

## CN meets challenge of complex move of pipes to the North

Canadian National recently undertook the challenge of transporting large rubber pipes to the North for use in Canada's frigid Beaufort Sea.

In July, the first of the 96 lengths of large rubber pipes, each 11.6 metres long with a minimum diameter of 1.2 metres and requiring very careful handling, were unloaded at McKinley Bay at the mouth of the MacKenzie River for use by Dome Petroleum Limited in their dredging operations in the Beaufort Sea.

The pipes were transported 6 000 kilometres across Canada from Halifax by CN Rail in a multi-modal transportation effort involving shipment of containers by rail, a delicate transshipping operation in Montreal, then conventional shipment by flatcar into Canada's Northwest Territories, and finally a 1 900-kilometre trip down the MacKenzie River by barge train.

Exploring for oil and gas in the Beaufort entails difficult work in some of the most hostile conditions in the world. To protect drill rigs from the ice which grips the Beaufort for all but a few weeks each year, artificial islands of silt dredged from the ocean floor are being built. This work, in water depths of 20 to 60 metres, requires dredging equipment strong enough to take the punishment which is routine in this environment and includes the buoyant large-diameter pipe for the output end of the dredging operation.

The pipe, built by Vredestein Industrial Products B.V., of Renkum, the Netherlands, was delivered to Halifax in



At CN Rail's Pointe St. Charles yard, the length of special slinging gear made yard derrick unusable, so an extendible-boom crane was brought in for the unloading.

three lots between mid-April and the end of May. The 12-metre containers, open-topped but canvas covered, were placed directly onto flatcars in Halifax, and carried to Montreal where the containers were unloaded.

### Complicated operation

The transshipping from container to flatcar was carried out using a special spacer bar supplied with the pipe. It was rigged to pick up each length by steel flanges at

the ends, and equipped with web slings to support the pipe in the middle as well, to minimize flexing. And, before the pipe was loaded, flatcars were individually examined by hand to make sure no nails or other protrusions would damage the skin of the pipe. Six pipes were then loaded on each flatcar, with appropriate blocking and bracing. Because the yard derrick could not lift the pipe lengths clear of the containers, an extendible-boom crane was brought in.

From Montreal, the pipes were taken to Roma Junction, in the Peace River country, then north to Hay River on the shores of Great Slave Lake, from where they began the last and most hazardous part of the journey down the MacKenzie River on the barge trains. The route is challenging in the best of circumstances but in the past couple of years, it has been made even more difficult by low water levels in the river system. This year, there were no problems with the water levels.

Barge trains, which can only operate for a brief period each year during the ice-free season, provide the only freight transport into the Beaufort for equipment and materials too heavy or too bulky to be shipped by air.

## Hi-tech shopping mall

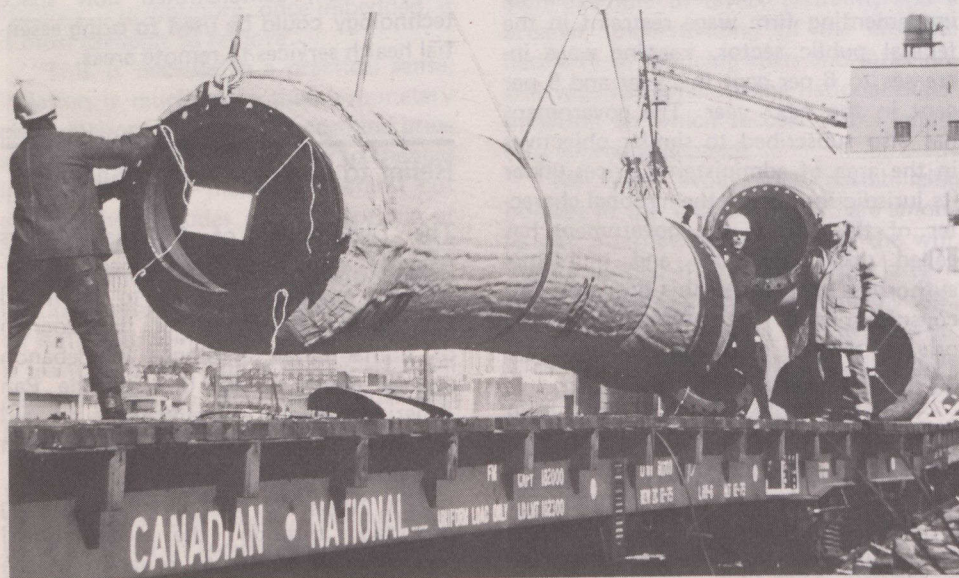
The Ottawa area which is fast becoming a leading high-technology centre will be home to what is considered to be a unique high-technology shopping and office complex.

The \$4.5-million complex, being developed by Terrace Investments of Ottawa, is expected to open in February. The firm is also considering similar projects in San Francisco, Boston and Toronto.

The 40 shops and head offices comprising the complex will present the newest in electronic gadgetry, including television games, video cassette recorders, calculators and home terminals.

"We'll be catering to the whole family in a centre that will serve as the show-place for the industry's products," said Bruce Firestone of Terrace Investments. He said it is hoped the complex will further speed up research and development of new micro-electronic products.

Already two-thirds of the 24 000-square metres of retail and office space have been rented. Two of the largest firms from the area's more than 300 high-technology manufacturers will set up head offices there.



Sections of floating rubber pipe, destined for Canada's high Arctic, are loaded aboard flatcars for the trip across Canada and into the North.

CN photos