PACIFIC GREAT EASTERN RAILWAY DIARY

C. H. RIFF

3

TUESDAY, MARCH 29, 1932

CO

3 Die When Bridge Falls Under Train

Heavy Rains to Blame for Weakening of Structure; Passengers All Escape

Continued from Page One

city at three o'clock this afternoon.

Details of his injuries were not known but company officials understood he would recover.

All four of the wreck victims were married men with a long record of service in the P.G.E

Cumming is survived by a wife and nine children. Duncan leaves a widow and three children and Bazley a widow.

Conley has a wife and two children.

Conley Was On Whytecliff Line

NORTH VANCOUVER, March 29.—C. M. Conley, brakeman who was injured when the locomotive and four work cars of a P.G.E. train plunged through a trestle 10 miles from Lillooet yesterday, is well known here.

He resides with his wife and daughter at 180 East Keith Road.

He was one of the most popular railwaymen on the North Shore.

During the Oliver Government regime he was superintendent of the P.G.E. line and for many years afterwards was conductor on the North Shore lines to Whytecliff.

He took an active part in negotiations between the railway workers' union and the company.

PASSENGERS TRANSFERRED

Ordinarily the creek bed at the place of the wreck is dry. It is believed a freshet must have developed from the heavy rains of the past week, tearing out the bents or supports of the high trestle.

The train was northbound at the time of the wreck. Passengers remained in the cars during the night, were transferred over the break today and continued their journey.

TRAFFIC NOT TIED UP

H. W. McNeill, chief clerk in the P. G. E. headoffice here, said repairs were being rushed at once. J. A. Quick, superintendent, and engineers, are en route to the scene in a special train.

The next northbound train will leave Squamish on schedule Thursday and if the bridge has not been repaired by that time passengers will be transferred over the break to another train beyond.

Southbound traffic from Williams Lake will be handled in the same way Wednesday.

MARCH 29, 1932.

Pacific Great Eastern Railway Finances.

The improvement in Pacific Great Eastern Railway earnings and the replacement of operating deficits by net earnings, mentioned in our June issue, pg. 258, and July issue, pg. 316, has been commented on by an Edmonton, Alta., newspaper, which pointed out that the railway, owned by the Province of British Columbia, had an operating profit during the first six months of 1933, the first time in its history that net earnings were secured in the first half of a year. The article pointed out, however, that the fixed charges are such that the railway is a heavy burden upon the B.C. treasury, but went on to say that the improvement in earnings encourages the belief that it may before long cease to be the white elephant that it has proved to be from the first. It continued:—"A much better chance should at least be afforded of selling the railway, which the B.C. Government has been seeking to do for a long while. Possibly the various failures to come to terms with prospective buyers may in the end turn out to have been an advantage to the province. The mining activity in the Bridge River and Cariboo countries has been responsible for the sharp rise in earnings, and with all the mineral wealth that there is reason to believe exists in the interior of British Columbia, construction of the line may yet be justified."

A Victoria press dispatch states that the B.C. Government has authorized the expenditure of an additional $10,000 on the upkeep of the P.G.E.R. line, which

AUGUST 1933

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A Victoria press dispatch states that the B.C. Government has authorized the expenditure of an additional $10,000 on the upkeep of the P.G.E.R. line, which brought the total borrowings in the last four years up to $1,261,000, and was taken from the proceeds of a $4,000,000 loan which was voted by the legislature in 1928 for extension of the railway to Prince George. It has been found impossible to use the money for the purpose for which it was intended, and the portion indicated has been employed in maintaining the existing line in good condition. The operating deficits for the four years up to the end of 1932 totalled $240,507. In addition $1,251,000 was spent in the four years to the end of 1932 to maintain the line, making the total cost to the taxpayers $1,491,507, the railway thus having gone behind at the rate of $372,877 a year on the average, this, of course, being apart from the debt charges, which are now about $2,300,000 a year. It is evident that any operating profits secured this year will be far outweighed by the charges mentioned. The press dispatch quoted the Prime Minister of B.C., Mr. Tolmie, who is also Minister of Railways, as saying that the Government will continue to negotiate for the sale of the property to British and/or United States interests.

AUGUST 1933

Two Die When Slide Wrecks PGE Train

Locomotive, Cars Swept Into Lake

Two trainmen died early today when a snow and rock slide bowled a Pacific Great Eastern freight locomotive and two tank cars into Seton Lake.

The accident occurred about 115 miles north of Vancouver.

Five cars of the train were derailed but two diesel locomotives, which were pushing, were undamaged.

Dead are:

Alex L. Munro, 42, engineer, of Squamish.

Henry Paul Seymour, 27, fireman, also of Squamish.

The accident happened at 4:20 a.m. at Mile 117 as the train was northbound. So far PGE officials have received only sketchy details on the tragedy.

The freight was crawling around the lakeshore, scant feet from the tracks, when the avalanche came roaring down the mountainside on top of it.

The heavy steam locomotive and cars were swept before it into the deep lake.

ENGINE SWALLOWED UP

Wrecking crews were called out from Lillooet, at the lake head, and Squamish.

PGE officials are now at the scene investigating the feasibility of salvaging the locomotive.

The engine cannot be seen and it is presumed the bodies of the engineer and fireman are still in the cab.

Services of divers will be required if the train and bodies are to be recovered, an official said.

LEAVES FAMILY

Munro had been with the PGE since August 23, 1944. He is survived by his wife and three children and his father at home.

Seymour worked for the railway since January 14, 1946. He was an RCAF veteran of the Second World War and is survived by his wife and one child.

NO TRAINS TODAY

There are still no trains entering or leaving Vancouver for the fourth consecutive day.

Both CNR and CPR are battling to dig lines clear of heavy snowslides and it is not known when they will be clear.

The CNR train that left here Thursday night for the east and became bottled up by a slide at Yale was expected back in Vancouver late this afternoon.

A snow plow and two engines cut their way through to the train about noon today. Since the line to the east is blocked the train will be hauled back here.

Passengers have been living on board ever since Thursday.

425 FLOWN HERE

Passengers on another stalled CNR train are living at a construction camp at Stout, 113 miles from Vancouver.

Over the weekend, Canadian Pacific Air Lines flew 425 stranded CPR passengers here from

(Details of airlift on Page 15)

Kamloops and Penticton. Another 85 were scheduled to be brought on the airlift today.

CPR trains are operating between Calgary and Kamloops and on the Kettle Valley line from Medicine Hat to Penticton.

Please Turn to Page Two
See "Trains"

January 23
1950

OUVER, BRITISH COLUMBIA, WEDNESDAY, MARCH 30, 1932

SEVERED AIR LINE SAVED P.G.E. TRAIN

Brakeman Conley, Patient at St. Paul's Hospital; Officials Go to Scene

C. M. Conley, brakeman of the P.G.E. train whose locomotive plunged through a trestle bridge Monday night, killing three of the train crew, lay in a hospital bed at St. Paul's today after being rushed by special train and tug from Lillooet to Vancouver via Squamish yesterday.

His miraculous escape from death in the 100-foot crash cost him only broken arms, one fractured in three places and the other in one, and internal injuries that are not expected to be serious.

Hospital authorities reported his condition was "pretty good."

BODIES AT LILLOOET

Bodies of the three men who lost their lives—Minor G. Bazley, engineer; J. R. Duncan, fireman, and H. P. Cumming, conductor—were still at Lillooet today pending instructions from their families.

While a detailed report of the accident has not yet been received at the P.G.E. offices here, new messages from Lillooet show that only the locomotive went through the trestle. First reports said four work cars also made the plunge.

AIR LINE SAVES TRAIN

When the wreck occurred, company officials said, the locomotive was automatically disconnected. The break in the train line automatically applied the air brakes to the train and all cars came to a standstill on the tracks as the engine dropped into the gully.

Robt. M. Wilson, executive assistant of the P.G.E., and other head officials of the company were on the scene today speeding repair work.

Passengers are being transferred around the broken bridge to other trains until repairs are finished. Service is being maintained out of Squamish on schedule.

MARCH 30, 1932.

3IA, THURSDAY, MARCH 31, 1932

SCENE OF FATAL WRECK

The fatal plunge taken by locomotive and tender in the P.G.E. train disaster near Lillooet Monday night is shown in this striking photograph. Three men of the train crew, Minor G. Bazley, J. R. Duncan and H. P. Cumming, were killed when the engine, see lying against the bank in the picture, crashed through these timbers after rains had weakened the trestle. The locomotive broke loose from the train as it fell. A fourth man, Charles M. Conley, was thrown clear as the accident occurred, suffering two broken arms and internal injuries. His condition was reported fairly good at St. Paul's Hospital today.

MARCH 31 1932

JAN 23 1950

IMBIA, MONDAY, ★★★C

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CRASH AFFECTS MEMORY

NEW WESTMINSTER, Jan. 23.—A Surrey woman was unable to remember her first name after an auto mishap on Marine Drive today.

Mrs. Hetherington, 74, of Trinidad Road, Surrey, suffered cuts on her head when in auto she was in skidded on a film of ice on a curve in the 2300 block and slid into the ditch.

She was admitted to Royal Columbian Hospital. Ambulance attendants were told she couldn't remember her first name.

January 23 1950

Railwayman Injured In PGE Boiler Blast

Inspectors Probe Quesnal Explosion That Rips Locomotive, Rocks Town

9/24/1951 P 14

Special to The Vancouver Sun

QUESNEL, Sept. 24.—Pacific Great Eastern Railway officials today are probing a locomotive boiler explosion that destroyed a railway engine and sent a Burnaby man to hospital.

The blast threw residents of nearby homes from their beds and showered the area with chunks of brick.

In Quesnel Hospital with burns and cuts is William Fowler, 19, of 3530 Sanders, Burnaby. Authorities say his condition is good.

Fowler, whose job was to see steam was kept up in locomotives during the night, was found unconscious on the tracks several yards from the wrecked engine.

The blast hurled brick fragments 150 feet into the home of Acting Roadmaster J. A. Miller, tossed from his bed by the explosion.

"There were actually two explosions," Miller said. "The first woke us and the second threw me out of bed."

Inspectors are on the scene today seeking the cause of the explosion.

The mishap is believed the second of its type in B.C. history. A similar accident occurred in the same rail yards in 1922.

September 24, 1951

Howe Sound, Pemberton and Northern Ry. An announcement was made at Vancouver, B.C., Dec. 3, to the effect that arrangements had been completed for making an early start on the construction of this railway. Reconnaissance surveys have been completed from Squamish, at the head of Howe Sound, to Anderson Lake, 92 miles, and it was expected that the surveys for location would be started by Dec. 31. It is proposed to operate the line by steam at the outset, but as there are some water powers on the Squamish River, it is proposed to develop electricity at convenient points and utilize it on the line, as there will be some heavy gradients back of Howe Sound. The company was incorporated last session of the B.C. Legislature.

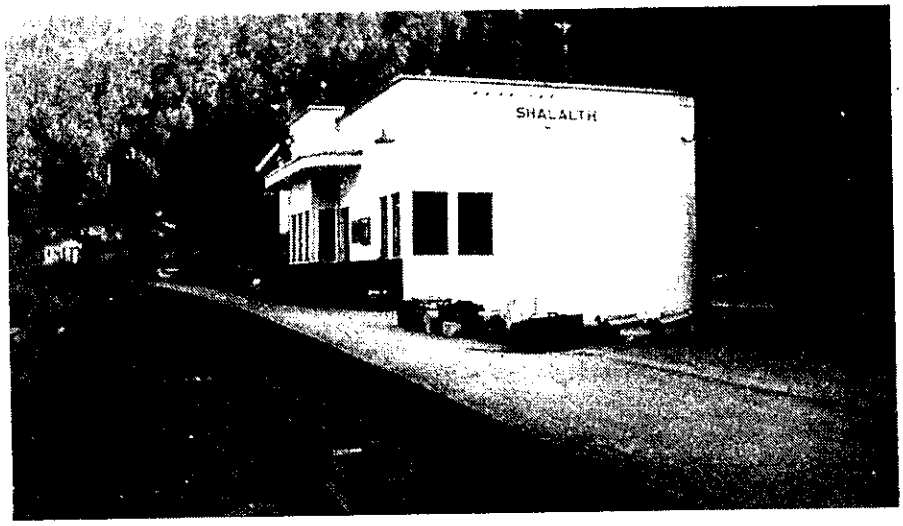
January 1908

Canadian Transportation

Extension and Improvement for P.G.E.R.

The Pacific Great Eastern Ry., the 347-mile line owned by the Province of British Columbia, is to be extended northerly to a junction with the Canadian National Rys. Prince Rupert line, beginning this year; highway connection between Squamish, the southerly terminal, with Vancouver, is to be provided, and steps are to be taken to increase the line's traffic. Eventual extension to the Peace River area is contemplated.

READERS may have noted references in the daily press, in February, to an address made by Prime Minister Byron Johnson of British Columbia in the Legislature of that province, wherein he dealt with British Columbia Government plans for the extension and improvement of the Pacific Great Eastern Ry. Mr. Johnson has favored us with a copy of his address, and has made available considerable additional information in regard to the plans for the Pacific Great Eastern property. In the following, we present information in regard to this road as it now exists, and as to the intentions concerning it.



The Pacific Great Eastern Ry. Station at Shalalth, the Rail Headquarters for the Bridge River Mining Area, at Mile 105.1 North from Squamish Dock.

The Present Pacific Great Eastern Ry. Property

The Pacific Great Eastern Ry., as it stands today and as it has been for many years, extends from Squamish Dock, one mile from Squamish, northerly to Quesnel, via Pemberton (mile 57.3 from Squamish Dock), Shalalth (mile 105.1), Lillooet (mile 120.4), Clinton (mile 165.7), and Williams Lake (mile 276.7), to Quesnel (mile 347). There is no rail connection between Squamish Dock and Vancouver; passengers and freight for P.G.E.R. points are handled by Union Steamships, Ltd., ships between Vancouver and Squamish Dock. There is no rail connection with the P.G.E.R. at the north end of the line at Quesnel, but there are roads radiating out from Quesnel to Likely, Barkerville, Prince George and Vanderhoof, and stages connect at Quesnel with arriving and departing trains on the P.G.E.R. The line serves the famous Cariboo country, and is crossed by the Cariboo Trail at a number of points. The scenery is unsurpassed, and the grandeur of the Upper Fraser Canyon, which the line follows for many miles, is comparable with that of the Grand Canyon of Colorado. The line is carried from sea level at Squamish Dock to altitude of 2,100 ft. at Alta Lake, at mile 37.1; it then drops down to altitude of 720 ft. at Creekside, at mile 62.5; climbs to 1,575 ft. at Birken, at mile 76.3; drops down to 793 ft. at Lillooet, and then climbs to 3,862 ft. at Horse Lake, at mile 205.9. It then descends to 1,549 ft. at Quesnel. Average grades run around 2.2%.

The country served produces lumber and cattle, chiefly, and in addition, throughout the Cariboo country, on the benches and in the valleys, are areas which, by virtue of climate, soil fertility and proximity to market, are ideal for settlers engaging in dairying, truck farming, fruit growing and poultry raising. One area, in particular, containing about 25,000 acres, is now being made available by an extensive drainage project. Bench lands of great potential productivity await the carrying out of irrigation projects. Also, the road derives considerable traffic to and from the Bridge River mining area, which is served through Shalalth; this area contains a number of leading gold producers.

Through trains between Squamish Dock and Quesnel are No. 1, operating northbound Mondays, Wednesdays and Fridays, and No. 2 operating southbound Tuesdays, Thursdays and Saturdays. By the schedule in effect during the past winter, passengers from Vancouver leave the Union Steamships, Ltd., dock there at 9 a.m., and, travelling by ship, make connection with the train which leaves Squamish Dock 2.50 p.m. The train arrives Lillooet 9.50 p.m. and leaves there 10.20 p.m., and arrives Quesnel 10.40 a.m. the following day. Southbound, the train leaves Quesnel 7.45 p.m., arrives Lillooet 7.45 a.m., leaves there 8.15 a.m., and arrives Squamish Dock 3.10 p.m. Passengers proceed to Vancouver by boat, arriving there 7 p.m. These trains carry first class cars, dining and parlor cars and standard sleeping cars, and open type observation cars are operated June-September. Representative fares from Vancouver, which include steamship passage between Vancouver and Squamish Dock, are:—To Shalalth, $6.80 one way, $11.95 round trip; to Lillooet, $7.50 one way, $13.25 round trip; to Williams Lake, $14.65 one way, $26.15 round trip; to Quesnel, $17.90 one way, $31.90 round trip. Sleeping car reservations and tickets are obtainable in Vancouver. The berth rate between Squamish Dock and Lillooet is $2.15 for a lower and $1.80 for an upper; between Squamish Dock and Williams Lake, $3.10 for a

Canadian Transportation

Diesel-electrics on Pacific Great Eastern

The steam power on the Pacific Great Eastern Ry. was augmented in 1949 by the acquisition of five 70-ton, 600 h.p. Diesel-electric locomotives of American Locomotive Co.-General Electric Co. manufacture.

THE intention of the management of the Pacific Great Eastern Ry., which is owned by the Province of British Columbia, to add quite extensively to the road's rolling stock, was recorded in these columns some months ago, it having been mentioned that the items scheduled for acquisition included four cabooses, 10 gondolas, 50 flat cars, a snow plough and five Diesel-electric locomotives. The locomotives, of American Locomotive Co.-General Electric Co. manufacture, have been delivered, and are described in the following.

One of the 70-ton Diesel-electric Locomotives Placed in Service on the Pacific Great Eastern Ry.

These four-axle, 70-ton Diesel-electric locomotives are 37 ft. long inside coupler knuckles, with height over all of 13 ft. 5⅜ in. and width over all of 10 ft., distance between truck centers being 19 ft. 5 in. Truck wheelbase is 6 ft. 10 in. and diameter of wheels, all drivers, is 36 in. The axle diameter in the motor suspension bearings is 7 in., and journal bearings are 5½ x 10 in. The locomotives are built to negotiate curves with minimum radius of 75 ft. Light weight of locomotive is 132,800 lb. and weight in working order is 137,600 lb., or 34,400 lb. per driving axle. The Diesel engine, of Cooper-Bessemer make, is a six-cylinder one operating at speeds up to 1,000 r.p.m. and developing 660 h.p. at elevations up to 1,500 ft. The four traction motors are type GE-748, with gear ratio of 105 15. The traction generator is type GT-571, and the auxiliary generator, type GMG-146. The total input to the generator for traction at elevations up to 1,500 ft. is 600 h.p., but, in actual operation, with the locomotives working in altitudes up to 3,800 ft., the h.p. rating has been reduced to 550. With total input of 600 h.p., tractive effort at 30% adhesion is 41,300 lb.; at continuous rating, 23,600 lb., and at one hour rating, 26,000 lb. Maximum permissible speed is 55 m.p.h. The locomotives are fitted with both independent and automatic air brake equipment, schedule 14-EL, and the water-cooled air compressor has displacement of 150 cu. ft. per minute. Construction of the locomotive complies throughout with the United States Safety Appliances Standards and Rules for the Inspection and Testing of Locomotives other than steam. An accompanying illustration shows the speed-tractive effort curve for a locomotive of this type. Fuel capacity is 500 gall.; lubricating oil capacity, 125 gall.; water capacity, 100 gall., and sand capacity, 12 cu. ft.

Framing, Superstructure, Etc.

In a locomotive of this type, the cab, hood and underframe are built from rolled carbon steel sheets, plates and shapes by electric welding. The underframes are formed by the welding together of the center sills, center plates, end plates, deck plates and bolsters. The center plates are equipped with renewable, hardened steel wearing rings and liners. Lifting holes are provided near the ends of the underframe. The sides, back and roof of the operating cab are insulated with flame-resisting insulating material and lined with light gauge sheet steel. The cab floor is of hard processed wood, on steel supports. Windows are provided in the sides and ends of the cab. The two windows at each side are of the sliding type, equipped with suitable catches, and all other windows, except the one in front of the operator, are fixed. All windows have metal sash and are glazed with shatterproof sheet glass. Two steel doors provide access to the cab, one leading from the front walkway on the helper's side, and the other from the rear platform. Each door has a window of shatterproof sheet glass with fixed metal sash. The engine hood is fitted with vertically hinged doors and gives access to the equipment from the platform on both sides of the locomotive. A roof hatch is provided for control of the radiator cooling air, and a second hatch provides access to the top of the engine. The hood is bolted in place for easy removal. Hand rails and side steps are provided for both walkways and the rear platform, and the treads of all steps and walkways have roughened surface. Switchmen's divided end steps, side steps and hand rails are rigidly fastened to the underframe. Push-pole pockets are provided.

Running Gear

The locomotive superstructure is carried on two two-axle, side-equalized swivel trucks, and the solid rolled steel wheels, of 36 in. diameter, have heat treated rims 2½ in. thick and A.A.R. standard tread and flange contours. The axles are of forged carbon steel, and the 5½ x 10 in. journals are of the collar type. The journal boxes are of cast steel, with lift type lids and renewable hardened steel pedestal liners. They are fitted with deep sided, babbitted brasses of standard ATA design. The truck frames are fabricated from rolled carbon steel plate and shapes by electric welding. The center plates

RARE SLEEPING CAR RETURNS TO CANADA

The PGE made few modifications to the IER cars. The major change was the conversion from the interurban Tomlinson style couplers to conver steam railway knuckle style couplers and new draft gear. The sombre red paint was enlivened with the application of the circular Caribou herald b car door. On April 30, 1956, the *Barkerville* was at Squamish.

Bert Mills

Question: What could an electrified railway in Indiana and a steam railway in British Columbia have in common? Answer: A unique fleet of 62 foot long sleeping cars.

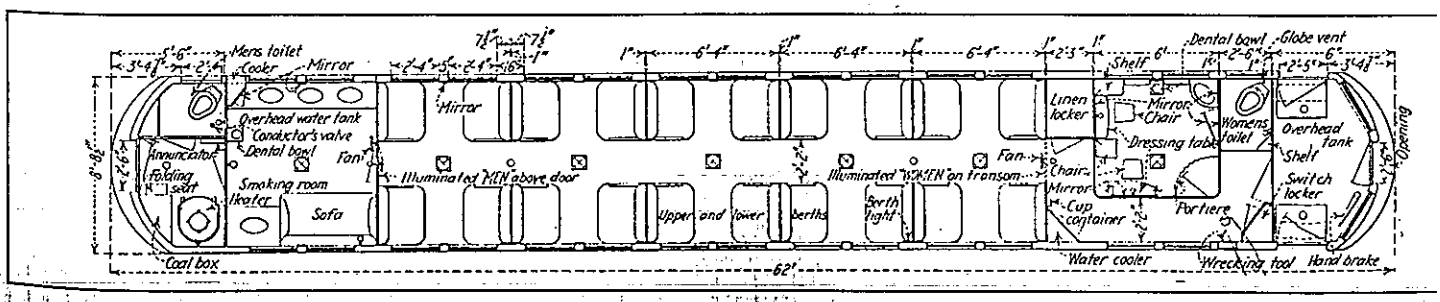
Prior to the 1920s, interurban electric railways connected the major cities in many areas of the United States. A particularly dense network of lines evolved in the American Midwest. Among the major properties was the Interstate Electric Railway which operated between a 117 mile line between Indianapolis, Indiana and Louisville, Kentucky. Each day the IER carded eight trains between these two large cities; this was twice as many as offered by its direct competitor the mighty Pennsylvania Railroad.

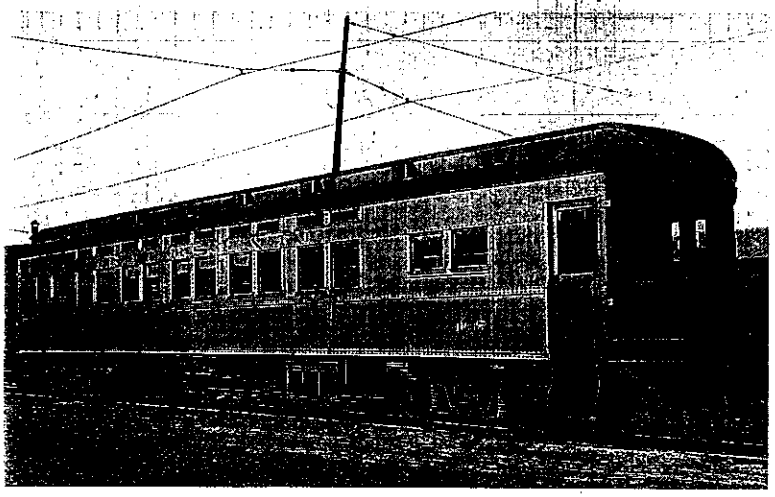
Faced with declining patronage as Americans turned to autos and buses following the First World I, the IER management upgraded its fleet to provide the finest in first class service. Eight all-steel first class cars were acquired from American Car & Foundry. Five parlour-dining cars were delivered in 1923 and three sleeping cars followed the next year. The bill for the three sleeping cars was $100,000. Containing ten sections each, they would be the only steel sleeping cars built for service on an interurban railway in North America.

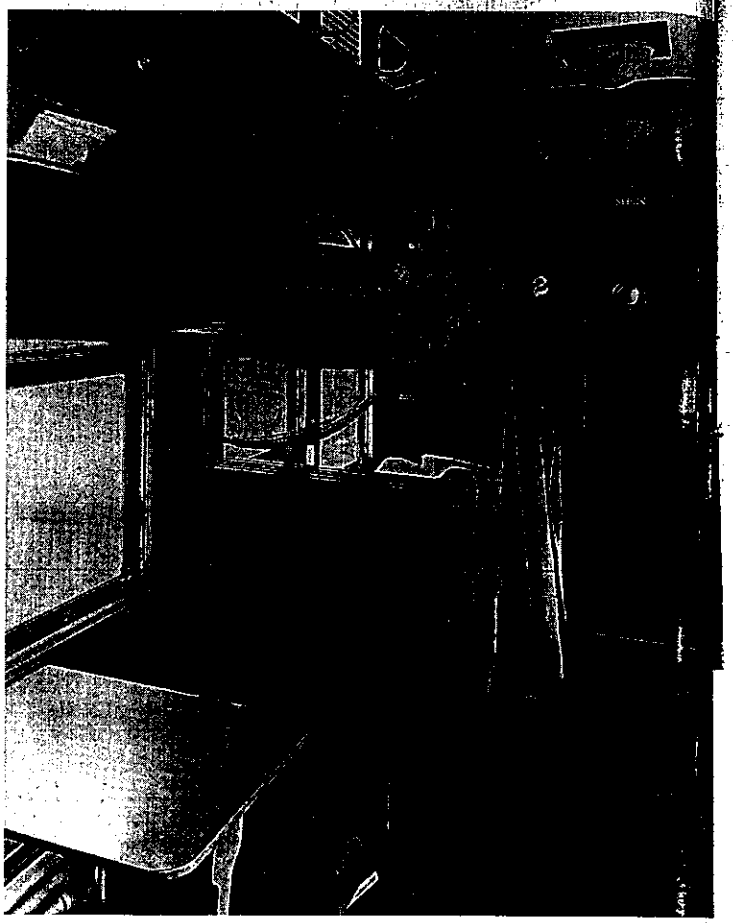
To ensure passengers had a quiet night's sleep, the cars were built as trailers without an air compressor, motors or trolley pole to make noise. The interior of the cars were panelled in the standard dark mahogany wood finish used in most railway passenger equipment at the time.

The cars were quite different from the 85 foot Pullman behemoths operated by the steam railways. The most immediately noticable feature was the short length of the cars. Due to the restricted clearances in city streets, the sleeping cars were only 62 feet long and 8 feet 8 inches wide. To compete for the overnight business trade, the cars were designed with improvements over their Pullman counter First, each upper berth had a pair of small win Second, the berths were three inches longer the 61 inch Pullman berth. Third, since passe were not permitted to pass between the car men's washroom occupied the full width rear of the car. This spacious chamber designed for the businessmen who made u bulk of the users of the sleeping car se Fourth, the IER painted the car exteriors eye-catching (some might say garish) sc with traction orange sides off-set by a red doors and roof - a far cry from the sombre green paint scheme on the Pullman cars.

One feature the cars shared with steam road brethren was their source of Because of the short distance between the terminals, it was set-out on a siding a intermediate community. After being static







Top: In June 1926, the *Louisville* was laying over at the Indianapolis Traction Terminal awaiting its next journey. Screens have been fitted into the lower portion of the windows to provide relief from the summer's heat. One of the selling points for the interurban service was the clean ride; those travelling on the steam powered trains on the parallel Pennsylvania Railway were left to cope with the soot as best they could.

Bottom: This view taken on February 1, 1937 shows the *Scottsburg* in the IER Kentucky Avenue yard in Indianapolis awaiting movement to its new owner. Soon it be rolling to British Columbia, a new name and another two decades of revenue service.

Right: Before entering service, the American Car and Foundry photographer took a detailed series of interior and exterior views of the only steel interurban sleeping cars ever built. The mahogany woodwork has been carefully polished to a lustrous surface before being released. At night the porter would drop the upper berths and insert wooden partitions between the sections for privacy.

All photos this page courtesy George Krambles

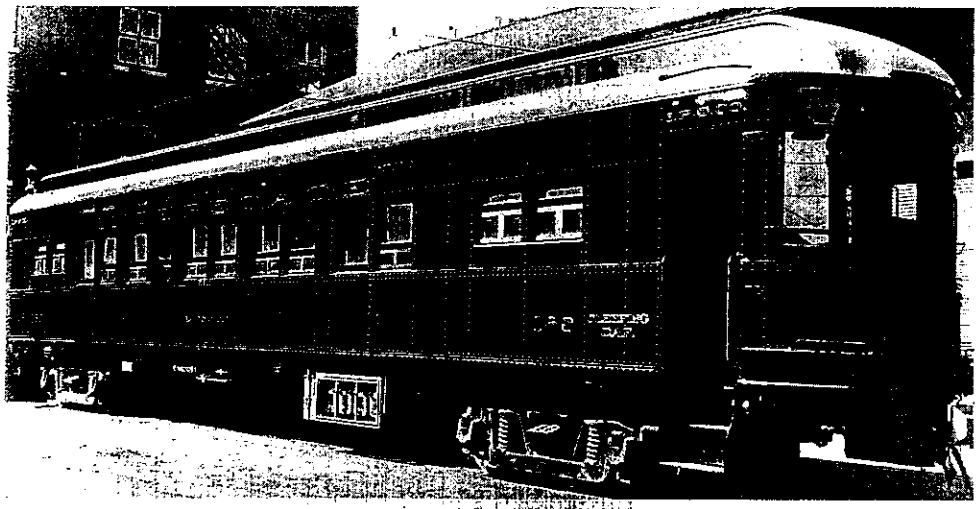
or several hours, the car was picked up by an early morning train for utherance to its destination. To keep the cars heated during their layover, hey were equipped with a coal fired baker heater. One of the porter's duties vas to ensure that the fire did not go out.

In 1930, the IER merged with several other interurbans to form the ndiana Railroad System. The new system continued the sleeping car ervice until 1932 when it was discontinued for lack of patronage. Given he rapidly declining fortunes of the interurban industry, most thought the ight year old cars had run their last mile in revenue service.

What kept them from the scrapper's torch was a obscure down-at-he-heel railway grandly called the Pacific Great Eastern. As originally planned, the PGE was to link Vancouver with the Grand Trunk Pacific's transcontinental line at Prince George. Its fortunes, along with those of the PGE, crashed during the financial woes which bankrupted both companies during World War I. The government of British Columbia reluctantly took over the PGE to maintain service to the Carbiou region of the province.

Known as the railway which ran from "Nowhere to Nowhere", it strove to provide the best service possible. Twice each week, mixed trains covered the 348 miles between Squamish and Quesnel in 21 hours. Passengers were accommodated in a rag-tag fleet of obsolete wooden passenger cars.

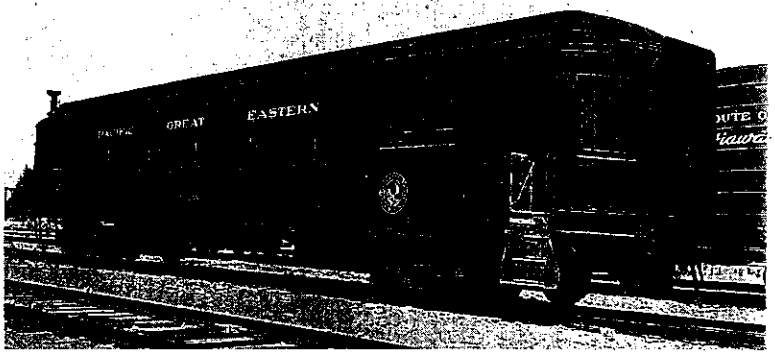
During the 1930s, traffic levels picked up as mining, lumbering and cattle ranching expanded. Sleeping car revenues increased by 81% between 1931 and 1934. To cope with the increasing passenger loads, the PGE sought additional rolling stock. With its light rails and frail bridges, miles of 2.2% grades and small locomotives, the equipment had to be lightweight. Since the company was faced with an almost non-existant capital budget, any equipment also had to be dirt cheap.



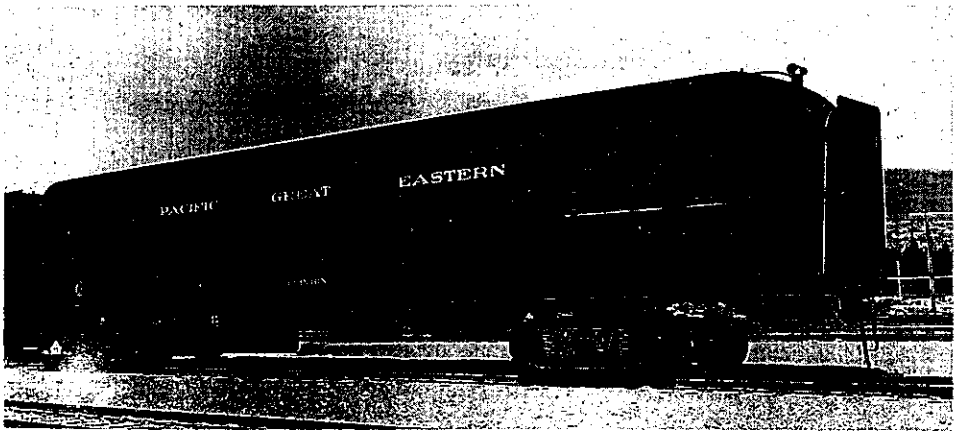
The company found an ideal source of cars in nearby Oregon. In 1925, it had purchased two wooden sleeping cars from the Oregon Electric Railway when that company had terminated sleeping car service on its Portland-Eugene route. Eight years later, the OER terminated all its of interurban passenger service. Between 1933 and 1936, the PGE purchased 20 wooden coaches and headend cars from the OER.

While its passenger equipment roster was dominated by these antiquated wooden interurban cars, the company had one claim to modernity. Because the lighting system on these cars had been designed to be powered by electricity drawn from catenary, extensive and expensive rebuilding would have been necessary if steam piping, batteries and generators were added to each car. Ever resourceful, the PGE shop forces installed diesel generators in a number of its baggage cars to provide the necessary source of electrical power. The power line was slung between the cars like the signal cord on an interurban train. Thus the PGE earned the distinction of being the first railway to use head end power in Canada and possibily in North America.

Looking for additional sleeping cars, the PGE heard of the stored IER steel sleepers. In 1935 it acquired two of the cars through the Iron & Steel Products Company of Chicago, an equipment broker. While the IER sleeping cars could accommodate only 20 versus 27 in a standard Pullman, they offered tremendous savings in weight. They were a mere 100,000 pounds, compared to the 180,000 pounds for a standard steel Pullman car. Most importantly, they were available at bargain basement prices. The two cars were acquired for slightly more than $10,800.



Photographer Stan Styles captured the three former IER sleepers during the 1950s. The *Clinton* was photographed at Quesnel in July 1953 while the *Bakerville* and *Pavilion* were posed at North Vancouver in April 1958.



The PGE liked them and purchased the third car in 1937. Upon arrival in B.C., the cars were renamed for local communities as follows:

Interstate Public Service of Indiana		PGE Car	Year
Car Name	Number	Name	Acquired
Indianapolis	166	Pavilion	1935
Scottsburg	167	Clinton	1937
Louisville	168	Barkerville	1935

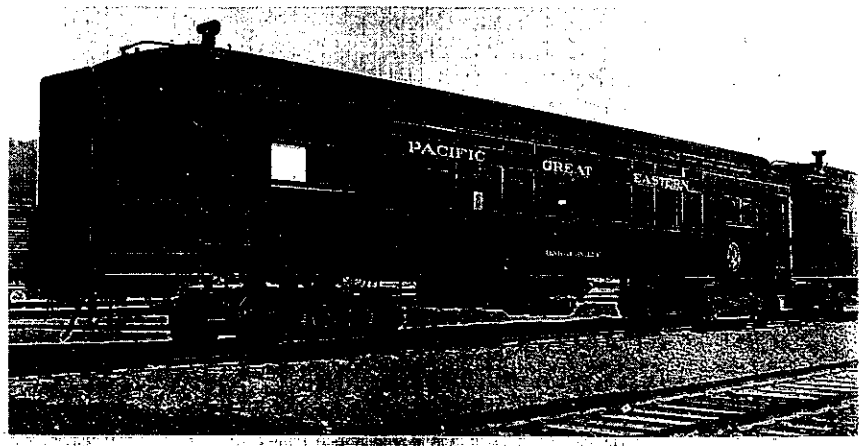
To make the cars compatible with the rest of the fleet, standard steam railway couplers and and diaphrams were added to permit passengers to pass between the cars.

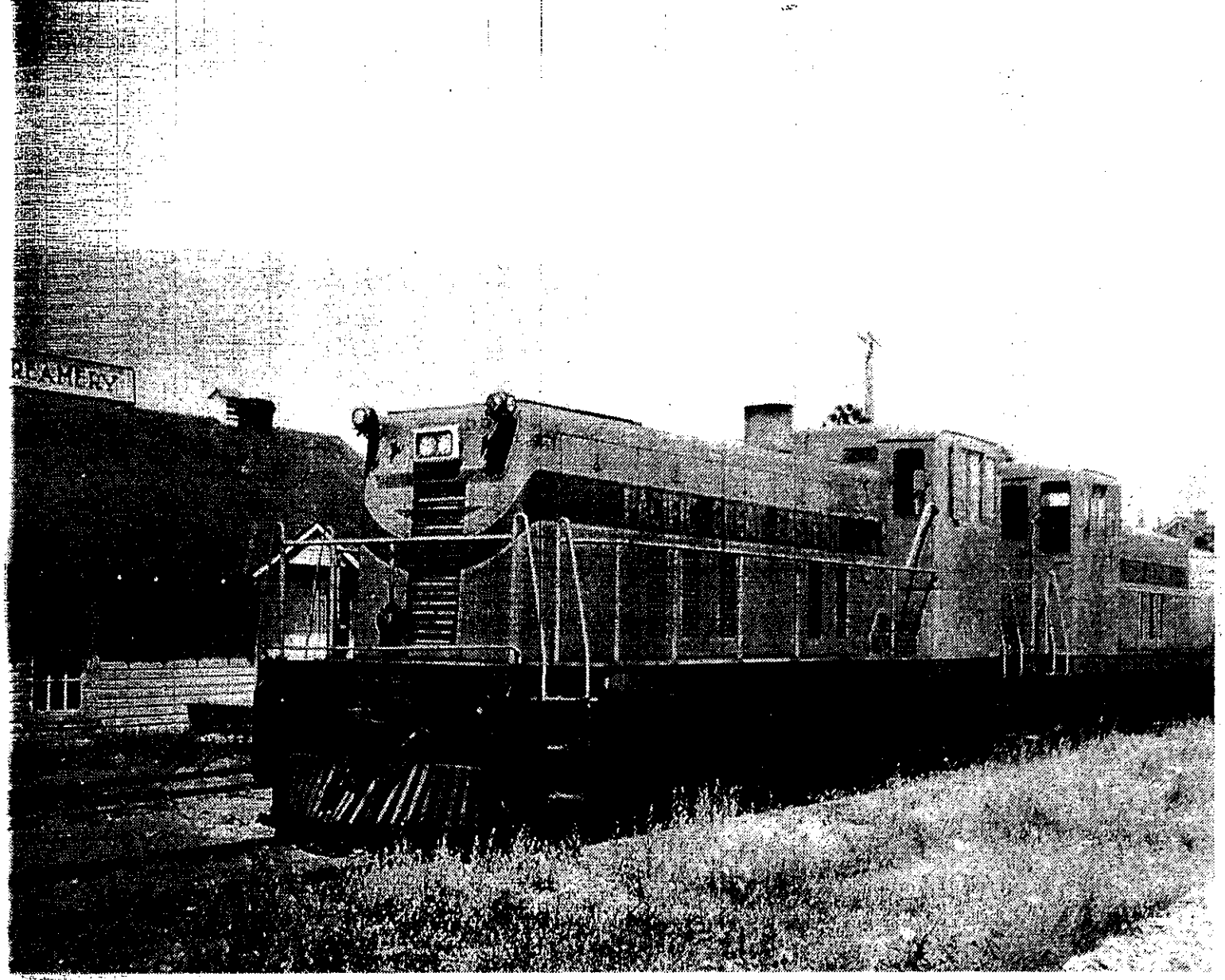
Following World War II, the *Clinton* and *Barkerville* were rebuilt to contain 8 sections and 1 compartment. The three cars remained in regular use until 1957. By this time, the provincial government had extended the PGE from Squamish to North Vancouver and from Quesnel to Prince George. As part of a postwar modernization program, the infrastructure received major upgrading and a fleet of Rail Diesel Cars was purchased. With their spunky acceleration, the RDCs were able to cover the 466 miles between Vancouver and Prince George on a daylight schedule of only 14 hours. While this ended the need for sleeping car service, the *Clinton*, *Barkerville* and *Pavilion* continued to be used as coaches or other passenger runs.

Two of the cars were placed in work train service in April 1964. When the *Barkerville* was converted into a 9 man bunk car, it lost its name in favour of the number X-223. The car was written off the roster after it tumbled into Seton Lake on November 28, 1967. The *Pavilion* became a 10 man bunk car and was renumbered X-224. It was given the number 990224 in 1970. The car retained this number when the PGE became the BC Rail on April 1, 1972. It was scrapped about 1975.

A better fate awaited the *Clinton*. It was sold to Washington State resident Mayrand Laing in June 1965. He had it moved to the Puget Sound Railway Historical Association museum in Snoqualmie, Washington. After Mr Laing's death on May 9, 1993, his widow donated the car to the West Coast Railway Association. The WCRA have established a museum in Squamish. They hope to return the car shortly to its former stomping grounds.

Thanks are owed to Greg Kennelly and Grant Ferguson of the West Coast Railway Association, George Krambles, and Andrew Wegmuller for their assistance with this article.





struction.

Perhaps B.C. Rail is the only Class I Railway in North America to be operating a regularly scheduled steam powered passenger train. Northbound train No. 3 and Southbound No. 4 is the ex-CPR Royal Hudson seen in daily service Tuesday, through Sunday from May 1 until October from B.C. Rails North Vancouver Station to Squamish and return a very scenic 40 mile trip along the edge of Howe Sound.

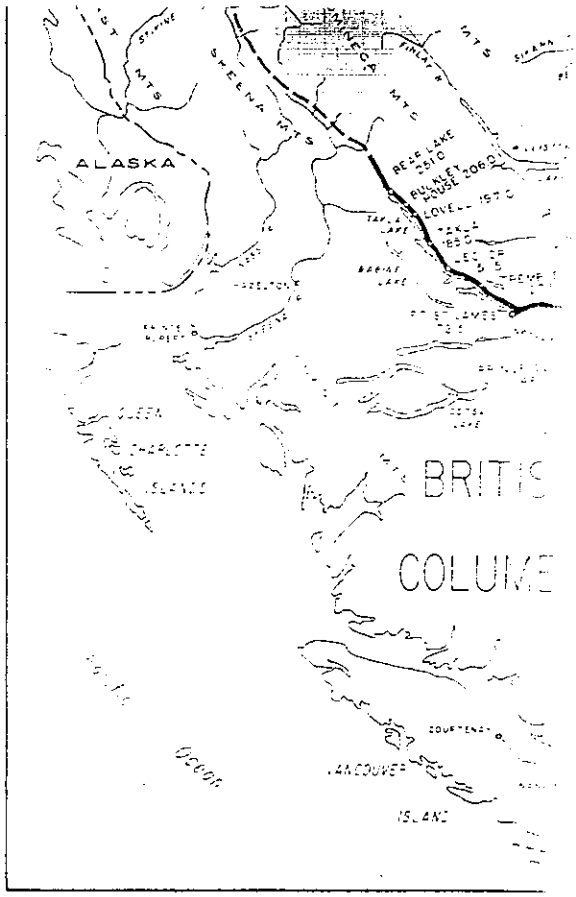
The first road diesels on the PGE were GE 70 Tonners followed by MLW RS-3's, the railway is now home to one of the larger fleets of Alco and MLW units in North America.

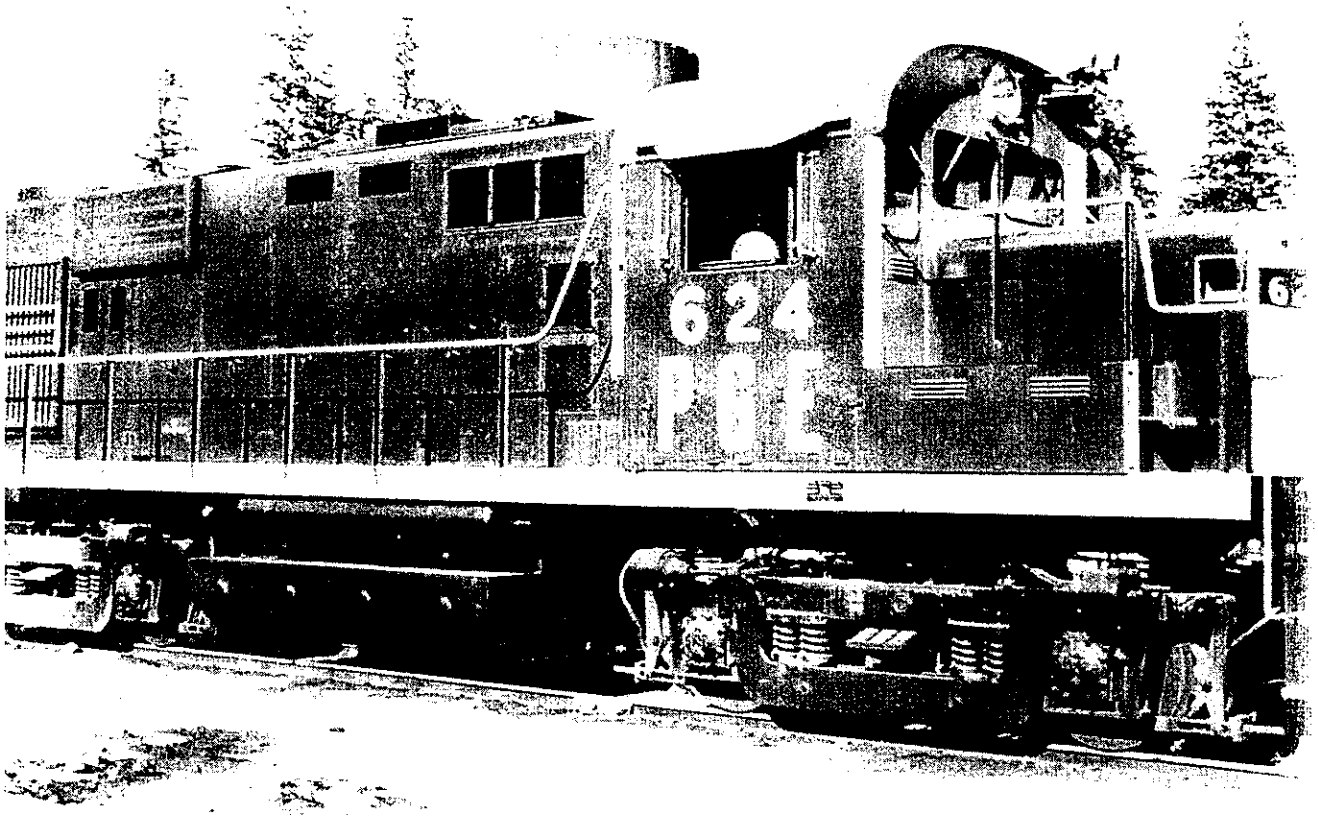
Several Alco models not built by MLW have been acquired by B.C. Rail in recent years. Both the C-420 units (formerly L & HR) are unique in Canada, while the ex-Erie-Lakawanna C425's are almost indistinquishable from the CNR and CPR C-424 units.

A review of the roster section will show B.C. Rail to be the owner of a large block of MLW 3000 Hp M-630 units, in addition to the many RS-10 and RS-18's.

A brief look at the map shows BCR tracks leading to such far north place names as Dawson Creek, Fort Saint John, Fort Nelson and to lesser known Bulkley House or Dease Lake.

Fort Nelson and Dease Lake bring the BCR to the threshold of the North West Territories and the Yukon. Who knows what the future holds? Maybe an inter-provincial railway company like the CNR will continue the tracks to Whitehorse or even Dawson City.



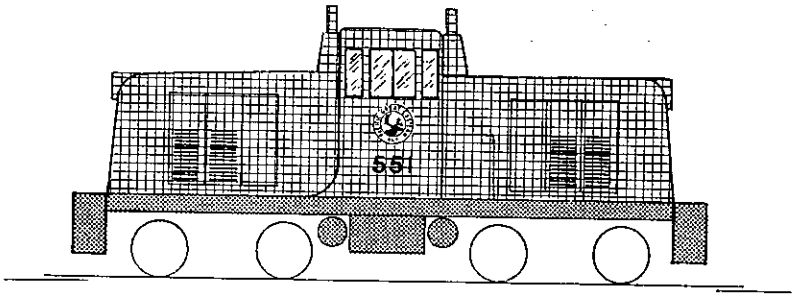


HANDRAILS & POSTS YELLOW

24" Ø GREEN HERALD

DATA BASED ON PHOTOS

A



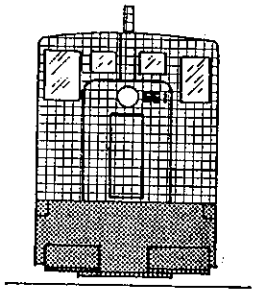
WALKWAY TREAD SURFACES BLACK

UNDERFRAME AND TRUCKS BLACK

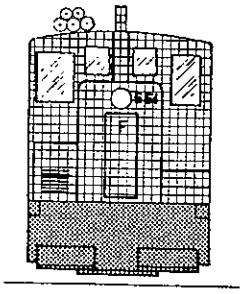
P.G.E.,
GE 65 Ton

GREEN ORANGE BLACK

The first diesel delivered to the PGE was rather simple in its paint scheme, all orange body above the frame with green herald and road numbers on sides and ends. Orange painted five chime horn adorns the engineers side of the cab roof. Note "F" on front engine compartment door.



REAR



FRONT

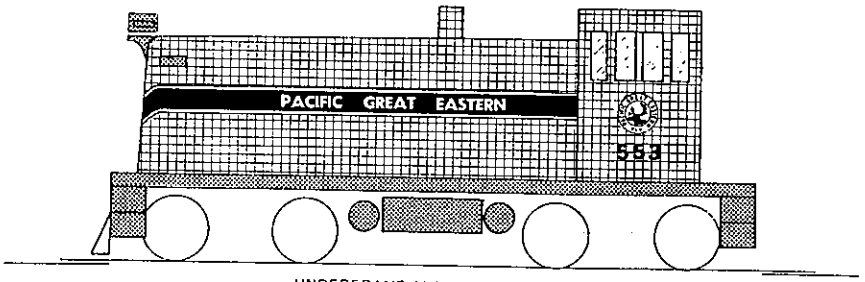
HAND RAILS & POSTS YELLOW

24" Ø GREEN HERALD

DATA BASED ON PHOTOS

B

12" WIDE GREEN STRIPE WITH 1" YELLOW BORDER STRIPES



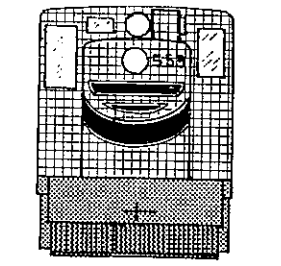
WALKWAY TREAD SURFACES BLACK

UNDERFRAME AND TRUCKS BLACK

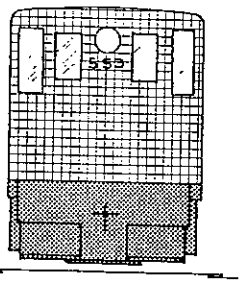
P.G.E., RS-6
GE 70 Ton

YELLOW GREEN ORANGE BLACK

E.R. WHITE



FRONT



REAR

LPD

REVISION

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PAINTING AND LETTERING GUIDE FOR CANADIAN RAILWAYS

Subject – DIESEL LOCOMOTIVES
Section – OUTLINE DRAWINGS
Railway – PGE/BCR

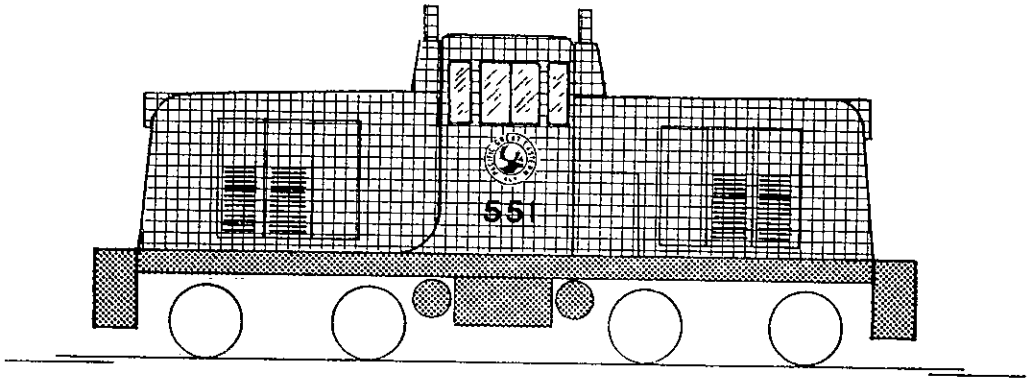
Date 6-23-77 | By D.C.L. | Drg. No. D-1

DRAILS & POSTS YELLOW

24" Ø GREEN HERALD

DATA BASED ON PHOTOS

A

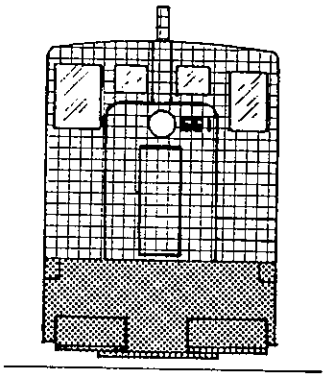


WALKWAY TREAD SURFACES BLACK

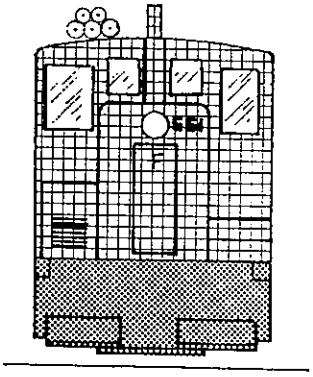
UNDERFRAME AND TRUCKS BLACK

GREEN ORANGE BLACK

to the PGE was rather simple in its paint
ove the frame with green herald and road
. Orange painted five chime horn adorns
ab roof. Note "F" on front engine com-



REAR



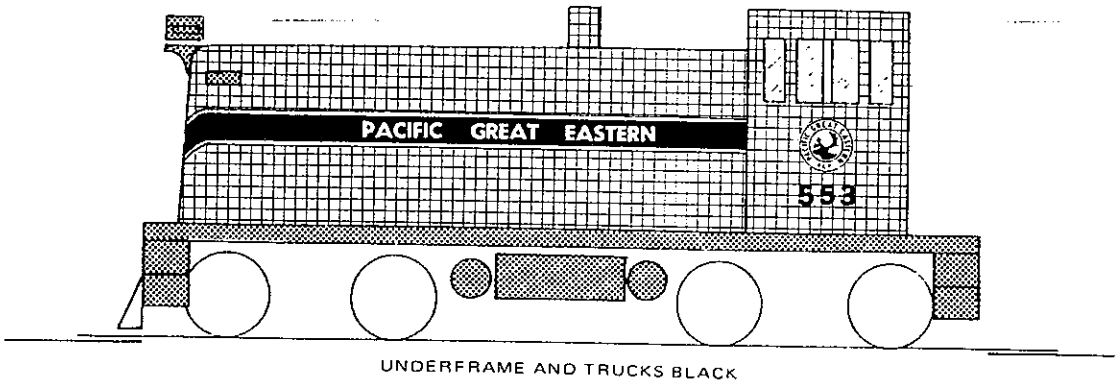
FRONT

AILS & POSTS YELLOW

24" Ø GREEN HERALD

DATA BASED ON PHOTOS

B

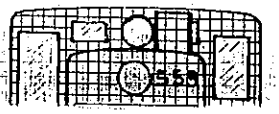


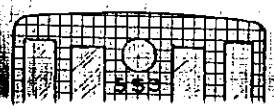
WALKWAY TREAD SURFACES BLACK

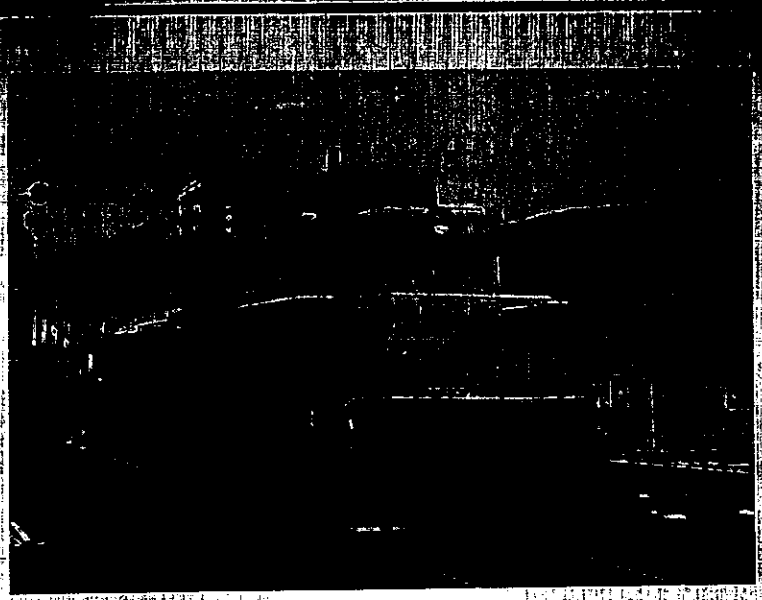
UNDERFRAME AND TRUCKS BLACK

YELLOW GREEN ORANGE BLACK

E.R. WHITE

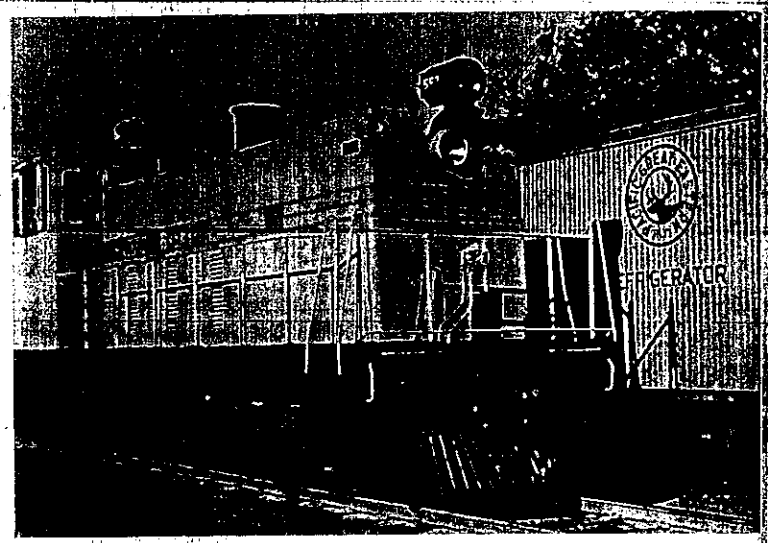






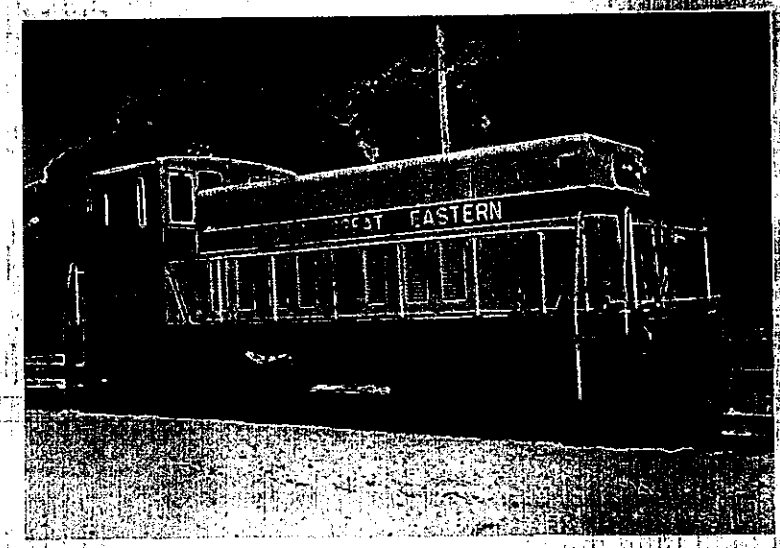
551 Diesel number one at Squamish May 21, 1955, GE 65 ton in a rather simple paint scheme but don't miss F for front on end door then check cariboo herald — it faces operating front on both locomotives and cabooses, both sides. End numbers in green could be either 5" or 6" high. Note 5 chime horn on cab roof.

BERT MILLS



552 This GE 70 tonner the second diesel on the P.G.E. displays the first application of the 12" wide green stripe with 2" green, 3" orange and one inch yellow stripes around nose. Note the boiler tube pilot, steam type upper headlight and what appears to be a black six chime horn on the cab roof. 5" green numbers at right of headlight and on cab back, 8" green numbers on cab side and 8" orange road name, on green stripe. Taken at Squamish, July 24, 1954.

BERT MILLS



556 At Squamish, August 2nd, 1961 shows the second style of paint scheme used on the P.G.E., frame, underframe and trucks still black, but step edge yellow or orange. First application of 24" ϕ orange herald on 24" ϕ green circle. Note stainless steel frame on twin sealer beam headlights and 5" green numbers to the right of it.

BERT MILLS

y 21, 1955, GE 65 ton
iss F for front on end
es operating front on
des. End numbers in
5 chime horn on cab

the second style of
lerframe and trucks
First application of
Note stainless steel
' green numbers to

A

WALKWAY TREAD SURFACES BLACK

HANDRAILS & POSTS YELLOW

DATA BASED ON PHOTOS

8" ORANGE ROAD NAME

1" YELLOW

2 – 2 5/8" ORANGE STRIPES

3 – 2 1/4" GREEN STRIPES

PACIFIC GREAT EASTERN

552

9" GREEN NUMERALS

GREEN HERALD ON ORANGE BODY

TRUCKS AND UNDERFRAME BLACK

P.G.E. RS-6

YELLOW GREEN BLACK

GE 70 Ton 600 hp. B–B

Three detail items make this locomotive different from your average 70 Tonner, six chime air horn, steam locomotive upper headlight and a boiler tube pilot. While a photo is not included in this volume it is known that at least one RS-3 unit also received the boiler tube pilot.

6 CHIME AIR HORN

5" NUMERALS

552

FRONT

5" NUMERALS

552

REAR

B

WALKWAY TREAD SURFACES BLACK

HANDRAILS & POSTS YELLOW

DATA BASED ON PHOTOS

STEP EDGES YELLOW BOTH SIDES FRONT & REAR

9" ORANGE ROAD NAME

12" WIDE GREEN STRIPE WITH 1" YELLOW BORDER STRIPES

PACIFIC GREAT EASTERN

556

9" GREEN NUMERALS

24" Ø ORANGE HERALD ON 25" GREEN CIRCLE

P.G.E. RS-6

YELLOW GREEN BLACK

GE 70 Ton 600 hp., B-B

This paint scheme is somewhat easier to apply with it's solid green stripe and conventional pilot. Herald now 24" ø Orange shown on 25" ø Green. Don't miss the fact that the green stripe has a yellow border top and bottom.

5 CHIME AIR HORN

5" NUMERALS

556

FRONT

5" NUMERALS

556

REAR

ERING GUIDE
RAILWAYS
OCOMOTIVES
PE PHOTOS

Drg. No. PP-2

LPD

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Revision

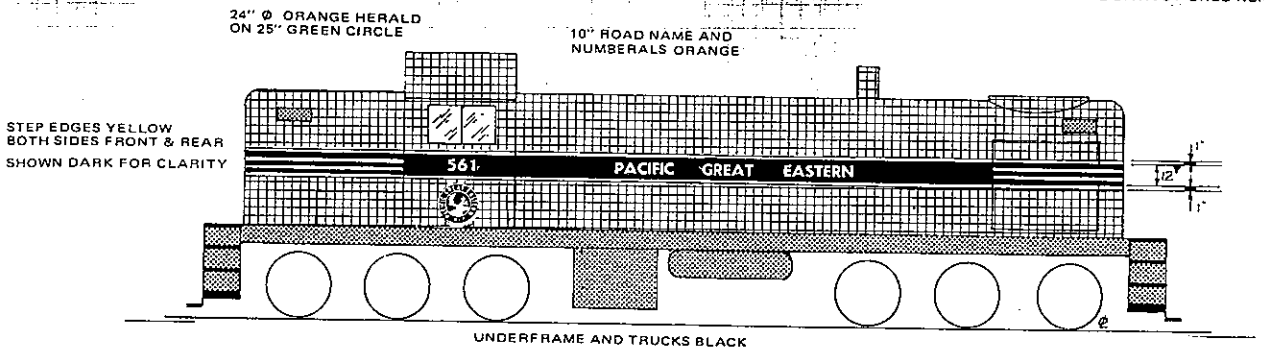
PAINTING AND LETTERING GUIDE FOR CANADIAN RAILWAYS

Subject – DIESEL LOCOMOTIVES
Section – OUTLINE DRAWINGS
Railway – PGE/BCR

Date: 6-7-77 By: D.G. Drg. No. D-2

HAND RAILS & POSTS YELLOW

DIMENSIONAL DATA BY GREG KENNELLY



P.G.E., RS-16

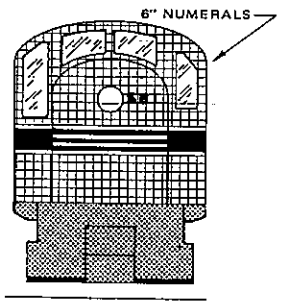
YELLOW GREEN ORANGE BLACK

M.L.W. RSC-3 1600 hp B-B

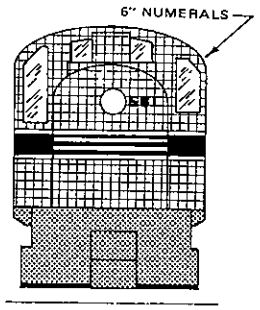
Perhaps the most visible paint paint scheme applied to diesels on the PGE was the first. This Orange carbody had to be more noteable in the Green forests of B.C.

This RSC-3 was retrucked by P.G.E. to the RS-3 B-B wheel arrangement. Several RS-3 units have been chop nosed by the railway.

12" wide green stripe with 1" Yellow edges is divided equally into 3 Green stripes and two Orange stripes around each end of the carbody. The cariboo herald (24" ø) faces front of locomotive



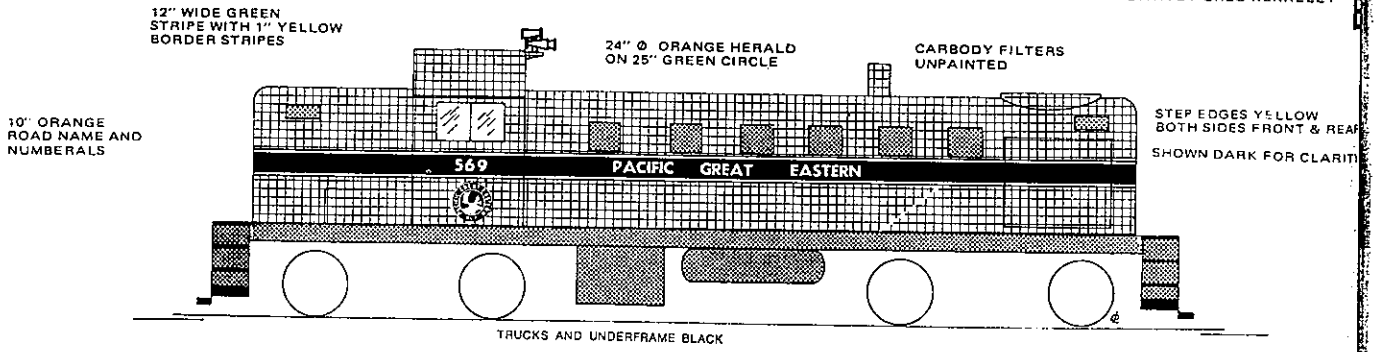
REAR



FRONT

HAND RAILS & POSTS YELLOW

DATA BY GREG KENNELLY



P.G.E., RS-16

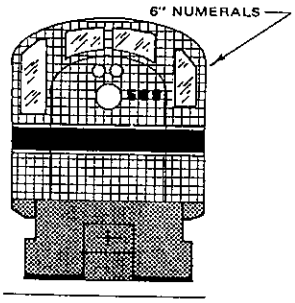
YELLOW GREEN ORANGE BLACK

M.L.W., RS-3, 1600 hp., B-B

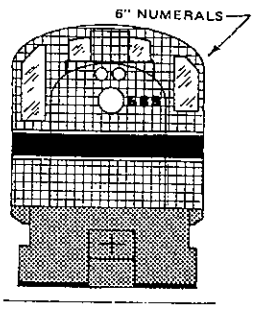
Basic scheme in contrast to 561 above is that the Green stripe is lacking the Orange dividing stripes around the ends.

Road name and number 10" Orange on 12" Green stripe, and herald Orange on Green circle.

AHM makes an RS-2 in plastic that may be modified to match this engine without too much work. Alco Models offered a brass RS-3 recently and several cast metal & plastic units have been available over the last 25 years.



REAR



FRONT

LPD

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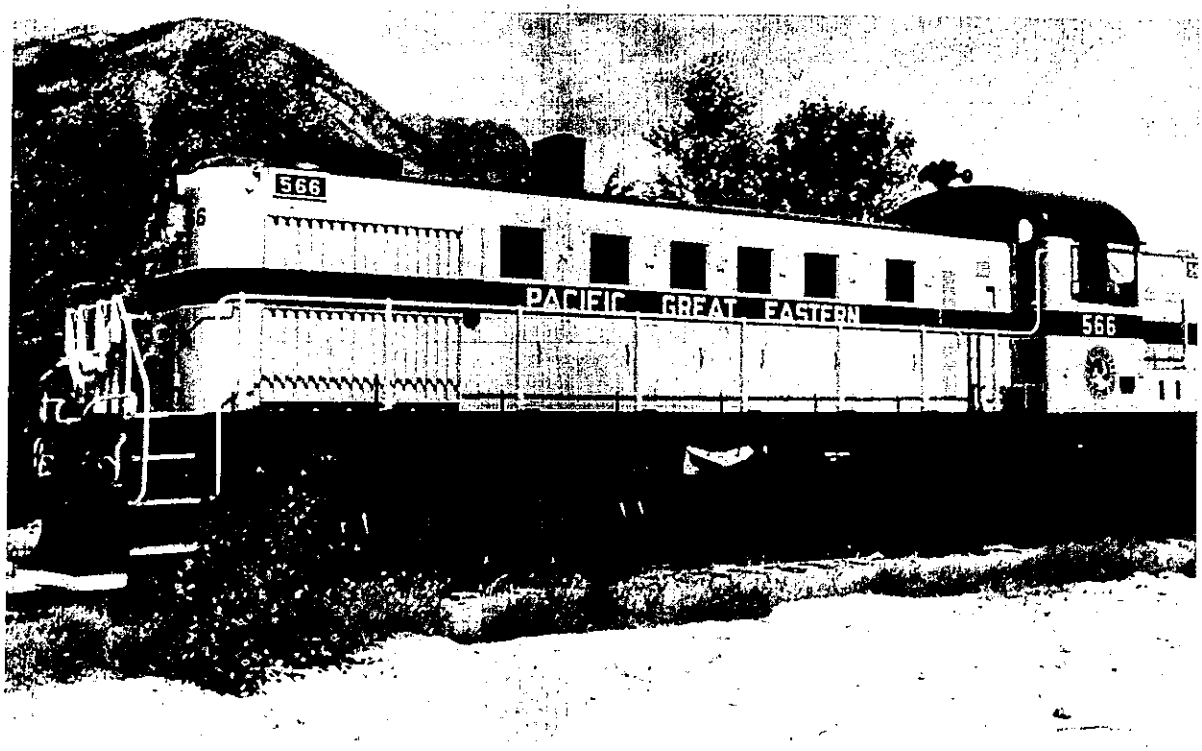
PAINTING AND LETTERING GUIDE FOR CANADIAN RAILWAYS

Subject – DIESEL LOCOMOTIVES
Section – OUTLINE DRAWINGS
Railway – PGE/BCR

Date: 4-29-76 | By: D.C.L. | Drg. No. D-3

Revision

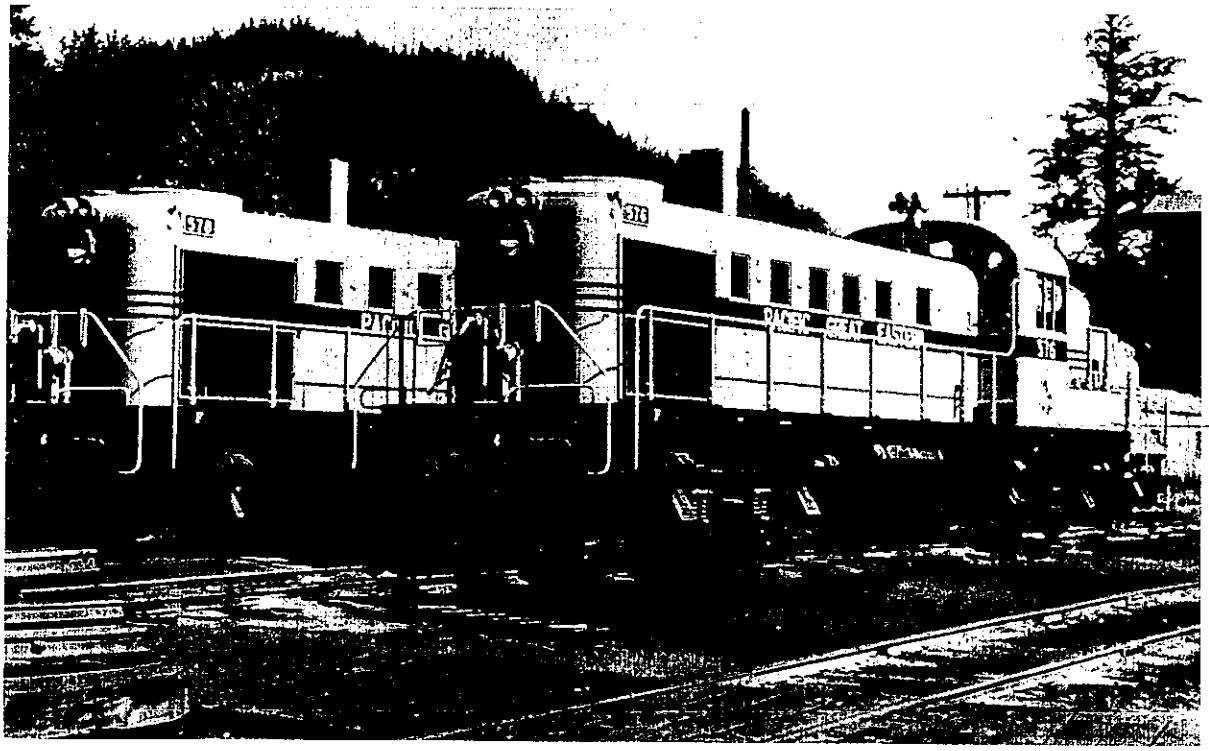


BERT MILLS

566 At Squamish July 26, 1961 sporting unique paint scheme, the photo shows what is believed to be the only engine painted orange with a green roof. Yellow handrails, step edges and pilot edges are the main paint features with the addition of a yellow rerailer.

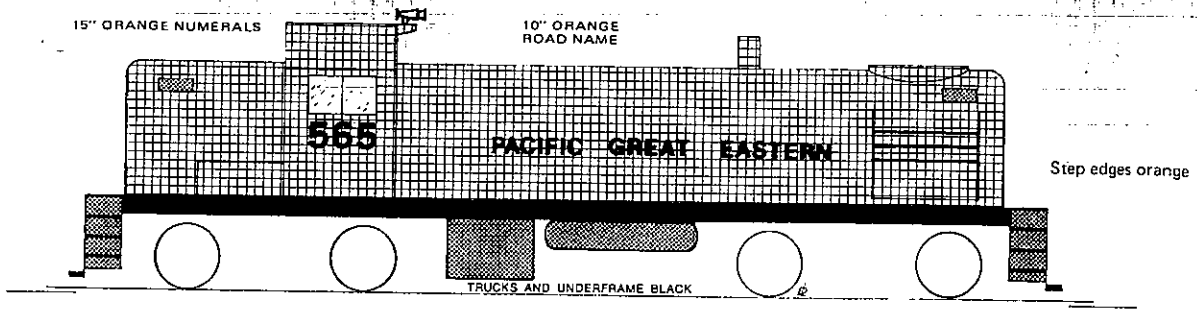
576 At Squamish, fresh from the builder — third unit in background may be 577. Black frame with yellow F for front has been retained but stripe spacing on hood ends has been stabilized. Note extended stacks, and five chime horn on cab front.

BERT MILLS



END HANDRAILS & POSTS ORANGE
SIDE HANDRAILS ORANGE WITH
GREEN POSTS

DATA BASED ON PHOTOS



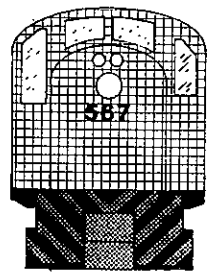
B.C.R., RS-16

GREEN ORANGE BLACK

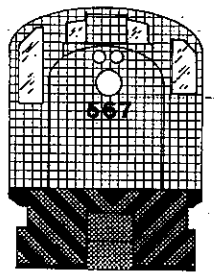
M.L.W., RS-3, 1600 hp., B-B

Basic information on this scheme supplied by Greg Kennelly indicated the ends had orange stripes and a 24" ø Orange herald was applied below 15" road numbers on the cab. Review of several photos indicate not all units had the cab herald.

Note Orange painted guards (3) across radiator louvers. This feature was common to most RS-3 RS-10 and RS-18 locomotives on the PGE.



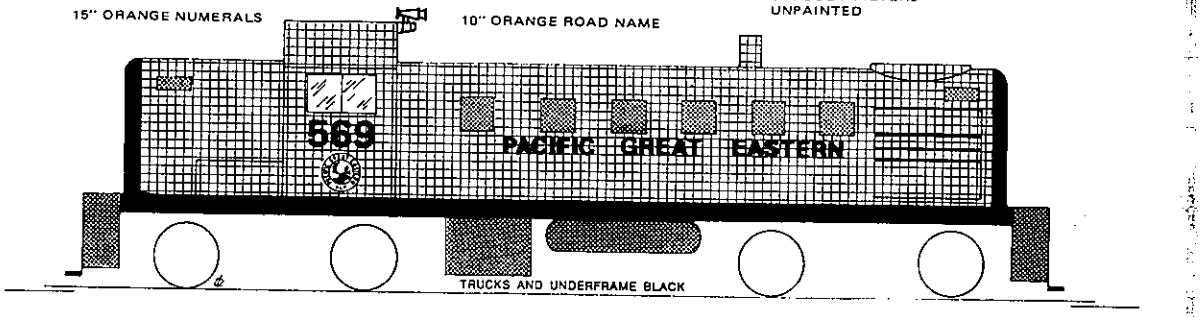
REAR



FRONT

END HAND RAILS & POSTS ORANGE
SIDE HANDRAILS ORANGE WITH
GREEN POSTS

DATA BASED ON PHOTOS



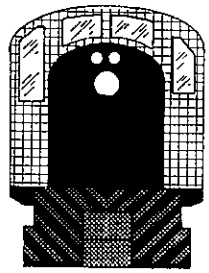
P.G.E., RS-16

GREEN ORANGE BLACK

M.L.W., RS-3, 1600 hp., B-B

The cariboo herald and Orange carbody ends have been added to this drawing.

Special attention should be paid to the herald, on locomotives and cabooses the head faces the operating front of the unit, on both sides.



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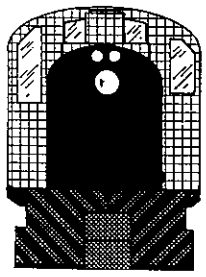

FRONT

LPD

1- 12-26-76
Revision

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PAINTING AND LETTERING GUIDE FOR CANADIAN RAILWAYS

Subject – DIESEL LOCOMOTIVES
Section – OUTLINE DRAWINGS
Railway – PGE/BCR

Date: 4-24-76 By: D.C.L. Drg. No. D-4

A BASED ON PHOTOS

Step edges orange

BLACK

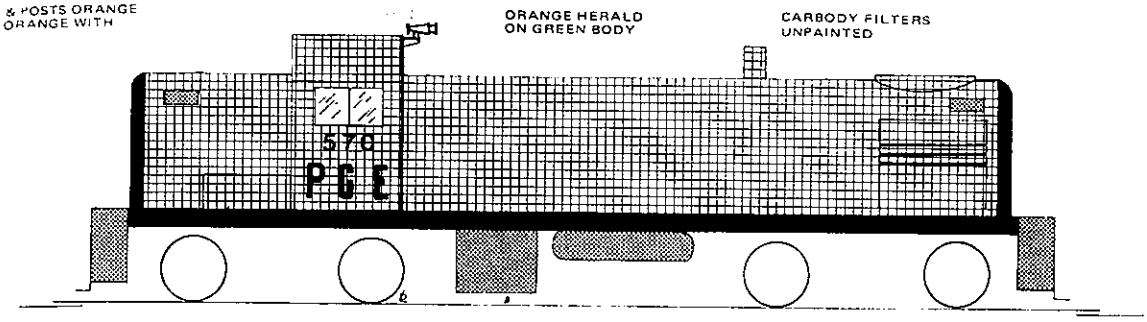
DATA BASED ON PHOTOS

A

END HAND RAILS & POSTS ORANGE
SIDE HANDRAILS ORANGE WITH
GREEN POSTS

ORANGE HERALD
ON GREEN BODY

CARBODY FILTERS
UNPAINTED



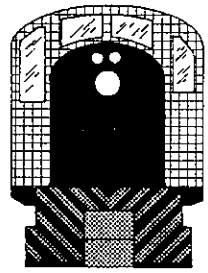
UNDERFRAME AND TRUCKS BLACK

G.E., RS-16

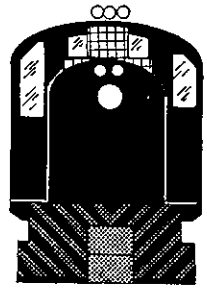
GREEN ORANGE BLACK

L.W., RS-3, 1600 hp., B-B

In a move to simplify paint work and project a more modern image the large PGE letters (24") were added to the cab and the cariboo herald and road name on the long hood were dropped. Front of cab on operating end was painted Orange like the ends.



REAR



FRONT

ONT

BASED ON PHOTOS

BLACK

DATA BASED ON PHOTOS

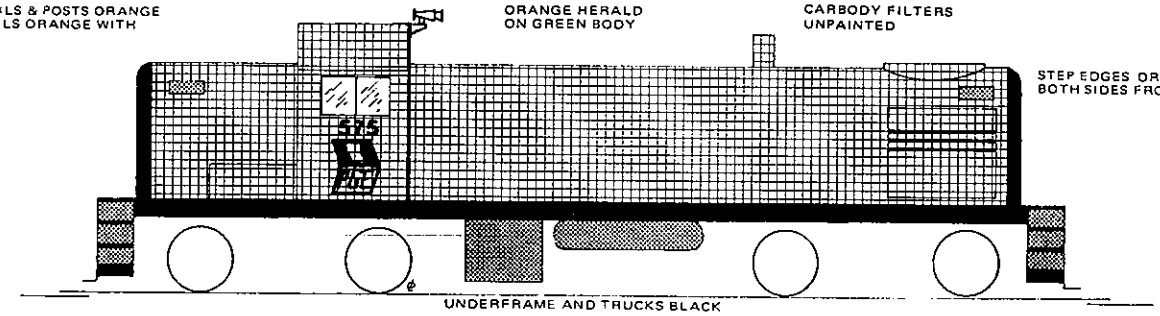
B

END HAND RAILS & POSTS ORANGE
SIDE HANDRAILS ORANGE WITH
GREEN POSTS

ORANGE HERALD
ON GREEN BODY

CARBODY FILTERS
UNPAINTED

STEP EDGES ORANGE
BOTH SIDES FRONT & REAR



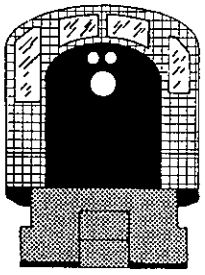
UNDERFRAME AND TRUCKS BLACK

G.E., RS-16

GREEN ORANGE BLACK

L.W., RS-3, 1600 hp., B-B

Next step in image improvement was the map herald. This Orange on Green carbody paint scheme saw the Orange on Black stripes dropped from the pilot. Orange front on cab was retained.



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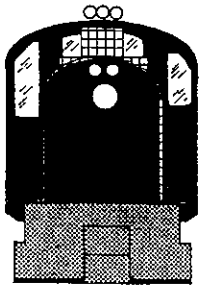

FRONT

ONT

TERING GUIDE
RAILWAYS
OCOMOTIVES
DRAWINGS

Drg. No. D-4

LPD

9-77

Revision

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PAINTING AND LETTERING GUIDE
FOR CANADIAN RAILWAYS

Subject – DIESEL LOCOMOTIVES
Section – OUTLINE DRAWINGS
Railway – PGE/BCR

Date: 11-20-76 | By: D.C.L. | Drg. No. D-5

12" WIDE GREEN STRIPE WITH 1" YELLOW BORDER STRIPES

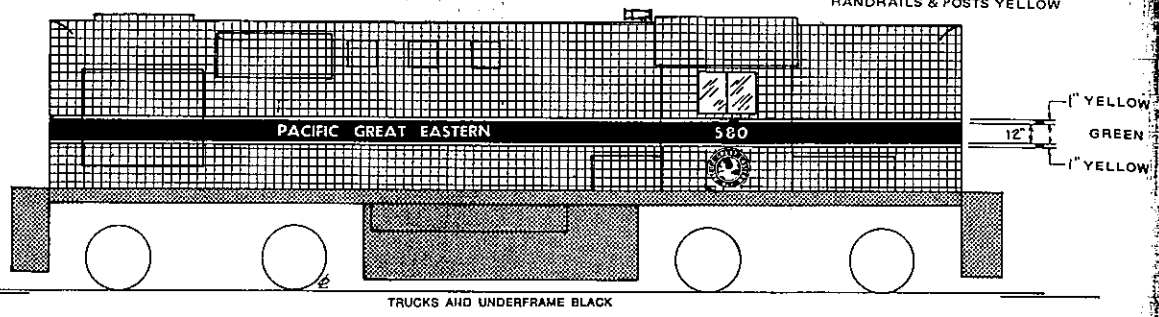
10" ORANGE ROAD NAME AND NUMERALS

24" Ø ORANGE HERALD ON 25" GREEN CIRCLE

DIMENSIONAL DATA BY GREG KENNELLY

HANDRAILS & POSTS YELLOW

CARBODY FILTERS UNPAINTED



TRUCKS AND UNDERFRAME BLACK

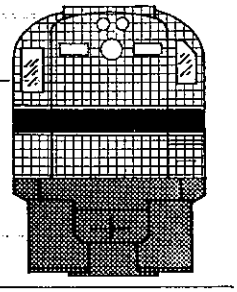
P.G.E., RS-16

YELLOW GREEN ORANGE BLACK

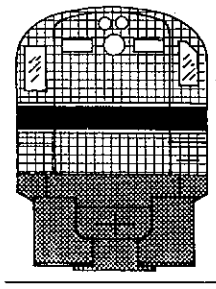
MLW., RS-10, 1600 hp., B-B

Basically the same paint work that was applied to the early RS-3 units.

The lettering used on the above drawing is slightly small in scale height, review of the applicable photos will give a modeller a good idea of the shape & size used by P.G.E.



FRONT



REAR

END HANDRAILS & POSTS ORANGE SIDE HANDRAILS ORANGE WITH GREEN POSTS

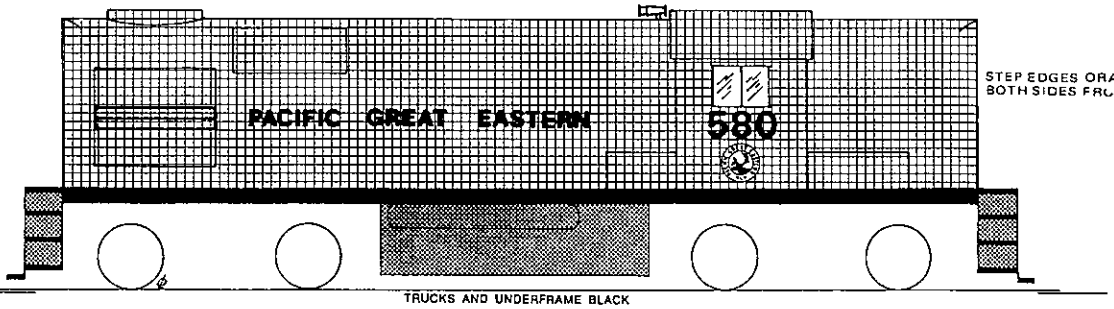
10" ORANGE ROAD NAME

24" Ø ORANGE HERALD ON GREEN BODY

15" ORANGE NUMERALS

DATA BASED ON PHOTOS

CARBODY FILTERS UNPAINTED



STEP EDGES ORANGE BOTH SIDES FRONT & REAR

TRUCKS AND UNDERFRAME BLACK

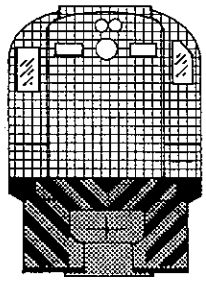
P.G.E., RS-16

GREEN ORANGE BLACK

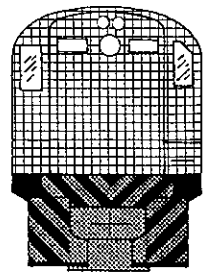
MLW., RS-10, 1600 hp., B-B

Road Number about 10% oversize — Herald correct size.

Note: Cariboo head in herald faces operating front of locomotive. This applies to both sides.



FRONT



REAR

LPD

A, 1-11-77

Revision

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PAINTING AND LETTERING GUIDE FOR CANADIAN RAILWAYS

Subject — DIESEL LOCOMOTIVES

Section — OUTLINE DRAWINGS

Railway — PGE/BCR

Date: 5-28-76 | By: D.C.L. | Drg. No. D

and is not at present being operated. (June, pg. 267.)

Pacific Great Eastern Ry.—Grading has been completed on the extension from Dundarave to Horseshoe Bay, B.C., and the

Pacific Great Eastern Ry.—The British Columbia Government owns and operates this railway, one section of which, from North Vancouver to Whytecliffe, 13 miles, is not yet connected up with Squamish, from which point the line runs inland to Clinton, and is under construction thence to Fort George. It has been proposed that the North Vancouver-Whytecliffe section, which runs through a suburban area, should be electrified. The Premier of British Columbia is reported to have said that the government may undertake the work. There is, he added, enough water power at three points along the principal section of the line to operate the whole line to Fort George by electricity when conditions warrant its being done. We have been officially advised that only the future possibilities of electrification have been discussed, and that no active steps are being taken at present.

The deck of the new bridge at Kitsilano, on the West Vancouver-Whytecliffe section of the line, has been completed, and traffic was reported to have been run over the new bridge Nov. 7. Nov., pg. 488.)

1920 C. Williams reported on alternative routes, via the Pine River Pass, one being a direct line 316 miles in length, and the second via Vanderhoof and Hudson's Hope, 426 miles in length, the estimated cost of construction in either case being approximately $18,000,000. In 1919, a survey was also made from Clinton, mile 187.2 from Squamish, for a branch line to Ashcroft, to effect a junction with the C.P.R., and a location showing a route of 41.5 miles on a 1% gradient, except for 6.9 miles at the Ashcroft line, was laid down. In 1922, the B.C. government employed J. G. Sullivan, consulting engineer, Winnipeg, and formerly Chief Engineer, C.P.R., and Col. J. S. Dennis, Chief Commissioner of Colonization and Development, C.P.R., and W. P. Hinton, formerly Vice President and General Manager, Grand Trunk Pacific Ry., to report on the line, its traffic possibilities, and the resources of the country through which it runs. Messrs Sullivan and Hinton concurred in recommending the abandonment of the line from Squamish to Clinton; Mr. Sullivan expressed disapproval of the completion of the line from Quesnel to Prince George; and favored the construction at some time of a line from Clinton to Ashcroft, using the salvaged material from abandoned portions of the line; while Mr. Hinton favored completing the line to Prince George, and the construction of the Clinton-Ashcroft line, thus giving a line through a country where there are traffic possibilities, and making the property more attractive to other companies to lease and operate under suitable conditions. Mr. Sullivan stated that the traffic moving into the Peace River country did not warrant the construction of a line from Prince George either via the Parsnip River and Pine River Pass, or to Grande Prairie.

Pacific, Peace River and Athabasca Ry.—We are officially advised that this company was incorporated last session of the Dominion Parliament to build a line from the mouth of the Naas River, B.C., to Prince Albert, Sask. The route to be followed is by the Naas River, Courier Creek, Skeena River, Bear River, Bear Lake, Driftwood River, North Tacla Lake, via Hogan Pass to the Omineca River, the Findlay branch of the Peace River, along the north side of the main Peace River easterly and north-

steel bridge work is in progress. It is expected to have a train service in operation from North Vancouver to Horseshoe Bay by the end of July. Work is in progress between Horseshoe Bay and Squamish, the ocean terminal. On the terminal site a large quantity of filling is being done along the foreshore. From Squamish the line is under construction practically through to the junction with the G T. Pacific Ry. at Fort George. We are officially advised that contracts have been let for construction on this line north of Clinton, B.C., as follows:—Madden Bros., Clinton, 6 miles; Rankin and Kellett, Clinton, the next 20 miles. Welch and Kennedy, Clinton, the next 4 miles. The remaining mileage is expected to be put under contract in August.

The projected extension from Fort George to a junction at B.C.-Alberta boundary with the Edmonton, Dunvegan and British Columbia Ry. is under survey. (June, pg. 267.)

Pacific Great Eastern Ry.—An inspec-
n trip was made at th eend of Nov.
20, as far as the Deep Creek viaduct,
ich had just been completed. Deep
eek is about 320 miles from Squamish,

Pacific Great Eastern Ry.—Press reports state that track has now been laid from Squamish to beyond Cheakamus, and that grading has been completed to Lillooet, mileage 120 from Squamish. It is expected to have the grading from Lillooet to Clinton completed in the autumn, and track laid by the end of the year. About 10% of the grading is reported to have been done between Clinton and Lac la Hache, and considerable work has been done thence to Fort George. It is reported that further subcontracts have been let at this end of the line which is being built from Fort George, as follows:—Welch and Kennedy, 4 miles; Rankin and Kellett, 20 miles; Madden Bros., 6 miles.

A temporary bridge has been erected across the Nechaco River at Fort George, to facilitate the preliminary work on the extension to the Alberta boundary. Location surveys are reported to be well advanced, and it is expected that construction work will be started as soon as possible. Local reports state that it is intended to build a branch to Dawson, Yukon, and that Finlay Forks has been selected as the point from which it will start. (Aug., pg. 371.)

Pacific, Peace River and Athabasca Ry.—We are officially advised that this company was incorporated last session of the Dominion Parliament to build a line from the mouth of the Naas River, B.C., to Prince Albert, Sask. The route to be followed is by the Naas River, Courier Creek, Skeena River, Bear River, Bear Lake, Driftwood River, North Tacla Lake, via Hogan Pass to the Omineca River, the Findlay branch of the Peace River, along the north side of the main Peace River easterly and northerly to the Vermillion rapids or chutes, thence crossing the river at this point and continuing down the right bank of the Peace River to Point Providence, thence easterly to the mouth of the Athabasca River, along that river to Fort McMurray, thence easterly to Clearwater and Pembina River, and by the Bear River easterly, southerly and easterly to Prince Albert, Sask. The line projected would have a total length of 1,500 miles; the capital of the company is fixed at $15,000,000, and the principal promoter is D. A. Thomas, Cardiff, Wales, one of the largest coal operators in the world. The statutory meeting for the organization of the company will be held Sept. 8.

Pacific Great Eastern Ry.—A press report stated Nov. 13, that track laying had been completed from the former track end near Clinton, to 59-Mile House, 18 miles, and that work has been started laying from 59-Mile House to a point six miles southerly from Horse Lake summit. This will complete the track laying work for the season. The Northern Construction Co., which has the contract, will carry on the deepening of cuts and other similar work on the uncompleted portions of the grade right of way into Prince George, B.C., during the winter. (Nov., pg. 488.)

PACIFIC GREAT EASTERN RY.

Proposal has been made by the Government of the Province of British Columbia that the Federal Government help it launch a $238,000,000 economic expansion programme, to be spread over a period of years. Of particular interest to rail transportation people is one of the items in the programme. It proposes that a 311-mile extension be made to the Provincially-owned Pacific Great Eastern Railway. The southern end would be extended by 40 miles to enable the line to reach Vancouver. The northern end would be pushed 271 miles farther north from Prince George to Dawson Creek in the Peace River country. Unofficially, cost of this portion of the programme is estimated at about $75,000,000. Dawson Creek is also served by Northern Alberta Railways and is situated at the southern end of the Alaska Highway.

Extension of the PGE would allow expansion of trade with Asiatic countries, particularly Japan. It would also bring the Vancouver market into closer touch with the north. In the event that the Federal Government was not favourable to assist in financing the northward extension of the railway (which has been a consistent money loser) it was suggested by the Premier of B.C., Mr. Bennett, that the Government might consider outright purchase of the railway, or that Ottawa might wish to enter a joint ownership with the provincial government. In the latter case, price of Federal partnership would be the cost of adding the extensions.

However, Prime Minister St.Laurent was quoted as saying, when the proposal to buy or take over the PGE was put before him -- "Is there a railway for sale ? - No, sir, I am not buying a railway for my grand-children. "

(Editor's comment - Too bad, it's such a scenic line, too.)

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CHRA January 1954

Canadian Rail

Number 158 / September 1964

GOVERNMENT OWNERSHIP of railways in Canada occurs at all levels, and not the least interesting is the Pacific Great Eastern, which is owned by the Province of British Columbia. For many years, the PGE began and ended nowhere, but in 1952 and 1956, the completion of extensions linked the "nowhere" carrier with the rest of the Canadian rail network. Here, in the latter year, the inaugural train is shown arriving from North Vancouver at Squamish, the erstwhile southern terminus of the line. (See "The PGE Is A 'Different' Railway" in this issue).

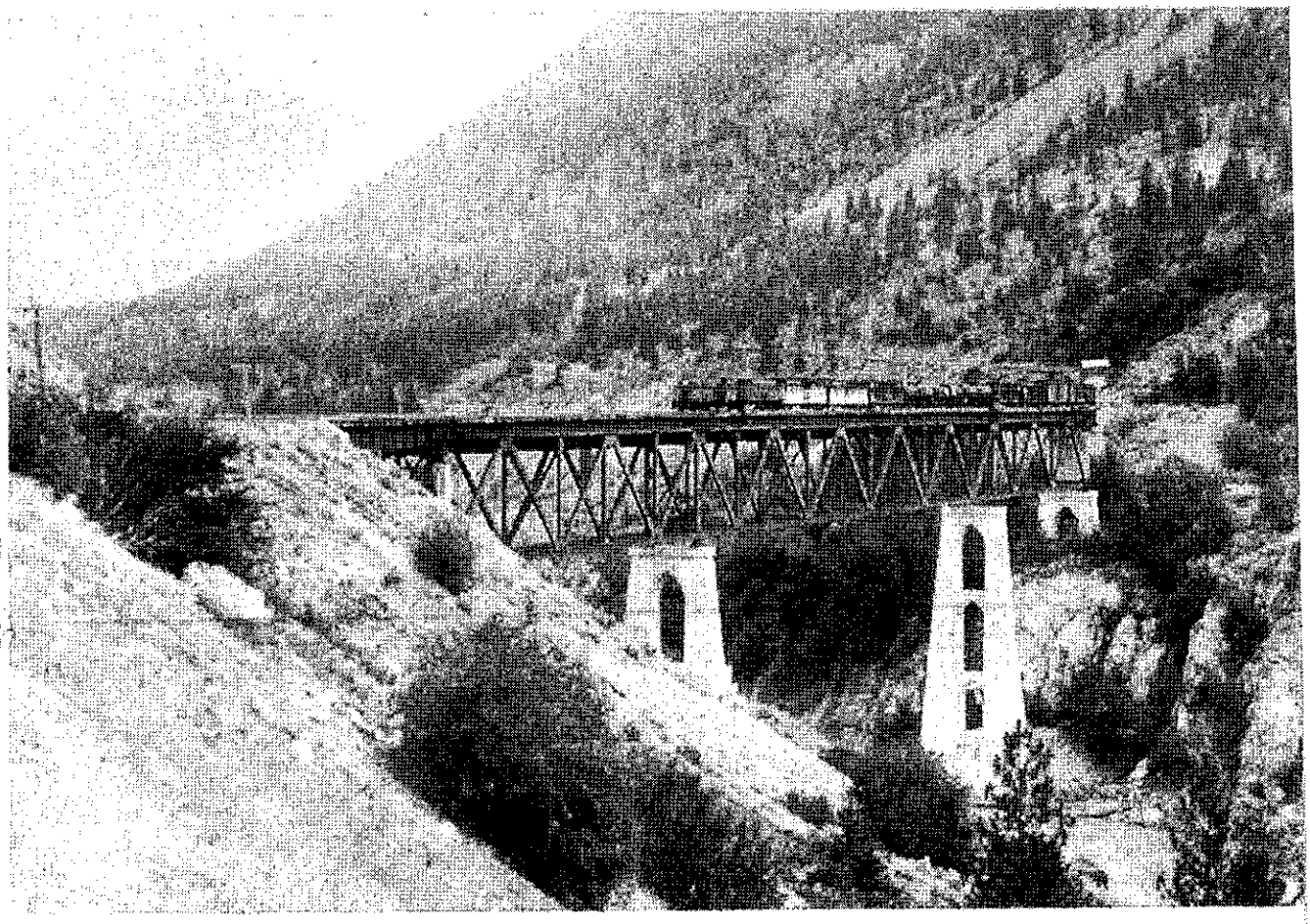
Photograph by PETER COX.

The late-comer to the Vancouver area was the Provincially-owned Pacific Great Eastern Railway. From 1914 to 1928, the P.G.E. operated a rail service from North Vancouver, across Burrard Inlet from the City, to Horseshoe Bay (11 miles), but it did not connect with any other railway. However, with the opening of the then-new Second Narrows Bridge in 1927, the Vancouver Harbour Commissioners built their railway over it and a connection was made for a few months, until P.G.E. abandoned their line. The Vancouver Harbour Commissioners had some trackage in North Vancouver in 1926, which had been worked by the P.G.E. With the P.G.E. abandonment, the V.H.C. took over the industrial and dock switching in North Vancouver, as well as their own terminal railway operations in Vancouver. When the National Harbours Board assumed the operation of port facilities, including railway lines, at all of Canada's major ports, Canadian National Railways were given the responsibility of operating the railways and thus it was that operation of V.H.C. railway facilities was assumed by the C.N. on January 1, 1953.

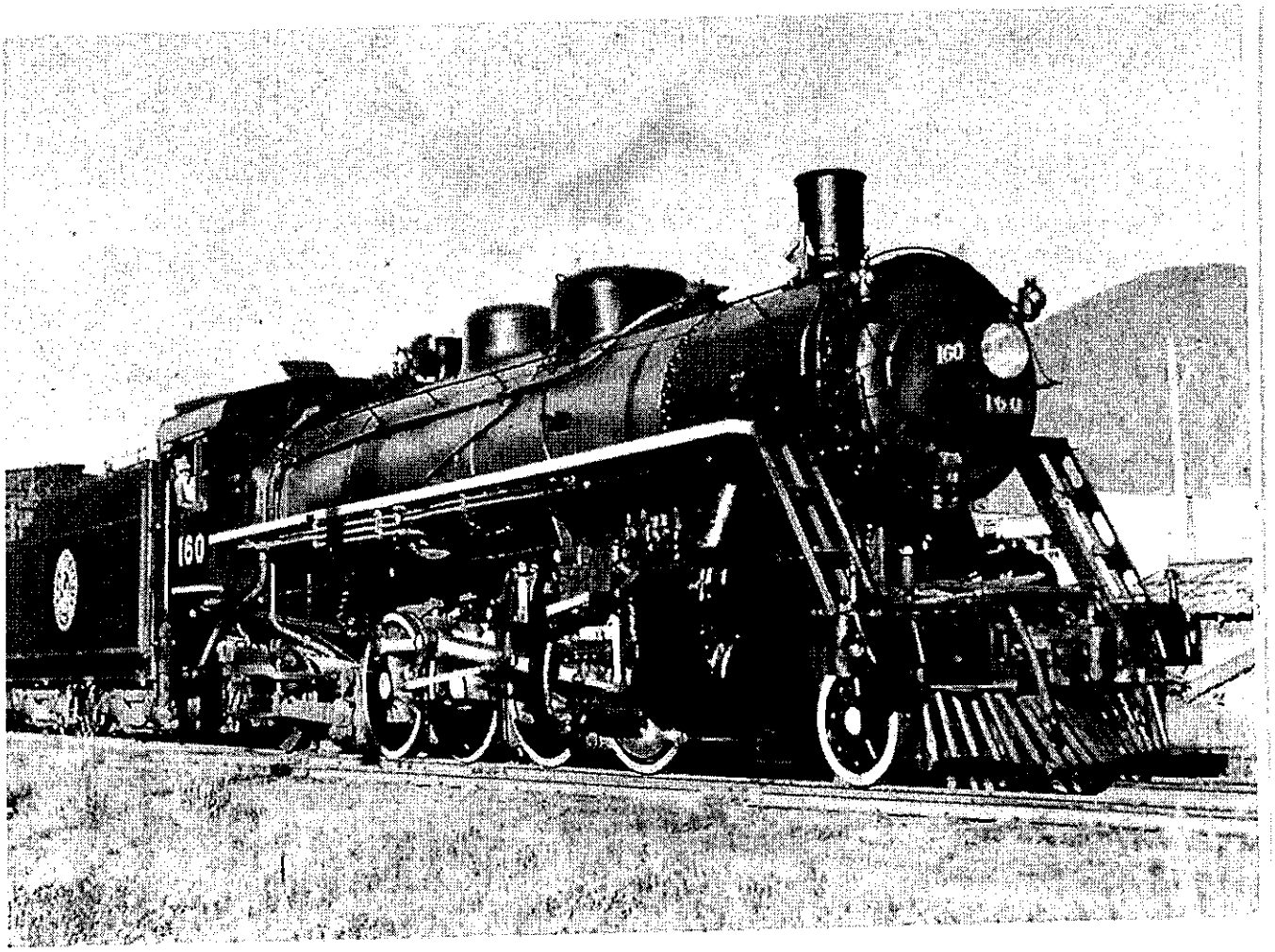
When, at long last, in 1956, the Pacific Great Eastern returned to North Vancouver as a permanent resident, it established freight yards and other facilities. The Canadian Pacific was quick to see the advantages of interchange traffic and accordingly secured running rights over the Canadian National to an interchange yard. In 1959, a terminal wharf operation was organized by Vancouver Wharves Limited, adjacent to the P.G.E. yards and this soon developed into an extensive, ever-expanding bulk-loading facility for sulphur, potash and other commodities. Potash from Saskatchewan was one of the most frequently shipped products, being brought to the west coast by Canadian National.

Until the advent of the P.G.E. to North Vancouver, with its new through line to Squamish and Prince George in the heart of central British Columbia, all traffic to the north shore of Burrard Inlet was terminal. Anything routed farther north had to go by rail-barge to P.G.E.'s first tidewater terminal at Squamish. With P.G.E.'s through line a reality, north shore traffic increased rapidly to boom proportions. Combined with the bulk commodity traffic, within 10 years there was a terrific bottleneck in North Vancouver. The Canadian National's Glen Yard at Vancouver could not handle a train of more than 58 cars, due to the length of the longest yard track and, as a consequence, long freight drags headed for the Vancouver wharves had to be split at Port Mann and run through Vancouver to North Vancouver in several sections. This operation was complicated, requiring movements through Vancouver city over industrial trackage with many grade crossings, from the CN yard to the waterfront yard, then along the waterfront and over the Second Narrows Bridge (1927) to the North Shore of Burrand Inlet. As the

UNIT-TRAIN PRECURSOR: A train of curved-side hoppers follows Test Car 89 and Canadian National units 5028, 5040 and 5046 westward through Burnaby, B.C. at Cariboo Road on 20 June 1968. Photo by D.E.Cummings. CP RAIL ALSO PRACTICED BIG FREIGHT TRAIN OPERATION, as witnessed by this extra east (no flags) at Banff, Alta., with units 4502, 8637, 8652 & 8690 on 19 January 1969. Photo by Robert A. Loat.




Hello!


160
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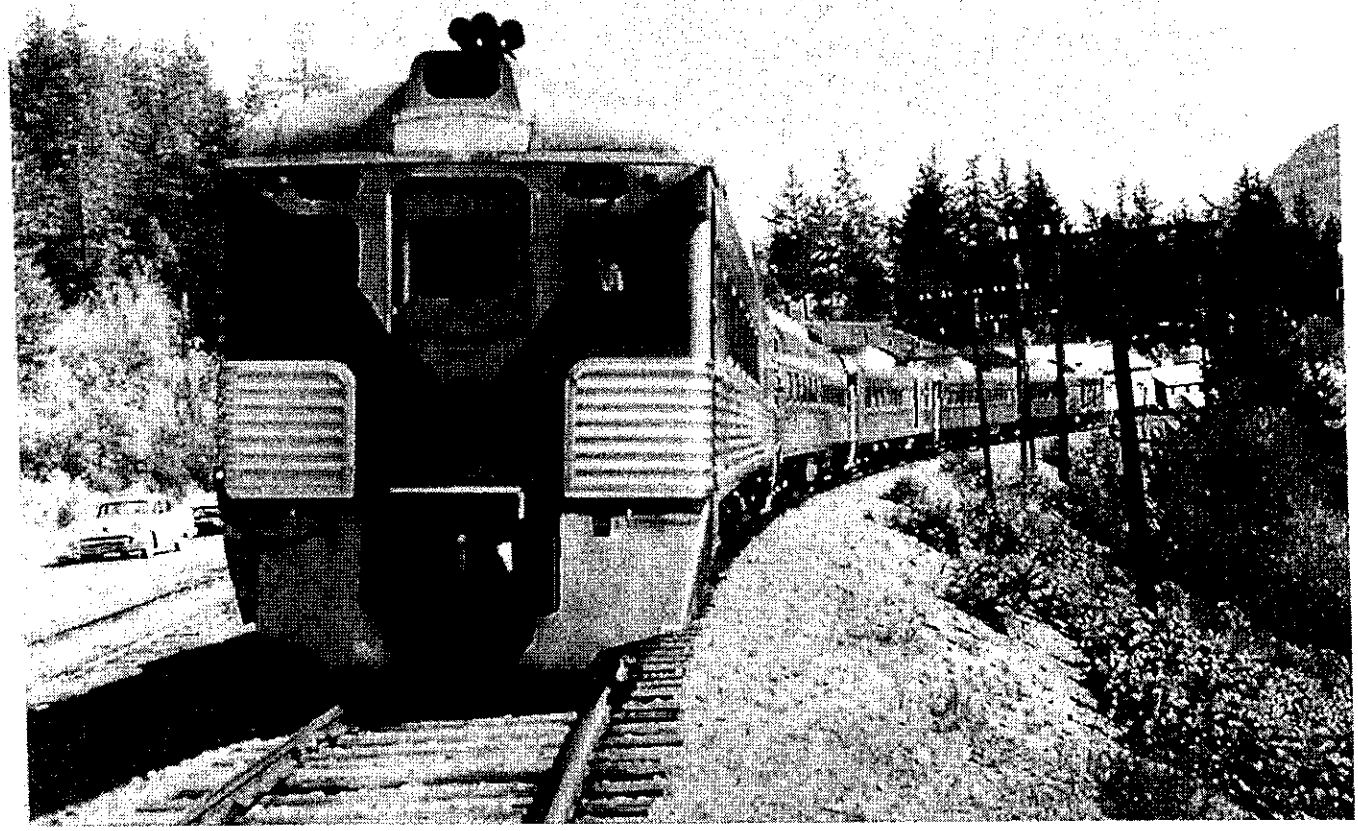

THE PGE IS A "DIFFERENT" RAILWAY .....

Text and Photos by PETER COX

See this month's cartoon, Back Cover

FOR YEARS AND YEARS, the Pacific Great Eastern actually ran from "nowhere to nowhere". Its southern terminus was Squamish, B.C., from which rails stretched northward to Quesnel in the Cariboo country. Construction materials and general supplies went North, forest and mining products came down. While not having any physical connection with other railways, PGE traffic was transferred by car barges and passenger vessels at Squamish to and from such points as Vancouver, Seattle and Bellingham, Wash.

Going back farther, the history of the PGE has quite a story to tell, considering a portion of the line uses the same route as a portage railway put down in 1861 between Anderson and Seton Lakes. However, 1907 was the actual beginning, being the year in which the Howe Sound, Pemberton Valley and Northern started constructing trackage North from Squamish. By 1918, British backing caused a change of name to Pacific Great Eastern, due to the fact that the Great Eastern Railway of England financed PGE's promoters. The charter provided for the construction of a railway North to Fort George (now Prince George), to connect with the Grand Trunk Pacific, and also eastward to meet the railways at Vancouver. Neither destination was reached for many years. Trackage was

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PHOTOGRAPH CAPTIONS

LEFT (Top): In steam days, Canadian Locomotive-built 2-8-2 No. 160 wheeled tonnage into Squamish.

LEFT (Bottom): Modern contrast: the "Cariboo Dayliner" on a day when it consisted of five RDC units.

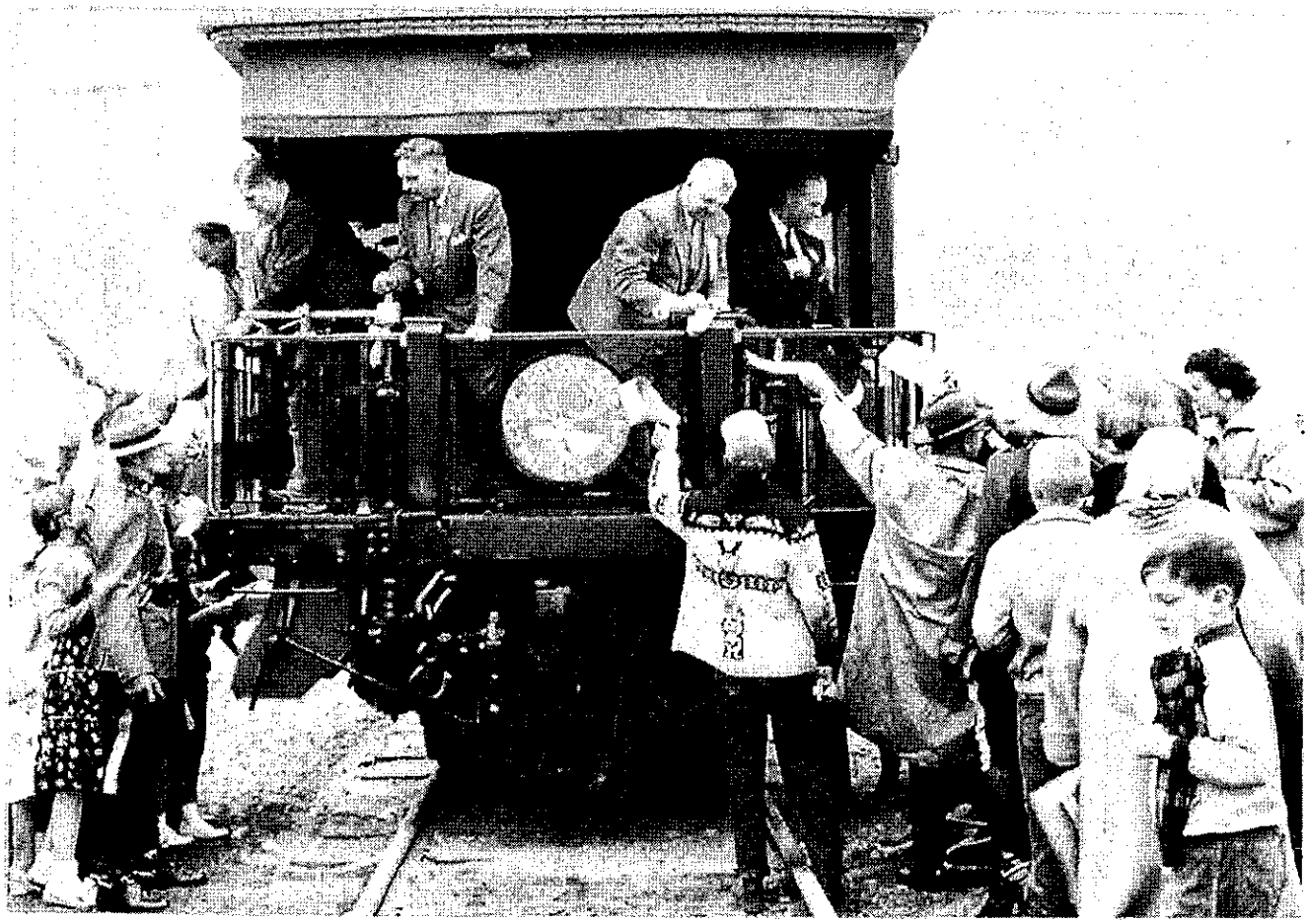
CENTER SPREAD (overleaf)

LEFT (Top): The platform of "Northern Summit" often finds Premier Bennett, who is also President of PGE, greeting his supporters.

LEFT (Bottom): The typical station at Quesnel, for many years the northern terminal of the line, 347 miles from Squamish.

RIGHT (Top): Two small General Electric units crossing the Fraser River at Lillooet.

RIGHT (Bottom): The first train "eventually" arrived at Prince George on October 31st, 1952.



Remembering B. C. Rail

By Mark Forseille

All photos by the author unless credited otherwise

Back in the mid 1980's, the British Columbia Railway had just changed its name to BC Rail. They were in the midst of repainting their locomotive fleet into the first new Red, White and Blue paint scheme. These happened to be the official colors of the Social Credit Government in power at the time.

The GE's weren't yet on the horizon, and the MLW's still ruled the rails along with the SD40-2's. The GF6C Electric's had recently been introduced on the Electrified Tumbler Ridge Subdivision to bring Northeast Coal to Tacheeda, where it was handed over to CN diesel power to finish the trip to the port at Prince Rupert, BC.

This is the point where I start this recollection of railfanning BC Rail. I recall that most summers starting in 1988, I'd head out from the lower mainland area of Vancouver towards Williams Lake for about a week.

In 1992, I decided to take the next step and venture further north up to Prince George. It was too bad that by this time all of the Big Alco's were all off the roster. I was aiming to get as many M420's as possible as most were in the Prince George area.

In the summer of 1998, a group of us decided to head up even further to Chetwynd seeking the new B36-7's. By 2000, we went the furthest up the line making it to Fort St. John, BC. Our main goal of this trip was to get photos of the GF6C's in their last few months of operation before they were removed from service.

BC Rail was a friendly road. They always accommodated us whenever we stopped to visit their diesel shops in both Squamish and Prince George. In the later years, one of the Prince George Diesel Shop Foreman even remembered my name from the previous visit the year earlier. Looking back now, I'm glad to have all those trips along the BCR.

BC Rail has some of the most magnificent scenery along its right of way. There are four main Subdivisions on the BCR between North Vancouver to Chetwynd.

The Squamish Sub which runs from North Vancouver to Lillooet is considered the most dangerous subdivision on the line. Numerous derailments due to rockslides have occurred on this subdivision over the years. Trains in the most dangerous sections were preceded by a Speeder car and later by Hi-Rail trucks to ensure a safe passage. On February 29, 1980 a rockslide blocked the track causing two engines to plunge into Seton Lake with crew fatalities. This slide happened after the speeder passed by and before the train arrived in that spot just minutes later. Ironically, this slide happened only 100 feet from the northeast end of the lake.

The Lillooet Sub runs from Lillooet to Williams Lake. At Lillooet the track starts in the Fraser Canyon and rising 2, 716 feet in the next 34.6 miles to Kelly Lake and the Caribou Region of BC.

The Prince George Sub runs from Williams Lake to Prince George. The northward progress of the Pacific Great Eastern halted for many years the Cottonwood River, north of Quesnel. The million dollar cost of the bridge was deemed too much for a railway that literally ran from nowhere to nowhere. After Quesnel, it's towards the City of Prince George into the Northern BC area of the Province. The majority rail traffic from the Caribou Region is derived from the lumber industry.

The Chetwynd Sub runs from Prince George to Chetwynd. Most of the southbound loads traveling this subdivison are from other BCR branch lines or from the Far North region of BC. Besides lumber, southbound trains pick up about 20 sulphur loads at Pinsul located 15 miles south of Chetwynd.

The Chetwynd Sub has three branch lines. The Stuart Sub branches off at Odell (MP 495.4) to Fort St James. This becomes the Takla Sub from Fort St James and continues north as far as Minaret (the current end of the line). Mostly lumber products are shipped from this section including raw logs.

The Tumbler Sub branches off at Wakely (MP 537.2) and heads to Tumbler Ridge, site of what was once called the North East Coal Project.

At Kennedy (MP 567.3), the Mackenzie Sub branches off to the town of the same name of which the sub is named where several sawmills lumber are located.

Once at Chetwynd, the mainline continues north to Fort St. John on the Fort St. John Sub.

Past Chetwynd, there are more petroleum loads coming south as well as more lumber products and some sulphur from Taylor near Fort St John.

The last sub is the Fort Nelson Sub from Fort St. John to Fort Nelson where the line ends at MP 978.8. More lumber products and grain are shipped from this area heading south.

The Dawson Creek Sub branches from Chetwynd to Dawson Creek towards the Alberta Border. There's some plywood, wafer board lumber products and grain coming from this area.

There is one more little known Sub. It's the Port Sub from Pratt in Cloverdale, BC to The Roberts Bank Coal Port. This is the only sub that the CN does not control today and is still owned and operated by BC Rail.

Pacific Great Eastern / British Columbia Railway / BC Rail issue

Souvenirs du Pacific Great Eastern et British Columbia Railway

Canadian Rail

THE MAGAZINE OF CANADA'S RAILWAY HISTORY

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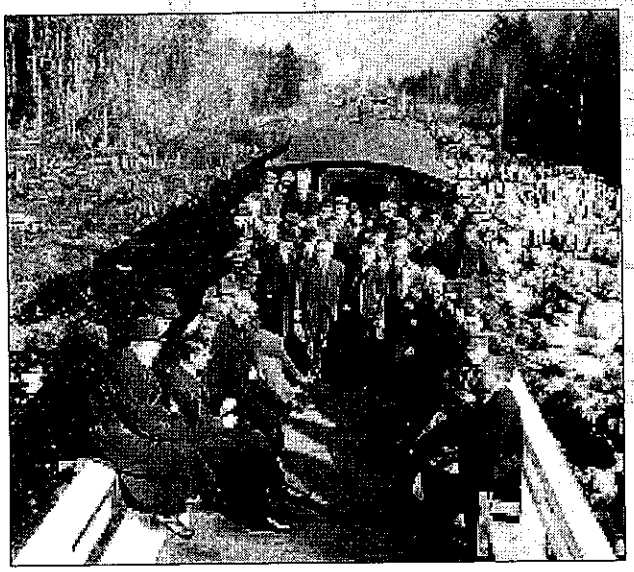
Brief Overview of the Pacific Great Eastern, British Columbia Railway and BC Rail

By Douglas N. W. Smith

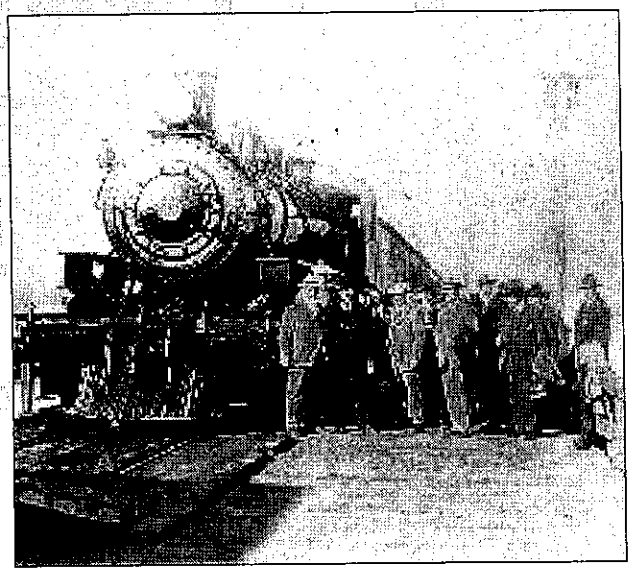
When the twentieth century dawned, British Columbia had only the Canadian Pacific Railway to link the west coast to the rest of the rest of the country. Scarcely fifteen years later, two additional transcontinental lines – the Grand Trunk Pacific and the Canadian Northern Railways – were completed. While the Canadian Northern selected Vancouver as its western terminus, the Grand Trunk Pacific struck out across the middle of the province and launched a new community called Prince Rupert as its Pacific coast terminus. Unsatisfied with just one new transcontinental line, Vancouver lobbied hard to have a branch linking it to the Grand Trunk Pacific. Bowing to political pressure, in 1912 the provincial government decided to back the construction of a new railway called the Pacific Great Eastern Railway (PGE) from Vancouver to Prince George. The Howe Sound & Northern Railway, which had built about twelve miles of track from Newport (later renamed Squamish) inland, was taken over giving the PGE its first piece of line.

In July 1914, the PGE completed 12.7 miles of track from North Vancouver through to Whytecliff. The company purchased some self-propelled rail cars and second hand passenger cars to launch a rather intensive commuter service. Motor bus competition killed off the traffic and operations over this route were unceremoniously halted in November 1928.



Dignitaries had an unobstructed view of the new Pacific Great Eastern Railway when the inaugural run to Lillooet was made in 1915. BC Archives collection, Call Number D-02965.

Les dignitaires ont une vue ouverte sur le nouveau chemin de fer Pacific Great Eastern lors de l'inauguration de la voie vers Lillooet en 1915. Collection des archives de la C.-B., no D-02965.



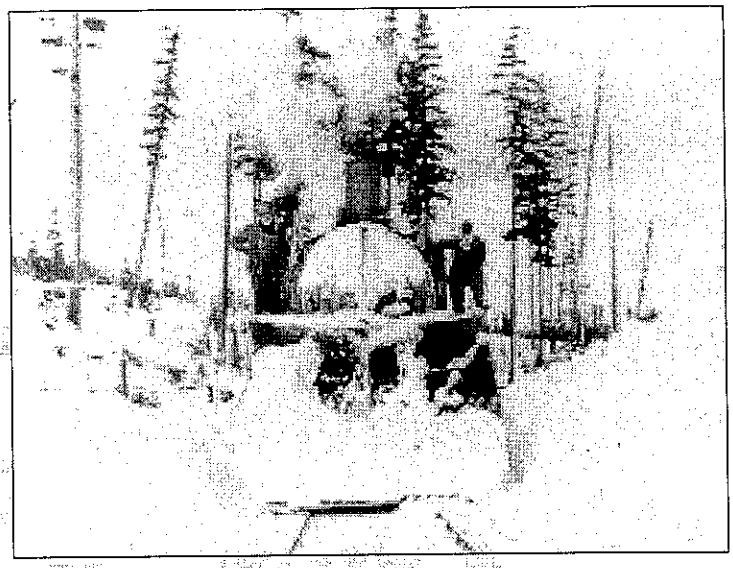
Number 58, a 1920, 2-8-2 product built by the Canadian Locomotive Company in Kingston, Ontario heads up a train of dignitaries photographed at Squamish, British Columbia, date unknown. BC Archives collections, Call Number D-00052.

La locomotive no 58 de type 2-8-2 construite en 1920 par la Canadian Locomotice Company (CLC), photographiée à Squamish à une date inconnue, est à la tête d'un convoi transportant des dignitaires, Colombie-Britannique. Collection des archives de la C.-B., no D-00052.

Work to extend the Howe Sound & Northern line commenced in 1914. Progress was sporadic as European funding for construction dried up in the First World War. The line became a political football when allegations surfaced that the contractors had been skimming money. Unloved and unwanted, the provincial government had to take over the line in 1918 as it had guaranteed most of the bonds that had financed construction up to that time.

The provincial government tried to unload the money losing line in the 1920s, but no one was interested – even the federal government could not be persuaded dump it on CN – for a measly selling price of $17 million. The line staggered on running from Squamish to Quesnel, in the interior of the province, with hand me down equipment, but lots of pride.

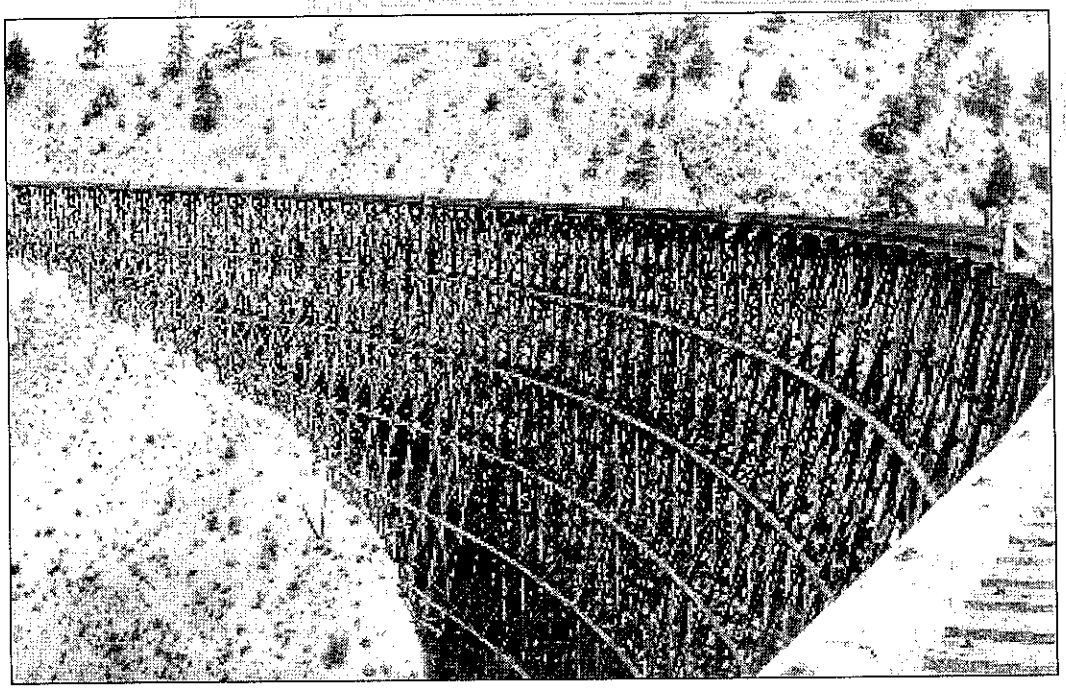
In 1949, Premier Byron Johnson announced that his government would complete the PGE. In 1952 the rails reached Prince George ending the old saying that PGE stood for "Prince George Eventually". In 1956, the old North Vancouver-Whytecliff line was reopened and extended to Squamish. The PGE modernized its operations with modern diesel locomotives for its freight trains and snappy Rail Diesel Cars for its passenger operations.



As with so many Canadian railways, winter played havoc on the PGE, here we see a snow plow equipped steamer in the early years on the railway. BC Archives collection, Call Number E-04250.

L'hiver fait des ravages sur le PGE, à l'instar de plusieurs chemins de fer canadiens. Ici, nous voyons une locomotive à vapeur équipée d'un chasse-neige à une époque révolue de ce chemin de fer. Collection des archives de la C.-B., no D-04250.

The completion of the Vancouver-Prince George line didn't end the expansion. The line was pushed up to Dawson Creek and Fort St John in BC's Peace River Country in 1958 and on to Fort Nelson in 1971. The electrified Tumbler Ridge subdivision opened to the Quintette coal mines northeast of Prince George in 1983. Expansion continued with the construction of a branch line north of Prince George to Dease Lake. Unofficially many thought this branch would eventually be pushed on to Alaska.

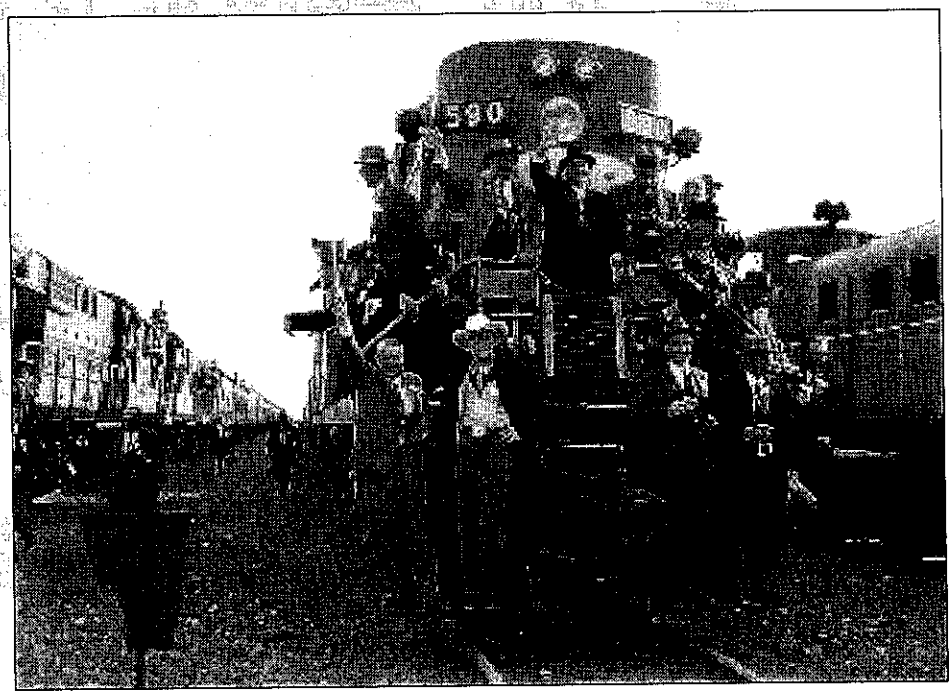


The Pacific Great Eastern required many bridges and trestles to conquer the formidable terrain, here we see the trestle built to cross 11 Mile Creek. BC Archives collection, Call Number D-00064.

Le Pacific Great Eastern nécessita la construction de plusieurs ponts à chevalets pour conquérir ce décor accidenté. Ici, nous voyons le pont à chevalets qui traverse le ruisseau au mille 11. Collection des archives de la C.-B., no D-000644.

Number 590, an RS-11Mu, built by Montreal Locomotive Works in May 1958 is on the point of the Peace River Special, which officially dedicated the new line in October 1958. The 590 was renumbered to 604 and had a long life on the PGE; it was retired by CN in 2008. BC Archives collection, Call Number I-32406.

La locomotive no 590 de type RS-11Mu, construite par la Montreal Locomotive Works en mai 1958, est en tête du Spécial Peace River, dédicace officielle de la nouvelle ligne depuis octobre 1958. L'engin fut renuméroté 604 et eut une longue vie sur le PGE; il fut retiré par le CN en 2008. Collection des archives de la C.-B., no I-32406.



Premier W. A. C. Bennett (in the black coat below the headlight) and dignitaries pose on the 590 as the line is officially opened into 'Peace River Country'. BC Archives collection, Call Number I-68582.

Le premier ministre W.A.C. Bennett (sous le phare, avec un manteau noir) et des dignitaires posent sur la 590 au moment de l'ouverture officielle de la ligne dans le comté de Peace River. Collection des archives de la C.-B., no D-I-68582.

The last line to be brought into the BC Rail orbit was the British Columbia Harbours Board Railway, a 23-mile line built in 1969 to connect the Roberts Bank shipping terminal with the Canadian Pacific, Canadian National and Burlington Northern Santa Fe main lines.

Corporate adjustments saw the PGE renamed the British Columbia Railway on April 1, 1972. This was changed to BC Rail on June 19, 1984.

In common with the push of many governments to downsize their operations, the BC government decided to privatize the operation. As a prelude, North Vancouver-Prince George intercity trains and the tourist train operations of BC Rail were terminated in 2002. A Request for Proposals to operate BC Rail's freight services were issued on May 15, 2003. Bidding one billion dollars, CN was chosen to operate BC Rail (excluding the Port Subdivision seriving Roberts Bank). It officially took over the line as of 0001 hours on July 15, 2004 ending 86 years of provincial ownership.

Today the only piece of railway remaining in provincial government ownership is the Port Subdivision. No PGE, British Columbia Railway or BC Rail trains tread these rails – they are used CN, CP and BNSF container trains, which pay the rump of BC Rail track use fees.

Pacific Great Eastern Ry.—The Brit
Columbia Government owns and opera
this railway, one section of which, fr
North Vancouver to Whytecliffe, 13 mil
is not yet connected up with Squami
from which point the line runs inland
Clinton, and is under construction the
to Fort George. It has been propo
that the North Vancouver-Whytecl
section, which runs through a suburl
area, should be electrified. The Prem
of British Columbia is reported to h
said that the government may underta
the work. There is, he added, enou
water power at three points along
principal section of the line to oper
the whole line to Fort George by elec
city when conditions warrant its be
done. We have been officially advi
that only the future possibilities of el
trification have been discussed, and t
no active steps are being taken at prese

The deck of the new bridge at Ki
lano, on the West Vancouver-Whytecl
section of the line, has been complet
and traffic was reported to have b
run over the new bridge Nov. 7. N
pg. 488.)

St. John & Quebec Ry. — The N

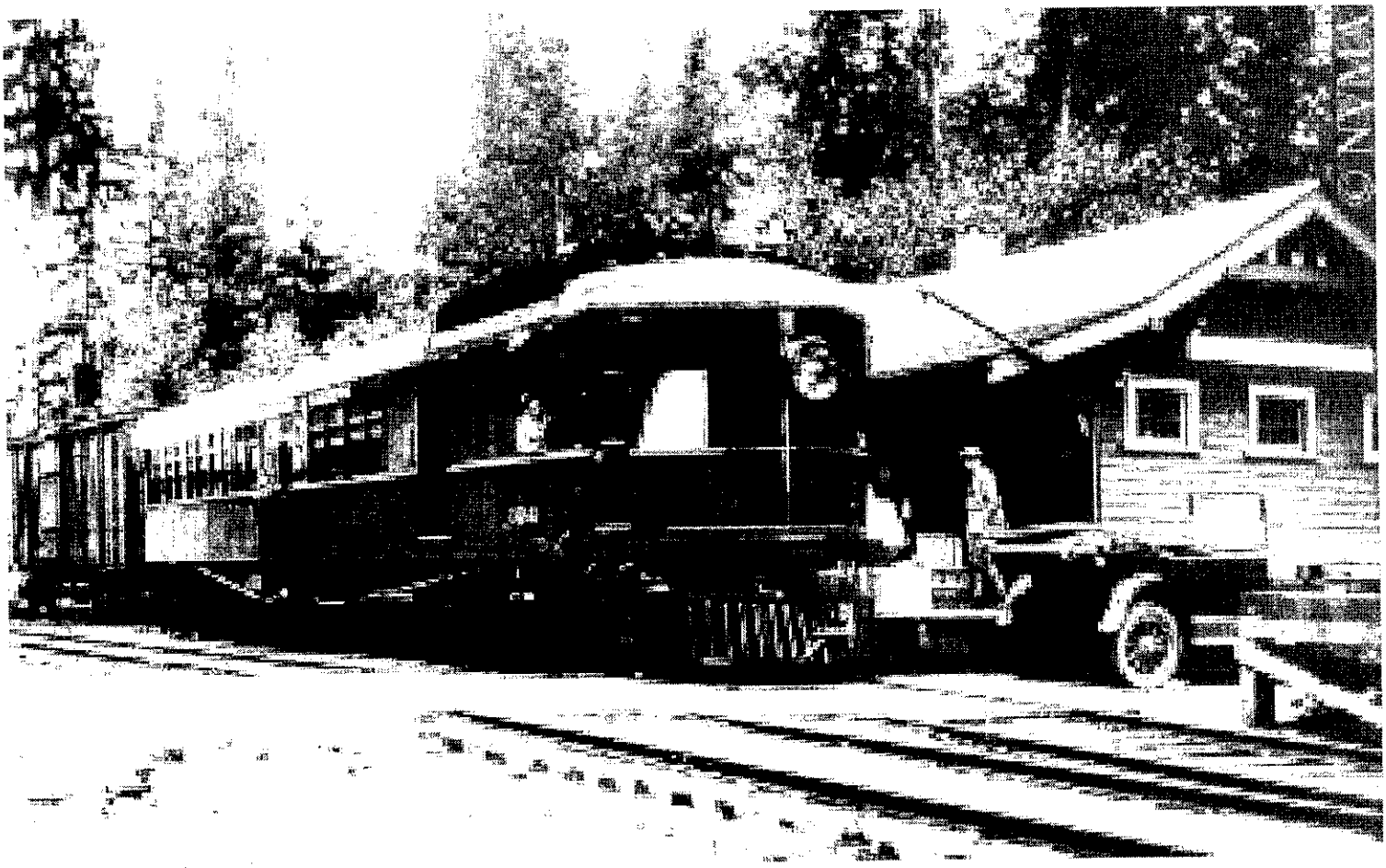
Pacific Great Eastern Ry.—We are officially advised that the British Columbia Government has let the contract for completing a 42 mile extension of the line beyond the present track end near Clinton, B.C., to the Northern Construction Co., Vancouver. The work to be done consists of track laying for 42 miles, 6 miles of grading, putting in a few trestle bridges, and other work, all the other work having been done before the government took over the railway from Foley, Welch & Stewart.

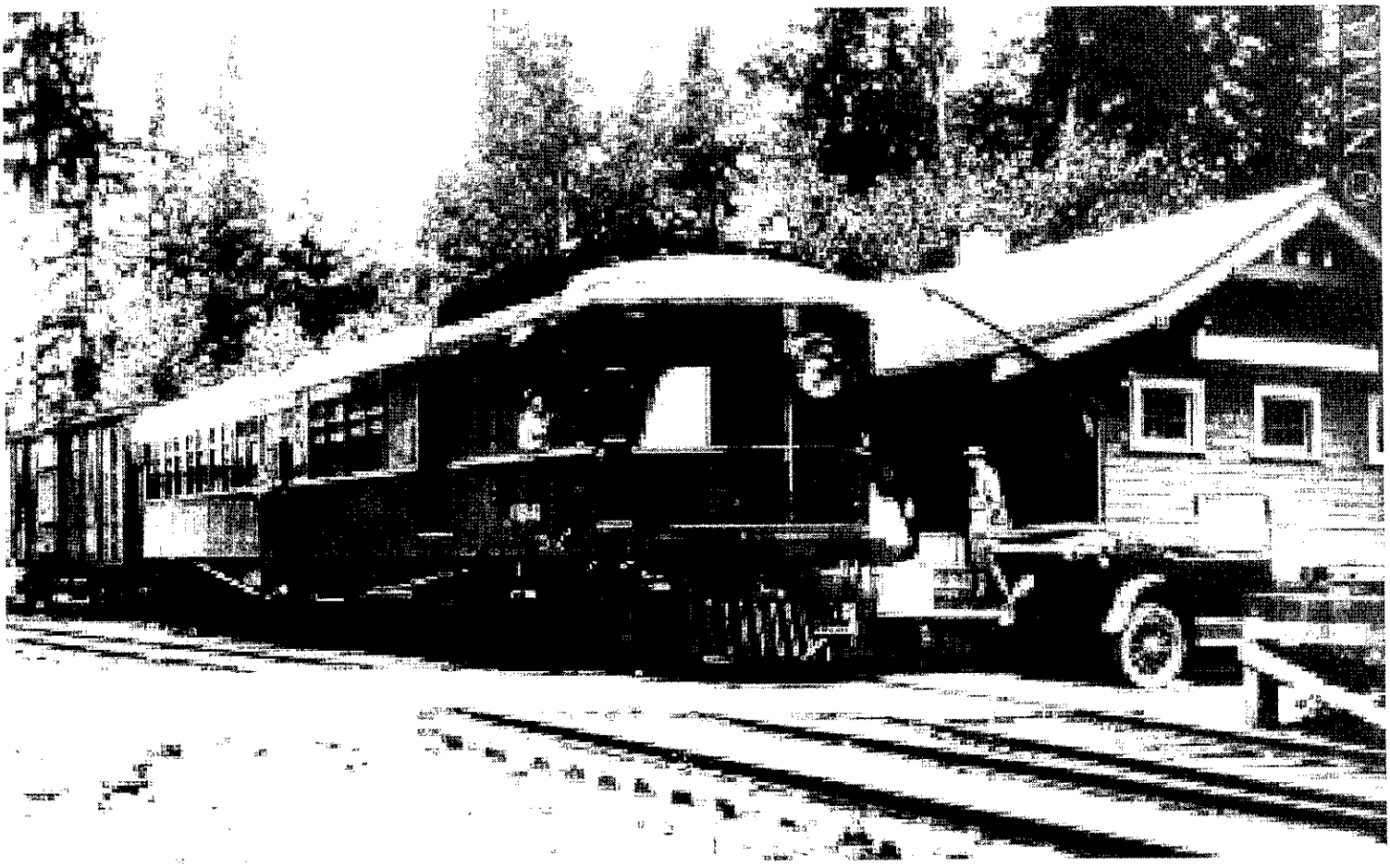
According to press reports, the lowest tenderer was McKinnon, Cooper, Drabble & Co., Vancouver, at $300,000; the next lowest Cotton & Co., Vancouver, at $308,000, and the next Palmer Bros., Vancouver, at $349,000; but for one reason or another no contract was arranged with either of them. These three bids were on the unit principle, while the remaining bids were on the cost-plus principle. An examination of these by A. F. Proctor, Chief Engineer, showed that the Northern Construction Co. estimate would work out at $319,000, with 5½% commission, but no commission would be paid on any amount over $319,000. The company is to furnish all the plant required, and will be allowed 25% upon all savings effected

Pacific Great Eastern Ry.—The British Columbia Government on Jan. 8 authorized the issue of a treasury note for $500,000 to carry on construction work on the line. This will, it is estimated, pay for material used and the actual cost of labor employed until the end of March. The work to be done under this order in council will consist of the continuance of track laying from Clinton towards Prince George and the finishing up of the grading between those two points. This work will be done entirely under the supervision of the government engineers.

Since the new B.C. Government took office the company appears to have been given very considerable attention. An order in council was passed, Jan. 8, authorizing the employment of accountants to make an audit of the company's books as the basis of a thorough consideration of the whole situation of the province's relationship to the company. It is expected that the Premier will make a statement as to the future of the company soon after the Legislature meets in February. (Jan., pg. 20.)

cific Great Eastern Ry.—The Minis
f Finance in the course of his bud
peech in the British Columbia Leg
re, Mar. 12, stated that the liabili
the company's bonds is $20,160,000
in addition, provision has to be
for the continuance of its construc-
northward. The province is the
sor of a line of railway serving a
le section of B.C., the development
ch is very important. There will
o be a good deal of financing in
tion with the line, and the govern-
vill have to float a loan to provide
ther construction. It is expected





Pacific Great Eastern Ry.—In regard to reports current for many months past as to negotiations for the sale of the P.G.E.R. by the British Columbia Government to one or other of various syndicates, coupled with reports of extensions to be built by the purchasers, the Prime Minister of British Columbia, Mr. Tolmie, was reported in a Victoria press dispatch of April 5 as having stated that it could be said definitely that no legislation on the subject would be introduced during the then current session of the Legislature. The dispatch added:—"P.G.E.R. sale negotiations, "which have been under way for months, "are still far from solution, but have not "been abandoned."—During a debate in the Legislature, April 4, T. D. Pattullo, leader of the Liberal opposition, accused the government of consistently withholding information and doing business in secret. The Prime Minister replied:—"We are doing nothing in secret, but I may remind the opposition leader of a parallel case. In Ottawa, the government regards the inner workings of the Canadian National Rys. as private information, and we take the same attitude toward the P.G.E.R."

MAY 1932

Railway Projects, Construction, Betterments, Etc.

said, be undertaken by Cornwall and Massena International Bridge Co. (Nov., 1931, pg. 699.)

The Pacific Great Eastern Ry. management invited tenders for dismantling 14 Howe truss span bridges on the Squamish Subdivision, but we are advised officially that it had been decided not to have the work done by contract, but to do it with railway forces as and when opportunity offers. The bridges to be demolished and which have been replaced by steel girder bridges are as follows, the mileage on Squamish Subdivision being stated first, followed by the length of the original bridge and a brief reference to the type of bridge replacing it:—mile 24, 100 ft., replaced by 80 ft. deck plate girder bridge; mile 30.5, 125 ft., replaced by 70 ft. half deck plate girder span; mile 44.1, 125 ft., replaced by 80 ft. half d.p.g. span on skew; mile 48.4, 150 ft., replaced by 3 d.p.g. spans totalling 201 ft.; mile 52.3, 125 ft., replaced by 80 ft. d.p.g. span; mile 84.7, 100 ft., replaced by 60 ft. d.p.g. span; mile 88.3, 60 ft., replaced by 2 d.p.g. spans totalling 80 ft.; mile 93.5, 60 ft., replaced by 40 ft. d.p.g. span; mile 120.5, six 150 ft. bridges, not replaced as the line at that point near Lillooet has been rebuilt in a new location. Details of this line diversion were given in our Sept., 1931, issue, pg. 576. A press report of Dec. 2, 1931, stated that tenders received for dismantling the bridges were considered too high, causing the management to undertake the work with its own forces.

In regard to press reports, stating that the Dominion Government would contribute toward the cost of extending the P.G.E.R., northerly from Quesnel to Prince George and southerly from Squa-

1931, stated that the Dominion Government commission considering the whole question of Canadian transportation had announced that it would receive a written presentation from the B.C. Government on the P.G.E.R. problem.

Peace River District-Pacific Coast Connection.—When the Dominion Government commission considering the whole question of transportation sat in Victoria, Dec. 10, 1931, several witnesses presented arguments in favor of providing a direct railway route outlet from the Peace River district to the Pacific Coast. R. R. Wilson, Fernie, B.C., representing mining interests, urged that the best and cheapest way to develop additional traffic over the western railway lines would be to extend a line into the northern territory of the Peace River area by way of Peace Pass. He claimed that such a rail connection would open up an empire of new mineral wealth, build up new towns, increase railway revenues, and solve the Pacific Great Eastern Ry. problem, and largely that of unemployment in Western Canada. T. D. Pattullo, leader of the B.C. Liberal party, is said to have urged that it is the Dominion Government's duty to determine the Peace River rail outlet issue; he is reported as having mentioned that it was rumored that there has been disagreement between the Canadian National and Canadian Pacific in regard to the direct rail outlet matter. Alderman R. T. Williams, of Victoria, is said to have urged that a route be built through the Peace River country to a terminus on Vancouver Island, and to have claimed that the cost of bridging Seymour Narrows, to connect Vancouver Island with the mainland, has been exaggerated.

The Commission sat in Vancouver,

JANUARY 1932

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In regard to press reports, stating that the Dominion Government would contribute toward the cost of extending the P.G.E.R., northerly from Quesnel to Prince George and southerly from Squamish to North Vancouver, as a measure of unemployment relief, we were advised officially recently that nothing has been decided with regard to the proposed extensions, and since the date of our official advice there have been no developments to suggest that the extensions will be gone on with in the near future.

A Victoria, B.C., press dispatch stated, late in Nov., 1931, that P.G.E.R. affairs had been discussed by the directors and Prime Minister Tolmie of British Columbia, the latter being noncommittal as to the matters discussed, but stating that no drastic changes in management had been under consideration. The Prime Minister was reported to have said, in speaking at Nanaimo, that it might be possible to have something tangible to present to the public in connection with the P.G.E.R. before long. He indicated that syndicates representing British and U.S.A. capital were anxious to submit proposals for taking over the railway, and that the government was giving them the fullest information on the subject. He was quoted as saying:—"There are three "syndicates with which we are negotiat-"ing for the purchase of the P.G.E.R. "The construction of the railway to the "Peace River would be part of the bar-"gain in each case. We will invite the "best brains of the country before we "take any definite action." He was also reported as saying that the operating deficit for 1931 would be about $60,000, which he considered low in view of prevailing conditions.

A Victoria press dispatch of Dec. 11, issue, he is reported as having mentioned that it was rumored that there has been disagreement between the Canadian National and Canadian Pacific in regard to the direct rail outlet matter. Alderman R. T. Williams, of Victoria, is said to have urged that a route be built through the Peace River country to a terminus on Vancouver Island, and to have claimed that the cost of bridging Seymour Narrows, to connect Vancouver Island with the mainland, has been exaggerated.

The Commission sat in Vancouver, Dec. 11, 1931. A report states that C. E. Tisdale, Chairman of the On-to-the-Peace Association, gave information concerning population, opportunities, and fertility of the Peace River country, claiming that it is producing 20,000,000 bush. of grain a year. M. D. Hamilton, President, Vancouver Board of Trade, called the commission's attention to the potentialities of the Peace River district and its need of a direct rail outlet to the Pacific. J. H. Cates, President, North Vancouver Board of Trade, asked that the commission find that the Pacific Great Eastern Ry. should be extended northerly and easterly to tap the Peace River country, and that it should also be extended southerly to North Vancouver.

Toronto, Hamilton and Buffalo Ry.—The Board of Railway Commissioners passed order 47,765, Dec. 12, 1931, authorizing the T.H. and B.R. to open for traffic the portion of its railway between Park St. on the west, and Victoria Ave. on the east, in Hamilton, Ont.

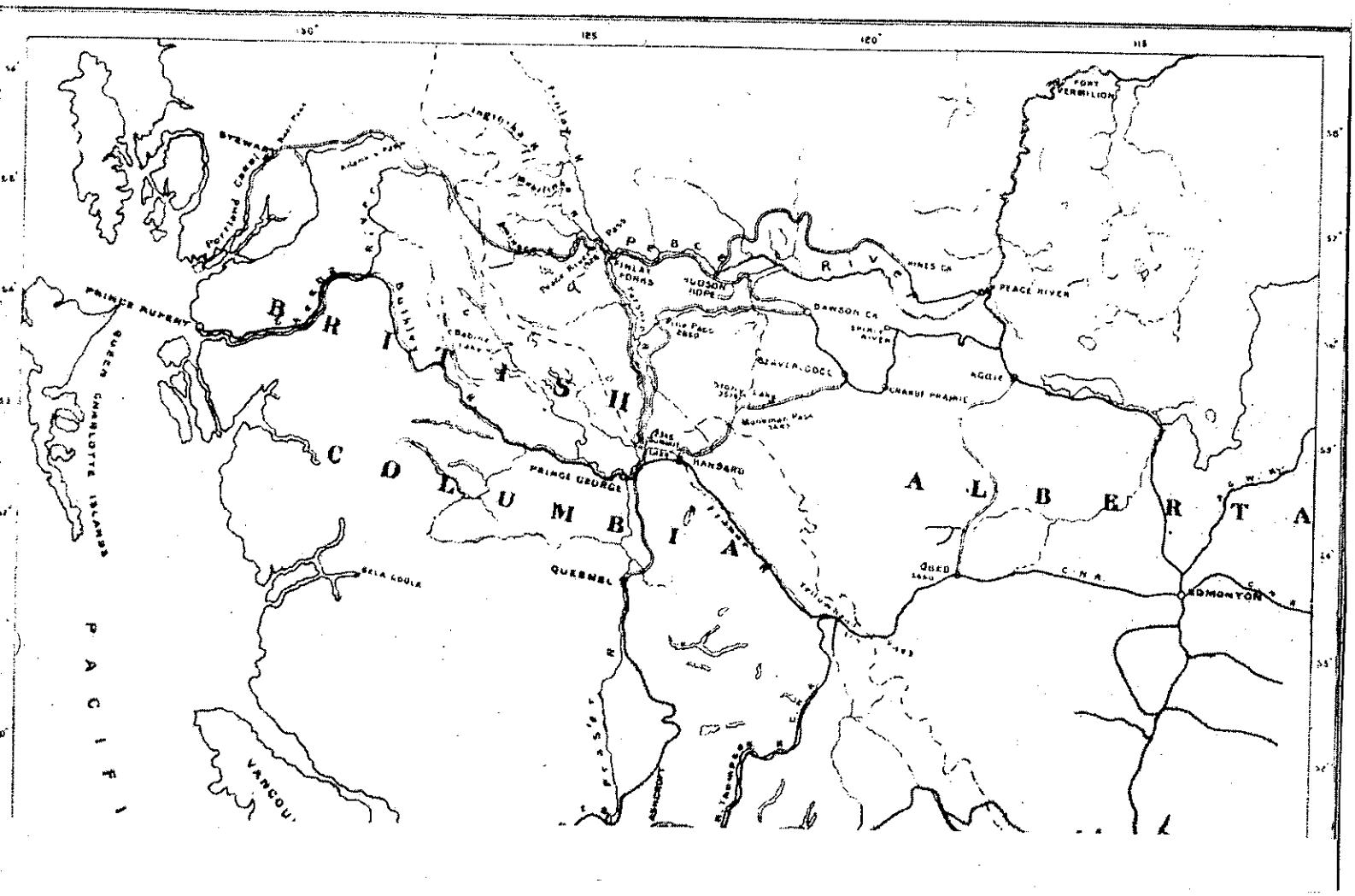
JANUARY 1932

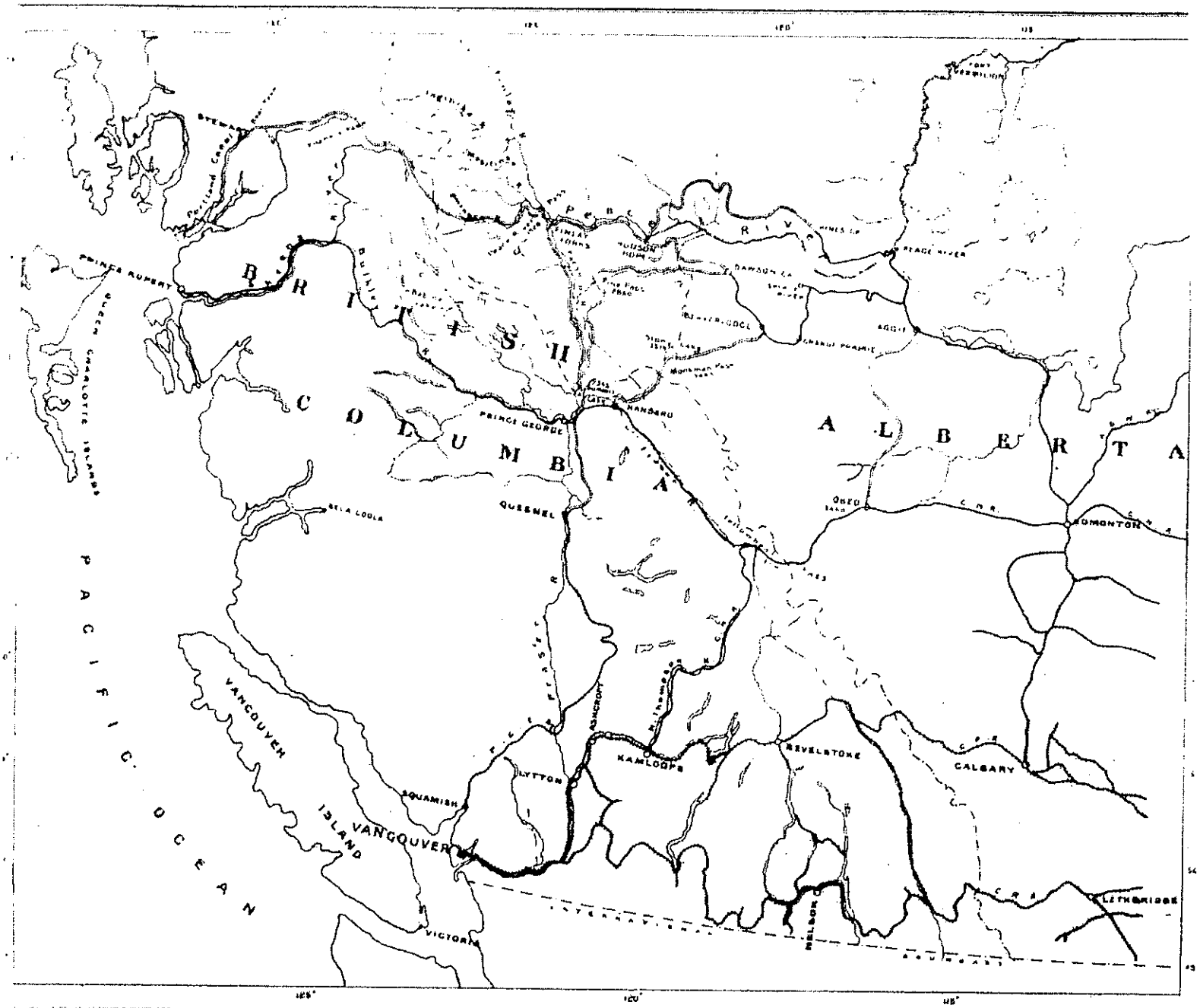
Railway Surveys by Airplane in the Peace River and Great Bear Lake Districts.

Thomas C. Macnabb, Engineer of Construction, Western Lines, Canadian Pacific Ry., addressed the Toronto Railway Club, Sept. 2, upon his experiences in conducting surveys between the Peace River district and the Pacific coast, and in the Great Bear Lake territory, his address having been illustrated by a large number of lantern slides. His remarks are summarized as follows:—

trict, and there is a growing need for transportation facilities to supplement the boats which now run for not more than three months each year. British Columbia is much interested in a Peace River rail outlet, because the terminal port will be in that province, and because the provincially-owned Pacific Great Eastern Ry. was designed to serve the Peace River area via the Pine Pass.

British Columbia tried to dispose of the P.G.E.R. by offering 20,000 acres of land for every mile built or to be built. To discover what the lands contained, the B.C. Government, the Canadian Pacific and the Canadian National Rys. made a survey of the natural resources in 1929-30, and a report was made to the railways and to Victoria. For its own information, the Canadian Pacific under-





Alternative Routes for Direct Rail Outlet from Peace River District to the Pacific Coast.

utes from Aggie via Obed, also via Monkman, Pine and Peace Passes, shown in light parallel lines. Canadian National, Canadian Pacific, Norther

Burrard Inlet Railway and Highway Bridge.

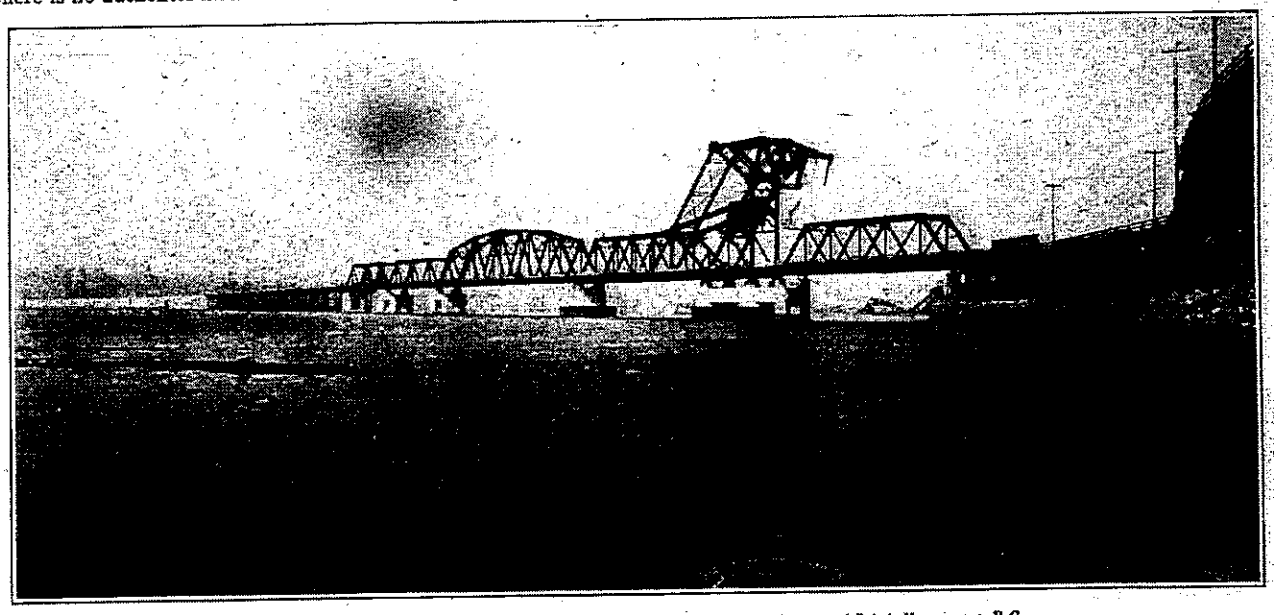
From time to time, prior to and during its construction, Canadian Railway and Marine World has given general information respecting the railway and highway bridge built across the second narrows of Burrard Inlet, at Vancouver, B.C., by the local municipalities, aided by the Dominion and British Columbia Governments. Lieut. E. H. James, who was resident engineer in charge of construction, read a paper on the bridge recently before the Engineering Institute of Canada's Montreal Branch, which is summarised as follows:—The building of a bridge across Burrard Inlet at the second narrows had been discussed for about 40 years, but difficulties had always been found in financing the project. The Vancouver, Westminster and Yukon Ry. Co. for many years held a charter to build a bridge, but there is no authentic information concerning actual plans earlier than 1909, in December of which year the Burrard Inlet Tunnel and Bridge Co. was formed; in April 1910 a charter of incorporation was granted, with power to build a bridge, and the British Columbia Government gave its assent to the project May 4, 1910. From then forward efforts were made to get the project started but it was not until Jan. 1914 that tenders were actually called for on plans prepared by the late Sir John Wolfe-Barry, of London, England. Financial difficulties again presented themselves, and any further progress was put an end to by the outbreak of war in Aug. 1914.

Interest in the project was revived in 1922, and, after about 6 months' negotiations, an agreement was entered into between the company and the Northern Construction Co. and J. W. Stewart, under which an investigation was made of the proposed site by their engineers, and by A. D. Swan of Montreal, consulting engineer to the bridge company. After this investigation plans were prepared jointly by the construction company's engineers and Mr. Swan, and a contract was entered into for the construction of a bridge for a lump sum. The plan as finally approved by the Dominion and British Columbia Governments, called for the erection of a trestle on the north shore to pier 1; a 300-ft. fixed span from pier 1 to pier 2; a 185-ft. bascule span between piers 2 and 3; a 54-ft. tower span between piers 3 and 4; a 150-ft. fixed span between piers 4A and 5, and a trestle approach from pier 5 to the south shore. The bridge carries a single track standard gauge railway, between the main trusses, a 10-ft. highway outside the truss on the west side, and a 10-ft. highway and a 3-ft. 6-in. sidewalk outside the truss on the east side. The two highways come together in a single 20-ft. roadway at each end of the bridge proper, so that it is necessary for highway traffic to cross the railway at grade once in either direction. The railway loading is Coopers E30, and the highways are designed for a uniform live load of 100 lb. per sq. ft. all members being in addition capable of carrying 15-ton trucks. The whole of the steel work is in accordance with the Canadian Engineering Standards Association's standard specifications for steel railway and highway bridges. The spans are carried on reinforced concrete piers, either built up on groups of cylinders bolted together and capped for piers 1, 4 A and5; or built up on penumatic caissons for the other piers. Details as to the construction and placing of these piers, together with information as to the depth to which they were sunk in the bed of the inlet were given in full in the paper.

While the piers were under construction some objections were made by lumber and marine interests to the construction of the bridge, and after an investigation authorized by the Minister of Public Works it was decided to raise the height of the bridge 5 ft. and to replace the trestle work at the north shore end by two 150-ft. spans, the cost of which work was met by the Dominion Government directly or through the Vancouver Harbor Commission. This raising of the piers necessitated their being strengthened and the construction of 2 additional cylinder-type piers, to carry the 150-ft. spans which replaced trestle work. The additional height gives a clearance of 22.2 ft. at high water. The railway connection extends from the Canadian Pacific Ry. tracks, on the south, to the bridge across Lynn Creek, while the roadway extends from Cariboo St., on the south, to the west boundary of the Indian Reserve on the north side.

Construction was started in Oct. 1923, with the gravel embankment carrying the rail and roadway from the north end of the bridge to Lynn Creek, across which a 150-ft. span was erected on plain mass concrete piers. Work on the railway trestle was started in Jan. 1924, and on the piers a little later. A start was made on March 6, 1925, to float the steel fixed spans into position and this was completed successfully on Aug. 26, 1925. The last part of the structure to be completed was the bascule leaf, which was erected in an upright position. The concrete counterweight for this span weighs approximately 1,000 tons. The span is operated by two 440-volt, 3-phase, 60-cycle alternating current motors of 100 h.p. each, capable of opening or closing the span in 1 min. 15 sec.; with a 70-h.p., 4-cylinder gas engine as a standby. The span is adequately lighted for navigation purposes and an efficient system of signalling with ships passing through is arranged. Roadways and sidewalks on both sides of the bridge have been laid out by the municipalities to connect the bridge with the streets and highways, the two North Vancouver municipalities building a 212-ft. span bridge across Lynn Creek to carry the new roadway. The bridge was opened by the British Columbia Minister of Public Works, Nov. 7, 1925, and during the first month afterwards about 45,000 automobiles and 125,000 persons passed across it. The railway connection from the south end of the bridge will be provided by the Vancouver Harbor Commission, and connection will be made with the Pacific Great Eastern Ry. at North Vancouver.

The construction was financed mainly by bond issues guaranteed by North Vancouver City, North Vancouver District; by $170,000 from the City of Vancouver; a grant of $100,000 from the Dominion Government, and a grant of $120,000 from the British Columbia Government. The extra cost of raising the height of the spans, and the replacing of certain trestle work by steel spans, was met as stated previously. The general contractors were the Northern Construction Co. and J. W. Stewart for whom W. Smah



Burrard Inlet Tunnel & Bridge Co.'s Bridge over Second Narrows of Burrard Inlet, Vancouver, B.C.