of the water bodies along Chesterfield Inlet are fished by commercial fishermen from Baker Lake and Rankin Inlet, except for the areas that are very close to the community of Chesterfield Inlet.

9.4 Harvest Patterns

Spring is an important season for the harvest of caribou, wildfowl and polar bear, and for seal hunting and fishing. Summer is important for caribou, wildfowl, seal, whale and walrus hunting and fishing. Fall is important for trapping; caribou, polar bear, and ringed seal hunting; and fishing. Winter is important for trapping and caribou, eider duck, polar bear, and ringed seal hunting (Table 9-2).

9.5 Harvest Data

(See Table 9-3).

9.6 Commercial and Domestic Importance

9.6.1 Commercial Importance

Fox pelts, seal skins, and polar bear skins provide some income for the Chesterfield Inlet Inuit although they are not major sources of income (Table 9-4).

Sales of fish to the local co-op and perhaps some to the Rankin cannery provide income for Chesterfield Inlet commercial fishermen. Using an average annual commercial harvest of 17,778 lbs (Table 9-3), and assuming that fishermen sell fish for $0.50/lb, then the expected annual income from the sale of fish would be $8,889 and the per-capita income would be $30.

9.6.2 Domestic Importance

Caribou meat is the principal food of all Chesterfield Inlet people. Seal meat is also very important, as are fish, and to a lesser extent, wildfowl (Table 9-5).

9.7 Pipeline Implications

The prime route avoids the Chesterfield Inlet resource-use zone and the coastal alternate traverses the western fringe of the caribou hunting zone.

The location of an offloading-transfer facility near the community and water traffic in Chesterfield Inlet could conflict with resource harvest in the area. The mouth of the Inlet is a prime area for polar bears, ringed seal, and bearded seal hunting; it is also important for whale and harp seal hunting. Domestic and commercial char fishing, seal hunting, and caribou hunting occur up Chesterfield Inlet as far as Barbour Bay. Water traffic and staging activities in the Inlet could interfere with

Table 9-2. Harvest patterns - Chesterfield Inlet.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept. to Nov)
Trapping[2,4] Arctic & Colored Fox	Primary season ends in Mar.	No trapping.	No trapping.	Starts in Nov.
Land Hunting: Caribou[1]	Hunting inland.	Hunting inland.	Hunting by boat along coast.	Hunting inland.
Wolf[1]	Often hunted inland in association with caribou hunting.			Hunting inland.
Wildfowl Hunting: Ducks & Geese[1]	Eider ducks hunted along floe-edge.	Hunted at floe-edge.	Hunted along shore.	Stops in Sept.
Egg Collecting[1]		Collected along coast & on islands.		
Ptarmigans[1]	Hunted in all seasons usually in conjunction with hunting or trapping.			
Marine Hunting: Polar Bear[3]	Floe-edge hunting.	Floe-edge hunting.	No hunting.	Hunted as they migrate along coast.
Ringed & Bearded[1] Seals	Hunted year-round.	Most important season hunted on ice & in birth lairs.		

Table 9-2. Harvest patterns - Chesterfield Inlet.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept. to Nov)
Harbour Seal[1]			Hunted as they haul out on rocks in bays & rivers.	
Harp Seal[1]			Hunted as they migrate into area.	
Marine Hunting: Beluga & Narwhal[1]			Hunted as they migrate through area.	
Walrus[1]		Hunted at floe-edge or on ice.	Hunted in open-water from Peterhead boats.	Hunted at floe-edge or on ice.
Fishing[1]		Net fishing & Jigging on inland lakes fishing in streams & along coast for char.	Net set in sea-some fishing in inland lakes.	Fishing on inland lakes most important commercial season.

[1] Welland 1976.

[2] inferred from analysis of the pattern in Gjoa Haven (see Table 7-2).

[3] inferred from analysis of the pattern in Whale Cove (see Table 11-2).

[4] inferred from analysis of the pattern in Rankin Inlet (see Table 10-2).

Table 9-3. Harvest data - Chesterfield Inlet.[1]

	TRAPPING			LAND MAMMAL HUNTING		WILDFOWL HUNTING			MARINE MAMMAL HUNTING							FISHING
	ARCTIC FOX	COLOURED FOX	WOLVERINE	CARIBOU	WOLF	GEESE	DUCK	PTARMIGAN	POLAR BEAR[3]	RINGED SEAL	BEARDED SEAL	HARP SEAL	BELUGA	NARWHAL	WALRUS	ALL SPECIES[3]
63-64	328			100		23	62	69	8	134						
64-65	766			213		23	94	157	1	648						
65-66	87	2		301	1	27	24	212	6	357						
66-67	61	2		197	1	59	97	329	3	206						
67-68	155	1		107	2	30	116	295	4							
68-69	73			58		11	85	85	5							
69-70				216		38	101	161	6	249[4]						
70-71				118		61	151	241	2							22,000 lbs
71-72	384	1		84	1	30	88	132	5	82						1,720 lbs
72-73					5				5	417						
73-74	409				7				5	211						
74-75	381[2]								8[2]	413[2]						18,112 lbs
75-76																12,581 lbs
76-77																18,418 lbs
Total All Years	2644	6		1394	17	302	818	1681	58	2717						
Avg. All Years	294	1.5		155	2.8	34	91	187	4.8	302						

Table 9-3. Harvest data - Chesterfield Inlet.[1]

	TRAPPING			LAND MAMMAL HUNTING		WILDFOWL HUNTING			MARINE MAMMAL HUNTING							FISHING
	ARCTIC FOX	COLOURED FOX	WOLVERINE	CARIBOU	WOLF	GEESE	DUCK	PTARMIGAN	POLAR BEAR[3]	RINGED SEAL	BEARDED SEAL	HARP SEAL	BELUGA	NARWHAL	WALRUS	ALL SPECIES[3]
Total 69-70 to 74-75	1174			418	13	129	340	534	31	1372						71,111[6] lbs
Avg.	391			139	4.3	43	113	178	5.2	274						17,778[6] lbs
High Year	409			216	7	61	151	241	8	417						22,000 lbs

1 All data from Usher 1975, unless otherwise indicated.

2 NWT Game Management Division.

3 Polar Bear quota for Chesterfield Inlet is 8.

4 Palmer 1973.

5 Commercial records: **all char** (R. Peet, personal communication).

6 Total and average do not include the 1971072 to 1973-74 period.

Table 9-4. Expected annual income from sales of fur - Chesterfield Inlet.

	Arctic Fox	Polar Bear	Ringed Seal	Total
Average Annual Harvest (69-70 to 74-75)[1]	391	8	274	
Average NT Pelt Price (74-75)[2]	$17.59	$325[4]	17.10	
Expected Income	$6878	$2600	$4685	$14,163
Per Capita Income	$23	$9	$16	$48

[1] from Table 9-3, except for polar bear which is based on allotted quota of 8.

[2] from Fur Traders Record Book - NWT Govt.

[3] based on a population of 294 in 1974.

[4] community polar bear skin price for 1974-75 from Smith and Stirling (1976).

harvesting activities or degrade the fish and marine mammal habitat.

Any interference with migrations or movements of the Kaminuriak caribou herd caused by construction along either the prime route or the coastal alternate in southern Keewatin could conflict with caribou harvest in the Chesterfield Inlet caribou-hunting zone.

Table 9-5. Estimated annual inputed income from major food sources - Chesterfield Inlet.

	Caribou	Geese	Ducks	Ptarmigan	Ringed Seal	Fish	Total
Average Annual Harvest (69-70 to 74-75)[1]	139	43	113	178	274	ND	
Edible lbs/Animal[2]	100	3.5	2.6	0.9	45		
Edible Meat (lbs)	13,900	151	294	160	12,330		26,835
Imputed Value/lb[3]	$3.00	$2.00	$2.00	$2.00	$3.00		
Imputed Value	$41,700	$301	$588	$320	$36,990		$79,899
Per Capita alue[4]	$142	$1.00	$2.00	$1.10	$126		$272

[1] from Table 9-3.

[2] from Usher 1976, Bissett 1974, Thompson 1976.

[3] adapted from Usher 1976.

[4] based on a 1974 population of 294.

ND No Data.

10. RANKIN INLET

10.1 The Community

Rankin Inlet was established in 1955 when North Rankin Inlet Mines decided to mine nickel-copper ore there. The mine opened in 1957 and closed in 1962 after the ore body was exhausted.

The opening of the mine drew people to Rankin Inlet from camps and other communities in Keewatin. When the mine closed, many moved back to their old communities or settled in newly established communities such as Whale Cove. The estimated population in 1976 was 840; it has increased substantially in the last decade, primarily due to the territorial government's designation of Rankin Inlet as an administrative centre for the District of Keewatin. In 1974, the population was 645; in 1971, 537; in 1969, 460; and in 1966, 429. In 1971, 94% of the population was Inuit.

Rankin Inlet is currently served by five flights a week from Churchill. Air connections from Churchill are to Winnipeg. Marine transportation is supplied by the Northern Transportation Company Limited operating out of Churchill. The shipping season extends from July to September (Canada North Almanac 1976).

10.2 The Economy

The economy of Rankin Inlet is the most wage-oriented of any community in Keewatin. It has a commercial fishery and cannery, a crafts industry (including parkas, sewn goods, boots, soapstone carvings, and ceramics), and a tourist lodge. It is also the NWT Government administrative centre for the District of Keewatin. The cannery buys fish from 40 or 50 fishermen and employs 15 to 20 people for 10 months of the year. The crafts industry is managed by the Kissarvik Cooperative. The tourist lodge and outcamps at Daly Bay, Ferguson Lake, and Parker Lake are managed by Siniktarvik Ltd (Welland 1976; Friesen 1975; Siniktarvik 1976?).

There were 90 holders of General Hunting Licences in 1974-75; the number has fluctuated over the last decade (Table 10-1). Thirty-four commercial fishing licences were issued to Rankin Inlet fishermen in 1975 (D. Dowler, personal communication).

Welland (1976) reports that recently some people have started to hunt or trap on a full-time basis and a few others hunt or trap full-time in the winter.

Table 10-1. Number of General Hunting Licences issued - Rankin Inlet.

1974-75	90	1970-71	62	1966-67	84
1973-74	99	1969-70	66	1965-66	76
1972-73	91	1968-69	61	1964-65	71
1971-72	69	1967-68	64	1963-64	137

Source: NWT Govt.

10.3 Resource-Use Areas

10.3.1 General Areas

Generally, the extent of caribou hunting defines the inland boundary of the Rankin Inlet resource-harvest zone while the extent of seal and whale hunting defines the marine boundary. The zone extends 230 km northeast and 330 km south along the coast, 280 km southwest towards the Tha-anne River, 250 km west to Ferguson Lake, and 220 km northwest past Chesterfield Inlet (see Map 8).

Because of the wage employment at Rankin Inlet, spring and summer camping holidays and weekend hunting trips are very important to most families (Welland 1976). Popular camping areas are around Baker Foreland and Scarab Point, the Meliadine and Diana Rivers, Barbour Bay, and the Mirage Islands, Cape Jones, and Corbett Inlet. A camp at Daly Bay is operated year-round by one family from Rankin Inlet and two families from Chesterfield Inlet.

10.3.2 Trapping

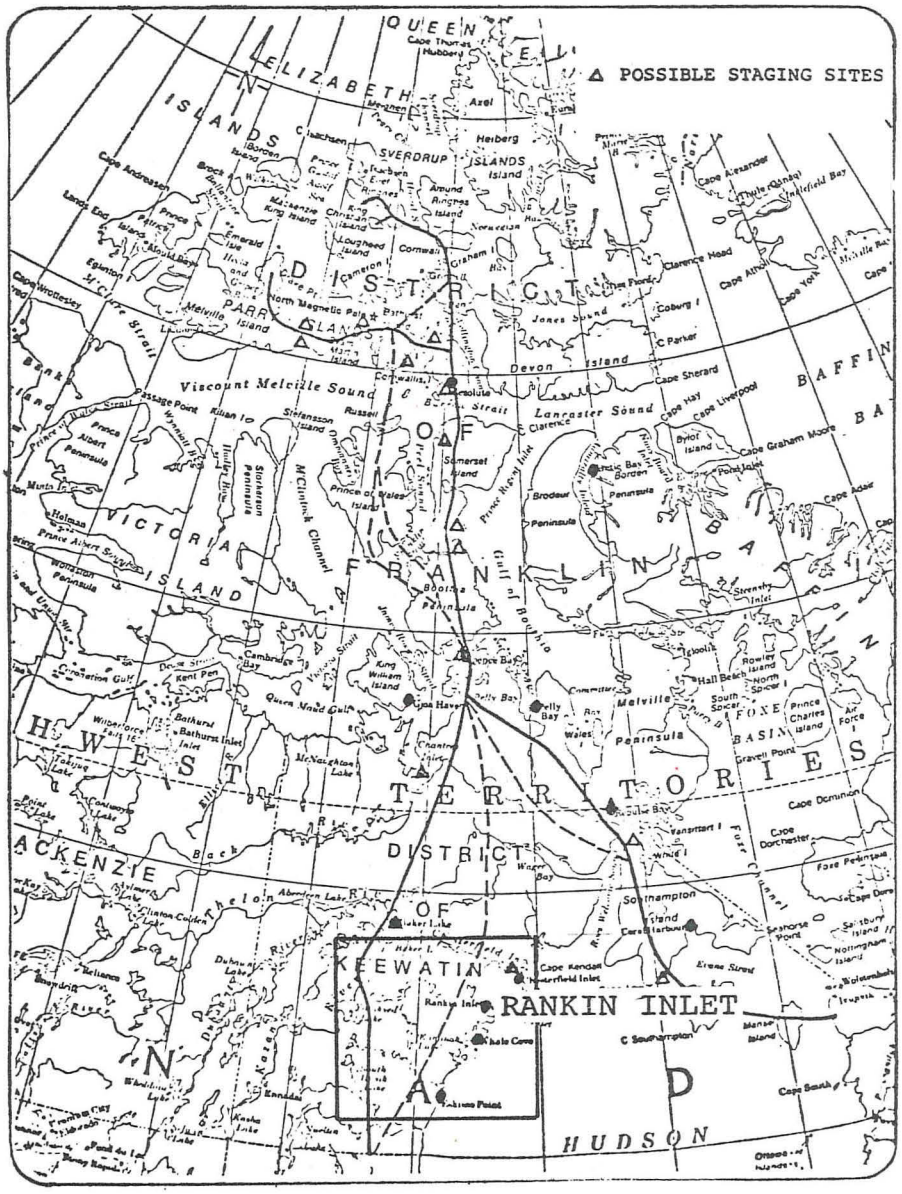
The most important trapping areas are: along the coast from Cape Jones to Baker Foreland; up the Meliadine and Diana Rivers and towards Machum Lake, McManaman Lake, Gibson Lake, and Barbour Bay; and north of Chesterfield Inlet south of Armit and Fehet Lakes. Secondary trapping areas are: along the coast from Cape Jones to Dawson Inlet and from Baker Foreland to the south shore of Chesterfield Inlet; up the Quoich River; and towards Banks, Kaminuriak, and Kaminak Lakes. Remote trapping, based from camps, occurs in the Daly Bay, Ferguson Lake, and Eskimo Point area (Welland 1976).

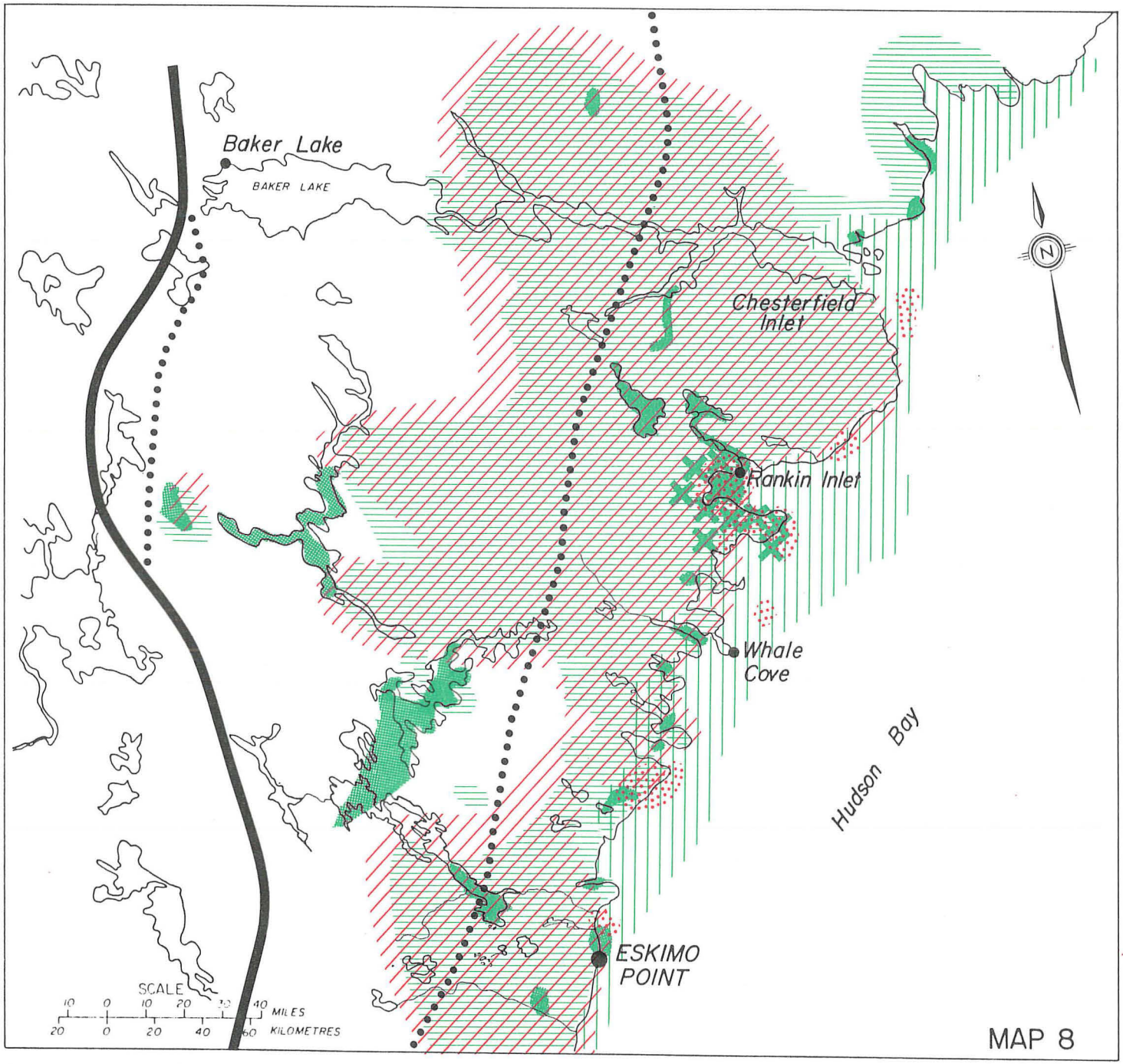
— LEGEND —

- Marine mammal hunting
  - seal
  - whale
  - walrus
  - polar bear
- Land mammal hunting
  - caribou
  - muskox
  - wolf
- Trapping
  - wolverine
  - arctic hare
- Wildfowl
- Fishing
- Trapline boundaries
  - almost exclusively fox

Proposed pipeline alignment
- Prime route
- Alternate route

- Community location





8. Rankin Inlet

10.3.3 Land Mammal Hunting

The most intensive caribou hunting occurs north of Chesterfield Inlet and Barbour Bay to the north and northwest, to the Gibson Lake - upper Diana River area on the west, to the upper Wilson River and Mistake Bay on the southwest and south, and along the coast to Baker Foreland. The best winter-hunting area is the Gibson Lake-Peter Lake area. The outer limits of the caribou hunting area are the Armit Lake area to the north, the Quoich River to the northwest, Kaminuriak and Ferguson Lakes to the west, Kaminak Lake to the southwest, the Tha-anne and Thlewiaza Rivers to the south, and the Daly Bay area to the northeast (Welland 1976).

Wolves are hunted in the caribou-hunting areas to the west, northwest, and north of the community. The major wolf-hunting area is the Gibson-Peter Lakes area (Welland 1976).

10.3.4 Wildfowl Hunting

The major wildfowl hunting areas are around Scarab Point, Rankin Inlet, and the Pengertot Peninsula. Remote areas are Daly Bay, the mouth of Chesterfield Inlet, Bibby Island and Dawson Inlet, and around Eskimo Point. Eggs are collected along the coast and on islands from Dunne Foxe Island and Pistol Bay north to Baker Foreland. Ptarmigan are hunted near the coast on trips inland (Welland 1976).

10.3.5 Marine Mammal Hunting

Polar Bears

Polar bear hunting is limited to the area along the coast from Wilson Bay north to Baker Foreland and a remote area south of Eskimo Point.

Seals

Seals are hunted throughout the marine-mammal hunting zone (Map 8). The most intensively hunted area for ringed and bearded seals is from Whale Cove north to Baker Foreland, extending 15 to 50 km offshore. Harbour seals are hunted in freshwater areas at the heads of bays from Bibby Island north to Baker Foreland (Welland 1976).

Whales

Whales are hunted throughout the marine-mammal hunting zone from south of Eskimo Point to north of Daly Bay.

Walrus

Walrus are hunted along the coast and offshore from Bibby Island to Baker Foreland although they are not abundant in this area. People occasionally hunt walrus in Roes Welcome Sound and at Walrus Island near Southampton Island (Welland 1976).

10.3.6 Fishing

Fishing is a widespread activity in the Rankin Inlet resource-harvest zone. Char, lake trout, and whitefish are important domestic and commercial species. Popular inland domestic fishing areas are McManaman, Twin, Meliadine, Peter, and Diana Lakes, lakes at the heads of Corbett Inlet and Pistol Bay, and lakes on the Pangertot Peninsula. There is also some domestic inland fishing in Fehet Lake north of Chesterfield Inlet. Important domestic char fishing areas are rivers and bays in the Rankin Inlet-Meliadine River-Diana River area, the Pistol Bay-Corbett Inlet area, and around Nevill Bay and Dawson Inlet. Remote areas (Winchester Inlet and near Eskimo Point) are fished less often (Welland 1976).

Water bodies in the area that had commercial quotas in 1976 are listed in Table 10-2.

Many of the commercial water bodies, especially those close to other communities, may be fished by residents of these communities, who may in turn sell their catch to the Rankin cannery. For example, the cannery receives fish from Baker Lake Inuit who fish along Chesterfield Inlet and on some of the larger inland lakes close to Baker Lake.

The Diana River near Rankin Inlet is sport fished for char and the Meladian River (south of Peter Lake) is sport fished for lake trout and grayling. The Rankin Inlet Lodge runs fishing excursions in these areas. There is sport fishing for char at the Daly Bay outcamp and for lake trout, whitefish, and grayling at the Ferguson Lake and Parker-Kaminuriak Lakes outcamps (Siniktarvik 1976?)

10.4 Harvest Patterns

Spring is an important season for hunting caribou, wildfowl, polar bear, and seal and for fishing. Summer is important for hunting caribou, wildfowl, seal, whale, and walrus and for fishing. Fall is important for trapping; caribou, polar bear, and seal hunting; and fishing while winter is important for trapping and caribou, polar bear, and seal hunting (Table 10-3).

10.5 Harvest Data

(See Table 10-4).

Table 10-2. Water bodies in the Rankin Inlet area with 1976 commercial quotas.

Water body	Char Quota (lbs)	Lake Trout & Whitefish Quota (lbs)	Recent Commercial Harvest Records
Banks Lake		18,000	
Big River (Barbour Bay)	20,000		1974
Blakely Lake		5,000	
Carr Lake		13,000	
Copperneedle River	10,000		1973,74,75
Corbett Inlet	10,000		1973,74,75,76
East Point (Ch. Inlet)	10,000		
Ferguson River	40,000		1972,73,74,75,76
Hanaway River	10,000		1974
Kaminak Lake		50,000	1970,71,73,74,75,76
Kaminuriak Lake		100,000	1972,73,74
Machum Lake		10,000	
MacQuoid Lake		13,000	
Mistake Bay	5,000		1973-74
O'Neil Lake		7,000	1973
Peter Lake		100,000	1976
Pistol Bay	5,000		
Quartzite Lake		12,000	
Ranger Seal Bay (Ch. Inlet)	15,000		1974
Rankin Inlet Area	30,000		1970,71,74,75,76
Robin Head Bay (Ch. Inlet)	15,000		1974
Savage Lake		3,500	
Steep Bank Bay (Ch. Inlet)	10,000		
Stony Point Area (Ch. Inlet)	15,000		1974,75,76
Wallace River	5,000		1974
Wilson Bay	20,000		

Table 10-3. Harvest patterns - Rankin Inlet.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept. to Nov)
Trapping[1,2]	Primary season.	No trapping.	No trapping.	Starts in Nov.
Land Hunting: Caribou[1]	Hunted inland.	Hunted inland.	Hunted by boat along coast.	Hunted inland.
Wolf[3]	Often hunted inland in association with caribou hunting.			
Wildfowl Hunting: Duck & Geese[1]	Eider ducks hunted along floe-edge.	Hunted at floe-edge & along coast.	Hunted along coast.	Stops in Sept.
Egg Collecting[1]		Collected along coast & on islands.		
Ptarmigan[3]	Hunted in all seasons.			
Marine Hunting: Polar Bear[4]	Floe-edge hunting.	Floe-edge hunting.	No hunting.	Hunted as they migrate along coast.
Ringed & Bearded Seals[1]	Some hunting at floe-edge.	Hunted at floe-edge or at birth lairs.	Hunted by boat.	Some hunting at floe-edge.

Table 10-3. Harvest patterns - Rankin Inlet.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept. to Nov.)
Harp Seal[1]			Hunted as they migrate through area.	
Beluga[1]			" " "	
Walrus[1]			Some hunted from Peterhead boats.	
Fishing[1]	No fishing.	Inland fishing jigging & net fishing char run fished.	Nets set in sea some inland fishing.	Inland fishing jigging & net fishing - most important commercial season char run fished early-inland lakes fished later.

[1] Welland 1976.

[2] inferred from analysis of the pattern in Gjoa Haven (see Table 7-2).

[3] inferred from analysis of the pattern in Chesterfield Inlet (see Table 9-2).

[4] inferred from analysis of the pattern in Whale Cove (see Table 11-2).

Table 10-4. Harvest data - Rankin Inlet and Whale Cove.[1]

	TRAPPING			LAND MAMMAL HUNTING		WILDFOWL HUNTING			MARINE MAMMAL HUNTING							FISHING	
																ALL SPECIES	
	ARCTIC FOX	COLOURED FOX	WOLVERINE	CARIBOU	WOLF	GEESE	DUCK	PTARMIGAN	POLAR BEAR[3]	RINGED SEAL	BEARDED SEAL	HARP SEAL	BELUGA	NARWHAL	WALRUS	(lbs) RANKIN INLET AREA[6]	(lbs) INLAND LAKES AREA[7]
63-64	3877	4		1123	3	217	204	889	10	1875			176				
64-65	1911	2		691	1	92	209	1178	8	1445							
65-66	351			783	5	103	205	948	5	405						16,645	6,185
66-67	2049			879		129	130	825	5	155						35,000	1,116
67-68	1209			279	1	76	148	761	8	62						7,471	6,963
68-69	415			498	14	66	90	492	7							5,733	7,701
69-70	369			933	2	162	205	916	11	190[4]						25,244	20,000
70-71	1941			866		270	228	848	10							11,214	101,055
71-72	900			787	1	225	118	1003	4	271	9[5]		103[5]		127[5]	25,453	40,238
72-73	386				1				16	452							51,388
73-74	2277[2]				3				15[2]	211[2]						76,062	56,874
74-75	2344[2]								17[2]	321[2]						19,218	
75-76																17,391	2,001
76-77																16,685	45,362
Total All Years	18029			6839	31	1340	1537	7860	116	5387						256,116	336,882
Avg. All Years	1502			760	34	149	171	873	9.7	539	9		103		127	23,283	33,688

Table 10-4. Harvest data - Rankin Inlet and Whale Cove.[1]

	TRAPPING			LAND MAMMAL HUNTING		WILDFOWL HUNTING			MARINE MAMMAL HUNTING							FISHING	
																ALL SPECIES	
	ARCTIC FOX	COLOURED FOX	WOLVERINE	CARIBOU	WOLF	GEESE	DUCK	PTARMIGAN	POLAR BEAR[3]	RINGED SEAL	BEARDED SEAL	HARP SEAL	BELUGA	NARWHAL	WALRUS	(lbs) RANKIN INLET AREA[6]	(lbs) INLAND LAKES AREA[7]
Total 69-70 to 74-75	8217			2586	7	657	626	2767	73	1445						191,267	314,917[8]
Avg.	1370			862	1.8	219	209	922	12	289						27,324	52,486[8]
High Year	2344			933	3	270	228	1003	17	452						76,062	101,055

1 All data from Usher 1975, unless otherwise indicated and is for Rankin Inlet plus Whale Cove.

2 NWT Game Management Division for Rankin Inlet plus Whale Cove.

3 Polar Bear quota for Rankin Inlet is 8.

4 Palmer 1973 for Rankin Inlet plus Whale Cove.

5 Mean from 2 years of records for bearded seal and 3 years for walrus and belugas from RCMP Game Records for 1962-1971 (Smith and Taylor 1977).

6 Commercial records for Rankin Inlet area: char and some lake trout (R. Peet, personal communication).

7 Commercial records for inland lakes (Kaminuriak, Kaminak, O'Neil, Savage, etc): mostly lake trout and whitefish and some char (R. Peet, personal communication).

8 Total and average do not include 1974-75 or 1975-76.

10.6 Commercial and Domestic Importance

10.6.1 Commercial Importance

Sales of fish and to a lesser extent, fox pelts, polar bear skins, and seal skins provide some income for the Rankin Inlet Inuit although, because of the wage employment available, they are not the most important sources of income. Table 10-5 gives a summary of expected annual income from sales of fur for Rankin Inlet plus Whale Cove.

Table 10-5. Expected annual income from sales of fur - Rankin Inlet plus Whale Cove.

	Arctic Fox	Polar Bear	Ringed Seal	Total
Average Annual Harvest (69-70 to 74-75)	1370	20	289	
Average Pelt Price - NWT (74-75)[2]	17.59	$475[4]	$17.10	
Expected Income	$24,098	$9500	$4,942	$38,540
Per Capita Income[3]	$27	$11	$5.60	$43

[1] From Table 10-3, except for polar bear which is based on an allotted quota of 8 for Rankin Inlet and 12 for Whale Cove.

[2] From Fur Traders Record Book - NWT Government.

[3] Based on a 1974 population of 645 for Rankin Inlet and 243 for Whale Cove.

[4] Community polar bear skin price for Rankin Inlet for 1974-75 from Smith and Stirling (1976).

Welland (1976) notes that trapping is the primary winter occupation for only a few people.

Based on an average annual harvest for the Rankin Inlet and inland lakes areas of 79,810 pounds (Table 10-4) and assuming fishermen receive $0.50/lb for the fish they sell, the expected annual income would be $39,905. Assuming that Rankin

Inlet commercial fishermen fished all these water bodies, the per capita income for Rankin Inlet would be $62.

According to Friesen (1975), the Rankin Inlet commercial fishery is the oldest, largest, and least successful in the Arctic. It is owned and managed by the NWT Government and was started as an economic development project after the mine closed. The plant currently handles up to 250,000 lbs of fish per year and the operators have requested a quota of 300,000 or 350,000 lbs per year. The plant's gross sales in 1974-75 were $120,000 and its operating costs were about $250,000. About $125,000 was paid out to 40 or 50 commercial fishermen in 1974-75. The plant employs 15 to 20 people for 10 months per year. The fishermen paid are not only from Rankin Inlet; fishermen from Baker Lake, Whale Cove, Chesterfield Inlet, and Eskimo Point also sell part of their catch to the cannery.

10.6.2 Domestic Importance

According to Welland (1976), caribou is the most important food; seals and fish are also important. Belugas are hunted mainly for their skin (muktuk) which is a favourite food. Table 10-6 provides an estimate of the relative importance of food sources for Rankin Inlet plus Whale Cove.

10.7 Pipeline Implications

The prime route avoids the Rankin Inlet resource-use zone while the coastal alternate traverses the core of the inland part of this zone. Both routes, though, could interfere with harvest activities or degrade fish and marine mammal habitats as a result of water traffic in Chesterfield Inlet. The Inlet is an important commercial char fishing area and a remote marine mammal hunting area for Rankin Inlet.

Specifically, the coastal alternate may conflict with resource harvest in the following key areas:

1. South of Chesterfield Inlet. This area is important for caribou hunting as well as spring and fall migrations and post calving movements of the Kaminuriak herd. Construction in spring, summer, and fall could interfere with caribou movements and migrations.

Table 10-6. Estimated annual inputed income from major food sources - Rankin Inlet plus Whale Cove.

	Caribou	Geese	Ducks	Ptarmigan	Ringed Seal	Fish	TOTAL
Average Annual Harvest (69-70 to 74-75)	$862	219	209	922	289	ND	
Edible lbs/ animal[2]	100	3.5	2.6	0.9	45		
Edible Meat (lbs)	86,200	767	543	830	13,005		101,344
Imputed Value/ lb[3]	3.00	$2.00	$2.00	$2.00	$3.00		
Imputed Value	$285,600	$1533	$1087	$1660	$39,015		$301,894
Per Capita Value[4]	$291	$1.70	$1.20	$1.90	$44		$340

[1] From Table 10-3.

[2] From Usher 1976, Bissett 1974, Thompson 1976.

[3] Adapted from Usher 1976.

[4] Based on a 1974 population of 645 for Rankin Inlet and 243 for Whale Cove.

ND No Data.

2. Barbour Bay. The coastal alternate crosses a major tributary to Barbour Bay, an important commercial char fishing area. Construction may interfere with char migrations in this tributary, may degrade fish habitat, and may interfere with fishing activities.

3. Peter Lake. The coastal alternate crosses tributaries of Peter Lake, which is important for domestic fishing. Construction activities may degrade fish habitat in Peter Lake and pipeline employee/local fishermen conflicts may occur here.

11. WHALE COVE

11.1 The Community

Whale Cove was established in 1959 for workers no longer required at the Rankin Inlet mine and for survivors of inland hunting camps in a region with plentiful animal resources. The main purpose of this program was to assist the inland people in adapting their technology to the use of coastal resources. A commercial whale fishery was started in 1961 but was forced to close in 1970 when excessive mercury levels were found in white whale meat (Welland 1976; Canada North Almanac 1976; Sergeant and Brodie 1975).

The estimated population in 1974 was 243; it has slowly increased over the last decade. In 1971, it was 238; in 1969, 179; and in 1966, 181. In 1971, 96% of the population was Inuit.

Whale Cove is currently served by two flights a week from Churchill; air connections at Churchill are to Winnipeg. Marine transportation is supplied by the Northern Canada Transportation Limited operating out of Churchill. Shipping access is possible only in September (Canada North Almanac 1976).

11.2 The Economy

Almost all families in Whale Cove depend on the land and sea for their living and everyone depends on country food for the main part of their diet (Welland 1976). Some wage employment is available through the Issatik Cooperative trading post and the NWT Government.

There were 32 holders of General Hunting Licences in 1974-75; the number has stayed about the same for the last decade (Table 11-1). Eight commercial fishing licences were issued to Whale Cove commercial fishermen in 1975 (D. Dowler, personal communication).

Table 11-1. Number of General Hunting Licences issued - Whale Cove.

1974-75	32	1970-71	32	1966-67	32
1973-74	28	1969-70	31	1965-66	39
1972-73	23	1968-69	35	1964-65	40
1971-72	31	1967-68	24	1963-64	--

Source: NWT Government

11.3 Resource-Use Areas

11.3.1 General Area

Generally, caribou hunting defines the inland boundary of the Whale Cove resource-harvest zone while seal hunting defines the marine boundary. The zone extends about 160 km northeast along the coast to Chesterfield Inlet, 250 km south along the coast past Eskimo Point, 220 km southwest to the Maguse Lake area, 200 km west to Kaminuriak Lake, and 200 km north past Chesterfield Inlet (see Map 9). Welland (1976) reports that inland areas extending 95 to 110 km from the community are intensively hunted while areas 160 to 200 km from the community are used less intensively.

Camping is an important activity for Whale Cove hunters. During winter, men often camp inland to trap fox or hunt caribou. Spring and summer are the most important seasons for camping and most families camp out for a month or more to fish, collect eggs and berries, and to hunt seals, whales, caribou, and geese. Popular camping areas are along the coast at Pistol Bay, Dunne Foxe Island, Wilson Bay, Nevill Bay, Dawson Inlet, and Sandy Point and inland around Whiterock Lake, the lower Ferguson River, Kaminak Lake, Kaminuriak Lake, the old location of Padlei, and South Henik Lake (Welland 1976). There is no indication of any permanent camps in the area.

11.3.2 Trapping

The most intensively trapped area extends about 120 km to the west and about 160 km northwest towards Banks Lake (Welland 1976). Remote trapping areas lie southwest towards Maguse and Turquetil Lakes, west past Kaminak Lake, northwest towards Parker and MacQuoid Lakes, and north beyond Rankin Inlet.

11.3.3 Land Mammal Hunting

The most intensively hunted area for caribou lies within 80 to 110 km from Whale Cove. Remote areas (South Henik Lake and the old Padlei location to the southwest, Kaminuriak Lake to the west, MacQuoid Lake to the northwest, and north of Chesterfield Inlet) receive less use (Welland 1976).

The wolf hunting area extends south beyond Eskimo Point southwest to Kaminak Lake, northwest to Derby Lake, and north to Rankin Inlet. Some wolves are taken within a few miles of Whale Cove (Welland 1976).

11.3.4 Wildfowl Hunting

Ducks and geese are hunted and eggs are collected along the coast and on islands between the Pork Peninsula and Sandy Point. More distant areas (in Rankin Inlet and around Eskimo Point) are hunted less often. Ptarmigan are hunted wherever they are seen (Welland 1976).

11.3.5 Marine Mammal Hunting

Polar Bears

Polar bears are hunted along the coast and along the floe-edge from the Pork Peninsula south past Eskimo Point. The main area is from Pork Peninsula to Bibby Island.

Seals

Seals are hunted throughout the marine-mammal hunting zone (Map 9). The most intensively hunted area is from the Pork Peninsula south to Sandy Point.

Whales

Belugas are hunted along the coast from Rankin Inlet to Bibby Island.

Walrus

There is a small walrus hunting area just east of Bibby Island but walrus are not common in the area.

11.3.6 Fishing

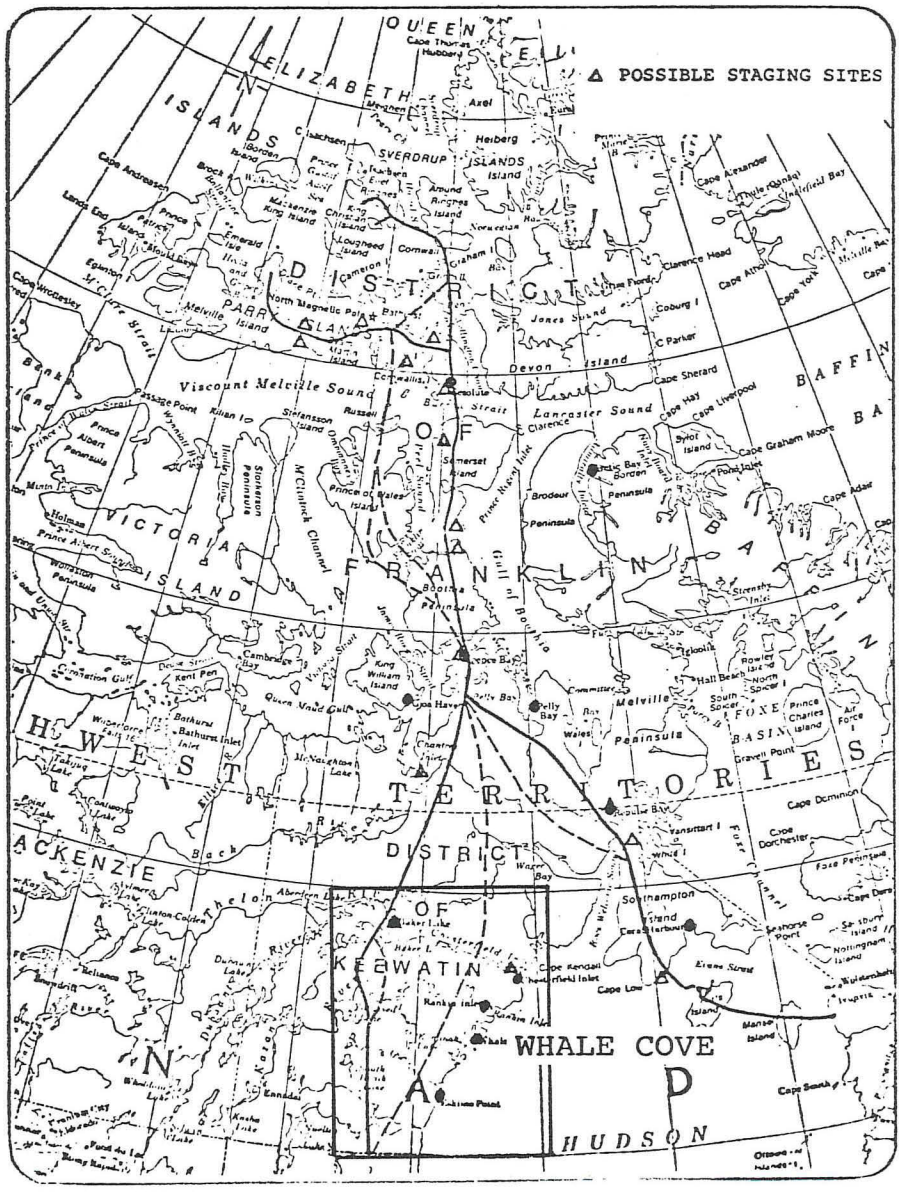
Important areas for domestic fishing are Derby, Maze, and Whiterock Lakes; the lower Wilson River; Kaminuriak, Kaminak, Quartzite, and Munro Lakes; and the lower Ferguson River. There is some ice fishing in spring off the coast near the community (Welland 1976).

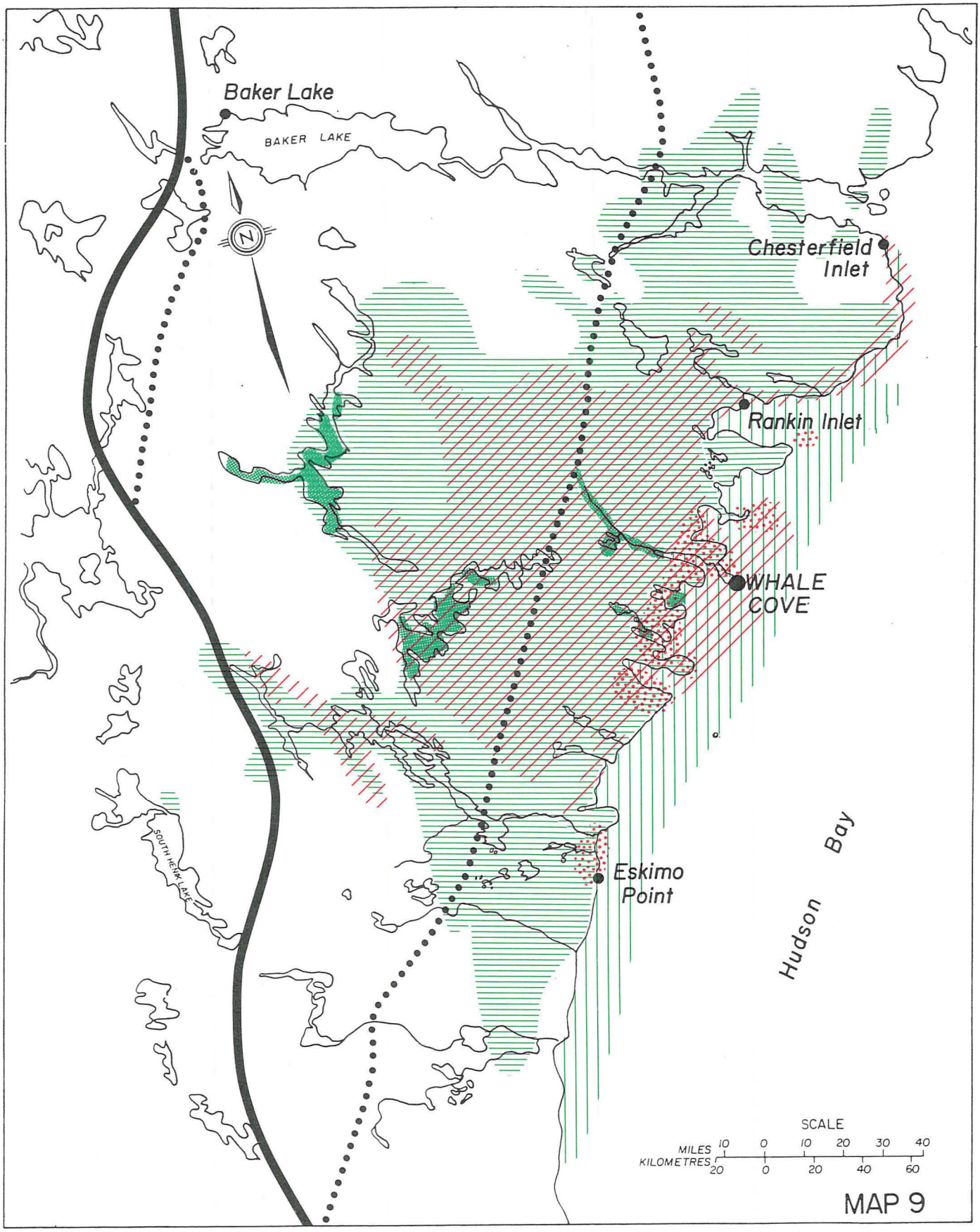
— LEGEND —

- Marine mammal hunting
  - seal
  - whale
  - walrus
  - polar bear
- Land mammal hunting
  - caribou
  - muskox
  - wolf
- Trapping
  - wolverine
- Wildfowl
- Fishing
- Trapline boundaries
  - almost exclusively fox

Proposed pipeline alignment

- Prime route
- Alternate route
- Community location




Baker Lake
BAKER LAKE
N
Chesterfield Inlet
Rankin Inlet
WHALE COVE
SOUTH HENIK LAKE
Eskimo Point
Hudson Bay
SCALE
MILES 10 0 10 20 30 40
KILOMETRES 20 0 20 40 60
MAP 9

9. Whale Cove

Water bodies in the Whale Cove area that had commercial quotas in 1976 are the same as those listed for the Rankin Inlet area (Section 10.3.6) with the exception of the bays, rivers, and inlets along Chesterfield Inlet, which are probably not fished by Whale Cove fishermen. In addition, the Sandy Point area has a 1000 lb char quota, the Whale Cove area has a 5000 lb char quota, and an unnamed river around Nevill Bay has a 5000 lb char quota. The Sandy Point and the Whale Cove areas have recent commercial harvest records. Probably most of the commercially fished water bodies in the area are fished by commercial fishermen from Rankin Inlet, although Whale Cove commercial fishermen use water bodies close to the community and may sell some of their catch through the co-op to the cannery in Rankin Inlet.

11.4 Harvest Patterns

Spring is an important season for hunting caribou, wildfowl, polar bears, and seals and for fishing. Summer is important for hunting caribou, wildfowl, seals, and whales and for fishing. Fall is important for trapping; caribou, polar bear, and seal hunting; and fishing. Winter is important for trapping and hunting caribou, eiders, polar bears, and seals (Table 11-2).

11.5 Harvest Data

Harvest data are not recorded separately for Whale Cove; they are combined with data from Rankin Inlet (Table 10-4). The polar bear quota for Whale Cove is 12, but Welland (1976) reports there are not many bears in the area and that harvesting them is not a major activity. The quota of 12, however, was filled in 1974-75 (P. Smith, personal communication).

Smith and Taylor (1977) report a mean harvest of 828 ringed seals (based on 4 years of records), 70 bearded seals (based on 2 years of records), 202 belugas (based on 7 years of records), and 802 arctic fox (based on 5 years of records). These data are from RCMP Game Records for 1962-1971. Walrus are scarce and are no longer an important resource in the area (Welland 1976).

Commercial char harvests in the Whale Cove area were: 9000 lbs for 1970, 5090 lbs for 1971, 8644 lbs for 1972, 20,832 lbs for 1973, 40,374 lbs for 1974, 31,502 lbs for 1975, and 34,089 lbs for 1976 (R. Peet, personal communication). The average annual harvest for 1970 to 1976 was 21,362 lbs.

11.6 Commercial and Domestic Importance

11.6.1 Commercial Importance

Welland (1976) reports that for most families fox pelts are the major source of earned income throughout most of the year.

Table 11-2. Harvest patterns - Whale Cove.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept. to Nov)
Trapping[2]	Primary season.	No trapping.	No trapping.	Starts in Nov.
Land Hunting: Caribou[1]	Hunted inland.	Hunted inland.	Hunted along coast & along navigable rivers.	Hunted inland.
Wolf[1]	Hunted anywhere.	Hunted in known denning areas.		Hunted anywhere.
Wildfowl Hunting: Ducks & Geese[1]	Eiders hunted at floe-edge.	Floe-edge hunting & hunting along shores.	Hunting along shores.	Stops in **Sept.**
Egg Collecting[1]		Collecting	Collecting	
Ptarmigan[1]	Hunting.	Hunting.		Hunting.
Marine Hunting: Polar bear[1]	Floe-edge hunting.	Floe-edge hunting.	No hunting.	Hunted as they migrate along coast.
Ringed & Bearded[1,2] Seals	Some floe-edge hunting.	Birth lair & floe-edge hunting.	Open-water hunting from boats.	Some floe-edge hunting.

Table 11-2. Harvest patterns - Whale Cove.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept. to Nov)
Beluga[1]			Shot from boats as they migrate along coast.	
Fishing[1]	No fishing.	Ice fishing with nets spring char run fished.	Open-water fishing with nets in bays & near mouths of rivers.	Ice fishing with nets fall char run fished.

[1] Welland 1976.

[2] inferred from analysis of the patterns in Rankin Inlet (see Table 10-3).

Wolf pelts, seal skins, and polar bear skins are also important sources of income. A 1973 survey indicated that 95% of seal skins harvested are traded and 5% are used for handicrafts (Friesen 1975). Table 10-5 gives a summary of expected annual income from fur sales for Rankin Inlet plus Whale Cove.

Based on an average annual char harvest of 21,363 lbs and assuming that Whale Cove fishermen receive $0.50/lb for the fish they sell, the expected annual income from sales of fish would be $10,681. The per capita income, based on a 1974 population of 243, would be $44.

11.6.2 Domestic Importance

Caribou are the mainstay of the diet; because many Whale Cove people previously lived inland, they prefer caribou meat to seal meat (Welland 1976). A 1973 survey revealed that 12% of edible seal meat and 100% of edible whale meat was used for family food while 5% of seal meat and 100% of whale meat suitable for dogs was fed to dogs (Friesen 1975). Fishing is important for both food and recreation (Welland 1976). Table 10-6 provides estimates of the annual imputed income from major food sources for Rankin Inlet plus Whale Cove.

11.7 Pipeline Implications

The prime route avoids the Whale Cove resource-use zone except for a remote caribou hunting and trapping area along the Kogtok and Upper Maguse Rivers near Kinga Lake. The coastal alternate traverses the core of the inland part of this zone.

Specifically, the pipeline project may conflict with resource harvest in the following key areas:

1. South of Chesterfield Inlet. Construction in this area in spring, summer, or fall could interfere with migrations and movements of the Kaminuriak caribou herd which is important to Whale Cove hunters.

2. Wilson River. The coastal alternate crosses this important domestic char fishing river downstream of Derby Lake and may interfere with fish movement and degrade fish habitat.

3. Ferguson River. The coastal alternate crosses this important domestic and commercial char fishing river downstream of Helika Lake and may interfere with fish movement and degrade fish habitat.

12. ESKIMO POINT

12.1 The Community

Eskimo Point was used for decades as a summer camp for inland people. The Hudson's Bay Company opened a trading post there in 1921. People moved to Eskimo Point from inland and coastal areas following the closing of the Hudson's Bay Company coastal post at Tavani in 1951 and their inland post at Padlei in 1960 (Welland 1976; Canada North Almanac 1976).

The estimated population of Eskimo Point in 1976 was 875; it has almost doubled over the last decade. In 1974, it was 681; in 1971, 700; in 1969, 502; and in 1966, 464. In 1971, 96% of the population was Inuit.

Eskimo Point is currently served by four flights a week from Churchill with connections to Winnipeg. Marine transportation is supplied by the Northern Canada Transportation Limited. The shipping season extends from August to October (Canada North Almanac 1976),

12.2 The Economy

Welland (1976) reports that a large number of people rely on trapping and hunting for most of their earned income and everyone depends on game for food. Wage employment is available through a handicrafts project (parkas, sewn goods, footwear, fur garments, and soapstone carvings) and with the NWT Government. Crafts are marketed through the Padlei Cooperative.

In 1974-75, there were 150 holders of General Hunting Licences; this number has increased, decreased, and then increased again over the last decade (Table 12-1). Twenty-three commercial fishing licences were issued to Eskimo Point fishermen in 1975 (D. Dowler, personal communication).

Table 12-1. Number of General Hunting Licences issued - Eskimo Point.

1974-75	150	1970-71	103	1966-67	116
1973-74	117	1969-70	98	1965-66	107
1972-73	121	1968-69	100	1964-65	100
1971-72	87	1967-68	117	1963-64	88

Source: NWT Government.

12.3 Resource-Use Areas

12.3.1 General Area

Generally, caribou hunting defines the inland boundary of the Eskimo Point resource-harvest zone while seal and whale hunting define the marine boundary. The zone extends about 380 km northeast along the coast to Daly Bay, 120 km south along the coast into Manitoba, 190 km west past the Henik Lakes, 280 km northwest to Parker Lake, and 260 km north around Gibson Lake (see Map 10).

Important spring and summer camping areas are the lower Tha-anne, Thlewiaza, McConnell, and Maguse Rivers, Maguse Point, and Sandy Point. Less important areas are Diane Lake, Napajut (Camp) Lake, Thaolintoa Lake, Hyde Lake, the upper Maguse River from Kinga Lake down past Maguse Lake, the Dawson Inlet area, Kaminak Lake, and around the old location of Nunalla along the coast south of the Manitoba border. Winter camping areas are around the Henik Lakes, Imikula Lake, Yathkyed Lake (Welland 1976). There is no indication of any permanent camps in the area.

12.3.2 Trapping

The most heavily trapped areas are along the coast towards Sandy Point, between Sandy Point and Kaminak Lake, up the Maguse River from the coast to Kaminak Lake, up the McConnell River, and up the Tha-anne River to Thaolintoa Lake. Remote trapping areas are north around Carr and Kaminuriak Lakes, northwest around Forde, Nutarawit, Yathkyed, and Imikula Lakes, west around the Henik Lakes and Hawk Hill and Edehon Lakes, and south towards the Manitoba border (Welland 1976).

12.3.3 Land Mammal Hunting

All land within 160 km of Eskimo Point is generally considered to be important for caribou hunting (Welland 1976). The Maguse, McConnell, and Tha-anne Rivers and the lakes along these rivers are heavily used areas. Caribou are hunted in all areas of the land-mammal hunting zone.

Wolf hunting areas are between Kaminak Lake and Sandy Point, up the Maguse River to Kaminak Lake, and up the McConnell and Tha-anne Rivers. Wolves are also hunted in association with caribou hunting south from Kaminak Lake to the Manitoba border (Welland 1976).

12.3.4 Wildfowl Hunting

Geese and ducks are hunted and eggs are collected along the coast and on offshore islands. Important goose hunting areas are around Maguse River-Austin Island-Maguse Point, Eskimo Point, and the coastal tundra north of McConnell River. Ptarmigan are hunted throughout the resource-use zone (Welland 1976).

12.3.5 Marine Mammal Hunting

Polar Bears

Polar bears are hunted along the coast near the Manitoba border.

Seals

Seals are hunted along the coast and along the floe-edge from Daly Bay south to the Manitoba border. Favourite areas are around Sandy, Maguse, and Eskimo Points, and from the mouth of the Tha-anne-Thlewiaza Rivers south to the Manitoba border (Welland 1976).

Whales

Whales are hunted from Daly Bay to the Manitoba border as they migrate along the coast.

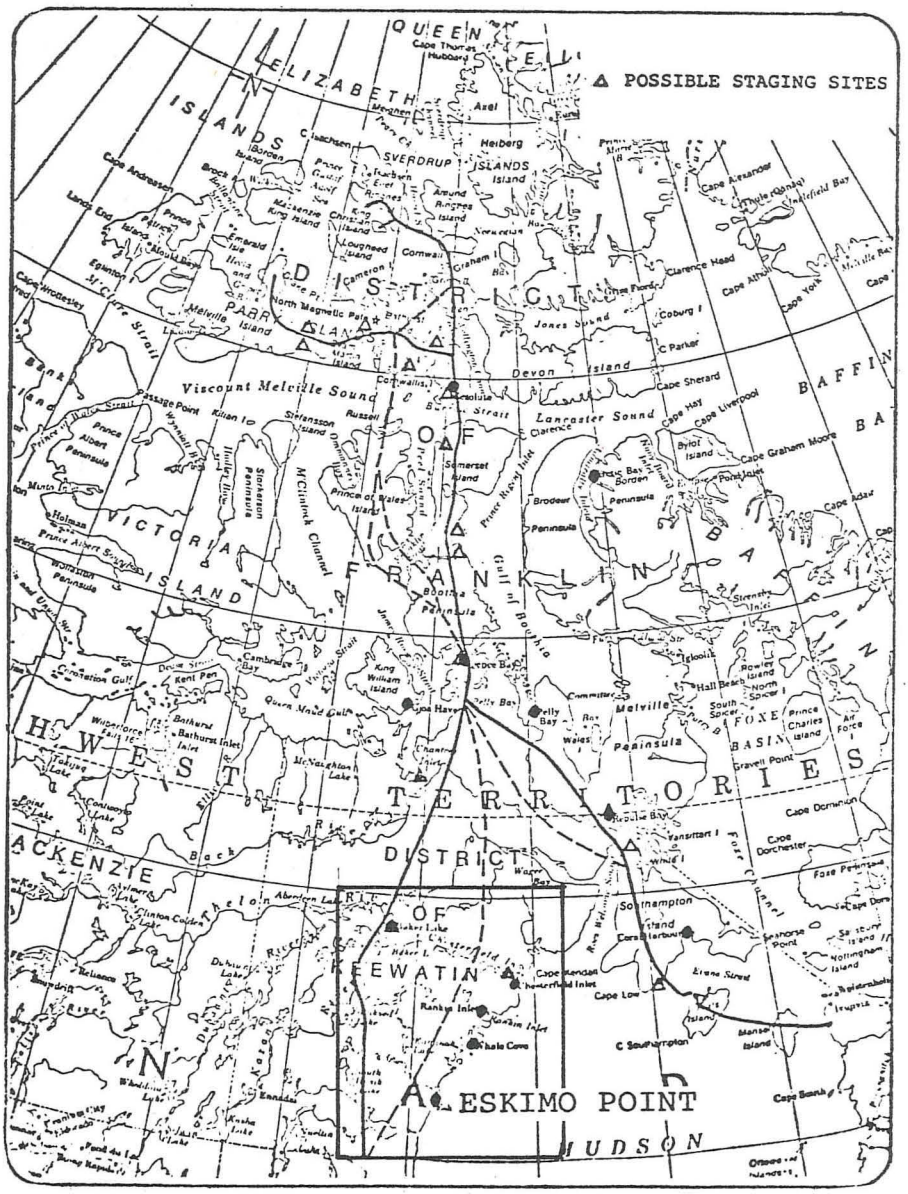
12.3.6 Fishing

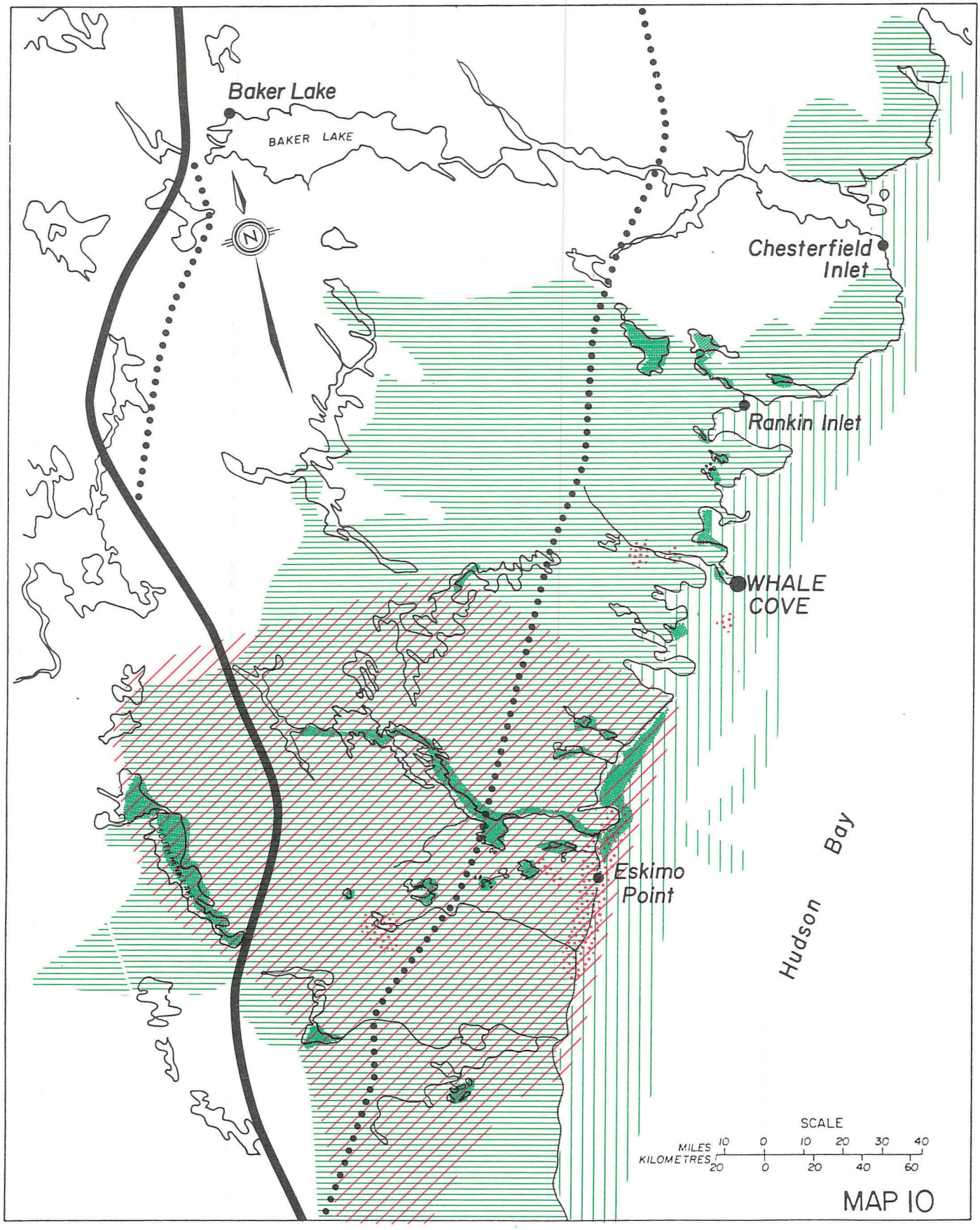
Important inland fishing areas are up the Maguse River to Kinga Lake (including Maguse and Turgutil Lakes) and up the Diane River to Diane Lake. Other inland fishing areas are Napajut (Camp) Lake, small lakes west of Sandy Point, Kaminak Lake, the Henik Lakes, and Thaolintoa Lake. Important coastal areas for char fishing are from Eskimo Point to Sandy Point and around the mouth of the Tha-anne-Thlewiaza Rivers (Welland 1976).

Water bodies in the area that had commercial quotas in 1976 are: Carr Lake - 130,000 lbs (lake trout and whitefish); the Eskimo Point area - 10,000 lbs (char); Kaminak Lake - 50,000 lbs (lake trout and whitefish); Maguse River - 10,000 lbs (char); Sandy Point - 1,000 lbs (char); Wallace River - 5,000 lbs (char); and an unnamed river north of Austin Island - 5,000 lbs (char). Of these, Kaminak Lake, Sandy Point, and the Wallace River have recent records of commercial harvest. Kaminak Lake is probably fished by Rankin Inlet or Whale Cove fishermen who may sell their catch to the Rankin cannery.

— LEGEND —

- Marine mammal hunting
  - seal
  - whale
  - walrus
  - polar bear
- Land mammal hunting
  - caribou
  - muskox
  - wolf
- Trapping
  - wolverine
- Wildfowl
- Fishing
- Trapline boundaries
  - almost exclusively fox
- Proposed pipeline alignment
  - Prime route
  - Alternate route
- Community location





10. Eskimo Point

12.4 Harvest Patterns

Spring is an important season for hunting caribou, wildfowl, and seal and for fishing. Summer is important for hunting caribou, wildfowl, seal, and whale and for fishing. Fall is important for trapping; caribou, polar bear, seal hunting; and fishing while winter is important for trapping and caribou, eider duck, and seal hunting (Table 12-2).

12.5 Harvest Data

(See Table 12-3).

12.6 Commercial and Domestic Importance

12.6.1 Commercial Importance

Fox pelts, polar bear skins, seal skins, wolf skins, and some wolverine skins provide income for the Eskimo Point Inuit (Table 12-4).

Friesen (1975) reported that in 1973, 100% of seal skins harvested were traded; of these, 9% were used locally to make handicrafts (Friesen 1975). Some income is also provided by sale of fish, either locally or to the Rankin Inlet cannery.

Based on an annual average harvest of 7726 lbs of char (Table 12-3) and assuming that Eskimo Point fishermen sell char for $0.50/lb, the expected annual income would be $3863. The per capita income would be $6.

12.6.2 Domestic Importance

Caribou meat is a primary food for the Eskimo Point Inuit. Seal meat, fish, whale meat, and wildfowl are also important. Geese, ducks, and eggs are eaten seasonally (Table 12-5).

A 1973 survey indicated that 17% of edible seal meat and 100% of edible whale meat was used for family food; 24% of seal meat and 22% of whale meat suitable for dogs was fed to dogs (Friesen 1975). Seal meat and whale meat are important foods for people who have traditionally lived on the coast.

12.7 Pipeline Implications

The prime route traverses the western fringe of the Eskimo Point inland resource-use area while the coastal alternate passes through the core of this area. Spring, summer, and fall construction on both routes would interfere with caribou migrations and movements and thus affect caribou hunting.

Table 12-2. Harvest patterns - Eskimo Point.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept. to Nov)
Trapping[2]	Primary season.	No trapping.	No trapping.	Starts in Nov.
Land Hunting[2,3] Caribou	Hunted inland.	Hunted inland.	Hunted along coast & along navigable rivers.	Hunted inland.
Wolf[1]	Usually hunted in conjunction with caribou hunting.			
Wildfowl Hunting: Duck & Geese[1,3]	Eiders hunted at floe-edge during seal hunting.	Hunting along floe-edge & along shores.	Hunting along shores and on islands - late summer is major season.	Stops in Sept.
Egg Collecting[1]			Collecting.	
Ptarmigan	Primary season.	Hunting.	Hunting.	Hunting.
Marine Hunting: Polar bear[1]				Hunted along coast before the ice forms.
Ringed & Bearded[2,3] Seals	Some floe-edge hunting.	Floe-edge hunting.	Open-water hunting from boats.	Some floe-edge hunting.
Harbour Seal[1]			Hunted along coast in hauling out areas on rocks near river mouths.	

Table 12-2. Harvest patterns - Eskimo Point.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept. to Nov)
Beluga[1,3]			Shot from boats as they migrate along coast.	
Fishing[1]	No fishing.	Ice fishing in lakes Char fishing in rivers after break-up.	Char netting in estuaries and along coast Some inland fishing.	Char netted as they migrate upstream. Ice fishing on lakes after freeze-up.

[1] Welland 1976.

[2] inferred from analysis of the pattern in Rankin Inlet (see Table 10-2).

[3] inferred from analysis of the pattern in Whale Cove (see Table 11-2).

Table 12-3. Harvest data - Eskimo Point.[1]

	TRAPPING			LAND MAMMAL HUNTING		WILDFOWL HUNTING			MARINE MAMMAL HUNTING							FISHING
	ARCTIC FOX	COLOURED FOX	WOLVERINE	CARIBOU	WOLF	GEESE	DUCK	PTARMIGAN	POLAR BEAR[3]	RINGED SEAL	BEARDED SEAL	HARP SEAL	BELUGA	NARWHAL	WALRUS	ALL SPECIES[6]
63-64	3079	4	1	2351	15			234	5	607						
64-65	2422	4	5	1544	15	177	66	357	10	858						
65-66	649		2	1367	28	193	84	243	11	519						
66-67	2340			1670	9	304	53	479	10	222						
67-68	1415	3	1	1203	23	201	81	460	13	221						
68-69	983	1		1096	56	121	38	202	4							
69-70	1134	2		982	19	97	84	155	2	413[4]						
70-71	1697	2	2	1185	54	291		539	7							
71-72	1550	9	1	1265	123	295	69	261	3	142	96[5]		67[5]		4[5]	
72-73	1054	2			67				10	550						13,668 lbs
73-74	4896								14	358						5,246 lbs
74-75									8[2]							7,762 lbs
75-76																4,229 lbs
Total All Years	21219	27	12	12663	409	1679	475	2930	97	3890						
Avg. All Years	1929	34	2	1407	41	210	68	326	8.1	432	96		67		4	

Table 12-3. Harvest data - Eskimo Point.[1]

	TRAPPING			LAND MAMMAL HUNTING		WILDFOWL HUNTING			MARINE MAMMAL HUNTING							FISHING
	ARCTIC FOX	COLOURED FOX	WOLVERINE	CARIBOU	WOLF	GEESE	DUCK	PTARMIGAN	POLAR BEAR[3]	RINGED SEAL	BEARDED SEAL	HARP SEAL	BELUGA	NARWHAL	WALRUS	ALL SPECIES
Total 69-70 to 74-75	10331	15		3432	263	683	153	955	44	1463						30,905 lbs
Avg.	2066	3.8		1144	66	228	77	318	7.3	366						7,726 lbs
High Year	4896	9		1265	123	295	84	539	14	550						13,668 lbs

1 All data from Usher 1975, unless otherwise indicated.

2 NWT Game Management Division.

3 Polar Bear quota for Eskimo Point is 10.

4 Palmer 1973.

5 Mean from 3 years of harvest for bearded seal, 4 years for walrus, 7 years for beluga from RCMP Game Records from 1962 to 1971 (Smith and Taylor 1977).

6 Commercial Records: all char. Data from R. Peet (personal communication).

Table 12-4. Expected annual income from sales of fur - Eskimo Point.

	Arctic Fox	Coloured Fox	Wolf	Polar Bear	Ringed Seal	TOTAL
Average Annual Harvest (69-70 to 74-75)[1]	2066	3.8	66	10	366	
Average Pelt Price NWT (74-75)[2]	$17.59	$28.61	$62.72	$953[4]	$17.10	
Expected Income	$36,341	$109	$4,140	$9,530	$6,259	$56,378
Per Capita Income[3]	$53	$0.20	$6	$14	$9	$83

[1] From Table 12-3, except for polar bear which is based on the allotted quota of 10.

[2] From Fur Traders Record Book - NWT Government.

[3] Based on a 1974 population of 681.

[4] Community polar bear skin price of 1974-75 from Smith and Stirling (1976).

Table 12-5. Estimated annual imputed income from major food sources - Eskimo Point.

	Caribou	Geese	Ducks	Ptarmigan	Ringed Seal	Fish	TOTAL
Average Annual Harvest (69-70 to 74-75)[1]	1144	228	77	318	366	ND	
Edible lbs/animal[2]	100	3.5	2.6	0.9	45		
Edible meat (lbs)	114,400	798	200	286	16,470		132,154
Imputed Value/lb[3]	$300	$2.00	$2.00	$2.00	$3.00		
Imputed Value	$343,200	$1596	$400	$572	$49,410		$395,179
Per Capita Value[4]	$504	$2	$0.60	$0.80	$73		$580

1 From Table 12-3.

2 From Usher 1976, Bissett 1974, Thompson 1976.

3 Adapted from Usher 1976.

4 Based on a 1974 population of 681.

ND No Data.

Other key areas where conflicts with resource harvest may occur are:

1. Roseblade Lake. The prime route passes near this lake which is a remote, but important, domestic fishing area. Harvest conflicts and habitat degradation may occur.

2. Maguse River. The coastal alternate crosses the river, which is a primary domestic char fishing area, at Maguse Lake. Interference with fish movements and habitat degradation may occur.

3. McConnell River. The coastal route crosses this river near Camp Lake. The lake and the river are important for domestic fishing; the river is also important for goose hunting and is a key snow goose breeding and staging area. Harvest conflict, degradation of fish and waterfowl habitat, and disturbance of snow geese may occur.

13. PELLY BAY

13.1 The Community

Pelly Bay was originally the site of a Roman Catholic mission established in 1935. It is the only settlement in the area without marine transportation (Brice-Bennett 1976; Canada North Almanac 1976).

The estimated population of Pelly Bay in 1976 was 255; it has risen slowly over the last decade. In 1974, it was 245; in 1971, 203; in 1969, 189; and in 1966, 171. In 1970, 93% of the population was Inuit.

Pelly Bay is currently served by one flight a week from Cambridge Bay with connections to Yellowknife and Edmonton (Canada North Almanac 1976).

13.2 The Economy

The economic base of Pelly Bay is hunting, trapping, and fishing. A successful commercial fishery is operated by the Koomiut Cooperative and fish are exported on a regular basis to Edmonton. Carving of soapstone, ivory, and caribou antlers has also become a major industry and crafts are marketed through the Koomiut Cooperative. Wage employment is available at the fish freezing plant. Pelly Bay also has a tourist facility, the Pelly Bay Lodge (Friesen 1975; Canada North Almanac 1976).

In 1972-73, there were 48 holders of General Hunting Licences; this represents a slight increase during the past decade (Table 13-1). Twenty-one commercial fishing licences were issued to Pelly Bay fishermen in 1975 and an estimated 30 were issued in 1976 (D. Dowler, personal communication).

Table 13-1. Number of General Hunting Licences issued - Pelly Bay.

1974-75	ND	1970-71	45	1966-67	39
1973-74	ND	1969-70	48	1965-66	36
1972-73	48	1968-69	45	1964-65	33
1971-72	49	1967-68	45	1963-64	39

Source: NWT Government ND: No Data

13.3 Resource-Use Areas

13.3.1 General Resource-Use Area

Generally, caribou hunting defines the southern inland boundary of the Pelly Bay resource-use zone while polar bear hunting defines the northern marine boundary. The zone extends about 160 km northwest to Lord Mayor Bay, 100 km north around the tip of Simpson Peninsula, and 230 km south and 220 km southwest inland (see Map 11). There is no indication of any permanent camps in the area.

13.3.2 Trapping

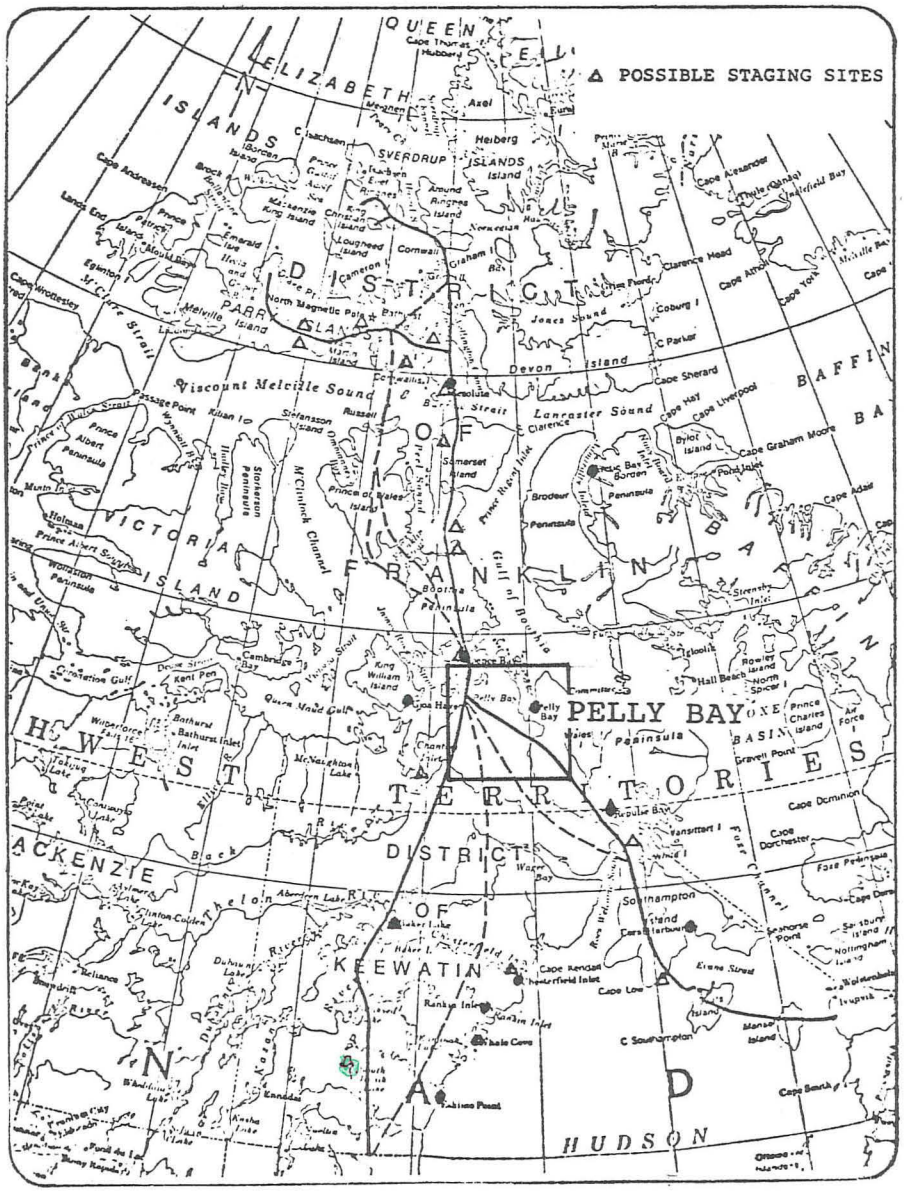
Important trapping areas are the Kuugariuk River system and towards Keith Bay, the Kellett River, the north shores of Pelly Bay, and some of the offshore islands (Brice-Bennett 1976).

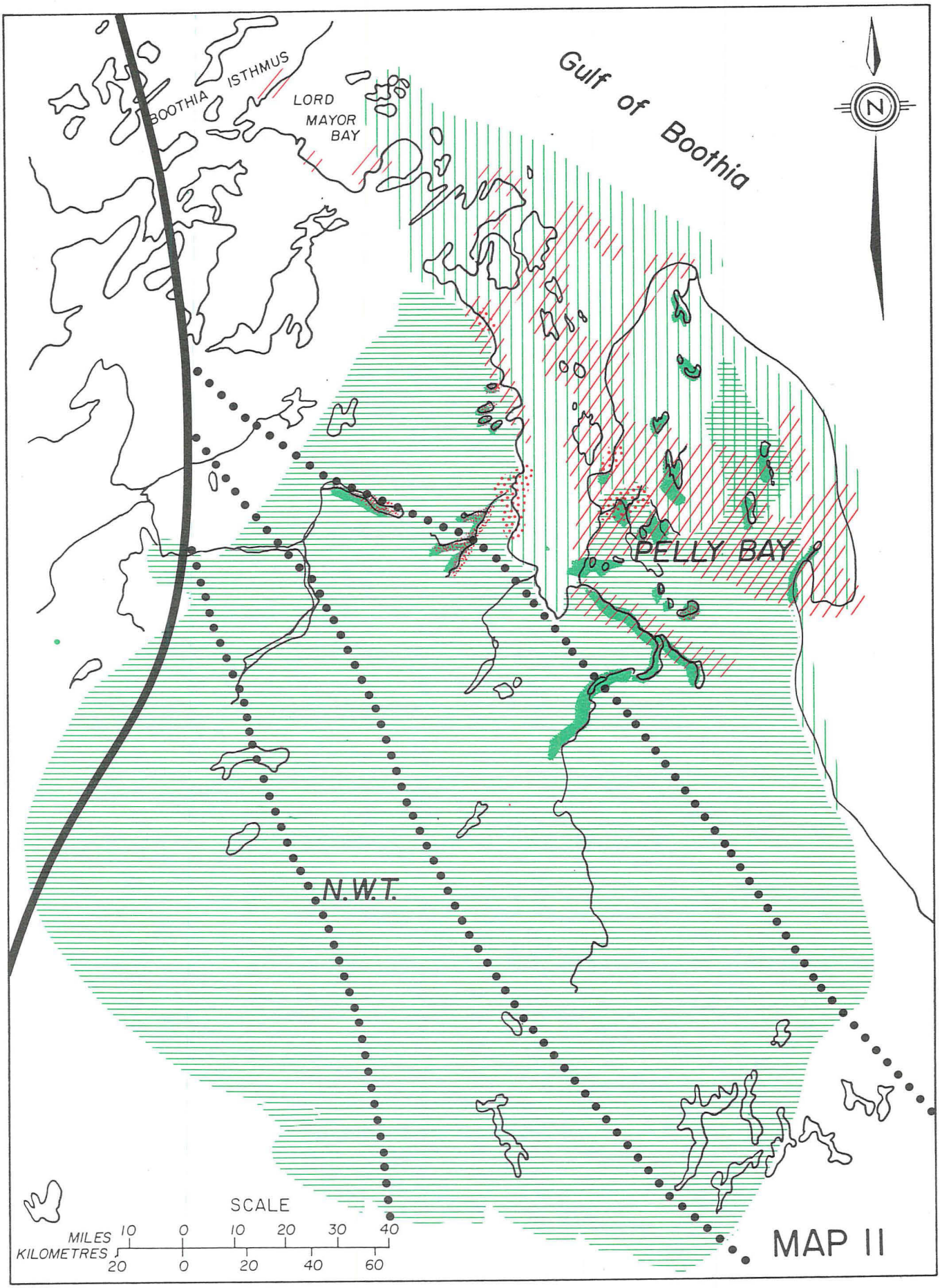
13.3.3 Land Mammal Hunting

Caribou are hunted south of the community throughout the land-mammal hunting zone (Map 11). Caribou have become more abundant south of the headwaters of the Kellett and Arrowsmith Rivers and are hunted as far south as Walker, Pierce, and Steward Lakes (Brice-Bennett 1976). Wolf hunting is confined to small areas along the upper Kellett River and south and east of the head of Pelly Bay.

LEGEND

- Marine mammal hunting
  - seal
  - whale
  - walrus
  - polar bear
- Land mammal hunting
  - caribou
  - muskox
  - wolf
- Trapping
  - wolverine
- Wildfowl
- Fishing
- Trapline boundaries
  - almost exclusively fox
- Proposed pipeline alignment
  - Prime route
  - Alternate route
- Community location




Gulf of Boothia
BOOTHIA ISTHMUS
LORD MAYOR BAY
PELLY BAY
N.W.T.
N
SCALE
MILES 10 0 10 20 30 40
KILOMETRES 20 0 20 40 60
MAP II

11. Pelly Bay

13.3.4 Wildfowl Hunting

Wildfowl are hunted around the mouth of the Kuugariuk River, Logan Bay, the mouth of the Becher River, and the west shore of Pelly Bay around Cape Berens.

13.3.5 Marine Mammal Hunting

Polar Bears

Polar bears are hunted in the northern part of the marine-mammal hunting zone (Map 11); they are not hunted in Pelly Bay. Important polar bear hunting areas are along the northeast coast of the Simpson Peninsula from Keith Bay, around some of the northern islands in the mouth of Pelly Bay, and towards Lord Mayor Bay and the Astronomical Society Islands (Brice-Bennett 1976).

Seals

Seals are hunted mainly in Pelly Bay; there is also a small hunting area on the northwestern shore of Committee Bay. The area around the mouth of Kuugariuk River is an important hunting area.

Whales

Whales are hunted on the west side of Pelly Bay near the mouth of Becher River.

Walrus

Walrus are not abundant in the area; Brice-Bennett (1976) reports that one walrus was recently taken at the mouth of the Kellett River and another at the southern end of St. Peter Bay.

13.3.6 Fishing

Kellett and Kuugariuk are major char rivers and are very important for domestic fishing. A few of the interior lakes in the Simpson Peninsula are used for trout fishing and Becher and Arrowsmith Rivers are also fished for char. Simpson Lake is a remote, but important, area for trout and whitefish fishing.

Water bodies in the area that had commercial quotas for char in 1976 are: the Arrowsmith River - 30,000 lbs; Becher River - 10,000 lbs; Keith Bay (Committee Bay) - 10,000 lbs; and Kellett River - 35,000 lbs. All these water bodies have recent records of commercial harvest. The Pelly Bay Lodge provides sport fishing for char in local rivers.

13.4 Harvest Patterns

Spring is an important season for hunting wildfowl, seal, and polar bear and for fishing. Summer is important for hunting wildfowl, seal, whale, and walrus and for fishing. Fall is important for trapping; caribou, polar bear, and seal hunting; and fishing. Winter is important for trapping and caribou and polar bear hunting (Table 13-2).

13.5 Harvest Data

(See Table 13-3).

13.6 Commercial and Domestic Importance

13.6.1 Commercial Importance

Fish, fox pelts, polar bear skins, and seal skins are important sources of income for the Pelly Bay Inuit. Table 5-4 gives a summary of expected income from sales of fur for Spence Bay plus Pelly Bay. Assuming fishermen receive $0.50/lb for char, an average annual commercial harvest of 50,000 - 60,000 lbs would provide Pelly Bay fishermen with an expected annual income of $24,000 to $30,000. The community per-capita income would be $102 to $122 (based on a 1974 population of 245).

Friesen (1975) reports that the Pelly Bay freezing plant is operated by a cooperative with government assistance. The fishery returns a good profit, but if the cooperative had to pay all capital and operating costs for the freezing plant, the operation would only be marginal.

In 1973, 95% of ringed seal skins and no bearded seal skins were traded; 5% of ringed seal skins and all bearded seal skins were used for handicrafts (Friesen 1975).

13.6.2 Domestic Importance

Caribou, seal, and fish are important food sources for the Pelly Bay Inuit. In 1973, 50% of edible ringed seal and 10% of edible bearded seal meat was used for family food. About 10% of the ringed and bearded seal meat suitable for dogs was fed to dogs (Friesen 1975).

Brice-Bennett (1976) reports that caribou-skin clothing is still used by hunters in winter, but that large numbers of clothing skins are no longer required by each family.

Table 13-2. Harvest patterns - Pelly Bay.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept. to Nov)
Trapping[1] Arctic Fox	Intensive in Dec. Stops around mid-Mar.	No trapping.	No trapping.	Starts in Nov. intensive in Nov.
Land Hunting: Caribou[2]	Early and late winter now most important season.	Stops in May.	No hunting.	Starts in Oct.
Wolf[4]	Hunting inland in association with caribou hunting.			Hunting inland.
Wildfowl Hunting: Ducks & Geese[5]	No hunting.	Starts in Jun.	Hunting in Jul, Aug.	Stops in Sept.
Ptarmigan[4,5]	Hunting in all seasons.			
Marine Hunting: Polar Bear[4]	Floe-edge hunting.	Floe-edge hunting.	No hunting.	Hunting along coast.
Ringed Seal[1]	Some breathing hole hunting.	Hunted on ice from mid-May to end of Jun.	Nets set in leads. Hunting along leads. Hunted from boats & nets are set along coast in open-water period.	Ends in Oct.

Table 13-2. Harvest patterns - Pelly Bay.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept. to Nov)
Bearded Seal[3]		Shot from boats in late spring when seals are resting on ice.	Shot from boats.	
Beluga & Narwhal[2]			Hunting.	
Walrus[2]			Hunting.	
Fishing[1]		Ice fishing on inland lakes - char fishing in rivers.	Fishing along coast.	Char fishing in rivers. Most important commercial season: fish taken by boat from river mouth to processing & freezing plant.

[1] Treude 1975.

[2] Brice-Bennett 1976.

[3] Villiers 1969.

[4] inferred from analysis of pattern in Chesterfield Inlet (see Table 9-2).

[5] inferred from analysis of pattern in Resolute (see Table 4-2).

Table 13-3. Harvest data - Pelly Bay.(1)

	TRAPPING			LAND MAMMAL HUNTING		WILDFOWL HUNTING			MARINE MAMMAL HUNTING							FISHING
	ARCTIC FOX(2)	COLOURED FOX	WOLVERINE	CARIBOU	WOLF	GEESE	DUCK	PTARMIGAN	POLAR BEAR(2,4)	RINGED SEAL	BEARDED SEAL	HARP SEAL	BELUGA[6]	NARWHAL[6]	WALRUS[6]	ALL SPECIES
63-64	134								7							
64-65	223								8	1073[1,2]						
65-66	28								13	60[1,2]						
66-67	55								11	96[2]						
67-68																
68-69																
69-71				200[3]					6[3]	356[3]						
70-71																
71-72											20/50[5]					
72-73										500[5]						(50,000-
73-74									10[8]							(60,000 lbs
74-75																(char
75-76																
Total All Years																
Avg. All Years																

Table 13-3. Harvest data - Pelly Bay.[1]

	TRAPPING			LAND MAMMAL HUNTING		WILDFOWL HUNTING			MARINE MAMMAL HUNTING							FISHING
	ARCTIC FOX[2]	COLOURED FOX	WOLVERINE	CARIBOU	WOLF	GEESE	DUCK	PTARMIGAN	POLAR BEAR[2,4]	RINGED SEAL	BEARDED SEAL	HARP SEAL	BELUGA[6]	NARWHAL[6]	WALRUS[6]	ALL SPECIES
Total 69-70 to 74-75																
Avg.																
High Year																

1 Usher 1975 - most data for Pelly Bay aggregated with data for Spence Bay (see Table 5-3).

2 Villiers 1969.

3 Palmer 1973.

4 Polar Bear quota for Pelly Bay is 10.

5 Friesen 1975.

6 Beluga and Narwhal are uncommon and walrus are rarely taken (Brice-Bennett 1976).

7 Quota of 50,000 to 60,000 lbs of char is generally taken (Friesen 1975).

8 NWT Game Management Division.

13.7 Pipeline Implications

The prime route avoids the Pelly Bay resource-use zone except for the crossing of the Murchison River which is commercially fished by Pelly Bay fishermen. The Quebec route crosses the core of the Pelly Bay inland resource-use zone.

Specifically, the Quebec route may conflict with resource harvest in the following key areas:

1. Simpson Lake. The route closely parallels this lake which is fished domestically. Degradation of fish habitat or pipeline employee/domestic fishermen conflicts may occur.

2. Becher and Arrowsmith Rivers. The route crosses these important commercial char fishing rivers, within 25 km of their mouths. Pipeline activities may interfere with fish movement and may degrade fish habitat.

3. Kellett River. The route crosses this important commercial and domestic char fishing river about 70 km from its mouth. Fish migrations may be impeded (if the char ascend that far upstream) and fish habitat may be degraded.

4. Kellett River to Ellice Hills. This is part of an important caribou hunting area. Winter construction could degrade winter range or displace caribou from critical winter habitats.

14. REPULSE BAY

14.1 The Community

Repulse Bay was established as a Hudson's Bay post in 1916. For years, it was the centre of trading for the nomadic people of the area. People started to settle in the community after a government housing project began in the early 1960's (Brice-Bennett 1976; Canada North Almanac 1976).

In 1974, the estimated population of Repulse Bay was 276; it has risen slowly over the last decade. In 1971, it was 220; in 1969, 199; and in 1966, 146. In 1971, 95% of the population was Inuit.

Repulse Bay is currently served by one flight a week from Churchill; air connections from Churchill are to Winnipeg.

Marine transportation is supplied by M.O.T. ships from Montreal. The shipping season is limited to late August and September (Canada North Almanac 1976).

14.2 The Economy

Repulse Bay is a sealing, fishing, and hunting community and is also a noted soapstone and ivory carving centre. Handicrafts are marketed through the Naujat Cooperative (Brice-Bennett 1976; Canada North Almanac 1976).

There were 54 holders of General Hunting Licences in 1974-75; the number has increased substantially over the last decade (Table 14-1). No commercial fishing licences were issued in 1975, but some have been issued in 1976 (D. Dowler, personal communication).

Table 14-1. Number of General Hunting Licences issued - Repulse Bay.

1974-75	54	1970-71	73	1966-67	25
1973-74	53	1969-70	37	1965-66	18
1972-73	56	1968-69	41	1964-65	34
1971-72	51	1967-68	41	1963-64	30

Source: NWT Government

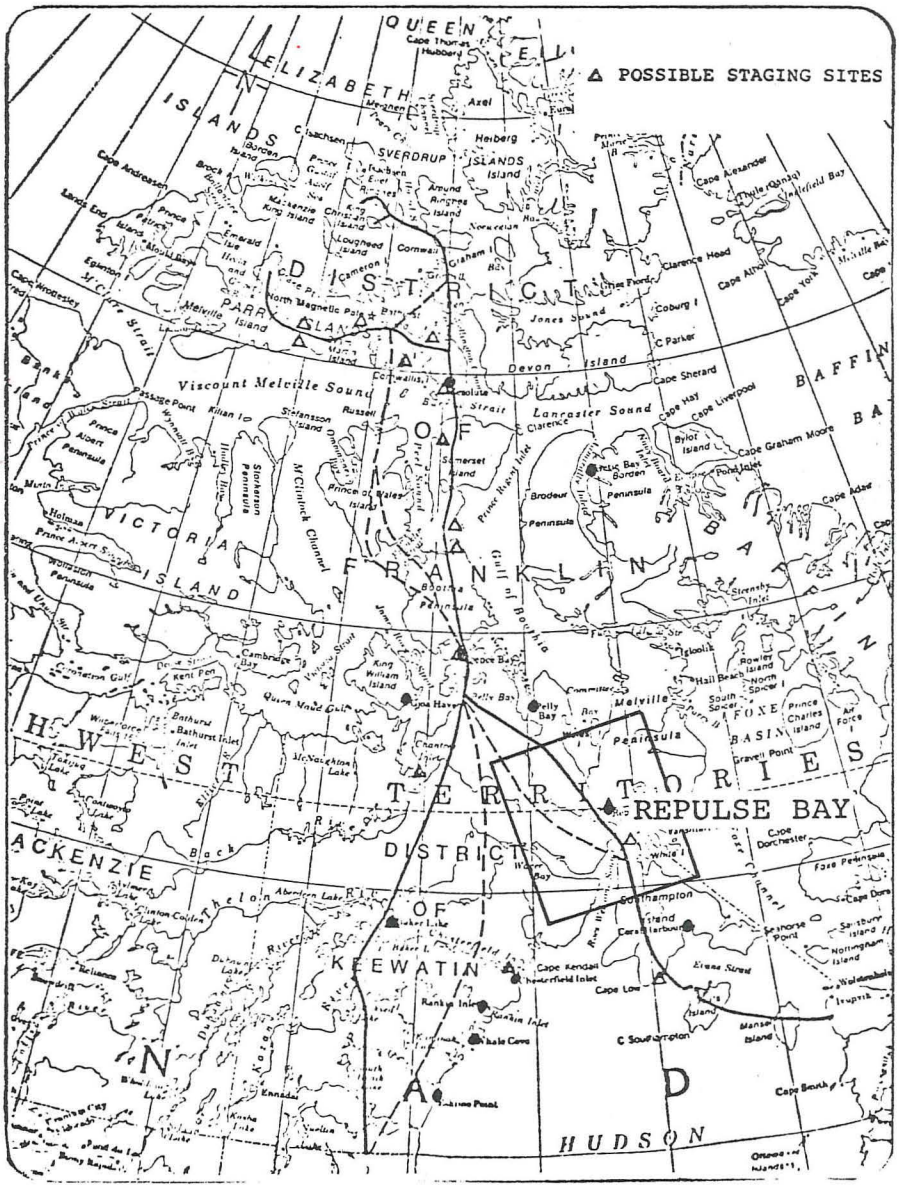
14.3 Resource-Use Areas

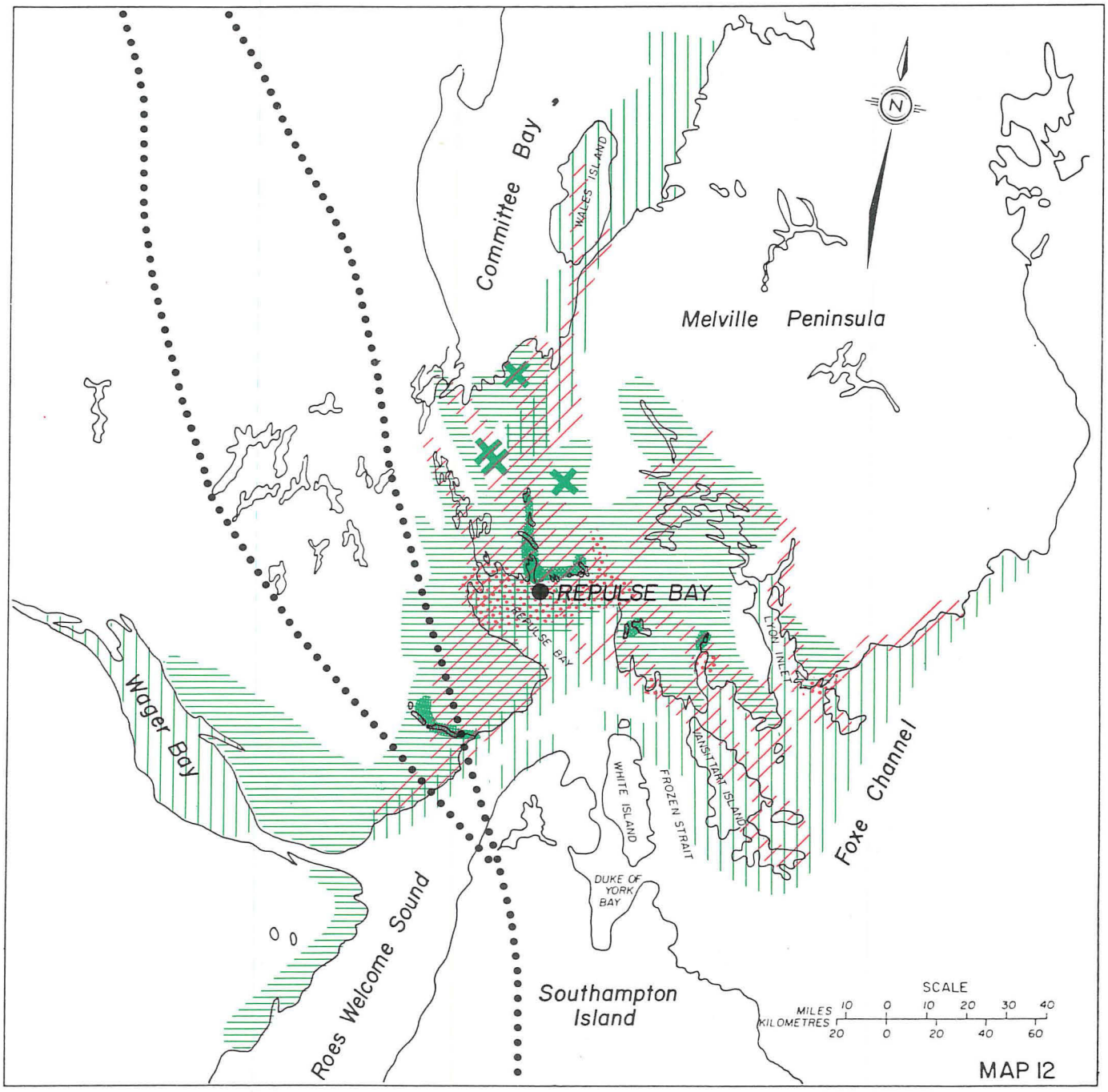
14.3.1 General Area

Caribou hunting defines the inland boundary of the Repulse Bay resource-harvest zone. Polar bear hunting defines the marine boundary to the north and east and seal hunting defines the marine boundary to the south. The zone extends about 240 km to the north along the eastern shore of Committee Bay, 210 km to the northeast along the eastern coast of Melville Peninsula, 180 km to the southeast along Vansittart Island, 230 km to the south along the western shore or Roes Welcome Sound, and 160 km southwest inland to Wager Bay (see Map 12).

LEGEND

- Marine mammal hunting
  - seal
  - whale
  - walrus
  - polar bear
- Land mammal hunting
  - caribou
  - muskox
  - wolf
- Trapping
  - wolverine
- Wildfowl
- Fishing
- Trapline boundaries
  - almost exclusively fox
- Proposed pipeline alignment
  - Prime route
  - Alternate route
- Community location





12. Repulse Bay

Brice-Bennett (1976) reports that most hunting occurs close to Repulse Bay and that the Committee Bay and Wager Bay areas are commonly hunted. Families often travel to spring and summer camps to fish. There is no indication of any permanent camps in the area.

14.3.2 Trapping

The most important trapping areas are north to Lefroy Bay and along the east shore of Committee Bay, north to North Pole and Christie Lakes, northeast to Ross Bay, south along the western shore of Repulse Bay and Roes Welcome Sound past the Snowbank River, and east along the northeast coast of Vansittart Island. Remote areas are Wales Island and the southeast coast of Melville Peninsula (Brice-Bennett 1976).

14.3.3 Land Mammal Hunting

Brice-Bennett (1976) reports that most caribou hunts now occur within a few miles of the settlement. Major hunting areas are northeast to Ross Bay, east towards Lyon Inlet, and south to Wager Bay. Remote areas are south of Wager Bay and north towards Committee Bay.

Wolves are usually sighted where caribou are abundant and are hunted on the ice and along the coast near the community and around Ross Bay. Wolverine are usually hunted near traplines south of Committee Bay.

14.3.4 Wildfowl Hunting

The most important areas for hunting ducks and geese and collecting eggs are along the coast and on offshore islands in Repulse Bay, around Gore and Moyle Bays, around Winter Island, and off Beach Point (Brice-Bennett 1976).

14.3.5 Marine Mammal Hunting

Polar Bears

Important polar bear hunting areas are Wales Island, along the eastern shore of Committee Bay, and the Vansittart Island - Gore Bay and Sturges Islands - Winter Island area. Wales Island has been identified as an important denning and feeding area. Some polar bears have also been killed close to the community (Brice-Bennett 1976).

Seals

Important seal hunting areas are in Repulse Bay, south along the western shore of Roes Welcome Sound past the Snowbank

River, and southeast along the northern shore of Frozen Strait and along the southwest coast of Vansittart Island. Other important areas are Gore Bay, Lyon Inlet, Ross Bay, and Wager Bay. Harbour seals are hunted occasionally around the community and in Hurd Channel (Brice-Bennett 1976).

Whales

Repulse Bay is the main hunting area for whales; primarily belugas. Other areas are around Beach Point and across Roes Welcome Sound to the northern tip of Southampton Island, and in Lyon Inlet (Brice-Bennett 1976).

Walrus

The main walrus hunting area is in Repulse Bay. Secondary areas are the northern part of Frozen Strait, the southwest coast of Vansittart Island, around Beach Point, along the western shore of Roes Welcome Sound south of the Snowbank River,aand around Sturges Island (Brice-Bennett 1976).

14.3.6 Fishing

Important fishing areas are the small lakes and rivers north of the community, North Pole and Christie Lakes, lakes and rivers east and south of Ross Inlet on Committee Bay, the Snowbank River, and north of Ross and Gore Bays (Brice-Bennett 1976).

Water bodies in the area which had commercial quotas in 1976 are: Alden Lake and River (Wager Bay) - 2,000 lbs (char); Bennett Bay (Wager Bay) - 5,000 lbs (char); Brown River (Wager Bay) - 15,000 lbs (char); Christie Lake - 2,000 lbs (lake trout and whitefish); Gore Bay area - 8,000 lbs (char); Haviland Bay Area (Repulse Bay) - 15,000 lbs (char); North Pole River - 5,000 lbs (char); North Pole Lake - 1,000 lbs (lake trout and whitefish); Piksimak River, Douglas Harbour (Wager Bay) - 5,000 lbs (char); Snowbank River - 5,000 lbs (char); and two unnamed lakes in the Repulse Bay area - 3,000 and 2,500 lbs (lake trout and whitefish). Of these, only the North Pole River has a recent record of commercial harvest.

14.4 Harvest Patterns

Spring is an important season for trapping; hunting caribou, wildfowl, polar bear, seal, and walrus; and fishing. Summer is important for hunting wildfowl, seal, whale, and walrus and for fishing. Fall is important for trapping, hunting caribou, polar bear, seal, and walrus and fishing, while winter is important for trapping and caribou, polar bear, and seal hunting (Table 14-2).

14.5 Harvest Data

(See Table 14-3).

14.6 Commercial and Domestic Importance

14.6.1 Commercial Importance

Seal skins, fox pelts, and polar bear skins are important sources of income for Repulse Bay Inuit (Table 14-4). A 1973 study survey reported that 66% of ringed seal skins and 81% of bearded seal skins were traded. Only 1% of all seal skins were used for handicrafts. Some walrus tusks were also used for handicrafts (Friesen 1975).

14.6.2 Domestic Importance

Seal meat is the primary food for the Repulse Bay Inuit; caribou, fish, ducks, belugas, and walrus are also eaten (Table 14-5). In 1973, 2% of edible ringed seal, 20% of edible bearded seal, 10% of edible beluga, 75% of edible narwhal, and 33% of edible walrus meat was used for family food; 14% of ringed seal, 41% of bearded seal, 90% of beluga, 25% of narwhal, and 66% of walrus meat which is suitable for dogs was fed to dogs (Friesen 1975).

14.7 Pipeline Implications

The Quebec route crosses the southern fringe of the Repulse Bay resource-use zone. Location of a staging area and increased marine traffic in Repulse Bay would probably have adverse effects on the community harvest of marine mammals because Repulse Bay is the primary seal, whale, walrus, and wildfowl hunting area and a secondary polar bear hunting area for the community. Tributaries to Repulse Bay, close to the community, are important for domestic char fishing.

Specifically, the Quebec route may conflict with resource harvest in the following key areas:

1. Snowbank River. This river is domestically fished for char and has a commercial quota. The route crosses it about 20 km from its mouth. Pipeline activities could degrade fish habitat interfere with char migrations, and conflict with fishing activities.

Table 14-2. Harvest patterns - Repulse Bay.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept to Nov)
Trapping[1,2] Arctic & Colored Fox	Trapping.	Now the major season.	No trapping.	Starts in Nov.
Land Hunting: Caribou[2,3]	Hunting inland.	Hunting inland.		Hunting inland.
Wolf[3]	Hunting inland in association with caribou hunting.			Hunting inland.
Wildfowl Hunting; Ducks & Geese[3,4]		Hunted at floe-edge.	Hunted along shore.	Stops in Sept.
Egg Collecting[4]		Eggs collected.		
Ptarmigan[3]		Hunted in all seasons.		
Marine Hunting: Polar Bear[3,4]	Floe-edge hunting.	Floe-edge hunting.	No hunting.	Hunting.
Ringed & Bearded[3,4] Seals		Hunted year-round.		
Harbour Seal[3]			Hunting.	
Beluga & Narwhal[2,3]			Hunting.	

Table 14-2. Harvest patterns - Repulse Bay.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept to Nov)
Walrus[2,3,4]		Hunting.	Hunting.	Hunting.
Fishing[2,3,4]	No fishing	Ice fishing on inland lakes, char fishing in rivers.	Fishing along coast.	Char fishing in rivers, fishing on inland lakes.

[1] Brice-Bennett 1976.

[2] inferred from analysis of the pattern in Pelly Bay (see Table 13-2).

[3] inferred from analysis of the pattern in Chesterfield Inlet (see Table 9-2).

[4] inferred from analysis of the pattern in Coral Harbour (see Table 15-2).

Table 14-3. Harvest data - Repulse Bay.[1]

	TRAPPING			LAND MAMMAL HUNTING		WILDFOWL HUNTING			MARINE MAMMAL HUNTING							FISHING
	ARCTIC FOX	COLOURED FOX	WOLVERINE	CARIBOU	WOLF	GEESE	DUCK	PTARMIGAN	POLAR BEAR[2]	RINGED SEAL	BEARDED SEAL	HARP SEAL	BELUGA	NARWHAL	WALRUS	ALL SPECIES
63-64	217	33		232	6	504	47	398	7	1761						
64-65	1121	48		284		14	61	345	9	1446				23[5]		
65-66	179	6		282		6	350	199	4	1398						
66-67	123	7		254	4	13	36	240	8	1550						
67-68	246	13		302	3	11	89	216	9	587						
68-69	99	3		273		1	22	87	10							
69-70				281	3		36	145	11	1475[3]						
70-71	350	8		554	7	12	419	53	10							
71-72	768	22		450	28	9	225	47	11	1346		9[7]	58[7]	20[7]	22[7]	
72-73	119	5			11				16	1258	69[4]					
73-74	1341	14			27				16	1084						
74-75									14[6]							
75-76																
Total All Years	4563	159		2912	89	570	1285	1730	125	11905						
Avg. All Years	456	16		324	11	71	143	192	10	1323		9	58	20	22	

Table 14-3. Harvest data - Repulse Bay.[1]

	TRAPPING			LAND MAMMAL HUNTING		WILDFOWL HUNTING			MARINE MAMMAL HUNTING							FISHING
	ARCTIC FOX	COLOURED FOX	WOLVERINE	CARIBOU	WOLF	GEESE	DUCK	PTARMIGAN	POLAR BEAR[2]	RINGED SEAL	BEARDED SEAL	HARP SEAL	BELUGA	NARWHAL	WALRUS	ALL SPECIES
Total 69-70 to 74-75	2578	49		1285	76		680	245	78	5163						
Avg.	645	12		428	15		227	82	13	1291						
High Year	1341	22		554	28		419	145	16	1475						

1 All data from Usher 1975, unless otherwise indicated.

2 Polar Bear quota for Repulse Bay is 16.

3 Palmer 1973.

4 Friesen 1975.

5 Mansfield et al, 1975.

6 NWT Game Management Division.

7 Mean from two years of records from RCMP Game Records for 1962-1971 (Smith and Taylor 1977).

Table 14-4. Expected annual income from sales of fur - Repulse Bay.

	Arctic Fox	Coloured Fox	Wolf	Polar Bear	Ringed Seal	TOTAL
Average Annual Harvest (1970 to 74-75)[1]	645	12	15	16	1,291	
Average Pelt Price - NWT (74-75)[2]	$17.59	$28.61	$62.72	$388	$17.10	
Expected Income	$11,346	$343	$941	$6208	$22,076	$40,913
Per Capita Income[3]	$41	$1.20	$3.40	$22	$80	$148

[1] from Table 14-3, except for polar bear which is based on allotted quota of 16.

[2] from Fur Traders Record Book - NWT Government.

[3] based on a 1974 population of 276.

[4] Community polar bear skin price for 1974-75 from Smith and Stirling (1976).

Table 14-5. Estimated annual imputed income from major food sources - Repulse Bay.

	Caribou	Ducks	Ptarmigan	Ringed Seal	Fish	TOTAL
Average Annual Harvest (69-70 to 74-75)[1]	428	227	82	1291	ND	
Edible lbs/ Animal[2]	100	2.6	0.9	45		
Edible Meat (lbs)	42,800	590	74	58,095		72,438
Imputed Value/lb[3]	$3.00	$2.00	$2.00	$3.00		
Imputed Value	$128,400	$1180	$148	$174,285		$304,014
Per Capita Value[4]	$465	$4.30	$0.50	$631		$1101

[1] from Table 14-3.

[2] from Usher 1976, Bissett 1974, Thompson 1976.

[3] adapted from Usher 1976-8.

[4] based on a 1974 population of 276.

ND No Data.

2. Roes Welcome Sound is a critical migration route for belugas that are hunted in Repulse Bay. Seal and walrus are hunted along its western shore. Staging activities, marine traffic, and the construction of the crossing in summer could displace marine mammals, disrupt their movements, or make feeding/resting areas unsuitable because of disturbance or pollution.

15. CORAL HARBOUR

15.1 The Community

Coral Harbour was founded as a Hudson's Bay Company post in 1924. In 1942, the United States Airforce built an air strip 9 mi (14 km) from the present community. In 1948, the airstrip was taken over by the Canadian Dept. of Transport and in 1950, the federal government built a school at the community. Over the years, Inuit have moved into Coral Harbour from camps on Southampton and Coats Islands (Welland 1976; Canada North Almanac 1976).

In 1976, the estimated population of Coral Harbour was 425; it has increased steadily over the last decade. In 1974, it was 404; in 1971, 360; in 1969, 306; and in 1966, 298. In 1971, 92% of the population was Inuit.

Coral Harbour is currently served by one flight a week from Churchill with connections to Winnipeg. Marine transportation is supplied by the Northern Canada Transportation Limited operating out of Churchill. The shipping season is limited to August and September (Canada North Almanac 1976).

15.2 The Economy

Welland (1976) reports that many people still depend on trapping to earn income during winter and all of the people rely heavily on local food for daily use. Wage employment is available through the MOT airstrip and the weather station. Handicrafts (including soapstone, ivory, and whale bone carvings) are marketed through the Katudgevik Cooperative. Coral Harbour also has a tourist facility, the Issungaag Motel, which is owned and operated by the cooperative.

There were 69 holders of General Hunting Licences in 1974-75; the number has increased over the last decade (see Table 15-1). No commercial fishing licences were issued in 1975 (D. Dowler, personal communication).

Table 15-1. Number of General Hunting Licences issued - Coral Harbour.

1974-75	69	1970-71	73	1966-67	54
1973-74	80	1969-70	80	1965-66	64
1972-73	79	1968-69	37	1964-65	65
1971-72	76	1967-68	56	1963-64	62

Source: NWT Government.

15.3 Resource-Use Areas

15.3.1 General Area

Caribou hunting and trapping define the inland boundary of the Coral Harbour resource-harvest zone while seal hunting defines the marine boundary. The zone extends 230 km west to the west shore of Roes Welcome Sound, south of Wager Bay; 230 km north to the north tip of Southampton Island; 110 km east to the southeast tip of Southampton Island; and 220 km south to the south end of Coats Island (see Map 13).

Camping in spring and summer is an important activity. Every June, most families, including those whose members have full-time jobs, camp for several weeks at various places to hunt seals and geese and to collect eggs. Most camps are at places where people have lived in the past (Welland 1976).

Important spring and summer camping areas are located in South Bay, Prairie Point, Native Bay and Native Point, East Bay, Bear Cove and Bear Cove Point, and Ruin Point. Important summer fishing camp areas are along the Kirchoffer River, Rocky Brook, and Sixteen Mile Brook. Duke of York Bay is a remote camping area but it is still used in most years.

There are no permanent winter camps now on Southampton Island but during the winters of 1970-71 and 1971-72, groups of more than 20 lived on Coats Island (Welland 1976).

15.3.2 Trapping

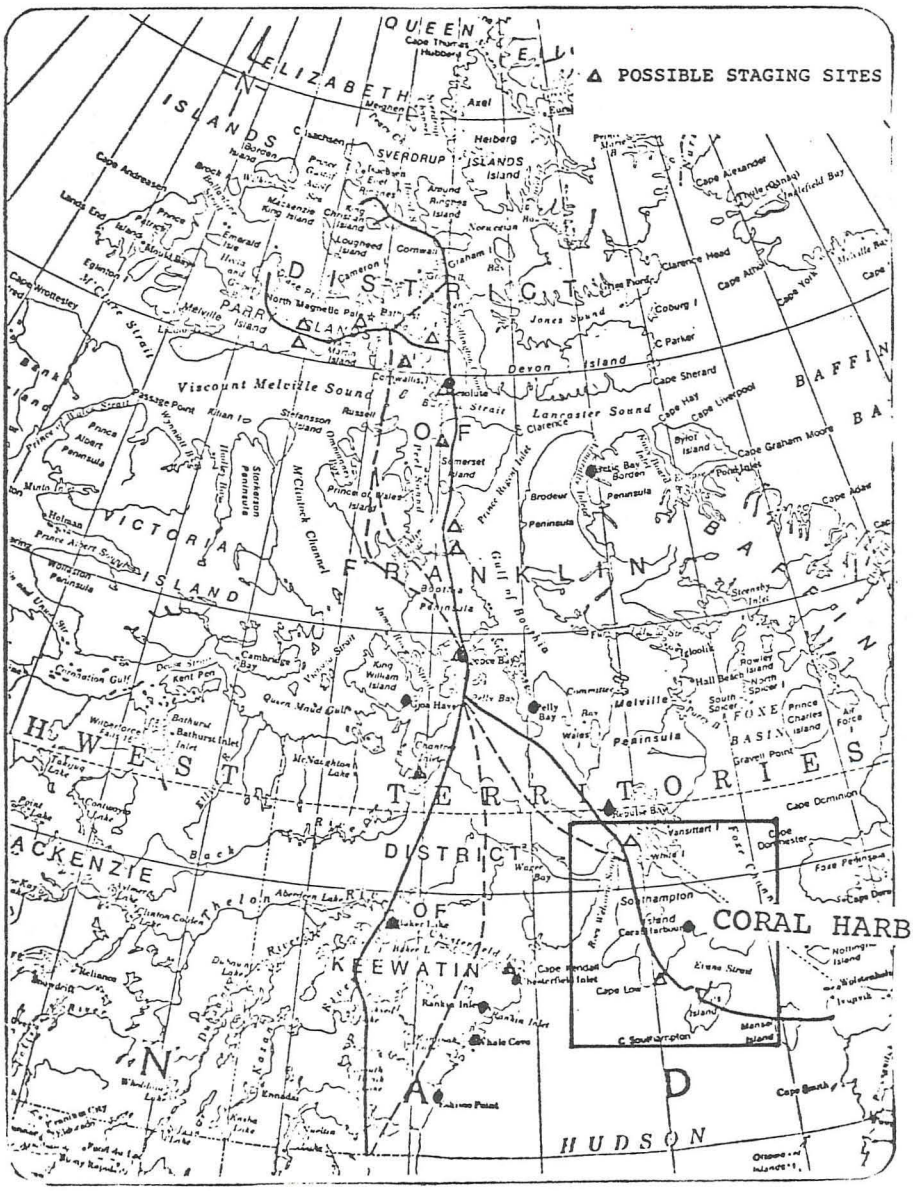
Important trapping areas are: shorelines in Native Bay, South Bay, and southwest to Cape Low; inland towards Salmon Pond

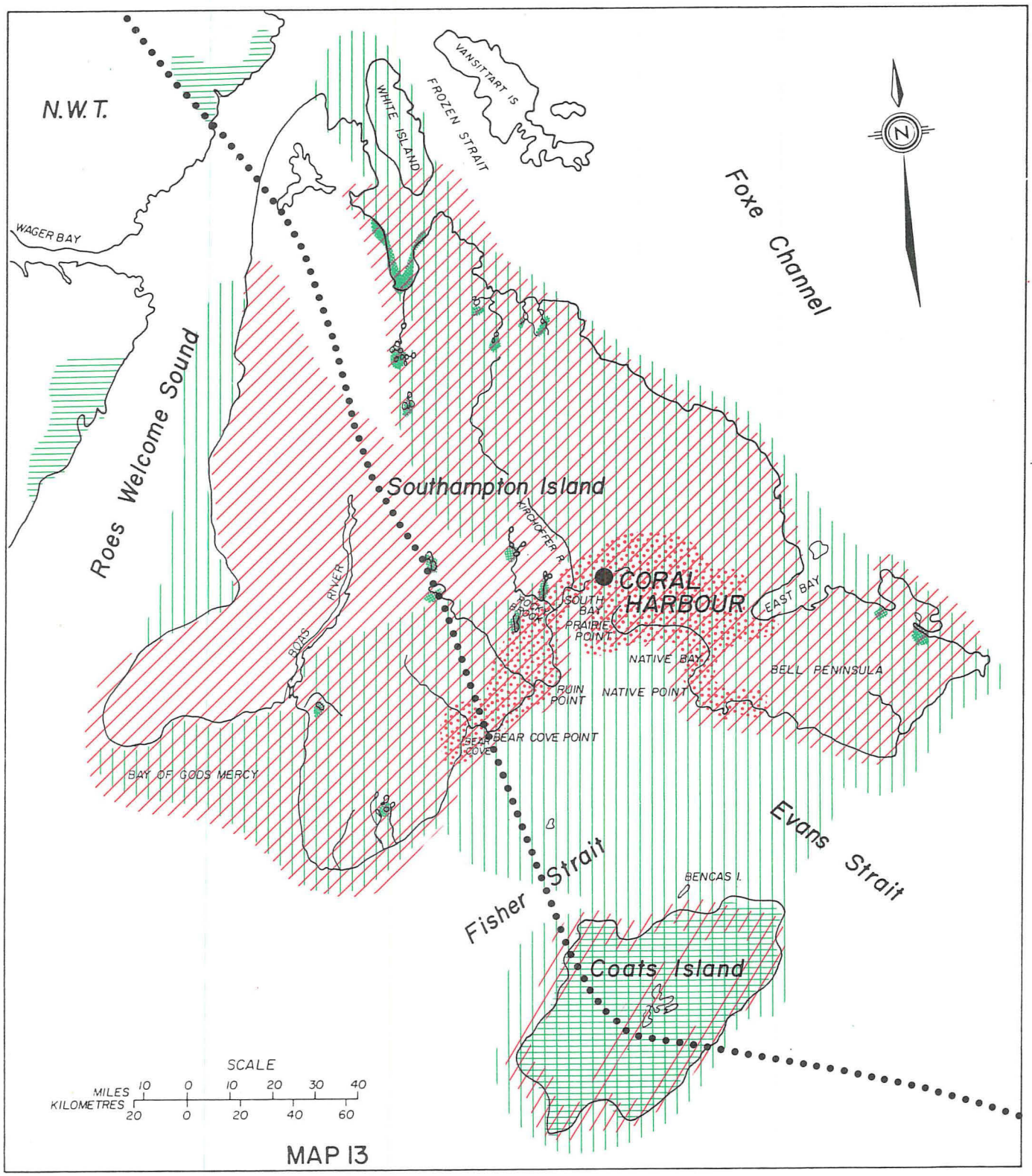
— LEGEND —

- Marine mammal hunting
  - seal
  - whale
  - walrus
  - polar bear
- Land mammal hunting
  - caribou
  - muskox
  - wolf
- Trapping
  - wolverine
- Wildfowl
- Fishing
- Trapline boundaries
  - almost exclusively fox

Proposed pipeline alignment
- Prime route
- Alternate route

- Community location





13. Coral Harbour

and north up the Cleveland River to Duke of York Bay; inland towards East Bay and all around the coast of the Bell Peninsula; north from Cape Low to the Bay of God's Mercy and inland from there to Coral Harbour; along the northwest coast from Ell Bay to Battery Bay; north up the Kirchoffer River and down the Canyon River to the coast; and inland towards Duke of York Bay. Remote areas are Cape Kendall, the Ascension Islands and Stanley Harbour, and Coats Island. Coats Island has been trapped in recent years, particularly by the seven trappers who lived there in the winter of 1971-72 (Welland 1976).

Short traplines running from Coral Harbour are used by weekend trappers who generally have full-time wage employment (Welland 1976).

15.3.3 Land Mammal Hunting

Major caribou-hunting areas are Coats and Bencas Islands; remote hunting areas are two areas on the western shore of Roes Welcome Sound, one south of Wager Bay and one south of Beach Point. These two areas are occasionally used in winter when people cross Roes Welcome Sound on the ice bridge. Caribou were depleted on Southampton Island and have not yet recovered to the point where hunting is permitted (Welland 1976).

15.3.4 Wildfowl Hunting

Ducks and geese are hunted along the coast and floe edge. The Bear Cove, Native Point, and East Bay areas are important for spring goose hunting and egg collecting. The coast from Bear Cove to Native Point, the mouth of the Boas River in Bay of God's Mercy, and Capes Prefontaine and Pembroke on Coats Island are important goose hunting areas in summer. Ptarmigan are hunted throughout the area, especially around Big Corner Cliff east of Coral Harbour (Welland 1976).

15.3.5 Marine Mammal Hunting

Polar Bears

Polar bears are intensively hunted from South Bay to Cape Low and all around the Bell Peninsula. Important remote areas are inland from Coral Harbour to the Bay of God's Mercy, Cape Kendall, Duke of York Bay, and Coats Island. There is some spring hunting in the mountainous areas on the east side of Southampton Island (Welland 1976). Coral Harbour has a unique polar bear hunting pattern; it is the only community in the study area where polar bear hunting ranges a considerable distance inland.

Seals

Ringed and bearded seals are hunted at the floe-edge in winter in South Bay and Native Bay. In late winter and early spring the hunting area expands into East Bay, Kokumiak Harbour, and Duke of York Bay. In June, hunting from spring camps at Bear Island and on adjacent coasts of South Bay is important. Summer hunting occurs along the coast, the important areas being all along the south coast of Southampton Island and around Duke of York Bay. In late summer and early fall, the important ringed and bearded seal hunting areas are between Southampton and Coats Island and along all coasts of Coats Island (Welland 1976).

Harp seals are hunted around South and Native Bays when they migrate into the area in summer. Harbour seals are hunted around Cape Low and Bay of God's Mercy where they haul out on rocks in late summer-early fall or at the floe-edge in winter (Welland 1976).

Whales

Whales are hunted in South Bay, around Native Point, in Duke of York Bay, and on the northeastern coast of Coats Island.

Walrus

Walrus are hunted at the floe edge in winter around Native Point and from Cape Low to Hut Point. Spring floe-edge hunting areas are in Native Bay, South Bay, and Duke of York Bay. The main summer hunting areas are in Native and South Bays, around Walrus Island, along the south and southeast coasts of Coats Island, and around Bencas Island. Secondary areas are around the western and northern coasts of Coats Island and around the Bell Peninsula (Welland 1976).

15.3.6 Fishing

Favourite spring fishing areas are lakes and rivers around Stanley Harbour and the Canyon and Cleveland Rivers. Important summer char fishing spots are close to the community at Rocky Brook, Sixteen Mile Brook, and Kirchoffer River. The Thomsen and Cleveland Rivers and the coast around Duke of York Bay are important spring and summer fishing areas for people camping in the Duke of York Bay area. Salmon Pond is an important fishing area in fall.

Water bodies in the area that had commercial quotas for char in 1976 are: Cleveland River (20,000 lbs); Gordon River, north of Stanley Harbour (2,500 lbs); and Thomsen River (5,000 lbs). None of these water bodies have recent commercial harvest records.

15.4 Harvest Patterns

Spring is an important season for hunting wildfowl, polar bear, seal, and walrus and for fishing. Summer is important for hunting caribou, wildfowl, polar bear, seal, whale, and walrus and for fishing. Fall is important for trapping; hunting caribou, polar bear, seal, and whale; and fishing. Winter is important for trapping and hunting caribou, eider duck, polar bear, seal and walrus (Table 15-2).

15.5 Harvest Data

(See Table 15-3).

15.6 Commercial and Domestic Importance

15.6.1 Commercial Importance

Polar bear skins, fox pelts, and seal skins are important sources of income for the Coral Harbour Inuit (Table 15-4). Welland (1976) reports that many people, including some in their early twenties, consider trapping to be their profession and hope to continue in it. Because Southampton and Coats Islands are productive areas and because fur prices are high, they regard trapping and hunting as an enduring and worthwhile profession.

Friesen (1975) reported 90% of ringed seal, 40% of bearded seal, and 60% of harp seal skins were traded; 1% of ringed and bearded seal skins were used for handicrafts. Walrus were important for their ivory tusks which are used for carving; 109 lbs of ivory were harvested in 1973.

15.6.2 Domestic Importance

Seal meat is the primary food of the Coral Harbour Inuit; caribou, fish, wildfowl, beluga whales, and walrus are also important (Table 15-5). In 1973, an estimated 25% of edible ringed seal, 50% of edible bearded seal, 75% of edible harp seal, 80% of edible beluga, and 41% of edible walrus meat was used for family food; 14% of ringed seal, 31% of bearded seal, 88% of harp seal, 20% of beluga, and 32% of walrus meat suitable for dogs was fed to dogs (Friesen 1975). Welland (1976) reports that walrus hunting has become a more wasteful practice as the use of ivory predominates and the meat is not used much with the decline in use of dog teams. Only preferred meats are now used for human consumption. Seal skins are still used domestically to make boots, mitts, and ropes (Welland 1976).

Table 15-2. Harvest patterns - Coral Harbour.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept. to Nov.)
Trapping[1,2]	Primary season.	No trapping.	No trapping.	Starts in Nov.
Land Hunting: Caribou[1]	Some hunting.		Starts in late summer.	Continues to early fall.
Wildfowl Hunting: Ducks & Geese[1]	Eiders hunted at floe-edge.	Starts in Jun from spring camps.	Important season.	
Egg Collecting[1]		Collecting.		
Ptarmigan[1]	Hunted anytime.			
Marine Hunting: Polar Bear[1,3]	Hunting.	Some hunting.	No hunting.	Starts in Oct.
Ringed & Bearded Seals[1]	Floe-edge hunting.	Floe-edge hunting from spring camps.	Hunting along coast & between islands after break-up.	Summer pattern continues to freeze-up.
Harp Seal[1]			Hunted as they migrate through area.	

Table 15-2. Harvest patterns - Coral Harbour.

Activity	Winter (Dec to Mar)	Spring (Apr to Jun)	Summer (July, Aug)	Fall (Sept. to Nov.)
Beluga & Narwhal[1]			Hunting in Aug.	Hunting in Sept.
Walrus[1]	Floe-edge hunting.	Hunted from canoes along floe-edge.	Hunted in open water from Peterhead boats.	
Fishing[1]		Ice fishing on lakes.	Char caught with nets & rods after break-up.	Ice fishing with nets for char.

[1] Welland 1976.
[2] inferred from analysis of the pattern in Pelly Bay (see Table 13-2).
[3] inferred from analysis of the pattern in Chesterfield Inlet (see Table 9-2).

Table 15-3. Harvest data - Coral Harbour (1)

	TRAPPING			LAND MAMMAL HUNTING		WILDFOWL HUNTING			MARINE MAMMAL HUNTING							FISHING
	ARCTIC FOX	COLOURED FOX	WOLVERINE	CARIBOU	WOLF	GEESE	DUCK	PTARMIGAN	POLAR BEAR (3)	RINGED SEAL	BEARDED SEAL	HARP SEAL	BELUGA	NARWHAL	WALRUS	ALL SPECIES
63-64	2039	1		11		312	179	463	99	1754						
64-65	4014			115		322	286	1144	101	2039						
65-66	832					667	402	434	45	3791						
66-67	727			27		905	258	1553	116	1839						
67-68	1602			11		275	142	334	74	1408						
68-69	806	6		25		169	75	260	39							
69-70	689			43		613	757	338	71	1251 (4)						
70-71	4156					803	1602	513	66							
71-72	2098			30		639	1711	294	64	691			33 (5)		132 (5)	
72-73	424								40	2946	44 (8)	31 (8)				
73-74	1859								65	856					132 (6)	
74-75				(2)					65 (7)							
75-76																
Total All Years	19246			262		4705	5412	5333	845	16575						
Avg. All Years	1750			37		523	601	593	70	1842			33		132	

Table 15-3. Harvest data - Coral Harbour (1)

	TRAPPING			LAND MAMMAL HUNTING		WILDFOWL HUNTING			MARINE MAMMAL HUNTING							FISHING
	ARCTIC FOX	COLOURED FOX	WOLVERINE	CARIBOU	WOLF	GEESE	DUCK	PTARMIGAN	POLAR BEAR (3)	RINGED SEAL	BEARDED SEAL	HARP SEAL	BELUGA	NARWHAL	WALRUS	ALL SPECIES
Total 69-70 to 74-75	9226			73		2055	4070	1145	371	5744						
Avg.	1845			37		685	1357	382	62	1436						
High Year	2098			43		803	1711	513	71	2946						

1 All data from Usher 1975, unless otherwise indicated.

2 In 1974, the quota for Coats and Bencas Islands was raised from 120 to 300, but during the winter of 1974-75, local hunters could not fill this quota. (Dialogue North 3-75).

3 Polar Bear quota for Coral Harbour is 65.

4 Palmer 1973.

5 Mean from 3 years of records for walrus and 4 years for beluga from RCMP Game Reports for 1962 to 1971 (Smith and Taylor 1977).

6 Welland 1976 reports fewer walrus taken in recent years due to decline in importance of dog teams.

7 NWT Game Management Division.

8 Friesen 1975.

Table 15-4. Expected annual income from sales of fur - Coral Harbour.

	Arctic Fox	Polar Bear	Ringed Seal	Total
Average Annual Harvest (69-70 to 74-75)[1]	1845	65	1436	
Average Pelt Price - NWT (74-75)[2]	$17.59	$809[4]	$17.10	
Expected Income	$32,454	$52,585	$24,556	$109,595
Per Capita Income[3]	$80	$130	$61	$271

[1] from Table 15-3, except for polar bear which is based on allotted quota of 65.

[2] from Fur Traders Record Book - NWT Government.

[3] based on a 1974 population of 404.

[4] Community polar bear skin price for 1974-75 from Smith and Stirling (1976).

Table 15-5. Estimated imputed income from major Food sources - Coral Harbour.

	Caribou	Geese	Ducks	Ptarmigan	Ringed Seal	Fish	Total
Average Annual Harvest (69-70 to 74-75)[1]	120	685	1357	382	1436	ND	
Edible lbs/Animal[2]	100	3.5	2.6	0.9	45		
Edible Meat (lbs)	12,000	2398	3528	344	64,620		82,890
Imputed Value/lb[3]	$3.00	$2.00	$2.00	$2.00	$3.00		
Imputed Value	$36,000	**$4795**	$7056	$688	**$193,860**		$242,399
Per Capita Value[4]	$89	$12	$17	$1.70	$480		$600

[1] from Table 15-3, except for caribou which was based on a yearly quota of 120, which has since been increased.

[2] from Usher 1976, Bissett 1974, Thompson 1976.

[3] adapted from Usher 1976.

[4] based on a 1974 population of 404.

ND No Data.

15.7 Pipeline Implications

The Quebec route crosses the core of the Coral Harbour resource-use zone on Southampton and Coats Island and in Fisher Strait. Specifically, the Quebec route may conflict with resource harvest in the following key areas:

1. Upper Boas River Drainage, Southampton Island. This is a secondary polar bear hunting area. Construction in this area may interfere with polar bear migrations, destroy den sites, and promote man-bear conflicts.

2. Bear Cove, Southampton Island. Important for ringed and bearded seal hunting, polar bear hunting, and spring and summer goose hunting. There is also some whale hunting in this area. Staging activities, marine traffic, and spring and summer construction could displace marine mammals and breeding geese and degrade their habitats.

3. Fisher Strait. This is a primary area for walrus hunting in summer and ringed and bearded seal hunting in late summer and early fall. Marine traffic and construction of the crossing in late spring, summer, and early fall could displace marine mammals or interfere with their movements.

4. Coats Island. This is the prime caribou hunting area; construction in spring and summer could disturb caribou populations in critical areas or interfere with their movements. The coasts of Coats Island are important for polar bear, walrus, and seal hunting; staging activities and marine traffic could disturb marine mammals or degrade their habitat.

16. RESOURCE IMPACTS

16.1 Format

Potential impacts are identified on a species-by-species basis according to the following format:

1. Nature of impacts on animal populations important to community harvest.

2. Descriptions of specific areas along the prime and alternate routes where these impacts may occur.

3. Evaluation of these impacts in relation to harvest and use patterns of communities.

4. Identification of major data gaps.

5. Recommendation of mitigative measures and protection strategies.

Impacts on species such as wolf and wolverine are not discussed because they are not considered critical to community survival and well-being, and because little is known on their abundance and distribution.

16.2 Arctic Fox

16.2.1 Disturbance of Denning

Arctic fox normally dig dens in well-drained soils of eskers, hillsides or streambanks (Banfield 1974), areas also suitable for pipeline construction, excavation and buildings. Potential impacts on fox populations include destruction of dens or disturbance leading to the abandonment of dens. The magnitude of impact is likely to be minor because fox are widespread and abundant in most areas along routes. In addition, impact effects would tend to be masked by natural population cycles.

Areas where denning is most likely to be affected are:

1. North side of Bellot Strait. This is a denning site (Peterson 1976) and a remote trapping area for Spence Bay.

2. Boothia Isthmus. The area from Pagnikto Lake north to Kangikjuko Lake (just north of Jekyll Lake) has been identified as an important fox denning area (Peterson 1976) and lies within the primary trapping area for Spence Bay.

3. Central Keewatin. Denning areas are reported to be abundant throughout central Keewatin (Peterson 1976). The prime route passes through the primary trapping area of Baker Lake and the western edge of the Eskimo Point trapping area. The coastal alternate passes close to primary trapping areas of all coastal communities except Chesterfield Inlet.

4. Southampton Island. Important fox habitat occurs throughout Southampton Island. The Quebec route passes through important Coral Harbour trapping areas on the island.

16.2.2 Communities Affected

Communities that would be affected most by reduction in availability of fox through increased mortality or displacement are Spence Bay and Baker Lake. Coral Harbour would be similarly affected if the Quebec route were chosen. The coastal communities, except for Chesterfield Inlet, could be affected to a minor degree by the coastal alternate. (Trapping is an important source of income for Coral Harbour and Eskimo Point and, to a lesser extent, for Rankin Inlet, Whale Cove, Spence Bay and Baker Lake).

16.2.3 Data Gaps

Fox denning areas are not well known except in a few locations. However, this is not a significant data gap from the point of view of resource protection during pipeline construction.

16.2.4 Resource Protection Strategies

No recommendations for route revisions or project scheduling at specific sites can be made at this time. The denning season extends from about the end of March to July (Banfield 1974). Attempts should be made during route location surveys to check sandy or gravelly terrain for dens. Active denning areas that are found should be marked and construction activities should not occur in these areas during the denning season.

16.3 Caribou

16.3.1 Interference with Caribou Migrations

Caribou are a basic necessity of life and well-being for almost all Inuit communities along the proposed routes. Sources of potential impacts which may be caused by the pipeline project are: construction activities (operation of equipment, presence of equipment and workers, and loud noise); low-flying aircraft; traffic; and barriers (roads, tracks, berms). All of these could deflect caribou from normal migration routes, destroy critical habitat and possibly result in abandonment of traditional range.

The primary implication of such impacts to resource-use is that caribou may no longer be present in traditional hunting areas. This is significant because hunters depend on the return of caribou herds to traditional areas at predictable times of year (in some cases key hunting areas are located at

specific river crossings or other particular land features). It is not known whether deflection of caribou from their normal migration route one year would result in long-term or permanent changes in migration patterns or locations of calving, post-calving, wintering, or other critical areas.

A secondary resource-use implication would be the reduction of caribou populations resulting from delayed arrival of herds on calving grounds or wintering areas, or from the general stress incurred through forced changes in migration patterns. Such changes, coupled with severe environmental conditions (e.g. bad winter and heavy snow conditions) could cause mortality. Miller (1972) claims that if the Kaminuriak herd is forced to calve south of their traditional calving ground, they could suffer a much greater loss of calves to wolves.

We assume that the pipeline will, in almost all areas, be buried, thus posing little interference to caribou migrations. If the pipeline is not buried in migration areas and if the pipeline or the berm were to create a physical or visual barrier to migrations, the impact on caribou populations would be much more severe than if obstruction occurred during just one season.

Areas where caribou migrations may be affected along the route are:

1. Polar Bear Pass Area (Bracebridge Inlet to Goodsir Inlet), Bathurst Island. Caribou migrate along the east coast, moving north in April and May to calving and summering grounds in northern Bathurst Island and returning south in September and October to wintering grounds on southeast Bathurst Island (Fischer and Duncan 1976). Southeast Bathurst has been a major winter caribou hunting area for the Resolute Inuit since 1953, but its importance has declined recently due to low caribou populations.

2. Somerset and Prince of Wales Islands. Caribou migrate north from their wintering area in Stanwell Fletcher Basin along the western coast of Somerset Island and across Peel Sound to Prince of Wales Island (Boreal Institute for Northern Studies 1975). They probably migrate north from March to May and return in fall, although precise migration dates are not known. The proposed prime route may avoid this migration if caribou movements are confined primarily to the coast and across Peel Sound; the western alternate route on Prince of Wales Island may conflict with migrations to calving areas in the

Arrowsmith Plains, in the northwest part of the Island, and on Russell Island. The northwest part of Somerset Island and the northeast part of Prince of Wales Island are important spring hunting areas for the Resolute Inuit; the importance of these areas is reported to be increasing in recent years. Southwest Somerset Island from McClure Bay to Bellot Strait is a remote caribou hunting area for the Arctic Bay Inuit and is probably no longer used by them.

3. Boothia Peninsula. Caribou on northern Boothia Peninsula probably migrate in early spring from wintering grounds in the northeast around Cape Airy to calving and summering areas in the northwest and north-central parts of the Peninsula, returning in fall (Fischer and Duncan 1976). The prime route would cross this migration route.

4. Baker Lake-Thelon River area. A small caribou crossing area on the Thelon River just upstream of Baker Lake (Canadian Wildlife Service 1972) conflicts with the crossing of the Thelon by the proposed prime route. This crossing is an important hunting site for the Baker Lake Inuit.

5. Yathkyed Lake to Manitoba border. This entire area is important for migrations and movements of the Kaminuriak herd from about mid-May to early November (Parker 1972, Miller 1972). From mid-May to early June they move across this area enroute to calving grounds east of Kaminuriak Lake in the McQuoid-Banks-Duffy-Kaminak Lakes area. The most common route is along North and South Henik Lakes, but depending on climatic conditions, some animals may migrate across the prime route anywhere from South Henik Lake, south to the Manitoba border. Mid-summer (mid to late July) and early fall (mid-Sept. to early Oct.) movements cross this area from the post-calving aggregation area to summering areas and from summering areas to a common rutting area near South Henik Lake (Parker 1972, Miller 1972). In late fall (late Oct. to early Nov.), the Kaminuriak herd migrates out of this area to their wintering area in northern Manitoba and Saskatchewan (Parker 1972, Miller 1972).

The coastal route would cross migration routes of the population that winters in the Rankin Inlet-to-Eskimo Point area enroute to the calving area east

of Kaminuriak Lake. It would also cross late summer and early fall migration routes, as well as the route used by these animals in late fall to return to their wintering area. The Kaminuriak herd is of prime importance to the people of Eskimo Point and Whale Cove, of less importance to the people of Rankin Inlet and Chesterfield Inlet, and of secondary importance to the people of Baker Lake.

16.3.2 Interference with Calving

Disturbance of caribou during calving may result from pipeline construction (operation of equipment, blasting, low-flying aircraft, traffic, etc.) and operation (compressor stations, surveillance flights, maintenance activities, etc.). This, coupled with the vulnerability of calves, could lead to animal losses by increasing stress on the population or by causing herds to abandon calving areas prematurely.

Disturbance on calving areas could affect resource harvest by reducing the number of animals available for harvest, either through direct mortality or through changes in movement patterns.

Areas where calving areas may be affected along the route are:

1. Aston Bay, Somerset Island has been identified as a calving area for the Somerset Island-Prince of Wales Island caribou population (Bissett 1968) although this has not been confirmed by recent surveys. Aston Bay is part of an important spring hunting area for the Resolute Inuit. The prime route passes close to Aston Bay and it has been identified as a possible staging site for pipeline construction.

2. Stanwell Fletcher Basin, Somerset Island. The south-west coast of Somerset Island south of Stanwell Fletcher Lake has been identified as a possible calving area, based on observations of cow-calf concentrations (Fischer and Duncan 1976). The prime route probably will avoid the core of this area, although some calving may take place near the proposed route.

3. Prince of Wales Island. Cow-calf concentrations have been observed in the Arrowsmith Plains area, the northwest part of the Island, and to a limited degree on Russell Island and the southeast shore of Baring Channel (Fischer and Duncan 1976). The western alternate would avoid the Arrowsmith Plains area but would probably cross calving areas on the northern part of the Island.

4. Boothia Peninsula. Cow-calf concentrations have been observed north, east, and south of Wrottesley Inlet, suggesting that calving occurs in this area (Fischer and Duncan 1976). The prime route avoids this area; the western alternate would cross it.

16.3.3 Disturbance of Caribou Concentrations

Important areas for caribou concentration, other than calving areas, are post-calving and wintering areas. Disturbance by pipeline construction or operation activities in these areas may displace caribou from critical ranges or destroy productive habitats, thereby placing caribou populations under added stress at times when they are likely to be vulnerable. Again, potential impacts on harvest would be abandonment by caribou of traditional hunting areas and reduction of caribou populations.

Areas where impacts may occur on caribou concentrations along the route are:

1. Southeast Bathurst Island. The Bathurst population (recently estimated at 300) winters in this area (Fischer and Duncan 1976) which used to be an important winter-hunting area for the Resolute Inuit. Caribou may be driven out of this area if Freemans Cove is used as a major pipeline staging area during winter.

2. Cornwallis Island supports a year-round population (now estimated at 30) which resides primarily in the Cape Austin area and along the west coast (Fischer and Duncan 1976). This is a secondary fall-hunting area for the Resolute Inuit.

3. Stanwell Fletcher Basin. Recent surveys have confirmed the importance of this area as the primary fall and winter concentration area for the Prince of Wales-Somerset Island population (R. Russell, personal communication). It is a remote but important hunting area for the Resolute Inuit, and a remote, and probably no longer important hunting area for the Arctic Bay Inuit.

4. Prince of Wales Island. The Island is important summer range for about 2,000 caribou. Main concentrations are in the southwest and northern parts of the Island, with the northern part supporting large concentrations in late July (Fischer and Duncan 1976). The western alternate would traverse this area.

5. Murchison-Hayes River area. This is a major wintering area for about 500 barren-ground caribou (Canadian Wildlife Service 1972) and is an important hunting area for Spence Bay and Gjoa Haven Inuit. The prime route skirts the edge of the winter range.

6. The South Henik Lake area is the major rutting and late fall staging area for the Kaminuriak herd (Parker 1972). From mid-May to mid-June, migrating herds cross between South and North Henik lakes (Canadian Wildlife Service 1972). The prime route passes along the eastern edge of this area.

7. Ellice Hills and Kellett River area. Several hundred caribou winter in these areas (Canadian Wildlife Service 1972), which are important hunting areas for the Pelly Bay Inuit. The Quebec route passes through both areas and could interfere with caribou movements from one area to the other.

8. Coats Island. The Island is critical year-round range for an isolated population of about 1500 - 2000 caribou (Canadian Wildlife Service 1972) and is the primary caribou hunting area for the Coral Harbour Inuit. The Quebec route crosses the center of the island.

16.3.4 Communities Affected

Communities that could be affected most by impacts on caribou are Eskimo Point, Whale Cove, Baker Lake, and Resolute. Spence Bay, Rankin Inlet, Chesterfield Inlet, and Gjoa Haven could be affected to a lesser extent and Arctic Bay to a minor extent. Coral Harbour and, to a lesser extent, Pelly Bay could be affected if the Quebec route is chosen.

The caribou is the mainstay of the Baker Lake Inuit and provides their only major source of meat. Caribou meat is also the most important food source for people at Eskimo Point, Rankin Inlet, Whale Cove, and Gjoa Haven. It is a secondary, but still very important food source for Resolute, Chesterfield Inlet, Spence Bay, Pelly Bay, Coral Harbour, and Arctic Bay.

16.3.5 Data Gaps

Major data gaps concerning impacts on caribou are related to:

1. Size, timing, and location of caribou migrations on and between Somerset and Prince of Wales Islands.

2. Size, timing, and location of migrations on northern Boothia Peninsula.

3. Status of populations and information on distribution and movement in the southern Boothia Peninsula and Hayes-to-Murchison Rivers area.

4. Winter movements of caribou in the Kellett River-Ellice Hills area.

5. Locations of prime seasonal caribou ranges on Coats Island.

16.3.6 Resource Protection Strategies

Based on the expected severity of impacts and the importance of the resource to communities, resource protection priorities concerning impacts on caribou populations should be:

1. Protection of the Kaminuriak herd in Southern Keewatin (prime and coastal routes).

2. Protection of the Prince of Wales-Somerset Islands-northern Boothia Peninsula population (all routes).

3. Protection of the Bathurst Island-Cornwallis Island population (all routes).

4. Protection of the Murchison-Hayes River population (prime route only).

5. Protection of the Coats Island population (Quebec route only).

6. Protection of the Kellett River-Ellice Hills population (Quebec route only).

Strategies to protect caribou populations include:

a) Consideration of alternate routes. None of the existing alternates appears superior to the prime route with regard to minimizing impacts on caribou migrations or populations. The coastal alternate conflicts with the Kaminuriak herd in southern Keewatin and the western alternate in the Arctic Islands conflicts with caribou populations on Prince of Wales Island. The Quebec route conflicts with the isolated Coats Island herd.

b) Scheduling of construction. In general, construction should be scheduled to avoid disturbance of caribou migration patterns and calving, or post-calving, wintering, and rutting concentrations. Specifically, there should be no construction during migration periods (April, May, September, and October) in Polar Bear Pass. Construction in the Stanwell Fletcher Basin should be scheduled to avoid concentrations of caribou in early fall and winter and disturbance of calving in June. Construction on the northern Boothia Peninsula should be scheduled to avoid caribou migrations there in early spring and fall. In southern Keewatin, no construction should be scheduled between mid-May and early November, important times for calving, post-calving, and rutting concentrations and migrations. If the Quebec route were chosen, construction in the Kellett River and Ellice Hills areas should not take place in winter.

c) Siting provisions. In general, permanent facilities such as compressor stations and maintenance depots should not be located in critical caribou concentration areas such as Stanwell Fletcher Basin and the North and South Henik Lakes area.

d) General code requirements. Regional and site-specific code provisions should be formulated to prevent disturbance of caribou populations (e.g. provisions prohibiting pipeline employees from hunting caribou and harassing wildlife; or provisions to ensure that pipelines and other structures do not obstruct migrations).

16.4 Muskox

16.4.1 Disturbance

The presence of people, construction equipment and aircraft have the greatest potential for disturbing muskox. These activities could cause herds to stampede or cause females to abandon calves (Lent 1971). Behavioural disturbance combined with habitat degradation during construction could also force muskox to desert critical wintering areas (Hubert, cited in Kucera 1974), resulting in a reduction in muskox populations. Any reduction in muskox populations is particularly significant as muskox are very slow to recover because of their low productivity.

Areas where disturbance of muskox may occur along the route are:

1. Bathurst Island. According to Fischer and Duncan (1976) the current estimated muskox population on Bathurst Island is 280; this population has declined greatly over the past few years, probably because of a series of severe winters. Main concentrations are in the Bracebridge-Goodsir Valley (Polar Bear Pass) and south of Bracebridge Inlet. There may be a movement from southern Bathurst Island to northwest of Bracebridge Inlet prior to calving in late April and early May (Fischer and Duncan 1976).

2. Cornwallis Island. About 40 muskox inhabit Cornwallis Island, concentrating in the western and northwestern part of the Island and around Eleanor Lake (Fischer and Duncan 1976).

3. Stanwell Fletcher Basin. Muskox were observed in this area for the first time in a century in 1975 (Russell and Edmonds 1976), suggesting recolonization (15 adults and 3 calves were observed there in 1976). It has been estimated that this area could support several hundred muskox (R. Russell and J. Edmonds, personal communication).

4. Prince of Wales Island. The current estimated muskox population on Prince of Wales Island is 600; they concentrate in the extreme south between Cape Haughton and Guillemard Bay, in the area south of Young Bay and east of Fisher Lake, and the area immediately south of Browne Bay (Fischer and Duncan 1976). Pipeline route alternates on Prince of Wales Island would cross these areas.

5. Murchison-Hayes-Back River Area. Muskox have been sighted in the Back River area between the Murchison and Hayes Rivers, and around the Meadowbank River (Boreal Institute for Northern Studies 1975). Construction of the pipeline and the possible use of Chantrey Inlet as a staging area may affect muskox populations and movements.

6. Ellice Hills Area. Sightings of muskox have been reported in this area (Canadian Wildlife Service 1972).

16.4.2 Communities Affected

Because muskox have been completely protected from hunting since 1917 harvest patterns throughout the study area would not be affected. However, muskox are now recovering to the point where hunting may soon be allowed in certain areas; therefore they represent an important potential resource. Communities whose future harvests of muskox may be affected by pipeline project impacts are Resolute, Gjoa Haven, to a lesser extent Spence Bay, and to a minor extent Baker Lake. Pelly Bay could be affected to a minor extent if the Quebec route is chosen.

16.4.3 Data Gaps

Major data gaps concerning impacts on muskox are related to:

1. Specific dates and locations of major movements on Bathurst and Prince of Wales Island and specific locations of critical habitats on Prince of Wales Island and in Stanwell Fletcher Basin.

2. Numbers and distribution of muskox in the Hayes to Murchison, Back, and Meadowbank Rivers area.

3. Status and movements of muskox in the Ellice Hills area.

16.4.4 Resource Protection Strategies

Based on the expected severity of impacts and the potential importance of the resource to communities, resource protection priorities concerning impacts on muskox populations should be:

1. Protection of the Stanwell Fletcher Basin population (all routes).

2. Protection of the Bathurst Island and Cornwallis Island populations (all routes).

3. Protection of the Prince of Wales Island population. (Arctic Islands western alternate only).

4. Protection of the Murchison to Hayes Rivers, Back River, and Meadowbank River populations (prime route only).

5. Protection of the Ellice Hills population (Quebec route only).

Strategies to protect muskox populations include:

a) Consideration of alternate routes. None of the alternate routes seem to be any better than the prime route for minimizing potential problems. However, the coastal alternate would avoid the Back and Meadowbank Rivers populations and, if the Quebec route is chosen, the southern alternate would avoid the Ellice Hills population.

b) Scheduling of construction. In general, construction should be scheduled to avoid disturbance of muskox movements or disturbance of muskox in important concentration areas such as calving and wintering areas. More must be known on specific timing and location of movements and location of critical habitats before site-specific recommendations can be made. Areas where scheduling restrictions may be critical are Polar Bear Pass, northwest Cornwallis Island, Stanwell Fletcher Basin, and Prince of Wales Island.

c) Siting provisions. In general, permanent facilities such as compressor stations and maintenance depots should not be located in critical concentration areas such as calving and wintering areas. Specifically, they should not be located in Polar Bear Pass, northwest Cornwallis Island, Stanwell Fletcher Basin, or any of the key concentration areas identified on Prince of Wales Island.

d) General code requirements. Code provisions should be enforced to prevent disturbance of muskox populations. Examples are prohibition of hunting and harassment of muskox. Minimum aircraft overflight restrictions should be established and enforced.

16.5 Wildfowl

16.5.1 Disturbance

Disturbance of wildfowl by low-flying aircraft, water traffic, operation and movement of equipment, and human activity could have major impacts on wildfowl populations. Disturbance can cause waterfowl and seabirds to abandon nests, leaving eggs or young vulnerable to predators or cold. Colonial-nesting birds are especially susceptible to disturbance, which if severe or persistent enough could result in desertion of colonies. Harassment of molting or staging waterfowl by aircraft and human activity could force birds out of prime feeding/resting areas

which could lead to depletion of energy reserves through stress during the critical pre-migration period. Permanent facilities such as compressor stations and maintenance depots may cause birds to avoid traditionally used areas for as long as the pipeline remains in use.

Potential impacts of disturbance on wildfowl harvest would be total absence or large-scale reductions of wildfowl populations in traditional hunting areas.

Areas where disturbance of wildfowl populations may occur along the pipeline route are:

1. Polar Bear Pass, Bathurst Island. Eiders are numerous and breed throughout the area and brant and lesser snow geese nest in small numbers in Bracebridge Inlet (Peterson 1976, Canadian Wildlife Service 1972). This is not a hunting area but disturbance of populations here may affect the availability of wildfowl in hunting areas farther south.

2. Cornwallis Island. The southwest coast is the important duck and ptarmigan hunting area for the Resolute Inuit. According to Alliston et al. (1976) important "seabird" breeding colonies are as follows: Arctic tern (mouth of Rookery River; northwest shore of Little Cornwallis Island); black guillemot (Griffen Island); glaucous gull (Cape Dungeness); and thick-billed murre (floe edge between Griffen and Cornwallis Islands). Marine traffic and materials staging in the above areas could disturb wildfowl and breeding seabirds.

3. Aston Bay, Somerset Island. This is an important area for goose and ptarmigan hunting for the Resolute Inuit and is used for brood rearing for snow geese and eiders (Alliston et al. 1976).

4. Cunningham Inlet-Limestone Island area is important for black guillemots in spring and for eiders during spring and brood-rearing periods (Alliston et al. 1976).

5. Stanwell Fletcher Lake-Creswell Bay. About 800 snow geese breed, moult, and raise broods along the north shore of Creswell Bay (Boreal Institute for Northern Studies 1975; Alliston et al. 1976). Large numbers of eiders use the area during the past-moult period and for brood rearing; oldsquaws moult along shores throughout Creswell Bay (Alliston et al. 1976). This is an important goose, duck, and ptarmigan hunting area for the Resolute Inuit.

6. Bellot Strait. This is an important area for seabirds (gulls, eiders, northern fulmar), a secondary hunting area for Spence Bay, and a remote hunting area for Arctic Bay.

7. Boothia Peninsula. This area is the main wildfowl hunting area for the Spence Bay Inuit.

8. Inglis Bay-Shepherd Bay. This is an important spring-staging area for snow and white-fronted geese (Canadian Wildlife Service 1972) and an important hunting area for the people of Gjoa Haven. Whistling swans breed in the area (McLaren et al. 1976).

9. Hayes River. Canada geese are plentiful in lakes and ponds along the lower Hayes River (Canadian Wildlife Service 1972). This is not an important hunting area but disturbance of populations here may affect the availability of geese in nearby Gjoa Haven hunting areas.

10. Storis Passage-Simpson Strait. This is the primary wildfowl hunting area for Gjoa Haven. Marine traffic here could disturb wildfowl.

11. Chantrey Inlet. The head of Chantrey Inlet in the vicinity of lower Hayes River and the lower Back River is important for Canada geese. It is also an important hunting area for Gjoa Haven. Marine traffic and materials staging in Chantrey Inlet or the lower Back River could disturb wildfowl.

12. Baker Lake Area. Canada geese nest west of Sugarloaf Mountain north and east of Pitz Lake (Canadian Wildlife Service 1972). The Pitz Lake area is important for breeding ducks, snow geese and Canada geese (McLaren et al. 1976). This is not a hunting area but disturbance here could affect the availability of geese and ducks in nearby Baker Lake hunting areas.

13. Upper Maguse River. There is a small breeding population of Canada geese along the river near Kinga Lake, an area identified as important breeding range in Keewatin (Canadian Wildlife Service 1972).

14. Chesterfield Inlet. The area around the community at the mouth of the Inlet is an important molting area for waterfowl (Alliston et al. 1976) and is the primary wildfowl hunting area for Chesterfield Inlet.

15. Thlewiaza to Maguse River. Most of this area extending up to 50 mi (80 km) inland is an important feeding area for thousands of post-moult snow geese in late summer (McLaren et al. 1976). Large colonies of nesting snow geese and, later, large brood aggregations and flocks of moulting geese concentrate within 25 kilometers of the coast, principally around the mouths of McConnell and Maguse Rivers (McLaren et al. 1976). The coastal alternate route passes through the middle of the late summer habitats but bypasses nesting/moulting grounds.

16. Repulse Bay. Repulse Bay and the area in Roes Welcome Sound off Beach Point are the primary wildfowl hunting areas for the Repulse Bay Inuit. Marine transportation and materials staging here could displace wildfowl.

17. Southampton Island. Snow and Canada geese nest in low-land areas of the upper Boas River (Canadian Wildlife Service 1972). A large area about 25 km east of South Bay and extending almost to the west coast is used intermittently by 50,000 geese during the molt and post-hatch periods; some Canada Geese nest in this area (Canadian Wildlife Service 1972).

18. Southampton to Coats Island. About 5,000 snow geese and 400 brant geese plus a colony of Sabine's gulls nest at Bear Cove (Canadian Wildlife Service 1972). Bear Cove is also a primary goose-hunting area in spring and summer for Coral Harbour. Construction in spring or summer, the use of Bear Cove as a material staging area, and marine traffic could degrade wildfowl habitats and force birds to seek undisturbed areas.

16.5.2 Pollution

Pollution by petroleum products or other toxic materials could lead to destruction or degradation of habitat as well as direct mortality. While this problem may occur anywhere along the routes, the most critical areas are at major pipeline staging areas and along major shipping routes.

Specific areas where pollution could have major impacts on wildfowl populations and harvest are:

1. Cornwallis Island - southern coast (major pipeline staging area).

2. Aston Bay, Somerset Island (possible major pipeline staging area).

3. Bellot Strait (possible major pipeline staging area and shipping route).

4. Boothia Peninsula-Spence Bay area (possible major pipeline staging area).

5. Storis Passage-Simpson Strait (possible shipping route).

6. Chantrey Inlet (possible pipeline staging area).

7. Chesterfield Inlet (possible major pipeline staging area and shipping route).

8. Repulse Bay (possible major pipeline staging area and shipping route).

9. Southampton Island-Bear Cove (possible major pipeline staging area).

16.5.3 Communities Affected

Communities that could be most significantly affected by impacts on wildfowl populations are Spence Bay, Chesterfield Inlet, Gjoa Haven, and Resolute. Potential impacts on Baker Lake would be less significant and minor impacts are predicted for Arctic Bay. Coral Harbour and Repulse Bay could be significantly affected if the Quebec route were chosen.

Wildfowl are not a major food resource for any community in terms of total nutritional requirements. However, they are a favourite food, offer an important change in the diet, and provide an important recreational activity. The eiderdown industry is also quite important to some communities. Of the communities identified that could be affected, Coral Harbour has the highest wildfowl harvest, whereas Spence Bay, Repulse Bay, and Chesterfield Inlet have relatively low harvest. The Gjoa Haven harvest is not known.

16.5.4 Data Gaps

Major data gaps concerning impacts on wildfowl populations are related to:

1. Status of Aston Bay and the Boothia Peninsula as wildfowl habitat.

2. Numbers and locations of eider and goose colonies in the Polar Bear Pass area.

3. Estimates of waterfowl populations and identification of principal breeding areas on Coats Island.

4. Estimates of Canada goose nesting densities and identification of prime snow and Canada goose habitats in the Boas River lowlands.

5. Status of Repulse Bay as wildfowl habitat.

16.5.5 Resource Protection Strategies

Based on the expected severity of impacts and the importance of the resource to communities, protection priorities to prevent or reduce impacts on wildfowl are:

1. Protection of populations in the Boothia Peninsula, Chesterfield Inlet, Cornwallis Island, Aston Bay, Storis Passage-Simpson Strait, and Chantrey Inlet areas (all routes).

2. Protection of populations in the Stanwell Fletcher Basin-Creswell Bay, Thlewiaza to Maguse River, Hayes River, Upper Maguse River, Bellot Strait, Baker Lake, Polar Bear Pass, Cunningham Inlet, and Inglis Bay areas (all routes).

3. Protection of populations in the Southampton-Coats Islands and Repulse Bay areas (Quebec route only).

Strategies to protect wildfowl populations include:

a) Scheduling and construction. In general, construction activities should be scheduled to avoid critical areas at critical times. Nesting areas should be avoided from mid-May to mid-July, molting areas from mid-July to mid-August, spring staging areas from mid-May to mid-June, and fall staging areas from mid-August to October. Specifically, there should be no construction activities from mid-May to August in nesting areas at Polar Bear Pass, Griffen Island, Stanwell Fletcher Lake-Creswell Bay, Chantrey Inlet, the Baker Lake area, the Upper Maguse River, Upper Boas River and Bear Cove. There should be no construction from mid-May to mid-June near Inglis Bay which is a spring staging area.

b) Siting provisions. In general, permanent facilities such as compressor stations and maintenance depots should not be located in critical habitats (nesting, molting, and staging areas).

c) General code requirements. Code provisions should be formulated to protect wildfowl populations (e.g. establishment of flight corridors and minimum altitudes for aircraft; specification of fuel handling and storage measures; prohibition of hunting and harassment of wildfowl by pipeline employees).

16.6 Polar Bear

16.6.1 Disturbance of Denning

Disturbance during the polar bear denning period (from about November to March) from construction activities, traffic, or human presence could result in direct mortality, abandonment of dens and of cubs, or in the case of severe and persistent disturbance, permanent abandonment of denning areas. Location of permanent facilities such as compressor stations or maintenance depots in denning areas may also lead to abandonment of denning areas. This is not likely to be a major problem in the study area because denning areas are widespread and good alternate den sites are likely to be available if a denning area is abandoned (I. Stirling, personal communication).

Areas where denning has been reported along the route are:

1. Northwest Somerset Island. Females with cubs use sea ice offshore from Cape Anne (Canadian Wildlife Service 1972) indicating that Cape Anne is a possible denning area. This area is part of the most intensive polar bear hunting area of the Resolute Inuit.

2. Bellot Strait is a suspected denning area and a secondary polar bear hunting area for Spence Bay.

3. Murchison River. There is a denning area about 25-50 km east of the prime route (Canadian Wildlife Service 1972), much closer to the coastal alternate, and right along the southern alternate to the Quebec route. No polar bear hunting occurs in this area.

4. Southampton Island. Likely denning areas are the north coast, the Upper Boas River-Mount Saorre area, and "The Points" formation, inland from Hut Point (Canadian Wildlife Service 1972). This is a secondary hunting area for Coral Harbour.

5. Coats Island. The north coast is a denning area (Canadian Wildlife Service 1972) and a secondary hunting area.

16.6.2 Man-Bear Conflicts and Impacts on Major Food Sources

Man-bear conflicts are inevitable if construction occurs in areas where bears are concentrated or migrating. Camps and other facilities where people are present and garbage accumulates are likely to attract bears. Consequently, some bears that become a nuisance may have to be destroyed. Areas where bears concentrate are also likely to be important feeding areas; disturbance or pollution in these areas could affect seals (the major food of polar bears) and thus force bears to seek alternate areas.

Areas which are important concentration areas for polar bears along the route are:

1. Polar Bear Pass, Bathurst Island. Polar bears have been reported in this area in summer (Freeman 1974). Polar bears are not harvested here but animals from this area may be hunted elsewhere in the Resolute harvest zone.

2. Crozier Strait, McDougall Sound. Concentrations of bears have been observed in spring near polynias (holes in the ice) in Crozier Strait (Finley 1976). Females with cubs have been observed in the Crozier Strait-Queen's Channel region (Freeman 1974). This area lies within the Resolute polar bear hunting zone.

3. Barrow Strait. Polar bears migrate west through the Strait in early spring from denning and spring feeding to summering areas and return along the same route later in the year (Canadian Wildlife Service 1972). Barrow Strait is the primary polar bear hunting area for the Resolute Inuit.

4. Creswell Bay. Polar bears concentrate here in late summer (Finley 1976); this is a secondary hunting area for Resolute and a remote hunting area for Arctic Bay.

5. Bellot Strait. Polar bears are common in the area, which is a secondary hunting area for Spence Bay and a remote hunting area for Arctic Bay.

6. Boothia Peninsula. Lord Mayor Bay is an important hunting area for the Spence Bay Inuit.

7. Chesterfield Inlet. The mouth of the Inlet is the primary hunting area for the Chesterfield Inlet Inuit.

8. Repulse Bay. Polar bear are plentiful in the bay during summer (Canadian Wildlife Service 1972); Repulse Bay is a secondary polar bear hunting area.

9. Southampton Island, Interior. Hundreds of bears migrate across the proposed route in summer and interior areas have been identified as a summer sanctuary (Canadian Wildlife Service 1972); this is a secondary hunting area for Coral Harbour.

10. Southampton Island to Coats Island. Polar bear move between Coats and Southampton via Walrus Island in June and October (Canadian Wildlife Service 1972). They are hunted throughout the area although the primary area is along the south coast of Southampton Island from Cape Low to South Bay.

11. Coats Island is a critical summer sanctuary from June to October (Canadian Wildlife Service 1972).

16.6.3 Communities Affected

Impacts on polar bear would have greatest effects on Resolute and Spence Bay and, to a lesser extent, Chesterfield Inlet. Effects on Gjoa Haven and Arctic Bay would be minor. Coral Harbour, and to a much lesser extent, Repulse Bay, would be affected if the Quebec route were chosen.

Polar bears provide an important source of income for many communities; the polar bear is a "high status" species, and hunting them is an important cultural activity. Polar bear are a very important source of income for both Coral Harbour and Resolute. They are also important for Repulse Bay, Spence Bay and Arctic Bay, but are of less importance to Chesterfield Inlet and Gjoa Haven.

16.6.4 Data Gaps

Major data gaps concerning impacts on polar bear populations are related to:

1. Status of denning in the Cape Anne area of Somerset Island.

2. Timing and extent of migrations through Barrow Strait.

3. Status of denning and information on movement and feeding in the Bellot Strait area.

4. Seasonal use of the Creswell Bay area.

5. Information on activity patterns and key use areas on Coats Island.

6. Status of denning in the upper Boas River area of Southampton Island.

7. Numbers and seasonal use in the Repulse Bay area.

16.6.5 Resource Protection Strategies

Based on the expected severity of impacts and the importance of the resource to communities, resource-protection priorities concerning impacts on polar bear populations should be:

1. Protection of populations in Barrow Strait, including Cape Anne on Somerset Island (all routes).

2. Protection of populations in Crozier Strait, Creswell Bay, and the Bellot Strait area (all routes).

3. Protection of populations in the Boothia Peninsula and Chesterfield Inlet areas (all routes).

4. Protection of populations in the Murchison River area (all routes).

5. Protection of populations in the Southampton-Coats Islands area (Quebec route only).

6. Protection of populations in the Repulse Bay area (Quebec route only).

Strategies to protect polar bear populations include:

a) Consideration of alternatives. The western alternate through the Arctic Islands would avoid Crozier Strait, Cape Anne, Bellot Strait, and Creswell Bay, and would cross Barrow Strait at a location where there are likely to be fewer polar bears.

b) Scheduling of construction. Construction should not occur in areas where polar bears are concentrated.

Specifically, there should be no construction in May and June in Crozier Strait and from June to October in the interior of Southampton Island and on Coats Island.

c) Siting provisions. Permanent facilities such as compressor stations and maintenance depots should not be located in denning areas such as Cape Anne, Bellot Strait, Upper Boas River, and the north coast of Southampton and Coats Islands.

d) General code requirements. Code provisions should be formulated to protect polar bear populations (e.g. provisions prohibiting shooting or harassment by pipeline employees; and provisions for proper disposal of garbage and other refuse).

16.7 Seals

16.7.1 Disturbance and Pollution

Water or airborne noise (blasting, boat/ship traffic, aircraft, construction activity) and presence of people and equipment may cause ringed and bearded seals to leave hauling-out sites or abandon feeding grounds. Pollution of pupping areas with fuel or toxic materials could foul birth lairs and result in pup mortality through exposure to the toxicant or abandonment by the female. Fuel spills in protected feeding areas such as bays could contaminate food sources, causing seals to abandon these areas. The project could affect harvest by reducing local populations or by displacing seals from traditional harvest areas.

Areas where disturbance or pollution could affect important concentrations of seals along the route are:

1. Baillie-Hamilton Island. Seals inhabit Couch Passage and Maury Channel (Canadian Wildlife Service 1972); this is a secondary hunting area of the Resolute Inuit.

2. Bracebridge Inlet. Concentrations of bearded seals were observed here in August; some were present in July. A major pipeline staging area may be located at Schomberg Point.

3. McDougall Sound is an important hunting area for bearded and harp seals. Concentrations of bearded seals have been observed here in June, July, and August and some may overwinter here (Finley 1976). The location of a staging area on Little Cornwallis Island and construction of the crossing from Bathurst to Cornwallis Islands could displace seals or degrade their habitat.

4. Barrow Strait. Primary ringed seal hunting area for Resolute. Harp seals also migrate into Barrow Strait in July and return in August, although they are not frequently hunted there (Finley 1976). Marine traffic, staging at Resolute, and construction of the crossing could displace seals or degrade their habitat.

5. Somerset Island-North Coast. Bearded seals concentrate here in July; Cunningham Inlet is an important area for a small concentration of seals (Finley 1976).

6. Aston Bay. A late spring-early summer survey revealed a higher density of ringed seals here than elsewhere in the area (Finley 1976). This is a secondary hunting area for Resolute. Location of a staging area here could displace seals or degrade their habitat.

7. Prince of Wales-Russell Islands. High densities of ringed seals were observed off the coasts of northeast Prince of Wales and eastern Russell Island; bearded seal concentrations were observed off the northwest coast of Russell Island and in Baring Channel in late summer (Finley 1976). The western alternate avoids the main part of the ringed seal concentration area but would cross the area used by bearded seals.

8. Creswell Bay. Ringed and bearded seals concentrate here (Canadian Wildlife Service 1972, Read and Stephansson 1976); it is a secondary hunting area for Resolute and a remote area for Arctic Bay.

9. Brentford Bay-Bellot Strait. This is a major summering area for ringed and bearded seals (Read and Stephansson 1976) and a remote hunting area for Spence Bay and Arctic Bay.

10. Spence Bay-Rasmussen Basin. This is an important seal-hunting area for Spence Bay and Gjoa Haven.

11. Simpson Strait is a primary seal-hunting area for Gjoa Haven. Marine shipping through here could displace seals.

12. Chesterfield Inlet. The mouth of Chesterfield Inlet and up the Inlet to Big Island is the primary seal-hunting area for the Chesterfield Inlet Inuit.