

ONTARIO
NORTHLAND
RAILWAY DIARY

ONTARIO
SESSIONAL
PAPERS

1909-1913

PART III.

ROLLING STOCK AND EQUIPMENT.

Rental of Rolling Stock.

In the month of February the Grand Trunk Railway Company made application to the Commission to rent two locomotives which were then completed and stored at Kingston, and later extended the request to cover the four locomotives of the Commission. With the consent of the Government, the four locomotives were accordingly rented at \$10 per day each, the Grand Trunk Railway guaranteeing that they would be used only on such portions of their system as had the best roadbed and undertaking to return them in ample time for the requirements of the Commission, and subject to proper inspection of their condition on return. Under this arrangement engines Number 1 and 2 were under rental to the Grand Trunk Railway from February 12th to April 24th, and engines Number 3 and 4 from February 12th to April 8th.

The Contractor had before that time applied for the use of these engines and a number of flat cars, when the season for ballasting should open, and after the return of the engines from the Grand Trunk they, and flat cars, were handed over to the Contractor under the following agreement:

MEMORANDUM OF AGREEMENT made this fifth day of March, 1904, between ALLAN RANALD MACDONELL hereinafter called the Contractor, of the first part; THE TEMISKAMING AND NORTHERN ONTARIO RAILWAY COMMISSION, hereinafter called the Commission, of the second part; and THOMAS LONG, of Toronto, JOHN J. LONG, of Collingwood and the HONOURABLE WILLIAM HARTY OF KINGSTON, hereinafter called the sureties, of the third part.

WHEREAS, By Indenture dated the 3rd day of October, 1902, the Contractor agreed with the Commission to furnish all necessary materials, labor, tools, machinery and plant, and to execute and complete all the works required in connection with the building of the Temiskaming and Northern Ontario Railway according to certain plans profiles and specifications as in said Indenture is more fully set forth.

AND WHEREAS, the Contractor is required by the Commission's Engineer in pursuance of the terms of the said contract, to provide for the said work on said railway, on or before the first day of May, 1904, one additional steam shovel, with the necessary additional plant and appliances which the Contractor represents to the Commission would involve large expense to him in the purchasing or otherwise procuring of additional engines and flat cars in conse-

Timber Bridges Filled.—Continued.

Second Division.

M.P. 184½.....	Sand	62 Flat cars.....	Approaches to permanent structures completed.
199½.....		22 Hart cars	
200½.....			
202		1,275 Flat cars.	
204	Gravel, clay and sand		Completed.
210½.....		268 Flat cars.....	
212		1,919 " "	Approach to permanent bridge.
217½.....		147 " "	
221		410 " "	
		10 Hart "	Not completed.

Works Under Construction at End of Year and not Completed.

General freight storage sidings, mileage 98.
 General freight storage sidings, Kerr Lake Junction.
 Freight shed sidings, Cobalt.
 General freight sidings, Charlton.
 Second track from Cobalt to North Cobalt.
 Filling trestle, mileage 221.
 Raising sags to surface, mileage 240 to 243.
 Raising sags to surface, mileage 250 to 251½.
 New round-house tracks, Cochrane.
 *Excavation for new yard, Cochrane.

* Excavation was commenced with steam shovel in January for location of shops and terminal yards. That for the former was completed in May, but that for the yards was postponed until 1910, traffic conditions not demanding it for the present.

MOTIVE POWER AND CAR DEPARTMENT.

Report of Mr. A. Allan, Master Mechanic.

New Locomotives.

Since the beginning of the year, 1909, the following new locomotives have been added to the Motive Power Equipment of this railway:

Two new switching engines, Nos. 152 and 153, built by the Canadian Locomotive Company of Kingston, Ont., received during the month of September. These are of the six wheeled type, with cylinders 19-inch diameter and 26-inch stroke. The diameter of the drivers of these engines is 51 inches and they carry a steam pressure of 180 lbs. The weight on driving wheels in working order is 128,000 lbs., weight of tender in working order 90,000 lbs.

Six new road engines, Nos. 127, 128, 129, 130, 131, and 132, were also received from the Canadian Locomotive Company, Kingston, during the months of September and October. These are of the ten wheeled type, with 19-inch cylinders, 24-inch stroke. Two of these engines are designed for passenger service, the diameter of driving wheels being 63 inches, while the balance are for freight service and have driving wheels 57 inches in diameter. These engines carry a

steam pressure of 190 lbs. Total weight of engine and tender in working order is 265,000 lbs., weight on drivers, 114,000 lbs.

Owing to the large increase in traffic since the beginning of the year, and also to the number of engines required for work service, both construction and maintenance, along the line, our equipment has been taxed to meet the demand for power, and the six new road engines will certainly be of great assistance in this respect, while the two new switch engines, one at Englehart, and the other at Cobalt, are rendering excellent service in taking care of the work at these points.

Locomotive Mileage.

During the year 1909, the engines of this railway have run the mileage shown below:

Engine No.	Miles run 1909	Engine No.	Miles run 1909.
101.....	21,696	119.....	28,773
102.....	24,289	120.....	21,733
103.....	21,951	121.....	29,900
104.....	26,737	122.....	32,190
105.....	14,802	123.....	30,780
106.....	11,941	124.....	28,788
107.....	32,291	125.....	32,394
108.....	29,037	126.....	30,540
109.....	38,703	127.....	2,068
110.....	27,206	128.....	3,396
111.....	11,077	129.....	2,922
112.....	29,778	130.....	1,590
113.....	47,317	131.....	683
114.....	41,208	132.....	
115.....	29,584	150.....	23,673
116.....	29,209	151.....	34,121
117.....	28,548	152.....	6,449
118.....	29,620	153.....	3,522

Engine Dispatch.

Following is a statement showing the number of engines dispatched from the different terminal points during the year 1909:

Terminal Stations	No. of engines dispatched.
North Bay.....	2,431
Cobalt.....	393
Englehart.....	2,477
Cochrane.....	723
Total.....	6,024

Repairs and Renewals to Locomotives.

During the year, Motive Power Equipment has been maintained to the full standard of efficiency, and the repairs and renewals required from time to time have been executed.

Engine No. 102 was taken into shop on October 4th, to have tires turned, and new set of tubes applied.

Engine No. 103 was taken into shop during August and given a light repair.

Engine No. 105 was taken into shop during July, had necessary repairs done, new set of tubes applied, and was turned out for work service.

Engine No. 106 was taken into shop during March, was given a general repair, including tires turned and new set of tubes applied.

Engine No. 107 taken into shop during latter part of 1908, was given a light repair, and had wheels changed under tender, and was turned out for passenger service in January.

Engine No. 108, taken in during September, had new set of tubes applied, and repairs made to link motion, etc.

Engine No. 109 was laid up during latter part of 1908 on account of being derailed and turned over into the muskeg near Cochrane, while in service of Contractor Scott, was given a general repair, and had a new cab applied, was turned out in July and assigned to passenger run on north end.

Engine No. 111 was taken into shop in month of April on account of breakages while in passenger service, was given a general repair and returned to passenger service.

Engine No. 112 was taken into shop in March and given a light repair, and returned to passenger service.

Engine No. 113 was turned out of shop in January after having undergone a general repair, having had driving tires turned, and new tubes applied.

Engine No. 115 was taken into shop, given a light repair, repainted and varnished, and turned out in September.

Engines Nos. 116 117 and 120, have been kept constantly in service, not requiring more than the ordinary running repairs.

Engine No. 118 was in shop during March and given some slight repairs, made necessary by derailment by engine and tender in North Bay Jct. yards. It was also given a light repair during first week in September, and repainted and varnished.

Engine No. 119 was taken into shop during month of January and given a light repair.

Engines Nos. 121, 122, 123, 124, 125 and 126 being comparatively new power, have not required more than the ordinary running repairs to keep them in first class working condition.

Engine No. 150 was brought into shop in September, given a heavy repair, and returned to switching service at Cobalt.

Engine No. 151 has been kept constantly in switching service in North Bay Jct. yard.

The Motive Power Equipment has been generally assigned during the year as follows:

Engine 101, freight and work service.

Engine 102, freight and work service.

Engine 103, freight and work service.

Engine 104, freight and work service.

Engine 105, freight and work service.

Engine 106, freight and work service.

Engine 107, passenger and work service.

Engine 108, passenger and work service.

Engine 109, passenger service.
Engine 110, passenger service.
Engine 111, passenger service.
Engine 112, passenger service.
Engine 113, passenger service.
Engine 114, passenger service.
Engine 115, freight service.
Engine 116, freight service.
Engine 117, freight and work service.
Engine 118, freight and passenger service.
Engine 119, freight service.
Engine 120, freight and work service, switching Englehart.
Engine 121, freight service.
Engine 122, freight and passenger service.
Engine 123, freight service.
Engine 124, freight service.
Engine 125, freight service.
Engine 126, freight and passenger service.
Engine 127, passenger service.
Engine 128, passenger service.
Engine 129, passenger service.
Engine 130, freight service.
Engine 131, freight service.
Engine 132, freight service.
Engine 150, switching service at Cobalt.
Engine 151, switching service at North Bay Jct.
Engine 152, switching service at Cobalt.
Engine 153, switching service at Englehart.

Each engine has had the boiler washed out once in every two weeks when in regular service. Stay-bolts and fire-boxes have been examined regularly, tested, and renewals made where bolts were found defective or broken.

The nettings and smoke boxes, ashpans and dampers have been regularly examined every trip during the summer season, as a precaution against fire. During damp weather and at such seasons as the danger from this source would be reduced to a minimum, the nettings, ashpans and dampers have been examined twice a week. The necessary records are kept in the office of the Master Mechanic of these inspections, also of the dates on which the boilers were washed out. Owing to the hard nature of the water supplied to the engines at Cobalt, it has been found necessary to use a small amount of soda ash in the water to prevent scale in the boilers. This has also been found beneficial at Englehart, since we started using the water from the artesian wells at that point.

Repairs to Passenger Equipment.

The following passenger equipment has been repaired at North Bay Jct. during the year:—

First class coach 100 was given a general overhaul, had truss rods tightened up, was repainted and varnished in October.

First class coach 107 was repaired and revarnished and turned out in May.

First class coach No. 108, was revarnished during the month of August.

First class coach No. 109 was through the shop in July, and after receiving necessary repairs was turned out with a coat of varnish.

First class coach No. 110 was taken into shop in January, and received extensive repairs, made necessary on account of being in the wreck at mileage 33½; was also repainted and varnished before being turned out.

Second class coach No. 2 was also in the shop during January for repairs, made necessary by wreck at mileage 33½.

Second class coach No. 4 was given a coat of varnish in the month of April.

Second class coach No. 14 was taken into the shop in January, given some light repairs, and repainted and varnished.

Second class coach No. 32 was taken into the shop in the month of February, on account of heater pipes having been frozen up while in interline service between Toronto and Englehart. Repairs were made to heater pipes and bill rendered according to the M. C. B. rules of interchange. This coach was also repainted while in the shop.

Mail and Express cars 23 and 25, received during the month of August, 1908, required to be taken into the shop and burnt off, repainted and varnished during June. As these cars did not meet with the specifications and guarantee, the contractors were billed with the cost of repainting.

Baggage car 21 was taken into the shop in June and revarnished.

The following passenger equipment has been supplied with the Safety Car Heater & Lighting Company's Pintsch Gas Lighting System:—

Second class coach 4, applied in June.

Second class coach 6, applied in June.

First class coach 112, applied in October.

First class coach 113, applied in October.

Mail and Express cars 23 and 25, have had the Pintsch Gas Lamps applied, thus completing the Pintsch Gas Equipments, the tanks, piping, etc., having been applied by the Preston Car & Coach Company when the cars were built at their works in Preston.

First class coaches 101 and 103 were returned from the Preston Car & Coach Company in first class condition during the month of March, having been sent there for a general overhaul.

Second class coaches 16 and 20, which were in the service of contractor T. S. Scott (McRae, Chandler & McNeil contract) during 1908, were returned to us, and have been in use as vans in work service during the greater part of the summer.

New Conductors' Vans.

During the month of October, seven new conductors' vans, numbered 63 to 69 inclusive, were received from the Sillicker Car Company of Halifax, N.S.

Repairs to Conductors' Vans.

Owing to the increasing freight traffic, our van equipment has been kept constantly in service, and it has been found possible to give them the repairs necessary.

Van 62, damaged in wreck at mileage 41, June 28th, was taken in and given the necessary repairs, repainted and varnished.

Repairs to Freight Equipment.

Necessary repairs and renewals have been made by the Car Department staff at North Bay Junction and Englehart, to freight cars belonging to this road, and

Cochrane: All necessary electrical construction is being carried on in the roundhouse, machine shop, stores building, depot, freight shed, as these buildings are being erected, in order that they may be electrically lighted from the 50 kw. A. C. generator to be installed in engine room of roundhouse. The electric wiring is being done in iron conduit pipe, in accordance with the Underwriters' rules, making same absolutely fire-proof.

Coal Tests and Analysis.

During the year we have experimented with several grades of coal for locomotive use, with a view of selecting a good quality of coal at a somewhat cheaper price than the coal formerly used.

The matter of fuel and oil consumption has been carefully watched and the Road Foreman has brought about good results by assisting the engineers and firemen in this respect. A locomotive performance sheet has been compiled monthly, and is found to be an advantage in connection with economizing in this respect.

Dynamometer Car.

In order to establish a correct tonnage rating for each class of engine, a dynamometer car with experienced operator for same was secured.

Tests were made of the different classes of engines hauling weighed trains, and from the dynamometer car data obtained, a schedule is being prepared, giving the maximum tonnage capacity of engines from station to station over each division.

Fire Extinguishers.

In accordance with recommendations of the Dominion Railway Commission, each passenger coach has been equipped with fire extinguishers of approved design.

Work Done and Material Supplied to Outside Companies and Firms.

Our steam crane has been loaned on a number of occasions to the Canadian Pacific Railway, for which proper bill has been rendered to cover rental, coal, oil and wages of operator, when he was required.

The Canadian Pacific engines have been supplied with water from North Bay Junction when requested, and proper charge made.

The Cleveland Sarnia Saw Mills Company have been billed with the cost of adjusting the loads at North Bay Junction yards on several occasions, such loads not being in a safe condition for transportation. Four spring hangers were also supplied to this firm for one of their engines during the month of October.

Bills have been rendered against a number of firms to cover charges for repairs to our cars, damaged on private sidings.

Repairs were made to E. F. & G. E. Fauquier Company's car No. 119 at Englehart, as requested, and bill rendered to cover cost.

A number of patterns have been made for the Nipissing Foundry Company at North Bay, and proper charges made for the work and material supplied.

Charges have been made for water supplied to the Temagami Hotel & Steamboat Company at Temagami, for use in restaurant, bakery, etc., at that station.

Steel nuts and a pair of brackets were supplied to the Montreal Smelting Company at Trout Mills on request.

Bills have been rendered monthly to cover all work done for construction, including engine rental, and other miscellaneous charges.

MOTIVE POWER AND CAR DEPARTMENT.

Annual Report Ending October 31st, 1910, of Mr T. Ross, Acting Master Mechanic.

New Rolling Stock.

During the year 1910, following new equipment has been received:—

Fifty box cars, 80,000 lbs. capacity, from Canadian Car and Foundry Company, Montreal. These box cars are similar to the preceding lot of fifty, which were supplied by same builders, and are of the type adopted as standard by C. & N. O. Railway, i.e., steel underframe with wood superstructure.

Twelve steel drop-bottom dump cars, 80,000 lbs. capacity, from Canadian Car and Foundry Company, Montreal. These cars were primarily secured for use in connection with the cinder hoists at each terminal, and in addition to this suitable for handling coal, gravel, lumber, etc.

One official car, "Sir James," from Preston Car and Coach Company, Preston, Ont. This car is of most modern description, and of the composite type steel underframe, with wood superstructure. Length 70 feet, 3½ inches over body, 80 feet, 3¾ inches over buffers. Interior finished in quartered oak, and lighted by gas and electricity.

Contract has been let to the Canadian Locomotive Company, Kingston, for four "Pacific Type" passenger locomotives. These are to be much larger locomotives than those now in service. Dimensions are: cylinders 21-in. x 28-in. diameter of driving wheels 69 inches; steam pressure, 200 lbs.; weight on drivers in working order 135,500 lbs.; total weight of engine in working order, 202,500 lbs. These engines will be delivered the early part of 1911.

Contract has been let to Canadian Car and Foundry Company, Montreal, for three Parlor-Cafe cars. These cars will be of similar construction to the new official car, i.e., steel underframe with wood body. Delivery of same will be made in the early part of 1911.

New Shops and Equipment.

During the year 1910, the new roundhouse and machine shop at Cochrane have been completed, and the following new equipment installed therein:

3—66-in. x 14-ft. Horizontal Tubular Boilers, purchased from the John Innes Company, Toronto.

1—Duplex Feed Water Pump, from the Smart Turner Company, Hamilton.

1—10-in. x 14-in. Rand Air Compressor, from the Rand Drill Company, Sherbrooke, Que.

1—25 H.P. Horizontal Stationary Engine, from E. Leonard & Sons, Company, London, Ont.

1—8-in. x 6-in. x 12-in. Duplex Pump, from the Canada Foundry Company, Ltd., Toronto.

1—75 H.P. Robb Armstrong Engine, direct connected to Westinghouse Kw. A. C. Generator, for lighting purposes.

1—Cochrane Feed Water Heater, from the Canada Foundry Company, Toronto.

1—30-ton Hydro-pneumatic drop pit jack, from Watson Stillman Company, New York.

1—24-in. Vertical Drill, from John Bertram & Sons Co., Dundas.

1—20-in. Gap Lathe, from The London Machine Tool Co., Hamilton.

1—Emery Wheel

1—10-ton Hand

1—Pipe Thread

1—Blacksmith

This roundhouse

for piping, electrical

arrangements. The new office, have been completed.

The coal chutes

Electrical trans

light shed, new u

roundhouse, and all

above buildings,

Arrangements a

Building at Cochrane

At North Bay J

1—42-in. Vertic

Ontario.

1—16-in. x 6-ft

Ontario.

1—24-in. Shape

1—Link Grinde

1—Band Re-saw

at, Ontario.

At Englehart

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engines.

Locomotive Mileage.

During the year
miles as shown k

Engine Number

101

102

103

104

105

106

107

108

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110

111

112

113

114

115

116

117

118

1911

1—Emery Wheel Stand.

1—10-ton Hand Travelling Crane, from Smart Turner Company, Hamilton.

1—Pipe Threading Machine.

1—Blacksmith Forge complete with Anvil, Tools, etc.

This roundhouse is now complete with all necessary steam, air, hot and cold water piping, electric lighting, and also the small tools necessary for present requirements.

The new office, stores and bunkroom building in connection with the roundhouse have been completed and equipped with fittings necessary for present requirements.

The coal chutes are well under way, and will be completed shortly.

Electrical transmission lines have been erected at Cochrane to connect the freight shed, new union depot, and stores building, with the electrical plant at roundhouse, and all wiring, etc., necessary for lighting purposes, in connection with the above buildings, completed.

Arrangements are being made to supply the Transcontinental Railway Office building at Cochrane, with electric light from the T. & N. O. lighting plant.

At North Bay Junction shops, the following new machinery has been installed:

1—42-in. Vertical Boring Mill, from John Bertram & Sons Company, Dundas, Ontario.

1—16-in. x 6-ft. Engine Lathe, from John Bertram & Sons Company, Dundas, Ontario.

1—24-in. Shaper, from John Bertram and Sons Company, Dundas, Ontario.

1—Link Grinder, from The M. C. Hammett Company, Troy, N. Y.

1—Band Re-sawing Machine, from the Hespeler Machinery Company, Hespeler, Ontario.

At Englehart roundhouse, sand house has been erected and equipped with sand drier, and pneumatic apparatus for elevating sand and delivering same to engines.

Locomotive Mileage.

During the year, the locomotives belonging to this Railway have run the mileages as shown below:—

Engine Number.	Miles Run, 1910.	Total Mileage of Engines,
101	25,736	193,472
102	26,312	189,070
103	7,981	167,999
104	23,333	182,797
105	18,862	124,610
106	31,150	127,471
107	28,673	149,405
108	36,478	163,128
109	50,170	186,351
110	7,686	118,624
111	50,522	175,031
112	30,397	177,590
113	37,036	177,657
114	42,107	178,422
115	27,393	88,370
116	16,470	79,384
117	26,502	82,023
118	33,513	91,217

Locomotive Mileage.—Continued.

Engine Number.	Miles Run, 1910.	Total Milage of Engine.
119	9,081	88,418
120	27,753	79,616
121	22,794	75,263
122	27,515	84,533
123	26,844	82,102
124	23,861	69,593
125	25,610	80,586
126	29,536	79,906
127	47,810	49,878
128	43,830	47,226
129	29,797	32,719
130	4,241	5,831
131	37,639	38,422
132	31,091	31,091
150	25,335	119,471
151	33,122	159,694
152	21,955	28,404
153	29,524	33,046
Totals :	1,017,659	3,838,420

On an average, our locomotives have made 100,000 miles between each general repair.

Engine Dispatch.

The following is a statement showing the number of engines dispatched from the different terminal points during the year:

Terminal Stations.	Number of Engines Dispatched.
North Bay Junction	2,961
Cobalt	17
Englehart	3,132
Cochrane	68
Totals	7,238

Repairs and Renewals to Locomotives.

During the year repairs and renewals have been made to locomotives as follows:

Engine 101 was given some light repairs during March, and turned out for work service. This engine is at present in North Bay Junction shop undergoing general repairs, such as driving tires turned, new boiler tubes applied, etc.

Engine 102 was taken into shop on October 1st, 1909, to have driving tires turned and new boiler tubes applied, completed November 15th. This engine also received light repairs during the month of February, such as new smoke stack and dome, ledgerwood pipe on steam dome, and headlamp applied, made necessary by accident in spur at mileage 81½ on February 11th.

Engine 103 was taken in shop for a general repair during January, and turned out on April 28th.

Age of Engines

8,418
9,616
5,003
2,102
9,593
0,586
9,906
19,878
17,226
12,719
5,831
38,422
31,091
19,471
59,694
28,404
33,046

38,420

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dispatched from

	Number of Engines Dispatched
.....	2,997
.....	478
.....	3,157
.....	628
.....	7,258

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January, and tur

Engine was loaned contractors E. F. & G. E. Fauquier at Cobalt, after part of August, and returned on September 10th.

Engine 105 was taken into shop during August, given general repair, and turned out for freight service on October 4th.

Engine 107 received light repairs, and delivered for service on January 10th. This engine was also loaned to Contractors E. F. & G. E. Fauquier on August 25th, and is still in their service.

Engine 108 was given general repair, and turned out of shop on January 10th. This engine had driving tires turned, new boiler tubes applied, engine and tender repainted, and was put into passenger service on trains 1 and 2, between Anglehart and Cochrane.

Engine 109 was taken into North Bay Junction shop on June 27th, to have engine truck tires turned, engine truck brasses refitted, guide bars closed, big end brasses renewed, tender wheels changed, and engine and tender repainted, being completed on July 7th.

Engine 110 was given general repair and turned out in first class condition for passenger service, on August 6th. This engine required to have front frames straightened, new pilot and buffer beam applied, etc., on account of being damaged in accident at Cobalt, August 25th.

Engine 112 was taken into shop during March, given thorough overhauling, and new tubes applied, being turned out May 30th.

Engine 113 was taken into shop during month of April, given some light repairs, engine and tender repainted.

Engine 114 was taken into shop for general repairs and new tubes, during January, and was turned out for passenger service on March 12th. This engine was also in shop for repairs to tender tank, and brake rigging overhauled, during July.

Engine 115 at present in shop undergoing general repair.

Engine 116 has been given heavy repairs, had forty-eight boiler tubes renewed, and turned out for freight service on May 17th.

Engines 117 and 118 crossheads lined up, boiler mountings overhauled, run-board bracket studs renewed, and intermediate side rod bushings renewed, during month of July.

Engine 119 given thorough overhauling, new tubes applied, and driving tires turned, being completed during August.

Engine 120 taken into shop on September 12th for general repair, and will be completed during November.

Engine 121 given heavy repairs, such as piston rings renewed, tender trucks overhauled, and seventy-five new boiler tubes applied, completed during October.

Engine 122 seventy-five new boiler tubes applied during month of July.

Engine 123 received heavy repairs, such as intermediate side rod bushings renewed, brake rigging overhauled, and one hundred new boiler tubes applied.

Engine 124 given heavy repairs during August, and seventy-five boiler tubes renewed.

Engine 125 given light repair, engine and tender repainted, during month of April. This engine also had eighty-two boiler tubes renewed during June.

Engine 126 at present undergoing general repair, having new tubes applied, and driving tires turned, etc.

1911

Engine 104 was in shop during February undergoing light repairs. This engine was loaned contractors E. F. & G. E. Fauquier at Cochrane, during the latter part of August, and returned on September 10th.

Engine 105 was taken into shop during August, given general repair, and turned out for freight service on October 4th.

Engine 107 received light repairs, and delivered for service on January 10th. This engine was also loaned to Contractors E. F. & G. E. Fauquier on August 25th, and is still in their service.

Engine 108 was given general repair, and turned out of shop on January 10th. This engine had driving tires turned, new boiler tubes applied, engine and tender repainted, and was put into passenger service on trains 1 and 2, between Cobalt and Cochrane.

Engine 109 was taken into North Bay Junction shop on June 27th, to have engine truck tires turned, engine truck brasses refitted, guide bars closed, big end brasses renewed, tender wheels changed, and engine and tender repainted, being completed on July 7th.

Engine 110 was given general repair and turned out in first class condition for passenger service, on August 6th. This engine required to have front frames strengthened, new pilot and buffer beam applied, etc., on account of being damaged in accident at Cobalt, August 25th.

Engine 112 was taken into shop during March, given thorough overhauling, new tubes applied, being turned out May 30th.

Engine 113 was taken into shop during month of April, given some light repairs, engine and tender repainted.

Engine 114 was taken into shop for general repairs and new tubes, during May, and was turned out for passenger service on March 12th. This engine was also in shop for repairs to tender tank, and brake rigging overhauled, during July.

Engine 115 at present in shop undergoing general repair.

Engine 116 has been given heavy repairs, had forty-eight boiler tubes renewed, and turned out for freight service on May 17th.

Engines 117 and 118 crossheads lined up, boiler mountings overhauled, running board bracket studs renewed, and intermediate side rod bushings renewed, during month of July.

Engine 119 given thorough overhauling, new tubes applied, and driving tires turned, being completed during August.

Engine 120 taken into shop on September 12th for general repair, and will be completed during November.

Engine 121 given heavy repairs, such as piston rings renewed, tender trucks overhauled, and seventy-five new boiler tubes applied, completed during October.

Engine 122 seventy-five new boiler tubes applied during month of July.

Engine 123 received heavy repairs, such as intermediate side rod bushings renewed, brake rigging overhauled, and one hundred new boiler tubes applied.

Engine 124 given heavy repairs during August, and seventy-five boiler tubes renewed.

Engine 125 given light repair, engine and tender repainted, during month of April. This engine also had eighty-two boiler tubes renewed during June.

Engine 126 at present undergoing general repair, having new tubes applied, and driving tires turned, etc.

Engine 127 required to have repairs made to front end, such as new pilot, buffer beam, etc., on account of being damaged in wreck at Temagami on November 25th, 1909.

Engine 130 required to have repairs made to tender, which was damaged in accident at bridge, mileage 119½, December 5th, 1909.

Engine 150 was taken into shop during March, and given some light repairs to motion, etc.

Engine 151 was given a heavy repair during January. This engine also had driving tires turned during month of June. Each engine has had the boiler washed out once every two weeks, when in regular service. Stay-bolts and fire boxes have been examined regularly, boilers tested, and stay-bolts renewed, where necessary.

SMOKE BOX NETTINGS, ASH PANS, AND DAMPERS, HAVE BEEN REGULARLY EXAMINED AT THE END OF EACH TRIP, AND EVERY PRECAUTION HAS BEEN TAKEN AGAINST FIRE FROM THIS CAUSE DURING DAMP WEATHER, AND AT SUCH TIMES AS THE DANGER FROM THIS SOURCE WOULD BE REDUCED TO A MINIMUM, THE NETTINGS, ASH PANS, AND DAMPERS, HAVE BEEN EXAMINED TWICE A WEEK.

Proper records of the examination of locomotive stay-bolts, nettings, dampers and also of the boilers washed out, are kept in the Acting Master Mechanic's Office.

The Motive Power Equipment has been generally assigned during the year as follows:—

Engine 101, freight and work service.
 Engine 102, freight and work service.
 Engine 103, freight service.
 Engine 104, freight and work service.
 Engine 105, freight and work service.
 Engine 106, freight and work service.
 Engine 107, passenger and work service.
 Engine 108, passenger and freight service.
 Engine 109, passenger service.
 Engine 110, passenger service.
 Engine 111, passenger service.
 Engine 112, passenger service.
 Engine 113, passenger service.
 Engine 114, passenger and freight service.
 Engine 115, freight service.
 Engine 116, freight and switching service.
 Engine 117, freight and work service.
 Engine 118, freight and passenger service.
 Engine 119, freight and passenger service.
 Engine 120, freight and work service.
 Engine 121, freight and work service.
 Engine 122, freight service.
 Engine 123, freight service.
 Engine 124, freight service.
 Engine 125, freight service.
 Engine 126, freight and passenger service.

Engine 127, pa
 Engine 128, pa
 Engine 129, fr
 Engine 130, pa
 Engine 131, pa
 Engine 132, fr
 Engine 150, sw
 Engine 151, sv
 Engine 152, sw
 Engine 153, sv

Each Cleaning.

Statement show
 tions during the

Statio
 North Bay Jur
 Englehart....
 Cochrane.....

Total

Repairs to Passenger

Following passe

First class coa
 interior of coach re
 First class coac
 in derailment of tra
 have been made.
 October.

First class coac
 revarnished.

First class coa
 loaded and painted.

First class coac
 plated on April 3rd

First class coac
 Second class cc

and express car 3
 resident in C. P. R.

and Canadian Paci
 Second class cc

revarnished.
 Second class c

loaded and painted.
 Second class cc

for and exterior
 Second class cc

light repairs
 Mail and Expr

mail end of can
 G. T. R.

new pilot, b
on Nov
was damage
ome light rep
engine also
the boiler wa
d fire boxes
where necess

- Engine 127, passenger service.
- Engine 128, passenger service.
- Engine 129, freight service.
- Engine 130, passenger and freight service.
- Engine 131, passenger and freight service.
- Engine 132, freight service.
- Engine 150, switching service at Cobalt.
- Engine 151, switching service at North Bay Junction.
- Engine 152, switching service at North Bay Junction and Cobalt.
- Engine 153, switching service at Englehart.

, HAVE BEEN
, AND EVER
THIS CAUSE
THE DANGER
UM, THE NET
AINED TWICE

Cleaning.

Statement showing the number of coaches cleaned at the different terminal stations during the year:

Stations.	Number of Coaches Cleaned.
North Bay Junction.....	1,931
Englehart.....	8,018
Cochrane.....	1,860
Total	11,809

ettings, dampen
aster Mechanic

Repairs to Passenger Equipment.

ing the year

Following passenger equipment has been repaired at North Bay Junction shops: First class coach, 100 trucks and brake equipment overhauled, interior and exterior of coach revarnished, and trucks repainted, during August.

First class coach 101, received considerable damage to trucks and air brakes, at derailment of trains No. 1, at mileage 186½, February 8th, and necessary repairs have been made. This coach also received a general overhaul during month of October.

First class coach 102 taken into shop during March, given general repair, and revarnished.

First class coach 103 revarnished during December, 1909, also trucks overhauled and painted.

First class coach 106 was given general repair, and revarnished, being completed on April 3rd.

First class coach 109 repaired and revarnished during month of January.

Second class coaches 2 and 28 had vestibules and end sills broken; also mail and express car 3 had end sheathing, coupler and truck end timber broken, by accident in C. P. Ry. yard, on the morning of July 25th. Repairs have been made and Canadian Pacific Railway billed with cost.

Second class coach 8 was taken into shop during April, given general repair and revarnished.

Second class coach 26 had interior and exterior revarnished, trucks overhauled and painted, and turned out on December 23rd, 1909.

Second class coaches 28, 30, 34 and 36 have been given a general repair, interior and exterior of coaches revarnished, and trucks repainted.

Second class coaches 32 and 40 have been revarnished. Coach 40 was also given light repairs during October.

Mail and Express car 1 has been given a general overhaul and revarnished, and mail end of car enlarged.

Mining Leases.

Agreements to amend mining leases so as to substitute for the present rentals the proposed new scale based on net profits, have been drafted, but the terms of same have not yet been settled with the Mining companies.

Surface Rights.

Negotiations are pending with the Wright Mining Company, and the Cobalt Town Site Mining Company for adjustment of differences that have arisen as to the rights of the Commission and Mining Companies respectively to deal with the surface for purposes unconnected with mining.

REPORT OF S. B. CLEMENT, CHIEF ENGINEER.

I beg to present the following report of work done under the direction of the Chief Engineer, for the twelve months ending October 31st, 1910.

Surveys.

Nipissing Junction Spur.

A spur line connecting the North Bay Junction yards with the Grand Trunk Railway at Nipissing Junction was located and complete plans, specifications, and estimates were prepared.

Elk Lake—Gowganda Branch.

During the year the location of a branch line from Charlton to Elk Lake and Gowganda was completed and plans and estimates of cost were prepared. A trial line was also run between Earlton and Elk Lake.

Porcupine Branch.

Preliminary surveys were made for a branch line into the Porcupine Mining District. The area represented by a triangle, the base of which is the operated line between Matheson and Nellie Lake and the apex the township of Tisdale, was carefully explored and trial lines were run wherever necessary to determine the topographical features of the country. The branch line was not located but the preliminary surveys showed that the best location as regards length, grades and capital cost would be from a point on the main line near M.P. 225.

Grade Reduction North Bay to Liskeard.

The subject of grade reduction on the first division between North Bay and Liskeard has received careful study. After the thorough examination of a wide belt of territory adjacent to the main line, cut offs have been located as follows:—

North Bay to Mileage 35.

Mileage 48 to Mileage 50.

Mileage 62.5 to Mileage 66.4.

In each case the cut off as located is a material improvement over the operated line as regards length, curvature and grades. Complete plans, profiles, and estimates of cost of construction for these cut offs are being prepared. Also estimates of the reduction in operating expenses that might be brought about if the cut offs were to be constructed.

Cut Off—Mileage 60 to Mileage 61.

A cut off 2,067 feet in length was located and constructed between M.P. 60—M.P. 61. By means of this cut off at a very moderate expense the operated line was shortened by 72 feet and 66 degrees of sharp curvature were eliminated. The grading for this cut off was done under contract by Alex. Avery. Track laying and ballasting was done by the Commission.

Cut Off—Mileage 228.

A large quantity of material was required for trestle filling and widening embankments to complete the McRae, Chandler and McNeil contract. By properly locating the steam shovel pit from which this material was excavated it was possible to re-locate the main line through the steam shovel cutting, shortening it by 237 feet and eliminating 32 degrees of curvature.

Right of Way.

During the year all the right of way, station grounds, and other property of the Commission was carefully checked over and a series of right of way plats were prepared on which is recorded every parcel of land in the possession of the Commission. All necessary plans and descriptions to accompany deeds and leases were prepared. In September, Mr. H. J. McAuslan, O. L. S., for over four years the Commission's Land Surveyor, resigned his position to engage in other work.

Ballast Pits.

The lack of a plentiful supply of good ballast was the reason for a search for proper ballast pits. Two new pits were located and purchased at Cassidy and Nellie Lake respectively. Spur lines into each of these pits have been located but only the Cassidy pit has been opened. The opening of these pits will permit a great improvement in the quality of the ballast in the track.

Liskeard Spur.

The grading of the Liskeard Spur was completed by Canadian Contracts Limited, Contractors.

Double Tracking.

During the year the double tracking of the railway from Cobalt to Haileybury was completed. The grading between Cobalt and North Cobalt was done under contract by S. McGar. The remainder of the work was done by Company forces.

Cochrane Terminals.

During the year the eight stall roundhouse and machine shop and the bunk room and petty stores building were completed by the Contractors, the Forest City Paving and Construction Company, and put in service. The coaling station being built by the same company was not completed in time for service this year.

1911

1911

The present sidings are sufficient to handle the freight traffic until the completion of the National Transcontinental Railway, when the large permanent terminal freight yard will be built.

Water Supply.

North Bay Jct.—A new water service has been designed for North Bay Jct. to consist of a 50,000 gal. steel tank and a 10 inch locomotive stand pipe. The contract for the steel tank was awarded to the John Inglis Co. The new water service is now being installed and will be completed about Dec. 1st, 1910.

Swastika.—A hydraulic ram installation has been made on the rapids on the Blanche River to supply the water tank at Swastika. This avoids the expense of maintaining a steam pumping station.

Track.

The Commission's policy of maintaining smooth and safe siding track has been continued. To this end during the year twenty-eight miles of track were recentred and the curves were fitted with suitable easements. During the year, 200,000 yards of ballast were placed under the tracks. Of this, 81,000 was on construction account to complete the ballasting between Matheson and Cochrane, while the balance, 119,000 cu. yds. was on Maintenance account.

Sidings and Yards.

Increased siding accommodation has been provided at Tomiko Mills, Tomiko, Temagami, Cobalt, and Kelso, thus enabling traffic to be more expeditiously and economically handled.

Station Buildings.

Cobalt.

The new brick passenger station was completed, S. F. Whitham, Contractor.

Haileybury.

Lavatories for men and women were installed and connection was made with the Town water and sewerage systems.

Liskeard.

The lavatories were connected with the Town sewerage system.

Kelso.

A frame combined freight shed and passenger station is under construction. The Haileybury Construction Company are the contractors.

Cochrane.

The new brick passenger station is approaching completion. O'Boyle Bros. Construction Company, contractors.

the freight traffic until the completion of the large permanent track.

It has been designed for North Bay Junction. The new 30 inch locomotive stand pipe. The new was completed about Dec. 1st, 1910. It has been made on the rapids at Swastika. This avoids the obstruction.

The new smooth and safe siding track for twenty-eight miles of track suitable easements. During the construction of the tracks. Of this, \$1,000 was expended between Matheson and Swastika was on Maintenance account.

Yards.

It has been provided at Tomiko Mills enabling traffic to be more expedient.

Buildings.

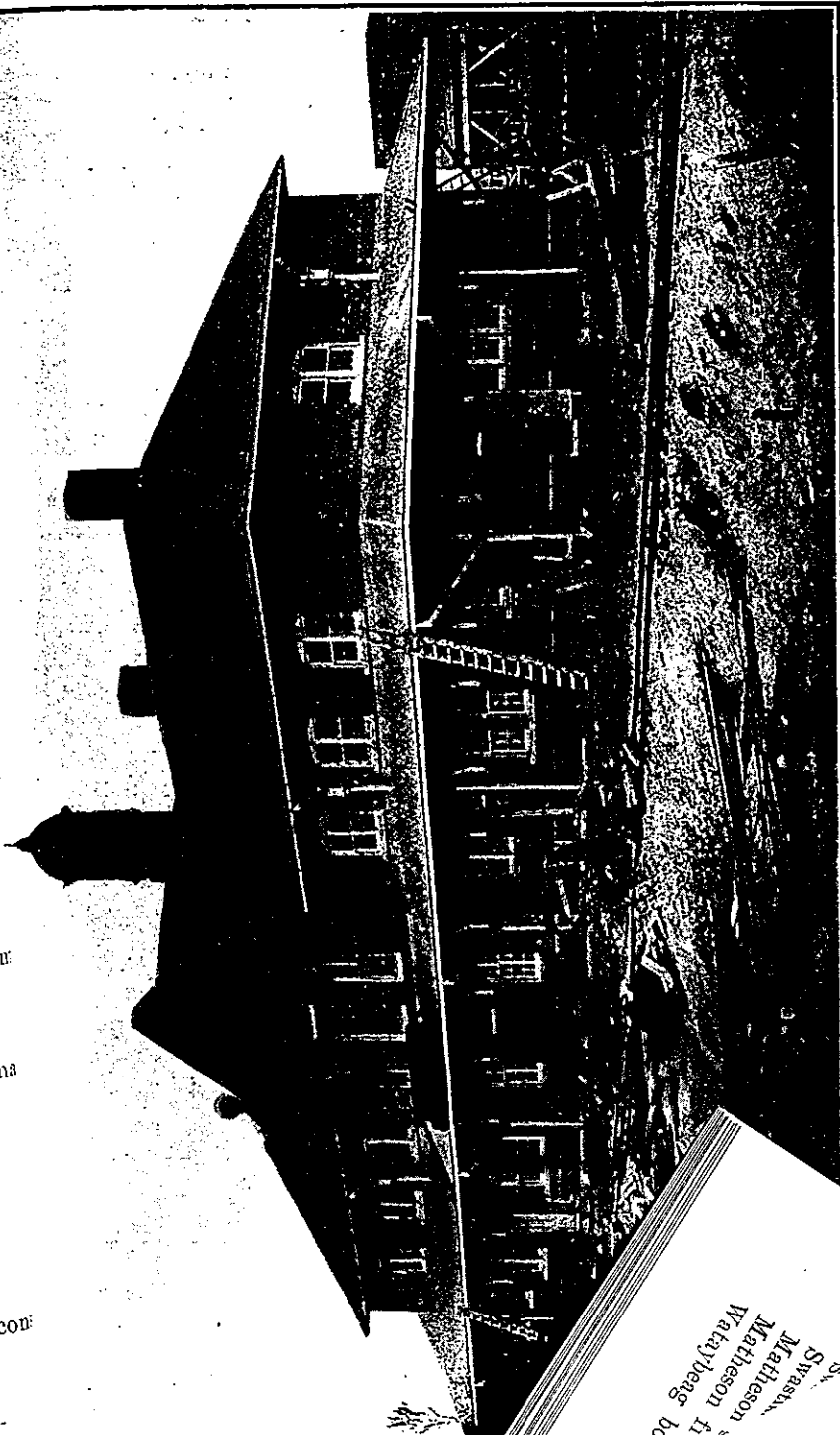
The new building was completed, S. F. Whitham, Contractor.

The new building were installed and connection was made with the Town sewerage system.

The new building with the Town sewerage system.

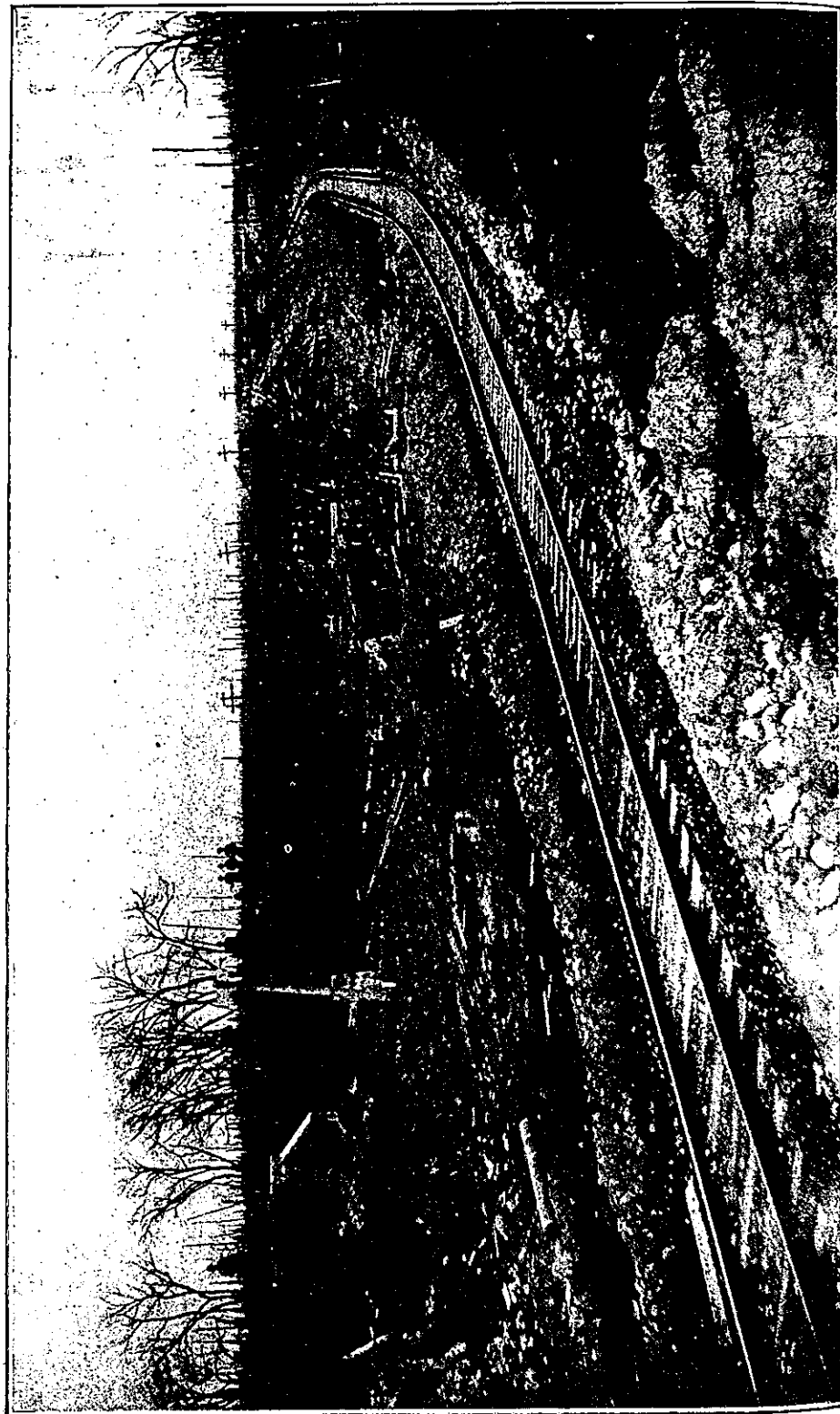
The new building and passenger station is under construction. The company are the contractors.

The new building and passenger station is approaching completion. O'Brien is the contractor.



Cochrane Union Station during construction.

Swastika
Matheson
Wabigoon
boardings



LOCATING

Bookstacks	
A, B - BT	6th floor
BV - BX	5th floor
C, D, E, F, G	5th floor
H - HN	5th floor
HQ - HX	4th floor
J, K	4th floor
L	5th floor
M	1st floor
N	4th floor
P - PM	4th floor
PN - PQ	5th floor
PR - PS	4th floor
PT	4th floor
Q, R, S	4th floor
T, U, V	4th floor
Z	4th floor
200	6th floor
800	4th floor
100, 300	Storage (Ask
400, 600	at Circ. Desk)
OVERSIZE, THESE	On same floor as call number

The tie renewals have been completed. The rails are all in good condition. A few broken. Considerable work was done between posts 190 and 205. Between posts 190 and 205, the soft portions of mud were distributed and placed. The soft portions of mud being new has been made repairs necessary.

Report of

Maintenance of Way and

Superintendence ..
Ballast
Ties
Rails
Other track material
Roadway and track
Removal of snow, sand
Bridges, trestles and
Grade crossings, fences
Snow and sand for
Telegraph and tele
Buildings, fixtures
Roadway tools and
Northland Mining

Maintenance of Way and

Superintendence ..
Ballast
Ties
Rails

1911

..... \$968 35
 534 93
 1,649 91
 22 34
 27 95
 37 80
 75 50
 8 25
 82 65
 163 58
 52 80
 5 85
 19 66
 100 35
 100 20
 39 82
 246 99

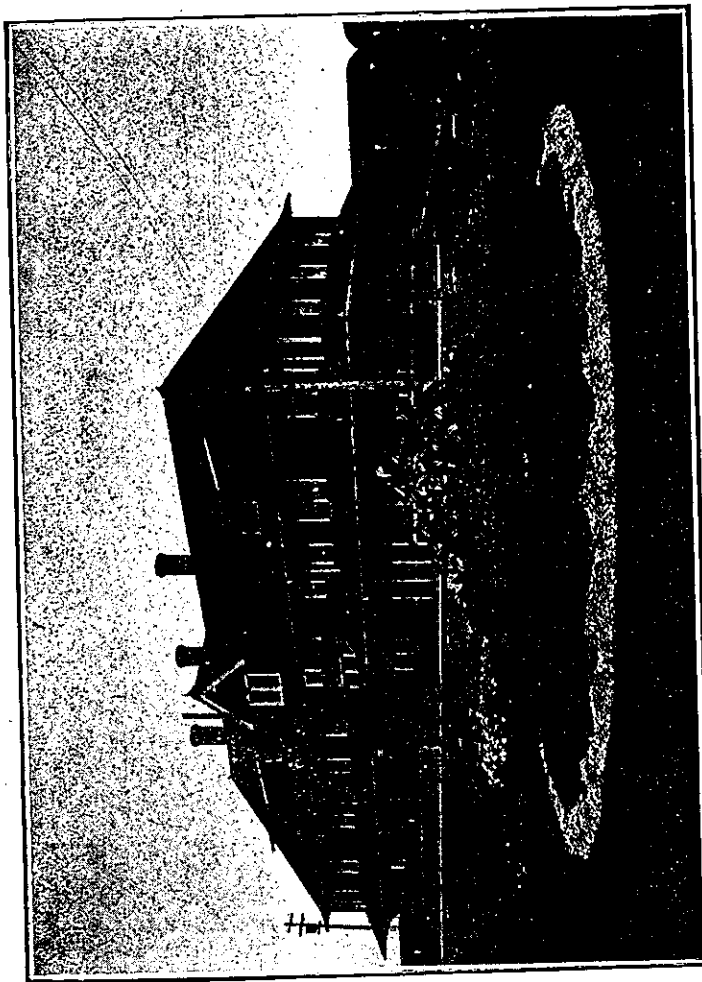
\$44,734 23

..... \$708 14
 3,756 30
 604 56
 6 68
 186 61
 9 05

\$5,271 34

..... \$78,159 39
 117,663 58
 1,922 57
 3,693 95
 1,067 11
 120 87
 5,592 74
 3,688 21
 33 39
 17,699 92
 38,908 21
 8,224 19
 892 94
 4,833 71
 1,815 34
 156 96
 44,734 23
 5,271 34

..... \$334,475 65



Station at Englehart.

MOTIVE POWER AND CAR DEPARTMENT.

Annual Report Ending October 31st, 1910, of Mr T. Ross, Acting Master Mechanic.

New Rolling Stock.

During the year 1910, following new equipment has been received:—
Fifty box cars, 80,000 lbs. capacity, from Canadian Car and Foundry Company, Montreal. These box cars are similar to the preceding lot of fifty, which were supplied by same builders, and are of the type adopted as standard by T. & N. O. Railway, i.e., steel underframe with wood superstructure.

Twelve steel drop-bottom dump cars, 80,000 lbs. capacity, from Canadian Car and Foundry Company, Montreal. These cars were primarily secured for use in connection with the cinder hoists at each terminal, and in addition to this are suitable for handling coal, gravel, lumber, etc.

One official car, "Sir James," from Preston Car and Coach Company, Preston, Ont. This car is of most modern description, and of the composite type steel underframe, with wood superstructure. Length 70 feet, 3½ inches over body, and 80 feet, 3¾ inches over buffers. Interior finished in quartered oak, and lighted by gas and electricity.

Contract has been let to the Canadian Locomotive Company, Kingston, for four "Pacific Type" passenger locomotives. These are to be much larger locomotives than those now in service. Dimensions are: cylinders 21-in. x 28-in.; diameter of driving wheels 69 inches; steam pressure, 200 lbs.; weight on drivers in working order 135,500 lbs.; total weight of engine in working order, 202,500 lbs. These engines will be delivered the early part of 1911.

Contract has been let to Canadian Car and Foundry Company, Montreal, for three Parlor-Cafe cars. These cars will be of similar construction to the new official car, i.e., steel underframe with wood body. Delivery of same will be made in the early part of 1911.

New Shops and Equipment.

During the year 1910, the new roundhouse and machine shop at Cochrane have been completed, and the following new equipment installed therein:

3—66-in. x 14-ft. Horizontal Tubular Boilers, purchased from the John Inglis Company, Toronto.

1—Duplex Feed Water Pump, from the Smart Turner Company, Hamilton.

1—10-in. x 14-in. Rand Air Compressor, from the Rand Drill Company, Sherbrooke, Que.

1—25 H.P. Horizontal Stationary Engine, from E. Leonard & Sons, Company, London, Ont.

1—8-in. x 6-in. x 12-in. Duplex Pump, from the Canada Foundry Company, Ltd., Toronto.

1—75 H.P. Robb Armstrong Engine, direct connected to Westinghouse 50 Kw. A. C. Generator, for lighting purposes.

1—Cochrane Feed Water Heater, from the Canada Foundry Company, Toronto.

1—30-ton Hydro-pneumatic drop pit jack, from Watson Stillman Company.

New York

1—24-in. Vertical Drill, from John Bertram & Sons Co., Dundas.

1—20-in. Gap Lathe, from The London Machine Tool Co., Hamilton.

1911

DEPARTMENT.

by Mr T. Ross, Acting

as been received:—

ian Car and Foundry Co
preceding lot of fifty, whi
adopted as standard by
superstructure.

s. capacity, from Canadi
re primarily secured for
and in addition to this:

d Coach Company, Prest
of the composite type sh
; 3½ inches over body, a
quartered oak, and light

e Company, Kingston, I
to be much larger locom
cylinders 21-in. x 28-in
s.; weight on drivers:
working order, 202,500 lb

ry Company, Montreal, f
r construction to the ne
ivery of same will be ma

nachine shop at Cochran
installed therein:

ased from the John Ing

rnier Company, Hamilto
he Rand Drill Compan

Leonard & Sons, Compan

anada Foundry Compan

ected to Westinghouse

undry Company, Toront
atson Stillman Compan

is Co., Dundas.

ool Co., Hamilton.

1—Emery Wheel Stand.

1—10-ton Hand Travelling Crane, from Smart Turner Company, Hamilton.

1—Pipe Threading Machine.

1—Blacksmith Forge complete with Anvil, Tools, etc.

This roundhouse is now complete with all necessary steam, air, hot and cold water piping, electric lighting, and also the small tools necessary for present requirements.

The new office, stores and bunkroom building in connection with the roundhouse have been completed and equipped with fittings necessary for present requirements.

The coal chutes are well under way, and will be completed shortly.

Electrical transmission lines have been erected at Cochrane to connect the freight shed, new union depot, and stores building, with the electrical plant at roundhouse, and all wiring, etc., necessary for lighting purposes, in connection with the above buildings, completed.

Arrangements are being made to supply the Transcontinental Railway Office Building at Cochrane, with electric light from the T. & N. O. lighting plant.

At North Bay Junction shops, the following new machinery has been installed:

1—42-in. Vertical Boring Mill, from John Bertram & Sons Company, Dundas, Ontario.

1—16-in. x 6-ft. Engine Lathe, from John Bertram & Sons Company, Dundas, Ontario.

1—24-in. Shaper, from John Bertram and Sons Company, Dundas, Ontario.

1—Link Grinder, from The M. C. Hammett Company, Troy, N. Y.

1—Band Re-sawing Machine, from the Hespeler Machinery Company, Hespeler, Ontario.

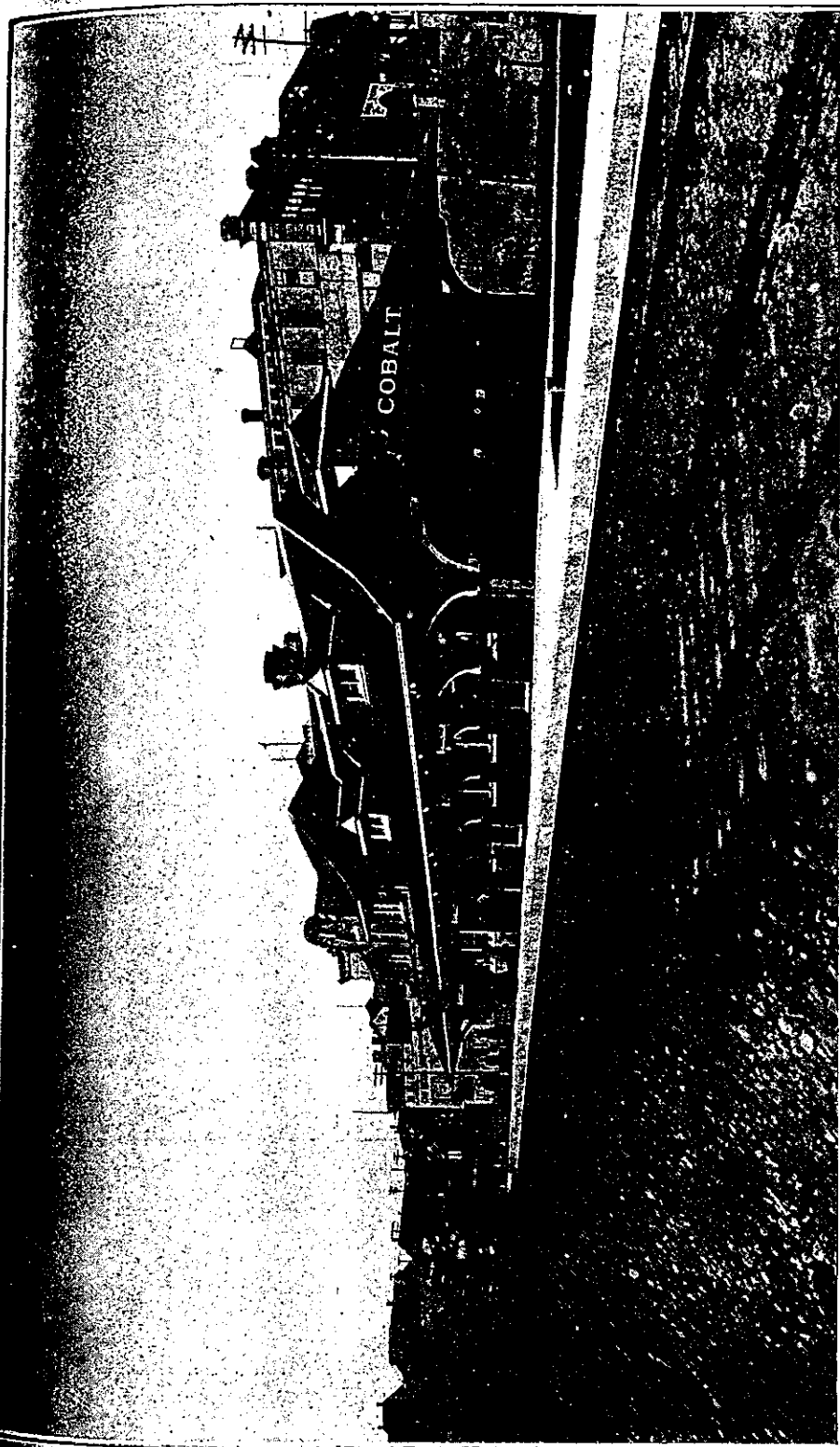
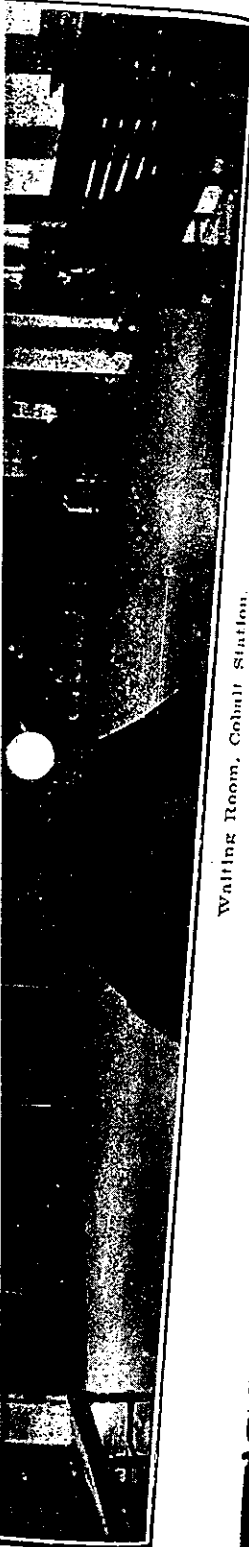
At Englehart roundhouse, sand house has been erected and equipped with sand drier, and pneumatic apparatus for elevating sand and delivering same to engines.

Locomotive Mileage.

During the year, the locomotives belonging to this Railway have run the mileages as shown below:—

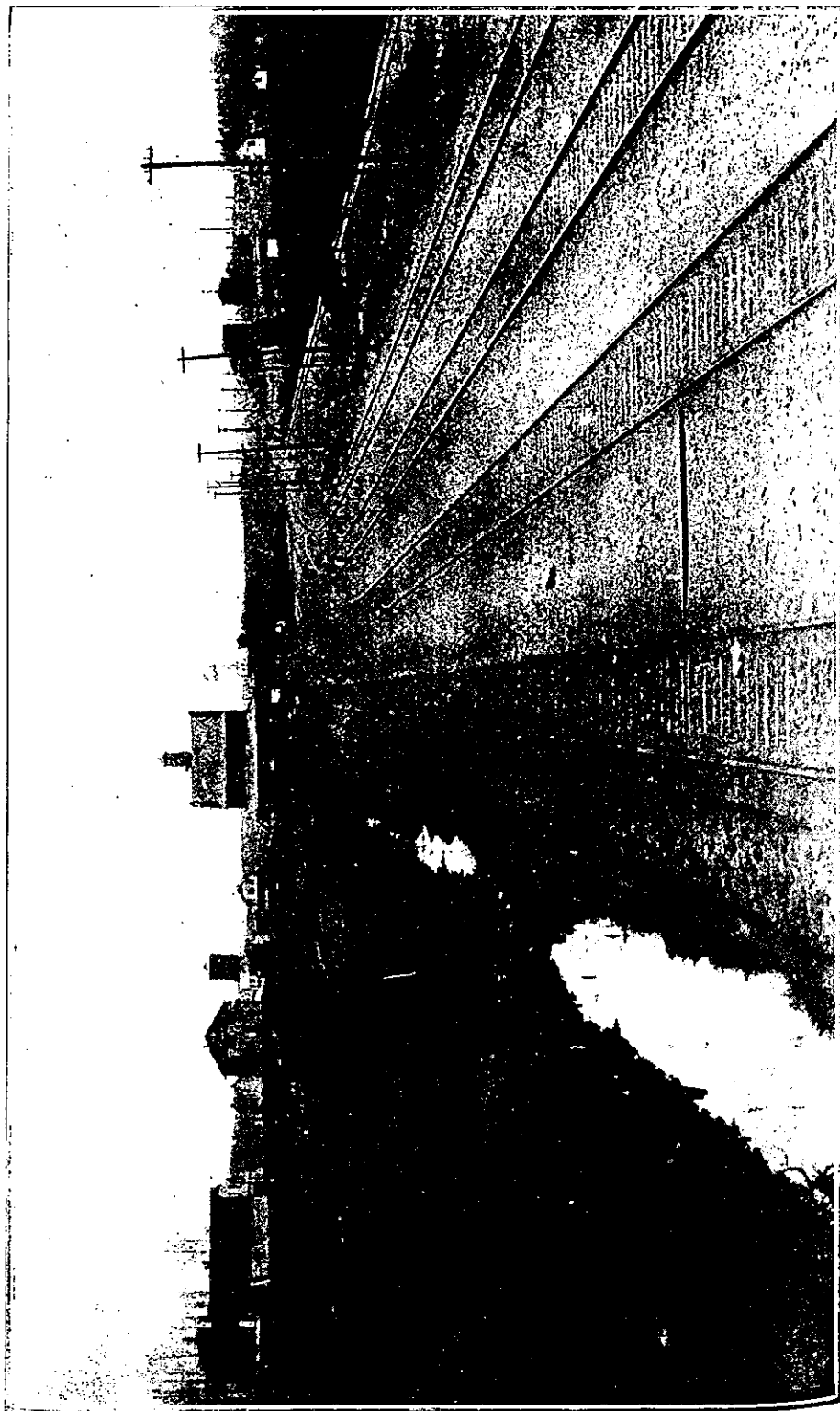
Engine Number.	Miles Run, 1910.	Total Mileage of Engines,
101	25,736	193,472
102	26,312	189,070
103	7,981	167,999
104	23,333	182,797
105	18,862	124,610
106	31,150	127,471
107	28,673	149,405
108	36,478	163,128
109	50,170	186,351
110	7,686	118,624
111	50,522	175,031
112	30,397	177,590
113	37,036	177,657
114	42,107	178,422
115	27,393	88,370
116	16,470	79,384
117	26,502	82,023
118	33,513	91,217

Waiting Room, Cobalt Station.



Cobalt Station.

1911



Cochrane yard.

Description.

Second Track.....	
Main Line	
Branch Lines.....	
Passing Sidings, etc.....	
Private Sidings.....	

I desire to testify to the faithful a
by the members of the staff of the Eng

Mr. John M. Lyle of Toronto was
the construction of the new stations a
plans for a new station at Matheson.

Mr. Cecil B. Smith was retained a
obtained on all important engineering

ANNUAL REPORT OF J. H.

Beg to submit herewith annual rep
Master and Acting Master Mechanic,

It is satisfactory to report that w
ous nature, and have continued under
the life of a passenger.

During this period, our efforts wer

Passenger Trains.....	
Freight Trains.....	
Mixed Trains.....	
Non-revenue Trains.....	
Work Trains.....	

Total.....
Total Trains.....

Loaded Cars.....	
Empty Cars.....	

Total.....
Total Cars.....

The following list of accidents ar
1909.—November 5th, Michael G
and was instantly killed.

November 6th, Train No. 37 struc
November 18th, No. 1/33 struck
Cobalt.

Description.	1910.	1909
	Aggregate Length.	Aggregate Length.
Second Track.....	5.03 miles	2.75 miles
Main Line.....	252.3 -	252.1 -
Branch Lines.....	13.24 -	13.24 -
Passing Sidings, etc.....	61.71 -	61.71 -
Private Sidings.....	12.8 -	12 -

I desire to testify to the faithful and efficient service that has been rendered by the members of the staff of the Engineering and Bridge Department.

Mr. John M. Lyle of Toronto was retained as architect in connection with the construction of the new stations at Cobalt and Cochrane, and prepared the plans for a new station at Matheson.

Mr. Cecil B. Smith was retained as Consulting Engineer, and his advice was obtained on all important engineering questions that arose.

Yours truly,

(Signed) S. B. CLARK,

Chief Engineer.

ANNUAL REPORT OF J. H. BLACK, SUPERINTENDENT.

Beg to submit herewith annual reports of the General Roadmaster, Building Master and Acting Master Mechanic, for the year ending October 31st, 1910.

It is satisfactory to report that we have been free of accidents of any serious nature, and have continued under Providence the record of not having lost the life of a passenger.

During this period, our efforts were as follows:

	Northbound.	Southbound.	
Passenger Trains.....	2,803	2,800	
Freight Trains.....	1,701	1,729	
Mixed Trains.....	314	314	
Non-revenue Trains.....	90	70	
Work Trains.....	.....	.....	574
Total.....	4,908	4,913	574
Total Trains.....			10,790
	Northbound.	Southbound.	
Loaded Cars.....	21,321	10,201	
Empty Cars.....	3,611	14,675	
Total.....	24,932	24,876	
Total Cars.....			49,808

The following list of accidents and derailments occurred during the year 1909.—November 5th, Michael Giamfrancesio fell off a car at ~~Manly~~ ex. 117, and was instantly killed.

November 6th, Train No. 37 struck and killed a heifer at ~~Tamagami~~.

November 18th, No. 1/33 struck and injured J. O'Rourke at ~~Manly~~ Siding, Cobalt.

November 19th, train No. 10 struck and injured J. Comian at Mileage No. 104.

November 20th, while turning car at Mileage No. 131, J. Lavory's finger was taken off.

November 25th, Train No. 46 struck rear end of ex. 122 at Temagami, damaging Van No. 63, C.P. box No. 22,464 and C.P. No. 187,498, and baggage car No. 21.

December 5th, Tender of Engine 130, C. P. No. 31828 and Van No. 69 went through trestle at Mileage No. 119½, due to land slide.

December 15th, Brakesman Clifford McLean was jerked off car at Cassidy, and was badly bruised.

December 21st, T. & N. O. flats 60,095 and 60,213 ran into Engine 131, at Mileage 10½, displacing lumber in cars.

December 24th, Mail and Express Car No. 25, Train No. 1, was burned at Mileage No. 62. Cause unknown.

December 28th, W. Anderson, while attempting to board train No. 2 at Temagami, fell under train and sustained serious injuries, resulting in death.

December 30th, F. J. Kelland had eye injured in North Bay Junction shop, while chipping a tire, and has since lost the sight.

1910.—January 1st, Conductor J. Donaldson fell through plank walk at Englehart, sustaining severe shaking up.

January 10th, Conductor A. Rouble fell off car on to draw-bar, at Tomiko, injuring left arm and hip.

January 10th, A. Tomesi, while loading rails at Mileage No. 52½ lost his footing—rail that he was throwing fell, injured right wrist and scratched face.

January 11th, rail fell on foot of D. Camegliano at Mileage No. 15½, bruising large toe.

January 15th, Brakesman G. Lee, at North Bay, had two fingers jammed between drawbar and buffer beam of car.

January 15th, Car G. T. No. 7,035 was derailed at Mileage No. 42.

January 25th, while unloading lumber at North Bay Junction, piece of timber fell on B. Cipparone's foot, injuring toes, no bones broken.

January 25th, Conductor H. Thomas slipped down steps at Cobalt office and sprained ankle.

February 3rd, J. Cundari fell into Culvert M. P. No. 149¾ while fighting with L. Scuggato and sustained severe shaking.

February 8th, Tender Engine No. 107, train No. 1, and all cars left track, M. P. No. 186½. No passengers injured.

February 10th, Drawbar of Engine No. 102, at North Cobalt, fell on to rails, causing derailment of four cars.

February 11th, Fred Hartley struck by wing of snow plough at Mileage No. 10¼, instantly killed.

February 14th, Ex. No. 129 struck hand car, injuring large toe of D. Bisonte.

February 22nd, Ex. No. 106 struck R. Heaton at Mileage No. 104½, breaking arm.

February 23rd, at Haileybury, Train No. 2, H. McDonald had leg taken off by train, injuries resulting in death.

February 24th, M. Armienti injured finger while pulling out spikes at Bushnell.

February 25th

March 6th, f

Car No. 35

March 9th, a

ed H. Dredg

March 10th,

April 7th, at

was run over

April 18th, :

On the morn

ay Junction.

April 28th,

Henry.

May 4th, at

ned by H. V.

May 9th, G

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May 15th, T

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May 16th, a

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May 18th, a

May 20th, a

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May 23rd, :

May 26th, :

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May 28th, a

stopping suc

June 9th, :

shed while u

June 21st,

ch runaway t

June 29th,

July 7th, at

loading lorrie

July 7th, a

July 8th, :

ious.

July 21st, :

inders.

July 21st,

theson.

July 25th,

damaging

3 T. R.

1911

February 25th, at Englehart shops, piece of wire struck C. Mold, cutting eye

March 6th, fourteen cars were derailed at Gillies, caused by broken truck on C. P. car No. 35,874.

March 9th, at Redwater, root projecting from gravel train struck and slightly injured H. Dredge.

March 10th, at Haileybury, Train No. 47 struck and killed George Prentice.

April 7th, at Englehart, Fireman Geo. Carnall fell between two cars, on rail, was run over, causing loss of left arm and injury to breast.

April 18th, at M. P. 95, Ex. No. 103 struck and killed a pig.

On the morning of April 18th, S. Latrielle was found dead on track at North Bay Junction.

April 28th, at M. P. 106, Train No. 47 struck and killed cow owned by J. Henry.

May 4th, at M. P. 204½, three cows struck and killed by Ex. No. 105; two owned by H. V. Cartwright and one by J. Johnston.

May 9th, Guiseppi Ricci slightly injured by hand car leaving track seven miles south of M. P. No. 109.

May 15th, Tool car T. & N. O. No. 60,189 burnt at Uno Park, cause unknown.

May 16th, at Temagami, E. Franceshine fell from top of car to ground while engine was coupling cars.

May 18th, at Uno Park, W. Boyce injured by block falling from trestle.

May 20th, at M. P. 172½, Train No. 1 derailed. Auxiliary called from Englehart. Track blocked eight hours. Three passengers slightly injured. Three coaches and engine off track.

May 23rd, at M.P. 103¼, V. Gasdo, while loading rails, had hand jammed.

May 26th, Swanson's Cut, land slide, at M. P. 149. Sixty feet in width and eighty feet long, five feet deep, on track. Estimated displaced 900 cubic yards of material. Caused by heavy rains, bad clay, and quick sand. No damage to equipment or rolling stock.

May 28th, at M. P. 239, Conductor J. T. Nidd slightly injured by work extra 121 stopping suddenly.

June 9th, at Haileybury, Train No. 33, Brakesman J. Cunning had toes crushed while unloading freight.

June 21st, Brakesman M. Downey, head injured as result of leaning out to watch runaway team—switch lamp striking his head.

June 29th, M. P. 137½, Train No. 47, unknown man struck and injured.

July 7th, at M.P. No. 104, Tonio Petronia's toe jammed by rail falling while unloading lorrie.

July 7th, at M. P. 51½, Ex. No. 115 struck and killed a moose.

July 8th, North Bay shops, John Roy struck on head with hammer, not serious.

July 21st, at M. P. 52, P. Dasti was slightly injured, slipping when unloading cinders.

July 21st, Train No. 1 struck and killed a horse owned by W. Monahan of Matheson.

July 25th, C. P. R. engine backed into our train No. 1, C. P. R. Yard, North Bay, damaging our engine No. 151, coaches Nos. 2 and 8, and mail car No. 3.

3 T. R.

July 28th, while assisting an intoxicated man, Rev. C. E. Bishop, of North Bay, had his hand caught between the vestibules of coaches and slightly injured, train No. 1.

July 30th, at M. P. 104, Train 49, Chas. Cousineau was struck and killed.

July 30th, at North Bay, train No. 47. Cow struck.

August 25th, Engine No. 152, struck by train No. 49, engine No. 110, at Cobalt—Engineers McKaig and Hill suspended, thirty days.

August 28th, Brakesman A. Lovatt had thumb jammed between vestibules of coaches, train No. 1, C. P. R. Yard, North Bay.

August 30th, at Temagami, Train No. 46, Andrew H. Reid, of Toronto, while attempting to board moving train, missed his footing and fell, train running over and severing left arm.

August 31st, T. & N. O. flat car No. 60435 was destroyed by the C. P. R. at the Humber. C. P. accepted bill for \$164.35, depreciated value.

September 3rd, Dump gave way at Cobalt Lake, submerging four cars and gravel plow. Equipment all recovered except plow.

September 10th, at M. P. 96½, Train No. 6, pig owned by E. B. Smith was killed.

September 30th, cars G. T. Nos. 46233 and 7987 derailed 13 poles north of M. P. No. 215, caused by brake beam dropping and trailing seven poles. Sixty ties broken; estimated damage, \$38.18.

October 8th, Haileybury, cow injured by Ex. No. 123, belonging to Rebecca Barofsky.

October 17, at North Cobalt, Gilda Matte, under influence of liquor, was injured while attempting to board train No. 1.

October 19th, at M. P. 200, Ex. 123 struck and killed a pig, owned by Mr. Geo. Lubicic.

October 23rd, at Liskéard, Train No. 46 struck and killed a cow, owned by Mr. Z. Hart.

October 24th, at North Cobalt, Train No. 1 struck and killed a cow, owner unknown.

During the year Kelso station was opened and equipped with telegraph instruments, for railway and commercial business.

Temporary offices were opened at ballast pits, at following points:

Mileage 17.

Redwater.

Nellie Lake.

Mileage 25.

Rabbit Creek.

Mileage 75.

Wataybeag.

Cochrane Junction Diamond.

These offices were closed on completion of season's work.

Wires were carried into new station at Cobalt with 267 feet 20 conductor lead cable in underground conduit. At Nipissing Central overhead bridge 105 feet of lead covered cable, twenty conductor, was strung through bridge to protect wires.

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Cylinders, diameter and stroke	23 ins. by 30 ins.
Valves, piston type, diameter	14 in.
Valve Gear	Walschaert.
Boiler, type	Extended Wagon Top.
Boiler pressure	180 lbs.
Diam. at Waist Sheet 71 in., at Dome Course, 78 in.	
Tubes, number and length.....	250, 2 in.; 14 ft. 6 in., 24, 5 in
Firebox, inside	96 in. long by 75 $\frac{1}{4}$ in. wide.
Grate area	50 sq. ft.
Heating Surface, Tubes	2,353 sq. ft.
Heating Surface, Firebox	166 sq. ft.
Heating Surface, Total	2,519 sq.ft.
Superheater, type	Vaughan Horsey.
Driving Wheel Base	15 ft. 10 in.
Total Wheel Base of Engine	24 ft. 6 in.
Diameter of driving wheels	57 in.
Diameter of Engine Truck Wheels	31 in.
Tractive Power	42,525 lbs.
Capacity of Tender	5,500 Imp. gals., 10 tons coal.
Weight of Tender, loaded	135,600 lbs.

Delivery of these engines to be in early part of 1912.

One American Railroad Ditcher, Serial No. 455 received during April, from the American Hoist and Derrick Co., St. Paul.

New Shop Equipment.

The following new machinery has been received:

- 1—42 in. Car Wheel Lathe, from the London Machine Tool Co.
- 1—48 in. Car Wheel Boring Mill from London Machine Tool Co.
- 1—300 ton Hydraulic Car Wheel Press from London Machine Tool Co.

These machines are all motor driven and have been installed at Englehart machine shop.

One Improved Triple Valve Testing Rack, purchased from the Westinghouse Air Brake Company, Hamilton, and installed in North Bay Junction machine shop.

Electrical Work.

All electrical work in connection with the different buildings and locomotives has been properly maintained. Electrical headlamps have been installed on locomotives Nos. 107, 117, and 120. Locomotives now equipped with Pyle National Electrical headlamps are Nos. 103, 105, 106, 107, 108, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, also Steam Wrecking Cranes Nos. 1 and 2, and Snow Plows Nos. 2, 3 and 4. Road Locomotives Nos. 101, 102, 104, 109, and 110, also switching engines Nos. 150, 151, 152, 153, are still equipped with oil headlamps.

During the month of October the coal chutes at Englehart were equipped with 12 16 c.p. incandescent electric lamps inside of chutes, and two arc lamps, one on each side of coal chutes.

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Baggage Cars Nos. 11, 13 and 15.

This equipment is one of the most efficient brakes for passenger service. The important features over the former type, (namely Schedule P. 2), are :—

Quick Recharge—Making it possible to obtain full braking power immediately after a release.

Quick Service—This makes certain the prompt and uniform application of all brakes in the train.

Graduated Release—This permits of the best method of braking, namely a heavy application at high speed, gradually reduced as the speed becomes moderate.

High Emergency—This feature makes it possible to use the equipment as a high speed brake when carrying 90 lbs. brake pipe pressure, and obtain better results than when using 110 lbs. pressure with the old standard equipment.

In the installation of this brake, all foundation brake gear has been straightened and made standard; trucks have been overhauled and put in good condition to stand the extra strain of the high speed brake.

New Equipment Applied to Locomotives and Cars.

Engines Nos. 101 to 108 have been equipped with "Improved Gollmar Bell Ringers."

Two galvanized iron water tanks have been applied to Private Car "Sir James."

The following passenger equipment has been equipped with the Safety Car Heating and Lighting Company's Pintsch Gas Equipment.

First Class Coach No. 111 Applied in March.

Baggage Car No. 11 Applied in December, 1910.

Mail and Express Car No. 5 Applied in April.

Baggage and Express Car No. 7 Applied in April.

Summary of Extensive Repairs on Locomotives, etc.

During the year the motive power equipment has been properly maintained and the repairs and renewals necessary from time to time have been executed thereon.

Extensive repairs performed on locomotives at North Bay Junction shop as follows :—

Engine No. 120, general repair, engine and tender painted, completed during the month of November 1910.

Engine No. 116, heavy repair, during November 1910.

Engine No. 113, Heavy repair, engine and tender painted, completed during the month of December, 1910.

Engine No. 101, general repair, new boiler tubes, November, 1910.

Engine No. 115, general repair, new boiler tubes, engine and tender painted, completed during January.

Engine No. 105, driving tires turned, month of January.

Engine No. 150, given a light repair, month of January.

Engine No. 127, heavy repair, all tires turned, completed during January.

Engine No. 109, heavy repair, month of January.

Engine No. 123, given light repair, during January.

Engine No. 151, given light repair during February.

Engine No. 114, given light repair during February.

Engine No. 130, driving engine truck and tender truck tires turned during month of February.

Engine No. 106, heavy repair, engine and tender painted, completed during the month of March.

Engine No. 126, general repair, new boiler tubes, completed in March.

Engine N. 132, given light repair during month of March.

Engine No. 108, heavy repair, engine and tender painted, during April.

Engine No. 122, given light repair during month of April.

Engine No. 118, general repair, during March and April.

Engine No. 131, given light repair during May.

Engine No. 104, heavy repair, engine and tender painted, during April and May.

Engine No. 120, given light repair month of June.

Engine No. 153, given light repair during month of June.

Engine No. 128, given light repair during month of June.

Engine No. 116, general repair, new boiler tubes, engine and tender painted, during May and June.

Engine No. 103, boiler repaired, made necessary account of being damaged by accident.

Engine No. 119, given light repair, month of June.

Engine No. 150, heavy repair, 234 boiler tubes renewed, month of June.

Engine No. 115, given light repair during July.

Engine No. 109, light repair, engine and tender painted during July.

Engine No. 121, general repair, during June and July.

Engine No. 117, general repair, during July and August.

Engine No. 102, general repair, during September.

Engine No. 153, heavy repair, during October.

Engine No. 127, heavy repair, during month of October.

Engine No. 107, general repair during September and October.

NOTE: The term "general repair" used above in cases where an engine has received a thorough overhauling and rebuilding. "Heavy repair" in cases where engines have been given such repairs as driving tires turned, driving boxes renewed, valve, piston rings, and side rod bushings renewed; and "light repair" in cases where engines have received minor repairs, such as renewing side rod bushings, renewing piston rings and valve rings.

Each engine has had the boiler washed out once every two weeks when in regular service. Staybolts in fireboxes have been regularly tested, and renewals have been made where necessary.

Nettings, ashpans and dampers have been regularly examined at the end of each trip during the summer season, as a precaution against fire. During damp weather and at such times as the danger from this source would be reduced to a minimum, the nettings, ashpans, and dampers have been examined twice a week.

Engine Dispatch.

Statement showing the number of engines dispatched from the different terminal points during the year:—

Terminal Stations.	No. of Engs. Dispatched.
North Bay Junction	2,871
Cobalt	317
Englehart	3,235
Cochrane	855
Total	7,278

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es.

Engine No. 110, passenger service.
Engine No. 111, passenger and work service.
Engine No. 112, passenger service.
Engine No. 113, passenger service.
Engine No. 114, passenger service.
Engine No. 115, freight service.
Engine No. 116, freight service.
Engine No. 117, freight and switching service.
Engine No. 118, freight and switching service.
Engine No. 119, freight service.
Engine No. 120, freight and switching service.
Engine No. 121, freight and work service.
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Engine No. 125, freight and work service.
Engine No. 126, freight service.
Engine No. 127, passenger service.
Engine No. 128, passenger service.
Engine No. 129, freight service.
Engine No. 130, freight service.
Engine No. 131, freight service.
Engine No. 132, freight service.
Engine No. 133, passenger service.
Engine No. 134, passenger service.
Engine No. 135, passenger service.
Engine No. 136, passenger service.
Engine No. 150, switching service at Cobalt.
Engine No. 151, switching at North Bay Junction.
Engine No. 152, switching service at North Bay Junction, and work service
Porcupine Branch.
Engine No. 153, switching Englehart and North Bay Junction.

Passenger Equipment Repairs.

Extensive repairs have been made to passenger equipment at North Bay Junction shops as follows:—

Baggage car No. 11, new steam pipes installed, interior painted, grained and varnished, exterior re-colored, completed December 27th, 1910.

Baggage car No. 19, Baker heater removed and direct steam heating system installed. Completed January 25th.

Mail and Express car No. 5, trucks overhauled, interior and exterior repainted and varnished, completed during month of April.

Baggage and Express car No. 7, interior and exterior painted and varnished during April. This car was converted into a baggage and express car, it being originally a mail and express car.

Baggage and Express cars Nos. 13 and 15 have been given a general repair, trucks overhauled and exterior and interior repainted and varnished.

Second class coaches Nos. 6, 30 and 34 given a general repair, trucks rebuilt, interior and exterior of car repainted and varnished.

During the month of April coach No. 22 was rebuilt into a demonstration car and is being used for the purpose of exhibiting agricultural produce from Northern Ontario through different parts of the country.

First class coaches Nos. 100, 102, 106, 107, 110, 111 and 112 have been thoroughly overhauled, trucks rebuilt, necessary repairs made to woodwork of bodies of coaches, interior and exterior repainted and varnished.

Official Cars.

Official car "Temagami" was given a general repair during the month of May, trucks rebuilt, steel sill straightened, roof taken off and canvas applied, interior and exterior of car repainted, grained and varnished.

Private car "Sir James" was revarnished during the month of October.

Coach Cleaning.

Statement showing the number of coaches cleaned at the different terminal stations during the year:—

Station.	Number of Coaches Cleaned.
North Bay Junction	2,086
Englehart	7,649
Cochrane	2,215
Total	11,950

Conductors' Vans, Repairs.

Conductors' vans Nos. 51, 52, 55, 63 and 67 have been thoroughly overhauled, trucks rebuilt, interior and exterior of vans repainted.

Repairs to Freight and Work Equipment.

Rebuilt flat cars Nos. 60223, 60495, 60353, 60567 and 60279.

During the year sixty-three flat cars have been redecked at North Bay Junction shops; new end sills have been applied to thirty-three flat cars.

Bills collectible covering cost of repairs to foreign cars have been rendered monthly against car owners, in accordance with the Standard Code of Rules Governing the condition of and repairs to freight cars for the interchange of traffic, adopted by the Master Car Builders' Association.

Steam shovels, ledgerwoods, snow plows, snow flangers, etc., have had all necessary repairs made. Snow plows Nos. 3 and 4, snow flangers Nos. 1 and 2, also steam shovel No. 2 have been repainted and relettered.

Steel-Tired Wheels Turned and Wheels Applied Rolling Stock.

During the year fifty-eight pairs of driving wheels; one hundred and six pairs of coach wheels; eighty-one pairs of tender wheels, and twenty-nine pairs of engine truck wheels have been turned on the wheel lathe installed in North Bay Junction machine shop. Also sixty-six new coach wheel tires, and eight locomotive driving tires have been bored out with the wheel lathe before being applied to wheels.

New wheels have been applied to rolling stock as follows:—

To Locomotives.

Eight pairs of 33 in. cast iron wheels mounted on 3 $\frac{3}{4}$ x 7 in. axle.

Forty-three pairs of 33 in. cast iron tender truck wheels mounted on 5 in. by 9 in. axle.

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Four pairs of 33 in. steel-tired tender truck wheels mounted on 5 in. by 9 in. axle.

Two pairs of 28 in. steel-tired engine truck wheels.

One pair of 28 in. cast iron engine truck wheels.

To Passenger Equipment.

Two pairs of steel-tired wheels mounted on $3\frac{3}{4}$ in. by 7 in. axle.

Two pairs of 36 in. steel-tired wheels mounted on $4\frac{1}{4}$ by 8 in. axle.

To Freight Equipment.

Ten pairs of 33 in. cast iron wheels mounted on $3\frac{3}{4}$ by 7 in. axle.

Nintey-nine pairs of 33 in. cast iron wheels mounted on $3\frac{3}{4}$ by 7 in. axle.

Fourteen pairs of 33 in. cast iron wheels mounted on 5 by 9 in. axle.

Thirteen pairs of 33 in. cast iron wheels mounted on $5\frac{1}{2}$ by 10 in. axle.

To Work Department.

Two pairs of 30 in. cast iron wheels mounted on $4\frac{1}{4}$ by 8 in. axle.

Forty pairs of 33 in. cast iron wheels mounted on $4\frac{1}{4}$ by 8 in. axle.

Six pairs of 33 in. cast iron wheels mounted on 5 by 9 in. axle.

New Tires Applied.

At North Bay Junction machine shop, worn-out tires have been removed from thirty-three pairs of coach wheels, and new tires applied; also eight new tires have been applied to locomotive driving wheels.

Rolling Stock Destroyed.

T. & N. O. flat cars Nos. 60151, 60349, 60215, 60271, 60413, 60305, 60247 and 60773, were destroyed by fire at Porcupine on July 11th.

T. & N. O. flat car No. 60401 was destroyed on Grand Trunk Railway at Gravenhurst, July 31st. The trucks and air brake equipment of this car have been returned to this railway and bill rendered against G. T. R. covering depreciated value of car body.

G. T. R. box cars Nos. 4902 and 14611 were destroyed on our line, in wreck at Mileage 115 $\frac{1}{2}$ on May 27th.

C. P. R. box car No. 40862 was destroyed by fire on our line at Porcupine, July 11th.

C. P. R. box car No. 57186, destroyed on our line in wreck at Mileage 66 $\frac{3}{4}$ on August 15th.

G. T. R. box car No. 9231 was destroyed by fire at Heaslip on September 4th.

The trucks, air brake equipment and iron work belonging to G. T. R. box cars Nos. 4902, 14611 and 9231, also C. P. R. box car No. 57186, have been returned to owners, and credit allowed this railway, per rules of Master Car Builders' Association.

Carpenter Shop.

The following miscellaneous articles have been manufactured in the carpenter shop at North Bay Junction:—

145,000 track shims for Road Department.

COMPARATIVE TABLE OF CURVATURE—1910-1911.

Main Line.

Year.	1° curve.	2° curve.	3° curve.	4° curve.	5° curve.	6° curve.	Total.
1910.....	821.39	1,963.50	1,748.57	3,189.00	1,459.15	4,172.22	13,355.03
1911.....	"	"	"	"	"	"	"
					Eliminating .....		.0

Porcupine Branch.

Year	1°	2°	3°	4°	5°	6°	7°	Total
1910.....								
1911.....	63.44	51.15	445.13	71.43	120.17	467.57	105.40	1324.29

Description.	1911	1910
Track Centres with easements.....	53. miles	30 miles.
Track Ballasted.....	133.5 "	154 "
Main Track replaced with new 80-lb. steel.....	6.75 "	7.25 "
Second Track constructed	0. "	2.9 "
Private Siding and Spurs constructed.....	1.2 "	.8 "
Passing and Yard Siding constructed.....	5.5 "	5.01 "

ACCIDENTS.

The following is a list of personal injuries relating to Departments under my jurisdiction, occurring during the year.

January 21st, Apprentice Herbert Newman had wrist sprained and bruised by coming in contact with machinery in North Bay Junction shops.

March 12th, Jos. Montigny had one finger on left hand cut off and thumb bruised by machinery at North Bay Junction.

April 28th, Helper John Swan, North Bay Junction shops had tops of second and third fingers cut off.

April 27th, While loading rails at Mileage 16¾ a rail fell, breaking Section Foreman Wm. La Plante's leg.

June 7th, Machinist Harry Pilling had nail torn off second finger of left hand North Bay Junction shops, finger was caught between piston head and front of cylinder. Injuries were slight, party being off duty four days.

June 19th, Stephen Manceni, laborer in our Road Department, had right arm pierced just above the elbow by hook on cable stretcher at North Bay Junction.

July 1st, Dan Rus, employee on Porcupine Branch fell off a structure, injuring his back.

July 20th, Michele Cappetocci, laborer handling stone had nail and part of flesh on large toe of right foot torn off. Injuries slight.

July 28th, H. Freeman, assistant boiler maker, North Bay Junction, had a piece taken out of little finger of left hand.

August 1st, Laborer J. Muldoon was struck on back and injured by falling rail in North Bay Junction yard.

August 24th, Machinist W. W. Perry had eye slightly injured by piece of steel, North Bay Junction.

August 28th, B. Galacia, Italian laborer had foot jammed at South Porcupine.

September 1st, Carpenter C. J. Chamberlain had ribs injured by falling over a tool box in boarding car at Matheson.

September 9th, Hugh McIsaac had right leg broken, struck with rail which was being hoisted, Wataybeag Pit.

September 12th, Sectionman F. Kowal struck in face by cable on steam ditching machine boom, Nushka Siding.

September 22nd, Blacksmith John Bell was struck on back of hand by piece of steel. Necessary for him to have X-Ray used to locate same.

October 14th, While blasting Porcupine Branch, Camp No. 9, laborer G. L. Peterson was struck in face and eyes with sand and small pieces of rock. Sight of one eye completely destroyed.

October 16th, Laborer Alex. Dobous was struck on forehead by rail tongs of steam ditching machine, Mileage 228.

October 19th, Cable stretcher, stitching machine broke. When falling, brace and ropes struck cableman V. Guiseppi, injuring right leg and cheek.

During the year extensive changes were made in the organization and personnel of the staff. On May first, J. J. O'Neil, Building Master, having resigned, W. J. Oldham, Supervisor of Bridges, was appointed Bridge and Building Master in charge of bridges, buildings and water service, reporting to the Chief Engineer.

Following the resignation of Superintendent J. H. Black, on August 1st, the position of Chief Engineer and Superintendent of Maintenance was created with jurisdiction over the following departments.

Engineering.

Motive Power and Car.

Road.

Bridge and Building.

Telegraph.

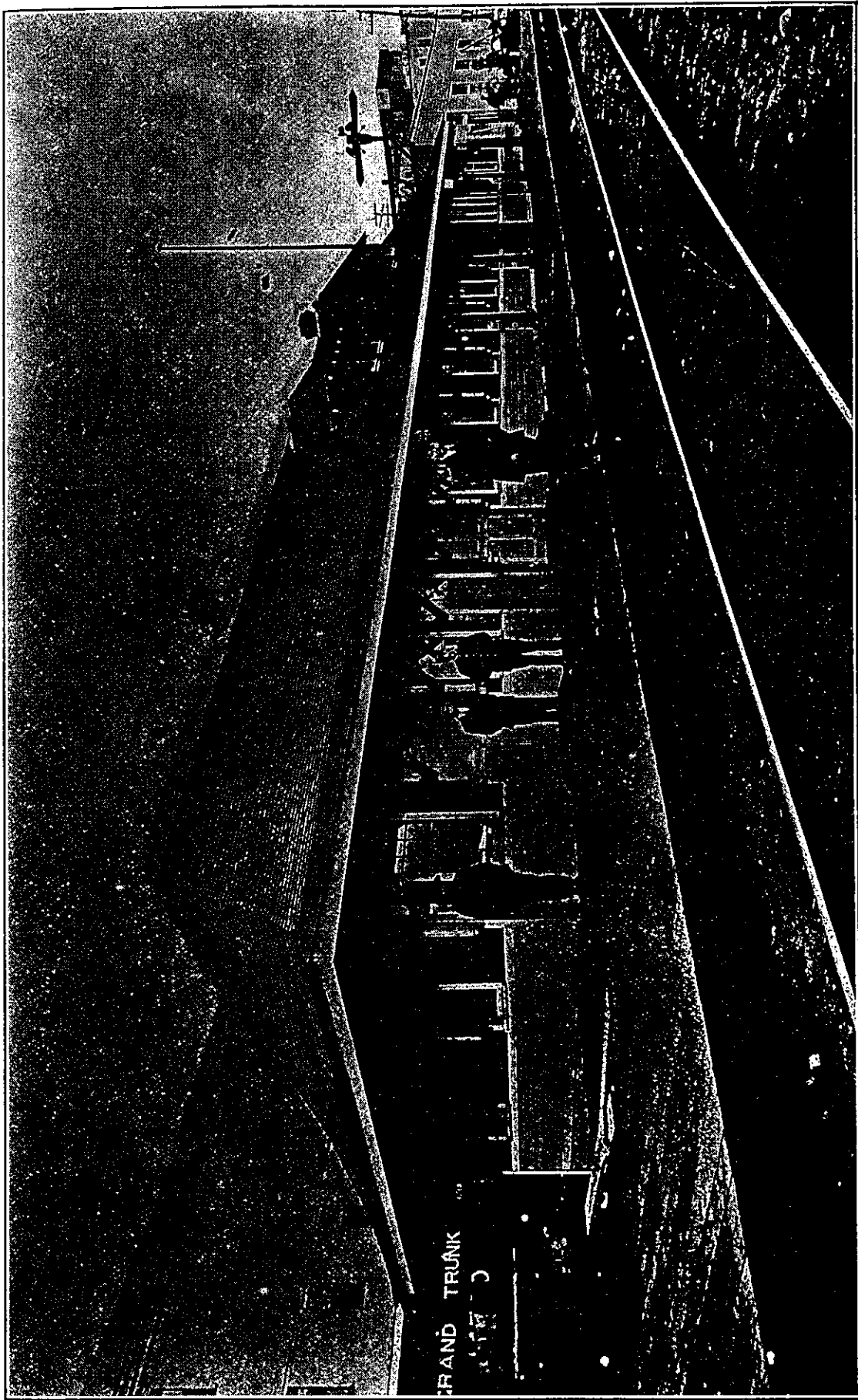
On January 1st, C. B. Smith having resigned, J. G. G. Kerry was appointed Consulting Engineer, and as such has given valuable advice.

I desire to express my appreciation of the faithful and valuable services that have been rendered the Commission by the heads of all of the above Departments and their Assistants.

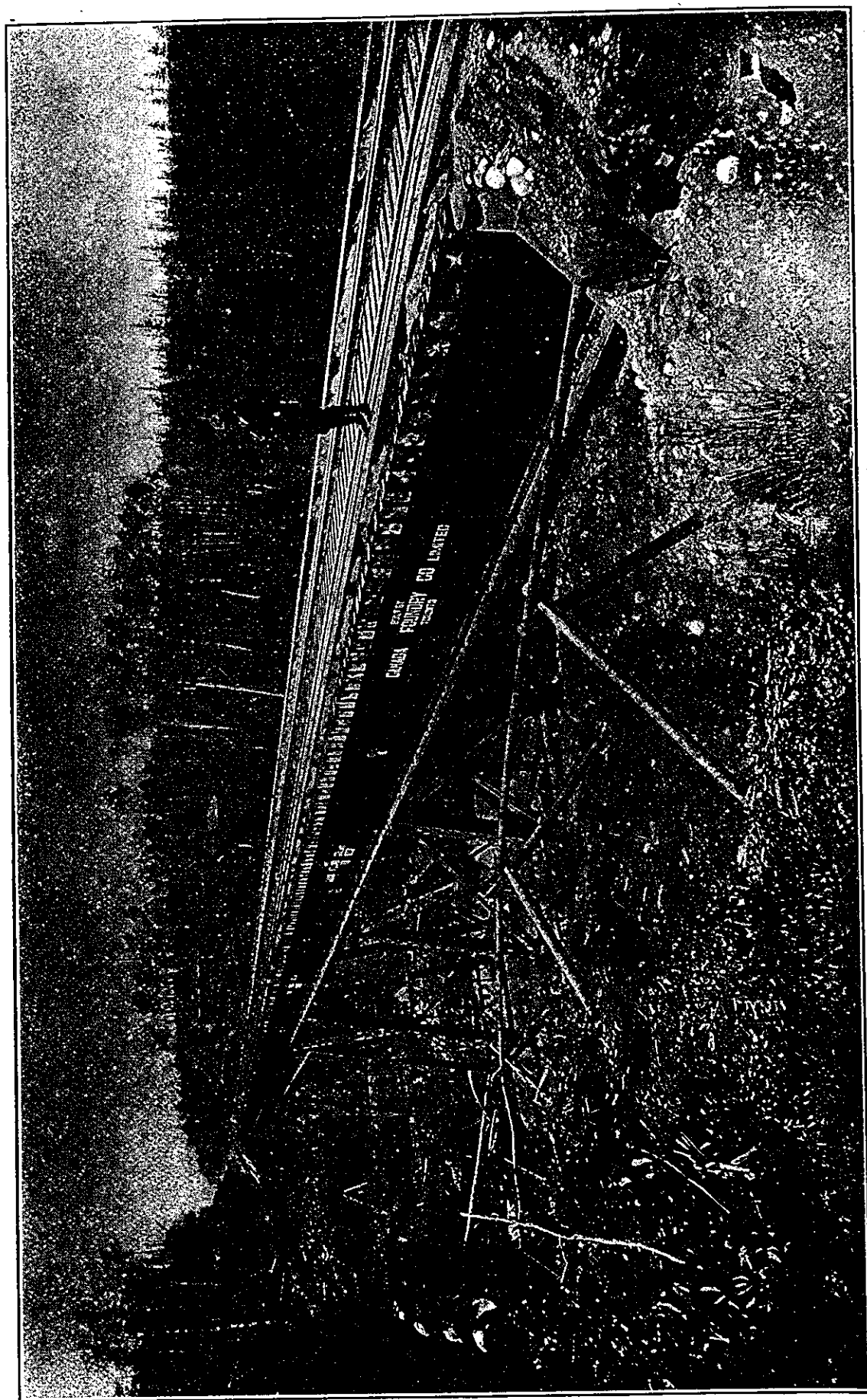
Respectfully submitted,

S. B. CLEMENT,

Civil Engineer and Superintendent of Maintenance.



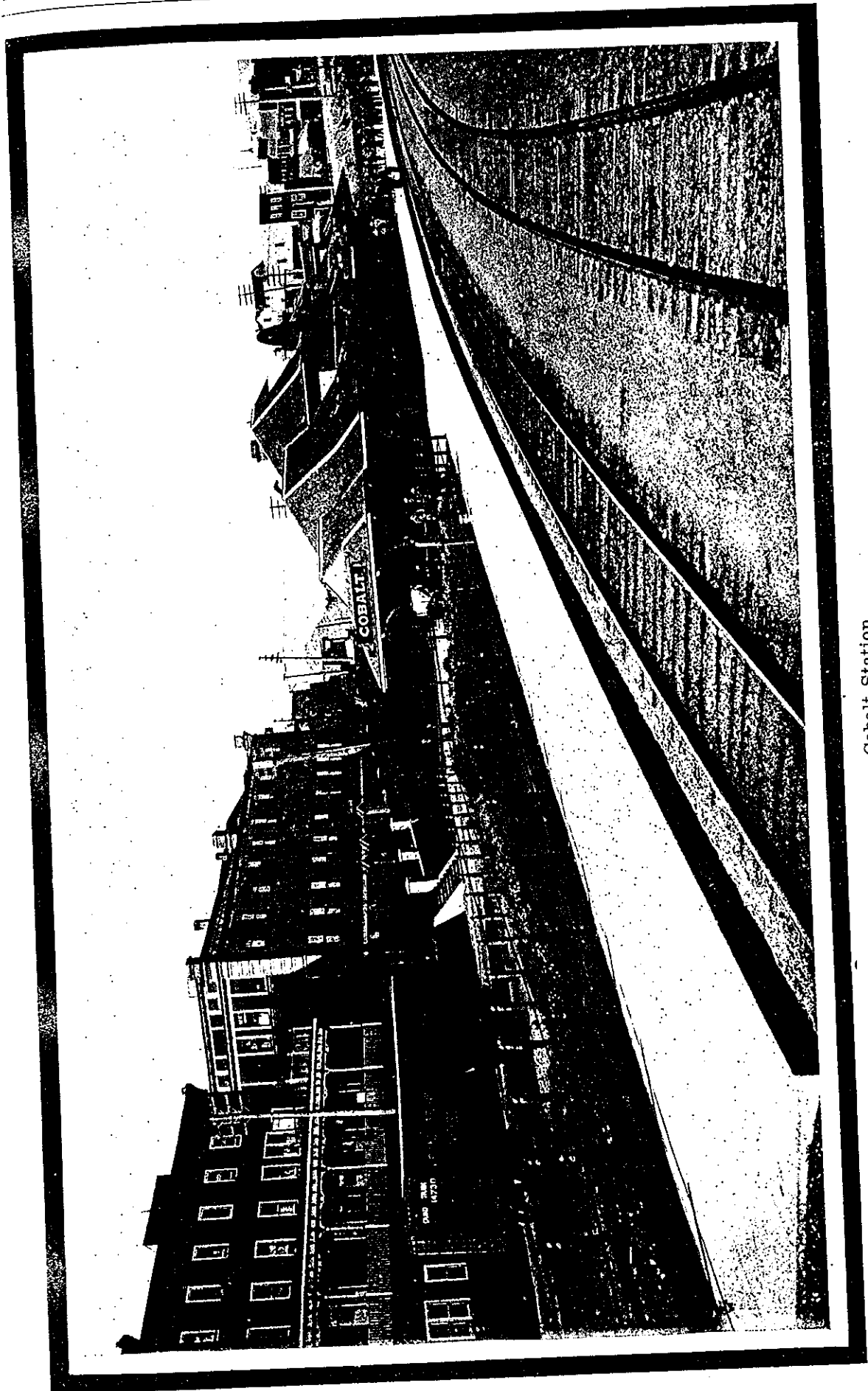
Cobalt Station.



Wataybeag Bridge.



1. Wabi Bridge.
2. Landing-place, Twin Falls, Alberta River.
3. Commissioner Murphy and Officials.
4. On the Porcupine—Chairman and Officials.



Cobalt Station.

ANNUAL REPORT OF SUPERINTENDENT OF TRAFFIC

Year Ended October 31st, 1912.

W. A. GRIFFIN, S. OF T.

Following accidents occurred during the year:—

1911.

November 11th, Faquier Bros'. Engine No. 5, straddled switch points, opposite old station, Cochrane. Slight damage to track. Account rendered Messrs. Faquier, Contractors, covering.

November 16th, Extra 121, East, M. P. 6½, Porcupine Branch, struck hand car, damaging slightly.

November 18th, South Porcupine, Car M. D. No. 13747 damaged by fire, \$10.00, caused by heater exploding.

November 19th, Train No. 47, M. P. 102, killed two pigs. Owner, McKinley, Porragh, Savage Mines, Cobalt.

November 22nd, North Bay Junction yard, Car D. L. & W., No. 28111 derailed, account brake rigging dropping. Slight damage to track.

November 30th, Extra 112, South M. P. 5, North Bay sub-division, struck hand car, damage \$10.00.

December 2nd, at Englehart, Car P. & R. 19830 damage \$2.00 by fire, cause heater exploding.

December 17th, Extra 116, South M. P. 232, Car P. M. 900 became disabled, end strap breaking, allowing bolster beams to drop to rails. Auxiliary from Englehart. Main track blocked four hours, fifteen minutes. No damage to track.

December 18th, Extra 118, South, while switching at New Liskeard, Brakeman F. St. Louis had third and fourth fingers of right hand crushed from first joint. Resumed duty February 15th, 1912.

December 25th, Extra 119, South M. P. 6½, North Bay sub-division, Car P. 17509 derailed. Cause, brake beam falling, main track blocked one hour, fifteen minutes. Car and track damaged, \$108.00.

1912.

January 3rd, Train No. 11, in charge of Conductor T. Hamilton and Engineer H. Jessup, ran into open switch opposite Union Station, Cochrane. Engine derailed, baggage car telescoped van, causing fire, destroying Van No. 50, baggage car No. 15, slightly damaging interior of 2nd class coach No. 10. C. P. 81980 and G. T. 5543 slightly scorched; B. & S. 10810, end smashed; B. & S. 10444, and 11370, draw-bars broken; C. P. 25727, sills broken; G. T. 75539, end sill and end of car broken and bent. Conductor T. Hamilton, Brakeman W. Russell and J. D. M. Sutherland severely injured. All recovered. Switch left open by Sectionmen, who were dismissed.

January 16th, Extra 131, South, while switching Milne's Siding (Trout Mills), train parted behind tender, allowing cars to descend grade at excessive speed, colliding with cars at foot of grade, destroying cars T. & N. O. 60173 and 60633, and damaging T. & N. O. 60547 extent of \$128.00, and T. & N. O. 100001 extent of \$14.00. Track damaged, \$12.85.

January 17th, North Bay Junction. E. Hill, in charge of live stock, standing in car door while train switching, sustained slight injuries to side of face by door closing.

January 20th, while car repairer unloading jack from Baggage Car, Train No. 1, Trout Mills, struck William Hughes, age 14. Head cut slightly.

January 21st, South Porcupine. Brakeman, John Kennedy while splitting board to light fire in caboose, nail penetrated foot. Resumed duty January 25th.

January 22nd, Mrs. J. A. Gillies, Haileybury, while walking from ladies waiting room to office to use telephone, slipped on ice, fractured leg above ankle.

January 26th, at Dane, engine of Extra 119, north from Dane to Swanton for water, on returning, light engine collided with train damaging cars T. & N. O. 60785, and C. P. 29663, loaded with steel rails extent \$195.00 and \$121.00 respectively, damaging tender, Engine 119 extent of \$90.00. Engineer and Conductor disciplined.

February 23rd, leading truck of Snow Plough No. 4 derailed opposite coal dock, account cinders and snow permitted to accumulate. Section Foreman resigned, pending investigation.

February 29th, at North Bay Junction Freight Shed, Arthur Demeza, trucker while transshipping bar of steel slipped fell between platform and car, injuring knee-cap, left leg. Resumed duty, March 4th.

March 5th, while south way freight Extra 120, switching Iroquois Falls 8.50 a.m., Brakeman Charles Lamourie fell from top of car, one truck passing over him. Rushed to hospital New Liskeard, by special, but succumbed to injuries 2.45 p.m. same date. Inquest held by Dr. Codd, Haileybury, verdict "accidental death."

March 5th, North Bay Junction freight shed, Michael Thibault, trucker while performing regular routine work, slipped and fell, fracturing bone of big toe of right foot. Resumed work, April 1st.

March 5th, North Bay Junction yard, Switchman R. G. McKenzie, performing routine work, slipped and fell, spraining instep of right foot. Resumed duty March 27th.

March 8th, Train No. 53, while passing Osborne, Cars G. T. No. 15462 and A. T. & St. F. No. 33609 derailed, damaging cars slightly. Cause, truck hook breaking on trailing truck A. T. & St. F. No. 33609, allowing bottom truck strap to drop. Auxiliary ordered from North Bay. Main track blocked three hours, twenty minutes.

March 15th, Train No. 55, M.P. 133½, truck on Car P. R. R. No. 7938 broke, derailling car and one pair of tender wheels, damaging track extent \$63.00. Auxiliary ordered from Englehart. Main track blocked four hours, thirty minutes.

March 21st, Kerr Lake, while unloading oil from Tank Car G. T. No. 81028 consignee's representative dropped match, accidentally setting fire to contents of car, damaging car G. T. No. 81028 to extent of \$218.93, also damaging car B. & O. No. 122264 extent of \$137.00.

MOTIVE POWER AND CAR DEPARTMENT

Annual Report for the Year Ended October 31st, 1912, of Mr. T. Ross,
Master Mechanic.

New Rolling Stock.

Consolidation Locomotives.

In June, 1912, four Consolidation type locomotives were received from the
Canadian Locomotive Company, Kingston. General description as follows:

Cylinders	23 in. x 30 in.
Steam Pressure	180 lbs.
Diameter of Drivers	57 in.
Weight on Drivers	181,050 lbs.
Total weight	210,600 lbs.
Total Heating Surface	3,300 sq. ft.
Grate area	50 sq. ft.

These engines are capable of hauling 950 tons over the controlling grade
hitherto, an increase over the older freight engines of about 58 per cent. They are
equipped with superheaters, brick arches, Walschart valve gear, piston valve with
outside steam pipes, Westinghouse E. T. 6 brake apparatus, with 8½ inch cross
compound pump, Pyle National Electric Headlight. The tenders are equipped
with equalized pedestal trucks.

The use of the superheater and brick arch has very noticeably added to the
efficiency of the boilers, and these engines are hauling their greater tonnage over
the division on practically the same amount of coal as is consumed by the 19 in x
24 in. ten-wheel freight engines previously used in the same service, and at the
high price of coal in this district, the saving effected amounts to a considerable
sum.

Conductors' Vans

Four new Conductors' Vans have also been received from the Canadian Car
and Foundry Company, Montreal. These vans have steel underframes and wooden
superstructure, and are numbered 70, 71, 72 and 73.

Steel Passenger Equipment.

During the year no passenger equipment has been ordered, but the investi-
gation of "all steel" cars has been continued. All passenger equipment built
for the Commission during the last three years has been fitted with steel under-
frames, which were the first steel underframe passenger cars to be built for any
Canadian Railway. The officials of the Departments find that the early difficul-
ties with "all steel" passenger cars in connection with proper insulation for
northern latitudes can be satisfactorily overcome, and specifications have been
prepared for "all steel" baggage and passenger cars, so that such new cars as
may be required in the future can be of "all steel" construction.

New Shop Machinery.

At North Bay Junction shops the following machinery has been installed:

1 Low pressure half of Duplex Air Compressor, received from the Canadian
Band Company.

equipment as a High Speed Brake when carrying ninety pounds brake pressure, and obtain better results than when using one hundred and ten pounds with the old standard equipment.

If then, a more powerful brake is desired, it can be obtained by simply increasing the brake pipe pressure.

Summary of Extensive Repairs on Locomotives, etc.

During the year the Motive Power Equipment has been properly maintained and the repairs and renewals necessary from time to time have been executed thereon.

Extensive repairs have been performed on Locomotives at North Bay Junction Shop as follows:—

Engine No. 111, general repair, engine and tender repainted, during November, 1911.

Engine No. 123, general repair and new boiler tubes, during November, 1911.

Engine No. 101, light repair, due to accident, November, 1911.

Engine No. 124, light repair, during November, 1911.

Engine No. 151, general repair and new boiler tubes, during November, 1911.

Engine No. 108, heavy repairs during November, 1911.

Engine No. 119, light repairs to tender, due to accident, during November, 1911.

Engine No. 132, light repairs due to accident during November, 1911.

Engine No. 122, general repair and new boiler tubes, during December, 1911.

Engine No. 127, light repairs, during December, 1911.

Engine No. 125, general repairs and new boiler tubes, January, 1912.

Engine No. 130, light repairs during January, 1912.

Engine No. 120, heavy repairs and new boiler tubes, January, 1912.

Engine No. 150, light repairs during January, 1912.

Engine No. 129, general repair and new boiler tubes, January, 1912.

Engine No. 153, front end repairs during January, 1912.

Engine No. 116, heavy repairs during January, 1912.

Engine No. 113, general repairs and new boiler tubes, February, 1912.

Engine No. 106, general repairs and new boiler tubes, March, 1912.

Engine No. 109, heavy repairs during March, 1912.

Engine No. 124, general repair and new boiler tubes, March, 1912.

Engine No. 105, light repairs, damaged in accident, March, 1912.

Engine No. 150, general repair and new boiler tubes, April, 1912.

Engine No. 132, General repair and new boiler tubes, May, 1912.

Engine No. 131, general repair and new boiler tubes, May, 1912.

Engine No. 103, light repair in May, 1912.

Engine No. 110, general repair during June, 1912.

Engine No. 128, light repair in June, 1912.

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- Engine No. 114, general repair and new boiler tubes, July, 1912.
 Engine No. 123, heavy repairs due to accident, July, 1912.
 Engine No. 112, general repair and new boiler tubes, August, 1912.
 Engine No. 135, light repairs in August, 1912.
 Engine No. 152, general repairs and new boiler tubes, September, 1912.
 Engine No. 136, light repairs due to accident, September, 1912.
 Engine No. 104, heavy repairs during September, 1912.
 Engine No. 108, general repairs and new boiler tubes, October, 1912.
 Engine No. 121, general repair, due to accident, October, 1912.
 Engine No. 122, light repair during October, 1912.
 Engine No. 115, general repair during October, 1912.

NOTE: The term "General Repair" as used above, refers to cases where an engine has received a thorough overhauling and rebuilding. "Heavy Repair" refers to cases where engines have been given such repairs as driving tires turned, bearings renewed, valves, piston rings and side rod bushings renewed; "Light Repair" refers to cases where an engine has received minor repairs such as renewing side rod bushings, piston rings and valve rings.

Each engine has had the boiler washed out once every two weeks when in regular service. Staybolts in fire boxes have been regularly tested and renewals have been made when necessary. Nettings, ash-pans and dampers have been regularly examined at the end of each trip during the summer season, as a precaution against fire. During damp weather and at such times as the danger from this source is reduced to a minimum and nettings, ash-pans, and dampers have been examined twice a week.

Engine Dispatch.

Statement showing the number of engines dispatched from the different terminal and divisional points during the year:—

Stations	Number of Engines Dispatched.
North Bay Junction	5,982
Cobalt	321
Englehart	3,844
Cochrane	1,064
S. Porcupine and Timmins	1,056
Total	12,267

The Motive Power Equipment has been generally assigned during the year as follows:—

- Engine No. 101, work service.
 Engine No. 102, freight service.
 Engine No. 103, work service.
 Engine No. 104, work service.
 Engine No. 105, work service.
 Engine No. 106, freight service.

MOTIVE POWER AND CAR DEPARTMENT.

Annual Report, year ending October 31st, 1911, of Thomas Ross, Master Mechanic, and H. L. Rodgers, Draughtsman.

New Rolling Stock.

During the year 1911 the following new equipment has been received:—

Four "Pacific Type" Passenger Locomotives, from the Canadian Locomotive Company, Kingston. No. 133 received in January, and Nos. 134, 135 and 136 during February. The following is a general description of these engines.

Weight on Drivers	133,375 lbs.
Weight on Front Truck	34,900 lbs.
Weight on Trailing Truck	34,825 lbs.
Total Weight	203,100 lbs.
Cylinders, diameter and stroke	21 in. by 28 in.
Valves, piston type	dia. 11 in.
Valve Gear	Walschaert.
Boiler, type	Extended Wagon Top.
Boiler Pressure	200 lbs.
Diameter at waist sheet, 63½ in.; at dome course, 72⅜ in.	
Tubes, Number diameter and length	272, 2 in., 19 ft.
Firebox	95¼ in. by 69¼ in.
Grate Area	46 sq. ft.
Heating Surface, Tubes	2705 sq. ft.
Heating Surface, Firebox	162 sq. ft.
Heating Surface, Total	2867 sq. ft.
Driving Wheel Base	12 ft. 7 in.
Total Wheel Base of Engine	31 ft. 6 in.
Diameter of Driving Wheels	69 in.
Diameter of Engine Truck Wheels	33 in.
Diameter of Trailing Truck Wheels	42 in.
Tractive Power	30,400 lbs.
Capacity of Tender	5,500 imp. gals., 10 tons coal.
Weight of Tender, Loaded	135,600 lbs.

Three Parlor-Cafe Cars, from the Canadian Car and Foundry Co., Montreal. These cars have steel underframes and body framing. also six-wheel steel trucks. Interior is finished in mahogany.

Dimensions: length over body, 70 ft. 3½ in., over buffers, 80 ft. 3 in. Cars are equipped with Pintsch Gas lighting and Gold Car Heating Co's. steam heating system.

Contract has been awarded to the Canadian Locomotive Co., Kingston, for four Consolidation Locomotives, of which the following are some of the details:—

Weight on Drivers	180,000 lbs.
Weight on Truck	26,000 lbs.
Weight, Total	206,000 lbs.

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March 22nd, at South Porcupine, Car G. T. Refrigerator No. 46273 damaged by fire extent of \$5.00. Cause, heater exploding.

March 25th, North Bay Freight Shed, George Gall, trucker, while performing regular routine work, had big toe left foot injured, caused by hydrant falling off truck. Resumed duty March 28th.

April 13th, while switching cars Town Siding, North Bay Junction, Car G. T. No. 10789 left track at heel of frog, also derailling truck C. P. No. 140046. Estimate damage cars, \$10.00, track, \$5.08.

April 14th, North Bay Junction yard, 3.20 a.m., switch engine No. 150 collided with T. & N. O. flat car No. 60267 destroying car and damaging engine. Engineer and brakeman responsible, disciplined.

April 18th, Train No. 1, M. P. 239, struck and instantly killed Russian, named John Saari, address unknown. Remains taken to Cochrane, Ontario, and buried at that point. Inquest held, verdict "accidental death."

April 19th, Switch Engine No. 151, derailed North Bay Junction yard, under pit switch. No damage to engine. Track damaged extent of \$10.61.

May 1st, while train No. 51 passing M. P. 49, cars G. T. No. 122414, G. T. No. 16079, P. R. R. No. 22597, G. T. P. No. 340274, A. R. L. No. 11675, and T. & N. O. No. 100185 derailed. Estimate damage to cars and contents, \$1,800.00. Damage to track \$53.10. Cause unknown. Auxiliaries ordered from North Bay Junction and Englehart. Main track blocked seven hours, ten minutes.

May 3rd, North Bay freight sheds, Charles Norton, trucker, had rib broken on right side, also shoulder bruised cause, case of glass falling on him. Resumed duty May 27th.

May 6th, Nellie Lake Pit, Brakeman Fred Williams, while running from van to cookery, stepped in hole, spraining knee badly. Resumed duty as freight clerk, North Bay Junction, July 29th.

May 9th, leading tender wheels of Engine No. 103 derailed M. P. 81¼. Cause, low joint. No damage to engine. Track damaged slightly.

May 15th, Train No. 47, M. P. 121, struck and killed cow. Owner, Mr. J. Humphrey, Uno Park.

May 23rd, Eugene Cousineau, trucker, North Bay Junction freight shed, sprained back while lifting tie. Resumed duty May 31st.

May 25th, Train No. 53, while passing Jocko, 8.30 p.m. struck and killed three horses. Owner, Hawkesbury Lumber Company, Ottawa.

May 29th, Train No. 47, M. P. 103½, struck Mrs. Robert Carson, age fifty, of Cobalt, fracturing four ribs and collar bone. Removed to Cobalt Mines Hospital, Cobalt, and succumbed to injuries June 6th.

May 29th, Train No. 1, M. P. 71½ struck and killed cow. Owner, Mr. E. Perron, Timigami.

May 29th, Train No. 53, M. P. 103½, cars B. & S. Nos. 11790, 11265, 13221, 19994, Q. M. & S. No. 140 and N. Y. C. No. 385937 derailed, damaging cars and track extent of \$885.20. Cause, switch not properly secured. Conductor and Brakeman responsible, disciplined.

May 31st, Eugene Cousineau, trucker, North Bay Junction freight shed, while transferring large piece of iron smoke stack, had right hand jammed between side of car door and stack. Resumed duty June 10th.

G T.R.

June 16th, Extra 123, South, ran into washout, M. P. 16¼, derailing engine No. 123, and Cars C. P. 120712, Wabash No. 23349, C. C. C. & St. L. No. 4262, T. & N. O. No. 100193, G. T. No. 69901, C. P. No. 72824, P. M. No. 31694. Estimate of damage, equipment and track, \$2,674.00. Auxiliaries ordered from North Bay and Englehart. Main track blocked seven hours, twenty minutes. Engineer Newman, Fireman Siroir and Brakeman W. Hill injured. Fireman and Brakeman resumed duty June 23rd; Engineer Newman, September 11th.

June 21st, Train No. 47, while passing Sesekinika struck and killed heifer. Owner, Mrs. William Radkey, Sesekinika.

June 24th, Extra 118, South, M. P. 172, struck hand car, damaging slightly.

June 26th, North Bay Junction yard, Switchman G. R. Smith stepped between cars to pull pin, stumbled on switch rod, injuring leg. Resumed duty July 31st.

July 9th, at Milne's Siding, M. P. 26½, tender of Engine No. 116, derailed. Cause, spread track. Estimate of damage, tender and track, \$255.25.

July 15th, Train No. 2, M. P. 110¾, struck and killed cow. Owner, M. R. R. Hurd, Haileybury.

July 21st, Extra 129, North, M. P. 135, ran into herd of cattle, killing two cows and one heifer. Owner of cows, R. Bond, Heaslip. Owner of heifer, Mr. J. W. Houghton, Heaslip.

July 30th, Train No. 51, M. P. 23, car G. T. No. 46596, derailed, damaging track slightly.

August 6th, Leading wheels of engine truck, Engine No. 136, Train No. 47 left rails M. P. 83½, fifteen minutes detention. Cause unknown.

August 8th, Head on collision, Train No. 47 and D. S. 121, Riddle, 7:37 a.m. Fireman George Carmichael killed, several passengers shaken up, but none seriously injured. G. T. Express Car No. 725 badly damaged; Cars L. & N. No. 9251 and G. T. P. No. 301824 completely destroyed; C. V. No. 62884 and P. & R. No. 3459 partially destroyed; Engines 136 and 121 badly damaged. Estimate damage rolling stock, \$7,000.00; track, \$560.00. Cause, Train No. 47 improperly flagged. Employee responsible dismissed. Auxiliaries ordered from Englehart and North Bay Junction. Main line blocked eleven hours.

August 12th, Extra No. 137, South, M. P. 86 struck velocipede on which two fire rangers were riding, instantly killing John White, resident of Aylmer, Quebec. John Richardson, other party, escaped without serious injury. Inquest held at North Bay, verdict "accidental death." No blame attached to train crew.

August 23rd, Train No. 82, M. P. 27½, Porcupine sub-division, struck and killed cow. Owner Hendrix Bostram, South Porcupine.

August 27th, Train No. 1, M. P. 28½ struck and killed cow. Owner George Cooper, Tomiko.

August 28th, at North Bay Junction yard, Car G. T. No. 46325 ran into side of two other cars, turning over on side, damaging slightly. Switchman responsible. Dismissed.

August 30th, Train No. 47, M. P. 183¾ derailed. Trailing truck of tender Engine No. 108 left rails, derailing baggage cars G. T. No. 584, and 679, and leading truck of 2nd class coach G. T. No. 1413. Estimate damage, equipment \$488.50, track and labor expenses, rerailing, \$327.60. No person injured. Cause attributed to sun-kink.

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September 6th, D. S. 140, M. P. 16½, G. T. Refrigerator, No. 46725 and Refrigerator No. 18147 derailed. Cause, tight friction on G. T. Refrigerator. Estimate damage, equipment, \$355.00. Auxiliary ordered from North Bay Junction. Main track blocked three hours, ten minutes.

September 7th, Extra 105, South M. P. 46½, struck and killed moose.

September 15th, Extra 137, South, M. P. 81, G. T. Refrigerator No. 46610 derailed. No damage to car. Estimate damage, track and labor rerailing, \$52.74.

September 25th, Extra 115, East, M. P. 32, Porcupine sub-division, G. T. Refrigerator No. 46524, derailed. Cause, tight friction. Main track blocked three hours.

September 27th, Train No. 35, M. P. 1, Kerr Lake sub-division struck and killed pig. Owner, Nipissing Mining Company, Limited.

September 28th, Train No. 85, M. P. 71½ struck and killed calf. Owner, Hindson, Timagami.

September 30th, Train No. 47, Swastika, struck and killed two pigs. Owner, Tough, Swastika.

October 5th, Extra 138, South, M. P. 127½, struck and killed cow. Owner, Mulvihill, Earleton.

October 5th, Train No. 44, M. P. 225, struck and killed pig. Owner Mrs. Smith, Iroquois Falls.

October 7th, Train No. 7, at South side of Wye, Cochrane, ran into herd cattle, killing one instantly. Owner Jamieson Meat Company.

October 7th, Work Extra 104, M. P. 106¼ struck and killed cow. Owner, J. Pockett, North Cobalt.

October 15th, North Bay Junction yard, Car J. B. No. 21349 and P. C. C. No. 879153, damaged extent \$111.50 and \$4.50 respectively. Switchman responsible, dismissed.

October 16th, Pullman Car "Chemainus," Train No. 1 side steps, north end, broken. Cause, striking ballast south of New Liskeard Station.

October 22nd, North Bay Junction yard, tender Engine 151, slightly damaged collision with Engine 152. Switchman responsible, disciplined.

October 28th, 2nd, No. 87, M. P. 48½ 6.50 a.m., struck and killed two cows, value \$600.00. Owners, Spanish River Pulp and Paper Company, Limited.

December 3rd, 1911, the Grand Trunk Railway being without terminal facilities at North Bay, withdrew from the C. P. R. and commenced using the T. & N. O. terminals, North Bay Junction, under agreement.

February 12th, 1912, Schumacher, M. P. 31.7 Porcupine sub-division, was opened for freight traffic, March 11th, 1912, opened for passenger traffic, and on April 8th for railway and commercial telegraph.

Thomkins, M. P. 33.2, Porcupine sub-division, opened for freight traffic, May 12th, 1912; passenger traffic March 11th, 1912, and on July 8th for railway and commercial telegraph.

ANNUAL REPORT OF CHIEF ENGINEER AND SUPERINTENDENT
OF MAINTENANCE

S. B. CLEMENT, C. E. & S. OF M.

Year Ending October 31st, 1914.

A. J. MCGEE, Esq.,

Secretary-Treasurer,

Toronto, Ontario.

DEAR SIR,—I beg to submit the following annual report, as Chief Engineer and Superintendent of Maintenance, for the fiscal year ended October 31st, 1914:

New Lines, Surveys and Construction.

Iroquois Falls Branch:

At the beginning of the year, a freight service was being operated on this branch, although the terminus at Iroquois Falls was not completed. During the year a terminal yard has been built on the Iroquois Falls station grounds, also the industrial spur sidings necessary to serve the plant of the Abitibi Power and Paper Co. These latter were built at the expense of the Company. A frame combination passenger station and Agent's residence and a frame section foreman's house were built under contract by Sherwood & Sherwood. A frame freight shed and one-stall engine shed were built by the Bridge and Building Department.

James Bay Surveys:

The collection of information, with respect to navigation and harbors on James Bay, particularly the Estuary of the Moose River and the territory between Moose Factory and Cochrane, has been continued. Mr. W. R. Maher, locating engineer, made two trips to James Bay. On the first, leaving Cochrane on March 24th, and returning May 30th, he studied ice and flood conditions at Moose Factory and on the second, leaving August 1st, and returning September 16th, he made additional soundings and surveys required to supplement the information previously collected. The Commission's Consulting Engineer, J. G. G. Kerry, has prepared a very complete report, in which are included the results of the various investigations carried on by the Commission.

Additions and Betterments of Road.

Change of Line at Cochrane:

In order to obtain a convenient operating connection with the National Transcontinental Railway yards at Cochrane to be used by Grand Trunk Railway trains when operating over the T. & N. O. Rly. under the Running Rights Agreement, it was necessary to divert two and one-half miles of main track, south of Cochrane. A contract for the grading was awarded to Messrs. MacDougall and McCluskey, of Cochrane. The track was laid and ballasted by the Track Department. At the same time the divisional and local freight yards were re-arranged and ample facilities have been provided to handle the traffic, that it is anticipated will result from the operation of the N. T. Rly. between Cochrane and Winnipeg in 1915.

PERINTENDENT

Additional Yard Facilities Completed During the Year.

Widdifield:

A through siding 603 ft. long with capacity for 8 cars for shipment of forest products.

Riddle:

The through passing siding extended 1,128 ft. with capacity for 45 cars. A large quantity of pulpwood will be shipped from Riddle this winter.

Cobalt:

An independent track through the Cobalt yard to Kerr Lake Junction has been assigned to the Nipissing Central Railway. This track is on the east side of the station grounds next to Cobalt Lake. The movements of the electric cars are confined to these tracks and do not conflict with the operation of the T. & N.O. Railway. These changes were made the occasion of a general re-arrangement of the Cobalt yard. These changes simplify the operation of the yard and increase the accommodation on sidings for receipt and shipment of freight. An independent through siding 514 ft. long to hold 6 cars was built at the north end of the yard for shipments of high explosives. This siding is a great convenience to the mines and explosive companies and reduces the danger to the public by avoiding the necessity of handling the explosives through the town.

New Liskeard:

The New Liskeard spur has been extended to the Dominion Government wharf on Lake Temiskaming. A short 8-car siding from the spur at the end of Armstrong Street provides accommodation for shipment of products brought in by train. Unfortunately, through the failure of the controlling dam at the foot of the lake, the water was too low to permit boats to dock at the wharf. The dam is now being repaired and it is expected that next season the water will be maintained at the regulated level and that large quantities of forest and agricultural product will be shipped from the New Liskeard wharf.

Additional land for the enlargement of the station grounds has been purchased.

Uno Park:

The spur public freight siding has been extended and made a through siding. The accommodation has been increased from 12 cars to 32 cars. Roadways have been graded and gravelled and piling ground for forest products provided.

Thornloe:

The passing siding was lengthened and a new local freight siding 1,213 ft. long to hold 25 cars was provided. Additional land for station grounds was purchased. Station roadways, graded and gravelled, and piling ground for forest products prepared.

M.P. No. 132:

A public spur siding was extended 198 ft. This siding now holds 9 cars and roadway was graded, providing good accommodation to settlers unable to draw their pulpwood and timber to Earleton or Heaslip.

as Chief Engineer
October 31st, 1914.

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1915

NORTHERN ONTARIO RAILWAY COMMISSION.

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Chamberlain:

Roadway and piling ground graded, etc.

Nahma:

Roadways and piling ground graded.

ELK LAKE BRANCH.

McCool:

Roadways and piling ground graded, etc.

Osseo:

Roadways and piling ground graded, etc.

Mountain Chutes:

Roadways and piling ground graded, etc.

M.P. No. 19:

Siding extended.

Wabun:

Roadways and piling ground graded, etc.

INDUSTRIAL TRACKS CONSTRUCTED.

Temagami:

Private spur siding, 533 ft. long, for Wm. Milne & Sons, at M.P. 73.6. This firm has bought a large quantity of fire killed timber in the Temagami Reserve. All this timber will be cut this coming winter and logs shipped to their mill at Trout Lake.

Latchford:

The Canadian Pulp and Lumber Co., a subsidiary of the Canadian American Wood and Pulp Co., of Niagara Falls, N.Y., has enlarged its rossing plant and expects to ross about 30 cars of pulpwood per day in transit, from Temiskaming points to Niagara Falls.

Two private spur sidings to serve the rossing plant have been constructed.

Gillies Depot:

A private siding on the bank of the Montreal River was built for Gillies Bros. to unload in the river logs railed from Rib Lake.

Monteith:

A private siding, 363 ft. long, to hold 6 cars, for Geo. D. Hamilton & Co., on the south side of Driftwood River. This firm is building a saw-mill on the river.

1915

1915

NORTHERN ONTARIO RAILWAY COMMISSION.

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Nellie Lake:

A private spur siding at M.P. 227 for Fred Brown. Siding 270 ft. long to hold 3 cars for shipment, pulpwood, etc.
A private spur siding at M.P. 228 for Malkin and Co. Siding is 950 ft. long and will hold 20 cars. Malkin and Co. operate a saw-mill and ship forest products.

Porquis Jct.:

A private siding at M.P. 5.5, Iroquois Falls Branch. Siding 381 ft. long, to hold 5 cars, for shipment forest products by settlers interested.

Timmins:

A private siding 448 ft. long to the Canadian Mining and Finance Company's power plant on Gillies Lake.

New frame combined passenger stations and agent's residences were built at Hecslip and Elk Lake, under contract by Sherwood & Sherwood.

New frame agent's residences were built at Charlton, South Porcupine and Timmins, under contract, by Sherwood & Sherwood.

New section foreman's house was built at Timmins, under contract, by Sherwood & Sherwood.

Shelter stations were built at the following flag stations: Lounsbury's, McCool, Oso, Kenabeek, Wabun, Belleek, Connaught.

The following indicates progress in the elimination of timber bridges and trestles:

Replaced by Steel Bridges	974 lin. ft.
Concrete Bridges	206 lin. ft.
Embankment	452 lin. ft.

Total Timber Bridges and Trestles eliminated .. 1,632 lin. ft.

The following culverts were constructed:

Concrete tile	506 lin. ft.
Timber.	117 lin. ft.
Corrugated Iron	1,245 lin. ft.

Corrugated iron culverting chiefly under road and highway crossings. Seldom used as under roadbed.

Additional tile drains to underdrain roadbed aggregated 4.81 miles. Main track widened by train filling and by clay from line cuttings aggregated 86.5 miles of line.

Additional right-of-way fencing, to the extent of 21.8 miles of fence, was constructed.

Seven public and four private grade road crossings were built.

Details of those portions of above betterments that were made by Commission's forces will be found in the accompanying reports of the General Roadmaster and Bridge and Building Master.

ANNUAL REPORT OF SUPERINTENDENT OF TRAFFIC

Year Ended October 31st, 1912.

W. A. GRIFFIN, S. OF T.

Following accidents occurred during the year:—

1911.

November 11th, Faquier Bros'. Engine No. 5, straddled switch points, opposite old station, Cochrane. Slight damage to track. Account rendered Messrs. Faquier, Contractors, covering.

November 16th, Extra 121, East. M. P. 6½, Porcupine Branch, struck hand, damaging slightly.

November 18th, South Porcupine, Car M. D. No. 13747 damaged by fire, caused by heater exploding.

November 19th, Train No. 47, M. P. 102, killed two pigs. Owner, McKinley, Savage Mines, Cobalt.

November 22nd, North Bay Junction yard, Car D. L. & W., No. 28111 derailed, account brake rigging dropping. Slight damage to track.

November 30th, Extra 112, South M. P. 5, North Bay sub-division, struck car, damage \$10.00.

December 2nd, at Englehart, Car P. & R. 19830 damage \$2.00 by fire, caused by heater exploding.

December 17th, Extra 116, South M. P. 232, Car P. M. 900 became disabled, strap breaking, allowing bolster beams to drop to rails. Auxiliary from Englehart. Main track blocked four hours, fifteen minutes. No damage to track.

December 18th, Extra 118, South, while switching at New Liskeard, Brake-Engineer F. St. Louis had third and fourth fingers of right hand crushed from joint. Resumed duty February 15th, 1912.

December 25th, Extra 119, South M. P. 6½, North Bay sub-division, Car P. 17509 derailed. Cause, brake beam falling, main track blocked one hour, fifteen minutes. Car and track damaged, \$108.00.

1912.

January 3rd, Train No. 11, in charge of Conductor T. Hamilton and Engineer J. Messup, ran into open switch opposite Union Station, Cochrane. Engine derailed, baggage car telescoped van, causing fire, destroying Van No. 50, baggage car No. 15, slightly damaging interior of 2nd class coach No. 10. C. P. 81980, G. T. 5543 slightly scorched; B. & S. 10810, end smashed; B. & S. 10444, end of car broken and bent. Conductor T. Hamilton, Brakeman W. Russell and J. D. M. Sutherland severely injured. All recovered. Switch left open. Sectionmen, who were dismissed.

January 16th, Extra 131, South, while switching Milne's Siding (Trout Mills), train parted behind tender, allowing cars to descend grade at excessive speed, colliding with cars at foot of grade, destroying cars T. & N. O. 6047 and 60633, and damaging T. & N. O. 60547 extent of \$128.00, and T. & N. O. 100001 extent of \$14.00. Track damaged, \$12.85.

January 17th, North Bay Junction. E. Hill, in charge of live stock, standing in car door while train switching, sustained slight injuries to side of face in door closing.

January 20th, while car repairer unloading jack from Baggage Car, Train No. 1, Trout Mills, struck William Hughes, age 14. Head cut slightly.

January 21st, South Porcupine. Brakeman, John Kennedy while splitting board to light fire in caboose, nail penetrated foot. Resumed duty January 25th.

January 22nd, Mrs. J. A. Gillies, Haileybury, while walking from ladies waiting room to office to use telephone, slipped on ice, fractured leg above ankle.

January 26th, at Dane, engine of Extra 119, north from Dane to Swastika for water, on returning, light engine collided with train damaging cars T. & N. O. 60785, and C. P. 29663, loaded with steel rails extent \$195.00 and \$121.00 respectively, damaging tender, Engine 119 extent of \$90.00. Engineer and Conductor disciplined.

February 23rd, leading truck of Snow Plough No. 4 derailed opposite coal dock, account cinders and snow permitted to accumulate. Section Foreman resigned, pending investigation.

February 29th, at North Bay Junction Freight Shed, Arthur Demeza, trucker while transshipping bar of steel slipped fell between platform and car, injuring knee-cap, left leg. Resumed duty, March 4th.

March 5th, while south way freight Extra 120, switching Iroquois Falls, 8.50 a.m., Brakeman Charles Lamourie fell from top of car, one truck passing over him. Rushed to hospital New Liskeard, by special, but succumbed to injuries 2.45 p.m. same date. Inquest held by Dr. Codd, Haileybury, verdict "accidental death."

March 5th, North Bay Junction freight shed, Michael Thibault, trucker while performing regular routine work, slipped and fell, fracturing bone of big toe of right foot. Resumed work, April 1st.

March 5th, North Bay Junction yard, Switchman R. G. McKenzie, performing routine work, slipped and fell, spraining instep of right foot. Resumed duty March 27th.

March 8th, Train No. 53, while passing Osborne, Cars G. T. No. 15462 and A. T. & St. F. No. 33609 derailed, damaging cars slightly. Cause, truck bolt breaking on trailing truck A. T. & St. F. No. 33609, allowing bottom truck strap to drop. Auxiliary ordered from North Bay. Main track blocked three hours, twenty minutes.

March 15th, Train No. 55, M.P. 133½, truck on Car P. R. R. No. 7938 broke, derailling car and one pair of tender wheels, damaging track extent \$63.00. Auxiliary ordered from Englehart. Main track blocked four hours, thirty minutes.

March 21st, Kerr Lake, while unloading oil from Tank Car G. T. No. 8102 consignee's representative dropped match, accidentally setting fire to contents of car, damaging car G. T. No. 81028 to extent of \$218.93, also damaging car B. & O. No. 122264 extent of \$137.00.

March 22nd, by fire extent of

March 25th, regular routine work off truck. Resumed

April 13th, G. T. No. 10789 locomotive. Estimate damage

April 14th, collided with T. & N. O. Engineer and brakeman

April 18th, Tr John Saari, addressed at that point. Inc

April 19th, cinder pit switch.

May 1st, while No. 16079, P. R. R. T. & N. O. No. 100 Damage to track at Junction and Engle

May 3rd, North right side, also sh duty May 27th.

May 6th, Nell to cookery, stepped North Bay Junction

May 9th, leading low joint. No damage

May 15th, Tr Humphrey, Uno 1

May 23rd, E sprained back while

May 25th, Tr three horses. Own

May 29th, Tr of Cobalt, fracturing pital, Cobalt, and

May 29th, Tr Perron, Timigami.

May 29th, Tr 10094, Q. M. & S. track extent of \$ Brakeman responsible

May 31st, E while transferring side of car door

6 T.R.

March 22nd, at South Porcupine, Car G. T. Refrigerator No. 46273 damaged by fire extent of \$5.00. Cause, heater exploding.

March 25th, North Bay Freight Shed, George Gall, trucker, while performing regular routine work, had big toe left foot injured, caused by hydrant falling off truck. Resumed duty March 28th.

April 13th, while switching cars Town Siding, North Bay Junction, Car G. T. No. 10789 left track at heel of frog, also derailling truck C. P. No. 140046. Estimate damage cars, \$10.00, track, \$5.08.

April 14th, North Bay Junction yard, 3.20 a.m., switch engine No. 150 collided with T. & N. O. flat car No. 60267 destroying car and damaging engine. Engineer and brakeman responsible, disciplined.

April 18th, Train No. 1, M. P. 239, struck and instantly killed Russian, named John Saari, address unknown. Remains taken to Cochrane, Ontario, and buried at that point. Inquest held, verdict "accidental death."

April 19th, Switch Engine No. 151, derailed North Bay Junction yard, cinder pit switch. No damage to engine. Track damaged extent of \$10.61.

May 1st, while train No. 51 passing M. P. 49, cars G. T. No. 122414, G. T. No. 16079, P. R. R. No. 22597, G. T. P. No. 340274, A. R. L. No. 11675, and T. & N. O. No. 100185 derailed. Estimate damage to cars and contents, \$1,800.00. Damage to track \$53.10. Cause unknown. Auxiliaries ordered from North Bay Junction and Englehart. Main track blocked seven hours, ten minutes.

May 3rd, North Bay freight sheds, Charles Norton, trucker, had rib broken on right side, also shoulder bruised cause, case of glass falling on him. Resumed duty May 27th.

May 6th, Nellie Lake Pit, Brakeman Fred Williams, while running from van to cookery, stepped in hole, spraining knee badly. Resumed duty as freight clerk, North Bay Junction, July 29th.

May 9th, leading tender wheels of Engine No. 103 derailed M. P. 81¼. Cause, low joint. No damage to engine. Track damaged slightly.

May 15th, Train No. 47, M. P. 121, struck and killed cow. Owner, Mr. J. Humphrey, Uno Park.

May 23rd, Eugene Cousineau, trucker, North Bay Junction freight shed, sprained back while lifting tie. Resumed duty May 31st.

May 25th, Train No. 53, while passing Jocko, 8.30 p.m. struck and killed three horses. Owner, Hawkesbury Lumber Company, Ottawa.

May 29th, Train No. 47, M. P. 103½, struck Mrs. Robert Carson, age fifty, of Cobalt, fracturing four ribs and collar bone. Removed to Cobalt Mines Hospital, Cobalt, and succumbed to injuries June 6th.

May 29th, Train No. 1, M. P. 71½ struck and killed cow. Owner, Mr. E. Perron, Timigami.

May 29th, Train No. 53, M. P. 103½, cars B. & S. Nos. 11790, 11265, 13221, 10994, Q. M. & S. No. 140 and N. Y. C. No. 385937 derailed, damaging cars and track extent of \$885.20. Cause, switch not properly secured. Conductor and Brakeman responsible, disciplined.

May 31st, Eugene Cousineau, trucker, North Bay Junction freight shed, while transferring large piece of iron smoke stack, had right hand jammed between side of car door and stack. Resumed duty June 10th.

6 T.R.

June 16th, Extra 123, South, ran into washout, M. P. 16 $\frac{1}{4}$, derailling eng. No. 123, and Cars C. P. 120712, Wabash No. 23319, C. C. C. & St. L. No. 12 T. & N. O. No. 100193, G. T. No. 69901, C. P. No. 72821, P. M. No. 312. Estimate of damage, equipment and track, \$2,671.00. Auxiliaries ordered from North Bay and Englehart. Main track blocked seven hours, twenty min. Engineer Newman, Fireman Stroit and Brakeman W. Hill injured. Fire and Brakeman resumed duty June 23rd; Engineer Newman, September 11th.

June 21st, Train No. 47, while passing Seseikinika struck and killed her Owner, Mrs. William Radkey, Seseikinika.

June 24th, Extra 118, South, M. P. 172, struck hand car, damaging slightly.

June 26th, North Bay Junction yard, Switchman G. R. Smith stepped between cars to pull pin, stumbled on switch rod, injuring leg. Resumed duty July 31st.

July 9th, at Milne's Siding, M. P. 26 $\frac{1}{2}$, tender of Engine No. 116, derailed, Cause, spread track. Estimate of damage, tender and track, \$255.25.

July 15th, Train No. 2, M. P. 1103 $\frac{1}{2}$, struck and killed cow. Owner, R. R. Hurd, Haileybury.

July 21st, Extra 129, North, M. P. 135, ran into herd of cattle, killing cows and one heifer. Owner of cows, R. Bond, Heaslip. Owner of heifer, J. W. Houghton, Heaslip.

July 30th, Train No. 51, M. P. 23, car G. T. No. 46596, derailed, damaged track slightly.

August 6th, Leading wheels of engine truck, Engine No. 136, Train No. 47 left rails M. P. 83 $\frac{1}{2}$, fifteen minutes detention. Cause unknown.

August 8th, Head on collision, Train No. 47 and D. S. 121, Riddle, 7:37. Fireman George Carmichael killed, several passengers shaken up, but none seriously injured. G. T. Express Car No. 725 badly damaged; Cars L. & N. No. 2, and G. T. P. No. 301824 completely destroyed; C. V. No. 62884 and P. & R. 3459 partially destroyed; Engines 136 and 121 badly damaged. Estimate damage rolling stock, \$7,000.00; track, \$560.00. Cause, Train No. 47 improperly derailed. Employee responsible dismissed. Auxiliaries ordered from Englehart and North Bay Junction. Main line blocked eleven hours.

August 12th, Extra No. 137, South, M. P. 86 struck velocipede on which fire rangers were riding, instantly killing John White, resident of Aylmer. Qu. John Richardson, other party, escaped without serious injury. Inquest held at North Bay, verdict "accidental death." No blame attached to train crew.

August 23rd, Train No. 82, M. P. 27 $\frac{1}{2}$, Porcupine sub-division, struck and killed cow. Owner Hendrix Bostram, South Porcupine.

August 27th, Train No. 1, M. P. 28 $\frac{1}{2}$ struck and killed cow. Owner G. Cooper, Tomiko.

August 28th, at North Bay Junction yard, Car G. T. No. 46325 ran into side of two other cars, turning over on side, damaging slightly. Switchman responsible, dismissed.

August 30th, Train No. 47, M. P. 183 $\frac{3}{4}$ derailed. Trailing truck of engine No. 108 left rails, derailling baggage cars G. T. No. 584, and 679, leading truck of 2nd class coach G. T. No. 1413. Estimate damage, equipment, \$488.50, track and labor expenses, rerailing, \$327.60. No person injured. Cause attributed to sun-kink.

P. 16¼, derailling engine. C. C. & St. L. No. 42824, P. M. No. 316. Auxiliaries ordered for hours, twenty minutes. Hill injured. Fireman, September 11th, struck and killed heifer.

d car, damaging slight. G. R. Smith stepped on leg. Resumed duty.

Engine No. 116, derailed track, \$255.25. killed cow. Owner, Y.

herd of cattle, killing: Owner of heifer, M.

6596, derailed, damaged.

No. 136. Train No. known.

S. 121, Riddle, taken up, but none serious. L. & N. No. 925. 62884 and P. & R. No. 62884. Estimate damage. 47 improperly flagged. Englehart and No.

velocipede on which killed. Aylmer. Quick injury. Inquest held. Train crew.

sub-division, struck and

killed cow. Owner Geo.

T. No. 46325 ran. Switchman responsible.

Trailing truck of tender. No. 584, and 679. Estimate damage, equipment. No person injured. Cause.

September 6th, D. S. 140, M. P. 16½, G. T. Refrigerator. No. 46725 and C. P. Refrigerator No. 18147 derailed. Cause, tight friction on G. T. Refrigerator. Estimate damage, equipment, \$355.00. Auxiliary ordered from North Bay Junction. Main track blocked three hours, ten minutes.

September 7th, Extra 105, South M. P. 46½, struck and killed moose.

September 15th, Extra 137, South, M. P. 81, G. T. Refrigerator No. 46610 derailed. No damage to car. Estimate damage, track and labor rerailling, \$52.74.

September 25th, Extra 115, East, M. P. 32, Porcupine sub-division, G. T. Refrigerator No. 46524, derailed. Cause, tight friction. Main track blocked three hours.

September 27th, Train No. 35, M. P. 1, Kerr Lake sub-division struck and killed pig. Owner, Nipissing Mining Company, Limited.

September 28th, Train No. 85, M. P. 71½ struck and killed calf. Owner, C. Hindson, Timagami.

September 30th, Train No. 47, Swastika, struck and killed two pigs. Owner, T. Tough, Swastika.

October 5th, Extra 138, South, M. P. 127½, struck and killed cow. Owner, D. Mulvihill, Earleton.

October 5th, Train No. 44, M. P. 225, struck and killed pig. Owner Mrs. Alice Smith, Iroquois Falls.

October 7th, Train No. 7, at South side of Wye, Cochrane, ran into herd of cattle, killing one instantly. Owner Jamieson Meat Company.

October 7th, Work Extra 104, M. P. 106¼ struck and killed cow. Owner, Mr. J. Pockett, North Cobalt.

October 15th, North Bay Junction yard, Car J. B. No. 21349 and P. C. C. & St. L. 879153, damaged extent \$111.50 and \$4.50 respectively. Switchman responsible, dismissed.

October 16th, Pullman Car "Chemainus," Train No. 1 side steps, north end, west side, broken. Cause, striking ballast south of New Liskeard Station.

October 22nd, North Bay Junction yard, tender Engine 151, slightly damaged by collision with Engine 152. Switchman responsible, disciplined.

October 28th, 2nd, No. 87, M. P. 48½ 6.50 a.m., struck and killed two horses, value \$600.00. Owners, Spanish River Pulp and Paper Company, Limited.

December 3rd, 1911, the Grand Trunk Railway being without terminal facilities at North Bay, withdrew from the C. P. R. and commenced using the T. & N. O. Railway terminals, North Bay Junction, under agreement.

February 12th, 1912, Schumacher, M. P. 31.7 Porcupine sub-division, was opened for freight traffic, March 11th, 1912, opened for passenger traffic and on July 8th, for railway and commercial telegraph.

Timmins, M. P. 33.2, Porcupine sub-division, opened for February 12th, 1912; passenger traffic March 11th, 1912, and for railway and commercial telegraph.

RECEIVED ONTARIO RAILWAY COMMISSION

1913

Necessary time-table changes have been made to meet summer and winter requirements. Time-table No. 22, made effective December 3rd, 1911; time-table No. 23, effective March 10th, 1912; time-table No. 24, effective June 30th, 1912; and time-table No. 25, effective September 15th, 1912. Present time-table effective shows trains No. 1 and 2, daily between North Bay and Cochrane. These trains are equipped with standard C. P. R. sleepers, with interline service via C. P. R. to Montreal. Trains 46 and No. 47 daily, between North Bay and Timmins, with interline service, via G. T. R. to Toronto. These trains are equipped with Pullman cars, between North Bay and Timmins, and with Cafe-Parlor cars between North Bay and Englehart. Trains Nos. 10, 11, 12, 13, 44 and 45 run daily between Timmins, Iroquois Falls Junction and Cochrane, connecting with main track trains. Local passenger traffic between stations, Porcupine to Timmins, inclusive Porcupine sub-division, is taken care of, in addition to through trains Nos. 46, 47, 10 and 13, by trains Nos. 50, 51, 52 and 53. Trains Nos. 3 and 4 run daily, except Sunday, between Englehart and Cobalt, and passenger traffic between Cobalt and Kerr Lake is taken care of by trains Nos. 32, 33, 34, and 35, daily except Sunday, and trains No. 73 and No. 74, Wednesdays and Saturdays only. Charlton Branch passenger traffic is handled by trains Nos. 23, 24, 25 and 26, daily, except Sunday, making close connections at Englehart with all main track trains.

The civility and attention of the employees of the railway is well spoken of by travellers on the line.

Every attention is given to cleanliness of cars and stations.

Effective November 1st, 1911, the following changes were made in the organization and personnel of the staff:—

Mr. S. H. Ryan, heretofore Chief Train Dispatcher, appointed Trainmaster.

Mr. J. J. Campbell, heretofore Train Dispatcher appointed Chief Train Dispatcher, vice Mr. S. H. Ryan, promoted.

Herewith reports from Dr. McMurchy, North Bay; Dr. Fisher, New Liskeard; Dr. Lowery, Englehart; and Dr. Moore, Schumacher, covering medical attendance.

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MOTIVE POWER AND CAR DEPARTMENT

Annual Report for the Year Ended October 31st, 1912, of Mr. T. Ross,
Master Mechanic.

New Rolling Stock.

Consolidation Locomotives.

In June, 1912, four Consolidation type locomotives were received from the Canadian Locomotive Company, Kingston. General description as follows:

Cylinders	23 in. x 30 in.
Steam Pressure	180 lbs.
Diameter of Drivers	57 in.
Weight on Drivers	181,050 lbs.
Total weight	210,600 lbs.
Total Heating Surface	3,300 sq. ft.
Grate area	50 sq. ft.

These engines are capable of hauling 950 tons over the controlling grade north, an increase over the older freight engines of about 58 per cent. They are equipped with superheaters, brick arches, Walschart valve gear, piston valve with outside steam pipes, Westinghouse E. T. 6 brake apparatus, with 8½ inch cross compound pump, Pyle National Electric Headlight. The tenders are equipped with equalized pedestal trucks.

The use of the superheater and brick arch has very noticeably added to the efficiency of the boilers, and these engines are hauling their greater tonnage over the division on practically the same amount of coal as is consumed by the 19 in x 24 in. ten-wheel freight engines previously used in the same service, and at the high price of coal in this district, the saving effected amounts to a considerable sum.

Conductors' Vans

Four new Conductors' Vans have also been received from the Canadian Car & Foundry Company, Montreal. These vans have steel underframes and wooden construction, and are numbered 70, 71, 72 and 73.

Steel Passenger Equipment.

During the year no passenger equipment has been ordered, but the investigation of "all steel" cars has been continued. All passenger equipment built for the Commission during the last three years has been fitted with steel underframes, which were the first steel underframe passenger cars to be built for any Canadian Railway. The officials of the Departments find that the early difficulties with "all steel" passenger cars in connection with proper insulation for northern latitudes can be satisfactorily overcome, and specifications have been prepared for "all steel" baggage and passenger cars, so that such new cars as may be required in the future can be of "all steel" construction.

New Shop Machinery.

At North Bay Junction shops the following machinery has been installed:
1 Low pressure half of Duplex Air Compressor, received from the Canadian Foundry Company.

- 1 Pneumatic Drill from the Pneumatic Tool Company, Chicago.
 1 Locomotive Cylinder boring bar, from the Underwood Company.
 At Englehart the following new machinery has been installed:
 1 Three-ton Travelling Crane, from the Canadian Rand Company.
 1 Three-ton Pneumatic Hoist, from the Chicago Pneumatic Tool Company.

Electrical Work.

The ice house and stockyards at North Bay Junction have been installed with electric lights. The installation of freight shed and yard offices have been completed, and the electric plant and pole lines have been maintained in good condition throughout the year.

Extra lights have been installed in Cobalt station and telegraph office, and necessary repairs made to electric light system in station and freight shed.

Extra lights have been installed in freight shed and office at Haileybury, and repairs made to installation in station.

At New Liskeard some extra lights have been installed in station, the light system having also been gone over and better distribution of light arranged.

Necessary repairs to plant and equipment at Englehart have been made, and extra lights have been installed in Freight Shed and Round House.

Electric wiring in conduit at Matheson Station has been completed.

At Cochrane a new armature has been installed in Exciter, and other repairs made to Electric Plant. The Electric installation in Station has also been completed.

The Station at Schumacher has been installed with electric lights.

At Timmins, the Station, Engine House, Bunk Room, and Section House have been installed with electric light.

In addition to the above work the electric headlights on all engines, snowplows, and wrecking cranes, have been maintained in good condition and ready for service at all times.

The following tabulated statement shows a comparison of the number kilowatt hours used each month at North Bay, Englehart and Cochrane, during the years 1910, 1911, and 1912.

Month.	NORTH BAY.			ENGLEHART.			COCHRANE.		
	1910.	1911.	1912.	1910.	1911.	1912.	1910.	1911.	1912.
January	4,557	5,261	8,574	6,368	6,160	6,590	.....	1,251	3,06
February ...	3,479	4,168	6,225	4,988	5,316	5,785	.....	913	3,1
March	3,016	3,018	5,684	4,635	6,539	4,834	200	936	1,3
April	2,480	2,227	3,427	4,422	3,669	5,100	22	609	6
May	1,761	1,750	2,934	3,762	5,743	4,029	.....	663	1
June	1,444	2,250	3,119	2,928	3,662	2,476	.....	287	5
July	1,537	2,268	2,343	2,810	3,779	2,055	.....	603	5
August	1,628	2,042	3,000	3,054	4,243	2,848	.....	754	5
September ..	2,484	3,091	4,133	3,718	4,890	4,570	.....	1,044	6
October	3,092	4,859	6,260	4,366	6,277	6,963	.....	1,663	5
November ..	4,139	7,134	.....	4,361	7,551	.....	687	1,757	.....
December ..	4,561	9,280	5,898	6,304	1,596	2,223
Total	34,178	47,348	45,699	51,310	64,133	45,250	2,505	12,703	15,2

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	1910.	1911.	1912
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22		609	6.7
.....		663	5.5
.....		287	5.5
.....		603	13
.....		754	33
.....		1,044	34
.....		1,663	34
687		1,757
1,596		2,223
2,505	12,703		15.2

New Equipment Applied Locomotives and Cars.

Since last report Coaches numbers 24 and 42 have been equipped with Pintsch Gas Lighting System.

Some alterations and additions were made in lockers, etc., in Parlor Cafe Cars Seelkinika and Tetapaga, in order to afford more efficient accommodation.

New Air Brake Equipment.

During the year 1912, the air brake equipment on fifty-six coaches, three hundred and sixty-four freight cars, and all locomotives in service have been cleaned, repaired and tested, as per Master Mechanics' and Master Car Builders' Rules.

Schedule L. N. Brake Equipment has been installed on the following passenger cars:—

First Class Coaches number 104, 108, 111, 112, and 113.

Second Class Coaches number 4, 40, and 42.

Workmen's Cars number 8, 24, 30, and 38.

Baggage Cars number 9 and 21.

Combination Second Class and Baggage Car number 12.

The trucks on the above cars have been thoroughly overhauled, all foundation brake gear strengthened, and high speed brake beams applied, to stand the extra strain of the high speed brake. This equipment is the most efficient brake for passenger service.

Engines 108 and 113, have been equipped with the Schedule E. T. brake, to work in unison with the L. N. Passenger car brake, and is the most efficient locomotive brake known.

Engines 103, 104, 105, 106, 124, and 123, have been equipped with Schedule S. W. A. brake, in addition to the plain Automatic. This equipment will greatly facilitate switching in way freight service.

The necessary attachments have been added to our improved Triple Testing Rack, which will enable us to test the No. 6 Distributing valves of the E. T. Brake. With the addition of these fixtures we are in a position to test all classes of triple valves used in connection with the Westinghouse Air Brake.

The tenders of engines 112 and 114, have been equipped with the American Automatic Slack Adjuster. This will give uniform piston travel which is one of the essential requirements of good brake service.

All passenger cars going through the repair shop are being equipped with Centrifugal Dirt Collectors, the result accomplished is that the use of the collector operates to reduce materially the work of cleaning and oiling the air brake equipment.

We expect, in the early part of 1913, to have all our passenger engines, and sufficient coaches equipped with the Schedules E. T. and L. N. brakes, to increase the standard brake pipe pressure from seventy to ninety pounds. This, in addition to the increased size of brake cylinder installed, makes it possible to use the

Locomotive Mileage.

The following statement shows the mileage made by the locomotives belonging to this Railway:—

Engine Number.	Miles Run, 1912.	Total Mileage of Engines.
101	30,008	251,058
102	36,175	232,779
103	24,008	213,489
104	29,113	227,379
105	20,956	173,788
106	29,401	182,476
107	38,857	189,678
108	29,832	232,846
109	9,128	226,701
110	33,790	193,503
111	30,348	250,345
112	32,103	252,149
113	32,579	254,935
114	32,310	255,578
115	30,571	145,325
116	30,095	135,950
117	33,807	139,258
118	33,765	152,747
119	32,639	158,163
120	31,974	146,335
121	26,952	126,624
122	28,199	136,337
123	22,428	125,049
124	18,648	111,493
125	24,691	140,503
126	31,106	124,108
127	30,470	112,945
128	32,722	112,703
129	24,747	94,149
130	32,366	67,543
131	25,170	100,292
132	30,833	97,779
133	24,502	30,364
134	48,046	62,390
135	38,711	52,853
136	44,578	54,851
137	11,371	11,371
138	9,716	9,716
139	2,096	2,096
140	6,544	6,544
150	26,165	166,794
151	35,961	227,722
152	23,470	77,462
153	33,151	83,866
Total	1,234,102	6,150,026

Repairs to Passenger Equipment.

Extensive repairs have been made to passenger equipment at North Bay Junction shop as follows:—

Coach No. 24, shopped during December, 1911, and given a general repair, having trucks rebuilt and car thoroughly overhauled, repainted and varnished.

Coach No. 8, given a general repair, repainted and varnished both interior and exterior, during December, 1911.

Passage car No. 9, given a general repair, repainted and varnished, during January, 1912.

Coach No. 42, had trucks rebuilt, body repaired, repainted and varnished and turned out in February, 1912.

Coach No. 113, trucks were rebuilt, body repaired, repainted and varnished during the month of February, 1912.

Coach No. 4, given a general repair, repainted and varnished and turned out during March, 1912.

Baggage car No. 21, given thorough overhaul, was repainted and varnished and turned out during April, 1912.

Coach No. 38, trucks rebuilt, body repaired, repainted and varnished during May, 1912.

Coach No. 104, given general repair, repainted and varnished in June, 1912.

Coach No. 108, given a general repair, repainted and varnished and turned out in July, 1912.

Coach No. 12, was rebuilt into a Combination Second Class and Baggage car. This was originally a Second Class coach.

Baggage car No. 11, given a general repair, was repainted and varnished and turned out during August, 1912.

Exhibition car, this car was thoroughly overhauled and necessary repairs made, and was also revarnished during September, 1912.

Coach No. 112, was given a general repair, trucks rebuilt, repainted and varnished and turned out in September, 1912.

Coach No. 40, taken into shop in October and given a general repair, repainted and varnished.

Official Cars.

Necessary repairs have been made from time to time on the Official car "Sir James" and "Temagami." The "Sir James" was taken into shop during October to have a thorough overhauling, and will be repainted and varnished, and will also have the Stone Electric Lighting System installed before leaving the shop.

Coach Cleaning.

Statement showing the number of coaches cleaned at the different stations during the year:—

Station.	Number of Coaches Cleaned
North Bay Junction	2,085
Englehart	5,058
Cochrane	2,979
S. Porcupine and Timmins	2,964
Total	13,086

Repairs to Conductors' Vans.

Conductors' vans Nos. 51, 69, 52, 64, 58, 63, 53, 56, 50, 59, and 67, have been overhauled and necessary repairs made, besides being repainted. The following vans have been supplied with new storm sash: Vans Nos. 51, 52, 58, 53, 57, 55, 62, 68, 60, 63, 66, 59, 65, 69, and 56.

Repairs to Freight and Work Equipment.

The following cars have been rebuilt during the year: Nos. 60279, 60476, 60649, 60425, 60757, 60185.

New sills have been applied to seventy-three cars.

Fifty-five flat cars have been re-decked.

Bills
monthly
governing
adopted by
been rendered
of repairs
actual cost

Steam
necessary
Steam shop
relettered.

Steel Tire
During
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Contractor
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Since
in the morning
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New

To Locomotives
Two
Seven
One
Six
and six

To Passenger
Four
One
Two
Fifty

To Freight
Thirty
Five
One
One
Eighty

To Snow
Two

To Work
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60279, 60410

Bills collectible covering the cost of repairs to foreign cars have been rendered monthly against car owners, in accordance with the Standard Code of Rules governing the conditions of repairs to freight cars, for the interchange of traffic, adopted by the Master Car Builders' Association. In addition to this a bill has been rendered monthly against the Grand Trunk Railway System, covering cost of repairs to cars under the terms of the Grand Trunk Terminal Agreement, at actual cost of labor and material, plus ten per cent.

Steam shovels, lidgerwoods, snow plows, snow flangers, etc., have all had necessary repairs made. Snow plows Nos. 2, 3, and 4 have been repainted. Steam shovels and lidgerwoods, have all received one coat of paint and have been relettered.

Steel Tires Turned and Wheels Applied Rolling Stock.

During the year fifty-seven pairs of driving tires, seventy-four pairs coach tires, fifty pairs tender wheels, and twenty-two pairs engine truck tires have been turned on the wheel lathe installed at North Bay Junction shop, together with five pair wheels for the Nipissing Central Railway, and one driving tire for Contractor O'Brien. The following tires also, were bored out before being applied to wheels: twenty-six driving tires, forty-six coach tires and sixteen tender tires.

Since the new wheel press and wheel lathe have been installed at Englehart, in the month of March, 1912, nine hundred and thirty-seven wheels have been pressed off axles, new wheels bored out and remounted on axles. Forty-two pairs of tires have been turned in wheel lathe.

New wheels have been applied to rolling stock as follows:—

To Locomotives.

Two pair cast iron wheels mounted on $3\frac{3}{4}$ x 7 in. axles.

Seventy-two pair cast iron wheels mounted on 5 x 9 in. axles.

One pair steel-tired engine truck wheels.

Six 50 in. driving tires; six 62 in. driving tires; four 69 in. driving tires; and six 57 in. driving tires; also nineteen steel tires for tender truck wheels.

To Passenger Equipment.

Four pair steel-tired wheels mounted on $3\frac{3}{4}$ x 7 in. axles.

One pair steel-tired wheels mounted on $4\frac{1}{4}$ x 8 in. axles.

Two pair steel-tired wheels mounted on 5 x 9 in. axles.

Fifty 36 in. steel tires.

To Freight Equipment.

Thirty-six pairs 33 in. cast iron wheels mounted on $3\frac{3}{4}$ x 7 in. axles.

Five Hundred and Sixty-six pairs 33 in. cast iron wheels, mounted on $4\frac{1}{4}$ x 8 in. axles.

One hundred and sixty-four pairs 33 in. cast iron wheels mounted on 5 x 9 in. axles.

Eighty-nine pairs 33 in. cast iron wheels mounted on $5\frac{1}{2}$ x 10 in. axles.

To Snow plows.

Two pairs 30 in. cast iron wheels mounted on $4\frac{1}{4}$ x 8 in. axles.

To Work Equipment.

Thirty-seven pairs 33 in. cast iron wheels mounted on $4\frac{1}{4}$ x 8 in. axles.

Three pairs 33 in. cast iron wheels mounted on 5 x 9 in. axles.