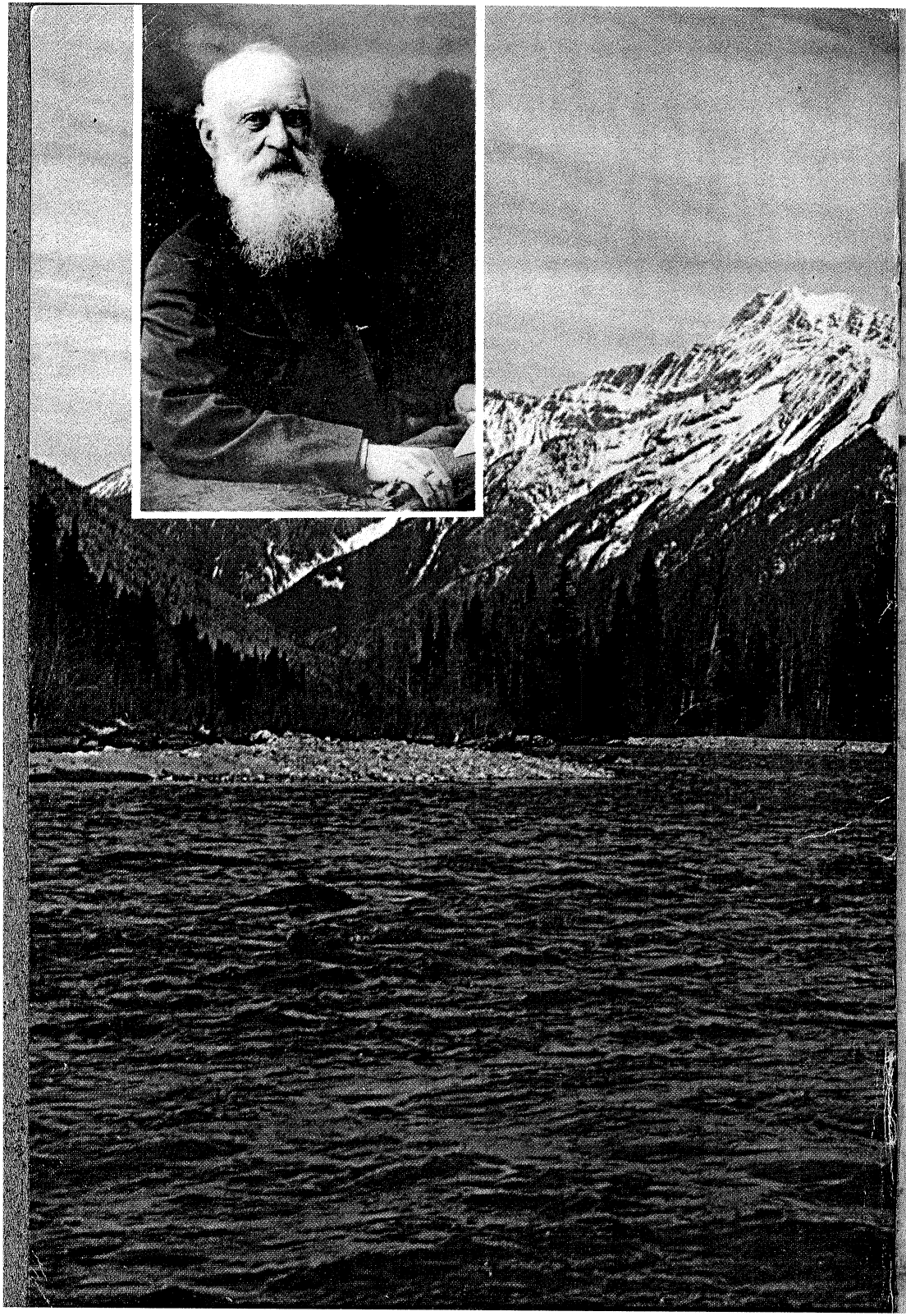

# Incredible ROGERS PASS

Edited by ART DOWNS

A CPR rotary snowplow in a massive avalanche at Rogers Pass in the early 1900s.

THE COVERS

**FRONT: The Trans-Canada Highway and Mount Sir Donald, one of many peaks in Glacier National Park which tower over 3,050 m (10,000 ft.). Contrary to popular belief, the mountains which flank Rogers Pass are part of the Columbia system, not the Rockies.**

**INSIDE FRONT: The Illecillewaet River which Walter Moberly, inset photo, followed in his 1865 attempt to find a route through the Selkirks.**

**INSIDE BACK: Willy, the short-tailed weasel. (See "Wildlife of the Back Country" on page 48.)**

**OUTSIDE BACK: Rogers Pass summit with monument commemorating the discovery of the pass and completion of the Trans-Canada Highway in 1962.**

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PHOTO CREDITS

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## CONTENTS



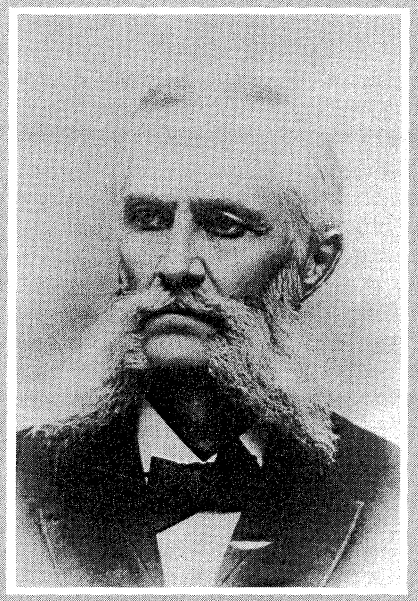
**Searching for bodies in the avalanche at Rogers Pass on March 5, 1910. Over sixty workmen died. (See page 22.)**

# Historical background

by FRANK W. ANDERSON

The mountains of Rogers Pass are not high measured in terms of Everest or Annapurna, but they do tower to over 3,700 m (11,000 ft.) and there are many of them. They huddle shoulder to shoulder like the front wall of a football team and scowl intimidatingly at all who approach. Man has seriously challenged them for only a century and has more or less had his way, although the cost has been several hundred lives.

The first recorded sighting was by David Thompson of the North West Company who saw them from a distance in 1807 as he traversed Howse Pass to the north. He saw them again from the Pacific side after he had followed the Columbia River round the Big Bend and was descending to the coast. Caught up in the hero worship of Trafalgar's great admiral Horatio Nelson, he named them Nelson's Mountains. Although Thompson saw them on several occasions afterwards there is no record that he made a serious assault upon them.



A rotary snow plow in action in 1912 and, left, Major A. B. Rogers after whom Rogers Pass is named.

In 1813 Alexander Henry, another Company employee, followed Thompson's canoe route. Like his predecessor, he did not make an attempt to cross them. He never made a return trip for the following year he was drowned near Astoria, Washington. In the wake of Thompson and Henry came the fur traders — men who moved with the seasons, were accustomed to hardships, and accepted

nature as they found it. For the next fifty-three years they used the Big Bend — the 304-km (190-mile) detour the Columbia River makes round the northern flank of Nelson's Mountains before dropping south on its journey to the Pacific. The men who came next, however, were less patient. They were the gold-seekers. In 1858 some 30,000 of them stampeded to the Fraser River and gradually moved upstream, fighting fierce rapids and warlike Indians who killed scores of miners before being subdued. The gold seekers filtered into tens of thousands of square miles of wilderness, panning the gravel of innumerable rivers and creeks in search of yellow treasure.

In 1865, four boatloads left Marcus, Washington, to prospect up the Columbia. Establishing a base at "The Eddy" (now part of Revelstoke) they explored the area, striking gold at Carnes Creek some 40 km (25 miles) to the north. Others pushed still farther into Big Bend country, making discoveries on creeks they called French and McCulloch. The steamer *Forty-Nine* was built at Marcus and made numerous trips up the Columbia as far as La Porte, where a rapid barred further progress. But the Big Bend was to prove overrated and its yield of gold so disappointing that miners nicknamed the region "Big Bilk."

While the miners were looking for sudden wealth, other men were interested in the region for a different, more prosaic purpose. On July 8, 1865, the British Columbia government ordered Walter Moberly, civil engineer, to explore the mountains in the vicinity of the Columbia and Kootenay Rivers for passes through which a railway might be constructed to link the western seaboard to the rest of Canada.

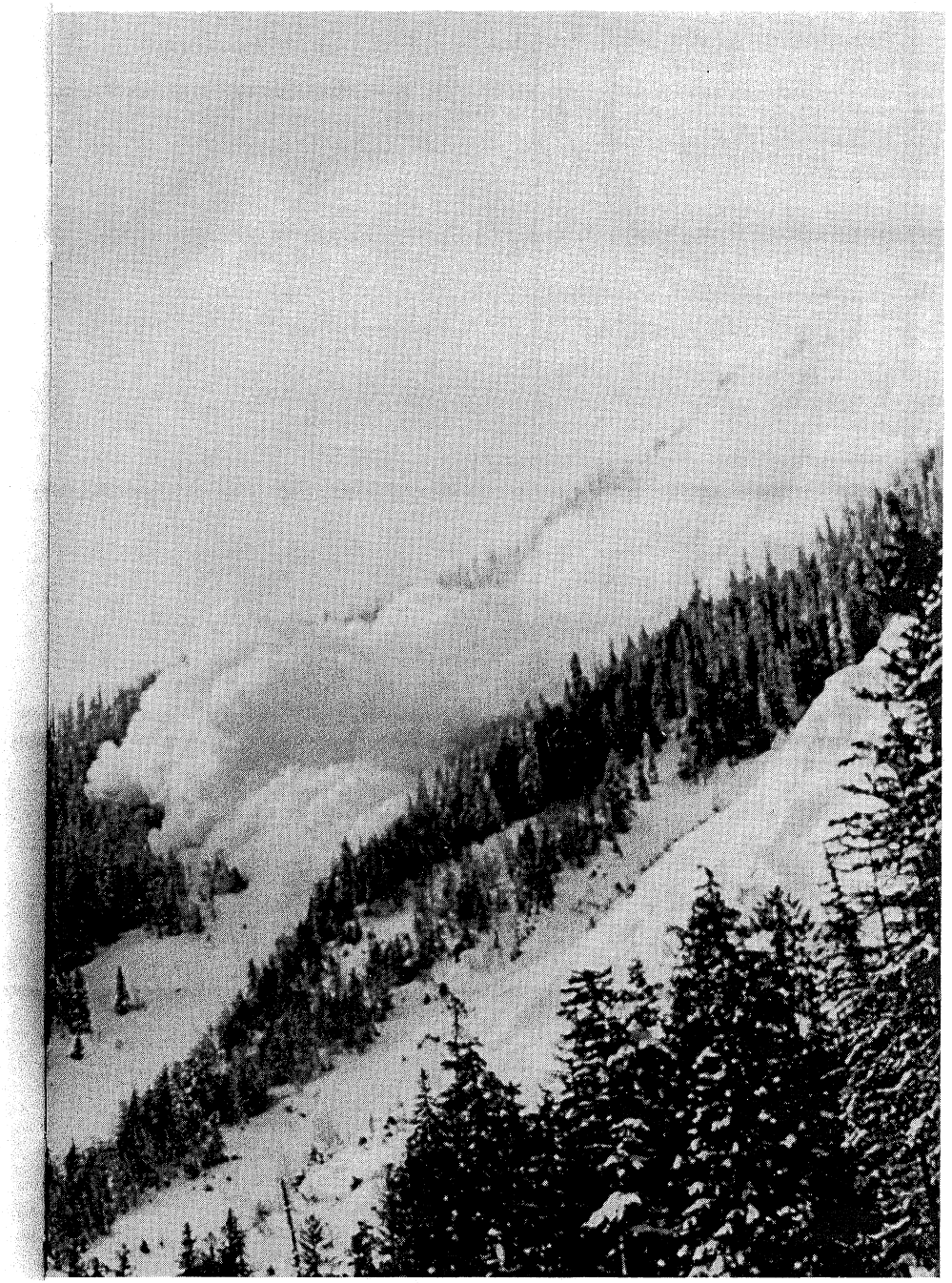
Moberly pushed into the region, discovered Eagle Pass through the Monashees and established the possibility of a railway as far as Revelstoke on the Columbia. He explored the old fur trail around the Big Bend and reported that it was a possible route. But realizing that the detour would be costly as well as time-consuming, he turned his attention to the hitherto impassable Selkirks (as Nelson's Mountains were now called, having been renamed in honor of Lord Selkirk after the North West Company and Hudson's Bay Company amalgamated). On September 17, 1865, he started for the frowning mountains.

Moberly and his crew followed the Illecillewaet River eastward some 30 km (18 miles) from its junction with the Columbia at Revelstoke until he came to the Forks. Here a tributary, the North Illecillewaet (now called Tangier), joined the main river. Although the terrain was rugged, Moberly felt it was a feasible route to follow but after exploring the north fork decided that it was impossible as a rail pass and returned to the Forks.

After a brief rest, Moberly announced his intention to ascend the south (or eastern) branch. His decision created consternation among his Indian guides. They warned him of massive snows which leapt from the mountainsides upon the unwary traveller. They spoke of snow so deep that neither man nor beast could move against it. When these warnings failed, they simply sat on their packs and refused to budge. Since the season was well advanced, Moberly temporarily gave up the quest.

In the spring of 1866, he returned to the attack. At the Forks, he split his force into two parties. One he led northward, while the second he dispatched up the south branch of the Illecillewaet under Albert Perry. He

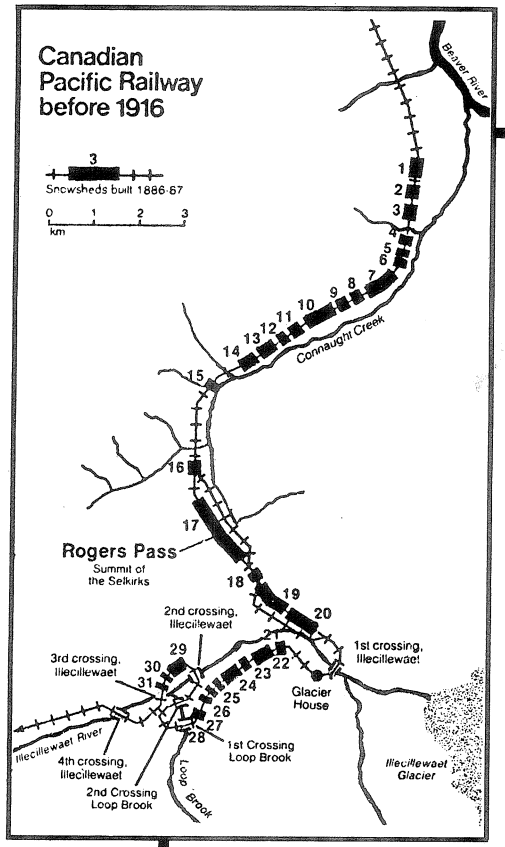




**The power of an avalanche such as this one in Rogers Pass is awesome. Trees two feet and thicker are sheared off without pause and railway locomotives lifted from the rails and tossed aside. Over 200 people were killed along the CPR line in Rogers Pass.**

# ROGERS PASS

**LEFT: For avalanche protection, in 1886-87 the CPR built thirty-one snowsheds in a 25-km (15-mile) section of the Selkirk Mountains. Today's highway parallels the railway.**




Drawn by
A. E. Knox

Glacier
National
Park

SELKIRK RANGES

COLUMBIA RIVER

Carnes Creek

GOLD MINING
(1864-1865)

THE EDDY

C.P.R.

REVELSTOKE

TWIN BUTTE

C.P.R.

N. Illecillewaet

ILLECILLEWAET
MINING

ALBERT
CANYON

ROGERS PASS

THE LOOP

GLACIER

Beaver River

Illecillewaet Glacier

SIX MILE CREEK

C.P.R.

BEAR CREEK

Quartz Cr.

Porcupine Cr

GOLD MINING
(1885 - 1886)

HOWSE PASS

GLACIER

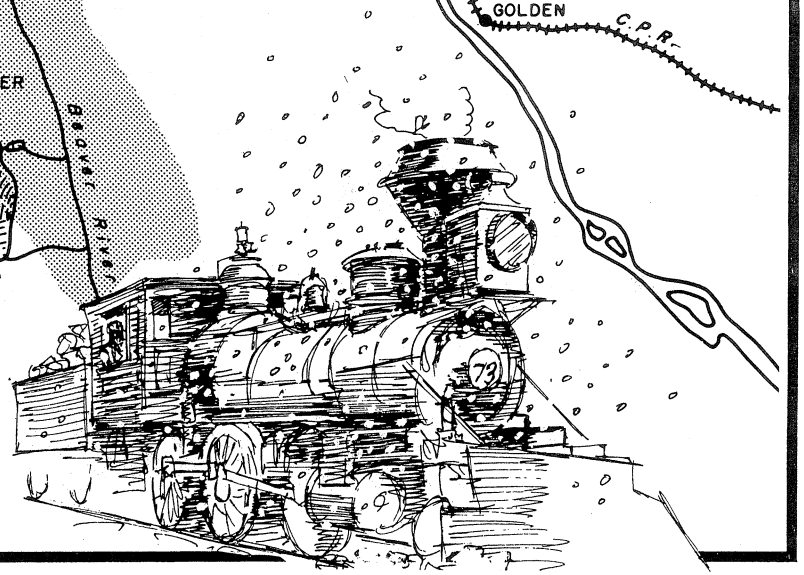
Blaeberry R.

BEAVER

DONALD

GOLDEN

C.P.R.



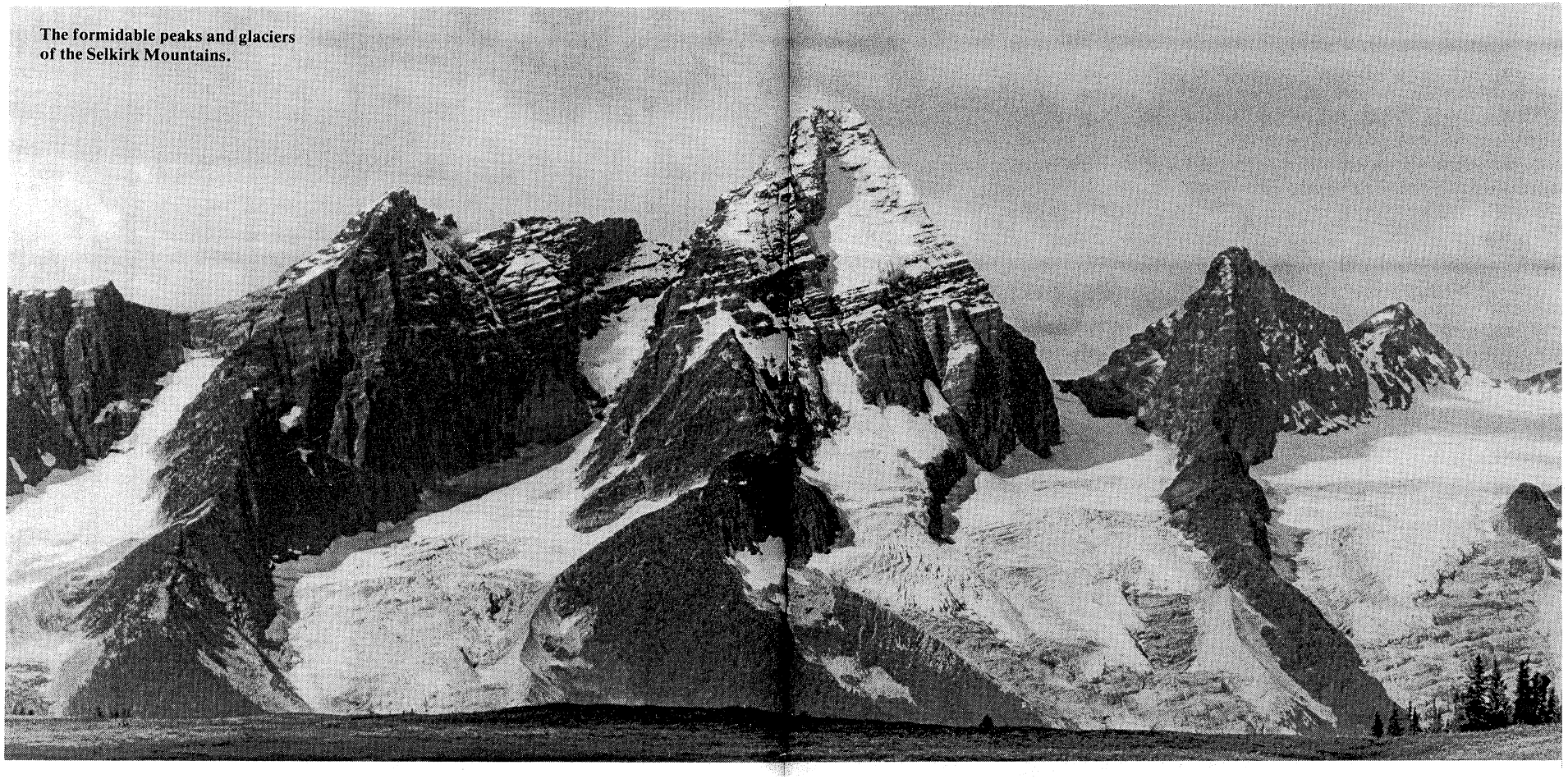
later reported that, while his own efforts were in vain, Albert Perry had followed the south branch sufficiently far to discover that a pass did exist across the Selkirks. However, it is not clear in his report if Perry followed the Illecillewaet far enough to determine where the supposed pass led, but we now know that Perry did not discover a pass.

Before Moberly or others could pursue this promising lead, they were ordered to build roads for the thousands of gold-seekers pouring into the Big Bend country since the difficulties of bringing in supplies through the mountains were enormous. The supply problem was gradually overcome but the miners were defeated by lack of capital. Little gold lay on the surface and few miners had the money to finance extended digging. As a result, all but the most resolute wandered away in search of easier El Dorados and the Big Bend gold rush ended.

When the gold fever had subsided, Moberly was free to resume his attack on the mountains. Unfortunately, interest in the railway had also subsided. He returned to Victoria with the Selkirks only partly conquered. In his final report he stated that if a pass existed, it would probably be found along the south branch of the Illecillewaet River.

The huddled Selkirks now had successfully turned back the fur traders, the gold seekers, and the surveyors. The rock barrier was unbroken. But in 1870, the trans-continental railway project was revived. This time the federal government commissioned Moberly to explore the Selkirks around Howse Pass, but scarcely had he begun when in 1872 the government abandoned the route. It had decided to take the line through the Yellowhead Pass to the north.

From 1872 until 1880, the railway project was pursued leisurely by the Canadian government. In 1880, however, the project was taken over by a private company known as "The Syndicate." Promoted by such men as George Stephen, James Hill and Donald A. Smith, the Syndicate brought new vigor to the task of solving the staggering financial and engineering difficulties of a transcontinental railway. Chief among these difficulties was the matter of taking the railroad through the Selkirks. James Hill suggested



**The formidable peaks and glaciers of the Selkirk Mountains.**

Major A. B. Rogers for this job, and pointed to Rogers' credentials.

Rogers, born in Massachusetts in 1829, graduated from Yale as a civil and railway engineer. After an apprenticeship on the Erie Canal construction, he tackled the gigantic engineering problem of the Chicago, Milwaukee and St. Paul railroad. His drive, determination and ingenuity promoted him to the forefront of the engineering profession. He came by his title of Major legitimately, having been commissioned during the 1862 Sioux uprising in Minnesota. Rogers was accepted and given the task of finding a route through the scowling Selkirks for Canada's first trans-continental railway, the Canadian Pacific.

Having studied Walter Moberly's reports on the initial exploration of the Selkirks, Rogers decided to attack from the west side. On May 15, 1881, in company with his nephew, Albert L. Rogers and ten Indian packers, he left the Columbia and headed up the Illecillewaet. With supreme confidence, he even arranged a rendezvous for July 1st with a party of his engineers at Exshaw, 48 km (30 miles) east of today's Banff.

Heeding Moberly's suggestion, Rogers ignored the north branch of the Illecillewaet and proceeded up the south branch. Because of the danger of avalanche and treacherous footing, the group travelled early in the morning and after sundown when the snow was frozen enough to bear their weight. On May 28th they reached a second fork in the river. They now knew they were approaching the end of their journey for the river had narrowed to a stream small enough to jump across.

Towards 4 p.m. they skirted a huge mountain, which they appropriately named Syndicate Peak (later Sir Donald) and found themselves at a summit. From here waters flowed east and west. For a better view the party, being "gaunt as greyhounds, with lungs and muscles of the best," ascended a nearby mountain. At one point, four of the Indians fell from the ledge, tumbled down an incline and were lost to view. Said young Rogers: "Our hearts were in our mouths...dead Indians were easily buried, but men with broken legs, to be carried out through such a country and with barely food enough to take us back to the Columbia river on a forced march, made a problem which even strong men dreaded to face." Miraculously, the four escaped injury.

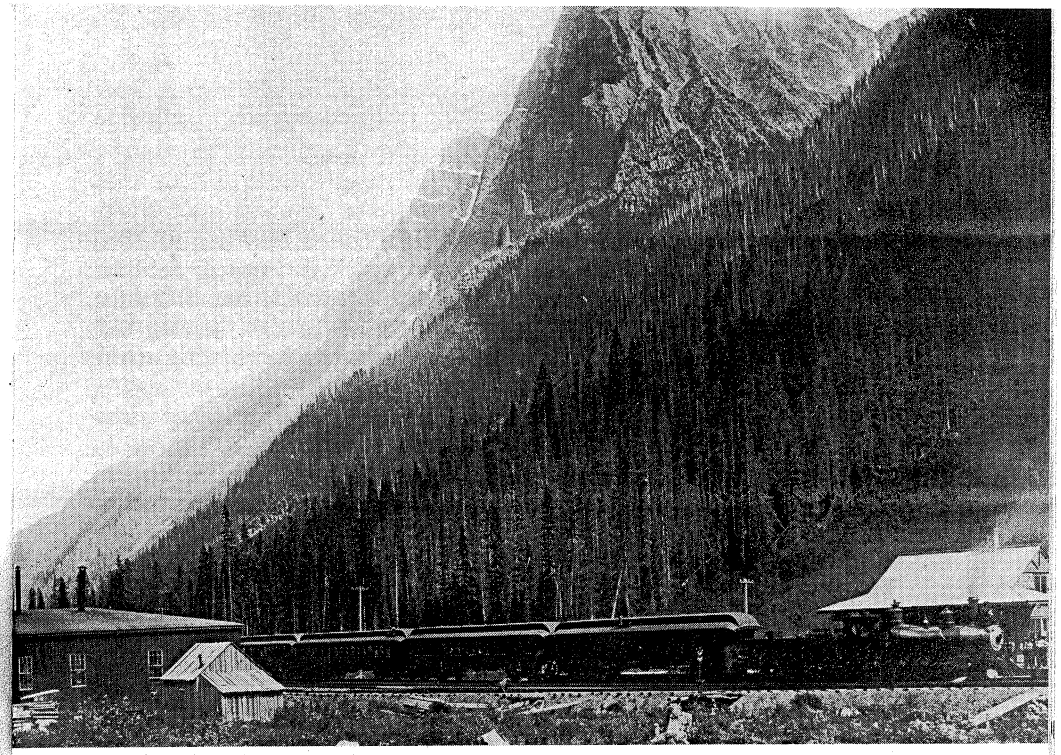
Late in the afternoon, they reached their objective. Crawling out on a ledge, they saw a pass stretching to the northeast. "Such a view! Never to be forgotten!" Albert Rogers wrote. "Our eyesight caromed from one bold peak to another for miles in all directions. The wind blew fiercely across the ridge and scuddy clouds were whirled in the eddies behind the great towering peaks of bare rock. Everything was covered with a shroud of white, giving the whole landscape the appearance of snow-clad desolation."

A pass through the rock barrier had been found.

The following year, tackling the Selkirks from the eastern side, Major Rogers left with a party of five on July 17th. They followed the Beaver River into the mountains and by July 24th found themselves standing at the source of the Illecillewaet River. Rogers returned to base camp, secure in the knowledge that the Selkirks could be conquered.

"The work in the Selkirks will be very heavy and expensive," he reported to CPR general manager Van Horne on January 10, 1883, "but I





**A CPR passenger train in the early 1890s at Rogers Pass Station with Mount McDonald towering over 3,000 m (9,000 ft.). On January 30, 1899, an avalanche demolished the station and the roundhouse at lower left, killing ten people.**
**Below: A construction crew at work on a snowshed in Rogers Pass in 1886.**

believe that the increased cost will be fully justified by great saving in distance and the cost of operation."

**Building the Railway**

Following Major Rogers' history-making treks to the summit of the Selkirks and his favorable report, teams of surveyors and wagon road builders swarmed through Kicking Horse Pass and headed for the Columbia River to a tent community given the optimistic name Golden City. Next came those who built the roadbed for the tracks, hewing and hacking at the forest, dynamiting stubborn knobs of rock, gouging at the dirt with horsedrawn scrapers. They moved slowly, by-passing or leaping streams and gorges, pushing westward foot by hard-won foot. Then came the bridge builders, filling in the gaps. They were followed by the track-layers — marching along with twenty men to a rail, singing, dancing and carousing their way across the plains and into the foothills. By the end of December 1883, the tracks lay covered in snow at Bow Valley Summit in the Rockies.

The next year was a hectic one for the railroad builders as they pushed through the formidable Rockies to the even more formidable Selkirks. The CPR advertised for 4,000 men with pay $2 a day and another 50 cents for overtime. In early April 1884 the camps began to stir. The surveyors peered deeper into the mountains; the supply road (or tote road) builders pushed towards Golden City on the Columbia, and the track-layers forsook the pleasures of Silver City (near Calgary) for the hard grind ahead.

Silver City had started out as an ambitious little mining camp in the early 1880s, but never amounted to anything until the track-layers arrived. Almost overnight it swelled to a bulging 4,000 with most of this population seeming to bulge out of the numerous saloons. With the departure of the railroad builders, Silver City shrank to its normal 351.

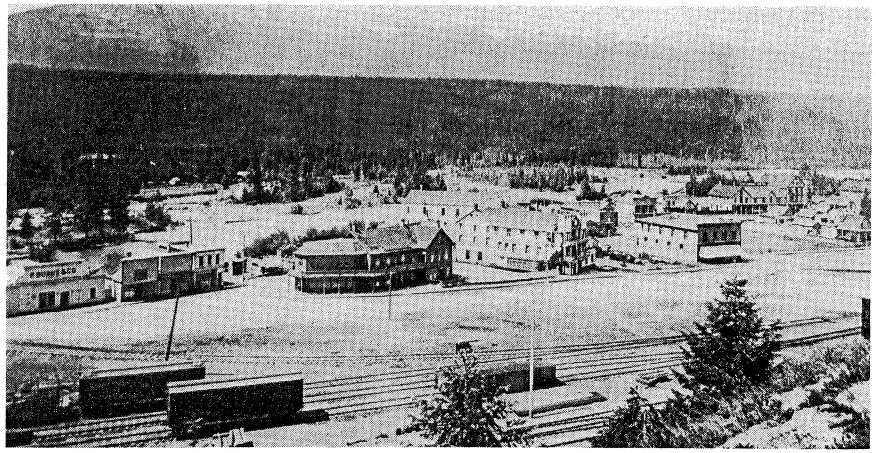
Construction across the open prairie presented few problems. On May 27, 1884, the last spike in the Northwest Territories — now Alberta — was driven by Mrs. F. P. Brothers, wife of the superintendent, at the Great Divide where water flowed east to Hudson Bay and west to the Pacific Ocean. The first spike in British Columbia was driven by Mr. Dickie, a government railway inspector. Scarcely anybody but the participants of the little ceremony in the Rockies was impressed.

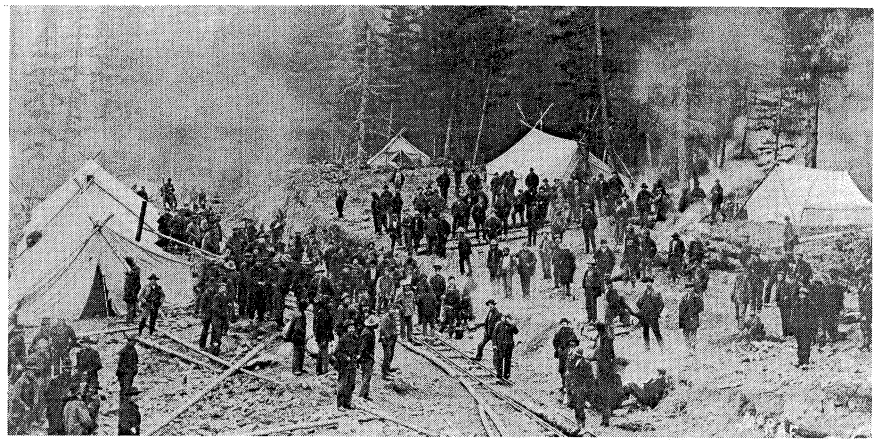
There had been few casualties during construction westward from St. Boniface into the foothills, but on August 2, 1884, the first major accident occurred. At the point called second crossing of the Kicking Horse River, Engine No. 146 went out of control coming down a grade. To meet such emergencies spur lines had been constructed up the mountainsides at steep angles to slow down runaway trains. An alert trackman, seeing the careening train, threw the switch and detoured the runaway onto a safety line. Unfortunately, the engineer forgot to apply his brakes after hitting the spur line and the train roared up the incline and smashed into an enormous rock at the end. There were some seventy Swedish workmen on the train, and many panicked and jumped from the moving train onto the rocks. One man was instantly killed, while an unknown number died from injuries. Fearful of frightening off new labor, construction bosses tried to keep secret such accidents.



Mountain fever also claimed many workers, but no accurate record remains of its victims. During cold, damp weather, the fever was at its worst and many a gandy-dancer succumbed and was buried quickly and quietly. Here and there a man was killed by falling rock or some other misadventure. In early October, for instance, a young Swede was killed at Maloney's camp, just outside of Golden City, when some dynamite exploded accidentally. Ten others in his crew were injured. Nevertheless, considering the dangers involved and the number of men engaged, the project had thus far not been too costly in human lives. But construction crews were approaching Rogers Pass — and the shoulder-to-shoulder Selkirks were not to surrender gracefully.

As the CPR pushed westward into the mountains, it made and then unmade several railside communities. Among those destined to survive was Golden City. Early in 1884 it was a sleepy tent town with one main street on which Dick Sanderson operated the CPR hotel. Then in August rails arrived and the settlement was for a time the end of steel. With whiskey at 50 cents a





**Construction crews at Golden in 1884 and, top, the community about 1888.**

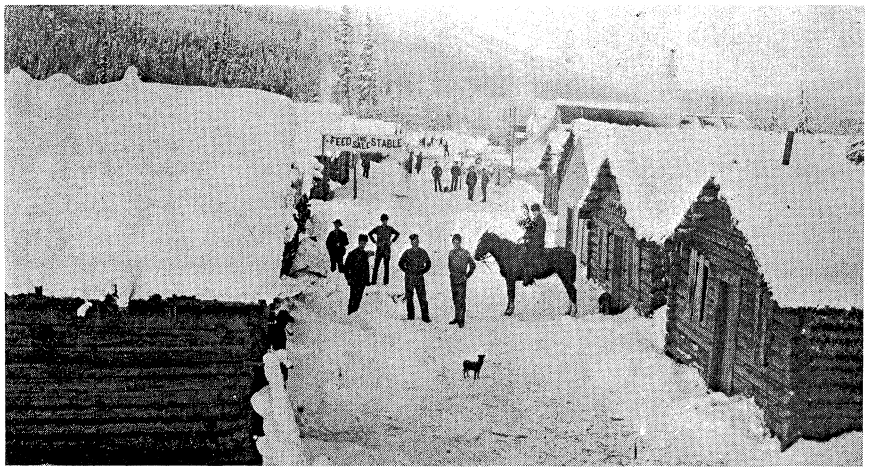
glass and construction crews lonely and thirsty, there was potential for trouble. But a detachment of North West Mounted Police under Inspector Samuel Steele took up winter quarters in tents by the tracks and maintained order. Then as abruptly as they arrived the construction crews vanished northward to the first crossing of the Columbia River on the way to Rogers Pass.

Here a community which became known as Columbia Crossing, then Donald, sprang to life in October 1884. It was reported to have "more saloons and restaurants than houses of any other line of business." A roving reporter for the Calgary *Herald* described the town as a "dirty, noisy, profane, reckless western town."

Whiskey was brought in from the U.S. and from Kamloops by pack trains. It retailed at $15 to $20 a gallon, finding outlets in Bob Philips' saloon, the Cosmopolitan, the Queen of the West, and the Italian and French quarter saloons. The Italian Saloon was a little hut 12 x 16, where the barkeep was a woman — "but what a woman!" The social life consisted of drinking, gambling and dancing. Music was an integral part of the camp and the main instruments were the fiddle and accordion. Nina Dow, Nellie and Ellen Swift, Emma Stewart, Maud Lewis, Agnes Morris and Nellie Goodrich were the prominent call-girls of the day, popularly referred to as "fallen angels."

The favorite gambling games were Seven-Up and Stud Poker. It was in Bob Phillips' saloon on the night of November 22, 1884, that Tom Evans drew his revolver and took a pot shot at Phillips, but missed his man and struck George Hide — who was standing behind the intended victim — inflicting a severe wound near the right eye. Evans held off the astonished patrons with his revolver and escaped. Despite a determined search by the police, he was never brought to justice.

There was a constant battle between the whiskey runners and the police. Hampered by a law which restricted their activities to within twenty miles of the right-of-way, the police could do little but search incoming trains and watch for the approach of the illicit packers. Another daily



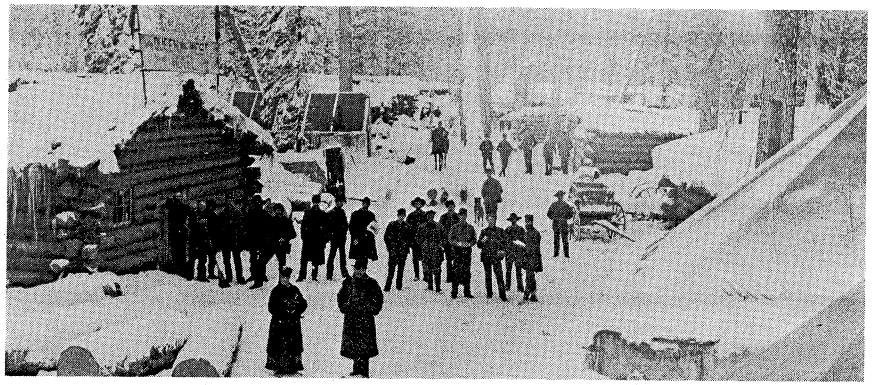



function was to round up the more obvious drunks. On October 30th, for example, the police escorted fifteen celebrants to Golden for the usual fine and warning.

Farther into the mountains 22.5 km (14 miles) from Columbia Crossing, Beaver Creek sprang up when winter stopped construction. Since Swedes formed nearly two-thirds of the population, favorite gathering places were the large number of Swedish restaurants. Saloons, however, were equally popular. One report noted that while there were only four stores, there were ten times that many watering places. That winter a bootlegger named McCallum introduced a new drink. To help him in his illicit smuggling of liquor, he constructed a can with an inner compartment. The inner compartment contained coal oil; the other, alcohol. When the Mounted Police wanted coal oil — they got it; and when the citizen wanted something to light his own inner lamp, he got that. A plug between the two compartments was so contrived that in the event of a raid the two liquids could be combined into something that tasted like whiskey but burned poorly in a lamp.

Despite the large number of rough and ready characters, there was little lawlessness. Nevertheless, two killings occurred. The first was on September 20, 1884, when a camp barber from California attempted to eviscerate James Finn, a construction foreman. He succeeded only in slicing Finn's clothing, who then drew a revolver and shot the barber dead. Finn was later arrested by Inspector Steele's NWMP and brought to trial. He pleaded self defence and was acquitted.

Later in the year, a murder took place outside Golden City. On December 4th a prospector named Baird set out with two companions for Calgary. It was no secret that he had enjoyed a good year in the mountains. Riding single file, the little party proceeded eastward to a point near Johnson's ranch, some 22.5 km (14 miles) from Golden. Suddenly a shot knocked Baird from the saddle. The other two men fled, but not before the unseen sniper had wounded one severely in the leg. When the rescue party reached the scene, they found Baird dead and $4,500 in gold dust missing



**At left is Donald in the winter of 1884-85, a single street of log buildings. Above is Beavermouth — also known as Beaver Creek, Beaver River and The Beaver — in 1884-85. The men are lined up outside the Queen of the West Hotel.**

from his saddle bags. No one was ever apprehended for the murder.

A humorous incident arose out of the tragic affair when a man named McIntosh, who owed considerable money, took advantage of the situation and circulated the news of his own murder. Stone-hearted creditors, failing to be duped by his obituary, tracked him down the following spring to a construction camp in Rogers Pass.

The year 1884 closed on a tragic note. On New Year's Eve, Constables Percival and Ross, tired of waiting for a train ride from Golden City to their detachment at Third Siding, decided to walk. Both men were inadequately clad and wore light, low shoes. At 2:30, Constable Percival arrived at Third Siding, almost frozen and exhausted. Back-tracking on the trail, the search party located young Ross lying beside the track. Percival, risking his own life, had covered him with his coat. His lungs, feet and hands frozen, Constable Ross died that night at the barracks.

Although the end of track remained at Beaver Creek during the winter of 1884-85, the tote road which carried supplies had been completed to Farwell, today's Revelstoke. From the tote route, engineers kept a close watch on the snow in Rogers Pass.

On February 8, 1885, there were three gigantic snow slides. At McKenzie Camp, 9.5 km (6 miles) west of the summit, a man named Robert Miller was caught and buried by an avalanche. Two miles away, at McDermot's Camp, a slide buried three men who were never found. The third slide was at the summit where a man named Hill had built a store. Fortunately, only the skirt of the slide struck the store and the men inside were able to scramble out through the windows.

Although an attempt was made to minimize the danger from slides and news of deaths suppressed, workmen began to leave for the east, fearing the dangers ahead. Their apprehension would prove well founded.

Towards the end of February, a second slide wiped Hill's store off the map. A short distance away another hurtling mass of snow and ice swept away over $65,000 worth of contract supplies. Salvage work minimized the loss to $10,000 worth of equipment, but six men were known to have perished. It was generally believed that many others had perished in the disastrous February slides and their deaths concealed.

Despite these early proofs of danger, almost 7,000 men were recruited in the spring and at the end of March camps broke winter quarters and began pushing the rails through Rogers Pass. Despite the early start, work stopped in a few days when workers went on strike and only a firm stand by Steele and the eight other NWMP under him when faced by a mob of 700 men prevented a riot. Harold Fryer, author of several books in the Frontier series, wrote of the incident:

"After Christmas 1884, Steele moved his headquarters from Golden to Beaver River, then a mile from the end of the rails. In the area were located about as unsavory a bunch of hooligans as could be found anywhere. They had set up bars and were preying on the construction workers by rolling any who got drunk on their rot-gut booze. Because the railway's manager of construction, James Ross, wouldn't allow his trains to bring in food to this rough segment, they generally got their supplies by stealing them. Consequently, the police had their hands full. Then as if there wasn't already enough trouble, the railroad workers went on strike.

"All through February and March 1885 dozens of workers complained to Steele that their pay was being held up and that they would strike if it didn't soon come through. Steele tried to persuade them to be patient. 'Your pay is guaranteed by the Canadian government,' he told them. It did no good. The workers were agitated by rowdies who had worked on the Northern Pacific in the U.S. and on April 1 they walked off the job.

"Steele expected trouble from the workers and it wasn't long in coming. A couple of days after the strike began Sergeant Fury and three constables had to hold off a large group of armed men who were trying to stop a train load of tracklayers from working. Fortunately the Mounties met the mob, who were firing revolvers and creating a great uproar, at the mouth of the narrow Beaver River Canyon and were able to stand them off without anyone getting hurt. When the strikers saw that Fury's men weren't backing off, they decided to call it a day and let the tracklayers go back to work.

"During this time Steele had been incapacitated with a severe case of flu. And while Fury was engaging the strikers at the canyon, Constable Kerr had gone to the end of the track for a bottle of medicine for his boss. On his way back he heard one of the troublemakers trying to incite a group of strikers to attack the Mounted Police barracks. He immediately tried to arrest him but got a severe pummelling and was forced to leave without his intended prisoner. A few minutes later Kerr met Sergeant Fury who brought

**North West Mounted Policeman Sam Steele, foreground, and his detachment in 1885. The man at left is Sergeant Bill Fury.**

the news to Steele. 'It's a pity he attempted the arrest without enough help,' said an unhappy Steele. 'But what is done is done. Now we've got to take that man at all costs — we can't let the rest of the gang think they can play with us. Take what ever men you need, Fury, and bring that man in.'

"Off went Fury only to return a short time later with a torn jacket. 'The gang took the prisoner away from us,' he told Steele.

" 'That's too bad,' replied Sam a little sarcastically. 'Now take your revolvers and shoot anyone who tries to interfere with the arrest!'

"Fury was off again, this time taking with him Constables Fane, Craig and Walters. A few minutes later a shot rang out and George Hope Johnston, a Federally appointed magistrate who acted as Steele's deputy, solemnly intoned, 'There's one of them gone to hell, Steele!'

"The two men stepped to the office window to see Constables Craig and Walters dragging a man across the bridge that separated the barracks from the shanty town of Beaver River. The prisoner was kicking and cursing, ably abetted by a woman dressed in red, who was shrieking and calling the policemen some very uncomplimentary names. Though still terribly weak from his illness, Steele grabbed a rifle and ran out to aid Fury and Fane, who were trying to keep the mob from crossing the bridge.

" 'Arrest that woman and bring her along!' he shouted to Fane, and to the menacing mob he gave a stern warning. 'Hold it right there or we'll open fire!'

"The mob answered with jeers and curses. 'Look at the bastard,' said one. 'His own death bed makes no difference to him.'

"Sam may have looked as though he wasn't long for the world, but his stance indicated plainly that if he was to depart, he would be taking a few strikers with him. While he and his men covered the mob, Mr. Johnston read the Riot Act. Steele again told them to move off or he and his men would open fire. By this time quite a number of well-armed town citizens had gathered to back up the police. It was all that was needed — the riot was over.

"It turned out that the man Johnston thought had been sent to Hades was only wounded by Sergeant Fury. He was treated by CPR doctors, fined $100 by Magistrate Johnston and turned loose. Other strikers who were arrested received the same light treatment. It was all that was necessary for on April 7 the workers got their pay and the strike ended."

With the men back on the job, the task of breaching the barrier of Rogers Pass continued. The original survey had proposed to carry the railway high along the side of Syndicate Mountain (now Sir Donald), but the avalanches convinced Major Rogers that this was impractical and dangerous. A safer route would be lower down the mountain, but a lower route along the mountainside meant that the rails had to drop 150 meters (500 ft.) in so short a distance that the railway grade would be too steep. The problem was solved by manager of construction James Ross.

He designed a double loop along the base of three mountains. The loops added nearly 5 km (3 miles) to the length of the section, but enabled rails to be laid along the valley clear of the most formidable slide areas. When completed the rails descended from the summit to Ross Peak in two circles. Most of the span was carried on wooden trestles, one over a mile long. The bottom of the loop ended in the valley of the Illecillewaet River whence it descended to Revelstoke and through Eagle Pass to Kamloops.

In the heart of the Selkirks, the builders realized that at best they could only afford protection against the avalanches of snow and ice that swept down the slopes. Over 6.4 km (4 miles) of snowsheds were completed in 1885-86, and each year after that there was a constant battle with the elements in the Pass. With an eye on the tourist trade, the CPR laid two sets of tracks at the summit. The winter tracks led through an enormous snowshed, while the summer tracks were laid in the open so that travellers could enjoy the magnificent view.

With the summit and the loop conquered, construction of the rest of the line through the Pass was relatively easy, although it involved several crossings of the Illecillewaet River. Finally, on November 7, 1885, the east-bound tracks joined the west-bound at Craigellachie, B.C., and the last spike was driven by Lord Strathcona, a financial partner in the railway. The historic spike was not gold but an ordinary iron one. CPR president Cornelius Van Horne did not like unnecessary expenses or long speeches. His address to those at the ceremony consisted of fifteen words: "All I can say is that the work has been well done in every way."

On June 28, 1886, the first transcontinental train left Montreal for the west coast, thundered through the Rogers Pass with the help of a pusher on July 2nd, and puffed into Port Moody just outside of Vancouver on July 4th. Twenty-one years after Walter Moberly made his first explorations


**Rogers Pass village in 1886. At left is the Woodbine Hotel, complete with a false front which hides the rough log construction and primitive inside facilities.**

toward Rogers Pass in an attempt to find a route for a railway, Canada had finally been linked by twin steel rails.

**The White Executioner**

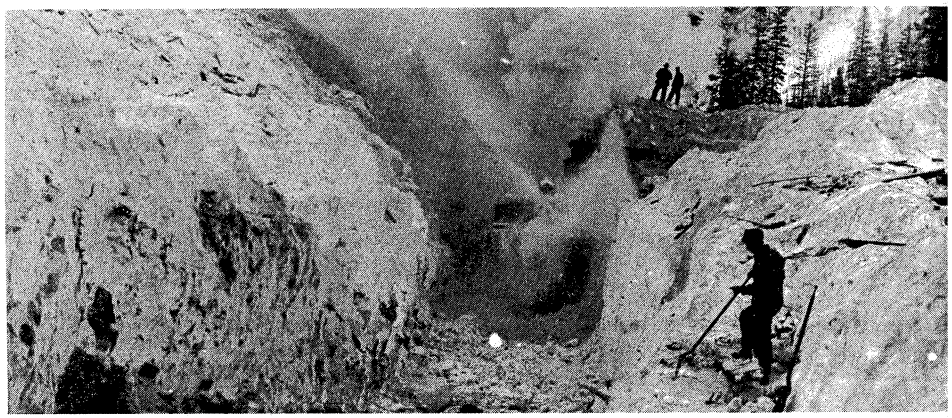
On April 21, 1886, the CPR began opening the road through Rogers Pass after the winter shutdown. Snow plows and crews of men spread out along the line, preparing it for regular traffic. It was the first move in a long struggle during which men gambled their lives against the vagaries of nature.

The first victim was Thomas Williams, locomotive foreman at Donald. On July 8, 1886, Williams slipped on a grease spot and fell into the path of an on-coming train. He was killed instantly. In December 1887, cyclonic winds picked a man up and "whirled and twisted him so rapidly and spirally that when dropped he was a limp mass without a bruise or break in skin or clothing yet with all his bones broken or dislocated."

In the next seventy-five years, over 260 men lost their lives, most by avalanches. The first major disaster occurred at old Rogers Pass Station.

On January 30, 1899, an enormous avalanche broke loose just after 3 p.m. and plunged towards the little town. Station master Albert Cator was talking to a young man at the station door. When they heard the slide coming, they rushed onto the platform. Just then the slide struck the building. Cator was swept away, but the young man dropped to the ground and was buried up to his neck. Miraculously, he survived. Not so fortunate were Mrs. Cator and her two children. They perished in the ruins of the station. Annie Berger, a waitress, survived with a broken leg. The night telegraph operator was asleep in the bunkhouse when the slide struck. Rescuers found him in his bed, suffocated. Frank Vago, who coaled the locomotives, was in the bunkhouse. He was picked up and jammed between the joists, upside down, but somehow survived.

On the tracks, section foreman Ridley was working inside a boxcar, with a helper on top. The helper saw the slide coming, hollered a warning and jumped. He landed inches clear of the skirt of the avalanche, but Ridley was swept away by the churning mass of ice and snow. Two workmen in the nearby roundhouse died, while two companions were brought out alive. In all, eight persons perished. It was an ominous preview of worse disasters.



**Rotary snowplow and crew clearing a path through an avalanche in the early 1900s.**



The same day, a second slide broke through a snowshed near the summit, killing an Italian workman inside. The following day, as a snowplow strove to clear the shed, its rotary blade critically injured three Italian workmen, one of whom died later.

One of the first men on the scene of the accident was George Williamson who brought in the medical supply train. Williamson, who started as a wiper at Donald in September 1892 and later became an engineer on trains in Rogers Pass, knew well the constant hazards from slides. Typical was one in the spring of 1906.

"We were widening out what had been a slide," he recalled. "I was coupled onto the rotary, pulling out timber from the slide. I saw some of the boys begin to run. My engine and the rotary were just outside the snow shed and when I saw them starting to run, I knew there was a slide coming and I started to back up. I got the engine inside the shed when...Bingo!...away goes the rotary. The engineer of the rotary, Jim Campbell, and his fireman had jumped and were hanging onto my pilot as I back in. Knocked the rotary away — oh say — 75 to 100 feet. Smashed it all to pieces. It broke off my push casting. There must have been eight, ten, twelve men buried.

"When we dug out the men on the extra gang, I said to Tom Wilson, the foreman, 'Tom, do you think you got all the men out!' So he counted them.

" 'By golly, George,' he said, 'There's one missing!'

"Well, they dug around in the snow and they touched this fellow and dug him out. He was unconscious, but he lived."

Although the tunnels and snowsheds were a necessary precaution in the mountains, they were also a hazard. Water dripping from the ceilings froze on the rails, frequently stalling trains. At Laurie tunnel, the Company constructed large wooden doors at one end in the hope of eliminating drafts which froze the water deep in the tunnel. Said an old-time railroad man: "I went up there as a young buck, firing, and there was many a time we'd slip to a standstill and I've got down and put my face to some water in Laurie tunnel to get air. There was so much gas, and no draft to take the smoke away. But you'd always have to be careful when you came to the end of the tunnel for fear the watchman wouldn't have those damned doors open."

Some winters in Rogers Pass were comparatively peaceful, but not 1910. Massive snowfalls were followed by frost and thaw — ideal avalanche weather. There were numerous slides in late January and all through February, and the rotary plow crews and the extra gangs of Japanese and Italian laborers became accustomed to being called out in the middle of the night to attack a new slide. The frequent deluges of snow continued into early March, causing a massive slide March 2nd which held up passenger trains at Revelstoke and Calgary. By March 4th, the line was reported clear.

Passenger train No. 97, already the most celebrated train on the western run since it had been held up twice by train robbers, (See Frontier Book No. 7: *Bill Miner, Train Robber*) left Donald, where it had been waiting for the signal that the tracks were clear, and moved into Rogers Pass that afternoon. Shortly after it had passed through Bear Creek, a slide

took place, and No. 97 was moved to Rogers Pass Station for safety.

W. C. Waddel of New York was a passenger and noted: "We were six hours late leaving Winnipeg, and three hours late leaving Calgary. To this circumstance we may probably owe our lives. Friday afternoon, just as the train was nearing Bear Creek Station, there was a succession of slides on the adjacent peaks, but not near enough to endanger the railway line. A brakeman was sent back to flag another train in the rear. A few minutes later (some say as little as four minutes) we heard a mighty roaring sound as a slide crashed onto the rails around the bend 200 yards away behind us. The brakeman hurried back covered with snow. He had run for his life when he heard the slide approaching. As it was, he just escaped by a miracle as he was covered with snow from head to foot. He missed the mighty avalanche by only a few feet.

"At Bear Creek Station we were not out of the danger zone as the mountains there rise precipitously. Just as darkness was approaching, we got word of the first slide...."

The first slide had come down opposite Shed No. 17, burying the tracks up to 6 meters (20 ft.) deep. Immediately a crew was sent to the scene. A rotary plow pushed by a locomotive and accompanied by three gangs of laborers and a bridge gang started clearing the main line. The rotary blew away the bulk of the snow, then the Italian and Japanese crews moved in with pick and shovel to clear the tracks.

A few moments before 11:30 that night while the crews were busy clearing the last remnants of the slide, Bill Lachance, fireman on the rotary plow, climbed down from his engine and strolled over the bridge to the north side of Bear Creek. Scarcely had he reached the north bank when a terrible wind rushed down the mountainside — the first warning of a slide. Picked up by the wind, Lachance was whisked through the air and flung into the brush. Behind the wind a massive wedge of snow hurtled down and engulfed the train and workers. Then a deadly calm settled over the scene.

At the first report of the accident a relief train consisting of some 200 men, nurses and doctors was dispatched from Revelstoke, 72 km (45 miles) to the west. The telegraph lines were down across the slide and it was difficult to get an accurate picture. But as word was brought back by messenger from the dreadful scene a mile west of Rogers Pass, the full magnitude of the disaster of that March 4th night became evident. Hurtling down from the slope, the slide had engulfed a quarter mile of track and dropped 450 meters (1,500 ft.) into Bear Creek chasm. Over sixty men had vanished.

Unable to use a rotary plow for fear of cutting the bodies in the slide, the CPR called upon men from nearby logging and mining camps to assist. At one time, over 600 men with picks and shovels were digging through the snow, in places piled nearly 9 meters (30 ft.) deep. Some men were found in the hard-packed snow with their own picks and shovels in hand. Two Japanese workers were dug out, clasped in each other's arms. Another Japanese trackman was found with a knife in one hand and a plug of tobacco in the other.

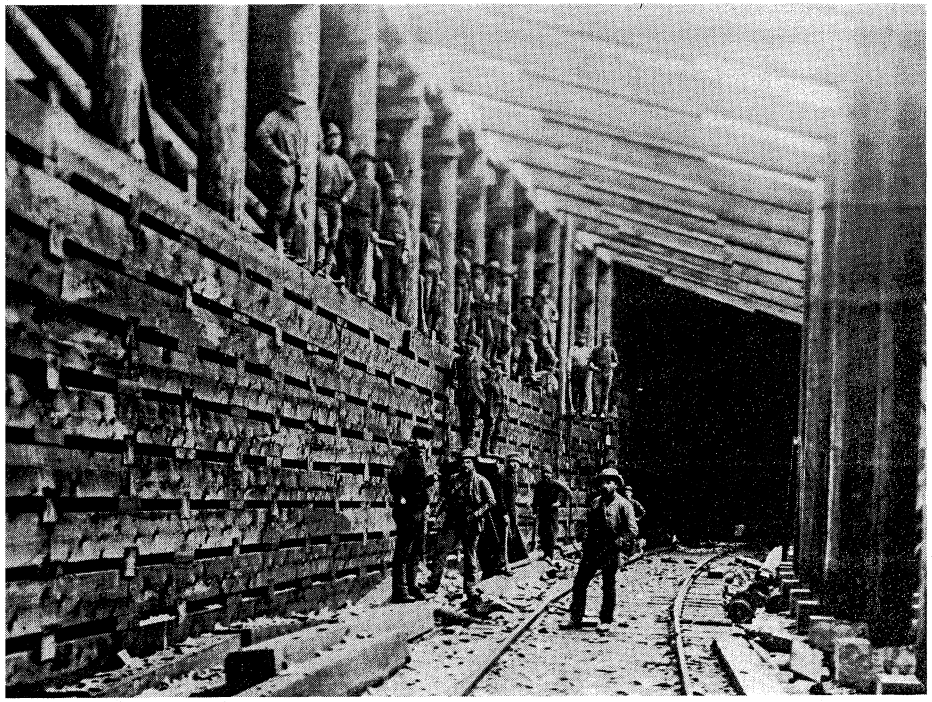
C. G. Anderson, a commercial traveller from Toronto, was among those on Train No. 97. Anderson gave the following account: "Picture an



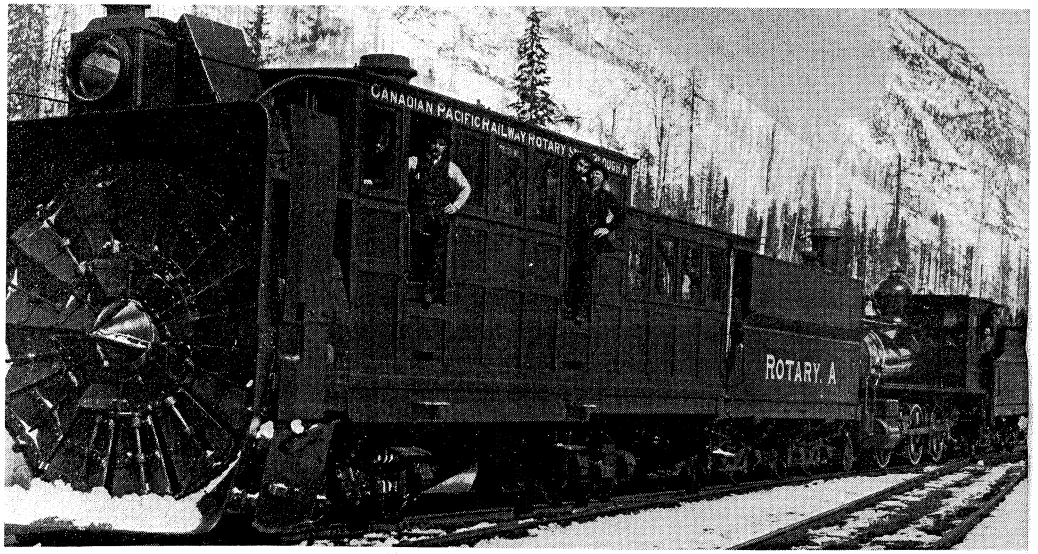
area 20 miles square, with Rogers Pass as the center of this area covered by millions of tons of snow, half ice, and here close to Rogers Station great trees and boulders torn up and hurled down from the mountain sides into this canyon (Bear Creek) upon the work train and the laborers without a moment's warning. I shall never forget the scene as I went down from our train to see them digging out the bodies of the unfortunate men. While there seeing the brave fellows who were taking their lives in their hands at this work — for so great was the danger of another slide that the passengers were warned against going to the scene — I saw the bodies of three white men and several Japanese taken out cold and stiff in death.... Not a bruise was to be found on any of the bodies that I saw taken out. Like white and bronze statues, the whites and Orientals were recovered one by one.

"It was a tragic spectacle that we witnessed. The rotary engine weighing over 100 tons, as well as a number of cars, had been actually lifted from the main line and hurled in the air onto the top of the roof of the snowshed 40 feet above. The engine lay upside down, a mass of wreckage, and twisted out of all semblance to its original shape. The cars were shattered into splinters. Underneath the engine, several bodies were found. Nearly all the railway men were buried under tons of debris ... the hands of nearly all the victims were extended in front of their faces as though they had been animated with the idea of self-preservation in the fatal moment when the avalanche descended. The faces nearly all wore a peaceful look.

"As victim after victim was recovered, the bodies were strapped onto



**Interior of a Rogers Pass snowshed in 1889.**




improvised toboggans and hauled to Glacier Station, three miles down the slope."

Another eyewitness account was provided by Joe Godfrey who helped in rescue efforts. A member of a bridge crew, he spent fifty years in the CPR's mountain division before retiring. He recalled that most of those dug up were standing. "We found three foremen," he said, "standing facing one another as if they'd been chatting. One even had his pipe in his hand. Another fellow, a Japanese, had his left leg bent, still standing up, as if he'd taken the first step to climb out. Another man we found still had a cigarette paper between his fingers. He was just about to roll a smoke."

Since officials feared that many of the men had been carried by the slide into the deep gorge of Bear Creek, it was almost impossible to count the number of victims. They began a canvas of all the section house quarters in the vicinity. The two engineers, W. Phillips and A. Potruff, were known missing. Fireman A. Griffith from the locomotive was also missing. Conductor R. J. Buckley and roadmaster J. D. Fraser were gone and presumed dead. The survey of the section gangs revealed that foreman Albert Johnson, Chuck Anderson and E. Wellander and all their crews had been killed.

D. J. McDonald, bridge foreman for the area, was found in the slide. An exceptionally heavy and powerful man, McDonald had evidently been covered with almost five feet of snow, but had retained sufficient consciousness to begin to struggle out by pushing the snow under his feet and working upward. When found, he had moved two feet and had only another three to go to reach the air.

When the final tally was completed, it was found that sixty-two men had perished in the catastrophe. Only Bill Lachance survived.

**The Railway Retreats**

While 1910 was a bad year for slides, 1911 and 1912 were worse. Nearly 100 slides came down, making railroading through the narrow pass a hazardous and costly business. The bulk of the damage was being done in the area of the Loop, the 8-km (5-mile) stretch which comprised the geographical structure known as Rogers Pass. In places, even a small slide tied up the line for hours. The nature of the snow in this region was another concern. In most instances, the snow froze almost instantly it settled, forming a hard shell over the ties and rails. The long Loop with its 6.4 km (4 miles) of snowsheds and trestles was particularly vulnerable in winter.

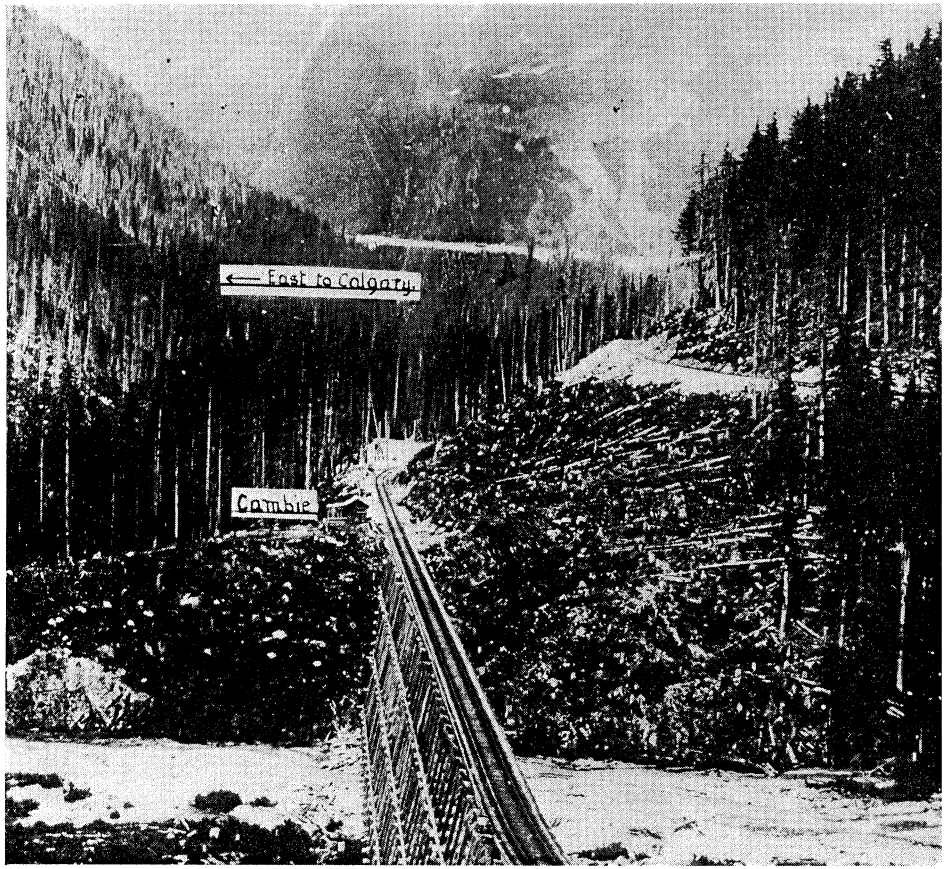
Finally, the CPR prepared to beat a strategic retreat. Orders were issued to proceed with the construction of a tunnel through Mount MacDonald to eliminate Rogers Pass. In 1913 CPR engineers began to drive a small, pioneer tunnel into the heart of the mountain. At top speed, they pushed the pioneer tunnel ahead and in one thirty-day period drove 245 meters (817 ft.) into the rock. From the pioneer tunnel — the first American tunnel system in which this technique was tried — the engineers worked

**Opposite is a typical snow clearing gang at Rogers Pass in the 1890s. The crew wiped out in 1910 was over twice as big. The top photo shows a Rogers Pass snowplow in the 1890s, and at center the remains of a similar snowplow after the 1910 avalanche.**

outward towards the limits of the final tunnel which was to be 23 by 29 ft. and which would accommodate a double set of tracks, carved through almost 8 km (5 miles) of solid rock.

Then World War One began in 1914 and reports of the tunnel's progress were replaced by more important news from Europe. But deep in the heart of Mount MacDonald, the work continued. Without fanfare, the Connaught Tunnel went into operation in 1916. Eight kilometers (5 miles) in length, it eliminated over 2,300 degrees of curvature in the original track, cut out nearly 8 km (5 miles) of snowsheds, and reduced the summit by 162 meters (540 ft.). The cost was nearly $10 million, of which $2.5 million was for dynamite.

With the completion of the tunnel, several changes took place in the pass. A world-renowned CPR hostelry, Glacier House, began to fall into disuse and the town of Rogers Pass, survivor of nearly thirty years of battle with the slides of March, passed away. Because the new tunnel enabled trains to move faster and because improved equipment was being sent into




**Part of "The Loop," a route abandoned when the Connaught Tunnel bypassed nearly 8 km (5 miles) of the railway in Rogers Pass.**



the mountain region, divisional headquarters was moved from Donald to Golden, and Donald disappeared.

Rogers Pass, having turned back the fur traders and the miners, had bested the railroad builders. True, the Selkirks had been conquered, but Rogers Pass itself, that beautiful, dangerous stretch of natural perfidy, had won again. Although the worst section had been bypassed, there was to be one more major tragedy.

The late days of February 1936 brought frost and thaw and winds, and experienced railroad men girded for another battle with nature. Late in the evening February 29, rain began to fall on the mountain slopes around Albert Canyon, eating into the piled up snow. Avalanches plummeted down the mountainsides, blocking the tracks between the west end of Connaught Tunnel and Revelstoke. The rain continued through March 1st.

Engineer Percy Shafer, hauling a load of livestock from Calgary to Vancouver, passed through Connaught Tunnel about 1 a.m., March 2nd. As he started down the grade towards Revelstoke, he ran into a slide some 30 meters (100 ft.) long just west of Illecillewaet Station. The engine was derailed and remained in the fast-freezing snow bank.

An auxiliary outfit clearing tracks nearby was immediately summoned to help in righting the engine and clearing the line. Two section crews, comprising fourteen men, were picked up at Illecillewaet and brought to the scene.

The rain continued.

Unable to get at the stricken engine, the crew decided to uncouple the train of bawling livestock and pull it back to Illecillewaet. This was done, but when the section crew returned to the scene, they discovered that the locomotive tender still blocked their approach to the engine. Uncoupling the tender, they hooked a cable over the drawbar of the tender, pulled it free and began to haul it up the slope towards Illecillewaet. Ernest Jones, a trainman, B.C. Calder, conductor of the wrecker crew, and Andrew Sheppherd, a car repairman, climbed aboard the tender for the ride back to town. It was then almost 2:30 a.m.

As soon as the tender was pulled free, the track repairmen crawled down the cut behind the stalled locomotive and began to replace a track which had been torn loose and to remove the frozen snow around the engine itself. Five men — engineer Percy Shafer, telegraph operator John R. Roland, mechanics Dick Cossar and G. B. Alexander, and trainman Hans Haug — gathered in the cab of the derailed locomotive for protection against the wind-driven rains and the chill of the night.

Proceeding cautiously because of the extreme slide danger, the wrecker backed uphill towards Illecillewaet some 3 km (2 miles) away. Almost within sight of the yards, the engineer suddenly slammed on his brakes to avoid another slide. The tender bumped into the engine, permitting the cable hooked over the drawbar to slacken and fall off. Almost before anyone realized what had happened, the tender began to roll down the slope.

The three men on top of the tender suddenly discovered that there was no hand-brake on the car. As one man expressed it: "She was free to go wherever she wanted." With horror in their hearts, Jones and Calder

jumped. Sheppherd, whether from fright or hope that a miracle would happen, stayed with the runaway.

Realizing their utter helplessness, the engineer of the auxiliary engine blasted his whistle, hoping the men below would understand that something was wrong. But the crew in the cut worked on. The five men in the engine cab chatted casually.

Joseph Ditomassi, a trackman working on a shelf above the slide with two companions, noted the engineer's frantic blast. "Guess she must have run into a slide," someone said.

"We heard a whistling sound like another slide coming," said Ditomassi. "Then we saw through the darkness of the night an even darker object approaching along the tracks at terrific speed. We called to those in the deep cut below and to those in the engine to jump, but they didn't have a chance."

Hurtling out of the night, its noise deadened by the falling rain and the light crust of frost on the rails, its approach undetected until the last agonizing moment, the runaway tender crashed into the cut. In a last second effort to escape, men tried to claw their way up the icy walls of the cut.

Joseph Ditomassi and his companions stared in shocked disbelief.

Of the five men trapped in the locomotive cab, Haug and Roland were killed instantly. Dick Cossar was hurled against the water glass which broke and gushed scalding water over him. Alexander and Shafer were knocked down, Alexander suffering a badly broken foot and Shafer a severe chest injury. Only E. G. Bowie, a mechanic who was standing by the engine, escaped without injury.

Of the fourteen men working in the cut, eleven died instantly and the others suffered severe injuries. When the rescue crew arrived they found the dazed survivors attempting to rescue the men still trapped inside the almost crushed locomotive cab. The six badly injured men were carried over the slide and sped towards Revelstoke by special train. Early in the morning, Dick Cossar died in Revelstoke hospital.

Andrew Sheppherd, last seen riding the runaway tender, was not found until the following day. He had waited too long to jump and when he did, broke his neck when he hit the retaining wall of an 18-meter (60-ft.) embankment. He was the fifteenth casualty.

The snow-ridden mountain slopes threatened further destruction as the rain and thaw continued through March 3rd. A huge rotary plow was thrown off the track and engineer Roy McKay suffered a fractured leg. Passenger train No. 4 from Vancouver had windows and vestibules smashed by a series of small slides as it crawled through the area but no one was injured. At another place two cars were derailed. Traffic was halted until the numerous slides were cleared, with nearly 100 eastbound passengers stranded in Revelstoke alone. Elsewhere, two other passenger trains and several freights were sidelined until the danger passed.

In 1937, as if determined to drive the railroad completely out of the Selkirks, the avalanches bombarded the line once more. Experienced engineers such as George Williamson, Walter Pavey and James Carmichael, who operated the pusher engines or the massive rotary plows, became adept at detecting slides and using evasive tactics. Whenever on a slide job, they

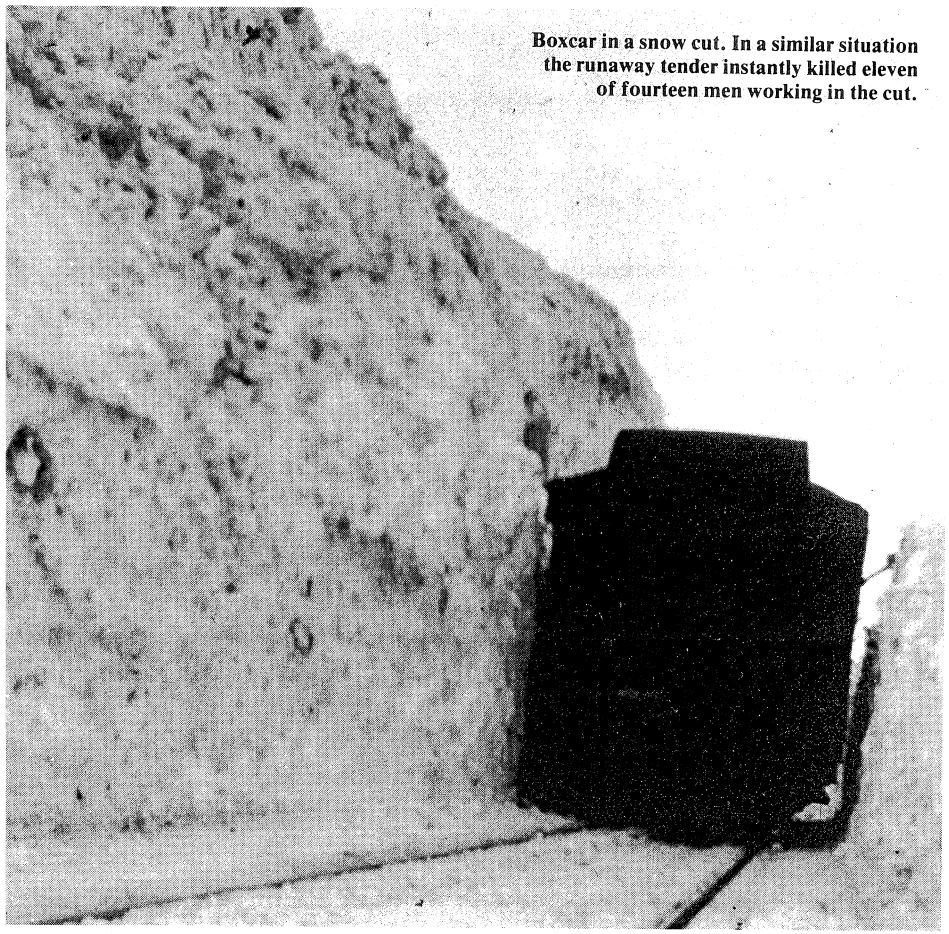


kept their hands on the controls and a weather-eye cocked to the mountainsides.

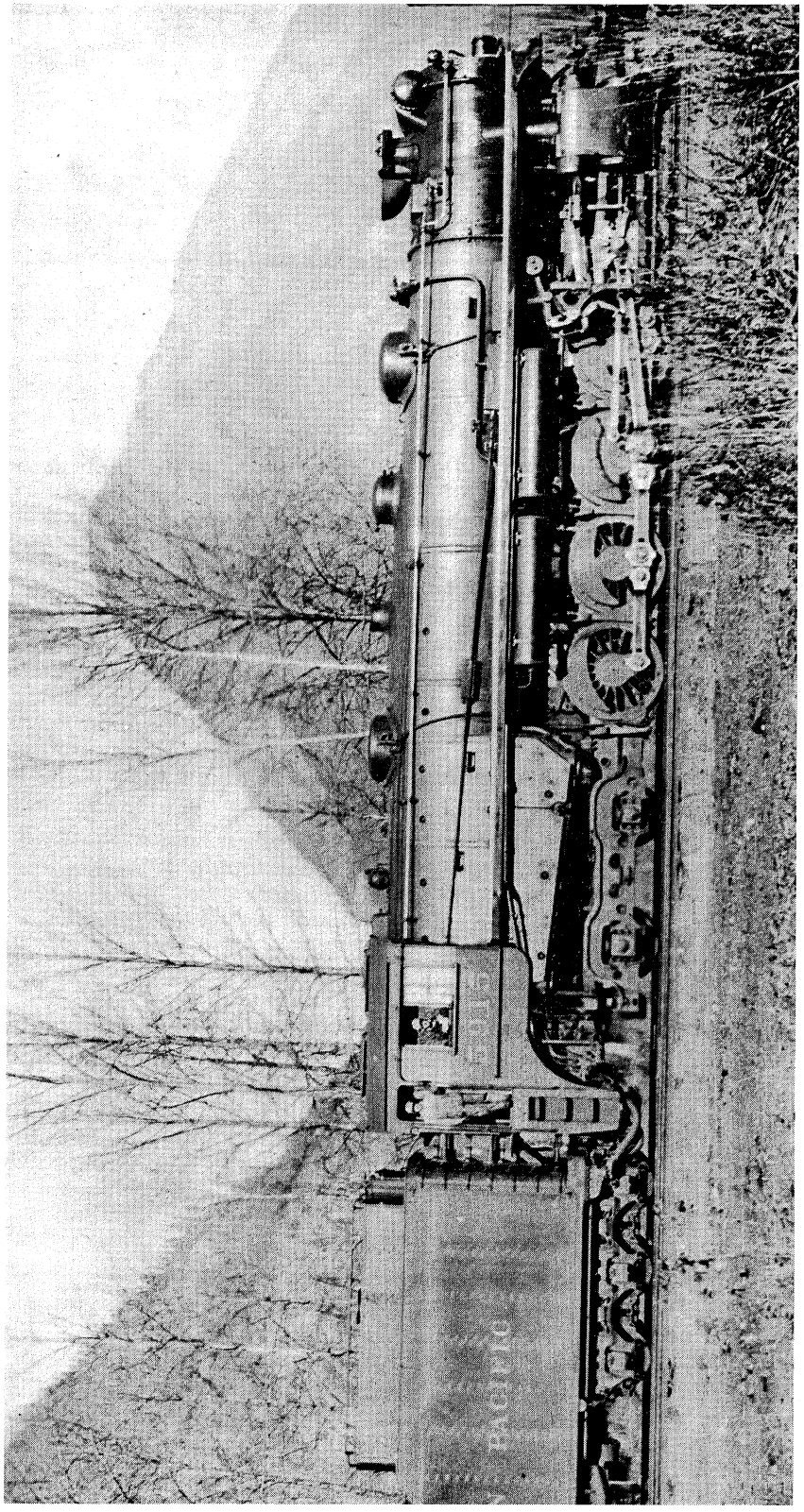
On a March afternoon in 1937, a slide came down near Laurie Tunnel and a crew under engineer Carmichael moved in from Revelstoke to clear it. Their unit consisted of a rotary plow in front, a pusher engine and two cabooses. It was a relatively light slide and since it had not frozen, offered little resistance to clearing.

Conductor Jack Macdonald, a skilled engineer and after whom the present Jack Macdonald avalanche shed is named, traded places with Carmichael, who returned to the caboose for a cup of coffee. A trainman saw a slide start down the mountain and, realizing that Macdonald could not see it because of the snow flying around the rotary plow, pulled the emergency cord.

The slide hurtled down to the river, passing just in front of the rotary. The entire crew breathed a gusty sigh of relief as they watched the mass of snow careen up the opposite valley wall. Then, to their horror, the



**Boxcar in a snow cut. In a similar situation the runaway tender instantly killed eleven of fourteen men working in the cut.**



**To challenge the Rockies and the Selkirks — one of the toughest sections of railway in the world — between 1929-50 the CPR built thirty-five locomotives which were the largest in the Commonwealth. The drive wheels were 5'3" in diameter, the locomotive was nearly 100 feet long and weighed 731,000 pounds.**

avalanche slowed, made a half circle and hurtled upwards towards them. Such was the bulk and momentum of the snow that it toppled the engine and cabooses off the track into the river, but left the rotary plow still on the track.

Unhurt but shaken, the crew rushed to the overturned engine to rescue Macdonald, but were driven back by a second, smaller slide. Then a third buried the engine under some 15 meters (50 ft.) of snow. It was four days before Macdonald's body was recovered.

**A New Era: The Gas Engine**

By the middle of World War One, motorized transport began to appear and, despite early ridicule, by the Twenties it was obvious that the automobile and truck were here to stay. Gradually, like the fur trader and the miner, the Fords, the McLaughlins and the Mitchell Sixes began nosing the toes of the Selkirks. Finding no passage, they turned southward through the Crowsnest Pass and the United States to gain entry into British Columbia.

As early as 1924, the B.C. government began looking at the Selkirks for a possible route between east and west. It looked hopefully for the motor car, unlike the ponderous locomotive, did not need such smooth inclines or extended turns. Again, however, the Selkirks denied them access. They eventually settled for a route which followed the Columbia River some 150 km (90 miles) north from Revelstoke and 160 km (96 miles) southeastward to Golden. Construction began in 1928 and, in 1929, Dominion engineers commenced work on the eastern section from Donald. In 1934, construction was taken over by Federal-Provincial Relief Projects and within the next six years an estimated $3 million was spent, a massive sum in those depression years. The Big Bend opened in 1940 but because World War Two had erupted, the event went virtually unnoticed.

The Big Bend Highway was never quite finished. It was a six-hour trip by car — if the driver was lucky. When a roadside sign said "15 miles per hour" it meant exactly that. It was a fair-weather road, never paved, and although a battery of graders patrolled it almost constantly, it remained a dusty, pot-holed, lonely thoroughfare. Travellers used to stop frequently to tighten bolts and dentures.

Then in 1953 Rogers Pass, which for almost forty years had been left free to play its annual game of spring bowling with the remnants of the old CPR snowsheds, was invaded once again. Federal Department of Public Works snow research stations were established and revealed that there were seventy-four danger areas in the section from which avalanches normally fell. While the average snowfall was an astonishing 900 cm (350 inches) — of itself a not insurmountable problem — studies indicated that the snow tended to settle in specific areas and that unseasonal thaws, or wind erosion, precipitated most of the slides. These slides themselves were of three basic types.

The first group was composed of brittle snow that refused to cling long to the slopes and slithered down, usually harmlessly. Another type was formed by a mass of hard snow breaking off and, like a snowball, gathering more snow on its rush down the mountainside. The last group, and the most dangerous, was caused by massive ledges of snow-turned-ice which built up

so that weight alone caused it to break loose and plummet to the valley floor, carrying rocks, uprooted trees and other debris. An added danger was that years of avalanche action — especially on Mount Avalanche — had left the mountainsides smooth with nothing to deter or even slow the speed of the slide.

While the avalanche study was still underway, the B.C. government decided to abandon the Big Bend Highway as a part of the Trans-Canada system and settled on Rogers Pass. In 1956 an observation center was established on Mount Abbott and a new concept of avalanche protection evolved.

Starting high on the mountainside, engineers sought out natural plateaus and widened them to catch slides early. Lower down, following the path of slides, they built mounds of rubble to slow down and break up the avalanche should it reach the lower regions. Finally, at road level, a series of snowsheds was planned to carry the snow over the highway. Buffers were to be installed immediately above these sheds to channel the avalanches over the tops.

To prevent the build-up of massive avalanches whose destructive forces were far greater than man could defend against, a program of deliberate slide precipitation was planned. By using howitzers, build-ups could be shelled and dislodged before they reached dangerous proportions. The engineers trusted their system of defence to dispel the resulting slide harmlessly before it reached the highway or railroad.

In 1958, surveyors moved into the Rogers Pass and in 1959 the roadbuilders came. They were a different breed from those who had descended upon Rogers Pass in 1884-85. Gone were the pick and shovel; gone were the horse drawn graders and scrapers; gone the ponderous old steam-driven piledrivers. In their places were powerful Euclids, powerdriven scrapers, bulldozers. In 1885, a good man with a pick was described as a one who could "keep only two good shovellers going." In 1960, a modern Euclid could scoop up the work of those old-time pickers and shovellers in one gulp of its cavernous jaws. In 1885, a man's worth was measured in brawn, an ability to live with danger day in and day out, and a measure of raucous humor. The new Rogers Pass man was measured by his ability to handle ponderous machines, his record of safety, and his adeptness at brightening the lives of the damsels of Revelstoke and Golden.

A highway 147 km (92 miles) long was pushed through the Selkirks, in many places utilizing the original roadbed established by the railroad. East of the summit, the highway engineers uncovered the remains of the CPR roundhouse destroyed by an avalanche in 1899. At the summit the highway passes over Connaught Tunnel which railway engineers built to thwart the avalanches.

The most difficult problem was the nature of the rock in the Selkirks. The Selkirk Range is older than the Rockies to the east by several million years and weather conditions have eroded its slopes and weathered its rocks to a much greater extent. Where normal rock blasting produces fragmented pieces, the same procedures in the Selkirks was apt to split enormous slabs of rock off the mountain. There were several delays before a new technique of blasting proved effective. Simultaneous with the road building went the



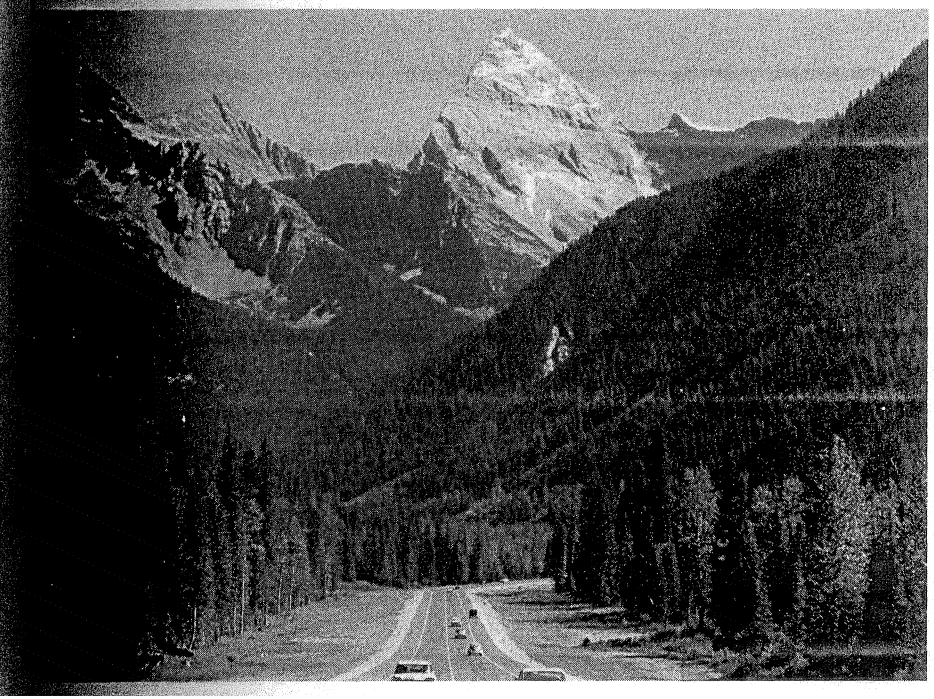
construction of snowsheds. The largest, the Lanark, is 360 meters (1,200 ft.) long and cost close to $700 a meter.

Finally on July 31, 1962, the Honorable W. A. C. Bennett, Premier of British Columbia, cut a ribbon and a cavalcade of cars bearing an estimated 7,000 people streamed over Rogers Pass. But that wasn't the end of pomp and ceremony. Politics demanded a second opening. On September 3, 1962, the Prime Minister of Canada, the Right Honorable John G. Diefenbaker, officially opened the highway on behalf of the federal government. It seemed only right that such a rugged protagonist as Rogers Pass be honored with two official ceremonies.

"Such a view! Never to be forgotten!" wrote young Albert Rogers eighty-one years before, as he saw Rogers Pass with his famous uncle, Major Rogers. "Our eyesight caromed from one bold peak to another for miles in all directions.... Everything was covered with a shroud of white, giving the whole landscape the appearance of snow-clad desolation."

Perhaps some of young Roger's descendents will journey through Rogers Pass in the summer when the region is a swirling mass of green grass and rainbow-hued flowers; when brown and black bears saunter down the railroad tracks in search of berries; when the black ribbon of asphalt lies across the valley like a necklace dotted with multi-colored beads of cars; and when the monument at the summit is surrounded by gaily-decked tourists clicking their camera shutters in rapture.

They will undoubtedly endorse the sentiments of their pathfinding forebear: "Such a view. Never to be forgotten!"



# Travel Log: Revelstoke to Golden 150Km (90Miles)

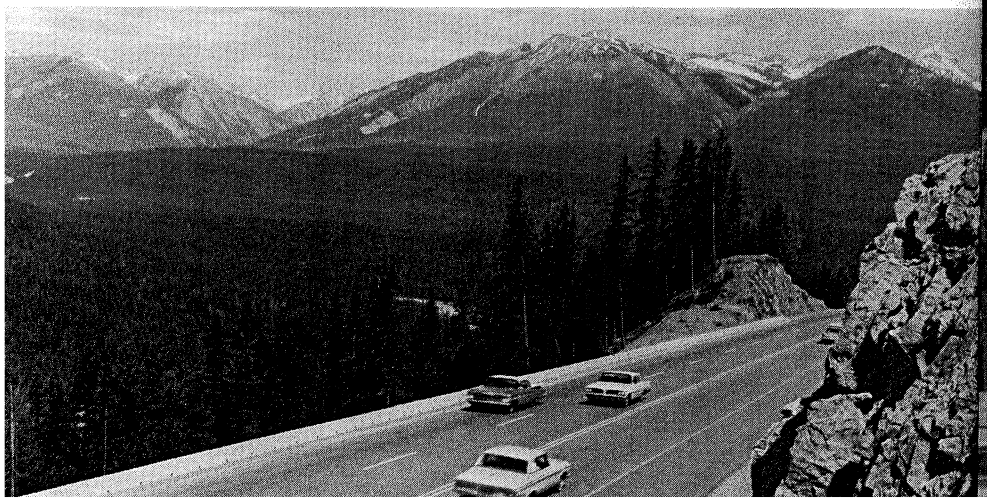
**Revelstoke**

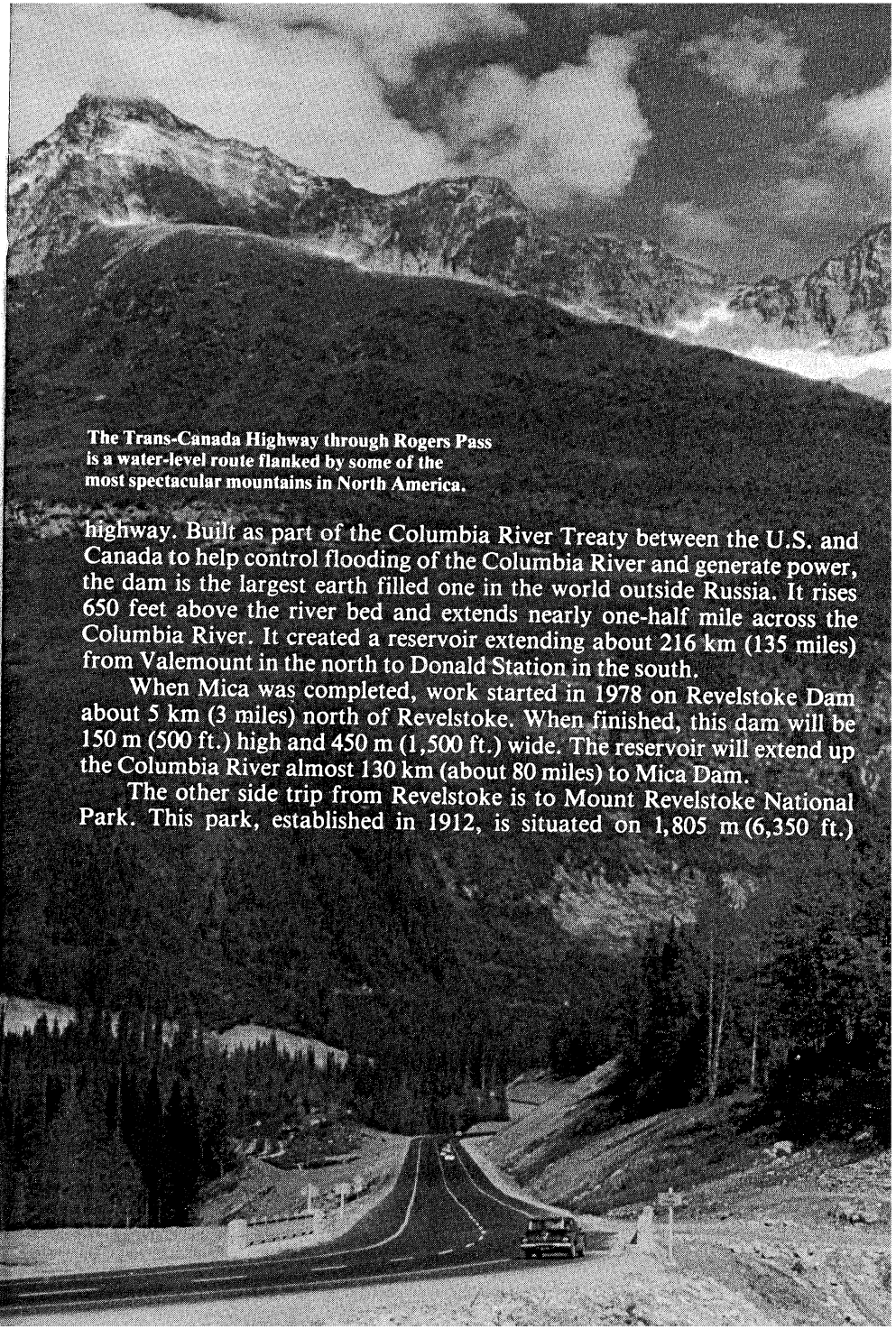
During CPR construction days in the 1880s this community was known as Farwell. In 1885 it had a population of 300 and 60 buildings, including the Grand Hotel, Wide West Hotel and Big Tent Restaurant. Colonel Edward Mallandaine who operated a pony express carrying mail west to Eagle Pass Landing wrote that in 1888 Farwell "...consisted of one street, on either side of which were wooden and log shacks, chief among them the Columbia Hotel."

"In Farwell, as at Eagle Pass Landing, the life was exciting, especially on pay days. There were brawls continually and gambling night and day with men of all nationalities throwing away their hard-earned pay at faro, stud poker and other games of chance. What the gamblers and saloon men did not get, the women of the town did, and a very small proportion of the money reached the storekeepers."

When the CPR's Trans-Continental service started, Farwell became an important railway divisional point and a major supply base for the Arrow Lakes and West Kootenay region to the south. For many years it was a port of call for the colorful sternwheel steamers which plied Arrow Lakes and the Columbia River. Today it has a population of some 5,000 and a wide variety of visitor facilities. From it lead two interesting side trips: one to Mount Revelstoke National Park, the other to Mica and Revelstoke Dams.

Mica Dam is about 136 km (85 miles) north of Revelstoke over a paved





The Trans-Canada Highway through Rogers Pass is a water-level route flanked by some of the most spectacular mountains in North America.

highway. Built as part of the Columbia River Treaty between the U.S. and Canada to help control flooding of the Columbia River and generate power, the dam is the largest earth filled one in the world outside Russia. It rises 650 feet above the river bed and extends nearly one-half mile across the Columbia River. It created a reservoir extending about 216 km (135 miles) from Valemount in the north to Donald Station in the south.

When Mica was completed, work started in 1978 on Revelstoke Dam about 5 km (3 miles) north of Revelstoke. When finished, this dam will be 150 m (500 ft.) high and 450 m (1,500 ft.) wide. The reservoir will extend up the Columbia River almost 130 km (about 80 miles) to Mica Dam.

The other side trip from Revelstoke is to Mount Revelstoke National Park. This park, established in 1912, is situated on 1,805 m (6,350 ft.)

Mount Revelstoke where visitors can look across meadows of multi-colored alpine flowers while standing in a forest of huge cedar and hemlock. Also, it is probably the only park in the world from where visitors can see three mountain ranges while sitting in their car. These are the Monashees across the Columbia River to the west, the Selkirks, home of formidable Rogers Pass, and the Clachnacudainn Range to the north.

The 26-km (15-mile) paved road to the summit of Mount Revelstoke National Park starts just east of the community of Revelstoke on the Trans-Canada Highway and ends in alpine country. There are no campgrounds in the park but there are picnic sites and pullouts along Summit Road which provide excellent views of Revelstoke, the Columbia and Illecillewaet River valleys and the Monashee Mountains. In the park are over 60 km (36 miles) of established trails for experienced hikers, while at the summit a short nature trail loops through flowered meadows for the benefit of those who enjoy a short walk.

From Revelstoke the Trans-Canada Highway follows the Illecillewaet River for 50 km (30 miles) to its birthplace among the peaks of Rogers Pass.

**Illecillewaet Lookout: Km 17 (Mile 10)**

An excellent view of the Illecillewaet River, a word which means fast water. This is the stream that Walter Moberly followed in 1865 in his unsuccessful attempt to find a route through the Selkirk Mountains. Although he didn't find a pass, he did become one of B.C.'s most prominent pathfinders. In 1865 he discovered Eagle Pass which the CPR and Trans-Canada Highway use to cross the Monashee Mountains, and later selected Burrard Inlet as the western terminal for the CPR. He predicted that a major city would grow at the end of steel and was proved right. Today that city, Vancouver, is the third largest in Canada, center of a population of over 1.5 million.

In 1885 about 8 km (5 miles) upstream from the lookout was born the community of Illecillewaet. In his book, *Among the Selkirk Glaciers,* William Spotswood Green described it as a "...typical frontier village, the inhabitants being all prospectors, miners engaged in silver mines....lumber men, and Canadian Pacific Railway (employees).

**Alpine flowers along a nature trail in Revelstoke National Park.**



"The city seemed to have no plan, but on the map which we saw it was laid out in the most splendid series of lots, and two steamers were represented as plying on the river — which, by the way, is a glacier torrent flowing at about 20 miles per hour."

The houses were wooden and some of them "...stood on legs in swampy pools only half reclaimed from the overflow of the river by piles of empty meat tins, broken packing cases, etc., which were littered about everywhere."

One inn had been closed by the sheriff, for what reason the author didn't mention, although his description of the remaining one provides a good hint. The gentlemen's shaving room turned out to be a wash basin in the yard on the stump of a tree, a strip of leather nailed to the side of the building was the razor strop, while a piece of broken mirror completed the fixtures.

**Mount Revelstoke National Park: Km 19 (Mile 11.5)**

Westward the highway traverses Mount Revelstoke National Park for 12 km (7 miles) but there are no facilities. Eastbound travellers will find a description of the park and the scenic drive to its summit in the description of Revelstoke at Km Zero.

**Western Entrance Glacier National Park: Km 50 (Mile 30)**

This park was established in 1886 and, contrary to common belief, is not in the Rockies but in the Columbia Mountains, one of the most rugged areas of Western Canada. Steep-walled peaks, avalanche-scarred valleys and over 100 glaciers make Glacier Park unique. It is aptly named since glaciers cover about 12 per cent of its 1,350 square-kilometer area (500 square miles). These glaciers are maintained by an average annual snowfall of over 9 m (30 ft.), although in 1966-67 over 18 m (60 ft.) fell. In Rogers Pass itself there is often precipitation one out of every two days in summer and daily in winter. This heavy snowfall, combined with the steep mountains which characterize the area, make Glacier one of the most active avalanche zones in the world.

Parks Canada explains the reason for this snowfall as follows:

"Mount Revelstoke and Glacier National Parks are in the Columbia Mountains region of British Columbia. High annual precipitation, heavy snowfall and relatively moderate winter temperatures are outstanding characteristics of this interior wet belt.

"The parks are located at a climatological divide, an area where two weather systems meet. The western part of the divide is influenced more by Pacific weather systems (moist and mild in the winter) and the eastern part is influenced more by continental weather systems (dry and cold in winter).

"Precipitation in the parks is almost always produced by moist air from the Pacific Ocean moving across the Columbias and being forced to rise. As the air is pushed up and over the mountains, it cools and its moisture is released. Neither the Interior Plateau nor the Rocky Mountains receive the tremendous amount of precipitation that the Columbia Mountains do. The plateau is dry because it is low and in the rain-shadow of the coastal mountains. The Rockies are dry because most of the Pacific air's moisture is lost by the time it reaches them."

Parks Canada also explains the reason for a phenomenon which often

startles those passing through the Park in early spring or summer — snow that can be red, yellow or pepper-colored.

"During the later spring and summer, the surface of the snowpack frequently turns watermelon red. This red colour is produced by algae belonging to the genus *Chlamydomonas.* As the last remnants of snow disappear from the subalpine, yellow patches occasionally spot the snow's surface. Close inspection will reveal masses of tiny golden snow fleas *(Onychiurus cocklei).* Throughout the winter, a careful observer can find a variety of invertebrates on the snowpack. Masses of tiny black fleas (*Hypogastriura* sp.) sometimes pepper the snow's surface. Snow craneflies (*Chionea* spp.) stride across the snow all winter long."

Because of the massive precipitation, wildlife in Glacier differs from other National Parks in Western Canada. The deep snow and long winters make life difficult for many forms of wildlife. Birds such as Steller's jays, gray jays — the familiar camp robber or whiskey jack — and Clark's nutcrackers remain all year but most other species migrate in winter. While large mammals such as deer and moose are not common, black and grizzly bear are because the park is well suited to these hibernators. Smaller species such as squirrels and marmots which have adapted to the snow by living above it or by hibernating are also abundant.

In the park all points of interest are marked. There are developed campsites along the Trans-Canada Highway and over 160 km (100 miles) of established hiking trails. Hikers, however, should remember to be alert for bears.

**Snowsheds: Km 51 (Mile 30.5)**

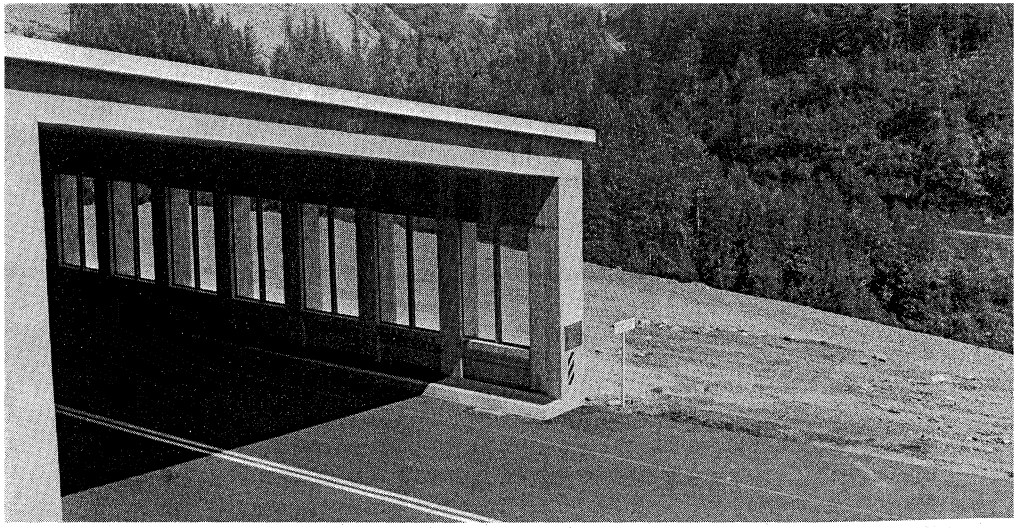
The first in a series of snowsheds which protect the highway from avalanches. Others lower in the valley cover the railway. Above the railway is the remains of a mining venture. In the 1880's near Laurie in the Illecillewaet Valley the Selkirk Mining & Smelting Company struck a lode of silver averaging 70 to 120 ounces per ton of ore. On a grassy flat at the east end of the Illecillewaet Tunnel, a hotel, offices and manager's residence, and a concentrator were built. High on the perpendicular face of the cliff behind was the bunkhouse, near the mouth of the main shaft. From here the ore was carried in buckets along a wire cable to the concentrator 900 m (3,000 ft.) below. Although in one place it descended a sheer 450 m (1,500 ft.) to the valley floor, miners ascended and descended in the buckets. By the turn of the century, however, the ore body was exhausted and the mine abandoned.

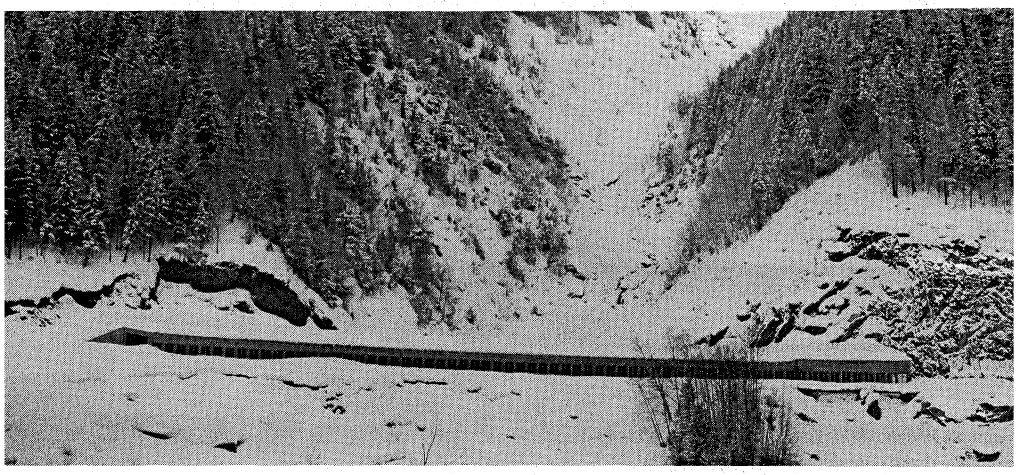
A major problem with mining ventures in the Selkirks was the inaccessibility. Roads and cable tramways were simply too expensive, a factor first noted by the miners of 1866. Old mining reports indicate that more money was put into mining in the Selkirks than was ever taken out.

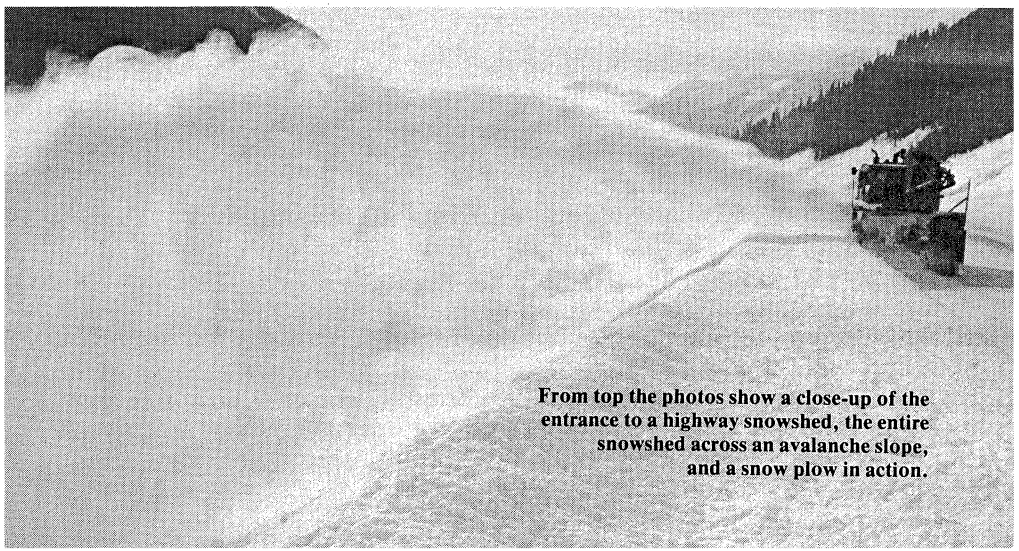
**Loop Creek Campground: Km 62.5 (Mile 39)**

Contains twenty sites, kitchen shelter and toilet. To the east on the Highway is Loop Trail and Viewpoint. The trail is an easy one-hour hike around the famous loop in the original CPR tracks. There are excellent viewpoints on top of stone pillars and opportunities for a close look at snowshed construction.









From top the photos show a close-up of the entrance to a highway snowshed, the entire snowshed across an avalanche slope, and a snow plow in action.

**Illecillewaet Campground: Km 65 (Mile 40.5)**
Fifty-nine sites, two kitchen shelters and flush toilets in an historical setting. Follow the signs to an exhibit near the site of Glacier House, a major CPR hotel at the turn of the century. Other signs lead to Avalanche Crest Trail. This is a 3½-hour uphill hike for experienced and well-prepared hikers. The end of the trail has excellent views of Rogers Pass, the original CPR line and the Trans-Canada Highway.

Glacier House, opened in 1887, was one of three Swiss style chalets built by the CPR in the Rockies. It began primarily as a dining room (and six small bedrooms) for passengers on the east- and west-bound trains whose dining cars were too heavy to pull up the steep inclines to the summit of the Selkirks. So popular did Glacier House become that it eventually expanded to ninety rooms and the chalet almost disappeared in a hodge-podge of architecture faintly reminiscent of a Scottish baronial castle and an English Tudor house. Nonetheless, it was "comfortable and homelike" according to one tourist who praised the hospitality of the staff. Unknown, however, is whether he included in his assessment a young man named Charlie whose job was to guard the decorative white stones surrounding the fountain in front of the chalet. Visitors insisted on taking the stones as souvenirs.

Glacier House became noted for its brilliant displays of wildflowers. While botanists crowded the meadows, mountaineers climbed 3,300 m (10,000 ft.) peaks led by two Swiss guides imported by the CPR in 1899. Visitors less energetic but still venturesome could hire a packhorse and ride the seven-mile trail to Nakimu Caves where a remarkable group of underground caverns was discovered by hunter-prospector Charles "Old Grizzly" Deutschman in 1904. Tours of the caves were so popular that the CPR built a tea-room and a large log cabin for overnight accommodation. Traces of the stone chimney can still be seen, although the caves are closed and the trail overgrown.

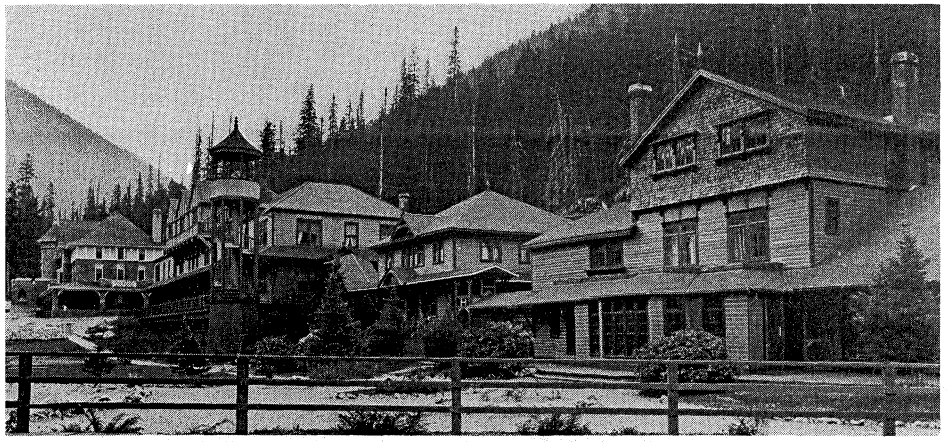
Other visitors came to hike and photograph the spectacular scenery with their recently invented Kodak Brownies, while more serious photographers could develop their pictures in the hotel's dark-room. Those who came to see the much publicized Illecillewaet Glacier could do so with hardly any effort. In 1885 its great white tongue was only a mile from Glacier House, but it was soon evident that the glacier was receding an average 16.5 m (50 ft.) a year. Today it is some 5 km (3 miles) from the site of Glacier House. This factor, as well as the high cost of maintaining Glacier House as a tourist facility, and the lack of road access, contributed to Glacier's decline and eventual closure in 1925. Four years later the hotel was dismantled and what could not be carried away was burned.

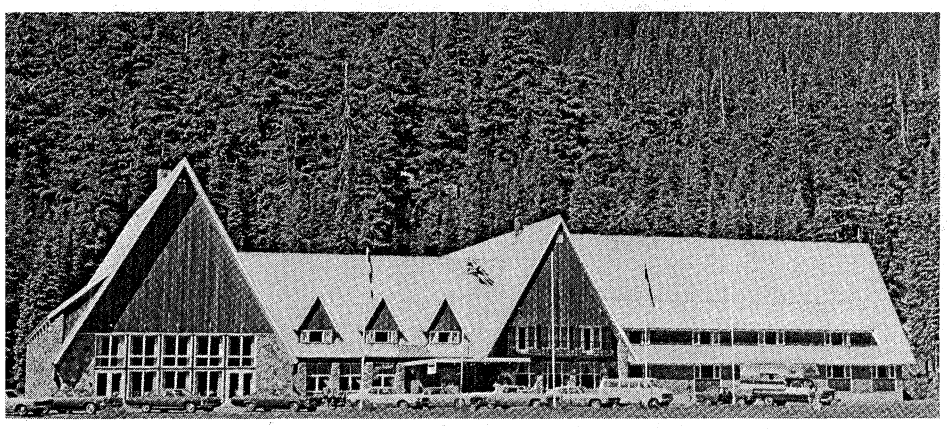
**Rogers Pass Summit: Km 68 (Mile 42)**
Here at the 1,327-m (4,354-ft.) summit of Rogers Pass occurred the official highway opening in 1962. The summit monument has details of the project and with its background of spectacular mountain scenery is a favorite photographic stopping place.

From the monument there is an interesting one-hour hike over the Abandoned Rails Trail. The walk is along the original CPR line at Rogers Pass summit and features close views of two snowsheds, associated slide paths and the original Rogers Pass station area. It ends near the service station at the Northlander Hotel 1.3 km (about 1 mile) to the east.

**Northlander Hotel: Km 69.5 (Mile 43)**
The hotel has a 100-seat dining-room, heated pool, service station and other visitor facilities. Here also was Rogers Pass townsite, a lonely little outpost of humanity that was headquarters for the engines which assisted trains over the summit. In 1894 it had two hotels — the Queen and the Brunswick — although both were built of canvas, a post office, general store, roundhouse and a boarding house. It was also short lived. On January 30, 1899, an avalanche destroyed the community.

The *Revelstoke Herald* featured a front page story on the disaster, noting: "A Most Shocking Affair — A Snowslide Sweeps Away The Station and Round House At Roger's Pass and Buries Eight People Alive — All the Bodies Have Been Found Except One...." Among the dead were the wife and two children of station master Albert Cator. The tragedy was only





**The CPR's Glacier House, at top in the early 1900s, has completely disappeared. Today the Northlander Motor Lodge at the summit of Rogers Pass has complete visitor services.**

one of many which would result in over 200 people being killed by avalanches which swooshed down the mountain slopes at speeds of over 200 km (120 miles) an hour.

**Avalanche Defence Viewpoint: Km 72 (Mile 44.5)**
A park picnic area with an interpretive exhibit illustrating the story of avalanche control. There are views of a gun position, a highway snowshed, the ruins of an old railway snowshed and several active avalanche paths.

To the summer travellers, the most evident of the defences against avalanches are the concrete snowsheds varying in length from 180 m (600 ft.) to nearly 600 m (2,500 ft.), designed to deflect snow over the highway. Other defences which are not so visible include mounds of rubble between 4 to 8 m (15 to 25 ft.) high built in a checkerboard fashion to break up an avalanche and dissipate much of its force. Higher on the mountainsides flat benches, some 300 m (1,000 ft.) long and 45 m (150 ft.) wide, catch and hold lesser snow slides. Other static defences include earthen diversion dams which catch or direct lesser slides and avalanche warning signs designating danger areas.

Another defence is described in *Snow War,* an excellent brochure published by Parks Canada:

"Unlike the original railway the highway is also guarded by a mobile system of defence. Men are employed year-round studying the climate. In winter, they make detailed weather and snowpack observations. Sophisticated remote sensors in special study areas high in the mountains above the pass continually radio weather information to a central forecast headquarters. Avalanche forecasters use this data and their personal experience to predict when avalanches are likely to occur. Under the direction of these forecasters, gate attendants and park wardens warn motorists entering the park of possible avalanche activity on the highway. The forecaster may decide to close the highway and attack the unstable slide areas with artillery.

"Circular gun positions along the road shoulders are used to station a 105 mm howitzer manned by the Royal Canadian Horse Artillery. Under the direction of the forecaster the army bombards known trigger zones high up the avalanche paths. The shock waves from exploding shells fired by heavy artillery will trigger avalanches when snow conditions are right. With the highway closed the slides can thunder harmlessly down the slopes."

**Mountain Creek Campground: Km 90 (Mile 54)**
A major campground with 260 camp sites, 46 trailer sites, 4 kitchen shelters, flush toilets and trailer sewage disposal. In the campground signs point to Trestle Trail, a pleasant 20-minute walk through valley bottom forest to a viewpoint on the spectacular Mountain Creek railway bridge.

**Eastern Boundary of Glacier Park: Km 90 (Mile 56)**
Eastbound travellers now follow the Beaver River out of the Selkirk Mountains northward then eastward to the Columbia River. The mountains on the east bank of the Columbia are the Rockies.

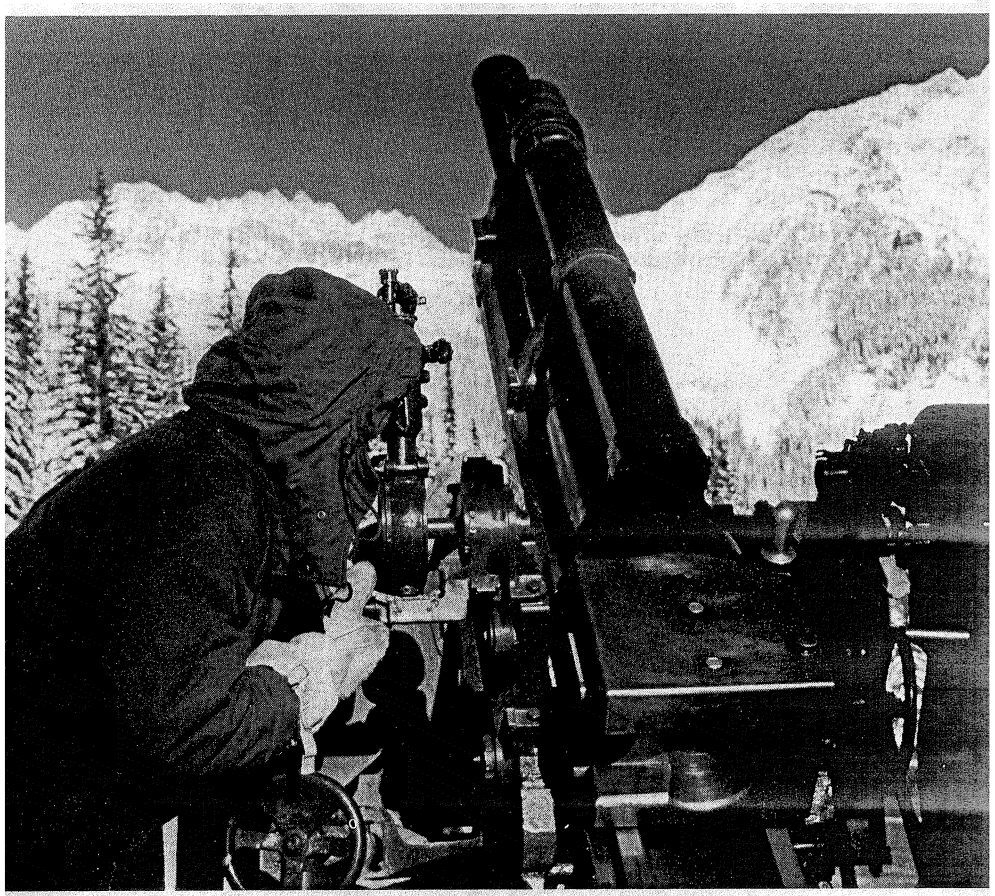
**Columbia River and Bridge: Km 121.5 (Mile 76)**
During railway construction a flourishing settlement appeared on the east bank of the Columbia at this point. Originally known as First Crossing, it then became Columbia Crossing and, finally, Donald. For a time Donald thrived as headquarters for the CPR's Mountain Division but when headquarters moved to Golden, Donald vanished.

A vivid picture of Columbia Crossing appeared in the *Calgary Herald* on November 19, 1884. Written by correspondent Jack Little, who was also in charge of the telegraph office, it carried the headline:

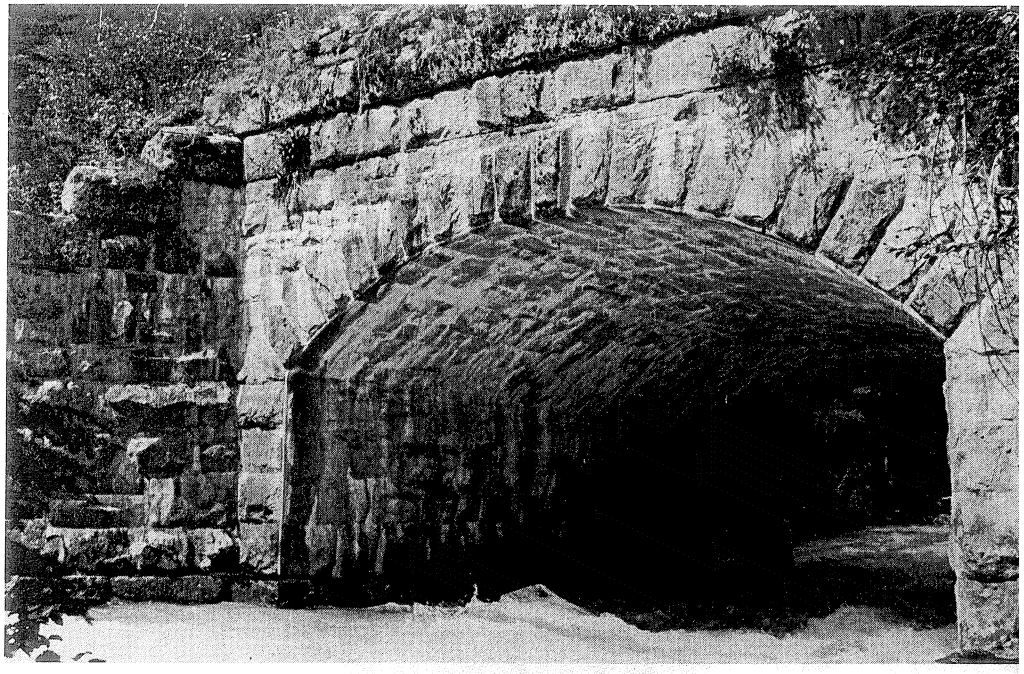
A MOUNTAIN CITY AS THE MOON SEES IT

"It lightens up some of the grandest works of the Creator; and if it hadn't to lighten up Bob Philips' saloon, and the Cosmopolitan saloon, and the Queen of the West, and the Swede Hotel, and the Italian restaurant, and the French quarter, and all the rest of the gambling, drinking, fighting little mountain town which lies stretched along the frozen bank of the Columbia, where the CPR crosses it first, it would have nothing to regret.

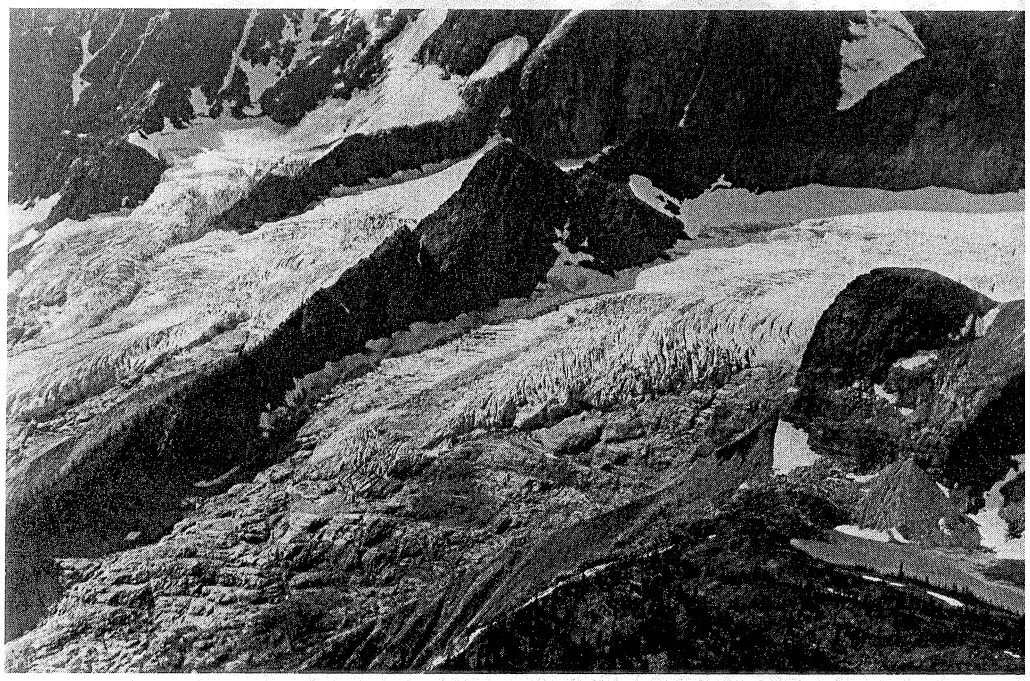
"The Italian saloon: It is a little hut 12 x 16 and it dispenses beer, cigars and something more fiery, in unlimited quantities. The bar-keeper — Saints preserve us! — is a woman — and Saints preserve her! what a woman!



**A howitzer manned by army personnel is used to trigger avalanches while they are comparatively small.**



An abandoned CPR bridge on the former "Loop" in Rogers Pass, and a few of the over 100 glaciers which cover twelve per cent of Glacier National Park.





There is an accordeon squaking (sic) in a corner.... In fact music is the strong feature of the town.... On all sides the music of the dice-box and the chips ... the merry music of the frequent and iniquitous drunk; the music of the dance and the staccato accompaniment of pistol shots; and the eternal music, from the myriad saloons and dives along the street of the scraping fiddle. In the French quarter a dance is going on. The women present are a Kootenai squaw, 'the first white lady that ever struck Cypress', and two or three of the usual type of fallen angels. A gang of men and boys lines the walls, and a couple of lads dance with the damsels in the centre. There (is) a lamentable sense of shame at Columbia Crossing."

**Golden: Km 147.5 (Mile 92)**

A modern community with a population of 3,500 and a wide range of tourist facilities, including motels and hotels. It was born in 1883 as a tent town optimistically called Golden City, although "City" was a rather presumptuous word to apply to the motley collection of log cabins and tents, two stores and a greater number of liquor outlets that catered to prospectors, miners and railroad workers.

Liquor was the reason for Golden City's "wild and unsavory reputation" as one traveller wrote after he and his companions had pointedly detoured the community in 1884. In spite of the CPR's successful bid to have the sale of alcohol banned within twenty miles either side of the track, there was no restriction imposed on having it for private consumption. Large amounts of alcohol found its way in kegs along the Whiskey Trail from Sand Point south of the border. One traveller on the trail, stopping at a horse ranch, was so awed by the sight of packtrain hands sleeping off a night's carousing in Golden City that he declared "hog" ranch a better name — a name that stuck even though there were never any four-legged hogs in evidence.

Soon after the rails reached Golden City in November 1884, hotels sprang up to accommodate the travellers. One of the better known was the Queen's whose proprietor, J. C. Green, sallied forth to meet the train in a claw-hammer coat, top hat and white gloves. Startled passengers must have blinked hard and wondered if the Waldorf-Astoria had magically transported itself from New York City and landed in the wilds of the Canadian Rockies. However, their illusions were soon shattered by the primitive comforts of some of the hostelries. A story is told of one patron who asked where the washroom was. "Log out back," was the laconic reply.

He had not been there long when a bullet whizzed past his ear, followed by a terse request to move to the other end of the log. The hapless guest had unwittingly stood in the ladies section.

Golden's fandango days as a wild, tough town were not to last long. Once the railway was completed and the workers gone, the community smoothed its skirts and settled down to respectability. By 1888 traveller William Spotswood Green was able to write "we spent two safe and comfortable nights in Golden City."

(This is the end of the eastbound travel log from Revelstoke to Golden. Travellers heading west can follow the mileage backwards through Rogers Pass some 150 km (90 miles) to Revelstoke.)