



Bulletin

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PIPELINES AND POLLUTION - THE PROBLEM OF ARCTIC OIL

The following passages are from an address by Mr. Jean Chrétien, Minister of Indian Affairs and Northern Development, to the 1971 Symposium on Petroleum Economics and Evaluation in Dallas, Texas, on March 9:

...The Canadian northland is not just big, it is immense. The Northwest Territories covers 1.3 million square miles; the Yukon Territory, 200,000 square miles. Together they make up 40 per cent of our country. Their southern boundary is at the Sixtieth Parallel, 1,200 miles north of New York. From there to Cape Aldrich on the northern tip of Ellesmere Island is a distance of another 1,500 miles. That's the distance from Galveston to Boston....

In contrast to its vast area and large resource potential, the Canadian North is underpopulated. It has only 60,000 people, over half of whom are Indians and Eskimos who live around the edges of the northern ocean and deep in the northern forests. These people are going through the difficult process

of adapting themselves to the modern technologies and ways of life being introduced from southern Canada while at the same time attempting to maintain their own identity and their own culture. This period of transition from one way of life to another is very difficult but in many ways unavoidable. Our task is to ensure that the effects of such a change are positive, not negative, and herein lies the challenge.

NO BARRIERS AGAINST OUTSIDERS

The greatness of Canada has been its openness as a country. We have no desire to build walls between ourselves and the outside world. In Northern Canada, we have benefited by major foreign investment from United States, French, Japanese, British, German, and Belgian concerns.... We shall continue to require large amounts of capital to maintain our pace of development and expansion. While much of this investment will come from within Canada, a significant part of it will have to continue to come from outside our country.

In addition to Canadian, French and German interests in the area of oil exploration, we have represented in the North all the large integrated major U.S. oil companies and many of the intermediate and smaller companies. All of these firms are at present spending large sums of money in the risky business of exploration. About ten years ago, exploration expenditures throughout the whole of the Canadian North were in the order of \$10 to \$15 million annually. This year expenditures may jump to a total of \$100 million and we expect the figure to go beyond this in the next few years, particularly if the expenditures are followed by commensurate successes.

...At the present time, some Canadians are asking themselves if there are ways of increasing their own investments in their own economy, or if the present controls are adequately protecting Canadian

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interests. The point I want to emphasize to you today, is that foreign capital need not fear such questioning, for we will remain an open country seeking positive, not negative, answers to these questions.

CANADA AHEAD OF THE GAME

In the North, the Government has made a conscious decision to be at the forefront of resource development. The Government has programs of direct financial support and indirect capital investment to ensure that those projects which show the promise of profitable return to both public and private sectors receive the encouragement required. Through Panarctic Oils Limited, a consortium formed in 1967, which includes many of Canada's leading oil and mining companies and the Government of Canada, industry and government have co-operated in a unique relation to undertake the exploration necessary to develop the oil and gas potential of the Arctic islands. The Panarctic experiment is an exciting one, and represents the extent of our commitment to the development of the North. As background to this agreement, in 1966, the oil and gas permits that had been issued six years earlier throughout that portion of the Arctic islands - known as the Queen Elizabeth Islands - were coming to an end and, in order to continue their life, the companies holding them would have to put quite large amounts of money in the form of guarantee deposits. Money was just not available, either in Canada or from the outside. We were about one year and a half ahead of the game, or in other words ahead of the Prudhoe Bay discovery, but of course we did not know that at the time.

The Canadian Government was convinced that the oil and gas-potential of the Arctic islands was extremely high. It was convinced that it would be in Canada's interest to develop this potential at as early an opportunity as possible since this would bring many benefits. It also wanted to ensure that Canadians or Canadian capital play the large role in this activity. As it happened, many of the companies in the play at the time were Canadian, although there were also quite a few from outside Canada, mainly from the United States.

ADVENT OF PANARCTIC

The Government and a consortium of these companies got together in a unique partnership - that is, they jointly formed Panarctic Oils Limited and the Government purchased 45 per cent of the equity stock of the company. This initial financing was for \$20 million which, at that time, seemed like a large amount of money. That was just a little over three years ago.

Since that time, Panarctic has developed into a medium-size oil exploration company; of course, it has no production as yet and no other associated activities, but it is a living, active organization competing on exactly the same basis as any other

company; it gets no special favours from the Canadian Government and the Canadian Government is represented on its board of directors in the same way that any other large shareholder would be. Today, Panarctic has spent \$40 million; it has sufficient capital for another \$35 million and, by the end of 1972, will have spent \$75 million in exploring for oil and gas in the Arctic islands. I expect that before oil and gas is actually brought to market from the islands it will spend at least this much again, if not more.

Little did any of the shareholders know that, six months after formation, Prudhoe Bay would be discovered, that the *Manhattan* would lead the way in developing a commercial Northwest Passage from the point of view of technology if not from the point of view of economics, and that Panarctic would make two major gas discoveries - one on Melville Island and one on King Christian Island, out of its first eight wells drilled. One discovery for every four wells drilled is not a bad ratio, but one major field discovery for every four wells drilled is, I think, something of a record anywhere in the world.

There are some who interpret the industry-government partnership in different ways and who put a political, ideological interpretation on what was in fact a pragmatic, practical approach to the resolution of several challenges which we, as Canadians, were facing at the time in our North. Perhaps Panarctic will provide an example which might be used as appropriate in other situations in the future, but again I would want to emphasize that this approach is likely to be taken only where special circumstances of time and place warrant and not on some predetermined plan.

CHALLENGE OF TRANSPORTATION

The transportation of northern resources to the markets of the world is a great challenge. It is a challenge not only in a technical sense or in a financial sense but to our sensitivity as a Government and as a country to the people of the North and the land in which they live. It is no longer possible for government or industry to take a single-minded approach to the question of development. A total approach is required, where a concern for profit and development is balanced with a concern for people and their environment.

At the present time, we have insufficient reserves in the Canadian North to warrant a natural-gas pipeline to southern markets. However, if we maintain our discovery success in the Arctic islands, we may have enough gas in the near future to make it feasible to construct a pipeline due south from this region.

I might add as well that, while Prudhoe Bay resources may be out of the commercial reach of the tanker *Manhattan*, this is not necessarily so for



Winter Games "snow birds", with Barnaby the Games mascot.

SECOND CANADA WINTER GAMES

The Second Canada Winter Games, held in Saskatoon, Saskatchewan, last month, cost a total of \$1.5 million - \$1,100,000 from the Federal Government and \$200,000 each contributed by the province and the city.

The First Canada Winter Games took place in Quebec City in February 1967, followed by the Summer Games in 1969, in Halifax and Dartmouth. The object of the Games is to develop a higher calibre of Canadian athlete for international competition.



Ski champion Nancy Greene, prepares to officially open Blackstrap, the mountain made by man, south of Saskatoon, Saskatchewan.

The Games are awarded by the Minister of National Health and Welfare to medium size cities to develop their sports facilities through community involvement.

The city of Saskatoon having won the bid for the Winter Games about a year ago, appointed a president, an executive and a board of directors. In Saskatoon there were some 500 volunteers who helped put the games together for some 2,300 athletes from across Canada. These athletes were chosen to represent their provinces from about 300,000 athletes competing at all levels.

MAN-MADE MOUNTAIN

Ski competitions at the Games were held on Blackstrap Mountain, 300 feet high, 2,000 feet above sea level, which was created in four months by the city of Saskatoon. This man-made mountain boasts a ski run of 1,400 feet and a 50-meter jump.

Saskatoon also built a skating oval with a standard 400-meter track.

GAMES VILLAGE

The problem of accommodating most of the athletes and coaches was solved by converting a large four-storey department store into what was known as Canada Games Village, into which trailers, campers and tents were installed on "streets" and "avenues" named after Canadian provinces and territories.

Prime Minister Pierre Elliott Trudeau and National and Health and Welfare Minister John Munro opened the games, which lasted for ten days.

WORKING HOLIDAY FOR STUDENTS

Some 3,200 post-secondary Canadian students will be able to enjoy a working holiday in Europe this summer, Manpower and Immigration Minister Otto E. Lang announced recently. They will be selected under an International Student Summer Employment Exchange program involving Canada and ten other countries - Austria, Belgium, Britain, Denmark, Finland, France, Germany, the Netherlands, Norway and Sweden. About 2,500 foreign students will come to Canada for a similar working holiday.

This is the first time the Department of Manpower and Immigration has acted as an intermediary on such a large scale in an international student summer employment exchange program. "The Departments of External Affairs and Secretary of State have collaborated with my Department in this project," Mr. Lang said. "We hope the program will add a cultural dimension to the working experience of the students."

Foreign governments or agencies in Europe have developed jobs for Canadian students. For example, the German Government's Central Labour Office will place 1,500 students, France will make available 700 job opportunities, Belgium 500, Britain 300, the Netherlands 200. The balance will be divided among the remaining host countries.

ELIGIBILITY

To be eligible, students must be Canadian citizens registered at or attending full-time a college, university or technological institute; they must be 18 years or older (21 for Belgium) by their departure date; and they must have a basic knowledge of the language of the host country.

Students must agree to work for at least two months, beginning about mid-May or early in June.

As the work week in Europe is generally longer than in Canada, it is not unusual for workers to put in 50 hours or more a week in their jobs. While European wages are lower than in Canada, room and board will be provided in some cases.

Three Canadian student organizations, the Association of Student Councils in Toronto and Halifax; Tourbec Inc., in Montreal and Quebec City; and Western Student Services Society, Vancouver, will assist participants in securing low-cost air fares and travel insurance.

MONTREAL'S TEUTONIC TOWERS

A German firm, Neue Heimat International, which has sponsored apartment buildings in France, Italy, Israel and South America, will give financial and technical assistance to the real-estate promoters of Mountain Place Limited in Montreal for a similar project, estimated at \$8 million, to be located in the west end of the city.

The complex, which will consist of two 19-storey

towers, one with 193 apartments and the other with 175, will be open for rental in October 1971 and May 1972, respectively. Each tower will be equipped with three elevators, air-conditioning with individual controls, as well as surface and underground parking areas. Forming an L shape, they will be linked by a three-storey central building which houses an indoor swimming pool and adjoining terrace under a glass roof. Surrounding grounds will be landscaped with trees and shrubbery.

AID TO AFRICAN UNIVERSITY

Canada is to give \$1 million to help expand the University of Botswana, Lesotho and Swaziland, Mr. Mitchell Sharp, Secretary of State for External Affairs, announced recently. With an equivalent contribution from Britain, the grant from the Canadian International Development Agency will finance the first phase of an expansion program at the unusual southern African university.

UBLS, a small but significant institution, began in 1945, as Pius XII University College, in the Roma Valley of Basutoland (since 1966, Lesotho). With assistance from many sources it has grown into a regional university, serving 2 million people of three non-adjacent developing countries, where most people live by agriculture and raising livestock. Its goals are the improvement of the general standard of education, the qualification of men and women for senior positions, and the preparation of students to take part in the development of their country's resources.

The main campus is at Roma, but an agriculture diploma is available at the Swaziland Agricultural College and University Centre, and UBLS has widespread extension programs in education, agriculture, government and community development.

The expansion program calls for new campuses at Gaborone, the capital of Botswana, and at Manzini, Swaziland. Further facilities will be added later under the second phase, which will bring the total cost to about \$4.5 million.

Besides funds, Britain and Canada provide technical assistance. The University has 23 British teachers on staff and, over the next 18 months, CIDA plans to provide about 20 Canadian instructors, double the number working there at present.

CMHC INTEREST-RATE REDUCED

Mr. H.W. Hignett, President of Central Mortgage and Housing Corporation, announced recently that the rate of interest charged on CMHC loans for new and existing housing is reduced to 8¾ per cent effective March 8, 1971.

The rate had been 9¼ per cent since the beginning of this year. From September 1969 until January 1, 1971 the rate had been 9½ per cent.

STRATFORD'S THEATRE IN THE PARK

An extra attraction at the Stratford Festival this year will be the Third Stage, a "theatre in the park" featuring drama, mime and puppets.

Michael Bawtree, the Festival's director, will direct *The Red Convertible*, a new play by one of the leading dramatists of Latin America, Enrique Buenaventura, in its première in English.

The National Theatre of Puppet Arts will present Excerpts from Shakespeare, and Montreal Marionettes will present opera, ballet and other musical works, including *Hansel and Gretel*, *Peter and the Wolf*, *The Sorcerer's Apprentice* and *The Brave Little Tailor*.

Rounding out the season at the Festival's new theatre will be Adrian Pecknold's Canadian Mime Theatre with a presentation entitled *Shapes and Shadows*.

VISITORS DOWN UNDER

Mr. Jean Chrétien, Minister of Indian Affairs and Northern Development, is leading a 12-man group of members of Parliament, senior officials of government departments and other officials, that will visit New Zealand and Australia to study government programs for the Maoris of New Zealand and the Australian aborigines as well as the development of natural resources in the latter country.

The officials will also study the operations of national parks systems of both countries.

ITINERARY

The party left Ottawa on March 26 and will arrive in New Zealand on March 29 for a three-day stay as guests of the Government. Leaving New Zealand on April 2, the group will arrive in Australia the same day and will depart for the return trip to Ottawa on April 9, having visited Canberra, Sydney and various communities in the Northern Territory *en route*.

PURPOSE OF TRIP

In New Zealand, the main focus will be on how the Maoris and the other segments of the population have been able to develop a social and economic relation considered to be among the most successful in the world.

In Australia, the group will study the administration of the Northern Territory, the development of natural resources as well as the Government's programs for native people.

Mr. Chrétien said: "All the areas in New Zealand and Australia in which we are interested have special relevance for Canada. Both countries have populations that consist in part, as Canada's does, of native people, and I am hopeful that our studies of government programs and the manner in which a viable social and economic system has been co-operatively devised will assist us and our own native

people to achieve an equally satisfactory arrangement — although perhaps not precisely along the same lines."

FEATURES COMMON TO BOTH COUNTRIES

The Minister observed that a parallel could also be drawn between Canada's and Australia's northern latitudes and the efforts being made in both countries to develop the mineral and other sources of wealth in those areas.

"As far as geography and demography are concerned there are many similarities," Mr. Chrétien said. "Canada's northern territories and Australia's North are both rich in natural resources. The problems of inaccessibility are similar. Both are vast land areas containing only scattered and sparsely populated communities. The same needs for improved transportation and communications exist.

"Seeing at first hand how these problems are met by the Australian Government, its industry and its people, could help us in the decisions we must make where Canada's North is concerned," the Minister concluded.

FLAVOUR POWER AWARD

Three scientists on the staff of the Canada Department of Agriculture — Mr. John Kitson, Dr. Hiroshi Sugisawa and Dr. Dugal MacGregor, all of the CDA Research Station at Summerland, British Columbia — recently won the top award in food engineering at an international competition in Paris.

The award, a bronze medallion, was presented by the *Revue des Industries Alimentaires et Agricoles*, a food-trade magazine.

The winning entry is a product that packs the full flavour and aroma of apple juice into a powder, which, when mixed with low-flavoured dry applesauce flakes and rehydrated with water, acquires the aroma and flavour of fresh, homemade applesauce.

The same process can be applied to produce any available natural or artificial fruit flavour.

The process is patented and is creating considerable interest among potential manufacturers and users both in Canada and abroad.

GRANTS FOR NORTHERN ATHLETES

Federal athletic grants, totalling \$30,000, to the governments of the Northwest Territories and the Yukon Territory were announced recently by the Member of Parliament for the Northwest Territories, Mr. R. J. Orange.

The Northwest Territories will receive \$15,000 from the federal Health and Welfare Department's Fitness and Amateur Sport Directorate to help in the development of the Territorial Experimental Ski Training (TEST) program.

TEST is a research project that uses cross-country skiing as a "motivational stimulant" for Indian, Eskimo and Metis people of the North. The program began in 1965 in the Northwest Territories, where it has been notably successful under the coaching of Bjorger Pettersen. This is the first time that TEST has extended beyond the borders of the Northwest Territories.

PIPELINES AND POLLUTION - THE PROBLEM OF ARCTIC OIL

(Continued from P. 2)

Arctic island oil reserves. However, the immediate question is one of pipelines.

It is clear that if the oil and gas reserves of Prudhoe Bay are to be brought to market, they will have to come part, if not the whole of the way by pipeline. In the case of natural gas, I think it will have to be moved all of the way by pipeline and that the likely market would be in the mid-continent region.

We in Canada would welcome the building of such a gas pipeline through our country and would do everything that is reasonable to facilitate this particular development.

With respect to an oil pipeline, it would appear we are facing a somewhat different situation. An oil pipeline would also be acceptable. In other words, if it is felt desirable to build an oil pipeline from Prudhoe Bay direct to the mid-continent market, then a right-of-way through Canada, I am sure can, and will, be made available. However, we shall have to take perhaps more extensive precautions with respect to the manner in which it is built to ensure that the real threat of pollution posed by a possible break in the line is kept to an absolute minimum.

GUIDELINES FOR PIPELINES

...While our attitude towards pipelines must be positive (projects of such dimensions will have a tremendous impact on our economy), many essential non-economic questions must be answered prior to approval being given to such lines. The question really is not whether pipelines will be built but how such lines will be constructed.

Any pipelines built will have to conform to

guidelines set for northern operations. Any line will have to be compatible with the standards - and they will be high standards - set for protecting the northern environment. The financing of the section through Canada will have to be done in a way which will be acceptable to the Canadian Government.

As you may know, my colleague, the Honourable J.J. Greene and myself last August issued guidelines with respect to pipelines through the North, which clearly indicated that the development of such facilities would be welcome but that there would be certain requirements to be met. The ones that I am most concerned with are the protection of the environment, the impact on the social and economic life of the people, and particularly the opportunities northern residents will have to participate in the construction and operation of the pipeline.

The Canadian Wildlife Service is now doing a study on the effect of any pipeline on fish and game, including the migrating caribou.

Through the Arctic Land-Use Research Program my Department is collaborating with a number of universities in soil studies and looking at ways of working in, and crossing, fragile tundra.

Already a group of companies is operating a short experimental oil pipeline at Inuvik in the Mackenzie Delta to determine just what does happen when a pipeline is run across the permafrost. They are now completing their second season of research, and with this and other experiments presently taking place, a body of hard data on pipeline construction is being built up which will help us make responsible decisions for the future.

One of the main motivating forces behind the Canadian Government's desire for the development of its northern areas is the existence of a small, wide-spread, but important segment of our population that lives there - the Eskimo and Indian people. These people want a higher standard of living. They want the opportunity for education, for better housing, for better health, for quality of life that we have. One of the best ways of doing this is to encourage oil and mineral exploration and development, so that these opportunities will be available to our northern peoples on their own ground.

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