REGULATORY CONTROL THE ALASKA HIGHWAY GAS PIPELINE PROJECT

by Carl. H. D. von Einsiedel

Before commenting on the specifics of the regulatory involvement affecting the Alaska Highway Gas Pipeline Project, I would like to philosophize briefly on regulatory control in general.

Regulatory control imposed by any government is often found to be irritating because it imposes restrictions on industry and the general public. Many tend to reject it and to justify its demise by argument.

However, we cannot completely 'argue away' the reason for its existence. There is no doubt that the interests of the public must not be overridden by private considerations of economic gain and that the use of natural resources must be monitored and controlled.

Regulatory agencies have been subjected to sharp criticism. Let us examine one of the several complaints regarding regulatory control. That most frequently heard is that regulatory agencies cause loss of time, require a lot of seemingly unnecessary information, and add to the costs of the products.

I think we must acknowledge that Canada, as compared to many other countries in the world, is subject to only limited regulatory control. As citizens of a true participatory democracy, who must necessarily acknowledge certain merits of regulatory control, we should direct our efforts to improving and updating existing methods. The improving and updating thus becomes the responsibility of both the regulator and the regulated.

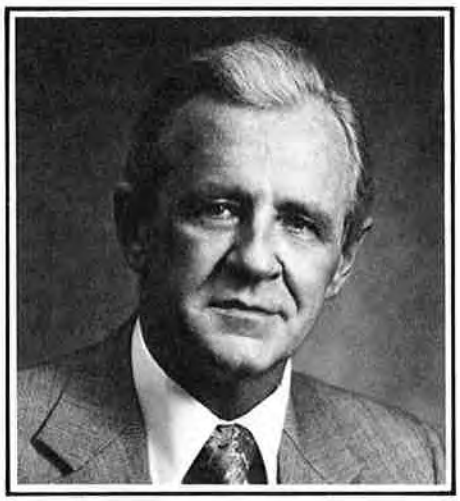
One of the most important prerequisites in respect of regulatory authorities is that not only the policy and decision makers, but also the staff of such authorities, be fully conversant with and knowledgeable of the specific fields and the resultant problems which may arise from the controls proposed to be imposed. At the same time, it is imperative that those empowered to regulate by administrative action, allow for and are willing to listen to claims of the rights of individuals and groups affected by the imposition of regulatory control. Agencies must not only be increasingly responsive to such demands, but must also realize that they are required to act as judges, not mediators, and must be prepared, difficult as it may be, to make sound decisions on the basis of the fullest available information and be willing to defend, **not negotiate**, such decisions.

In recent years individuals and groups, who seemingly have been silent for so long, are now raising their voices to express concerns over and objections to the construction of such projects as pipelines, power transmission lines and other facilities, which may be required for the general benefit of our nations.

If no authorization process and its regulatory contingent existed, many such construction proposals might be tied up in the courts for years, as is often the case in the American system.
While advocates of industry have proclaimed that in many areas existing "over-regulation" stifles industrial progress, they might perhaps reflect on the thought that through litigation, as an alternative, greater loss of time and money, as well as far less certainty that a specific project would materialize, could be experienced.

Let us examine the work that involves most of. During the performance of our duties do we not quite often find that, because no particular regulation exists, shortcuts are being taken which, since

(see Regulatory, pg. 42)



Carl von Einsiedel *was born in Leipzig, Germany, on March 29, 1925. His formal education was obtained in Germany and included studies in Law and Economics.*

Von Einsiedel arrived in Canada in 1951 and after a short exposure to the logging industry, was engaged until 1960 on many major pipeline projects relating to line location, engineering inspection and right-of-way, including the Trans Mountain and Interprovincial oil pipeline, Westcoast and TransCanada gas pipeline projects.

He joined the National Energy Board in May, 1960 as Technical Officer in the Engineering Branch, in 1967 he became Chief of the Right-of-Way Division and in 1975 von Einsiedel was promoted to Assistant Director, Right-of-Way. His responsibilities included supervision of the preparation of all pipeline orders and the technical portion of pipeline certificates; supervision of the examination of all submitted drawings of pipelines, including plans, profiles and books of reference; investigation and reporting on pipeline crossing problems and land owner concerns; liaison with government agencies, pipeline companies and the general public in regard to right-of-way and associated matters.

Von Einsiedel is a member of the Canadian Institute of Surveying. He has been a member of the International Pipeline Committee of the International Right of Way Association for many years, serving as Chairman during 1977/1978.

Regulatory (cont. from pg. 41)

they are not forbidden, are considered to be justifiable? But are they—or in whose judgment are they?

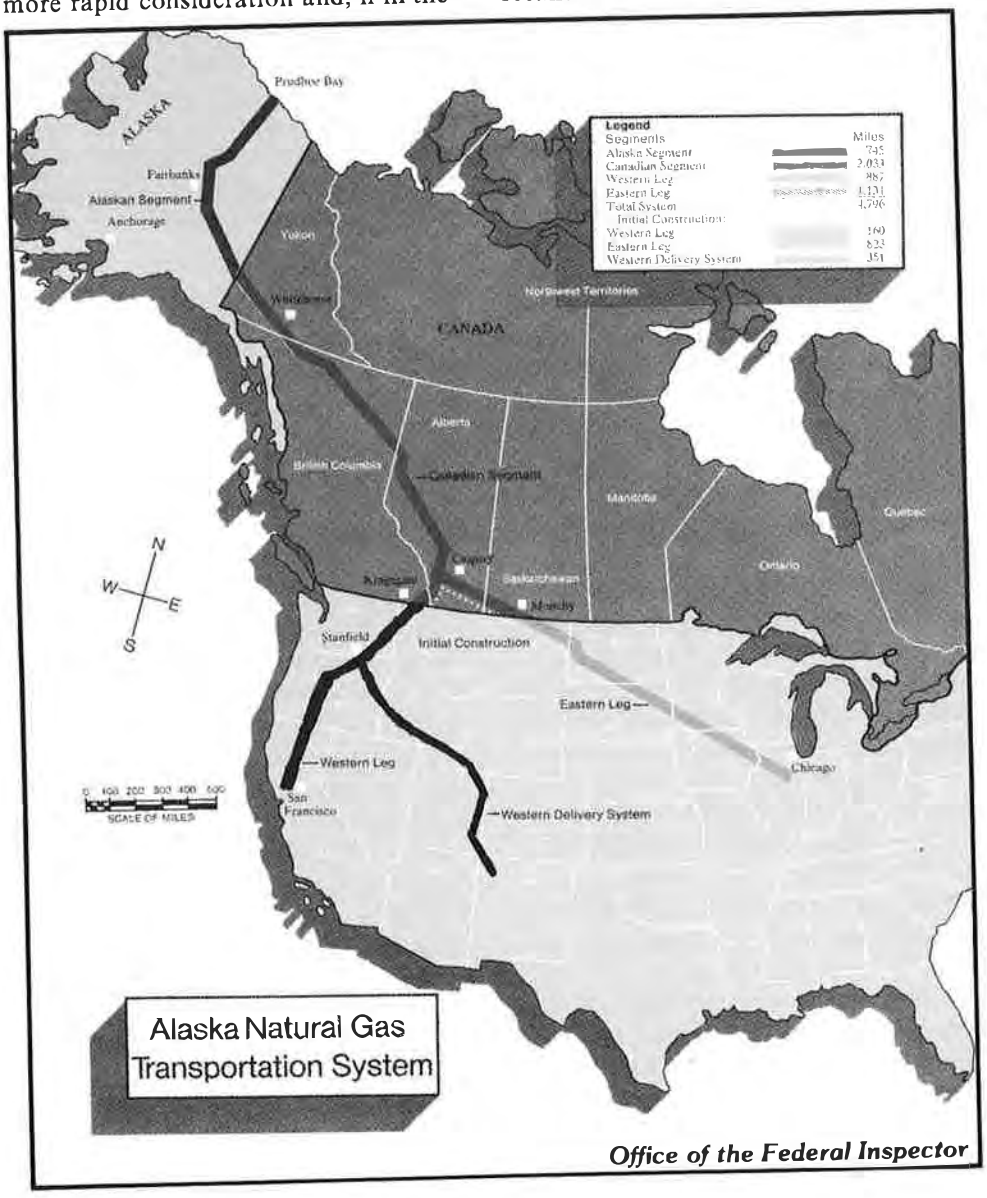
Do we not also find that, when major interests compete either for or against a particular project, the negative proponent tries to restrict or superimpose demands on the proposer? Such demands are sometimes wholly unreasonable, but cannot be rebutted because no regulatory control authority exists which could rule on the need for certain actions.

By gearing planning towards accurate submissions to regulatory authorities, industry benefits considerably from the process and, additionally, saves time and expense by being fully conversant with the requisite regulatory requirements. Moreover, it permits more rapid consideration and, if in the public interest, more rapid approval.

By co-operation much is to be gained. As a staff member of the National Energy Board of Canada for over 18 years and now as Executive Secretary, Operations, of the Northern Pipeline Agency, I have observed and participated in many public hearings held and in decisions made by the Board and the Agency within the triangle of industry, general public and regulatory body.

My experience working with the Northern Pipeline Agency and the National Energy Board, has convinced me that industry, regulatory agencies and the public through a concentrated effort and improved communication and co-operation do achieve objectives beneficial to all. Regulatory control is successful when groups work together.

Let me turn now to the Alaska Highway Gas Pipeline Project. It will be recalled that the National Energy Board made its recommendation to the Government of Canada in June 1977 for the approval of the Alaska Highway Gas Pipeline Project (see map).



Office of the Federal Inspector

On April 13, 1978, **Bill C-25**, known as the **Northern Pipeline Act**, was proclaimed and became law. This Act established the Northern Pipeline Agency to facilitate the planning and to oversee the design and construction of a pipeline for the transmission of natural gas from Alaska.

This Act also gave effect to an agreement between Canada and the United States of America on principles applicable to such a pipeline. **The Northern Pipeline Act** also amended certain other existing Canadian legislation.

The Northern Pipeline Agency is charged with the responsibility of consulting with the governments of the provinces and territories affected by the pipeline, in order to carry out federal responsibilities in relation to the pipeline and to facilitate the efficient and expeditious planning and overseeing of its construction.

The Act is also intended to support Canadian economic and energy interests and to maximize related industrial benefits by ensuring the highest possible degree of Canadian content and participation in all aspects of the planning, construction, procurement of goods and services, as well as the protection of Canadian employment opportunities. Provision has been made for assurance of the lifestyle and well-being and aspirations of the native peoples of Canada. Provision has also been made for possible extension of the Act to cover the Dempster Highway Pipeline Lateral, which could make gas from the Mackenzie Delta in the Northwest Territories available to Canadian consumers.

While ensuring the protection of Canadian interests, the Government of Canada has not lost sight of American interests. The pipeline agreement testifies to this fact. Negotiating teams from our two countries sat down to hammer out an agreement that would maximize related industrial benefits for both countries. Many hours were spent by the teams to make our mutual interests compatible and complementary. These meetings were attended

(see Benefits, pg. 43)

Benefits (cont. from pg. 42)

by experts who were willing to communicate, to substantiate their views and to compromise when necessary. The negotiating sessions were intense and resulted in the agreement signed by the United States and Canada in September 1977.

The agreement states that the pipeline route will begin at the discharge side of the Prudhoe Bay field gas plant facilities. Then paralleling the Alyeska Oil Pipeline southward from the North Slope of Alaska and crossing the Brooks Range through the Antigun Pass, it will continue on to Delta Junction, then southeastward to the Alaska Highway and along this highway to the Alaska-Canada border.

In Canada, the pipeline will closely follow the same highway through the Yukon to the British Columbia border near Watson Lake and will continue across the northeasterly part of British Columbia to the Boundary lake area in Alberta. From there on the pipeline will generally parallel existing pipeline rights-of-way to Caroline, Alberta. From that point one 36-inch diameter line proceeding southwesterly will deliver gas at Kingsgate, British Columbia, at the International Boundary, and a 42-inch diameter line proceeding southeasterly will deliver gas at Monchy, Saskatchewan, again at the International Boundary. From these locations the gas pipelines will interconnect with facilities of the Pacific Gas Transmission Company and of the Northern Border Pipeline Company respectively. It should be noted that this route is the one originally proposed by the applicants, but is different than the route in the Yukon that the National Energy Board said it was prepared to approve.

Canada and the United States also agreed upon the required capacity of the pipeline and were satisfied that the necessary gas volumes would be available to justify fully the large capital expenditure. The agreement also took into consideration equitable financing, taxation, tariffs and cost allocation, and required that goods and services for the pipeline would be on generally competitive terms.

Provision has been made in the agreement for future co-ordination and consultation between our governments, and for consultation among the national regulatory authorities, including the Federal Energy Regulatory Commission and the Office of the Federal Inspector in the United States and the Northern Pipeline Agency and the National Energy Board in Canada.

"If no authorization process and its regulatory contingent existed, many such construction proposals might be tied up in the courts for years, as is often the case in the American System."

Foothills Pipe Lines (Yukon) Ltd. of Calgary, Alberta, is the parent company responsible for the Candian portion of the project. This company is owned equally by NOVA, an Alberta Corporation of Calgary, Alberta, and Westcoast Transmission Company Limited, Vancouver, British Columbia.

The main line system in Canada will be built in five segments by the following subsidiary companies:

- Foothills Pipe Lines (South Yukon) Ltd. - Zones 1 and 2
- Foothills Pipe Lines (North B.C.) Ltd. - Zones 3 and 4
- Foothills Pipe Lines (Alta.) Ltd. - Zones 5, 6 and 7
- Foothills Pipe Lines (South B.C.) Ltd. - Zone 8
- Foothills Pipe Lines (Sask.) Ltd. - Zone 9

A sixth subsidiary, Foothills Pipe Lines (North Yukon) Ltd., will build the Dempster Lateral, if and when it is approved.

The main line through Alaska-Canada-Northern U.S.A will consist of the following lengths (approximate only) and diameters:

- Alaska—1196 km (743 mi.) of 1219 mm (48-in.) pipe
- Yukon—377 km (234 mi.) of 1219 mm (48-in.) pipe and 451 km (280 mi.) of 1422 mm (56-in.) pipe

Present planning calls for the whole of the Alaska segment and the first 214 km in the Yukon to accommodate cold-flow transmission, while the remainder will all be warm-flow.

- B.C. (North)—714 km (444 mi.) of 1422 mm (56-in.) pipe
- Alberta—634 km (394 mi.) of 1422 mm (56-in.) pipe
  (Eastern Leg)—377 km (234 mi.) of 1067 mm (42-in.) pipe
  (Western Leg)—301 km (187 mi.) of 914 mm (36-in.) pipe
- Saskatchewan
  (Eastern Leg)—259 km (161 mi.) of 1067 mm (42-in.) pipe
- B.C. (South)
  (Western Leg)—171 km (106 mi.) of 914 mm (36-in.) pipe
- U.S. Eastern Leg—1840 km (1131 mi.) of 1067 mm (42-in.) pipe
- U.S. Western Leg—1466 km (911 mi.) of 1067 mm (42-in.) pipe

The capital cost for the entire system, excluding that for the Dempster Lateral from the Mackenzie Delta, was originally estimated to be $10.7 billion. This reflected a cost of $4.3 billion for the Canadian segments and $6.4 billion for the American segments. More current estimates (June 1981) indicate that the total costs (including the gas plant in Alaska) will be approximately $45 billion in "as spent" dollars.

The early summer of 1980 was a period of considerable uncertainty. The project seemed to be stalled in a number of areas. The Foothills group of companies set deadlines for the approval of the 1980/81 construction phase of the Western Leg, then called "prebuild": first April 15, then May 15, and then June 15, 1980. A high level of diplomatic activity also took place between Canada and the United States to obtain assurances on the commitment of the U.S. to this project. Finally during mid-July, due to the efforts of the Minister responsible for the Northern Pipeline Agency, H. A. (Bud) Olson, Commissioner and Chief Executive Officer Mitchell Sharp, and their colleagues, the necessary assurances from the United States Congress and the President were received. This enabled the Canadian Government to give its approval to commence construction on July 22, 1980, on certain portions of the Western Leg in Canada. During that

(see Diplomatic, pg. 44)

Diplomatic (cont. from pg. 43)

period of time, because of the uncertainty relating to the project, the companies were understandably somewhat reluctant to proceed with the finalization of the various reports and studies required under very complex technical orders and detailed socio-economic and environmental terms and conditions. One can look back today with satisfaction on the co-operative effort that was put forth by the pipeline company sponsors and the Agency, without cutting corners in the regulatory areas, to make it possible for actual pipeline construction to begin only a few days after that critical target date of July 22, 1980.

Two Parliamentary committees have been established to monitor and report on the activities of the Northern Pipeline Agency and the project in general. The relationship of these committees to the regulatory structure set up by the Canadian Government is illustrated in Figure 1.

The first of these Committees is the **Standing Committee of the House of Commons on Northern Pipelines.**

The Standing Committee, composed of eleven members, maintains a continuing surveillance of the Northern Pipeline Agency and the Alaska Highway Gas Pipeline Project as it progresses. The Agency must submit to the Parliament of Canada matters relative to sections 12, 13, 14, 15 and 22 of the **Northern Pipeline Act**. These in turn are usually referred to the Committee. They include terms and conditions, orders in council, amending, rescinding or adding to the terms and conditions, the transfer of powers to the Minister from other departments, annual reports, and reports of the Auditor-General to Parliament.

Since its formation the Committee has met about 30 times. Testimony has been heard from the Minister responsible for the Northern Pipeline Agency, members of the National Energy Board, officials of Foothills Pipe Lines (Yukon) Ltd. and the Agency.

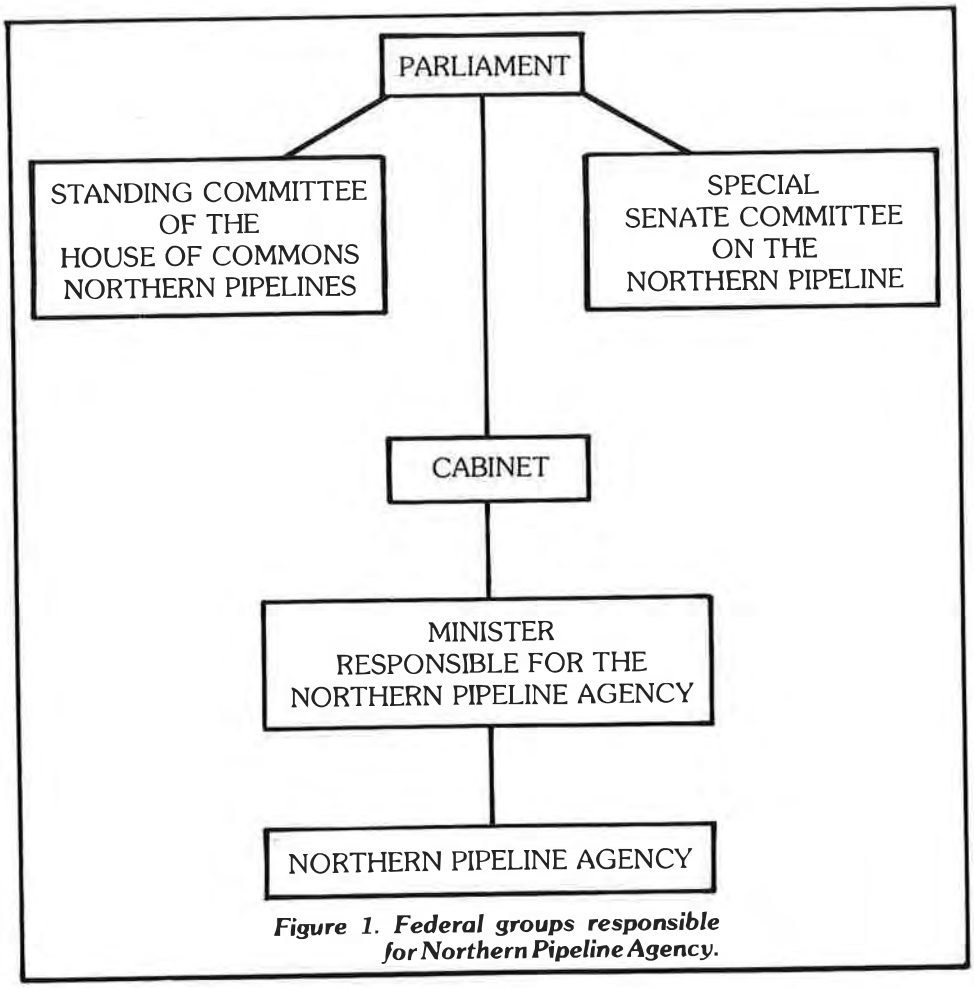


Figure 1. Federal groups responsible for Northern Pipeline Agency.

The second committee is the **Special Committee of the Senate on the Northern Pipeline**. Composed of twenty members, the Committee's original terms of reference were;

1. to enquire into the planning and construction of the pipeline;
2. to consider all reports, orders, agreements, regulations, directions and approvals referred to in the **Northern Pipeline Act**; and
3. to report to the Senate thereon at least once in each session of Parliament during the planning and construction phase.

However, these terms of reference have been expanded. The Senate Committee is now looking into other major energy developments such as the Trans Quebec and Maritimes Pipeline and enhanced recovery of hydrocarbon resources. This committee has also met about 30 times since its formation.

It might be appropriate to elaborate on the complexity of approvals that have been granted to date by the Minister responsible for the Northern Pipeline Agency, the National Energy Board, the Minister of Transport, the Railway Transport Committee of the Canadian Transport Commission, and last but not least, the Northern Pipeline Agency.

The Minister had to grant more than 24 approvals of some importance, including every domestic purchase of over $500,000 and every foreign contract or purchase larger than $100,000, until the procurement plan was approved by the Minister on July 25, 1980.

The procurement plan sets out the procurement policies and procedures of Foothills in response to the requirements of the Act to maximize Canadian content and industrial benefits. The Minister has specified the following items as "Designated Items":

- Line Pipe (36 in. in diameter or larger)
- Turbomachinery
- Valves and Fittings (20 in. in diameter or larger).

The procurement of these items is subject to approval by the Agency with respect to bidders' lists, specifications, bid evaluations and contract awards.

The line pipe contract alone (with Ipsco and Stelco) is estimated over the

(see Procurements, pg. 45)

Procurements (cont. from pg. 44)

life of the project to amount to over $2 billion, including estimated future inflation adjustments. The total steel requirement for this line pipe will amount to approximately 1.4 million metric tonnes or 1.54 million tons.

In addition, the Minister also concurred with the approval by W. A. Scotland, an Associate Vice-Chairman of the National Energy Board appointed by the Board as the Designated Officer and a Deputy Administrator of the Northern Pipeline Agency, of those socio-economic and environmental plans that were given wide prior public circulation and review, insofar as these applied to the 1980/81 construction phase of the Western Leg and the 1981 construction phase of the Eastern Leg.

A. B. Yates, a Deputy Administrator of the Agency, is responsible for policy and programs and, under his immediate supervision, coordinates the input from all sources, including Agency staff, in the preparation of these socio-economic and environmental plans and the presentation of them in their final form for approval.

Furthermore, the Minister concurred with a total of 24 acknowledgements of compliance and leaves to proceed under Condition 17 of Schedule III to the **Northern Pipeline Act**.

The Minister has delegated to Harold S. Millican, the Administrator of the Northern Pipeline Agency, in addition to his duties as Chief Operating Officer, the authority to concur on his behalf with certain approvals, including the above mentioned acknowledgements of compliance and leaves to proceed.

The National Energy Board has dealt with the approvals for export of additional Alberta gas as an intermediate term measure to utilize portions of the pipeline comprising the Western and Eastern Legs. Furthermore, the Board also, with the approval of the Governor in Council, amended Condition 12 of Schedule III to the **Northern Pipeline Act**, which made the financing of the early construction phases possible.

The Board has delegated to the Designated Officer and Deputy Administrator of the Agency many of its powers, duties and functions, on which I will elaborate later, as well as transferred to the Minister of State for Economic Development certain of its powers under Parts I, II and III of the **Gas Pipeline Regulations**, which were also subsequently delegated to W. A. Scotland. The above mentioned regulations deal with certain aspects of design, construction and testing of the pipeline.

Under the provisions of section 76 of the **National Energy Board Act**, many detailed approvals were also required for the construction of the Western and Eastern Legs, such as crossings of navigable waters, railways, highways and other utilities. In these instances, the Minister of Transport approved the crossing of 16 navigable waters in Alberta, Saskatchewan and British Columbia. The Railway Transport Committee of the Canadian Transport Commission approved a total of 12 railway crossings and, as earlier mentioned, under delegated powers of the National Energy Board the Designated Officer approved a total of 31 complex crossing orders, some of which have been amended because of realignments and field design changes. Furthermore, under the provisions of section 29 of the **National Energy Board Act**, the Designated Officer also approved plans, profiles and books of reference, for a total of approximately 846 (528 mi.) of pipeline.

Prior to these approvals, in late January 1979, five very complex technical orders had been issued to the five segment companies of Foothills. These orders required that, prior to the construction of any portion of the pipeline, each of the Foothills companies submit the following for the approval of the Designated Officer:

(a) the detailed engineering design, including such specific test, operations and maintenance procedures as are relevant thereto;
(b) the proposed pipeline project scheduling and cost control procedures; and
(c) the construction and inspection specifications and procedures.

In making such submissions, the Foothills companies were further ordered to comply with applicable related National Energy Board regulations.

These orders deal with highly technical engineering requirements which apply to the overall system in Canada and with which the Foothills group of companies must comply. Similar technical information is routinely required by the National Energy Board for other pipelines. However, for the Northern Pipeline the **Northern Pipeline Act** called for the

(see Foothills, pg. 46)

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Foothills (cont. from pg. 45)

issuance of such orders and directives by the Designated Officer with Ministerial concurrence.

Resulting from the requirements of these orders, approximately 120 individual technical approvals were granted by the Designated Officer. These apply only to approvals related to the Western and Eastern Legs.

About 30 approvals were given, with Ministerial concurrence, relating to specific socio-economic and environmental requirements.

Before any actual construction could begin, the Designated Officer, under the provisions of the **Nothern Pipeline Act**, held two sessions with landowners and Foothills Pipe Lines (Alta.) Ltd., relating to route objections by landowners and, subsequently, eight specific route approvals were issued.

Foothills (Alta.) was able to resolve a number of route objections by negotiating directly with landowners without involvement by the Agency.

Furthermore, the **National Energy Board Act** under section 73 provides that a pipeline company may take without the consent of the owner a right-of-way of up to 18,288 m (60 ft.) in width. Because of the large diameters of the new pipeline and the commitment to preserve topsoil, the greater width seemed to be required by Foothills.

Hearings were held during 1980 and 1981 at Claresholm, Sundre, Olds, Cochrane, Brooks, Strathmore, Calgary and Rocky Mountain House in Alberta, as well as in Shaunavon and Regina in Saskatchewan. The Designated Officer, under delegated powers from the National Energy Board, issued a total of 245 orders approving the taking of lands for pipeline purposes in excess of 18.288 m (60 ft.). This might indicate a large number of potential expropriations but, in fact, only a total of 17 landowners in Alberta went to arbitration before the court to date. The complex list of approvals granted will give you an appreciation of the multitude of matters that needed resolution and approval before construction could start.

Finally the first pipeline construction, clearing the right-of-way along the Flathead Ridge section in southeastern British Columbia, began during the last days of July, 1980. Pipeline laying commenced in August, 1980 along the Western Leg in Alberta and British Columbia and these sections of pipeline were completed in early 1981. "Leave

(see Energy, pg. 47)

Correction
Northern Pipeline Agency Right Of Way Activity

Dear Mr. Powell:

I was pleasantly surprised to see the above noted article in your February, 1982 magazine. As Manager, Right-of-Way for the Northern Pipeline Agency, I am writing this letter to thank you for the Association's interest in the Agency and to point out some inaccuracies in the article that need to be set straight.

The Project, in which the Foothills Companies and the Northern Pipeline Agency are involved, is known as the Alaska Highway Gas Pipeline Project. It is sponsored by two major Canadian companies, NOVA, an Alberta Corporation, of Calgary, Alberta and Westcoast Transmission Company Limited of Vancouver, British Columbia, with the Foothills Group of Companies owning the various segments of the pipeline system. The pipeline, when completed, will take Alaskan gas from the Northwest Alaskan Pipeline Company at the Alaska/Yukon border and transport it through western Canada for delivery to other U.S. pipeline companies at two points on Canada's southern border, one at Kingsgate in the Province of British Columbia and the other near Monchy, in the Province of Saskatchewan. The Project also provides that, in the future, a lateral may be added to the system, called "the Dempster Lateral", to bring northern Canada gas to southern markets.

The Northern Pipeline Act was enacted by the Parliament of Canada in 1978, for the purpose of establishing the Northern Pipeline Agency. The Agency's prime task is to facilitate the planning and construction of the Alaska Highway Gas Pipeline. In this regard the Agency is also the regulator of the Project, assuming responsibility for regulation under various statutes including parts of the National Energy Board Act. In this role the Agency has been actively involved since the spring of 1980 in monitoring and regulating the activities of the various Foothills Companies in constructing the southern portions of the pipeline.

The Right of Way Group, a part of the Scheduling and Regulatory Section of the Northern Pipeline Agency, carries out a number of functions including, but not limited to:

1. the monitoring of the Foothills Companies land acquisition and damage settlement programs.
2. ensuring compliance with pertinent Acts, including such things as:
   (1) the route selection and route determination process under Condition 18.1 of Schedule III to the Northern Pipeline Act.
   (2) review and recommendations for approval of Plans, Profiles and Books of Reference pursuant to section 29 of the National Energy Board Act.
   (3) review and recommendations regarding Foothills applications for Leave to Take Additional Lands pursuant to section 74 of the National Energy Board Act, and
   (4) review and recommendations for approval of Foothills applications for Orders permitting the crossing of highways and other utilities by the pipeline under section 76 of the National Energy Board Act.

I hope this will help to clear up any misunderstandings that you may have had concerning the Alaska Highway Gas Pipeline Project. For your readers information, copies of the Northern Pipeline Agency's Annual Report, 1980-1981 are available by writing the Northern Pipeline Agency 4th Floor, Sheel Centre, 400-412 Avenue SW, Calgary, Alberta T2P 0J4.

Yours truly,

Douglas M. Fox
Manager, Right-of-Way

Energy (cont. from pg. 46)

To Open" these sections of the pipeline was granted by the National Energy Board in April and May 1981. On October 1, 1981, ceremonies were held in Los Angeles to commemorate the arrival in California of the first shipments of natural gas from Alberta to America through the Alaska Highway Gas Pipeline.

On May 22, 1981, following the same procedure as outlined for the Western Leg, the first "Leave To Proceed" with construction was granted for the Eastern leg through southeastern Alberta and Saskatchewan to a point near Monchy, Saskatchewan, on the Canada/United States border.

On the American side construction is well under way by Northern Border, which will interconnect with the Canadian line at the International boundary and, when completed, will deliver natural gas to the U.S. Midwest.

The target date for the opening of this portion of the system is the fall of 1982.

It is worth noting that the Northern Pipeline Agency has a statutory 'sunset clause', which means that it will cease to exist one year after the last Leave to Open has been granted for the Alaska Highway Gas Pipeline, unless by joint resolution of Parliament the Agency is authorized to regulate and oversee the construction of a Dempster Lateral. From this point onwards, the National Energy Board will take over jurisdictional responsibility for the pipeline.

On December 15, 1981, the President of the United States officially signed the legislation termed the "Waiver Package" which consists of amendments to the **Alaska Natural Gas Transportation Act** of 1976.

Approval of this legislation provided Foothills Pipe Lines (Yukon) Ltd. and the Canadian Government with assurances given originally by President Carter in July 1980 that the U.S. Government would at the appropriate time through Congress remove any impediments as may exist under present law and which might have impeded the financing of the project.

In Canada, approval of the "Waiver Package" now provides the Foothills group of companies with the right to collect their full cost of service as soon as the Canadian segment of the pipeline is completed, or at a targeted completion date for the whole project, whichever comes later. In the United States, the approval permits the major Alaskan gas producers to own a non-controlling interest in the project.

In both countries, the approval of the "Waiver Package" is viewed as a most positive step in assuring the necessary financing and eventual completion of the entire project.

Despite the many delays and difficulties experienced in putting together this project on both sides of the border, the regulatory process has been used to successfully build the Alaska Highway Gas Pipeline to date. I am convinced that we will see it completed.

Centerline (cont. from pg. 35)

soil to one side and they were able to stay within the 200 foot work area.

All other operations in the corridor were completed without major difficulty.

Progress to Date

Of the four parts of ANGTS, three have pipe in the ground. The Alaskan Segment has yet to begin construction. That is expected to commence in 1985 or 1986. The Canadian Segment has 400 miles of completed pipeline. Phase I of the Western Leg is almost complete and Canadian natural gas is being pumped through portions of it at the present time.

The Eastern Leg is also nearing completion and is scheduled to be in service in the fall of 1982. With the exception of the North Dakota spreads, it is finished from the Canadian border to northern Iowa. When complete the pipeline will transport up to 2.4 billion cubic feet of natural gas per day.

Construction work on Spread One was of high quality and surpassed the standards for a project of this trype. Since large pipelines are new to this region of the country, satisfactory performance of the pipeline coupled with the responsiveness of the company to public concerns and the return of productivity to the right-of-way will greatly affect future proposals for utility transmission systems.

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