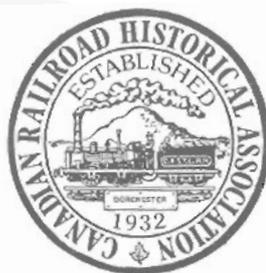


Canadian Rail

THE MAGAZINE OF CANADA'S RAILWAY HISTORY

No. 439



MARCH - APRIL 1994



PUBLISHED BI-MONTHLY BY THE CANADIAN RAILROAD HISTORICAL ASSOCIATION

PUBLIE TOUS LES DEUX MOIS PAR L'ASSOCIATION CANADIENNE D'HISTOIRE FERROVIAIRE



CANADIAN RAIL

ISSN 0008-4875



PUBLISHED BI-MONTHLY BY THE CANADIAN RAILROAD HISTORICAL ASSOCIATION

TABLE OF CONTENTS

FOREIGN LOCOMOTIVES & POWER UNITS IN BRITISH COLUMBIA..	MERVYN T. GREEN.....	43
THE CNR ROUNDHOUSE AT JASPER, ALBERTA.....	DAVID SMYTH.....	59
THE ROUNDHOUSE BELOW THE MOUNTAIN.....	HOWARD O'HAGAN.....	66
WORKING ON THE RAILWAY (LIFE OF WILLIAM DOIG ROBB).....	COLIN G. GROFF.....	68
RAIL CANADA DECISIONS.....	DOUGLAS N.W. SMITH.....	72
CANADIAN RAILWAY TROOPS - A FOLLOW-UP.....		73
A BUSY FALL AND WINTER AT THE CANADIAN RAILWAY MUSEUM	A.S. WALBRIDGE.....	78
IN MEMORIAM EDMUND LAMBERT.....		79

FRONT COVER. Back in the days of steam the roundhouse was one of the most important structures on the railway system. In this impressive view, taken in 1953, we see CNR Mountain-type locomotive 6005 on the turntable of the roundhouse at Jasper, Alberta. Note the magnificent sight of the Rocky Mountains in the background, also the impressive water tank and chimney

Provincial Archives of Alberta, photo No. PA-62519, courtesy of Lon Marsh.

For your membership in the CRHA, which includes a subscription to Canadian Rail, write to:

CRHA, 120 Rue St-Pierre, St. Constant, Que. J5A 2G9

Membership Dues for 1994:

In Canada: \$31 (including GST).

Outside Canada: \$29.50 in U.S. funds.

Canadian Rail is continually in need of news, stories, historical data, photos, maps and other material. Please send all contributions to the editor: Fred F. Angus, 3021 Trafalgar Ave. Montreal, P.Q. H3Y 1H3. No payment can be made for contributions, but the contributor will be given credit for material submitted. Material will be returned to the contributor if requested. Remember "Knowledge is of little value unless it is shared with others".

As part of its activities, the CRHA operates the Canadian Railway Museum at Delson / St. Constant, Que. which is about 14 miles (23 Km.) from downtown Montreal. It is open from late May to early October (daily until Labour Day). Members, and their immediate families, are admitted free of charge.

THE GOAL OF THE ASSOCIATION IS THE COLLECTION, PRESERVATION AND DISSEMINATION OF ITEMS RELATING TO THE HISTORY OF CANADIAN RAILWAYS

The CRHA has a number of local divisions across the country. Many hold regular meetings and issue newsletters. Further information may be obtained by writing to the division.

NEW BRUNSWICK DIVISION
P.O. Box 1162
Saint John N.B. E2L 4G7

ST LAWRENCE VALLEY DIVISION
P.O. Box 22, Station "B"
Montreal P.Q. H3B 3J5

RIDEAU VALLEY DIVISION
P.O. Box 962
Smith's Falls, Ont. K7A 5A5

KINGSTON DIVISION
P.O. Box 1714
Kingston, Ont. K7L 5V6

TORONTO & YORK DIVISION
P.O. Box 5849, Terminal "A"
Toronto, Ont. M5W 1P3

NIAGARA DIVISION
P.O. Box 593
St. Catharines, Ont. L2R 6W6

CALGARY & SOUTH WESTERN DIVISION
c/o Ian Mackenzie, Secretary
1912 Westmount Road N.W.
Calgary, Alberta T2N 3M7

SELKIRK DIVISION
P.O. Box 39
Revelstoke, B.C. V0E 2S0

CROWNEST & KETTLE VALLEY DIVISION
P.O. Box 400
Cranbrook, B.C. V1C 4H9

NELSON ELECTRIC TRAMWAY SOCIETY
123 View Street
Nelson, B.C. V1L 2V8

PRINCE GEORGE-NECHAKO-FRASER DIVISION
P.O. Box 2408
Prince George, B.C. V2N 2S6

PACIFIC COAST DIVISION
P.O. Box 1006, Station "A"
Vancouver, B.C. V6C 2P1

ESQUIMALT AND NANAIMO DIVISION
1148 Balmoral Road
Victoria, B.C. V8T 1B1

EDITOR: Fred F. Angus

CO-EDITOR: Douglas N.W. Smith

ASSOCIATE EDITOR (Motive Power)
Hugues W. Bonin

DISTRIBUTION: Gerard Frechette

LAYOUT: Fred F. Angus

Printing: Procel Printing

DIRECTORS OF THE C.R.H.A.

PRESIDENT: Walter J. Bedbrook

VICE PRES.: Charles De Jean

VICE PRES.: David W. Johnson

TREASURER: Robert Carlson

SECRETARY: Bernard Martin

Frederick F. Angus

Alan C. Blackburn

James Bouchard

Gerard Frechette

Mervyn T. Green

J. Christopher Kyle

William Le Surf

Robert V.V. Nicholls

Ernest Ottewell

Andrew W. Panko

Douglas N.W. Smith

William Thomson

Richard Viberg

A. Stephen Walbridge

Michael Westren

DIVISION LIASON REPRESENTATIVES

WESTERN

D. Walter Edgar

4515 Dalhart Road N.W.

Calgary, AB T3A 1B9

Phone: (403)-286-2189

CENTRAL

Christopher Kyle

49 - 77 Wellesley St. East

Toronto, ON M4Y 1H7

Phone: (416)-962-1880

MARITIME

Richard E. Viberg

172 Main St.

Hillsborough, NB E0A 1X0

Phone: (506)-734-3467

Foreign Locomotives and Power Units in British Columbia

By Mervyn T. "Mike" Green

INTRODUCTION

During the research for my book on all the industrial locomotives ever used in British Columbia and the Yukon Territory since 1863, I became aware that there was a wide variety of foreign-built locomotives (using steam, compressed air, electric and diesel traction) and power units used in B.C. over the last 130 years. I am referring here only to items built in construction plants located outside of North America, for although units built in various U.S.A. loco plants are technically 'foreign', many copies of these American types were also produced in Canadian plants (mostly in Ontario and Quebec). I am therefore not including, for example, any loco produced by General Electric, nor General Motors Diesel Division (GMD)/ Electro-Motive Division (EMD), both of General Motors, nor Plymouth, nor Porter, nor Whitcomb, to mention only a few.

The foreign units described below have worked in many different industries in B.C., but the greatest number were employed in some form of mining. There were also a few which never turned a wheel in revenue service; these have included some units which were in transit to another country or Canadian province, or which were displayed in B.C. as a builder's sample or as part of a major exhibition such as Expo '86.

Apart from Expo '86, foreign locomotives used in B.C. have been imported from at least fourteen different foreign builders, located in five different European countries and one Asian country. In alphabetical order, the European units were built in Austria, England, Germany, Scotland and Sweden, while there has been but one group of units from Asia, all of which were built in Japan. The country which has provided the largest variety of locos over the years has been England, which has exported units for more than 150 years. The numbers carried on the builder's plates which were assigned and attached at the times of construction are given below (wherever known), after the abbreviation c#, for construction number.

AUSTRIA

The Austrian locomotive builders are represented in B.C. by two types of mining unit, all built by the Jenbacher Werke (JW) in Jenbach, a small town a few kilometres east of Innsbruck. The construction plant is located on the north side of the Austrian Federal Railways' (ÖBB) main line which goes east to Vienna. JW has built diesel industrial units in any gauge from one metre up, but it has also built many standard-gauge locos for ÖBB, including the

current standard diesel switchers of classes 2043 (built 1964-74, weighing 68 tons, supported on two 4-wheel trucks and producing 1475 hp), 2060 (built 1954-60, 27 tons, 200 hp on 4 wheels), 2062 (built 1958-66, 32 tons 400 hp on 4 wheels), and 2068 (built 1990-93, 1100 hp on two 4-wheel trucks with hydraulic drive).

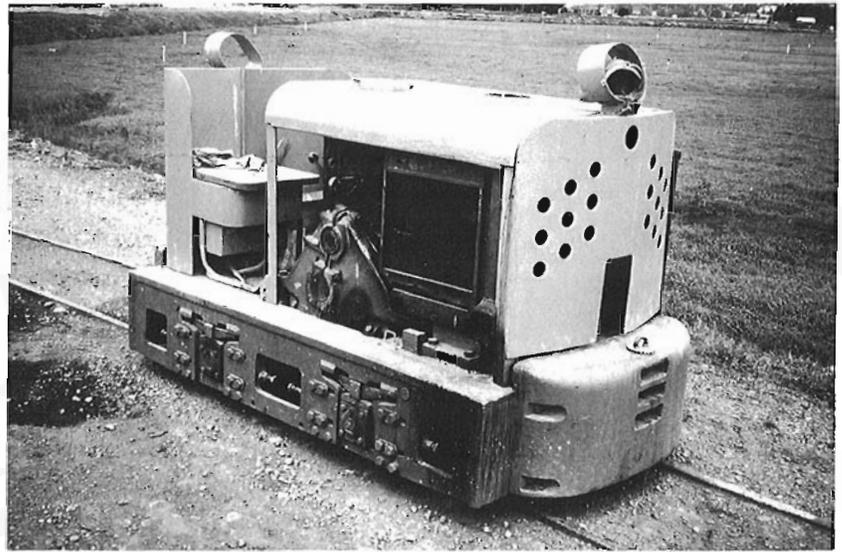
The seven 4-wheel diesel-mechanical units in B.C. were all built in the mid 1950s, for Teck Corporation's operations at the ex-Highland Bell Silver Mine, located inside Wallace Mountain at Beavertell, about 90 km. south of Kelowna B.C. The locos are all 24" gauge 'mine mules' of two sizes: #1 to #3 weighing 10 tons each and #4 to #7 weighing 20 tons, carrying c#s 1181-87 (in numerical order, on units 1-7). Each has a distinctive 'JW' logo (with the J above the W) cast into its wheel axle bearings. The locos were in use at Beavertell until 1989, when Teck closed down the mine. All the equipment used there (including some other 24" gauge battery-electric units, whose maker is not known) was 'moth-balled' and stored, pending a decision on the future of the whole mining operation during the depressed state of the international metals market in the late 1980s.

Later that year, two of the small JW units (#2 and #3) were sold to the Nelson Machinery Co. (Nelmaco), which is located on a sandy bench above the Thompson River at Savona B.C. This site is about 40 km. west of Kamloops, adjacent to the CPR main line at mile 25.2 of the Thompson Subdivision and just north of (and below) the Trans-Canada Highway, #1. The vast storage yard there stretches over several rolling hectares of semi-desert. From about 1960 to 1988, Nelmaco also had a small storage yard at #1255 Welch Avenue, North Vancouver (just west of the BCR passenger station), but since 1988 all of its business of servicing, salvaging, rebuilding and scrapping of industrial locos has been concentrated at Savona. The climate here is so dry that units can be left out of doors without covers, with little or no damage or deterioration from rusting of metal surfaces. JW #3 is still there, awaiting a 'call to service'.

Units #2 was sold (1991) to the Savage brothers of #16300 Cambie Road, Richmond B.C. (about 25 km. southeast of Vancouver), where it is now located, about 0.5 km. south of the CNR Mile 7 Yard of the Greater Vancouver Terminals. Many readers know of the 'Maine Two Footers' on the U.S. East Coast, which were once used to harvest cranberries, and which operated until 1992 on the Edaville Railroad at South Carver Massachusetts. This equipment has been moved to Portland, Maine for a new Maine Narrow Gauge Museum. Few know that similar narrow-gauge lines still exist

today on the West Coast. There are over ten cranberry rail operations on the Pacific Coast at Grayland Washington and one cranberry railway in Richmond B.C. - the latter is a unique operation in Canada!

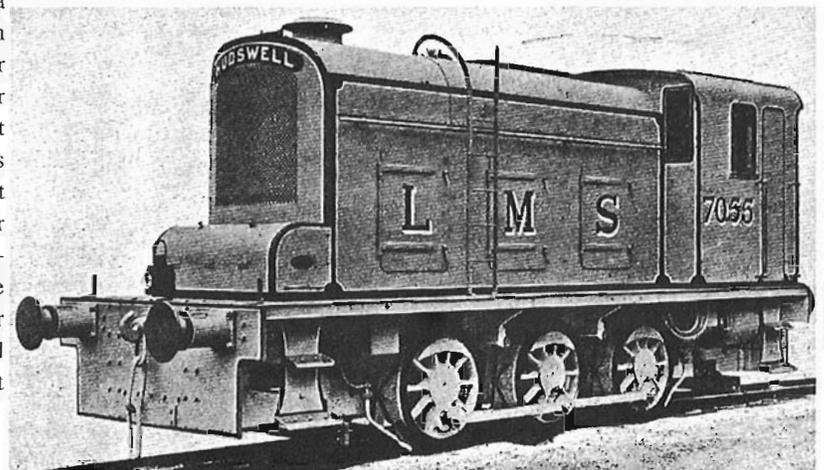
Since 1991 the Savages have used the small Austrian unit each October and November on their 24" gauge Columbia Cranberries Railway (CC) during their annual cranberry harvesting season. They first built the rail trackage in 1982 and have extended it twice since then, first further northward and then eastward, to a current total length of about 5 km. After experiments with various methods of getting the ripe cranberries out of the flooded peat fields in which the fruit grows and onto road vehicles for transportation to the nearby cranberry packing plant (which have included power vacuums, helicopters, and road trucks with trailers), the Savages have settled on a rail-based method. They have found that a combination of man-operated rakes and booms to collect the ripe berries in the flooded fields, then transfer of the fruit onto a gas-powered conveyor belt and into large wooden containers carried on narrow-gauge railway flat cars, then transfer of the containers by forklift truck onto a road truck, to be carried to the Ocean Spray Cannery about one km. away, was the best combination of methods. The weight of the picked berries is well distributed over the surface of the earthen levees along which run the rail tracks; this has minimised surface damage and compression of the field levees and lessened costly rebuilding. Here, #2 works with three other varied diesel units, all obtained from Nelmaco. The chief engineer of this motley diesel collection is an engineer for the B.C. Ferries coastal fleet (based a short distance to the south on the Fraser River) - an occupation that is a vast difference in size and power from his rail charges! He is also responsible for maintaining a steam-powered 4-4-0 loco, #1865, built by the Crown Metal Products of Wyano PA., which is used to haul three steel passenger cars to give rides at Savage family picnics and to Lions Club outings for needy children. The Savages also own a 1915 Sawyer-Massey steam traction engine, which is fired up on rare occasions. Meanwhile, unit #3 is still awaiting a buyer at Savona B.C., while the rest of the JW group (#1 and #4-7) remain in storage, sealed inside the mine at Beaverdell B.C.



Columbia Cranberries' Austrian-built Jenbacherwerke 24" gauge 4-wheel 10-ton unit #2 about to work on the peat fields in Richmond B.C. in 1991. It is one of a group of three small units built in Austria for the Beaverdell Mine in the 1950s. (Author)

(HUNS), also of Leeds (Yorks); Manning Wardle & Co. (MW), also of Leeds; and Ruston & Hornsby Ltd. (R&H) of Lincoln, in East Anglia.

The Aveling & Porter company is best known for its stream road traction engines and road rollers, many hundreds of which were built from the 1850s up to the years after World War II. The first two A&P units in B.C. were built in 1860 and are



The British London Midland and Scottish Railway Co. standard-gauge 0-6-0 diesel-hydraulic switcher #7056 is the same type as the two Hudswell Clarke units built in 1949. They were acquired from Samuel Williams of Dagenham Docks in April 1960. #21 and #22 spent the next 13 and 14 years respectively working for Vancouver Wharves in North Vancouver, B.C. (Author's Collection)

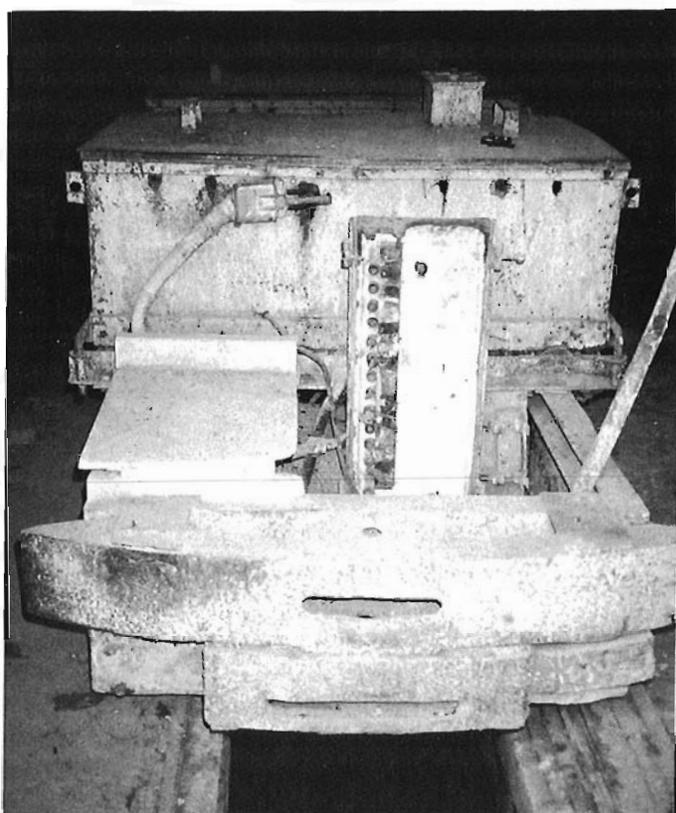
ENGLAND

The English units were built by six different companies: Aveling & Porter Ltd. (A&P) of Rochester (Kent); Electromobile Ltd. (EL) of an unknown source; Hudswell Clarke & Co. Ltd. (HC) of the Railway Foundry, Leeds (Yorkshire); Hunslet Engine Co.

believed to be those used by Rogers Logging on the very first steam logging operations in B.C., hauling logs from 1871 to 1895 or so for a few kilometres northwest over a wood pole track from the inland area being cleared in Kitsilano (western Vancouver) to Jerry's Cove, on English Bay (now, Jericho Beach, but first named after Jeremiah Rogers, for the Biblical 'Jeremiah' came from 'Jericho'). The route today is occupied by Valley Drive and runs northwest into English Bay. There, the logs were transferred to barges and sailed east along the coast to sawmills located on Burrard Inlet and around False Creek. Around 1871, logger Jeremiah Rogers bought two second-hand 4-wheel steam tractors. They had run on four road wheels apiece, and had been operated by the Barnard Freight Line along the Cariboo Highway which had been built between 1861 and 1865 and ran from Yale to Barkerville via Yale, Spuzzum, Lytton, Cook's Ferry, Clinton and Soda Creek. The road tractors had run since about 1865, having come second-hand to B.C. from England. Later, with their road wheels replaced by four new double-flanged steel wheels apiece, they operated for Rogers on wood pole rails of unknown gauge (cut from the surrounding forest), until about 1895. Rogers also had a rail logging operation which ran north down from Little Mountain (via today's Swangard Stadium) to a mill on False Creek. When rail logging operations ceased, both A&P units were scrapped, probably on site, somewhere in the Kitsilano or False Creek areas, about 1895.

The second two A&P units were used on the Departure Bay Coal Co. (DBCC) operations in Nanaimo B.C., on the eastern shore of Vancouver Island. They were both 0-4-0s, built in July 1875 as 36" gauge 6 horsepower steam road tractors, with c#s 1109 and 1110 (DBCC #1 and #2). The Nanaimo company bought them from Mr. W. Bird, a dealer in Vancouver, who imported them from England in 1875. The DBCC had them both converted to 42" gauge flanged wheels and a geared drive in Nanaimo, where they worked for the next 14 years, pulling wooden tubs of coal from the mines to be dumped into coastal lighters. The mines became part of the Dunsmuir & Diggle Coal Co. (D&DCC) of Nanaimo in 1889 and the two locos were part of the deal. They did not last long with their new masters, however, for they were the 'odd men out'. D&DCC preferred a roster of 6-coupled tank engines, all built between 1876 and 1888 by the Baldwin Locomotive Works of Philadelphia Pennsylvania - both the English engines were scrapped in Nanaimo soon after their purchase (1889/90).

The 'Electromotive limited' (sic) locomotive is a unique item. It is a 4-wheel 30" gauge battery-electric 'mine mule' weighing 3 tons. Power from the batteries (located in two large boxes, one at each end of the loco) feeds a small electric motor, which drives the axles through a series of steel triple chain links. Believed to have been built in England in 1920 by General Electric (as its type R27M) for the Clayburn Brick & Tile Works of Abbotsford B.C. as its #5, it became Clayburn Industries #5 in 1928, and spent the rest of its life hauling 4-wheel wooden wagons of fireclay out of the mine adit on the southwestern flank of Sumas Mountain over a 200 metre line to a reload point at Kilgard, east



The British-built 30" gauge four-wheel battery-electric 'Electromobile Limited' unit used by Clayburn industries (near Abbotsford B.C.) was stored in its battery-charging shed in Kilgard for 25 years after its withdrawal from service in 1968. It suffered from vandalism while sitting inside its dark little 'home'; seen here in 1992. (Author)

of Abbotsford. When operations ceased in 1968, the loco was stored in a small battery-recharging shed at Kilgard. Unfortunately, the unit was vandalised at least once, so that its maker's plates have been removed from both ends of its frame. Attempts to identify it from sources in Canada, U.S.A. and Britain have so far not produced any definite data, apart from its individual controller #216203. In March 1993, CI donated #5 to the Sumas-Matsqui-Abbotsford Museum Society, which plans a cosmetic restoration. In July 1993, the loco was removed to a new site, at 4315 Wright Street, in Clayburn Village (north of Abbotsford), behind the Clayburn Community Centre, where it resides under a lean-to cover, at the rear of a separate shed.

Hudswell Clarke was one of the earliest British exporters of steam locomotives, supplying many units to British colonies and other overseas buyers from its Leeds Railway Foundry from 1870 on. The first two HC units did not arrive in B.C. until 90 years later; they were standard-gauge 6-wheel locos and a lot heavier at 30 tons and more powerful (producing 275 hp) than most industrial locos. Based upon a 'shunter' design for the London Midland & Scottish Railway, these two were built in 1949 with diesel-



This 6-wheel Huwood Hudswell 36" gauge diesel mine loco is now displayed (1992) at the Fernie East, B.C. Infocentre with a 'train' of four 4-wheel wood-sided coal cars. (Lorne Nicklason)



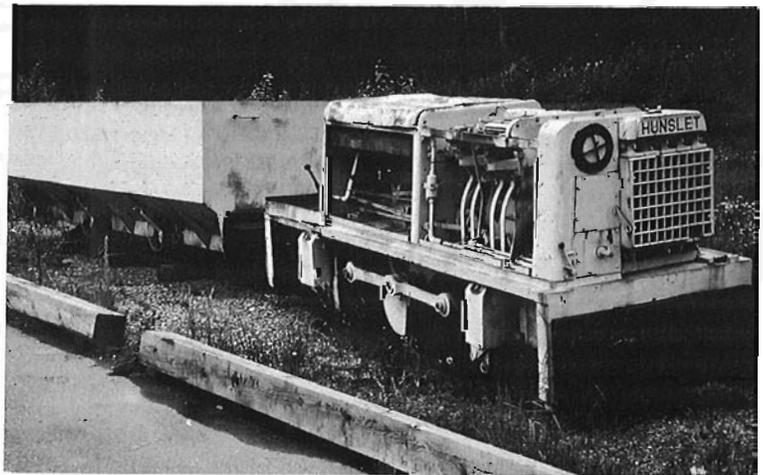
A close-up of the brass builder's plate on DM 641 at Fernie, B.C. (Lorne Nicklason).

hydraulic power plants (c#s D701-2) for Samuel Williams Ltd. and were used to switch ('shunt') the Dagenham Docks (near the Ford Motor Co.'s main British erection plant) on the Thames in Essex, east of London. They arrived in North Vancouver in May 1960, were numbered #21 and #22 and were put to work at Vancouver Wharves' (VW) operation there, switching hopper cars and gondola cars of sulphur, coal and molybdenum, en route to Asian customers. They were the first diesel-hydraulic locos in B.C. and worked for almost 14 years, until they were supplanted by larger, heavier and newer units. These were American Locomotive Co. and Montreal Locomotive Works' S3 diesel-electric units, which arrived from 1969 on, to handle the heavier trainloads being brought in by BCR and CNR to be unloaded at VW's terminal. Unit #21 (#D701)

was scrapped in North Vancouver in January 1973, but its sister #22 (#D702) lasted for a few more years. VW #22 was sold in 1974 to Commercial Steel Co. (CSC), a scrap metal dealer located on Commercial Drive, Burnaby (east of Vancouver). There, it switched hopper cars of scrap steel and other metals brought in over BCER tracks from BCR and CNR until 1976. Then, it was also cut up and joined the other metals unloaded by two rail-mounted 4-wheel cranes (equipped with electro-magnets) and placed for smelting in CSC'S electric furnaces.

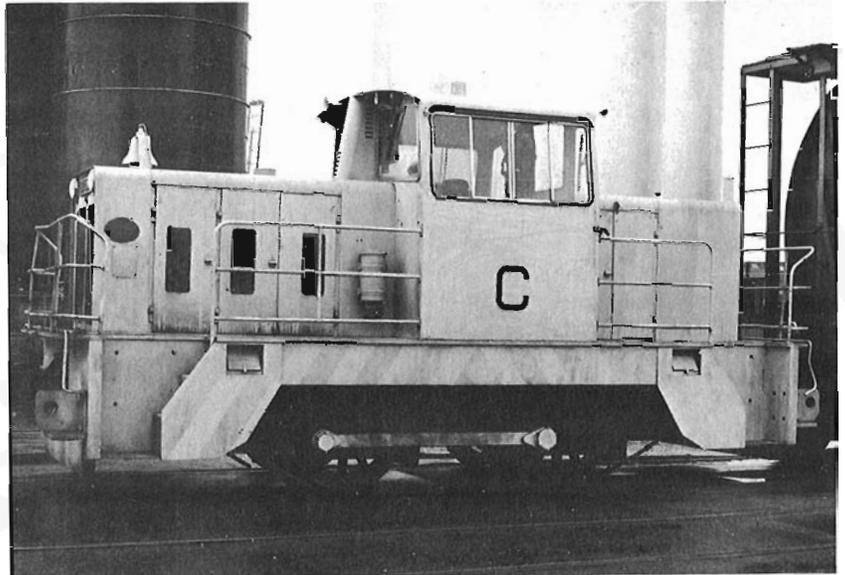
The third HC unit never turned a wheel in revenue service in B.C., but it does still exist in this province. This is a 36" gauge 100 hp DM 641 series unit: a 6-wheel diesel-mechanical loco, built in 1948 for the International Coal & Coke Co. of Coleman, Alberta. It carries an unusual 'Huwood Hudswell' plate on its radiator nose - the Huwood Co. was a major Canadian importer of HC locos in the years after World War II.

After working underground until 1969, the loco was retired and then acquired by the City of Fernie B.C. It spent 20 years in the City Works Yard, before being repainted and put on display in 1989 with four wooden 4-wheel coal cars at the Fernie Travel Infocentre, on Hight #3 at the east end of the City. Here, it can easily be seen from the Crowsnest Highway. It is displayed with several other items of local mining history, including a tall wooden derrick, several steel ore cars and four other locos: two Porter-built steam 0-4-0STs (built 1901 and 1904) and two Hunslet-built diesel-mechanical 4 wheel 'mine mules' (described below).



The Hunslet-built 36" gauge diesel-mechanical unit (from the Elk River Colliery) on display in Fernie, B.C. (1992) Note its mismatched 'train' - a 42" gauge steel hopper car. (Lorne Nicklason)

The Hunslet-built units in B.C. are of three types: two 4-wheel diesel-mechanical 'mine mules'; three 4-wheel diesel hydraulic light switchers; and one small diesel-mechanical 'mine mule'. The first sub-group consists of two 36" gauge underground units, currently on display in Fernie B.C. They are c#3428 (built March 1947) and c#4131 (built January 1950); both were acquired from the Elk River Colliery, in 1965 and 1971 respectively. They have spent time at various locations in Fernie, before being moved to the Fernie Infocentre display in 1990 and 1989 respectively. The second sub-group consists of three identical standard-gauge units, built for Pacific Grain Elevators over a period of six years. They are still in use in Lapointe Pier (Stewart and Commissioner, in Vancouver, on the south shore of Burrard Inlet), where they daily switch grain hopper cars for unloading into the elevators and for returning the empties to the CNR and CPR tracks nearby. They are all 252 hp locos with hydraulic drives, built and numbered as follows: #A c#6687, built Sept. 1968; #B c#7182,



The third of the three Hunslet-built standard-gauge diesel-hydraulic 4-wheel switchers owned by Pacific Elevators Ltd. is seen going about its daily chores along the waterfront of Vancouver, B.C. in 1986, as it was then painted (Ronald Keillor)

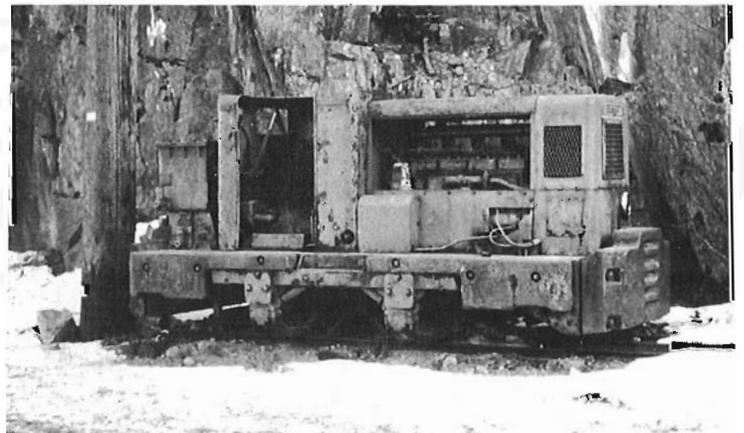


One of the Ruston & Hornsby 30" units is shown at work at the Giant Mascot Mine near Merritt, B.C. in the 1960s, handling a train of side-dumping steel 'bath-tub' ore cars. Derailments in the mine were common: note the rerailers hanging on the back end of the loco. Note also a standard item of equipment of every mine loco: a strong light at each end. (UBCSCD)

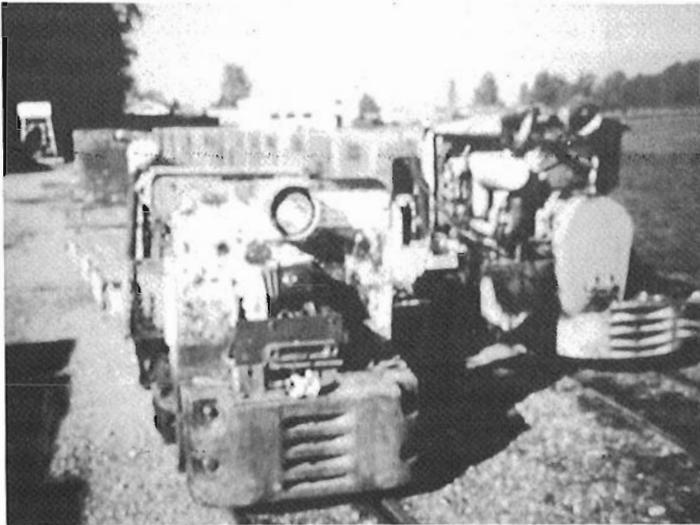
built May 1971; and #C c#7404, built July 1974. The third sub-group consists of one tiny 24" gauge unit, producing a mere 5 hp to power 4-wheels. It was originally built for Kerr-Addison Mines Co. of Ontario in May 1959 (c#5286), then sold in the 1980s to a scrap dealer in Hope B.C., who sold it to the Columbia Cranberries Railway in Richmond B.C. in September 1988. It did not do very well there: one of its three cylinders was blown in early 1990. It was sold by Nelmaco at Savona B.C. in June 1991 (and replaced by JW unit #2, listed above). It was still there in July 1992, when there was

talk of rebuilding it with a Deutz engine, with a potential sale to another customer. There has been no further news of it to date.

There have been only two Manning Wardle (MW) locomotives in use in B.C. The first was one of the earliest B.C. units, for it appeared in 1874, when the H.M. Baird Coal Co. of Nanaimo B.C. received a new 36" gauge 10-ton 0-6-0 ST steamer, c# 647: it worked for three years without a running number. The operation was renamed the Old Country coal Tar Mine in 1877 and was closed down soon thereafter. The loco was then sold later the same year (1877) to the Vancouver Coal Mining and Land Co. (VCML) of Nanaimo, B.C., where it received running number 3 and the name 'Nanaimo'. After hauling coal tubs around the



Among the locos displayed (1993) along the Industrial Road at Britannia Beach, B.C. is Ruston & Hornsby 24" gauge 4-wheel mine unit #78. This started life 43 years ago, as Crows Nest Pass Coal Co. #78. (Author)



Two of the four currently-operating diesel-mechanical 24" gauge units of the Columbia Cranberries line are shown here, resting during the 1989 harvest season in Richmond, B.C. On the left is #3, Ruston & Hornsby of 1958, accompanied by 'Jimmy' #1, a much-altered Plymouth FMD-00 of 1959. (Author)

Nanaimo pits for the next 28 years, it was leased for almost three years (1905-08) to the Andrew Haslam Lumber Co. of Nanaimo. There it helped to log an area about 15 km. south of the city. Upon its return from lease in 1908, #3 was sold to the Ladysmith Lumber Co. Railway of Cassidy B.C., which operated over part of the Dunsmuir-owned line from Departure Bay to East Wellington (another part of the 'Dunsmuir empire', which also included the Esquimalt and Nanaimo Railway Co.), but it lasted there only for a few months. In late 1908 it was sold yet again, this time to the New Ladysmith Lumber Co. of Ladysmith B.C. However, its journeyings were not yet over, for it soon moved to the B.C. mainland. Here, it was used on the Howe Sound Pemberton Valley & Northern Railway Co. between Squamish and Anderson Lake, during the construction period of the railway, 1909-10. After its transfer to the ownership of the Pacific Great Eastern Railway Co. in November 1912 as #3, the loco saw further (but limited) service on the PGER, until it was withdrawn and scrapped at PGER's Squamish Works in 1919. Thus, in its lifetime of 45 years, this 'boomer' loco worked for seven different owners, having one of the most varied careers of any industrial loco in B.C. A second larger MW 0-6-0 ST (built 1874) was also acquired by the VCML (from an unknown source) in 1884. This unit weighed just over 10 tons and carried the name 'London', running as #4. However, this unit stayed and worked on Vancouver Island, hauling logs in the forests of the Nanaimo area, until it was withdrawn and scrapped in Nanaimo in 1918.

The fifth group of English-built units came from Ruston & Hornsby Ltd. R&H) and comprised three diesel-mechanical types. The first sub-group consisted of a single 24" gauge 'mine mule' built in 1950 for the Crows Nest Pass Coal Co. (CNPC), a Great Northern Railway subsidiary, which operated in the Fernie and Michel areas of southeastern B.C. The second sub-group comprised three 24" gauge 'mine mules' built in 1958 for the Craigmont Copper Mines Co. of Merritt B.C. while the third sub-group consisted of at least two 30" gauge units, which were built for the Giant Mascot Mines Co. of Hope B.C.

The first R&H unit carried c#349078, was a type DLG-48, and weighed 7.5 tons. It worked in the CNPC coal mines for seven years, until the company closed down in 1957. Soon after, it was sold to the Vancouver Iron and Engineering Works, located on the south shore of False Creek in Vancouver. It worked there, handling loads of iron and steel construction materials, until it was declared unnecessary after a change in materials handling at the Works. The unit was sold to Nelmaco in 1964, but there were no buyers for it, so in 1976 it was donated to the recently-opened B.C. Mining Museum (BCMM), at Britannia Beach, on the eastern shore of Howe Sound, about 50 km. north of Vancouver. Over the years, Nelmaco has been very generous to the BCMM, donating at least three diesel locos for display at its site in the ex-Anaconda Copper Mine.



Parked just above the entrance of the B.C. Mining Museum of Britannia Beach is Scottish-built NB 36" gauge mine unit #36. Seen here in 1993, this unit started work 36 years ago in Lethbridge, Alberta, then was used in Coleman, Alberta, Hope, B.C., Fort Nelson, B.C., and Savona, B.C., before coming to rest at Britannia Beach, B.C. Note again a mismatched 'train', consisting of a 42" gauge 'Granby' steel ore car. (Author)

This R&H unit is displayed along the Industrial Road, just across Highway #99, the 'Sea to Sky Road' (Vancouver - Squamish), and east of the BCR main line (mile 31.0 of the Squamish Subdivision).

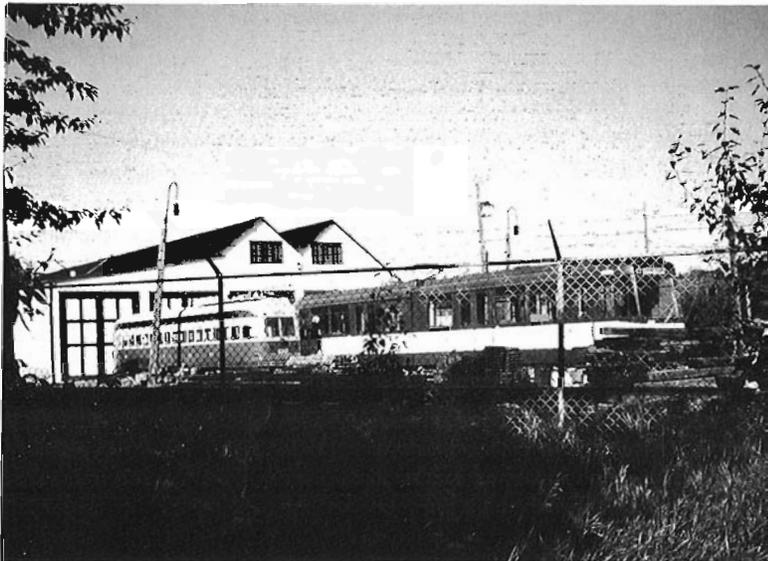
The three Craigmont Copper Mine units were built 1958 as type LBU, with 3-cylinder engines of 10-25 hp, and were numbered and disposed of as follows:

CCM#1, c#427805, engine #402492, worked in the mine (located in the Nicola Valley, about 15 km. north of Merritt, B.C.), until the mine was closed in 1982, then it was sold or scrapped on site in 1983.

CCM#2, c#427807, engine # not known, worked and was disposed of as #1 above.

CCM#3, c#427806, engine #402568, worked as a 24" gauge unit, then it was converted to 42" gauge, then it was reconverted back to 24" gauge and sold to the Columbia Cranberries Railway in 1983. There it is #3 and is still at work in East Richmond, B.C.

The two Giant Mascot Gold Mine Co. units were of 30" gauge: two 4-wheel types with Deutz engines: the DLU-48 type, including c#349059 of 1950, and the F2L812 type, including c#392572 of the mid- 1950s. Both were sold to the West Hope dealer of second-hand forestry equipment in the early 1980s. They have remained ever since in his yard, on the ground in the open, awaiting a buyer. The yard is located at Tom Berry and Starret roads, adjacent to the CNR main line (mile 43.5 of the Yale Subdivision) and just east of Hope Airport.



Unit #601, shown here in Fort Edmonton Park in 1990, prior to being refurbished by Edmonton Transit for use on a special tourist route over the ex-CPR High Level Bridge with two other trolley cars. (Author)



The standard-gauge ex-Hannover Duewag articulated LRT unit #601, stored in the Dominion Bridge site of B.C. Transit in Burnaby, B.C., April 1985. This tram is now in Edmonton Alberta. On the right can be seen ex-BCER car #1220 (built St. Louis 1913), which is currently being restored by the Steveston Interurban Restoration Society in Richmond, B.C. (Lubertus Post)

GERMANY

There have been two German builders represented in B.C.: Henschel-Werke GmbH of Kassel; and Duewag GmbH of Dusseldorf. Henschel and Sohn built a large number of small 0-4-0 T steam

locos for the German Army during the time of the Nazi build-up of military strength in the Depression Years of the 1930s. One such unit is c#23026, built in 1936: it is a woodburning 10-ton 24" gauge unit, used in earth-dam construction. It is believed to have been stored for a while during and after World War II, and then was used by the US army of Occupation. It was bought in the early 1960s by an unknown mining contractor, who shipped it to North America. It was resold in 1964 to Leonard Hutton and stored on his property near Victoria B.C. There is no information as to whether this loco ever turned a wheel in revenue service in B.C., although it was lettered by Hutton as 'BWR', for his 'Blue Water Railway'. It was sold in 1978 to the Olympic Game Farm Railroad (OGFR) of Sequim (near Seattle), Washington, after being equipped with a new boiler built in Victoria. As #7 of the OGFR it pulled train-loads of visitors to view the zoo animals 1979-80. The whole railway was put up for sale in Dec. 1980 (for \$100,000, including track and cars). In April 1988 the locomotive passed through Seattle Docks en route to Japan. Its fate there is not known. Recent research has shown that a similar 'German' loco displayed in the Town of Leavenworth Washington



'Nephews' to unit #601 - a 6-car train of Edmonton Transit, northbound in November 1992 from University Station to Grandin Station, was approaching the tunnel of the north side of the North Saskatchewan River, running on the last section of the new LRT bridge which was built in 1991 and 1992. The train is composed of three 2-car articulated U2 units, built by Siemens-Duewag in Edmonton, Calgary and Germany. (George Duncan)

("The Bavarian Town") some time in the 1980s, was actually built in Sweden, and was returned to Sweden in Fall 1992. This loco has been confused in the past with the unit from Victoria/Sequim, but it is now clear that these are two different units.

The Duewag unit is a two-car Light Rapid Transit set, built for Hannover, in the northern part of Germany, in 1970. This is a standard-gauge three-truck articulated streetcar of a new design (named LRV 1), which ran for three years as Hannover #601. It is an 'uncle' of the Siemens-Duewag LRT U2 type, of which many are now in use in Calgary and Edmonton Alberta, with others at work in other North American cities, including San Diego California. There were no repeat orders for the LRV 1 type: in 1971 the 31-ton vehicle was bought from Germany by the B.C. government, then shipped to Vancouver in January 1976 as a demonstration vehicle for a planned LRT operation there (which became the SkyTrain operation, and opened for service just before Expo '86). A change of government occurred in B.C. soon after LRV 1 arrived, and the new politicians never really liked the car. LRV 1 was renumbered 10001 and stored between 1976 and 1980 in the B.C. Hydro Ry (BCHR) depot at Trapp Road, New Westminster B.C. (now the Southern Railway of B.C.). It was then transferred in 1980 to the B.C. Transit (BCT) Storage Depot on Boundary Road in Burnaby (inside the ex-Dominion Bridge warehouse site), adjacent to the BCR-CNR joint line. Six years later, it was transferred yet again; this time to the BCT SkyTrain Yard in East Burnaby. After a

comparatively brief stay there, this orphan LRT car was sold for \$1 to the Edmonton Radial Railway Society, in December 1987. It moved by road in 1988 to storage in Fort Edmonton Park as #601. Plans were made to operate it in Edmonton with two other street cars (both acquired in 1989; an ex-Toronto transit Commission PCC car #4367 and another tram from Hinkai, Japan), on the ex-CPR High Level Bridge Line over the North Saskatchewan River. The route would connect the LRT station at Grandin (beneath the Legislative Assembly Building) with South Edmonton (just north of the disused CPR depot), but these plans are still not finalised. The three cars are on lease to Edmonton Transit and have undergone cosmetic restoration at the D.L. MacDonald Maintenance Depot, where they are currently stored, close to the Siemens-Duewag U2 articulated cars #1001-37 used

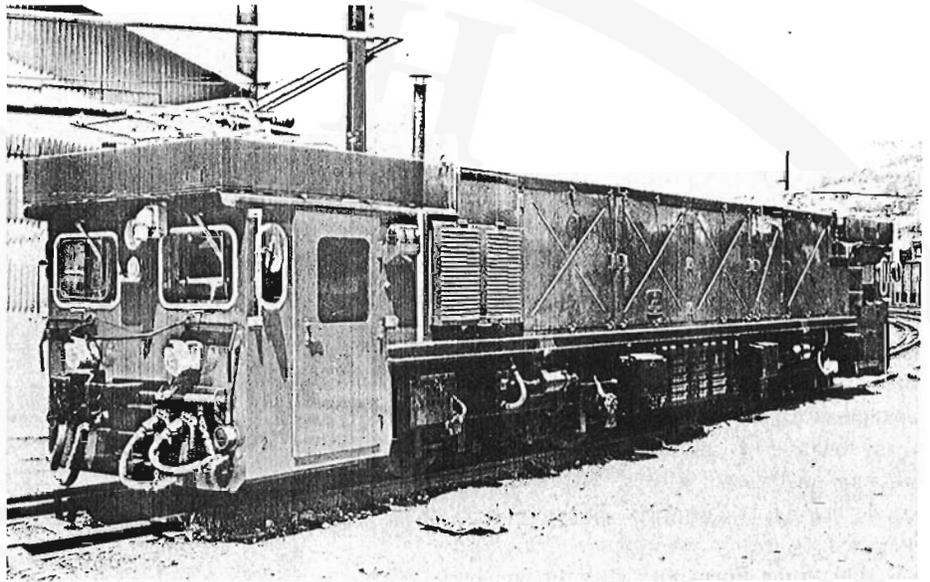
by Edmonton Transit. Thus, after a lengthy and roundabout journey, car #601 is at last near to some of its 'nephews', although it is in need of further work on its narrow-tired 'tramway' wheelsets (which need to have broader tires, to allow smoother operation on standard CPR track).

JAPAN

The only Japanese units ever to run in commercial service in B.C. (and probably, in all of Canada) were a group of five electric locomotives built 1969-71 by the giant Mitsubishi Heavy Industries Ltd. of Tokyo, Japan. Copper prices then were high on the world market and Japanese industry was eager to invest in new raw materials sources, including the Canada Wide Mines Ltd. (Granduc) copper operation below Granduc Mountain. This is located in the remote extreme northwest corner of the province, about 60 km. north of Stewart, B.C. and just east of the Alaskan boundary. A 16 km.-long tunnel was built between 1964 and 1969 (using three 42" gauge Plymouth DMD24 diesel-mechanical units, built 1962-63, to haul the construction trains) from Tide Lake Camp to reach the ore body. The raw ore was then carried in 8-wheel steel ore cars, running on 42" gauge track as 15-20 car trains, each hauled by one of five 8-wheel 750 hp double-ended electric locos, drawing power via a pantograph from a 1500 volt DC overhead catenary line. The locos also transported the miners between the Leduc work face and the surface camp at Tide Lake, pulling 4-car trains whose cars held 55 passengers apiece. There

was also one 4-wheel electric converter unit, used with rail maintenance trains in the tunnel. One of the five locos was wrecked in 1971, soon after its arrival in B.C. and it was scrapped: its maker's plate was saved and is now on display in the Stewart Museum. The remaining four locos and the converter car worked until the mine was closed in 1984, due to the world-wide slump in copper prices. All five units were then sealed inside the mine workings, awaiting a buyer, or a major upswing in world copper prices, to enable the mine to be reopened. Ten years later, they are still waiting!

A major problem for any potential buyer is the remote location: the only surface access is by a 40 km. gravel road, leading from the Tide Lake ore concentrator and camp via Hyder AB to Stewart B.C., but the expensive-to-maintain road needs constant snow clearance each winter. It runs along the east side of Salmon River and Salmon Glacier and was built only to serve the mine. The dried copper ore concentrate was sent in six special dual-purpose highway double-tankers (making four round trips a day) carrying 25 tons of ore to an ore and fuel dock located on Portland Canal, just west of Stewart, then loaded onto freighters for Japanese customers. The first shipload



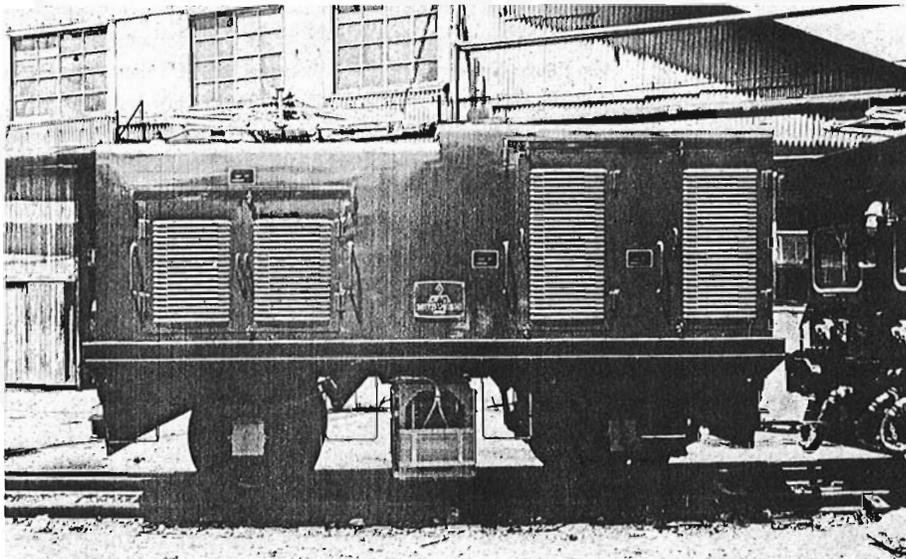
One of the five Mitsubishi-built 42" gauge mine locos, photographed at Canada Wide Mine's camp at Tide Lake, B.C. in 1971. These units were unusual mine locos on several counts: they had driving cabs at both ends; they ran on two 4-wheel trucks, to give flexibility and to support their great length; they drew power via two pantographs (from the overhead 1500v electric supply line); and they produced a hefty 750 horsepower. (University of British Columbia, Special Collections Division)

of Granduc ore left for Japan in Jan. 1971. The road tankers returned to Leduc laden with fuel oil supplies for the concentrator and for the camp heating plant. Since the mine closure (in 1984) there has been no need to maintain the road, for no caretakers remain at Tide Lake, thus the road's condition has deteriorated badly north of the Westmin Resources plant. This active open-pit gold and silver mining operation (which opened in 1989) is located at the sites of the underground Big Missouri and Premier mines (about 210 km. from Hyder), which first operated from 1923 to 1932.

There were also two Japanese-built maglev units displayed at Expo '86, which are described below, but these were never used in revenue service in B.C.

SCOTLAND

A 'Made in Scotland' label today brings to mind exports of knitted clothing, tam'o shanters and tartans, and foodstuffs such as kippers, malt whiskey, shortbreads, oatcakes and marmalades/jams, but there also used to be several major Scottish locomotive builders,



The Mitsubishi-built 42" gauge 4-wheel electrical converter car of Canada Wide Mines Ltd., also seen at Tide Lake Camp in 1971. Note the single pantograph on the roof and the 'Keep Out - insulated' plates on the unit's sides, which warned maintenance personnel of electrical hazard. (UBCSCD)

located in the low Clyde Valley in western Scotland. Two builders are represented in B.C.: the North British Locomotive Co. (NB), which had two separate plants in Glasgow, the Queens Park Works and the Hyde Park Works; and the Sharp-Stewart & Co. plant, also in Glasgow (and later absorbed by NB). Each builder is represented by units, with two preserved and one for sale in B.C.

One NB 30" gauge 4-wheel 15-ton diesel-mechanical loco of type BLW-5 was built in 1957 as c#27720, with a 1000 hp Crossley engine. It first worked for Lethbridge Colliery Ltd. (later, Dominion Coal Co.) in Alberta until 1965, when it was sold to the Giant Mascot Gold Mines Co. operation and numbered #36. This mine was located high in the mountains, 30 km. north of Hope, B.C. #36 stayed there until 1970, then it was sold to the Churchill Copper Co. mining operation near Fort Nelson, B.C. where it ran with the same number. When the mine began to close down in 1973, #36 was withdrawn from service and sold to Nelmaco. At about the same time, the BCMM was being established at Britannia Beach B.C and Nelmaco donated #36 (and some other mine locos) for display there. It arrived and was put on display at the Museum entrance gate in February 1974. It remains there to this day, forming an 'ore train' with a 42" gauge 'Granby' steel ore car. A similar unit, c#27492 of 1955 was also used by Giant Mascot Mines until the early 1980s, when it was sold to the forestry equipment dealer in West Hope, B.C., where it still sits on the ground, awaiting a buyer (see above, for the address).

Just across the Alberta border, displayed outside the Crowsnest Museum in Coleman Alberta, is a composite NB mining loco made of parts from two units owned by Lethbridge Coal Co. Ltd. (LC). This is a 36" gauge 4-wheel diesel-mechanical unit built in 1948, but similar to the BLW-5 type displayed at Britannia Beach Museum. The Coleman unit carries two maker's plates, with a different number on each side: c#26696 (LC #A) and c#26697 (LC #B). The staff of the Fernie Museum in southeastern B.C. claim that one of these units should have been displayed in B.C., as it worked for some time in the Fernie area, but there is no other confirmation of this. Anyway, how do you display 'half' of a preserved loco?

The Sharp-Stewart standard-gauge 0-4-4T steam loco is much older, having been built at the Atlas Works in Glasgow in 1895 (c#4085 and named 'Dunrobin') for the private railway of the Duke of Sutherland, one of the financial backers of the Highland Railway of Scotland (HR). Weighing only 31 tons, it met the main line trains with a small 4-wheel private saloon/parlour car (built in 1909 by the HR), which carried the Duke and his guests from Golspie (near Inverness) to his castle. 'Dunrobin' was maintained by the HR and subsequently absorbed in HR stock as #397.

SENIOR AND STUDENT, \$2.00

N^o 6174



GOOD FOR ONE ROUND TRIP ON THE "DUNROBIN" OR SHAY LOCOMOTIVE

Between Fort Steele and Kootenay River Viewpoints

FORT STEELE HISTORIC PARK, FORT STEELE, BRITISH COLUMBIA

Copy of a ticket issued for a trip on the Fort Steele Railway behind Sharp-Stewart-built standard-gauge 0-4-4 T steam loco 'Dunrobin'. (Author's Collection)

Withdrawn from service before World War II, it was stored for many years, until it and the saloon coach were sold in 1950 to the 15" Romney Hythe & Dymchurch Railway in east Kent. It stayed there as a static display item at Hythe Station until 1965, when a Victoria B.C. businessman bought both 'Dunrobin' and the coach. He shipped them both to Victoria and placed them in a storefront static display on Douglas Street as a tourist attraction. Victoria is full of 'English' reminders of its early years as an English colony in North America - ironically, these two items were Scottish! (it must be assumed that most American tourists cannot distinguish between England and Scotland. After all, they are both somewhere 'over there' to the East, i.e. Britain!) In 1967 they were both bought by the Fort Steele Provincial Heritage Park, located 12 km. north of Cranbrook B.C. The site is about 100m. above the east side of the Kootenay River, just east of the junction of the CPR Cranbrook Subdivision and the Windermere Subdivision. There, 'Dunrobin' took up duties on a one-mile loop of track, hauling a single twin-bogie passenger compartment coach acquired from British Railways (built in 1954 for its Eastern Region as its #E3733), in addition to the HR 4-wheel saloon.

'Dunrobin' continued in this role until 1988, sharing its passenger duties with Lima 3-truck Shay #115, built in 1930 (acquired in 1970 from Railway Appliance Research Ltd. of North Vancouver B.C.), handling the summer crowds of visitors. It paid a short visit to Vancouver in 1986, to appear in steam at Expo '86 (see below), then it was stored and refurbished for a little over two years. It then reappeared as a star performer at the 'Railfair '91' celebrations in the California State Railroad Museum at Sacramento California in April-May 1991, crewed by Ernie Ottewell of Revelstoke (CRHA Selkirk Division) and Mike Westren of Cranbrook (CRHA Crows Nest & Kettle Valley Division). Today,

'Dunrobin' is back at work on the Fort Steele Railway, but now it shares passenger duties with #1077, a seventy-year old 2-6-2 steamer built as a woodburner by the Montreal Locomotive Works (c#65337 of Dec. 1923) for Cathels & Sorenson Lumber Co, of Port Renfrew on Vancouver Island.

[Editor's note: One might also include the thirty locomotives built for the CPR by Dubs of Glasgow in 1882; some of these also saw service in B.C.].

SWEDEN

The Swedish railway builders have become very well-known to North Americans, following the 1993 demonstration of the ASEA-Brown Boveri-built 6-car X2000 electric 'tilt train' on Amtrak and on its brief tour in Ontario and Quebec. In B.C., however, Swedish rail products have played a far less glamorous role, for they have all been narrow-gauge units, designed for ore haulage inside mine adits. Two makers have units here now: the Atlas Compressed Air Locomotive Co. (ATCO) and the Industria General Aktiebolaget Co. (IGA), both of Stockholm. The ATCO units have seen operation in several different B.C. locations, with preserved items today at the BCMM and elsewhere; while the two IGA units saw mine service in Salmo B.C. and now haul passengers in summer in Kimberley, B.C.

Many ATCO-built 4-wheel compressed air units have passed through Nelmaco's yard in Savona, B.C. ATCO's main competitor in compressed air-driven 4-wheel front-end loader/mucker units was the EIMCO-Finlay Corp. of Salt Lake City, Utah, which has built similar units in gauges from 18" to 42". There were many customers in B.C. for its 'Rocket Shove' units (including the Robert Gold Mine Co. at Ymir, near Nelson, B.C., where they were in use 1952-74) and many others have also been handled by Nelmaco. The ATCO units have included: c#59245, a 24" gauge front-end loader/mucker of type L100, which was acquired from a mine on Vancouver Island in the early 1970s, then was donated in July 1979 to be BCMM at Britannia Beach B.C.; C#298358, a 30" gauge front-end loader/mucker, which was acquired in the early 1980s from another unknown mining operation; c#112880, a 36" gauge unit of type E31 is also there, but its origin is not known. The last two (and another similar unit of 36" gauge, whose c# and previous history is also not known) were all for sale at Savona in mid-1991.

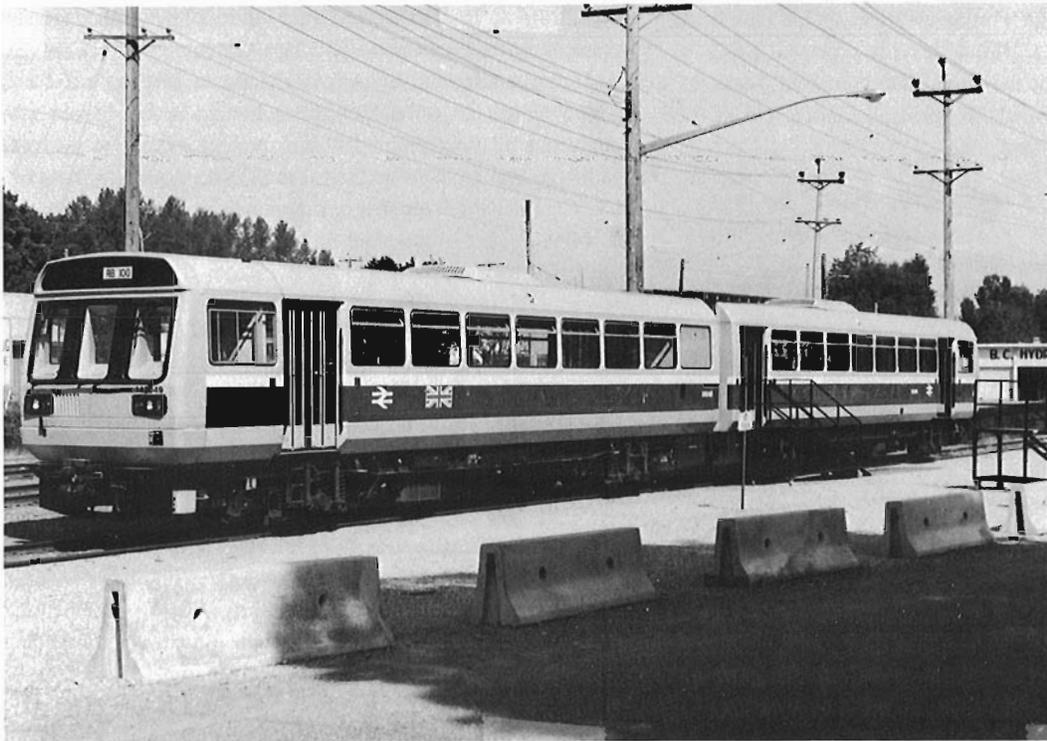
The Texaco Mine Co. operated a copper-iron mine on Texada Island, some 15 km. south of Powell River B.C., from 1893 to 1977. When the mine closed, an ATCO 36" gauge front-end loader/mucker was sold to an unknown buyer in August 1977. The Giant Mascot Mine Co. of Hope B.C. also used at least one ATCO unit, c#191581, a type 56-E 24" gauge front-end loader/mucker. This one was acquired by the Hope dealer (mentioned above) after the mine closed down in 1974.

The Hudson Bay Mine Co. had a lead-zinc mining operation at Salmo B.C. about 45 km. northeast of Trail, B.C., from the early

1970s to 1978. The HB co. was a subsidiary of the giant Cominco organization (the Consolidated Mining and Smelting Co. of Canada), which was established by Alfred Heinze in 1895 to build and operate the smelter at Trail, on the Columbia River. Heinze was bought out by the CPR in 1898, to protect its mining interests against inroads from its arch-rival the GNR, headed by James J. Hill. Cominco had a number of ore properties in B.C., besides the HB Mine, including the giant Sullivan Mine (lead-silver-zinc) at Kimberley and copper mines at Rossland, B.C. (1924-28) and Stewart, B.C. (1898-1928). Today, the Trail smelter is owned by Teck Corp. and receives its ore concentrate from the Red Dog Mine in Alaska, with the ore sent by road trucks to Anchorage AK, then by barge to Vancouver Wharves in North Vancouver (bought by BCRail in 1993) or to Seattle WA, then by BN hopper cars to an offload site at Boundary, on the Washington B.C. border line, for delivery to Trail in road trucks.

In the HB Mine there were at least two IGA-built 36" gauge 8-ton diesel-mechanical units built in 1972 with Deutz engines: They were numbered 2 and 4 in the mine. After the mine closed in 1978, both locos were bought by the Bavarian City Mining Railway BCMR) of Kimberley, B.C. and renumbered 1985 (ex-#2 and 1986 (ex-#4). The BCMR line (formed as the Kimberley Railway and Steam Navigation Association Inc. in 1978 and built by volunteers over the next six years) was originally sponsored by the Kimberley Chamber of Commerce. Since 1984, the BCMR has operated each summer for the tourist season, running two-car and three-car trains of covered passenger stock over a 2.5 km.-long circular track, built in the Happy Hans Campground. This is located just above the City of Kimberley, on Gerry Sorenson Way, about 5 km. from Kimberley (mile 16.3 on the CPR Kimberley Subdivision from North Star). Cranbrook B.C. is about 25 km. to the south. The 4-wheel cars each hold 12 passengers and were built by the BCMR on steel chassis formerly used for HB Mine ore cars. In 1991, the BCMR bought enough new concrete ties to extend its trackage downhill into the City centre, 5 km. to the south: construction started in 1992. The railway's prospects and the future lives of the two IGA units look good. Kimberley was established and grew up as a mining town, but for the last 20 years it has been presenting itself as a tourist centre (promoted as a 'Bavarian Town') and selling the skiing delights of the surrounding mountains.

At one point beside the BCMR track loop, there is an outdoor display of the Kimberley District Heritage Society Museum (KDHSM), containing six 4-wheel mine mules from the Sullivan Mine (just across the intervening valley, to the east). However, these are not 'foreigners': Cominco overhead-electric units #1, #4 and #5 (all 36" gauge), and J#34 and #36 (both 18" gauge) were built by the Jeffrey Manufacturing Co. of Columbus Ohio and were all acquired by the KDHSM in 1991; the sixth unit, battery-electric 36" gauge Cominco #69, was built by the Goodman Mining Equipment Co. of Chicago Illinois and was acquired by the KDHSM in 1985.



Two views of the BREL 2-car standard-gauge railbus #142049, on display at Abbotsford, B.C. (July 30, 1986) The upper view clearly shows the two-piece automatic folding doors. The temporary Railbus System connected with the SkyTrain, and passengers changed from one to the other at New Westminster, B.C. The SkyTrain service between Vancouver and New Westminster opened for public service in December 1985, six months before Expo started. (Both photos by Ronald Keillor)

general motive power used by B.C. Sugar was horse power, pulling 4-wheel flat trucks. This was supplanted by three gas-powered trucks with flanged steel wheels pushing the trucks, a system used from 1908 to 1925. In the latter year these were replaced by a gravity and escalator system which continued in use until 1957. Today, the Rogers Sugar Refinery at this site has standard-gauge rail service via CNR and CPR, but the plant has no locos of its own.

There have been several foreign demonstrators in B.C. at various times, but the greatest collection of foreign locos and power units at any one time occurred in 1986, when the Expo '86 World's Fair of Transport & Communication was held

OTHER FOREIGNERS

Finally, there have been a number of other foreign locomotives in B.C. which have spent comparatively short periods of time within the province, either because they were passing through (en route to a new owner), or were on display at a Fair or Exposition. The former types are epitomised by a small British steam 0-4-0 T built in 1890, which paused for a while in Vancouver Port, en route to Hawaii. It may have been employed briefly on the narrow-gauge trackage used to transfer raw Hawaiian sugar from ocean freighters to the factory, at #123 Rogers Street, Vancouver, of the B.C. Sugar Refining Company which was established in 1890. At that time, and until 1908, the



around False Creek in Vancouver B.C. from April to October 1986. It included displays of rail motive power from many different countries, including these foreigners:

From Britain - 'Rocket', a full-size standard-gauge replica of Robert Stephenson & Co.'s 0-2-2 steam loco of 1829, built in 1979 at the York National Railway Museum, where it currently resides. It was on display inside the ex-CPR Roundhouse (built in 1886, now preserved and the home of ex-CPR 4-4-0 steam loco #374, which headed the first transcontinental train from the East, arriving in Vancouver on May 26, 1887). 'Rocket' also participated in the 'Steam Cavalcade' (see below).

- #142049, a standard-gauge two-car diesel-mechanical railbus 'Sprinter' set, built by BREL-Leyland in 1986 and on loan from British Railways. It consisted of cars #55590 and 55640, carrying a total of 121 passengers. Equipped with a 205 hp Leyland diesel engine, it was tested on the BCR Squamish Subdivision



Hong Kong double-deck tramcar #12, while on display with a great variety of public transportation methods at Expo '86, in Vancouver, B.C. in August 1986. (Author)

in June 1986, then it operated a twice-daily six-week service from June 25 to August 10, 1986 on the BCHR (now SRBC) line from New Westminster to Abbotsford B.C.

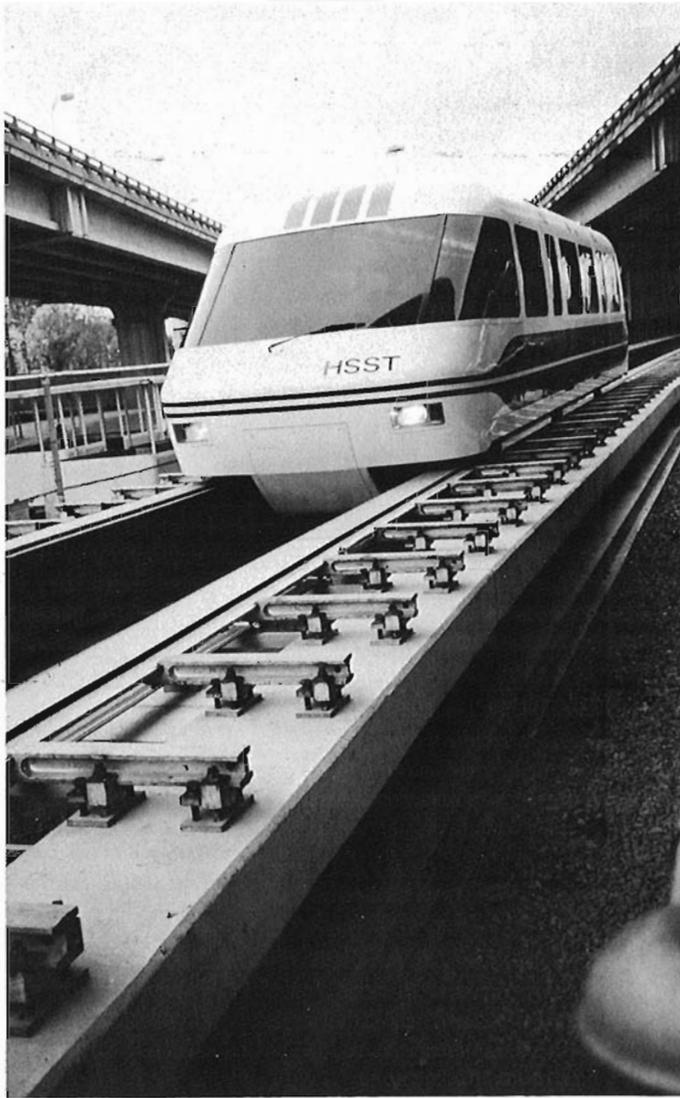


HSSST car #500, outside the Japan Pavilion at Expo '86, Vancouver, B.C. (Author)

From Czechoslovakia - a 4-wheel gas-mechanical 6-man track inspection car (standard-gauge), built in 1910 by Usti-Tempace of Bohemia. On loan from the National Technical Museum of Prague, it was also on display inside the Roundhouse.

From France - #12, built by Soule of Paris: this was a 6-person elevated system hauled by a cable. Twelve cars of this 'people-mover' system operated at the French Pavilion. Soule built a similar system for the Charles de Gaulle Airport in Paris in 1992-93.

- 'Aramis' was a 12-person LRT car, built by Matra of Paris in 1986. It also was on display outside the French



Also at Expo '86, on display outside the Japan Pavilion, was Maglev car #03. (Author)

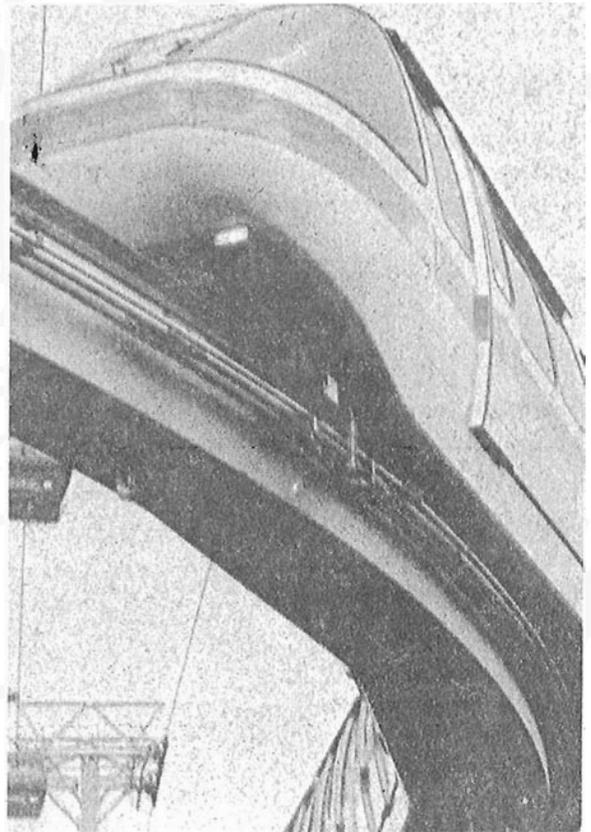
Pavilion. In 1991, Matra provided this system ('OrlyVAL') to connect the second Paris airport at Orly with the Metro and RER lines in the city.

From Germany - #4, an 800 mm. gauge steam 0-4-0 T, built in 1884 by Krauss-Maffei Locomotive Works in Munich, Bavaria (c#1576) for the Kladno Steelworks (SONP) in Czechoslovakia. It was displayed inside the Czech Pavilion, on loan from the National Technical Museum of Prague (CZ).

- #07, a sleek 4-seat passenger-carrying maglev car (powered by magnetic levitation) built in 1985 by Thyssen-Henschel GmbH of Kassel. This car, displayed inside the German Pavilion, had reached a maximum speed of 355 kph on December 12, 1985.

From Hong Kong - #12, a colourful 42" gauge double-deck tramcar equipped for one-man operation (through English Electric controls) from a 500 volt DC overhead power line. Built in 1949 at Hong Kong Docks and operated by Hong Kong Tramways until 1986, it was later moved to the B.C. Museum of Transportation (BCMT) at Cloverdale B.C. after Expo '86 closed and was displayed there until 1989. It was then donated to the Greater Victoria Electric Railway Society (GVERS) and participated in a 1991 exchange deal with the Glenwood Trolley Museum (just west of Portland Oregon). In return for #12, the GVERS obtained a 4-wheel Brill trolley car, originally built in 1912 for use in Oporto, Portugal and displayed in Glenwood since 1988 as #167. The GVERS then repainted this car in red and cream as BCER #30 and loaned it to the BCMT at Cloverdale during 1991 and 1992. It was returned to Victoria when the BCMT closed down in 1992.

From Japan - #03, a single car powered by maglev, built by Sumitomo Industries of Tokyo, which operated back and forth on a 0.45 km. demonstration track, giving free rides to the public. It was sponsored by Japan Air Lines as a "high-speed surface transport mode with potential as an airport link",



Both the Expo '86 monorail and the overhead cable ways ('Skyrides') were built in Switzerland in 1986. (Brian Kent/Vancouver Sun)



The 'John Molson' 2-2-2 steam locomotive replica (built in Japan in 1970) was on display for the 'Steam Cavalcade' of Expo '86, May 1986. (Author)

capable of carrying 40 passengers in a single cabin at speeds up to 308 kph. However, passengers to/from Vancouver International Airport have not yet been provided with any form of high-speed rail transport, seven years later!

- #500, an unmanned maglev test car, model ML500, built in 1979 by Sumitomo to develop the #03 listed above. Capable of speeds up to 517 kph, kit was displayed outside the Japan Pavilion.

From Switzerland - ten 9-car monorail trains, each carrying 100 passengers, were built by Von Roll Habegger of Bern in 1986. They operated over a 5.3 km. elevated track throughout the Expo site. The trains and track were sold to a Fun Park in England in 1988.

- a 58-car cable way, with each car carrying six passengers, was built by Garavanta in 1986. It was sponsored by Air Canada. A second 67-car cable way, also with each car seating six persons, was built by Von Roll Habegger in 1986. This one was sponsored by CP Air. Both cable ways were dismantled after Expo and returned to Switzerland.

As part of the Expo '86 celebrations, a 'Steam Cavalcade' was mounted in the CNR Freight yard along Terminal Avenue in Vancouver, between May 23 and June 2, 1986. Twenty-two steam engines participated, but not all joined in the opening processions (in steam) from the CNR Yard, via the Burlington Northern track

to the waterfront, then west along the CPR main line to 'End of Track' at mile 129.9, of the Cascade Subdivision. Only four of the 22 participant steam standard-gauge locomotives were foreign-built:

1. The #3, a 4-4-0 loco built by Dubs & Co. of Glasgow, Scotland, in 1882 (c#1572). The Prairie Dog Central Railway and the Vintage Railway Society (both of Winnipeg) have operated it on steam passenger excursions over the CNR's Oakpoint Subdivision in recent years.

2. the 'Dunrobin' 0-4-4 T loco built by Sharp-Stewart of Glasgow in 1895 (c#4085). This engine was on loan from Fort Steele, B.C. as has been noted above.

3. the 'John Molson', an operating replica of one of the 2-2-2 locos built in Britain and exported to Canada in the 1840s. Built by Kawasaki of Japan in 1970 (c#32430), this loco represented the Canadian Railway Museum, which is operated by the C.R.H.A. in Delson-St. Constant, Quebec.

4. the 'Rocket', an operating replica of the famous 1829 0-2-2 loco built by Stephenson. This unit was built in York, England, in 1979; it was on loan from the National Railway Museum there, as is also noted above.

Items #1 and #3 of the above locos participating in Steamexpo, or displayed/operating on the CNR Terminal Avenue Yard site, all returned home during June 1986. All those units on

display or operating on the False Creek site of Expo '86 returned home during October-November 1986. There have been no further foreign units arriving in B.C. for work or display since then.

CONCLUSION

With the current depressed state of economic conditions, particularly in the world metals market, it seems unlikely that, in the foreseeable future, we will see any additions to the foreign locomotives and power units list above.

The two major users of foreign power in B.C. industry in the past have been mine and forestry operators. Much of the mining activity today is occurring in open-pit mine sites, where large rubber-tired road vehicles are commonly utilised to transport ore from mine site to concentrator. New federal restrictions on mine emissions came out in the third quarter of 1993: they have made mining more expensive and will probably result in the premature closure of marginally economic mines. The use of rail transport in the forestry extraction process is now reduced to only one operation in B.C. This is the Canadian Forest Products Co.'s (CFP) line from the woods of the Nimpkish Valley of northern Vancouver Island, over some 90 km. of rail line via Woss and Nimpkish to the reload site at Beaver Cove, 20 km. east of Port McNeill. However, there are no foreign units here: CFP uses four SW1200RS units, three built by GMD in 1956-59 and one built by EMD in 1954. All new forest operations since 1956 have used only road transport methods.

Unless there is a marked upturn in the mining industry in the near future, with the use of new adits to recover underground ore veins and lodes at depth (yet protecting the environment from mine emissions), it is most unlikely that there will be any new underground rail operations in B.C. Sadly, then, this survey of foreign locomotives and power units in British Columbia is therefore probably the first - and the last - for ever!

SOURCES

Archival Staffs in Britannia Beach, Fernie, Kimberley, Richmond, and Stewart museums and in Vancouver City Archives, 1990-93.

Bown, Paul, et al: CANADIAN TRACKSIDE GUIDE 1993. Ottawa, Ontario: Bytown Railway Society Inc., 1993.

Cordner, Ken, editor: 'Worldview Austria', in MODERN RAILWAYS. Shepperton, England: Ian Allan Publishing Ltd., December 1992.

Ewert, Henry: THE STORY OF THE BRITISH COLUMBIA ELECTRIC RAILWAY COMPANY. North Vancouver, B.C.: Whitecap Books, 1986.

Fox, Peter: MULTIPLE UNIT POCKET BOOK (BRITISH RAILWAYS POCKET BOOK #2). Sheffield, England: Platform 5 Publishing Ltd., 1986.

Granduc Operating: CRANDUC. Vancouver B.C.: Granduc Operating Co., 1976.

Green, Mervyn T. 'Mike': INDUSTRIAL LOCOMOTIVES - A CATALOGUE OF INDUSTRIAL LOCOMOTIVES AND SHORT LINES OF BRITISH COLUMBIA & YUKON TERRITORY (An All-Time Listing, Including Museums). Vancouver, B.C.: Pacific Coast Division of CRHA, 1992.

Green, Mervyn T. 'Mike': 'Mining & Tunnelling Locomotives in British Columbia Today', in CANADIAN RAIL #423. Montreal, Quebec: CRHA, July-August 1991.

Interviews 1990-93 with: Claude Eyling, Cyril Holbrow, and Bill Toews, of Clayburn (Abbotsford), B.C.; the late Geoffrey Moore, of Beckenham, Kent (England); Brian Shadwick, of Bodmin, Cornwall (England); Douglas Battrum, Lubertus Post & Andrew Rimmington, of Coquitlam, B.C.; Lorne Nicklason, of Delta, B.C. George Duncan and Harrie Pollard, of Edmonton, Alberta; David Davies of Kamloops, BC; Frances and James O'Connor, of Kimberley BC 'Scotty' Scot III, of Leavenworth, Washington (USA); Kenneth Moir, of North Vancouver, BC; Michael Jeffrey, of Savona, B.C.; John Taubeneck, of Seattle, Washington (USA); Brian Peters, of Surrey, BC; and Ronald Keillor, Ronald Meyer and Martin Rogers, of Vancouver, B.C.

Johnson, Kenneth G.: WASHINGTON STATE STEAM LOCOMOTIVES. Burlingame California: Chatham Publishing, 1978.

Macdonald, Bruce: VANCOUVER: A VISUAL HISTORY. Vancouver, BC: TalonBooks, 1992

Meyer, Ronald: PRESERVED STEAM LOCOMOTIVES AND ROLLING STOCK OF B.C. AND THE YUKON. Vancouver, B.C.: Pacific Coast Division of CRHA, 1973.

Railway Working Timetables: BRITISH COLUMBIA RAIL (BCR) #8, June 14. 1981;

CANADIAN NATIONAL RAILWAYS (CNR) MOUNTAIN REGION #3, January 19, 1992;

CANADIAN PACIFIC RAILWAY (CPR)(HEAVY HAUL SYSTEMS) #86, December 9, 1990, courtesy of Bert Post.

Taubeneck, John: 'Motor Cars Work in the Bogs', in THE SPEEDER. U.S.A., M.C.C.A., Fall 1990.

Wyberg, John: BRITISH COLUMBIA RECREATIONAL ATLAS, 1:600,000 Scale.

Victoria, B.C: Department of Recreation and Conservation, 1975.

The CNR Roundhouse at Jasper Alberta

By David Smyth

With this issue of "Canadian Rail", we continue our series on Canadian enginehouses. Most of these bastions of the steam age have fallen to the wreckers. The Historic Sites and Monuments Board undertook a major study of the remaining extant facilities during the early 1990s. This study formed the basis for the heritage designation accorded to three remaining enginehouses in 1992. The Jasper facility, however, was not a successful candidate.

INTRODUCTION

The building was originally submitted to the Historic Sites and Monuments Board for heritage designation by the Rocky Mountain Rail Society, which hopes to acquire it from CN Rail to house and service both its restored steam locomotive, 6060, and its several passenger cars.

The feeling in the Jasper area, outside of CN Rail, seems to be that the only way to save this building is through designation by the Board. For whatever reason, perhaps because of the fate of so many other roundhouses which no longer exist, there is a sense that CN Rail is imminently going to tear down the roundhouse. This is certainly not the position officially expressed by the company or felt by its lower echelon, local employees.¹ Today the roundhouse is still used to service rolling stock and remains an active part of the CN Rail's operations in Alberta and British Columbia.

HISTORICAL

From the mid-1820s to the early 1850s the Yellowhead Pass was an integral part of a major Hudson's Bay Company route across the Rockies. In 1864 the Pass was surveyed by John Rae, the famed Arctic explorer, for a proposed, but never built, Hudson's Bay Company telegraph from Red River to Vancouver. Eight years later Sanford Fleming retraced much of Rae's route, at least east of the Yellowhead Pass. This 1872 survey remained the officially approved railroad route through the Rockies for almost a decade.² The CPR decision to take a more southerly route across the prairies and to breach the Rockies via the Kicking Horse Pass seemed to ring the death-knell for the Yellowhead Pass route.

For years after the completion of the CPR in 1885, there seemed to be no possibility of any other transcontinental railroad ever being needed or being built. The expected immigration boom to the prairies did not materialize. In fact, until 1901, emigration to the United States from Canada was greater than immigration into Canada.³ However, a rapid turn-around occurred that year initiating a period of rapid population growth. Concurrently, this marked the beginning of major capital investments from abroad. So promising and optimistic were the times that by 1903 not one, but two new transcontinental lines were being proposed. Despite federal government attempts to merge the interests of the two into a more rational single venture, the rival companies would have none of it. By 1915, two new transcontinental railroads were completed, and both followed the Yellowhead Pass.

The two railways were the Canadian Northern Railway (CNoR) and the Grand Trunk Pacific Railway (GTPR). William Mackenzie and Donald Mann were the driving force behind the former. They entered the railway business in 1896 in Manitoba. By 1899 their lines had been named the Canadian Northern Railway. They expanded rapidly, purchasing or building lines in Ontario and Quebec in 1901 and 1903, respectively. By 1903 they had conceived of the idea of a transcontinental railway and within two years they had constructed a mainline from Port Arthur, on Lake Superior, to Edmonton. In 1908 they surveyed a route west from Edmonton, choosing Fleming's route of 1872, through the Yellowhead and then southwest towards Kamloops and along the Fraser River to Vancouver.⁴ When it was completed in September 1915, the road was heavily in debt.

The GTPR was the offspring of the Grand Trunk Railway Company (GTR), the principal line in central Canada, serving the country's most densely populated area and its industrial corridor. Charles Melville Hays, an American, was brought in by the British-controlled GTR in 1896 to salvage the company's marginal financial situation. He soon dominated the company's operations and planning and set his eyes on the West. He was instrumental in establishing the company's heavily capitalized subsidiary, the GTPR, in 1903. An arrangement was negotiated between it and the federal government to co-operate in the construction of a transcontinental line. The government would itself build a completely new railway, the National Transcontinental Railway (NTR), from Moncton to Winnipeg, while the GTPR would build from Winnipeg to the West Coast. For an agreed-upon fee, the GTPR would then operate the NTR line.

Construction was begun on the GTPR in 1906 and at its peak some 25,000 men were employed.⁵ Standards of construction were very high, and very costly. The CNoR and the GTPR built their lines through Yellowhead Pass simultaneously. West of Yellowhead Pass, the GTPR line swung northwest along the upper Fraser River and then west to an isolated port on the northwest coast now called Prince Rupert. The first train reached that site from Winnipeg in April 1914.

Both the CNoR and the GTPR of necessity established divisional points for the management and maintenance of their lines and rolling stock. Both mainlines passed through the town of Fitzhugh, re-named Jasper in 1911. The GTPR made it the site of its divisional headquarters in the Rockies, while the CNoR chose the hamlet of Lucerne, about 22 miles away on the British



This view shows six stalls of the original enginehouse at Jasper as it appeared in 1953, six years before it was torn down. On the left appears part of the 1924 addition which is still standing. All these photos were taken by a firm called "Columbia Pictures" and are made available to Canadian Rail by the Provincial Archives of Alberta, via Lon Marsh.

Provincial Archives of Alberta, photo No. PA-685114.

Columbia side of the Yellowhead Pass. The first GTPR train reached Jasper in 1911 and the first passenger train arrived there the following year.⁶ The year 1912 also saw the construction of the GTPR's station and roundhouse at Jasper.

To help to guarantee high quality and to attempt to keep down costs, the GTPR built many of their structures to standardized plans. "Wayside buildings, divisional headquarters and terminals would be standardized to as great an extent as possible."⁷ Though ideally the GTPR would have preferred the convenience of identical facilities for similar local needs, individual conditions dictated variations in yard plans and facilities. The divisional points at Rivers, Melville, Watrous, Biggar, Wainwright, Edson, Jasper, McBride, Endako, Smithers and Pacific were not "virtually identical," as one has claimed, but had varying yard plans to suit local geography and even different facilities within the layouts.⁹ Each of these divisional points did have a standard plan 12 stall

roundhouse and turntable, but not all had machine shops, for instance Watrous, Biggar and Wainwright.⁸ The Jasper roundhouse complex is the only one of these to have survived in any form.⁹

The following is a brief description of the construction of the GTPR facilities at Jasper:

The Roundhouse was the G.T.P. standard 12 stall. The contract for the construction of the Roundhouse was awarded to Collins Bros. and Hamilton of Edmonton in June of 1911 and construction commenced in July, 1911 and was completed, in December, 1911. A contract for the heating system was awarded to the Canadian Buffalo Forge Company Limited. This system was installed in January, 1912 although it does not appear to have been made operational until August, 1912. A standard 75'-0" through turntable was fabricated by the Canadian Bridge Company Limited of Walkerville, Ontario.¹⁰



Another view showing the old, and part of the new, enginehouse at Jasper. Mountain-type locomotive 6005 is on the turntable, while most stalls are occupied. Engine numbers visible are 2-8-2 No. 3803, and 2-10-2's Nos. 4328, 4316, 4326, 4325, 4330.

Provincial Archives of Alberta, photo No. PA-685/110.

The strong expansion of the Canadian economy from 1902 to 1912, during which the bulk of construction of the competing CNoR and GTPR lines was completed, came to a sudden end in 1913 with the onset of the pre-war depression. "The fierce competitiveness had led to the inevitable over-building of railway lines in the West. With the commencement of the Great War in August 1914, inflation took its toll. Financial crises ensued, and the seemingly 'bottomless pit' of money dried up."¹¹ Railways across the country sank into seemingly irretrievable financial situations. This led to the creation of Canadian Government Railways in 1915 when the government took over the National Transcontinental Railway, and its successor, Canadian National Railway (CNR) in 1918. The needs of the war effort forced the consolidation of many parallel, competing lines. Such was the case in 1917 when much of the CNoR track west of Edmonton was torn up and sent "for military railways to support the troops in France and Flanders."¹² By the end of the year most of the CNoR line between Edmonton and Jasper had been torn up, leaving the competing GTPR the route through the mountains.

This unification of the competing companies' lines west of Edmonton was an omen of things to come. In expectation of a government take-over of the CNoR and GTPR, reports were prepared for the Department of Railways and Canals in 1917 outlining the facilities of the two competing lines and assessing the changes that would have to be or could be made should the railway operations be amalgamated. In the event of such a merger, almost certainly one of either the Jasper or Lucerne yards would be closed. This telegraphed report of May 1917, written five years after the completion of the yard, describes the facilities at Jasper.

Jasper Yard Grand Trunk has station building, one thousand ton icehouse, seventy five foot turntable, twelve stall hot air heated engine house with brick walls, eighty thousand gallon [word unclear] steel gravity tank and standpipe, cinder hoist, three hundred and fifty thousand gallon oil storage tank and twenty five thousand gallon service oil tank, four hundred ton coal chute, freight shed, superintendent's office, nine coach hydrants, pintsch gas tank for charging cars, five through sidings capacity three hundred cars, wye.¹³

Earlier in this 1917 report the reason for the large oil storage tanks was noted. "All locomotives running out of Jasper Westerly are oil burners and would have to be converted or replaced if oil not provided at Lucerne." The GTPR began using oil-fired steam locomotives in the mountains in 1915, but the CNoR apparently had not converted any locomotives by 1917.

Oil-burning steam locomotives were first introduced in Canada by the CPR in 1912, an adoption of a recently established American practice. As locomotives grew larger it became quite a problem feeding tons of coal into their enormous fire-boxes; sometimes two firemen were required. The CPR first used fuel oil in their locomotives going into the mountains from Revelstoke. During World War I the automatic coal stoker was invented, thus eliminating the coal firing problem and lessening the demand to convert locomotives to burn fuel oil. Developed about 1910 in the United States for general heating purposes, fuel oil remained expensive when compared to coal. The exploitation of the Turner Valley oil fields immediately after the close of the war changed the economics of the situation, providing cheaper fuel for several already converted oil-burning locomotives. As well, the cinders from coal-burning locomotives were recognized as a fire hazard in the mountains. This combination of economic and safety considerations prompted both the CPR and CNR by the 1920s to use fuel oil burning steam engines in the Rockies. Conventional coal-fired steam locomotives continued to be used east of the Rockies. What began as a solution to a physical problem ultimately was adopted for economic and safety reasons.¹⁴

Shortly after this above-noted 1917 report was written, the gloomy forecast for the two new transcontinental railways came to pass. The CNoR was nationalized in 1918 and the following year negotiations were begun by the federal government to takeover both the Grand Trunk and Grand Trunk Pacific railways. In 1923 the operations of the all these companies were merged with the Canadian Government Railways to form the Canadian National Railways system.

In preparation for this amalgamation in-depth reports were prepared on the current state and estimated cost for upgrading to the facilities at all the divisional points.

Data from the report for Jasper are reproduced below.

This division point has an engine house of 12 stalls capacity, brick walls, wood roof, mill construction with cinder floors.

There are 12 engines assigned to this point. Electric power and light supplied by generator set. Coal storage is provided for boilers, cars are run alongside storage and coal shovelled from cars. Water supply by gravity from mountains.

The enginehouse has a capacity of 12 stalls, G.T.P. No. 2-L design. It is in good condition. The boiler room, hotwell, pump pit and coal bunkers are in building attached to engine house. Fan room for indirect heating system is centrally located against outside wall of engine house.

Drop Pits: 1-Driving wheel drop pit under 3 pits equipped with air operated jack.

Turntable: 75' length operated by standard G.T.R. air motor. Recommended turntable be lengthened to 88'-6" in 1922.

Coaling Plant: 1-G.T.P. standard gravity type, 24 pockets, 12 each side.

Sanding facilities: Located in frame building near coaling plant.

Water Supply: Water for this point comes from a lake from which there is a natural fall, to the yards and round house. The supply is ample at all times. Engines here can water either at wood tank or at stand pipe, located at the north end of roundhouse.¹⁵

With the merger in the works, the CNR would cease to use either Lucerne or Jasper as a divisional point. At first glance Jasper would appear to have had the upper hand. Its facilities were far more extensive and better built. At Lucerne the turntable was larger, 86 feet, but the roundhouse had only five stalls and was of wood-frame construction.¹⁶ "Deciding whether to retain Lucerne on beautiful Yellowhead Lake or Jasper as the next westerly divisional points was a ... difficult problem. Each town had been established for nearly ten years, each had a choice location, and each had a population approaching three hundred."¹⁷ A description of the railway facilities at Jasper and Lucerne is shown in Table I which appears on the opposite page.

Despite the apparent advantages of the Jasper yard, the management of the CNR wanted to abandon it and expand the facilities at Lucerne. The Board of Railway Commissioners for Canada, however, ordered "that the application to close the divisional point at Jasper, in the Province of Alberta, be refused; the divisional point to be consolidated at Jasper."¹⁸ Consequently, Lucerne would be closed and the staff re-located to an expanded Jasper operation.

Reluctantly the CNR made Jasper its main divisional point in the Rockies. Jasper's domain stretched in the east to that of the former GTPR terminal at Edson, in the northwest to that of the former GTPR terminal at McBride, and in the southwest to that of the former CNoR terminal at Blue River. To accommodate both a greater volume of traffic and larger locomotives the facilities at Jasper were expanded in 1924. A six-stall addition was made to the roundhouse at a cost of \$54,000. This included a new machine shop. A new generator room and stores building were also built at this time.¹⁹ The stalls were longer than in the original 1912 structure. Apparently the 70 foot turntable was not replaced with the currently-in-place 100 foot item until 1930.²⁰

Jasper remained, and remains, an important CN Rail maintenance centre in the mountains. The original 1912 GTPR roundhouse was taken down by the company in 1959, leaving just the 1924 six-stall annex which has undergone significant alterations. Today repairs are regularly done to rolling stock and only the most minor work is carried out on diesels at the Jasper Roundhouse.

TABLE I

CANADIAN NATIONAL RAILWAYS			
COMPARATIVE STATEMENT OF PRESENT FACILITIES AT JASPER AND LUCERNE			
J A S P E R	INSURANCE	L U C E R N E	INSURANCE
12 Stall Brick Round House 87 ft., Boiler Room 64' X 71' and annex 27' X 35'	\$45,000	5 Stall Frame Round House 90 ft., and shop 35' X 80'	\$30,000
75 ft. Standard turntable, concrete circle	No insurance	86 ' 9" Turntable, concrete circle	No insurance
4 Pocket Coaking (sic) Trestle	\$27,500	None	-----
44' X 21' Sand House	\$550	None	-----
1 Steel 100,000 gal. tank and 1 wooden 40,000 gal. tank	\$5,300	1 Steel 60,000 gal. tank	\$1,300
Frame Station	\$14,500	1 Frame Pump House	\$1,450
Frame Freight House	\$6,100	Frame Station	\$10,700
Oil Storage Tank	\$21,000	None	-----
Frame Engineers' Bunk House	\$1,300	None	-----
Frame Shopmens' Bunk House	\$750	Locomotive Foreman's Dwelling	\$2,000
Frame Ice House	\$4,500	Bunk House	\$2,000
Frame Section House	\$2,400	Frame Ice House (750 tons)	\$1,800
Frame Storehouse	\$8,000	Frame Section House	\$1,400
Section Bunk House	\$900	Frame Storehouse	\$16,000
Master Mechanic's Office	\$1,050	None	-----
4 various tool houses	\$1,400	None	-----
Coal shed and coal boxes	\$500	None	-----
Oil and dope house	\$700	None	-----
Stock chute	\$25	None	-----
2 Material racks	\$75	None	-----
5 Through Yard tracks; 1 wye; Freight Shed spur; Spur track past stock yard; & other engine spurs and tracks	-----	4 Through Yard tracks; 1 wye; other engine spurs and sidings	-----
TOTAL	\$141,550	TOTAL	\$66,650

While no one outside CN Rail can tell definitely what the railway's plans for the surviving part of the roundhouse complex at Jasper may be, it reports, as noted above, no intention to cease its maintenance operations there. Today Jasper would appear to be more important as a service centre than ever before, though this may offer no security to the particular roundhouse under study. Jasper is now the only maintenance facility between Edmonton, Prince George and Kamloops. It also services engines and cars on branch lines to the coal fields. Edson, McBride and Blue River are now merely the turn-around points for the Jasper crews.²¹ The roundhouse complex at Edson was demolished in the late 1950s. That at McBride was torn down in the early 1950s and the Blue River facility also has been demolished.²²

ARCHITECTURAL AND ENGINEERING

Construction Character

None of the original 1912 GTPR roundhouse remains. As noted above it was demolished in 1959. What is left is the 1924 CNR six-stall roundhouse addition, built after the consolidation of the two divisional points at Jasper. The 1924 building was of brick construction, with cinder floors and a roof supported by wooden members. It was originally steam heated, from boilers contained in the 1912 section of the building, but now all remnants of this system have been removed. Six sets of double-hung wooden stall doors on the four remaining active stalls, these new doors likely having been installed after the last steam locomotive was serviced



A view of 6005 on the turntable at Jasper, showing the six-stall 1924 addition to the roundhouse. Provincial Archives of Alberta, photo No. PA-685/11.

here. Apparently new metal posts and cross-members are in place in both the roundhouse and machine shop, as additional roof support to the original wooden members.

Functional or Operational Quality

Massive alterations have also been carried out on the surviving 1924 roundhouse addition. The most obvious of these were the complete elimination of two of the stalls in this originally six-stalled building. So complete have these modifications been that not one of the CN Rail staff interviewed at the roundhouse in November 1990 was even aware that the roundhouse initially had six stalls. Now only four doors exist and only three stalls, only one of which has a working pit. The crew there was aware of the possibility of four stalls in days past. The southern-most and northern-most stalls now house storage rooms and offices respectively. Modern windows and doors, not remotely resembling the originals, have been installed throughout. The boilers and all the machinery from the machine shop annex are all gone. The machine shop now

serves as a garage for a mobile crane. Not surprisingly, no sign of the exterior portion of the smoke jacks has survived, neither any interior part.

ENVIRONMENTAL

Turntable

The 1930 turntable is still in service and looks much, if not exactly, as it did in the early 1950s.

Ancillary Features

The roundhouse is the lone surviving structure from the steam era in the Jasper yard. The water tower, coal chute, original sand tower and other important steam era structures have all been removed. The roundhouse is definitely an integral part of a fully operational rail yard, but it is the sole survivor of its time.

END NOTES

1. Smyth, David, *Extant Engines in Canada: A Report Presented to the Historic Sites and Monuments Board of Canada*. Not Published, 1992
2. No one at any level at CN Rail, at either Jasper or Edmonton, admitted any knowledge of any plans to discontinue the Jasper Roundhouse. Two roundhouse employees, carman Al Laarz and administration clerk Val Covey, both expressed confidence that the building would be maintained. Though citing no precise figures, both Laarz and Covey separately asserted that the money recently spent on the existing roundhouse could have paid for a replacement building, if that had been the corporation's intention. Smyth interviews of 28 November 1990 with Laarz and Covey.
3. David Smyth, "The Yellowhead Pass and the Fur Trade," *BC Studies*, No. 64 (Winter 1984-85), pp. 48-73.
4. Robert F. Leggett, *Railroads of Canada*, (Vancouver: Douglas, David and Charles, 1973), p. 111.
5. *Ibid.*, pp. 111-8, and T.D. Regehr, *The Canadian Northern Railway: Pioneer Road of the Northern Prairies, 1895-1918* (Toronto: Macmillan Company, 1976). For a discussion of the route selection in British Columbia, and its associated problems, see pp. 297-300 of Regehr piece.
6. Robert F. Leggett, *op.cit.*, pp. 119-32.
7. James G. MacGregor, *Overland by the Yellowhead* (Saskatoon: Western Producer Book Service, 1974), pp. 168-87; Leslie S. Kozma, "Senseless Duplication: A Brief Case History of the Development and Demise of the CNoR and GTP Mainlines from Edmonton, Alberta to Red Pass Junction, B.C. - 1905 to 1960" (Unpublished March 1978 typescript manuscript held by the library of the Glenbow Museum, Calgary), and Merna Forster, *Jasper...A Walk in the Past* ([Jasper?]: Parks and People, 1987), p. 26.
8. R.M. Bailey, "Some Background on the Historical Significance of the Jasper Turntable and Roundhouse" (Unpublished three-page manuscript prepared in March 1988 and submitted to the Superintendent of Jasper National Park in April 1988), p. 2.
9. *Ibid.*
10. Kozma to Smyth letter of 19 October 1991.
11. Edward Forbes Bush, MRS No. 209, pp. 198-9, and Hilderman, Feir, Witty and Associates, "Hanna Historical Roundhouse and Village: Feasibility Study and Concept Design" (Edmonton. Unpublished June 1981 report prepared for Alberta Tourism and Small Business, Travel Alberta Planning Unit), pp. 23-5.
12. Quoted from 12 January 1990 letter to author from R.F. Haglund, Building Manager, Manitoba East District, CN, Winnipeg.
13. Leslie S. Kozma, *op.cit.*, p. 1.
14. James G. MacGregor, *op.cit.*, p. 217.
15. Telegraph report dated at Edmonton on 23 May 1917, to G.A. Bell. Photocopy supplied to author by Leslie S. Kozma. the original of this report is in the NAC, RG43, Vol. 587, File 18648D1. The number of stalls in the Jasper roundhouse was incorrectly listed by O'Hagan as 10, and this figure was accepted by Bush. Howard O'Hagan, "Roundhouse Below the Mountain," *Canadian National Magazine*, Vol. 34, No. 12 (December 1949), p. 7, and Edward Forbes Bush, MRS No. 209, p. 259.
16. The information in this paragraph is derived from a telephone conversation of 4 January 1990 with Omer Lavallée, retired CPR archivist. See also, Laura Atkins, Colleen Nicoll and Jody Stewart, "Turner Valley Oilfields," *Alberta History*, Vol. 32, No. 1 (Winter 1984), pp. 9-19. The date of GTPR conversion to oil was supplied to the author by Leslie S. Kozma.
17. 1920 Evaluation Report, "Grand Trunk Pacific Railway Jasper, British Columbia." Photocopy supplied to author by Leslie S. Kozma. The original of this report is in the NAC, RG36, Series 35, Vol. 27.
18. 23 May 1917 telegraph report to G.A. Bell (cited above in note 125); Edward Forbes Bush, MRS No. 209, p. 512, and Howard O'Hagan, *op.cit.*, p. 22, and NAC, RG 30, Vol. 7507, File 588-1. This file deals with the problems faced in sorting out which of Lucerne or Jasper should be retained.
19. James G. MacGregor, *op.cit.*, p. 218.
20. Order No. 33402 of the Board of Railway Commissioners for Canada, 3 March 1923. NAC, RG 30, Vol. 7507, File 588-1.
21. Howard O'Hagan, *op.cit.*; Kozma to Smyth letter of 13 December 1989, and telephone conversation of 13 December 1989 with Robert Haglund, CN engineer, Winnipeg.
22. Howard O'Hagan, *op.cit.*, p. 23.
23. Telephone conversation of 28 December 1989 with Val Covey.
24. Telephone conversation of 28 December 1989 with Fred Johnson, Calgary, Locomotive Foreman at Jasper Roundhouse from early 1960s to 1979, and Edward Forbes Bush, MRS No. 209, pp. 198-9. Johnson himself was involved in the demolition of the complexes at Edson and McBride.

The Roundhouse Below the Mountain

By Howard O'Hagan

We are pleased to supplement Mr Symth's historical review with the article "Roundhouse Below the Mountain" from the December 1949 issue of "Canadian National Railways Magazine". This article provides a personal view of the difficulties of merging the former Grand Trunk Pacific and Canadian Northern employees when the duplicate divisional points at Lucerne and Jasper were amalgamated.

Above the Canadian National roundhouse in Jasper, Alberta, lies Mount Tekarra, dominating that part of the Athabaska valley as the roundhouse itself dominates the town of 1,700 people.

Tekarra, the mountain above the roundhouse, is about 8,500 feet high. It was named after his devoted Iroquois guide by James Hector, later Sir James Hector, an early traveller through the Athabaska valley. The word in Iroquois means "Fidelity".

Mountain and roundhouse, each in its separate way, is an old-timer. Tekarra was there when the ice came and saw it recede and later watched the river make a valley. The roundhouse was built by the Grand Trunk Pacific in the summer of 1912. It had 12 stalls. Today it has 18. In this growth, the roundhouse, like Tekarra, might be regarded as a symbol of fidelity--the fidelity, not of one man, but of dozens and hundreds who over the years have toiled here and nursed and nourished the proud and white- and black-plumed monsters which go out each day and night, wailing into the mountains, drawing behind them the cargo, passenger and freight, which is a nation's blood and business.

The first locomotive to enter Jasper and to be tended in the roundhouse came, of course, from the east in the summer of 1912. It was G.T.P. No. 60 and was driven by Noble Findlay. The locomotive foreman at the time was Jack Lewis, now retired and living near Vancouver. He was in charge of the roundhouse until 1924, when following the consolidation of the former Canadian Northern divisional point of Lucerne, B.C., with Jasper, Tom Young came from the former town to take over.

Noble Findlay, the first man to drive a locomotive into Jasper Park, is still a familiar figure about the town. He has little to say about this early experience. It was, to him, merely another run over a new stretch of mountain line. He can tell you, however, that the bell of old No. 60 is not yet silenced. It still rings up against the mountains, for it has been preserved as a memento of the early days and now hangs above Green 13 on the Jasper Park Lodge golf course. Nor is its purpose purely one of commemoration. Green 13 is a sunken green. Golfers playing there are not visible to others approaching along the fairway. Therefore, when they have picked up their balls, they pull a rope, ring the bell of locomotive No. 60, that those waiting to drive on to the green may proceed with their game.

It was only a year after the opening of the Lodge in 1924, that the Jasper roundhouse entered upon its present stage of development. This was the year when Lucerne came to Jasper. Tom Young, then the newly appointed locomotive foreman, today is retired and will stand under the mountain ash and poplar trees around his neat home in the north end of Jasper and talk of the problems which beset him during consolidation -- problems which were peculiar not to the roundhouse at Jasper, but whose significance is that they were common to the meshing of dozens of divisional points which took place during the early 1920's in the process of forming a unit out of the many roads which, under the late Sir Henry Thornton, developed into the Canadian National Railways.

For one thing, Tom Young points out, feeling ran high between the Grand Trunk men at Jasper and the Canadian Northern men who came from Lucerne, just on the other side of Yellowhead pass. Each group thought in terms of its past affiliation and not yet in terms of the new. Tom Young's job was to make a working team out of these disgruntled elements.

The Lucerne men were disgruntled, some of them at any rate, because they had to give up their homes by a green mountain lake and move across the divide into another community. The Jasper men, again some of them, were disgruntled by the invasion of their working quarters by newcomers with schedules and ideas that were strange.

These resentments had been fortified by the years of delay in consolidation and of indecision as to whether Lucerne, a freight terminal, would come to Jasper or Jasper, a passenger terminal, move to Lucerne. Jasper, a national park headquarters as well as a railroad town, was less adversely affected by the postponements than Lucerne. In Lucerne, composed except for a few trappers and three storekeepers, entirely of railroaders and their families, houses were neglected, gardens untended, for their owners did not know when they might be called upon to leave them. When the order came through in 1924 and the working staff moved to Jasper, relief in many cases was matched by a not unnatural disappointment.

This was only the background of the real headache of the new locomotive foreman in the Canadian National roundhouse in Jasper. the main headache was the matter of schedules. In the mechanical departments, the schedules of Jasper and Lucerne men

jibed, but quite the contrary was so with the locomotive engineers and firemen. Here the G.T.P. had one schedule, the Canadian Northern from Lucerne another. Two terminals lie west of Jasper: McBride on the old G.T.P. and Blue River on what was once the Canadian Northern. Tom Young, at first, could send no C.N. men to McBride and no G.T.P. men to Blue River.

Edson is the terminal to the east of Jasper. Here, where only one line was used, the difficulty was settled by allocating work in the proportion of three to two in favor of the Canadian Northern crews. The effort required to keep this proportion invariable was no small one and confusion was a constant threat. The problem was finally solved by Howard Chase, then Chief Engineer for the Brotherhood of Locomotive Engineers, who came up to Jasper and persuaded the adherents of the G.T.P. and of the Canadian Northern to accept a common schedule. Similar agreement was reached in other western duplicate terminals such as Edmonton and Saskatoon.

In the shop itself, where schedules were not a trouble, there was still the problem of bringing together in close working association men who were used to slightly different working methods and each man, inevitably prejudiced in favor of his own. "I solved that one," Tom Young says with a wry smile. "I solved it by teaming a G.T.P. machinist with a Canadian Northern helper and vice-versa. When the boys saw that no favorites were being played, we had the situation licked. But, you know, what impressed me most about it was that this wasn't just a worry for us here in Jasper. It was a difficulty which had to be met and beaten in dozens of other shops. Because it was being beaten, the men gradually came to realize that they were no longer working for the old Grand Trunk or the old Canadian Northern. No, they came to understand that they were now working for the Canadian National."

Tom Young, who was succeeded as locomotive foreman by G. R. Steeves of Hanna, Alta., in 1935, is the link in the history of the Jasper roundhouse between the past and the present--a link, for instance, between 1924 when the roundhouse handled locomotives, including the old 2100's, ranging in weight from 90 to 130 tons, to today when it takes in the 4300's, the 6000's and 6100's which scale from 250 to 300 tons.

The locomotives of 1924 were known as 90 per cent engines. Those of the present are 150 per cent or better. This 150 per cent means that the locomotive has a 150,000 draw-bar pull, less one per cent for the weight of the locomotive itself. According to Tom, the draw-bar pull is estimated in this way: you take 85 per cent of the steam pressure of the locomotive. This represents the actual pressure on the valves because the steam "reduces" after leaving the throttle. Then you square the diameter of the cylinder, multiply this by the 85 per cent of the steam pressure and by the length of the cylinder. Divide this by the diameter of the driving-wheel. Then, if your calculations are sound, you have the draw-bar pull. In the old days, Tom says locomotives were rated by the

number of cars they pulled, this whether the cars were loaded with straw hats, coal or lumber. Incidentally, car limits for locomotives leaving the Jasper roundhouse are, currently, 59 west and 70 east, easily twice the number hauled, on the average, 245 years ago. The average monthly dispatch of locomotives is around 450. This is not twice the figure of 1924 for the reason that, though traffic has tremendously increased, today's power units perform much more work on each dispatch.

In 1930 Tom Young saw the installation the present turntable of 100 feet, capable of handling the new locomotives taking the place of the old 90 to 130 percenters.

Other changes have come about. The ice-house, by the roundhouse, has now four times the capacity it had in the 1920's. Air conditioning has had a lot to do with bringing this about and today a passenger train, during the summer months, will take from 20 to 30 tons of ice before it pulls out of Jasper.

Should for any reason the town water supply fail, the roundhouse will not be caught short for an auxiliary system has been laid down to the Athabaska river. The town's water comes from Cabin creek which drains a series of lakes below Mount Pyramid to the west.

Today, under Locomotive Foreman Steeves and his assistant, H. Kensit, a staff of 104 is working in the motive power and car departments and 96 engine-men in the motive power department. On the Brule, or eastern subdivision are six freight engines and two passenger engines, while 12 freight engines and two passenger engines serve the Tête-Jaune and Albreda subdivisions to the west. Those to the west burn oil, to the east coal. Two switch engines work in the yard.

Few of the old-time engineers and firemen who came from Lucerne at the time of the amalgamation in 1924 are presently on the job. Of the Grand Trunk men who were in Jasper then, all are out of service. Of the Lucerne men four remain: Oscar Jacobson, Tom Cheeseman, Sammy Fellowes and Sam Sliter.

They, and the other more recently arrived engineers and firemen, today roll the freight and passenger trains of the Canadian National east and west on the main line--east along the wide, grey Athabaska to Entrance and through the foot-hills to Edson and west over Yellowhead pass, under the lordly frown of Mount Robson down the Fraser to McBride or over Albreda Summit to the North Thompson and Blue River. Each of them is more than a railroader. Each, through his years on the road, has learned to know the threat of mountains, to study the weather which may bring slides or washouts. Theirs is the vigilance of service, of faith to a trust as, on each journey, they go out from under the shadow of the mountain whose name stands for fidelity.

Source: Canadian National Railways Magazine, December 1949.

Working on the Railway

This is the second instalment of this series looking at the lives of individuals who worked for the railways during the steam era. The first individual who was featured in this series moved across the continent during his sixty career working for the Intercolonial, Canadian Northern, Canadian National and Northern Alberta railways. This instalment features the life story of an individual who rose from an apprentice on the Grand Trunk to the highest executive positions on the Canadian National. This article appeared in the a 1931 issue of the "Canadian National Railways Magazine".

Six Decades of Railway Life

By Colin G. Groff

The life story of any outstanding railroader furnishes material aplenty of the romantic and inspirational kind, for railroading is in itself a romance and an adventure.

But few of them could equal in romance and inspiration the career of William Doig Robb, retiring next month from the position of vice-president of the Canadian National Railways, after 60 full years of service; for to few railroaders anywhere in the world has been given the privilege of rounding out six full decades of service, retiring at the age of 74 with so abundant a remaining store of health and vigour as to guarantee many years for the enjoyment of well-earned leisure.

The youth of Canada can find inspiration enough in the career of this remarkable Canadian, who, in the 60 years of his devoted service to the great railway system which is now the Canadian National Railways, not only rose from humble apprentice to a vice-president but made outstanding contribution to the growth and development of his own system and to Canadian railroading in general. Mr. Robb's history is, of course, the history of Canadian railroading itself. The 60 years of his service is the span that bridges the gulf between the wheezy old wood-burners of the sixties and the locomotive giants of 1931, and, from first to last, from the time nearly 50 years ago, when he installed the first Westinghouse airbrake in Canada on a locomotive, to the day a year ago, when he officiated at the inauguration of the train telephone, latest marvel of the modern railway world, he has had some hand in most of the improvements and developments that have helped to build up what is now known as one of the world's most modern transportation systems.

Mr. Robb is just completing his 74th year of life. But he looks younger than many men of 60, and is as health and vigorous as at almost any stage in his long career. Sitting across from him, at his office at headquarters, in Montreal, listening to his recital of incidents in his life, it was difficult to realize that he had done 60 years of service. It just didn't seem possible that it was his own personal story he was telling; for 60 years of hard, griding railroading doesn't tend to make a man look young at 74. What was the secret of it? There was no secret at all. Mr. Robb simply was just another wonderful exemplification of the old adage that hard work never did anybody any harm. But there was something more to it than this. Mr. Robb was blest with a happy nature, an ability not to "worry", a philosophical outlook on life, and the capacity to take a keen enjoyment in every task that confronted him. He faced and solved problems in the "tough" days of pioneer railroading

with the same keen pleasure that in later years he was wont to order a dinner at his club. They were meat and drink to him.

Not only is the retiring Vice-President the oldest executive in point of years, but he is also the executive the longest record of service.

Mr. Robb was not quite three years old when the Prince of Wales, later King Edward VII, officially opened the old tubular Victoria Bridge, in 1860. He was present years later as Superintendent of Motive Power for the Grand Trunk System, when the Duke and Duchess of York, later King George V and Queen Mary, presided at the opening of the re-constructed Victoria Bridge, now doing service for the system.

Mr. Robb has lived and breathed the atmosphere of railroading all his born days. The pungent smoke of the old wood-burning engines was in his nostrils as a "wee" chap, for his father, who had been an engineer on the Caledonian Railway, in Scotland, had come to Canada on invitation of the Grand Trunk Railway, which was a British institution and was in need of engineers. The terminus and shops were then at Longueuil, where Mr. Robb was born on September 23rd, 1857. On completion of the tubular Victoria Bridge, across the St. Lawrence, the terminal and shops were moved to Point St. Charles, and Mr. Robb, senior, ran out of that terminus as an engineer east and west, until he went to Sherbrooke as locomotive foreman. He afterwards went to Richmond, and after two years there was moved to Hadlow Cove, one and a half miles from Point Lewis, and it was here that Mr. Robb, as a boy, commenced the career that was to lead him to a vice-president's chair. He entered the shop as a machinist apprentice, on July 1st, 1871.

A few months later, when he had just turned 14, he met the first real test of his career. He was called upon suddenly to "fire" one of the old wood-burning locomotives on the passenger run from Levis to Richmond. The engine run then was from Point Levis to Richmond and from Point Levis to Riviere du Loup, and there was often a shortage of firemen. The call came one night on short notice for a man to "fire" the engine hauling the passenger train leaving Levis at seven in the evening. Fourteen-year-old Robb was the only man handy, and he was detailed. Every 50 miles it was necessary to stop and load up a fresh supply of wood. The conductor, brakeman, engineer and young Robb would get off and join in the job of throwing wood on to the tender.

Leaving the terminal, the juvenile fireman had to oil the engine, take water and wood and back down to the switch at hadlow, there the engineer stepped on, the boy running the engine down and coupling to the train. At Richmond the engineer got off the train, and young Robb had to reverse the engine, take water, wood and oil, and back on to the train. The "firing" was a back-



Grand Trunk locomotive No. 286 is typical of the motive power in use when Mr. Robb went to work for the railway. No. 286 was built by the Canadian Locomotive Company in Kingston (construction number 79) in November, 1870. Originally broad gauge, it was converted to standard in March 1874 and renumbered 96. In 1881 it was sold to the arch-rival Canadian Pacific Railway where it became No. 11, one of the new company's first locomotives. It served the CPR until October, 1895 when it was scrapped.

National Archives of Canada, Merrilees Collection, photo No. PA-185883.

breaking job, stuffing wood continually into the hungry fire-box—stiff enough for an able-bodied man, almost a staggerer for a 14-year-old lad. But young Robb was strong of back and sturdy of spirit. He “fired” that engine for a week. The only respite he got from feeding the fire-box was during stops at stations. In those days of no air brakes, it was necessary to shut off steam a considerable distance out of the station, and apply the hand brakes on each car in order to guarantee a stop by the time the station platform was reached. Fortunately for the young stoker, there were many such stops. That was the longest spell of firing he had. “I do not suppose there is another railroad man in Canada to-day that had just such an experience as that,” says Mr. Robb.

Mr. Robb's determination to “get on” early asserted itself. he was being paid 60 cents a day in the shops at Levis, which was high pay at that time for an apprentice. To finish his course he went to the large repair shops at Point St. Charles, Montreal, having still two years to complete his term. Here his pay was 80 cents a day, and here it was that, still a mere boy, he realized for the first time just how small a unit he was in the system, and that if he was to make progress it was necessary that he apply himself strictly to work and learn as rapidly as possible. To qualify himself further, he went to night school, sacrificing what time he might have had for youthful enjoyment, and was taught mechanical drawing, and practical mechanics appertaining to railway locomotives and equipment. This line of action soon brought its own reward. At the age of 24 he was made Charge hand, rebuilding and repairing engines, and early in 1883 he was made night foreman at Point St. Charles. Later that year he went to Belleville as locomotive foreman.

In those early days of railroading there was opportunity for much wider experience than is the case at present. At that time the English system of railroading was still largely in effect on the Grand Trunk, the Motive Power Department being entirely independent from any other department. A locomotive foreman had many more responsibilities and more departments under his charge than is the case to-day.

As locomotive foreman, Mr. Robb had all the engineers and firemen strictly under his jurisdiction. he examined them in both transportation and mechanical rules. In addition, he had under his jurisdiction all the water service department from Vaudreuil to Port Union. He had shops which took care of engineering department, work such as the making of frogs, switches and diamonds. The car department, between Kingston and Cobourg, was also under him. He attended all investigations for the Motive Power Department on the same footing as the transportation representatives. It can be seen from this that Mr. Robb received a very extensive railroad experience which it would not be possible for a locomotive foreman of the present day to obtain.

During the early years of Mr. Robb's career, very interesting developments were going forward in Canadian railroading. These had largely to do with the gradual shifting over from conditions of the country's first crude railway operations to more modern methods. Indeed, Mr. Robb had much to do with bringing these changes about, and in later years, introducing innovations which played a big part in the evolution of railroad operations.

In the beginning of his apprenticeship, very crude conditions prevailed. The engines and cars were all small, sidings were short,

and a great deal of the railroads was laid with the old iron "U" rails imported from England. Gradually they were replaced with the "I" steel rail, 56 pounds to the yard, also made in England. The engines were eight-wheel, with drive wheels about 5 feet 6 inches, cylinders 16 inches by 24 inches and pressure running from 110 to 120 pounds--mere toys compared with the giants of to-day.

The Grand Trunk at that time still operated on the old English [sic] gauge of 5 feet 6 inches, while the roads in the United States were on a 4 feet 8 1/2 inch gauge. Interchange of traffic between Canada and the United States roads thus presented many difficulties. A change was imperative. The Grand Trunk adopted the United States gauge west of Montreal in 1872 and the following year east of Montreal. In both cases, the change-over was made in one day--on a Sunday. The new locomotives were brought in from the United States, from the Baldwin, Schenectady and Rhode Island locomotive works.

After the national policy came into force in 1878 in Canada, no more locomotives were brought in from the States. From that time on for many years the engines were made at the Point St. Charles shop. In later years, when Mr. Robb was Superintendent of Motive Power, as many as 25 to 50 engines were built in a year.

It was during his service as a machinist at Point St. Charles that Mr. Robb installed the first Westinghouse airbrake on a locomotive in Canada. This machine was one being used on the Delaware and Hudson line for hauling trains into the Bonaventure Station in Montreal. The Grand Trunk trains were then equipped with the vacuum brake, an English railway equipment, which in fact is still in use on British railways both in Britain and in Argentina, where Mr. Robb saw them on his recent trip to South America.

It was not until some years later, when Mr. Robb was at Belleville, that the airbrake was placed on all Grand Trunk equipment, and Mr. Robb, with his knowledge of the new brake, was called in to instruct the engineers and firemen in its operation.

From Belleville, after 16 years of service there, Mr. Robb went to London, Ontario, as Master Mechanic, where he remained six months then was moved to Toronto as Master Mechanic in charge of the Mechanical Department of the system over lines in Ontario from York (now Danforth) to St. Clair tunnel.

Four years later he was brought to Montreal as Acting Superintendent of Motive Power, and within 11 months of that time was in the saddle as Superintendent of Motive Power for the entire Grand Trunk system, a position carrying a salary of \$5,000 a year. That was in 1902. Fifteen years later he earned the record of long service, initiative and enterprise, and his proved ability to handle men, by his election to the executive of the system as Vice-President in Charge of Motive Power and Car Departments. Promotion became even more rapid as the top of the ladder was being reached, for inside of 13 months he became Vice-President in Charge of Operation. Four years later in August, 1922, following the retirement of the President of the Grand Trunk System, he was appointed Vice-President and General Manager, which position he retained until the appointment of Sir Henry Thornton as Chairman and President of the fully consolidated Canadian National Railways.

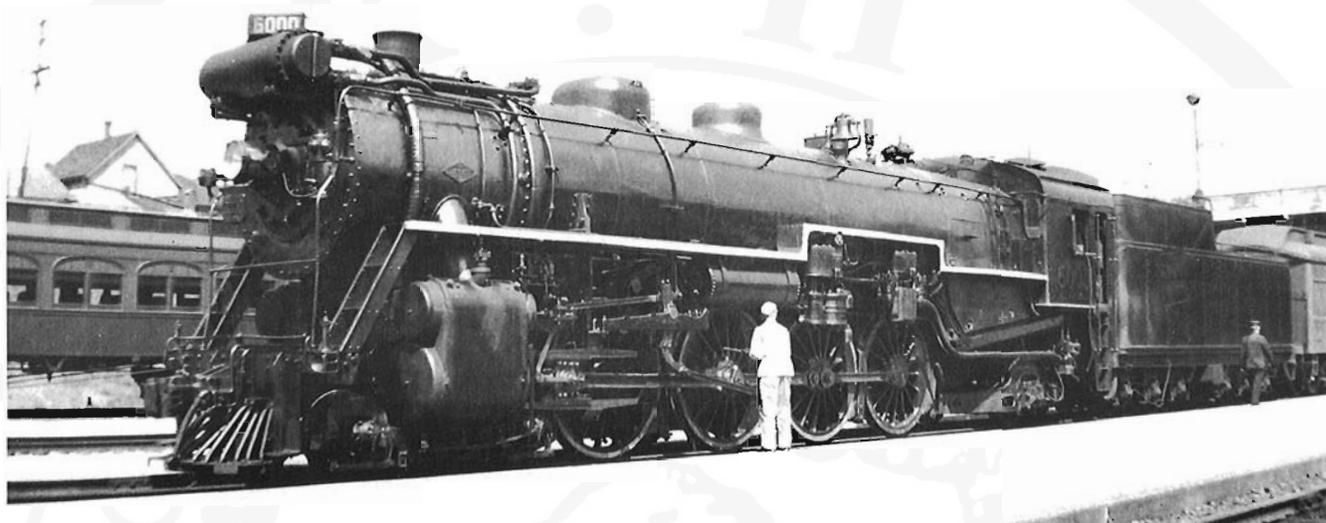
Mr. Robb's keen interest in the welfare of his fellow workmen and employees under his care, has never waned throughout the years of his busy career. The magnificent system of First Aid for injured workmen which is now one of the outstanding features of the National System, owes its origin to Mr. Robb's determination to remedy pitiful conditions which existed away back in his early apprentice days. "In those days" says Mr. Robb, "we saw injured men die before our eyes for want of immediate medical attention which was not available, since there were no telephones and no autos, and doctors were difficult to get. Fellow workers would stand around in a sympathetic attitude, but, knowing nothing of First Aid, were helpless to render assistance. This was one thing that impressed me when I was an apprentice, and I determined if ever I had the power, I would make an improvement. When I returned to Montreal as Acting Superintendent of Motive Power, I introduced First Aid instruction at Point St. Charles and later over the whole system, and along with that I introduced the teaching of 'safety first'. By the time the amalgamation came about, we had so many employees on the Grand Trunk System with a knowledge of first aid that it was almost impossible for an accident to happen without there being someone in the vicinity to render immediate assistance and relief.

"Another thing that impressed me while an apprentice was the need for a better apprentice training system. I was able in later years to introduce a new apprenticeship system, issuing text books and indenturing boys for five years, withholding a certain amount of their pay. We provided instructors, held yearly examinations, and when the course was finished, gave the apprentices a bonus. This system was later copied by railways throughout the world.

"This apprentice system stood us in good stead during the war. At that time we had no agreement with any union and could put on as many apprentices as we liked. I had increased the number of apprentices to such an extent that during the war, when our machinists were taken over by munition plants, the apprentices were able to take their places, and we carried on without trouble.

"Speaking of the war years, here is something that is not generally known," says Mr. Robb. "Both the Grand Trunk and the C.P.R. established in their plants, munition shops to assist in keeping up with the demand for shells. For two or three years, at Stratford and Montreal, the Grand Trunk turned out 2,000 or more 18-pound shells per day." This was largely under Mr. Robb's direction.

It was while at Belleville as locomotive foreman that Mr. Robb put into effect a most far-reaching innovation. This was the system of washing locomotive boilers with hot water. "In those days," said Mr. Robb, "we were very hard pressed at times for motive power. Locomotives had to be washed out after every 1,000 miles of operation, and the process was a long one, for, to avoid destruction of the fire boxes, the locomotives had to be cooled off gradually, before being washed out. It required generally from 12 to 14 hours for the 'washing out' process and this seriously tied up our engines and the yards often became congested with cars waiting to be moved. This, I felt was wasteful in many ways. I therefore evolved the system of hot water washing. When the engines came in they brought their own hot water. I blew this water out of the engines into a storage tank, and washed them out with their own water and with water heated by the sand drier. In



There's time for a few last touches with the oil can as the conductor walks back to the coaches before train 6, the "Inter City Limited" will pull out of Hamilton for Toronto. When this circa 1934 view was view, Number 6 was one of three daily Chicago-Toronto-Montreal trains fielded by CN. The 6000 was the first 4-8-2 type locomotive built for Canadian National and served as the fore-runner of a fleet of Mountain, Hudson, and Northern type steam locomotives which would become the standard power on CN main lines. It rolled out of the Kingston Locomotive Works in June 1923 and lasted till the last days of steam on CN. The massive proportions of these engines dwarfed the 4-4-0 type steam locomotives, like No. 286, which pulled the Grand Trunk trains when Mr Robb began his railway career in the 1870s.

Source: Paterson-George Collection

this way I turned engines out in from three to four hours, saving not only time, but fuel, for the engines, being still warm, required little fuel to raise steam once more. The new system worked so well that I was given authority to install it all over the Grand Trunk system."

It was some years later before this system was adopted by any other railway either in Canada or the United States. Some 15 to 20 years later, an amusing incident happened. Some United States firm stumbled on to the idea, and immediately patented it. Seeking for prospective purchasers for the system, the firm found that the Grand Trunk was using it and immediately threatened suit for infringement of patent. Mr. Robb took a considerable amount of satisfaction in informing the firm that he himself had patented the system 15 years before, record of which was registered at Washington. The manager, astonished, came to Montreal to see Mr. Robb, and asked him why he had not pushed the patent for sale to other railroads. "I was too busy working in the Grand Trunk," was Mr. Robb's reply. This was the beginning of one of those long and firm friendships with which Mr. Robb's career has been so richly endowed.

Mr. Robb was probably the first railway man in Canada to use air appliances for shop practices. He was the first to operate a turn-table by air pressure, using one man in place of four or five.

During the final part of his career, the nine years that have elapsed from the formation of the Canadian National System to the present day, Mr. Robb has, in his capacity of Vice-President, had charge of departments which have furnished him with new and exceedingly interesting fields for his initiative and energy. As in

former years, he has been actively behind every movement for the development of the most modern improvements in equipment and service. For instance, as Vice-President in Charge of Telegraphs and Radio, he sponsored the development of the train radio and the train telephone, which has put the National System in front of my other railway system in the world in respect to such modern equipment. The development also of the carrier current on the telegraph system, which as proved one of the wonders of the modern electrical and mechanical world, was brought about under his jurisdiction. As Vice-President in Charge of Colonization and Agriculture, he has seen these departments take their place as important factors in the development of the immense fertile areas throughout the dominion served by the National System. For eight years he has taken a keen interest in the promotion of the Boys' and Girls' livestock clubs, and has been a familiar and welcome figure among the young farmers each year at the Royal Winter Fair during the Canadian National Railways' competitions for these clubs.

As the crowning event of his career, Mr. Robb fittingly was chosen as the official delegate of the Canadian National Railways, and the personal representative of Sir Henry Thornton, to accompany the recent Canadian Trade Mission to the South American Republics. In the words of the Montreal Star, Mr. Robb... "has well earned his leisure and well will he know how to enjoy it. Always an eager traveller and student of life, always an intelligent lover of good literature--which, by the way, his sons have inherited--and of late a real golfer, his coming years of freedom from the burdens of office should be as rich and satisfying as his six full decades of devotion to duty and substantial achievement."

Rail Canada Decisions

By Douglas N.W. Smith

CN LEAVES THE BRUCE PENINSULA

During the last half of the nineteenth century, the community leaders of Owen Sound waged a continual effort to secure a share of the vast traffic in goods and people moving between the eastern manufacturing centres and the developing western farmlands. In 1850, the community had refused to provide a bonus to the Ontario, Simcoe & Huron Railroad which was to be built from Toronto to a point on Georgian Bay. Spurned, the OS&H ran its tracks to "Hens and Chicks", the present site of Collingwood. The OS&H terminus became the centre for shipping on Georgian Bay. With its speedy rail connection to Toronto, it also became a major trans-shipping point for settlers and manufactured goods moving to the American Midwest and grain and lumber shipments going to the east coast.

Having witnessed Collingwood's rapid rise to prominence, Owen Sound readily agreed to pay a \$300,000 bonus to the narrow gauge Toronto, Grey & Bruce Railway in 1872. The arrival of the first TG&B train in 1873 failed to touch off the expected major boom in trade largely because the port lacked its own steamship company. Hampered by limited on-line traffic and the unfortunate selection of narrow gauge which precluded the transfer of freight cars with the rest of the country's railways, the TG&B faced financial collapse by the end of the 1870s.

Initially it appeared the Grand Trunk Railway had secured control of the company, but an adroit purchase of the TG&B's bonds in 1881 gave control of it to the newly formed Canadian Pacific Railway. The TG&B formed a key link between CP's rapidly cobbled together network of lines in southern Ontario and the trackage completed west of Fort William (now Thunder Bay), Ontario. To tie together the two disparate parts of its railway, CP inaugurated steamship link between Owen Sound and Fort William. To accommodate the increased traffic, CP rebuilt the line to standard gauge, expanded the terminal facilities, and built the first grain elevator along Owen Sound's harbour. [See the article "Canadian Pacific's First Steamers" in the May-June 1992 issue of "Canadian Rail" for further details on CP's shipping interests.]

The 250,000 bushel elevator rapidly became overburdened by the flow of wheat. In 1887, the town's municipal officials offered CP a bonus to double the elevator capacity, but were turned down.

Rankled by CP's attitude, the town's leading businessmen were ready to listen when the GTR made them an offer to build a line into the city in 1891. In exchange for a subsidy of \$75,000, a GT subsidiary, the Grand Trunk, Georgian Bay & Lake Erie Railway built a 12.4 mile line from Parkhead, the junction with the line from Stratford to Wiarton. The GTGB&LE had been created by the GT in 1881 to takeover several struggling railway companies in the Bruce Peninsula. The GTGB&LE had completed the line to the Georgian Bay port of Wiarton in 1882. The first GTGB&LE train rolled into Owen Sound on July 12, 1893.

This construction of this branch line capped a program of railway construction and amalgamation which the GT had been following almost from the time it completed its original main line

west from Toronto to Point Edward (Sarnia). In 1859 when the GT had completed its line from the Atlantic Ocean at Portland, Maine to the shores of the St Clair River at Point Edward, Ontario, it comprised 972 miles of main line. Two decades later, its trackage had only grown by 301 miles or an average of 15 miles per year.

The fifteen year period between 1880 and 1894 was a period of intense expansion as the GT strove to meet the challenges of the CPR. Over these years the GT grew 2,239 miles or some 149 miles per year.

While the Owen Sound extension marked the end of the greatest period of growth in the GT system, it was not destined to fulfil the hopes of the leaders of the Owen Sound business community. Its lines already served the ports of Windsor, Sarnia, Port Edward, Port Huron, Goderich, Kincardine, Southampton, Wiarton, Meaford, Collingwood, Penetanguishene, and Midland. The company had encouraged the construction of grain elevators at many of these communities. Arrangements with many steamship lines on the upper Great Lakes gave the GT a commanding advantage over CPR. Not wanting to upset these arrangements, the GT announced that it was not interested in building a grain elevator or establishing a line of steamers at Owen Sound.

Grain statistics appear to bear out the policy adopted by the GT. In 1899, it hauled 11.3 million bushels of wheat from the elevators at Midland, Goderich, Collingwood, Sarnia while CP handled 2.6 million bushels through its sole port at Owen Sound. Never quite happy with the harbour at Owen Sound, CP moved most of its ships to the new grain port of Port McNicoll in 1912.

While the availability of competing railway service encouraged the growth of the Owen Sound, the community would become a regional centre and not a key point in the national grain transportation system.

A little more than a century after the GT began service to Owen Sound, CN received Agency authority to terminate its service. On September 30, 1993, it authorized CN to remove its trackage from Harriston to Owen Sound, a distance of 62 miles.

MORE CN LINES DISAPPEAR IN NOVA SCOTIA

By the end of 1993, CN trackage in Nova Scotia had been reduced to its main line from Amherst to Halifax, the branch from Windsor Junction to Dartmouth and little else.

On September 24, 1993, the Agency gave CN permission to abandon 15.5 of the 16.5 miles of the Pugwash Subdivision between Oxford Junction and Pugwash Junction and the 4.6 mile Pugwash Spur. Salt traffic, which formed the major commodity handled over the line, will be trucked to a reload facility near Oxford Junction. This trackage formed part of the ill-fated venture to develop a major port for trans-Atlantic shipping in eastern Canada.

The Great American and European Short Line was chartered in 1882. At this time, ships crossing the Atlantic between Liverpool and New York City required upwards of eight days to

make the journey. Their route brought them close to the east coast of Newfoundland and Cape Breton before turning south. By transferring passengers and mails to trains, several days could be cut off of the journey time.

Initially, the company planned to build its line from St John's to a point opposite Cape Breton, run a steamer over the Gulf of St Lawrence, build a line from a point near Cape North to the Straits of Canso, run their trains across the straits on a car ferry, purchase or rent the Intercolonial Railway trackage from Canso to New Glasgow and build a short line from New Glasgow to Oxford. At Oxford, the trains would run westwards over the Intercolonial.

Though construction began on the New Glasgow-Oxford line, the company rapidly ran out of funds. It was absorbed by the Intercolonial in 1888. The trackage was completed from Oxford to Browns Point, the junction with the ICR branch to Pictou, in 1890.

The second segment of CN's Nova Scotia trackage to be abandoned in 1993 was the portion of the Chester Subdivision from Summit [Mile 4.9] and Barry's Stillwater Marsh [Mile 42.3]. This trackage was built by the Halifax & Southwestern Railway (H&SW) as part of its line between Halifax and Yarmouth. While this segment was completed in 1904, the entire line was not finished until 1907. At this time, the H&SW was the second largest railway in the province with 350 miles of trackage. The Intercolonial had 475 miles while the Dominion Atlantic had 290 miles. Today less than five miles of the H&SW remains.

The major change, however, involved the sale of the Truro-Sydney main line and the spurs to Pictou and Hopewell to a new short line. On October 1, 1993, the Cape Breton and Central Nova Scotia Railway began operations. The company is owned by

RailTex of San Antonio, Texas. What makes Canada's newest railway noteworthy is its roster which is entirely composed of Montreal Locomotive Works locomotives. Main line power is primarily C-630M type diesels.

ANOTHER NEW RAILWAY

The Chemin de Fer de Lanaudière has set up shop on the former CP trackage between Joliette and St-Felix-de-Valois, Quebec. The lines primary shipper Bell Gas Ltee purchased the line from CP and began operations in March 1993. Motive power is a Montreal Locomotive Works S-13 acquired from CN.

SHORT TURNS

On August 15, 1993, the Ontario Northland Transportation Commission assumed ownership of the CN line from Cochrane to Calstock, Ontario.

CN received Agency authorization to abandon the St Raymond Subdivision from Shannon to Saint Raymond, Quebec, a distance of 19.7 miles. This line was built by the Quebec & Lake St John Railway in the early 1880s.

In 1925 the rails of the Alberta & Great Waterways reached the hamlet of Waterways, some 272 miles north of Edmonton. The line subsequently became part of the Northern Alberta Railways and then part of Canadian National. On September 14, 1993, the Agency authorized CN to abandon the trackage from Lynton to Waterways, a distance of 9.9 miles.

On September 25, 1993, CN received permission to abandon the last 1.4 miles of the Kincardine Subdivision near Listowel.

Canadian Railway Troops - A Follow-up

The article on the Canadian Railway Troops in World War I, which appeared in the November-December 1993 issue of Canadian Rail, has brought forth more comment than any other article which has ever been published in our magazine. Quite a large amount of interesting information has been received and is printed here as an update or sequel to the original article.

COMMENTS ON "RAILWAY TROOPS" ARTICLE

By Mervyn T. (Mike) Green

1. Front cover and pages 208, 213:

I assume these are the "Simplex" 4-wheel petrol-engined "Tractors" that you mention on page 200, with additional armour plating to protect the engine crews. There were 837 "Simplex" units produced by the Motor Rail & Tramcar Co. Ltd. of Bedford (England): at the peak of production, in early 1917, the factory was turning out 20 to 25 machines a week. They became the most common units on the Western Front. The 20 h.p. unit was specifically designed for working in forward areas over light track and was built only as an unprotected cableless machine. The 40 h.p. model, however, was built in three versions: open (with a pillar roof over the driver's seat), protected (rifle-proof shields and steel doors),

and armoured (completely enclosed like a small tank). It would appear that those shown in the article were the 40 h.p. "protected" variety. 200 other 45 h.p. petrol-electric tractors were built by British Westinghouse Co. Ltd. (100) and Dick - Kerr Ltd. (100).

There are several 1912 - 1919 built "Simplex" units preserved today in England at:

Amberley Chalk Pits Museum, near Arundel, West Sussex.

Irchester Narrow Gauge Museum, near Willingborough, Northampton.

Midland Railway Centre, Butterley Station, near Ripley, Derby (2 units).

Museum of Army Transport, Flemingate, Beverley, North Humber.

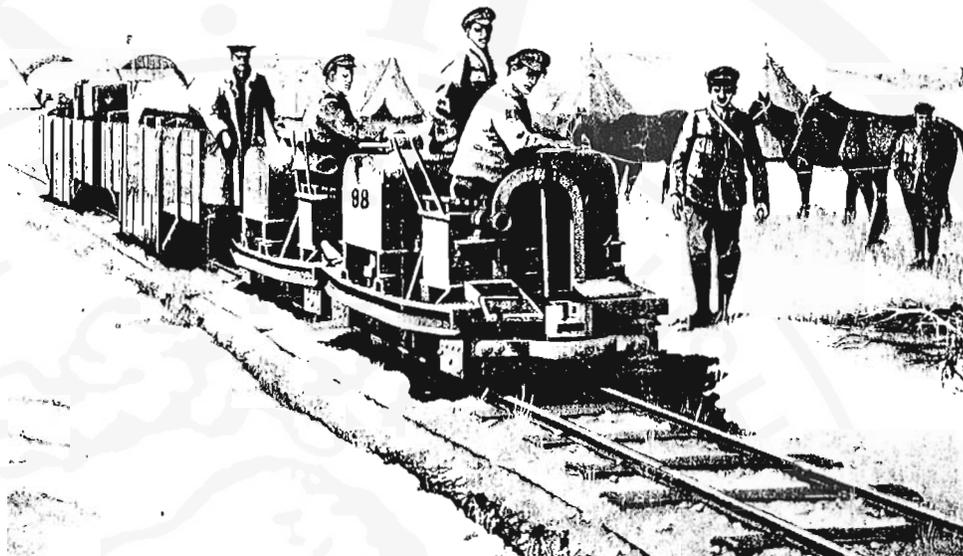
National Railway Museum, Leeman Road, York (60 cm. gauge).

2. Page 191, Areas of Railway Operations:

The memories of my father, Simon Edward Green (1895 - 1972), who was a volunteer soldier from 1914 in the 1st. Machine Gun Company, 4th Battalion, the Wiltshire Regiment of the British Army (commanded by Col. John Redman), included time with railway-building companies in the Middle East. He was sent to the Indian Empire in 1915 and stationed near New Delhi. A joint British and Indian Army expeditionary force (the "Egyptian Expeditionary Force") was raised and sent to the Persian Gulf in 1917, under the command of British General Edmund H.H. Allenby (1861 - 1936), to develop a "Second Front" and remove the Turkish Army from the Middle East. My father was part of this: he participated in the "March on Damascus" in 1917 - 18 and he provided Lewis machine-gun covering for the accompanying companies of railroad-building "sappers".

My father used the name "sapper" for any and all types of Army engineers: he also applied it to any soldier who built trenches, tunnels, roads, railways, or bridges and not just to the Royal Engineers personnel. The original name was applied only to those RE's who "sapped" into the opponent's trenches and depots and destroyed them. He recalled these sappers as including soldiers from Britain, Canada, India, Australia and New Zealand. He also remembered his other fellow-soldiers by occupation (e.g. gunner, rifleman, cook, driver, or batman), rather than by company origin (e.g. British county regiment, Service Corps, Indian regiment, or Royal Engineers). These troops were (in part) rebuilding the (German-built) Hedjaz Railway, sometimes called "Lawrence of Arabia's line", because of the destructive raids of Col. Lawrence and his Saudi desert groups against the Turks who previously controlled the line. Much new line was also laid, mainly with metre-gauge track lifted from Indian branch lines: this was pushed northwestwards as the troops advanced up the Tigris - Euphrates Valley in Mesopotamia (now Iraq, but he always referred to it as "Mespot") to Jerusalem (Israel) and Damascus (Syria). Some parts of this line still exist in the three countries named.

My father and fellow veterans of 1914 - 1918 had few positive memories of the war, although he became a member of the British Legion in the 1930's. They always referred to the turmoil as "The Great War". Even though my father was also a member of the British L.D.V. and Home Guard in World War II, 1939 - 1945, while on loan from the London Passenger Transport Board's Chiswick Bus Works, and employed on repairing Bristol Aircraft in Esher, Middlesex, he never referred to the Great War as World War I.



The first train over Vimy Ridge after the Arras offensive of April 1917, operated here by Canadian troops with double-headed "Simplex" 20 horsepower gas-mechanical tractors. From a painting by Roy C. Link, based on an Imperial War Museum photo (CO 1259).

3. My father's memories were not told me until some 40-odd years after the Great War, in the late 1950's, when he realised that we had a common military interest in the Middle East, even though neither of us had ever been stationed in the same place, apart from passing through the Suez Canal Zone.

I had by then spent my two years as a National Serviceman as part of the Royal Air Force's Middle East Air Force, being stationed at Khormaskar (Aden Colony, now South Yemen) and Khartoum (Sudan), with brief stays at several Suez Canal Zone air bases, 1951 - 1952. Later, as a Regular Officer, I was stationed at RAF Pembrey in South Wales (1952 - 1958). It was during those latter years that my father finally told me of his Great War experiences.

4. Page 196 - Colonel Stewart: There is a considerable amount of information on him in "The Railway Contractors" by Geoffrey W. Taylor (Victoria, 1988). Stewart later helped develop the well-known Western Canadian rail construction firm of Messrs. Foley, Welch & Stewart, which had widespread interest in the Grand Trunk Pacific and other lines.

5. Page 197: The 0-4-0 steam locomotive in silhouette appears to be of a fairly standard design used on industrial lines in France and Belgium in the first half of this century. I believe a number of these were taken over by the British Railway Operating Department (ROD) in 1914. It could also be one of the hundreds of small (60 cm. to 1 metre) 0-4-0 T's built by Decauville of France, many of which were used by the French Army on their portions of the Western Front. One of this type is still operating at the Amberley Chalk Pits Museum, near Arundel, West Sussex, England. There are also others still in existence: see below at paragraph 6e.

6. Page 200 - Motive Power used:

a. About 600 varied standard gauge steam locomotives were taken over from British railways by the Ministry of Munitions in 1914, mostly of the 0-6-0 freight (or "goods") type from the Great Western and Great Central Railways. New 2-6-0 dual-service (or "mixed-traffic") locos came from the GWR also. Particularly useful were Great Central Railway 2-8-0 dual-service locos and Great Eastern Railway 2-4-2 T switchers (or "shunters"), all lettered ROD (Railway Operating Department). Both types had low axle-weights, to allow operation on hastily-laid standard-gauge lines with unstabilised ballast and rails. They were painted an all-over dark grey, with white lettering and numbers.

b. The Belgian light railways were known as the Vicinal Section of the Western Field Railways. They were of great importance to the British Army and 50 metre-gauge 0-6-0 T tram locomotives of class 18 were built in 1917 - 1918 by Robert Stephenson (30) and by Hawthorne Leslie (20). Many of these locos worked in the Ypres sector. After the war, 48 of these were taken over by the SNCV (Societe Nationale des Chemins de Fer Vicinaux), as Class 19; most operated in the Province of Antwerp. The SNCV operated an extensive network all over the country, the tracks often being laid alongside public highways. Most were closed in the 1950's and 1960's.

c. Some small German-built locos were also in temporary use by the Allied forces on the Western Front, after capture during the infrequent advances before 1918.

d. The U.S. Transportation Corps in France used many standard-gauge "Pershing" 2-8-0 units. A large number of narrow-gauge units were built by Baldwin (495 4-6-0 T) and Alco (100 2-6-2 T): they were also sent to France and used by the U.S. Army 1917 to 1919. The Baldwins were built and shipped at the rate of 25 per week, the last batch being delivered in France in July 1918. Very few returned to the U.S.A.: most stayed in France, while a small number went to Britain and elsewhere. It was probably one of these that David Ll. Davies remembers working in a Welsh slate quarry (page 213). Others still exist in Britain at Porthmadog, in Wales, on the Ffestiniog Railway: a 1918 Baldwin 2-4-0 T and a 1917 Alco 2-6-2 T (acquired in 1984 from France).

e. A careful search of the "Canadian Tracksides Guide" (Ottawa, 1993) does not reveal that any of the several thousands of rail units used in the Great War have been preserved in Canada, but there may be some in the U.S.A. However, as mentioned above, there are some units preserved in Britain, while some others are also preserved on the European mainland:

In France, at the French Railway Museum in Mulhouse, in Haut Rhin, just north of Basel.

In Switzerland, at the Narrow Gauge Museum in Blonay-Chamby (between Vevey and Montreux).

In Belgium, at the Tramways Museum at Schepdaal, near Brussels.

f. There were also large numbers of railway locomotives used by the Central Powers on the Western Front, especially 600 cm. and metre-gauge types. Several German units are preserved in Austria, France and Germany. Other preserved units can also be found in Turkey.

g. In a little over 20 years, in 1939, world war was renewed. Once again, very large numbers of steam locos were provided for the British Army (through the British Ministry of Supply). These included some used earlier in the Great War (marked *) and:

108 Great Western Railway "Dean Goods" freight 0-6-0's *

259 London Midland & Scottish Railway Stanier class 8F freight 2-8-0's.

92 London & North Eastern Railway Robinson class O4 freight 2-8-0's * and 13 class F4 and F5 2-4-2 T switchers *.

935 Standard MoS Riddles freight 2-8-0's (after the war, 733 were taken over by British Railways and classified as class 8, 184 by the NS in Holland, and 4 to the Kowloon-Canton Railway of China; the rest [14] were destroyed by air or land bombardment).

150 Standard MoS Riddles freight 2-10-0's (all of which were absorbed by BR and classified as class 9).

377 of the Standard MoS Riddled-Hunslet 0-6-0 ST switcher (in 1946, 75 were sold to the LNER in Britain, 75 to the NS in Holland, and 6 to the CFT in Tunisia, while several hundred were used in Britain's National Coal Board Collieries, with the last in use until the early 1990's - many have been preserved).

And a few smaller steam and diesel units.

All locos were lettered WD, for War Department, and painted in a sand-brown or khaki livery (some with green camouflage stripes and blobs).

7. Page 201: The soldier-driver of the 4-wheel passenger speeder is an army Lance Corporal, the lowest of the non-commissioned ranks. He has a single chevron on the upper part of each sleeve. A Corporal carried two chevrons and a Sergeant three. My father reached the heady rank of Lance Corporal for a short period during his four years of army service!

8. Although there can be few living veterans of the Great War, it is possible that further data could be forthcoming from branches of the Royal Canadian Legion and the Army, Navy and Air Force Veterans in Canada organizations.

9. Sources:

Butcher, Alan, RAILWAYS RESTORED. Shepperton, Surrey England: Ian Allan, 1992.

Bytown Railway Society Inc., CANADIAN TRACKSIDE GUIDE, 1993, Ottawa, Ontario 1993.

Davies, W.J.K., GREAT WAR RAILWAYS, Edmonton Alberta: Alberta Pioneer Railway Association's "The Marker", October-November 1983.

Friel, Charles P., IN SEARCH OF THE LAST 141R. Shepperton, Surrey, England, "Railway World", October 1974.

Green, Simeon E., PERSONAL DIARIES AND PHOTOGRAPHS, 1915-18. Bideford, North Devon, England: Green Family, 1957.

Nock, O.S., RAILWAYS IN THE TRANSITION FROM STEAM, 1940-1965. New York, N.Y., Macmillan Publishing, 1974.

Ransome-Wallis, P., PRESERVED STEAM LOCOMOTIVES OF WESTERN EUROPE. Shepperton, Surrey, England: Ian Allan, 2 volumes, 1971.

Research Assistance: Ron Meyer and John Picur, both of Vancouver B.C., 1993-94.

Smith, Mark et al., STEAMPASSENGER SERVICE DIRECTORY, Richmond VT: Empire State Railway Museum Inc., 1990.

Taylor, Geoffrey W., THE RAILWAY CONTRACTORS. Victoria B.C., Morriss Publishing, 1988.

Tourret, R., WAR DEPARTMENT LOCOMOTIVES. London, England: Tourret Publishing, 1976.

Westwood, John, RAILWAYS AT WAR. La Jolla, California: Howell North Books, 1981.

THE DEPOT AT PURFLEET

By David LI. Davies

You have given me a clue about Purfleet (see bottom of right hand column, page 196), which is on the north side of the Thames, 15 miles due east of the centre of London. In World War I it would have been served by the London, Tilbury and Southend Railway.

From your comments, it would appear that at the beginning of 1917 Purfleet became the English base camp for the CRT. This would make sense as ships from North America could land supplies there and specialised loads could go forward to France from there, avoiding the clutter of general ports.

The sale of the Baldwin to the Glyn Valley Tramway (my boyhood railway) took place at a "dump" at Purfleet. All adds up!

My father was also in the British Army in France from December 1914 to April 1919; and I followed in 1945 - 1948 in the Welsh Regiment - now amalgamated into the Royal Regiment of Wales.

THE RAILS FROM WESTERN CANADA

By Les Kozma

I would like to make some clarifications regarding the paragraph "Constructing and maintaining" in the right hand column of page 198 [regarding the rail removed from redundant railway lines in Western Canada].

On 18 December 1916, the Dominion Government received an appeal from the British Government requesting 1,200 to 1,500 miles of steel rails for the War effort. An order-in-council was passed the following day and work commenced almost immediately on the lifting of unused sidings on the Canadian Government Railways, primarily on the under-utilized National Transcontinental line. Four hundred miles of track, complete with switches and fittings, were taken up, and presumably shipped overseas. About two-thirds of the lifted track was replaced by lighter rail, while the balance was not replaced.

In May 1917, the Dominion received another request for rails, and on 18 May 1917, another order-in-council was passed, authorizing removal of rails on the Canadian Northern and Grand Trunk Pacific lines west of Edmonton. Work in the field commenced at once. Connections were made between the respective lines and the track was lifted and shipped east. Portions of the consolidated line were used jointly by the CNoR and GTPR as early as August. Work was completed by October 1917.

The rails and fittings were all sent to Trois Rivieres, Quebec for shipment to France, but primary documentation indicates that the steel removed from the West never left Canada! I have been unable to determine the exact disposition of these materials, but it appears that it was subsequently consumed in railway construction and maintenance in the East.

I can cite National Archives of Canada, RG 43 Volume 587, File 3323, W.H. Biggar to the Minister of Railways and Canals, dated 2 January 1919: "*The work was being done as a war measure... the clear intention... was to secure rail for war purposes in France. It now appears that very little rail, if any, went to France, but remained in Canada, and was disposed of by the Government in Canada*".

THE UNITS OF THE CANADIAN RAILWAY TROOPS

Submitted by R.F. Corley

The units of the Canadian Railway Troops, with their dates of organization and disbanding.

1st Battalion, CRT, formed from experienced Canadian Pacific Railway personnel

June 15, 1917 - November 1, 1920

2nd Battalion, CRT, formerly the 127th Canadian Infantry Battalion, Canadian Expeditionary Force

June 15, 1917 - November 1, 1920

3rd Battalion, CRT, formerly the 239th Canadian Infantry Battalion

June 15, 1917 - November 1, 1920

4th Battalion, CRT

June 15, 1917 - November 1, 1920

5th Battalion, CRT

June 15, 1917 - November 1, 1920

6th Battalion, CRT, formerly the 228th Canadian Infantry Battalion

June 15, 1917 - November 1, 1920

7th Battalion, CRT, formerly the 257th Canadian Infantry Battalion

June 15, 1917 - November 1, 1920

8th Battalion, CRT, formerly the 218th Canadian Infantry Battalion

June 15, 1917 - November 1, 1920

9th Battalion, CRT, formerly the 1st Pioneer Battalion

June 15, 1917 - November 1, 1920

10th Battalion, CRT, formerly the 256th Canadian Infantry Battalion

June 15, 1917 - November 1, 1920

11th Battalion, CRT, formerly the 3rd Labour Battalion

June 15, 1917 - November 1, 1920

12th Battalion, CRT, formerly the 2nd Labour Battalion

June 15, 1917 - November 1, 1920

13th Battalion, CRT

June 15, 1917 - November 1, 1920

14th Battalion, CRT Depot

June 15, 1917 - November 1, 1920

No. 1 Section, Skilled Railway Employees, CRT

February 1, 1917 - November 1, 1920

Ruthenian Railway Construction Company
February 1, 1917 - November 1, 1920

Railway Construction Company, Military District No. 10, Manitoba
February 1, 1917 - November 1, 1920

Railway Construction Company, Military District No. 11, British Columbia
February 1, 1917 - November 1, 1920

Railway Construction Company, Military District No. 12, British Columbia
February 1, 1917 - November 1, 1920

Railway Construction Corps, Military District No. 13
February 1, 1917 - November 1, 1920

Railway Construction Company, Southern Alberta
February 1, 1917 - November 1, 1920

No. 2 Section, Skilled Railway Employees Battalion, CRT
June 15, 1917 - November 1, 1920

No. 1 Skilled Railway Employees Reinforcing Draft, CRT
June 15, 1917 - November 1, 1920

No. 1 Railway Construction and Forestry Depot
June 15, 1917 - November 1, 1920

No. 2 Railway Construction and Forestry Depot
June 15, 1917 - November 1, 1920

No. 3 Railway Construction and Forestry Depot
June 15, 1917 - November 1, 1920

No. 1 Railway Construction Reinforcing Draft
June 15, 1917 - November 1, 1920

Corps of Canadian Railway Troops
September 3, 1918 - November 1, 1920

Depot Corps, CRT
September 3, 1918 - November 1, 1920

THE CANADIAN RAILWAY TROOPS ON CANADA'S NATIONAL WAR MEMORIAL

In the article on the Canadian Railway Troops, it was mentioned that they are almost forgotten today. However, they do have a monument. On Canada's national war memorial in Ottawa, to the rear of the arch, is the figure of one of the Canadian Railway Troops, wearing his steel helmet and with a spike mallet over his shoulder, looking as if he was ready to continue laying rails under such terrible conditions so long ago. It is very fitting that this important branch of the war effort is recognized in such a fine way in the nation's memorial to its warriors.

THE CANADIAN RAILWAY TROOPS IN THE KINGSTON NEWSPAPER

Our President, Mr. Walter Bedbrook, sent a copy of Canadian Rail, with the CRT article, to the Kingston Whig-Standard newspaper. The paper printed a lengthy column, with excerpts from the article. Walter has written a letter which he asks be included in this issue of Canadian Rail:



A member of the Canadian Railway Troops, with his spike mallet, stands as a part of Canada's national war memorial in Ottawa.

To our members:

Mr. Lyndon Jones, a columnist with the Kingston Whig-Standard, wrote an article in his weekly column excerpted from Canadian Rail and which included an unsolicited review of the magazine.

At one point, calling Canadian Rail a booklet, he sums up his comments as follows: "*Canadian Rail is the bimonthly magazine of the Canadian Railroad Historical Association and Canada's only railway magazine that covers the latest in technological developments, historical articles and essays and photographic stories of Canada's railways - steam, diesel and electric, national, short-line inter-urban or street railways*".

This is a very comprehensive statement from an unbiased source, and what Canadian Rail is to most of the Association's members, and certainly to me as President. Whatever one's particular interest in railways, it can be found somewhere in Canadian Rail.

It is necessary to increase the membership in the Association to help in defraying the ever increasing costs in producing the magazine. One of the better ways to do this is by asking all present members to solicit new members from among their friends and associates. Please help. In doing so, Canadian Rail will be able to continue presenting in-depth articles as noted in the above review.

Walter J. Bedbrook, President.

A Busy Fall and Winter At the Canadian Railway Museum

By A. S. Walbridge

When the Montreal Transportation ceased its street car operations in 1959, it sold all remaining track, and support poles for trolley wires, in the streets to the city for \$1. Thirty-four years later, a long section of street car rail was extracted from the pavement, and loaded into two CP Rail gondola cars as a donation to our museum. Also received was a carload of steel poles. Several Saturdays of reasonable weather permitted our volunteers to unload the cars and store the material, all without accident. It was a small miracle considering that unloading 65 foot lengths of rail from cars measuring 65' 6", using an ancient Montreal Tramways electric crane is a very tricky operation. Our long-term volunteer Ed Lambert handled the crane unloading the first two cars, but unfortunately he died on November 25 before the third car was unloaded. The unloading job was continued by Barry Biglow, and completed on December 11. To Charlie DeJean, Dave Johnson, Alain Bossé, Roger Desautels, Francois Gaudette, André Beaupre and others - Thank you!

Our new shop building was completed during the spring and summer of 1993. Building connecting track, from the turntable into the front of the shop, was completed during the spring. Connecting the back of the shop with nearby street car track necessitated the relocation of the street car switch; then the building of connecting track to the rear of the shop. Our old Tramways crane was of considerable help, along with the unusually mild weather during the fall. Montreal Tramways car 1959 was towed into the shop over the pit for extensive work on its mechanical and electrical parts. It operates daily during our "museum season".

Ex Port of Montreal switcher 1002 is receiving a tuneup. The interior of its cab is being repainted. Ex CN 15767 has had its roof removed. A new roof deck is underway, and we hope to return it to active duty on Sundays during the 1994 season. What a pleasure to work in a heated building during the winter after over 30 years of outdoor winter work.

THIS PAGE, TOP: Unloading the last street car rail from CP Rail gondola on December 11, 1993. Barry, Francois, Dave, Charlie and Alain pose for the photo.

MIDDLE: Crane W2 at work stacking rails, December 11, 1993.

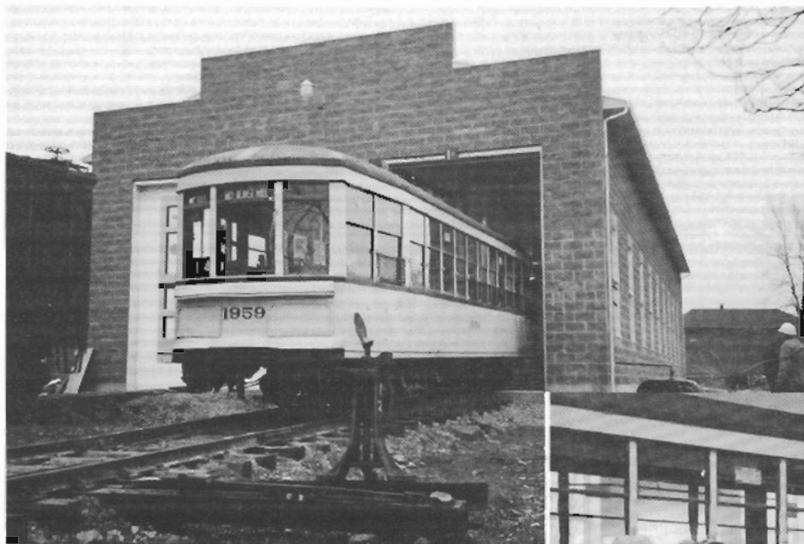
BOTTOM: Connecting the track into the rear of shop building.

OPPOSITE, TOP: Car 1959 outside the shop building in November 1993.

OPPOSITE, BELOW: Inside the shop building in December, 1993. André, Barry, Charlie, Francois, Len, Roger, Alain and Rob pose in front of car 1959.

All photos by A.S. Walbridge.





"MUD HUT" DEMOLISHED

As part of the project to relocate the Montreal Forum adjacent to CP Rail's Windsor Station, the former express wing, known as the "Mud Hut" was demolished at the beginning of March 1994. This structure was built in 1906 with a single storey and sloping roof which, with its stucco finish, made it look, indeed like a mud hut. In the 1920's it was enlarged to three stories with flat roof, but the old name continued to be used by older employees. Its destruction marks the end of one more item of Montreal's ever-dwindling railway heritage.



THE TRAIN MASTERS - UPDATE

Mr. Ray Corley has sent some additional information and corrections to the article on the Train Masters in the last issue. He says that CNR 3000 was painted and lettered for CN while demonstrating and did not have a special paint job. Lots of information is available including "Canadian Transportation, September 1955, page 488. CPR 8900 came out of the Beloit plant fully painted and lettered for Canadian Pacific.

Referring to Table II (page 6), Mr. Corley states that CP 8901 - 8920 had GE 752PC1 motors built by Canadian General Electric in Peterborough, Ontario.

In Memoriam Edmund Lambert

The members of the CRHA were shocked to hear of the sudden death, on Thursday, November 25, 1993, of our long-time member and friend Ed Lambert. Ed had joined the Association in December, 1957, and had been active in many aspects of CRHA activities including a term as Director. In more recent times he had been very active at the Museum, especially in the restoration of the street cars, and it was largely due to his perseverance that car 1959 and the crane car were restored to operating condition. Often he worked singlehandedly on a piece of equipment outside and in less than ideal weather conditions. It is ironic and sad that his

death came just as the completion of the shop building meant far better working conditions.

A long-time employee of Allis Chalmers in Lachine, Ed had also seen service in the Royal Canadian Navy during World War II. His stories of the old days, especially about the street cars and interurbans, were of great interest to enthusiasts.

To his widow and family we offer our sincere sympathy. The passing of Ed Lambert leaves a gap that will be difficult or impossible to fill. He will be sorely missed. Fred F. Angus.

BACK COVER: The interior of the new shop building at the Canadian Railway Museum at Delson - St. Constant, Que. as it appeared in January, 1994. Three pieces of equipment are in the shop having work done. On the left we see locomotive 1002 of the Port of Montreal. This unit has had the interior of its cab repainted and is undergoing electrical and mechanical maintenance. In front of it is Montreal street car 1959 which is having new bearings installed as well as a mechanical cleanup. To the right is CN passenger trailer 15767 which is having its roof re-covered. Photo by A.S. Walbridge.

Canadian Rail

120, rue St-Pierre, St. Constant, Québec
Canada J5A 2G9

Postmaster: if undelivered within
10 days return to sender, postage guaranteed.

MAIL  POSTE

Canada Post Corporation / Société canadienne des postes

Postage paid

Port payé

Lettermail

Poste-lettre

PERMIS # 148

ST. CONSTANT, QUÉ. J5A 2G2

Can Rail #439
Expiry 94/12/31 Member #0646
Warren Allin
Apt 911
7925 Kingsley Rd.
Cote St. Luc QC H4W 1P5

PLEASE DO NOT FOLD NE PLIEZ PAS S.V.P.

