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ECONOMIC DEVELOPMENT PROSPECTS IN YUKON

One of a series of reports
on development prospects
in the provinces, territories,
and regions of Canada
prepared by *Canada*
the Department of Regional Economic Expansion



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**ECONOMIC DEVELOPMENT PROSPECTS
IN THE YUKON TERRITORY**

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PREFACE

In 1973, the Department of Regional Economic Expansion issued a series of reports on the economic circumstances of each of the provinces and territories and the prospects for development. These reports were used in discussions which led to the successful implementation of a new federal-provincial mechanism, the General Development Agreement, which is designed as a flexible tool to pursue regional development in Canada. This mechanism has as its central objective the formulation of integrated federal-provincial regional development strategies based on the identification and pursuit of development opportunities.

With the aid of this report, it now appears that the mid-1970s represented a period in many respects, as fundamental adjustments occurred internationally and within Canada. The report, in conjunction with the recent public discussion on the appropriate role of business, industry and government in the economy, suggests that this is an appropriate time to review in a comprehensive fashion, some major economic issues affecting regional development. This report is the first comprehensive review of regional economic issues and opportunities by examining the major economic sectors and the economy's performance. In addition, it identifies policy issues and instruments which are developed and which have a bearing on the potential for regional development.

The report begins with a description of the economic development of Yukon as an assessment of the economic performance of Yukon. It provides a context for the discussion of the issues which bear on its economic development. Federal and territorial approaches to development are then discussed. The following section on development opportunities is the main body of the report. In this section, the current economic development opportunities are identified and potential economic development opportunities are highlighted.

It is a truism that, in any regional economic development strategy, the identification of development opportunities is a key element. The report identifies development opportunities in Yukon and suggests that the identification of development opportunities is a key element in the development of a regional economic strategy. The report also identifies policy issues and instruments which are developed and which have a bearing on the potential for regional development.

The report is intended to provide a basis for the development of a regional economic strategy for Yukon.



YUKON

PREFACE

In 1973, the Department of Regional Economic Expansion issued a series of reports on the economic circumstances of each of the provinces and their prospects for development. These reports were useful in discussions which led to the successful implementation of a new federal-provincial mechanism, the General Development Agreement, which was designed as a flexible tool to pursue regional development in Canada. This mechanism has as its central objective the formulation of integrated federal-provincial regional development strategies based on the identification and pursuit of development opportunities.

With the aid of hindsight, it now appears that the mid-1970s represented a watershed period in many respects, as fundamental realignments and adjustments occurred internationally and within Canada. These considerations, in conjunction with the recent public discussion concerning the appropriate roles of business, labour and governments in the economy, suggest that this is an opportune time to review, in a comprehensive fashion, some major economic issues and factors affecting regional development. This report represents the first comprehensive DREE review of territorial economic circumstances and opportunities by examining the major factors affecting the Yukon economy's performance. In addition, it explores the policy issues and instruments which affect development planning and which have a bearing on the potential for realizing development opportunities.

The analysis begins with a detailed description of factors relating to economic development and an assessment of the economic performance of Yukon. This section provides a context for the next section which deals with specific development problems facing the territory and the issues which bear on its economic development. Federal and territorial approaches to development are then discussed. The following section on development opportunities is the central focus of the report. In this section, the comparative advantages of the territory are described and potential economic development opportunities are highlighted.

It is a truism that, over time, regional economic circumstances and development opportunities will continue to change and evolve. In a similar vein, it is apparent that economic development will continue to require an evolving spirit of policy coordination within and between various orders of government. In this context, it is hoped that this report will serve as a backdrop to discussions on the economy and to the further formulation and implementation of integrated development strategies and, at a broader level, contribute a spatial dimension to economic policy-making over the medium term.

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1. OVERVIEW

In area, the Yukon territory comprises 536 327 km² and occupies the northwest corner of Canada. In 1979, of the 24 068 Yukon inhabitants, more than 15 400 are located in Whitehorse, with the rest scattered in 12 smaller communities across Yukon.¹

The main economic activities in Yukon centre around the extraction of resources and tourism. Government, by virtue of its relative size, plays a major role in the economy. With a good system of roads linking most of the centres of population with Alaska and southern Canada, the required transit system is in place to service the tourism industry and the local travel needs of the residents. Hydro-electric power currently produced in Yukon is utilized to service local needs, but there is a potential for further expansion in the production and use of power. The level of local needs and the timing of production are difficult to ascertain. The timing and skill of commitments to pipeline and mining developments are important considerations.

Historically, the territory has experienced several investment booms, beginning with the Gold Rush in 1898 and continued with military and other government expenditures, especially during World War II, and with mineral exploration and development on a relatively minor scale until the middle 1960s. Recently, with the growth of the government sector and mining development, the territorial economy has become more stable.

Yukon is now approaching another critical stage in its development with the likelihood of several major projects, led by the proposed Alaska Highway gas pipeline. Substantial preparation is required to maximize economic benefits to residents while minimizing the anticipated social disruptions.

¹ Population data based on Yukon estimates. Statistics Canada sets population at only 21 800 (Catalogue No. 91-001). The latter may be downward biased due to survey difficulties.

2. ECONOMIC DEVELOPMENT FACTORS

2.1 Background

Prior to the 1898 Gold Rush, Yukon was one of the last frontiers of North American fur exploitation. Although perhaps not as profitable as in some other regions, the Hudson's Bay Company's trading posts operated in the territory for more than 30 years prior to the discovery of gold in the Klondike. The fur trading activity brought most of the early pioneers to the territory and led to the identification of many of the water routes and campsites, which were later used for transportation and as community sites by the gold seekers.

The Gold Rush brought economic boom and bust, but left a legacy of corporate responsibility for transportation, merchandising, and in some cases power generation, housing, and such civic responsibilities as employment services, welfare, and schooling. Private companies inherited these responsibilities and continued in that role long after the Gold Rush had subsided. This situation remained much the same until the outbreak of World War II, with the territorial government gradually accepting these responsibilities.

The advance into mid-20th century technology took place as a result of the efforts of the military, mainly American, to ensure the defence of the north during World War II. A chain of airports from Edmonton to Alaska was constructed through a joint Canada-United States project, the Northwest Staging Route. The Alaska Highway, following much the same route from Edmonton to Fairbanks, was completed in 1942-43. The Canol Pipeline, built to bring oil from Norman Wells, Northwest Territories, to Whitehorse, was completed in 1944, along with an accompanying service road and a refinery in Whitehorse. In the late 1940s and 1950s, the construction of the Distant Early Warning Line brought further transportation and communication advances.

After the wartime effort had diminished, the facilities remained, as well as a much more sophisticated administrative structure. However, the "make it quick and get out" approach to development continued to hinder the economic potential of Yukon. The construction of these large-scale projects did not result in any substantial business investment which would have long-term benefits for the territory. Few, if any, advantages accrued to the indigenous population, who bore the brunt of the social disruption caused by this activity.

The late 1950s and 1960s increased economic activity in Yukon, based mainly on the extension of roads in the territory and the mineral exploration activity. Throughout this period, several new mines got under way, the last of which was the Cyprus Anvil open-pit lead-zinc mine, which started operation near the new community of Faro in 1970. Although no major new mines have

opened since that time, mining has long been the mainstay of the economy, and exploration work continues at a high rate in many areas of the territory. Many deposits have been found, indicating significant long-term potential. Placer mining for gold, spurred by the current market price, has reached its highest level since the Gold Rush.

Second to mining is the tourist industry. The transportation infrastructure, some dating back to the Gold Rush days, has played an important role for travellers in the territory. A major tourist destination, Alaska, has led to a high level of travellers passing through the territory.

The availability of an expanding transportation base also led to the establishment of a small but growing forestry industry located primarily in the southeastern area of the territory.

In many ways, the growth which took place over the past 20 years has taxed the level of services and infrastructure available in Yukon. Future major development opportunities are anticipated but may be constrained by the inadequate power, rail and road systems and the availability of skilled labour. The failure to involve indigenous people, primarily those of Indian ancestry, in past developments is now resulting in strong opposition to impending major resource projects.

2.2 Factors

2.2.1 Demographic Trends

The Yukon territory's population increased by slightly more than 41 per cent in the 1971-78 period, considerably more than that of Canada as a whole. During this period, the net migration into the territory averaged approximately 1 000 persons per year. In July 1978, the population of the territory was estimated at 23 306, an increase of 6.7 per cent from June 1976.

The Yukon population has experienced considerable fluctuations over the years, ranging from a high of over 30 000 during the Gold Rush to a low of 4 100 in 1921. During the late 1950s and early 1960s, the territorial economy began to expand under the stimulus of government assistance for mineral exploration and development. Population increased from 9 000 in 1951 to 14 600 in 1961. However, the population declined between 1961 and 1966, following the subsequent withdrawal of military personnel and other federal employees. Since 1966, there has been a resurgence.

Closer examination of census data indicates that the main reasons for fluctuations in population have consisted of the flow and ebb of southern Canadians during periods of peaks and troughs in resource development activity in Yukon. People of

Indian ancestry have had a more balanced distribution of population by sex and age than have residents of European origin. Currently, Indian people account for approximately 30 per cent of the total Yukon population.

The major growth centre in Yukon continues to be Whitehorse with a population of 16 676, followed by Faro (1 785), Watson Lake (1 409) and Dawson City (1 129) in March of 1979. The balance of the population (4 000) is scattered in several small communities with Elsa, at 649, being the largest.

Over the medium term, the territory can be expected to maintain the current level of net in-migration. Continued mineral development and expansion of the tourist industry will tend to encourage continued in-migration. The construction of the proposed Alaska Highway gas pipeline will also result in the hiring of many non-Yukon residents for the required skilled work force; however, few of these are expected to take up permanent residence in Yukon.

2.2.2 Resource Endowments

Yukon's most significant resource potential lies in its minerals. Much of the territory lies in the Cordillera region which extends northward from British Columbia. The mineral belts running west to east contain: copper and nickel; copper-molybdenum; lead-zinc; and tungsten with gold, silver, asbestos, barite, iron and uranium. Exploration for Yukon's mineral resources has been increasing over the years, and several excellent deposits have been identified and could come into production in the early 1980s. The territory is also believed to contain substantial pools of oil and gas. However, it remains just a matter of time and the establishment of pipelines before their potential can be determined and tapped to generate revenue rather than absorb exploration dollars.

Another important resource is hydro-electric power. Several locations have been identified as potential sites for new power plants. The Northern Canada Power Commission has recently been granted funds to undertake feasibility and environmental studies for a site on the Yukon River. This site could increase the territory's electrical output by 500 megawatts over the current level of 80 megawatts. In addition, or as an alternative, thermal coal deposits or other hydro sites could be exploited for electrical generation.

The potential of the forest industry is not clear because of inadequate inventories of forest resources. The southeast portion of the territory around Watson Lake is most suitable for tree growth and has the greatest concentration of merchantable timber. The rest of the territory contains a variety of species of limited potential. Generally, sawmill operations will be limited to supplying local markets, with the

exception of the Watson Lake area where some export potential exists.

The tourism industry centres on the Gold Rush history, Yukon's position as a link to Alaska, and its reputation as a virtually untouched natural wilderness with a great variety of geological formations and scenery. This reputation is enhanced by some of the most impressive big game outfitting areas in North America. Yukon is improving its image as an area with many accessible and interesting attractions and a growing number of businesses are developing to provide required tourism-related services.

2.2.3 Market Environment

Markets for most Yukon products are determined externally, either in southern Canada or, as in the case of minerals, internationally. The remoteness of new mineral developments and the lack of infrastructure, particularly transportation and power, make mining and exploration acutely sensitive to international market fluctuations.

Local market development for any product is limited by population size and distribution and the high-cost transportation system. The population is small and scattered, and distribution costs are high by southern standards. Local demand is insufficient to support significant economic diversity and, in many cases, existing demand can be more easily met by southern suppliers with lower unit costs.

The tourism industry relies on American tourists for its largest percentage of visitors. However, they are usually on their way to or from Alaska. People from other areas of Canada make up the second most active group to travel to Yukon. For the most part, these people are coming to Yukon to enjoy its natural wilderness. Although not nearly as large a number, offshore visitors to Yukon are a significant group and tend to spend significantly more in Yukon than the average of the former groups.

2.2.4 Sub-Territorial Distribution

The population of Yukon and the base of economic activity is centred in Whitehorse and along the Alaska Highway in the southern part of the territory. Mineral production and exploration, although supported from this southern base, is centred largely in the central and northeastern areas. The large centres tend to be non-native in population. The majority of people of Indian ancestry live in more remote communities.

2.3 Overview of Economic Performance

2.3.1 General Indicators

Until 1966, the population and economy of Yukon were subjected to several periods of rapid growth followed by rapid decline. Data since this period indicate a stabilizing trend, with the rather gradual and modest growth pattern which is evident today.

From 1966, the population of Yukon has risen at an average annual growth rate of 3.9 per cent. A slightly higher pattern of growth is evident in the net value of commodity production from 1967 to 1977 for a number of the more important economic sectors. The economic engine behind the figures is the influence which the mining industry has on the economy of Yukon. Much of this increase can be attributed to the Cyprus Anvil lead-zinc mine at Faro, which started production in 1969-70.

Yukon residents have higher than average income levels. In the mining sector, the levels of wages and other benefits are high to ensure that a skilled labour force is available. However, the cost of living tends to offset the benefits of higher incomes. The cost of consumer goods has been consistently 15 to 35 per cent higher than in southern Canada. Recent price increases have been spurred on by prospects of major development projects such as the Alaska Highway gas pipeline.

Retail trade has experienced steady growth. Whitehorse building permits, the number of visitors to Yukon, and the amount of tourism expenditures indicate a pattern of strong business growth, although periodic setbacks have occurred. In general, previous boom and bust cycles have not produced the types of sustained growth trends currently being experienced in Yukon.

2.3.2 Labour Markets

The number of people of labour force age in Yukon increased from 6 424 in 1951, to 9 343 in 1961, to 12 020 in 1971, and to an estimated 14 800 in 1976. Estimates for total full-time employment in Yukon indicate strong growth during 1977, followed by almost no increase in 1978. Over the past two years, a net increase of 891 new jobs has occurred in Yukon. This growth, from 7 536 in January 1977, to 8 427 in December 1978, represents an increase of almost 11.8 per cent. However, almost all of this increase, approximately 11.1 per cent, came in 1977. In 1978, employment rose by only 58 positions, or only 0.8 per cent. The slowdown in employment growth in 1978 is mainly due to the closure of the Clinton Creek asbestos mine during the year.

2.3.3 Investment Climate

Investment in Yukon is dependent upon government and the private non-renewable resource sector. The region has experienced several investment booms in the past few decades -- mining, military, and government, including construction of the Distant Early Warning Line.

Future investment in Yukon appears promising, particularly if many potential large-scale development projects proceed. Even if no decisions on major projects are made before 1986, the Yukon economy should be able to remain relatively stable. However, if no new development takes place, especially in the mining sector, and if the mines now operating on less-profitable ore bodies should close, Yukon could lose its only rail link to tidewater as the result of decreased rail traffic. Indeed, the rail line has already been threatened with closure because of an inadequate profit picture.

The exhaustion of Cassiar Asbestos ore at Clinton Creek has had a major negative impact on the economic operation of the railroad. Cyprus Anvil has been left as the sole major private user, and even with the inclusion of the mineral products shipped from some of the smaller producers, the railroad is on very tenuous ground. Yet the potential for major new developments makes the medium- to long-term position of the railroad look much more encouraging, if it can be sustained for that long.

2.4 Sectoral Review and Medium-Term Prospects

The medium- to long-term prospects for development in Yukon are promising, but highly dependent upon future large-scale private and public investment decisions. Most of the initiatives which are currently under consideration are located in the southern half of the territory. The construction of the Alaska Highway gas pipeline, future expenditures on the upgrading of the highway system, potential growth in the forestry and tourism industries, and future power development, will tend to provide more permanent jobs and a more stable future for all of the communities along the Alaska Highway. These developments could broaden the role of Whitehorse as the major supply, business and institutional centre in Yukon, and will also provide some of the smaller centres, such as Watson Lake and Haines Junction, with the opportunity to become more important trade and service centres.

The medium-term prospects for each major economic sector are described in this section in order of relative consequence during the medium-term.

2.4.1 Construction

The construction industry now rates third in the territory in terms of production. Most of the commercial, residential and apartment construction has taken place in

Whitehorse with institutional construction projects occurring in various centres. Indications are that the value of such construction will increase across the territory in the early 1980s as a prerequisite to the Alaska Highway gas pipeline.

A major transportation project has just recently been initiated -- the Shakwak Project, which includes the upgrading and paving of over 483 km of highway from Haines, Alaska to Haines Junction, Yukon and from there to the Alaska border. This project is expected to take 10 years to complete at an estimated cost of over \$200 million.

The proposed construction of the Alaska Highway gas pipeline is the largest single industrial initiative currently under discussion. The Yukon segment of this pipeline is now estimated to cost \$2.5 billion. However, the economic benefits of this project to Yukon are not expected to be large or of long duration. Conversely, the social problems and community disruptions normally associated with such large projects could have longer lasting effects. Apart from the construction phase benefits, the pipeline will also provide the territory with another source of long-term income.

2.4.2 Mining and Exploration

By December 1978, mining remained the most important industrial sector in Yukon, with over 1 139 people employed directly in the industry and an estimated 1 400 people employed indirectly in service and allied businesses. Mining accounts for over 80 per cent of the economic activity generated by the private sector of Yukon. However, Yukon mining activity is a relatively small part of total Canadian mineral output, with the very important exception of lead, for which Yukon produces 26 per cent of total Canadian output.

Although indices of employment, production and sales indicate a strong mining sector, no new mines have commenced operation since Cyprus Anvil brought its open-pit lead-zinc mine into production in 1970. The Clinton Creek closure of 1978 is but another example of the instability of mining.

Mining exploration has been very active in the past few years, with an estimated expenditure in 1978 of \$18 to \$20 million. In January 1977, 44 active mining companies were operating in Yukon; by December 1978, the number had increased to 61. In terms of claim activity, the numbers of new quartz-mining claims staked and recorded have risen from 8 559 in 1975 to 12 266 in 1977. Exploration programs have uncovered a number of prospective new mines. The majority of these require transportation infrastructure and a source of power not now available. Although some of these mines could become active in the early 1980s, a major increase in mineral revenues from new sources is not expected before 1985.

Rising energy prices and recently completed highway facilities to the Bonnet Plume area bring these coal resources closer to utilization. A joint venture by Pan Ocean Oil and Mountain Mines, with 340 200 hectares under lease, has found low-ash coal in shallow seams of 2 to 8.8 m from four drill holes.

The strong market for metals, combined with the low value of the Canadian dollar, is expected to provide an impetus for continued exploration and development, in spite of constraints imposed by unsettled native land claims, high costs of production, and lack of infrastructure.

Exploration for and development of oil and gas resources has been an important activity in Yukon for nearly 30 years. The first land holdings for exploration were acquired in 1952. After four years of geophysical exploration, the first well was drilled in the Eagle Plain area in 1958 and was soon abandoned. A subsequent well, Western Minerals Chance No. 1, discovered large quantities of gas and oil in 1960 in the Eagle Plains area of northern Yukon, and in 1964 at Beaver River in the southeast corner of Yukon near the British Columbia border. Gas has now been produced from the Beaver River field for the last eight years.

As of December 31, 1978, in Yukon a total of 136 permits, covering an area of 21 143 km² and 142 leases covering an area of 2 117 km² were in effect. During the period 1972-77, no new leases were issued. However, since the 1977 amendments to the Canada Oil and Gas Land Regulations, leases have been issued to holders of existing permits. The permits that expired between 1972-77 had an option under the Canada Oil and Gas Land Regulations to acquire a special renewal permit or accept leases. The bulk of the permittees chose to accept leases.

Exploration work in northern Yukon (north of 65°) has been more or less dormant since 1972, with one company doing some drilling in the winter of 1977-78 at 66° north. Presently, there is a moratorium on exploration work in the Old Crow Flats. Exploratory work tends to be concentrated in the southeast Yukon, closest to southern markets and existing pipelines, where quick cash flow is far more likely to be generated.

With regard to expenditures and revenues on exploration work north of 65°, \$123 million has been spent, \$23 million in the Porcupine River area. In 1972, the Government of Canada received a revenue of \$534 000 from oil and gas activity in Yukon. This was, in effect, 43.6 per cent of the total revenue from natural resources in Yukon. Between 1972 and 1976, oil and gas revenue had declined by 46.6 per cent to \$249 000. This represents only 12 per cent of total revenue from natural resources. In addition, mining and forest activity have

fluctuated during this period, which also contributed to the overall changes in natural resources activity.

The future for oil and gas development in Yukon looks bright. The two main areas for potential oil and gas fields are in southern Yukon (south of 65°) and in the southeast corner of Yukon, adjacent to the British Columbia-Northwest Territories border. In the north, the Eagle Plain, Peel Plateau, Porcupine and Old Crow areas have good potential, although to date only a few discoveries of oil and gas reserves have been made. Nevertheless, the prospect of a pipeline facility along the Dempster Highway, to provide access and marketing of oil and gas reserves, should further stimulate exploration activity in these areas. In the southeast corner, the potential for oil and gas development looks optimistic. In 1978, Columbia Gas discovered a new commercial gas field, Columbia et al Kotaneelee E-37, and development work is presently under way. In 1977, several wells were drilled and tested in the Beaver River area east of Watson Lake. Because they proved successful, a gas plant was proposed, and is presently under construction.

2.4.3 Tourism

Of the private sector, tourism is at present the second highest income producer in the territory. While 1976 and 1977 showed a decline, 1978 brought impressive gains, with the number of visitors reaching 342 000, and estimated expenditures reaching \$33 million. This upward trend is expected to continue in 1979.

The Government of the Yukon Territory is heavily involved in the promotion of tourism in Yukon, and looks upon the industry as an area where considerable developmental effort should be placed in the future.

Potential exists for further expansion of the tourism industry; however, due to the seasonality of the industry, capacity is limited in the summer months, and in excess the rest of the year. The current marketing strategy is to lengthen the tourism season in the spring and fall and to highlight the attractiveness of the territory as a convention centre in off-season months. Territorial representatives are active in marketing shows in many centres across North America and in Europe and the Far East. The lower value of the Canadian dollar is expected to assist these marketing efforts and contribute to the trend of increased tourism traffic and expenditures in Yukon.

2.4.4 Hydro-Electric Power

Power generation increased by over 96 per cent between 1971 and 1976, with the current capacity estimated at 80 megawatts per year. A large percentage of the power for industry and the larger centres is produced from hydro generation plants.

However, most of the power generated for remote communities is supplied by diesel generators, resulting in rapid increases in the cost of power as the price of diesel fuel escalates.

Plans are being advanced for the development of further hydro-electric capacity. The Northern Canada Power Commission is undertaking a \$3-million feasibility and environmental study in relation to potential hydro developments on the Yukon River. If such a project proceeds, it would increase the power-generating capacity in Yukon to 500 megawatts. Such an undertaking would, of course, require large government expenditures. The proposed Alaska Highway gas pipeline and the territory's mining industry could provide a substantial market for hydro-electric power.

2.4.5 Forestry

Softwood, primarily white spruce, is found in commercial quantities in southern Yukon. Growth is slow, with replacement sometimes taking more than 100 years. There is a local market for all of the lumber now produced in Yukon, with additional potential markets in Alaska and the southern United States.

Annual forestry production has risen to 1 247 million cubic metres in 1977. Based on various studies, this is a small percentage of potential production levels. To date, timber cutting permits have been limited in terms of the total cut. This policy is likely to continue due, in part, to limited knowledge of the size of the resource. The only area which has timber available in amounts required for larger operations is the southeast in the vicinity of Watson Lake. However, to be efficient, production would need to increase considerably and operations must be able to compete in outside market areas. High costs of production and transportation impose immediate disadvantages in competing for these markets.

There is potential for increased activity in the forestry sector, but future developments will be highly dependent upon better resource information and the ability of producers to compete in markets outside the territory.

2.4.6 Service Sector

Significant expansion is dependent upon developments in the primary sectors and major construction projects.

2.4.7 Trapping, Hunting and Fishing

Although exact numbers of full- and part-time trappers are difficult to determine, a significant portion of the population derives economic as well as social and cultural returns from land-based activities. Returns from trapping remain an important component of cash income for many people of Indian ancestry. However, the number of individuals and their families

who can sustain themselves entirely from the proceeds of trapping is small.

The potential for expansion within the fur industry is limited. While Yukon furbearer populations may be impressive in total, they are low in density, and high transportation costs considerably reduce profitability. As the population grows, increasing the pressure of fur harvesting to provide or supplement incomes, the profitability of trapping can be expected to decrease in the absence of technological improvements. Of primary importance is the dependence of the fur industry on a highly volatile international market.

Subsistence hunting and fishing remain an important element of the traditional lifestyle and represent a major contribution to the local economy of many more remote communities. The fragility of the wildlife resource, combined with a rapidly expanding population, is expected to limit the potential growth of land-based activities of this nature.

2.4.8 Transportation

The transportation industry in Yukon has three basic elements: rail, highway, and air services. These elements have played an important role in the past and present development and servicing of the economy of Yukon.

The territory has had the advantage of a comprehensive system of airports and roads which were built through the period of World War II and subsequently improved to service the mining industry. Consequently, the territory is serviced by Class I, II and III air carriers, as well as by the trucking industry. However, distance and volume factors make the movement of people and goods expensive.

The White Pass and Yukon Railroad is in danger of being closed down by its parent company due to the need for large capital expenditures for line improvements. The long-term impact of such a decision upon the economy of Yukon is difficult to assess, especially with the Carcross-Skagway Highway nearing completion. Considerable investment in upgrading the highway would be required to support the large trucks required by Cyprus Anvil as an alternative to the railway for year-round travel. Recently, however, short-term rates for goods being shipped via the railroad have been increasing.

Trucking continues to expand in Yukon. To some extent it is eroding the role of the White Pass and Yukon Railroad as the sole transporter of mineral products to tidewater. As highway improvements continue to take place, trucking is expected to play a more important role in the shipment of goods to and from Yukon.

The recent completion of the Dempster Highway will ease access to coal deposits in the Bonnet Plume area, as well as provide access to the Beaufort Sea in the Northwest Territories. That same highway also improves the viability of a parallel natural gas line to feed into the proposed Alaska Highway natural gas pipeline.

13. DEVELOPMENT PROBLEMS AND ISSUES

Constraints and issues are discussed in this section in order of relative importance of their effect on medium-term development opportunities.

3.1 Constraints To Development

3.1.1 Native Land Claims

The unresolved native land claims issue and apparent lack of progress in negotiating settlements are imposing a serious impediment to economic expansion, particularly in the area of non-renewable resource development. The high potential for conflicting land-use requirements, when settlements are concluded, has resulted in a reluctance by government to dispose of or otherwise commit land for development purposes. The controversy surrounding this situation and resulting uncertainty creates an atmosphere not conducive to investment. The need for a rapid settlement is highlighted by the major developments which will soon be under way.

3.1.2 Infrastructure

Although Yukon has a relatively well-developed highway system, little access exists to the areas which are expected to see mineral development in the future. Much of the current work being carried out is of a "catch-up" nature, bringing the standard of highways up to the level of that in the rest of Canada. The construction of the Alaska Highway pipeline will require accelerated upgrading and extensive repair to cope with heavy trucks.

In addition to the current uncertainties surrounding the White Pass and Yukon Railroad, major railway expansion will probably require large infusions of public funds. In the meantime, freight rates may continue to rise, increasing the cost of transportation for both raw products and consumer goods.

The present limited supply of electrical power could constrain normal growth of existing activities, and has more serious ramifications for future development, especially mining which requires a reliable source of power at reasonably stable cost. At present, the capacity in the existing system cannot support new large-scale mining. The situation would be aggravated if the power requirements for the Alaska Highway gas pipeline or for the development of the proposed smelting activities were also included. Power supply in more remote communities is dependent upon high-cost diesel-generating units. Although the Northern Canada Power Commission has to study the impacts of a potential hydro-electric power plant site, the lead time to bring such a plant into production is several years. Other development commitments in Yukon are in part contingent upon a decision to proceed with new hydro-electric developments. Thermal coal could also be exploited for electrical generation.

3.1.3 Social Conditions

Development in Yukon is hampered by social conditions which, because of their severity and extent, may be more limiting than similar conditions elsewhere in Canada. The overall remoteness of the territory, as well as the limited availability of amenities, combined with the existence of a small and basically unskilled labour force, results in a climate which often serves to limit possible investment opportunities.

3.2 Development Issues

3.2.1 Spin-Off Effects

Most of the effects of the significant industrial spin-offs associated with large-scale development in Yukon have historically not been located in the territory. Most production, particularly in the non-renewable resource area, is shipped to outside markets with little value-added occurring inside the territory. The majority of employees are recruited in southern Canada or from among people who have recently arrived in the territory. Similarly, spin-off benefits, such as in the service industries, are usually exploited by those who have come north in response to these opportunities. As a result, the long-term resident population, which is primarily of Indian ancestry, continues to be by-passed by the mainstream of economic activity.

3.2.2 Land Use -- Traditional Versus Developmental

Considerable controversy surrounds land-use management in Yukon. The issue tends to centre on the conflict between traditional extended use of the fur and wildlife resources by native people, and the intensive use patterns inherent in large-scale resources. Opposition by some native groups to development is very strong throughout Yukon and will probably continue as long as land claims remain unresolved.

This issue also has important social and cultural implications. The traditional economy carries with it certain cultural values which do not mesh well with an industrial economy. The traditional settlements tend to be more cohesive social units than are found in modern urban environments, and their members tend to be less mobile than their southern counterparts.

3.2.3 Agriculture

There is some pressure on the territorial government to release large tracts of land for agricultural use. While large areas of Class 3 and 4 land occur in southern Yukon, the constraints imposed by climate, high production costs, high transportation costs, limited local markets and lack of infrastructure would appear to negate any attempt at commercial agriculture in the territory. As well, large-scale disposition of land for agricultural use could cause conflict with an eventual land claims settlement.

4. FEDERAL AND TERRITORIAL INSTRUMENTS

Government in Yukon includes the operations of 22 departments and agencies of the Government of Canada, the territorial government, and a structure of local governments.

The impact of government activity on the economy in general is greater than this number would imply. Individual departmental policies and regulations, together with the taxation, royalty and incentive framework, are predominant influences on the investment climate in the territory. Major infrastructure facilities and essential services are provided by two federal Crown corporations: Northern Canada Power Commission and Canadian National Telecommunications.

The Northern Development Branch of the Department of Indian Affairs and Northern Development has been generally responsible for economic development in Yukon, but their involvement to date, as well as direct government intervention and the economic development process, has been limited. The other major components involved have been the Job Creation Branch, of the Canada Employment and Immigration Commission, and the Indian Economic Development Fund. The introduction of programing in Yukon by the federal Department of Regional Economic Expansion, and the establishment of the territorial Department of Economic Development, will go a long way toward ensuring that government mechanisms are in place to respond to the needs of the Yukon community. The need for further development programs directed toward long-term residents is now critical because of the imminence of several major projects.

5. ECONOMIC DEVELOPMENT OPPORTUNITIES

5.1 Synopsis Of Comparative Advantages

In many respects, Yukon is considered a frontier economy with large resource potential which has not been exploited. Many of the factors which are identified with a frontier economy, such as remote location, small population and limited infrastructure for development purposes, are found in the territory.

However, given these limitations, Yukon still has many advantages. The territory is richly endowed with a tremendous wealth of largely untapped natural resources including minerals, forests, coal, and potential hydro-electric power sites. The territory's wilderness landscape and existing history also provide many opportunities for tourism development.

At present, the Government of the Yukon Territory wishes to actively pursue the development of its resource potential and is encouraging policies which will result in this development. However, development is contingent upon the willingness of both the public and private sectors to invest, and on the competitiveness of Yukon exports in world markets.

5.2 Specific Opportunity Areas

Mineral production dominates the private sector of the Yukon economy and is expected to continue to do so in the foreseeable future. The vast uninhabited mountain areas provide one of the largest potentials for mineral development in North America.

Yukon has at least 1 600 known mineral prospects, many of them in various stages of exploration and development. In addition, new exploration activity has increased, with over 60 firms now working in Yukon. Recent indications are that for at least six of the known deposits, there are plans for production by the early 1980s, given the provision of necessary infrastructure, particularly electrical power. However, unless suitable training programs and labour relations are established, most new jobs will be taken by migrants from southern Canada and most of the spin-off benefits will accrue outside Yukon.

Hydro-electric, and possibly thermal-electric power developments could remove a major constraint to other developments such as mining. The construction and operation of any such facility, along with its power grid, would also have considerable impact on the economy. The current site under investigation for a hydro-electric generating plant is in the Carmacks area in central Yukon. A new facility in the 500-megawatt range would provide short-term construction employment as well as some long-term operational positions in some smaller Yukon communities.

The forest industry in Yukon is, at present, comprised of several small, marginal operators, using uneconomical and largely unsuitable equipment. Research into the requirements for modernization and rationalization of existing operations is necessary, along with a comprehensive resource inventory.

The construction of the proposed pipeline from Alaska will have the greatest impact on the social structure of Yukon since World War II. Other construction activity, including roads and hydro projects, will be largely dependent on government policy.

Expansion of the service sector is largely dependent on two factors: activity in the primary sector, principally mining, and the ability of local entrepreneurs to benefit from the spin-offs of major construction projects.

The provision of hydro-electric power could also have a great deal of influence on the discussions currently taking place concerning the establishment of an aluminum smelter near Whitehorse and a lead-zinc smelter at Faro. Smelters are large users of energy and such proposals could not proceed without some form of secure power supply. Both smelters would require skilled labour which is currently not available locally. Such developments would also require substantial public and private investment in community infrastructure and servicing industries. If the population base were to be substantially affected, new industries could develop to supply locally some of the products which are currently imported to the region.

5.3 Potential For Government Action

5.3.1 Planning

A comprehensive assessment of the economy of Yukon is necessary. Examining various opportunities in light of constraints and prospects for future development is a key element in preparing for long-term economic development. This could establish the basis for subsequent government action.

The development strategy must consider not only all the sectors of the economy, but also the needs and aspirations of all groups residing in the territory. There is a need to identify the resources available and to more accurately determine their potential for development. This will contribute toward the provision of a sound basis to guide future investment and decision-making.

Increased interaction between residents of communities affected by development activities and agents responsible for these activities is required in order to maximize the local benefits of development. Providing a forum through which local people can participate in identifying, assessing, planning and

realizing economic opportunities which are in keeping with their own aspirations may encourage development activities at the community level.

5.3.2 Effects of Major Projects

Positive action by government is required to ameliorate the adverse effects of the major projects now in the planning stage. Emphasis on affirmative action programs is necessary to enable people of Indian ancestry, who comprise a significant percentage of the permanent population, to reap some of the benefits which will result from these projects.

6. SUMMARY AND CONCLUSIONS

Most of the development opportunities currently under consideration for Yukon remain speculative. Both spatial and sectoral linkages occur in all of these initiatives. Transportation and power infrastructure are two requirements which are common in most cases. Highway upgrading is expected to continue whether other development takes place or not, but new roads or rail construction will probably take place unless new mines or other resource projects are developed. Mining development is expected to extend into the eastern section of Yukon, with attendant benefits for service centres located on current access routes. Tourism development, the Shakwak Project, and the Alaska Highway gas pipeline may have their greatest impact on centres along the Alaska and Klondike Highways. Smelter development would benefit Whitehorse and the Faro-Ross River area.

