

1,500 to 2,000 teams of horses were set to work, involving the use of a dozen steamers for the transport of material & provisions. It was a small army in number, but its motive, creation instead of extinction, made its work of wonderful interest. The problem boldly faced by the new General Manager was one calculated to daunt the most venturesome & daring spirit. In his preliminary & personal survey he had found what he afterwards characterized as "200 miles of engineering impossibilities."

The country it was necessary to cross was a waste of forest, rock & muskeg, out of which almost every mile of road was hewn, blasted, or filled up, & in places the filling up of muskegs proved to be a most difficult task.

There were moments during the work when even Van Horne's stout heart almost failed him. Discouraging reports from surveyors & engineers, the discovery of unexpected obstacles, & the varied phases of weather, rain following cold & floods following rain, made the task hard beyond the comprehension of ordinary men. But there was that in the old Dutch stock of the Van Hornes & perchance in the American spirit of the Illinois-born man, which caused him to hammer away at the problem until he finally succeeded. It is well to say in passing, that if Van Horne had accomplished nothing else, his victory over the engineering difficulties afforded by the line along Lake Superior's north shore would give him fame enough for one man.

While the work of constructing the Lake Superior north coast line was progressing, other portions of the great system were receiving the attention of the tireless General Manager & his assistants. To those who have travelled over the C.P.R. from Montreal to Vancouver, the feat of building a railway under such conditions & through such a marvellous country is past understanding. The obstacles presented along the north shore fade into insignificance when compared with those encountered after entering the majestic Rockies. Practically every foot of the mountain division of the road was contested & probably every mile of tunnel & track was sealed with the blood of man.

The bridging of fathomless chasms & the piercing of many mountains were accomplished only after herculean labor & much suffering physically. There are bridges in this mountain division that hang in air—mere spider webs of iron—300 feet & odd above the river they span. There are places where masonry is plastered against the solid rock of the mountains. There are ledges midway between heaven & earth, & elevations where the whirling trains plunge headlong into clouds & deep, cool ravines, where the road-bed disputes with the darkness, the realm of mysterious mountain torrents.

There are miles of tunnels, & bridges without number. On the mountain division alone the exigencies of the winter season compelled the construction company to build 32 miles of snow-shed, & that at the enormous cost of \$64 a lineal foot. Over \$10,000,000 expended as a preliminary precaution against snow!

Small wonder that the Queen honored the man who faced all these problems & was daring enough to undertake such a colossal task, with a knighthood of the distinguished order of St. Michael & St. George!

While the mountain division was being carried through, the government contractors had finished certain other portions of the road, enabling the company of which Mr. Van Horne was General Manager, to take possession in conformity with the terms of the contract, & to connect the Pacific portion of the line with that coming from the East.

Finally, one rainy day, Nov. 7, 1885, a party assembled at Craigellachie, a short distance west of the Columbia River & one of them, Sir Donald A. Smith, drove the last

spike of the connecting rail, thus establishing a railway from ocean to ocean within Canadian territory.

That picturesque ceremony was of unbounded interest to the American people for two reasons. First, because it meant the completion of a railway destined to become a formidable factor in the carrying trade of the North American continent; secondly, because, assisting in the ceremony, was a man of their own kind, who, with his own brains & with his own hands had added to the list of great human achievements one of enormous & far-reaching proportions.

In the history of great enterprises the work itself must always take second place. Human interest lies in the man or men who planned & accomplished the work. It has already been said in this article that Sir Wm. Van Horne could rest his fame solely upon the building of the C.P.R. But he is more than a general manager, or a president, or a railway builder. He has been compared to Cecil Rhodes from the standpoint of marvellous versatility. He is an artist of undoubted ability & a connoisseur in music. He reads Spanish, Italian & Japanese with facility, & has made an exhaustive study of the art, history & literature of Japan. His interest in the latter country has caused him to undertake an extended history of Japanese art which will be published in many volumes, illustrated in color by Sir William himself, with sketches of all the exquisite gems in his own collection.

In his palatial home in Montreal Sir William has a magnificent collection of paintings, ancient & modern. The Dutch seventeenth century school is largely in evidence, while modern French, English & Spanish are represented. In addition to the engrossing cares of a railroad magnate, having under his supervision a gigantic corporation valued at \$200,000,000, Sir William has found time to become a prosperous amateur farmer in two provinces, & to cultivate special species of mushrooms. To-day he is still comparatively young—only 57 years of age—and from all appearances he has barely commenced to employ his talents.

Staff Register on the C. P. R.

The Second Vice-President and General Manager has issued a circular from which the following are extracts:—

A complete staff register, to include the following classes of employes, will hereafter be kept in this office:—

Agents, station, ticket,	Hostlers,
passenger, freight,	Inspectors—car &
& other,	other,
Baggagemasters,	Linemen, telegraph,
Baggagemen—station	Master mechanics,
& train,	Master mechanics'
Brakemen,	assistants,
Call boys,	Operators,
Car sealers, markers &	Photographers,
carders,	Policemen,
Checkers—car &	Porters—sleeping &
freight,	parlor car,
Clerks,	Pumpmen,
Conductors,	Repairers—car &
Despatchers, train,	other,
Doctors,	Roadmasters,
Engineers—civil, loco-	Signalmen,
motive & other,	Storekeepers,
Elevator men,	Storemen,
Firemen,	Switchmen,
Foremen—shop, sec-	Tankmen,
tion, locomotive, car	Timekeepers,
& other,	Watchmen,
Flagmen,	Weighmen,
Fuelmen,	Wipers,
Gardeners,	Yardmasters,
Gatemen,	Yardmen,
Accounting department staff.	
Bridge & building department,	
engine house men—all classes, with the exception of ordinary laborers.	

Hotels—clerical staff, housekeepers, stewards, head waiters, chefs.

Dining car crews.

Pacific steamships, lake steamers, Columbia & Kootenay steamers, Windsor ferries—officers.

To inaugurate this register it is necessary that the record of each employe, in the classes above mentioned, since entering the Co's service, should be obtained. A form has been prepared for this purpose, & the head of each department must arrange to have such filled up by those employed under him, & sent to this office at the earliest possible date.

Commencing Jan. 1, 1901, all employes then in the service of the Co., unless specially engaged otherwise, will be considered as on the permanent staff. Thereafter all new hands employed, unless otherwise specially arranged, will be considered as on the temporary staff, & will not be transferred to the permanent staff until after six months' continuous service, & then only in the event of satisfactory service & on the recommendation of head of department on form provided. Proper records must be kept by each department so that this form may be submitted promptly at the end of the six months' term, in the event of satisfactory service.

Any employe on the temporary staff found incompetent for transfer to permanent staff must be relieved from the service, & notification sent to this office on form provided.

The fact that any employe is or has been on the permanent staff within the meaning of the above regulations, shall not in any way affect or alter the rights of either the Co. or of such employe in respect of the termination of his services or compensation therefor, & all such rights shall be the same as if there were no such permanent staff as is above provided for.

All new applicants must present, prior to engagement, or if by special arrangement, within 30 days thereafter, testimonials of character or references from previous employers for at least the three years preceding engagement, provided they have been so long employed. Record of such hands on form provided, with copies of testimonials, must immediately on engagement be sent through the proper officers to this office for approval. Heads of departments will take the necessary steps to ascertain that testimonials & credentials presented by new hands are authentic, using form provided for the purpose of communicating with outside parties.

All promotions or change of position of men in the service, with or without change in salary, must be reported to this office for approval on form provided.

In the case of enginemen, trainmen, regular relieving despatchers, relieving agents, & relieving operators, it will only be necessary to report changes when transfer is from one general superintendent's division to another.

No engagement, transfer or promotion will be effective except from day to day until approved by this office.

In submitting forms for approval of employment of new hands, or change of one already in the service, for a temporary period, it must be stated approximately what length of time such engagement or change is intended to cover, & if it be found necessary later to extend the period, another form must be submitted.

Advice of all employes resigning or dismissed from the service must be promptly reported on form provided.

Whenever an employe not included in classes above named (section laborers, freight shed & station porters, &c.), is discharged for such cause as may be considered sufficient to make such person an undesirable future employe on any division, advice must be sent to this office on form provided.

Certificates of service on form provided must only be issued by the following officers: