

# Railway Department

PROVINCE OF BRITISH COLUMBIA

## ANNUAL REPORT

Year ended December 31st

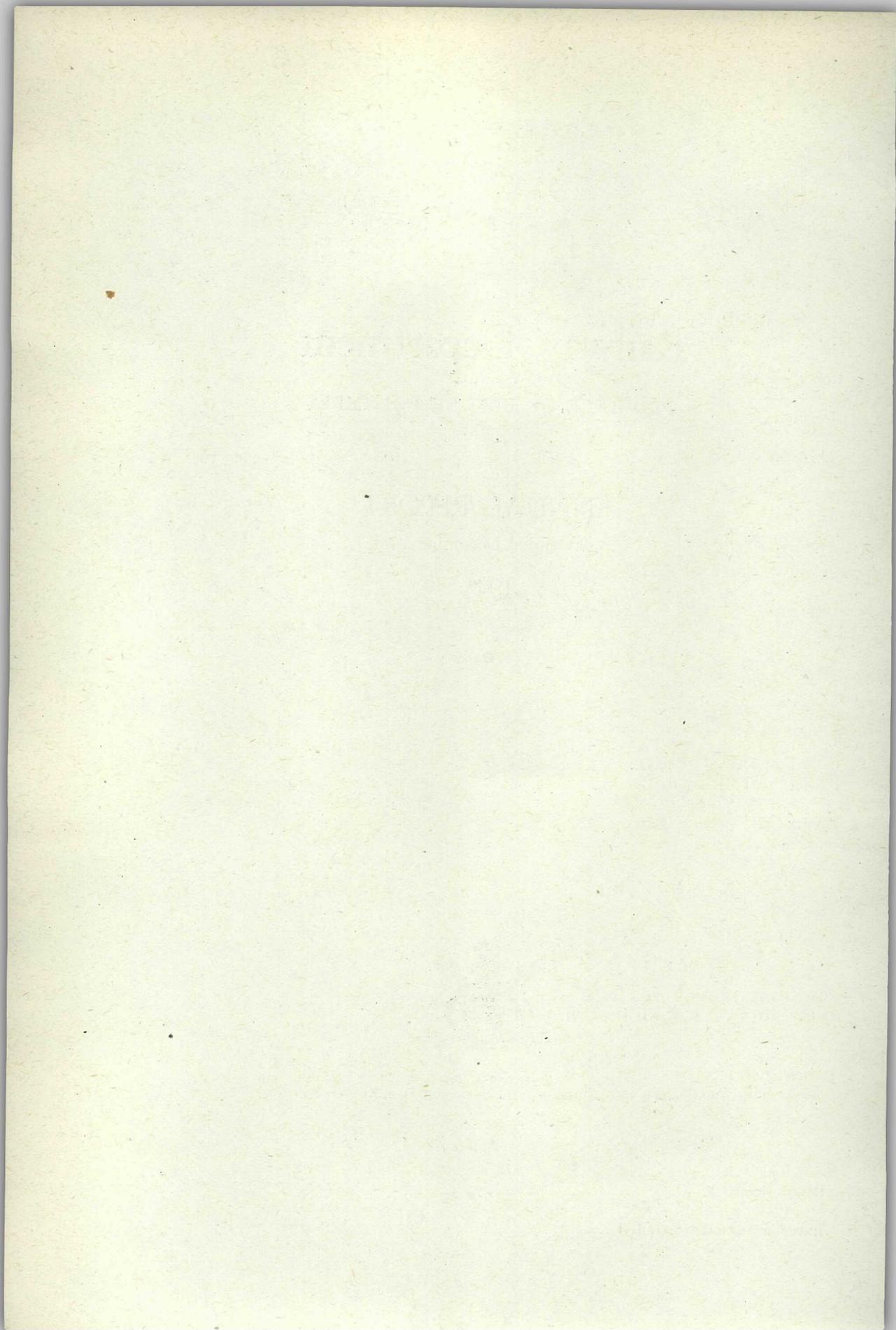
1948



VICTORIA, B.C. :

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1949.



*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, 1948, with Appendices.

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

*Victoria, B.C., February 15th, 1949.*

VICTORIA, B.C., December 31st, 1948.

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

SIR,—I beg to submit herewith the Thirty-first Annual Report of the Railway Department, covering the year 1948, 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, 1948, consisted of Chief Inspector, two Inspectors, draughtsman, and 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 the plans, profiles, and economic studies of northern extensions of the Pacific Great Eastern Railway Company, and co-operated with Government and other agencies in obtaining essential information, including research-work. Resources data have been correlated into terms of economic values. Surveys and plans were made to safeguard and improve the existing railway as at present operated.

The Mechanical Branch has progressively extended its inspection and supervision pursuant to the "Railway Act," comprising amendment of rules and regulations, educational and safety tests, investigation and prevention of accidents and fires. The Inspection Bureau assumed extra duties in making an intensive survey of the mechanical operating conditions of the Pacific Great Eastern Railway, also reported upon Pine Valley coal tests and its further utilization.

Both Civil and Mechanical Engineering Branches have worked with other agencies, notably the Controller of Coal, Petroleum, and Natural Gas, steam railways, heating and power plants, and research-workers, in surveying and testing the quantity and quality of Pine River coal. Arrangements have been made for tests in locomotive and stationary boilers, also such new uses as coal-fired gas-turbines, which require a high-grade low-ash coal in the prime mover.

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.

As outlined above, the Department devotes more attention and energy to the welfare of this Provincially owned railway than prescribed under the terms of the "Railway Act." This Department is the virtual construction department of the railway; furthermore, it attends to such matters as right-of-way, damage claims, public or private agreements, improvements, replacements, and unusual undertakings.

Important survey projections were made of a line from Quesnel to Prince George, with marked improvements, especially elimination of high, expensive trestles. Considering the northern extensions, an intensive study of resources, reports, physical features, transportation routes, and economic factors has been made to determine the choice of railway location, utilization of products and markets, potential wealth and traffic, settlement and industrial opportunities, all directed toward the development of Central and Northern British Columbia and the physical and economic improvement of the existing railway.

An instrumental survey party under the direction of the Department carried on field and office work to prepare plans, profiles, and economic studies of revisions and betterments, structure replacements, water-supplies, removing dangerous slides, terminal facilities, erosion-prevention, raising embankments, and road revisions.

*Operation—General Manager's Report.*

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

*Maintenance of Way.*—The programme of rehabilitating the properties of the Pacific Great Eastern Railway which was commenced in 1947 has been continued throughout 1948, and very considerable progress has been made on this extra and necessary work. It will take two more years of intensive effort before it will be possible to reduce the expenditures for maintenance of way to the amount of a normal expenditure. It should be borne in mind that we will recover in a period of four years from the nine-year period of drastically reduced expenditure due to war-time conditions, which have made necessary these excessive but essential expenditures.

The strengthening of track structures, renewal of worn-out bridges (by rebuilding in some instances and by filling in others), renewal of culverts, of widening cuts, lining and strengthening tunnels, and other work necessary for the safety of the railway have been continued during the past year.

This work has enabled us to successfully handle traffic that was 20 per cent. heavier than the previous year, with only the usual number of minor derailments occurring, while our car-loading has been at a high point in average weight of loads carried. We were also able to take from Squamish to Shalalth a very heavy load, consisting of a transformer for the power installation at Bridge River weighing 127 tons. This could not have been handled had not our programme been well under way. By moving this transformer we materially assisted in shortening the time of the opening of the Bridge River power plant, to the great advantage of Vancouver and Southern British Columbia.

The Pacific Great Eastern Railway was subject to only minor washout delays during the Fraser Valley floods. Freight traffic from the trans-continental railways and the highways was diverted via the Pacific Great Eastern Railway to carry essential food and other supplies to the Coast when all other traffic was interrupted south of Lytton. The Prince George country also was supplied by this railway during a tie-up on the Canadian National.

It will be necessary to obtain authority to continue the work in 1949 and in 1950, after which the expenditures for maintenance-of-way work will, it is hoped, be reduced to normal annual costs.

*Maintenance of Equipment.*—The majority of our equipment, both mechanical and cars, is rapidly becoming obsolete, and the increased business of the past years has taxed our equipment to the limit. We have been able to handle the increased traffic only by the recently acquired cars and locomotives, but it has been a difficult task to move traffic and keep our equipment in condition equal to what it was at the first of the year. We have received the box cars ordered in 1947, but have still had to rent a considerable amount of equipment, such as stock-cars, gondolas, and flat cars, during the year to keep pace with the increased business.

We have purchased and received during the year the following equipment: Three sleepers, one café car, ten gondolas, one oil-tank car (8,000-gallon capacity).

We have on order, to be delivered in 1949, the following equipment: Fifty new flat cars, ten second-hand gondola ballast cars, five diesel-electric locomotives.

*Operation.*—We are still short of equipment of various kinds, which has necessitated renting equipment, thereby raising our costs of operation. The costs of materials of all kinds show increases, with fuel-oil the greatest. The wages of all employees have shown a very heavy increase, and without a corresponding increase in freight rates we will be at a serious disadvantage to produce favourable results in operating.

Our stock business has reached a new high point, and lumber, forest products, vegetables, and fruit all show increases over 1947. This has resulted in a bottle-neck in our tug-and-barge service between Squamish and Vancouver, and has necessitated renting tugs and barges at a high rental charge. This was essential, but not economic.

Our passenger traffic shows a very fine increase as a result of our advertising and service provided on our passenger trains, and through our personnel. Very many complimentary comments have been received in reference to our passenger and dining-car service.

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) section 177 of the Act were inspected, excepting rolling-stock and floating equipment. These inspections were made September 21st to 23rd and November 2nd to 4th, 1948.

On both trips the Railway Department's Inspecting Engineer and the Chief Inspector were accompanied by the railway company's engineer of maintenance and the bridge and building master. Work affecting their departments was also discussed with the two roadmasters and other officers of the Company.

The 1948 programme of bridge-work, listed as a result of the 1947 inspections, has been completed. In addition to the usual maintenance repairs, fourteen bridges were redecked and seven pile bridges were rebuilt. The bridges between Squamish and Shalalth received a practical test on September 21st, 1948, during the train movement of a transformer on a six-axle well car, a gross load of 256,000 lb., equivalent to a Cooper E 50 loading. The inspection following this train disclosed no signs of fracture or undue compression in the bridge members.

The results of the 1948 work on buildings and structures other than bridges brings many essential repairs up to date. At Squamish terminals, former army buildings were rebuilt into offices, residences, and other buildings; improved facilities were provided for the mechanical and transportation departments. Ten section bunk-houses will augment the limited accommodation on the northern sections.

Acting upon the insistence of this Department, 165,000 track-ties were renewed in 1948, against an average of 80,000 annually for the previous eight years. Rehabilitation activities have commenced and certain improvements made; for example, increased visibility and slides removed by daylighting side-hill cuts, eroded banks riprapped, log cribs replaced by concrete walls, and dangerous rocks removed.

Subject to full precautionary measures with vigilant maintenance-work and observance of safety instructions, the railway-track and its supporting or protecting structures are now in a fair condition for the safe operation of traffic under present train loadings and schedule running time. To maintain this fair condition and to be reasonably free from danger to the employees and to the public using the railway, also to operate efficiently, free from unusual interruptions, the programme of works prescribed by the Railway Department must be adhered to, with special emphasis on bridges, erosions, and slides.

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.

From the beginning of the year up until the advent of inclement weather of late December all industrial railways operated to full capacity. Extensive heavy repairs were made to existing motive power and rolling-stock under the advice and supervision of the Department during the year. Considerable used railway equipment was imported by the companies operating industrial railways. This equipment was imported subject to our prior inspection and approval. In many cases approval could not be granted, as much of the equipment did not come up to required standards; consequently such equipment was condemned and not imported. By taking full advantage of the service offered by this Department, the operators of the railways were not only saved considerable inconvenience but, as a result, obtained better and safer equipment to operate.

All logging, mining, and industrial railways in the Province were inspected during the year. This inspection covered not only the equipment and rolling-stock, but the road-bed, bridges, and structures, as well as the dispatch and operating departments of the railways concerned. In carrying out these inspections, a great amount of detail is attended to by the Inspectors, and follow-up inspections are necessary to see that the work required is carried out. I regret to report that in most cases a lack of staff prohibited proper follow-up inspections, and I find it necessary to report at this time that an extra Inspector must be added to the staff. To aggravate this condition, additional duties have been taken on by the Inspection Bureau, in that it is now inspecting equipment, such as electric locomotives, technically under the jurisdiction of the Department of Mines. By arrangements made with the Chief Inspector of Mines, this duty is being performed by our technically qualified Inspectors rather than have the Department of Mines employ technically qualified help for that specific purpose.

Nine air locomotives of the Crow's Nest Pass Coal Company were inspected and certified during 1948. Copies of these reports were forwarded to the Department of Mines for their files. The steam and diesel locomotives of this company, as well as its subsidiary, the Morrissey, Fernie and Michel Railway, were inspected, and the trackage and bridge structures approved.

The railways and wharves of the Canadian Collieries (D.), Limited, were inspected on Vancouver Island during 1948, and, as a result, the company was required to rebuild and rebrace its Nanaimo coal-wharves in order that they could be approved safe for operation.

Twelve new power rail-cars for the transportation of workmen were built in British Columbia during the year. Some of these power-cars are diesel-powered. These units were constructed to the Department's design and were built under the supervision of Department Inspectors, after which they were certified for operation. In addition to this, three used steam locomotives were imported by various logging companies. These locomotives required to be rebuilt under our supervision in order that they could be approved and certified.

The street-railways and common-carrier railways of the British Columbia Electric Railway Company under Provincial jurisdiction were inspected during the year. I am pleased to report the rehabilitation programme of Vancouver street-railways, put in effect during 1947, was carried forward during 1948, with a resulting improvement in the condition of the Vancouver street-railways. The equipment, both street-car and interurban, as well as freight motive power, was periodically inspected, the electric locomotives being certified and approved. In cases where persons were 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. Where neces-

sary, corrective measures were imposed upon the companies to avoid recurrence of similar accidents.

The trackage of companies operating locomotive cranes was inspected. Boilers of cranes and equipment were tested and certified, and engineers examined and certificates issued. We regret to report one fatal accident on one of these operations, where a workman walking ahead of an approaching locomotive crane stumbled and fell and was fatally injured when the crane ran over him.

The boilers of all railways operating under Provincial charter were inspected and certified during the year by Department Inspectors. In cases where boilers required to be renewed or repaired, plans and specifications were checked by the Department for approval.

Four hundred and sixty-eight (468) inspections covering the fire-protective appliances of locomotives were made on the Canadian Pacific Railway, Canadian National Railways, Great Northern Railway, and Esquimalt and Nanaimo Railway. Reports of these inspections were forwarded to the British Columbia forestry department and the Board of Transport Commissioners at Ottawa. In order that Inspectors are vested with the proper authority to make these inspections, each Inspector is appointed by the Board of Transport Commissioners in Ottawa as Board of Transport Fire Inspectors, and they act with the full authority of the Board of Transport Commissioners on the transcontinental railways. In cases where defects were found, the Inspectors ordered the locomotives out of service. In many cases when defects were reported, the Inspectors made special journeys into the East Kootenay District, so that forest fires caused by faulty equipment might be prevented.

During the Fraser River flood of June, 1948, the services of the Department were offered, and arrangements were made so that in case rail-cars (speeders) were required to evacuate the residents of the Fraser Valley, they were made available from the logging companies to be transported by the Canadian Pacific Railway Company to the scene of action.

In company with the Inspecting Engineer, two general inspections of the Pacific Great Eastern Railway were made during the year. These inspections covered the road-bed, bridges, structures, and general facilities of the railway, as well as its mechanical facilities. The result of these inspections was covered by separate reports. During the year the Inspectors made regular inspections of the rolling-stock of this railway and applied annual hydrostatic tests to certify the boilers in all shops and on locomotives and other equipment. Internal inspections of the locomotive boilers on this railway were also made during the year.

In October, 1948, acting in accordance with instructions issued by the Minister of Railways, a survey was made of the mechanical facilities and mechanical personnel of the Pacific Great Eastern Railway. In order to conduct this survey, the Inspectors of the Inspection Bureau were set up as a three-man board and proceeded to the Pacific Great Eastern Railway property, where a three-week survey was conducted, and a detailed report with recommendations submitted to the Minister.

In June, 1948, Col. C. C. Stibbard, Director of Operation, Board of Transport Commissioners, Ottawa, requested that I proceed to Ottawa to discuss matters pertaining to fire-protection on the transcontinental railways operating in British Columbia, and also to be posted on current improvements with respect to motive power taking place in Eastern Canada. This exchange of ideas proved beneficial to this Department and possibly to the Board of Transport Commissioners.

Fullest advantage was taken of the opportunity while in Eastern Canada to visit the officials of the Canadian Pacific Railway and Canadian National Railways at Montreal, and also to be conducted through their shops, as well as the Montreal Locomotive Works, so that improved methods of construction and repair might be offered through

this Department to the industries of British Columbia. Further scope for an extensive study covering all phases of transportation and motive power was taken advantage of while in Montreal, in that I took the opportunity of crossing over to England by aeroplane and spending twenty days on the study of English locomotive shop practice. This afforded an opportunity to witness locomotives, diesel engines, and electrical equipment being constructed for shipment to all parts of the world. With the co-operation of British railway officials I was afforded the opportunity to study transportation methods on railways, street-railways, buses, and the underground system of London, England. I returned by New York and Chicago, where a further study of transportation systems and motive power was continued. Contacts made during this extensive study may prove most valuable to the Government and this Department in particular.

The discovery of a high-grade coal at Hasler Creek, on the proposed Pacific Great Eastern Railway extension, resulted in a study being made on the use of this coal on railways, power plants, and domestic use, as well as in gas-turbines. The Inspection Bureau of this Department participated in this study and submitted a report covering the potential uses of this coal and recommended further tests in locomotives and power plants, and a sample of the coal is being forwarded to Batelle Institute, Columbus, Ohio, for test in a coal-burning gas-turbine. This was arranged while in the East, in company with Dr. Walker, Deputy Minister of Mines; G. Melrose, Deputy Minister of Lands; and Dr. T. B. Williams, Controller of Coal and Petroleum, which delegation attended the Dominion Coal Board Conference at Ottawa on December 6th, 1948. At the conclusion of the conference I was instructed to proceed to Dunkirk, N.Y., and New York, N.Y., to make further study of coal-burning gas-turbine locomotives at present being developed by the Bituminous Coal Research, Inc. A separate detailed report was submitted covering this research.

In order to promote safety on the logging-railways, the regulations were amended during 1948 so that train-dispatchers were required to be examined and certified as to their competency. As a result, during the year twelve dispatchers were examined and certified in the field.

With respect to safety on the industrial railways, the educational programme instituted in 1947 was carried forward by the Inspectors during 1948. While there were no fatal accidents on industrial railways during 1947, I regret to report one fatal accident during 1948 on a logging-railway, where a certified trainman, who had been properly instructed by our Inspectors as to safe working methods, in some unaccountable manner fell from the front of a locomotive and was run over by the train.

Following is a report of the inspection-work performed during the year 1948:—

Hydrostatic tests applied to boilers .....	169
Internal and external inspections of boilers .....	20
Internal-combustion locomotives inspected and certified .....	25
Power rail-cars inspected .....	47
Power rail-car certificates issued .....	45
Number of car inspections on industrial railways .....	1,650
Miles of track inspected .....	1,055
Locomotives inspected other than hydrostatic tests .....	110
Locomotive engineers examined and certified .....	10
Conductors examined .....	20
Certificates issued to conductors .....	19
Power-car operators examined and certified .....	13
Locomotive-crane engineers examined and certified .....	19
Dispatchers examined and certified .....	12

Internal-combustion locomotive engineers examined and certified .....	1
B.C. Electric Railway street and interurban cars inspected .....	118
B.C. Electric Railway locomotives inspected and certified .....	7
Accidents investigated on industrial railways .....	3
Fatal accidents on industrial railways .....	1
Fatal accidents on locomotive crane in industrial plant .....	1
Accidents investigated on B.C. Electric Railway .....	19
Fatal accidents on B.C. Electric Railway .....	11
Boiler designs approved by the Department .....	1
Air-reservoir designs approved by the Department .....	4
Passenger power rail-car designs approved by the Department ..	2
New passenger power rail-cars built under supervision of the Department .....	12
New diesel-electric locomotives imported .....	1
Second-hand locomotives imported from United States .....	3
Second-hand locomotive cranes imported from United States ..	2
Number of second-hand locomotives inspected in United States and approval for operation in British Columbia refused .....	12
Number of cars inspected in United States for approval to operate in British Columbia .....	80
Inspections made of fire-protective appliances on industrial locomotives .....	37
Inspections made of fire-protective appliances on locomotives of C.P.R., C.N.R., E. & N. Railway, and National Harbours Board for Board of Transport Commissioners .....	468

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.
Approving a resolution of the British Columbia Electric Railway Co., Ltd., authorizing the general freight and passenger agent of the company to prepare and issue tariffs .....	732
Approving amendments to the rules and regulations made pursuant to the "Railway Act," Part II—General Operating Rules .....	733
Granting leave to construct a highway crossing over the right-of-way of the Pacific Great Eastern Railway in D.L. 771, N.W.D. ....	734
Giving consent to the issue by the British Columbia Electric Railway Co., Ltd., of 3¼-per-cent. general mortgage bonds, 1947 series, and also to the sale of same .....	735
Giving consent to the issue by the British Columbia Electric Railway Co., Ltd., of 3¼-per-cent. general mortgage bonds, 1948 series, and also to the sale of same .....	736
Granting leave to the Municipal Council of the Corporation of the District of Surrey to construct a grade highway crossing over the tracks of the Vancouver Power Co., Ltd. ....	737
Granting the British Columbia Electric Railway Co., Ltd., leave to construct grade highway crossings at Telford Avenue and Dow Road, in the Municipality of Burnaby .....	738
Approving the general location of a projected line of mining railway of the Torbrit Silver Mines, Ltd. ....	739
Approving the standard freight tariffs on the lines of the Pacific Great Eastern Railway Co., and rates from Vancouver to points on the above railway .....	740
Granting the Minister of Public Works leave to construct a highway crossing under the tracks of the Pacific Great Eastern Railway Co. at Mile 171.56, Lillooet Division .....	741
Approving an agreement entered into by the Pacific Great Eastern Railway Co. and the British Columbia Electric Railway Co., Ltd., in respect of the carriage of certain traffic .....	742
Granting leave to the Pacific Great Eastern Railway Co. to construct a highway along the right-of-way of said company on Lot 471, Group 1, Lillooet District .....	743

## APPENDIX B.

## ACCIDENT REPORT, 1948.

	Injured.	Killed.
British Columbia Electric Railway Co., Ltd.—		
Passengers .....	92	1
Employees .....	18	—
Other persons .....	42	12
Pacific Great Eastern Railway Co.—		
Passengers .....	1	—
Employees .....	60	—
Other persons .....	—	—
Industrial railways—		
Employees .....	—	1
Other persons .....	—	—
Locomotive cranes—Employees .....	—	1
Totals .....	213	15

APPENDIX B—Continued.  
ACCIDENT REPORT, 1948—Continued.

Persons Injured.	Result.	Cause.
<i>B.C. Electric Railway Co.</i>		
1 motor-cyclist.....	Injury to left shoulder.....	Motor-cycle and street-car collided.
1 pedestrian.....	Fatal injuries.....	Struck by street-car.
1 pedestrian.....	Injury to head, sacrum, hip, and both elbows.....	Fell alighting.
1 pedestrian.....	Injury to head.....	Struck by street-car.
1 car-passenger.....	Facial cuts.....	Auto and street-car collided.
1 pedestrian.....	Fatal.....	Struck by backing street-car.
1 passenger.....	Fatal.....	Stepped from moving train.
1 passenger.....	Injury to right knee.....	Injured in street-car.
1 passenger.....	Injury to shoulder.....	Street-car collision.
1 passenger.....	Injury to left shoulder, elbow, right knee, and lower back.....	Fell alighting.
1 passenger.....	Left hip broken.....	Fell alighting.
1 passenger.....	Fractured ribs and injury to left chest.....	Fell in street-car.
1 car-passenger.....	Injury to muscles of cervical region.....	Auto and street-car collided.
1 pedestrian.....	Injury to head, right side of neck.....	Struck by street-car.
1 passenger.....	Injury to ankle and thumb.....	Fell alighting.
1 passenger.....	Injury to back.....	Fell alighting.
1 passenger.....	Injury to shoulder, lower back, right leg, and headaches.....	Fell boarding street-car.
1 passenger.....	Injury to wrist and thumb.....	Fell alighting.
1 passenger.....	Injury to lower jaw.....	Fire engine and street-car collided.
1 passenger.....	Injury to forehead, shin, etc.....	Fire engine and street-car collided.
1 passenger.....	Injury to neck, headaches.....	Fire engine and street-car collided.
1 passenger (child).....	Injury to left cheek.....	Fire engine and street-car collided.
1 passenger.....	Injury to hand.....	Fire engine and street-car collided.
1 passenger.....	Injury to arm, neck, knee, and finger.....	Fell in street-car.
1 pedestrian.....	Injury to eye, wrist, and forearm.....	Struck by street-car.
1 passenger.....	Injury to head, shoulder, and right hand.....	Fell in street-car.
1 passenger.....	Injury to lower back.....	Fell alighting.
1 pedestrian.....	Injury to foot and ankle.....	Struck by street-car.
1 passenger.....	Injury to lower spine.....	Fell in street-car.
1 pedestrian.....	Injury to wrist.....	Struck by street-car.
1 pedestrian.....	Injury to face and fractured rib.....	Struck by street-car.
1 passenger.....	Injury to hip.....	Fell alighting.
1 passenger.....	Injury to head, sacrum, and lower back.....	Fell in street-car.
1 passenger.....	Injury to shoulder, elbow, and wrist.....	Fell alighting.
1 pedestrian.....	Injury to scalp, headaches.....	Struck by street-car.
1 passenger.....	Injury to rib.....	Fell in street-car.
1 pedestrian.....	Injury to wrist joint and possibility of some disability.....	Struck by street-car.
1 pedestrian.....	Fatal.....	Jumped in front of street-car.
1 car-passenger.....	General bruising.....	Auto and street-car collided.
1 car-passenger.....	Broken nose.....	Auto and street-car collided.
1 passenger.....	Injury to shoulder.....	Street-car collision.
1 passenger.....	Injury to abdomen and back.....	Street-car collision.
1 passenger.....	Injury to left temple region, left thumb, lower left leg, and headaches.....	Fell in street-car.
1 passenger.....	Injury to left shoulder and chest.....	Fell alighting.
1 passenger.....	Injury to foot.....	Fell in street-car.
1 pedestrian.....	Injury to arm.....	Struck by street-car.
1 passenger.....	Injury to right shoulder.....	Fell alighting.
1 passenger.....	Fractured radius.....	Fell boarding street-car.
1 passenger.....	Injury to right lumbar and right sacro-iliac region.....	Fell in street-car.
1 passenger.....	Injury to right chest.....	Fell alighting.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 pedestrian.....	Fatal.....	Struck by interurban train.
1 passenger.....	Injury to right lumbar region.....	Fell in street-car.
1 passenger.....	Fractured two ribs.....	Fell in street-car.

APPENDIX B—Continued.  
ACCIDENT REPORT, 1948—Continued.

Persons Injured.	Result.	Cause.
<i>B.C. Electric Railway Co.—Cont.</i>		
1 passenger.....	Injury to wrist.....	Fell in street-car.
1 passenger.....	Injury to sacrum and coccyx.....	Fell in street-car.
1 passenger.....	Injury to right forearm and shoulder.....	Fell in street-car.
1 passenger.....	Injury to hip, back, and sacrum.....	Fell in street-car.
1 passenger.....	Injury to sacrum and lumbar muscles.....	Fell alighting.
1 passenger.....	Injury to hand.....	Fell alighting.
1 pedestrian.....	Injury to head.....	Struck by street-car.
1 passenger.....	Injury to knees and chest.....	Fell boarding street-car.
1 pedestrian.....	Injury to head.....	Struck by street-car.
1 passenger.....	Injury to ankle.....	Fell alighting.
1 pedestrian.....	Injury to foot.....	Struck by street-car.
1 pedestrian.....	General bruising.....	Struck by street-car.
1 passenger.....	Injury to knee, shoulder, and neck.....	Street-car collision.
1 passenger.....	Injury to chest.....	Street-car collision.
1 passenger.....	Injury to knee.....	Street-car collision.
1 passenger.....	Injury to ribs and knee.....	Street-car collision.
1 passenger.....	Injury to leg, knees, chest, and shoulder.....	Fell alighting.
1 passenger.....	Injury to chest.....	Fell in street-car.
1 passenger.....	Injury to leg and hip.....	Street-car collision.
1 car-passenger.....	Injury to hand and arm.....	Auto and street-car collided.
1 car-passenger.....	Concussion.....	Auto and street-car collided.
1 car-passenger.....	Injury to neck and shoulder.....	Auto and street-car collided.
1 car-passenger.....	Concussion and injury to neck and shoulder.....	Auto and street-car collided.
1 passenger.....	Broken hip.....	Fell alighting.
1 passenger.....	Injury to back.....	Fell in street-car.
1 pedestrian.....	General bruising.....	Struck by street-car.
1 passenger.....	Injury to ankle.....	Fell alighting.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 car-passenger.....	Injury to head.....	Auto and street-car collided.
1 car-passenger.....	Injury to head.....	Auto and street-car collided.
1 passenger.....	Injury to leg.....	Fell alighting.
1 passenger.....	Injury to hip and leg.....	Fell alighting.
1 passenger.....	Injury to lower back, coccyx, arm, and lower leg.....	Fell in street-car.
1 car-passenger.....	Injury to ribs.....	Auto and street-car collided.
1 truck-passenger.....	Injury to leg and back.....	Street-car and truck collided.
1 truck-passenger.....	Injury to scalp, arm, thumbs, and legs.....	Street-car and truck collided.
1 truck-passenger.....	Injury to cheek.....	Street-car and truck collided.
1 truck-passenger.....	Injury to head, legs, and sacrum.....	Street-car and truck collided.
1 passenger.....	Injury to head and upper back.....	Street-car and truck collided.
1 passenger.....	Injury to forehead, shoulder, etc.....	Street-car collision.
1 passenger.....	Fractured bone in foot.....	Fell alighting.
1 passenger.....	Minor injuries.....	Street-car collision.
1 passenger.....	Minor injuries.....	Street-car collision.
1 passenger.....	Injured back.....	Street-car collision.
1 passenger.....	Fractured ribs.....	Fell in street-car.
1 pedestrian.....	Fractured nose.....	Struck by train.
1 passenger.....	Fractured ribs.....	Fell in street-car.
1 passenger.....	Injured ankle.....	Fell alighting.
1 pedestrian.....	Fatal.....	Struck by car.
1 car-passenger.....	Injury to face and knees.....	Street-car and taxi collided.
1 passenger.....	Fractured ribs.....	Fell in street-car.
1 passenger.....	Fractured rib, injured arm and head.....	Fell in street-car.
1 passenger.....	Injured shoulder, bruised leg.....	Fell boarding street-car.
1 passenger.....	Fractured leg.....	Fell alighting.
1 passenger.....	Minor cuts.....	Street-car collision.
1 passenger.....	Minor facial cuts.....	Street-car collision.
1 truck-driver.....	Fatal.....	Truck and train collided.
1 passenger.....	Injured shoulder and chest.....	Street-car collision.
1 passenger.....	Injured elbow.....	Street-car collision.

APPENDIX B—Continued.  
ACCIDENT REPORT, 1948—Continued.

Persons Injured.	Result.	Cause.
<i>B.C. Electric Railway Co.—Cont.</i>		
1 passenger (child).....	Injured pelvic region.....	Street-car collision.
1 passenger.....	Injured shoulder.....	Street-car collision.
1 passenger.....	Injured back.....	Street-car collision.
1 passenger.....	Fractured ribs, injured back.....	Street-car collision.
1 passenger.....	Bruised nose.....	Street-car collision.
1 passenger.....	Bruised chest.....	Street-car collision.
1 passenger.....	Bruised and shaken.....	Street-car collision.
1 passenger.....	Bruised chest.....	Street-car collision.
1 passenger.....	Injured hand and knee.....	Fell boarding street-car.
1 passenger.....	Injured shoulder, hip, and knee.....	Fell in street-car.
1 passenger.....	Fatal injuries.....	Fell boarding street-car.
1 passenger.....	Injured legs and back.....	Injured in street-car.
1 passenger.....	Injured head, back, and ankle.....	Fell boarding street-car.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 passenger.....	Fractured rib.....	Fell boarding street-car.
1 passenger.....	Bruised and shaken.....	Street-car collision.
1 passenger.....	Bruised and shaken.....	Street-car collision.
1 passenger.....	Bruised and shaken.....	Street-car collision.
1 passenger.....	Bruised and shaken.....	Street-car collision.
1 passenger.....	General bruising.....	Fell in street-car.
1 passenger.....	Fractured foot.....	Fell alighting.
1 passenger.....	Fractured rib.....	Fell in street-car.
1 car-passenger.....	Possible fractured leg.....	Auto and street-car collided.
1 car-passenger.....	Face lacerations.....	Auto and street-car collided.
1 car-passenger.....	Face lacerations.....	Auto and street-car collided.
1 car-passenger.....	Possible fractured jaw.....	Auto and street-car collided.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 car-passenger.....	Slightly injured.....	Auto and tram collided.
1 car-passenger.....	Slightly injured.....	Auto and tram collided.
1 car-passenger.....	Slightly injured.....	Auto and tram collided.
1 car-driver.....	Injured foot.....	Auto and tram collided.
1 truck-driver.....	Injury to back, fractured jaw, and abrasions to face.....	Truck and street-car collided.
1 street-car operator.....	Leg injuries and superficial injuries to head and face.....	Truck and street-car collided.
1 passenger.....	Head injuries and shock.....	Truck and street-car collided.
1 passenger.....	Injuries to right posterior chest.....	Fell against crossbar rail.
<i>Pacific Great Eastern Railway.</i>		
1 sectionman.....	Crushed finger.....	Fell while carrying tie.
1 sectionman.....	Injured shoulder.....	Slipped while unloading icy ties.
1 machine apprentice.....	Crushed finger.....	Large wrench slipped from hand.
1 sectionman.....	Injured hip.....	Tie slipped while unloading.
1 electrician.....	General bruising.....	Fell from light-pole.
1 machine apprentice.....	General bruising.....	Fell while handling tools.
1 bridgeman.....	Injured shoulder.....	Lifting heavy bridge timbers (recurrence of old injury).
1 labourer.....	Crushed finger.....	Loading ties; dropped tie on finger.
1 carman.....	Cracked rib.....	Fell off coach roof.
1 sectionman.....	Bruised knee.....	Tie slipped while unloading.
1 trainman.....	Twisted back.....	Foot slipped while loading express.
1 trainman.....	Injured foot.....	Stepped off car and stepped on nail.
1 trainman.....	Injured elbow.....	Slipped while climbing on box car.
1 trainman.....	Scalded foot.....	Steam-hose on engine broke.
1 trainman.....	Crushed finger.....	Finger caught between two drums when unloading.
1 trainman.....	Bruised back.....	Slipped while climbing on box car.
1 trainman.....	Strained back.....	Lifting heavy gas-drum.
1 labourer.....	Cut foot.....	Struck foot with pick.
1 sectionman.....	Bruised leg, arm, and back.....	Unloading ties; fell from car.

APPENDIX B—Continued.  
ACCIDENT REPORT, 1948—Continued.

Persons Injured.	Result.	Cause.
<i>Pacific Great Eastern Railway—</i>		
<i>Continued.</i>		
1 boilermaker.....	Strained arm.....	Thrown off balance working on engine.
1 carman.....	Cracked rib.....	Foot slipped when putting king-pin on car
1 coach-cleaner.....	Bruised knee.....	Tripped over piece of iron.
1 sectionman.....	Crushed toe.....	Piece of freight fell on foot.
1 sectionman.....	Fractured toe.....	Unloading lumber; dropped plank.
1 shop labourer.....	Sand in eye.....	Sand blown from tank under pressure.
1 sectionman.....	Sprained back.....	Loading rails on top of car.
1 sectionman.....	Sprained hand.....	Tripped and fell down embankment.
1 machinist.....	Foreign body in eye.....	Turning coach-wheel with lathe.
1 trucker.....	Injured finger.....	Hand caught between side of car and angle iron.
1 bridgeman.....	Cut toe.....	Struck foot with axe.
1 sectionman.....	Bruised hand.....	Gate slammed on hand.
1 boilermaker.....	Sprained ankle.....	Slipped when moving machine.
1 engine workman.....	Cut and bruised thumb.....	Hand struck by workman's shovel.
1 sectionman.....	Cut instep.....	Slipped when loading ties.
1 apprentice.....	Pinched finger.....	Removing heavy plate from snow-plough.
1 lineman's helper.....	Bruised foot.....	Fell when carrying large screen.
1 sectionman.....	Broken bone, foot.....	Track-jack fell on foot.
1 machinist.....	Bruised ankle.....	Hose fell on foot.
1 sectionman.....	Cut hand.....	Cut hand with axe.
1 sectionman.....	Bruised finger.....	Caught between rails.
1 shed foreman.....	Bruised.....	Fell between cars.
1 machinist's helper.....	Pinched finger.....	Caught hand between main rod and part of locomotive.
1 sectionman.....	Bruised ribs.....	Track-jack slipped.
1 carman.....	Injured leg.....	Twisted rail flew back when cut.
1 labourer.....	Pain in right side.....	Foot slipped.
1 patrolman.....	Injured collar-bone.....	Thrown from speeder.
1 levelman.....	General bruising.....	Jumped from speeder.
1 brakeman.....	Sprained ankle.....	Slipped on step boarding train.
1 locomotive engineer.....	Head concussion.....	Head struck scaffold.
1 trainman.....	General bruising.....	Knocked off ladder by speeder.
1 conductor.....	Sprained knee.....	Slipped on snow.
1 trainman.....	Injured back.....	Slipped on snow.
1 passenger.....	Shock.....	Fell in sleeping-car.
 <i>Comox Logging and Railway</i>		
<i>Co.</i>		
1 employee.....	Fatal.....	Fell from front of moving locomotive.

APPENDIX C.  
LIST OF RAILWAYS AND SUMMARY OF MILEAGE.

*Industrial Railways.*

Name.	Operating.	Mileage.
1. Alberni Pacific Lumber Co., Ltd.....	Port Alberni.....	75.0
2. Begbie Pole-yard.....	Begbie.....	0.9
3. B.C. Cement Co., Ltd.....	Bamberton and Blubber Bay.....	2.2
4. B.C. Forest Products, Ltd.....	Youbou.....	35.0
5. B.C. Forest Products, Ltd.....	Port Renfrew.....	24.0
6. B.C. Forest Products, Ltd.....	San Juan.....	32.0
7. B. & D. Logging Co.....	Hyde Creek, Vancouver Island.....	1.0
8. Bloedel, Stewart & Welch, Ltd.....	Sproat Lake.....	7.5
9. Bloedel, Stewart & Welch, Ltd.....	Great Central.....	1.0
10. Bloedel, Stewart & Welch, Ltd.....	Menzies Bay.....	63.0
11. Bloedel, Stewart & Welch, Ltd.....	Franklin River.....	55.5
12. Britannia Mining & Smelting Co., Ltd.....	Britannia.....	4.9
13. Canadian Forest Products, Ltd.....	Englewood.....	61.1
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.....	25.9
20. Crow's Nest Pass Coal Co., Ltd.....	Coal Creek.....	7.5
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.....	18.0
26. Mayo Lumber Co., Ltd.....	Paldi.....	5.0
27. Morrissey, Fernie and Michel Railway.....	Fernie.....	7.6
28. Northern and Eagle River Co.....	Stillwater.....	5.1
29. Pacific Coast Terminals, Ltd.....	New Westminster.....	5.2
30. Powell River Co., Ltd.....	Cumshewa Inlet.....	17.5
31. Salmon River Logging Co., Ltd.....	Sayward.....	36.0
32. Victoria Lumber Co., Ltd.....	Chemainus.....	57.1
33. Victoria Lumber Co., Ltd.....	Dunsmuir.....	8.5
34. Western Forest Products, Ltd.....	Rounds.....	40.3
35. Wellington Colliery Railway Co.....	Cumberland.....	22.5
		771.7

*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.....	97.1
	Interurban lines.....	109.2
	Leased lines.....	61.3
Nelson street-railway.....		4.0
		271.6

## APPENDIX C—Continued.

## LIST OF RAILWAYS AND SUMMARY OF MILEAGE—Continued.

<i>Summary of Railway Mileage.</i>		Mileage.
Industrial railways .....		771.7
Common carriers .....		560.7
Tramways (city) .....		101.1
		<hr/>
Total, all lines .....		1,433.5

## APPENDIX D.

## LIST OF CRANES AND PORTABLE EQUIPMENT 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.
B.C. Cement Co., Ltd. ....	Crane No. 21439 B.C.
B.C. Forest Products, Ltd. ....	Crane No. 20742 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.
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. ....	Internal-combustion Locomotive No. 5.
	Internal-combustion Locomotive No. 8.
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 PORTABLE EQUIPMENT INSPECTED BY RAILWAY DEPARTMENT—Continued.

Commox Logging & Railway Co.....	Unloader D.R.P. No. 2. Crane No. 41922 B.C. Internal-combustion Locomotive Un- loader No. 3. Gas Internal-combustion Locomotive No. 20.
Consolidated Mining & Smelting Co. of Canada, Ltd.....	Crane No. 12772 B.C.
Deeks Sand & Gravel Co., Ltd.....	Gas Internal-combustion Locomotive No. 1.
Dominion Bridge Co., Ltd.....	Crane No. 44129 B.C. Crane No. 44317 B.C.
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 Dry Dock.....	Crane No. 22582 B.C. Crane No. D.R. 314.
Evans, Coleman & Evans, Ltd.....	Crane No. D.R. 316.
Hamilton Bridge Co.....	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.
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 and Michel Railway.....	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. 3, D.R. 49. 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. Steam-shovel. Diesel-electric Locomotive No. 551.
Point Hope Shipyards.....	Crane No. D.R. 315.
Powell River Co., Ltd. (Kelley Logging Co., Ltd.).....	Crane No. 44893 B.C. Diesel Internal-combustion Loco- motive.
Prince Rupert Drydock & Shipyards.....	Crane No. D.R. 290.
Robertson & Hackett Sawmill.....	Crane No. 44584 B.C. Crane No. 12545 B.C.
Salmon River Logging Co., Ltd.....	Gas Internal-combustion 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.

## APPENDIX D—Continued.

## LIST OF CRANES AND PORTABLE EQUIPMENT INSPECTED BY RAILWAY DEPARTMENT—Continued.

Vancouver Creosoting Co., Ltd.....	Crane No. D.R. 283. Gas Internal-combustion 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. C.C.C. 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	502.4	210.8	43.2	2,068.2	545.6
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	28.6	.....	.....	140.8	28.6
British Columbia Electric Railway (leased).....	43.4	17.6	.....	.....	43.4	17.6
Under the jurisdiction of the Provincial Government—						
Pacific Great Eastern Railway.....	349.8	37.0	.....	.....	349.8	37.0
British Columbia Electric Railway.....	179.3	27.2	.....	.....	179.3	27.2
Nelson street-railway.....	4.0	.....	.....	.....	4.0	.....
Industrial railways.....	50.7	34.5	570.4	116.1	621.1	150.6
Totals.....	3,984.4	975.9	883.2	184.2	4,867.6	1,160.1

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