

THE ADMINISTRATION OF MINERAL
EXPLORATION IN THE YUKON AND
NORTHWEST TERRITORIES

CENTRE FOR RESOURCE STUDIES
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EXECUTIVE SUMMARY

The purpose of this study has been to identify ways to streamline the administrative procedures and regulations with respect to mineral exploration in the Yukon and Northwest Territories. The Department of Indian and Northern Affairs (DINA) requested the Centre for Resource Studies to point out particular procedures and regulations which are causing concern in the northern mineral industry and make recommendations on ways to improve the situation.

Consultations were held with chambers of mines, company officials, and The Mining Association of Canada, as well as with officers of DINA and the department of Energy, Mines and Resources (EMR) in Ottawa, Whitehorse and Yellowknife. The most frequently mentioned administrative problems have arisen in connection with the Territorial Land Use Regulations. In addition, the industry has concerns related to government policy; these concerns are mentioned in the study but are not analysed in detail.

A number of specific problems have been identified, relating respectively to the industry/government relationship, to conditions within the department and to conditions within industry.

Between government and industry:

- i) The application requirements are not understood.
- ii) The application process is unnecessarily complex.
- iii) Permit conditions are not understood or accepted.
- iv) Permit conditions are not always warranted.
- v) There are apparently unnecessary delays in granting permits.
- vi) Working relationships between industry representatives and the inspection staff are poor.
- vii) End-of-season requirements are thought to be excessive.
- viii) The Department's treatment of unexpected circumstances is not clear.
- ix) The relationship between the industry and parts of the department is generally adversarial rather than cooperative.

Within the department:

- i) There are organizational problems.
- ii) There is confusion about the purpose and administration of the regulations.
- iii) Consultation and coordination with other government agencies appears to be lacking.

iv) Internal monitoring and review could be improved.

Within industry:

- i) There is pronounced variability in company approach.
- ii) Documentation of complaints is inadequate.
- iii) An efficient inspection service depends partly on industry cooperation.
- iv) Industry's community relations could be improved.

The recommendations of the study follow. It will be noted that one recommendation may address several of the concerns identified earlier.

Recommendations

- i) *The Department of Indian and Northern Affairs should undertake a major review of all aspects of administration affecting mineral exploration in the northern territories.*

The review should be overseen by a steering committee consisting of: the two regional directors; the Director-General, Resources and Economic Planning; the Director-General, Northern Environment; the Director-General, Northern Policy and Programming; and chaired by the Assistant Deputy Minister, Northern Affairs. The review should deal first with government/industry relations throughout the process of administering applications, attaching conditions, and making site inspections. In this stage of the review, representatives of industry should be full partners in it. Secondly, the review should examine the organization of the department with special reference to: functional reporting, status of mining people in the organization, and the training and selection of field personnel. The third area that should be included in the review is that of the nature of conditions attached to permits. Here, a joint industry/DINA working group should be established to examine the standard conditions and develop rationales and criteria of applicability. The existing book of standard conditions should be circulated to interested parties for comment and should form the basis of the working groups' review.

- ii) *DINA should establish an automatic system for the monitoring and annual review of the regulatory process.*

Such a system would produce regular statistics on the performance of the department, would induce more uniformity in the administration of regulations, and would solicit feedback from industry.

- iii) *The process of community consultation should be thoroughly reviewed.*

The effectiveness of the consultation on class A permits is questionable because of the infrequent recorded response from communities. It is not

clear whether the process is sufficiently defined. That is, are the communities really being consulted effectively? It is possible that the methods being used are quite foreign to native communication patterns and that the response is simply not being detected. On the other hand, the low response level may indicate a lack of concern on the part of the communities. If so, the question must be asked whether the benefits are commensurate with the delays in issuing permits. An alternate procedure would be simply to inform the communities of proposed exploration activities. If this were coupled with voluntary consultation by industry on a more extensive basis, it would appear to fill the perceived needs of the community and would eliminate permit delays from this cause.

- iv) *There should be increased flexibility in the regulatory requirements and the existing policy for dealing with unexpected circumstances should be communicated.*

All regulations requiring it should be amended immediately to give relief from work requirements, and other requirements, when unforeseen circumstances arise out of actions by the department or other agents of the Crown. Secondly, relief should be given in cases of broader circumstances beyond the control of the operator; not simply for emergencies which threaten life, property or the natural environment. Thirdly, as an exploration program proceeds, much more will be learned by the operator and the site inspectors about the local conditions. In these cases, there is good reason for permitting relief from in-applicable conditions and from unnecessary end-of-season requirements. The revised conditions could be negotiated with the inspector on the spot if the situation is perfectly clear; otherwise an application for such relief could be handled expeditiously by the regional offices in a manner similar to the existing B permit requirements. The existing departmental policy of providing appropriate flexibility by means of ministerial order or order-in-council should be communicated more effectively.

- v) *Administrative procedures and guidelines should be clarified and communicated.*

For the benefit of workers within the department, as well as industry officials, a uniform set of guidelines should be prepared for every stage in the application/inspection/administration process. Ideally these should be developed at the point of maximum knowledge. That is, it may be necessary to develop a collection of standard conditions in Ottawa: on the other hand, the criteria for interpretation and inspection of sites should be developed in the regions. In any case, expert input should be sought from industry as well as from sources within government. As indicated, we feel that the guidelines, criteria, rationale, and procedures should be as transparent as possible. That is, they should be communicated to the industry. This point is developed more fully in the recommendation which follows.

vi) *Communications with industry must be made more effective.*

Our study was greeted with some incredulity by industry officials because they felt they had indicated their concerns on many previous occasions, with no tangible results. Annual meetings have been held to allow industry representatives to make recommendations to senior government officials. The latter are reported to express satisfaction with the exchanges, to express the view that 'constructive suggestions' have been made by industry, and that these suggestions will be given 'careful consideration'. The results, according to chambers of mines, are less satisfactory. They report that officials return to Ottawa and nothing more is heard of the recommendations. No modifications have been made, even though industry officials claim they were led to expect some. We are not able to comment on the justice of this perception. No doubt some modifications were deemed to be impossible because of environmental or other considerations. What is clear, however, is that the reasons for subsequent action, or lack of it, were not communicated to the industry. We therefore recommend strongly that industry representatives be given full information about all aspects of the regulatory process. We have mentioned above the release of guidelines, procedures, criteria and rationales for regulatory action. We believe that chambers of mines could occupy a pivotal role in the communications. We suggest that copies of any guidelines, procedures, etc. should automatically be filed with the chambers and also supplied to companies on request. Assistance is needed particularly by smaller companies. As well as streamlining the regulations, there is no reason why regional officials should not, with the assistance of the chambers of mines, provide communication and training sessions for personnel of small companies to help them become familiar with the regulatory requirements.

We believe these recommendations will substantially streamline the actual administration of the exploration regulations in the Northwest Territories and the Yukon. But, if implemented, they can also have an important symbolic effect. Because of the policy considerations which have been referred to briefly throughout the study, industry officials may be forgiven for deducing that the mining industry is not welcome in the north. We believe this is a distorted impression, and that, within the constraints imposed by the current politics of the north, the mining industry has a significant contribution to make. We believe that many departmental officials share this view. By making the regulatory process as painless as possible, while still fulfilling the necessary functions of protecting the environment and responding to native needs, DINA can help to reassure industry about its future.

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1. INTRODUCTION

Mineral exploration has been taking place in the Yukon and Northwest Territories since the latter part of the 19th century. For the most part, this activity has been undertaken with a minimum of government supervision. Traditional mining legislation governing exploration in the north was primarily intended to regulate the staking and registration of claims. Any able-bodied person could try his hand at prospecting.

More recently, mining and other exploration activities in the north have become the subject of broader regulatory considerations. Mining involves the extraction of a nonrenewable resource. While there is thought to be considerable potential for base metal and uranium extraction in the territories, the impact of such activities on the environment and on the native people has only recently emerged as a subject of debate. In this new and sometimes uncertain atmosphere, the federal government has begun to develop more sophisticated activities in the north. These government initiatives are exemplified by the passage of the first Territorial Land Use Regulations in November 1971. At the present time, the panoply of regulations and orders (not all of them new) affecting exploration activity north of 60 includes:

- . Archaeological Sites Regulations - Northwest Territories
- . Arctic Shipping Pollution Prevention Regulations
- . Arctic Waters Pollution Prevention Regulations
- . Beluga Protection Regulations
- . Canada Mining Regulations
- . Canada Oil and Gas Land Regulations
- . Canada Oil and Gas Drilling and Production Regulations
- . Game - Becoming Extinct - Northwest Territories
- . Migratory Birds Regulations
- . Northern Inland Waters Act and Regulations
- . Reindeer Regulations - Northwest Territories
- . Shipping Safety Control Zones Order
- . Territorial Coal Regulations
- . Territorial Land Regulations
- . Territorial Land Use Regulations
- . Territorial Land Titles Office Regulations
- . Territorial Quarrying Regulations
- . Territorial Timber Regulations
- . Territorial Dredging Regulations
- . Yukon Placer Mining Act
- . An Act Respecting Quartz Mining in the Yukon Territory.

Extensive as this list is, it is not necessarily exhaustive. It does include, however, the specific regulations which are causing concern in the northern mineral industry: the Northern Inland Waters Regulations, the Territorial Land Use Regulations, the Canada Mining Regulations, the Yukon Placer Mining Act, and the Act Respecting Quartz Mining in the Yukon Territory. Most frequently cited as troublesome among these are the Territorial Land Use Regulations.

The Territorial Land Use Regulations came into force in 1971. The purpose of these regulations, which are administered by the federal Department of Indian and Northern Affairs (DINA), is to ensure that operations carried out on federal land in the Yukon and Northwest Territories (NWT) have a minimal impact on the environment. In the NWT, the Territorial Land Use Regulations supersede the Canada Mining Act and Regulations, which comprise the basic legislation governing mining in that territory. Their application in the Yukon Territory is somewhat more limited. They are not in force where work is carried out on mineral or placer claims in the Yukon Territory under the terms of the Yukon Quartz Mining Act or Yukon Placer Mining Act. However, both these acts are currently under revision and it is anticipated that the Territorial Land Use Regulations will have broader application in the Yukon once those revisions are complete.

Until November 1975, the regulations did not apply to the Canadian shield (Keewatin) or to Baffin Island. Therefore mineral exploration, even in the NWT, was largely unaffected during the first four years that the Land Use Regulations were in force. In 1975, the regulations were amended to extend their coverage to all of the NWT. Effective March 3, 1977, significant changes were made in the land use regulations. The main features of this most recent revision include:

- i) the establishment of a system of A level and B level land use permits. Class B permits are intended to be issued quickly and apply to relatively small scale activity, for example, the establishment of a campsite for the expenditure of between 100 and 400 man days of exploration effort. Class A permits were intended to apply to larger scale operations. The processing period for 'A' level Land Use Permit applications was fixed at forty-two days to allow for environmental assessments and, if necessary, community consultation. This represented an extension of the processing period by twelve days over the previous system. 'A' permits may be issued in ten days where community consultation is not required and where interdepartmental assessment can be completed in that time.
- ii) provision for the raising of a B permit application to the A level in cases where it was felt environmental concern merited additional time for assessment.

The revised regulations were first applied to the summer 1977 field season. The first year of experience with the revised Territorial Land Use Regulations was not an entirely happy one from the perspective of the mining industry and DINA. At a meeting with the Minister of Indian and Northern Affairs in Yellowknife in October 1977, the Northwest Territories Chamber of Mines expressed its concern about the administration of the revised Territorial Land Use Regulations. A follow-up meeting was held in November 1977 between Chamber members and officers of the Department of Indian and Northern Affairs to clarify some of the problems being encountered. The Yukon Chamber of Mines has also expressed concern on various occasions to the minister about the nature of the Land Use Regulations and their administration. For its part, the Department has taken note of industry comments and introduced some internal changes in the processing of permit applications with a view to streamlining its processing procedure for the 1978 exploration season.

As a further response to the difficulties seen both by the industry and the Department, DINA has commissioned the Centre for Resource Studies to undertake this study of exploration permits. Its purpose is to identify and comment on problems associated with the granting of exploration permits in the Yukon and Northwest Territories. The major objective of this report is to suggest ways to streamline the administrative procedures and regulations in this area. The main focus of attention is on the administration of Land Use Permits under the Territorial Land Use Regulations. Comments will also be made on the granting of water licences and authorizations and on certain Air Transport Regulations administered by the Department of Indian and Northern Affairs.

At the outset, readers should be aware of certain limitations of the study and of this report. It is perhaps most important to note that the terms of reference did not include a mandate to analyze policy with respect to exploration or northern development in general. However, provision has been made for the enumeration of policy questions which may have come to light in the course of the study. Some policy questions have emerged and these are discussed in chapter 6 of this report.

The second caveat is that this study was not intended to be a fullscale review of legislation. Its objective is to enumerate and attempt to sort out some of the difficulties facing the mining industry and DINA in the administration of exploration permits. Accordingly, environmental, native groups, and other interested parties who would likely be consulted in the course of a more general review have not been canvassed. Instead, emphasis was placed on attempting to gain a balanced assessment of industry - government problems with respect to exploration permits by consulting with both government and industry representatives.

The information used in this study came from a variety of sources. Interviews were held with representatives of mining companies located both in the territories and at head offices. In addition, chambers of mines and The Mining Association of Canada were consulted. Twelve interviews were held with federal government personnel from the Department of Indian and Northern Affairs and Energy, Mines and Resources located in Ottawa. Field personnel in the Yukon and NWT regional offices of DINA were also interviewed. A variety of statistical information on the volume of permit applications and processing time was obtained from DINA. Copies of sample permits and inspection forms, relevant legislation and regulations, and brochures attempting to explain the exploration permit process to the public were also obtained and reviewed. For its part, the mining industry supplied case study material relevant to problems in the application and inspection stages in the process. It was felt that the collection of data from both government and industry would contribute to the achievement of a balanced approach in this report.

2. MINING IN THE NORTHERN TERRITORIES: AN OVERVIEW

Historical Background

Since the voyages of Martin Frobisher, mining in Canada's far north has had a history of stop-and-go development. The Klondike gold rush produced intense but short-lived activity in the Yukon. Its immediate legacy was a romantic but nearly-abandoned Dawson City and several large mechanized placer operations working the sands in several rivers. These in turn declined but did not disappear. In addition to some small, seasonal family gold-mining endeavors, there are a few industrial placer operations seeking gold and tungsten.

Between the wars quartz gold mining was of growing importance, leading to the establishment of a permanent settlement at Yellowknife. Two gold producers continue in operation there at present. The search for radium near Great Bear Lake resulted eventually in the production of uranium for military purposes. The private producer, Eldorado Mining and Refining Ltd., was taken over for reasons of national security by the federal government in 1944. Uranium production ceased at Port Radium in 1960. Near Port Radium, however, two small silver mines continue to operate.

All these early developments share an important characteristic: the product is of high value per unit of weight. These mines could therefore operate even before the construction of extensive ground transportation facilities, often shipping their products by air. In contrast, substantial developments in base metals, which have become the territories' major economic output, had to await the post-war expansion of roads and railways in the north. Indeed, in this period, the development of northern roads and railways has been intimately interrelated with the development of mines.¹

At present, the territories supply substantial quantities of base-metal concentrates (those containing lead, zinc, copper, and associated precious metals) from established mines and mills located at Elsa, Faro, and Whitehorse in the Yukon Territory and at Pine Point in the Northwest Territories. In 1976, for example, these mines produced over 20 percent of total Canadian zinc production and nearly 40 percent of the lead.² Canada's only tungsten producer is located at Tungsten, NWT.

Canada's newest northern mine is on Baffin Island. The Nanisivik zinc-lead mine, in which the Canadian government holds 18 percent ownership, ships its concentrates by water, mainly to European smelters. There are two distinctive features about this development. The first is an unusually high degree of government/industry cooperation (the federal government provided transportation and infrastructure facilities, thereby earning an equity share). Secondly, an effort has been made to involve the indigenous population. The local Inuit community was consulted in the

1. See Wallace (1977), pp. 106-125.

2. Department of Energy, Mines and Resources (1978).

planning, and Inuit employment is encouraged, apparently successfully, at the minesite.

Other major mineral deposits are known, awaiting development until governmental, economic, or transportation questions are resolved. For example, one of Canada's richest zinc deposits is located at Arvik, on Little Cornwallis Island. Its development apparently depends in part on market conditions and in part on the outcome of negotiations, between the developer and the Department of Indian and Northern Affairs, which have been in progress for at least three years.

Exploration Interest

Even though relatively few mines have been opened in the northern territories in recent years, exploration has been vigorous for several reasons.

Stimulated largely by the major oil find in Alaska in the 1960s, exploration for petroleum and natural gas in the frontier regions of Canada expanded very rapidly. In the early 1970s significant finds of gas were located in the Mackenzie Delta, and later drilling was concentrated in the Beaufort Sea and the arctic islands. The increased petroleum activity over this period of time is significant for the present study as we shall show later.

In the case of hard minerals, exploration activity reached a peak in 1968. After declining sharply, it got a boost in the 1973-75 period. The increase was due both to favourable prices for base metals (in the 1973-74 period), and to radical policy changes, including greatly increased taxation of mines, in several provinces. The immediate result was to displace exploration activity from the affected provinces to the Yukon and Northwest Territories. Mining company officials perceived the territories to be a favourable geological environment and to have a stable system of regulation and taxation. Furthermore, there was only one government level to deal with. Such conflicts as those which had arisen between federal and provincial governments could be avoided by exploring in the territories. Since then, the relative attractiveness of the territories has declined. This is due in part to a more stringent regulatory environment in the territories, and in part to a relaxation of provincial impediments. Nevertheless, exploration activity has remained at a high level.

The reason it has done so is because uranium has become very attractive. Prices have increased virtually five-fold and the demand is expected to continue for some years. Favourable geological formations exist in the Northwest Territories, and major finds have been reported in the Baker Lake area.

Organization of the Canadian Mining Industry

The Canadian Mines Handbook for 1978-79 lists the names of over 3,000 mining companies in Canada. Of these, the majority are inactive at present. Active companies range in size from very large to very small.

At one extreme there are a handful of large corporate groups which operate smelters, refineries, and perhaps several mines in one or more provinces and territories. These large, 'integrated' companies represent the names which are familiar to all: Noranda, Cominco, Hudson Bay Mining and Smelting, Inco, etc. The production of mineral products is generally concentrated in relatively few of these larger firms. For example, in 1972 three corporate groups accounted for 90 percent of the lead produced in Canada while 5 corporate groups accounted for 89 percent of the zinc.³

In the intermediate range there is a larger number of medium-sized firms which operate one or more mines and mills. These producers either ship their concentrate to Canadian smelters and refineries operated by the larger integrated firms or export the concentrate to overseas smelters.

At the lower end of the size scale, there is a vast number of small firms which exist for the purpose of holding particular properties and/or exploring for minerals. These organizations frequently consist of no more than ten or a dozen individuals administering annual budgets of up to a few hundred thousand dollars. These small firms are by no means ineffective as exploration organizations, however. A recent study published by the Ontario Ministry of Natural Resources showed that between 1951 and 1974 in Ontario the smaller enterprises spent only 28 percent of all base metal exploration funds but were responsible for 62 percent of all economic discoveries.⁴

The interests of the Canadian mining industry are represented by a number of industry organizations. Producing companies have formed The Mining Association of Canada at the national level and have also formed mining associations in most of the mineral-producing provinces. In addition, there are chambers of mines located in Edmonton, Vancouver, Whitehorse and Yellowknife. These organizations include the exploration departments of larger companies, the smaller, 'junior' companies, prospectors, suppliers, and other interested parties. These chambers take an active part in placing the concerns of their members before governments.

Petroleum Exploration and Mineral Exploration: Salient Differences

In contrast to the mining industry, it appears that DINA and the oil companies have worked out administrative difficulties. In any event, their relations appear more harmonious. It is therefore useful to explore the differences in the two industries.

3. See Urquhart (1978), p. 42.

4. See Freyman (1978).

Significantly, it appears that many of the exploration regulations were written with petroleum exploration in mind.

For example, the application form for a permit requests the locations of all holes in advance. Since oil and gas deposits occur in simpler geological environments, their drilling programs usually involve only one or a few holes, and their locations are well known in advance. On the other hand, a mining program may involve several dozen holes. Of these the location of only a few, possibly only one, may be known in advance. Locations of subsequent holes are dependent on the results from previously drilled ones. Mining exploration is, in this sense, less 'predictable' than petroleum exploration.

The more complex geology for hard minerals has other effects. Since oil and gas deposits are larger in size, more predictable in their location, and easier to find, the success ratio for oil and gas discovery is several hundred times higher than for mining. That is, on the average the oil industry experiences a success ratio of about one significant discovery for every five wildcat wells drilled. By contrast, the mining industry averages less than one significant discovery for several hundreds of diamond drill holes. Since the risk factor is smaller, petroleum firms can absorb heavier expenditures in the early stages. Small exploration firms in the mining industry must minimize expenditures in preliminary stages, and it is seldom that these are recouped through an economic discovery.

There are institutional differences as well. For one thing, there is a difference in scale. The value of petroleum products exceeds that of mining products by many times. Therefore, a different range of economic factors affects important facets of the two industries. The petroleum industry, because of its wealth and global experience, has a long history of coping with governments and regulations. Petroleum firms have large, specially trained staffs. Furthermore, the expense of meeting government requirements is a much smaller proportion of the cost of an oil company's typical exploration program. They have therefore developed greater sophistication in handling regulatory matters and in working with local communities than have any but a handful of mining companies.

Current Environment Within Which Mining Operates

The Canadian mining industry, and in particular that portion of it which is active in the northern territories, is subject to a number of important influences. These will be discussed briefly in the paragraphs which follow.

The international market situation for most metals is confused at present. The decades of the 1950s and the 1960s were marked by generally steady world economic growth and a rapid expansion of mineral production in Canada. Then, in 1973/74, the commodity boom led many to think that nations which were self-sufficient in natural resources would be in a favourable position for many years. Recent events

have forced a re-evaluation of these optimistic expectations. The last four years have seen a stagnation in the world economy which has led to a prolonged trough in the demand and prices for copper, zinc, and nickel. On the other hand, lead, molybdenum, and uranium have been in good demand. Future trends in demand and prices are difficult to predict and are made even more so by changing world trading patterns.

Third-world countries are anxious to increase their mineral output as a stepping stone to economic development. At the same time, resource-deficient industrialized nations, such as Japan and the western European countries, are anxious to diversify their sources of supply. As a result, they are establishing increased trading relationships with the third world. This leaves the position of traditional suppliers, those resource-rich industrialized nations such as Canada, somewhat uncertain. The outlook for Canadian minerals is indisputably for lower growth rates in the future.

At home, the policy climate which favoured mineral development in earlier decades has altered. Provincial changes have been referred to. More relevantly for our study, there have been substantial changes in the approach to economic development, and particularly mineral development, in Canada's northern territories. As has been pointed out, earlier legislation contemplated ready access by prospectors leading to subsequent mine development. In recent years, however, a number of other concerns have displaced the desire for mineral development both in government and in the minds of the public.

The exhaustive study by the Berger Commission of a proposed Mackenzie valley gas pipeline heightened the awareness of Canadians, both in the north and in the south, of problems associated with industrial development. The possibilities of environmental damage, as well as the demands of native northerners for continuation of their traditional way of life, achieved an unprecedented national prominence. Northern natives have claimed authority over major tracts of land. Industrial development appears to be stalled wherever possible by native peoples until such claims are settled.

Prior to the 1970s, the mining industry operated in the north with little regulation. Exploration for and development of mineral resources were seen as important steps in the economic growth and development of the north, and indeed of Canada. An initial indication of a shift in northern priorities is found in a 1972 policy statement presented by the Hon. Jean Chrétien, then Minister of Indian Affairs and Northern Development, to the Standing Committee on Northern Affairs and Indian Development. According to this statement, the government's first objective was 'to provide for a higher standard of living, quality of life, and equality of opportunity for northern residents by methods which are compatible with their own preferences and aspirations.' Economic development occupied third place, but was still expressed as a desire 'to encourage viable economic development within

regions of the northern territories so as to realize their potential contribution to the national economy and the material wellbeing of Canadians.' It should be noted that viable economic development, integrated with the Canadian economy, was the goal.

In January 1978 the current minister, the Hon. Hugh Faulkner, made a speech to the Northwest Territories Council opening session. In it he indicated an even more significant shift towards a policy of development of the north for northerners. In the context of development 'for' the north and not 'of' the north, economic growth would not be sought for its own sake. Southern-initiated economic activity would not be favoured in comparison to activities which would make direct and on-going contributions to northern residents. Projects for which labour, capital and materials come primarily from the south, and for which the product goes south, contribute little to development, according to the minister's speech. Furthermore, a balance is to be sought between renewable and nonrenewable resource development, presumably by favouring the renewable. Developers will be influenced to structure their projects to provide maximum benefits to the north and northerners.

Here we note that the policy emphasis has shifted away from economic growth towards the resolution of social, environmental and political problems in the north. Two dramatic examples will serve to illustrate this point further.

The first example concerns the Baker Lake land freeze. In April 1977, as a result of representations by the Baker Lake Inuit community, the then Minister of Indian and Northern Affairs imposed a one-year suspension on the issuance of mineral rights and land use permits in an area near Baker Lake. During the year a consultant studied the effects of exploration activity on the caribou and other renewable resources. The consultant's report on renewable resources including caribou was based in large part on interviews with Baker Lake residents. In April 1978, the Baker Lake community sought a permanent injunction from the Federal Court of Canada prohibiting mining and mineral exploration in the Baker Lake area. The plaintiffs stated that mineral exploration activities, including aerial surveys, had caused a marked decline in the number of caribou in the area. Industry disputes this, maintaining that over-hunting, due to a fourfold increase in the local Inuit population in recent years, is the major cause. Be that as it may, the Court issued an interim injunction restraining the department from issuing land use permits except as subject to some special conditions. These conditions, which are apparently in accord with DINA's proposed policy, prohibit exploration activity at any time within three miles of major caribou crossing sites and at certain times of the year within three miles of areas identified as calving and post-calving areas. The issuance of mining claims and leases is prohibited near caribou crossings. Baker Lake has been a particularly active area for uranium exploration. The outcome of the Baker Lake issue is in doubt until the trial of the main action. In the meantime the interim injunction continues to apply.

The second example relates to the possibility that large tracts of land will be withdrawn permanently from mineral exploration. In the first place, there are indications that caribou protection measures may be applied over most of the mainland NWT. Similarly, the minister has announced plans for the creation of large wilderness parks. As announced in July 1978, the first area to be set aside is 15,000 square miles in the northern Yukon. This is not the place to comment on the desirability of establishing such parks. We merely note that the ultimate extent of the land which will be reserved for such uses and the process by which interested parties will be consulted are not yet clear.

The mining industry has not accepted the changed environment without protest. In addition to several meetings between companies and the minister and officials of DINA, representatives of the Yukon Chamber of Mines have engaged in open correspondence with the minister in which several of the more sensitive issues have been explored at length.

It is not our purpose in this study to deal with the policy environment in great depth. We do feel however, that it cannot be totally ignored. There is no doubt that some of the contentious issues overshadow, and to some extent influence, the administration of mining and exploration in the northern territories. These issues certainly affect the attitudes with which mining company officials view the regulatory actions of DINA.

We turn now to a detailed discussion of the organization of the department and the process by which exploration permits are handled.

3. THE DEPARTMENT OF INDIAN AND NORTHERN AFFAIRS: AN OVERVIEW

The Yukon and Northwest Territories have a combined area of nearly one and one-half million square miles. Together they comprise approximately 40 percent of Canada and offer a considerable variety of terrain varying in degree of habitation and development. Despite their vast area, the territories have barely 60 thousand inhabitants. The variations in habitat and way of life among the people of the territories reflect the varied pace of development and the imperatives of northern geography.

The complexity of the north is reflected in its government. The task of administering this vast area and seeing to the needs of its people is shared by the federal government, the two territorial governments, and local councils.

At the federal level, the Department of Indian and Northern Affairs has the mandate for administration of the north. Its responsibilities include the development of policy and day-to-day administration of northern affairs. Because of the complexity of its task, DINA is in some respects a miniature of a provincial government, combining responsibilities for social development, resource development, environmental protection, and commercial development. For example, DINA has responsibilities in the north which are otherwise assigned to provincial departments of Mines, Environment, Industry, and others.

DINA's operational responsibilities cover three major programs: the Parks Canada Program; the Indian and Inuit Affairs Program; and the Northern Affairs Program. The Northern Affairs Program of the department is responsible for controlling development of natural resources in the Yukon and Northwest Territories. This responsibility is both broad and sensitive since it includes mandates both for the promotion of development and for environmental protection.

The Northern Affairs Program is headed by an Assistant Deputy Minister who is located in Ottawa. Its organization and staff resources are split between Ottawa and two regional offices, one in each territory. The general division of responsibility is that policy is developed and evaluated in Ottawa and the administration of legislation and regulations is done in the field.

Major staff groups in Ottawa include: Northern Policy and Programming, Northern Environment, Northern Resources and Economic Planning, and a Northern Pipeline Group. Staff responsibility for administration of the Territorial Land Use Regulations and the Inland Waters Act and Regulations falls within Northern Environment. The Northern Resources and Economic Planning Group contains a branch which is responsible for northern nonrenewable resources. This branch, with its one mining and three oil and gas divisions, serves as the voice of nonrenewable resource development within the department.

Although staff responsibility for environmental assessment and environmental protection is based in Ottawa, an extensive regional organization in each of the territories, under a Regional Director, administers the process dealing with land and water use applications and field inspections. Allocated to this task are about 100 and 200 annual man years of effort in the Yukon and Northwest Territories respectively. Each regional office is organized to reflect the Northern Affairs Program's dual responsibilities by the location of an Assistant Regional Director Northern Environment and an Assistant Regional Director Northern Development in each. An 'engineer' is designated in the NWT and in the Yukon for the purposes of administering and enforcing Territorial Land Use Regulations. This person, not necessarily an engineer by profession, administers the application process and supervises field inspection activities.

The formal division of staff and operational responsibilities between the Ottawa and regional offices is that policy is established in Ottawa and administered in the regions. In practice, this division appears to be less clear than intended. There is a perception that regional officers responsible for the administration of legislation and regulation dealing with exploration report on a function basis to the Director-General Northern Environment. Thus they are potentially serving two masters, the Director-General Northern Environment in Ottawa and the Regional Director who is responsible for administration of the program within each territory.

Personnel in the Northern Affairs program have frequent contact with those in other programs of the department. This is essential to ensure that the initiatives and activities of the department's various programs are coordinated. They are certainly closely related. For example, a development initiative by the Northern Affairs Program could have a significant impact on native land claims. The withdrawal of land for parks, such as occurred in the Yukon Territory in 1978, affects the scope of northern development and exploration activity.

Contacts between DINA and other federal departments with related functional responsibilities appear to occur on an 'as-required,' rather than on a regular, schedule. An exception is the Interdepartmental Environmental Review committee which meets frequently in Ottawa. In the territories, regional personnel do consult through land use and other committees. For specific projects, contact does occur between personnel in the Northern Affairs Program and personnel from other federal government departments in the context of DINA regulation and supervision of the activities of other federal departments in the territories. DINA applies the same regulations to, say, the Geological Survey of Canada as it does to private exploration organizations.

At the policy level, there is no regular forum for consultation, other than at the Cabinet level, between the Department of Indian and Northern Affairs and Energy, Mines and Resources (EMR) for the discussion of issues related to nonrenewable resource development. In the case of Baker Lake, it appears that DINA did not

consult EMR before imposing the 1977 'freeze' on uranium exploration, even though EMR bears line responsibility for uranium and nuclear energy.

It is obvious from its broad and diverse responsibilities that the Department of Indian and Northern Affairs serves a variety of interests. For example, it is concerned with the welfare of the people who live in the north and with the activities of various economic interests involved in the territories. In the case of the mining industry, the Yukon and Northwest Territories chambers of mines have enjoyed ready access to officials of the department and, on occasion, to the minister. For example, representatives of both chambers plus senior officials of mining companies with an interest in northern development met with officials of the department and with the minister on July 13, 1978 in Ottawa. That meeting provided opportunity for an industry-government exchange on a variety of industry concerns, including the exploration permit process. Before enumerating these industry concerns, it is necessary to understand the nature of that process.

4. THE ADMINISTRATION OF EXPLORATION PERMITS

Because of differences in applicable legislative instruments in the two northern territories, the permit requirements are not identical. For our purposes it is sufficient to note that the conduct of an extensive program of mineral exploration in either of the territories may require three main types of authority:

- i) a land use permit;
- ii) a water use licence or authorization; and
- iii) a prospecting permit, licence, and/or lease.

Authorities with respect to prospecting (prospecting licences, permits, and leases) have a longer history than those with respect to water and land use. Individual prospecting licences are available for a small fee to individuals aged eighteen or over or to companies. They allow the holder to prospect and stake any number of claims on any unoccupied federal crown land. In areas where there is little mineral exploration, prospecting permits may be issued for the exclusive right to prospect and stake a limited number of claims within a specific area for a maximum period of three years. When licenced prospectors find ground they wish to protect in order to carry out further exploration, any number of claims may be staked. Claims must be recorded and maintained in order for the prospector to retain the exclusive right to prospect and develop a mine on a claimed site over a ten year period. A lease can be applied for during or at the end of this ten year period and, if approved by the Surveyor-General, will provide 21 additional years of exclusive access.

As indicated above, regulations with respect to prospecting permits, licences, and leases appear to be well established and known to the industry. It is in the administration of land use and water use authorities that more difficulties occur. Therefore the application and inspection processes for land and water use will be described at somewhat greater length.

The Application Process

Land Use

In general terms, a land use permit authorizes a person or company to carry out a specific land use operation at a specified place, during a stated period of time and subject to conditions defined to protect the environment and the interests of residents in the area.

Certain small activities, including prospecting or locating a mineral claim without the use of machinery, do not require a permit. However most mineral exploration activities in the Yukon or NWT require either a class A or a class B land use permit, depending on the scope and the size of the area affected. In the case of

the Yukon, the necessity for a permit is sometimes obviated because the Yukon Quartz Mining Act and the Yukon Placer Mining Act supersede the Territorial Land Use Regulations.

Class A permits are distinguished from class B permits on the basis of the weight of explosives used, the weight of vehicles used, the weight of drilling equipment, number of man days involved, the size of fuel caches, and the extent of proposed disturbance of the land surface. Also, class A permits are required for any operation in areas of interest to one or more communities.

Class A permits may possibly be issued within a ten-day period from the time of application. However, because most applications are reviewed by the Land Use Advisory Committee and by communities which may be affected by the operation, the Land Use Regulations provide for a period of up to forty-two days from the time the application is received until the applicant is informed whether a permit will be issued.

Class B permits are issued on the authorization of the land use engineer in whichever territory is involved and are normally issued within ten days of receiving the application. Under Section 28 of the Territorial Land Use Regulation (PC 1977-532, 3 March 1977) the engineer may, where he deems it necessary, upgrade a class B permit application and consider it as an application for a class A permit. Such upgrading would occur in instances where proposed operations were of a larger scope than permitted in the B category or when the proposed operations might affect one or more communities in the exploration area. The criteria for upgrading class B to class A permit applications are stated very generally in the legislation. Under Section 25 (1)(C) the regulations state that the engineer must notify the applicant in writing that the engineer has ordered further investigations to be made respecting the proposed land use. The reasons for these further studies must be stated.

The following is a brief outline of each step in the processing of a class A permit application.

- i) As soon as an application is received, it goes to the office of the person designated 'engineer' in the regulations. The 'engineer' may consult with others inside and outside DINA to determine whether the application contains all the necessary information.
- ii) Within the first ten days, the 'engineer' determines whether to accept the application or to reject it as incomplete and return it to the applicant for further information. It is also during this first ten day period that any upgrading of B permit applications to class A is done. If this occurs, the applicant must be notified in writing.
- iii) Copies of the application and all relevant materials are forwarded to each member of the Land Use Advisory Committee, the Ottawa Land Use Office, the

Inuit Tapirisat and/or the Indian Brotherhood and to the DINA district office nearest to the community that is affected by the proposed operation. The district office then forwards a copy of the application to the community council for its comments.

- iv) Each of the above individuals or organizations is required to return the application, along with recommendations concerning environmental or other limitations, to the Land Use Administrator. Though there is no specific time limit set out for this response in the regulations other than the basic forty-two-day limit on application processing, a time limit is usually established administratively.
- v) The Land Use Advisory Committee, an interdepartmental/territorial committee established in each territory, meets to consider each class A permit application and the comments made on it by government experts and affected communities. This committee then advises on the conditions to be attached to the permit if one is to be issued.
- vi) Depending on the advice of the Land Use Advisory Committee, the office of the 'engineer' may take three basic courses of action. It may issue a permit for a period not to exceed two years and subject to specific operating conditions. It may reject the application and return it to the applicant with a statement of the reasons for turning it down. Alternatively, it may order a detailed land inspection, postponing a final decision for another twelve months.

Water Use Applications

Under the Northern Inland Waters Act, a licence or authorization is required for any person, company, agency, or municipality intending to use inland waters, for any reason except for domestic purposes.

A Water Use Authorization can be issued by the Controller of Water Rights in each territory for water use requiring less than 50 thousand gallons per day for a period of no more than 270 days. In many instances, an authorization would be suitable for mining exploration activities. However, very large scale exploration efforts and all other uses of water with respect to mining require a licence.

A water licence establishes the specific conditions governing any large scale use of inland fresh waters in the Yukon and NWT. Licences are issued by the appropriate water board with the approval of the Minister of Indian and Northern Affairs. The licences can be issued for any time period up to 25 years.

There is a formal process of review by a quasi-judicial agency for water use applications. Unlike the land use applications process, no time limit has been set for the water use review process.

The steps in the water use application review process may be summarized as follows:

- i) The application is received at the Office of the Water Board in each territory where it is reviewed by the controller and technical advisor of the Territorial Water Board.⁵
- ii) If the usage falls within the prescribed limits, the controller may issue an authorization to the applicant.
- iii) In the case of applications for a licence, copies of the application and all relevant documents are forwarded to each member of the Territorial Water Board. After studying the materials the board must publish a public notice in the Canada Gazette and local papers advising the nature of the licence applied for and inviting interested parties to submit briefs at a public meeting.
- iv) Unless the board and the applicant are convinced there is absolutely no public interest in the application, a public meeting is held at the community nearest to the location of the proposed water use.
- v) Transcripts of the public meeting are forwarded to all board members and members of the Water Board Technical Committee. The Technical Committee then forwards to the board its recommendations regarding any condition to be attached to the licence.
- vi) A meeting of the Water Board is held to determine whether the licence will be issued or turned down and, if issued, what conditions will be attached. These licences are forwarded to the Minister of Indian and Northern Affairs for approval.
- vii) The minister can either approve the licence and conditions as presented by the board (he does not have authority to alter the conditions) or reject the licence and return it to the board for further consideration.

The Inspection Process

In the case of both land use and water use permits, comprehensive inspections are usually carried out before the start of an operation, during the operation, and at its conclusion to insure that it has been conducted according to the conditions of the permit and that the site has been properly restored.

The general criteria for inspection once a permit has been granted are contained in the Territorial Land Use Regulations and in the regulations of the Northern Inland Waters Act. A specific exploration effort will also be evaluated by the inspector in terms of the particular conditions attached to the permit it has received.

5. The Territorial Water Boards are composed of six members named by each territorial council and three representatives nominated by the ministers of federal departments of Indian and Northern Affairs, Environment, and Health and Welfare. All members are appointed by the Minister of Indian and Northern Affairs, who also appoints the chairman and vice-chairman from the members.

Land use and water inspectors from each regional office visit each exploration site periodically to conduct their reviews. The results of their inspection are recorded on an inspection summary sheet which is to be filled out on the site and co-signed by the inspector and permittee or, in the case of a company, its representative. Inspections may occur on a random basis, and a final inspection may be required when the exploration effort has been completed. In the latter case, it is important for department inspectors to arrive on the site promptly so as to avoid unnecessary delay in winding up the exploration operation.

An inspector has the authority to issue warnings or to close down an operation if a major violation is found. In all cases, copies of the inspection summary are retained on file in the regional office.

It is worth noting that the land use and water inspectors are in essence DINA's representatives in the field. In many cases, they are the only contact between the federal government and members of the mining industry. Thus the relationship established between the inspectors and people working in the field assumes considerable importance in determining the general climate of relations between the federal government and the mining industry.

We now consider the concerns of the mining industry which were identified by our investigation.

5. PROCEDURES AND REGULATIONS OF CONCERN TO THE NORTHERN MINERAL INDUSTRY

Some of the problems identified by northern mining companies refer specifically to procedures and regulations. Others, some of which are of great concern, clearly fall in the area of policy. The main focus of our study has been to identify and comment on the problems of procedures and regulations. These are the matters discussed in the present chapter. Contentious policy issues are dealt with briefly in chapter 6.

We discuss the administrative problems in three groups: those which are present at the interface between industry and the department, those which appear to exist within the department, and finally, those which appear to exist within industry. We conclude this chapter by summarizing our recommendations for the streamlining of procedures and regulations affecting mineral exploration in the Yukon and Northwest Territories.

At the outset we wish to note that the troublesome regulations are relatively new. That is, they have been in force for only two exploration seasons in most of the Northwest Territories and do not yet apply fully in the Yukon. All parties, in the public as well as the private sector, are still becoming familiar with a new process. We have not been able to determine in absolute terms just how great the regulatory problem is. It does appear that in some situations administrative difficulties have caused losses of at least several tens of thousands of dollars to individual operators. On the whole, however, we have evidence that the process is running more smoothly as time goes by. Nevertheless, some specific problems remain.

Problems Between Industry and the Department

These concerns fall into three categories, relating respectively to the application process, the inspection process, and general administration. Consider first the application process.

- i) *The application requirements are not understood.* There is at least a partial absence of communication by DINA of the requirements for land use applications and of the rationale behind the requirements. As a result, industry harbours suspicions, possibly founded in misunderstanding, about the actions of DINA personnel. Some firms, especially the smaller ones, may not have a clear understanding of the application process itself. One specific area which causes trouble is the upgrading of B applications to A applications. We question whether the criteria for such upgrading are explicit, even within the department, and whether they are communicated to applicants.
- ii) *The application process is unnecessarily complex.* For the various permits required, several totally distinct applications must be submitted. The

process could be made more efficient by ensuring that maximum immediate assistance and information is available at the point of contact between the applicant and the department. This would help to obtain all necessary information in the first instance, and would avoid the necessity of sending applications back for more information. More specifically, information which is required for both land and water use applications (such as the description of the project) could be combined on a common data sheet, and would only need to be submitted once.

- iii) *Permit conditions are not understood or accepted.* The rationale for attaching specific conditions is often not understood by industry, nor is it communicated effectively by DINA. There is, within the department, a compendium of several hundred standard conditions which can be attached to land use permits as appropriate. For each of these standard conditions, there is a corresponding rationale which explains the purpose and applicability of the condition. The rationale in some cases contains guidelines for the inspector in interpreting conditions in the field. As far as we can determine, the circulation of this compendium is strictly internal. We believe that the permittee should see the rationale for all conditions, for two reasons. First, an explanation of the thinking behind the conditions would make them more palatable. Secondly, if the permittee can demonstrate that the rationale does not apply to his particular situation, he would have a better basis on which to seek relief.
- iv) *Permit conditions are not always warranted.* As to the nature of the conditions themselves, industry officials believe that stringent conditions are applied throughout the territories, whether warranted by local conditions or not. For example, it is agreed that surface damage may be next to catastrophic under permafrost conditions in soils of high water content, such as exist in parts of the tundra. Under other conditions, applying in major areas of the territories, vehicle ruts may be repaired by natural processes within a few months or years. A blanket condition prohibiting all damage to the land surface is plainly excessive in the latter situation. To introduce more flexibility, it has been suggested that the north be divided into its distinct ecological zones. In some zones, permit conditions would need to be more stringent than in others. One case which was reported to us involved the use of a tracked vehicle to supply a drilling program near Wrigley, NWT. When prominent ruts were noted in a swampy area on the supply route, the company was ordered to terminate use of the tracked vehicle. According to the company's viewpoint, the damage to the environment was inconsequential. Nevertheless, a helicopter was required for the balance of that season, and for two subsequent years of drilling, at an additional cost estimated at \$40 thousand to \$50 thousand.
- v) *There are apparently unnecessary delays in granting permits.* These delays are often occasioned by the need for further study of the local situation. It is not clear, however, that the additional study always results in better decisions. Two reported cases illustrate this point. In the first case, a

company encountered delays and restrictions because of the possible presence of peregrine falcons in the area. When discussions between company personnel and department officers took place early in 1976, the wildlife officer was only able to indicate two localities where falcon nesting was known to have taken place. A few weeks later, the company submitted detailed maps outlining three locations where detailed work was proposed. At this time, the same officer was able to designate at least two nesting sites adjacent to each work location, even though there had been no opportunity to acquire additional information in the interval. After repeated meetings, correspondence, and telephone calls, a conditional permit was granted in late June. The work then proceeded without interruption. The officer's change of mind resulted in a waste of industry staff time, rather than major out-of-pocket costs.

The second case of delays and extra costs is more substantial. It also illustrates the dangers attendant on oral communication. A firm wished to construct an airstrip near their exploration site. After three telephone conversations in February 1977 between Edmonton and Yellowknife, the firm was advised that the construction had been discussed with wildlife representatives, who had no objection. However, soil testing of the area would be required. If the test results demonstrated the suitability of the site, a permit would be granted. On the strength of these telephone calls a firm of soil experts was hired to investigate the site the following summer, at a cost of \$20 thousand. The report was favourable, and the company applied for a land use permit, attaching the soils report. Within a week the permit was refused, on three grounds. First, the exploration program had been carried out without the aid of an airstrip up to that point in time. Secondly, the disturbance associated with an airstrip would only be justified if the property were advancing into the production (mining) stage; there was no indication that this stage would be reached. Thirdly, there was an existing airstrip only 13 miles away. We do not attempt to assess the merits of these arguments. However, it is surprising that a member of the department should make judgements on the possibility of eventual production from an exploration program. Furthermore, the conditions for objection all predated the original conversations, in which a soil test appeared to be the only requirement. The company appealed the ruling, and by mid-July 1978 received permission by telephone to build the strip. Written confirmation had not been received by the time of our visit, two weeks later, but construction was proceeding. This contradictory behaviour, we are assured by the company, is not typical. It is an isolated but extreme example of the type of problem which can arise.

We now consider concerns related to the inspection process.

- vi) *Working relationships between industry representatives and the inspection staff are poor.* Industry sources frequently cited the inspection process as a source of conflict. The various types of inspectors (land use, water use, wildlife) do not coordinate their visits. This ties up operator's personnel

repeatedly. Inspectors are often perceived as inexperienced, and ignorant about mining and exploration operations. Inspectors' rulings are sometimes considered arbitrary; they are reported to have closed down an operation for a trivial violation of the regulations without regard for the expense involved to the operator. In contrast, departmental officials in Ottawa expressed the belief that, before closing down an operation completely, the inspector would normally consult with senior regional staff.

Several features of the process could lead to disagreement between the inspector and the company representative as to whether the job conformed to the conditions of the permit. First, there are no agreed standards as to whether the conditions have or have not been met. It is true that the regulations themselves establish certain standards, and so do the specific conditions attached to a permit. Nevertheless, there is room for interpretation on the spot. It is not clear to what extent the inspection staff use uniform criteria. Moreover, there is no indication that the department has communicated its criteria, if they exist, to industry. The inspection form is to be filled out on site and shown to the company representative; we have been told this is not always done. Furthermore, the inspection form itself is not very helpful; after examining an example of the form we felt that it would be incomprehensible without an explanatory manual.

- vii) *End-of-season requirements are thought to be excessive.* Permits commonly require a final inspection, and they often require that the site be restored to a natural state and all buildings and equipment removed. If the final inspection is not prompt, company personnel must either wait for the inspector or return to the site on another occasion. This has implications for both cost and time. Furthermore, putting the site in its natural state is sometimes wasteful, since the company may need to use the same facilities the following year. We also heard of one case where a well was caused to be filled in, though it would have been of continuing benefit to a permanent resident in the area. We understand that the department has introduced more flexibility in the end-of-season requirements, and this appears to be a useful step.

We now discuss troublesome aspects of the general administration of exploration permits.

- viii) *The department's treatment of unexpected circumstances is not clear.* Some *force majeure* provisions exist, in a restricted sense, in the Land Use Regulations, where Section 20 provides that any person may carry out any operation to cope with an emergency which threatens life, property or the natural environment. Nevertheless, the normal definition of an emergency is rather narrow. It presumably does not include the actions of the department, of other agencies of the Crown or of third parties. The Canada Mining Regulations (Sections 35(5) and 44) also provide for the delay of obligatory work requirements

when the holder of claims or leases is unable to perform the required work. Furthermore, DINA officials have assured us that when legislation is inadequate, it is departmental policy to give appropriate relief by ministerial discretion or order-in-council in the event of uncontrollable circumstances affecting exploration or mining rights. Nevertheless, companies continue to be concerned that they will be placed in an untenable position by the interaction of regulatory measures and unexpected events. It is evidently necessary that DINA's intentions on this point be enshrined in legislation and regulations wherever possible and clearly communicated to industry.

- ix) *The relationship between the industry and parts of the department is generally adversarial rather than cooperative.* We will show later that this problem is more pronounced in relation to some companies than to others. Nevertheless, for all the companies we spoke to a real question existed as to whether the department was sincere in its desire to improve the operation of the procedures and regulations for mining. Overshadowing the administrative arrangements we have studied are policy disagreements, of which Baker Lake is a prime example. There is no question but that these disagreements, which are unlikely to be resolved in the short term, contribute to the attitude of mutual suspicion. Be that as it may, the working relationship must clearly be improved.

An example of the adversarial approach relates to a company which made application in 1977 to resume work in an area in which it had explored the previous summer. Despite the previous year's activity, a delay was involved within the department in obtaining environmental input. The application was also deemed incomplete and more information was requested. The company complied on February 15th. Then, assuming the permit would be forthcoming, the company commenced moving the existing drill camp to a new location along existing winter roads. Two inspectors visited the camp on February 18th and terminated the moving activity. Permission to resume was granted on March 1, 1977, and the company was charged with a violation of the Land Use Regulations. A subsequent court hearing dismissed the charge, on the grounds that the company had not exceeded the maximum permissible activity that can be carried out without a permit. Nevertheless, the stop work order did involve extra expense in the order of \$15 thousand or more.

Problems Relating to the Department

A number of industry's concerns appear to relate to conditions or procedures internal to DINA. These are considered below.

- i) *There are organizational problems.* First, the ambiguous relationship of regional personnel to specialized staff groups in Ottawa induces tension within the department, and can also create conflicts for regional people. In some cases the authority of the regional director is not clear.

A second problem relates to the training and selection of inspectors. There is some question as to whether these individuals have either the required experience or knowledge of mining and exploration operations to carry out their duties effectively. We have been informed that most inspectors have training in biology rather than earth sciences or mining technology, and that they are more sensitive to environmental concerns than to additional operating costs created by adverse field decisions. This priority is no doubt understandable in staff hired specifically to enforce environmental regulations. Nevertheless, it appears that there is scope for the exercise of more maturity and judgement (the quality that some respondents have called 'common sense').

A third problem has been identified in relation to community consultation under the provisions of class A permits. The process of consultation is itself unclear. We do know that the permit applications are sent to district offices for transmittal to the communities, but the method of consultation is not explicit. In 1977, of forty-two class A applications (including twenty which had been upgraded from class B), twenty-seven were submitted to community consultation, but significant comments were received back in only five cases (similar statistics were not available for 1978). While many factors may affect the response rate, this information raises serious questions about the effectiveness of the consultation of communities, and indeed about the upgrading of B to A applications in general.

ii) *There is confusion about the purpose and administration of the regulations.*

A feeling exists, within both DINA and industry, that attempts are being made to use the Land Use Regulations for purposes other than those for which they were intended. Furthermore, administrative practices and guidelines relating to the interpretation of the Land Use Regulations have not been made explicit, either within the department or to industry. A small booklet was issued in December 1977, for use primarily by the public. It does contain minimal information about the various application and review procedures. This booklet represents a good beginning, but it is certainly not explicit enough to provide industry and department officials with an agreed set of principles and interpretations. Moreover, some portions are now outdated. A much more appropriate set of guidelines for this purpose was drafted in April 1977, but as far as we can determine these were never completed and have never been released to the mineral industry.

iii) *Consultation and coordination with other government agencies appears to be lacking.* It is not clear how extensively or effectively DINA consults other agencies when establishing regulations. We have noted that EMR was not consulted prior to the Baker Lake land freeze. Other examples relate to flight restrictions which have been imposed over caribou herds. In the 1978 exploration season flights are prohibited below 2000 feet over calving and post-calving areas and below 1000 feet over groups of caribou at all other times in defined areas. Such restrictions could delay airborne geophysical

programs and increase their costs. Was EMR consulted on the technical implications and the economic impacts of the restrictions? Such information would clearly be required to calculate the trade-offs involved.

- iv) *Internal monitoring and review could be improved.* We noted several areas where attention to quality control could progressively improve the processes of application and inspection, as well as the general administration of the regulations. For example, table 1 shows some important statistics on the effectiveness of the land use permit processes for the exploration year 1977. The information is very useful, but it is notable that the statistics are not compiled routinely. They had to be specially assembled, and the corresponding 1978 statistics were still unavailable at this writing. Furthermore, there appears to be a lack of meetings and directives within the department that clarify how the whole regulatory system *should* work. We suggest that an effective monitoring system would address, in addition to these points, the following questions.

- . Are there files of complaints raised by companies?
- . Do the supervisors of inspection teams solicit comments from companies?
- . Is there an effective bring-forward system to ensure that inspectors are on hand at critical times such as the close of individual programs?

Moreover, we are inclined to think that a major end-of-season review, in which industry was involved, could help to establish better procedures for the next application period, which follows in a few months.

Problems Relating to the Industry Itself

There are several areas in which the industry concerns appear to arise out of actions over which the industry itself has some control.

- i) *There is pronounced variability in company approach.* Some companies are more effective than others in working within the existing regulatory framework. While the relationship between department officials and mining companies tends to be adversarial, this is not true between DINA and oil companies. As we have pointed out, the situations of the two types of industry are not entirely comparable. For technical as well as institutional reasons the oil companies have dealt with governments more easily, and are more highly regarded by them. Though their situations are not identical, there may be some hints for mining companies in the practices of oil companies. Even within the mining industry, differences are detectable. It is clearly more difficult for smaller companies to cope with the multiplicity of regulatory devices in use. As a result, the smaller firms have more complaints and deal less effectively with the department than the larger ones. Even among the larger companies, however, there are a few which seem to have difficulty maintaining good working relationships with government. With assistance and cooperation from DINA, the chambers of mines might be more effective in assisting exploration companies. We can see benefits in an expanded role for the chambers in acting as mediators, educators, clearing houses for regulatory information, etc.

Table 1

LAND USE PERMITS: MINERAL EXPLORATION AND RELATED COMMUNITY CONSULTATION, 1977

| A Permits | | | | | | | | | B Permits | | Time to Issue (Days) | | | Comments |
|-------------------------------|------------------------|---------------------------|------------|--------------|----|----------|-------------|------|--------------------------|------------------|-------------------------|---------------------------|-------------------------|--|
| A Applications Received | "B" Transferred to "A" | | Total A | Consultation | | Comments | | | Number Applied For | Number Issued | A Range (Average) | B→A Range (Average) | B Range (Average) | |
| | Environ- mental | Community Consultation | | Yes | No | Routine | Significant | None | | | | | | |
| | | | | | | | | | | | | | | |
| <u>General</u> | | | | | | | | | | | | | | |
| 22 | 5 | 15 ^a | 42 | 27 | 15 | 4 | 5 | 18 | 34 ^b | 14 ^b | 5-42 (25) | 9-50 (33) | 7-10 (8) | 1 A permit application cancelled |
| <u>Organization "A"</u> | | | | | | | | | | | | | | |
| 3 | | 5 | 8 | 7 | 1 | 2 | 2 | 3 | 6 | 1 | 15-40 (30) | 24-42 (38) | 8 | |
| <u>Organization "B"</u> | | | | | | | | | | | | | | |
| 3 | | 1 | 4 | 3 | 1 | 1 | 1 | 1 | 5 | 4 | 26-42 (31) | 50 (50) | 8-10 (9) | |

Source: Statistics provided by DINA.

^aOf the 15 permits transferred from B to A for community consultation purposes, only 4 elicited any comments from the community of which one was no objection and 3 were significant.

^bDifference in B permits applied for and B permits issued is the number transferred to class A.

- ii) *Documentation of complaints is inadequate.* The industry has had many complaints but these do not appear to have made a strong impression on government. A high degree of frustration results among firms, and a future deterioration of attitudes occurs. One factor in this vicious cycle is that complaints have a hollow ring unless the facts are properly established. Although we heard many complaints we had difficulty in obtaining factual details. We believe that the department should encourage industry to document any complaints, including any extra costs involved, and send them to the department. Of course, industry will need to respond positively to this initiative if it is to gain any benefit.
- iii) *An efficient inspection service depends partly on industry cooperation.* Industry can do more to aid the department in providing an efficient inspection service. Provided the inspectors are receptive, the industry could provide training sessions and/or materials to improve inspectors' knowledge of mining and exploration operations. Furthermore, during actual field programs, industry could ensure that the senior person on site is available to deal with inspectors. Firms could also give notice well in advance when ready for final inspection. These actions would tend to avoid misunderstandings and unnecessary delays.
- iv) *Industry's community relations could be improved.* We have heard of cases where mining companies consult local communities, but these instances seem to be more isolated than they are in the oil and gas industry. It appears to us that the department could encourage and facilitate the consultation of communities by mining companies before and during the application process, as well as while field work is actually going on. Important results of this consideration could be a saving in time during the application process, improved understanding and acceptance by the native population, and the possibility of increasing employment for native northerners.

Recommendations

- i) *The Department of Indian and Northern Affairs should undertake a major review of all aspects of administration affecting mineral exploration in the northern territories.*

The review should be overseen by a steering committee consisting of: the two regional directors; the Director-General, Resources and Economic Planning; the Director-General, Northern Environment; the Director-General, Northern Policy and Programming; and chaired by the Assistant Deputy Minister, Northern Affairs. The review should deal first with government/industry relations throughout the process of administering applications, attaching conditions, and making site inspections. In this stage of the review, representatives of industry should be full partners in it. Secondly, the review should examine the organization of the department with special reference to: functional

reporting, status of mining people in the organization, and the training and selection of field personnel. The third area that should be included in the review is that of the nature of conditions attached to permits. Here, a joint industry/DINA working group should be established to examine the standard conditions and develop rationales and criteria of applicability. The existing book of standard conditions should be circulated to interested parties for comment and should form the basis of the working groups' review.

- ii) *DINA should establish an automatic system for the monitoring and annual review of the regulatory process.*

Such a system would produce regular statistics on the performance of the department, would induce more uniformity in the administration of regulations, and would solicit feedback from industry.

- iii) *The process of community consultation should be thoroughly reviewed.*

The effectiveness of the consultation on class A permits is questionable because of the infrequent recorded response from communities. It is not clear whether the process is sufficiently defined. That is, are the communities really being consulted effectively? It is possible that the methods being used are quite foreign to native communication patterns and that the response is simply not being detected. On the other hand, the low response level may indicate a lack of concern on the part of the communities. If so, the question must be asked whether the benefits are commensurate with the delays in issuing permits. An alternate procedure would be simply to inform the communities of proposed exploration activities. If this were coupled with voluntary consultation by industry on a more extensive basis, it would appear to fill the perceived needs of the community and would eliminate permit delays from this cause.

- iv) *There should be increased flexibility in the regulatory requirements and the existing policy for dealing with unexpected circumstances should be communicated.*

All regulations requiring it should be amended immediately to give relief from work requirements, and other requirements, when unforeseen circumstances arise out of actions by the department or other agents of the Crown. Secondly, relief should be given in cases of broader circumstances beyond the control of the operator; not simply for emergencies which threaten life, property or the natural environment. Thirdly, as an exploration program proceeds, much more will be learned by the operator and the site inspectors about the local conditions. In these cases, there is good reason for permitting relief from in-applicable conditions and from unnecessary end-of-season requirements. The revised conditions could be negotiated with the inspector on the spot if the situation is perfectly clear; otherwise an application for such relief could

be handled expeditiously by the regional offices in a manner similar to the existing B permit requirements. The existing departmental policy of providing appropriate flexibility by means of ministerial order or order-in-council should be communicated more effectively.

- v) *Administrative procedures and guidelines should be clarified and communicated.*

For the benefit of workers within the department, as well as industry officials, a uniform set of guidelines should be prepared for every stage in the application/inspection/administration process. Ideally these should be developed at the point of maximum knowledge. That is, it may be necessary to develop a collection of standard conditions in Ottawa: on the other hand, the criteria for interpretation and inspection of sites should be developed in the regions. In any case, expert input should be sought from industry as well as from sources within government. As indicated, we feel that the guidelines, criteria, rationale, and procedures should be as transparent as possible. That is, they should be communicated to the industry. This point is developed more fully in the recommendation which follows.

- vi) *Communications with industry must be made more effective.*

Our study was greeted with some incredulity by industry officials because they felt they had indicated their concerns on many previous occasions, with no tangible results. Annual meetings have been held to allow industry representatives to make recommendations to senior government officials. The latter are reported to express satisfaction with the exchanges, to express the view that 'constructive suggestions' have been made by industry, and that these suggestions will be given 'careful consideration'. The results, according to chambers of mines, are less satisfactory. They report that officials return to Ottawa and nothing more is heard of the recommendations. No modifications have been made, even though industry officials claim they were led to expect some. We are not able to comment on the justice of this perception. No doubt some modifications were deemed to be impossible because of environmental or other considerations. What is clear, however, is that the reasons for subsequent action, or lack of it, were not communicated to the industry. We therefore recommend strongly that industry representatives be given full information about all aspects of the regulatory process. We have mentioned above the release of guidelines, procedures, criteria and rationales for regulatory action. We believe that chambers of mines could occupy a pivotal role in the communications. We suggest that copies of any guidelines, procedures, etc. should automatically be filed with the chambers and also supplied to companies on request. Assistance is needed particularly by smaller companies. As well as streamlining the regulations, there is no reason why regional officials should not, with the assistance of the chambers of mines, provide communication and training sessions for personnel of small companies to help them become familiar with the regulatory requirements.

We believe these recommendations will substantially streamline the actual administration of the exploration regulations in the Northwest Territories and the Yukon. But, if implemented, they can also have an important symbolic effect. Because of the policy considerations which have been referred to briefly throughout the study, industry officials may be forgiven for deducing that the mining industry is not welcome in the north. We believe this is a distorted impression, and that, within the constraints imposed by the current politics of the north, the mining industry has a significant contribution to make. We believe that many departmental officials share this view. By making the regulatory process as painless as possible, while still fulfilling the necessary functions of protecting the environment and responding to native needs, DINA can help to reassure industry about its future.

6. OVERRIDING POLICY CONSIDERATIONS

Much as the procedures for the administration of mineral exploration could be improved, the entire regulatory situation is overshadowed by two important public issues. First, the government's stated priorities for the north have changed. Secondly, the government is under intense pressure to deal with native land claims. Until these are settled, it will be nearly impossible to begin the task of reconciling the needs and desires of northern residents with those of inhabitants of the remainder of Canada. As a result, orderly resource development in accordance with the joint needs of these groups is virtually impossible at present. In other words, the policy situation is very important, but very confused.

One result of this confusion is that the land use permit process is subject to pressures to use it for purposes other than those for which it was intended. We have mentioned that the upgrading of class B to class A applications, and the time taken for community consultation, have been sensitive points. It appears that a regulation intended for the protection of the environment has been used for social and political purposes. This became evident, as interviews with both department and industry officials indicated confusion about the purposes of permit upgrading and community consultation.

One feature which disturbs the industry is that DINA seems to be making policy without having gone through the process of public debate, and possibly without legislative authority. In one instance, the current Baker Lake restrictions have been imposed by the Federal Court of Canada on the basis of testimony about impending land use policy by a representative of the department. It is not at all clear that normal processes of debate or consultation were followed before this policy was implemented in a very binding form.

Another disturbing feature of policy, according to the mining industry, is evident whenever native positions conflict with mining activity. In these cases, the department always supports the native position without making an objective appraisal of the conditions. Departmental officials dispute this, pointing to instances where departmental action has been in industry's favour.

Some confusion seems to exist within the department, as well as within native and other public interest groups, about the differential environmental impacts of mineral exploration and mine development. Exploration, by its nature, creates relatively little disturbance, and that temporary. It does occur, however, over a wide area. Mine development, on the other hand, creates much more disturbance, but in a local area.⁶ Because of the probabilities involved, exploration seldom results in a mine in any specific area. There seems to be a need to define and clarify the nature of the potential problems associated with each stage of mineral discovery and development.

6. See Ripley, *et. al.* (1978).

We have mentioned that the industry doubts the fundamental desire of the government to have a mining industry in the north. We are inclined to attribute the cause of this concern to a basic disagreement between the aspirations of industry and the present ordering of government priorities. Clearly, however, the industry is not ready to accept that mineral development should be permanently relegated to an inferior position on the priority list.

One proposed solution to the impasse relates to the status of mining people in the organization. We have noted earlier that mineral products constitute the major economic output of the northern territories. The value added in mining for 1974 in the northern territories was \$236 million. This represents over \$4,000 for each resident, a far higher per capita value than in any province of Canada.⁷ For this reason alone, the industry has repeatedly suggested the appointment of a mining man at a very senior level (Assistant Deputy Minister) within the Department of Indian and Northern Affairs.

The mere appointment of an Assistant Deputy Minister, Mining will not bring about a fundamental reordering of government priorities. Nevertheless, in industry's view, such an appointment would provide knowledgeable input at the policy level, and would improve not only the calibre of government response with respect to existing mines, but also the administration of exploration. If nothing else, it would certainly bring about a more constructive attitude on the part of industry.

From the viewpoint of the mining industry, and no doubt from that of many Canadians, the solution can be summed up in four short sentences. Mining is important to the economy of the north. The north is an area of immense importance to the Canadian mining industry. Northern minerals are important to all Canadians. Policy differences should therefore be resolved as soon as possible.

Whether or not such a view can be accepted without qualification by policy makers, there seems ample justification for improving the *controllable* aspects of northern mineral administration. This study has attempted to show how.

7. Value-added data were from Statistics Canada (1978); population estimates from Statistics Canada (1977).

APPENDIX I: PERSONS INTERVIEWED

The following representatives of industry and government provided information on aspects of the administration of mineral exploration in the north. We are very grateful for their cooperation and the time made available to us.

Industry Personnel

Dr. A.B. Baldwin
Manager, Minerals Exploration
Shell Canada Resources Ltd.
Calgary

Mr. Mike Brezinski
Prospector
Yellowknife

Mr. G.E. Cooper
Director, Canadian Exploration
Noranda Mines Ltd.
Toronto
(Also Chairman, Exploration Committee
The Mining Association of Canada)

Mr. M.E. Delpierre
Project Geologist
Cominco Ltd.
Vancouver

Mr. Wm.St.C. Dunn
Exploration Manager,
Silver Standand Mines Ltd.
Vancouver
(also President,
B.C. & Yukon Chamber of Mines)

Mr. A. Fekete
Prospector
Whitehorse
(also President,
Yukon Prospectors Association)

Mr. J.D. Blackwell
Geologist
Cominco Ltd.
Yellowknife

Mr. E.H. Caldwell
Manager, Exploration Properties
Cominco Ltd.
Vancouver

Mr. E.J. Debicki
District Geologist
Canadian Nickel Co. Ltd. (Inco)
Whitehorse

Mr. R.P. Douglas
Group Vice-President
Cominco Ltd.
Yellowknife

Mr. D.J. Emery
President
Giant Yellowknife Mines Ltd.
Yellowknife

Mr. R.A. Granger
Prospector
Whitehorse
(also President,
Yukon Chamber of Mines)

Industry Personnel (Continued)

Mr. R.J. Hawkes
Assistant Manager
Noranda Exploration Co. Ltd.
Yellowknife
(also President,
N.W.T. Chamber of Mines)

Mr. D.W. Heddle
Assistant Manager, Western District
Cominco Ltd.
Vancouver

Mr. D. Linzey
Mine Operator
Whitehorse Copper Ltd.
Whitehorse

Mr. L.R. McDonald
Manager, Eastern District
Cominco Ltd.
Toronto

Mr. A.C. Ogilvie
Manager
Yukon Chamber of Mines
Whitehorse

Mr. L. Padnode
Prospector
Whitehorse

Mr. D.C. Rotherham
Manager, Exploration
Placer Development Ltd.
Vancouver

Mr. Tony Shearcroft
Contractor
Yellowknife

Mr. F.G. Higgs
Manager
B.C. & Yukon Chamber of Mines
Vancouver

Mr. V.F. Hollister
Exploration Geologist
Duval International
Vancouver

Mr. Rod MacRae
Exploration Engineer
Placer Development Ltd.
Vancouver

Mr. B.K. McKnight
Exploration Manager, Eastern Canada
Western Mines Ltd.
Toronto

Mr. H.V. Page
Managing Director
Alberta Chamber of Resources
Edmonton

Mr. M. Phillips
Resident Geologist
Archer Castro & Assoc.
Whitehorse

Mr. G.J. Ryznor
Senior Geologist
Cominco Ltd.
Vancouver

Mr. J.G. Simpson
Exploration Manager
Cyprus Anvil Mining Corp.
Vancouver

Industry Personnel (Continued)

Mr. W.M. Sirola
Exploration Geologist
Kerr Addison Mines Ltd.
Vancouver

Mr. D. Tenney
Geologist
Whitehorse Copper Mines Ltd.
Whitehorse

Mr. R.E. Van Tassel
Manager, Exploration
United Keno Hill Mines Ltd.
Whitehorse

Mr. Paul White
Prospector and Contractor
Whitehorse

Government Personnel

Mr. F. Alden
Land Use Administrator
DINA
Yellowknife

Mr. E.M.R. Cotterill
Assistant Deputy Minister,
Northern Affairs Program
DINA
Ottawa

Mr. A.E. Ganski
Regional Manager, Land Resources
DINA
Yellowknife

Dr. J.P. Hea
Acting Director,
Non-Renewable Resources
DINA
Ottawa

Dr. C.M. Trigg
Trigg, Woollett Consulting Ltd.
Edmonton
(also Past President,
Alberta Chamber of Resources)

Mr. C. Vaydick
Prospector
Yellowknife

Mr. H.P. Wilton
Project Geologist
Cominco Ltd.
Yellowknife

Mr. E. Boodle
Land Use Administrator
DINA
Yellowknife

Mr. G.C. Evans,
Head, Land Policy
DINA
Ottawa

Mr. D.J. Gee
Chief, Land Management Division
DINA
Ottawa

Mr. R.W. Hornal
Regional Director, Northern Operations
DINA
Yellowknife

Government Personnel (Continued)

Dr. R.D. Hutchinson
Senior Advisor, Mineral Policy Sector
Energy, Mines and Resources
Ottawa

Dr. O.H. Loken
Director,
Northern Environmental Protection
DINA
Ottawa

Mr. R. McLeod
Acting Regional Director,
Northern Operations
DINA
Whitehorse

Mr. I.G. Petrie
Head, Land Use
DINA
Ottawa

Mr. A.H. Jones
Chief, Water Resources Division
DINA
Ottawa

Mr. D. MacKinnon
Acting Director-General,
Northern Resources and Economic Planning
DINA
Ottawa

Mr. J.M. Patterson
Chief, Mining Division
DINA
Ottawa

Dr. M.J. Ruel
Director-General, Northern Environment
DINA
Ottawa

APPENDIX II: DOCUMENTS CONSULTED

In addition to published sources referenced in the report, the following documents were examined in the course of the study:

Applications, Permits, and Inspection Forms

Application for Land Use Permit

- . Blank form

Land Use Permits

- . Archer, Cathro & Associates Limited, Permit No. Y76F209, 3 June 1976
- . Canex Placer Ltd., Permit No. YA7C153, 8 November 1977
- . Cominco Ltd., Permit No. N77C539, March 21, 1977
- . Cominco Limited, Permit No. YB7J053, May 18, 1977
- . Cyprus Anvil Mining Corporation, Permit No. YA7D122, September 1, 1977
- . Essex Minerals Company, Permit No. N78C777, January 31, 1978
- . Hudson Bay Exploration & Development Co. Ltd., Permit No. YA8C231, April 20, 1978
- . Texas Gulf Inc., Permit No. N77C687, August 2, 1977
- . Urangesellschaft Canada Ltd., Permit No. N77C599, April 22, 1977
- . Urangesellschaft Canada Ltd., Permit No. N77C710, October 12, 1977

Land Use Inspection Report

- . Imperial Oil Ltd., Permit No. N77A697, inspected 14 November 1977

Correspondence

- . Letter from M.P. Phillips, Chairman, Land Use Committee, Yukon Chamber of Mines, to Hon. Judd Buchanan, Minister, Indian and Northern Affairs, dated March 23, 1976 concerning Amendments to Land Use Regulations
- . Letter from A.C. Ogilvy, Manager, Yukon Chamber of Mines to Hon. Warren Allmand, Minister of Indian Affairs and Northern Development dated February 11, 1977 concerning Territorial Lands Act: Amendments to Land Use Regulations
- . Letter from Ewan Cotterill, Assistant Deputy Minister, Northern Program to Chambers of Mines; Regional Directors, DINA; Commissioners of Yukon and Northwest Territories; and senior officials of Energy, Mines and Resources and Department of Environment dated July 26, 1978 concerning the present study by the Centre for Resource Studies
- . Open Letter from R.A. Granger, President (on behalf of the Directors), Yukon Chamber of Mines to Hon. Hugh Faulkner, Minister, Indian Affairs and Northern Development dated July 19, 1978 concerning Northern Development Policy
- . Open Letter from J. Hugh Faulkner, Minister, Indian and Northern Affairs to R.A. Granger, President, Yukon Chamber of Mines, dated August 10, 1978 concerning Northern Development Policy

Correspondence (Continued)

- . Open Letter from R.A. Granger, President, Yukon Chamber of Mines to Hon. J. Hugh Faulkner, Minister, Indian Affairs and Northern Development dated August 17, 1978 concerning Northern Development Policy
- . Open Telegram from H.T. Fargey, Executive Vice-President, Cominco to Hon. J.H. Faulkner, Minister, Indian and Northern Affairs dated August 25, 1978 concerning Withdrawal of Lands from Exploration
- . Letter from Frederick G. Higgs, Manager, British Columbia & Yukon Chamber of Mines to Ewan Cotterill, Assistant Deputy Minister, Indian and Northern Affairs, dated September 7, 1978 concerning Centre for Resource Studies, Queen's University - DINA Assessment

DINA Internal Documents

- . Administrative Guidelines Territorial Land Use Regulations, April 1977
- . Land Use Permits - Mineral Exploration and Related Community Consultation, 1977
- . Standard Land Use Operating Conditions; a compendium compiled by Land Use Section, DIAND, Yellowknife, November 1977
- . Organization Chart and List of Responsibilities, December 1977
- . Administration of the Territorial Land Use Regulations, January 1978
- . Flight Restrictions Information Conservation of Caribou Baker Lake, July 1978
- . Land Use Permits - Number of Permits Issued by Year, July 1978

Documents Prepared by Industry

- . Territorial Land Use Regulations prepared by Yukon Chamber of Mines, December 1975
- . Preliminary Report on the 'Baker Lake Issue' prepared by U. Rath, The Mining Association of Canada, 1978
- . Major Components and Conflicts of an Emerging Government of Canada Policy for the North by Ulli Rath, The Mining Association of Canada, June 1978
- . Various company files relating to government regulation of northern exploration activity

Government Publications

- . A Description of the Prospectors' Assistance Program Yukon and Northwest Territories, issued by the Queen's Printer, 1967
- . Presentation of Brief by the Yukon Chamber of Mines: Transcript of Proceedings of Committee of the Whole, The Yukon Legislative Assembly, *Debates and Proceedings*, 4 December 1975
- . Mines and Minerals Activities 1975
- . Procedures Licensing Legislation & All That, December 1977 - a public guidebook to regulations governing Northern Natural Resources Development
- . Mines and Minerals Statistics, May 1978

Legislation and Regulations

List

- . Regulations, Orders, Acts and Ordinances applying to mining in the territories

Legislation

- . Yukon Placer Mining Act; R.S., c.Y-3; amended by R.S., c.49(1st Supp.); 1972
- . Explosives Act; R.S., c. E-15 including: Explosives Regulations established by P.C. 1956-349 amended by P.C. 1956-1552; P.C. 1963-1740; P.C. 1964-1852; P.C. 1966-2228; P.C. 1967-1586; P.C. 1968-1607; P.C. 1969-1928; P.C. 1972-2345; P.C. 1973-573; P.C. 1973-2917 and Ammonium Nitrate and Fuel Oil Order made by P.C. 1957-335; 1974
- . An Act Respecting Quartz Mining in the Yukon Territory; R.S.C. 1952, c. 301 as amended by 1966-67, cc. 25, 96, & 64

Regulations

- . Territorial Coal Regulations; made under the Territorial Lands Act, P.C. 1954-1979 and amended by P.C. 1965-1819; P.C. 1967-2227
- . Territorial Land Use Regulations; made under the Territorial Lands Act, P.C. 1977-532, 3 March 1977
- . Canada Mining Regulations, P.C. 1977-3149, effective 3 November 1977
- . Territorial Dredging Regulations, made under the Territorial Lands Act, P.C. 1954-1920

Ordinances

- . Explosives Use Ordinance, September 1963
- . Blasting Ordinance, March 1972
- . Mining Safety Ordinance, July 1976
- . Northwest Territories Mining Safety Ordinance and Mine Safety Rules, July 1977

Orders-in-Council

- . P.C. 1977-2529 amending the Territorial Lands Act, September 1977
- . P.C. 1977-3149 amending the Territorial Lands Act and the Public Lands Grant Act, November 1977
- . P.C. 1976-1505, amending the Prospectors' Assistance Regulations, June 1976

Statements of Government Policy and Priorities

- . Canada's North, 1970-1980; Statement of the Government of Canada on Northern Development in the 70s. Presented to the Standing Committee on Indian Affairs and Northern Development by the Hon. Jean Chrétien Minister of Indian Affairs and Northern Development on March 28, 1972
- . Political Development in the Northwest Territories; Government of Canada Background Policy Document, August 1977

Statements of Government Policy and Priorities (Continued)

- . Notes for a speech by J. Hugh Faulkner, Minister, Indian Affairs and Northern Development to Northwest Territories Council Opening Session, January 1978
- . Notes for a speech by J. Hugh Faulkner, Minister, Indian Affairs and Northern Development, April 1978
- . Press Release, 'Falkner Announces Northern Yukon Land Withdrawal,' July 1978

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FREYMAN, ANDREW J. (1978) *The Role of Smaller Enterprises in The Canadian Mineral Industry with a Focus on Ontario*, Ontario Ministry of Natural Resources, Toronto.

RIPLEY, HARLE A. and ROBERT E. REDMANN, with James Maxwell (1978) *Environmental Impact of Mining in Canada*, Centre for Resource Studies, Kingston.

STATISTICS CANADA (1977) *Canada Year Book, 1976-77* (CS 11-202).

_____ (1978) *General Review of the Mineral Industries, 1975* (26-201).

URQUHART, ELIZABETH (1978) *The Canadian Nonferrous Metals Industry: An Industrial Organization Study*, Centre for Resource Studies, Kingston.

WALLACE, IAIN (1977) *The Transportation Impact of the Canadian Mining Industry*, Centre for Resource Studies, Kingston.