

PIPELINE

Pipeline Kicks Off Boom in Southeastern B.C.

Construction coincided with start of other major developments

Construction of the Alaska Highway gas pipeline's Western Leg through southeastern British Columbia came and went in a spurt of activity between August, 1980 and February, 1981. Yet a number of people representing the business, economic development and local government sectors agree the project, with a peak work force of about 400, helped kick off an economic boom in the Cranbrook and Fernie, B.C. region which has not subsided.

"The timing of pipeline construction was great because it occurred during the usual slack period for motel and hotel operators," comments Wilf Nordick, Commissioner of the East Kootenay Regional District's Economic Development Commission based in Cranbrook. "Last year was the first time local accommodation facilities were full year round, and this gave some who were considering expansion the incentive to do it." Whether the pipeline project alone caused the zero vacancy rate is hard to tell, says Nordick, because it happened just as other major developments in southeastern B.C. were getting off the ground, especially in coal, construction and the related spin-off industries.

Approximately \$22 million in building permits were issued this year in Cranbrook — an all-time record for the city of about 17,000 people and growing at an annual rate of six percent. With so many openings in construction and a shortage of skilled tradespeople, Nordick is not surprised that some pipeline crew members, who arrived to work on the Western Leg, decided to stay once the project was over. Nordick knows of at least one motel where several families of pipeline workers remained through the winter after Western Leg construction shut down, while waiting to find more permanent housing.

The Northern Pipeline Agency's socio-economic terms and conditions require each segment company of Foothills Pipe Lines (Yukon) Ltd. to provide businesses operating in the vicinity of the pipeline route with opportunities resulting from construction activity in the

area. Both Sandra Vermette, manager of the Fernie Chamber of Commerce, and Howard Luxton, former manager of the Cranbrook Chamber of Commerce, are pleased with the involvement of local businesses in the project. Besides the motels and hotels, Luxton notes that food stores, restaurants, entertainment establishments and vehicle supply, service and rental outfits did particularly well. "The pipeline company used the Chamber's mailing list to advertise to the business community: 'We're coming in, do you have a service that may be of assistance?' Since vehicles had to be rented locally, it meant a boost to Cranbrook dealerships. At times over 100 trucks and buses were leased to pipeline people." Vermette recalls how one restaurant in Fernie would open at five o'clock in the morning to prepare breakfast and pack lunches for the pipeline crew. "I also noticed gas sta-

tions keeping longer than normal hours to service the crew's vehicles."

Fernie's mayor, Gus Boersma, admits he was initially apprehensive of the effect a large crew would have on the residential community of about 8,000, located in the Elk Valley and surrounded by the Rocky Mountains. "Many pipeliners brought their families along, which may have made housing more difficult," he remarks, "but was fantastic as far as peace and quiet were concerned. Boersma says the scheduling of Western Leg construction in the Fernie area fit in well, because it did not conflict with the ski season in terms of accommodation. "The bulk of the job was done and the crew had moved on to the next section by the time the onslaught of sk traffic had begun."

Prior to the start of the pipeline project in southeastern B.C., environmental

continued inside back page . . .



Profile - Ken McKinnon, Yukon Administrator

Ken McKinnon has lived and worked in the Yukon for 25 years in a variety of professions – truck driver, lineman, surveyor, television station manager and politician. His "jack-of-all-trades" background serves him well in his position as the Northern Pipeline Agency's Yukon Administrator in Whitehorse.

"This job would be difficult without some background in both construction and government, and a knowledge of environmental concerns and minority group interests in the Yukon," says McKinnon, 45. His role as Yukon Administrator, during planning and construction of the Alaska Highway gas pipeline, includes maintaining continuing contact with the Yukon Territorial Government (YTG), the governments of Alaska and the Northwest Territories, federal departments and agencies and native and other interest groups. As well, McKinnon has assumed responsibility for field surveillance to ensure Foothills Pipe Lines (South Yukon) Ltd. meets the Agency's terms and conditions.

"A myriad of situations face a regional office," McKinnon remarks. "Since we're involved with every single aspect of the pipeline project on a daily basis, we have to be generalists. We can't afford the luxury of just dealing with socio-economic, environmental or engineering matters."

Born and educated in Winnipeg, Manitoba, McKinnon first arrived in the Yukon as a 20-year old student seeking summer work. "I was just a kid on the road in those days," he recalls. "Since high school, I used to live and work in different parts of Canada. The only place I hadn't seen was northern Canada, so I came up here in '56 and kept returning each year until I graduated in political science from the University of Manitoba, and stayed."

Lack of social barriers

McKinnon was struck by the Yukon outdoors and the lack of social barriers. "You were accepted for who you were, what you were able to do and how well you performed your job and your functions within the community." Although a job related to political science was scarce, work was always available for someone with a trade, says McKinnon. "So I worked at just about anything in different communities all over the Yukon."

In 1961, McKinnon entered politics as an elected member of the Yukon Legislative Assembly. He served three more terms in office, during which he was appointed chairman of the YTG's Financial Advisory Committee from 1968-1970, Minister of Local Government in 1974 and Minister of Highways and Public Works with Portfolio Responsibilities for the Pipeline Coordinator's Office from 1976 to 1978.

McKinnon describes himself as a "Red Tory" in the '60s and early '70s, speaking out on questions of native

rights and the settlement of land claims and environmental issues long before it was popular to do so. "I was constantly controversial and amazingly enough still got elected on four occasions," he comments.

McKinnon was one of the chief architects of the position that the YTG brought before the 1977 Alaska Highway Pipeline Inquiry chaired by Dean Kenneth Lysyk. The Inquiry was set up to investigate the socio-economic impact of the pipeline and alternate routes in the Yukon. The YTG presented a balanced approach towards development, says McKinnon, and Lysyk adopted this in his report: the idea that the pipeline could be built and the socio-economic and environmental integrity of the Yukon could still be protected with proper planning and the proper terms and conditions in place. Lysyk's recommendations had a substantial influence on the development of the *Northern Pipeline Act*, the 1978 legislation which gave the Foothills group of companies certificates to build the Alaska Highway pipeline and created the Northern Pipeline Agency to oversee planning

and construction of the Canadian section of the project.

Prior to his appointment as the Agency's Yukon Administrator in 1979, McKinnon acted as co-chairman of the Yukon hearings panel which sought public comment in communities along the Yukon section of the pipeline on the Northern Pipeline Agency's proposed socio-economic and environmental terms and conditions, and the Environmental Impact Statement for the territory, prepared by Foothills Pipe Lines (South Yukon) Ltd.

"... blueprint for disaster without some control..."

Having lived through 25 years of development in the Yukon, and having watched the Alaskan experience with construction of the Alyeska oil line, McKinnon concludes, "When you think of this huge civil engineering project being undertaken in an area of 207,000 square miles and with 25,000 people, you've got a blueprint for disaster without some control. I think everyone in the Yukon recognizes this."



Ken McKinnon, Yukon Administrator

photo courtesy of The Whitehorse Star

Eastern Leg Construction Highlights



Pipe is installed across a railroad near Piapot, Saskatchewan using a "slip bore." Powered by the machine in the foreground, an auger inside a length of pipe bores a tunnel under the railroad. The pipe is then pulled or "slipped" out and the "carrier" or permanent piece of pipe is put in.



Automatic welders move down the 45 m (140 ft.)-deep west bank of Irishman's Coulee, Alberta.



Sideboom tractors lower the pipe into the trench in the bed of the Frenchman River in southwestern Saskatchewan.



A completed pipeline section is ready for hydrostatic testing near Piapot, Saskatchewan. Heavy-walled test heads welded onto the pipe end are designed for safety as the water inside the pipe is pumped to test pressure — a minimum of 10,863 kilopascals (1,575 lb. per sq.in.).

News In Brief

The Northern Pipeline Agency will hold a public hearing on November 5 in Rocky Mountain House, Alberta to consider applications made by Foothills Pipe Lines (Alta.) Ltd. for additional lands along the first 57 km (35 mi.) of the Northern Leg of the Alaska Highway gas pipeline, extending north from James River Junction near Caroline, Alberta. Construction of this portion, known as the Pilot 56-Inch Spread, is intended to test heavy equipment and techniques used for installing 1,422 mm (56 in.)-diameter pipe, which will comprise approximately 1,792 km (1,053 mi.) of the 2,167 km (1,286 mi.) Northern Leg through Yukon, British Columbia and Alberta.

The interests of 45 landowners could be affected. Parties intending to intervene in the applications by Foothills (Alta.) must make written submissions to William A. Scotland, Designated Officer of the Agency, by October 28.

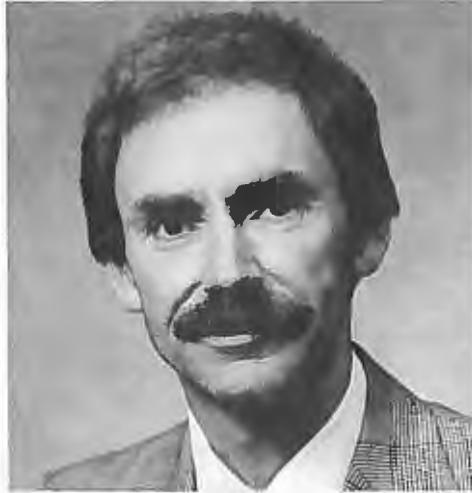
Canadian gas began flowing to the United States October 1 through the Western Leg of the Alaska Highway gas pipeline. Initial volumes of up to 6.7 million cu.m (240 million cu.ft.) per day through the new facilities are licensed for export by the National Energy Board.

Senator H. A. (Bud) Olson, Minister responsible for the Agency, announced on September 28 the appointment by the federal Cabinet of Margaret Elizabeth Todrick as a member of the Northern British Columbia Advisory Council.

Mrs. Todrick, a businesswoman, has resided in the Fort St. John area for the past 24 years. She is a former alderman for the city and has served as a school trustee and library board member.

Mrs. Todrick fills the vacancy created when Mr. Patrick Walsh, who was appointed to serve as Chairman of the Council during its first year, resigned following his recent appointment as Commissioner and Chief Executive Officer of Tumbler Ridge, B.C.

The Council was established in September, 1980, under the *Northern Pipeline Act* to advise the Minister on all matters relating to the planning and construction of the Alaska Highway gas pipeline in northern B.C.



Jim Hamilton, Manager, Geotechnical Design



Dave Gee, Manager, Surveillance Information/Reports

The Northern Pipeline Agency recently appointed J. James Hamilton as Manager, Geotechnical Design, and David J. Gee as Manager, Surveillance Information/Reports.

With over 25 years of experience in geotechnical research and consulting work for the National Research Council of Canada, Jim Hamilton is responsible for review of the geotechnical aspects of the engineering design of the northern sections of the pipeline.

Dave Gee spent the past 12 years with the Northern Program of the Department of Indian Affairs and Northern Development in both Ottawa and Yellowknife, working in renewable resources management. He now has assumed responsibility for the development and operation of a system to relay information on daily construction progress and problems reported by the

Agency's field surveillance staff to the Agency's Calgary headquarters.

The governments of Canada and Saskatchewan concluded a Federal/Provincial Agreement on September 16, providing for consultation and cooperation on matters relating to the planning, construction and operation of the pipeline in the province. These matters include the review of socio-economic and environmental plans, final routing, the granting of land rights on provincial crown land and surveillance of construction of the pipeline.

The fall meeting of the Federal Provincial Territorial Consultative Council (FPTCC) was held in Dawson City, Yukon September 16. The Council was set up under the *Northern Pipeline Act* to ensure collaboration and consultation on intergovernmental matters relating to the Alaska Highway gas pipeline project. Composed of senior officials from the Northern Pipeline Agency and the governments of British Columbia, Alberta, Saskatchewan and Yukon, the FPTCC meets together on a quarterly basis. On the previous day the Hon. Mitchell Sharp met with members of the Yukon Advisory Council in Whitehorse and with the Hon. Dar Lang, Yukon Minister of Renewable Resources, Tourism and Economic Development.

After meetings with senior U.S. government officials in Washington D.C. in September, the Hon. Mitchell Sharp, Commissioner of the Northern Pipeline Agency, expressed confidence concerning the Reagan Administration's commitment to the Alaska Highway gas pipeline project. However, Sharp stressed that the project faces serious setbacks if the U.S. Congress does not pass certain legislative waivers before Christmas, which would allow the major companies who own the Alaskan gas also to share in the ownership of the pipeline. Although producer ownership is prohibited by the present legislation, is central to the financing plan reached last May between sponsors and producers of the 1,180 km (730 mi.) Alaska segment of the pipeline.

Pipe Delivery Begins for '82 Construction

by Julian Hawryszko

As this year's work on the Eastern Leg of the Alaska Highway gas pipeline in Alberta and Saskatchewan nears completion, delivery of pipe for 1982 construction in Alberta begins. Between the end of October and the first part of January, 1982, a total of 191.9 km (119.2 mi.) of 1,067 mm (42 in.)-diameter pipe, weighing 55,000 tonnes and valued at \$1,000 per tonne, is scheduled to be produced and shipped by rail to nine off-loading sites near the pipeline route. Upon delivery, the pipe will be trucked over access roads from the railhead off-loading sites to stockpile sites along the actual right-of-way. Little use of public highways will be required.

Plans for pipe transportation and logistics outlined by Foothills Pipe Lines (Alta.) Ltd. call for an average of 10 and a maximum of 20 rail cars a day, arriving

five days a week, each carrying nine pipe lengths or joints. A normal truckload will consist of a maximum of three joints, depending on pipe length and weight, terrain and road conditions and the distance from the railroad to the right-of-way.

Road and rail facilities are well established where 1981 and 1982 pipeline construction takes place, although special planning was necessary to take into account such factors as the poor condition of grain-carrying rail branch lines. Because certain sections of these lines were closed this summer while undergoing reconstruction, extra rail cars were brought in to serve as temporary storage facilities for pipe when access to the stockpile sites was barred. The overall pipe production and delivery schedule remained unaffected.

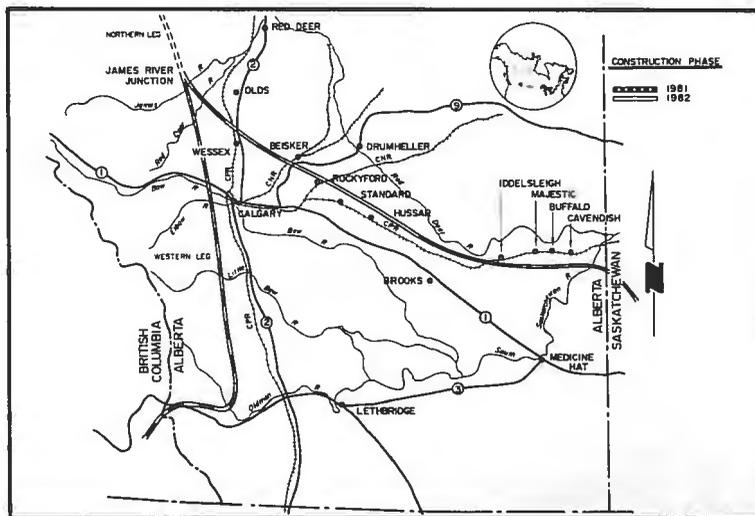
Construction of the northern segments in Alberta, British Columbia and Yukon will go through areas of more limited transportation facilities, and logistics planning and execution will be more complex. In recognition of this, the 1981-82 construction phase is being used to develop and test new systems and vehicles, such as a self-steering tractor-trailer unit capable of tracking automatically from the back.

Transportation and logistics planning is an essential component of the pipeline project to ensure on-time delivery of the needed materials, in sound condition, at the lowest possible cost and with a minimum of disruption to other users of the transportation system.

Julian Hawryszko is Manager of Logistics for the Northern Pipeline Agency and a specialist in transportation economics.

PIPE DELIVERY FOR 1982 CONSTRUCTION IN ALBERTA

| Railhead/Off-loading Site | Length of Pipe | No. of Stockpile Sites |
|---------------------------|----------------|------------------------|
| Wessex | 16,300 metres | 1 |
| Beisker | 30,000 metres | 1 |
| Rockyford | 44,500 metres | 2 |
| Standard | 12,500 metres | 1 |
| Hussar | 28,500 metres | 2 |
| Iddlesleigh | 10,000 metres | 1 |
| Majestic | 13,700 metres | 1 |
| Buffalo | 11,600 metres | 1 |
| Cavendish | 25,300 metres | 1 |



continued . . .

Pipeline Kicks Off Boom in Southeastern B.C.

groups expressed several concerns to the Northern Pipeline Agency. "Most importantly, we asked that access roads to the right-of-way be removed once the pipeline job was complete," explains Dave Melenka, president of the 300-member East Kootenay Hunters' Association in Cranbrook. "We also sought assurances that special care would be taken at stream and river crossings to control erosion and prevent damage to

the fish populations, and that the pipeline corridor be revegetated with grasses which provide excellent browse for wildlife, as well as minimizing erosion." Melenka commends the company for doing a top rate job from an environmental perspective.

The concerns raised by environmentalists over the pipeline project were minimal, maintains Lloyd Phillips, news editor of the *Fernie Free Press*. Phillips

has lived in Fernie all his life and notes a growing awareness among people that major development projects are not as detrimental to the environment as originally believed. He feels his view reflects the general mood regarding growth in the area. "We are happy the way things are and are not worried if we do or do not grow an awful lot. On the other hand, we welcome people coming in and growing with us."

Incentives For Effective Cost Control

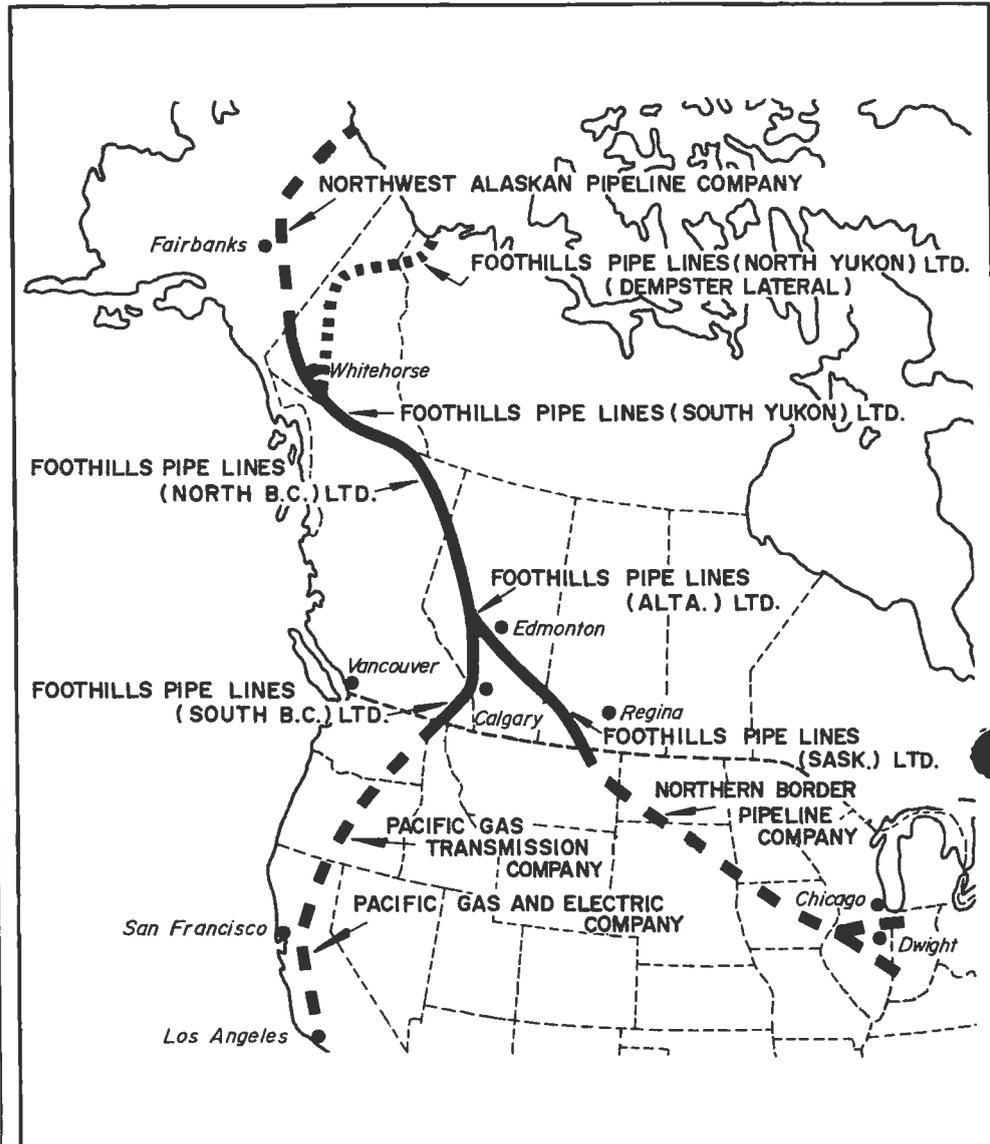
The National Energy Board's review, released in August, of the final design cost estimates for Eastern and Western Leg facilities of the Alaska Highway gas pipeline in Canada helps establish a basis to measure the performance of Foothills Pipe Lines (Yukon) Ltd. in controlling project costs. As part of the 1977 Canada-United States Pipeline Agreement, the companies owning the line in each country are provided with an incentive scheme to keep expenditures to a minimum, consistent with sound design, engineering and operating practices. Known as Incentive Rate of Return (IROR), the scheme allows the owner companies a higher rate of financial return on their equity investment in the project if actual costs prove lower than the estimated costs, and a reduced rate of return if costs exceed the estimate.

Novel regulatory mechanism

"The IROR concept is a novel regulatory mechanism," says Jim Buchholz, Manager of Project Scheduling for the Northern Pipeline Agency. "It offers project sponsors a positive reward for superior cost and schedule control in a format which is not available with conventional methods of determining the rates charged for use of pipeline services." Buchholz explains that under traditional rate-making practices, regulatory review of expenditures takes place after the project is completed, with the risk to investors that imprudently incurred expenses will be disallowed and therefore not recoverable in the rates charged.

Both the U.S. Federal Energy Regulatory Commission (FERC) and the Canadian National Energy Board (NEB) have held public hearings over the past two years, dealing with the application of the incentive scheme to the pipeline project and the determination of final design cost estimates for Phase I construction as a basis for comparison with actual costs.

In its August decision, based on a hearing held last spring in Ottawa, the NEB disallowed about two percent of the total estimates for the Western Leg and about five percent for the Eastern Leg, submitted by the company at \$167,379,000 and \$653,942,000 respectively.



Pipeline

The Northern Pipeline Agency was created by Parliament in April, 1978 to oversee the planning and construction of the Alaska Highway gas pipeline project in Canada. Enquiries or suggestions regarding the Agency's publication *Pipeline* are welcome and may be directed to:

 Northern Pipeline Agency
Canada

4th Floor
400-4th Avenue S.W.
Calgary, Alberta
T2P 0J4
(403) 231-5777

Canada

Editor: Donna Lawrence
Researcher/Writer: Deena Soicher