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FRONT COVER

PASSING BLACK LAKE on the run from Marelan to Kilmar, the railway of the Canadian Refractories Company describes an interesting and picturesque series of curves. This line has now been abandoned.

INSIDE FRONT COVER

LOCOMOTIVE NUMBER 1 of the Canadian Refractories railway is a G.E. diesel-electric. In this view, taken at the Marelan plant, we see Messrs. V. Thorburn, G. Poulter (driver) and W. Stewart (trainman).

Canadian Refractories Industrial Railway

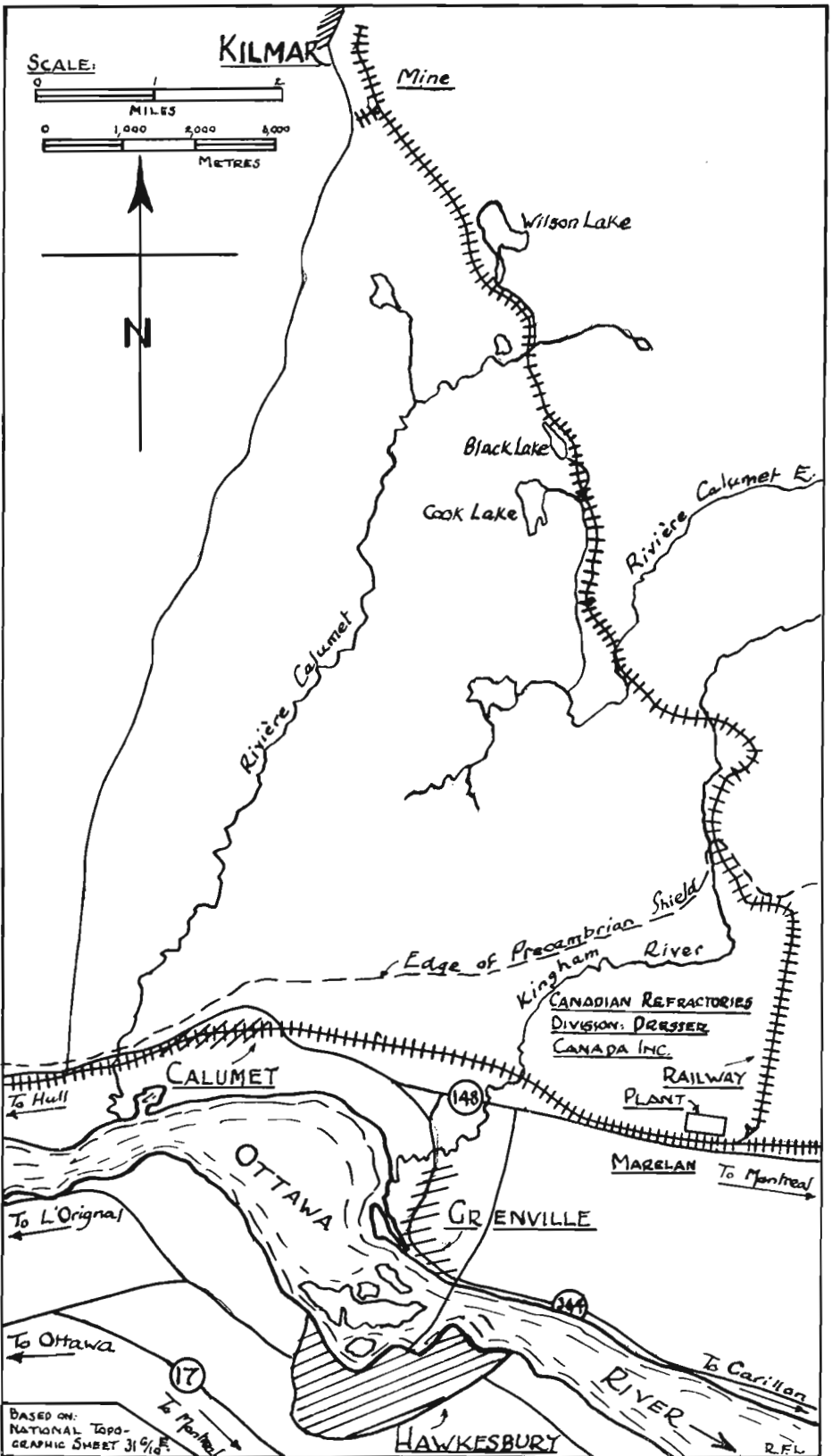
By Robert F. Legget

Another of Canada's small industrial railways has finished its course after 65 years of faithful service. It will soon be just a memory to the few who knew it well. For the last run was made on 17 July 1981 on the Canadian Refractories line from Kilmar to Marelan, Quebec. All rolling stock was then brought down to the Company's main plant, at Marelan, and has now been disposed of; the twelve miles of track have now been dismantled.

The accompanying sketch map shows the location of this little-known line in Quebec, across the Ottawa River from Hawkesbury, Ontario, roughly midway between Montreal and Ottawa. The southern limit of the Precambrian Shield here comes close to the Ottawa. Original settlements were naturally along the banks of the "Grand River" (as the Ottawa was known in earlier days) but small groups began establishing new homes along the early logging roads going up into the hills. One of these small outposts eventually became the Scottish settlement of Kilmar, eleven miles north of the river towns of Calumet and Grenville. It is said that an itinerant preacher first noticed the glistening white ore near Kilmar around the year 1900. This was start of the notable industrial complex of today.

The white ore is low-grade deposit of magnesite, formed in the Precambrian Grenville complex. It is believed that solutions high in magnesium penetrated the Grenville limestone in some geological upheaval eons ago, forming the valuable magnesium carbonate. Originally mined in open pits, the magnesite has been mined from shafts since 1936, the underground operations of today being efficient and highly mechanised, with proved reserves available for many years to come.

Mining commenced in 1914 when supplies from an Austrian mine were cut off by the first world war. Dominion Timber and Minerals Company was the operating agency. Ore was brought in horse-drawn carts down the winding road from the mine to a siding on the North Shore line of the Canadian Pacific Railway, as many as one hundred teams of horses being employed at one time. In 1916 a charter incorporating the Grenville, Harrington and Northern Railway was issued for the construction and operation of a standard gauge railway from Grenville to Labelle, Quebec but this company was apparently never set up.



BASED ON:
NATIONAL TOPO-
GRAPHIC SHEET 31 G/10

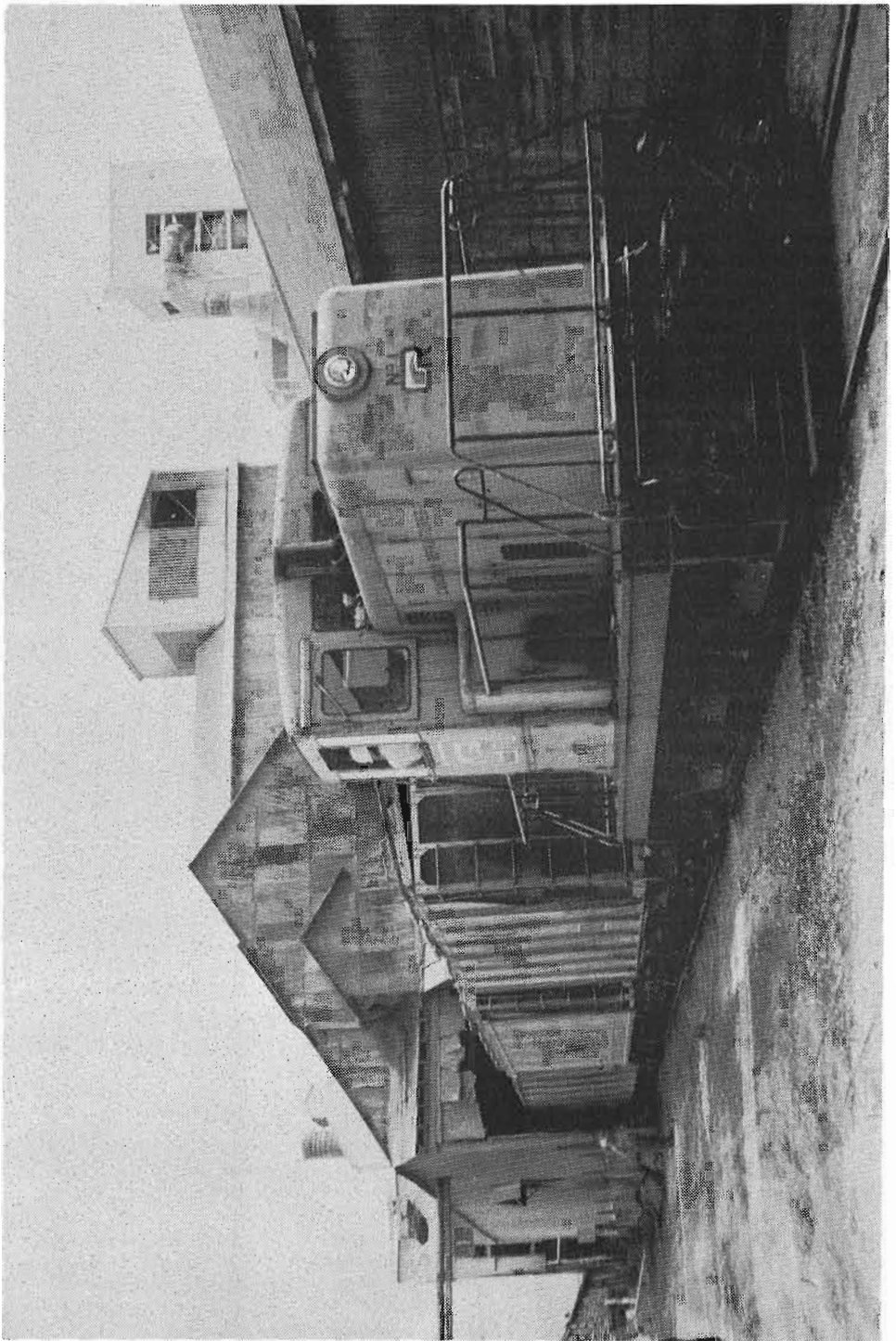
Later that year, however, a narrow gauge railway was constructed from mile 54.7 of the C.P.R. Montreal to Ottawa line, as far as the magnesite mine, approximately 11.5 miles to the north. Urgently needed for war purposes, magnesite was shipped down the little line in ever increasing quantities (35,000 tons annually by 1918) and transferred to main line cars at the junction with the C.P.R. All the equipment for the little line had been purchased from a logging company in the Fort William district, "lock, stock and barrel".

The names Kilmar and Marelan were derived from the Kilbourne family which had early financial interest in the development. It was taken over in 1918 by the Scottish Canadian Magnesite Company; this company was succeeded by Canadian Refractories Limited in 1933. This Company maintained close links with the Harbison-Walker Refractories Company of Pittsburgh which finally purchased a controlling interest in the operation after the end of the second world war. In 1967, Dresser Industries obtained control and the operation is now known as the Canadian Refractories Division of Dresser Canada Inc.

In the 1920s the unique properties of the Kilmar ore, even though low-grade, were studied by scientists of National Research Council of Canada, notably by Mr. F. E. Lathe (whom I had the pleasure of knowing as a colleague in my first years with the Research Council). Methods were developed of beneficiating the ore, notably by heavy-mineral separation; it could then be "dead-burned" in a rotary kiln and crushed. It is in this form that the ore is shipped from the processing plant at the mine to the modern manufacturing plant at Marelan, adjacent to Highway 148 and so familiar to all who use this pleasant "north shore road" from Montreal to Hull. The main products of the plant are MAGNECON refractory bricks in a variety of sizes and shapes, used for such purposes as lining kilns and furnaces. They are shipped from the plant, initially by C.P.R., to countries all over the world, constituting one of Canada's notable specialist exports.

The first plant at Marelan was started in 1953; it has been expended at regular intervals since then. The latest addition is a replacement of the smaller special products plant located at the Kilmar mine. It was this change in manufacturing that sealed the fate of the little railway since all that it would now have to carry would be the crushed ore from the mine to the plant and this could clearly be done more economically by contractors using trucks. The automobile had won another victory!

Plans for upgrading to standard gauge the original narrow-gauge line were made in 1930 and carried out in 1931, using the same alignment. After leaving the mine the route follows a winding course through the bush, generally following the contours of the land with only a few short sharp grades. There are no earth-works to speak of and only a few short steel joist bridges, crossing and recrossing the Calumet and Kingham Rivers. The winding course changes abruptly to a two-mile tangent as soon as the boundary line of Chatham Township is reached, an interesting feature of location for which an explanation has not yet been traced. This long straight stretch is on a down grade of about 1.8 per cent, finishing with a Y



MORNING TRAIN READY TO LEAVE KILMAR for Marelán. An empty B. & O. box car is ahead of two loaded hopper cars.

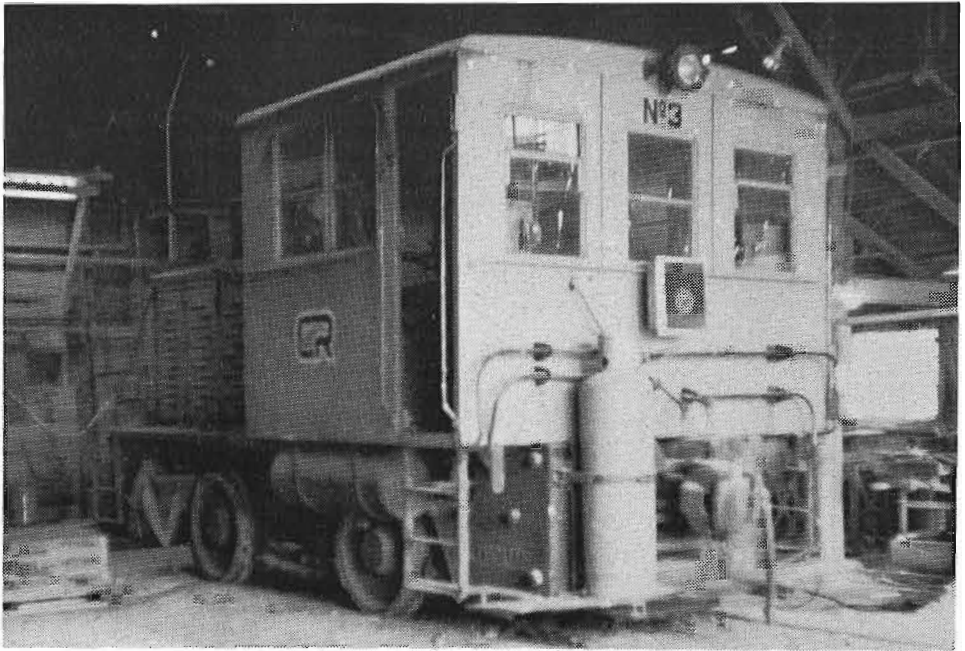
junction and then a junction with the C.P.R. North Shore line at the former Marelán station, followed by a short run into the sorting yard of the Marelán plant. There are only one of two house along the track (near the southern end); a small quarry is passed but otherwise all that can be seen is the untouched bush.

The narrow-gauge railway was equipped with small side-dump cars, two of which when loaded were hauled by one of the stud of our small saddle-tank "dinkies". No details of these small steam locomotives are now available and no picture has yet been traced but they must have provided a pleasing sight hauling their little trains down from the hills. At one time, the line was so busy that all four locomotives were in steam at once, working day and night and requiring a total of thirty two trainmen! Then the line was converted to standard gauge, they were replaced by Plymouth 4-wheel 35-ton chain-driven gasoline locomotives - one of the first conversions from steam haulage in Canada! There were eventually three of these versatile machines, only one of which was retained when, in 1950, a General Electric 65-ton, 580 h.p., diesel-electric locomotive was obtained. It provided the main motive power for the line for over thirty years until the line was closed; it was then in excellent condition. It has been sold to an industrial complex at L'Original. The "Plymouth" was used only in emergencies such as times when sections of the line were flooded as snow and ice melted in springtime. The crushed ore was carried in standard bottom-dump covered hopper cars; half a dozen tank cars were also on roster for transport of oil up to the mine.

It was on locomotive No. 1 - the diesel-electric - that I was privileged to make the journey from Kilmar to Marelán on a lovely summer day shortly before the line was closed. Mr. J. D. Hollett, Manager of the Marelán plant, kindly granted permission



SNOWPLOW OF THE KILMAR - MARELAN RAILWAY. Simple but effective.



THE ONE REMAINING PLYMOUTH GASOLINE LOCOMOTIVE in its storage shed at the Kilmar mine.



THE END OF THE "TWO MILE STRAIGHT" showing the switch into the Y adjacent to the main line connection.

for this privilege; Mr. B. Boivin, Manager of the Kilmar plant, made the necessary arrangements. I am indebted to Mr. Hollett for many courtesies, including some of the information which this account contains. I was accompanied by Mr. V. Thorburn whose 35 years with the Company enabled him to answer all my persistent questions, adding so greatly to the pleasure of the journey. It was a pleasure to watch the expert handling of the locomotive by its drive, Mr. G. Poulter who was assisted by Mr. W. Stewart as trainman and second-man, busy indeed when our little train reached the plant.

The load was typical of the daily run - an empty B & O boxcar being returned to the main line and two loaded hopper cars, each with about 350 tons of crushed calcined ore. Very shortly after leaving the mine yard all traces of "civilisation" had disappeared, a part only from the track ahead. It was a real pleasure to be again amid untouched bush country, with birds innumerable around. Wilson Lake is passed on the left (to the east) at mile 2, the track running along the edge of Black Lake two miles further on. The track was well ballasted throughout, with waste rock from the mine. Despite the fact that it had not been economical to provide new ties for some years, riding was generally quite smooth for such a heavy locomotive. Two thirds of the line has 80 pound rails and one third 100 pound rails. It was clear that the small maintenance-of-way gang had been doing a good job.



TYPICAL VIEW FROM THE FRONT PLATFORM OF THE LOCOMOTIVE showing the thick bush through which the line ran.

Their main problem was easily seen - water! Since the line wanders along the low-level areas between typical glaciated exposures of the Shield, it traverses water-logged ground for much of its length. Not only is this typical muskeg topography widespread but the water problems are compounded by the activities of beavers. I saw more beaver dams and houses during the hour's ride than I had seen for many years! We noticed the results of work by the track gang in removing some beaver-made structures which were too close to the line to be left intact. Rebuilding by the beavers of some of these was also noted.

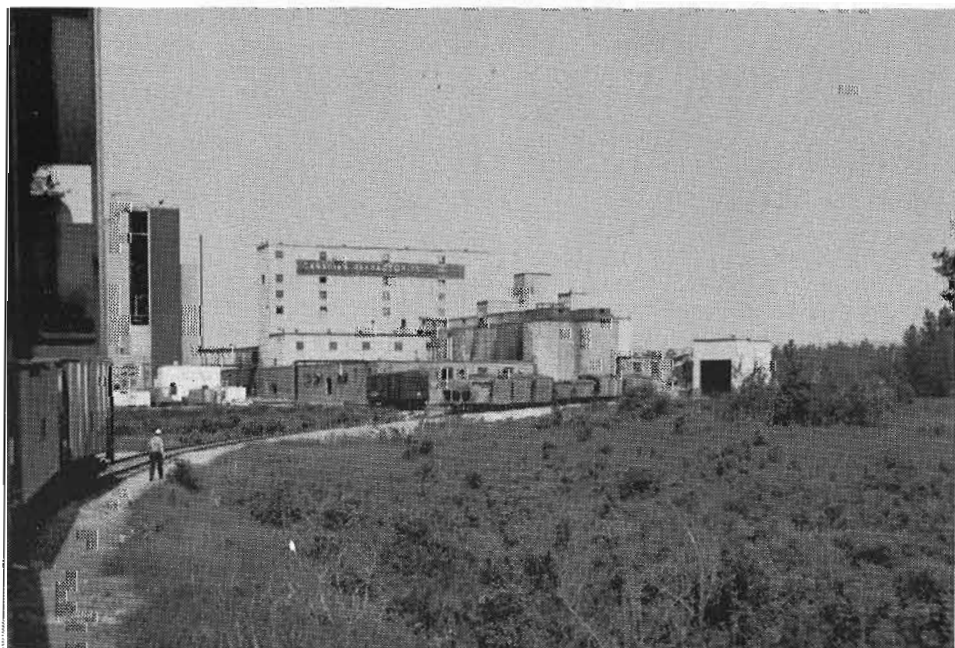
The water-logged nature of much of the track had led to occasional derailments but only one serious mishap has interfered with operations during recent years. This was a winter derailment when improper clearance of snow at one of the few crossings caused the flange on the locomotives lead wheel to "climb", ten feet of railhead being broken off. The locomotive was derailed and tipped on its side, fortunately sustaining no real damage even though the ground was frozen. It proved possible to bring up the rough gravel road (for which the crossing was provided) two powerful mobile cranes. Once positioned, the two cranes had no difficulty in replacing the locomotive on the track; it was soon operating again as usual. There have been, naturally, typical troubles with snow drifts but the line had its own somewhat unusual snow-plow; when operated by the Plymouth, this cleared the track without difficulty.

The last part of our run, down the "two-mile-straight", showed Driver Poulton's skill in handling his brakes since no power was needed until the Y was reached and the Marelan plant was in sight. The locomotive ran round its three cars by using the Y and then pushed them into the plant yard, past all that remains (a battered hut) of the original Marelan station. Shunting took place immediately, a job that will have to be done in future by a C P R yard locomotive. Later in the day the return trip to Kilmar would be made, with empty cars an occasional tank car full of oil, and regular shipments of miscellaneous supplies for the special products plant and the mine.

The elimination of this return freight, when the new special products plant opened at Marelan, was largely responsible for the closing of the line - obviously unavoidable but still regrettable to a railway lover! It is to be hoped that future transport of the ore by road will prove to be as safe and reliable as it has been for 65 years by the railway. But a parting warning from my new friends was to drive up the road from Calumet to Kilmar with unusual care when next I paid a visit since it would then be used by trucks bringing down the ore!



THE MORNING TRAIN BEING PUSHED BY LOCOMOTIVE No. 1 past all that remains of Marelan station. The C.P. North Shore line from Montreal to Hull-Ottawa is in the background.



MORNING TRAIN BEING PUSHED (by loco No. 1) into the railway yards of the Marelan plant.

UPDATE ON C.N No. 417

In the January 1982 issue of Canadian Rail we printed an article entitled "WHERE IS CN 417?". This engine is shown in C.N.'s official records as lost in Armstrong Lake. The question was which Armstrong Lake. Since then, as a result of this article, the story has gradually unfolded and now the mystery of 417 has been solved as can be seen from the following correspondence.

The Mystery of CN 417

Due to the persistent research of Jacques Messier in reviewing possible locations of "Armstrong Lake", the authors of "Canadian National Steam Power" believe we have located the lake from which "CN 417", as the J.D. McArthur 2-6-0 No. 22, was reported as being in, and not recoverable, in the CN Motive Power retirement record of October 1920.

Mr. Messier redirected our attention to the lake in Manitoba on the Hudson Bay Railway. While several of this class of locomotive were used on McArthur contracts on the NAR, the company also had the contract for construction of the first 214 miles of the HBR to Pikwitonei, about 10 miles south (before) Armstrong Lake.

When this possibility was examined a few years ago, the writer's research led him to dismiss it, since the account of the HBR construction stated the line got to Pikwitonei and then construction ceased in 1917.

But now a more definitive account consulted indicates the rails had reached mile 333, but when work ceased and the McArthur contract was closed, the CGR operated a service to mile 214.

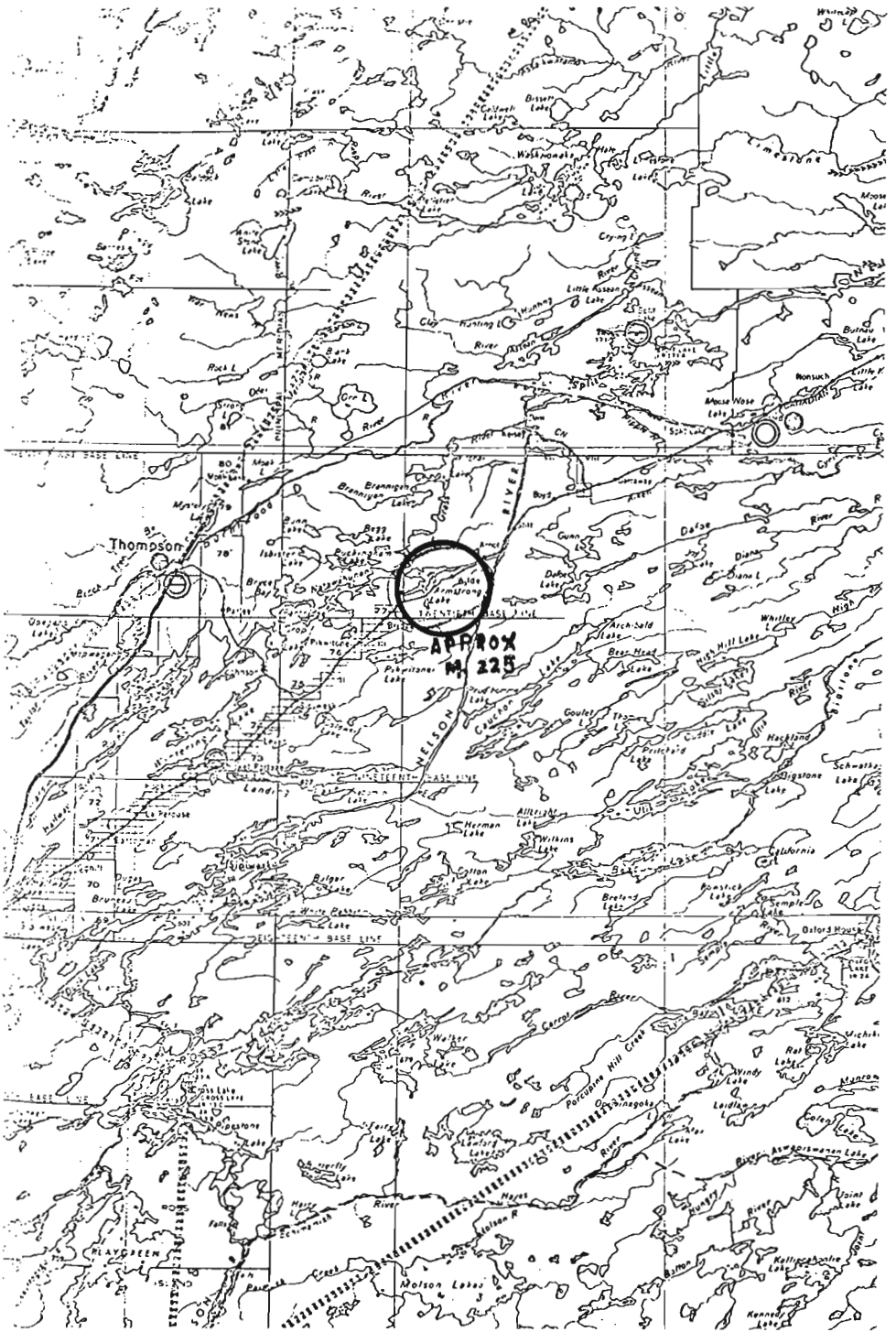
Hence by at least 1917, McArthur was constructing over the arm of Armstrong Lake. After 1917 it is likely locomotives ventured beyond mile 214, either operated by McArthur or the CGR, to close camps, take in materials, etc. On Sept. 1919 the McArthur locomotives were officially accepted into the CN roster.

Thus the locomotive could have been lost by McArthur, or the CGR/CN, in the period up to October 1920, and only "written off" on the latter date.

Further research suggests starting at that date and working backwards, and the assistance of CN Archives, and the Manitoba Archives, on construction history of the HBR, and McArthur, will be sought. In addition to determining the date, we may also learn what was the nature of the incident (washout, collision, speed, etc.).

Our thanks to Mr. Messier for redirecting our attention to this location.

R.F. Corley
May 12, 1982



THE MYSTERY OF CN 417

Further to our enquiries of November 1981 and May 1982, some further research, great co-operation and a little luck have resulted in a definitive answer.

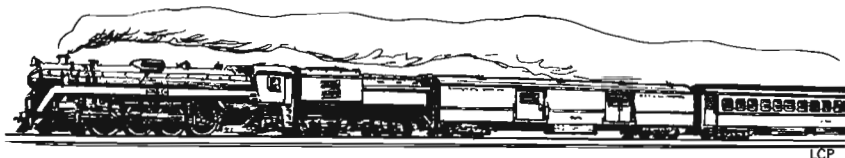
Omer Lavallee, dean of Canadian railway historians, was researching "Canadian Railway and Marine World" on another subject when he spotted some news items in the 1915 issues. And there, on page 392 (October 1915) appears "The contractor, J.D. McArthur, is reported to have said in an interview recently, that the accident early in the summer, when the trestle bridge over Armstrong Lake gave way, had not interfered materially with the summer's work on the line. At the time of the accident a locomotive and a track layer were precipitated into the lake; these have been definitely located, and it is expected that they will be recovered during the winter."

This is undoubtedly "CN 417" which, contrary to J.D. McArthur's expectations, was not retrieved and hence was ultimately reported to the CN as "Lost in Armstrong Lake" in October 1920. Undoubtedly there was hope it could be recovered, and it was carried "on paper" as being acquired by the CN with the rest of the McArthur fleet.

The writer surmised the accident could have occurred at least up to 1917 - but this, and earlier 1915 reports, confirms construction north of mile 214 was in effect by 1915.

With thanks to the Manitoba Archives, CN Archives and the individuals who have assisted, now all we have to determine is the date in the "summer of 1915".

R.F. Corley
June 6, 1982



NEWSPAPER TRANSCRIPTS RE CN 417 IN ARMSTRONG LAKE

(exactly as written)

Manitoba Free Press Monday May 31, 1915 (Page 10, Col. 4)

The Pas. Man., May 29 - An engine and three cars loaded with track steel last Tuesday went through a vent in the bridge over Armstrong lake on the Hudson Bay railway, and lies out of sight in 30 feet of mud. The engineer was the only person aboard and he escaped by climbing through the cab window into the lake as the engine toppled over and swam ashore. *

The bridge was just finished and this was the first attempt to take a train of any kind over it. The railway engineers were uneasy about it sustaining heavy traffic on account of the great depth of light swampy soil to solid bottom.

Assistant Chief Engineer J.P. Gordon sat in a canoe close to the bridge and narrowly escaped serious injury when the engine went down. He was observing the action of the structure under the heavy strain.

The cause of the accident is attributed to the weakness of the wooden piles and failure to drive them far enough down to rock bottom. A delay of from three to six months will occur in the completion of the railway through this mishap.

The accident followed a pressure test of 300,000 pounds, causing a displacement of track pilings. The bridge is 900 feet long and half of it was destroyed. Reconstruction of the damaged part has commenced.

Hudsons Bay Herald (The Pas) June 4, 1915 (Page 1, Col. 2)

Assistant Chief Engineer Gordon's report on the Armstrong Lake bridge accident attributes it to the faultiness of track piles between vents Nos. 8 and 14. The total loss will probably amount to \$54,000, \$24,000 on the destruction of 24 vents in the bridge and the balance on the engine, cars and material that have entirely disappeared in the mud beyond all chance of salvage. Engineer Cameron saved himself by diving under the engine as it reached the water. The fireman escaped when the bridge started to give.

Every precaution was taken to avert disaster. The night before, four cars and track layer were shunted out on the bridge and remained there all night, subjecting the piles to a pressure of three hundred thousand pounds. Mr. Gordon examined the bridge in the morning and found no movement had taken place. Reconstruction of the vents destroyed is proceeding with and it is not expected to delay the completion of the railway from the time set.

* EDITOR'S NOTE: An amusing choice of words. If this was literally true it would be nice to have a photo of the engine swimming ashore!

The bridge is 900 feet long, of 60 vents of 15 feet each. It is built of heavy timber. The piles were driven last spring and tested from time to time. The erection was done by Hudson's Bay Construction company from plans of Hudson's Bay railway engineers. Some uneasiness was felt on account of the character of the soil and every care was exercised in driving the piles to solid bottom. They attained a greatest depth of 135 feet. The railway must go over Armstrong lake in order to obtain better soil conditions, shorter route and less cost than by a more roundabout way entailing an unpromising increased mileage.

Hudson Bay Herald (The Pas) June 11, 1915 (Page 1, Col. 1)

Chief Engineer J.W. Porter's examination of the Armstrong bridge collapse on the Hudson's Bay railway nearly two weeks ago, has resulted in orders being issued to rebuild the bridge with pilings as before. It is thought that piles can be driven to solid bottom, necessitating the construction of a special pile driver and piles. Mr. Porter believes the whole bridge may be finished inside a month and the time thus lost of no serious moment. Mr. Hazelwood thinks the track layer and perhaps the engine and cars may be rescued from the lake next winter. This depends on the extent of the cars sinking in the mud.

Hudson Bay Herald (The Pas) Aug. 20, 1915 (Page 1, Col. 3)

R.A. Hazelwood, chief engineer for McArthur on construction of the Hudson's Bay railway, thinks the engine and track-layer lying at the bottom of Armstrong Lake may be recovered as soon as the ice forms. A diver has examined the condition of the wrecked cars, and he believes they can be raised. The engine is lying deep in the mud. A special hoisting platform has been placed in position for supporting the lifting cranes.

N O T E S

- . Xeroxes of newspaper articles provided courtesy of Provincial Archives of Manitoba.
- . Accident date: Tuesday May 25, 1915.

R.F. Corley
June 16, 1982



Book Review

REMEMBER WHEN. Trolley Wires Spanned The Country.
Bulletin 119 of the Central Electric Railfan's Association.

Norman Carlson and Arthur Peterson, Co-Editors.

Occasionally it is our pleasure to review a book which is truly outstanding in its field. Such a book, from the point of view of those interested in street car and interurban lines, is Bulletin 119 of the Central Electric Railfan's Association based in Chicago Illinois. This association was founded in 1938, and to commemorate their 40th anniversary in 1978 undertook to publish a book illustrating many of the electric railways of the United States and Canada which existed during these forty years. The resulting book, completed late in 1980, is a masterpiece.

Bulletin 119, entitled "Remember When Trolley Wires Spanned The Country" is a hard-covered book of 160 pages, size 8½" X 11" in an oblong format. It starts with a brief history of the Association, then goes on to illustrate a tour of the electric railways of North America which could have been made in the years from 1938 to about 1958. This is where the book is so outstanding. There are no less than one hundred and fifty-four photos, all full page (6" X 9½" plus captions), all very clear, and all in full colour! When one considers the scarcity of colour film in the 1938 era one realizes just how rare some of these photos are.

Most of the lines depicted are, of course, in the United States (30 photos in the Chicago-Milwaukee area), but the fifteen photos taken in Canada are of great interest to Canadian enthusiasts. Some of the more interesting are: Niagara, St. Catherines and Toronto car 130 on a trestle at Welland on July 4 1953; Toronto two-car Witt train on April 4 1954; Montreal car 2002 on Mount Royal on October 31 1951; M. & S.C. 607 near the McGill Street terminal; Q.R.L.&P. cars 410 and 455 in 1951; Port Arthur car 70 in July of 1941 (surely one of the earliest colour photos of a Canadian street car); Fort William car 45 the same day; and two good photos of B.C. Electric cars in 1950 and 1952 respectively.

Most of the cars depicted have since been scrapped, but a few have been preserved in museums. Interestingly, the oldest car in the book, Ottawa grinder 6 (formerly passenger car 66) built in 1897, is now at the Canadian Railway Museum at Delson.

A few areas, such as Canada's Maritime provinces, were not visited by the C.E.R.A. members when they still had street cars so are not in the book, and other systems, notably the network of lines in Ohio, had been abandoned before the era of colour photography. But there was a huge variety of electric lines still intact in the 1940-era, although some were very near their end. This book shows vividly the contrast between the electric car days and the era of the automobile which wiped out most of these electric railways in less than twenty years. Only now, as gasoline prices soar is it realized what a mistake this was, and new electric lines are starting to be built after a hiatus of almost half a century.

While the price of \$30.00 U.S. (now about \$39.00 Canadian) for bulletin 119 might at first seem high, it is really a bargain when one considers that it works out to about 25¢ each for 154 high-quality rare colour photos. And the quality is high, the colour printing is just as clear as most quality black-and-white photos. The book is strongly recommended to trolley enthusiasts; and modelers too will now know the proper colour for their models. Enthusiasts on both sides of the border will enjoy this book; there is something here for almost everyone.

REMEMBER WHEN Trolley Wires Spanned The Country.

Published by: Central Electric Railfans' Association
Post Office Box 503
Chicago, Illinois 60690
U.S.A.

Price: \$30.00 U.S.



The business car

CONSTRUCTION HAS BEGUN ON A \$130 MILLION PUBLIC TRANSIT SYSTEM alongside CN's Uxbridge subdivision, in Metro Toronto.

In an agreement executed last January, CN will lease surplus right-of-way from the Kennedy-Eglinton subway station to Scarborough Town Centre to the TTC for the next 99 years.

The new transit link is an Intermediate Capacity Light Rail Transit (ICLRT) system. The first of its kind in Toronto, the ICLRT uses light weight trains, propelled along standard gauge tracks by linear induction motors.

"One of the major problems in planning a transit link through a highly developed area, such as Scarborough, is the creation of a right-of-way," says Paul Elias urban projects manager for the GLR.

Buses and street cars, the more traditional modes of public transit, are subject to limitations of the road, particularly traffic congestion. The ICLRT is designed to travel on elevated guideways in urban areas. Thus it offers the benefit of a "dedicated" roadway for fast, convenient and regular service at a fraction of the cost of constructing a subway line.

The groundwork for the ICLRT was set in 1975 when then vice-president, great lakes region, Keith E. Hunt, promised CN's cooperation with the City of Toronto in helping the TTC realize their transportation goals by permitting the line to abut CN track.

This line provides the most direct route from the Kennedy-Eglinton subway station to the Scarborough Town Centre, the ideal route for the ICLRT line.

During the three year construction period a portion of CN track will be diverted to permit excavation of a flyunder tunnel. Once construction is completed an operating and maintenance agreement must be executed.

"This will protect CN financially, operationally, and against liability," says Mr. Elias.

To ensure the safety of TTC passengers and CN'S operations a sensitized fence will separate the two tracks. In the event of a derailment the electronic circuits in the fence will activate CN's signals and TTC's master control centre to prevent any trains from entering the derailment site and aggravating the situation.

The Ontario government's involvement is to promote the ICLRT with an eye to marketing it worldwide. Its innovative linear induction motor which is silent, pollution-free, and can pull the train up steep grades, is a major selling feature.

Metro Toronto and Scarborough officials hope the ICLRT will encourage commercial and residential development around the Scarborough Town Centre. The centre contains municipal, business and commercial offices, as well as a large shopping complex.

The ICLRT can transport 30,000 passengers per hour and will be funded jointly by the Ontario government (80 per cent) and Toronto municipal government (20 per cent).

KEEPING TRACK

GO IS BREAKING NEW GROUND AGAIN IN ELECTRIFICATION, AND IT'S RELYING on its contacts in the industry to help initiate the project. Currently there are 11 Canadian engineering consultants vying for the opportunity to have their electrification proposals for the Lakeshore line accepted; they are establishing teams of experienced railway electrification people from inside and outside Canada to help.

One of the firms will be chosen soon for the project's design phase, which is scheduled for completion within the next two years.

Since it is the first heavy rail electrification since the Montreal tunnel completed in 1918, there is a dearth of knowledge on the subject in Canada. GO would like to remedy the situation.

"We want to ensure that Canadian experience and expertise exists after the project is complete, and that there is a transfer of technology to Canadian companies," explains Dave Sutherland, Director of Development and Special Projects.

GO NEWS

THE ONTARIO COURT OF APPEAL RECENTLY ISSUED ITS DECISION CONCERNING the Ontario & Quebec Railway Company. The Court ruled in favour of the defendant, Canadian Pacific Limited, which company had appealed the 1978 lower court decision which was in favour of the plaintiffs. Although the Eaton firm has not indicated whether it will appeal to a higher court, it is possible that co-plaintiff, Joseph Pope & Company may. Shares of O&Q dropped from \$10,700 to \$1,700 per share with the court's decision. The Ontario & Quebec minority shareholders had filed a suit of \$524,000,000 against major shareholder, Canadian Pacific, concerning various alleged misuses of O&Q's property.

The White Pass & Yukon has ordered for May 1982 delivery its first new power in years. Four diesel-electric locomotives, Nos. 111 to 114, are to be built by Bombardier at a cost of \$4,500,000. They are 1200 hp DL535E units. --The Sandhouse

SRS NEWS

POWER CORPORATION'S ON AND OFF INTEREST IN BECOMING A VERY VISIBLE Canadian Pacific shareholder is on again, with that Company now admitting ownership of 6.4% of the stock and an eye on acquiring much more. Power Corporation has agreed to a limit of 15%, and already has claimed two seats on the Board of Directors of CP Ltd. The fine print in the agreement is rather full of loopholes and is only for ten years. The first of Power Corporation's seats on the Board will be held by none other than Power President Paul Desmarais. The thought of one of Canada's mightiest corporations becoming a subsidiary of another equally mighty corporation should be alarming to many.

THE MARKER

A PROFESSOR OF COMPUTER SCIENCE AT THE UNIVERSITY OF WATERLOO, ONT., has developed a way to truly 'train' his students in programming microcomputers: he's set up a network of actual model trains, and his students have to program the micro that controls the trains so that multiple routes can be run at the same time. The set-up is located in a room in the mathematics and computer building.

If the student's program is correct, the trains run smoothly. If there's a programming error, however, they won't run at all.

Dr. Michael Malcom has been refining this technique for the past seven years, and is now into his third trainyard design.

"Our track now has tiny phototransistors positioned at various points along the routes," he explains, "allowing the computer to react very quickly to data detailing exactly where each train is moving. We put a silver sticker on the side of each car, and as the car passes the phototransistor, light from an LED is reflected into the sensor, which then transmits the positional data to the computer."

The microcomputer can operate as many as four trains simultaneously, controlling direction and speed. Also, it can control the decoupling and switching of various cars on each train.

"The trains profice a realistic and challenging real-time control problem," Malcom sums up. "They give the students a feeling for the potential significance of the programming techniques they're learning."

CANADIAN DATA SYSTEMS

AMTRAK IS CHANGING THEIR FOOD SERVICE ONCE AGAIN -- ONLY THIS TIME, it's for the better. By March 1, all breakfasts served on dining cars will be freshly cooked, with lunches and dinners remaining in the pre-processed airline form they are currently in.

Amtrak says the change in breakfast preparation is a response to customer complaints. Eggs and other breakfast foods were not being heated properly in the convection ovens, and the only option was to return to the old system.

Other changes to dining car service will include tablecloths, long absent from Amtrak's tables. Other amenities which should be returning shortly are glass salt and pepper shakers, stainless steel water and sugar containers, and flowers (even plastic flowers would be welcome!). The plastic plates, knives, forks and spoons will remain for now, primarily because Amtrak has large amounts of them.

Amtrak hopes that the changes will not only please passengers, but help improve employee morale as well.

BADGER RAILS

COLIN GARRAT, ONE OF THE FEW PEOPLE WHO MANAGES TO MAKE A LIVING photographing steam trains these days, claims to have discovered one of the few (or only) remaining 7 foot gauge locomotives from the Great Western Railway in Britain. He found the locomotive slowly rusting away on the tiny island of Sao Miguel in the Portuguese Azores, and speculates that it was sold to the builders of the harbour on that island to haul stone when the Great Western was converted to the conventional gauge of 4'8½".

REGINA UNION STATION, VARIOUSLY THREATENED, REPRIEVED, AND THREATENED again is once more in reprieve mode. The Saskatchewan Government and VIA Rail will spend \$10 million to convert the classic structure into a joint bus and passenger train terminal. The station is currently serving the Canadian, and the strange Winnipeg - Regina - Saskatoon train which runs minutes before The Canadian in each direction. The funds will be spent on land purchases, renovations and construction, with the Saskatchewan Government picking up \$6.2 million of the tab. Let's hope that they leave the track in long enough to use it.

DAILY COMMERCIAL NEWS, VIA THE MARKER

THOSE PLANNING A VACATION TO CAPE COD THIS SUMMER MAY BE INTERESTED that regular passenger service will return to the entire upper Cape Cod area beginning this spring for the first time in two decades, since the Old Colony Line went out of existence. Mark Snider, owner of the Cape Cod and Hyannis Railroad, which ran a highly profitable excursion service between Hyannis and Sandwich (Mass.) last summer announced he will expand service this year to include Buzzards Bay and Falmouth. There are some new features being thrown into the operation this year in addition to the new stops. The Hy-Line company excursion boat, Viking, will make a daily stop at the Mass Maritime Academy dock to pick up train passengers for a trip up and down the canal. The old Buzzards Bay railroad station will be used as a regular ticket agency, and, in addition, the U.S. Army Corps of Engineers will have a special slide show on the history of the Canal waiting for the train passengers. There will be a club car serving refreshments to the passengers. The trains will run seven days a week this year instead of five. They will run to Falmouth on the two days a week that the freight trains run over the tracks. In addition to the round trip, excursion runs, the train schedules and fares are being drawn up to accommodate those people who want one way tickets.

BROCKTON ENTERPRISE VIA JOE BOLSTER AND THE 470

BANFF EXCURSION TRAIN URGED AS UNIQUE TOURISM CHANCE READ A HEADLINE in the Calgary Herald, 22 Jan. '82. Local Calgary real estate agent Jim Fetterly is promoting a daily train to Banff as a tourist attraction and convention feature with the specific winter role of hauling skiers. His working title for it is the Rocky Mountain Special. He sees an eight coach diesel hauled train of renovated 1930's vintage stock. These would include observation and concession cars plus a couple of refitted luxury cars. It would take about \$500,000 to get started. CP Rail apparently would be prepared to "rent rail space". Alberta Department of Tourism liked the idea, but suggested it may be politically unpopular with Jasper having just lost daily service. Fetterly, who has a long volunteer background, is currently an associate director of the Stampede Board and past-president of the Calgary Tourist and Convention Association and the Travel Industry Association of Alberta.

"With the Winter Olympics only six years away, now is the time to get such a train on the tracks" he says.

AMTRAK PLANS BULLET TRAIN: AMTRAK HAS ANNOUNCED PLANS TO BUILD America's first "bullet train" -- a Japanese-style passenger train that will speed between Los Angeles and San Diego at 160 mph. The train will make the 130-mile trip in 59 minutes--less than half the time it takes to travel by car or conventional train, but about the time it takes to fly. The fare will be about \$35--about the cost of an airline flight. For most of the trip, the train will travel on elevated tracks built on the median strip of the San Diego Freeway, a six to eight-lane superhighway. The project will be developed by the American High Speed Rail Corp. a private company formed by Amtrak. Lawrence Gilson, president of the new firm and a vice president of Amtrak, said the trains will go into service in about six years. Test runs will begin in about three years. Building the line will cost \$2 billion, of which \$500 million will come from Japanese investors.

PORTLAND PRESS HERALD VIA THE 470.

BRITISH RAIL IS RECEIVING THE FIRST OF OVER 200 NEW SLEEPERS BASED on its current Mark III carbody. Two types are being built--one with 13 rooms and one with 12 and an attendant's serving room. One attendant serves two cars and he can serve light snacks and breakfasts which have been prepared. Rooms are similar to our bedrooms, with cross-wise sofas which convert to beds. If used as first-class, they sleep one per room, and if second class, the upper bed is also made up. Each room has a wash basin, but two toilets are located at one end.

The 470.

DESPITE VIA RAILS CANCELLATION OF THE MONTREAL-LABELLE-MT.LAURIER ski train service, we are pleased to report the popularity of The Great Alaska Ski Train - which carried more than 2,000 passengers in three runs over two weekends. It not only attracts cross country ski fanatics and snow campers, but also train buffs, those who like to party and dance and city slickers who prefer their wilderness within shouting distance of transportation. And with the poor snow conditions in Anchorage, the ride is even more appealing. Up in the hills where the train stops, there is a light blanket of powder snow atop the thin snowpack. The ride to the ski area is slow and leisurely, thanks to frost heaves and slide zones which limit the train to a top speed of 49 mph, according to the assistant to the general manager of the Alaska Railroad. The trip takes about two hours and 15 minutes. The train leaves Anchorage at 7:30 a.m. and returns at about 6:15 p.m. On the return trip this past Saturday, the train passed but one car on the Seward Highway, an event which brought forth loud cheers from the crowd of revelers packed into the dance car on the return trip. The polka dance - with live music provided by the Krausenpieler Blaskapelle Band - was held in a rocking and rolling converted baggage car built in 1962 for the Union Pacific. A relatively new car on the train, it joined a couple of rebuilt military cars from 1945. The 30-year old coaches, which seated the approximate 700 passengers, were purchased from the Southern Railway, where they were used on the Southern Crescent, a Mardi Gras run from Washington, D.C. to New Orleans. The dome cars are on lease from Amtrak. You might remember seeing them featured in the National Geographic advertisements of the 1950's when they were the pride of the Northern Pacific Railroad's North

Coast Limited between Seattle and Chicago. They may be old, but they're in good condition and are roomier than more modern cars. They also have large windows which afford a spectacular view of Turnagain Arm as the train winds its way along the shore. Only members of the Nordic Ski Club were allowed on the train, but the train ride is quite an inducement - if not the sole reason - for many people to join the club, which now numbers more than 2,500.

FROM AN ANCHORAGE PAPER VIA "DOC" BRANSON AND THE 470.

300 NEW WOODCHIP GONDOLA CARS ARE BEING BUILT IN CN RAIL'S Transcona shops to supplement the chip car fleet on the St. Lawrence Region.

The new cars have solid ends and a capacity of 6,700 cu. ft. The design is similar to that of the 879000 series car shown in the photo below except there is no side door.

Delivery starts in April at the rate of three cars a day.

CN MOVIN

AFICIONADOS WILL WELCOME THE PUBLICATION OF A NEW ADDITION TO the growing library on railways - Canadian National in the East (Volume One) by J. Norman Lowe. In addition to a number of fascinating photographs of locomotives, passenger cars and stations, Mr. Lowe's extensive research provides detail and color about the railway's operations over the past six decades.

In his introduction, the author begins with the opening of the Champlain and Saint Lawrence Rail Road on July 25, 1836, and then introduces readers to a remarkable number of railway companies, leading to the formation of Canadian National Railways in 1918 and to the further amalgamation in 1923.

Among the photographs and detailed descriptions are those showing the Grand Trunk Station in Hamilton, Ontario, taken in 1903; the arrival of the Royal Train at the new Toronto Station, taken in 1927; the Tunnel Station, Montréal, 1930; and winter diesel operations in Moncton in 1964.

Copies of the 26-page book are available from B.R.M.N.A. 5124 - 33 st N.W., Calgary, Alta. T2L 1V4 for \$6.00 including postage.

Incidentally, a similar presentation depicting CN's recently acquired Northern Alberta Railways is also available from the same publisher.

CN MOVIN

A CONCRETE POURING CEREMONY; HELD ON FRIDAY AFTERNOON, OCTOBER 16th 1981 in North Vancouver's Lonsdale Quay Development, marked the start of construction of the British Columbia Railway's new home, which is to be known as B.C. Rail Centre. BC Rail's president and CFO, Mr. Mac Norris was the Master of

Ceremonies, and took the opportunity to comment briefly on recent happenings on the provincial railway. In recent years BCR has added new equipment in both its office and train operations, upgraded the Fort Nelson Extension, opened a new terminal building, car shop and stores centre in Prince George. In addition, British Columbia Railway has pioneered development of an electronic system for the control of train movements. The railway is involved with the giant northeast coal mining project; this is well under way and on schedule for the start of coal shipments to Japan by the end of 1983. Access roads to the sites of tunnels have been completed. Work is progressing on clearing and grading work, bridge construction and the excavation of the tunnel portals. The coal site is at the end of the 129-km Tumbler Ridge Branch line which leaves the main line at Anzac, B.C. and runs easterly. B.C. Rail's move to its new location in the Lonsdale Quay Development will consolidate some 500 of the railway's employees from nine separate areas into one centralized location within sight of the company's railway line. The six-storey B.C. Rail Centre, to be built at a cost of \$13.8 million, will be a cast-in-place concrete structure with two underground levels of parking space, sufficient to accommodate 230 vehicles. The building will provide 15,140 square meters of office and retail space. The railway itself will occupy portions of the first five floors and the entire sixth floor. Certain areas of the first five floors will be leased to a number of commercial enterprises. The B.C. Rail Centre building will feature an exterior of double-glazed solar bronze windows set in aluminium frames with pre-cast light buff concrete panels.

SRS NEWS

THE TORONTO-PETERBOROUGH-HAVELOCK LINE PASSENGERS ASSOCIATION has recently presented a report to Ontario's Minister of Transportation. In it the Association claimed that retention of the line would save the taxpayers considerable sums of money. The Association in mid-February applied to the Ontario Supreme Court for an injunction that would prohibit cancellation of the passenger service.

SRS NEWS

CANADIAN NATIONAL RAILWAYS IS TACKLING PERSISTENT PROBLEMS WITH worn out wheels and tracks on its western Canada rail lines by turning to high technology in the form of a self-steering truck for 91-tonne coal hoppers. The railway is planning a multi-million dollar purchase of 970 hoppers with the advanced truck design for use on its line to Prince Rupert. The railway has already converted 110 of its cars to the self-steering type to gain operating experience before placing the large order. The new truck design contributes to a 30 per cent reduction in wheel and rail wear in the mountain lines.

SRS NEWS

THE THURSO (& NATION VALLEY) RAILWAY HAS ACQUIRED ANOTHER GE 70-Ton unit from the used diesel market, this time from Georgia, U.S.A. Not being superstitious, it will be numbered 13. It joins other 70-Ton units numbered 7, 11 and 12, plus GE yard switcher #10. The receipt of #13 allows the Thurso Railway to dispose of GE 25-Ton, single truck #6.

SRS NEWS

AT THE END OF FEBRUARY, CN RAIL UNVEILED A LOCOMOTIVE WHICH may set new industry standards for safety performance and reliability in northern climate railway operations.

The new locomotive, dubbed the "Draper Taper" by Bombardier Inc., builders of the first 20 locomotives, is in large measure the brainchild of William L. Draper, assistant chief of motive power - operations department. Mr. Draper says that "the Brotherhood of Locomotive Engineers and Bombardier were also involved in designing the new locomotive, and the union approved the final design."

The locomotive, a mainline freight-haul unit, is of a wide carbody design, but features a revolutionary cutaway behind the cab. The cutaway, which gave rise to the "Draper Taper" nickname, permits the engineer exceptional rear visibility for a wide carbody, and allows fullview inspection of the train, even on a very slight curve. The new unit combines the best operating features of a wide carbody locomotive and a narrow carbody road switcher.

"The new locomotive also incorporates a number of other design features," added Mr. Draper. "It improves reliability of train operations, particularly in cold weather, and most particularly in heavy snow conditions."

Current locomotives are sometimes stopped when snow is carried into electric traction motors with cooling air. In the new locomotive, air will be ducted to each motor from a central blower housing positioned at the forward end of the main diesel engine. In addition, the blower housing has a system of louvers in the top, servo-controlled, and the servos will be activated by changes in traction motor temperature. Hence, when the temperature rises, the louvers will open to admit air.

"It's expected that in winter conditions, the louvers will remain closed most of the time, largely eliminating the problem of snow shorting out the traction motors," said Mr. Draper.

This feature offers an additional benefit. When the louvers are closed, the horsepower draw from the main engine at full load is reduced from approximately 120 to 20. In sustained operation, this will mean significant fuel savings."

The wide car body design also makes routine maintenance much easier. On earlier-model road switchers, the narrow body meant the diesel engine was tightly enclosed and access to the engine was from the outside. In winter, catwalks along the sides of the locomotive would frequently jam with snow, creating a hazard for train crews. Occasionally, the snow would totally block access to the engine compartment. These will not be concerns with the new locomotive. Access to the engine is internal. However, the side access doors normally considered an advantage on older motive power have been retained.

The cab itself is considerably larger than on earlier road switchers. The electrical cabinet has been moved back, increasing the floor space in the cab by about 25 per cent, and improving crew comfort. In addition, later models will have a new, much smaller control console, eliminating the old-style controls and making the cab even more spacious.

Some of the design innovations resulted in part from a study of Soviet locomotive designs carried out by Bill Draper during a visit to the Soviet Union four years ago. "We didn't directly adapt anything the Russians were doing, but I learned from that visit that we were on the right track," he said.

Mr. Draper says that the GR-418 series locomotives, currently being rebuilt at the Pointe St. Charles shops, incorporate many of the winterization features developed for the new locomotives. A number of these are already in service, and have performed exceptionally well in winter conditions.

The combination of features built in to the new "Draper Taper" locomotives will become standard for all CN mainline freight-haul locomotives.

KEEPING TRACK

THE SAME SIEMENS/DUWAG TROLLEY USED IN SAN DIEGO AND EDMONTON has been recommended for a proposed trolley line along New York City's 42nd Street. A new study financed by the Power Authority of the State of New York was made public in late July, and it called for a streetcar line along the busy street, from river to river. Traffic on 42nd Street now averages 5mph, but streetcars could run the length of the thoroughfare in only 18 minutes, compared to 45 minutes now taken by buses. Other studies in 1977, 1979 and 1980 made similar recommendations. The present study proposed that private sources could finance the operation, which would require \$35.6 million in capital expenditures. Annual operating costs were estimated at \$2.8 million.

TRANSIT NEWS (EDMONTON)

THE WAIL OF A STEAM WHISTLE HASN'T BEEN HEARD ALONG THE WHITE Pass & Yukon Route narrow gauge railroad since June of 1964, when the last steam locomotive was ret red from active service. But that silence is about to be broken.

After a year of labor, the White Pass & Yukon Corp. has restored old engine No. 73 to operating condition, and with justifiable pride announces that she will make her inaugural run from Whitehorse to Carcross, Yukon Territory on May 29 for representatives of the press and the tourism industry and the remaining old time Yukoners who pioneered the country.

A repeat of the inaugural festivities is planned on the Alaska side of the railroad, with a train from Skagway to Lake Bennett, B.C., and return on June 12.

A total of eight special through excursion trains have been scheduled for the 1982 season, with the steam engine pulling a train of open platform "parlor cars" dating to the turn of the century. As on all White Pass through trains, a complimentary lunch stop is provided at Lake Bennett, B.C.

Excursions for the summer from Whitehorse to Skagway will operate June 7, July 5, Aug. 1 and Aug. 30.

Trains north bound from Skagway to Whitehorse will run on June 20, July 29, Aug. 16 and Sept. 22. Seating capacity is limited to 80 passengers on each trip and reservations are required.

One way fare is set at \$120.

Between excursions, the locomotive will be used for two weeks at a time in her lay over terminal for Charter service and local operation.

To insure a high degree of visibility, the No. 73 will handle the morning chore of pulling the scheduled passenger trains out of the depot to the edge of town where regular diesel will take over. The steamer will also meet the afternoon inbound train at that same point, and with suitable smoke and whistle fanfare bring the arriving train into the depot. Passengers on the WP & YR trains should be able to see old No. 73 at one end of the line or the other throughout the summer, and have several miles of steam powered train travel on their railroad journey.

The opportunity to experience a pioneer transportation reborn is an exclusive of a northern tour over the WP & YR narrow gauge. With the return of No. 73 to service, the railroad can lay claim to having the northern most operating steam locomotive on the continent, and to turning back the clock to the glory days when steel and steam opened Alaska and the Yukon to the outside world.

For reservations and information contact: White Pass & Yukon Corp. Ltd., P.O. Box 2147, Seattle, Washington 98111, 623-2510.

TRAIN SNOWBOUND AT PIUSVILLE

On Feb. 23/82 a snowplow extra with 3 engines, a snowplow and a caboose was attempting to clear the main C N line in Prince county, P.E.I. A viscious winter storm on Sunday, Feb. 21st had filled in cuttings already several feet high.

The train got as far as Piusville, 8 miles north of O'Leary, where it became hopelessly caught in enormous banks. The crew was able to free one of the engines and the caboose which were backed the half mile to the village of Piusville where it got stuck as well.

On the 26th of Feb., high winds and bitter cold combined to make unbelievable drifts almost covering the two engines and the plow still marooned north of Piusville. Snowmobiles formed a path right over one engine and crossed it. Hundreds of local residents walked over the train. By the time the winds stopped, banks towered almost 20 feet all around the imprisoned plow.

When the engines started running out of fuel and there was fear that the water in the engines might freeze, two workmen were flown in by helicopter to remove the water. The helicopter was necessary since no roads were open in the Piusville area for a week after the storm.

Twelve days after getting snowbond, the engines and plow were freed by another crew. They hauled the dead engines to Bloomfield and put them on a siding. The second snowplow extra then proceeded to open the rest of the line westward. On Sunday, March 7th a train came up and hauled the dead engines to Charlottetown where they were checked over in the shops.

This ended one of the most interesting railway events in West Prince for a long while.

Allan Graham



THE TRAIN STUCK IN THE SNOWDRIFTS with only the front of the first engine showing.



A SIDE VIEW OF THE WHOLE TRAIN.



THE TRAIN THAT EVENTUALLY FREED THE SNOWBOUND ONE sitting in front of Alberton station the morning after it cleared the line.



A FRONT VIEW OF THE SNOW BLOWER ATTACHMENT on a C.N. crane which was able to clear the line right to Tignish.