Surveyors of The Past

BY CHARLES FAIRHALL

CHARLES AENEAS SHAW

Foreword: This article is largely based on Shaw's "Tales of a Pioneer Surveyor", Academic Press, Canada Ltd. (Longman Canada Ltd.)

In 1867, after a gestation period of 200 years, a fledgling nation, sired by two Old World countries, was born. By 1871, what a prodigious offspring it had become! Stretching 3,000 miles from sea to sea, extending northward from the 49th Parallel to the Arctic Islands, it encompassed virgin forests that had yet to feel the bite of the logger's axe, an implacable granite wasteland known as the Precambrian Shield, mighty lakes and rivers, great expanses of lonely prairies which supported moving dark rivers of buffalo, and not one but three towering mountain ranges, seemingly impassable walls of naked rock which sealed off the Pacific Coastal plain.

Tenanted by 3½ million people in six scattered provinces, what was needed to bind this great land together and give it a sense of unity, purpose and nationalism, was a narrow band of steel, the Canadian Pacific Railway.

This was the world of the 1870's and the challenge that faced Charles Aeneas Shaw.

Shaw, sired by sturdy Scottish-United Empire Loyalist stock, was born on a farm at Oak Hill, Toronto, on November 15, 1853. As a boy, his imagination fired by the tales of James Fenimore Cooper, he longed to hunt buffalo in the western plains and to see the Rocky Mountains. He eventually realized these ambitions to the fullest degree. At age 14, he was doing a man's work on the family farm, ploughing, sowing, pulling stumps and breaking rocks. At 15, he was employed as a picketman on a survey for the Northern Extension Railway from Barrie to Bracebridge. Despite some bad experiences, he was back again the following year working as a chainman on the Toronto and Nipissing Railway line between Kirkfield and Coboconk.

In 1869, he joined the Queen's Own Rifles and later became a cadet in the Toronto Military School. In 1871, he graduated and obtained a Captain's certificate.

In 1872, he was hired by William Murdoch of Bowmanville as a chainman and topographer for a survey for the C.P.R. Over the next dozen years, he worked on railway surveys from the Ottawa Valley to the Selkirk Mountains.

In 1873, having passed his preliminary examinations, he was articled to Mr. Murdoch for the three-year term. In the Fall of 1877, he wrote his final examinations (which lasted from Monday till Saturday) and was the only one of sixteen candidates to pass, having secured full marks in every subject but descriptions (he had never been coached in this subject, nor any of the others, by Mr. Murdoch).

After leaving the C.P.R., he opened an office in Winnipeg and engaged in a general land surveying practice. A depression drove him out of surveying into farming, but drought, hail and the continuing depression forced him to leave the farm. In 1897, he moved to Greenwood, B.C. and spent many years there working on mining, railway and irrigation projects.

In 1915, he left his practice to serve in the army as a major in charge of a P.O.W. camp. After his discharge in 1918, he settled in Keremeos, B.C., where he continued his surveying and engineering practice until his retirement in 1936. He spent his last years in Vancouver and Victoria writing his memoirs before his death in 1942.

Charles Shaw was a man who possessed remarkable leadership qualities. He could fish, hunt, ride, bust a wild bronco or shoot a buffalo while at a full gallop. He was at ease with and could speak with any man, be he an unlettered miner, an Indian Chief or a University Professor, on his own terms. His sense of humour and inexhaustible supply of anecdotes made him an entertaining companion. A devoted family man, he showed endless patience with his sons, teaching them the skills he had gleaned over the years.

In his memoirs, edited by Raymond Hull and published by Longman Canada Ltd. under the title of "Tales of a Pioneer Surveyor", Shaw gives us a vivid picture of the life of a railway surveyor.

His first venture with the C.P.R. was very nearly his last. In November 1872, Shaw embarked along with Murdoch and party on the last boat of the season to sail from Collingwood. The ship struck a shoal in Georgian Bay and sank. Adrift in small boats, the Captain and some of the crew perished, but Shaw and his companions reached shore safely. They returned to Toronto and took a train to Duluth, Minnesota, where Murdoch purchased a small fishing boat furnished with oars, mast and sail and set out on December 10 for Fort William, 250 miles away. On calm days, the crew had to row in below zero temperatures, so cold that each man had to chip from the blades of the oars a ball of ice the size of a man's head. They crept along the shoreline, sleeping in the snow at night, existing on frozen pork and hardtack. When the lake froze so far out, they had to abandon the boat and handsaw boards from frozen birch logs to build toboggans and finish the last 50 miles on foot. Shaw spent that first winter locating the line westward from Prince Arthur's Landing. The party consisted of the Chief Engineer, 2 assistants, 2 levellers, 2 rodmen-axemen, 2 chainmen-axemen, 2 cooks-axemen, 6 line axemen, several packers and 6 men to supply firewood, cut trails, get teepee poles for new camps and so on. They also had 15 dog teams with their drivers, mostly half-breeds or Indians. Their supplies consisted of flour, mess pork in brine, beans and tea. Sugar, soap and candles were considered luxury items by the Government and not allowed. On good snow, a team of 4 strong dogs could pull 400 lbs. 20 miles in a day. With a light load, 35 miles was not uncommon. A dog driver on snowshoes, in bitterly cold weather, running ahead to break trail or running behind if the trail was already broken, expended an enormous amount of energy and developed a corresponding appetite. The daily ration of the Hudson's Bay Company was a goose per man; on the praire 10 lbs. of buffalo meat; in northern Saskatchewan 8 lbs. of moose meat; and where large game animals were scarce, as in some parts of British Columbia, the allowance was 8 rabbits or sometimes a large salmon, dried and smoked, which reduced the weight to 1½ or 2 lbs.

Teepees were used for accommodation, being generally more comfortable and roomy than tents, especially in Winter when the fire in the centre was the principle source of light. The fireplace was made by laying four logs a foot in diameter and five feet long in the form of a square in the centre of the teepee. The space between the logs was filled with earth and on this the fire was built. For cooking, a pole was fastened across the centre of the teepee, high enough to clear their heads, and from this the pot hangers were suspended. Bread was baked in kettles in a heated pit. The Winter was very cold, the thermometer seldom getting above 35° below zero.

In the early Spring, as the light became stronger and the days lengthened,

snow blindness became a common affliction. They tried to prevent it by blackening their faces with a mixture of pork fat and charcoal and tucking a fringe of evergreen branches under the brims of their hats. If these precautions were not successful, those afflicted were confined to their teepees and treated with poultices of tea leaves.

Since fresh fruit and vegetables were unknown, scurvy became a common affliction. Legs turned black, with flesh like putty, gums were swollen and teeth became loose.

This then was Shaw's initiation into the life of a C.P.R. surveyor. No life was harsher or less rewarding. Monthly rates of pay in the early 1870's were:

Engineer in charge of party	$160
Commissariat Officer	$100
Transitman	$100
Leveller	$ 60
Rodman	$ 40
Chainman	$ 35
Foreman Packer	$ 33
Packer	$ 30
Axeman	$ 30

Supplementing their daily diet of pork fat and beans with fresh game, the surveyors were sometimes subjected to some rather strange cuisine. Shaw writes of eating skunk, wolf and even mink, but probably his most unforgettable meal was a feast given in his honour by the Sioux Chieftain, Sitting Bull. After the battle of the Little Big Horn, the Sioux were driven north by the U.S. Cavalry into Canada. Shaw and his party ran into a large encampment of these Indians who at once took them prisoner, assuming them to be Yankees. They intended to exterminate them on very short notice. Fortunately, Shaw spoke enough Cree to persuade them that they were not "Long Knives", but were in fact Englishmen from the north, working for the Government. Scouts were dispatched to verify their story and eventually they were released and treated as welcome guests and given the freedom of the camp. They were presented to Sitting Bull and joined him in the ceremony of smoking the peace pipe. As a mark of friendship, the Indians held a feast.

A circle of braves sat around a black iron pot filled with a greasy stew into which they dipped forked sticks. Upon seeing and smelling it, Shaw's companion whispered "My God, Shaw, I can't eat this garbage!" To this Shaw replied, "We've got to eat it. If we insult them, it will cost us our lives". The first tidbit Shaw fished out was a muskrat's head, complete with the long whiskers and bleary gray eyes. He was unable to retain it and it slipped back into the murk. A more judicial prodding produced a duck's foot, which lasted a remarkably long time till the rest of the disgusting mess was wolfed down by the braves.

Shaw had many occasions to observe the Indians, both in Ontario and on the prairies, and generally he found them to be honest, good-hearted people. The Plains Indians in certain areas, expressed some disapproval with the white man's entry into their land. Although they rarely tampered with survey markers or removed them, they would sometimes express their resentment by defecating on the top of every available stake, which added nothing to the amentities of the job. At one of their locations, Shaw's party came in contact with a roving band of Indians among whom was a really beautiful girl of 18. Having been deprived of women for months, this dusky maiden stirred romantic yearnings in the breasts of some of the crew. These tender emotions however died aborning the day they returned to camp to find their friends feasting on the carcass of a dead horse. The lovely squaw, leaning against a cart, was nonchalantly munching on a couple of feet of raw intestines.

Shaw was adopted into the Blackfoot tribe and invited to witness the Sun Dance, a ghastly test for young men seeking warrior status. No wonder, with such an initiation, the Blackfoot was a fearless rider, hunter and fighter.

Although generally respected by his men who would follow him unhesitatingly, Shaw did make a few enemies among his peers. Confident in his ability and resolute in his decisions, he at one time had occasion to incur the wrath of Major A. B. Rogers, a bad-tempered, hard-swearing Yankee Prairie surveyor who had never seen a mountain until he joined the C.P.R. survey crew. Asked his opinion of the profile of Rogers' final location between Calgary and Bow Gap, Shaw bluntly announced in Rogers' presence, that he could get a far better line and save at least a half a million dollars. This hardly endeared him to Rogers and a fight threatened to break out between the two. Shaw's judgement was vindicated when his line was eventually accepted at a calculated savings of $1,350,000 over Rogers' location.

The two men met again in the Selkirk Mountains at the site of Kicking Horse Pass. Apparently the Major did not recognize his antagonist of the previous Spring.

"Who the hell are you and where the hell do you think you're going" was Rogers' greeting.

"It's none of your damned business to either question" Shaw retorted. "Who the hell are you anyway".

"I am Major Rogers".

"My name is Shaw. I've been sent by Van Horne to examine and report on the pass through the Selkirks".

Shaw recalled that Rogers practically frothed at the mouth when he heard the name.

"You're the ---------- Prairie Gopher that has come into the mountains and ruined my reputation as an engineer". A stream of profanities followed.

Shaw, a big man, hard as nails, leapt from his horse and seized him by the throat; in his own words, he "shook him until his teeth rattled". "Another word out of you" said the infuriated Shaw, "and I'll throw you in the river and drown you". Rogers, thus quelled, mumbled an apology and offered to guide him through the Selkirk Pass.

Shaw replied "That will be alright, as long as you keep a civil tongue in your head".

Rogers, ambitious for fame, eventually received his reward when his name was enshrined on maps on the pass used for the C.P.R. through the Selkirk Mountains.

Once the route across the mountains was determined, Shaw was content to return to his wife and to less arduous forms of surveying. His work for the C.P.R. was done.

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