

*The Mud Lake Trestle - a Century of CPR Service; The 75th. Anniversary of the 1939 Royal Tour; Stan's Photo Gallery; CN's Dynamometer Cars
Le pont sur le Lac Mud - Un siècle au service du CP. Le 75ième anniversaire de la visite royale de 1939. La galerie des photos de Stan. Les wagons dynamomètres du CN.*

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FRONT COVER: CPR 8577, a GE model AC4400CW rated at 4400 HP and built in 1998, leads CPR Bakken crude oil train 608 eastbound across the Mud Lake Trestle on June 14, 2014. John Soehner

BELOW: The CPR built a new 12 stall roundhouse in 1914 at Trenton, Ontario, the divisional point on the Shore Line. CPR Archives

PAGE COUVERTURE: La locomotive du CP 8577, construite par GE en 1998, un modèle AC4400CW de 4400 CV, amène un train de wagons citernes chargé de pétrole en provenance des champs pétrolières de Bakken sur le pont du Lac Mud, le 14 juin 2014. John Soehner

CI – DESSOUS : Le Canadien Pacifique avait construit cette rotonde à Trenton, Ontario, en 1914. Cet endroit était le siège de la division des Cotes. Archives CP



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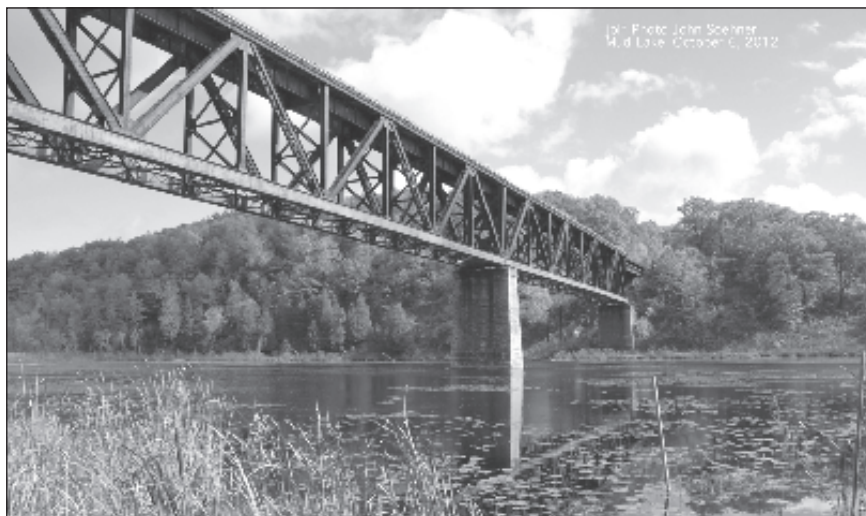
Mud Lake Trestle: A Century of CPR Service

Text and Images by John Soehner

French version: Jean Maurice Boissard

The Canadian Pacific Railway's Mud Lake Trestle at Feldspar, Ontario celebrated its 100th year of continuous service on June 29, 2014 as part of the railway's Montreal-Toronto main line. Quite a feat for a combination of concrete, steel and wooden ties!

As a nearby resident of nearby Bolingbroke I have gotten to know the track and some of the people that work the track in the Feldspar-Bolingbroke area.



John Soehner, October 6, 2012 / *John Soehner, 6 octobre 2012*

A brief history of the 'CPR Shore Line'

In May 1884, the Canadian Pacific started service between Montreal and Toronto when the Ontario & Quebec Railway (O&Q), a company in which the CPR held a controlling interest, completed construction of a rail line from Perth to Toronto, Ontario via Tweed, Havelock, Peterboro, Pontypool, Agincourt to West Toronto Junction. The CPR already was operating between Montreal and Perth over a circuitous route through Ottawa and Carleton Place. The O&Q (which was leased to the CPR for 999 years) ran somewhat parallel to the present day Highway #7 west of Perth. The O&Q became the holding company for various other lines in Ontario including the new direct line built between Smiths Falls and Montreal in 1887 thereby completing a 339 mile single track between Montreal and Toronto.

To improve access to downtown Toronto, the Don Valley branch between Leaside Junction and downtown Toronto was constructed. It opened for freight service on September 7, 1892. Traffic increased rapidly and by 1908 plans for double tracking the line were in the

Le pont à chevalet de Mud Lake: un siècle au service du CP

Texte et images de John Soehner

Version française: Jean-Maurice Boissard

Le pont à chevalet du Canadien Pacifique au dessus de Mud Lake à Feldspar, Ont., sur la ligne principale Montréal-Toronto, a célébré ses 100 ans de service continu le 29 juin 2014. Un bel exploit pour cet assemblage de béton, d'acier et de traverses en bois! Comme proche résident de Bolingbroke, j'ai connu les voies de chemin de fer et certains de ceux qui y travaillent dans la région de Feldspar-Bolingbroke.

Une courte histoire de la ligne de la côte du CP

En mai 1884, le CP inaugure alors une liaison entre Montréal et Toronto lorsque l'Ontario & Quebec Railway (O&Q), une compagnie dont le CP détient des actions majoritaires termine une ligne entre Perth et Toronto via Tweed, Havelock, Peterboro, Pontypool, Agincourt jusqu'à la jonction Toronto West. Le CP avait déjà une liaison vers Perth mais par Ottawa et Carleton Place. Le O&Q, loué pour 999 ans par le CP, a une voie à peu près parallèle à l'actuelle Autoroute #7 à l'ouest de Perth. Elle devient alors la compagnie qui va contrôler plusieurs autres lignes

en Ontario incluant la nouvelle ligne directe entre Smith Falls et Montréal en 1887 complétant alors les 546 km (339 miles) de voie simple entre Montréal et Toronto.

Pour améliorer l'accès au centre de Toronto, cette ligne est prolongée par la branche de Don Valley à partir de Leaside Junction. La ligne est ouverte au trafic marchandise le 7 septembre 1892. Ce trafic augmente rapidement, si bien qu'en 1908, la planification débute pour doubler la voie. Entre 1908 et 1911, la voie est doublée sur la section comprise entre Montréal et Glen Tay à 25 km (15,5 milles) à l'ouest de Smith Falls.

Le développement des activités exige alors que l'on soulage la voie simple entre Smith Falls et Toronto. Les relevés établis en 1911 montrent que, hormis plusieurs détours, il est impossible de diminuer la pente de 1,1 % (dans les deux sens) de la ligne existante. Le tracé d'une nouvelle ligne est alors envisagé à partir de Glen Tay 25 km (15,5 milles) à l'ouest de Smith Falls vers Agincourt et de 16,9 km (10,5 milles) à l'est de Toronto. Cette ligne est plus longue de 2,6 km (1,6 milles) que celle du O&Q, mais n'a qu'une pente de 0,4 % dans chaque direction. Ceci permet à une D-10 4-6-0 de tirer vers l'est

works. The section of line between Montreal and Glen Tay (15.5 miles west of Smith Falls), was double tracked between 1908 and 1911.

Growth of business made some relief of the single track between Smith Falls and Toronto imperative. Surveys completed in 1911 found that even with long diversions it would be impossible to reduce materially the 1.1% ruling grade (in each direction) of the existing line. An alternative a new line to avoid these grades between Glen Tay, a point 15.5 miles west of Smiths Falls, and Agincourt, 10.5 miles east of Toronto, was investigated. This alternate route would be 1.6 miles longer than the O&Q line, but with a ruling grade of only 0.4% in each direction. Because of the reduced grade, a D-10 4-6-0 locomotive, which could handle 1150 tons eastbound over the O&Q line, would be able to haul 2290 tons over the new line!

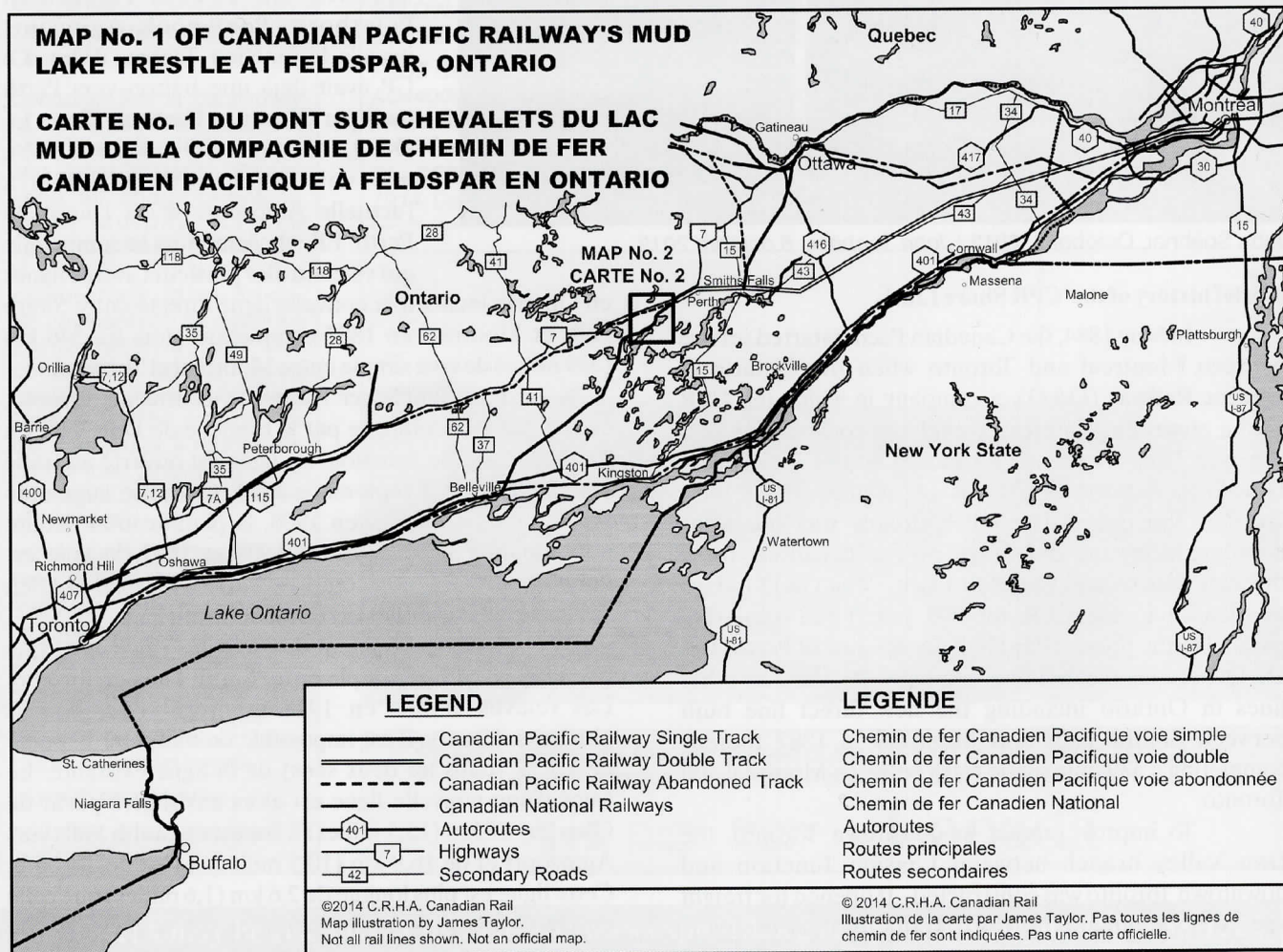
The CPR had a new company called the Campbellford, Lake Ontario & Western Railway (CLO&W) incorporated to build the new line from Glen Tay to Agincourt. Because the line dipped down to run through Belleville and Cobourg along the Lake Ontario, the new route was dubbed the 'Shore Line'. Construction

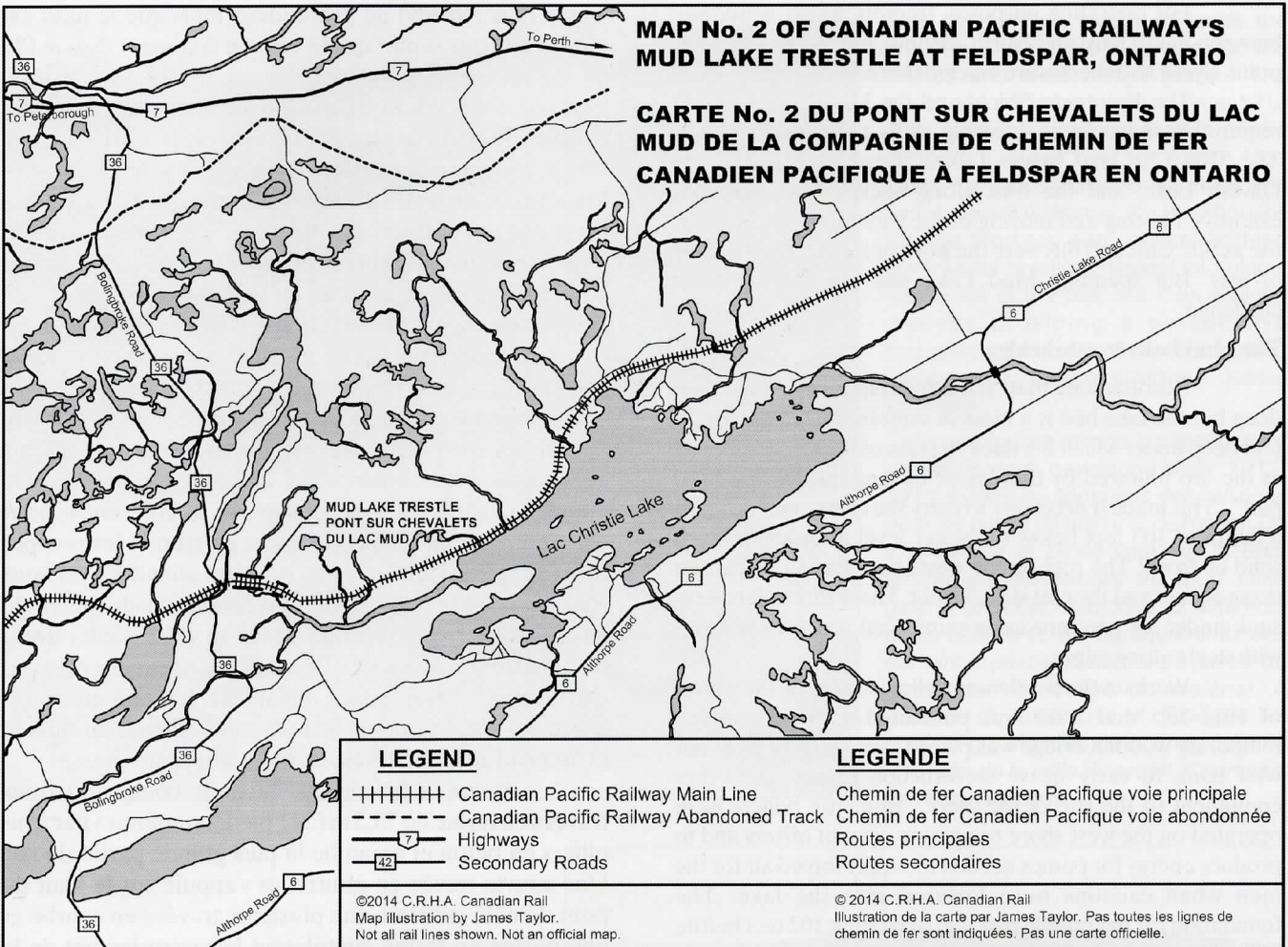
des trains de 2 077 tonnes (2 290 tons) au lieu de 1 043 tonnes (1 150 tons) sur la ligne du O&Q.

Le CP incorpore une nouvelle compagnie, la Campbellford, Lake Ontario & Western Railway (CLO&W) pour construire la ligne entre Glen Tay et Agincourt. Cette ligne, passant par Belleville et Cobourg le long du lac Ontario, est appelée 'Shore Line' « la ligne de la côte ». Sa construction débute à Trenton le 1er mai 1912.

Le CLO&W avec le O&Q forment alors une double voie (deux voies simples séparées) pour le CP entre Montréal et Toronto. Ceci lui permet de mieux concurrencer la voie double du Grand Trunk. Cette nouvelle ligne lui donne aussi accès aux villes plus industrielles du sud de l'Ontario incluant Belleville, Trenton, Cobourg, Port Hope, Bowmanville, Oshawa et Whitby.

Les travaux commencent à différents points de la ligne, la section la plus difficile se situant entre Christie Lake et Crow Lake. Elle est construite selon les plus hauts standards d'alors : des courbes maximales de 4° avec une courbature maximale de 12,5° par kilomètre (20° par mille). Toutes les pentes, à l'entrée et à la sortie des voies





started in both directions at Trenton on May 1, 1912.

The CLO&W, along with the Ontario and Quebec Railway, formed a double track (two separate single track lines miles apart) for the CPR between Montreal and Toronto. This allowed the CPR to better compete with the Grand Trunk Railway's double track Montreal-Toronto line. The new line would give the CPR access to the more industrialized southern part of Ontario including Belleville, Trenton, Cobourg, Port Hope, Bowmanville, Oshawa and Whitby.

Work proceeded at various points along the line with the most difficult section between Christie Lake and Crow Lake. The line was built to high standards with a maximum curve of 4 degrees and an average curvature of 20 degrees per mile. All grades at, approaching and leaving passing sidings are reduced to 0.3% compensated for a distance of 3000 feet from either end of the siding. All bridges and culverts were of concrete and steel construction. Of the steel structures the principal ones are the 1,800 foot bridge over the Ganaraska River at Port Hope; the 1,493 foot trestle over the Trent River and Canal; the 964 foot Mud Lake trestle; and 916 foot Dixie Creek trestle. Most of these are viaduct construction, with few spans greater than 90 feet.

de contournement, sont réduites à 0,3 %, compensées sur une distance de 914,4 m (3000 pieds) à chaque extrémité. Tous les ponts et ponceaux sont en acier et béton. Les ouvrages les plus importants en acier sont le pont de 548,6 m (1 800 pieds) au-dessus de la rivière Ganaraska à Port Hope, les ponts à chevalet de 455m (1 493 pieds) au-dessus de la rivière Trent et du canal, de 294 m (964 pieds) au-dessus du lac Mud et de 279 m (916 pieds) au-dessus de la crique Dixie. La plupart sont en viaduc avec quelques portées plus longues que 27 m (90 pieds).

Pour les opérations, Trenton, à mi-chemin entre Smith Falls et Toronto nord, devient un point de division; un triage et des ateliers y sont construits.

L'Axe de Frontenac et la traversée de Mud Lake présentent de formidables défis d'ingénierie. La « Big Cut » au lac Christie, la « Deadman's Cut » près du lac Davern et les rochers le long du lac Sucker exigent de grands dynamitages et l'utilisation des déblais comme remplissage pour les points bas. Couper et remplir sont les travaux quotidiens tout le long de la ligne, mais la traversée de Mud Lake s'avère le défi le plus difficile.

Le pont à chevalet sur le Mud Lake

Les relevés indiquent que « le lac n'a que de 60 à

For operating purposes Trenton, which is midway between Smith Falls and North Toronto, was made a division point, a yard and shops were erected there.

The Frontenac Shield and the Mud Lake crossing required formidable engineering skills to be surmounted. The “Big Cut” at Christie Lake, “Deadman's Cut” near Davern Lake, and the rock along Sucker Lake required extensive blasting and moving of the rubble to low spots for use as fill. Cuts and fills were the work of the day for the right of way. But spanning Mud Lake was the most difficult challenge.

The Mud Lake trestle bridge

Records state that “the lake is only two or three feet deep but the lake bed is a mass of semi-liquid mud some 20 feet deep under which is a thick stratum of blue clay, very soft at the top followed by thin layers of sand, gravel and hard pan”. This made it necessary to carry the centre pier down to a depth of 103 feet below the water level in order to reach solid bedrock! The pier on the west shore had to be carried down 56 feet and the east side, 30 feet. These three piers were sunk under air pressure using reinforced concrete caissons with steel cutting edges.

Work on the trestle was well underway by the winter of 1912–13. Mud Lake was punctured with piles and a temporary wooden bridge was placed over the lake from the west bank to carry heavy construction cranes and other equipment to the site of the piers. Immense boilers were operated on the west shore to operate cement mixers and to produce energy for pumps needed to supply forced air for the men when caissons were lowered into the lake. The foundation for the middle pier had to be sunk 102 feet before bedrock was struck. This foundation was sunk by caissons in which men work under air pressure to the bottom of the caisson shaft. A heavy frame cribwork surrounded the iron caisson and depressed as work progressed.

At completion, Mud Lake Trestle comprised two 241 foot trusses supported on three concrete piers spanning the largest portion of the lake. A short girder span led to the top of the trestle on the east bank, while several curved viaduct spans and a smaller truss span complete the west bank connection to the main spans. The length of Mud Lake trestle is 700 feet. The spans are 145 feet above the high water level of the lake. The structure was erected by the Foundation Company of New York.

An excursion to visit the site was arranged for Lanark County Council by Perth Court House officials on Friday June 20, 1913. Work on the trestle and nearby Hamilton Bridge must have had a miracle of timing as they were completed in less than a year! By May 12, 1914 inspection of the new line was completed. On June 1, 1914, freight traffic was initiated. On June 29, 1914 the line was officially opened to passenger traffic with the running of the daily overnight trains 37 and 38 between Montreal and Toronto via Trenton. More trains were added as the years went by. The CPR's two lonely K1 4-8-4 steam locomotives 3100 and 3101 were built in 1928 to haul the increasingly heavier overnight trains on this line.

90 cm (2 à 3 pieds) de profondeur mais que le fond est rempli de boue semi-liquide sur une épaisseur de 6 m (20 pieds) en dessous de laquelle on trouve une couche d'argile bleue assez molle au-dessus, suivie de minces couches de sable, de gravier et d'aliôs (grès) qui exigent de creuser pour le pilier central jusqu'à 31 m (103 pieds) sous le niveau de l'eau afin d'atteindre le roc solide ! ». Le pilier sur la rive ouest descendra jusqu'à 17 m (56 pieds) et celui de la rive est jusqu'à 9 m (30 pieds). Ces trois piliers seront coulés par air comprimé et en utilisant des caissons de béton armé avec des bords coupants en acier.

Les travaux pour le pont sont bien avancés à l'hiver 1912-1913. Des piliers sont plantés dans le lac et un pont temporaire en bois est construit pour acheminer de l'ouest les grandes grues et les autres équipements nécessaires à la construction des piles définitives. De grandes chaudières sont érigées sur le côté ouest pour alimenter en énergie les centrales à béton et les pompes devant fournir l'air forcé aux ouvriers quand les caissons sont descendus dans le lac. La fondation du pilier du milieu doit être descendue de 31 m (102 pieds) avant d'atteindre le roc solide. Elle est déposée par des caissons dans lesquels les hommes travaillent. Un bâti en treillis solide est installé autour de la cage métallique du caisson et descend au fur et à mesure que le travail progresse.

À son achèvement, le pont comprend deux travées en ferme de 73,5 m (241 pieds) soutenues par trois piliers en béton et enjambe la plus grande partie du lac. Une courte travée en poutrelles s'appuie sur le haut du pont du côté est alors que plusieurs travées en courbe et une portée en ferme complètent le raccordement de la partie ouest aux travées principales. La longueur totale de l'ouvrage est de 213 m (700 pieds). Les travées surplombent de 44 m (145 pieds) les eaux du lac. L'ouvrage est réalisé par la Foundation Company of New York.

Une visite du site est organisée pour le Conseil du Comté de Lanark par les fonctionnaires du tribunal de Perth le vendredi 20 juin 1913. Les travaux du pont de Mud Lake et du pont Hamilton tout proche sont un miracle de synchronisation, car ils ont été réalisés en moins d'un an ! Le 12 mai 1914, l'inspection de la nouvelle ligne est complétée; le 1er juin, le trafic marchandise est ouvert et le 29 juin, la ligne est officiellement ouverte au trafic voyageur par le passage des trains de nuit quotidiens numéros 37 et 38 entre Montréal et Toronto via Trenton. D'autres trains sont ajoutés au court des années. Les deux seules locomotives vapeur, K1 4-8-4 3100 et 3101, sont construites en 1928 pour tirer sur cette ligne les trains de nuit de plus en plus lourds.



This construction image captures the cribbing around the caissons for the middle and west bridge piers. The photo was probably taken in winter 1912-13. Note the small rail system on the temporary bridge over the frozen Mud Lake, the plant boiler to the right and various small buildings, the bunkhouses for the workers and several stiff-leg derricks for hoisting material into place. To the left of the pier is a man walking thereby providing a perspective suggesting the size of the project being undertaken. Image courtesy Jessie Donnelly

Cette photo prise lors de la construction, probablement pendant l'hiver 1912-1913, montre les sommiers des caissons pour les piliers du milieu et de l'ouest. On y remarque la petite voie sur le pont temporaire au-dessus du Mud Lake gelé, à droite la chaudière et différents petits bâtiments, les baraquements des doroirs et plusieurs derrick à jambe de force pour le levage du matériel. À gauche du pilier, on y distingue un homme qui marche, ce qui nous donne une idée de la taille du projet. Courtoisie de Jessy Donnelly

The newly completed Mud lake trestle bridge in 1914 at mileage 27.31, unfortunately the glass plate negative was broken sometime over the years. CPR Archives

Le nouveau pont à chevalet sur le Mud Lake en 1914 au PK 49 (PM 27.31). Malheureusement la plaque photographique en verre s'est cassée avec les années. Archives du CP



The curve heading onto the bridge looking west at mileage 27.06 in 1914. CPR Archives

La courbe allant vers le pont lorsqu'on regarde vers l'ouest au PK 43,54 (PM27.06) en 1914. Archives du CP

The Trenton Division in the steam era / La division Trenton au temps de la vapeur

All photos Bruce Chapman collection / Toutes les photos proviennent de la collection Bruce Chapman

MONTREAL, OTTAWA, TORONTO, HAMILTON, LONDON, WINDSOR, DETROIT, CHICAGO

See below for classes of tickets not valid for passage on Pool Trains 15 and 6 between Montreal and Toronto.

Note particularly the stations from which trains depart and arrive (See Note A below)

MORNING, AFTERNOON and NIGHT TRAINS—Montreal and Toronto—Ottawa and Toronto

For train times, Montreal-Toronto and Ottawa-Toronto see Tables 43, 44, 49, 50 and 51.

Nos. 5, 15, 17 and 21 also 6, 14, 16 and 22 are Pool Trains between Montreal and Toronto only. They carry through equipment beyond Toronto on schedules shown as per Equipment Table 49A.

READ DOWN						TABLE 49										READ UP	EXPLANATION OF SIGNS THIS PAGE					
Pool 9	Pool 33	Pool 17	Pool 21	Pool 15	Pool 5	Eastern Time										Pool 14	Pool 6	Pool 22	Pool 16	Pool 34	Pool 10	P.M.
Ex. Sat. Belleville Toronto	Daily Ottawa Toronto Night Express	Daily Montreal Toronto Night Express	Daily Montreal Toronto Chicago Express	Daily Montreal Toronto The Canadian	Daily Montreal Toronto Royal York	Heure de l'est										Daily Toronto Montreal The Canadian	Daily Toronto Montreal Royal York	Daily Toronto Montreal The Overseas	Daily Toronto Montreal Night Express	Daily Toronto Ottawa Night Express	Ex. Sun. Toronto Belleville	
P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	MONTREAL										P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.
Will not operate on Sun. Oct. 11			11.00	11.00	3.00	Lv. Windsor Station. Ar. Bonaventure Station.										5.45	10.45	7.45	7.40			
			11.06	11.06	3.06	Westmount.										10.37	7.37					
			11.12	11.12	3.12	Montreal West.										10.30	7.30					
			11.31	11.31	3.46	Ste. Annes.										5.10	7.05	7.05	7.01			
			12.28		4.23	Lv. Cornwall. Ar. Prescott.										4.15	9.16		6.05			
			1.40		5.25	Ar. Brockville (Union). Lv. Brockville (Union).										3.14	8.12		5.09			
			1.40		5.25	Ar. Brockville (Union). Lv. Brockville (Union).										2.55	8.12		4.50			
			1.40		5.25	Lv. Ottawa (Union). Ar. Carleton Place.										1.35	10.20				7.30	
			1.40		5.25	Ar. Smiths Falls. Lv. Smiths Falls.										4.25	9.34				6.05	
			1.40		5.25	Lv. Brockville (Union). Ar. Brockville (Union).										3.50	9.12	5.00			5.55	
			1.45		5.35	Lv. Brockville (Union). Ar. Brockville (Union).										2.55	8.30					
			2.58		6.33	Lv. Brockville (Union). Ar. Brockville (Union).										2.45	8.07		4.40			
			4.15		7.31	Lv. Kingston. Ar. Kingston.										1.37	7.14		3.39			
			4.15		7.31	Ar. Belleville. Lv. Belleville.										12.25	6.09	4.28	2.18			
			4.15		7.31	Ar. Peterboro. Lv. Peterboro.										12.25	6.09	2.30	2.18			
			4.22		7.35	Ar. Belleville. Lv. Belleville.										12.25	6.05	2.30	2.03			4.20
			4.30		7.43	Ar. Trenton. Lv. Trenton.										11.59	2.10	2.00			4.02	
			4.40		7.53	Ar. Brighton. Lv. Brighton.										11.59	2.00				3.49	
			5.20		8.23	Ar. Colborne. Lv. Colborne.										11.41					3.37	
			5.20		8.23	Ar. Grafton. Lv. Grafton.										11.09		1.18	1.16		3.26	
			5.30		8.33	Ar. Cobourg. Lv. Cobourg.										10.59	1.16	1.07	1.06		3.16	
			5.30		8.33	Ar. Port Hope. Lv. Port Hope.										10.59	1.16	1.07	1.06		3.07	
			5.30		8.33	Ar. Peterboro (CN). Lv. Peterboro (CN).										10.59	1.16	1.07	1.06		2.44	
			5.30		8.33	Ar. Peterboro (CN). Lv. Peterboro (CN).										10.59	1.16	1.07	1.06		2.38	
			6.02		9.00	Ar. Newcastle. Lv. Newcastle.										10.30			12.38		2.23	
			6.18		9.00	Ar. Bowmanville. Lv. Bowmanville.										10.13	4.45	12.20	12.30		2.14	
			6.18		9.00	Ar. Oshawa. Lv. Oshawa.										10.13	4.45	12.20	12.30		2.14	
			6.18		9.00	Ar. Whitby. Lv. Whitby.										10.10					2.14	
			6.18		9.00	Ar. Agincourt. Lv. Agincourt.										9.29					1.43	
			6.18		9.00	Ar. Danforth. Lv. Danforth.										9.29					1.43	
			6.18		9.00	Ar. Leaside. Lv. Leaside.										9.29					1.43	
			6.18		9.00	Ar. Don. Lv. Don.										9.15	4.00	11.32	11.22		1.30	
			6.18		9.00	Ar. Toronto (Union). Lv. Toronto (Union).										9.15	4.00	11.32	11.22		1.30	
			6.18		9.00	Ar. Subway Royal York Hotel. Lv. Subway Royal York Hotel.										9.15	4.00	11.32	11.22		1.30	
			6.18		9.00	Ar. Canadian Pacific. Lv. Canadian Pacific.										9.15	4.00	11.32	11.22		1.30	
			6.18		9.00	Ar. Hamilton Hunter St. Lv. Hamilton Hunter St.										9.15	4.00	11.32	11.22		1.30	
			6.18		9.00	Ar. Table 56. Lv. Table 56.										9.15	4.00	11.32	11.22		1.30	
			6.18		9.00	Ar. Canadian Pacific Ry. Lv. Canadian Pacific Ry.										9.15	4.00	11.32	11.22		1.30	
			6.18		9.00	Ar. Toronto (Union). Lv. Toronto (Union).										8.30	3.00	10.40			1.30	
			6.18		9.00	Ar. Parkdale. Lv. Parkdale.										8.20	2.50	10.30			1.30	
			6.18		9.00	Ar. West Toronto. Lv. West Toronto.										8.12	2.42	10.22			1.30	
			6.18		9.00	Ar. Guelph Jct. Lv. Guelph Jct.										7.25	1.56	9.36			1.30	
			6.18		9.00	Ar. Galt. Lv. Galt.										7.02	1.35	9.13			1.30	
			6.18		9.00	Ar. Woodstock. Lv. Woodstock.										6.20	1.25	8.28			1.30	
			6.18		9.00	Ar. London. Lv. London.										5.40	1.15	7.50			1.30	
			6.18		9.00	Ar. London. Lv. London.										5.30	1.01	7.40			1.30	
			6.18		9.00	Ar. Chatham. Lv. Chatham.										4.23	9.35	6.33			1.30	
			6.18		9.00	Ar. Windsor. Lv. Windsor.										3.25	8.25	5.35			1.30	
			6.18		9.00	Ar. Windsor. Lv. Windsor.										3.15	8.25	5.15			1.30	
			6.18		9.00	Ar. Detroit, E.T. Lv. Detroit, E.T.										3.05	8.15	5.05			1.30	
			6.18		9.00	Ar. Michigan Central R.R. Lv. Michigan Central R.R.										58	16	44			1.30	
			6.18		9.00	Ar. Detroit, E.T. Lv. Detroit, E.T.										2.35	7.55	4.50			1.30	
			6.18		9.00	Ar. Chicago, C.T. Lv. Chicago, C.T.										8.00	11.59	9.40			1.30	
			6.18		9.00	Ar. (Central Station). Lv. (Central Station).										8.00	11.59	9.40			1.30	

Note A.—Pool trains 5, 17, 9, westbound, 16, 14 and 10 eastbound stop at Canadian National stations between Montreal and Toronto; Pool Trains 15 and 6 west of Dorval, do likewise. Pool trains 15 and 6 depart from and arrive at Windsor Station, Montreal. Pool Trains 21, 22, 33 and 34 depart from and arrive at Canadian Pacific stations. For further particulars consult nearest Ticket Agent of the Canadian Pacific or Canadian National.

AFTERNOON TRAINS—Montreal-Toronto. The following classes of tickets will not be valid for passage on Pool Trains 15 and 6, operated between Montreal and Toronto.—Tickets issued to employees at reduced rates and Coach excursion tickets. Tickets for Sleeping and Parlor Car space in Pool Trains will be issued by Ticket Agents of either Railway

Note A.—Les trains en commun 5, 17, 9, allant vers l'ouest, et les trains 16, 14 et 10 allant vers l'est, s'arrêtent aux gares du Canadian National entre Montréal et Toronto. Les trains en commun 15 et 6 font de même à l'ouest de Dorval bien qu'à Montréal, ils utilisent la gare Windsor. Les trains en commun 21, 22, 33 et 34 desservent seulement les gares du Pacifique Canadien. Pour renseignements plus complets, s'adresser à tout agent du Pacifique Canadien ou du Canadien National.

TRAINS D'APRÈS-MIDI—Montreal-Toronto. Les billets d'employés, à prix réduits, ainsi que les billets d'excursion en voitures ordinaires ne sont pas valables dans les trains en commun 15 et 6 entre Montréal et Toronto. Les billets de wagon-lits et wagon-salons des trains en commun sont délivrés par les agents des deux chemins de fer

Public timetable for September 1942 indicates Pool Train service between Montreal and Toronto, as per Note A - Pool trains 21, 22, 33 and 34 stop at the Canadian Pacific stations; also note that trains 33 and 34 operate via Peterboro.

L'horaire public de septembre 1942 indique que, selon la note A, les trains de service en commun entre Montréal et Toronto numéros 21, 22, 33 et 34 s'arrêtent aux gares du CP et que les trains numéros 33 et 34 passent par Peterboro

G3H 4-6-2 2424 was built by the Canadian Locomotive Company in Kingston, Ontario in September, 1944; it was photographed pulling a time card freight through Cobourg, Ontario, date unknown; this was the only locomotive of its class to see extensive service in the Toronto area.

La 2424, une G3H 4-6-2 construite par la Canadian Locomotive Company à Kingston, Ont., en septembre 1944. Elle est photographiée tirant un train de fret à Cobourg, Ont. Date indéterminée. C'est la seule locomotive de sa classe à être de service intensif dans la région de Toronto.



CPR ten-wheeler 423, a D4G built by Canadian Pacific in 1915 prepares to depart Belleville, Ontario on the Shore Line on September 15, 1945. CRHA Archives, Fonds Paterson

La ten wheel (4-6-0) 423, une D4G construite en 1915 par le CP, se prépare à partir de Belleville, Ont., sur le « ligne de la côte » le 15 septembre 1945. Archives ACHF, Fonds Paterson

Another ten-wheeler, this time D10E 841, a 1909 MLW product is at work in Oshawa, Ontario in May, 1941. Stan F. Styles

Une autre Ten wheel, la D10E 841, une construction de 1909 de la MLW, au travail à Oshawa, Ont., en mai 1941. Stan F. Styles



Locomotive 1002 rides the turntable at Trenton, Ontario, the divisional point on the Shore Line when this photo was taken in 1945. The 1002 was a D10H built by MLW in 1912, it was scrapped in 1961. George W. Parks

La locomotive 1002 sur le pont tournant en 1945 à Trenton, Ont., point de division de la « ligne de la côte ». La 1002 est une D10H construite par la MLW en 1912 et détruite en 1961. George W. Parks



Three crew members pose proudly beside 1056, another D10H, in Belleville, Ontario on August 1, 1957; the locomotive was scrapped a year later.

L'équipage pose fièrement devant la 1056, une autre D10H, à Belleville, Ont., le 1er août 1957; la locomotive sera détruite un an plus tard.

G3C 2325 an MLW 1923 4-6-2 Pacific Type highballs a freight near Oshawa, Ontario on April 6, 1944. William E. Paul

La G3C 2325, une 4-6-2 Pacific construite en 1923 par la MLW, à pleine vitesse avec un train de marchandises près d'Oshawa, Ont., le 6 avril 1944. William E. Paul

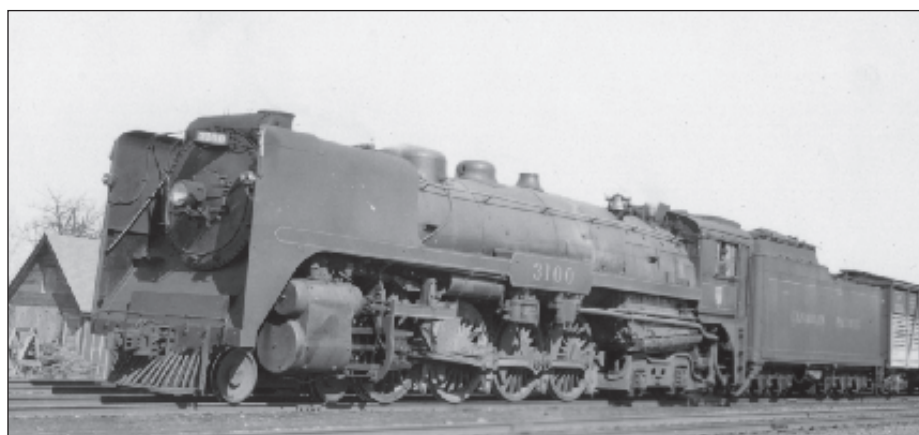


Canadian Pacific Railway 2398 at the head-end of a passenger train is taking water at Trenton, Ontario in 1947; the locomotive is a class G3G and was out-shopped from CLC in August, 1942. George W. Parks

La CPR 2398 en tête d'un train de passagers fait de l'eau à Trenton, Ont., en 1947. C'est une G3G sortie des ateliers de la CLC en août 1942. George W. Parks

The now famous 2816 (with smoke deflectors) was photographed at Oshawa, Ontario on April 6, 1941 pulling a long freight. William E. Paul

La désormais célèbre 2816 (avec les déflecteurs de fumée) photographiée à Oshawa, Ont., tractant un long train de marchandises le 6 avril 1941. William E. Paul



The 3100 was one of only two Northern Types on Canadian Pacific Railway, classified as a K1A, it was built by the CPR at Angus shops in 1928; it was hauling a freight train on the Shore Line on March 4, 1945.

La 3100 est l'une des deux machines de type Nord du CP. Classée K1A, elle est construite aux ateliers Angus en 1928. Elle tire un long train de marchandises sur la « ligne de la côte ».

Alco Schnectedy built 2-8-0 3437 was a class M4D and was photographed by George W. Parks at Trenton, Ontario on August 3, 1947.

La 3437, une 2-8-0 classe M4D, construite par les ateliers de l'ALCO à Schnectedy, est photographiée ici par George W. Parks à Trenton, Ont., le 3 août 1947.



Upgrading of the Mud Lake trestle occurred in 2009 when new bridge members replaced the original ones on the main spans. Railings and cat walks were also added during the rebuild period. In 2013 bridge members were replaced in the curved viaduct segments on the west approach.

La réfection du pont de Mud Lake commence en 2009 lorsque de nouvelles poutres remplacent celles d'origine sur les travées principales. En 2013, ce sont des éléments des travées en courbe de l'approche ouest qui sont remplacés. Des rambardes et des passerelles sont aussi ajoutées durant cette période de reconstruction.



Crews are re-installing the guard rails after ties were replaced on the bridge in September 2009. John Soehner

Les équipes remontent les contre rails après le remplacement des traverses sur le pont en septembre 2009. John Soehner

Mid winter 2014 and a 2 AM crew change at Smith Falls, Ontario; CP Rail were operating a variety of leased power on the Shore Line this past winter. Robert Heathorn

Au milieu de l'hiver 2014, changement d'équipe à 2 h du matin à Smith Falls, Ont. Le CP a utilisé plusieurs types de locomotives louées sur la « ligne de la côte » cet hiver.



The early twentieth century construction of the Glen Tay-Agincourt line with the Mud Lake trestle continues to provide the CPR with its only twenty-first century line from eastern Canada to Toronto. The section of the O&Q between Glen Tay and Havelock was abandoned in the last three decades of the last century. The CPR anticipates the Mud Lake trestle to continue providing rail service well into its second century.

Sources

CRHA Archives, Canadian Railway and Marine World, August 1914

Old Time Trains website, Trenton Division by R. L. Kennedy

MVAR Rail Link Newsletter, 2007

Special thanks to Ted Rafuse, Bruce Chapman, Douglas Smith, Josee Vallerand and James Taylor for assisting with this article.

La construction, au début du siècle dernier, de la ligne Glen Tay-Agincourt, avec le pont sur le Mud Lake, permet au CPR de maintenir sa seule ligne de Toronto vers l'est du Canada. La section du O&Q entre Glen Tay et Havelock est abandonnée dans les années 70. Le CP compte sur le pont au-dessus du Mud Lake pour maintenir son service rail durant le 21^e siècle.

Sources

Archives ACHF, Canadian Railway and Marine World, août 1914

Old Time Trains website, Trenton Division by R. L. Kennedy

MVAR Rail Link Newsletter, 2007

Merci à Ted Rafuse, Bruce Chapman, Douglas Smith, Josée Vallerand et James Taylor pour leur aide lors de la rédaction de cet article.

The 75th Anniversary of the 1939 Royal Tour

By Peter Murphy, Douglas Smith and friends

Seventy five years ago the 1939 Royal Tour of Canada began on May 17, with the arrival of King George VI and Queen Elizabeth at Wolfe's Cove, Quebec aboard the Empress of Australia. This visit to Canada in 1939 was truly historic being the first time a reigning monarch had visited this country. For Mackenzie King, it was one of the momentous events of his life. As Prime Minister, he travelled with the royal couple for their entire tour, across Canada and back, sharing the spotlight and taking part in all the festivities. As Minister in Attendance, he also accompanied the King and Queen on their visit to the United States.

In Europe, it was apparent that war was looming, and one of the main reasons for the Royal Tour was to stimulate Canadian affection and support for Britain in the coming conflict. President F.D. Roosevelt invited the King and Queen to visit the United States as well. In light of the international situation, the British gladly seized this opportunity to strengthen their friendship with the Americans.

An enormous amount of work went into the preparation of the Royal Tour. The King and Queen would arrive in Canada by ship and travel across the country by train. Both the Canadian Pacific and the Canadian National Railways offered their services, and a Royal Train was assembled, using some of their best passenger rolling stock.

The 12 car train was composed of the following cars: CP baggage car 4473, CP baggage-dormitory car 4484, CN diner 1330, CP 8 section-4 bedroom sleeper "Viceroy", CP 14 single bedroom car "Grand Pre", CP business car 99, CN bedroom-lounge-observation "Atlantic", CP business car "Wentworth", CN bedroom-lounge-observation "Pacific", CN 14 single bedroom car "Grand Manan", and Government of Canada Vice Regal Cars 1 and 2. The entire train was decorated in a special livery of royal blue and aluminum for the tour.

The Royal Train left Quebec City on May 18. A pilot train, carrying officials and the press, preceded the royal train by one hour and no other trains were permitted to travel on the affected line within this period. The travel arrangements were shared by Canada's two major railways with the CPR being responsible for the most of westward journey to Victoria, British Columbia. CPR used its streamlined Hudson locomotives assigning the 2850 to the Royal Train and 2851 to the pilot train. The 2850 hauled the train from Quebec City to Ottawa and from Brighton, Ontario through to Vancouver without change. The CNR handled the train from Ottawa to Coteau and on to Brighton. The 2850 was able to accomplish this feat as the Royal Tour made long stopovers at major centres which permitted maintenance

forces to work on the locomotive. The 2850 also received assistance from helper locomotives at a number of locations to surmount grades with the heavy train. The eastward trip was handled by the CNR from New Westminster, BC to Niagara Falls, Ontario.

Unlike the CPR, the CNR assigned five steam locomotives to haul the Royal Train. These included streamlined Northern 6400, Mountains 6028, 6047 and 6057, Pacific 5117 and Consolidation 3430. The 6400 handled the train in southern Ontario and as far west as Nakina, the 5117 and 6047 and 6057 in western Canada, the 6028 east of Levis to Maritimes, the 3430 for the run from Moncton up the branch line to Cape Tormentine..

At Niagara Falls, the Royal Tour then headed south into the United States, for a visit to Washington, New York City, and Hyde Park, President Roosevelt's home, using the rails of the Pennsylvania and New York Central Railroads.

The Royal Tour returned to over the Delaware & Hudson Railroad Canada where the CPR took over the train at Delson, near the site of present day Exporail. The 2850 resumed its duties pulling the train to Sherbrooke, which point marked the end of its service on the royal train. The train was pulled by CPR Pacifics 2625 and 2658 over the Quebec Central to Joffre (near Charny) where the CNR again took over the train.

While the Royal Train over the former Intercolonial Railway line to Saint John, NB, the royal couple left the train at Newcastle, NB. They travelled by road to Fredericton. The CPR provided a four car special train between Fredericton and Saint John where the royal party returned to the Royal Train for a short run to Cape Tormentine where they traveled by naval destroyer to Charlottetown and Pictou, NS. Another short limousine ride brought the royal party back to the royal train in New Glasgow for the final leg of the trip to Halifax.

The King and Queen, sailing on the Empress of Britain stopped for a visit to Newfoundland (then a British Colony), and then returned to Britain, completing a very successful trip. In strengthening Canadian support and affection for the monarchy, the tour had succeeded beyond the organizers' most optimistic expectations. For the King and Queen, it was highly gratifying that this, their first major tour, had gone so well. For the thousands of Canadians who were able to catch their first-ever glimpse of the King and Queen, it was never to be forgotten. For Mackenzie King, delighted to be able to spend so much time with the royal couple and to share the attention and luxury, the tour was both a political and a personal triumph.

Much has been written about the royal tour, but three of our CRHA members and friends have personal connections worth recalling for this project.



Royal Hudson 2850 with officials and crew at 'The Glen (Yard)', Westmount, Quebec on May 18, 1939. CRHA Archives, Fred J. Sanroff collection

Le 8 mai 1939, des représentants officiels et l'équipe de train posent devant la locomotive Royal Hudson no 2850 à la cour Glen de Westmount, Québec. Archives ACHF, collection Fred J. Sanroff

Ronald S. Ritchie writes:

This is an anecdote that I have told many times. In 1939 when the King and Queen visited Canada, my parents were scheduled to take me to see them in Montreal. Unfortunately I came down with the mumps and couldn't go. They promised me that I would see them later.

Eventually it was decided that we would go to Sherbrooke and see them before they left for the Maritimes and accordingly we travelled to Sherbrooke on one of the several special CPR trains laid on for that day. The royal train, hauled by 2850, duly arrived and we viewed the ceremonies. The royal party was then scheduled to travel via the Quebec Central Railway from Sherbrooke to be delivered to the Canadian National at Joffre for further movement east. As the 2850 was too heavy to operate on the QCR, a pair of light Pacific's handled the train.

My parents and I made our way to the CPR station to return to Montreal on one of the Specials and while en-route home, we noticed many people running around with cameras to photograph our train. Upon arrival at Montreal West it became apparent what all the excitement was about; our engine was none other than the 2850 being worked back to Montreal, for preparation for its appearance at the New York World's Fair later that year.

I am sure that I am one of the few remaining people who can say that they rode a train hauled by 2850 in its royal train livery.

James A. Brown writes:

Regarding the Royal Tour, these two scans in my collection of the pilot and Royal Trains were both taken by my father, Alvin H. Brown. The date was May 22, 1939, and the trains were heading north on the Mactier Subdivision, just north of Weston Ontario, about ten miles out of Toronto Union Station. The pilot train was first, followed by the Royal Train itself. The Toronto departure was at about 6:45pm EST, 45 minutes late on account of the King had stayed longer than planned visiting a military hospital in the city.

Lighting was poor, overcast and not far off sunset, film was slow so he evidently wasn't using a high shutter speed. Although not perfect, these photos, taken by my father are important to me and I am pleased to share them with Canadian Rail readers!



CPR 2851, in Tuscan red livery leads the pilot train. Alvin H. Brown

La locomotive du CPR no 2851, dans sa livrée rouge toscane, en tête du train pilote. Alvin H. Brown



The Royal Train, lead by 2850 in royal blue and aluminum livery heads north near Weston, Ontario. Alvin H. Brown

Le train royal, tiré par la locomotive no 2850, dans sa livrée bleue et argent, en direction nord, près de Weston, Ontario. Alvin H. Brown

The late departure meant that planned brief stops at various points on the journey north had to be cancelled in favour of roll-bys, disappointing thousands who had been waiting for hours for at least a glimpse of Their Majesties.



CNR 6400 and Royal Train at CNR West Toronto, thousands of people turned out at every stop to hopefully catch a glimpse of the Royal couple. Alvin H. Brown

La locomotive CNR no 6400 et le train royal du CNR à Toronto-Ouest. Des milliers de gens se précipitent à chaque arrêt du train pour voir le couple royal. Alvin H. Brown

Thomas Grumley writes:

My dad, Richard Laurence Grumley (1899-1974), immigrated to Canada from Ireland via Liverpool, England in 1917. Coming from a family of seafaring people, his initial employment in Canada comprised working on Canadian ships in the capacity of a Steward. But he gradually migrated to the Canadian National Railways in what would be a 44 year career in the Dining Car Department from 1920 until his retirement from the company in February 1964. In the context of his employment, he worked many routes; Montreal-Chicago during prohibition, the Super Continental between Montreal and Capetrol, Ontario, and the daily Montreal-White River Junction run. Two of his more prestigious jobs were being seconded to work at Lord Beaverbrook's residence in New Brunswick in a cooking capacity. The other was working the Royal Train as a cook across Canada in 1939; he later became a chef.

Working under the supervision of his close friend, mentor and chef Tommy Gear, the team from the CNR worked the entire Royal visit. For his efforts and in addition to his regular pay, my dad received an \$80 bonus (which was considered a significant sum at the time), a pair of sterling silver cufflinks engraved with George VI's Royal crest, and a photo of him shaking hands with the King and his royal entourage. In addition he received a complimentary booklet describing the Royal tour across Canada.

The Steward seems amused at the peeling potato bee aboard the royal train by the CNR kitchen crew; Richard Grumley is third from the left. CNR Photo X8749, Thomas Grumley collection



Un steward semble amusé de voir des membres de l'équipe de cuisine du CNR, peler des patates. Richard Grumley est le troisième à gauche. Photo du CNR X8749, collection Thomas Grumley



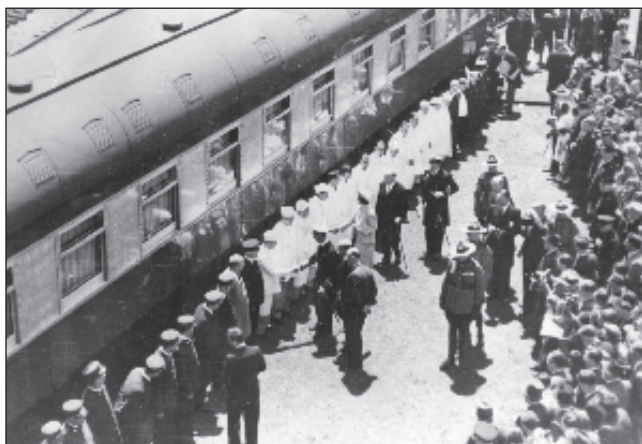
Chef Tommy Gear is preparing the famous CNR roast beef (Exporail cookbook page 86) while behind him, Richard Grumley stacks plates on the royal train. Quarters were cramped and the work was dangerous, special attention had to be paid to pots of boiling water; Tom remembers his dad's hands always being scarred from burns and cuts. CNR Photo X8510, Thomas Grumley collection

À bord du train royal du CNR, le chef, Tommy Gear, prépare son fameux rôti de bison (livre de recettes d'Exporail page 86) alors que Richard Grumley empile des assiettes. L'espace est restreint et les tâches dangereuses, il faut surveiller les casseroles brûlantes et l'eau bouillante; Tom se souvient que son père craignait constamment les brûlures et les coupures. Photo CNR X8510, collection Thomas Grumley



The complete CNR dining car crew pose alongside the royal dining car; Tommy Gear, Chef is sixth. from the left, Richard Grumley is immediately behind the Steward with the railroad hat. CNR Photo X8726, Thomas Grumley collection

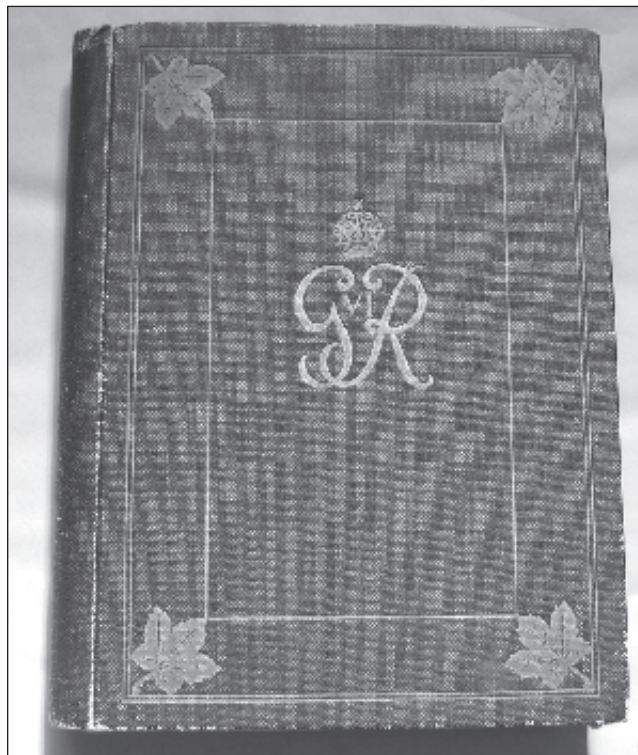
L'équipe au complet pose devant la voiture-restaurant. Le chef Tommy Gear est le sixième de gauche, Richard est juste derrière le steward qui porte un képi. Photo CNR X8726, collection Thomas Grumley



Richard Grumley, third. from the left of those in white, is next to shake hands with the Queen as she thanks the CNR dining car crew at the end of the royal tour! CNR Photo, Thomas Grumley collection

Richard Grumley, troisième à gauche de ceux vêtus de blanc, se prépare à donner la main à la reine, alors que celle-ci remercie l'équipe de la voiture-restaurant du CNR à la fin de la tournée royale. Photo CNR, collection Thomas Grumley

My father was able to keep his white armband consisting of alpha-numeric red lettering identifying him to the RCMP as a member of the train crew. One last valuable document he received was a 195 page hard covered book developed as a joint project by the CNR and CPR which detailed the complete itinerary of the Royal couple across Canada starting with their arrival in Quebec City and their departure from Halifax on June 15, 1939.



Richard L. Grumley's hard cover book with details of the complete itinerary of the royal tour. He signed his name on the inside cover and dated it May 30, 1939, Montreal, the city where he lived. Thomas Grumley collection

Le livre à couverture rigide de Richard L. Grumley avec l'itinéraire complet de la tournée royale. M. Grumley a inscrit à l'intérieur de la couverture : son nom, la date du 30 mai 1939 et l'endroit, Montréal, qu' il habitait à ce moment là. Collection Thomas Grumley

Throughout the trip company photographers took photos of the various crews working the train and pictures of the dining car crew appear in railway related books. By today's standards, it was a tough and lengthy assignment. So much so that when my dad was approached in 1956, for Princess Margaret's tour in Canada, he graciously declined. During his later years he worked as the chef on the prestigious Montreal-Ottawa run until his retirement in 1964.

J.R. Thomas Grumley was born after the Royal visit and the above information is based on discussions he had with his dad as a youngster.

Sources:

Library and Archives Canada website
 Wikipedia the free on-line encyclopedia
 Ronald S. Ritchie
 James A. Brown
 J. R. Thomas Grumley
 Fiftieth Anniversary of the 1939 Royal Tour by Douglas N W Smith, Canadian Rail, May-June 1989

A Revelstoke Trainmen's Memorable Experience

by Douglas N W Smith

To most Canadians the Canadian Pacific's semi-streamlined Hudson 2850 that hauled the twelve car train of the King and Queen from Quebec to Vancouver was the "Royal" engine. Shortly after the conclusion of the Royal Tour, it was put on display at New York City's World Fair beside another Royal Train locomotive, Canadian National's 6400, the London, Midland & Scottish Railway "Coronation Scot" and other railway exhibits.

To the CPR men at Revelstoke, however, the real "Royal" engine was in the roundhouse there. It was the massive 5919 in which Their Majesties rode over the fourteen scenic miles from Beavermouth to Stoney Creek.

Envy of the shops and roundhouse forces there were Engineers Jock Rutherford and Fireman Stanley T.

Lea who, of all the then enginemen handling the Royal locomotive over the division, were in the leading engine of the triple-header which took the train out of Beavermouth.

Two massive Selkirk type (2-10-4) engines were added to the Royal Train at Beavermouth to assist the heavy train up the grade over Rogers Pass. These T1a class were part of a group of twenty built by Montreal Locomotive Works in 1929 and were assigned to moving trains between Field and Revelstoke as well as helper duty up the Big Hill east of Field and from Revelstoke west to Taft. Each huge oil burner with its tender weighed 728,000 pounds and had ten 63 inch driving wheels. It developed 5,000 horsepower, which was sufficient to haul twelve steel cars or 1,050 tons up a 2.2% grade. This was equal to more than 12,000 tons on level track. The engine had a maximum tractive effort of 90,000 pounds and the cylinder dimensions were 25 inches with a 32 inch stroke.



The ride of a lifetime – Queen Elizabeth rides the cab of Selkirk 5919 from Beavermouth to Stoney Creek in the Selkirk Mountains of British Columbia, on the royal tour of 1939. CPR Archives

La ballade d'une vie. La reine Elizabeth demeure à bord de la locomotive Selkirk no 5919 lors du trajet entre Beavermouth et Stoney Creek dans le secteur de la chaîne de montagnes Selkirk en Colombie-Britannique durant la tournée royale de 1939. Archives CPR

continued on page 177

The Four Seasons of the Mud Lake Trestle and the CPR's Shore Line

To complement our feature article on CPR's Mud Lake Trestle, we are pleased to present these colour images depicting this impressive structure and surroundings in each of the four seasons!

Les quatre saisons du pont sur le Lac Mud et de la ligne des côtes du CP.

Pour aller de pair avec l'article sur le pont du Lac Mud, nous sommes heureux de vous offrir de belles photos couleur mettant en vedette ce pont durant les quatre saisons.



Fresh spring foliage is evident as CPR 9552, a 1995 GE product leads a freight eastbound on the Shore Line, that's Tay River in the background. Robert Hearthorn

Les nouvelles pousses du printemps viennent d'éclorre, alors que la locomotive du CP 9552, construite par GE en 1995, est en tête d'un train de marchandises en direction de l'est ; on peut voir le rivi re Tay   l'arri re plan. Robert Hearthorn



It's summer, July 28, 2010 and CPR 9667 leads empty Ethanol Train 667 westbound; the GE locomotive is a class DRF 44 and is geared for 75 MPH. John Soehner

En plein  t , le 28 juillet 2010, la locomotive CP 9667 est en t te du convoi 667 de wagons vides de transport d' thanol, en direction ouest ; cette locomotive, construite par GE, fait partie de la classe DRF 44 et peut atteindre les 75 milles   l'heure. John Soehner

John Soehner Photo
9667 leads Ethanol Train #667
Mud Lake - July 28, 2010



Mid autumn - October 8, 2008 finds CPR 8879 and mate hauling Train 143 over the Mud lake Trestle through the fall foliage of Eastern, Ontario. John Soehner

Les belles couleurs du feuillage d'automne, dans l'est ontarien, sont en vedette le 8 octobre 2008, alors que la locomotive du CP 8879 emmène le convoi de marchandises 143 qui traverse le pont sur le Lac Mud. John Soehner

The leaves are down, Mud Lake is frozen and scenery is bleak as Pandrol Jackson rail-grinding train RMS-5 works its way across the trestle in the late 1990s. Bob Hearthorn

C'est l'hiver, vers la fin des années 1990, tout est blanc et le lac est gelé, alors que le train meuleur de rails, de la Société Pandrol Jackson, traverse le pont sur le Lac Mud. Bob Hearthorn





Experimental units 2101 and 2100 along with 5879 lead eastbound Train 230 on August 31, 2010. The lead two units were built by National Railway Equipment (NRE) in 2008 as model 3GS21B-DE; each unit had three (3) Cummins model QSK19C diesel engines which could operate independently, or in tandem depending on load. Each locomotive was rated at 2100 HP and was geared for 70 MPH; both units were named Carol Ann Odorico. John Soehner

Le 31 août 2010, les locomotives en cours d'essais 2101 et 2100 du CN, en compagnie de la 5879, sont en tête du train de marchandises 230. Ces deux locomotives ont été construites par la National Railway Equipment en 2008 comme leur modèle 3GS21B-DE. Chacune possède trois moteurs diesel Cummins QSK19C et peuvent fonctionner seule ou ensemble, selon la demande. Ces locos de 2100 CV peuvent atteindre 70 MPH. John Soehner



Mid winter at Feldspar, Ontario, just west of the Mud Lake trestle, CPR 8629 leads a westbound hot shot kicking up all kinds of fresh snow in the process! Robert Heathorn

En plein hiver à Feldspar, Ontario, un peu à l'ouest du pont du lac Mud, la locomotive 8629 du CP, avec un train de marchandises en direction ouest, roule à toute vitesse soulevant la neige fraîchement tombée. Robert Heathorn

Stan's Photo Gallery

July - August 2014

By Stan Smaill

French Version, Michel Lortie

It is with great pleasure that we finally introduce the readers of Canadian Rail to the night photography of Gary Knapp. Recalling the previous works of nocturnal railway photo masters such as Jim Shaugnessy, Wallace Abbey, Richard Steinheimer, Jim Boyd, James A. Brown and the inimitable O. Winston Link, Gary Knapp has continued the tradition of inspired photography of trains after dark.

Gary is a lifelong Vermonter who hails from St. Johnsbury and Essex Junction, Vermont. His Dad, Bob Knapp, had a special interest in the steam power of the Central Vermont and befriended many CV train and engine crews in the fifties, when Gary was growing up. Retiring from a long career with IBM, Gary was able to concentrate on his first love, photographing the railroad night scene full time.

I first met Gary back in the eighties, when VIA Rail Canada briefly assigned MLW FPA-4's to power trains 16 and 17 between Matapédia and Gaspé, Quebec in the summer of 1988. Since then I have greatly admired his photographic work of both the day and night variety. Herewith is a selection of mostly night railway images from Gary Knapp, the man that some people call the "new" O. Winston Link.

The master and the tools of his trade! Recalling the efforts of master night photographer O. Winston Link on the Norfolk and Western Railway in the fifties, Gary Knapp poses at Port Henry, New York with his cameras and lighting gear with ex CPR Rs18 No 1800 behind him. The unit was repainted (and re-numbered) to commemorate home- town iron ore road Lake Champlain & Moriah. Times have changed since the Link's day; there is not a single Sylvania flashbulb in sight!

Voici le maître avec son outillage! Tout en se rappelant ce qu'a fait le maître de photo de nuit, O. Winston Link, sur le chemin de fer Norfolk & Western durant les années cinquante, Gary Knapp pose pour cette photo prise à Port Henry, New York. À l'arrière-plan, l'ancienne locomotive RS-18 du CP repeinte et renumérotée pour rappeler le chemin de fer de transport de minerais, Lake Champlain & Moriah. Les temps ont bien changé ; Il n'y a plus une seule ampoule flash Sylvania dans le décor!

Les photos de Stan

Juillet - Août 2014

Par Stan Smaill

Version française : Michel Lortie

Je suis très heureux de faire connaître aux lecteurs de Canadian Rail les travaux photographiques de Gary Knapp, comme l'ont fait avant lui des maîtres de la photo nocturne tels Jim Shaugnessy, Wallace Abbey, Richard Steinheimer, Jim Boyd, James A. Brown et l'inimitable O. Winston Link ; Gary Knapp a continué cette tradition de photographier des trains à la nuit tombée.

Gary a toujours vécu dans l'état américain du Vermont ; né à St Johnsbury, il habite maintenant à Essex Junction. Le père de Gary, Bob Knapp, aimait les locomotives à vapeur et avait de bons amis parmi les cheminots du Central Vermont durant les années cinquante. Ayant pris sa retraite après une longue carrière chez IBM, Gary a enfin pu se consacrer à ce qu'il préférerait, soit photographier des trains la nuit.

J'ai rencontré Gary, pour la première fois, durant l'été 1988, alors que VIA Rail Canada avait commencé à utiliser les locomotives FPA-4 construites par MLW, pour tracter ses trains 16 et 17 entre Matapédia et Gaspé, au Québec. Depuis ce temps, j'ai toujours admiré ses photos, autant celles prises de jour comme celles de nuit. Voici une série de photos, dont plusieurs prises de nuit, par celui que certains nomment le "nouveau" O. Winston Link.



After Canadian Pacific assumed ownership and control of the storied Delaware and Hudson in the 1990s, it began operating the annual 'Toys for Tots' special train in conjunction with the U.S. Marine Corps. An annual highlight for both rail enthusiasts and needy children or needy children the train runs along the D&H Main Line to Canada. The opportunity to photograph this train at night was an additional gift to persistent photographers like Gary Knapp. On December 6, 2006, GP38-2 7312, still in the classic blue-gray D&H 'lightening stripe' paint scheme, is deadheading southbound at Port Henry, New York with the 'Toys for Tots' train consist.

Après que Canadian Pacific eut assumé la propriété et la gestion du fameux chemin de fer américain Delaware & Hudson, il a créé, avec l'aide du corps des Marines de l'armée américaine, un train dédié à la distribution de jouets pour les enfants nécessiteux ; ce train s'arrêtait dans tous les villages le long de la voie principale du D&H vers le Canada. Gary Knapp l'a photographié la nuit de 6 décembre 2006. En tête du train, la GP38-2 7312 porte toujours sa belle livrée originale du D&H, ici en direction sud à Port Henry, N.Y.



Rivière-du-Loup, Quebec finds VIA Rail No 16, the 'Chaleur', crossing the upper falls in the Parc des Chutes, a beautiful, if unremarked, location for railway photography. This nocturnal scene features VIA F40PH's 6428 and 6419 in the second gray paint scheme on August 28, 2008. Rapido Trains offers a fine scale model of the VIA F40PH before the recent CadRail rebuilding and repainting in the new 'green' paint scheme. It is available directly from VIA Rail Canada at VIA Rail.ca.

Cette photo de nuit, du 28 août 2008, du train de VIA Rail 16, le "Chaleur", a été prise à Rivière du Loup, Québec, dans un endroit appelé le Parc des Chutes. Les locomotives de type F40PH 6428 et 6419 portent la livrée gris bleu et jaune de la seconde génération. La Société des trains Rapido fabrique un modèle réduit à l'échelle HO de ces locomotives, peintes dans cette livrée, avant la reconstruction par CAD et la nouvelle livrée verte ; ceux-ci sont disponibles auprès de VIA Rail Canada sur le site via.rail.ca.



Like Shaugnessy , Link and Brown, whenever possible Gary attempts to include the human element in his night photos. At 0259 on May 5, 2007, CPR GP38-2's 3025 and 3072 pose in front of the classic Napierville Junction Railway 'chateausque' station at Lacolle, Quebec. The 'NJ' is now the CPR Lacolle Subdivision, and the NJ roadswitcher is running as a night job for two weeks to clear the line for daytime trackwork blocks. Left to right are engineer Bryan Mitchell, conductor Rejean Meunier and trainman Robin McLellan.

Gary aime bien inclure des personnages dans ses photos ; on voit ici, à l'avant-plan, de gauche à droite, le mécanicien Bryan Mitchell, le conducteur Réjean Meunier et le cheminot Robin McLellan. Les locomotives GP38-2 3025 et 3072 et leur train sont devant la gare de style "Château" de Lacolle, au Québec. L'ancien chemin de fer Napierville Junction fait partie du CP sous le nom de Subdivision Lacolle. Le train en est un qui devait circuler de nuit afin de laisser le champ libre durant le jour aux équipes de travaux de la voie.

'Matapedia Holidays' is Gary's title for this marvelous scene at Matapedia, Quebec on December 28, 2006. On the left is the Gaspé bound No. 14, the 'Chaleur', and on the right, about to leave for Campbellton and Halifax, is No. 14, the 'Ocean'. The enduring quality of the Budd shot-weld stainless steel is evident in the reflection off this passenger equipment that has graced Canadian rails for sixty years!

'Le temps de fêtes à Matapédia ! C'est le titre donné par Gary pour cette belle photo prise le 28 décembre 2006. À la gauche, le train 14 "Chaleur" en direction de Gaspé et, à la droite, l'autre section du 14, le "Océan", est en partance vers Campbellton et Halifax. L'entretien méticuleux de ces wagons Budd en acier inox font que ceux ci sont toujours utilisés sur les chemins de fer canadiens après plus de soixante années.





The distinctive Delaware & Hudson station at Plattsburgh, New York is the setting for this recent view of CPR Es44 8869 leading a northbound train of oil empties. With the increase in crude oil and ethanol traffic, the former D&H Canadian Main Line (CML) has become a very busy single track artery. At one time, the 'North End' of the D&H was dispatched from this majestic building. Today the dispatcher for the CML is in Minneapolis, Minnesota.

Devant la très belle gare du Delaware & Hudson à Plattsburgh, New York, l'Es44 8869 du CP tracte un train de wagon citerne vide en direction nord. Depuis le début du transport des produits pétroliers par rail, l'ancienne voie principale du D&H est devenue très achalandée. À une autre époque, le répartiteur des trains du D&H travaillait dans cette gare ; maintenant, les trains sont contrôlés à partir de Minneapolis au Minnesota.



Things aren't always what they seem! Rebuilt ex Soo Line CPR SD60-2 6240 is on the point of a westbound Montreal, Maine & Atlantic freight at Foster, Quebec. This spring the MM&A was reorganized as the Central Maine & Quebec Railway.

La locomotive SD60-2 6240 avait appartenu au SOO Line et avait été reconstruite pour le CP ; elle est en tête d'un convoi du désormais infâme chemin de fer Montréal Maine & Atlantic à Foster, au Québec. Ce chemin de fer a, depuis, été réorganisé sous le nom de Central Maine & Quebec Railway.



Merry Christmas, U.S. style! The Canadian Pacific Holiday train is southbound on the Canadian main Line at Fort Edward, New York behind GE 9824. The CPR shop crews at St Luc Yard under the direction of Guilio Capuano and Steve Filiatrault were two of the key people responsible for this marvelous rolling light show.

Un joyeux Noël aux U.S.A. ! Le train des fêtes du Canadien Pacifique roule en direction sud sur la voie principale en provenance du Canada à Fort Edward, New York, tracté par la locomotive GE 9824. L'équipe des ateliers St-Luc du CP à Montréal, sous la direction de Guilio Capuano et Steve Filiatrault, est responsable de la décoration de la locomotive et des wagons.

Daytime at 'Shaugnessy's Rock'! So named for the many photos taken by Jim Shaugnessy and others during the D&H years, Gary Knapp continues the tradition at this marvelous location high above Willsboro Bay in the CP-D&H era. AC4400 9625 has train 252 southbound on the morning of October 12, 2009. Look carefully and you will see a hardy kayaker paddling the still waters of Lake Champlain on this beautiful fall morning.

Gary Knapp continue la tradition de prendre des photos à cet endroit nommé le rocher de Shaugnessy, car celui-ci l'avait souvent utilisé comme décor à ses photos prises à l'époque du D&H. La AC 4400 9625 du CP emmène le train 252 vers le sud le 12 octobre 2009 ; on peut entrevoir un canotier voguant sur les eaux du lac Champlain par ce beau matin d'automne.





CNR SD40-2W 5352 leads the daily northbound St. Albans turn at Noyan, Quebec. Two New England Central units help pull the train which is crossing the venerable swing bridge over the Richelieu River. The pleasure craft are at rest but at least one jovial mariner salutes 5352's conductor with beer in hand, of course!

Le train du CN en provenance de St Alban au Vermont passe sur le très ancien pont de la rivière Richelieu à Noyan au Québec ; la locomotive du CN 5352, une SD40-2W est en tête, aidée par deux locomotives du New England Central. Les bateaux de plaisance sont amarrés pour la nuit, mais un marinier fêtard salue le train avec sa bouteille de bière.



Friendly salutes are exchanged as dimensional loads trail CPR SD40-2's 5690 and 5677 on train 253 northbound at Port Henry, New York in a recent night shot by Gary Knapp. Out of view to the right, is ex CPR RS18 1800 in the railway display that recalls Republic Steel's Lake Champlain & Moriah Railroad. Amtrak's 'Adirondack' still calls at Port Henry daily.

À Fort Henry, New York, le train 253 du CP, transportant un objet hors norme, est tracté par deux SD40-2 5690 et 5677, dont l'équipage salue celui qui les regarde passer. La belle gare en pierre est toujours en service et le train "Adirondack" de Amtrak s'y arrête à tous les jours ; à la droite de cette gare, on peut voir une ancienne locomotive de type RS-18 du CP, repeinte aux couleurs rappelant le défunt chemin de fer Lake Champlain & Moriah.



Still stateside, but worth showing, is this marvelous nocturnal image of the St Lawrence & Atlantic northbound freight at Gorham, New Hampshire on the former Grand Trunk main line between Montreal and Portland, Maine. It's 0206 on October 9, 2013 and fall colours are at their peak as GP40-2 3008 leads her consist into this classic New England night scene.

Cette très belle photo de nuit a été prise à Gorham au New Hampshire, le 9 octobre 2013 sur l'ancienne ligne du Grand Trunk entre Montréal et Portland, Maine, maintenant l'Atlantic & St Lawrence ; le feuillage d'automne est resplendissant alors que la GP40-2 3008 traverse, avec son train, ce village typique de la Nouvelle Angleterre.

Back to Foster, Quebec. Ex R&S MLW M420TR No 26 is tonight's motive power for the very popular tourist train operated between Sherbrooke, Magog and Bromont, Quebec – sometimes running as often as three times a day. The Orford Express operated on the former CPR Sherbrooke Sub with crews supplied by the Montreal, Maine & Atlantic. Orford Express faces an uncertain future at this writing as an equipment fire recently damaged their passenger equipment.

Le train touristique Orford Express est très populaire et circule même la nuit entre Sherbrooke, Magog et Bromont au Québec ; sur la photo, il est tracté par la locomotive 26, une M420TR, construite, à l'origine, par MLW pour le chemin de fer Roberval & Saguenay. Le train circule sur les rails du MM&A avec des équipages fournis par celui-ci. Ce train fait maintenant face à un futur incertain car un incendie a détruit récemment son matériel roulant.





As I mentioned in the introduction to this Photo Gallery, I first encountered Gary Knapp in the Gaspé region of Quebec back in 1988. VIA Rail ran FPA-4s briefly on trains 16 and 17 between Matapédia and Gaspé that summer. FPA-4 6783 is on train 16 in this superb view of coastal running along the Baie-de-Chaleur back in the summer of 1988.

Comme je l'ai déjà dit, j'ai rencontré Gary dans la région de Gaspé en 1988, alors que VIA Rail avait brièvement utilisé ses locomotives FPA-4 sur ses trains 16 et 17 entre Matapédia et Gaspé. Gary a pris cette belle photo de la 6783 traversant un pont le long de la baie des Chaleurs durant cet été 1988.



Another day-time shot by Gary Knapp finds CN MLW-ALCO M636 2332 about to head into the Morrisey Rock Tunnel on the old Inter Colonial Railway at Tide Head (near Campbellton), New Brunswick. This tunnel is the only active railway tunnel in the Maritimes; it was the subject of many an MLW-ALCO publicity rendering by the late artist Howard Fogg who was, for a time, under contract to ALCO to produce publicity artistry. When CN introduced these locomotives in 1970, they were the strongest on the system turning out 3,600 horse power.

Une autre photo de jour, prise par Gary Knapp, nous fait voir une locomotive de type Alco M636, la 2332 du CN, entrant dans le tunnel Morrisey sur l'ancien chemin de fer Intercontinental à Tide Head, Nouveau-Brunswick, près de Campbellton. Ce tunnel est le seul en usage dans les Maritimes. Il a été souvent mis en valeur dans les publicités de la compagnie Alco par l'artiste Howard Fogg. Ce type de locomotives a été mis en service par le CN en 1970. Ces locomotives étaient alors les plus puissantes du réseau avec leurs 3600 CV.

continued from page 165



The Royal train, lead by Selkirk 5919 and Royal Hudson 2850 cross the famous Stoney Creek bridge. CPR Archives

Le train royal, tiré par les locomotives Selkirk no 5919 et Royal Hudson no 2850, traverse le fameux pont Stoney Creek. Archives CPR

These engines were the heaviest ever built for the CPR and were the heaviest in the British Empire. The helpers were coupled ahead of the Hudson with Selkirk 5919 in the lead.

During the stop at Beavermouth to couple on the helpers, Their Majesties, attired in sport clothes and scoring gloves, climbed up a specially built set of purple painted steps to the cab of the 5919. They rode the 14 miles along the gorge of Beaver River, through the mighty ramparts of the Selkirks, their heads still snow-crowned, the Beaver River brawling and tumbling with the late spring freshets, and finally the breath-taking crossing of Stoney Creek bridge which spans a mountain torrent 275 feet below.

With W.M. Neal, Vice President, Western Lines of CPR, accompanied Their Majesties. The Queen sat behind Fireman Lea on the left hand side of the cab. The King sat behind his Queen on a leather seat specially installed by the left hand door of the cab. Engineer Rutherford was amazed at the King's vast knowledge of steam locomotives.

In this way they saw some of the most stupendous scenery on the continent. Little wonder that the Queen remarked to Mr. W. M. Neal, Vice-President, Canadian Pacific Railway Western Lines, as she descended from the cab, "That was a thrilling experience."

It was a grand experience too for Rutherford and Lea, and for Division Master Mechanic Frank Warner who kept a wary eye on the proceedings.

The 2850 went on to complete its transcontinental run from Vancouver where the Royal Train was surrendered to the Canadian National to return the royal party back across the continent to Halifax. Because of the exceptional feat of hauling the Royal Train from Quebec City to Ottawa and from Toronto to Vancouver, George VI approved a CPR request made shortly after the tour to place the replica of the royal crown on all of the semi-streamlined Hudsons, which thereafter were known as the Royal Hudsons.

Queen Elizabeth had commented when seeing the 2850 "It's such a lovely engine!" Few would disagree with this assessment. Today the 2850 may be seen at the CRHA's Exporail Museum outside of Montreal.

CNR Dynamometer Cars

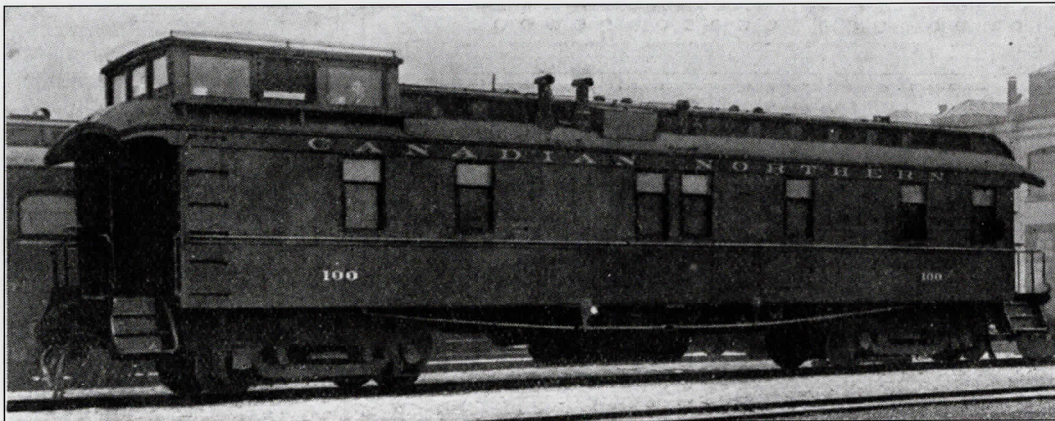
by Barry Biglow

Every railroad has had the problem of deciding how much trailing load can be handled by the motive power at the head of the train. With steam power locomotives there were many variables which affected the results such as the quality of coal, how well the coal was placed in the firebox, the draft on the fire, the air available to mention only the fire problems. Boiler issues included the area of the firebox, the number and area of tubes, cinders plugging in the tubes, cinders plugging in the smoke box, and the quality of the water. Mechanical variables included the size of cylinders and valve events handling the steam. After all things were considered the final test was how well the locomotive performed on the road.

Almost all railroads resorted to some method of measurement of performance on the road especially on the maximum uphill gradient. The amount of work done was measured in some fashion the two critical items being the speed and the pull on the train usually called tractive effort. Measurement of the tractive effort called for a special type of coupling to the train and largely because of this special coupling cars called dynamometer cars were

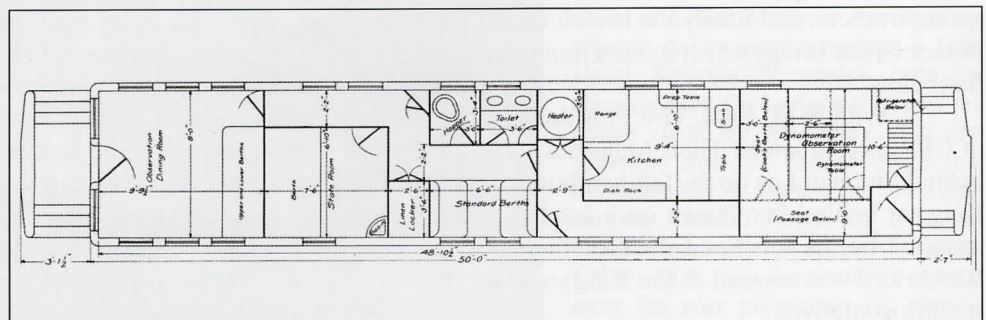
developed. Measurement by trial and error was risky since daily changes of the variables enumerated above as well as variation in the track adhesion could affect the results. Using a dynamometer car allowed the tests to be much more reliable and predictable since all the variables could be measured. The test also showed the locomotive deficiencies.

While doing some research I came across the Canadian Northern Railway dynamometer car 100 written up in the June 1913 issue of Canadian Railway and Marine World. The car had emerged from the Crossen Car factory in 1895 as Lake Manitoba Railway and Canal Company coach number 3. After the amalgamation of the LMR&C into the Canadian Northern in 1901, the coach was given the number 100. The dynamometer equipment and a cupola were installed in 1911. The cupola was removed in 1925 and the dynamometer equipment sometime before the end of that decade. The Canadian Northern named the car "Algoma" in 1917 and then the number 157 in 1918. Canadian National changed the number to 75 in the 1920s and finally 59 in 1943. The car was scrapped in 1946.

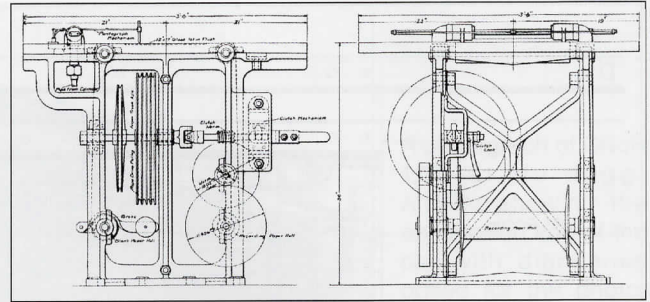


Photograph of CNOR 100, note that the measuring end had a 4 wheel truck while the other end had a 6 wheel truck indicating its passenger car origin. An observer is in the measurement end cupola. CRHA Archives

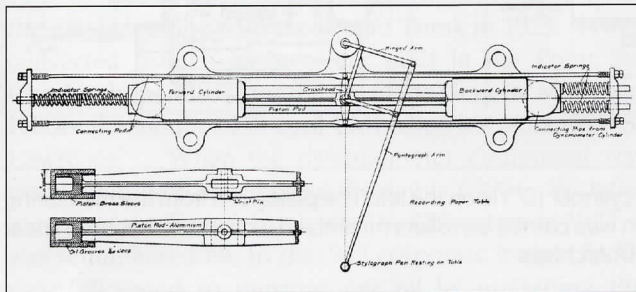
Published Floor Plan of Canadian Northern 100 in Canadian Railway & Marine World (CRMW). Living space was provided for the operating crew, visitors and the steward. Note that the window spacing on the plan does not correspond with the photographs. Changes probably were made when the car was under construction in the shops. CRHA Archives



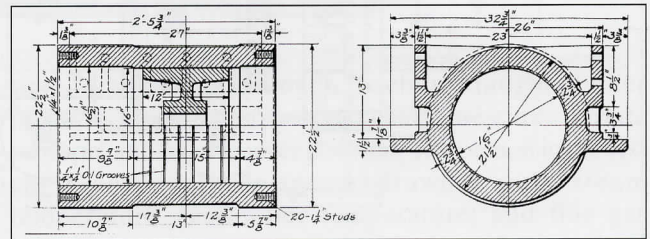
The article illustrated the center sill and coupler construction. As well, there were photographs showing the exterior of the car with an observer in the cupola and the recording table inside the car. The instrumentation is typical for the World War I period. The measurement was by means of a hydraulic cylinder placed between the sides of the center car sill beams with a piston connected to the coupler. Coupler movement on rollers was such that the cylinder hydraulic oil was compressed when the train is being pulled (pull) and also when the train is pushing the locomotive (buff). Hydraulic oil is effectively incompressible and the hydraulic oil pressure in the cylinder multiplied by the piston area is the tractive effort often called drawbar pull (or buff). The pressure was transmitted to a small cylinder on the recording table extending the recording piston rod in proportion against a spring. A pantograph assembly magnified the small movement of the piston rod to a pen on the recording chart. Another similar small cylinder recorded buff.



The chart support and drive assembly. The large pulley was belt driven from a propeller shaft connected to the car wheel and in turn via a clutch. Worm gear and reduction pulleys moved the recording chart paper on a distance basis. Lifting the clutch disengaged the worm drive so the operator was free to change paper and to start recording at his leisure. The recording pantograph (B) is shown at the top. CRHA Archives



The recording pantograph for Drawbar "pull" and "buff". Hydraulic pressure from the measuring dynamometer cylinder moved the central connecting point between the two cylinders in a manner measured by the springs at the end of the carriage. The movement was magnified by the pantograph assembly and then placed on the record chart by the pen stylus. Changing springs changed size of the movement and hence chart calibration. CRHA Archives



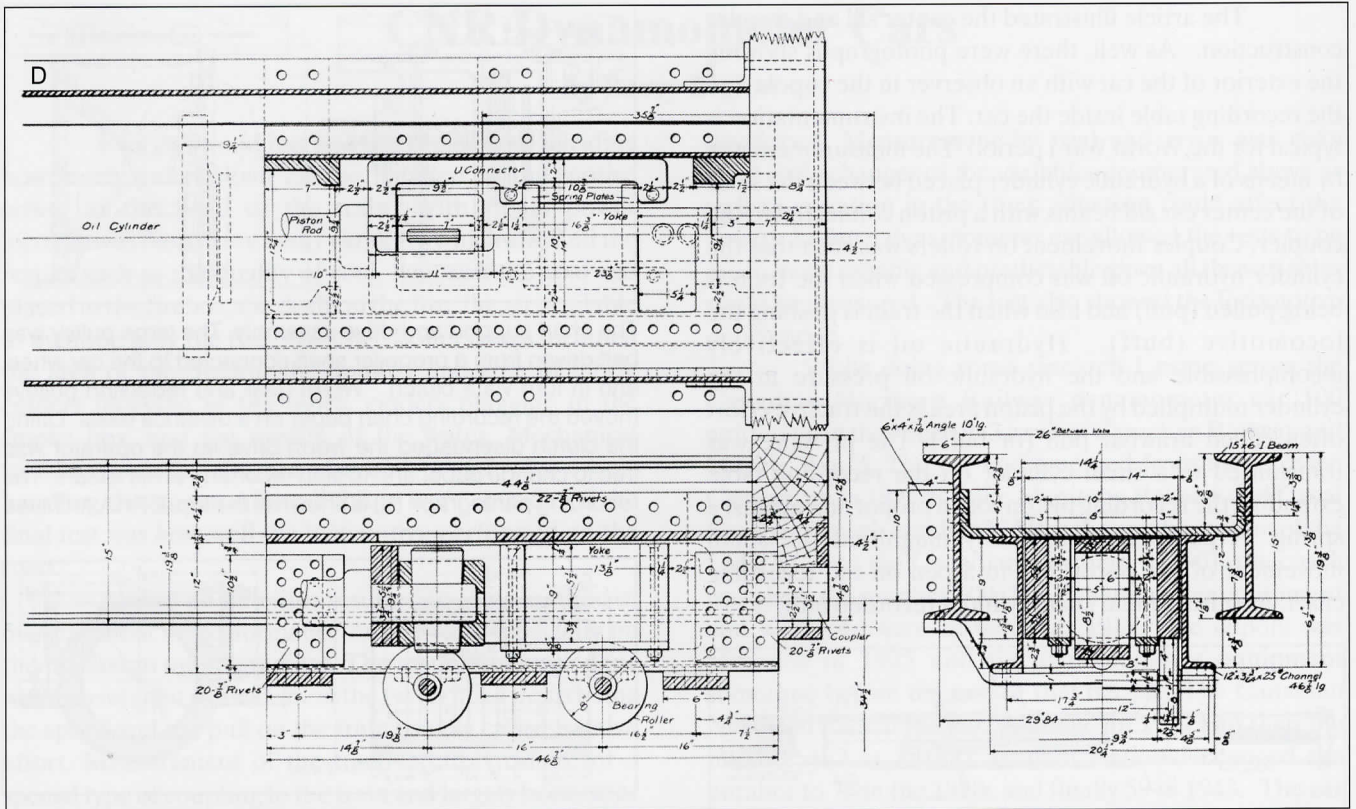
The dynamometer measuring cylinder and piston. The outer cylinder was riveted to and between the side sills of the car while the piston, shown in cross section, was connected to a rod and thence to the coupler at the end of the car. Hydraulic oil filled the chambers on each side of the piston. The operator when measuring arranged that hydraulic oil was prevented from flowing from one side to the other of the piston leading to a pressure proportional to the pull / push on the coupler. The pressures caused when the coupler attempted to move the piston was piped to the associated cylinder of the recording pantograph (B), one pressure only (push or pull) being operative at a time. CRHA Archives

A characteristic problem with this type of measurement was the oil leakage past the rings on the measuring piston. It was necessary to adjust the piston position in the measuring hydraulic cylinder before a test and after a period of sustained pull over a subdivision, say at each terminal point. Bypass valves were installed to allow for this adjustment. The test crew was sometimes frustrated if the locomotive made a coupling before the adjustment was made. In one case the gentle grade downhill from Toronto Yard with a light engine brake allowed repositioning the piston. A reservoir of oil was necessary as well as a method of removing any air in the system. A hand pump was often fitted to allow centering the hydraulic piston. When the car was not actively testing it was necessary to wedge the piston so that the piston did not run to one end and perhaps damage the end seal.

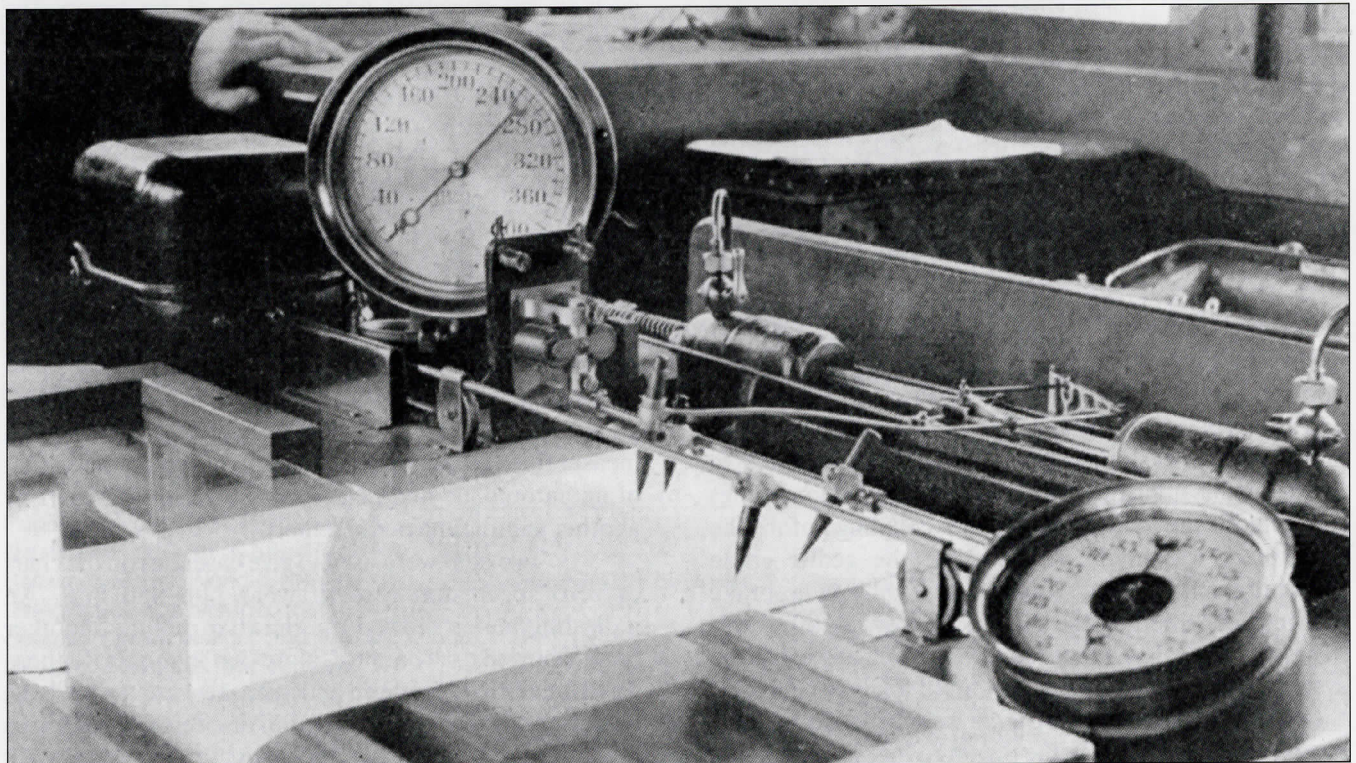
Speed and distance measurement was done by measurement of the revolutions of a wheel of the

dynamometer car. By a set of gears the chart on the recording table was driven in proportion so that the distance was recorded. The speed of the chart movement was such that notations of location on the track could be added to the chart as it passed over the table. Speed measurement was done by a drag cup meter similar to that of an automobile and placed on the recording chart by another pantograph pen assembly.

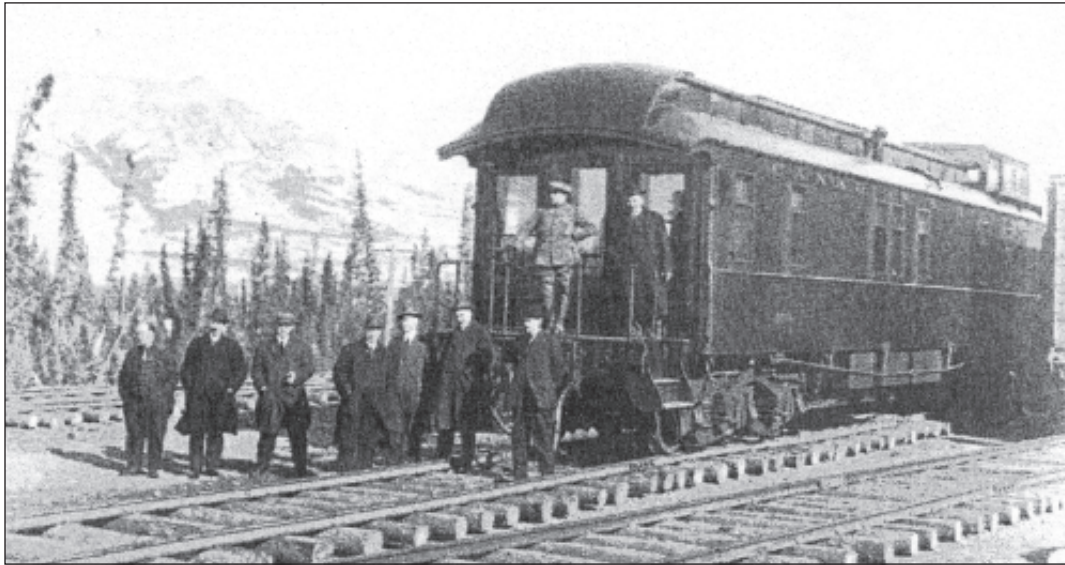
Two pens were used to give baselines on the chart of zero speed and zero drawbar pull and buff. An indicating meter showed the drawbar pull and another meter showed drawbar buff. Note that in the above there was no electricity required and indeed there may not have been electricity on the car. A point of interest is the trucks under the car. The car is a conversion from a coach which had six wheel trucks. However, adapting the center sill for the dynamometer cylinder required a four wheel truck to be used on the measurement end of the car.



The construction at the dynamometer end of the car. The measuring cylinder (D") is on the left. The piston rod from the measuring cylinder was connected to the coupler via an intermediate yoke which was carried on rollers minimized friction and ensured linear motion. The remainder of the coupler connection is not detailed. CRHA Archives



View of the dynamometer table. The pantograph arrangement is shown complete with the two hydraulic cylinders, pantograph, and pen styli together with pipe connections. Shown is the speed pen on the horizontal rod as well as two additional pens for the zero baselines on the chart paper. Gauges of the measured values are also shown. CRHA Archives



A photograph of CNoR 100 at Nordegg, Alberta showing the observation end of the car with dignitaries posed for the photo. Nordegg Historic Society

The CNR acquired a second dynamometer car in the amalgamation with the Grand Trunk in 1923. It was converted from a business car built in the Point Ste Charles shops in 1872 for the use of the General Manager. It bore the number 118 until 1901 when it was named “St Lawrence”. When the dynamometer equipment was installed in 1908, it was given the number 2901. With the merger of the Grand Trunk into the CN system in 1923, it was renumbered 69. In the 1953 corporate budget funds were allocated to improve car 69 by upgrading the hydraulic cylinder and installing a Chicago Pneumatic speedometer drive and Veeder Root odometer for distance measurement under AFE 70/518-A.

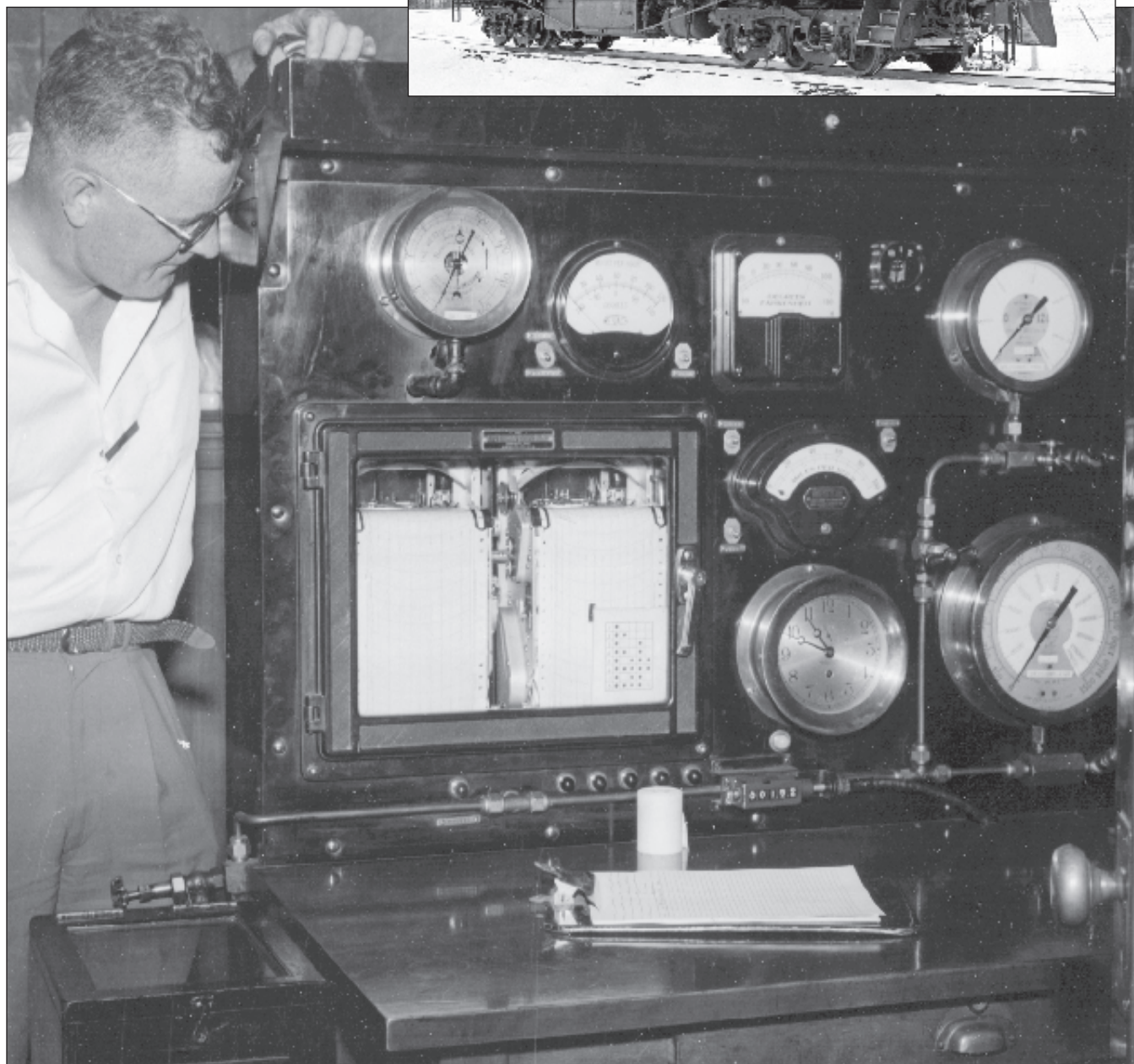
Remaining test sheets show that at least three persons were needed when testing. The person on the locomotive pilot recorded time, steam pressure and superheat; the person in the locomotive cab recorded

time, smoke box draught, firebox draught, boiler pressure, steam chest pressure, back pressure, throttle position, and reverse lever position; The person in the test car recorded time, speed, drawbar pull, steam temperature, feed-water temperature, and flue gas temperature. Time is the critical element since these three records had to be correlated after the test. Surviving records for CNR 6203 show a steam pressure of 245 psi gauge with a superheat of 261 degrees Fahrenheit for a BTU content of 1345. The exhaust was 8.8 psi. gauge and a superheat of 66 degrees Fahrenheit for a BTU content of 1191. The difference, only 154 BTU, less than ten percent of the available energy in the steam was used in performing work. A test of CNR 6300 showed a 1314 BTU input and 1176 exhaust or 138 BTU used in useful work. These figures show the weakness of the steam engine in extracting the energy in the steam.

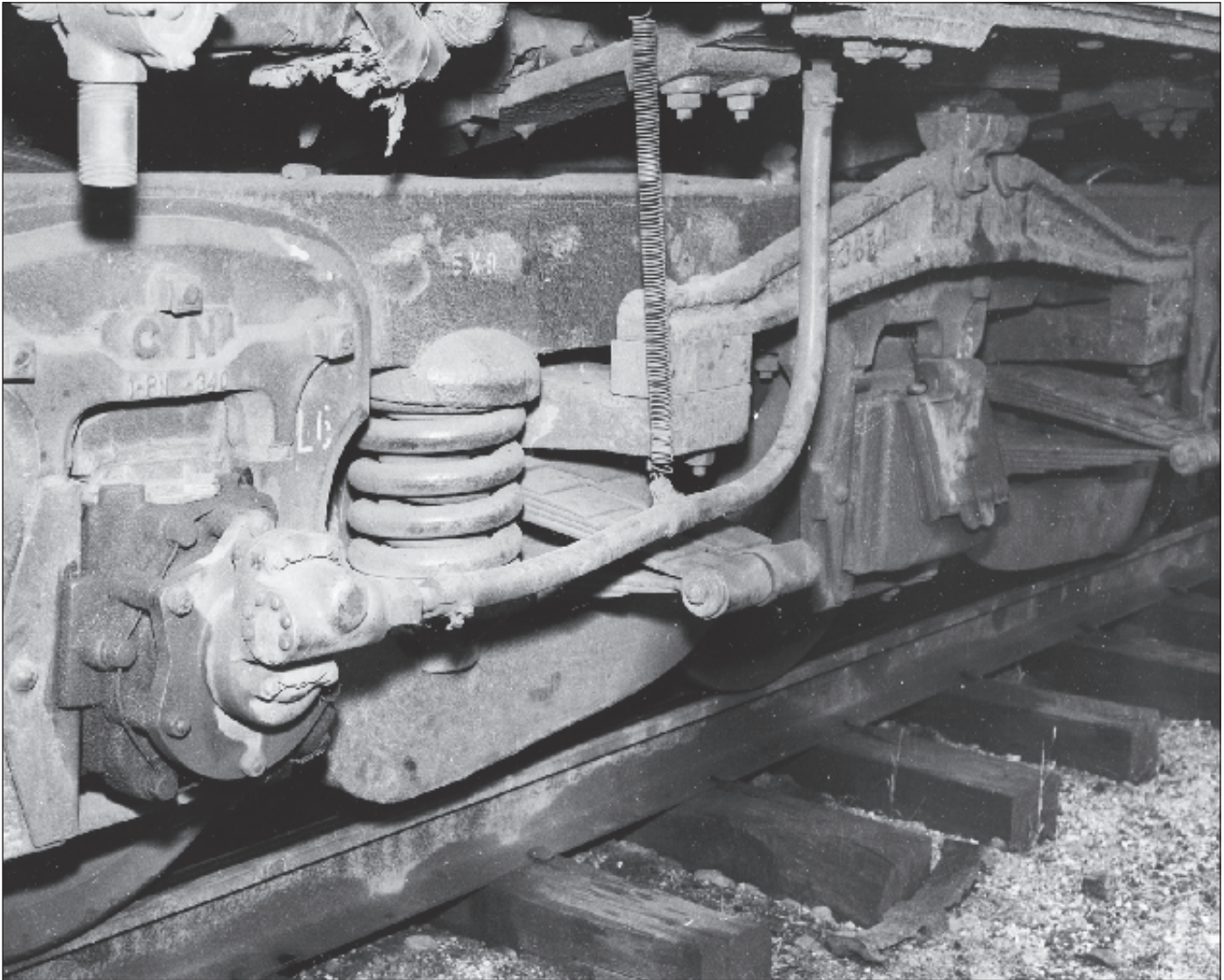
Dynamometer car 69 is believed bound for Chicoutimi for tests of troublesome hydraulic freight car draught gears. Note the truss rods indicating that the center sill was wooden. This car soldiered on for nearly one hundred years. Barry Biglow



Car 69's steward is taking a break as the car is parked at Parkhead, Ontario on January 30, 1964. James A. Brown



This photograph shows the operating console and operator of car 69 when using a hydraulic measuring cylinder. The hydraulic line enters near the operator's leg and proceeds across the table to the two meters on the right for pull and push. Not visible is the connection to the right Esterline Angus (EA) chart recorder. The other EA chart recorder is for speed measurement. The speedometer is to the right of the chart recorders above the clock. Above the chart recorders is the trainline air brake gauge. The other two meters are the air temperature and wind speed. At the bottom are five indicating lights showing the diesel electric trainlines of excitation and engine speed. The chart for trainline usage is on the glass of the right chart recorder. The operator is equipped on the desk with a clipboard and a spare paper roll for the diesel locomotive speed recorder. A Veeder Root counter below the clock indicates accumulated distance. The charts are still driven mechanically on a distance basis. CNR Photo, Author's collection

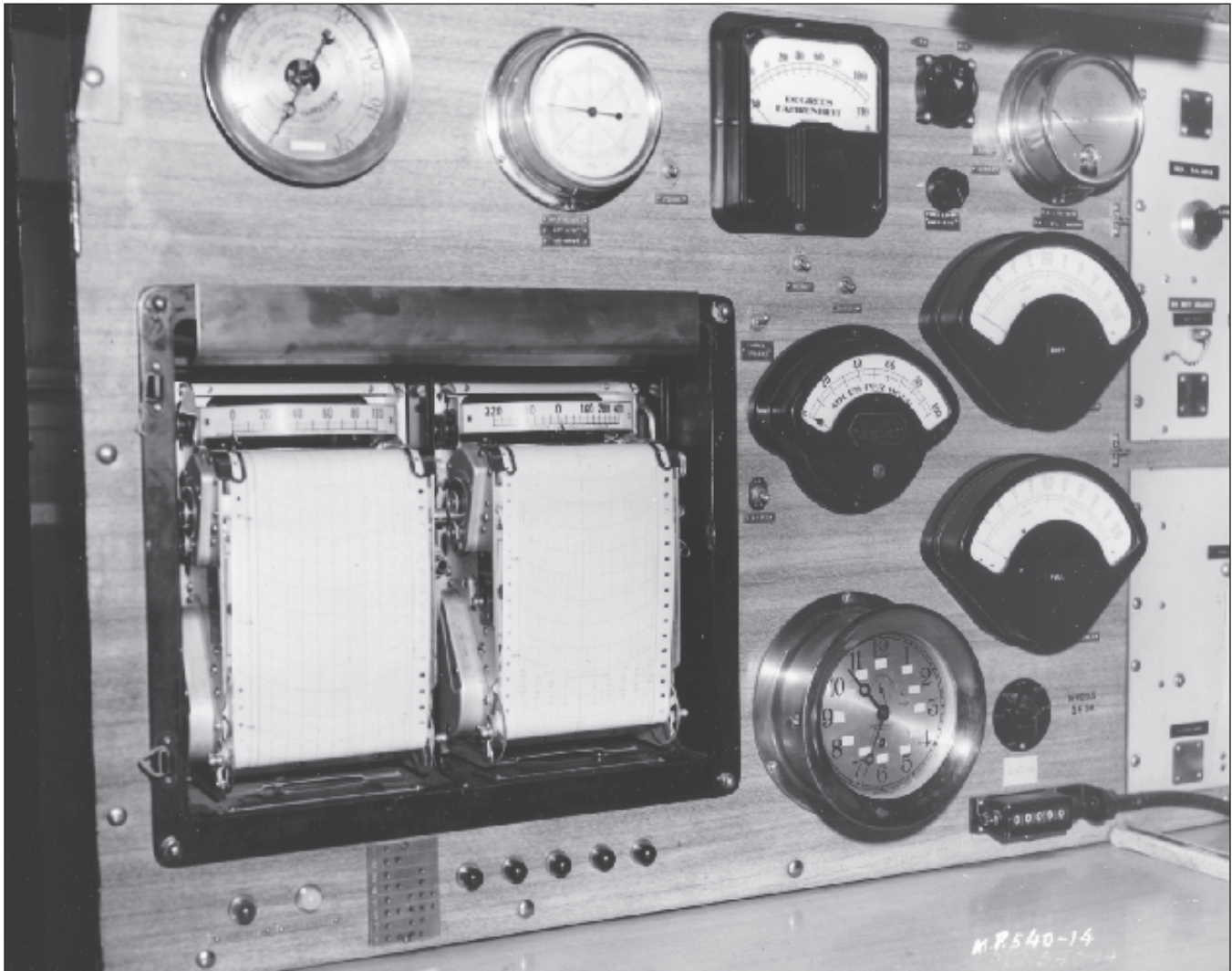


The right angle drive normally used for diesel locomotive speed recorders was used on car 69 to drive the chart recorders, distance counter (Veeder Root) and the speedometer. Some difficulty occurred getting the right gear ratio due to the various items to be driven and due to the unusual application. CNR Photo, Author's collection

The dynamometer car 69 did the work during the early dieselization years. This car had no cupola, but it did have a hydraulic piston coupler for measurement of drawbar pull and buff. Being an older car the circuits were wired for 32 volts direct current matching the voltage of ice activated passenger cars and steam engines. For reasons lost to history General Motors decided to use 64 volt direct current on their diesel electric locomotives and after a period of time, this voltage became standard on diesel electric locomotives with the older use of 125 volt circuits disappearing. Power from the locomotives was thus not readily available for use on car 69. This made testing of diesel electric locomotives a problem since the batteries on car 69 would discharge waiting for the test train, usually a freight, to depart so the axle generator on car 69 could charge the car batteries. Compounding the problem, the freight train drag speed up gradients was too

slow for the axle generator to reach 32 volts to charge the batteries. Thus all lights and other items not essential for working were carefully monitored for wasting electricity.

A 27 pin diesel train line receptacle was installed together with a set of indicating lights allowing monitoring the throttle notch position on the diesel electric locomotive as well as the wheel slip indications. Train air brake gauges were also fitted. Dynamometer car 69 had the hydraulic coupler installed at the blind end of the car while the working area was at the observation end. This configuration meant that triangular mirrors were required on each side to allow observation of the signals and other wayside items during testing. An automotive spotlight was installed to help find the mile boards at night. One truck under the observation end was roller bearings while the blind end truck was friction journal bearings. On occasion oiling of the front truck was missed



The revised instrumentation panel on car 69. The hydraulic measuring cylinder was replaced by a rod equipped with strain gauges requiring a revised instrumentation panel. The two vacuum tube electronic panels, which magnified the small changes in resistance from the rod, are at the extreme right where the hydraulic gauges were previously. The two hydraulic gauges were replaced by the two large meter meters on the right. Above them is the wind speed meter and below is the Veeder Root distance counter with its mechanical drive. The two chart recorders are for speed on the left and for drawbar pull/push on the right, both being driven on a distance base. Above are the trainline air brake gauge and the wind speed direction indicator. In the middle are the ambient temperature gauge, the speedometer, and the clock. The five diesel trainline indicator lights are below the drawbar chart recorder. Trainline indicating lights for alarm and dynamic braking are below the speed chart recorder with the trainline chart between the indicator light groups. James A. Brown

since the car man inspecting the train assumed both trucks were the same.

Replacement of the hydraulic piston by a strain gauged rod measurement was done in the early 60's. The rod was calibrated at the National Research Council in Ottawa and required electronic amplifiers to supply a measurement voltage to the Esterline Angus recorders. A rotary machine converted the battery voltage on the car to alternating current for the tube amplifiers but was an additional load on the overworked batteries. The Esterline Angus recorders had a pen tip requiring delicacy in filling the tip with ink to assure the correct balance for a good record.

Perhaps one of the most unusual test done by car 69 was as with it as the only car behind GR25 4000 doing acceleration tests in Parsley Yard in Montreal for W. Sargeant of the Transportation Department. This was part of the planning for the first GO Transit service to replace the CN commuter service in Toronto. Unfortunately the excitation designed for freight service was too sluggish and the service was planned using modified GM GP40 locomotives instead. Other tests like a push-pull test on the St Hyacinthe commuter train using GR12 locomotives made for some variation from the usual testing on freight trains.



A small test train. Dynamometer car 69 represents the only load behind the GP35 unit which was being tested for train acceleration for possible use on the new GO Transit service. The train is sitting on the Montreal Yard diesel shop lead track waiting to go to Parsley Yard. Barry Biglow

C&O units were borrowed to verify if GP40-2 units were sufficiently improved that CN should order this model after the unhappy experience with traction motors on the original CN 4002/17 class. The author is monitoring wheel slip during a test. Barry Biglow





Car 69 is marshalled into an Ontario Northland train behind a pair of ONR 1500 series diesels on January 28, 1964. James A. Brown

Car 69 finally met its end at the age of 99 years doing freight testing on the Lac St Jean subdivision near Chambord in 1969 when the locomotives turned over taking the dynamometer car with them and dragging the car in the ditch on its side. The center sill of the car was broken and this fault led to the car being scrapped.

Plans for a new dynamometer car under the number 2920 exist in the author's files. This was probably

the number of passenger car – in this case a heavyweight colonist car built in 1928. Harkening back to the Canadian Northern car 100, a cupola was included in the plans. While the details are interesting, the car was never converted. Instead a replacement dynamometer car numbered 15100 was created from the bedroom-buffet-lounge-observation car “Atlantic” in 1975, but that is another story.



The last CN dynamometer car 15100 (later renumbered to second 69) photographed at Sioux Lookout being returned to Montreal on the Super Continental on a cold snowy February night in C1981. Barry Biglow



BUSINESS CAR

July - August 2014

By John Godfrey

Edited by David Gawley

Mail Received



CRHA Archives, David Jenkins donation

We received many compliments about the May - June 'Coal Haulers' issue of Canadian Rail. Two members have submitted additional information regarding the Old Sydney Collieries roster. Thanks go to Ron Blumer of Novi, Michigan and Allen Copeland who communicated to us via Don McQueen. Rather than list the additions / corrections, we are re-issuing the roster in its entirety.

Old Sydney Collieries Roster (1950 to 1961)

Road No.	Type	Builder	Serial	Yr Built	Notes
17	2-6-0	Schnectedy	27301	1903	Note 1
18	0-6-0	MLW	50017	1911	Note 2
19	0-6-0	Davenport	2031	1925	Note 3
25	2-4-0	Baldwin	17781	1900	Note 4
26	2-4-0	Baldwin	23937	1904	Note 5
27	2-4-0	Baldwin	23954	1904	Note 6
30	0-8-0	Alco - Brooks	67551	1927	Note 7
31	0-8-0	Alco - Brooks	67553	1927	Note 8
32	0-8-0	Alco - Brooks	67550	1927	Note 9
33	0-8-0	Lima	7188	1926	Note 10
300	RS-1	Alco	79232	1951	See Devco 300

Notes:

- 1 Ex NS Coal 2-6-4T 10, OSL, Four Star 17; was preserved in Glace Bay but scrapped after 1996
- 2 EX NS Coal 14, Four Star Colliery 14; Disposition unknown
- 3 Ex James H. Corbett, Welland 2031, Dominion Iron & Steel 115; Scrapped 1959
- 4 Ex Sydney Mines 2-4-0T; Preserved at Exporail since 1961
- 5 Ex NS Steel & Coal 11, ex Sydney Mines 26, Scrapped
- 6 Ex NS Steel & Coal 12 2-4-4T, OSC 27, then to S&L 27; Scrapped
- 7 Ex Detroit & Toledo Shore Line 113 OSC in 1952; Disposition unknown
- 8 Ex Detroit & Toledo Shore Line 115 OSC in 1953; Disposition unknown
- 9 Ex Detroit & Toledo Shore Line 112 OSC in 1954; Disposition unknown
- 10 Ex Kentucky & Indiana Terminal 27, via 2 other roads to OSC in 1956, Disposition unknown



Paul Crozier Smith

Paul Crozier Smith writes: In the May - June 2014 Canadian Rail on page 138 and in the Devco roster on page 140, the author makes no mention that the two RS-27s owned by the company also worked for a short period on the British Columbia Railway. I am attaching a photo of MLW Alco RS-27 676 taken at Horseshoe Bay, BC on February 16, 1974.



Better Times for VIA's 'Ocean'?

The federal Transport Minister Lisa Riatt and New Brunswick Premier David Alward announced on May 12th that \$10.2 million will be invested to repair a 44 mile section of Canadian National's Newcastle Subdivision between Nelson Junction and Nepisiquit Junction in New Brunswick used by VIA's Montreal-Halifax Ocean.

CN previously said it would abandon the track between Bathurst and Miramichi by early July if a short line operator was not found or if maintenance funding was not forthcoming. VIA said it would not buy or maintain the section. If the trackage were abandoned it could have meant the end of the Ocean service or the rerouting of the train over CN's freight-only route via Edmundston, N.B.

The plan still must be ratified by the boards of directors of VIA and CN.

As if to mark this turn of events, VIA's newly installed president, Yves Desjardins-Siciliano invited representatives of the communities and MPs along the route of the Ocean to ride with him from Montreal on July 2nd, the 110th anniversary of the train which is the oldest name train still operating in Canada. During the trip, VIA's president used the opportunity to discuss ways to better promote the service, increase ridership and respond to the needs of the people in the lower St Lawrence and Maritime provinces. A ceremony was held in Halifax the following day where about 100 dignitaries participated.

The Intercolonial Railway of Canada inaugurated the Ocean Limited on July 3, 1904 as a summer only express train to supplement the Maritime Express, the existing Montreal-Halifax train. The Ocean Limited: A Centennial Celebration was published by your co-editor Doug Smith in 2004 and is available from the Exporail boutique.

This is the second time recently that Raitt has committed federal funding to save a rail passenger route

in Canada. On April 14th, Raitt announced the federal government would reinstate a \$2.2 million annual subsidy to Canadian National Railway until March 31, 2015, enabling the continued operation of the tri-weekly passenger train on the former Algoma Central route between Sault Ste. Marie and Hearst, Ontario.

A4 Dominion of Canada returns to Exporail, the Canadian Railway Museum

On April 30, 2014, A4 Dominion of Canada started its long journey home to Exporail from the National Railway Museum at Shildon. It went by truck to Liverpool, then by ship, the Atlantic Concert, to Halifax, then by CN rails to Montreal and finally by CPR rails to Exporail, arriving after a five week trip on June 3, 2014.

During the highly successful Mallard 75 exhibition, which ran at the National Railway Museum at York and Shildon from July 3, 2013 to February 23, 2014, the newly cosmetically restored A4 Dominion of Canada was seen by 755,000 visitors. This was an all time record for an exhibition at the NRM.

The locomotive and tender were wrapped in red tarpaulins for the trip to Canada. They were unloaded at Exporail from the two special rail cars carrying them using the rail loading ramp. This was quickly carried out by volunteers at Exporail under the supervision of Andrew Goodman, President of Moveright International, which



Exporail's unloading and switching crew welcome the Dominion of Canada back onto Canadian rails. This shot was taken outside Exporail's Barrington station. Stephen Cheasley

L'équipe, vouée au déchargement et à l'aiguillage, accueille la Dominion of Canada, de retour au pays. Photo prise près de la gare Barrington au musée Exporail. Stephen Cheasley



The 'Ocean' on March 13, 2014, David Morris

L'«Océan», le 13 mars 2014. David Morris

was responsible for the whole move. The unloading process was completed by 3 PM on June 4, 2014.

On Saturday, June 21, 2014, A4 Dominion of Canada entered the Angus Pavilion at Exporail and took its place beside CPR Royal Hudson, 2850, ending its 21 month visit to the United Kingdom.

CN donates locomotive to Exporail

Exporail, the Canadian Railway Museum, is pleased to announce the arrival of diesel-electric locomotive CN 7300. Exporail thanks its loyal partner, CN, for this generous donation that will fill several needs. This fully functional yard engine will be used to move rolling stock to prepare new exhibitions, present railroad demonstrations and pull the passenger train that offers visitors a fun ride on Sunday afternoons.

Since its opening, the Museum has acquired a number of historic pieces of equipment from CN for its collection of national interest. CN regularly supports the Museum's efforts to preserve, enhance and promote Canada's railway heritage.

Exporail's Executive Director, Marie-Claude Reid, is delighted with CN's latest contribution as it provides a reliable replacement for its old CN 30 locomotive, which finally ended its career after 30 years of loyal service to the Museum.

Exporail's latest acquisition Canadian National 7300 is a Canadian-built General Motors SW1200RS diesel locomotive. The unit was built at General Motors Diesel's London, Ontario plant in 1960 as CNR # 1382. The SW1200RS was an exclusively Canadian model road switcher intended for branchline and light mainline service. Although its carbody resembled the classic switcher locomotive, the SW1200RS had number boards both front and rear as well as Flexicoil, instead of switcher, trucks. Multiple unit controls and 65 mph gearing further added to the locomotive's flexibility.

The SW1200RS was a versatile locomotive capable of pulling freight trains, peddling freight cars to local industries and pinch-hitting as a yard locomotive. Between 1956 and 1960 Canadian National purchased 192 examples of the model. Always popular with crews for their good visibility and pulling power, in 1987 CN remanufactured 18 units at its Point St. Charles shop in Montreal. Becoming 7300 series units, the rebuilt class was led by #7300. Yard and transfer service were the intended use of the new group.

At Exporail the 7300 will perform switching and other operating duties at the museum. It arrived fully operational and in excellent condition both mechanically and electrically. Canadian National has given Exporail a valuable operating tool. It will be put to good use.

Ms. Reid is also very pleased that CN has confirmed it is providing substantial financial support for a planned railway safety-themed exhibition being set up in conjunction with Operation Lifesaver. The exhibition will cover a wide range of crucial safety issues, such as vigilance near railway tracks, technological innovation, and changes in safety practices and regulations.

Stephen Covey, CN's Chief Security Officer and Police Chief, said: "Operation Lifesaver is proud to join forces with Exporail to promote railway safety. This exhibition, which will be seen by many children and their parents, will give them the tools and knowledge they need to make prudent and smart decisions when they are near a railway track or other railway facility." (Exporail press release and Ken Goslett)

Website: www.exporail.org

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In its earlier life, CN 7300 was CNR 1382 and spent much of its time in western Canada; here it is hard at work between Ingelow and Justice, Manitoba on September 13, 1965. James A. Brown

Identifiée CNR 1382 à ses débuts, la locomotive CN 7300 a vécu sa carrière principalement dans l'ouest du pays; ici, en ce 13 septembre 1965, elle doit fournir de grands efforts entre Ingelow et Justice au Manitoba. James A. Brown



Newly arrived CN 7300 rides the Exporail turntable, its first assignment was handling the unloading of the Dominion of Canada. Stephen Cheasley

Récemment arrivée, la CN 7300 a droit à un tour de manège sur le pont tournant d'Exporail. Sa première tâche fut de manoeuvrer le déchargement de la Dominion of Canada. Stephen Cheasley

Le CN fait don d'une locomotive à Exporail

Exporail, le Musée ferroviaire canadien est heureux d'annoncer l'arrivée de la locomotive diesel-électrique CN 7300 et de remercier son fidèle partenaire, le CN, pour ce don qui comblera plusieurs besoins. Cette locomotive de manoeuvre, totalement fonctionnelle, permettra notamment d'effectuer des déplacements de matériel roulant lors de la préparation de nouvelles expositions, de présenter des démonstrations ferroviaires et, de tracter le train de passagers qui offre aux visiteurs une belle balade les dimanches après-midi.

Depuis son ouverture, le Musée a fait l'acquisition, auprès du CN, de nombreux véhicules historiques de sa collection d'intérêt national. Le CN appuie ainsi régulièrement les actions de préservation, de mise en valeur et de diffusion du patrimoine ferroviaire.

La directrice générale d'Exporail, Marie-Claude Reid, est enchantée de cette contribution du CN qui assure à l'institution un équipement fiable pour remplacer leur ancienne locomotive CN 30, dont la longue carrière au musée – plus de trente ans de loyaux services – s'est finalement achevée.

Conçue pour le service sur les voies secondaires et les manoeuvres en cour de triage, la locomotive CN 7300 a été construite à London, Ontario, en 1960, par la filiale ferroviaire de General Motors. Reconstituée en 1987 aux ateliers du CN de Pointe St-Charles, elle a été retirée du service puis totalement révisée en 2014. De

type SW1200 RSm (classe GS-412a pour le CN), cette locomotive est équipée de deux bogies à double essieux. Elle est dotée d'un moteur développant 1200 chevaux vapeurs, une puissance plus que suffisante pour le service sur les lignes secondaires et le triage. Cette locomotive de manoeuvre, souple et efficace, est très représentative des nombreuses machines destinées aux lignes secondaires utilisées par le CN à travers l'ensemble de son réseau canadien.

Madame Reid est également ravie de la confirmation, par le CN, d'un soutien financier important pour la réalisation d'un projet d'exposition traitant de la sécurité ferroviaire, en collaboration avec Opération Gareautrain. De la vigilance à proximité des voies ferrées, jusqu'à l'innovation technologique, en passant par l'évolution des savoir-faire et de la réglementation, les sujets qui nous interpellent sont nombreux.

Stephen Covey, chef de la Police et de la sécurité du CN, a déclaré : « Opération GareAuTrain est fière de s'associer à Exporail afin de promouvoir la sécurité ferroviaire. Cette exposition rejoindra de nombreux enfants, ainsi que leurs parents, et leur donnera les outils et les connaissances nécessaires afin de prendre des décisions prudentes et judicieuses lorsqu'ils se trouveront près d'une voie ferrée ou autres installations ferroviaires. »

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Montreal Golden Chariot 2 being restored at Seashore

Montreal Golden Chariot Observation Car No. 2 has been one of the most popular cars with Seashore visitors since it arrived in Maine 50 years ago. However, recently the car's century of service had caught up with both mechanical and bodywork issues need attention. Fortunately, a relatively new Seashore member, Richard Rubin, who has childhood memories of riding the Observation cars in Montreal in the 1950s, provided the financial incentive to attack these problems. He pledged US \$25,000 as a 2-for-1 challenge to fund the repairs. Members responded generously, and with some other funds previously donated for the car, the needed funding was on hand allowing work to begin in earnest in 2013.

The overhaul of two of the car's motors by contractor A.C. Electric of Bangor, Maine included vacuum-impregnation treatment of the internal components to prevent future electrical shorts. The second pair of motors were to receive the same treatment after this summer's festivities. As part of the overhaul, the car's seats were removed, repaired, and repainted, and wood decking replaced. The ornate striping, which the car carried in its later years of service in Montreal, has been replicated.

The car was made ready and was a star attraction on July 5th when Seashore celebrated the 75th anniversary of its founding. Many consider this to be the start of volunteer rail preservation movement. It was at



Montreal 'Golden Chariot' 2 makes its returns to service after a major restoration at the Seashore Trolley Museum at Kennebunkport, Maine on Saturday, July 5, 2014. Jim Schantz

the end of our annual trolley parade in which over 30 cars were operated for the large audience with a professional narration.

Attending and addressing the crowd were Aaron Annable, the Acting Consul General from the Canadian Consulate in Boston and Marie-Claude Francoeur, the Province of Quebec's Delegate to New England. The Museum welcomes its Canadian friends to come to Kennebunkport to ride this special car again. (Jim Schantz)

BACK COVER TOP: Canadian Pacific railway's 4-6-4 2816 'The Empress' and train are eastbound over the Mud lake trestle on June 10, 2004 while on an eastern tour of Ontario and Quebec. Robert Heathorn

HAUT DE LA PAGE COUVERTURE ARRIÈRE: La locomotive à vapeur de type 4-6-4 2816 du CP, "The Empress", amène son train vers l'est sur le pont du Lac Mud, le 10 juin 2004. Elle faisait alors une tournée du Québec et de l'Ontario. Robert Heathorn

BACK COVER BOTTOM: On June 21, 2014 the Dominion of Canada was been put on display in the Grand Gallery next to the 2850 Royal Hudson; its third cylinder is visible from the viewing pit under the locomotive. Stephen Cheasley

BAS DE LA COUVERTURE ARRIÈRE: La locomotive Pacific A-6 a été installée au Musée Exporail le 21 juin 2014. Dans le hall principal, les visiteurs peuvent voir le troisième cylindre et la mécanique en passant par le puits d'examen. Stephen Cheasley

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