

The CARIBOO

Published by the BC Rail Historical & Technical Society



Issue 8

April 1992

1912 - 1992

BC Rail celebrates 80 years of railroading



tine \$51 was built new for the PGE by Montreal Locomotive Works. This photo was taken in the Lilloget area around 1920.

From North Vancouver to Fort George — that was the dream in 1912.

Now, 80 years later, that dream, and a whole lot more, has been realized by BC Rail.

From Telecommunications to Intermodal and Rail Freight, it all started with the dreams of a few people who hoped to profit from the riches hidden in northern British Columbia.

It hasn't always been an easy road. In fact, the original private contractors of the Pacific Great Eastern Railway, a company called Foley, Welch and Stewart, only made it to Chasm (just past Clinton) before going bankrupt six years after the PGE's first spike was driven. But, all was not lost. The provincial government took over the Railway, and continued the dream.

By 1921 a mainfine linking Squamish and Quesnel had been built, It was complemented by a popular, if improfitable, passenger line bridging North and West Vancouver, Unfortunately for picknickers, the passenger line folded in 1928. However, through the depression the trains on the mainline kept huffing and puffing thanks to a dedicated work force who didn't let a limited budget stop them from operating the only

transportation service to many parts of the region.

By the late 1940s things started to turn around for the PGE. The economy had improved and a flourishing interest in lumber helped boost revenues.

The railway finally secured enough capital to grow. In 1952, the Cottonwood Canyon was finally bridged and the PGF was on its way to Prince George, By 1956 the very ingged sections along flowe Sound had been tackled and the dream was complete. The

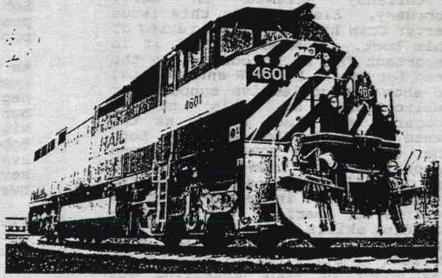
PGE now ran from North Vancouver to Prince George, However, those frontiers turned out to be only the beginning. Soon the tracks were laid to the Peace River district and beyond to Port Nelson. In 1972 the PGE became the British Columbia Railway Company.

Throughout the early 70s the Railway continued to lose money. That's when the provincial government struck a Royal Commission to investigate whether the railway could ever become profitable.

The recommendation of the Commission was that the Railway concentrate on operating as a business rather than as a developmental arm of the government

BC Rail took that advice and today it is a profitable business. Its assets are worth over \$1.2 billion, it employs over 2,000 people and it operates 2,200 miles of track.

But the dream doesn't stop there. Now the Company is striving to become a recognized industry leader in quality and customerservice. The new Strategic Plan was designed to help the Company meet that goal.



One of BC Rail's newest engines, a GE Diesel Dash 8 40cm locomotive purchased in 1990.

REPRINTED FROM "COUPLER", JAN/FEB 1992

The CARIBOO is published quarterly for enthusiasts and modelers of the Pacific Great Eastern Railway and its successor lines. Sample issues may be obtained for \$3.00 U.S. funds (posted to North American addresses). All editorial contributions are welcome. Send all correspondence to: Jim Moore, 25729 Floral Court, Valencia, California 91355-2139, U.S.A.

As you will note, my column now has a title thanks to Pat Flannigan of Spring Valley, NY. Pat says the title conveys the position of an engineer in a locomotive cab.

Special mention must be made of the efforts of BCRH&TS members Andy Barber, Greg Kennelly and Richard Varemko. These three gentlemen organized and staffed a booth featuring our socieety at the recent Western Rails show in Vancouver. Our booth took Third Place in the Best of Show category, for which we received a nice ribbon. This is a very special accomplishment when you realize that this was our first appearance at an organized public event. Congrats gentlemen!

IMPORTANT NOTICE: An envelope containing \$18.00US cash (subscription monies) was received in January from a Canadian address. Unfortunately, the US Postal Service damaged the envelope to such an extent that the return address was unreadable. Would the person who send this money in please contact Jim Moore so that their account may be credited.

My copy of "The BC Rail Freight Car Roster and Pictorial" (Duane Karam. Jr./Society of Freight Car arrived Historians) in February. Elsewhere in this issue Carter Cram has a thorough review of this book. However, I feel it is important for me to comment on the need for us (as PGE/BCR enthusiasts) to show our collective support for publications of this nature. Compared with such giants as the Santa Fe or the Pennsylvania, both the PGE and the BCR have received minor attention from manufacturers and suppliers of scale modeling items. In some instances, this has led us to perfect our scratchbuilding skills, or to band together an endeavor such as "The Cariboo". Still, it is nice when a new model or book detailing our favorite roads becomes available. Many such projects are done solely as a labor of love. I feel that it is important for us to show our support of such products by voting with our wallets.

stockpile of article and features for "The Cariboo". If we are to increase the frequency and size of our newsletter, I need material. Everyone has something that they can contribute. Be it an article, som photos, or reprint material. Now is the time to put pen to paper and send something along for others to enjoy. To quote "Tempo jr." (published by the Forest City Railway Society): "Knowing and sharing is the only way".

I have just about exhausted the

In 1990, we explored the possibility of producing a variety of custom decals. At that time reader response was too low to make this proposal a reality. Perhaps it is time once again to test the waters. "Cariboo" reader Bob Brillinger runs a company which specializes in the production of custom dry transfers. Bob has perfected a revolutionary new process enabling him to produce transfers that are 1) multi-colour, overlapping (unlike other dry transfers, there isn't a need to layer several transfers to produce a multi-colour marking), and 3) self settling (comparable to decals applied with solvaset). Thanks to a latex ingredient in the ink, Bob' product will not crack or distort during application. Also, because this new process does not employ a traditional silk screening, "short runs" are not a problem. In fact, Bob says that it costs the same to produce one transfer as it does to produce 500.

As with decals, the major cost involved is for art work and negatives. If we are able to supply our own art work, our bottom line will be reduced by as much as 75%. Bob estimates that he can produce an average 3"x8" sheet for (one colour) seven dollars and (six colours) for twenty-five dollars.

Please drop me a note if 1) you are interested in participating in a custom transfer project and 2) you are willing/able to help with the preparation/acquisition of related art work.

Trivia: Did you know it takes 12,000 gallons of water and 1,200 gallons of Bunker C oil for a steam engine to travel from North Vancouver to Squamish and back?

Should the BCRH&TS publish a listing of member's address and telephone numbers? Once again this question has been raised. What do you think? Liability issue aside, would you like to be included in a listing such as this? Comments welcome.

PGE/BCR RESOURCES

BOOK REVIEW

Carter Cram

David G. Casdorph, of "Freight Car Journal", has just released Monograph #17, one of his on-going series of soft cover editions. This new offering, titled "BC Rail Freight Car Roster and Pictorial", is authored by Duane Karam, Jr. A number of the photos included in the book were provided by frequent "Cariboo" contributor Richard Yaremko.

Contents include the obvious...box cars, lumber flats, tank cars, wood chip cars, log cars, gondolas, various hoppers, piggy-back trailers and a variety of motor trucks. Not included are cabooses or M-O-W equipment. A nice roster is found at the back of the book. I found it somewhat distracting that the roster did not include the car types or the number of cars within a given series. Appearing within the 28 pages are 4 black & white photos, the balance are all color. are clear and most cars are captured in 3/4 side shots, thus allowing insight into car end design.

We are treated to BCOL #1, a small and unusual well-flat car; BCOL #903, a 40' mechanical reefer with its power unit and fuel tank mounted at the "A" end. We also see BCOL #2126 and #2127, ex CN and CP "hopper-box" cars, designed by National Steel...a full-scale kit-bashing, eh? BCOL #2308 from the 2301-2320 series of 4427 cu ft grain hoppers. Last, and certainly not least, 20 Canadian cylindrical hoppers (120202-120292) illustrated by BCOL # 120227 or ex UNPX #120227.

The 2 tone (or light/dark green) "Dogwood" colors did not reproduce well in this book. The greens show up as gray tones. On page 18, the

features excellent/accurate colors. This model strongly resembles a Chevy or GMC of the 1970s.

I found the coverage delightful, interesting, and the worth the price of purchase. I support and thank the author, contributors and publisher. Even a mention of "The Cariboo" is included on the book's inside cover.

NEWS ITEMS

The following news items are reprinted courtesy of "The Coupler":

BC Rail's plan to develop a deep water port in Squamish could soon become a reality. Squamish Harbor is BCR's closest access to tide water, and would provide an excellent opportunity to relieve some of the congestion in the North Vancouver yard. The plan, which would involve a property swap with Crown Lands, would allow for the development of the port site while preserving the Squamish Estuary.

The new site would occupy the east side of Squamish harbor, while a conservation area would be on the western side.

Sixty-five percent of the fuel consumed by BCR motive power is used to run trains. A further 33% of the fuel is currently viewed as waste. This latter amount is attributed to locomotive factors as inefficiency, rolling resistance and track condition. Some of the conservation procedures already in place to reduce fuel consumption include reducing engine idling, increasing tons hauled per unit, and storage of less efficient locomotives. BCR aims to cut fuel consumption by 35%.

North Vancouver Yard was the setting for the filming of a US TV series for a couple of days last October. "Street Justice", with actor Carl Weathers, will be aired sometime this fall.

Late last year, BCOL 996004 snow plow caught fire while in storage in Lillooet. Arson was suspected. The extent of damage is unknown.

A new B&B shop was opened in Prince George on December 18. Construction on the project began in June. For modelers, the shop is 2 stories high and closely resembles a Pikestuff structure.

The slide in Williams Lake has finally been stabilized. Occurring near mile 315.1, the west side of a land bank fell away from the track and slide into a creek below. For a period of 3 days, the bank continued to fall away until it was only 3 feet from the mainline. Equipment was used to remove about 800 feet of bank from the opposite track, so that the main could be relocated 20 feet to the east to safety.

Rivendell Forest Products, a US based company, is suing 15 western Canadian forest companies for allegedly charging customers higher than true freight costs. The suit seeks \$2 billion in damages. If successful, the enormous cost would impact the financial position of several BC mills. BC Rail could be affected by any related slow down in mill production.

Thanks to a \$500,000 grant from the provincial Ministry of Transport, engine 3716 is undergoing a major overhaul. Locomotive 3716, which serves as a standby for the Royal Hudson, should be running like new by this summer. The boiler tubes had expired and the running gear is in need of overhaul.

The 1912 ex-CPR freight engine, originally numbered 3916, is one of about 300 units built between 1900 and 1914. Engine 3716 was donated to the people of BC in 1976, and fills in two days a month each summer when the Royal Hudson has its boiler cleaned.

Unlike the Reyal Mudson (which was built in 1940), 3716 sports smaller wheels, making it more powerful and better suited to mountain travel. Because of these characteristics, BCR has plans to use 3716 in charter service to Whistler this year.

BC Rail installed a new telephone system in its North Vancouver yard last winter. The new system, with a capacity for 400 lines, allows for independent access to the BC Tel network.

the Tumbler Ridge line was completed last fall. BCR crews worked for 8 weeks spraying concrete in the tunnels to stabilize the surrounding rock. Three hundred meters of the tunnel arch in the Table tunnel and 200 meters of the walls in the Wolverine tunnel were sprayed.

When the Squamish carshop was moved last summer, it became the largest structure to be relocated in provincial history. The structure dates back to 1915, when the PGE began service from Squamish to Lillooet. It's one of only four buildings left over from PGE days. Bonus trivia question: What are the other three?

Last November, seen departing North Van yard: GE powered, 137 car VP-03. 9075 feet, over 1.7 miles long. Is this the longest single train in BCR history? (Andy Barber)

A new Volvo truck, referred to as a Stormobile, was noted in Prince George recently. The vehicle will be used for overhead maintenance work on the electrified Tumbler Ridge Subdivision. The truck is equipped with direct drive high rail, six speed transmission, and boom bucket that can reach up to 18 meters.

Last August, BCR operated its biggest charter ever. Twenty coaches were used to carry 1225 passengers from Whistler to North Vancouver. The train included nine coaches leased from the NRHS, nine Royal Hudson coaches, and 2 Budd cars.

**1

BC Rail's Budd car passenger service carried more than 100,000 passengers in 1991. This is the greatest number since the Budd cars arrived on the PGE in 1956. (Michael Blusson)

BC Rail has committed \$4 million to completely upgrade the North Van Yard and its facilities (Phase 1 of a 3 year \$13.5 million program). The yard is to be rebuilt to provide for greater car capacity, improved access for the mobile yard reparequipment, and to extend the Vancouver Wharves interchange track. The Royal Hudson passenger equipment will be moved away from its present location at the diesel shop to new

the yard. This move will eliminate a switching bottle-neck which occurs every time the cars are pulled from their present storage location. The overall plan also has the north 'west) throat of the yard beginning mediately beyond the east end of the Capilano River bridge. Here, the mainline is to become five tracks that will pass under the Lion's Gate bridge, and then branch out to join the configuration of the present yard. The weigh-in-motion scale that is west of the Lion's Gate bridge will be removed and relocated elsewhere in the yard. (Michael Blusson)

In a move to increase seat passenger loads per train, the Royal Hudson service will be cut to five trips weekly for the 1992 season. The train will operate Monday-Friday. (WCRA "News")

BC Rail has invited tenders for the first phase of a \$110 million car renewal program: purchase of 100 73" center beam flats and 50 100 ton pulp boxcars.

Phase two (1993) calls for the purchase of another 100 centerbeam flats, 50 pulp boxcars, and 50 chip cars.

Further orders for rolling stock will be placed in 1994-96.
(BCR "Carrier")

Sperry Rail test car #117 was seen at the Squamish station on 16 March. (WCRA "News")

The North Vancouver yard will receive a \$14.6 million upgrade. The current yard facilities date back to the 1950s, when PGE established a rail connection with Squamish. Planned features include upgrading the CN interchange, improved turnouts throughout the yard, and new storage tracks for the Royal Hudson equipment.

The planned completion date is 1994. (WCRA "News")

A once weekly ski train to Whistler from North Vancouver began operating on January 10. The new service was scheduled to run for ten weeks, and uses two RDC-1s. (WCRA "News") At 15:15 on Sunday, 16 February 92,5. a derailemnt occured in North Van Yard while the yard crew was switching a cut of cars out of a recently arrived southbound freight. Units 627 (RS18 "Cat" conversion) and S403 were pushing loaded bulkhead flat cars into the east end of the yard on the south track of the double-track approach. At the first cross-over, immediately west of the Royal Hudson shops, BCOL 52779 split the switch, the trailing truck riding up and over the points. Approximately ten cars had already cleared the switch successfully. leading truck of continued along the south track while the trailing one followed the alignment to the north. Unable to spot the mishap immediately, the crew continued to back the train up, pushing BCOL 18379, BCIT 818520, MSDR 20081, and MSDR 20022 through the half thrown switch, derailing all. The crew eventually had the train stopped, but not before 200' of track had been torn up. Minimal damage was inflicited upon switch where the inital derailment occured, as only the points had been chipped. The second switch of the crossover (this one located on the north side (allowing access to the north half of the yard) was totally destroyed. After passing this switch, BCOL 18379 rolled over on its side (ended up 40 degress toward the north) while the leading end of the car and the first truck dug down three feet into the roadbed. bulkhead flat stopped just before reaching the Philip Avenue crossing. The car body had sheared off the pins which keep it centered over the trucks. Its spilled load was spread out over the reload shed tracks. BCOL 818520, the second car in line, came to rest still on its trucks, with a tilt of 5 degrees to the north. BCOL 52779, the car which initially derailed, uncoupled from BCOL 18379, and was dragged by the momentum of the leading cars over road crossing gouging pavement and ripping up the timbers with its rear truck. This car came to rest with the leading truck still on the proper tack, the second truck was sitting atop the switchstand (minimal damage here) of the switch accessing the engine shops and rip Even though tilting north on a 20 degree angle, the added center beam and tie down cables of

this car allowed it to keep its load. Unfortunately, BCOL 18379 had neither of these features.

The last two bulkheads, labelled MSDR, had derailed trucks, but remained upright and undamaged. By 16:30 the derailemnt site had been assessed and a crane with which to remove the cars' loads had begun to work. The large, yellow tired "big hook" was getting positioned to move the cars to clear the track for the passage of interchange traffic and for the southbound Budd cars. (Michael Blusson)

YARD WATCH

On Friday, February 21, progress on the North Van project was well In the morning, Work underway. Extra 611 (RS-18 "Cat Conversion" 611, with side air-dumps BCOL 6136,6154, 6139, 6151, 6152, 6153, 6146, 6142, 6148, 6144 and 6137; 50' flatcar BCOL 1227 (modified to carry a backhoe), and caboose 1876 in the new red/white/blue paint scheme, was busy dumping "fill" to build up the subgrade on both sides of the tracks between the Capilano River bridge and the road crossing a few hundred yards to the east. The track, which connects A1 to the mainline, thus bypassing the ladder switches, has been eliminated with removal of the immediately opposite the switch That morning, a ballast scale. (ESWT-3) and work train caboose 1904 were spotted on the short stub of this track that remains connected at the south (east) end. By 11:30, the loads had been dumped, and Work Extra 611 was on its way back up to Porteau.

Judging by the amount of progress

noted it will take only another week or two of "fill" before final location surveys can be had and ballast and track put in place.

On February 29, rebuilding work on the other end of the yard was underway. The five tracks immediately south of the mainline had been pulled up, while the ladder switches were in the process of being dismantled. (A derailment occured on February 16 just east of these swithces. Repair work was conveniently time to coincide with the North Van Yard "overhaul" project. Details on the derailment are included elsewhere in this issue.) The work on the north (west) end of the yard was put on hold pending the completion of the track rebuilding at the south end.

Also of note, log flat BCOL 10346, one of the first pieces converted from 52'8" bulkhead flats (Feb 92) was in the yard. Besides having the bulkheads removed, some of the flooring was cut away, and four stakes were added to each side. Car was lengthened by ten feet. One hundred twenty-five cars are expected to be converted, so we will be seeing more of them in the months to come.

Other rebuilding moves include 50' combination boxcar BCOL 100018 (seen 29 February 92), an example of the 70 ton pulp boxcar program. This car was formerly BCOL (PGE) 40691. Also spotted in North Van, but on the the Vancouver Wharves reload shed tracks, was the "covered" pulp car (centerbeam bulkhead flat) BCOL 1520000. This prototype car is considered so unique that stencilled on its side are the words "Patent Pending".

INTERCHANGE

SWAP PGE/BCR slide and photographs. Please send list of available items to: Marcel Devlieger, R.R. #2, Rettleby, Ontario Log 100

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Carter Cram wrote to tell us about the March 92 issue of "Railroad Model Craftsman" which contains an article on Canadian grain cars (cylindrical hoppers). Carter also that Overland Models offered these cars in brass and that Model Power offers an Americanized in plastic (as version Bachmann). And he is hopeful about a more accurate plastic model promised by Intermountain Railway of Denver, Anyway, Carter says that he co. found the RMC 3/92 issue and article very interesting.

WCTU Railway has acquired former BCIT 841100-841199, which were 52'8" double door boxcars. Cars were relettered only, numbers remain the same. ("Freight Car Journal")

Procor Limited added 61 general service tank cars (built by Procor, 1989). Series is PROX 23100-23160. These are 100 ton, 21,250 imperial gallon, lined tanks cars usually used for styrene monomer service.

Also noted are PROX 13600-13637 acid tank cars (built by Procor, 1988).

These are 11,151 imp gallon, insulated, coil tank cars.

("Freight Car Journal")

Dave Barone: To answer your inquiry concerning the possibility of cars remaining with PGE reporting marks. All rolling stock has been relettered to BC markings. Two exceptions: cars in company service, cars not in active service (ie. stored or in disrepair).

Marcel Devlieger would like to know the lengths of BCOL tank cars 1968 and 1969. Write Marcel at R.R. #2, Kettleby, Ontario LOG 1J0.

MOTIVE POWER NOTES

GF6C #6007 was observed on 14 February with damage to its superstructure from what appears to have been a sideswipe accident. (WCRA "News")

GE Dash 8-40CMs 4612 and 4617 were sent to CPR on loan for three months. The units arrived on CP tracks on 24 Dec 91. They were teamed with two UP Dash 8-40Cs in coal train service to Roberts Bank. In exchange, BCR received CP SD40-2s 6005, 6014, and 6021. (Paul J.C. Smith)

BC Rail will acquire four more Dash 8-40CWs in 1992. It is expected that they will be numbered 4623-4626. With the railway operating more trains, and the SD40-2s working north of Prince George, more 4000hp units are needed. (Pauk J.C. Smith and Michael Blusson)

The remains of ex BCR #711, which was lost in Seton Lake on February 29, 1980, was noted in Prince George on a flatcar last October. The diesel was recovered by salvagers in 1988, and later moved to the Squamish shop complex in 1990. (Paul J.C. Smith)

On February 29, BCR S-13 #502 was at North Vancouver-not in two tone green, but in Vancouver Wharves' red and white paint scheme as unit #827. This brand spanking new paint job obviously means that the engine has been recently sold to VW. On 5 March, #827 was in the VW engine shed. The front number boards had just been put in place, and the handrails and step edges had been painted yellow. (Michael Blusson)

PRODUCT REVIEWS

In issue #7 we asked for reader reaction to the Company Store's bulkhead flat conversion kit. The kit is intendeded for use with the MDC/Roundhouse 52' flatcar. Laszlo Dora writes to say that he has built several of the conversion kits. The directions are straight-forward, easy to follow. Each end takes about one hour to complete. The brakewheel must also be relocated.

Each kit contains enough parts to complete two cars and sells for 12.00 US postpaid. (Company Store, 25a Hamilton Road, Cambridge New Zealand)

BC Rail's Dash 8 40CM locomotive

BC Rail's Dash 8 40CM model locomotives are the latest generation of intelligent, microprocessor controlled locomotives from General Electric. Since introduction in 1984, GE has produced over 1000 Dash 8's which are now in service on North American railroads. The Dash 8 locomotive continues to set new standards for productivity, reliability and efficiency in heavy haul rail applications.

For BC Rail, GE has applied the Dash 8 propulsion and control systems to a fully winterized, full-width carbody. The winterization system automatically adjusts engine air and ventilation air flow in response to outside ambient temperatures. This innovative air flow system allows the locomotive to operate efficiently and reliably, especially in extreme Canadian weather conditions. The BC Rail Dash 8's also feature enhanced collision capability and roller bearing traction motor suspension with oil filled gear cases for reduced maintenance.

The Operator's Cab developed for BC Rail's Dash 8 40CM locomotive provides a safe, clean and comfortable environment for Railroad operating crews. The ergonomically designed, fully insulated cab is finished with textured paneling similar to that used in modern passenger aircraft permitting the lowest sound levels in the industry.

The desk style Operator's console is equipped with the KC120 two handle master controller.

SPECIFICATIONS

MODEL:

ARRANGEMENT:

WEIGHT:

ENGINE:

ModelHorsepower

AIR COMPRESSOR:

Motor (AC)

CONFIGURATION:
• Enclosed full-width carbody

· Canadian comfort cab with desk top controller

Roller bearing motor suspension - oil filled gear cases

Enhanced collision capability

Automatic winterization

Locotrol equipped

CONTROL:

TRACTION EQUIPMENT:
• Alternator

Alternate

Motors

• Radiator Fan (AC)

Traction Motor Blower (AC)
Alternator Blower (AC)

Dynamic Brake Blower (DC)

Dash 8 40CM

C-C with Dofasco Trucks

395,000 lbs.

7FDL16, 4 cycle, V-16 4000 HP for Traction

WABCO 3CMDBL

1 - GYA28

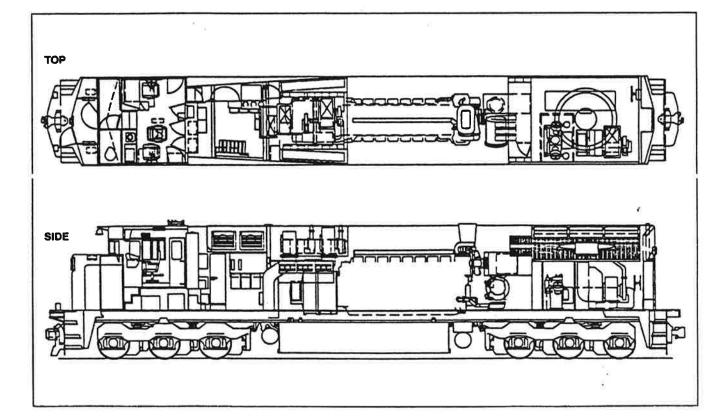
Microprocessor

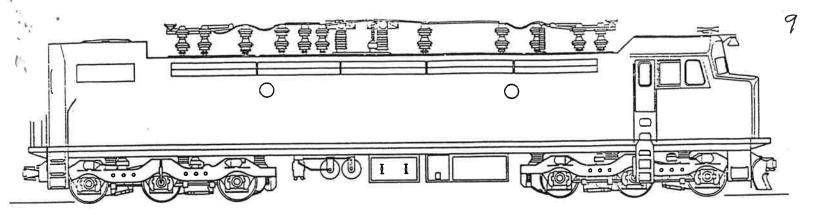
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1 - GMG187 6 - GE752AH

1 - GYA30 2 - GDY76

1 - GDY74 2 - GDY72





The Locomotive

Developing British Columbia's northeastern coalfields was the single largest industrial undertaking in the history of the province. More than \$2.6 billion was invested over a three-year period – including two open-pit mines, highway access, development of a new town, and a \$500 million rail line, built by BC Rail.

Motive power for the 98-car unit coal trains is provided by seven 50-kV electric locomotives, designated GF6-C and built by General Motors Diesel Division in London, Ontario. This thyristor-controlled locomotive utilizes ASEA of Sweden manufactured power and control equipment.

Electrification eliminated the need to ventilate a nine and a six-kilometre tunnel, and offered fuel and maintenance economies.

The first unit coal train moved out of Tumbler Ridge on November 1, 1983 – one month ahead of schedule under conventional diesel power. The first of the 6,000-hp GF6-Cs was phased in beginning December, 1983. By May, when the project

was officially opened, coal trains were being hauled to BC Rail's main line at Tacheeda entirely under electric power.

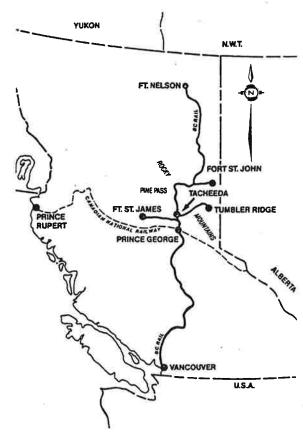
General Motors, ASEA and BC Rail met the challenge of creating a truly modern heavy haul locomotive for rugged northern conditions, while BC Rail's own construction and engineering staff won the race against time to construct Canada's first electrified heavy freight railway.

Performance of the electric locomotive fleet has been excellent. The GF6-C offers good adhesion under controlled creep conditions. With separately excited direct current traction motors a degree of motor control, not yet practical in conventional diesel-electric locomotives, is achieved.

The Route

The 81-mile (129-km) Tumbler subdivision was built in a remote northern region of the Rocky Mountains in less than four years. The route is the first and toughest section of a 950-km rail haul that carries coal from the Quintette and Teck-Bullmoose mines to the Ridley Island deep-sea terminal in Prince Rupert, B.C.

General Description



MOTIVE POWER EQUIPMENT GUIDE MULTIPLES BRAKING CLASSIFICATION OMF OF CAPUEL OFF 40 18/20/2 370 UNIT S, ASO 18 OME 15 80 \$\\$\\2\Z **NUMBER** 100 יא יא א יא X1 X 500 X X 502 X X X X X X 1200 X X X 601 1200 X X X X X Х X X X (4) 602 to 605 X X X X X X X X X X 1200 X 606 X X X 1200 X X X X X X X (2) 607 & 608 X X X X X X X 1200 X X 609 X X 1600 X X X X X X X X X 610 X X X X X X X X X 1600 X 611 X X 1600 X X X X X X X X X (4) 612 to 615 X X X X X X X X 1600 X X 617 X < X X 1600 X X X X X X X X X (4) 619 to 622 X X X X X X 1600 X X X X 623 X X 1600 X X X X X X X X X (2) 624 & 626 X X X X X 1600 X X X X X 627 X X 1600 X X X X X X X X X (3) 628 to 630 X 2500 X X X X X X X X X (2) 631 & 632 X 2000 X X X X X X X X X X X (8) 640 to 647 XX 2000 X X X X X X X X X (4) 681 to 684 XX X 2000 X X X X X X X X X (4) 685 to 688 X X 3300 X X X X X X X X X X 710 X*< $\mathbf{x} \mid \mathbf{x}$ 3300 X X X X X X X X X X 719 X X2 2700 X X X X X X X X X (7) 736 to 742 X X2 3000 X X X X X X X X X X X5 (3) 743 to 745 X X X X X X X2 3000 X X X X (5) 746 to 750 X X 3300 X X X X X X X X X X (4) 751 to 754 3300 X X X X X X X X X X X X (4) 756 to 759 X X 3300 X X X X X X X X X (7) 761 to 767 X X X X 2200 X X X X X X (2) 802 & 803 X X X X X X X X 2200 X X X 811 X3 X2 χe 3800 X X X X X X X X X (22) 4601 to 4622 X X X X3 X2 Х X X X X X X (7) 6001 to 6007 X X (3) S401 to S403 ONLY WITH UNITS 601, 603, 805, 608, 610, 612, 631, 632 X (7) S404 to S410 SEATING CALLEY X χ³ 290 X X 140 72 BC 10-11-12 RDC 1 X Хэ 260 70 140 RDC 1 **BG 14** X X 208 64 63 RDC 1 **BC 15** Y 260 DU 21-22 HUU 2 X X 208 140 54 RDC 2 **BC 23** X χз 290 BC 30-31-33 XX 220 RDC 3

- . TRAILING UNIT, NO CAB
- CATERPILLAR (Engine)
- ELECTRIC FREIGHT UNIT
- GE GE (Builder)
- GM GM (Builder) M MLW (Builder)
- RCL REMOTE CONTROL LOCOMOTIVE
- RS ROAD SWITCHER
- SWITCHER
- APU AUXILIARY POWER UNITS (42 KW)
- RDC RAIL DIESEL CAR

- MS 10 should trail when coupled with 26 L BRAKE
- X2 Equipped with extended range dynamic braking.
- With 30 CDW Brake Valve.
 Units 631 to 6007 have alignment control draft gear.
 Cabs are not equipped to lead unit standards.
- Xs Units 4601 4622 equipped with universal Locotrol II, can be used as a lead or remote unit. Not compatible with Locotrol 105
- X7 Units 601 to 630 and S401 to S410 have draw-bar stops.
- Units 710, 719, 751, 752, 753, 754, 756, 767 equipped with lead locotrol 105.
- Units 763, 764 & 765 equipped with pace setter. Units 757, 758, 762 equipped with Positive Traction Control (PTC) - RSD (Reset Safety Device) units equipped 602, 609, 611, 614, 617, 623, 624, 626, 627, 628, 630

Note: Any change from these tonnage ratings must be authorized by Traffic Control Supervisor Note: F-30 units equipped with Positive Traction Control (PTC) can handle 15% above F-30 rating

(Read Down)

NORTHWARD (Read Down)

MACKENZIE SUBDIVISION

Fort St. James

Bulkley House

Leo Creek

Kennedy Mackenzie

BC RAIL LTD. PASSENGER TRAIN SCHEDULE No. 10

During period when Daylight Saving Time prevails in British Columbia, times for trains should be read as "Daylight Saving Time".

Effective April 1986
Subject to change without notice.

			doject	to change without notice.		
Read Down	Read Down				Read	Read Up
SUN.		MILES	Km			MON.
WED.	NO. 1	PROM NTH.	FFIOM NTH		NO. 2	THUR.
SAT.*	DAILY	VAN.	VAN	STATIONS ALT.	DAILY	SUN.
	0730	1.2	1.9	(S) NORTH VANCOUVER 3		
	0750 f 0753	11.6 14.1	18.6 22.7	HORSESHOE BAY 162 SUNSET BEACH 102		
	0802	18.0	28.9	LIONS BAY 65		
	1 0805	19.3	31.0		1 2000	
	1 0819	26.2	41.5		f 1946	
	1 0828	31.0	49.9	BRITANNIA 13		
	0845 f 0852	39.9 44.1	64.2 70.9	(S) SQUAMISH 25	1919	
	1 0859	49.6	79.8		1 1859	
	1 0919	59.5	95.7	GARIBALDI 1126	1 1839	
	1 0925	62.6	100.7	WATER TANK 1296	f 1836	
	0935	67.2	108.1	McGUIRE 1537	1 1823	
	1 0950 1 0952	73.4 74.4	118.1 119.7	WHISTLER 2089 ALTA LAKE 2104	f 1810	
	0953	75.0	120.7	CANADIAN HOSTEL 2104	1 1759	
	1 0958	77.2	124.2	MONS 2100	f 1756	
	1 1018	90.3	145.3	TISDALL 1123	f 1736	
	1030	94.7	152.4	(S) PEMBERTON 696	1730	
	1 1037	99.1 109.0	159.5 175.4	MT.: CURRIE 686 GRAMSONS (10 Downing St.) 1303	1 1719 1 1700	
	1 1052	112.5	181.0		1 1656	
	1 1107	117.8	189.5	GATES 1238	1 1647	
	1 1110	120.4	193.8	DEVINE 1015	1 1640	
	1 1115	122.8	197.6	D'ARCY 880	1 1637	
	1 1122	127.8	205.6 207.4	PONDEROSA 870	1 1625	
	f 1123	128.9 130.4	209.8		1 1621	
	1 1137	133.9	215.5	CURRIES 856	1 1612	
	1 1149	139.3	224.1	SETON PORTAGE 828		
	1 1200	142.3	229.0	SHALALTH 813 Arr(S) LILLOOETLve. 793	1 1558 1530	
	1235 NO.1	157.7	253.8	Aft (5) LILLOUET LVE. 793	NO. 2	-
	DAILY				DAILY	
1250		157,7	253.8	Lve(S) LILLOOETArr. 793		151
1 1303 1 1317		165.4 173.1	266.2 278.5	FOUNTAIN 1059		1 145
1326		177.8	286.1	PAVILION 2218	1	1 142
1334		181.2	291.6	MORAN 2611		1 141
1 1355		192.3	309.4	KELLY LAKE 3509	9	1 135
1 1409	1	203.0	326.6			1 133
1418		214.6	345.3	CHASM 3508		1 133
1 1433		223.2	359.1	GREEN LAKE CROSSING		l 131
. 1-100		220,2	003.1	GRVL. PIT - N. GREEN		'''
1 1447		232.5	374.1	AND WATCH LAKES 3612	1	1 130
1 1450		236.3	380.2	FLYING-U 3788	1	1 125
1502 1505		243.2	391.3	HORSE LAKE 3864		1 124
1505 1526		246.2 259.2	396.2 417.1	(S) EXETER 3181		122
1 1535		265.4	427.1	TATTON3041	1	1 121
1546		273.4	440.0	LAC LA HACHE 2761		1 120
1 1558		281.5	453.0	WRIGHT 2660	1	1 115
1616		293.6	472.5	ENTERPRISE 2500		1 113
1640 1705		305.8 313.9	492.1 505.1	4 ONWARD 2048 (S) WILLIAMS LAKE 1765		f 111 105
1740		335.5	539.9	SODA CREEK 1660		f 102
1811		358.1	576.3	ALEXANDRA 1705		1 095
		384.6	618.9	(S) QUESNEL 1454		091
1847	î l	419.3	674.8	STRATHNAVER 1985	1	1 082
:::::			683.3	HIXON 1869	1	1 082
1934		424.6				
1934		424.6 448.8	722.2			f 075
1934 1947						f 075 073
1934 1947 12020		448.8	722.2			

Cover: Cottonwood River Bridge

"June 7 - Sept. 21, 1986 only

Printed in Canada

You are embarking on a journey through some of the most spectacular scenery in the world. All members of the train crew are at your service to help make the trip a memorable occasion.

BC Rail and its employees hope you enjoy travelling the scenic route of British Columbia

Ft. above Mile sea level

NORTH VANCOUVER. The city of North Vancouver is the railway's southern terminus and home of BC Rail's corporate headquarters. In addition to our regular passenger service, from May to September BC Rail also operates the world famous Royaf Hudson steam excursion between North Vancouver and Squamish. Shortly after departure we pass under the tamous Lions Gate Bridge built in 1938. The bridge joins North Vancouver to Vancouver's Stanley Park.

- 2.5 WEST VANCOUVER. We cross the Capilano River, which is an important salmon migration route, and enter the city of West Vancouver. This beautiful residential area has some of the most expensive real estate in Canada.
- 11.0 166 HORSESHOE BAY TUNNEL. This 4,200 foot tunnel is the longest on our passenger line.
- 11.6 162 HORSESHOE BAY. Frequent lerry traffic to Vancouver Island and the Sunshine Coast and pleasure craft dotting the seascape, make this major transportation terminal at the gateway to Howe Sound, a visitor's delight. The area is world famous for salmon fishing.
- 26.2 PORTEAU CROSSING. This provincial park and campsite overlooking scenic Howe Sound has some of the best scuba diving on this part of the Coast.
- 31.0 BRITANNIA BEACH. During the 30's, these mines were the largest producers of copper in the British Empire. The mines were closed in 1974 and are now the main attraction of the British Columbia Mining Museum.

WOODFIBRE. Looking west across Howe Sound, you may see the Western Pulp Ltd. Woodfibre pulp mill. Access to the mill is only by ferry.

39.9 SQUAMISH. At the head of Howe Sound, Squamish is a bustling railroading and logging centre. It is also home to the railway's locomotive and heavy repair shops.

MOUNT GARIBALDI. This snow-covered mountain rises to 8,787 feet in majestic splendour. It was named in 1860 to honour Giuseppe Garibaldi, a nineteenth century Italian soldier and statesman.

47.061.0

CHEAKAMUS CANYON AND THE CHEEKEYE RIVER. Over the next few miles the train climbs a 2.2 per cent grade, the steepest on the railway, as it snakes through the spectacular Cheakamus Canyon. Below the rail line, the river tumbles wildly through a narrow craggy gorge. The train follows the Cheakamus River for about twenty-five miles to the summit of the Coast Range at Alta Lake.

CHEAKAMUS RIVER. The river's name is an Indian word meaning "those who fish with cedar rope nets"; fishing is still a popular pastime today. During early summer, eagles can be seen nesting along the river.

- 65.3 1535 BRANDYWINE FALLS. Only the pinnacle of the 280 foot falls can be seen from the train as it crosses Brandywine Bridge. The waterfall was named by members of an early survey party who were betting on the fall's height — one group bet wine against the other group's brandy.
- 73.4 2089 WHISTLER. Whistier and Blackcomb Mountains provide excellent conditions for both novice and expert skiers. Year-round recreational facilities including a championship golf course, great wind surfing on Alta Lake and a network of good hiking trails make Whistler an internationally popular resort. BC Rail provides an excellent schedule for both day trippers and extended visits to the Whistler area.
- 74.4 2104 ALTA LAKE. Previously called Summit Lake, this lake is the summit of the rail line as it passes through the Coast Range.
- 78.0 1895 GREEN LAKE. Looking to the west, you can see Wedge Mountain. The rail line now descends a sharp grade and enters the fertile Pemberton Valley, named after Joseph Pemberton, a Hudson's Bay Company Surveyor.
- 94.7 696 PEMBERTON. The town is a major distribution centre for the Pemberton Valley. A short distance north is the Lillooet River, a main transportation route to the Cariboo during the gold rush days of the 1860's.
- 99.1 686 MOUNT CURRIE. The Indian reserve, flag stop and nearby mountain are all named after John Currie, who resided in the area during the 1870's. The reserve is known for its annual spring
- 102.7 905 BIRKENHEAD RIVER. Named for a British troopship sunk off the coast of South Africa in 1852, the river is home to chinook and coho salmon; and Dolly Varden, steelhead and rainbow trout.
- 109.0 1303 10 DOWNING STREET (GRAMSON'S). The old house was built by Ab Gramson, a World War I veteran who homesteaded around 1920. A proud and patriotic Englishman, he named his home after the official residence of Britain's prime ministers. The names on the house are World War I battle sites.
- 112.5 1617 BIRKEN. Towers of the major transmission line from Bridge River to Vancouver can be seen in the distance. Birken, on Gates Lake, is at the summit of the Cascade Mountains.

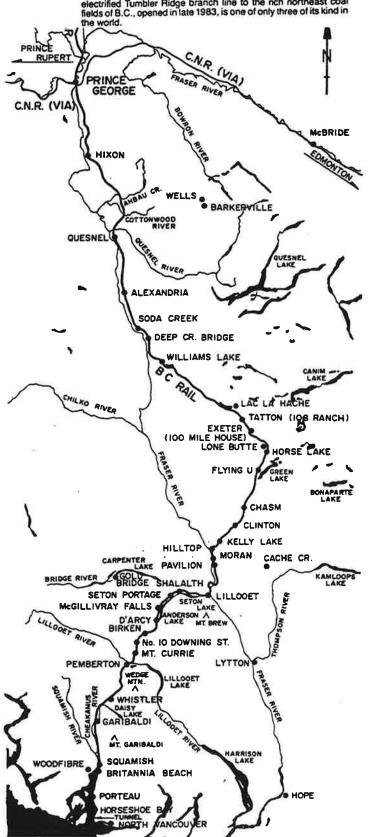
- 980 D'ARCY. Located at the south end of scenic Anderson Lake, the village is popular with day trippers. Visitors can spend a few hours enjoying the sandy beaches, swimming, picnicking and canoeing before catching the afternoon train back to North Vancouver.
- ANDERSON LAKE. Originally Anderson and Seton Lakes were joined but, due to glacial action over the centuries, became separated. Both of these lakes are in excess of 700 feet deep in some areas.

22.8

- McGILLIVRAY FALLS. A view of the falls can be seen to the west.
- 139.3 828 SETON PORTAGE. A three-mile narrow gauge horse-drawn railway was built between Seton Portage and Anderson Lake in 1861. It is believed to be the first railway in Western Canada.
- 141.0- SETON LAKE. The milky blue-green colour of this lake is a reflection of glacial till.
- 141.3 813 SOUTH SHALALTH. This is the site of B.C. Hydro's Bridge River Power House. To the west are the huge penstocks guiding the never-ending supply of water on its journey from Bridge River. Shalatth is the Indian name for Seton Lake.
- 155.0 860 BRIDGE RIVER POWER STATION CANAL. To the east of the train at the end of Seton Lake is a canal outlet an integral part of B.C. Hydro's water delivery system.
- 157.7 793 LILLOOET. Originally called Cayoosh Flats, this historic town is located at the junction of Cayoosh Creek and the mighty Fraser River. It played an important part in the Cariboo Gold Rush of a century ago. Lillooet is Mile Zero of the old Cariboo Wagon Road. Started in 1858, the Road led north to the goldfields at Barkerville and Wells.
 - BC Rail provides excellent daily service for day trips to Lillooet.
- 160.2-188.0 FRASER RIVER. The train crosses the Fraser River to start its winding journey up another 2.2 per-cent grade to Hilltop. The rail line sticks close to the mountain side through the Fraser River Canyon and climbs 3,000 feet to the Cariboo Plateau.
- 177.8 2218 PAVILION. The name derives from the Salish Indian custom of placing a pole or streamer at the base of rock piles which covered their dead. The French-Canadian fur traders called the streamers "pavillons."
- 181.2 2611 MORAN. Two thousand feet below the tracks, the Fraser River cascades southward on its relentless journey to the Pacific Coans.
- 192 3 3509 KELLY LAKE. We are now entering the Cariboo Country amidst rolling hills, alkali lakes, and grazing cattle contained by a multitude of different styles of fencing.
- 203.0 3166 CLINTON. This town is a ranching centre in the Cariboo and well known for its annual rodeo and also the Clinton Ball, an annual event for over 100 years.
- 214.6 3508 CHASM. Although you can see only the rim, this awe inspiring canyon is hundreds of feet deep and more than a mile long.
- 236.3 3788 FLYING U. We are now in guest ranch country.
- 243.2 3864 HORSE LAKE. This is the highest elevation on the rail line. The butte, for which Lone Butte is named, can be seen from here. One of the railway's microwave towers can be seen in the distance.
- 246.2 3745 LONE BUTTE. The old water tower still stands as a symbol of traditional railroading days gone by.
- 259.2 3181 EXETER (100 MILE HOUSE). The rail station was named after the Marquess of Exeter who, until 1930, ran the 12,000 acre Bridge Creek Ranch from his home in England. Located one hundred miles from the start of the Cariboo Wagon Road in Lillooet, 100 Mile House was a way station on route to the coldfields.
- 265.4 3041 108 RANCH (TATTON). The ranch features a championship golf course, trail riding and canoeing for summer activities. In the winter months the 100 Mile House/108 Ranch area is a cross country skiers' paradise, with miles of well groomed trails and famous Cariboo hospitality to enjoy.
- 273.4- 2761 LAC LA HACHE (Fr: Axe Lake). Popular year round resort lake with excellent ice fishing in the winter months.
- 313.9 1765 WILLIAMS LAKE. This bustling city is a major lumbering centre in the heart of the vast ranching country which serves the Chilcotin and Horsefly areas. The annual Williams Lake Stampede draws rodeo enthusiasts from all over the world.
- 329.9 1824 DEEP CREEK BRIDGE. With the deck 312 feet above the creek bed, this is one of the highest railway bridges in the world.
- 335 5 1660 SODA CREEK. Between 1863 and 1921 river steamers plied the waters of the Fraser between Soda Creek and Prince George 130 miles to the north.
- 358.1 1705 ALEXANDRIA. Nearby is the site of Fort Alexandria, the last post established by the North West Company before merging with the Hudson's Bay Company in 1821.
- 384.6 1454 QUESNEL. Quesnel is an important forest industry centre at the junction of the Fraser and Quesnel Rivers. Until 1952 Quesnel was the northern terminus of the railway. Within a scenic one hour drive east, visitors can wander through the famous gold rush towns and museums of Wells and Barkerville. During the Cariboo Gold Rush of the 1860's San Francisco was the only city west of

- 398.0 2405 COTTONWOOD RIVER BRIDGE. The prage is 1,023 feet long and sits 234 feet above the Cottonwood River.
- 406.3 2380 AHBAU (ah-bóo) CREEK BRIDGE. In 1952, a silver spike ceremony commemorated the opening of BC Rail's Quesnel to Prince George line. The bridge is 920 feet long and 75 feet above Ahbau Creek.
- 424.6 1869 HIXON. Earlier this century, there was extensive placer mining at Hixon Creek.
- 462.5 1870 PRINCE GEORGE. At the junction of the Fraser and Nechako Rivers, Prince George is the railway's major northern divisional point. With a population in excess of 75,000, Prince George is the major commercial and transportation hub of north central British Columbia.

From Prince George the BC Rail freight service extends north to the Peace River country and Fort Nelson, 980 miles from North Vancouver. Our line also serves the lumber and pulp producing communities of Fort St. James and McKenzie. BC Rail's 50kv electrified Tumbler Ridge branch line to the rich northeast coal fields of B.C., opened in late 1983, is one of only three of its kind in the world.



Major projects for the year

The net income for 1992 will be used to finance the following capital projects:

Car purchases and conversions — \$25 million

- purchase 200, 73 ft. centre beam bulkhead flat cars
- purchase 50 new 100-ton pulp box cars
- upgrade150, 70-ton box cars to 100-ton for pulp
- · add centre beams to bulkhead flat cars
- convert 125, 70-ton bulkhead flat cars to 75 log cars

Squamish port development — \$ 17 million

This will be a three year project. Expenditures are for land, facilities and the preparation of the port.

Locomotive purchases — \$ 8 million

Four 4000 h.p. locomotives will be delivered in late 1992 and early 1993. This is part of a ten year locomotive fleet upgrade and renewal program.

Re-engine yard locomotives — \$ 7 million

Part of a five year program to re-engine 27 yard locomotives. Six units have already been completed.

CWR relay — \$ 6 million

Complete continuous welded rail from Squamish to Garibaldi. As well, there will be a 12 mile curve rail relay on the Tumbler subdivision.

Takla rehabilitation —

\$5 million

Complete the track and roadbed from Lovell to Sloane (73 miles).

Ties —

\$ 4 million

- A wood tie replacement program from Lillooet to Kelly Lake.
- A steel tie program from Cheakamus to Pemberton in high curve areas.
- Continuation of the annual program to replace defective ties.

Grade and rock stabilization — \$ 4 million

Work will continue in the Cheakamus Canyon and along Pavilion Hill. Bankwidening is planned from Darcy to Lillooet.

Communications south upgrade — \$ 4 million

Completion of the final phase of a \$13 million project to replace the existing analog microwave system with digital.

North Van. yard upgrading — \$ 4 million

This is the first year of a three year project to completely upgrade the facilities at the North Van. yard.

Fort Nelson Subdivision —

\$ 2 million

Bridge work and work on the subgrade and drainage program between Fort St. John and Fort Nelson to maintain and improve the stability of the track.

WCRA CORNER

The West Coast Railway Association has raised more than \$20,000 towards its Project #551 fundraiser target. The goal was to reach \$37,000 by April, the date the lease became Because available. shortfall, the WCRA is currently working to renegotiate the terms of The good news the agreement. that if WCRA continues to the engine's fundraiser progress, preservation is assured. news is that the related interest costs will increase the final price of the engine.

Your help is needed. Donations can be made by check, Visa or Mastercard. All donations are tax deductible in Canada. (WCRA, POB 2790, Vancouver, BC V6B 3X2).

Just prior to our closing date for this issue, we learned that the former PGE car shop had beer securely lowered onto its neconcrete foundation in Squamish. The accomplishment is certainly a feather in the cap for the WCRA. Work on the exterior walls continue.

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