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Berger 'Buries' Arctic Gas

OTTAWA (AP) — The Berger Commission recommends that no pipeline be built along the Mackenzie River valley for 10 years and that there should be a permanent ban on any pipeline from Alaska crossing the environmentally sensitive Northern Yukon.

The commission said in a report presented to Parliament today that they feel it will take 10 years to settle and implement Native land claims in the North.

More time also is needed to solve technical and environmental problems involved in building the line, the report said.

If accepted by the Canadian government, the recommendations would spell the end of the Canadian Arctic Pipeline Ltd. proposal to build one pipeline to serve both Alaska and the Mackenzie Delta.

Bob Ward, president of Arctic, said in Anchorage that it remains to be seen what impact the report will have on the Canadian government.

A spokesman for El Paso Alaska, one of Arctic's two competitors, said the report's conclusion should come as no surprise. He said El Paso hopes a similiar study of a proposed southern Yukon route — the Alaska highway route proposed by Northwest Pipeline Corp.—will reach the same conclusions.

El Paso proposes a trans-Alaska line to Prince William Sound where the gas would be liquified and put on tankers for the trip south to the lower 48.

There was no immediate comment from Northwest.

The government sources said that if a pipeline is to be built now the commission leans toward an Alaskan Highway route through the Yukon with a route along the Dempster Highway to move the Mackenzie Delta gas to market.

But the report adds that those routes were not included in the commission's study and need more study before any decision can be made.

Native groups have pressed Justice Thomas Berger of the British Columbia Supreme Court — who heads the commission — to put a moratorium on pipeline construction for 10 to 15 years after settlement of land claims to give them time to adjust.

Environmental groups hotly oppose any pipeline across the northern coastline, saying it could destroy the Porcupine caribou herd and disrupt important nesting areas for birds and the calving waters of the Beluga whale.

NORTHERN FRONTIER NORTHERN HOMELAND

THE REPORT OF THE MACKENZIE VALLEY PIPELINE INQUIRY : VOLUME ONE

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Table of Contents

This is Volume One of a two-volume report. It deals with the broad social, economic and environmental impacts that a gas pipeline and an energy corridor would have in the Mackenzie Valley and the Western Arctic. In it certain basic recommendations are made. Volume Two will set out the terms and conditions that should be imposed if a pipeline is built.

MACKENZIE VALLEY PIPELINE INQUIRY

COMMISSIONER
Mr. Justice Thomas R. Berger

10th Floor
One Nicholas Street
Ottawa, Ontario K1N 7B7

April 15, 1977

The Honourable Warren Allmand
Minister of Indian Affairs and Northern Development
House of Commons
Ottawa, Ontario

Dear Mr. Allmand:

We are now at our last frontier. It is a frontier that all of us have r about, but few of us have seen. Profound issues, touching our d concerns as a nation, await us there.

The North is a frontier, but it is a homeland too, the homeland of Dene, Inuit and Metis, as it is also the home of the white people wh live there. And it is a heritage, a unique environment that we a called upon to preserve for all Canadians.

The decisions we have to make are not, therefore, simply abou northern pipelines. They are decisions about the protection of th northern environment and the future of northern peoples.

At the formal hearings of the Inquiry in Yellowknife, I heard th evidence of 300 experts on northern conditions, northern environmen and northern peoples. But, sitting in a hearing room in Yellowknife, i is easy to forget the real extent of the North. The Mackenzie Valley and the Western Arctic is a vast land where people of four races live, speaking seven different languages. To hear what they had to say, I took the Inquiry to 35 communities – from Sachs Harbour to Fort Smith, from Old Crow to Fort Franklin – to every city and town, village and settlement in the Mackenzie Valley and the Western Arctic. I listened to the evidence of almost one thousand northerners.

I discovered that people in the North have strong feelings about the pipeline and large-scale frontier development. I listened to a brief by northern businessmen in Yellowknife who favour a pipeline through the North. Later, in a native village far away, I heard virtually the whole community express vehement opposition to such a pipeline. Both were talking about the same pipeline; both were talking about the same region – but for one group it is a frontier, for the other a homeland.

All those who had something to say – white or native – were given an opportunity to speak. The native organizations claim to speak for the native people. They oppose the pipeline without a settlement of native claims. The Territorial Council claims to speak for all

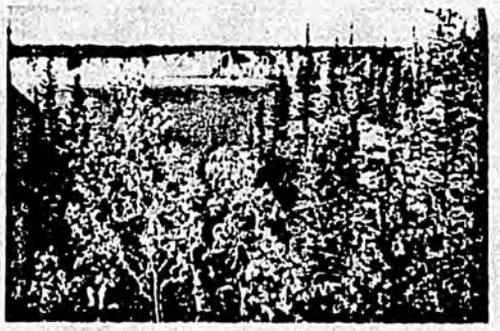
northerners. It supports the pipeline. Wally Firth, Member of Parliament for the Northwest Territories, opposes the pipeline. I decided that I should give northerners an opportunity to speak for themselves. That is why I held hearings in all northern communities, where the people could speak directly to the Inquiry. I held hearings in the white centres of population, and in the native villages. I heard from municipal councillors, from band chiefs and band councils and from the people themselves. This report reflects what they told me.

The North is a region of conflicting goals, preferences and aspirations. The conflict focuses on the pipeline. The pipeline represents the advance of the industrial system to the Arctic. The impact of the industrial system upon the native people has been the special concern of the Inquiry, for one thing is certain: the impact of a pipeline will bear especially upon the native people. That is why I have been concerned that the native people should have an opportunity to speak to the Inquiry in their own villages, in their own languages, and in their own way.

I have proceeded on the assumption that, in due course, the industrial system will require the gas and oil of the Western Arctic, and that they will have to be transported along the Mackenzie Valley to markets in the South. I have also proceeded on the assumption that we intend to protect and preserve Canada's northern environment, and that, above all else, we intend to honour the legitimate claims and aspirations of the native people. All of these assumptions are embedded in the federal government's expressed northern policy for the 1970s.

The Corridor Concept and Cumulative Impact

The proposed natural gas pipeline is not to be considered in isolation. The Expanded Guidelines for Northern Pipelines, tabled in the House of Commons on June 28, 1972, assume that, if a gas pipeline is built, an oil pipeline will follow, and they call for examination of the proposed gas pipeline from the point of view of cumulative impact. We must



Spring on the Yukon Coastal Plain. (ISL–G. Calef)

Pingos near Tuktoyaktuk. (GNWT)

Old Crow River. (ISL–G. Calef)

Autumn on Mackenzie River. (R. Fumoleau)

consider, then, the impact of a transportation corridor for two energy systems, a corridor that may eventually include roads and other transportation systems.

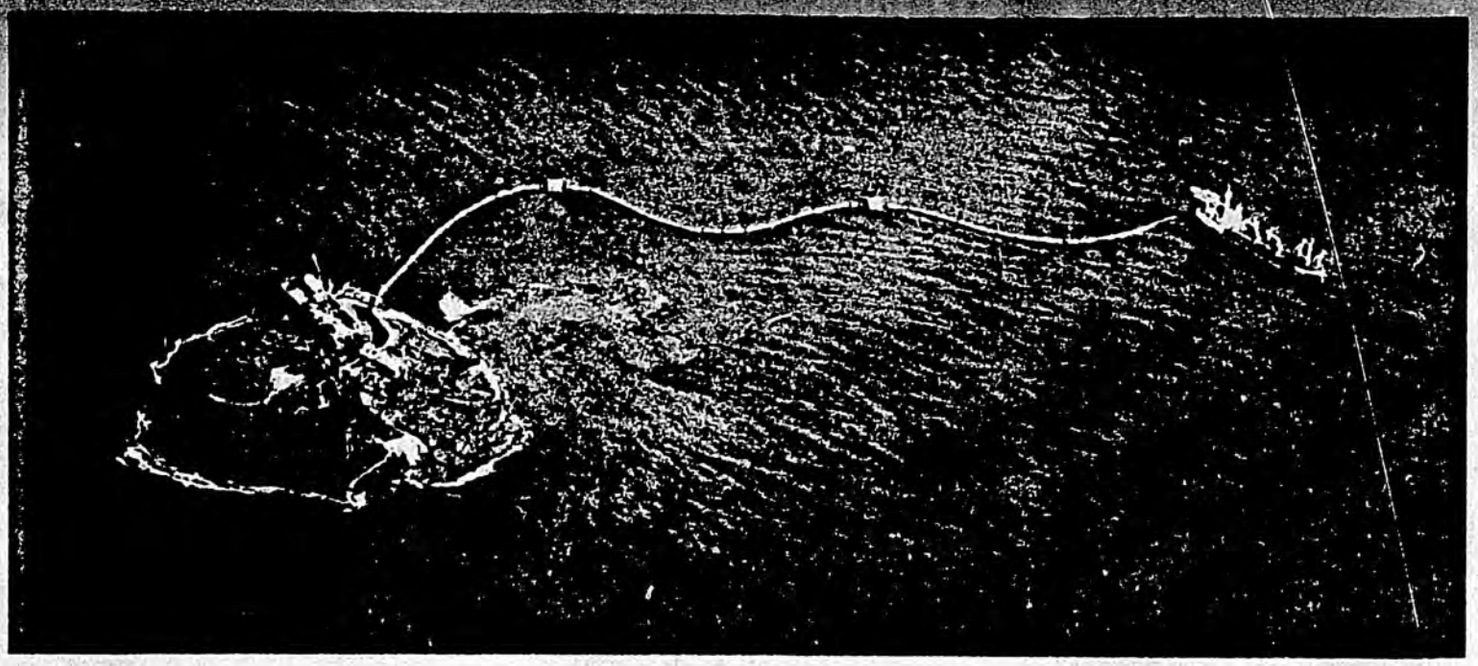
The construction of a gas pipeline and the establishment of an energy corridor will intensify oil and gas exploration activity all along the corridor. The cumulative impact of all these developments will bring immense and irreversible changes to the Mackenzie Valley and the Western Arctic. And we must bear in mind that we have two corridors under consideration: a corridor from Alaska across the Northern Yukon to the Mackenzie Delta, and a corridor along the Mackenzie Valley from the Delta to the Alberta border.

The Project: Its Scope and Scale

A gas pipeline will entail much more than a right-of-way. It will be a major construction project across our northern territories, across a land that is cold and dark in winter, a land largely inaccessible by rail or road, where it will be necessary to construct wharves, warehouses, storage sites, airstrips – a huge infrastructure – just to build the pipeline. There will be a network of hundreds of miles of roads built over the snow and ice. Take the Arctic Gas project: the capacity of the fleet of tugs and barges on the Mackenzie River will have to be doubled. There will be 6,000 construction workers required North of 60 to build the pipeline, and 1,200 more to build gas plants and gathering systems in the Mackenzie Delta. There will be about 130 gravel mining operations. There will be 600 river and stream crossings. There will be innumerable aircraft, tractors, earth-movers, trucks and trailers. Indeed, the Arctic Gas project has been described as the greatest construction project, in terms of capital expenditure, ever contemplated by private enterprise.

Engineering and Construction

The gas pipeline across the North from Prudhoe Bay and from the Mackenzie Delta will confront designers and builders with major challenges of engineering and logistics. These relate not only to the



size and complexity of the project but also to its remote setting, the arctic climate and terrain, and those components of the project and its design that are innovative or lack precedent.

The question of frost heave is basic to the engineering design of the gas pipeline. Both Arctic Gas and Foothills propose to bury their pipe throughout its length, and to refrigerate the gas to avoid the engineering and environmental problems resulting from thawing permafrost. But where unfrozen ground is encountered, in the zone of discontinuous permafrost or at river crossings, the chilled gas will freeze the ground around the pipe, and may produce frost heave and potential damage to the pipe.

The pipeline companies are obviously having trouble in designing their proposal to deal with frost heave. They are making fundamental changes in the methods proposed for heave control; the methods seem to be getting more complex, and the conditions for success more restrictive. It is likely that the companies will make yet further changes in their proposals, changes that are likely to increase costs and to alter substantially the environmental impact of the project.

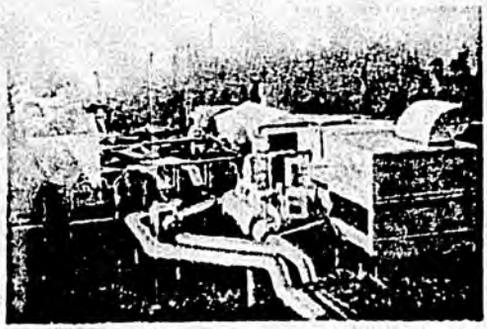
Another issue is construction scheduling. The pipeline companies propose to construct the pipeline in winter. But we have limited experience of pipelining in far northern latitudes and in permafrost. There are uncertainties about scheduling, so far as logistics, the construction of snow roads, and productivity are concerned. In this respect, the greatest challenges will be encountered in the Northern Yukon, which is also the most environmentally sensitive area along the route. I am not persuaded that Arctic Gas can meet its construction schedule across the Northern Yukon. Should this occur, there is a likelihood of cost overruns, of construction being extended into the summer, or even of a permanent road being built to permit summer construction. The environmental impact of a change to summer construction would be very severe. The project would then have to be completely reassessed.

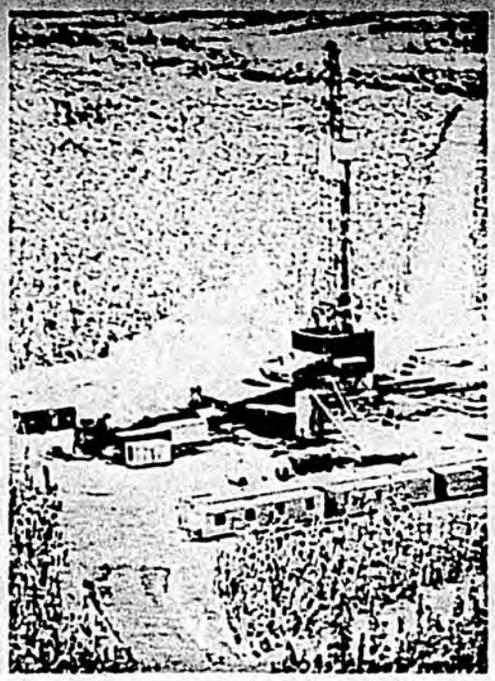
Construction of artificial island in the Beaufort Sea. (J. Inglis)

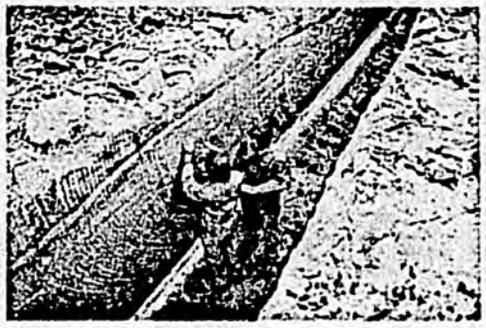
Compressor unit, Sans Sault Test Site. (Arctic Gas)

Drill site on the Eagle Plain, southeast of Old Crow. (ISL–G. Calef)

Permafrost test at Sans Sault Test Site. (Arctic Gas)







I recognize, of course, that the proposals of the pipeline companies are in a preliminary, conceptual stage, not in their final design stage. I recognize, too, that improvements will appear in the final design. But my responsibility is to assess the project proposals as they now stand.

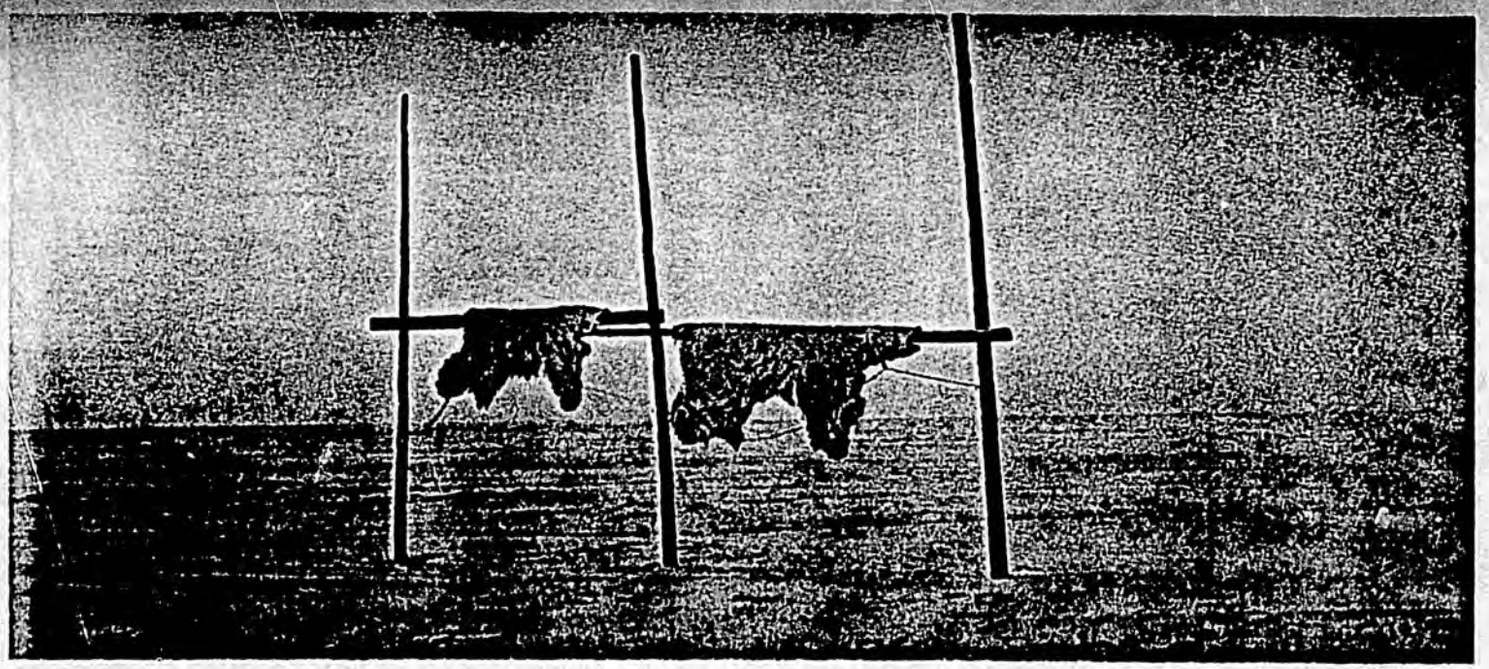
Given the uncertainties relating to design and construction, illustrated by the foregoing comments on frost heave and scheduling, and given the bearing they have on environmental impact and the enforcement of environmental standards, it seems to me unreasonable that the Government of Canada should give unqualified approval to a right-of-way or provide financial guarantees to the project without a convincing resolution of these concerns.

The Northern Environment

There is a myth that terms and conditions that will protect the environment can be imposed, no matter how large a project is proposed. There is a feeling that, with enough studies and reports, and once enough evidence is accumulated, somehow all will be well. It is an assumption that implies the choice we intend to make. It is an assumption that does not hold in the North.

It is often thought that, because of the immense geographic area of the North, construction of a gas pipeline or establishment of a corridor could not cause major damage to the land, the water or the wildlife. But within this vast area are tracts of land and water of limited size that are vital to the survival of whole populations of certain species of mammals, birds and fish at certain times of the year. Disturbance of such areas by industrial activities can have adverse biological effects that go far beyond the areas of impact. This concern with critical habitat and with critical life stages lies at the heart of my consideration of environmental issues.

We should recognize that in the North, land use regulations, based on the concept of multiple use, will not always protect environmental



values, and they will never fully protect wilderness values. Withdrawal of land from any industrial use will be necessary in some instances to preserve wilderness, wildlife species and critical habitat.

The Northern Yukon

The Northern Yukon is an arctic and sub-arctic wilderness of incredible beauty, a rich and varied ecosystem inhabited by thriving populations of wildlife. The Porcupine caribou herd, comprising 110,000 animals or more, ranges throughout the Northern Yukon and into Alaska. It is one of the last great caribou herds in North America. The Yukon Coastal Plain and the Old Crow Flats provide essential habitat for hundreds of thousands of migratory waterfowl each summer and fall. This unique ecosystem – the caribou, the birds, other wildlife, and the wilderness itself – has survived until now because of the inaccessibility of the area. But it is vulnerable to the kind of disturbance that industrial development would bring.

The Arctic Gas pipeline, to carry gas from Prudhoe Bay, Alaska, to markets in the Lower 48, would cross this region, either along the Coastal Route or, as a second choice, along the Interior Route. Once a gas pipeline is approved along either route, exploration and development in the promising oil and gas areas of Northern Alaska will accelerate, and it is inevitable that the gas pipeline will be looped and that an oil pipeline, a road and other developments will follow.

Gas pipeline and corridor development along the Coastal Route, passing through the restricted calving range of the Porcupine caribou herd, would have highly adverse effects on the animals during the critical calving and post-calving phases of their life cycle. The preservation of the herd is incompatible with the building of a gas pipeline and the establishment of an energy corridor through its calving grounds. If a pipeline is built along the Coastal Plain, there will be serious losses to the herd. With the establishment of the corridor I foresee that, within our lifetime, this herd will be reduced to a remnant. Similarly, some of the large populations of migratory

Polar bear skins, Sachs Harbour. (M. Jackson)

Inuit women cutting up whale, Tuktoyaktuk. (D. Campbell)

Scraping a caribou hide. (A. Steen)

Arctic fox pelts, Sachs Harbour. (M. Jackson)

waterfowl and sea birds along the Coastal Route, particularly the fall staging snow geese, would likely decline in the face of pipeline and corridor development.

Gas pipeline and corridor development along the Interior Route would open up the winter range of the caribou herd. The impact of this development combined with that of the Dempster Highway could substantially reduce the herd's numbers and undermine the caribou-based economy of the Old Crow people.

Thus, I have concluded that there are sound environmental reasons for not building a pipeline or establishing an energy corridor along the Coastal Route. There are also sound environmental reasons for not building a pipeline or establishing an energy corridor along the Interior Route, although they are not as compelling as for the Coastal Route. A pipeline and corridor along the Interior Route would have a devastating impact on Old Crow, the only community in the Northern Yukon. All the people in the village told me they are opposed to the pipeline. They fear it will destroy their village, their way of life, and their land.

I recommend that no pipeline be built and no energy corridor be established across the Northern Yukon, along either route. Moreover, if we are to protect the wilderness, the caribou, birds and other wildlife, we must designate the Northern Yukon, north of the Porcupine River, as a National Wilderness Park. Oil and gas exploration, pipeline construction and industrial activity must be prohibited within the Park. The native people must continue to have the right to hunt, fish and trap within the Park. The Park must indeed be the means for protecting their renewable resource base.

You and your colleagues will have to consider whether Canada ought to provide a corridor across the Yukon for the delivery of Alaskan gas and oil to the Lower 48. I recommend that no such route be approved across the Northern Yukon. An alternate route has been proposed across the Southern Yukon, along the Alaska Highway.

Some of the concerns about wildlife, wilderness, and engineering and construction that led me to reject the corridor across the Northern Yukon do not appear to apply in the case of the Alaska Highway Route. It is a route with an established infrastructure. In my view, the construction of a pipeline along this route would not threaten any substantial populations of any species in the Yukon or in Alaska. But I am in no position to endorse such a route: an assessment of social and economic impact must still be made, and native claims have not been settled.

The Mackenzie Delta and the Beaufort Sea

The Mackenzie Delta and Beaufort Sea region supports a unique and vulnerable arctic ecosystem. Its wildlife has been a mainstay of the native people of the region for a long time, and still is today.

In my opinion, unlike the Northern Yukon, oil and gas development in the Mackenzie Delta-Beaufort Sea region is inevitable. Notwithstanding the disappointing level of discoveries so far, the Delta-Beaufort region has been rated by the Department of Energy, Mines and Resources as one of three frontier areas in Canada that potentially contain major undeveloped reserves of oil and gas.

A decision to build the pipeline now would act as a spur to oil and gas exploration and development in the Mackenzie Delta and the Beaufort Sea. Future discoveries will probably lead to offshore production. It is the impact of this whole range of oil and gas exploration and development activity that must concern us.

In order to protect the Delta ecosystem, the birds and the whales, I recommend that no corridor should cross the outer Delta. This means that the Arctic Gas Cross-Delta Route must not be permitted. Also, strict limitations will have to be placed on other oil and gas facilities on the Delta, particularly the outer Delta. Special measures will be needed to avoid disturbance to fish populations within the Delta. I also propose that a bird sanctuary should extend across the outer part of the Delta to protect migratory waterfowl, giving the Canadian

Caribou fording Porcupine River. (ISL.–G. Calef)

Caribou with newborn calves migrating. (ISL.–G. Calef)

Foraging caribou in the Northern Yukon. (ISL.–G. Calef)

Bull caribou. (C. Dauphiné Jr.)

Wildlife Service jurisdiction to regulate industrial activity in the sanctuary.

The white whales of the Beaufort Sea – 5,000 in number – come to the warm waters bordering the Mackenzie Delta each summer to have their young. To preserve this population from declining in the face of pipeline construction and the cumulative stresses imposed by ongoing oil and gas exploration, production and transportation, I recommend that a whale sanctuary be established in west Mackenzie Bay covering the principal calving area. If the herd is driven from its calving area, it will die out. Unlike the bird sanctuary, the whale sanctuary will be an area in which oil and gas exploration and development would be forbidden at any time of the year.

Much of the oil and gas potential of the region is believed to lie offshore beneath the Beaufort Sea. You and your colleagues have decided that the risk entailed in the Dome exploratory drilling program in the Beaufort Sea is acceptable, on the ground that it is in the national interest to begin delineating the extent of these reserves. I am not offering any opinion on that decision. I am, however, urging that, once the Dome program is completed, careful consideration be given to the timing and extent of the drilling and development that may take place thereafter. A proliferation of oil and gas exploration and development wells in the Beaufort Sea will pose an environmental risk of a different order of magnitude than the risk entailed in drilling 16 exploration wells to see if oil and gas are to be found there.

The matter is not, however, simply one of Canadian drilling activity in arctic waters. We have preceded all of the other circumpolar countries – the United States, the Soviet Union, Denmark and Norway – across this geographic and technological frontier. We are pioneering on this frontier and establishing the standards that may well guide other circumpolar countries in future arctic drilling and production programs.

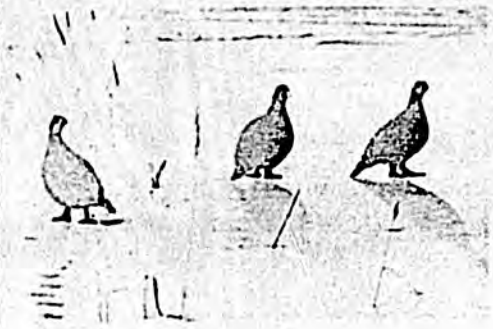
The greatest concern in the Beaufort Sea is the threat of oil spills. In

my opinion, the techniques presently available will not be successful in controlling or cleaning up a major spill in this remote area, particularly under conditions involving floating ice or rough water. Therefore, I urge the Government of Canada to ensure that improvements in technology for prevention of spills and development of effective technology for containment and clean-up of spills precede further advance of industry in the Beaufort Sea. I further urge that advances in knowledge of the environmental consequences of oil spills should likewise keep ahead of offshore development. Here I am referring not only to impacts on mammals, birds and fish in the Beaufort Sea area but also to the possibility that accumulation of oil in the Arctic Ocean could affect climate. In this I am referring to the possibility that oil spills from offshore petroleum development by all the circumpolar powers could diminish the albedo (the reflective capacity of ice), causing a decrease in the sea ice cover and hence changes in climate. Canada should propose that research be undertaken jointly by the circumpolar powers into the risks and consequences of oil and gas exploration, development and transportation activities around the Arctic Ocean.

The Mackenzie Valley

The Mackenzie Valley is a natural transportation route that has already seen several decades of industrial development. It is the longest river system in Canada, one of the ten longest rivers in the world, and one of the last great rivers that is not polluted.

I have concluded that it is feasible, from an environmental point of view, to build a pipeline and to establish an energy corridor along the Mackenzie Valley, running south from the Mackenzie Delta to the Alberta border. Unlike the Northern Yukon, no major wildlife populations would be threatened and no wilderness areas would be violated. I believe that we can devise terms and conditions that will allow a pipeline to be built and an energy corridor established along the Mackenzie Valley without significant losses to the populations of



Snow geese feeding. (Arctic Gas)

Willow ptarmigan. (A. Steen)

Peregrine falcon. (R. Fyfe)

Gyrfalcon. (R. Fyfe)

birds, furbearers, large mammals and fish. A pipeline along the Mackenzie Valley would impinge on the outer limits of the winter ranges of the Bluenose and the Bathurst caribou herds, but would not cross their calving grounds or disturb their main migration routes. These herds are not threatened.

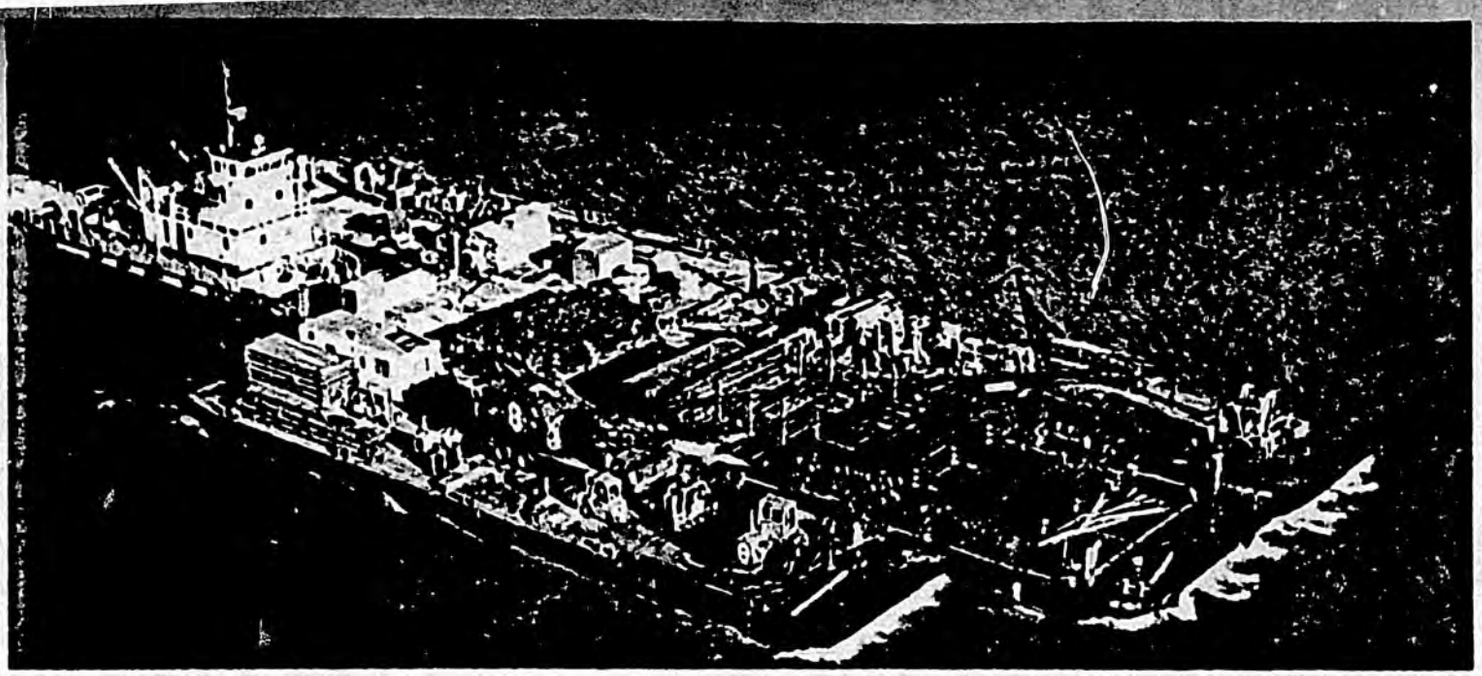
However, to keep the environmental impacts of a pipeline to an acceptable level, its construction and operation should proceed only under careful planning and strict regulation. The corridor should be based on a comprehensive plan that takes into account the many land use conflicts apparent in the region even today.

Comprehensive land use planning in the Mackenzie Valley can emerge only from a settlement of native claims, but, on purely environmental grounds, there are several areas of land that warrant immediate protection. I recommend sanctuaries to protect migratory waterfowl and the already endangered falcons. These sites have been identified under the International Biological Programme, namely: the Campbell Hills-Dolomite Lake site, which is important to nesting falcons, and the Willow Lake and Mills Lake sites, which are of importance to migratory waterfowl.

Northern Science and Research

Throughout the Inquiry, we found that there are critical gaps in the information available about the northern environment, about environmental impact, and about engineering design and construction on permafrost terrain and under arctic conditions. I have already referred to the inadequate state of knowledge about frost heave. This is a very practical question. Others, such as the albedo question, that seem to be less definite or to lie far in the future also demand our attention now. There is a whole range of issues that fall between, many of which are discussed in this report.

We are entering an era in the North when the government, its departments and agencies, will have to be in a position to assess – and to judge – the feasibility, desirability and impact of a whole series of



proposals for northern oil and gas exploration and development. Industry proposes: government disposes. But for government to make an intelligent disposition of industry's proposals – whether they be for pipelining in permafrost, for drilling in the Beaufort Sea, for under the sea transporation systems, or for tankering in arctic waters – it must have an independent body of knowledge. A continuing and comprehensive program of northern science and research is called for.

Cultural Impact

It is, however, the people who live in the North that we ought to be most concerned about, especially the native people. Euro-Canadian society has refused to take native culture seriously. European institutions, values and use of land were seen as the basis of culture. Native institutions, values and language were rejected, ignored or misunderstood and – given the native people's use of land – the Europeans had no difficulty in supposing that native people possessed no real culture at all. Education was perceived as the most effective instrument of cultural change: so, educational systems were introduced that were intended to provide the native people with a useful and meaningful cultural inheritance, since their own ancestors had left them none.

The culture, values and traditions of the native people amount to a great deal more than crafts and carvings. Their respect for the wisdom of the elders, their concept of family responsibilities, their willingness to share, their special relationship with the land – all of these values persist today, although native people have been under almost unremitting pressure to abandon them.

Native society is not static. The things the native people have said to this Inquiry should not be regarded as a lament for a lost way of life, but as a plea for an opportunity to shape their own future, out of their own past. They are not seeking to entrench the past, but to build on it.

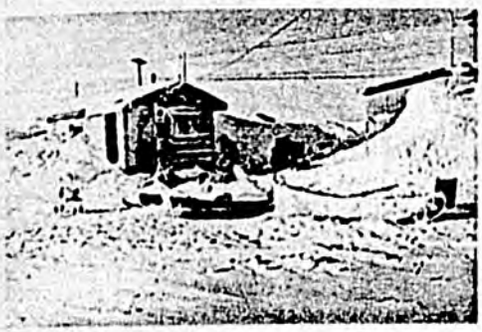
Today white and native populations in the Mackenzie Valley and Western Arctic are about equal in number. But it is the native people

Barge on Mackenzie River. (Arctic Gas)

Snowmobiles and sleigh, Tuktoyaktuk. (H. Lloyd)

Northern bush aircraft. (DIAND Yellowknife)

Boats used to hunt whale, Kugmallit Bay. (W. Hoek)



who constitute the permanent population of the North. There they were born, and there they will die. A large part of the white population consists of public servants, employees of the mining industry and of the oil and gas industry and their families. Most of them do not regard the North as their permanent home, and usually return to the South. There are, of course, white people in the North who have lived there all their lives, and some others who intend to make the North their permanent home, but their numbers are small in comparison to the native population.

So the future of the North ought not to be determined only by our own southern ideas of frontier development. It should also reflect the ideas of the people who call it their homeland.

Economic Impact

The pipeline companies see the pipeline as an unqualified gain to the North; northern businessmen perceive it as the impetus for growth and expansion. But all along, the construction of the pipeline has been justified mainly on the ground that it would provide jobs for thousands of native people.

We have been committed to the view that the economic future of the North lay in large-scale industrial development. We have generated, especially in northern business, an atmosphere of expectancy about industrial development. Although there has always been a native economy in the North, based on the bush and the barrens, we have for a decade or more followed policies by which it could only be weakened and depreciated. We have assumed that the native economy is moribund and that the native people should therefore be induced to enter industrial wage employment. But I have found that income in kind from hunting, fishing and trapping is a far more important element in the northern economy than we had thought.

The fact is that large-scale projects based on non-renewable resources have rarely provided permanent employment for any significant number of native people. There is abundant reason to

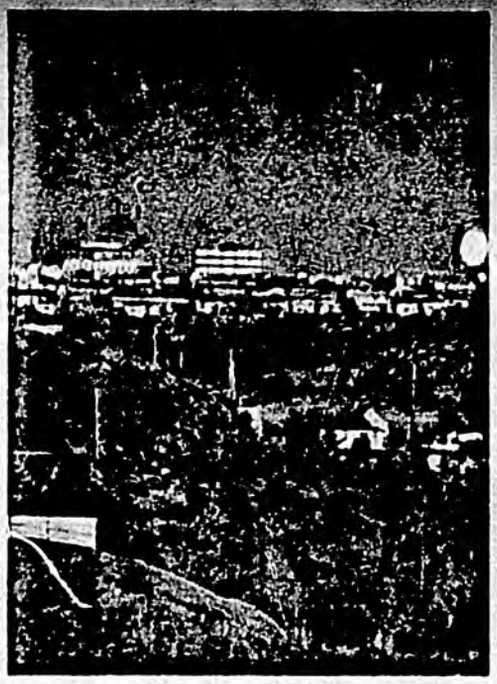
doubt that a pipeline would provide meaningful and ongoing employment to many native people. The pipeline contractors and unions have made it plain that native northerners are not qualified to hold down skilled positions in pipeline construction, and that they will be employed largely in unskilled and semi-skilled jobs. Once the pipeline is built, only about 250 people will be needed to operate it. Most of these jobs are of a technical nature and will have to be filled by qualified personnel from the South.

I have no doubt that terms and conditions could be imposed that would enable northern businesses to expand during the construction of the pipeline. But there are hazards for northern businessmen. Construction of the Mackenzie Valley pipeline could produce a serious distortion of the small business sector of the Northwest Territories. This would raise problems for the orderly development of regional economic and commercial activity in the long run.

If communities in the Mackenzie Valley and Western Arctic are made to depend exclusively on industrial wage employment and if the production of country food for local consumption ceases to be an important component in the economy, then the self-employed will certainly become the unemployed. The point is simple enough: the extension of the industrial system creates unemployment as well as employment. In an industrial economy there is virtually no alternative to a livelihood based on wage employment. Those who are unable or unprepared to work for wages become unemployed and then dependent on welfare. To the extent that the development of the northern frontier undermines the possibilities of self-employment provided by hunting, fishing and trapping, employment and unemployment will go hand-in-hand.

I do not mean to suggest that native people will not want to participate in the opportunities for employment that industrial development will create. Some native people already work alongside workers from the South. Many native people have taken advantage of

Detah Indian village. (R. Fumoleau)



Inuit housing. (GNWT)

Yellowknife. (A. Steen)

Fort Franklin. (R. Fumoleau)

opportunities for wage employment – particularly in the Delta – on a seasonal basis to obtain the cash they need to equip or re-equip themselves for traditional pursuits. But when the native people are made to feel they have no choice other than the industrial system, when they have no control over entering it or leaving it, when wage labour becomes the strongest, the most compelling and finally the only option, then the disruptive effects of large-scale, rapid development can only proliferate.

It is an illusion to believe that the pipeline will solve the economic problems of the North. Its whole purpose is to deliver northern gas to homes and industries in the South. Indeed, rather than solving the North's economic problems, it may accentuate them.

The native people, both young and old, see clearly the short-term character of pipeline construction. They see the need to build an economic future for themselves on a surer foundation. The real economic problems in the North will be solved only when we accept the view the native people themselves expressed so often to the Inquiry: that is, the strengthening of the native economy. We must look at forms of economic development that really do accord with native values and preferences. If the kinds of things that native people now want are taken seriously, we must cease to regard large-scale industrial development as a panacea for the economic ills of the North.

Social Impact

I am convinced that the native people of the North told the Inquiry of their innermost concerns and their deepest fears. Although they had been told – and some indeed had agreed – that the proposed pipeline would offer them unprecedented opportunities for wage employment, the great majority of them expressed their fears of what a pipeline would bring: an influx of construction workers, more alcoholism, tearing of the social fabric, injury to the land, and the loss of their identity as a people. They said that wage employment on the pipeline

would count for little or nothing when set against the social costs. I am persuaded that these fears are well-founded.

The alarming rise in the incidence of alcoholism, crime, violence and welfare dependence in the North in the last decade is closely bound up with the rapid expansion of the industrial system and with its intrusion into every part of the native people's lives. The process affects the close link between native people and their past, their own economy, their values and self-respect. The evidence is clear: the more the industrial frontier displaces the homeland in the North, the greater the incidence of social pathology will be. Superimposed on problems that already exist in the Mackenzie Valley and the Western Arctic, the social consequences of the pipeline will not only be serious – they will be devastating.

The social costs of building a pipeline now will be enormous, and no remedial programs are likely to ameliorate them. The expenditure of money, the hiring of social workers, doctors, nurses, even police – these things will not begin to solve the problem. This will mean an advance of the industrial system to the frontier that will not be orderly and beneficial, but sudden, massive and overwhelming.

Native Claims

Native people desire a settlement of native claims before a pipeline is built. They do not want a settlement – in the tradition of the treaties – that will extinguish their rights to the land. They want a settlement that will entrench their rights to the land and that will lay the foundations of native self-determination under the Constitution of Canada.

The native people of the North now insist that the settlement of native claims must be seen as a fundamental re-ordering of their relationship with the rest of us. Their claims must be seen as the means to establishing a social contract based on a clear understanding that they are distinct peoples in history. They insist upon the right to

Inuit at Northern Games, Coppermine, 1976. (GNWT–R. Wilson)

Reindeer round-up, Atkinson Point. (J. Inglis)

Holman youngster. (P. Scott)

Children playing in Holman, 1959. (J. Fyles)

determine their own future, to ensure their place, but not their assimilation, in Canadian life.

The federal government is now prepared to negotiate with the native people on a comprehensive basis, and the native people of the North are prepared to articulate their interests over a broad range of concerns. These concerns begin with the land, but are not limited to it: they include land and land use, renewable and non-renewable resources, schools, health and social services, public order and, overarching all of these, the future shape and composition of political institutions in the North.

The concept of native self-determination must be understood in the context of native claims. When the Dene refer to themselves as a nation, as many of them have, they are not renouncing Canada or Confederation. Rather, they are proclaiming that they are a distinct people, who share a common historical experience, a common set of values, and a common world view. They want their children and their children's children to be secure in that same knowledge of who they are and where they came from. They want their own experience, traditions and values to occupy an honourable place in the contemporary life of our country. Seen in this light, they say their claims will lead to the enhancement of Confederation — not to its renunciation.

It will be for you and your colleagues, in negotiations with the native people, to determine the extent to which native claims can be acceded to, and to work out the way in which self-determination might be effected in the North, whether by the establishment of native institutions on a geographical basis or by the transfer of certain functions of the Government of Canada and the Government of the Northwest Territories to native institutions.

The idea of new institutions that give meaning to native self-determination should not frighten us. Special status for native people is an element of our constitutional tradition, one that is recognized by the British North America Act, by the treaties, by the Indian Act, and

by the statement of policy approved by Cabinet in July 1976. It is an ethnic thread in our constitutional fabric. In the past, special status has meant Indian reserves. Now the native people wish to substitute self-determination for enforced dependency.

The attainment of native goals implies one thing: the native people must be allowed a choice about their own future. If the pipeline is approved before a settlement of claims takes place, the future of the North – and the place of the native people in the North – will, in effect, have been decided for them.

The construction of the pipeline now will entail a commitment by the Government of Canada and the Government of the Northwest Territories to a program of large-scale frontier development, which, once begun, cannot be diverted from its course. Once construction begins, the concentration on the non-renewable resource sector and the movement away from the renewable resource sector will become inexorable. The goal of strengthening the native economy will be frustrated.

An increase in the white population in the wake of pipeline construction will entrench southern patterns of political, social and industrial development, will reduce the native people to a minority position, and will undermine their claim to self-determination.

The settlement of native claims is not a mere transaction. Intrinsic to settlement is the establishment of new institutions and programs that will form the basis for native self-determination. It would be wrong, therefore, to think that signing a piece of paper would put the whole question behind us, as if all that were involved was the removal of a legal impediment to industrial development. The native people insist that the settlement of native claims should be a beginning rather than an end of the recognition of native rights and native aspirations. In my opinion, a period of ten years will be required in the Mackenzie Valley and Western Arctic to settle native claims, and to establish the

Snowdrift children. (R. Fumoleau)

Johnny Crapeau of Detah. (R. Fumoleau)

Maggie Fisher of Fort Good Hope. (R. Fumoleau)

François Paulette of Fort Smith. (M. Jackson)

new institutions and new programs that a settlement will entail. No pipeline should be built until these things have been achieved.

It would therefore be dishonest to try to impose an immediate settlement that we know now – and that the native people will know before the ink is dry – will not achieve their goals. They will soon realize – just as the native people on the prairies realized a century ago as the settlers poured in – that the actual course of events on the ground will deny the promises that appear on paper. The advance of the industrial system would determine the course of events, no matter what Parliament, the courts, this Inquiry or anyone else may say.

In recent years in the North we have witnessed a growing sense of native awareness and native identity. The same phenomenon can be observed throughout the country. It is not going to go away. To establish political institutions in the North that ignore this fact of life would be unwise and unjust. Special status can be – and ought to be – a constructive and creative means by which native people, through the development of institutions of their own, can thrive in a new partnership of interests.

If There is no Pipeline Now

If the native people are to achieve their goals, no pipeline can be built now. Some will say this decision must mean that there will be no economic development in the North. If a pipeline is not built now, so the argument goes, the northern economy will come to a halt. But this view misconstrues the nature of the northern economy and northern development.

If there is no pipeline, the native economy based on hunting, fishing and trapping will scarcely be affected. The mining industry, which is the largest component of the private sector of the economy of both the Yukon Territory and the Northwest Territories, will not be greatly affected. Government, the largest employer and the main source of income for white northerners, and the federal and territorial

bureaucracies are not likely to decrease in size simply because a pipeline is not built now.

A decision not to build a pipeline now would not necessarily bring an end to oil and gas exploration. There will be a setback to Inuvik and, to a lesser extent, to other Delta communities. If exploratory drilling in the Delta and the Beaufort Sea ought to continue in the national interest, the Government of Canada has the means to see that it does.

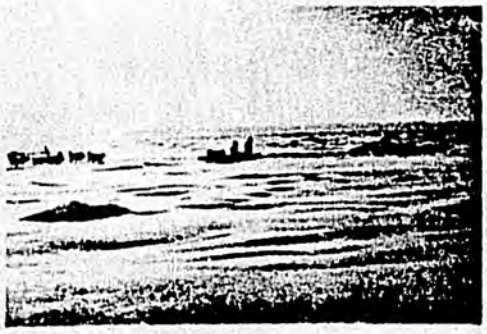
I am convinced that non-renewable resources need not necessarily be the sole basis of the northern economy in the future. We should not place absolute faith in any model of development requiring large-scale technology. The development of the whole renewable resource sector – including the strengthening of the native economy – would enable native people to enter the industrial system without becoming completely dependent on it.

An economy based on modernization of hunting, fishing and trapping, on efficient game and fisheries management, on small-scale enterprise, and on the orderly development of gas and oil resources over a period of years – this is no retreat into the past; rather, it is a rational program for northern development based on the ideals and aspirations of northern native peoples.

To develop a diversified economy will take time. It will be tedious, not glamorous, work. No quick and easy fortunes will be made. There will be failures. The economy will not necessarily attract the interest of the multinational corporations. It will be regarded by many as a step backward. But the evidence I have heard has led me to the conclusion that such a program is the only one that makes sense.

Implications

There should be no pipeline across the Northern Yukon. It would entail irreparable environmental losses of national and international importance. And a Mackenzie Valley pipeline should be postponed for ten years. If it were built now, it would bring limited economic



Northern Yukon. (E. Peterson)

Dogteams trek across sea ice. (GNWT)

Little Bell River. (ISL–G. Calef)

Winter – Yukon North Slope. (Arctic Gas)

benefits, its social impact would be devastating, and it would frustrate the goals of native claims. Postponement will allow sufficient time for native claims to be settled, and for new programs and new institutions to be established. This does not mean that we must renounce our northern gas and oil. But it does mean that we must allow sufficient time for an orderly, not hasty, program of exploration to determine the full extent of our oil and gas reserves in the Mackenzie Delta and the Beaufort Sea. Postponement will offer time for you and your colleagues to make a rational determination regarding the priorities to be adopted in relation to the exploitation of all our frontier oil and gas resources, at a time when the full extent of our frontier reserves has been ascertained.

I believe that, if you and your colleagues accept the recommendations I am making, we can build a Mackenzie Valley pipeline at a time of our own choosing, along a route of our own choice. With time, it may, after all, be possible to reconcile the urgent claims of northern native people with the future requirements of all Canadians for gas and oil.

Yours truly,

Thos R. Berger

Epilogue: Themes for the National Interest

Prime Minister Trudeau has said that Canada is a product of the providential encounter between the French and the English on this continent. Canada takes its identity from the evolution of that encounter. The contours of that meeting between the French and the English in North America define the political institutions of the nation, and constitute Canada's unique contribution to the search by man for a rational polity.

But there was an earlier encounter on this continent that made possible the very existence of the nation – between the Europeans and the indigenous peoples of the Americas. Here, in what is now Canada, it was an encounter first between the French and the native people, then between the English and the native people. It was an encounter which has ramified throughout our history, and the consequences of which are with us today. This encounter may be as important to us all, in the long sweep of history, as any other on this continent. And it is taking place in its most intense and contemporary form on our northern frontier.

It is for this reason that so many eyes are drawn to the North. As André Siegfried, the de Tocqueville of Canada, said:

> Many countries – and they are to be envied – possess in one direction or another a window which opens out on to the infinite – on to the potential future.... The North is always there like a presence, it is the background of the picture, without which Canada would not be Canadian. [*Canada* p. 28-29]

It may be that, through this window, we shall discover something of the shape that our future relations with the native people of our country must assume.

The English and French are the inheritors of two great streams of western civilization. They hold far more in common than divides them: they have similar linguistic and literary traditions and rivalry and commonality of interests that have caused their histories repeatedly to overlap. What is more, the industrial system is the foundation for the material well-being they both enjoy.

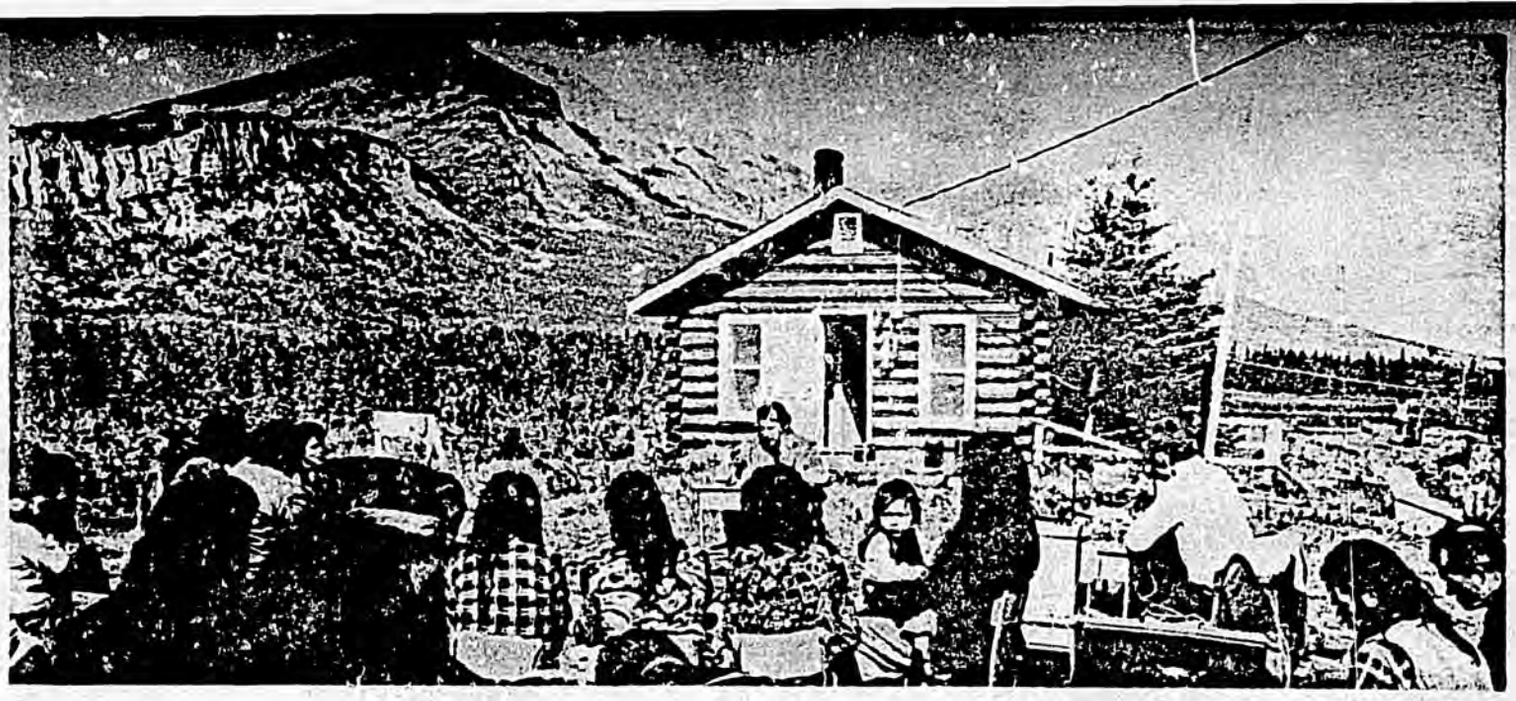
Now the industrial system beckons to the native people. But it does not merely beckon: it has intruded into their culture, economy and society, now pulling, now pushing them towards another, and in many ways an alien, way of life. In the North today, the native people are being urged to give up their life on the land; they are being told that their days and their lives should become partitioned like our own. We have often urged that their commitment to the industrial system be entire and complete. Native people have even been told that they cannot compromise: they must become industrial workers, or go naked back to the bush.

Yet many of them refuse. They say they have a past of their own; they see that complete dependence on the industrial system entails a future that has no place for the values they cherish. Their refusal to make the commitment asked of them is one of the points of recurring tension in the North today. They acknowledge the benefits we have brought to them. They say that they are, in some respects, more comfortable now than they were in the old days. The industrial system has provided many things that they value, such as rifles, radios, outboard motors and snowmobiles. But they know that, in the old days, the land was their own. Even in the days of the fur trade, they and the land were essential to it. Now they recognize they are not essential. If it is in the national interest, a pipeline can and will be built across their land. They fear that they will become strangers in their own land. The native people know that somehow they must gain a measure of control over their lives and over the political institutions that shape their lives, and that they must do this before the industrial system overtakes and, it may be, overwhelms them. This is what their claims are about, and this is why they say their claims must be settled before a pipeline is built.

The native people know their land is important to us as a source of oil and gas and mineral wealth, but that its preservation is not essential to us. They know that above all else we have wanted to subdue the land and extract its resources. They recognize that we do not regard their hunting, trapping and fishing as essential, that it is something we often regard in a patronizing way. They say that we reject the things that are valuable to them in life: that we do so explicitly and implicitly.

We have sought to make over these people in our own image, but this pronounced, consistent and well-intentioned effort at assimilation has failed. The use of the bush and the barrens, and the values associated with them, have persisted. The native economy refuses to die. The Dene, Inuit and Metis survive, determined to be themselves. In the past their refusal to be assimilated has usually been passive, even covert. Today it is plain and unmistakable, a fact of northern life that must be understood.

The native people have had some hard things to say about the government, about the oil and gas industry and about the white man and his institutions. The allegation has been made that what the leaders of native organizations in Northern Canada are saying is not representative of the attitudes and thinking of northern native peoples. But this Inquiry not only has sought the views of the native organizations, but has obtained the views of the native people who live in every



settlement and village of the Mackenzie Valley and the Western Arctic. There the native people, speaking in their own villages, in their own languages and in their own way, expressed their real views. About that I am in no doubt.

It would be a mistake to think that the native people are being manipulated by sinister forces, unseen by them, yet discernible to us. It is demeaning and degrading to tell someone that he does not mean or does not know what he is saying, that someone has told him to say it. It would be wrong to dismiss what they have said because we would rather believe that they are not capable of expressing their own opinions.

It may be uncomfortable to have to listen, when we have never listened in the past. But we must listen now. If we do not understand what is in the minds of the native people, what their attitudes really are toward industrial development, we shall have no way of knowing what impact a pipeline and an energy corridor will have on the people of the North.

We all have different ideas of progress and our own definitions of the national interest. It is commonplace for people in Southern Canada to dismiss the notion that a few thousand native people have a right to stand in the way of industrial imperatives. But many of the Dene intend to do just that. Philip Blake told the Inquiry at Fort McPherson:

> If your nation chooses ... to continue to try and destroy our nation, then I hope you will understand why we are willing to fight so that our nation can survive. It is our world.
>
> We do not wish to push our world onto you. But we are willing to defend it for ourselves, our children, and our grandchildren. If your nation becomes so violent that it would tear up our land, destroy our society and our future, and occupy our homeland, by trying to impose this pipeline against our will, then of course we will have no choice but to react with violence.
>
> I hope we do not have to do that. For it is not the way we would choose. However, if we are forced to blow up the pipeline ... I hope you will not only look on the violence of Indian action, but also on the violence of your own nation which would force us to take such a course.
>
> We will never initiate violence. But if your nation threatens by its own violent action to destroy our nation, you will have given us no choice. Please do not force us into this position. For we would all lose too much. [C1085ff.]

Chief Fred Greenland said to the Inquiry at Aklavik:

> It's clear to me what the native people are saying today. They're discussing not their future but the future of their children and grandchildren, and if the government continues to refuse or neglect [us] ... I think the natives would just stop their effort and discussions and the opportunities for a peaceful settlement would be lost. We must choose wisely and carefully because there will be a future generation of Canadians who will live with the results. [C3863]

Frank T'Seleie, then Chief at Fort Good Hope, also spoke of the future generations, of the children yet unborn. He told the Inquiry:

> It is for this unborn child, Mr. Berger, that my nation will stop the pipeline. It is so that this unborn child can know the freedom of this land that I am willing to lay down my life. [C1778ff.]

Chief Jim Antoine of Fort Simpson:

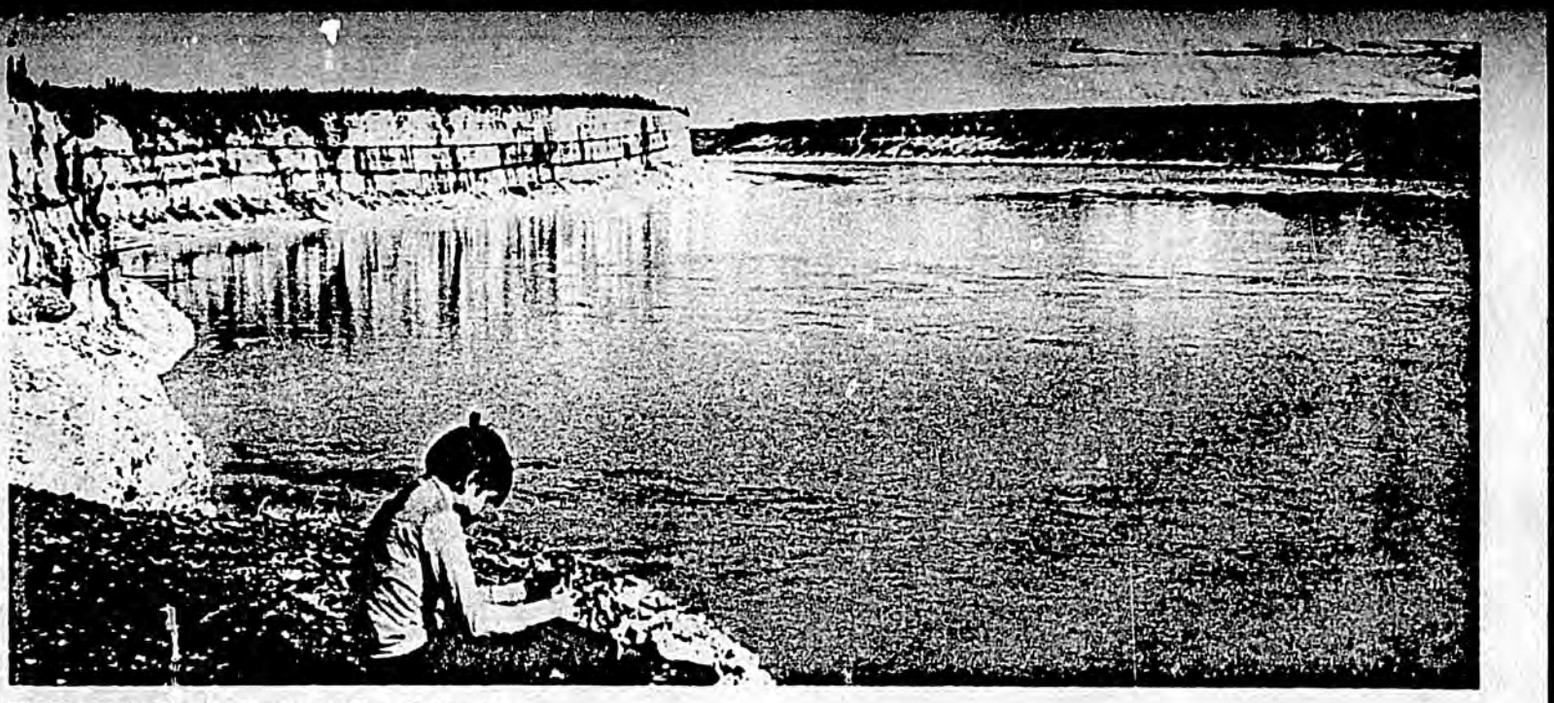
> ... every time we try to do something, within the system ... it doesn't seem to work for us, as Indian people. We tried it, we tried to use it, it doesn't work for us.... We're going to keep on trying to use the system until we get frustrated enough that we're going to try changing it. I think that's where it's directed, that's where it's going. I would stand with my brother from Good Hope that he would lay down his life for what he believes in, and I feel the same way. There's a lot of us young people who feel the same way. [C2625]

Raymond Yakaleya, speaking at Norman Wells:

> Our backs are turned to the corners. This is our last stand.
>
> I ask each and every one of you in this room what would you do if you were in our shoes? How would you feel if you had these conditions on you? I ask you one more time, let us negotiate, there's still time, but don't force us, because this time we have nothing to lose. When I ask for the lives of my people, am I asking you for too much? [C2177]

I have given the most anxious consideration to whether or not I should make any reference in this report to these statements. It may be said that merely reciting them would be to invite a violent reaction to the pipeline, if it were built without a just settlement of native claims. Yet these statements were not lightly made. No one who heard them could doubt that they were said in earnest. So I have concluded that they cannot be ignored. They illustrate the depth of feeling among the native people.

I want to emphasize that my recommendation that the construction of a Mackenzie Valley pipeline should be postponed until native claims are settled is not dependent upon this evidence. That recommendation is based upon the social and economic impact of a pipeline, and upon the impact it would have on native claims. I would be remiss in my duty, however, if I did not remind the Government of Canada that these things were said. I do not want anyone to think I am predicting an insurrection. But I am saying there is a real possibility of civil disobedience and civil disorder that – if they did occur – might well render orderly political evolution of the North impossible, and could poison relations between the Government of



The Ramparts along the Mackenzie River. (R. Fumoleau)

and economic advancement of the native people are concerned. Those social and economic gains will follow from the achievement of a sense of collective pride and initiative by the Dene, Inuit and Metis, and not simply from a clearing away of legal complications to enable industrial development to proceed.

If the pipeline is not built now, an orderly program of exploration can still proceed in the Mackenzie Delta and the Beaufort Sea. And, even if the oil and gas industry withdraws from its exploration activities because of a decision to postpone the pipeline, the Government of Canada has the means to ensure the continuation of exploratory drilling if it were held to be in the national interest. Postponement of the pipeline would mean that, if continued drilling in the Mackenzie Delta and the Beaufort Sea reveals sufficient reserves, Canada can proceed to build a pipeline at a time of its own choosing, along a route of its own choice, by means it has decided upon, and with the cooperation of the native people of the North.

Let me make it clear that if we decide to postpone the pipeline, we shall not be renouncing our northern energy supplies. They will still be there. No one is going to take them away. In years to come, it will still be available as fuel or as industrial feedstocks.

We have never had to determine what is the most intelligent use to make of our resources. We have never had to consider restraint. Will we continue, driven by technology and egregious patterns of consumption, to deplete our energy resources wherever and whenever we find them? Upon this question depends the future of northern native people and their environment.

Maurice Strong, Chairman of Petro Canada, has written:

> Man's very skills, the very technical success with which he overspreads the earth, makes him the most dangerous of all creatures.
>
> One critical aspect of man's use of planetary resources is the way in which he is burning up more and more of the world's energy....
>
> We can no longer afford to plan on the basis of past and current trends in consumption. If we assume that a decent standard of life for the world's peoples inevitably requires increasing per capita use of energy, we shall be planning for an energy starved world, or an ecological disaster, or both. Rather than searching endlessly for new energy sources, we must contribute to its wiser use....
>
> At present, we are far from this ideal. We have recklessly assumed that no matter how wasteful our lifestyle, we shall somehow find the energy to support it....
>
> In the last 15 years, world use of energy has doubled. North America now uses about five times as much energy as is consumed in the whole of Asia, and per capita consumption is about 24 times higher. The United States each year wastes more fossil fuel than is used by two-thirds of the world's population. [*Edmonton Journal*, September 22, 1976]

If we build the pipeline, it will seem strange, years from now, that we refused to do justice to the native people merely to continue to provide ourselves with a range of consumer goods and comforts without even asking Canadians to consider an alternative. Such a course is not necessary, nor is it acceptable.

I have said that, under the present conditions, the pipeline, if it were built now, would do enormous damage to the social fabric in the North, would bring only limited economic benefits, and would stand in the way of a just settlement of native claims. It would exacerbate tension. It would leave a legacy of bitterness throughout a region in which the native people have protested, with virtual unanimity, against the pipeline. For a time, some of them may be co-opted. But in the end, the Dene, Inuit and Metis will follow those of their leaders who refuse to turn their backs on their own history, who insist that they must be true to themselves, and who articulate the values that lie at the heart of the native identity.

No pipeline should be built now. Time is needed to settle native claims, set up new institutions and establish a truly diversified economy in the North. This, I suggest, is the course northern development should take.

We have the opportunity to make a new departure, to open a new chapter in the history of the indigenous peoples of the Americas. We must not reject the opportunity that is now before us.

The Corridor Concept

The Corridor Concept and Cumulative Impact

The concept of a pipeline corridor from the North was first enunciated by the Government of Canada in the 1970 Pipeline Guidelines. In 1972, these Guidelines were expanded. The Expanded Guidelines for Northern Pipelines (to which I shall refer as the "Pipeline Guidelines") were tabled in the House of Commons in June 1972, and they form the cornerstone of Canadian policy with regard to the construction of northern pipelines. The Inquiry is bound by Order-in-Council, P.C. 1974-641 March 21, 1974, under which it was established, to consider the proposals made by the pipeline companies to meet the specific environmental and social concerns set out in the Pipeline Guidelines.

The significance of the corridor concept to this Inquiry relates to the consideration of impact and cumulative impact. The Pipeline Guidelines assume that, if a gas pipeline is built, an oil pipeline will probably follow it, and they call for examination of the proposed gas pipeline from the point of view of cumulative impact. We must consider then, not only the impact of a gas pipeline, but also the impact of an oil pipeline — in sum, the impact of a transportation corridor for two energy systems.

The government's corridor policy is plainly spelled out in the Pipeline Guidelines:

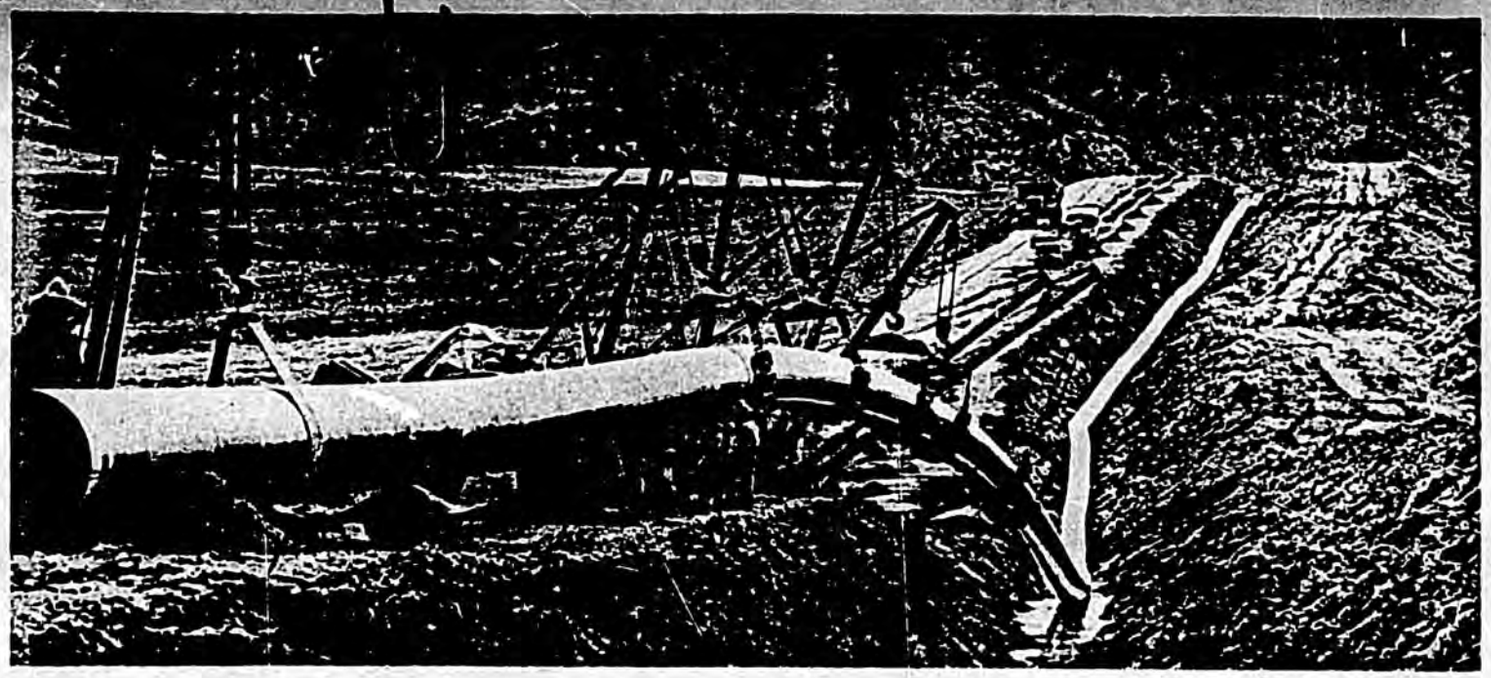
> In view of the influence of the *first* trunk pipeline in shaping the transportation corridor system and in moulding the environmental and social future of the region, any applicant to build a first trunk pipeline within any segment of the corridor system outlined in 1. above must provide with [its] application:
>
> i) assessment of the suitability of the applicant's route for nearby routing of the other pipeline, in terms of the environmental-social and terrain-engineering consequences of the other pipeline and the combined effect of the two pipelines;...
>
> ii) assessment of the environmental-social impact of both pipelines on nearby settlements or nearby existing or proposed transportation systems....[p. 10]

The assumption in 1970 was that an oil pipeline would be built first, and a gas pipeline would be likely to follow it; ever since the Pipeline Guidelines were issued in 1972, the assumption has been that a gas pipeline would come first and that an oil pipeline would be likely to follow it. Now we have before us proposals by Arctic Gas and Foothills to build a gas pipeline. The influence of a gas pipeline on the development of an energy corridor and in moulding the social, economic and environmental future of the North will be enormous. The Pipeline Guidelines call for a consideration of the environmental and social impact of a gas pipeline and an oil pipeline, as well as of the combined impact of the construction of both pipelines along the corridor. That policy ramifies throughout the Inquiry's consideration of the environmental and social issues that arise along the whole route. However, the corridor will not be simply a corridor for gas and oil pipelines. The Pipeline Guidelines envisage that the corridor may eventually include roads, a railroad, hydro-electric transmission lines and telecommunications facilities.

There are real limits to our capacity to forecast the impact of such a corridor. The Pipeline Guidelines are principally concerned with the impact that gas and oil pipelines will have in the North. The Inquiry has, therefore, largely limited itself to a consideration of the impact of these energy transportation systems. But sometimes it has been necessary to consider the impact of pipelines in relation to other transportation systems. For instance, what if a haul road had to be built along the Arctic Coastal Plain of the Northern Yukon? Or to what extent will the capacity of the existing fleet of tugs and barges on the Mackenzie River have to be augmented? Or to what extent will hunting from the Dempster Highway have to be restricted to enable the recommendations of this Inquiry to be carried out? We cannot make an intelligent assessment of the impact of a gas pipeline unless we do so in the light of the cumulative impact of the corridor.

Of course, the gas pipeline itself will be a multi-stage project involving considerations of cumulative impact. The gas pipelines proposed by Arctic Gas and by Foothills can be expected to be looped. Looping is the process of progressively increasing the amount of gas that can be transported by the pipeline system; a second (or third) pipeline is built beside the first in sections or loops from one compressor station to the next. This means that construction along the gas pipeline right-of-way can be an ongoing or repetitive process and can involve cumulative impacts over and above those resulting from the project that was originally proposed.

The importance of considering the impact of a gas pipeline in the light of cumulative impact along the corridor is obvious. This importance can be illustrated by reference to gravel, which is in short supply in the North. Arctic Gas estimate that the gas pipeline will require 30 million cubic yards of gravel and other borrow materials within Canada and North of 60. Mackenzie Valley Pipeline Research Limited estimated the gravel requirements for an oil pipeline at 42 million



cubic yards. It would be foolish to consider the impact of the borrow requirements of a gas pipeline without taking into account the gravel requirements of an oil pipeline, as well as those of other regional and local projects. Substantial amounts of borrow materials will be required for gas plants and gas-gathering systems in the Mackenzie Delta, for the completion of the Mackenzie Highway and the Dempster Highway, and for airports, not to mention the needs of communities along the route. Gravel provides a quite straightforward example of cumulative impact. There are many other examples, some of them by no means as straightforward, that I shall be dealing with in this report.

The Northern Yukon Corridor and the Mackenzie Valley Corridor

It should be borne in mind that there are two proposed corridors: one across the Northern Yukon and another along the Mackenzie Valley. The following passage from the Pipeline Guidelines makes this plain:

> The Government of Canada is prepared to receive and review applications to construct one trunk oil pipeline and/or one trunk gas pipeline within the following broad "corridors":
>
> i) Along the Mackenzie Valley region (in a broad sense) from the Arctic coast to the provincial [Alberta] boundary;
>
> ii) Across the northern part of the Yukon Territory either adjacent to the Arctic coast or through the northern interior region from the boundary of Alaska to the general vicinity of Fort McPherson, and thus to join the Mackenzie "corridor": ... [p. 9]

Arctic Gas propose to build a pipeline from Alaska that would use the corridor across the Northern Yukon as well as the corridor along the Mackenzie Valley. Foothills propose to build a pipeline that would use only the corridor along the Mackenzie Valley.

Arctic Gas propose to transport only Alaskan gas in the corridor across the Northern Yukon, and to transport both Alaskan and Canadian gas in the Mackenzie Valley corridor. Under the Foothills proposal, the Mackenzie Valley corridor would be used to carry only Canadian gas.

Since 1972, as mentioned above, the Government of Canada has assumed that a gas pipeline along either of these corridors would probably be followed by an oil pipeline. That assumption is a sound one: once a gas pipeline is built across the Northern Yukon, there will be every reason for an oil pipeline carrying American oil to follow the same route. You may ask, is not the trans-Alaska pipeline to carry American oil to the Lower 48? The Alyeska pipeline was built to deliver oil to the western states, but the United States still has severe shortages of oil in the midwest and the east. And there are great petroleum reserves in northern Alaska, especially in Naval Petroleum Reserve No. 4 lying to the west of Prudhoe Bay. The urgency of bringing oil from northern Alaska to the markets in the Lower 48 that need it most is obvious. If a gas pipeline and energy corridor were already in place across the Northern Yukon and along the Mackenzie Valley, it is quite likely this corridor would be the route of choice.

Once a gas pipeline is built along the Mackenzie Valley, it is likely that in the future an oil pipeline will follow. Oil has in fact been found in the Mackenzie Delta region. It is said that discoveries of oil in the Mackenzie Delta and the Beaufort Sea do not justify an oil pipeline today. Nonetheless, while the proven reserves of oil in the Mackenzie Delta region have not yet reached threshold levels, they may do so in time. In any event, it is obvious that if present or future exploration programs reveal large reserves of oil under the Beaufort Sea, the call for an oil pipeline from the Delta to the mid-continent will be made once again.

I think all of this demonstrates the wisdom of the Pipeline Guidelines, which insist that there should be an examination of the impact of an oil pipeline along with the gas pipeline. Any attempt to dismember the policy and to assess the impacts piecemeal, along either the Northern Yukon corridor or the Mackenzie Valley corridor, should be resisted.

The United States' Interest in the Corridor

The Arctic Gas pipeline, if it is built, would provide a land bridge for the delivery of Alaskan gas across Canada to the Lower 48. The implications of this prospect, from the point of view of Canadian policy in the North, should be borne in mind.

The corridor across the Northern Yukon will be an exclusively American energy corridor. The Mackenzie Valley corridor, under the Arctic Gas proposal, will be an American energy corridor as much as it is a Canadian energy corridor. The United States will have an interest in the scheduling of pipeline construction in Canada and, when the pipeline is built, in seeing that it remains safe and secure, because it will be carrying Alaskan gas in bond to the Lower 48. It will be an energy lifeline for the United States,

Trans-Alaska pipeline and gravel haul road. Sideboom tractors lower pipe into ditch. (Alyeska)

Stockpile of drill pipe. (NFB–McNeill)

Drill rig in the Delta. (Arctic Gas)

Mackenzie Highway right-of-way beside Mackenzie River. (J. Inglis)

extending across the Northern Yukon, across the Mackenzie Delta, along the Mackenzie Valley, and then through Alberta, Saskatchewan and British Columbia to the Lower 48. It will supply gas to a complex of industries and urban centres in the United States. The Americans will be dependent on the continuous supply of gas, and the gas being transported from Alaska will be their own gas. Moreover, the United States wants the pipeline to begin to deliver that gas as soon as possible.

There are, of course, pipelines that cross United States territory and carry oil and gas to Canadian markets: the Interprovincial pipeline, which delivers western oil to Ontario; the Portland-Montreal pipeline, which delivers offshore oil to Quebec; and the Great Lakes Transmission Company pipeline, which delivers gas to Ontario. All of them pass through the United States. But these connections cannot be compared in magnitude or impact to the Arctic Gas proposal. They are not pipelines reaching some 2,000 miles from a distant frontier.

The consequences of such American interest in the pipeline are of special concern to the Inquiry. The impact of the pipeline, so far as northern peoples and the northern environment is concerned, will be largely within Canada (the line from Prudhoe Bay to the Alaska-Yukon border is only 200 miles long, whereas the line from the Alaska-Yukon boundary to the Northwest Territories-Alberta border is 1,000 miles long). The native people's concern over when a pipeline is built, the environmental concern over where it should be built, and the stipulations for protecting the people and the environment apply largely in Canada. The United States cannot be expected to be as concerned as Canada with the seriousness of the social and environmental impact of the pipeline along its route. This difference, coupled with the Americans' rather more urgent need of gas, might result in pressure to complete the pipeline without due regard to the social and environmental concerns in Canada. The risk is in Canada. The urgency is in the United States.

A pipeline 2,200 miles long (in Canada) is a highly vulnerable artery. What measures might have to be taken to forestall an interruption of delivery – an interruption that would affect vital Canadian interests, but even more tellingly, vital American interests? There may be real possibilities for misunderstanding and tension between our two countries, notwithstanding our long history of good relations. These considerations deserve the attention of the Government of the United States as well as of the Government of Canada. It may be that they are not at all daunting. But they should still not be overlooked.

A treaty between Canada and the United States will not cover all possibilities. It will, of course, define the rights of our two governments with regard to the pipeline and to the gas being transported in that pipeline. And it will establish the ground rules for the transportation of Alaskan gas across Canada to the United States. It cannot do more. I say this because a treaty, although it will regulate the conduct of our two governments, will not necessarily regulate the conduct of the two countries' citizens.

The implications for our relations with the United States of the building and maintenance of the proposed gas transmission system deserve careful consideration by all Canadians. We are not simply considering a proposal to build a pipeline on an isolated frontier. We are considering, in the Arctic Gas proposal, the establishment of an international energy corridor that will cross some 2,200 miles of Canadian territory, opening up wilderness areas that are among the most important wildlife habitat in North America. It will cross lands that are claimed by Canada's native people, a region where the struggle for a new social and economic order and political responsibility is taking place.

It seems to me the question of whether or not there should be a corridor to carry vital energy supplies from Alaska through the heartland of Canada to the Lower 48, is at the threshold of the decision-making process. If Canadians decide that there is to be such a corridor, then we must also consider when it should be established and what route it should follow. These are questions Canadians must decide for themselves.

Hunting camp near Fort Resolution. (R. Fumoleau)

Postponement of the Pipeline

In my judgment, we must settle native claims before we build a Mackenzie Valley pipeline. Such a settlement will not be simply the signing of an agreement, after which pipeline construction can then immediately proceed. Intrinsic to the settlement of native land claims is the establishment of new institutions and programs that will form the basis for native self-determination.

The native people of the North reject the model of the James Bay Agreement. They seek new institutions of local, regional and indeed territorial government. John Ciaccia, speaking to the Parliamentary Committee convened to examine the James Bay Agreement, said that the Government of Quebec was "taking the opportunity to extend its administration, its laws, its services, its governmental structures through the entirety of Québec." [*The James Bay and Northern Québec Agreement*, p. xvi] The Dene and the Inuit seek a very different kind of settlement.

They also reject the Alaskan model. The Alaskan settlement was designed to provide the native people with land, capital and corporate structures to enable them to participate in what has become the dominant mode of economic development in Alaska, the non-renewable resource sector. This model is only relevant if we decide against the strengthening of the renewable resource sector in the Canadian North.

The Alaskan settlement also rejects the idea that there should be any special status for native people. That is a policy quite different from the policy formulated by the Government of Canada. In Alaska the settlement was designed to do away with special status by 1991 and to assimilate Alaskan natives. The Government of Canada faced that issue between 1969 and 1976 and decided against it.

The issue comes down to this: will native claims be rendered more difficult or even impossible of achievement if we build a pipeline without first settling those claims? Must we establish the political, social and economic institutions and programs embodied in the settlement before building a pipeline? Unless we do, will the progress of the native people toward realization of their goals be irremedially retarded? I think the answer clearly is yes. The progress of events, once a pipeline is under construction, will place the native people at a grave disadvantage, and will place the government itself in an increasingly difficult position.

In my opinion a period of ten years will be required in the Mackenzie Valley and Western Arctic to settle native claims, and to establish the new institutions and new programs that a settlement will entail. No pipeline should be built until these things have been achieved.

It might be possible to make a settlement within the year with the Metis, and perhaps to force a settlement upon the Inuit. It would, however, be impossible, I think, to coerce the Dene to agree to such a settlement. It would have to be an imposed settlement.

You can sign an agreement or you can impose one; you can proceed with land selection; you can promise the native people that no encroachments will be made upon their lands. Yet you will discover before long that such encroachments are necessary. You can, in an agreement, promise the native people the right to rebuild the native economy. The influx of whites, the divisions created among the native people, the preoccupations of the federal and territorial governments, faced with the problems of pipeline construction and the development of the corridor, would make fulfilment of such a promise impossible. That is why the pipeline should be postponed for 10 years.

A decision to build the pipeline now would imply a decision to bring to production now the gas and oil resources of the Mackenzie Delta and the Beaufort Sea. The industrial activity that would follow this decision would be on a scale such as to require the full attention of the government, and entrench its commitment to non-renewable resource development in the North. The drive to bring the native people into the industrial system would intensify, and there would be little likelihood of the native people receiving any support in their desire to expand the renewable resource sector.

If we believe that the industrial system must advance now into the Mackenzie Valley and the Western Arctic, then we must not delude ourselves or the native people about what a settlement of their claims will mean in such circumstances.

It would be dishonest to impose a settlement that we know now – and that the native people will know before the ink is dry on it – will not achieve their goals. They will soon realize – just as the native people on the prairies realized a century ago as the settlers poured in – that the actual course of events on the ground will deny the promises that appear on paper. The advance of the industrial system would determine the course of events, no matter what Parliament, the courts, this Inquiry or anyone else may say.

If we think back to the days when the treaties were signed on the prairies, we can predict what will happen in the North if a settlement is forced upon the native people. We shall soon see that we cannot keep the promises we have made.

Phillips Bay, Yukon coast; breeding and staging area for waterfowl. (I. MacNeil)

Porcupine River. (ISL–G. Calef)

Alaska North Slope. (ISL–G. Calef)

and the Northern Yukon biota, can be consistent with and complementary to these principles.

We have already some experience in the establishment and management of parks (although not wilderness parks) in the North and have seen their effects on the interests of the native people. At Nahanni Butte the Inquiry was told that the Dene play no part in the management of the South Nahanni National Park. This experience must not be repeated in the wilderness park for the Northern Yukon that I am urging upon the Government of Canada. The conditions I have outlined will, in my judgment, avoid such a repetition and will avoid prejudice to native claims.

In *Runes of the North*, Sigurd Olson, an American naturalist, wrote:

> It may well be that with [the help of the native people] the Canadian north, with its vast expanses of primeval country, can restore to modern man a semblance of balance and completeness. In the long run, these last wild regions of the continent might be worth far more to North Americans from a recreational and spiritual standpoint than through industrial exploitation. [p. 156]

It may be said that no one will visit the park because it is too remote. Only the wealthy, it may be argued, will have the opportunity to see the caribou and to enjoy the solitude and the scenery. But Canadians of ordinary means and less are there now, enjoying these wonders of nature. I speak, of course, of the native people. Is that not enough? Canadians from the provinces do not have to visit the wilderness or see the herd of caribou to confirm its existence or to justify its retention. The point I am making here is that the preservation of the wilderness and its wildlife can be justified on the grounds of its importance to the native people. But the preservation of wilderness can also be justified because it is there, an Arctic ecosystem, in which life forms are limited in number, and where, if we exterminate them, we impoverish the frontier, our knowledge of the frontier, and the variety and beauty of the earth's creatures.

An Alternative Route Across the Yukon

I have recommended that no pipeline be built and no energy corridor be established across the Northern Yukon along either of the routes proposed by Arctic Gas. This means that, if gas from Prudhoe Bay and, subsequently, gas and oil from other sources in Alaska must pass overland to the Lower 48, the pipeline will have to be routed through the southern part of the Yukon Territory. The only overland route that has been seriously advanced as an alternative to the routes proposed by Arctic Gas is the Alaska Highway Route (also known as the Fairbanks Route) which is the route proposed for the Alcan Pipeline. This route would follow the trans-Alaska pipeline from Prudhoe Bay to Fairbanks, the Alaska Highway to the eastern border of Alaska and then cross the Southern Yukon into British Columbia and Alberta.

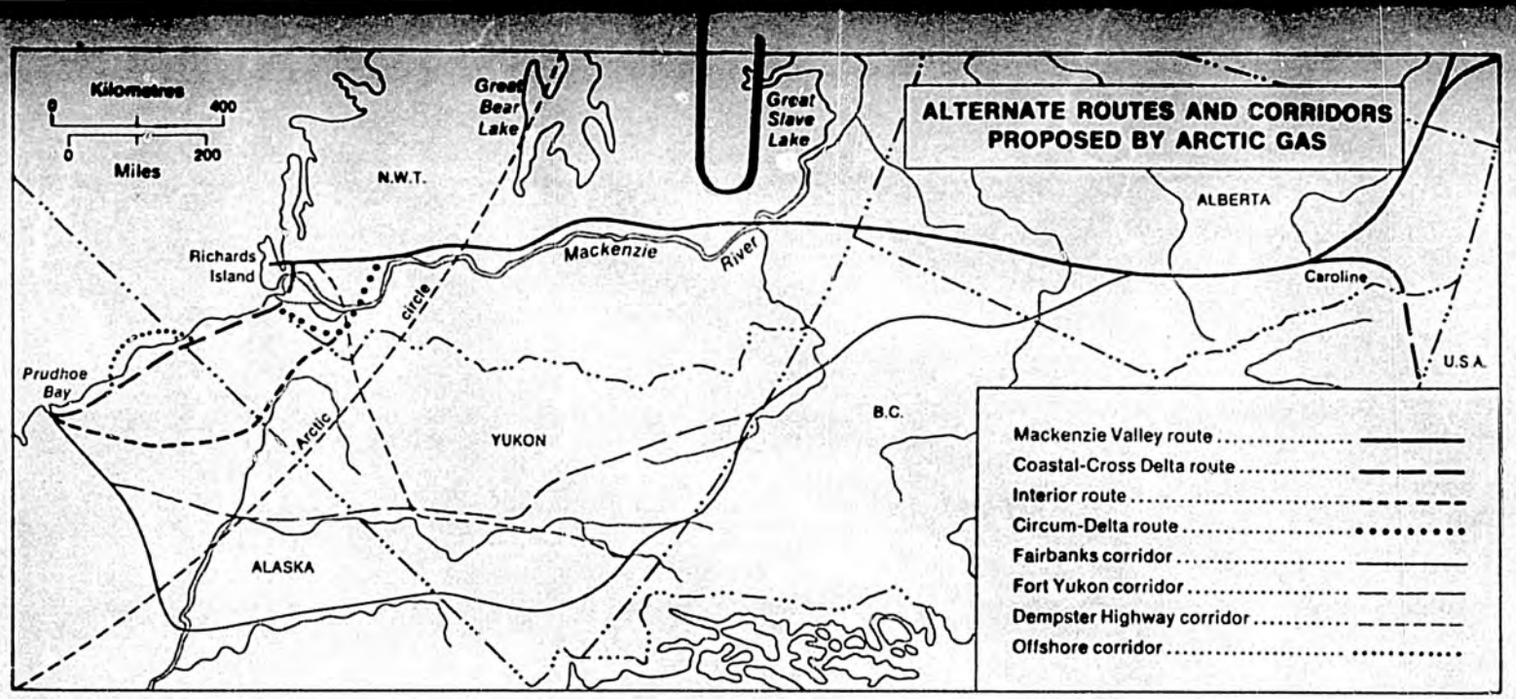
At Whitehorse, I heard evidence from Arctic Gas and from other participants in the Inquiry, comparing this route with the Coastal and Interior Routes. On the basis of that evidence, many of the concerns that led me to reject the pipeline routes across the Northern Yukon do not appear to apply to the Alaska Highway Route.

No major populations of any wildlife species appear to be threatened by the construction of a pipeline paralleling the Alaska Highway, either in the Yukon or in Alaska. The route follows an existing corridor along the trans-Alaska pipeline north of Fairbanks and along the Alaska Highway south and east of Fairbanks. Like the trans-Alaska pipeline, this route would come into contact with only small numbers of caribou south of Prudhoe Bay. Elsewhere, although there are important wildlife populations in the area traversed by the proposed route, they apparently would not have major contact with the corridor.

The concerns that I have expressed about the scheduling and logistics of building a pipeline across the Northern Yukon would not apply (or would be much less important) if a pipeline were built along the Alaska Highway Route. The Arctic Gas pipeline would have to be built in the cold and darkness of winter north of the Arctic Circle, from a snow working surface. It would depend upon a limited shipping season, and a whole infrastructure would have to be established to bring in material, equipment and supplies. In contrast, a pipeline following the Alaska Highway Route in Canada could probably be built in either winter or summer, and it would cross an area with less extreme winter weather, and follow a main highway that has a short connection to the Pacific coast.

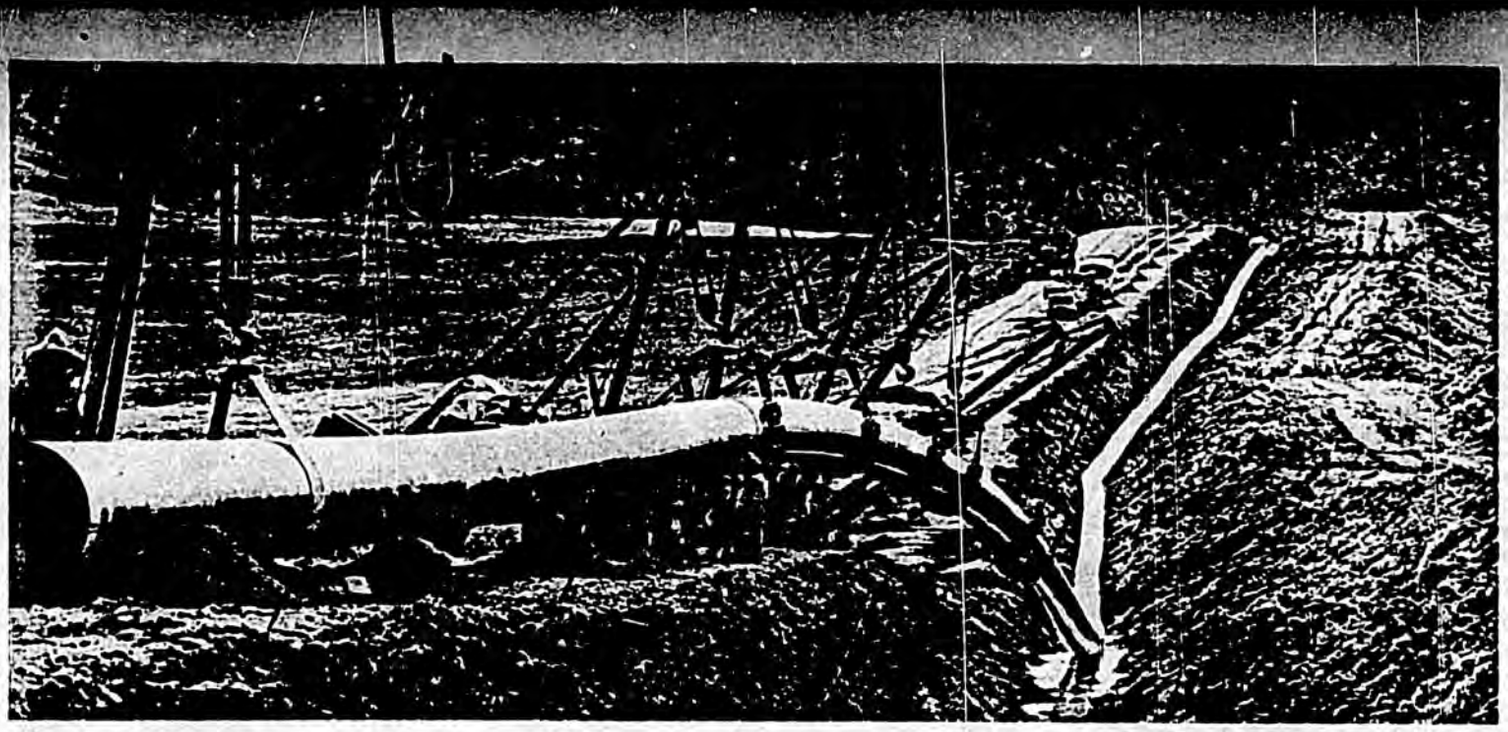
Within Canada, only short sections of the Alaska Highway Route would encounter permafrost, and the problems of pipeline construction and operation across permafrost and of controlling frost heave would be of little concern. Of course, permafrost does exist throughout most of the Alaska portion of this proposed route.

I have not examined the social and economic impact of a pipeline along the Alaska Highway Route. Neither have I considered the question of native claims in the Southern



Yukon. The Council of Yukon Indians have advised that native claims must be settled in the Southern Yukon before any pipeline is built. These matters would be of fundamental importance in any decision to build a pipeline across the Southern Yukon and they must be assessed carefully before any recommendation is made for a pipeline along the Alaska Highway. Certainly, I am in no position to make such a recommendation.

If a decision should be made in favour of a pipeline along the Alaska Highway Route, or over any other southerly route across the Yukon Territory, I recommend that any agreement in this regard between Canada and the United States should include provisions to protect the Porcupine caribou herd and the wilderness of the Northern Yukon and Northeastern Alaska. By this agreement, Canada should undertake to establish a wilderness park in the Northern Yukon and the United States should agree to accord wilderness status to its Arctic National Wildlife Range, thus creating a unique international wilderness park in the Arctic. It would be an important symbol of the dedication of our two countries to environmental as well as industrial goals.



cubic yards. It would be foolish to consider the impact of the borrow requirements of a gas pipeline without taking into account the gravel requirements of an oil pipeline, as well as those of other regional and local projects. Substantial amounts of borrow materials will be required for gas plants and gas-gathering systems in the Mackenzie Delta, for the completion of the Mackenzie Highway and the Dempster Highway, and for airports, not to mention the needs of communities along the route. Gravel provides a quite straightforward example of cumulative impact. There are many other examples, some of them by no means as straightforward, that I shall be dealing with in this report.

The Northern Yukon Corridor and the Mackenzie Valley Corridor

It should be borne in mind that there are two proposed corridors: one across the Northern Yukon and another along the Mackenzie Valley. The following passage from the Pipeline Guidelines makes this plain:

> The Government of Canada is prepared to receive and review applications to construct one trunk oil pipeline and/or one trunk gas pipeline within the following broad "corridors":
>
> i) Along the Mackenzie Valley region (in a broad sense) from the Arctic coast to the provincial [Alberta] boundary;
>
> ii) Across the northern part of the Yukon Territory either adjacent to the Arctic coast or through the northern interior region from the boundary of Alaska to the general vicinity of Fort McPherson, and thus to join the Mackenzie "corridor"; ... [p. 9]

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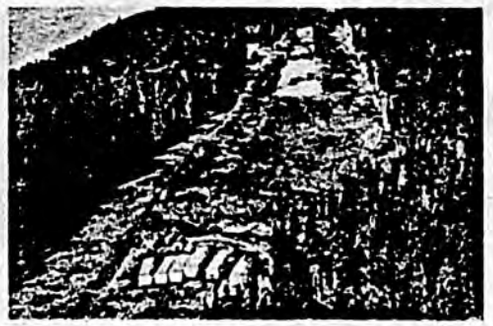

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the sense of medication. So at least in its initial stages, southern psychiatry is appropriate. However, many of the problems seen are so closely interwoven with the life-style of the native people in the North, which in turn is closely bound to such problems as economics, housing, self-esteem and cultural identity, that to label them as psychiatric disorders is frankly fraudulent and of no value whatsoever, as the treatment must eventually be the treatment of the whole community rather than [of] the individual. [F28437]

Social Impact and the Pipeline

Some advocates of the pipeline say that the wage employment it would provide, even though temporary, would ameliorate the social problems that underlie the psychological symptoms that Kehoe, Abbott and others have described. In the light of all of the evidence and our experience, this attitude must be regarded as wrong. We cannot ignore the truly frightening increases in crime, abuse of alcohol, diet-related illness, venereal disease rates and mental illness that have occurred during the past ten years in the North.

At the same time, we should acknowledge some encouraging trends: violent deaths of native people in the Northwest Territories fell from 28.4 percent of all deaths in 1974 to 22.5 percent in 1975. There was a reduction in the number of cases of venereal disease reported in 1976. I have described some local reactions against alcohol abuse that have led to measures of local prohibition. Why have these indicators of crime and social disease, which for years have gone from bad to worse, broken their upward trend? Perhaps it has been a result of heightened native consciousness, the determination of the native people to be true to themselves, that is responsible. But let us make no mistake: these improvements, although welcome, are small, and they may prove to be merely an interruption of longer-term trends. In communities into which the industrial economy has only recently penetrated, the situation is deeply alarming.

The question we face is, will construction of the pipeline hamper social improvements? The answer must be yes. If pipeline construction goes ahead now, can we ensure that its effects will not halt these social improvements? The answer must be no. Although some ameliorative measures can be taken to lessen the social impact of pipeline construction and related activity on the northern people, no one should think that these measures will prevent the further and serious deterioration of social and personal well-being in the native communities.

The process of rebuilding a strong, self-confident society in the Mackenzie Valley has begun. Major industrial development now may well have a disastrous effect on that process. With the pipeline, I should expect the high rate of alcohol consumption to persist and worsen. I should expect further erosion of native culture, further demoralization of the native people, and degradation and violence beyond anything previously seen in the Mackenzie Valley and the Western Arctic.

The presence of a huge migrant labour force and the impact of construction over the years will mean that alcohol and drugs will become more serious problems. It is fanciful to think that greater opportunities for wage employment on a pipeline will stop or reverse the effects of past economic development.

Let me cite what Dr. Wheeler said of the Dene, because this statement applies to all the native peoples of the Mackenzie Valley and the Western Arctic. His views ex plify those of every doctor and nurse spoke to the Inquiry.

> The Dene have great strength as a people. Pa of this strength lies in their extended fami ties which they have been able to maintain close-knit communities. We white peop know the value of these kinds of ties, as w are now feeling the loss of them in terms the depersonalization and dehumanization southern urban living. How long will t Dene family survive the loss of its young me and the degradation of its women?
>
> We want to hear what plans the territori and federal governments have or are develo ing for these kinds of social problems. H perhaps the answer lies not with increasi government bureaucracy, with all its contro The solution to these problems, and with it th survival of the Dene, lies within the Den They must be allowed to develop these solu tions within a time frame of their ow choosing before we get stampeded into social disaster from which the North ma never recover. The people need time an freedom in order to survive. [C3402]

The Limits to Planning

I have been asked to predict the impact of t pipeline and energy corridor and to reco mend terms and conditions that mig mitigate their impact. Some impacts a easier to predict than others: there is a v difference between the effects that are like to occur in the first year and those that w be important in ten years. And there a difficulties in prediction that involve mo than time or scale, for even short-term caus chains can be intricately connected. Mor over, some consequences of the pipeline w be controllable, but others will not. Just there are limits to predicting, so also a there limits to planning.

Arctic Red River. (M. Jackson)

Café and bar in Fort Providence. (Native Press)

Elizabeth Mackenzie, activist against liquor abuse, being sworn in as a Justice of the Peace, Rae-Edzo. (Native Press)

People visiting outside the Bay, Fort Norman. (N. Cooper)

I can recommend terms and conditions that will to some extent mitigate the social impact of the pipeline and energy corridor, but some of the consequences I have predicted will occur no matter what controls we impose. Other consequences can be predicted only in a vague and general way: we can anticipate their scale, but cannot adequately plan for them. There is a gulf, therefore, between the nature of the predictions and the nature of the terms and conditions I am asked to propose. The one is imprecise and often speculative; the other, if the terms and conditions are to be effective, must be very precise. We must never forget their limitations; it is all too easy to be overconfident of our ability to act as social engineers and to suppose – quite wrongly – that all problems can be foreseen and resolved. The nature of human affairs often defies the planners. In the case of a vast undertaking like the Mackenzie Valley pipeline, overconfidence in our ability to anticipate and to manage social problems would be foolish and dangerous.

I am prepared to accept that the oil and gas industry, the pipeline company, and the contractors will be able to exercise a measure of control over the movement and behaviour of their personnel. I am prepared to accept that government will expand its services and infrastructure in major communities to serve the requirements of pipeline construction in the Mackenzie Valley and of gas plant development in the Delta. Where actual numbers of people can be predicted, planning is possible and orderly procedures and cost-sharing arrangements can be worked out. However, there are obvious limitations to planning of this sort. The cost of the project or the number of workers required may be so far in excess of the figures we have now that it will seem as though we had planned one project but had built another. There is the question of how many people will be involved in secondary employment: their number will be large, no matter what measures are taken to discourage them, and the costs associated with their presence in the North will be very high.

There are also political limits to planning. The impacts that lead to social costs vary in the degree to which they can be treated. There are matters over which government and industry can exercise some control; there are other matters over which control would not be in keeping with the principles of a democratic society. And there are social impacts over which no control could be exercised even under the most authoritarian regime.

Finally, I am not prepared to accept that, in the case of an enormous project like the pipeline, there can be any real control over how much people will drink and over what the abuse of alcohol will do to their lives. There can be no control over how many families will break up, how many children will become delinquent and have criminal records, how many communities will see their young people drifting towards the larger urban centres, and how many people may be driven from a way of life they know to one they do not understand and in which they have no real place. Such problems are beyond anyone's power to control, but they will generate enormous social costs. Because these costs are, by and large, neither measurable nor assignable, we tend to forget them or to pretend they do not exist. But with construction of a pipeline, they would occur, and the native people of the North would then have to pay the price.