

Railway Department

PROVINCE OF BRITISH COLUMBIA

ANNUAL REPORT

Year ended December 31st

1947



VICTORIA, B.C. :

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1948.

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For the year ended December 31st

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Printed and Published by the Railway Department, Victoria, B.C.

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, 1947, with Appendices.

L. H. EYRES,
Minister of Railways.

Victoria, B.C., February 20th, 1948.

VICTORIA, B.C., December 31st, 1947.

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

SIR,—I beg to submit herewith the Thirtieth Annual Report of the Railway Department, covering the year 1947, together with Appendices.

Your obedient servant,

J. M. STEWART,
Deputy Minister and Chief Engineer.

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, 1947, consisted of Deputy Minister and Chief Engineer, Chief Inspector, two Inspectors, 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 survey of the proposed extension of the Pacific Great Eastern Railway north to the Peace River region. A description of the work is included in this Report.

In the industrial field the Mechanical Branch of the Department extended their inspections, especially of equipment. A more extensive programme of inspection of equipment was instituted on the British Columbia Electric Railway.

Other activities are described in the several sections of this Report.

COMMON CARRIERS.

THE PACIFIC GREAT EASTERN RAILWAY.

Proposed Northern Extension.

Surveys for the proposed northern extension of the Pacific Great Eastern Railway were continued under the supervision of the Department. Two survey parties were placed in the field—season of 1947—one between Quesnel and the Fraser River crossing north of Prince George, and another between Dawson Creek and East Pine, also from Centurion Junction through Fort St. John to Beaton River crossing.

Better progress was made than during the 1946 season; personnel had been trained, supplies were obtainable, and trucks and wagons used instead of pack-horses and boats.

The following is a summary of the 1946-47 field and office work:—

	MAIN-LINE MILEAGE.		
	Preliminary and Resurvey Lines.	Projected or Revised Location.	Plans and Profiles prepared.
(a) Quesnel to Fraser River (14 miles north of Prince George).....	140	To be completed in 1948.	
(b) Fraser River to Summit Lake.....	.....	22	22
(c) Red Rocky Creek to Hudson Hope (Canadian Pacific survey).....	.....	204	204
(d) Hudson Hope to East Pine via Windy Creek and Pine River.....	75	64	64
(e) Red Rocky Creek to Centurion Junction via Pine Pass	95	131	131
(f) Centurion Junction to Dawson Creek via East Pine and Coldbrook Creek.....	89	81	81
(g) Centurion Junction via Fort St. John to Beaton River (Canadian Pacific Railway survey of crossing).....	106	93	93
Totals.....	505	595	595

Of the above mileage, office projections and revisions of item (a), 128 miles between Quesnel and the crossing of the Fraser River, will be completed by the spring of 1948. From Taylor Flat past Fort St. John to Murdale, a 32-mile section under item (g), is reconnaissance only. Additional surveys are required in the vicinity of Beaton River crossing to assure the best procurable location in this difficult terrain.

The Centurion Creek-Fort St. John-Beaton River line provides economical access from the Pine to the Peace valley, and a satisfactory crossing of the Peace comparable to the railway-highway bridge at the Town of Peace River; it will also be the means of developing agricultural land along the route, especially north of the Peace River.

A detailed study of railway surveys, resources reports, physical features, and economic factors was carried out to facilitate negotiations for the satisfactory solution of the Pacific Great Eastern Railway problem and the development of North-eastern British Columbia. Reports were prepared covering the following subjects: Comparison of Railway Routes via Peace Pass and Pine Pass; Economic Studies made by Canadian National Railways and Pacific Great Eastern Railway; Resources in relation to Potential Tonnage for Railway Routes via Peace Pass and Pine Pass; Pine Valley Coal Production and Markets; Proposals to develop Natural Resources by a Railway System to Pacific Ports.

Essential data, maps, and plans accompanied the above reports, forming comprehensive documents to promote the development of natural resources by means of a railway to the Pacific Coast.

Operation—General Manager's Report.

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

"Maintenance of Way.—This department of the Railway has seriously suffered from unavoidable neglect during the war years 1940-47 due to very severe restrictions in both labour and material, making it physically impossible to attempt any but the most vitally essential maintenance-work that would keep the track and structures in a safe condition for operation. The steadily increasing traffic during the war years from 1940 placed a great strain on the track structure, necessitating the adoption of precautionary measures in train operation. Resulting from an examination by the Inspectors from the Railway Department, covering the known condition of the Railway's physical properties, and periodically reported on by the Railway officers to the directorate, the Provincial Government authorized the expenditure of considerable money to cover the long-deferred maintenance-of-way work. This included essential strengthening of the track structures, together with some betterment items, as capital appropriations. A track diversion of considerable extent at Mile 343.5 was undertaken during the fall months and completed in December. This work was caused by the complete demolition of a pile-trestle bridge spanning an unstable and sliding side-hill area. Several minor derailments of loaded freight-cars occurred at various points during the year, apparently due to top-heavy loads in large-capacity foreign cars, creating an oscillating motion on uneven track. The heavy loading had been permitted during the war years under the Transport Controller's regulations. The gradual deterioration of the road-bed resulted in the condition described.

"Maintenance of Equipment.—Each year of operation increases the problems of the mechanical department in its endeavour to keep the Railway-owned equipment in serviceable condition to handle traffic, both freight and passenger. Shortage of labour and material is still a very major handicap to the full production required of the mechanical department. In a realization of the increasing seriousness due to the life of the Railway equipment reaching absolute exhaustion through old age, also due to its state of obsolescence, authority was granted to purchase two new locomotives, seventy-five new all-steel box cars and other miscellaneous freight and passenger cars. The locomotives have been received and the box cars will reach Vancouver early in 1948.

"The equipment purchased and received is listed herewith: Three Pullman tourist sleeping-cars (steel), used; one passenger (day-coach) car (steel), used; four flat cars (steel underframe), used; ten gondola cars (steel underframe), used; seventy-five box cars (steel), new (50 per cent. received); two locomotives, new.

“Operation.—The continued shortages of rolling-stock of practically every description has seriously handicapped transportation and added very materially to the transportation expense. Practically every kind of equipment is required—locomotives (steam and diesel), passenger-coaches, sleeping-cars, baggage-cars, express and mail cars, stock-cars, gondola or open-top cars, flat cars, refrigerator cars, logging-cars, outfit-cars, locomotive cranes, ballast-cars, air dump-cars, tractor-shovels, bulldozers, and ditching-machines. The shortage of housing accommodation for employees, particularly at Squamish, will be temporarily overcome by the purchase of army huts at Nanaimo and transferring them by barge to Squamish. This was undertaken late in 1947 and will not be completed until the spring of 1948. It will provide housing for both married and single men, also additional and very necessary extensions to mechanical and office accommodation. To a much lesser extent, housing is being provided at various points along the line of railway. Continued increase in all branches of revenue traffic was evident in 1947. It approximated 27 per cent. Passenger traffic during the holiday months, June to September, inclusive, indicated to a pleasing degree the popularity of the train service and scenic attractions to the tourist, particularly those from the United States. The paid advertising through the medium of publications and the press, and the free publicity through comments from pleased patrons, is necessitating a further amplification of passenger-train service for 1948. In freight traffic, forest products continue to hold first place in volume of car-load shipments. The European export market is expected to lessen during 1948, but the United States purchases may tend to offset to some extent. The shipment of pit-props to England has ceased. Live stock is expected to be similar in volume during 1948 to that of 1947. A satisfactory condition existed in the movement of fruit and vegetables, fresh and canned, from various points along the line. The drainage programme being undertaken by the Dominion Government in the Pemberton area and the probability of expansion of the irrigated acreage in and about Lillooet will result in much larger crops of vegetables and fruits for shipment in both the raw and manufactured state. With the prospect of increases in both freight and passenger traffic, better public and employee service from improved track, equipment, mechanical shop, and housing conditions, the year 1948 ought to reflect an improved financial status for the Pacific Great Eastern Railway.

“ W. H. TOBEY,
General Manager.”

Inspecting Engineer's Report.

“ Inspections of the properties of the Pacific Great Eastern Railway have been made pursuant to 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, floating equipment, and power, light, and water services at Squamish, Lillooet, and Williams Lake.

“ 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. All the responsible officers afforded essential information, and the results of detailed examinations and considered decisions were concurred in by these officers. The ensuing reports covering emergent work to be completed in 1947 were considered by the management and the board of directors. Orders were issued forthwith and maintenance-work accelerated by contracts let to augment the efforts of the Company's forces.

“ The conditions outlined in the Company's report for the year 1946 still exist, in that much of the maintenance programme deferred throughout the war-effort years is still in arrears. There is a continued shortage of labour and material. Only the urgent requirements were undertaken—notably tie renewals, bridge repairs, ‘Mud Hill’

revision, riprap at erosions, and clearing active slides. Notwithstanding adverse factors such as broken ties, churning track, heavy car-loadings, and wet weather, the vigorous co-operation of all ranks averted serious interruptions to train movements.

"Subject to full precautionary measures such as track patrols and structure inspections, with attendant maintenance-work, observation of slow orders and safety instructions, also inspection of and adequate repairs to rolling-stock, the railway-track and its structures are in a fair condition for the safe operation of traffic under present equipment loadings and will be reasonably free from danger to the public using the railway.

"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.

ACTIVITIES OF INSPECTORS.

1. Inspection of locomotives on industrial railways, including testing of boilers, brakes, etc., and checking all plans and specifications in connection with same.
2. Inspection of all rolling-stock and equipment on all Provincial railways.
3. Inspection of all locomotive cranes and equipment where operated on track.
4. Inspection of locomotives and equipment of the Pacific Great Eastern Railway Company.
5. Investigation of accidents.
6. Supervision of reconstruction of locomotives.
7. Inspection of all locomotives (including C.P.R., E. & N., C.N.R., G.N.R.) in the Province in regard to forest-protection.
8. Conducting examinations for locomotive engineers, conductors, and power-car operators.
9. Inspection of cars and equipment of the British Columbia Electric Railway Company and the Nelson street-railway, and administering the regulations made pursuant to the "Railway Act" in regard to operation. Checking schedules and overcrowding of cars.
10. Inspection of tracks and structures on all Provincial railways.

EQUIPMENT INSPECTION BRANCH.

CHIEF INSPECTOR'S REPORT.

"The annual report of work accomplished by the Vancouver office of the Department during the year 1947 is respectfully submitted herewith.

"During the year all the railways operated to full capacity. Due to the shortage of new replacements, extensive repairs were made to existing motive equipment under the advisement and supervision of the Department. Considerable railway equipment was imported from the United States, which was inspected and approved by the Inspectors prior to importation.

"All logging and industrial railways, their equipment, bridges, and structures were inspected during the year. A card-index system was installed in the office, so that

Inspectors could check up on this phase of the work and make follow-up inspections where it was found necessary to have instructions carried out and put into effect by the companies. As a result of these inspections, considerable replacements have been made and the industrial railways are in a safe condition to operate.

"Eight new power rail-cars for the transportation of workmen in the logging industry were manufactured in British Columbia during the year. This equipment was built to the Department's design and under the supervision of the Inspectors. In addition to locomotives imported for the industry, two new locomotives were manufactured in Eastern Canada for the Pacific Great Eastern Railway. These were tested and certified before being put into service in British Columbia.

"During the year regular inspections were made of the British Columbia Electric Railway Company's rolling-stock and street-railway equipment both in the Lower Mainland and Victoria districts. Eighty miles of street-railway was inspected in Vancouver, and the Company instituted a rehabilitation programme, employing extra track crews so that the track could be restored to pre-war condition. Since this programme has been put into effect, a marked improvement in the condition of the Vancouver City tracks has been achieved.

"Districts I and III of the British Columbia Electric Railway were inspected. Certain recommendations were put into effect, but in general these railways are well maintained and in safe condition to operate.

"Annual inspection and certification of all locomotives, other than steam, by Department Inspectors, and monthly inspection by company inspectors, was instituted and put into effect during 1947. Twenty-four of this type of locomotive were tested and certified during the year by the Inspectors, in addition to the annual inspection and certification of steam-locomotives, rail-cars, and auxiliary steam equipment on all Provincial railways.

"On the Nelson street-railway three inspections were made of the equipment and one of the trackage. These inspections showed the equipment safe to operate, but it should be noted the street-cars are very old and replacements will soon be necessary. The trackage is in fairly good condition, the Company having renewed cross-ties and rails where necessary.

"The surface railway of the Britannia Mining and Smelting Company, Limited, was inspected, and eight operators of motive equipment examined and certified by the Inspectors. Recommendations made by the Inspectors were put into effect. No accidents occurred on this railway in 1947.

"Two general inspections of the Pacific Great Eastern Railway were made during the year in company with the Inspecting Engineer. 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 is covered by separate reports. During the year the Inspectors made inspections of the rolling-stock and applied annual hydrostatic tests to certify all the Company's locomotives and other steam-boilers.

"The air-locomotives of the Crow's Nest Pass Coal Company, by arrangement with the Department of Mines, were hydrostatically tested. The steam and diesel-electric motive power of this Company and its subsidiary company, Morrissey, Fernie, and Michel Railway, was also annually tested and certified and the road-bed inspected.

"The trackage of companies owning and operating locomotive cranes was inspected. The boilers of the cranes were tested, and in a number of instances the engineers were examined and issued certificates authorizing them to operate as engineers on steam and internal-combustion locomotive cranes.

"Four hundred and ninety inspections covering the fire-protection appliances of locomotives were made on the C.P.R., C.N.R., G.N.R., and E. & N. Railway. Reports of these inspections were forwarded to the British Columbia forestry department and to the Board of Transport Commissioners at Ottawa. In cases where locomotives had

been reported setting fires, Inspectors were dispatched to make special inspections. Several of these special inspections were made in the East Kootenay and Kamloops districts during the summer season.

"In June, 1947, the Pacific Great Eastern Railway Company made arrangements with the Department to obtain the services of Inspector J. W. Millar, on leave of absence, to be superintendent of the railway. This created a vacancy for an Inspector in the Department, and in order to fill the vacancy it was necessary to hold a qualifying examination and to set up an Examination Board in conjunction with the Civil Service Commission. As a result, Inspector W. E. Tyler qualified and was appointed on June 15th, 1947.

"New regulations with respect to railway safety appliances and rail-cars used for the conveyance of workmen and passengers were drafted and published during the year, and the revised regulations governing locomotives and locomotive cranes, drafted in 1946, were published in pamphlet form and distributed during 1947.

"All accidents during the year on railways under the Department's jurisdiction were investigated and reports duly filed. Inspectors attended all inquests concerning fatal accidents on the British Columbia Electric Railway. On accident-prevention the Department was represented at the International Safety Conference held at Longview, Washington, and at the joint convention of the American Society of Mechanical Engineers and the National Board of Boiler and Pressure Vessel Inspectors held at Los Angeles, California, during the year. Subjects relating to safety, as well as matters vital to the interests of this Department, were discussed to advantage at these international meetings.

"With respect to safety on the logging and industrial railways, an earnest endeavour was made on the part of the Inspectors to more strictly enforce the rules of operation, and as a result it is gratifying to report there was not a fatal accident on these railways during the year.

"Following is a report of the inspection-work performed during the year 1947:—

Hydrostatic tests applied to boilers.....	165
Internal and external inspections of boilers.....	25
Internal-combustion locomotives inspected and certified.....	13
Power rail-cars inspected.....	141
Power rail-car certificates issued.....	38
Cars inspected on industrial railways.....	1,711
Miles of track inspected.....	1,115
Locomotives inspected other than hydrostatic tests.....	82
Locomotive engineers examined.....	17
Certificates issued to locomotive engineers.....	16
Conductors examined.....	15
Certificates issued to conductors.....	13
Power-car operators examined.....	23
Certificates issued to power-car operators.....	22
Locomotive-crane engineers examined.....	1
Certificates issued to locomotive-crane engineers.....	1
B.C. Electric Railway street and interurban cars inspected.....	116
B.C. Electric Railway locomotives inspected and certified.....	11
Accidents investigated on industrial railways.....	6
Fatal accidents on industrial railways.....	—
Accidents investigated on common-carrier railways.....	1
Fatal accidents on common-carrier railways.....	1
Accidents investigated on B.C. Electric Railway.....	21
Fatal accidents on B.C. Electric Railway.....	11

Boiler designs approved by the Department.....	4
Air-reservoir designs approved by the Department.....	1
Passenger power rail-car designs approved by the Department	3
New passenger power rail-cars built under supervision of the Department	8
New locomotives	2
Second-hand locomotives imported.....	4
Second-hand locomotive cranes imported.....	2
Inspections made of fire-protective appliances on industrial locomotives	42
Inspections made of fire-protective appliances on locomotives of C.P.R., C.N.R., G.N.R., E. & N. Railway, and National Har- bours Board for Board of Transport Commissioners.....	490

" 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 rules and regulations, Boiler Code, governing the design and construction of steam-boilers and pressure-vessels	726
Approving rules and regulations governing Locomotives, Part III; Locomotive Cranes, Part IX; Power-cars and Rail-cars, Part V; and Railway Safety Appliance Standards, Part IV; also amending Part I, Rules and Regulations governing Location and Construction	727
Granting the Hillcrest Lumber Company leave to construct a grade highway crossing in Cowichan District, Vancouver Island	728
Appointing W. E. Tyler, Inspector, pursuant to section 210 of the "Railway Act," to investigate the circumstances connected with any accident or casualty to life	729
Giving consent to the issue by the British Columbia Electric Railway Company, Limited, of 3¼ per cent. general mortgage bonds, and also to the sale of same	730
Approving, pursuant to section 235 of the "Railway Act," the Local and Joint Passenger Tariff No. 38 of the Pacific Great Eastern Railway	731

APPENDIX B.

ACCIDENT REPORT, 1947.

	Injured.	Killed.
British Columbia Electric Railway Company, Limited—		
Passengers	116	---
Employees	1	---
Other persons	58	11
Pacific Great Eastern Railway Company—		
Passengers	---	---
Employees	38	---
Other persons	---	1
Industrial railways—		
Employees	7	---
Other persons	1	---
Locomotive cranes—		
Employees	---	---
Totals	221	12

APPENDIX B—Continued.
ACCIDENT REPORT, 1947—Continued.

Persons injured.	Result.	Cause.
<i>B.C. Electric Railway Co.</i>		
1 passenger.....	Injury to head.....	Street-car collision.
1 passenger.....	Injury to back of neck, shoulders, arms.....	Street-car collision.
1 passenger.....	Injury to back and leg.....	Fell alighting.
1 passenger.....	Injury to knee.....	Fell in street-car.
1 passenger.....	Injury to elbow and back.....	Fell alighting.
1 passenger.....	Injury to knee and back.....	Street-car collision.
1 passenger.....	Injury to shoulder and ribs.....	Fell in street-car.
1 passenger.....	Injury to shoulder and buttocks.....	Fell in street-car.
1 passenger.....	Injury to knee, hip, and ankle.....	Fell alighting.
1 passenger.....	Fractured knee-cap.....	Fell boarding.
1 passenger.....	Injury to knees and ankle.....	Fell alighting.
1 car-passenger.....	Fractured fibula.....	Auto and street-car collided.
1 car-passenger.....	General bruising.....	Auto and street-car collided.
1 passenger.....	Fractured ribs.....	Auto and street-car collided.
1 passenger.....	Fractured left radius.....	Fell in street-car.
1 passenger.....	General bruising.....	Auto and street-car collided.
1 car-passenger.....	General bruising.....	Auto and street-car collided.
1 passenger.....	Injury to ankle, leg, and back.....	Fell alighting.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 car-driver.....	Injury to knee.....	Auto and street-car collided.
1 passenger.....	Injury to spine, chest, and back.....	Fell alighting.
1 passenger.....	Injury to patella.....	Fell alighting.
1 car-passenger.....	Injury to wrist.....	Street-car collision.
1 car-passenger.....	Injury to shoulder and chest.....	Street-car collision.
1 passenger.....	Injury to ankle and foot.....	Fell alighting.
1 car-driver.....	Injury to lumbar region.....	Auto and street-car collided.
1 passenger.....	Injury to foot.....	Street-car collision.
1 car-driver.....	Injury to vertebrae.....	Street-car collision.
1 car-passenger and son.....	Injury to shoulder.....	Street-car collision.
1 car-passenger.....	Injury to neck.....	Street-car collision.
1 car-passenger.....	Injury to leg.....	Street-car collision.
1 passenger.....	Injury to vertebrae.....	Fell alighting.
1 car-passenger.....	Fatal injuries.....	Auto and train collided.
1 car-passenger.....	Injury to lobe of liver.....	Passenger in auto.
1 car-passenger.....	Concussion.....	Passenger in auto.
1 passenger.....	Injury to knee, arm, and shoulder.....	Fell boarding street-car.
1 truck-passenger.....	Injury to head, chest, and back.....	Truck and street-car collided.
1 car-driver.....	Injury to ribs, pelvis bone, and iliac bone.....	Auto and street-car collided.
1 passenger.....	Injury to back, pelvis, and legs.....	Auto and street-car collided.
1 passenger.....	Injury to face, shoulder, and leg.....	Passenger in street-car.
1 passenger.....	Injury to ankle and left shoulder.....	Injured boarding street-car.
1 pedestrian.....	Fractured infra-orbital ridge.....	Struck by street-car.
1 car-driver.....	Injury to eyebrows and forehead.....	Auto and street-car collided.
1 car-driver.....	Fatal.....	Auto and street-car collided.
1 car-passenger.....	Injury to skull and ribs.....	Passenger in auto.
1 car-passenger.....	Injury to thigh, hands, eyes, and teeth.....	Passenger in auto.
1 car-passenger.....	General bruising.....	Passenger in auto.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 passenger.....	Injury to right foot.....	Fell alighting.
1 car-passenger.....	Injury to neck, chest, pelvis, and thigh.....	Auto and street-car collided.
1 car-passenger.....	Injury to skull and lung.....	Auto and street-car collided.
1 passenger.....	Injury to knee, forehead, and shoulder.....	Fell in street-car.
1 passenger.....	Nervous shock.....	Truck and street-car collided.
1 passenger.....	Injury to ribs.....	Street-car collision.
1 pedestrian.....	Fractured left femur.....	Struck by two-car train.
1 passenger.....	Injury to foot.....	Fell in street-car.
1 pedestrian.....	Injury to head and hip.....	Struck by street-car.
1 pedestrian.....	Injury to head.....	Struck by street-car.
1 passenger.....	Injury to back and hip.....	Fell alighting.
1 passenger.....	Injury to knee.....	Fell in street-car.
1 passenger.....	Injury to left leg.....	Fell in street-car.

APPENDIX B—Continued.
ACCIDENT REPORT, 1947—Continued.

Persons injured.	Result.	Cause.
<i>B.C. Electric Railway Co.—Cont.</i>		
1 passenger.....	Injury to right shoulder.....	Fell alighting.
1 passenger.....	Injury to left groin.....	Street-car derailed.
1 passenger.....	Injury to shoulder, ribs, and head.....	Street-car derailed.
1 passenger.....	Injury to head, back, and side.....	Fell alighting.
1 passenger.....	Injury to leg.....	Fell in street-car.
1 car-driver.....	Injury to left elbow.....	Auto and street-car collided.
1 passenger.....	Injury to right hand.....	Fell boarding.
1 passenger.....	Shock, bruises to back and sacrum.....	Street-car collision.
1 passenger.....	Injury to ribs.....	Fell boarding.
1 passenger.....	Injury to upper arm, chest, and leg.....	Fell alighting.
1 passenger.....	Injury to chest.....	Split switch.
1 car-driver.....	Injury to back and head, shock.....	Auto and street-car collided.
1 car-passenger.....	Injury to neck.....	Auto and street-car collided.
1 car-passenger.....	Injury to neck.....	Auto and street-car collided.
1 passenger.....	Injury to left shoulder and lower back.....	Struck by doors boarding street-car.
1 passenger.....	Injury to left arm.....	Fell alighting.
1 car-driver.....	Injury to neck and shoulder.....	Auto and street-car collided.
1 car-passenger.....	Injury to neck and shoulder.....	Auto and street-car collided.
1 passenger.....	Injury to right shoulder, abdomen, and legs.....	Fell in street-car.
1 passenger.....	Injury to chest.....	Fell in street-car.
1 passenger.....	Injury to arms, shoulders, wrist, and lumbar region.....	Fell alighting.
1 passenger.....	Injury to back.....	Street-car collision.
1 passenger.....	Injury to back and elbow.....	Street-car collision.
1 passenger.....	Injury to toes.....	Fell alighting.
1 passenger.....	Injury to dorsal region.....	Street-car collision.
1 passenger.....	Injury to lower back.....	Street-car collision.
1 passenger.....	Injury to head.....	Street-car derailed.
1 passenger.....	Injury to back.....	Street-car collision.
1 passenger.....	Injury to chest.....	Street-car collision.
1 car-passenger.....	Injury to skull and back.....	Auto struck by street-car.
1 passenger.....	Injury to hand.....	Street-car collision.
1 passenger.....	Injury to eye.....	Street-car collision.
1 pedestrian.....	Fatal.....	Threw himself under train.
1 passenger.....	Injury to head and nervous system.....	Fell alighting.
1 passenger.....	Injury to sacrum and coccyx.....	Fell in street-car.
1 passenger.....	Fractured femur.....	Struck by street-car doors.
1 passenger.....	Injury to back and wrist.....	Street-car collision.
1 passenger.....	Injury to chest and dorsal spine.....	Street-car collision.
1 passenger.....	Injury to back.....	Fell in street-car.
1 car-driver.....	Injury to back.....	Auto and street-car collided.
1 pedestrian.....	Fatal injuries.....	Struck by street-car.
1 passenger.....	Injury to shoulder, chest, and knee.....	Street-car collision.
1 passenger.....	Injury to right hand.....	Street-car collision.
1 passenger.....	Injury to head and ear.....	Street-car collision.
1 passenger.....	Injury to base of skull.....	Street-car collision.
1 passenger.....	Injury to lower back.....	Fell boarding street-car.
1 pedestrian.....	Injury to back and ribs.....	Struck by street-car.
1 pedestrian.....	Injury to head.....	Struck by street-car.
1 passenger.....	Injury to ribs.....	Fell in street-car.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 passenger.....	Injury to shoulder and elbow.....	Struck by street-car door.
1 passenger.....	Fractured colles.....	Fell alighting.
1 car-driver.....	Injury to face, shock.....	Auto and street-car collided.
1 pedestrian.....	Fractured right pubic bone.....	Struck by train.
1 passenger.....	Injury to back and leg.....	Fell alighting.
1 passenger.....	Injury to side, back, elbow, and hand.....	Fell in street-car.
1 pedestrian.....	Injury to wrist, and leg broken.....	Struck by street-car.
1 pedestrian.....	Fatal.....	Struck by street-car.
1 passenger.....	Injury to shoulder, arm, neck, and back.....	Fell in street-car.
1 pedestrian.....	Fatal.....	Struck by train.
1 passenger.....	Injury to left side of chest.....	Fell in street-car.

APPENDIX B—Continued.
ACCIDENT REPORT, 1947—Continued.

Persons injured.	Result.	Cause.
<i>B.C. Electric Railway Co.—Cont.</i>		
1 passenger.....	Injury to right shoulder.....	Fell alighting.
1 passenger.....	Injury to left knee.....	Fell alighting.
1 passenger.....	Injury to back, knee, and head.....	Fell alighting.
1 car-driver.....	Injury to forehead, back, and cervical region.....	Auto and street-car collided.
1 pedestrian.....	Injury to left elbow.....	Struck by street-car.
1 passenger.....	Injury to coccyx.....	Fell in street-car.
1 passenger.....	Shock and bruises.....	Street-car collision.
1 passenger.....	Bruised shoulders, back, and legs.....	Street-car collision.
1 passenger.....	Sprained neck and lower back.....	Street-car collision.
1 passenger.....	Injury to head.....	Street-car collision.
1 passenger.....	Injury to back and bruised arm.....	Street-car collision.
1 passenger.....	Sprained finger, back, and ankle.....	Street-car collision.
1 passenger.....	Shock.....	Street-car collision.
1 passenger.....	Shock.....	Street-car collision.
1 passenger.....	Injury to right shoulder.....	Street-car collision.
3 passengers.....	Shaken up.....	Street-car collision.
1 passenger.....	Sprained back and left knee-joint.....	Street-car collision.
1 passenger.....	Sprained ankle.....	Street-car collision.
1 passenger.....	Injury in right sacro-iliac joint.....	Street-car collision.
1 car-driver.....	Bruises and shock.....	Auto struck by street-car.
1 car-passenger.....	Bruised knee.....	Auto struck by street-car.
1 car-passenger.....	Sprained shoulders.....	Auto struck by street-car.
1 car-passenger.....	Shock.....	Auto struck by street-car.
1 car-passenger.....	Shock and head injury.....	Auto struck by street-car.
1 taxi-driver.....	Injury to back.....	Taxi struck by street-car.
1 motorman.....	Electrical shock and injury to back.....	Contact with live circuit-breaker.
1 bicyclist.....	Concussion.....	Struck by street-car.
1 passenger.....	Fractured ankle.....	Fell alighting.
1 passenger.....	Injury to lower dorsal.....	Fell in street-car.
1 passenger.....	Injury to right knee.....	Fell in street-car.
1 pedestrian.....	Injury to chest, back, and knee.....	Struck by street-car.
1 passenger.....	Injury to neck and shoulders.....	Fell in street-car.
1 taxi-passenger.....	Shock, cuts, and bruises.....	Taxi collided with street-car.
1 passenger.....	Injury to chest and forehead.....	Fell alighting.
1 truck-passenger.....	Injury to ribs and concussion.....	Truck and street-car collided.
1 passenger.....	Injury to right side of chest.....	Fell in street-car.
1 passenger.....	Injury to ankle.....	Fell boarding.
1 passenger.....	Fractured arm and leg.....	Fell alighting.
1 passenger.....	Fractured femur.....	Fell in street-car.
1 car-passenger.....	Injury to right knee.....	Auto and street-car collided.
1 passenger.....	Fractured ankle bone.....	Fell alighting from train.
1 passenger.....	Sprained back and ankle.....	Fell in street-car.
1 passenger.....	Fractured ankle.....	Fell in street-car.
1 passenger.....	Fractured foot.....	Fell boarding street-car.
1 passenger.....	Injury to right side of chest.....	Fell in street-car.
1 pedestrian (child).....	Cut on left side of forehead.....	Crossed in front of street-car.
1 car-driver.....	Injuries to head.....	Auto hit rear of street-car.
1 pedestrian.....	Superficial head lacerations.....	Tripped and fell against street-car.
1 car-passenger.....	Minor cuts and bruises.....	Auto and street-car collided.
6 passengers.....	Minor injuries.....	Collision between two street-cars.
1 car-passenger.....	Bruised shins.....	Street-car and auto collided.
1 passenger.....	Severely sprained ankle.....	Fell alighting.
1 pedestrian.....	Fatal.....	Ran two-wheel cart into street-car.
1 car-passenger.....	Soreness in muscles, neck, and upper back.....	Street-car struck auto.
1 passenger.....	Injury to knees.....	Fell alighting.
<i>Pacific Great Eastern Railway.</i>		
1 locomotive engineer.....	Injured rib.....	When reversing engine.
1 conductor.....	Injured back and chest.....	Flipped boarding train.
1 brakeman.....	Sprained ankle.....	Boarding foot caught in ladder.
1 conductor.....	Injured ribs.....	Uncoupling air-hose.

APPENDIX B—*Continued.*
ACCIDENT REPORT, 1947—*Continued.*

Persons injured.	Result.	Cause.
<i>Pacific Great Eastern Railway—Continued.</i>		
1 trainman.....	Burned left arm.....	Engine exhaust.
1 trainman.....	Fractured shoulder.....	Speeder collided with train.
1 trainman.....	Crushed left foot.....	Taking rock off track.
1 stationary engineer.....	Injured groin.....	Slipped and fell.
1 machinist.....	Injured groin.....	Repairing locomotive, stepped from one bracket to another.
1 sectionman.....	Cut head.....	Cutting down tree.
1 locomotive foreman.....	Injured back and right hand.....	Heavy gust of wind slammed door and threw workman on his back.
1 sectionman.....	Strained back.....	Lifting speeder to track.
1 bridgeman.....	Bruised right foot.....	Timber slipped and rolled on foot.
1 sectionman.....	Sprained shoulder.....	Pulling track-ties.
1 sectionman.....	Injured chest.....	Tightening track-bolts.
1 sectionman.....	Lacerations to right shin.....	Drawing track-spikes.
1 sectionman.....	Cut eyeball.....	When spikes being driven, chip flew off.
1 bridgeman.....	Cut right ankle.....	When adzing timber.
1 locomotive-crane fireman.....	Twisted wrist.....	Drying brake-drum with waste, drum rolled.
1 express messenger.....	Crushed foot.....	Tool-chest dropped on foot.
1 bridgeman.....	Sliver in finger.....	Handling steel cable.
1 carman.....	Scalded back.....	Cutting rail at derailment.
1 sectionman.....	Bruised muscles.....	Shackle struck workman.
1 telephone groundman.....	Cut arm.....	Pike-pole fell off speeder.
1 trainman.....	Crushed toe, right foot.....	Hand-truck slipped forward.
1 topographer.....	Sprained ankle.....	Slipped and fell.
1 carman (apprentice).....	Strained back.....	Lifting heavy jack.
1 rope-puller (ditcher).....	Bruised hand.....	Greasing engine.
1 car inspector.....	Pulled muscle in knee.....	Slipped from oil-car to ground.
1 telephone groundman.....	Torn ligaments in shoulder.....	Lifting pole with tongs, pole dropped.
1 bridgeman.....	Cut left instep.....	Adzing timber.
1 sectionman.....	Sprained arm.....	Pulling out tie, workman slipped.
1 sectionman.....	Sprained back.....	Pulling push-car, slipped.
1 bridgeman.....	Fractured toe.....	Timber rolled over foot.
1 sectionman.....	Cut left leg above knee.....	Cutting brush.
1 boilermaker.....	Bruised toe, left foot.....	When taking lagging off boiler, lagging fell.
1 sectionman.....	Bruised right foot.....	Wheel of speeder passed over it.
1 sectionman.....	Injured side.....	Fell backward.
<i>B.C. Forest Products, Limited.</i>		
<i>Renfrew Division.</i>		
Passengers in rail-cars.....	Badly shaken up.....	Rail-car collision.
<i>San Juan Division.</i>		
1 employee.....	Compound fracture of leg.....	Rail-car collided with log-train.
<i>Canadian Collieries (D.), Limited.</i>		
1 employee.....	Slight injuries.....	Collision between gondola car and locomotive.
1 employee.....	Slight injuries.....	Collision between gondola car and locomotive.
1 employee.....	Slight injuries.....	Collision between gondola car and locomotive.
<i>Victoria Lumber Company, Limited.</i>		
1 employee.....	Legs injured.....	Lost footing while walking along centre sill of log skeleton car.
<i>Western Lumber Company, Limited.</i>		
1 employee.....	Knee-cap fractured.....	Jumped off speeder.
1 employee.....	Slight injuries.....	Jumped off speeder.

APPENDIX C.

LIST OF RAILWAYS AND SUMMARY OF MILEAGE.

Industrial Railways.

Name.	Operating.	Mileage.
1. Alberni Pacific Lumber Company, Limited	Port Alberni.....	75.0
2. Begbie Pole-yard	Begbie.....	0.4
3. B.C. Cement Company.....	Bamberton and Blubber Bay.....	2.2
4. B.C. Forest Products, Limited.....	Youbou.....	35.0
5. B.C. Forest Products, Limited.....	Port Renfrew.....	23.0
6. B.C. Forest Products, Limited.....	San Juan.....	32.0
7. B. & D. Logging Company.....	Hyde Creek, Vancouver Island.....	1.0
8. Bloedel, Stewart & Welch, Limited.....	Sproat Lake.....	7.5
9. Bloedel, Stewart & Welch, Limited.....	Menzies Bay.....	50.0
10. Bloedel, Stewart & Welch, Limited.....	Franklin River.....	53.0
11. Britannia Mining & Smelting Company, Limited.....	Britannia.....	7.1
12. Canadian Forest Products, Limited.....	Englewood.....	41.5
13. Canadian Industries, Limited.....	James Island.....	10.0
14. Canadian Collieries, Limited.....	Nanaimo.....	13.8
15. Comox Logging & Railway Company.....	Headquarters.....	26.0
16. Comox Logging & Railway Company.....	Ladysmith.....	25.3
17. Consolidated Mining & Smelting Company of Canada, Limited.....	Trail.....	20.0
18. Consolidated Mining & Smelting Company of Canada, Limited.....	Kimberley.....	25.7
19. Crows Nest Pass Coal Company, Limited.....	Coal Creek.....	8.9
20. Dominion Tar & Chemical Company, Limited.....	New Westminster.....	6.0
21. Dominion Tar & Chemical Company, Limited.....	North Vancouver.....	1.0
22. Elk River Timber Company, Ltd.....	Campbell River.....	50.0
23. Hillcrest Lumber Company, Limited.....	Mesachie Lake.....	17.5
24. Mayo Lumber Company, Limited.....	Paldi.....	5.0
25. Morrissey, Fernie, and Michel Railway.....	Fernie.....	8.4
26. Pacific Coast Terminals, Limited.....	New Westminster.....	5.0
27. Powell River Company, Limited.....	Cumshewa Inlet.....	17.5
28. Salmon River Logging Company, Limited.....	Sayward.....	38.0
29. Victoria Lumber Company, Limited.....	Chemainus.....	57.1
30. Victoria Lumber Company, Limited.....	Dunsmuir.....	4.5
31. Western Forest Products, Limited.....	Rounds.....	30.3
32. Wellington Colliery Railway Company.....	Cumberland.....	33.0
		730.7

Common Carriers.

Pacific Great Eastern Railway.....	Squamish Division, main line.....	347.8
	Squamish, industrial track.....	4.5
	Yard track and sidings.....	31.0
	North Shore line.....	2.4
	Yard track and sidings.....	1.6
		387.3

Tramways.

British Columbia Electric Railway Co., Ltd.....	Victoria.....	18.3
	Vancouver.....	108.9
	Interurban lines.....	108.4
	Leased lines.....	55.1
Nelson street-railway.....		3.5
		294.2

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

	Mileage.
Industrial railways	730.7
Common carriers	550.8
Tramways (city)	130.7
	<hr/>
Total, all lines	1,412.2

APPENDIX D.

LIST OF CRANES AND PORTABLE EQUIPMENT INSPECTED BY DEPARTMENT OF RAILWAYS.

Alberni Pacific Lumber Company, Limited	Crane No. 40929 B.C.
Alberta Lumber Company, Limited	Crane No. 42998 B.C.
Arrowhead Wood Preservers, Limited	Crane No. D.R. 293.
	Crane No. D.R. 322.
	Crane No. 22633 B.C.
Baxter, J. H., & Company, Limited	Crane No. D.R. 336.
B.C. Cement Company, Limited	Crane No. 21439 B.C.
B.C. Forest Products, Limited	Crane No. D.R. 319.
	Crane No. D.R. 320.
	Crane No. D.R. 331.
	Crane No. 20742 B.C.
	Unloader No. 44213 B.C.
B.C. Pulp & Paper Company, Limited	Crane No. D.R. 304.
Bloedel, Stewart & Welch, Limited	Crane No. 44666 B.C.
	Crane No. 3843.
Britannia Mining & Smelting Company, Limited	Internal-combustion Crane No. 5.
	Internal-combustion Crane No. 8.
Burrard Dry Dock Company, Limited	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.
Canada Creosoting Company, Limited	Crane No. D.R. 212.
	Gas Switcher No. 1.
Canadian Forest Products, Limited	Crane No. 42722 B.C.
	Crane No. 43635 B.C.
	Crane No. 43973 B.C.
	Diesel Switcher No. 96.
	Internal-combustion Crane No. 97.
Capital Iron & Metals, Limited	Crane No. D.R. 295.
Comox Logging & Railway Company	Unloader D.R.P. No. 2.
	Unloader No. 32830 B.C.
	Unloader No. 3.
	Gas Internal-combustion Crane No. 20.
Consolidated Mining & Smelting Company of Canada, Limited	Crane No. 12772 B.C.
Department of Public Works Assembly Wharf	Crane No. D.R. 306.

APPENDIX D—Continued.

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

Dominion Bridge Company, Limited	Crane No. 44129 B.C.
	Crane No. 44317 B.C.
Elk River Timber Company, Limited	Crane No. 21085 B.C.
	Gas Switcher No. 7.
Esquimalt Drydock	Crane No. 22582 B.C.
	Crane No. D.R. 314.
Evans, Coleman & Evans, Limited	Crane No. D.R. 316.
Hamilton Bridge Company	Crane No. 12669 B.C.
Hillcrest Lumber Company, Limited	Crane No. 40049 B.C.
	Crane No. 44315 B.C.
King, M. B., Lumber Company, Limited	Crane No. 12430 B.C.
Lions Gate Lumber Company, Limited	Gas Internal-combustion Crane.
Mayo Lumber Company (1943), Limited	Crane No. D.R. 321.
Morrissey, Fernie, and Michel Railway	Snow-plough.
	Diesel-electric Locomotive No. 1.
Northern Construction Company, Limited	Crane No. 12321 B.C.
Osborn Bay Wharf Company, Limited	Crane No. 21526 B.C.
Pacific Coast Terminals Company, Limited	Crane No. 44440 B.C.
Pacific Drydock Company, Limited	Crane No. D.R. 302.
Pacific Great Eastern Railway Company	Crane No. D.R. 312.
	Stationary Boiler No. D.R. 326.
	Stationary Boiler No. 42837 B.C.
	Crane No. D.R.P. 8.
	Ditcher No. D.R.P. 1.
	Pile-driver.
	Marion Steam shovel.
Point Hope Shipyard, Limited	Crane No. D.R. 315.
Powell River Company, Limited (Kelley Logging Company, Limited)	Crane No. 44893 B.C.
Prince Rupert Drydock and Shipyard	Crane No. D.R. 290.
Robertson & Hackett Sawmill Company, Limited	Crane No. 44584 B.C.
	Crane No. 12545 B.C.
Salmon River Logging Company, Limited	Gas Internal-combustion Crane No. 8.
Sigalet & Company, Limited	Crane No. 21089 B.C.
Sooke Lake Lumber Company, Limited	Crane No. 22632 B.C.
Timberland Lumber Company, Limited	Crane No. 12368 B.C.
Timber Preservers, Limited	Crane No. 43807 B.C.
	Crane No. D.R. 288.
Vancouver Creosoting Company, Limited	Crane No. D.R. 283.
	Gas Internal-combustion Crane No. 6.
Victoria Lumber Company, Limited	Crane No. D.R. 300.
Victoria Machinery Depot Company, Limited	Crane No. D.R. 291.
	Crane No. D.R. 305.
Western Bridge & Steel Fabricators, Limited	Crane No. D.R. 307.
	Crane No. D.R. 308.
	Crane No. D.R. 309.
Western Forest Industries, Limited	Crane No. 41276 B.C.
	Diesel Locomotive Crane.
Yarrows, Limited	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	499.2	210.8	44.0	2,068.2	543.2
Canadian National Railways.....	1,359.0	325.6	102.0	25.0	1,461.0	350.6
V.V. & E. Railway (Great Northern).....	140.8	28.0	.....	.....	140.8	28.0
British Columbia Electric Railway (leased).....	43.4	17.0	.....	.....	43.4	17.0
Under the jurisdiction of the Provincial Government—						
Pacific Great Eastern Railway.....	350.2	37.1	.....	.....	350.2	37.1
British Columbia Electric Railway.....	185.4	26.5	17.7	0.6	203.1	27.1
Nelson street-railway.....	3.5	.....	.....	.....	3.5	.....
Industrial railways.....	38.2	37.1	548.5	106.9	586.7	144.0
Totals.....	3,977.9	970.5	879.0	176.5	4,856.9	1,147.0

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