

MACKENZIE VALLEY PIPELINE INQUIRY

COMMISSIONER

Mr. Justice Thomas R. Berger

Suite 600
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Ottawa, Ontario K1P 5H7

The Honourable J. Hugh Faulkner
Minister of Indian Affairs and
Northern Development
House of Commons
Ottawa, Ontario

November 30, 1977

Dear Mr. Faulkner:

This is Volume Two of my report. In Volume One, which was tabled in the House of Commons on May 9 of this year, I recommended that, on environmental grounds, no pipeline be built and no energy corridor be established across the Northern Yukon. I found that construction of a pipeline along the Mackenzie Valley would be feasible from an environmental point of view, but I recommended that it be postponed for ten years to allow for a settlement of native claims. I also expressed the view that, if a pipeline had to be built to deliver Alaskan gas to the Lower 48, the Alaska Highway route was preferable from an environmental point of view. The National Energy Board reached conclusions similar to my own, and since that time, you and your colleagues have reached agreement with the United States on the construction of a pipeline along the Alaska Highway route.

Rejection of the Arctic Gas proposal allows the government to plan now for the preservation of the caribou, whales, wilderness and wildlife of the Western Arctic, and to settle native claims throughout the region. In Volume One, I outlined a number of broad recommendations to deal with these concerns, and I shall elaborate on them in this volume.

In its report, *Reasons for Decision: Northern Pipelines*, handed down on July 4, 1977, the National Energy Board indicated that, depending upon the extent of discoveries in the Mackenzie Delta and the Beaufort Sea, a pipeline should be constructed either along the Dempster Highway, to connect with the pipeline that is to be built along the Alaska Highway route, or along the Mackenzie Valley. If the reserves of natural gas in the Beaufort Sea turn out to be large, then in due course – at a time when they are needed, and following a settlement of native claims – they can be delivered by means of a pipeline along the Mackenzie Valley. In any event, there will be continuing exploration in the Delta region, and a pipeline along either

the Dempster Route or the Mackenzie Valley Route will affect that area – an area about which I heard a great deal of evidence. Some of the recommendations in this volume will have a bearing on whatever pipeline route is finally selected.

Volume One and Volume Two

In Volume Two, as in Volume One, 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 mid-continent. However, I have also proceeded on the assumption that we intend to protect and to preserve the northern environment, and that, above all, we intend to honour the legitimate claims of the native people. All of these assumptions are embedded in the Statement of the Government of Canada on Northern Development in the 70's, presented by the Honourable Jean Chrétien to the Standing Committee on Indian Affairs and Northern Development on March 28, 1972.

The social, cultural and political tensions in the North are closely linked to industrial advance. The intrusion of large-scale frontier development among native people has aggravated the cluster of pathologies that have become so familiar in the North: welfare, crime, violence, disease, alcoholism, and social and personal disarray. This is a hard fact to accept, requiring as it does a reconsideration of conventional wisdom, but it is supported by the evidence before the Inquiry. The evidence led irresistibly to the conclusion that, if a pipeline were built now in the Mackenzie Valley, its economic benefits would be limited, its social impact devastating, and it would frustrate the goals of native claims.

Because it perceived the problems of northern native peoples as arising out of individual poverty, the federal government has, during the past two decades, initiated many programs to increase their opportunities for wage employment and income. The idea was essentially a simple one: create enough job opportunities in the North (by developing mines, for example), give the people some training (as heavy equipment operators, for example), and the problems will eventually go away. But they are still there, because they are not simply problems of poverty, but of a people trying desperately to preserve their cultural identity. Thus the growth of government and bureaucracy and the coming of industry constituted a threat to their desire to affirm their identity as a people, and to gain control over their own lives and their own future – something they believe is essential to their well-being.

The condition of native people in the North today is, in many respects, the product of white domination of native people and native society. That this domination has often been benevolent does not at all diminish its devastating consequences for the patterns of collective and cooperative self-reliance that are the tradition of northern native people. Despite the benefits that the dominant white society has brought to native people – benefits that they readily acknowledge – this dominance, and the resulting weakness of their own society, have left native people, as a group, and as individuals, especially vulnerable to the impact of large-scale industrial development. In Volume One, I attempted to show how this historically established relationship between white and native society could not be separated from questions of impact, of native identity, and of the long-term prospects for economic and social well-being.

Rapid and large-scale industrial development is, in any circumstance, a potentially disruptive process; in the context of a northern society that has experienced many years of domination, this disruption contributes to the profoundest of social ills. It then becomes something that cannot be treated with ameliorative measures that may, in other historical or cultural contexts, be more or less effective. Because the various causes of these social ills are inextricably linked, a consideration of industrial development and social, cultural and political progress in the North cannot be separated from a discussion of native claims. It is through a settlement of their claims that native people see the way to social, economic and political advance.

I concluded in Volume One that certain adverse consequences of the construction of a pipeline and the establishment of an energy corridor could not be mitigated, and that it was unrealistic to proceed as if they could. I did say, however, that if the pipeline were postponed, and if steps were taken now to strengthen native society and the native economy through a settlement of native claims, the pipeline might be built in ten years' time, when the benefits of pipeline construction could be enlarged, and the adverse consequences mitigated. This volume deals with the measures that will have to be taken to achieve these ends.

*Social and Economic
Recommendations*

My social and economic recommendations apply to renewable resources, employment, manpower delivery, urban centres, rapid growth, northern business and transportation.

I believe that, in the North, a strong native society and a strengthened renewable resource sector can exist side by side with

large-scale, non-renewable resource development, but only if we change our priorities and strengthen the renewable resource sector before the pipeline is built. Postponement of the pipeline means that many alternate modes of social, economic and political development can be explored in the Mackenzie Valley and Western Arctic – alternatives that would otherwise have been foreclosed. Some of these alternatives can be explored only through the settlement of native claims, and some can be clarified only with more knowledge about the area's renewable resource development potential. I am, therefore, making certain proposals for more accurate measurement of the native economy, and for the development of the renewable resource sector as a whole.

It has been said that the choice for native people is stark: jobs on the pipeline or no jobs at all. This statement is, of course, false because it overlooks the fact that, for native people, the opportunities provided by pipeline construction will be limited. Moreover, it fails to recognize the persistence of the native economy, the possibilities for development of the renewable resource sector, the continuation of oil and gas exploration activity, and the role of the federal and territorial governments as employers. It ignores the fact that many native people have shown that they are not strongly inclined towards the type of employment offered by large-scale industrial projects. It disregards the long-term implications of employment in a volatile boom-and-bust sector, of which pipeline construction is an obvious example. And it overlooks the potential of the renewable resource sector. Jobs – permanent jobs – can be provided in logging and sawmilling, in the management, harvesting and processing of fur, meat and game, in fishing, in recreation, conservation and other related activities. Such ventures, given a fraction of the support extended to the non-renewable resource sector, could offer many opportunities to native people in the North. Ventures like these are also amenable to local or regional control, and would not, therefore, impede the goals of native claims. With such enterprises in place, there would be a diversified spectrum of job opportunities, no undue dependence on pipeline construction when it takes place, and no necessity for the kind of wholesale recruitment of pipeline construction workers from native communities that is presently envisaged.

Nonetheless, all northern residents who want to work on pipeline construction when it is built should have that opportunity. I recommend that pipeline construction be accompanied by preferential hiring on the basis of five years' residence in the North. Such

preference would exist for any northerner seeking a pipeline job, and would help him over whatever obstacles might be presented by requirements for union membership and lack of adequate training. But a manpower delivery system of this kind should not be founded on the notion that pipeline employment is necessarily the preferred choice for northern people.

It is likely that the pipeline, when it is built, will attract large numbers of people to the Mackenzie Valley and the Mackenzie Delta, and cause major shifts of population within the region. The pipeline will have a particularly severe effect on some communities – I call them action communities – especially Inuvik, Tuktoyaktuk, Norman Wells, Fort Simpson, Yellowknife and Hay River. Most of these communities are already experiencing the socially harmful effects of rapid growth of government and industry, and the tensions between native people and white institutions. Because the pipeline will exacerbate these conditions, my proposals with regard to the action communities are ameliorative. My recommendations relate to methods for coping, first of all, with the social impact of the pipeline in the action communities, and secondly, with the physical and financial aspects of such impact. These communities cannot be expected to cope with many of the pressures that pipeline construction will place on them, and they will require impact funding from senior governments.

It has been argued that gas from the North should not bypass northern communities only to service industries and homes thousands of miles away. Yet the evidence presented to this Inquiry suggests that, if gas were made available, few northern communities would experience a cost reduction over presently available energy sources. There are, I believe, more effective, if less direct, methods of ensuring that northern communities benefit from the natural gas reserves of their region. I propose subsidization of northern energy costs, regardless of the fuel that is most efficient in a particular location. In this way, some of the benefits that will be experienced by southerners can be extended to northerners.

I have also considered the effects that a Mackenzie Valley pipeline could have on northern business. Many witnesses expressed concern that the pipeline may cause serious distortions in the territorial economy. The pipeline might generate overinvestment in pipeline-related activities, it might inhibit the ability of local firms to supply goods and services needed by northern communities, and it might generally interfere with orderly and sustained economic growth. But northern businessmen will quite properly want to use the

pipeline as an opportunity for growth and expansion. Their ability to do so is limited in comparison with large firms domiciled in the metropolitan centres of the provinces. I am, therefore, recommending measures that relate to bidding on contracts, bonding, and the availability of capital. These measures are designed to place northern firms in a competitive position so that they can secure a reasonable volume of pipeline-related work and prosper in the long run. Native enterprises, whether proprietorships, cooperatives or corporations, should enjoy the same preferences as other northern firms.

If native cooperatives and corporations are set up as a result of a settlement of claims, then I anticipate that they will assume a place on the northern business scene, and that they could play a part in the economic activity generated by pipeline construction. I expect, however, that once in place, native cooperatives and corporations will undertake ventures in the renewable resource sector rather than in non-renewable resource enterprises, such as mining, and the oil and gas industry simply because they are on too large a scale. Native people should have the opportunity to participate in the management of enterprises that can be undertaken locally and regionally – economic ventures related to traditional values and experience, and based on skills that are already acquired or that can be developed and used within the community. The development of a strong renewable resource economy would reduce the vulnerability of the northern economy to the kind of boom-and-bust cycle that has characterized it in the past.

To a great extent, the social and economic recommendations in this volume are anticipatory. Postponement of the Mackenzie Valley pipeline means that the terms and conditions being formulated now will have to be enforced in an institutional and political context that cannot very easily be foreseen. I have sought to be specific, but in some areas, it would be implausible, if not impossible, to be precise. This is less of a difficulty in the case of environmental matters, still less in the case of engineering matters, and you will find that my recommendations in these areas are quite specific in many instances.

*Environmental
Recommendations*

In Volume One, I made recommendations designed to protect caribou, whales, wildlife and wilderness. These recommendations were founded on the need to preserve critical habitat in perpetuity. Thus, my proposal that a wilderness park be created in the Northern Yukon is intended to protect this unique wilderness region, including vital

habitat for wildlife and migratory birds on the Arctic Coastal Plain and Old Crow Flats, and particularly the critically important calving and summer range of the Porcupine caribou herd. My recommendation that no pipeline be built and no energy corridor be established across the mouth of the Mackenzie Delta, together with my proposals to establish a white whale sanctuary in west Mackenzie Bay and bird sanctuaries in the outer Delta, are designed to protect the unique land and water ecosystems that characterize the Delta and the margins of the Beaufort Sea. In addition, the bird sanctuaries that I have proposed along the Mackenzie Valley are intended to protect major populations of migrating and nesting birds at critical localities. In this volume, as in Volume One, I focus my concern on critical habitat and critical life stages of mammals, birds and fish and particularly on the limited tracts of land and water that are vital to the survival of whole populations of certain species at certain times of the year.

In view of the agreement between Canada and the United States to build a pipeline along the Alaska Highway route, it is appropriate to repeat one of the recommendations that I made in Volume One. I urged that Canada should undertake to establish a wilderness park in the Northern Yukon, and the United States should accord wilderness status to its Arctic National Wildlife Range, thus creating a unique international wilderness park: nine million acres on each side of the international boundary. I suggested that it would be an important symbol of the dedication of our two countries to environmental as well as to industrial goals.

Since the release of Volume One, the Carter Administration has recommended in proposed amendments to the Alaska National Interest Lands Conservation Act, that 43 million acres in Alaska, including the lands comprising the Arctic National Wildlife Range in north-eastern Alaska, be set aside as wilderness. Thus, the United States has taken an essential step toward fulfilling the conditions that are necessary for the establishment of an international wilderness park. It remains now for Canada to include in our National Parks Act a provision for the establishment of wilderness areas, and then to designate the Yukon north of the Porcupine River as wilderness.

In Volume One, I drew attention to the impacts that the Dempster Highway will have on the migration patterns and winter range of the Porcupine caribou herd. Hunting will also increase because of the access the highway will offer. These concerns have been intensified by recent events on the Dempster Highway, and by the possibility that Mackenzie Delta gas will be transported by a pipeline along the route

of the highway. The impact of such a pipeline has still to be assessed in detail.

The decision to build the Dempster Highway was made without adequate environmental assessment. However, the highway is now virtually complete, so we shall have to devise measures to deal with it. In particular, protection of the Porcupine caribou herd's winter range must be a principal concern. If we can devise measures to cope with the Dempster Highway, we may, in due course, be able to cope with many of the impacts of a pipeline along the same route. I recommend, therefore, that a restricted hunting zone extending two miles on either side of the highway, and on either side of all connecting access roads and seismic lines, be established within the winter range of the herd. Provision should be made, however, for the continuation of traditional use by native people. I also recommend that vehicle traffic and construction activity along the highway be controlled during caribou migration in the vicinity.

Turning to the Mackenzie Valley itself, I concluded in Volume One that the construction of a pipeline along the Mackenzie Valley was feasible from an environmental point of view. Consequently, in this volume, I have included a lengthy series of recommendations designed to protect the environmental resources of the Mackenzie Valley and the Mackenzie Delta. These environmental proposals are intended to serve as guidelines for the government in its review and approval of project designs and plans, and for regulation of the project in general. As these recommendations tend to be quite specific, I can only highlight a few here.

A pipeline along the Mackenzie Valley will result in disturbance to wildlife populations, because it will increase access. I recommend, therefore, that the same conditions I have urged for the Dempster Highway be imposed here: the establishment of a two-mile restricted hunting zone along each side of the pipeline right-of-way, along all temporary or permanent access routes, and around all pipeline facilities, with the qualification that traditional use by native people be exempted from this restriction.

The birds of prey – including the peregrine falcon and gyrfalcon – that nest in the vicinity of proposed pipeline routes constitute a significant portion of the surviving North American population of these species. During their occupation of nest sites in spring and summer, these birds are extremely sensitive to disturbance by machinery, aircraft or human activity; even repeated low-intensity noise can lead to desertion of nests and the loss of young. It is

important to avoid disturbance in the vicinity of occupied nests, particularly those of the rare and endangered peregrine falcon. I therefore recommend that a Raptor Protection Zone be established around any nest site that may be adversely affected by the pipeline project, and that construction activities within these zones be controlled by permit.

If large volumes of gas are discovered in the Beaufort Sea, it is likely that a pipeline will be built along the Mackenzie Valley. Thus, it is only common sense to urge that lands for conservation purposes be withdrawn now, well before new pipeline proposals are made. I therefore recommend that the Government of Canada develop a northern conservation strategy – a strategy that recognizes the claims of northern native peoples, the constitutional situation in the North, and the special characteristics of the northern environment. Such a strategy would entail not only a program to set aside wilderness areas but also park lands, wildlife areas, wild rivers, ecological reserves, recreation areas and archaeological and historic sites.

I have already discussed the need for wilderness protection for the Northern Yukon and the Porcupine caribou herd. Wilderness protection should also be provided for the white whale sanctuary I proposed in Volume One for west Mackenzie Bay. These proposals are designed to protect the caribou and the whales in perpetuity.

What I am urging now, in addition, is that throughout the region, conservation lands should be identified and set aside. This, of course, should be done only after the fullest consultation with northern government and northern peoples.

Conservation lands can be set aside under Section 19 of the Territorial Lands Act. They should be set aside only on the basis that native hunting, trapping and fishing rights within these areas are guaranteed, and they would be subject to a settlement of native claims. It should be borne in mind that one of the objectives of native claims is the preservation of northern wildlife on which native people have long depended. To this extent, their goals coincide with the goals of setting aside conservation lands. In fact, the people of Old Crow have expressed their support for my proposal for a wilderness park in the Northern Yukon. No final disposition of any conservation lands should be made until native claims are settled.

I want to emphasize that a northern conservation strategy offers an opportunity to involve native people in the whole conservation lands program in the North: in fish and game management, in compiling inventories of environmental and recreational resources, and in

managing wilderness parks and other conservation areas. This would offer native people employment, training in skills that are relevant to the preservation of their northern homeland, and a livelihood that would allow them to remain in their own communities and regions. There is no reason why the objective should not be for native people to manage these conservation lands.

Project Recommendations

The first issue to be addressed in the discussion of the project is location of the pipeline and its auxiliary facilities. Major routing issues were dealt with in Volume One, but there is still a need to refine the location of the right-of-way, ancillary facilities and access routes along the Mackenzie Valley. To reduce disturbance of land and waterbodies, to minimize impact in tributary valleys, and to protect wildlife and fish populations, I recommend that measures be taken to ensure the refinement of location of the pipeline right-of-way and its ancillary facilities. These measures will take into account present patterns of development, future plans, and the views of the communities along the route. Routing must not be decided by the Company simply in terms of engineering and cost. Rather, tentative locations and routes should be progressively refined by a process of successive Company proposals and regulatory responses that take all of these factors into account.

The existence of permafrost along the pipeline route necessitates departures from the engineering design and construction procedures commonly applied by the pipeline industry. I have discussed some of these in Volume One. In permafrost terrain, construction procedures for clearing, grading, drainage and erosion control, revegetation, and use of snow roads and snow working surfaces must not only meet the needs of the pipeline project, but also avoid chain-reaction impacts on land, on the environment and on people. Design measures and construction procedures are needed to control adverse effects of thaw settlement, frost heave, liquefaction of thawing soil and slope instability. In view of the uncertainties that still surround these matters – despite the vast amount of evidence brought before this Inquiry and the National Energy Board – I recommend that a geotechnical review board of independent experts be established to ensure the successful resolution of all outstanding problems.

If a pipeline is built in the Mackenzie Valley, snow roads and snow working surfaces will be needed in place of the graded, temporary winter roads normally used by the industry. In view of the importance of snow roads in reducing damage to permafrost terrain,

and in view of the complexity of permafrost distribution in the southern part of the Mackenzie Valley, I recommend that snow roads be adopted for all pipeline construction North of 60, except where a different mode, such as graded winter road construction, is specifically approved.

The management of fuels and hazardous substances during pipeline construction and operation presents two problems: contingency planning and spill prevention. At present, government is concentrating on the contingency aspect, that is, spill clean-up. On the other hand, spill prevention – undoubtedly the best way to ensure protection of the environment – is not receiving enough attention. I therefore include detailed proposals aimed at preventing spills of fuels and hazardous substances during their transportation, transfer and storage.

Project recommendations should be both practical and enforceable. As an illustration, take schemes for the management of liquid and solid wastes – schemes designed to protect both public health and the environment. Because the public health aspects are already dealt with as a matter of routine, my recommendations focus on environmental issues and, in particular, on sewage effluent guidelines. For construction camps, I recommend standards less stringent than those set out in the Department of the Environment's current Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments and less stringent than those recommended for the pipeline by the National Energy Board. In my view, those more stringent standards are unnecessarily rigid for many of the pipeline's temporary facilities, and strict adherence to them is not practicable.

The pipeline project will require a considerable number of low altitude aircraft flights superimposed upon existing aircraft traffic in the region. Because these flights could have adverse impacts on populations of mammals and birds, I am making proposals for flight corridors, flight ceilings and regulation of flight schedules. In particular, I recommend the establishment of a Flight Control Group that would vet aircraft flight plans for the pipeline project and related activities. This group would deal with matters of routing, altitudes and scheduling in the context of current information on bird and mammal sensitivities.

for the company building the pipeline should be answerable to one authority, not a multitude of them.

The changes that occur in the Northwest Territories during the next ten years may be as great as those in the ten years just past. The certainty of change makes it difficult at this time to offer specific recommendations on the machinery of regulation that should be established when a pipeline is built. But some principles are, I believe, of paramount importance, and their importance will likely persist, no matter what changes occur in the North and its institutions over the next decade.

The Agency should be in business from the very beginning. By this, I do not mean that it should be in business at the start of construction, or even preconstruction, activity. Rather, the Agency should be operational just as soon as a permit for a right-of-way is issued.

In addition, the most careful definition of the Agency's authority will be necessary. I recommend that its mandate be confined to the enforcement of all terms and conditions, social and economic as well as engineering and environmental, on the pipeline right-of-way itself and on associated facilities, but that the powers and responsibilities of ordinary government departments and agencies should prevail elsewhere. If the Agency's mandate is not carefully defined, it could infringe unduly on the jurisdiction of northern governmental institutions.

The problems resulting from social, economic and environmental impact require measures that range all the way from the provision of services to in-migrants to the monitoring of caribou populations. These problems are so wide-ranging in their impact, and affect such a variety of interests, that they should be dealt with by appropriate departments of government at the federal, territorial, regional and local levels. To turn the regulation of such matters over to a monitoring and enforcement Agency would lead to the creation of a parallel government structure that would exercise perhaps greater authority than existing institutions; it would be subversive of any other structure of northern government.

Clearly, ordinary institutions of government, as well as other interests with legitimate concerns about pipeline impact, must be able to participate in, and have access to, the work of the Agency. For instance, those responsible for fish and game management should have access to the Agency at all levels, as should those branches of government that are responsible for the social conditions in the towns and settlements within the zone of impact. At the same time, public

interest groups, such as those concerned with environmental protection, should also have access to the Agency.

Furthermore, the Agency should be responsive to the concerns of native organizations. This need may well have diminished by the time the pipeline is built, for native claims will have been settled by then, and a new structure of local and regional institutions will be in place. Nevertheless, native organizations at that time may assert a special interest in the impact of the pipeline – an interest that extends beyond the scope and capacity of northern institutions as they may exist a decade from now, and that calls for a response from native organizations outside the structure of northern government and northern institutions. In some respects, this will depend on the extent to which native people a decade from now consider northern government and northern institutions to be truly reflective of their interests.

I also recommend the establishment of an Impact Assessment Group. This group would consist of representatives from local, regional and territorial governments, and from public interest groups, and, of course, native organizations. It would advise the Agency on matters of local impact, but it would also exercise an ombudsman function in its relations with the regulatory Agency. The group would have the right to question officials and employees of the Agency, and review the Agency's documents. Although they would not in any sense be an appellate tribunal, since they would have no power to reverse the Agency's actions, they would have the responsibility to make their findings public. This assessment group would deal with the overall impact of the pipeline and the Agency's administration, as well as with specific problems of impact and specific complaints about the Agency's administration.

Conclusion

In Volume Two, my objective has been to distill the available evidence on a wide range of social, economic and environmental subjects. In this way, Volume Two is designed to serve as a convenient point of departure for those persons in both the public and private sectors who, in the years to come, will be engaged in planning for the Mackenzie Valley and the Western Arctic. The responsibility for such planning and its implementation will rest with the Government of Canada, and with the local, regional and territorial institutions that may evolve in the Northwest Territories as a result of the government's statement of August 3, 1977 on *Political Development in the Northwest Territories* and of a settlement of native claims.

Throughout both Volume One and Volume Two, I have sought to avoid rigid distinctions between the issues that are before us. At many points, social, economic and environmental matters overlap, and the question of native claims impinges again and again on virtually every aspect of northern life. At the heart of my recommendations is the need to settle native claims. This need bears directly on all of the social, economic and environmental subjects discussed in this report, and indirectly, but no less compellingly, on all matters related to the North; it requires a recognition of the special and collective nature of the native interest in the North.

Yours truly,

A handwritten signature in black ink that reads "Thomas R. Berger". The signature is written in a cursive, flowing style with a large, prominent 'T' and 'B'.