

# Railway Department

PROVINCE OF BRITISH COLUMBIA

## ANNUAL REPORT

Year ended December 31st

1949



VICTORIA, B.C. :

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1950.

Railway Department

Department of Public Works

ANNUAL REPORT

1907-1908

1908



Printed and Published by the Government Printer, Perth, Western Australia.

To His Honour CHARLES ARTHUR BANKS,  
*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, 1949, with Appendices.

L. H. EYRES,  
*Minister of Railways.*

*Victoria, B.C., February 21st, 1950.*

VICTORIA, B.C., December 31st, 1949.

*The Honourable L. H. Eyres,  
Minister of Railways, Victoria, B.C.*

SIR,—I beg to submit herewith the Thirty-second Annual Report of the Railway Department, covering the year 1949, together with Appendices.

Your obedient servant,

R. E. SWANSON,  
*Chief Inspector.*

# Report of the Railway Department.

The Department has supervision of all railways subject to the Provincial Statutes.

The staff of the Department, as of December 31st, 1949, consisted of Chief Inspector, three Inspectors, two draughtsmen, a secretarial stenographer—grade 2, and a senior clerk-stenographer.

The railways supervised by the Department include common carriers, industrial railways, and electric interurban and street-railways.

The Civil Engineering Branch continued in charge of the records of the Department, and co-operated with the Construction Department of the Pacific Great Eastern Railway Company in assisting in right-of-way, land, and other matters.

During 1949 the Mechanical Branch inspected all industrial railways, including logging and mining railways, in British Columbia. This comprised the inspection of all rolling-stock, motive power, road-bed, bridges, and structures. The inspection also covered operation of railway and dispatch systems. A follow-up inspection system was put into effect during the year, so that where an Inspector made recommendations, the same Inspector made a subsequent inspection to see that the work recommended had been carried out.

Due to progress and improvements in motive power, it was found necessary from time to time to adjust regulations to new requirements.

Current duties, such as approval of location and construction plans, sanction and filing of tariffs and operating conditions, have been attended to. Other activities are described in the several sections of this Report.

## COMMON CARRIERS.

### THE PACIFIC GREAT EASTERN RAILWAY.

In addition to its functions of inspection, regulation, supervision, and other safeguarding agencies, the Railway Department continued in a consultant capacity for the benefit of the existing railway. The Department attends to such matters as right-of-way, agreements, contracts, improvements, replacements, and unusual undertakings. The surveys, plans, and economic studies made in 1948 have been applied to actual reconstruction work outlined in the accompanying report of work done in 1949. Work to be done in 1950 is prescribed under a programme referred to in the Inspecting Engineer's report.

The field surveys, examinations, tests, research work, and intensive studies pertaining to Northern and Central British Columbia have proved essential. Ensuing reports deal with such factors as potential resources, use of products and their markets, transportation methods and routes, settlement and industrial opportunities. All this data tend toward the development of British Columbia and increase the utility and value of its Provincially owned railway.

Pursuant to the northern railway-extension surveys under the auspices of the Railway Department, and mentioned in its 1947 and 1948 Annual Reports, a Pacific Great Eastern Railway Construction Department was organized early in 1949. Senior engineers and competent personnel were selected from the Department to form the nucleus of this new Construction Department, which is now in responsible charge of proposed and actual work north of Quesnel and south of Squamish.

On the 82 miles from Quesnel to Prince George, the line was rerun or revised, and contracts awarded on the first 30 miles and last 17 miles. Considering the abnormally wet weather and mud conditions, fair progress was made on clearing and grading, and

2.8 miles of main line and side-tracks opened for freight traffic. This new trackage now serves material-yards and new industries in North Quesnel. Revised location surveys are now being made to eliminate high expensive trestles, avoid unstable ground, and safeguard the railway line from such hazards as landslides and stream erosions.

*Operation—General Manager's Report.*

The following remarks by the general manager are incorporated in this report:—

*Maintenance of Way.*—Our programme for the rehabilitation of the Pacific Great Eastern Railway, commenced in 1947, was continued through the year 1949, and we are able to report very decided progress in this regard.

By two large diversions at Mile 130 and Mile 131.6, it was possible to eliminate two very heavy trestles which required renewal. Concrete walls were constructed and five bridges eliminated along Seton Lake. These jobs, as well as the filling of other smaller bridges, undertaken and completed during the year, will greatly reduce the maintenance charges on the railway in the future.

Heavy tie renewal was continued throughout the year. Buildings were kept in repair, and work done on the renewal of culverts, widening of cuts, strengthening of tunnels, and other work necessary to the safety of the railway.

I look forward to completing this work to a very great extent by the end of the year 1950. We will then reap the benefit financially of the work done in the last three and one-half years and will have restored the line to a safe condition, overcoming the nine-year period when the work was not kept up to date.

*Maintenance of Equipment.*—During the year the following equipment was purchased: Four diesel-electric locomotives, twelve second-hand gondola ballast-cars, forty second-hand flat cars, a crane, a diesel unit passenger-car for Shalalth service, a new snow-plough, and three cabooses. Our passenger-coaches are getting very old, but by putting certain ones through the shop this year and renovating them, we will have satisfactory equipment.

There is also on order, at the present time for 1950, two diesel locomotives, to be delivered at the end of February, and we will have to purchase, for 1950, a ditcher. The present machine is obsolete and worn out and will not pass the boiler test.

*Operations.*—We have, during the past year, shown a very decided improvement in the amount of money spent for rental of equipment. This has been due to continually checking cars and keeping them moving. We have also shown a substantial increase in the amount of demurrage we have collected, which counterbalances the rental charges.

Savings have been effected in various ways that have reduced our expenses very considerably, but, in spite of such reductions, we have not as yet offset the increase in expenses caused by the increased wages granted to all railroad employees in December, 1948. The costs of labour and material have risen so greatly that without a substantial increase in freight rates it would be impossible to overcome this. Every effort is being made, and will continue to be made, to take advantage of reductions in all expenses possible.

Our business during the year has shown an increase of approximately 5 per cent. over the previous year. This is based on the earnings for the year. In the fall of 1948, due to the conditions affecting hay and feed in the Cariboo, the ranges were depleted of all cattle possible, which made a very heavy movement. On this account our movement of cattle for 1949 was not as large as in the previous year. However, this makes for a more healthy condition for the future.

Lumber shipments, which comprise our greatest volume of traffic, were slightly higher than in 1948. This was better than expected, in view of the current lumber-market situation.

Our passenger service continued at a high point, and, as a result of our advertising campaign, we have had a large number of American tourists during the past summer

who will, I feel, be an advertising medium through which our passenger tourist business will show a gradual increase each year.

Our greatest need is increased population to provide increased business, since, notwithstanding all the reductions which we have been able to effect, we will still require increased traffic to meet our expenses in a satisfactory manner, and increased population will develop this traffic.

When the power from the Bridge River development of the British Columbia Electric Railway Company was turned on, it disrupted our telephone service. A new line was constructed to Shalalth from Squamish at the major expense of the British Columbia Electric Railway, and we have had to rewire our line from Quesnel to Williams Lake during the year. We will have to continue the new line from Williams Lake to Lillooet this year as a safety measure in the operation of train orders which are taken over the telephone-line. It is essential that we maintain a clear voice-channel to prevent errors in train orders.

J. A. KENNEDY,  
*General Manager.*

*Inspecting Engineer's Report.*

Inspections of the properties of the Pacific Great Eastern Railway have been made pursuant to the terms of the "Railway Act," with special regard to maintenance of way and structures. Items enumerated in subsection (2) of section 177 of the Act were inspected, except rolling-stock and floating equipment.

During inspection trips the Railway Department's Inspectors and the Railway Company's maintenance-of-way officials conferred and made decisions which were afterward included in a joint report of work done in 1949 and to be done in 1950.

The above-mentioned 1950 programme of work comprises a separate report for the information of the Railway Department, and the information of and action by the management of the Railway Company. Bridge replacements along Anderson and Seton Lakes must be continued. Around Pavilion Mountain, bridges require careful maintenance, and plans should be made for certain replacements in 1951.

In addition to the regular-maintenance bridge repairs, four pile trestles were rebuilt, decks were renewed on nine steel bridges and four pile trestles, four frame trestles were replaced with concrete retaining-walls and embankments, three pile and frame trestles have been filled, and alignment revisions eliminated high trestles at Fountain and Fourteen Mile Creeks. Eighty feet of concrete footings were placed in Soda Creek tunnel.

The 1949 work on buildings and other structures was accomplished according to the report outlined by this Department. Water-supplies, stockyards, station and terminal buildings were repaired or replaced, bringing these facilities to a fair physical condition.

Two hundred thousand track-ties were renewed in 1949, and the track surface improved to remove most of the temporary slow orders north of Lillooet. Improvements such as slide-removals, riprapping, retaining-walls, and bridge fills are reducing the hazards common to previous years. Communications were improved by rebuilding the telephone-line from Squamish to Shalalth and from Williams Lake to Quesnel.

The Railway Company Construction Department awarded three contracts on the Quesnel-Prince George extension, Miles 00 to 30 and Miles 65 to 82. Of this new work, the Railway Department approved the operation of freight traffic on 1.85 main-line and 0.87 siding miles which now provide terminal facilities for material-yards and industrial sites in North Quesnel.

Subject to full precautionary measures, such as track patrols and inspections, vigilant maintenance work, and careful operation of adequate rolling-stock, the track is

now in good condition for the safe operation of traffic under present train loadings and schedule running time.

To maintain this good condition, and to safeguard the employees and the public using the railway, the improvement programme must be continued, with emphasis on structures supporting the railway. The Maintenance-of-way Department must be given adequate co-operation by other departments, and all ranks realize that safe track is of paramount importance.

C. R. CRYSDALE,  
*Inspecting Engineer.*

#### LOCOMOTIVE CRANES.

Inspections of boilers and safety appliances in shipyards and other industrial plants are continued where cranes and other mobile plants operate on track.

#### FOREST FIRE PROTECTION.

Inspections for fire-prevention equipment were made on locomotives of all railways, including those subject to the jurisdiction of the Board of Transport Commissioners for Canada, this being a requirement of the Forest Service of the Department of Lands and Forests.

#### EQUIPMENT INSPECTION BRANCH.

##### CHIEF INSPECTOR'S REPORT.

During the year all industrial railways operated to full capacity. The usual and extensive heavy repairs necessary to keep motive power and rolling-stock on industrial railways operating were carried on under the advice and supervision of the Department Inspectors during the year. Several used locomotives and a considerable amount of used railway equipment were imported by the industrial railways during the year. This equipment was inspected prior to its importation by the Inspectors so that it could be approved for operation in British Columbia. In certain cases approval could not be granted, as some of the equipment did not come up to our standards. Such equipment was not imported.

Through arrangements made with the Chief Inspector of Mines during 1948, our Inspectors inspected trackage, locomotives, and cars on mining operations that would otherwise not have come under the jurisdiction of this Department.

Nine air-locomotives of the Crow's Nest Pass Coal Company were inspected and certified during 1949, copies of the reports being forwarded to the Department of Mines. The steam-locomotives and equipment of this company were also inspected during the year, as well as the steam and diesel locomotives of Morrissey, Fernie and Michel Railway. The trackage and bridges were also inspected.

The mine locomotives, rolling-stock, and trackage of the Britannia Mining and Smelting Company, Limited, Britannia Beach, were inspected. Copies of these reports were forwarded to the Department of Mines. The cable of the incline railway of this company was inspected, and a special inspection was made when it was reported to this office the cable had been kinked and was somewhat damaged. As passengers are hauled on this railway, a careful check is being kept on the cable operating the incline railway.

During the year the surface haulage at the Sullivan mine of the Consolidated Mining and Smelting Company of Canada, Limited, Kimberley, was reconstructed so that there now exists a 2-mile surface haul from the mine to the tippie. New railway was constructed and new locomotives and equipment purchased for this operation. This railway and equipment were inspected, and a certificate issued for the operation of the railway. Rules and regulations to govern this operation are being drafted by the company under the advice of our Inspectors and Inspectors from the Department of Mines. When these regulations are submitted to both Departments and approved, such regulations will govern this operation.

Two inspections were made during the year of the narrow-gauge railway serving the plant of the Consolidated Mining and Smelting Company of Canada, Limited, at Trail. Several miles of narrow-gauge railway are in operation, and it is constructed in some cases on quite a heavy grade. The locomotives and equipment were inspected, and a training programme was set up by our Inspectors whereby the company trains the operators so they may be certified by this Department. Rules and regulations are being formulated by the company, and drafts have been submitted to this office. When these rules and regulations have been approved, such rules and regulations will also govern this operation, and the operators of the locomotives will be examined and certified.

The narrow-gauge railway on James Island serving the Canadian Industries, Limited, was inspected. Several small internal-combustion and electric locomotives are in operation on this railway. Our Inspectors instructed the company as to safe practices. It is considered that the certification of the operators will not be necessary. This company has an excellent safety record. The incline railway and skip at James Island were also inspected, as well as the standard-gauge track used in conjunction with the barge-slip.

An inspection was made of the narrow-gauge railway in operation at the B.C. Cement Company's plant on Texada Island. Several small internal-combustion locomotives, rolling-stock, and equipment were inspected. Arrangements are pending to have the operators of the locomotives certified under the "Railway Act."

On the standard-gauge logging-railways three new rail power-cars for the transportation of workmen were built in British Columbia during the year. These power-cars were constructed to the Department's design and were built under the supervision of Department Inspectors. The power-cars were certified upon completion. During the year the Inspectors inspected and certified fifty-four rail power-cars used in the logging industry for the transportation of workmen. This system of certification was inaugurated in 1947 in an effort to raise the standard of this type of equipment and thus prevent accidents. This system of certification is working out very well, and I am pleased to report at this time the equipment is in a much safer condition than before certification under the "Railway Act" was carried out. Three second-hand steam-locomotives were imported by various logging companies for operation in British Columbia. These locomotives required to be overhauled and, in some cases, rebuilt in order that they could be approved and certified for operation in British Columbia.

In accordance with the Department's new Boiler Code formulated in 1947, the first all-welded locomotive boiler in Canada was constructed at the Vancouver Iron Works, Vancouver, in August and September, 1949, for the Salmon River Logging Company. The design and construction of this boiler were made possible through research conducted by this Department. The boiler was inspected during construction by our Inspectors and, upon completion, was X-rayed under the supervision of our Inspectors, after which it was stress-relieved and hydrostatically tested. We consider this new all-welded design of locomotive boiler a landmark in the progress of locomotive-boiler construction and a tribute to research in the field of mechanical engineering.

The common-carrier railways and the street-railways of the British Columbia Electric Railway Company under Provincial jurisdiction were inspected during the year. The common-carrier railways were found to be in good condition, the usual replacements and repairs having been carried out by the companies. The equipment was periodically inspected, and the locomotives certified. With respect to the street-railways, several miles of trackage were abandoned during the year as street-cars were replaced by trolley-buses. Some of the street-railway equipment has been scrapped, but the equipment kept in service has been periodically inspected, and defects, when found, reported to the company. Where persons have been seriously injured by street-cars and interurban cars, the rolling-stock was impounded until inspected and released by

our Inspectors. Where fatal accidents occurred, Inspectors attended inquests, and reports were forwarded to the Deputy Minister. In some cases corrective measures were imposed upon the company to avoid recurrence of similar accidents.

During the year the British Columbia Electric Railway Company dieselized its District III line from New Westminster to Chilliwack with respect to freight-haulage. Three 70-ton General Electric diesel locomotives were procured. These were inspected and certified before being placed in operation. Certain changes were recommended with respect to footboards and safety appliances and were carried out by the company under our Inspectors' advice and supervision.

The standard trackage serving the Nanaimo Pulp and Sulphate Company's new plant at Nanaimo was inspected. A new barge-slip has been installed at this location. Good construction is in evidence on the grade, and the track has been properly laid and ballasted. Close clearances were checked, and as this is new construction, close-clearance applications were denied, as it was felt where new trackage is being constructed, close clearances could be avoided. A new 45-ton diesel-electric locomotive was procured for this operation on our recommendation. This locomotive was inspected and certified. The operator was also examined and certified.

The standard-gauge trackage recently installed to serve the Columbia Cellulose plant at Port Edwards was inspected. The construction was found to be up to standard. A new 45-ton diesel-electric locomotive was procured for this operation. This locomotive was inspected and certified, as well as company equipment operating on the track.

The boilers of all railways operating under Provincial charter were inspected and certified during the year by Department Inspectors. Internal inspections were made, as well as hydrostatic tests, and in many cases locomotives were inspected under steam. Where defects were found, the locomotives were taken out of service until proper repairs had been made. Where boilers required to be renewed, plans and specifications were checked by the Inspectors before new boilers were built.

During the year, rules and regulations were made pursuant to the "Railway Act" covering stationary steam plants, shops, buildings, and structures at terminals of railways where workmen are employed. These rules and regulations apply more particularly to the Pacific Great Eastern Railway.

Eighty-six inspections were made of fire-protective appliances on steam-locomotives operating on logging and mining railways. Reports of these inspections were filed with the Forest Service.

Four hundred and ninety-six inspections covering fire-protective appliances of locomotives were made on the Canadian Pacific Railway, Canadian National Railways, and Great Northern Railway. Reports of these inspections were forwarded to the British Columbia Forest Service and the Board of Transport Commissioners at Ottawa. Each Departmental Inspector is appointed by the Board of Transport Commissioners in Ottawa as Board of Transport Fire Inspectors so they may act with full authority of the Board of Transport Commissioners on the transcontinental railways. Where defects were found, the Inspectors ordered the locomotives out of service.

In company with the Inspecting Engineer, a general inspection of the Pacific Great Eastern Railway was made during the year. This inspection covered road-bed, bridges, structures, and general condition of the railway, as well as mechanical facilities. A survey was made of the mechanical facilities of the Pacific Great Eastern Railway during 1948, and a report submitted. I am pleased to report, at this time, conditions are very much improved in the roundhouse and coach-shop at Squamish. Shop-tracks and oil-tanks have been installed. A new electrically driven air-compressor has been installed, and new air-receivers were also installed, as it was necessary to condemn the old ones. The facilities at Lillooet, as recommended in the 1948 Report, are not yet completed. At Williams Lake a new boiler was recommended for the roundhouse, as the old one was condemned. A small boiler procured for this purpose was not installed

by December, 1949. It was necessary for an Inspector to make a trip to Williams Lake to test the old boiler so it could operate on a very much reduced pressure. This was done to accommodate the railway so it might enjoy the benefits of steam heat during the cold winter season.

During the year the Pacific Great Eastern Railway procured four new 70-ton diesel-electric locomotives. These locomotives were inspected and certified before being placed in operation.

On the Pacific Great Eastern Railway extension, approximately 2 miles of the newly constructed railway were inspected in December, 1949, and a report made recommending that a certificate be issued so that this portion of the railway could be opened to freight traffic.

The advent of dieselization on the Pacific Great Eastern Railway, British Columbia Electric Railway, and the Esquimalt and Nanaimo Railway on Vancouver Island presented a problem in highway-crossing warning devices, as the conventional horn used on diesel locomotives does not in any way sound like that of a railway locomotive. The public mistakes its warning for that of a boat or highway vehicle. The whistles or horns with which the diesels came equipped were entirely inadequate and could not be approved under section 185 of the "Railway Act."

A discussion concerning this matter was held in Victoria in December, 1948, and, as a result, I was instructed to make a research into the effectiveness of warning devices as used at railway crossings and, if possible, recommend a type of warning device that could be used on diesel locomotives which would simulate the standard railroad steam-whistle, as it was felt the public recognizes the standard railway steam-whistle to herald the approach of a locomotive at grade crossings.

Acting upon these instructions, a research was made into the effectiveness of warning devices as used on locomotives. The note of the conventional multitonned steam-locomotive whistle was analysed by recording the note on a recorder, then analysing the note electronically by the use of an oscilloscope. It was found that the note of the conventional railroad whistle had a frequency ranging between 256 cycles per second (middle C) and 1,000 cycles per second; that five or six fundamental notes were combined to comprise a C sharp diminished chord; and that third, fifth, and seventh harmonics were superimposed on the fundamental notes comprising the chord. It was also found that the intensity of the steam-locomotive whistle can be varied at the will of the operator so as to sound a loud note or a modulated note.

As steam is not available on a diesel-electric locomotive to sound a whistle, the warning device used must be driven by the compressed-air system as used on the air-brakes; consequently, the air-supply is limited, and if a conventional whistle were fitted to the air-supply of a diesel locomotive, no compressed air would be available for the air-brakes. In order to overcome this difficulty, it was decided to make a research into the construction of a multiple-toned air-horn which could be used on diesel locomotives, and which horn would simulate the sound of a steam-locomotive whistle with the same intensity of sound and yet use a very limited supply of compressed air. The research indicated that if five or six suitably designed air-horns were constructed and arranged for unitary operation so that each individual horn would emit the fundamental frequencies as emitted by the steam-whistle, and with the horns suitably designed so that the third, fifth, and seventh harmonics were superimposed upon the fundamental notes, the tone of the conventional steam-whistle could be simulated by the use of air-horns. Special diaphragms would be required, and a research was made into diaphragm materials which would stand up under the severe conditions imposed in railroad service.

A pilot model of such a horn was constructed, using a special type of diaphragm. This horn was placed in service for two days on the Esquimalt and Nanaimo Railway, where recordings were made of the steam-whistle and the new horn when both were sounded at grade crossings. It was generally conceded the new horn sounded so much

like the steam-locomotive whistle that the public could not tell it from a steam-train approaching a grade crossing. This horn was later applied to the National Harbours Board diesel in Vancouver, which organization applied to the Board of Transport Commissioners to have it approved under the Dominion "Railway Act." Inspectors from the Board of Transport Commissioners ran tests and found our horn to be satisfactory, and it was approved for operation under Board Order No. 72365. This type of horn was also approved by our Department, and, as a result, several are now in operation on the Pacific Great Eastern Railway and on the British Columbia Electric Railway diesel-electric locomotives.

It should be mentioned that the British Columbia Research Council was of great assistance in measuring the consumption of air and sound intensity during the development of this new warning device which was being developed in an effort to prevent accidents at grade crossings.

In March, 1949, a meeting was held in Victoria concerning tests of Hasler Creek coal on railway locomotives and in stationary boilers, as it was felt this coal should be tested under actual operating conditions. Acting in accordance with instructions, I proceeded to Montreal, where, through the courtesy of Mr. N. R. Crump, vice-president of the Canadian Pacific Railway, a dynamometer car was made available to us and arrangements made so we could test Hasler Creek coal on the Brooks subdivision of the Canadian Pacific Railway between Calgary and Medicine Hat.

Two hundred tons of Hasler Creek coal were mined under the supervision of Mr. N. D. McKechnie, of the British Columbia Coal Control Board, and transported overland to the rail-head, where 50 tons were shipped in closed freight-cars to the Canadian Pacific Railway at Calgary, Alta. The balance of the 200 tons was shipped to Vancouver, B.C., and to Princeton, B.C., for tests in stationary boilers.

Coal tests were conducted on the Canadian Pacific Railway during May, 1949, which were run under the supervision of this Department. In addition to Canadian Pacific Railway officials and employees, Mr. J. W. Millar, chief mechanical officer, Ontario Northland Railway, formerly an Inspector with this Department, and Mr. K. C. Gilbert, Chief Chemist, British Columbia Coal Control, Victoria, B.C., were present at and assisted in these tests.

The tests on the Canadian Pacific Railway were made with both Hasler Creek coal and the coal normally used by the railway. The tests proved conclusively that Hasler Creek coal is a good locomotive fuel, and savings as high as 15 per cent. may be obtained by its use. No trouble was experienced in the firing or handling of the locomotive while using this coal.

During May, 1949, this Department conducted tests at the University of British Columbia power plant to determine the quality of Hasler Creek coal in chain-grate stokers. The tests were conducted for five days, and at the conclusion it was proved Hasler Creek coal is a suitable fuel to be burned in stationary steam plants using chain-grate stokers and that savings as high as 20 per cent. may be obtained by its use. In addition to University of British Columbia faculty and staff, and the staff of this Department, Mr. K. C. Gilbert, Chief Chemist, British Columbia Control Board, and Mr. T. A. Wood, Inspector of Boilers and Machinery, assisted during the tests.

The Department made arrangements with Mr. A. C. R. Yuill, consulting engineer, Vancouver, B.C., to have a test conducted of Hasler Creek coal at the steam plant of the Granby Consolidated Mining, Smelting and Power Company, Limited, Princeton, B.C. The purpose of this test was to prove whether or not Hasler Creek coal could be successfully burned in pulverized-coal burning steam plants primarily designed to burn low-rank coals. The test was conducted on June 7th, 1949. Mr. A. R. Eastcott, power superintendent, Princeton, B.C., conducted the test. It was witnessed by Mr. A. C. R. Yuill, consulting engineer, Vancouver, B.C., and Mr. K. C. Gilbert, Chief Chemist, British Columbia Coal Control, Victoria, B.C. I was also present to witness,

assist, and advise in conducting the test, and a report was submitted. Mr. A. C. R. Yuill and Mr. A. R. Eastcott also submitted reports. All reports showed Hasler Creek coal to be eminently suitable for firing in powdered form, particularly in large boilers being continuously operated, and that Hasler Creek coal lends itself to pulverized-coal firing. Its low ash content has no objectionable slagging qualities, and it, being of a friable nature, pulverizes easily.

A report of the above three tests on Hasler Creek coal was published by the Department.

In the 1948 Report it was mentioned that a lack of staff prohibited follow-up inspections, and it was recommended that an extra Inspector be added to the staff. In June, 1949, applications were received and examinations held at this office. Two applicants qualified in a four-day competitive examination, and Mr. W. F. Thomas, locomotive foreman, Canadian Pacific Railway, Vancouver, B.C., was appointed to the position as Inspector. He commenced his duties with the Department on August 1st, 1949.

The safety-first educational programme instituted by this Department in 1947 on the logging and industrial railways was carried forward by the Inspectors during 1948 and 1949. I am pleased to report that on the standard-gauge railways there were no fatalities or serious accidents during the year. There was one fatality on the narrow-gauge railway in the Trail smelter, where a locomotive operator was fatally injured when a trolley-pole broke. Since the occurrence of this accident, a training programme has been set up by the Consolidated Mining and Smelting Company plant at Trail, as well as at other narrow-gauge operations, as it is felt the education of workmen as to safe operating conditions is the cardinal principle of accident-prevention.

Following is a report of the inspection work performed during the year 1949:—

Hydrostatic tests applied to boilers .....	171
Internal and external inspections of boilers .....	18
Internal-combustion locomotives inspected and certified .....	15
Internal-combustion locomotive cranes inspected and certified .....	6
Power rail-cars inspected and certified .....	54
Diesel-electric locomotives inspected and certified .....	10
Electric locomotives inspected on narrow-gauge electric railways .....	16
Locomotives inspected other than hydrostatic tests .....	152
Number of cars inspected on industrial railways .....	1,865
Number of cars inspected on common-carrier railways .....	195
Miles of track inspected .....	1,450
Locomotive engineers examined and certified .....	5
Conductors examined and certified .....	10
Power-car operators examined and certified .....	12
Locomotive-crane engineers examined and certified .....	4
Train-dispatchers examined and certified .....	9
Internal-combustion locomotive engineers examined and certified .....	3
Engineers examined and certificates issued, B.C. Electric Railway .....	9
Engineers examined and certificates issued, P.G.E. Railway .....	18
B.C. Electric Railway street and interurban cars inspected .....	139
B.C. Electric Railway electric locomotives inspected and certified .....	15
Accidents investigated on B.C. Electric Railway .....	28
Fatal accidents on B.C. Electric Railway .....	9
Wrecks investigated on industrial and logging railways .....	2
Fatal accidents on industrial and logging railways .....	0
Accidents investigated on narrow-gauge trackage serving industrial plants .....	1

Fatal accidents on narrow-gauge trackage serving industrial plants.....	1
Accidents investigated on Pacific Great Eastern Railway.....	3
Fatal accidents on Pacific Great Eastern Railway.....	2
Boiler designs approved by the Department.....	2
Air-reservoir designs approved by the Department.....	2
New passenger power rail-cars built under supervision of the Department.....	3
New diesel-electric locomotives imported.....	9
Second-hand locomotives imported from United States.....	3
Number of second-hand locomotives inspected in United States and approval for operation in British Columbia refused.....	3
Number of cars inspected in United States for approval to operate in British Columbia.....	41
Inspections made of fire-protective appliances on industrial locomotives.....	86
Inspections made of fire-protective appliances on P.G.E. Railway locomotives.....	16
Inspections made of fire-protective appliances on locomotives of C.P.R., C.N.R., and G.N.R., for Board of Transport Commissioners.....	496

R. E. SWANSON,  
*Chief Inspector.*

#### LIST OF APPENDICES.

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

Accidents on railways under Provincial jurisdiction 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.
Giving consent to the issue by the British Columbia Electric Railway Co., Ltd., of 3¾-per-cent. general mortgage bonds, 1949 series, and also to the sale of same.....	744
Appointing William Frederick Thomas, Inspector, to inquire into causes of accidents, pursuant to section 211 of the "Railway Act".....	745
Amending Rules and Regulations, Part III, pursuant to section 289 of the "Railway Act".....	746
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## APPENDIX B.

## ACCIDENT REPORT, 1949.

British Columbia Electric Railway Co., Ltd.—	Injured.	Killed.
Passengers.....	56	3
Employees.....	3	—
Other persons.....	34	5
Pacific Great Eastern Railway Co.—		
Passengers.....	—	—
Employees.....	61	—
Other persons.....	1	2
Industrial railways—		
Employees.....	—	—
Other persons.....	—	—
Locomotive cranes—Employees.....	—	—
Totals.....	155	10

APPENDIX B—*Continued.*  
ACCIDENT REPORT, 1949—*Continued.*

Persons Injured.	Result.	Cause.
<i>B.C. Electric Railway Co.</i>		
1 pedestrian.....	Injury to arm.....	Struck by street-car.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 passenger.....	Injury to back.....	Street-car collision.
1 passenger.....	Injury to neck.....	Street-car collision.
1 passenger.....	Injury to back.....	Fell in street-car.
3 car passengers.....	Minor injuries.....	Auto and street-car collided.
1 passenger.....	Injury to back.....	Street-car collision.
1 truck passenger.....	Minor injuries.....	Truck and street-car collided.
1 passenger.....	Injury to shoulder.....	Fell in street-car.
1 car passenger.....	Minor injuries.....	Auto and street-car collided.
1 car passenger.....	Injury to shoulder.....	Auto and street-car collided.
1 car passenger.....	Minor injury.....	Auto and street-car collided.
10 passengers.....	Minor injuries.....	Street-car collision.
1 passenger.....	Fractured rib, injury to shoulder.....	Fell alighting.
1 passenger.....	Injury to arm.....	Fell alighting.
1 pedestrian.....	Injury to head.....	Struck by street-car.
1 passenger.....	Injury to hand.....	Fell boarding street-car.
1 passenger.....	Injury to heel.....	Fell alighting from interurban.
1 passenger.....	Injury to hip.....	Fell in street-car.
1 passenger.....	Injury to head and shoulder.....	Fell in street-car.
1 pedestrian.....	Injury to chest.....	Struck by street-car.
1 motor-cyclist.....	Minor injury.....	Motor-cycle and street-car collided.
1 motor-cyclist.....	Fractured leg.....	Motor-cycle and street-car collided.
1 passenger.....	Injury to leg.....	Fell alighting.
1 passenger.....	Fractured ankle.....	Fell alighting.
3 car passengers.....	Minor injuries.....	Auto and street-car collided.
1 passenger.....	Fractured ribs.....	Fell in street-car.
1 pedestrian.....	Severe bruises.....	Struck by street-car.
1 passenger.....	Injury to wrist.....	Fell alighting.
1 passenger.....	Injury to shoulder and back.....	Fell alighting.
1 pedestrian.....	Fractured rib.....	Struck by street-car.
1 pedestrian.....	Injury to hip.....	Struck by street-car.
1 pedestrian.....	Minor injuries.....	Struck by street-car.
1 car passenger.....	Injury to head and arm.....	Auto and street-car collision.
1 car passenger.....	Fractured arms.....	Auto and street-car collision.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 passenger.....	Injury to shoulder.....	Fell alighting.
1 passenger.....	Fractured rib.....	Fell alighting.
1 passenger.....	Fractured leg.....	Fell alighting.
1 pedestrian.....	Minor injuries.....	Struck by street-car.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 pedestrian.....	Fatal.....	Struck by street-car doors.
1 passenger.....	Injury to head and back.....	Fell in street-car.
1 passenger.....	Injury to spine.....	Fell alighting.
1 passenger.....	Injury to back.....	Fell alighting.
1 motor-cyclist.....	Injury to head.....	Motor-cycle and street-car collision.
1 pedestrian.....	Fatal.....	Struck by train.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 pedestrian.....	Minor injury.....	Struck by street-car.
1 passenger.....	Fractured lower spine.....	Fell alighting.
1 passenger.....	Injury to knee.....	Fell in street-car.
1 truck passenger.....	Minor injuries.....	Truck and street-car collision.
1 employee.....	Injury to back.....	Fell boarding street-car.
1 passenger.....	Fractured arm.....	Fell alighting.
1 car passenger.....	Injury to head.....	Auto and street-car collision.
1 passenger.....	Injury to back.....	Auto and street-car collision.
1 car passenger.....	Fractured nose.....	Auto and street-car collision.
1 passenger.....	Fractured ribs.....	Street-car collision.
2 passengers.....	Minor injuries.....	Street-car collision.
1 passenger.....	Injury to shoulder and back.....	Fell in street-car.
1 trolley-coach passenger.....	Fractured ribs.....	Trolley-coach and street-car collision.
1 employee.....	Fractured hand.....	Fell in street-car.
1 passenger.....	Injury to head and back.....	Fell alighting.

## APPENDIX B—Continued.

## ACCIDENT REPORT, 1949—Continued.

Persons Injured.	Result.	Cause.
<i>B.C. Electric Railway Co.—Cont.</i>		
1 passenger.....	Injury to chest and knee.....	Fell in street-car.
4 passengers.....	Minor injuries.....	Street-cars collided.
1 passenger.....	Minor injury.....	Street-cars collided.
1 passenger.....	Injury to lower back.....	Street-cars collided.
1 passenger.....	Fatal.....	Fell alighting from moving tram.
1 pedestrian.....	Injury to leg.....	Struck by street-car.
1 pedestrian.....	Injury to head.....	Struck by street-car.
1 car passenger.....	Minor injuries.....	Auto and street-car collision.
1 passenger.....	Injury to thigh.....	Fell boarding street-car.
1 passenger.....	Fractured lower back.....	Fell alighting.
1 cyclist (child).....	Fatal.....	Bicycle and street-car collision.
1 car passenger.....	Injury to knee.....	Auto and street-car collision.
1 car passenger.....	Fractured rib.....	Auto and street-car collision.
1 passenger.....	Fractured wrist.....	Fell alighting.
1 passenger.....	Fractured hand.....	Fell alighting.
1 car passenger.....	Injury to eye.....	Auto and street-car collision.
1 employee.....	Injury to back.....	Fell alighting.
1 passenger.....	Fractured rib.....	Street-cars collided.
2 passengers.....	Minor injuries.....	Street-cars collided.
1 passenger.....	Fractured shoulder-bone.....	Fell in street-car.
<i>Pacific Great Eastern Railway.</i>		
1 section foreman.....	Injured shoulder and knee.....	Slipped from loaded push-car.
1 deck-hand.....	Injured left wrist.....	Crow-bar broke while handling.
1 machinist.....	Cut hand.....	Handling chuck from lathe.
1 machinist.....	Cut hand.....	Fitting pin in bearing.
1 sectionman.....	Bruised instep and ligament.....	Loading scrap axle.
1 machinist.....	Crushed finger.....	Bar slipped from compression spring.
1 fireman.....	Injured left shoulder.....	Slipped on ice removing ashes.
1 locomotive watchman.....	Steel in knee.....	Steel flew from anvil.
1 hostler's helper.....	Left ankle scalded.....	Hot water from hose.
1 blacksmith.....	Injured toe.....	Wrench fell from locomotive.
1 machinist.....	Strained back.....	Lifting 5-gallon bucket of water.
1 hostler's helper.....	Injured foot.....	Stepped on rail.
1 pipe-fitter.....	Strained back.....	Slipped when babbiting car brasses.
1 labourer.....	Multiple abrasions.....	Gas-car hit by truck.
1 labourer.....	Broken wrist and abrasions.....	Gas-car hit by truck.
1 labourer.....	Injured back.....	Gas-car hit by truck.
1 foreman.....	Broken nose, bruised arm.....	Gas-car hit by truck.
1 labourer.....	Fractured shoulder, bruises.....	Gas-car hit by truck.
1 labourer.....	Fractured wrist.....	Gas-car hit by truck.
1 labourer.....	Injured knee and leg.....	Slipped when nipping up rails to put in tie.
1 labourer.....	Injured face and arm.....	Struck by falling rock.
1 engineer.....	General shake-up.....	Jumped from speeder.
1 trainman.....	Bruised shoulder.....	Struck by hanging chain.
1 trainman.....	Turned ankle.....	Slipped on rock.
1 carman.....	Injured back.....	Lifting car truck.
1 sectionman.....	General shake-up.....	Fell when scrap car moved.
1 blacksmith.....	Crushed thumb.....	Lifting plank.
1 machinist.....	Injured foot.....	Piece of steel fell on foot.
1 labourer.....	Injured knee and shoulder.....	Hit by rock.
1 labourer.....	Injured foot.....	Slipped when handling tie.
1 labourer.....	Wrenched back.....	Lifting tie.
1 labourer.....	Injured wrist.....	Wheelbarrow handle struck wrist.
1 brakeman.....	Strained back.....	Lifting-coupling.
1 trainman.....	Cracked ankle.....	Stepped on water-hose.
1 cook.....	Infected foot.....	Stepped on rusty nail in board.
1 labourer.....	Strain.....	Lifting ties.
1 boilermaker.....	Damaged nerve in finger.....	Vibration from rivet-gun.
1 labourer.....	Injured foot.....	Tie fell on foot.
1 chef.....	Fractured rib.....	Thrown across table in diner.
1 hostler's helper.....	Bruised elbow.....	Slipped off locomotive.

## APPENDIX B—Continued.

## ACCIDENT REPORT, 1949—Continued.

Persons Injured.	Result.	Cause.
<i>Pacific Great Eastern Railway—</i> Continued.		
1 machinist.....	Injured finger.....	Valve-handle broke.
1 labourer.....	Crushed toe.....	Slipped off motor-car.
1 sectionman.....	Injured leg.....	Hit by track-bar.
1 sectionman.....	Wrenched back.....	Slipped when taking out ties.
1 patrolman.....	Multiple bruises and rib fracture.....	Speeder jumped track.
1 trainman.....	Broken ribs.....	Slipped and fell off box car.
1 labourer.....	Ruptured groin.....	Loading ties on push-car.
1 labourer.....	Crushed hand.....	Caught hand between ties.
1 labourer.....	Crushed finger.....	Caught hand between ties.
1 labourer.....	Injured back.....	Lifting push-car on to track.
1 brakeman.....	Injured ankle.....	Fell stepping off cab.
1 bridgeman.....	Injured ankle.....	Unloading timber from flat car.
1 engineer.....	Injured knee-cap.....	Broken axle caused derailment.
1 pedestrian.....	Fatal.....	Locomotive hit hand-truck on station platform and truck hit pedestrian.
1 pedestrian.....	Injured arm, bruises, and shock.....	Locomotive hit hand-truck on station platform and truck hit pedestrian.
1 labourer.....	Crushed finger.....	Caught finger between rail and pinch-bar.
1 sectionman.....	Bruises and swelling.....	Fell when shovelling snow.
1 machinist.....	Injured shoulder.....	Pulling hand-truck.
1 pedestrian.....	Fatal.....	Pulling stick across track.

## APPENDIX C.

## LIST OF RAILWAYS AND SUMMARY OF MILEAGE.

*Industrial Railways.*

Name.	Operating.	Mileage.
1. Alberni Pacific Lumber Co., Ltd.....	Port Alberni.....	77.0
2. Begbie Pole-yard.....	Begbie.....	0.9
3. B.C. Cement Co., Ltd.....	Bamberton and Blubber Bay.....	2.5
4. B.C. Forest Products, Ltd.....	Youbou.....	43.4
5. B.C. Forest Products, Ltd.....	Port Renfrew.....	18.0
6. B.C. Forest Products, Ltd.....	San Juan.....	33.0
7. B. & D. Logging Co.....	Hyde Creek, Vancouver Island.....	1.5
8. Bloedel, Stewart & Welch, Ltd.....	Sproat Lake.....	7.5
9. Bloedel, Stewart & Welch, Ltd.....	Great Central.....	2.0
10. Bloedel, Stewart & Welch, Ltd.....	Menzies Bay.....	67.0
11. Bloedel, Stewart & Welch, Ltd.....	Franklin River.....	56.2
12. Britannia Mining & Smelting Co., Ltd.....	Britannia.....	4.9
13. Canadian Forest Products, Ltd.....	Englewood.....	67.9
14. Canadian Industries, Ltd.....	James Island.....	10.0
15. Canadian Collieries (D.), Ltd.....	Nanaimo.....	13.8
16. Comox Logging & Railway Co.....	Headquarters.....	24.3
17. Comox Logging & Railway Co.....	Ladysmith.....	25.3
18. Consolidated Mining & Smelting Co. of Canada, Ltd.....	Trail.....	20.0
19. Consolidated Mining & Smelting Co. of Canada, Ltd.....	Kimberley.....	32.3
20. Crow's Nest Pass Coal Co., Ltd.....	Coal Creek.....	7.2
21. Deeks Sand & Gravel Co., Ltd.....	Port Coquitlam.....	2.0
22. Dominion Tar & Chemical Co., Ltd.....	New Westminster.....	6.0
23. Dominion Tar & Chemical Co., Ltd.....	North Vancouver.....	1.0
24. Elk River Timber Co., Ltd.....	Campbell River.....	50.0
25. Hillcrest Lumber Co., Ltd.....	Mesachie Lake.....	7.5
26. Mayo Lumber Co., Ltd.....	Paldi.....	1.0
27. Morrissey, Fernie & Michel Railway.....	Fernie.....	7.2
28. Northern & Eagle River Co.....	Stillwater.....	5.1
29. Pacific Coast Terminals, Ltd.....	New Westminster.....	5.2
30. Powell River Co., Ltd.....	Cumshewa Inlet.....	16.0
31. Salmon River Logging Co., Ltd.....	Sayward.....	35.0
32. Victoria Lumber Co., Ltd.....	Chemainus.....	57.1
33. Victoria Lumber Co., Ltd.....	Dunsmuir.....	14.2
34. Western Forest Products, Ltd.....	Rounds.....	34.0
35. Wellington Colliery Railway Co.....	Cumberland.....	22.5
		778.5

*Common Carriers.*

Pacific Great Eastern Railway.....	Main line.....	349.8
	Sidings.....	20.3
	Spurs, wyes, etc.....	16.7
	North Shore line.....	3.4
		390.2

*Tramways.*

British Columbia Electric Railway Co., Ltd.....	Vancouver.....	72.5
	Interurban lines.....	109.2
	Leased lines.....	63.6
		245.3

APPENDIX C—*Continued.*LIST OF RAILWAYS AND SUMMARY OF MILEAGE—*Continued.**Summary of Railway Mileage.*

Industrial railways .....	778.5
Common carriers .....	563.0
Tramways (city) .....	72.5
	<hr/>
Total, all lines .....	1,414.0

## APPENDIX D.

## LIST OF CRANES AND OTHER AUXILIARY MOTIVE POWER INSPECTED BY RAILWAY DEPARTMENT.

Alberni Pacific Lumber Co., Ltd. ....	Crane No. 40929 B.C.
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. 21532 B.C.
Baxter, J. H., & Co., Ltd. ....	Crane No. D.R. 336.
Bloedel, Stewart & Welch, Ltd. ....	Crane No. 44666 B.C.
	Crane No. 3843.
	Crane No. D.R. 340.
	Gas Internal-combustion Locomotive No. 50.
Britannia Mining & Smelting Co., Ltd. ....	Electric Locomotive No. 5.
	Electric Locomotive No. 8.
B.C. Cement Co., Ltd. ....	Crane No. 21439 B.C.
B.C. Forest Products, Ltd. ....	Crane No. 43579 B.C.
	Crane No. D.R. 320.
	Crane No. D.R. 331.
	Crane No. D.R. 319.
	Unloader No. 44213.
B.C. Pulp & Paper Co., Ltd. ....	Crane No. D.R. 304.
Burrard Dry Dock Co., Ltd. ....	Crane No. 50514 B.C.
	Crane No. 12370 B.C.
	Crane No. 41298 B.C.
	Crane No. D.R. 292.
	Gas Locomotive Crane No. 4.
Canadian Collieries (D.), Ltd. ....	Steam-shovel D.R. 301.
Canadian Forest Products, Ltd. ....	Crane No. 42722 B.C.
	Crane No. 43635 B.C.
	Crane No. 43973 B.C.
	Internal-combustion Locomotive Crane No. 97.
	Diesel Locomotive Crane No. 2338.
	Diesel Switcher No. 96.
Capital Iron & Metals, Ltd. ....	Crane No. D.R. 295.
	Crane No. D.R. 299.
	Crane No. 44386 B.C.
Coast Quarries, Ltd. ....	Crane No. D.R. 342.

## APPENDIX D—Continued.

LIST OF CRANES AND OTHER AUXILIARY MOTIVE POWER INSPECTED BY RAILWAY DEPARTMENT—  
Continued.

Columbia Cellulose Co., Ltd.	Diesel-electric Locomotive No. 1.
Comox Logging & Railway Co.	Unloader D.R.P. No. 2.
	Crane No. 41922 B.C.
	Internal-combustion Locomotive Un- loader No. 3.
	Gas Locomotive No. 20.
	Gas Locomotive No. 17.
Consolidated Mining & Smelting Co. of Canada, Ltd., Kimberley	Crane No. 12772 B.C.
	Electric Locomotive No. 1.
	Electric Locomotive No. 2.
Consolidated Mining & Smelting Co. of Canada, Ltd., Trail	12 narrow-gauge electric locomotives.
Deeks Sand & Gravel Co., Ltd.	Gas Locomotive No. 1.
Dominion Bridge Co., Ltd.	Crane No. 44129 B.C.
	Crane No. 44317 B.C.
	Crane No. D.R. 347.
Dominion Tar & Chemical Co., Ltd.	Crane No. 44441 B.C.
	Gas Switcher No. 1.
Elk River Timber Co., Ltd.	Crane No. 21085 B.C.
	Gas Switcher No. 7.
Esquimalt Drydock	Crane No. 22582 B.C.
	Portable Boiler No. D.R. 314.
Evans, Coleman & Evans, Ltd.	Crane No. D.R. 316.
Hamilton Bridge Co., Ltd.	Crane No. 12669 B.C.
Hillcrest Lumber Co., Ltd.	Crane No. 40049 B.C.
	Crane No. 44315 B.C.
Industrial Peat Co.	Crane No. 1085A.
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.	Gas Locomotive Crane.
Lumby Timber Co., Ltd.	Crane No. 21089 B.C.
	Crane No. D.R. 343.
Mayo Lumber Co. (1943), Ltd.	Crane No. D.R. 321.
Morrissey, Fernie & Michel Railway	Diesel-electric Locomotive No. 1.
Nanaimo Sulphate & Pulp, Ltd.	Diesel-electric Locomotive No. 1.
Northern Construction Co., Ltd.	Crane No. 12321 B.C.
Osborn Bay Wharf Co., Ltd.	Crane No. 21526 B.C.
Pacific Coast Terminals Co., Ltd.	Crane No. 44440 B.C.
	Auxiliary Boiler No. 03301 B.C.
Pacific Great Eastern Railway Co.	Pile-driver No. D.R. 312.
	Boiler No. D.R. 326.
	Power-boiler No. D.R. 341.
	Boiler No. 42837 B.C.
	Crane No. D.R.P. 8.
	Ditcher No. D.R.P. 1.
	Boiler No. 3, D.R. 49.
	Diesel-electric Locomotive No. 551.
	Diesel-electric Locomotive No. 552.
	Diesel-electric Locomotive No. 553.
	Diesel-electric Locomotive No. 554.
	Diesel-electric Locomotive No. 555.
Point Hope Shipyard	Crane No. D.R. 315.
Powell River Co., Ltd. (Kelley Logging Co., Ltd.)	Crane No. 44893 B.C.
	Diesel locomotive.

## APPENDIX D—Continued.

LIST OF CRANES AND OTHER AUXILIARY MOTIVE POWER INSPECTED BY RAILWAY DEPARTMENT—  
Continued.

Prince Rupert Drydock & Shipyard.....	Crane No. D.R. 290.
Robertson & Hackett Sawmill.....	Crane No. 44584 B.C.
	Crane No. 12545 B.C.
Salmon River Logging Co., Ltd.....	Gas Locomotive No. 8.
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 Creosoting Co., Ltd.....	Crane No. D.R. 283.
	Gas Locomotive Crane No. 6.
Victoria Lumber Co., Ltd.....	Crane No. D.R. 300.
Victoria Machinery Depot, Ltd.....	Crane No. D.R. 291.
	Crane No. D.R. 305.
Western Bridge & Steel Fabricators, Ltd.....	Crane No. D.R. 308.
	Crane No. D.R. 309.
Western Forest Industries, Ltd.....	Diesel Locomotive Crane No. CCC 142.
	Crane No. 41276 B.C.
Yarrows, Ltd. ....	Crane No. D.R. 289.
	Crane No. 376.

## APPENDIX E.

## MILEAGE OF ALL RAILWAYS OPERATING IN THE PROVINCE.

	MAINLAND.		ISLAND.		TOTAL.	
	Main Line.	Sidings.	Main Line.	Sidings.	Main Line.	Sidings.
Under the jurisdiction of the Board of Transport Commissioners for Canada—						
Canadian Pacific Railway.....	1,857.4	504.9	210.8	43.2	2,068.2	548.1
Canadian National Railways.....	1,359.0	328.6	102.0	24.9	1,461.0	353.5
V.V. & E. Railway (Great Northern).....	140.8	29.8	.....	.....	140.8	29.8
British Columbia Electric Railway (leased).....	42.8	20.8	.....	.....	42.8	20.8
Under the jurisdiction of the Provincial Government—						
Pacific Great Eastern Railway.....	349.8	37.0	.....	.....	349.8	37.0
British Columbia Electric Railway.....	154.7	24.8	.....	.....	154.7	24.8
Industrial railways.....	54.6	36.3	572.9	114.7	627.5	151.0
Totals.....	3,959.1	982.2	885.7	182.8	4,844.8	1,165.0

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