

Railway Department

PROVINCE OF BRITISH COLUMBIA

ANNUAL REPORT

Year Ended December 31st

1953



VICTORIA, B.C.

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1954

Railway Department

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ANNUAL REPORT

1937



Printed and Published by the Government of British Columbia, Victoria, B.C.

To His Honour CLARENCE WALLACE, C.B.E.,
Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

I have the honour to present herewith the Annual Report of the operations and activities of the Railway Department for the year ended December 31st, 1953.

W. R. T. CHETWYND,
Minister of Railways.

Victoria, B.C., February 12th, 1954.

VICTORIA, B.C., December 31st, 1953.

The Honourable W. R. T. Chetwynd,
Minister of Railways, Victoria, B.C.

SIR,—I beg to submit herewith the Thirty-sixth Annual Report of the Railway Department, covering the year 1953, together with Appendices.

Your obedient servant,

J. S. BROADBENT,
Assistant Deputy Minister.

Report of the Railway Department

FOREWORD

It is a recognized rule in human evolution that civilization progresses in accordance with improvements in overland transportation. It was a little over a century ago that the first pioneer coal-miners landed in a wilderness at a place on Vancouver Island known to-day as Nanaimo. Coal had been discovered, and, as a new age in transportation was dawning, coal was needed to fuel the ships and supply power for the new railways and cities which were creating a new civilization in the Golden West of North America.

In those early days the only land transportation in British Columbia was by horse and wagon, but, as it was necessary to move the coal from inland mines to tide-water, small steam-locomotives were imported from England and little railways sprang up around Nanaimo and Wellington on Vancouver Island. These were the first railways in British Columbia. In 1883 Robert Dunsmuir, by a special Act, incorporated the Wellington Colliery Railway, and in the same year an Act was passed to authorize the building of the Island Railway from Nanaimo to Victoria. This railway, which was to become the Esquimalt and Nanaimo Railway, was under construction before the Canadian Pacific Railway was completed into Vancouver in 1886.

From that time onward, as the railways progressed, civilization followed the newly opened avenues of potential growth; however, in the early 1920's civilization progressed to a point where the railways and methods of railroading lagged behind the demands of civilization, and man, of necessity, invented improved methods of transportation to carry his civilization to greater heights.

Transportation on air-inflated rubber tires became the public demand, and the air-inflated rubber tire was the key to success of the motor-car. In turn the motor-car was improved and reduced in price so that by 1925 the working class owned 90 per cent of all the motor-cars in the United States and Canada. Soon the roads became inadequate as the motor-car demanded better roads. As roads were improved, better motor-cars were built to run upon them until, where in 1914 the speed-limit on some roads was 8 to 15 miles per hour, the speed of traffic increased by 1930 up to 60 and 70 miles per hour. In fact, transportation on rubber tires progressed to the point that during the early thirties the railway companies woke up to find the new methods were seriously affecting the business of their railways. They introduced diesels and better equipment, but the motor-car and its big brothers, the truck and bus, were firmly entrenched, in fact so much so that by 1950 some of the logging companies were using rubber-tired logging-trucks. Private roads were being built into the wilderness for the transport of logs and raw materials.

The new type of motor-trucks could negotiate heavier grades, and improved braking systems were required. Air-brakes were applied to these 60-ton vehicles in order to control them safely. Motor-trucks hauling logs and other material moved on to public roads hauling the heavy commodities which formerly were hauled on the railways.

In the cities the public demand for transportation on rubber tires reached the point where street-railways were taken up, and in the place of street-cars rubber-tired trolley-buses operated on the streets by power from overhead trolley-wires. These vehicles were not required to carry licence-plates of any kind either under the "Motor-vehicle Act" or the Public Utilities Commission. They were and still are operated under the Street Railwaymen's Union, although a Class A chauffeur's licence is required to drive them.

A new era of transportation had come into being. Newly accepted standards became commonplace. Logging and construction companies now flew their personnel into the camps by aeroplane. Some companies procured helicopters for the construction of transmission-lines, hauling loads of 2,000 pounds over glaciers and mountain ranges. Aerial tramways were constructed to inaccessible places. When oil was discovered on the Prairies, pipe-lines were constructed to transport oil to the Great Lakes and also to the Pacific Seaboard in British Columbia.

Thirty years before, a railroad traffic man was considered to be a transportation expert, but not so in the new order of things: the railroad still had its place hauling long cross-country hauls and also hauling heavy commodities where railway already existed; the aeroplane had its place where fast transportation was required or where no road of any kind existed or was possible; the truck and bus running on public and private roads and on city streets had also their place in the new order of things, as well as did local and transcontinental pipe-lines in transporting crude oil and natural gas.

To-day the four major types of land transportation operate competitively with each other, and each must recognize the other as a necessary part of our present-day economy. On a National basis all four types of transportation are controlled by the Board of Transport Commissioners, but in British Columbia transportation solely within the Province operating under Provincial jurisdiction is controlled by the Provincial Railway Department.

About twenty years ago the Federal Government recognized new types of transportation other than railways and the name of "Board of Railway Commissioners," and all types of transportation other than that under Provincial jurisdiction were controlled by the Federal Board of Transport.

The Railway Department recognized new methods of transportation which were to be assisted rather than hindered. Logging companies, which had always had the Department's assistance on technical matters, called the Department in to help them in their trucking and other transportation problems. As a result, improved braking systems were developed for logging-trucks, improved underground hoisting safety devices were recommended on the Alcan project, and improved safety devices were used on aerial tramways. Truck-drivers on private roads were examined and certified, and this service is now being extended to the public roads, in which respect public lectures and training courses are being conducted by the Department in the hope of increasing public safety.

In view of the trend of the times regarding new methods of transportation in addition to railways, the time is at hand when the name of the Department could be changed to the "Department of Transport," which would be in keeping with changes already made along the same line by the Federal Government.

THE HISTORY OF A RAILWAY

(Compiled by R. E. Swanson, Chief Inspector)

The Railway Department in British Columbia came into existence in 1911 to take care of existing railways and also to administer the railway expansion and railway-building programme that was booming during the years prior to World War I, which event ended the great railway speculative booms that had flared up in the West ever since the building of the first transcontinental railway. Some of the railways incorporated in those years are still operating and serving the present-day economy of the country, but many of them were fantastic schemes which never materialized. The history and statistics of those early railways and schemes to build industrial empires are preserved in the files of the Railway Department; but what about some of the earlier railways in existence before such records were kept? It is, therefore, the intention of this short article to preserve the history and statistics of one of the early narrow-gauge railways which ushered

in wide gauge on Vancouver Island before the transcontinental railways reached the shores of the Pacific.

Historical records show that sometime during the year 1869 Robert Dunsmuir, who was a Scottish mining engineer for the Vancouver Coal Company, which operated the Nanaimo coal mines, discovered the Wellington coal-seam 5 miles north of Nanaimo on Vancouver Island. It is said, while on a hunting-trip, Dunsmuir discovered the seam quite by accident where a windfall had exposed the seam, and he and his partner, W. Diggle, immediately set to work to acquire the property and develop it under the name of Dunsmuir, Diggle & Company, which was in 1883 changed to R. Dunsmuir & Sons and later changed to Canadian Collieries (Dunsmuir) Limited.

The first shipments of coal from the Wellington seam were transported to Departure Bay by horse and cart, but as production increased a tramway employing wooden rails was constructed from Wellington to Departure Bay and mules supplied the motive power. In time the wooden rails were replaced with iron rails imported from England, and Dunsmuir obtained a small "dinky" or construction locomotive to replace the mules.

By 1883 the Wellington seam had developed to such proportions that five shafts were in operation, working three shifts, and the original railway became inadequate. That year the Wellington Colliery Railway was incorporated by an Act of the Legislature. The railway was reconstructed and rerouted, with 30-foot cuts and fills to hold the required grade and curvature. The gauge of the track was 3 feet, and the weight of rail was 42 pounds per yard. Larger wharves were constructed at Departure Bay, with new marshalling yards at Wellington and at No. 4 mine on the bluffs. New shops were built at Wellington.

No. 3 mine was located 2 miles south-west of Wellington in a valley. This became the original South Wellington (now forgotten) and was famous in its day for its Chinatown. As it was in a valley beneath No. 4 bluff, a long trestle was constructed and a hoist was employed to haul the South Wellington coal up to the No. 4 marshalling yards on the bluff, from where the cars of coal were hauled on the new railway to Departure Bay, from which point R. Dunsmuir & Sons transhipped it to San Francisco in a fleet of fast sailing-vessels owned by the company.

The Wellington seam appeared unlimited, and when the coal seam was further discovered on the Westwood Estate, 3 miles east of Wellington, Dunsmuir tried but was unable to obtain the coal rights on his own terms, and consequently the Westwood interests negotiated with Mr. R. D. Chandler, of San Francisco, who bought the Westwood coal rights and formed the East Wellington Colliery. Dunsmuir now had two competitors—the Nanaimo interests and the new Chandler interests—but this state of affairs he determined would be taken care of in due course.

The East Wellington Colliery Railway was constructed to run from new wharves on the south side of Departure Bay (where the Black Ball Ferry dock now stands) 5 miles out to the Westwood property, which was, in effect, the back door of the Dunsmuir domain. This railway was well constructed, was 3-foot gauge with 42-pound rail, and had two 20-ton saddle-tank engines called the "Premier" and the "Columbia." The first trip was made on July 28th, 1883, and coal was thereafter railroaded from the two new mines at East Wellington to Departure Bay and thence by sailing-ships to San Francisco. A large sawmill was also built at East Wellington and served by the new railway.

Dunsmuir watched this new "empire" thrive at his back door for seven years, then one day he found Chandler had trespassed and mined Dunsmuir coal over his boundary. After the lawsuit Dunsmuir possessed the Chandler interests and took over the railway, which he connected up with his own Wellington Colliery Railway, changing the names of the locomotives in honour of the names of the Dunsmuir sailing-ships.

From a railway point of view, 1883 was an important year: legislation was passed in Victoria authorizing the building of the Island Railway from Nanaimo to Victoria, which project was one of the conditions of Confederation. Dunsmuir, in company with his associates in San Francisco, built the railway which was to become the present Esquimalt and Nanaimo Railway. In return for building the railway, the Dunsmuir interests acquired what is known to-day as the E. & N. land grant. In addition, the Dunsmuir interests continued to own and operate the railway until it was sold to the Canadian Pacific Railway in 1905.

The Dunsmuir "empire" continued to expand, for, during the early nineties, coal was discovered near Comox Lake on Vancouver Island, and the new coal town was called Cumberland. Another Wellington Colliery Railway was built from Union Bay to Cumberland, and this railway was standard gauge, the same as Dunsmuir's Esquimalt and Nanaimo Railway. Regular passenger service was inaugurated between Union Bay and Cumberland.

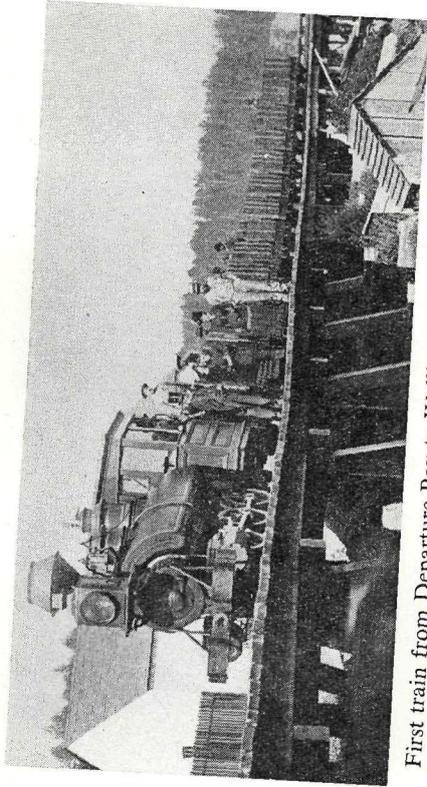
When the Cumberland development was well under way, the Dunsmuir geologists turned their attention to the Wellington seam. It seemed to them, geologically speaking, mountain-building had cut off the Wellington coal seam but its extension should be farther to the south-west. The main coal-seam was finally discovered to be 8 miles south-west of Nanaimo, and development got under way. The town was named Extension, and an extension of the narrow-gauge Wellington Colliery Railway from Departure Bay was planned to go 12 miles out to Extension. The right-of-way was graded, but permission could not be obtained to cross the Vancouver Coal Company's property, as in those days there was no Railway Act under which to obtain expropriation of property. Dunsmuir swore his vengeance on the Nanaimo interests and, foreseeing the original Wellington seam nearly worked out, decided to construct a new railway south to Oyster Bay.

The new town he called Ladysmith, in honour of the Boer War town in South Africa. Thus another new Wellington Colliery Railway was constructed, but the old original was still operating from Wellington to Departure Bay.

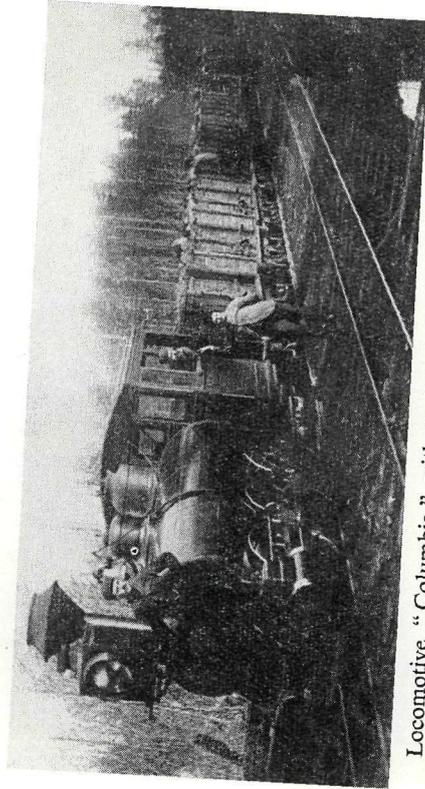
The new operations at Ladysmith and Cumberland were modern, and the virgin coal-seams were lucrative; whereas Old Wellington was becoming obsolete and costly to operate. There were many strikes due to poor mining conditions, and when a strike took place in Wellington in 1899, Dunsmuir shut the mines down and moved the town of Wellington to Ladysmith, so that where in 1898 Wellington had a population of 5,000 people, in 1901 there were only 100.

The little railway was abandoned in 1899, and the locomotives and rails taken to Extension. To-day timber grows on the old grades over which millions of tons of Wellington coal had been hauled, and the original locomotive, "Wellington," has been erected in a park in Nanaimo as a monument to the coal age which ended in December, 1953, when the successors to the Dunsmuir interests mined the last coal in the area of Nanaimo, Wellington, and Ladysmith.

The Canadian Pacific Railway acquired the Collieries' property in Nanaimo, and to-day Esquimalt and Nanaimo Railway diesel trains rumble along where three-quarters of a century ago the little Wellington Colliery Railway gave birth to its wide-gauge brother; thus out of past accomplishment is born the progress of the future.



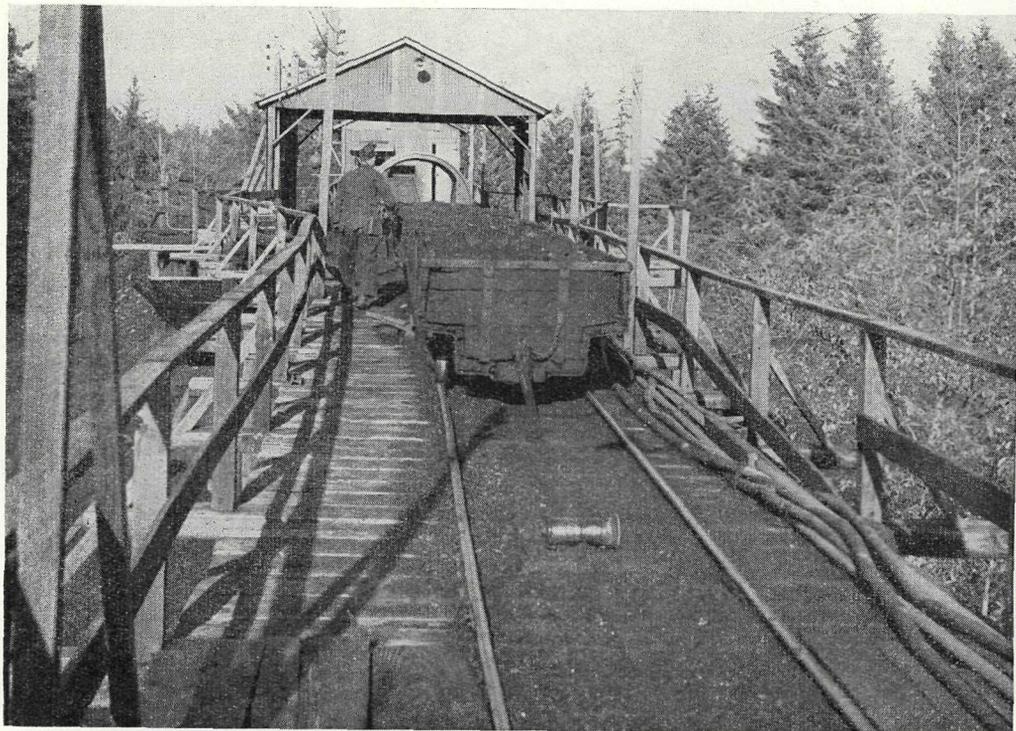
First train from Departure Bay to Wellington in 1880. The locomotive was called the "Duchess," and was 17 tons and 3-foot gauge.



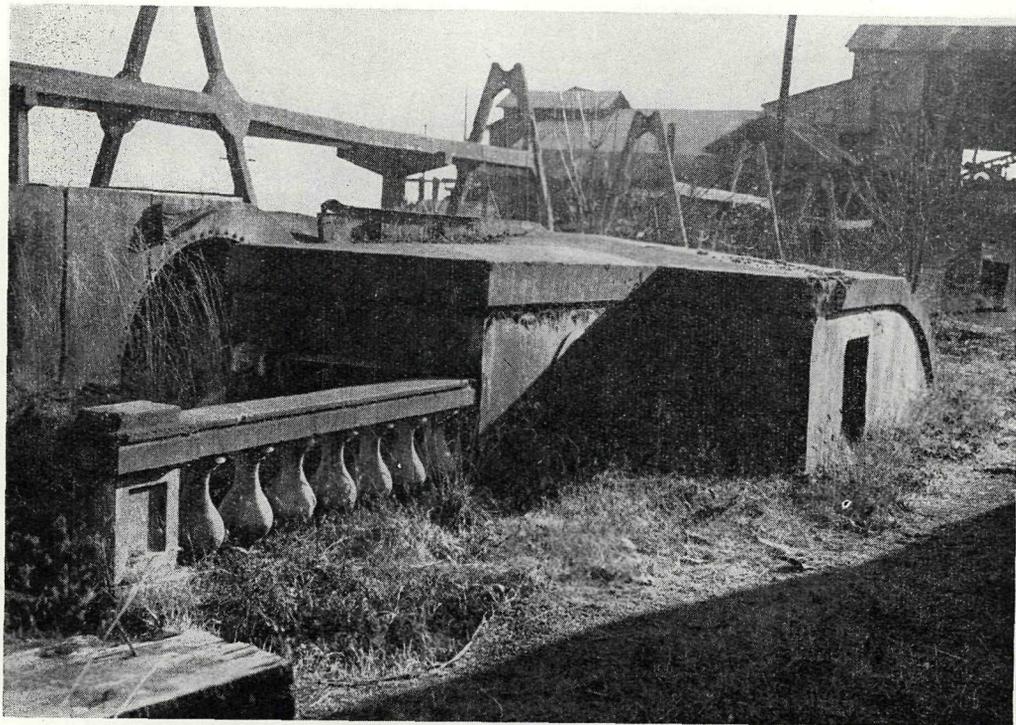
Locomotive "Columbia" with train of coal leaving East Wellington, 1883. Locomotive was later renamed the "Wellington," and now stands in Piper Park in Nanaimo as a monument to the early pioneers.



Old grade of the Wellington Colliery Railway near Wellington as it looks to-day. This railway was abandoned in 1899, when the mines were shut down. The locomotives on the right ran on this railway.



Last coal to be hoisted in the Nanaimo-Wellington district in November, 1953.
Note narrow-gauge track.



"The Splendour that was Greece and the Glory that was Rome"—ruins of old
coal mines in Nanaimo where the last coal was mined in 1953.

INSPECTION REPORTS

Development and expansion in industry and construction in British Columbia during the year 1953 kept all means of transport exceptionally busy. Railways, aerial tramways, motor-trucks, and other means of transportation connected with the activities of the Department were therefore operating to full capacity. Business on the common-carrier railways is reported to have been increased over previous years, and in the timber industry, while there has been a trend to the hauling of logs and lumber by motor-truck, the logging-railways have been kept operating to full capacity, with motor-trucks in many instances feeding the railways to transport the raw materials to tide-water.

On the Pacific Great Eastern Railway, where traffic has increased enormously, regular inspections were carried out on track, rolling-stock, and operation. In order to cope with increased traffic, the company procured three additional diesel-electric locomotives during the year. These locomotives are 1,600 horse-power, 240,000 pounds on drivers, with a starting tractive effort of 60,000 pounds. They have conventional four-wheel trucks, with the total weight of the locomotive on the drivers. Previously the company had procured similar locomotives with six-wheel trucks and only two-thirds of the total weight on drivers, and consequently these locomotives hauled only two-thirds the possible tonnage at low speed. The specifications for the new locomotives were prepared by the Department, and it is understood the company will convert its original diesels to the conventional wheel arrangement of the new locomotives.

While it can be reported maintenance on the Pacific Great Eastern Railway is being well taken care of by the personnel of the company, it must be pointed out that much of the steel rail on this railway is now over forty years old and in certain sections is quite badly worn. In 1951-52 the worn rail on the Squamish subdivision was replaced with several miles of new 85-pound rail, and a programme was inaugurated whereby 50 miles of worn rail would be replaced with new 85-pound rail each year; however, the 50 miles allocated for 1953 did not arrive in time, and it will be laid during 1954. Actually 100 miles should be replaced during 1954. With regard to public safety, the urgency of the rail-renewal programme cannot be too strongly recommended by the Department, for when rail wear progresses beyond a certain point, public safety will be impaired. Studies on rail wear by competent authorities indicate that while diesel locomotives are not as hard on track as steam power is, rail wear is increased in many instances by the use of diesel power until speeds and superelevation of track are adjusted to the new conditions and track-oilers are installed on bad curves. Flange wear on wheels is one of the main contributing factors to rail wear and vice versa; therefore it is recommended that the company obtain adequate modern mechanical facilities so that flange and wheel wear can be taken care of in the company shops, as the present machinery is entirely inadequate. A separate report on the Pacific Great Eastern Railway is included under another heading.

While passenger traffic on District 3 of the British Columbia Electric Railway from New Westminster to Chilliwack has been discontinued, freight traffic has increased, and a regular freight transfer service is operating between Huntingdon and New Westminster. Overhead trolley-wires have been taken down from Kennedy to Chilliwack, and consequently this portion of the railway is now dieselized. Inspection of District 3 tracks and facilities was made during 1953, and it can be reported the track is in quite good condition. Certain rail-renewal has been done with heavier section of rail, and the Vedder River Bridge has been strengthened and repaired. Regular inspections were also made of the automatic crossing signals at Scott Road and King George Highway. Inspections were also made of crossings on District 1 and accidents investigated. New industrial spurs were inspected on District 1.

On the logging-railways there has been a trend to truck-logging, and consequently some of the operations have curtailed their rail-hauls to main-line hauls feeding the railway with trucks; others have found it more convenient to truck all the way and

abandon short rail lines. In this regard the Department has been called upon to recommend changes to truck air-brakes so the vehicles can be properly controlled. This phase of the work, inaugurated in 1952, has been carried forward during 1953, so that several of the operations now use an improved braking system developed by the Department. In addition, the Department has been requested to train and examine the drivers of these air-equipped logging-vehicles, and, during 1953, 117 truck-drivers were examined and certified.

Inasmuch as the Department had availed itself with special knowledge and facilities regarding heavy logging and lumber transport vehicles, the Royal Canadian Mounted Police on Vancouver Island made application to the Department for a Department Inspector to examine air-equipped vehicles involved in accidents on public highways and later appear as an expert witness on behalf of the Crown regarding the equipment involved. This request was complied with, and, as a result, the Royal Canadian Mounted Police has now requested the Department extend its truck-driver training course to drivers of vehicles on public highways and later examine the drivers as to their proficiency.

On the mining-railways, regular inspections were made. With the closing of the No. 8 mine at Cumberland, 10 miles of trackage was abandoned, and the haulage from the new Tsable River mine is being handled by motor-truck feeding the rail facilities at Union Bay. At Nanaimo the Canadian Collieries (Dunsmuir) Limited has turned its trackage over to the Canadian Pacific Railway. At Fernie the Morrissey, Fernie and Michel Railway has continued to operate at full capacity; regular inspections were made on the main-line railway and the small narrow-gauge locomotives serving the mines and coke-ovens. The underground air-locomotives were hydrostatically tested, and copies filed with the Department of Mines. Inspections were made at Britannia Mining and Smelting Company, where electric locomotives are used. Inspections were also made at the Kimberley mine and at Trail on the haulage and industrial railways of the Consolidated Mining and Smelting Company.

Hoisting equipment, aerial tramways, and locomotives were inspected at Kemano and Kitimat. The safety brake on the aerial tramway at Kemano, designed last year by the Department, has continued to function satisfactorily during the year. Exceptionally large hoists were employed underground for the lining of the underground penstocks. These hoists and cables were inspected. At this operation eighty-six hoistmen were certified by the Department. Safety lectures employing films and slides were also conducted in the interests of safety with regard to motor-trucks and tractors.

The common-carrier aerial tramways and ski lifts were inspected several times during the year, and annual certificates to operate were reissued. No accidents were reported on the three aerial tramways adjacent to Vancouver, but one accident (not serious) was reported at the Red Mountain Ski Club, where a passenger did not disembark at the proper time and place.

Trackage were inspected and locomotives tested at the shipyards, pulp-mills, steel-mills, and other industrial plants. At Columbia Cellulose Company the engineer was examined and certified. At the new Elk Falls paper-mill the barge-slip was inspected and the steam-locomotive tested. At Prince Rupert dry-dock the locomotive crane was tested. The diesel-electric locomotive, trackage, and barge-slip at the powder-works of the Canadian Industries Limited were inspected, and operating personnel instructed and examined. While making inspection at the Powell River Company plant, assistance was given to the company in noise measurement where noise was impairing the efficiency of workmen in various parts of the plant. Measurements were made of the noise level, and recommendations submitted to the company in the interests of safety and well-being of the workmen involved.

Five hundred and thirty-three inspections were made of fire-protective appliances on locomotives of the Canadian National Railways, Canadian Pacific Railway, and the

Great Northern Railway. These inspections were made by Department Inspectors under the authority of the Board of Transport Commissioners, with copies of reports submitted to the Forest Service. Forty-three similar inspections were made of logging and industrial locomotives.

Public safety and safety with regard to employees has always been a prime function of the Department, and during 1953 our safety programme has been diversified to extend to a wider range of application. As previously mentioned, our safety lectures have been extended to the trucking industry on construction projects, private roads, and public roads. Safety lectures were given at four terminals on the Pacific Great Eastern Railway, and a safety programme inaugurated so that subdivisions on that railway can compete with each other for a Pacific Great Eastern Railway safety trophy put up by the Department. The safety trophy on mining-railways was again won by the Morrissey, Fernie and Michel Railway in 1953. The Department's safety trophy for logging-railways was awarded to the Englewood Division of the Canadian Forest Products Limited. It is felt safety trophies have increased the competitive spirit of all concerned, and during the coming year it is the sincere resolution of the Department to further the application of safety practices in every field of its endeavours.

On the Pacific Great Eastern Railway it can be reported generally that from Squamish to Quesnel the condition of the track is much improved over previous years; 130,000 railroad-ties were replaced during 1953. Bridges which required renewal and repairs from last year's inspection have been completed, with several new bridges, some of creosoted-timber construction, replacing existing bridges, while other bridges have been replaced by line diversions and fills. Several new culverts have been installed to take care of run-off, and at Mile 288 a run-off flume was completed at a washout-site. Tunnels are in order, portal timbers and linings being maintained during the year. A number of industrial spurs to serve timber-producers have been installed during the year. Switches and clearances were found to be in order.

During 1953, 6 miles of track was lifted and rebalasted and, in addition, 9 miles of track was resurfaced by floating gangs, with the usual maintenance carried out by regular section gangs from Squamish to Quesnel. The programme of replacing eight bridges on Pavilion Hill was carried forward during the year, with four bridges remaining for 1954. Chemical weed-control was not carried out in 1953 but should be done in 1954, as, over many sections, weeds are in evidence, and consequently tie-renewals will be increased if weed-control is not kept up in 1954.

Section gangs are not yet established at Prince George. Buildings to accommodate crews are under construction, so that regular crews can be put on in 1954. Way-stations are under construction on the extension, with seven completed. Water-supply at Prince George terminal is under construction and will be completed in January, 1954.

The rail-renewal programme was halted during 1953, as rail on order did not arrive in time; however, during 1954, 50 miles of 70-pound rail will be replaced with 85-pound rail. In this respect the company engineers recommend, in consideration of the rail wear on Pavilion Hill, that 32 miles of steel be changed between Miles 122.7 and 154.5 and 18 miles of 60- and 70-pound rail on Alta Lake Hill between Miles 36 and 54 be changed with 85-pound rail.

It must be borne in mind that on many sections the 60- and 70-pound rail is badly worn, in fact close to approaching the danger point; consequently, the rail-renewal programme must be continued, and 50 miles of new 85-pound rail will be required for 1955 so that the rail along Anderson and Seton Lakes can be changed. The importance of the rail-renewal programme cannot be minimized, as public safety will be impaired as rail wear progresses. Recent studies indicate that track-oilers installed on bad curves tend to eliminate rail wear and at the same time cut down on flange wear on locomotives and cars.

It can be reported that terminal and mechanical facilities are much improved at Squamish, Lillooet, and Williams Lake, with such facilities not yet completed at Prince George. Adequate mechanical facilities to take care of locomotive wheel and flange wear recommended in 1952 are still lacking at Squamish.

In view of the improvements and increased maintenance over the past five years, it can be reported the railway is safe for operation, provided maintenance as recommended is carried forward.

Following is a report of the inspection work performed during the year 1953:—

Hydrostatic tests applied to boilers	130
Internal and external inspections of boilers	17
Internal-combustion locomotives inspected and certified	14
Internal-combustion locomotive cranes inspected and certified ..	8
Air-locomotives hydrostatically tested	18
Power rail-cars inspected and certified	46
Air-receivers tested and inspected	5
Diesel-electric locomotives inspected and certified	24
Electric locomotives inspected on narrow-gauge electric railways	15
Electric locomotives inspected on Alcan project	12
Locomotives inspected other than hydrostatic tests	74
Number of cars inspected on industrial railways	621
Number of cars inspected on common-carrier railways	94
Miles of underground trackage inspected at Alcan project	16
Miles of track inspected	759
Aerial tramways inspected in British Columbia	5
Aerial-tramway inspections conducted	17
Locomotive engineers examined and certified	3
Conductors examined and certified	4
Power-car operators examined and certified	13
Locomotive-crane engineers examined and certified	7
Train-dispatchers examined and certified	1
Internal-combustion locomotive engineers examined and certi- fied	1
Engineers examined and certificates issued, Pacific Great East- ern Railway	3
Electric-locomotive operators examined and certified, Consoli- dated Mining & Smelting Co. of Canada Ltd.	14
Motormen and underground hoistmen examined and certified, Morrison-Knudsen Co. of Canada Ltd.	86
Logging-truck operators examined and certified	117
B.C. Electric Railway street and interurban cars inspected	6
B.C. Electric Railway diesel and electric locomotives inspected and certified	17
Accidents on B.C. Electric Railway	4
Fatal accidents on B.C. Electric Railway	2
Accidents investigated on logging and industrial railways	4
Fatal accidents on logging-railways	1
Fatal accidents on aerial tramways	1
Accidents on logging-truck roads investigated	1
Accidents on Pacific Great Eastern Railway	6
Fatal accidents on Pacific Great Eastern Railway	1
Kemano project hoist designs approved	1
New diesel-electric locomotives imported	3

Rail-car designed and constructed under Department supervision	1
Reservoirs constructed under Department supervision	4
Safety lectures conducted by the Department	8
Truck air-brake lectures conducted by the Department	21
Inspections made of fire-protective appliances on Pacific Great Eastern Railway and industrial railways	43
Inspections made of fire-protective appliances on locomotives of C.P.R., C.N.R., and G.N.R. for Board of Transport Commissioners	533

LIST OF APPENDICES

A list of Executive Council certificates issued is given in Appendix A.

Accidents on railways are shown in Appendix B.

Industrial railways operating during the year are shown in Appendix C.

A list of locomotive cranes in industrial plants inspected by the Department is shown in Appendix D.

A summary of the mileage of all railways operating in the Province is shown in Appendix E.

APPENDICES

APPENDIX A

CERTIFICATES ISSUED UNDER THE PROVISIONS OF THE " RAILWAY ACT "

	Certificate No.
Granting leave to the B.C. Electric Railway Co. Ltd. to issue general mortgage bonds and approving of the sale of same.....	811
Approving standard freight tariff on the line of the B.C. Electric Railway Co. Ltd.	812
Approving standard freight tariff on the line of the Pacific Great Eastern Railway Co.	813
Granting Minister of Public Works leave to construct highway crossing over tracks of Canadian Collieries Ltd. Railway at Lake Trail Road.....	814
Ordering Elk River Timber Co. Ltd. to construct farm crossing over its line of railway at Homewood Road, Sayward District.....	815
Granting B.C. Electric Railway Co. Ltd. leave to construct a spur track across Dow Road, Municipality of Burnaby.....	817
Granting Minister of Public Works leave to construct highway crossing over tracks of Pacific Great Eastern Railway at Pemberton.....	818
Approving application of Pacific Great Eastern Railway Co. to operate its line of railway from Quesnel to Prince George for passenger traffic.....	819
Amending Certificate No. 793, section (c), governing speed tape recorders.....	820
Amending Rules and Regulations, Rule 121, Part III, Locomotives.....	821
Approving application of Aluminum Company of Canada for exemption from standard clearances.....	822
Granting the Pacific Great Eastern Railway Co. leave to construct a level crossing across the Cariboo Highway at Prince George, P.G.E. Mileage 428.8.....	823
Granting the Pacific Great Eastern Railway Co. leave to construct a spur track across the highway at Squamish.....	824
Granting the Pacific Great Eastern Railway Co. leave to construct a level crossing across the Cariboo Highway, P.G.E. Mileage 279.7.....	825
Granting The Corporation of the District of Burnaby leave to construct a level crossing over tracks of B.C. Electric Railway Co. Ltd. at Rumble Street, District of Burnaby.....	826
Granting Minister of Lands and Forests leave to construct a highway crossing over tracks of Pacific Great Eastern Railway Co. at Mile 377.7.....	827
Granting Minister of Lands and Forests leave to construct a highway crossing over tracks of Pacific Great Eastern Railway Co. at Mile 406.5.....	828
Granting The Corporation of the District of North Vancouver leave to construct a level crossing over tracks of Pacific Great Eastern Railway Co. at Philip Avenue, District of North Vancouver.....	829
Approving construction and operation of Aluminum Company of Canada Ltd.	318

APPENDIX B

ACCIDENTS REPORTED, 1953

On Railway

	Killed	Injured
B.C. Electric Railway Co. Ltd.—		
Passengers	---	29
Employees	---	1
Other persons	2	15
Pacific Great Eastern Railway Co.—		
Passengers	---	---
Employees	---	---
Other persons	1	5
Industrial railways—		
Employees	2	2
Other persons	---	---
Locomotive cranes—Employees	---	---
Aerial tramways (industrial)	1	---
Totals	6	52

Level Crossings

	Unprotected Crossing			Protected Crossing		
	Killed	Injured	Number of Accidents	Killed	Injured	Number of Accidents
Under jurisdiction of the Provincial Government—						
After sunrise	---	---	6	---	3	1
After sunset	---	1	2	---	---	---
Totals	---	1	8	---	3	1
Under jurisdiction of the Board of Transport Commissioners for Canada—						
After sunrise	4	8	16	---	---	1
After sunset	1	16	29	---	---	1
Totals	5	24	45	---	---	2
Total number of accidents in British Columbia	5	25	53	---	3	3

APPENDIX C
LIST OF RAILWAYS AND SUMMARY OF MILEAGE
Industrial Railways

No. and Owners/Name of Railway	Head Office	Operating	Mileage		Gauge
			Main Track	Sidings, etc. Total	
STANDARD GAUGE					
<i>Mainland</i>					
1. Begbie Pole-yard.....	Revelstoke.....	Begbie.....	0.92	0.92 ¹	Standard.
2. Crow's Nest Pass Coal Co. Ltd.	Fernie.....	Fernie, Coal Creek, Elk River, and Michel.....	7.15	7.15	"
3. Columbia Cellulose Co. Ltd.	Vancouver.....	Watson Island.....	3.06	3.06 ¹	"
4. Deeks-McBride Ltd./Deeks Sand & Gravel Co. Ltd.	Vancouver.....	Coquitlam.....	1.89	1.99	"
5. Dominion Tar & Chemical Co. Ltd.	Montreal.....	North Vancouver.....	1.00	8.00	"
6. Morrissey, Fernie & Michel Railway Co.	Fernie.....	Fernie, Coal Creek, and Elk River.....	3.62	6.35	"
7. O'Brien Logging Co. Ltd./Northern & Eagle River.	Vancouver.....	Stillwater.....	4.50	5.00	"
8. Pacific Coast Terminals Co. Ltd.	New Westminster.....	New Westminster.....	5.20	5.20	"
9. Kelley Logging Co. Ltd.	Vancouver.....	Aero.....	8.00	13.00	"
10. Canada Creosoting Co. Ltd.	Montreal.....	North Vancouver.....	0.75	0.75	"
Totals, Mainland.....			32.28	19.14 51.42	
<i>Vancouver Island</i>					
11. MacMillan & Bloedel Ltd.	Vancouver.....	Great Central.....	0.50	0.50	"
12. MacMillan & Bloedel Ltd.	Vancouver.....	Franklin River.....	54.00	59.00	"
13. B.C. Forest Products Ltd.	Vancouver.....	Youbou.....	31.90	5.60 37.50 ²	"
14. B.C. Forest Products Ltd./Renfrew Division, South.	Vancouver.....	Port Renfrew.....	16.00	2.00 18.00	"
15. B.C. Forest Products Ltd./Renfrew Division, North.	Vancouver.....	Port Renfrew.....	17.00	1.00 18.00	"
16. Canadian Collieries (D.) Ltd./Wellington Colliery Railway.	Union Bay.....	Union Bay.....	1.00	1.00	"
17. Canadian Forest Products Ltd.	Vancouver.....	Englewood.....	88.37	13.07 101.44	"
18. Comox Logging & Railway Co.	Ladysmith.....	Ladysmith.....	22.00	3.24 25.24	"
19. Comox Logging & Railway Co.	Ladysmith.....	Headquarters.....	20.22	4.15 24.37	"
20. Hillcrest Lumber Co. Ltd.	Mesachie Lake.....	Mesachie Lake.....	6.00	1.50 7.50 ²	"
21. MacMillan & Bloedel Ltd./Copper Canyon Railway (Camp No. 1)	Chemainus.....	Chemainus, Seymour, Cowichan Lake District.....	38.20	10.50 48.70	"
22. MacMillan & Bloedel Ltd./Nanaimo River Railway.	Chemainus.....	Dunsmuir District.....	2.58	6.91 9.49	"
23. Mayo Lumber Co. Ltd.	Paldi.....	Paldi.....	0.50	0.25 0.75	"
24. Osborn Bay Wharf Co. Ltd.	Mesachie Lake.....	Crofton.....	0.33	0.33	"
25. Western Forest Industries Ltd./Gordon River.	Vancouver.....	Cowichan Lake District.....	7.00	0.50 7.50 ²	"
Totals, Vancouver Island.....			305.10	54.22 359.22	
<i>Queen Charlotte Islands</i>					
26. Powell River Co. Ltd.	Vancouver.....	Cumshewa.....	7.00	15.00 22.00	"
Totals, industrial railways, standard gauge.....			344.38	88.36 432.74	

NARROW GAUGE									
<i>Mainland</i>									
27. Britannia Mining & Smelting Co. Ltd./Tunnel Railway	Britannia Beach			3.17	1.79	4.96	36"		
28. Consolidated Mining & Smelting Co. of Canada Ltd.	Trail			20.00		20.00	18"		
29. Consolidated Mining & Smelting Co. of Canada Ltd.	Trail			9.00	33.13	42.13	18", 36"		
30. Dominion Tar & Chemical Co. Ltd.	Montreal			{ 3.00		3.00	30"		
				{ 3.00		3.00 ¹	Standard.		
Totals, Mainland				38.17	34.92	73.09			
<i>Vancouver Island</i>									
31. Canadian Industries Ltd.	Montreal			8.25	1.75	10.00	36" and standard.		
Totals, Vancouver Island				8.25	1.75	10.00			
Totals, industrial railways, narrow gauge				46.42	36.67	83.09	Standard and narrow.		
Totals, all industrial railways in British Columbia				390.80	125.03	515.83	Ditto.		
<i>Common Carrier</i>									
32. Pacific Great Eastern Railway	Vancouver			430.84			Standard.		
					33.97		"		
					16.56		"		
					10.67		"		
Totals				430.80	61.20	492.00			
<i>Street and Interurban Electric Railways</i>									
33. B.C. Electric Railway Co. Ltd.	Vancouver			152.45	44.12	196.57 ⁵			
Grand total						1,204.40			

¹ All leased.² Includes 5 miles leased.³ Includes 7 miles leased.⁴ Includes 3.46 miles leased.⁵ Includes 61.70 miles leased.

APPENDIX D

LIST OF CRANES AND OTHER AUXILIARY MOTIVE POWER IN INDUSTRIAL PLANTS
INSPECTED BY RAILWAY DEPARTMENT

Alaska Pine & Cellulose Ltd.	Crane No. D.R. 304.
Alberta Lumber Co. Ltd.	Crane No. 42998 B.C.
Anderson Bros. Lumber Co. Ltd.	Crane No. 11905 B.C.
	Crane No. D.R. 302.
Arrowhead Wood Preservers Ltd.	Crane No. D.R. 293.
	Crane No. D.R. 322.
	Crane No. 22633 B.C.
Associated Foundry Ltd.	Crane No. D.R. 305.
Baxter, J. H., & Co. Ltd.	Internal-combustion Crane No. 1.
B.C. Cement Co. Ltd.	Crane No. 21439 B.C.
B.C. Forest Products (Sawmill)	Crane No. D.R. 320.
Burrard Dry Dock Co. Ltd.	Crane No. 50514 B.C.
	Crane No. D.R. 292.
	Gas Locomotive Crane No. 4.
Capital Iron & Metals Ltd.	Crane No. D.R. 295.
	Crane No. 44386 B.C.
Columbia Cellulose Co. Ltd.	Diesel-electric Locomotive No. 1.
Consolidated Mining & Smelting Co. of Canada Ltd.—	
Kimberley	Electric Locomotives Nos. 1, 2, 3.
Trail	12 narrow-gauge electric locomotives.
Dominion Bridge Co. Ltd.	Crane No. 44129 B.C.
	Crane No. 44317 B.C.
	Crane No. D.R. 347.
	Crane No. 44013 B.C.
Dominion Bridge Co. Ltd. (Granville St. Bridge project)	Gas Locomotive No. 1.
Dominion Tar & Chemical Co. Ltd.	Crane No. 44441 B.C.
	Gas Switcher No. 1.
	Crane No. D.R. 283.
	Gas Locomotive Crane No. 6.
Esquimalt Dry Dock	Crane No. 22582 B.C.
	Portable Boiler D.R. No. 314.
Hillcrest Lumber Co. Ltd. (Sawmill)	Crane No. 40049 B.C.
	Crane No. 44315 B.C.
	Crane No. 41298 B.C.
Jamieson Construction Co. Ltd.	Diesel-electric Locomotive No. 1.
King, M. B., Lumber Co. Ltd.	Crane No. 12430 B.C.
Lions Gate Lumber Co. Ltd.	Crane No. 12370 B.C.
Lumby Timber Co. Ltd.	Crane No. D.R. 343.
Mayo Lumber Co. Ltd.	Crane No. D.R. 321.
MacMillan & Bloedel Ltd.—	
Sawmill	Crane No. 44666 B.C.
Pulp-mill	Gas Internal-combustion Locomotive No. 50.
	Diesel-electric Locomotive No. 1.
Northern Construction Co. Ltd.	Crane No. 43505 B.C.
Osborn Bay Wharf Co. Ltd.	Crane No. 21526 B.C.
Prince Rupert Drydock & Shipyard	Crane No. D.R. 290.
Sigalet & Co. Ltd.	Crane No. 21089 B.C.
Sooke Lake Lumber Co. Ltd.	Crane No. 22632 B.C.
Timber Preservers Ltd.	Crane No. 43807 B.C.
	Crane No. D.R. 288.
Timberland Lumber Co. Ltd.	Crane No. 12368 B.C.
Vancouver Steel Co. Ltd.	Crane No. D.R. 316.
	Crane No. D.R. 342.
Victoria Machinery Depot Ltd.	Crane No. D.R. 291.
Western Bridge & Steel Fabricators Ltd.	Crane No. D.R. 308.
	Crane No. D.R. 309.

APPENDIX E

MILEAGE OF ALL RAILWAYS OPERATING IN THE PROVINCE

	Mainland		Island		Total	
	Main Line	Sidings	Main Line	Sidings	Main Line	Sidings
Under jurisdiction of the Board of Transport Commissioners for Canada—						
Canadian Pacific Railway.....	1,858.31	527.06	197.81	46.51	2,056.12	573.57
Canadian National Railways.....	1,302.34	364.63	90.17	21.53	1,392.51	386.13
Great Northern Railway.....	140.77	38.52	-----	-----	140.77	38.52
B.C. Electric Railway (leased).....	33.04	21.72	-----	-----	33.04	21.72
Totals.....	3,334.46	951.90	287.98	68.04	3,622.44	1,019.94
Under jurisdiction of the Provincial Government—						
Pacific Great Eastern Railway.....	430.80	61.20	-----	-----	430.80	61.20
B.C. Electric Railway.....	104.96	20.27	-----	-----	104.96	20.27
Industrial railways—						
Standard gauge.....	32.28	18.39	305.10	54.97	337.38	73.36
Standard gauge, Queen Charlotte Islands.....	7.00	15.00	-----	-----	7.00	15.00
Narrow gauge.....	38.17	34.92	8.25	1.75	46.42	36.67
Totals.....	613.21	149.78	313.35	56.72	926.56	206.50
Grand totals.....	3,947.67	1,101.68	601.33	124.76	4,549.00	1,226.44

Total mileage of all railways in British Columbia, 5,775.44.

VICTORIA, B.C.

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