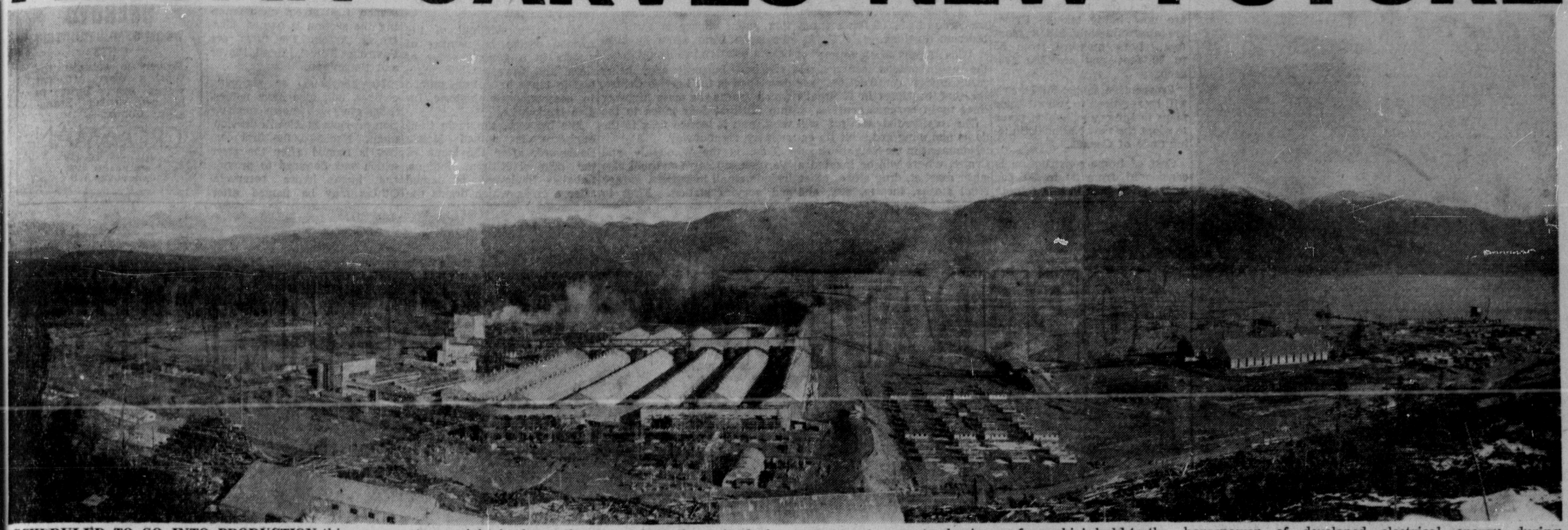
ALCAN CARVES NEW FUTURE



SCHEDULED TO GO INTO PRODUCTION this summer is the giant aluminum smelter at Kitimat, B.C., pictured above in the panoramic photograph supplied by the Aluminum Company of Canada Limited. At the extreme right is shown the approach to the main dock and the estuary of the Kitimat River which has been dredged to allow navigation by deep-sea ships. From the dock to the buildings in the centre housing the potlines, a conveyor transports alumina ore from ship's hold to the smelter. To the left is seen the terminal of the 50-mile transmission line which stretches to the Kemano Bay powerhouse, from which the plant will draw 450,000 horsepower of developed electrical energy during its first stage of operation, costing more than $250,000,000.

Wilderness Gives Birth to New City

Transformation from wilderness to civilization, already underway in the wake of an industrial drama, marks the genesis of British Columbia's newest community of Kitimat—B.C.'s first Aluminum City.

Three years after the first brush was cleared on the banks of the Kitimat River, initial stage of the gigantic smelter of Aluminum Company of Canada is preparing for production next month.

And eight miles up the valley, construction is being rushed on the first 400 homes of Canada's most modern city.

Kitimat will have to be the most modern community in the country if the plan for its development is followed. Its design is a town planner's dream. The Aluminum Company of Canada has provided it and the municipal council has vowed it will be executed.

The Master Plan of Kimitat is designed to take care of the community's initial development and through the stages that may ultimately see it ascend to populations of 35 to 50 thousand.

Announcing the plan a year ago, an Alcan official stated:

"In essence, the master planners have conceived the town as a place for the worker and his family to enjoy life. The emphasis is placed on neighborhood living, each with its local shopping centre . . . The pattern not only provides pleasant, safe, and convenient living, it is also economical in layout.

Best Town in the World

"We want Kitimat to be one of the best, if not the best, town in the world."

Kitimat is located on the 54th parallel, at the head of an open valley where the river of the same name empties into Douglas Channel, 70 miles from open sea. Across the channel is the ancient village of Kitimat, the home of the Haisla Indians.

It is considered the best and only place where there is enough land to permit development of industry and a townsite of an extensive basis and still provide sea and rail facilities, all within reach of the power development.

Reeve W. H. Sparks, who guided the initial construction of the smelter site and now is resident engineer of town development, is enthusiastic.

"The whole council is delighted with the design. It may sound idealistic in theory, but it is principally sound.

"We will do everything in our power to see that we have a model city, the most modern in the country."

Traffic Routing Makes Difference

The main difference between the design of future Kitimat and conventional communities is in the system of traffic routes, points out Cyril Henderson, municipal manager and former professional town planner.

All arterial traffic will be routed around residential neighborhoods. Throughout the whole system, there will be no need for pedestrians to walk in the way of vehicular traffic.

Even the residential streets should be free of foot traffic. Most streets will lead off from the boulevards or arterial roads in semi-oval loops, with the rear of houses fronting the streets. There will be no alleys. Fronts of the homes face out towards open spaces and walkways.

Each such section points towards the centre of a neighborhood in which are located parks and playgrounds, schools and shopping centre.

"No child will have to cross a major street or walk further than a quarter-mile in going to school," said Mr. Henderson.

First couple to occupy the dwellings now being erected moved in on March 15 this year. By Christmas, it is expected 400 families will comprise the nucleus of Neighborhood A designed to house 5,000 persons.

Planned to Develop in Four Stages

There are 10 such neighborhoods included in the Master Plan and their development will correspond to the industrial expansion of the aluminum plant and secondary industry. Expansion is planned in four stages:

- Stage 1, entered now, is expected to reach full development by 1957 and corresponds to the first stage of the smelter of two potlines which will require 1,000 employees.
- Stage 2 when ultimately developed will provide housing and facilities for 12,000 to 15,000 people and corresponds to double the capacity of the smelter, i.e., four potlines.
- Stage 3 will be reached when the plant installs its next two potlines and is designed for a maximum of 25,000 people.
- Stage four is the largest major expansion program for the townsite as well as the plant. Designed for a population of 50,000, this stage goes hand-in-hand with the ultimate development of the smelter with its capacity increased to 12 potlines. At this stage there would be an estimated 14,200 Alcan employees.

Meanwhile, the municipal council which governs the newly incorporated district of 60 square miles will spend some $5,000,000 by the end of 1955 for public works and schools.

The 1954 current revenue budget nudges $1,000,000.

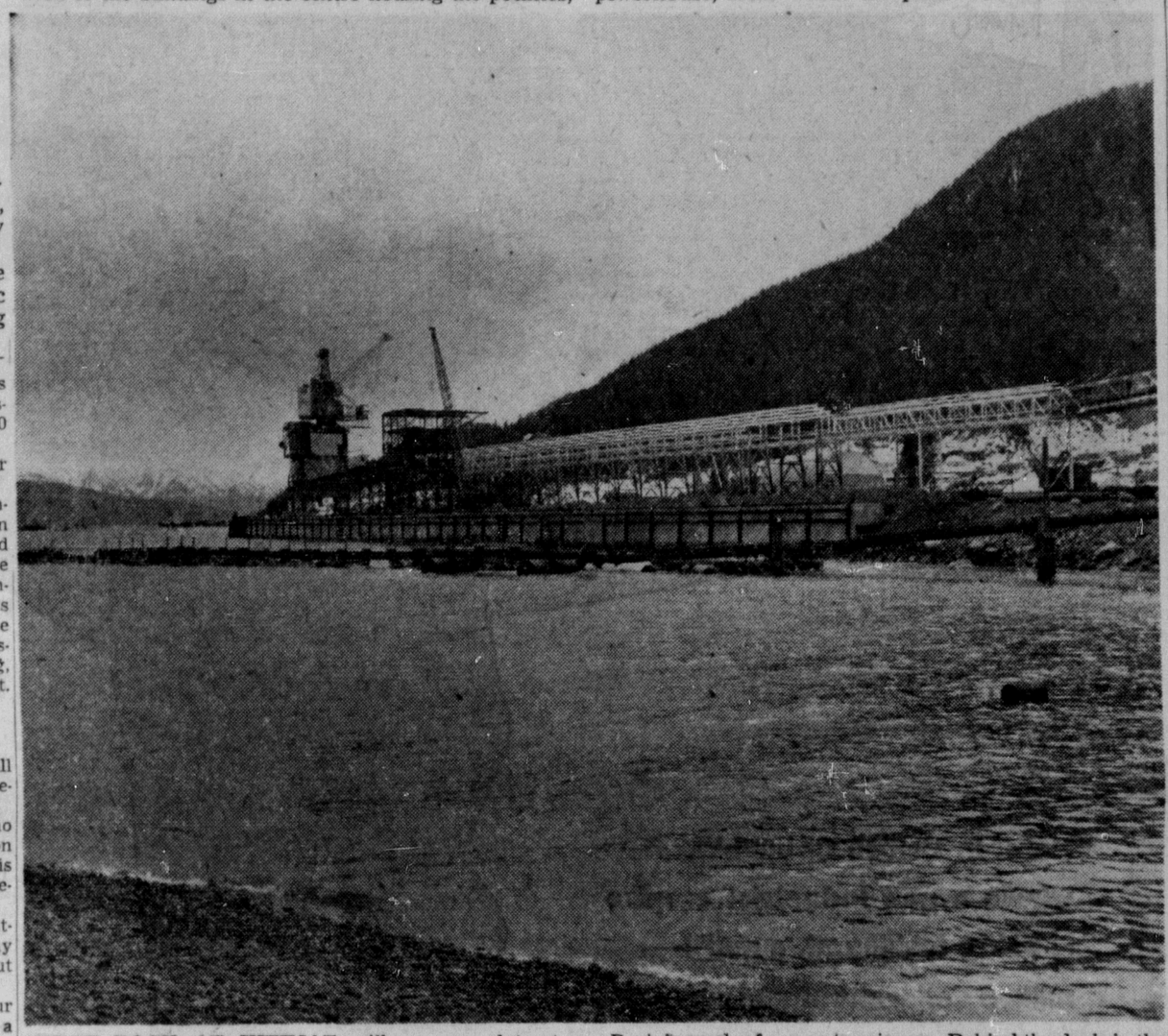
The B.C. government authorized the new council to borrow the $5,000,000 during the first three years in order to get it started. Close to $3,000,000 worth of facilities the council will have to provide already have been installed, or are under construction by Alcan. They include a million-dollar bridge over the Kitimat River, roads, and a $1,500,000 water and sewer systems.

Still under construction, the water-sewer project is expected to service 500 lots by September.

Such installations will either be purchased direct from Alcan or the company will be reimbursed by the municipality.

At present, the civic offices are located near the smelter site in the temporary Alcan office building. Current year's budget will provide extensive purchases of supplies and equipment. No concrete plans for a municipal hall have been formed but council expects to have 25 civic employees by the end of this year and double that number by 1955. Present staff, including the manager, totals seven.

Alcan, as the development company of Kitimat and owner of most lands except those re- **(Continued on Page 10)**



HUGE DOCK AT KITIMAT will accommodate two deep-sea freighters at a time and is equipped with one general purpose loading crane, and a specially designed crane for unloading powdered alumina from ships' holds. Dock is made of concrete caissons. Behind the dock is the conveyor to the plant, nearing completion. Another dock which can be seen in the distance, jutting out into Douglas Channel, provides moorage for passenger vessels.

Industrial Giant Comes to Life

A new industrial giant will come to life some time this summer when the first aluminum ingot is poured at the Aluminum Company of Canada's smelters at Kitimat, B.C.

Situated 400 miles north of Vancouver and 100 miles southeast of Prince Rupert, this giant project is the biggest single post-war development in Canada by private industry.

Beginning of operation of the huge underground powerhouse at Kemano Bay and transmission of 450,000 horsepower of electricity over a 50-mile line will start the manufacture of aluminum—ending three years of hard slugging by thousands of men in this rugged coastal wilderness.

When the project strides into peak production, more than $550,000,000 will have gone into the development.

Biggest single feat of the entire project was to turn an eastern flow of a chain of lakes back against a western mountain wall, producing a reservoir from which an ultimate 2,200,000 horsepower will be developed.

This involved damming of the Nechako River with the third highest rock-fill, clay-core dam in the world to raise the level of a chain of lakes in Tweedsmuir Park and form a water storage 120 miles long, 2,800 feet above sea level.

10-MILE TUNNEL

This reservoir has been connected by a 10-mile tunnel 25 feet in diameter through the Coast Range to two steel-lined penstock tunnels which will drop the water to turbines 2,600 vertical feet below — 16 times the drop of Niagara Falls.

At the discharge end of the penstocks, a powerhouse cavern has been excavated one quarter mile inside a mountain of solid rock. First stage of development of the cavern will be large enough to house eight generating units of 150,000 horsepower each. Fully developed, the cavern will be 1,100 feet long and will contain eight more generators of the same horsepower, fed by a twin to the first 10-mile tunnel and two more penstocks.

FIRST STAGE

Installation of three generating units aggregating 450,000 horsepower now is being completed. These will provide sufficient power for the present first stage smelter development of 91,000 tons of aluminum a year.

A double circuit transmission line of very heavy construction, crossing over the 5,300-foot Kildala Pass will carry the power to the smelter at Kitimat.

The power site and the design of the project are such that ultimate expansion to a total generating capacity of 2,200,000 horsepower to produce 550,000 tons of aluminum a year can be attained.

OTHER INDUSTRIES

At the same time, Alcan officials say, there will be ample power available at Kitimat for other industrial and commercial uses, and foresee fast development of secondary industries at B.C.'s newest industrial centre.

Five square miles of industrial acreage has been set aside along Kitimat's waterfront. A concrete products plant is already in operation. Other industries have bought sites and will move in shortly.

A forest management license has been applied for by a company which plans to build a $60,000,000 pulp and paper mill, using Alcan power.

The multi-million-dollar project already has been a boon to all B.C., providing a steady market of steel, cement and other construction materials manufactured in the province.

Great benefits also were received by transportation companies which handled the thousands of tons of materials in a steady stream during the two-year construction period.

A good deal of the high-level construction, especially on the transmission line, involved the constant use of a fleet of helicopters.

EXCITING PROJECT

Alcan's "B.C. Project" has excited world-wide interest. Breaking into a new and undeveloped region, establishing a new frontier, building a new plant and a city chopped out of forests, and buidling an ocean port 70 miles from the open ocean, have a romantic appeal to the general public, but also proved a challenge to professional engineers.

SET RECORDS

Meanwhile, construction workers and excavators worked against time to meet the 1954 deadline set three years before.

For example, four times during the tunnel driving, world records were broken. The last record, still standing, was a 282-foot drive through solid rock in six days and 61-foot advance in one day.

Alcan, with its extensive plants and headquarters in eastern Canada, also recently set foot in Jamaica, where it constructed a bauxite concentration plant. Bauxite is the raw ore used in smelting aluminum, but being concentrated into alumina (oxide of aluminum) before shipping cuts bulk and costs in half.

It is estimated that at least two deep-sea ships will call each month at Kitimat with alumina.

ALCAN WORKERS GET SPECIAL HOUSING DEAL

Employees of Aluminum Company of Canada Ltd. at Kitimat who purchase homes on the new townsite in 1954 will get a special deal through a plan of company assistance.

To encourage employees to buy or build their own homes Alcan has promised this year to make available second mortgage loans, then contribute to the employee monthly a bonus of $2.85 for each $1,000 of the approved value of the house.

The plan, which applies to Alcan employees only, was adopted partially because of the high cost of building during initial development of the townsite. It makes it possible for an employee to buy a $14,000 home for $700 (or 5 per cent) down and a monthly payment of $65.24, including taxes, insurance, repairs and maintenance.

To protect the purchaser, Alcan will buy back the house at an approved price less depreciation if at any time during the first 10 years the employee vacates the premises in good repair.

The plan is administered by the property department in Kitimat and Vancouver, where further information is available.

CARACAS, Venezuela (Reuters)—The economic committee of the inter-American conference here has urged international consultation before agricultural surpluses are sold in world markets, to avoid harming normal production by other countries. The committee also recommended that the surpluses should not be destroyed.

GREAT RIVER

The Columbia River flows 1,400 miles to the Pacific and its basin has been computed at nearly 300,000 square miles.

Newest B.C. Municipality Adopts Civic Council-Manager System

Kitimat, British Columbia's newest city in the making, is the third municipality in the province to adopt the council-manger plan of civic government.

And selected to manage civic affairs was Cyril McC. Henderson, an expert in town planning called to the townsite by the Aluminum Co. of Canada to help organize Kitimat's first administration.

A vigorous exponent of the council-manager plan, Mr. Henderson recommended such a government for the new city. He also supervised drafting the framework of Kitimat's Municipal Code, only such form of legislation believed to exist in Canada.

The Code is a "master bylaw" setting out an indexed order of legislation for each category of administration. New bylaws are added to the Code as amendment.

The council-manager plan was provided for in the incorporation of the district municipality in March, 1953. After election of the six councillors and reeve, council asked Mr. Henderson to be its manager.

The 36-year-old civil engineer was born in Los Angeles, but gained his education in London, England, graduating with a Bachelor of Science degree. Following three years as technical officer in the RAF, Mr. Henderson decided to study town planning.

He graduated from the Massachussetts Institute of Technology with a Masters degree.

He was appointed resident town planning co-ordinator at Kitimat for Alcan in 1953.

Mr. Henderson admits that the master plan for Kitimat townsite is "revolutionary" and "a radical departure from conventional town plans in Canada." There are only about four such plans in the U.S. to date.

The whole council is happy with the plan and looks forward to a bright future for Kitimat. Says Reeve W. H. Sparks:

"We believe there is every chance for Kitimat to become the finest and one of the most prosperous cities in Canada.

"I don't think it will be long before a highway will be built to connect us with Terrace and the northern trans-provincial highway. Such a road together with the railroad which is scheduled to operate this winter will make Kitimat an important seaport."

Reeve Sparks cited the likely construction of a lumber assembly wharf as a future development with Kitimat taking a major part in lumber shipments from central interior B.C.

To start with there will only be about one deep-sea ship a month calling at Kitimat with raw materials for the aluminum smelter, but full production of the final stage of the plant would require one ship every six days.

"Shipping will be a major secondary industry for Kitimat," Reeve Sparks forecasts.

Meanwhile, the council is initiating the expenditure of $5,000,000 to provide services and utilities for the new city. Decision is expected soon on a proposal to install a fluoridation system in the water works, which would be the first in the province.

The water system, now under construction, has been designed for maximum protection against fire, says Mr. Henderson. Source of water is in four wells near the Kitimat River from where it is pumped to a million-gallon reservoir.

Preliminary assessment of land in the new municipality totals $608,928 of which $56,480 is exempt. Assessment of improvements for last year, including the aluminum plant, were $13,290,375.

Tax rate of 57.7 mills is based on 100 per cent of land and 75 per cent of improvement assessments. Average home will be taxed at about $200 a year.

Council hopes that the B.C. Telephone Co. will provide telephone service in the near future. Up to now, communication between various departments at the smelter site and between Kitimat and outside points has been provided by radio telephone.

A scheduled bus system is operated by the company, but is expected soon to be replaced by a commercial line.

The community is already serviced by a network of roads with the main thoroughfare black-topped for several miles. An estimated $770,000 will be spent by the municipality on roads until 1955 with paving to begin the following year.

Council has also budgeted for $970,000 as its share of school costs for the present and following year. It is planned to build teacherages to accommodate teaching staff.

Civic officials are also studying a plan to provide or assist civic employees with housing accommodation.

Big British Columbia

British Columbia, west coast province of Canada, has an area of 366,255 square miles and is as big as Washington, Idaho, Montana, Wyoming and some of North Dakota.

The Coast Range mountains, northern extension of the Sierra-Cascade system, raise snow-capped peaks in a northwesterly line roughly parallel to the Pacific coast.

Deep salt-water inlets reach inland up to 70 miles through which ocean ships can pass with ease, dwarfed by the 4,000 to 5,000-foot mountains that rise abruptly from the water.

'Reefers' Used By Railways 60 Years Ago

Since the Grand Trunk Railway, now part of the Canadian National system, introduced the first refrigerator car in Canada in 1895, the use of "reefers" to carry perishable commodities has grown by leaps and bounds.

Last year the CNR carried about 2,500,000 tons of perishable traffic. This included fish from the Atlantic and Pacific coasts to markets across Canada and the United States.

Fresh fruits and vegetables, transported by refrigerator cars, can now be found in produce stores in every province and in every season.

From the initial car put into service nearly 60 years ago, the CNR's "reefer" fleet has grown to nearly 4,700 units. Over 300 of these are used in express service and the remainder in freight service.

Over the years many innovations and improvements have been made in refrigerator cars. Shipments are now carried at any set temperature as low as five degrees below zero.

A mechanical refrigerator car and a compact container for handling less than carload lots are now being tested by the company.

EARLY TRADERS

The first white traders reached the Peace River in northern Alberta about 1786.