

EVENTS IN THE LIVES OF THE PIONEERS  
OF THE  
ALUMINUM COMPANY OF CANADA'S KITIMAT PROJECT  
IN THE CAMP AT  
TAHTSA, NECHAKO AND KITIMAT  
1951 - 1954

**HONESTLY IT HAPPENED**

**by Hugh H. Meldrum**

## FOREWORD

Numerous articles have been written about the Aluminum Company of Canada's project at Kitimat, Kemano, and Nechako, known as the Alcan Project. These have appeared mainly in engineering journals or construction and electrical magazines. The subject matter has been, as a rule, technical or statistical.

The reader will find no such material in this book, other than the bare essentials necessary to support or set the stage for the human interest incidents related.

Chapter Zero, which outlines the purpose of the project and the geographical nature of its various phases, can be ignored if desired. It does describe the terrain and sets the continuity.

No attempt is made to give accurate dates for any incident, or even to place them in chronological order, and no names are given unless essential.

I had the good fortune to be located for sometime in the camps of West Tahtsa, Nechako and Kitimat.

## CHAPTER ZERO

There is only one word to explain the reason behind the project which, in British Columbia, is known as the Alcan Project. That word is Power. Power for the Aluminum Company of Canada's smelter at Kitimat at the head of the Douglas Channel on Canada's west coast.

The scope of the project is large in imagination, money, and a rea. Undoubtedly the imagination was there, the money available, but what about the area?

What was needed? A reservoir to be created by a dam, site for a power house, location on tidal water to allow deep sea vessels to dock, and an area for a town where someday 30,000 to 50,000 people could work and have their homes.

Three sites were investigated. By ordinary means, maybe five years to do this might have been required. One year was cut from this figure by use of helicopters. After much exploration, the site was chosen. In fact, in time it seemed that nature herself designed it for this very purpose.

It is an area as large as Wales, or half the size of Vancouver Island, extending from the Nechako River on the east end of the project, to the townsite for the new town of Kitimat to be built at the west end of the project at the tip of the Douglas Channel on the Pacific Ocean - a total distance of over 220 miles as the crow flies, and of various widths. The east end has an elevation 3,000 feet above sea level; the west end is at sea level.



Before the project could be started, a total of seven major camps had to be constructed, together with many minor camps for maintenance of roads and other needs. From east to west these were at the following points:

- (1) Nechako Canyon - for construction of the Kenney Dam and the spillway at Skins Lake,
- (2) West Tahtsa - at the west end of Tahtsa Lake for construction of 2-1/2 miles of the ten mile tunnel to Kemano and the portal. East Tahtsa camp was a camp required for transfer of material from vehicles to barges on the lake.
- (3) Horetsky - for construction of access into the tunnel at the half way point and boring east and westwards - 2-1/2 miles each way.
- (4) Kemano - for construction of the power house, penstocks, and 2-1/2 miles of tunnel towards Horetsky Creek, also part of the transmission line.
- (5) Kildala Camp - for building of the transmission line to Kitimat. Twelve or more minor camps were constructed over the 48 miles total length.
- (6) Kitimat - for construction of the smelter, together with docks, storage bins, shipping buildings, etc.
- (7) Townsite - clearing forest and construction of roads, water, sewer, and buildings required for a town of an unknown size.

A total of over 6,000 men were engaged at one time on these projects, not counting those crews building the townsite at Kitimat.

The Kenney Dam, 300 feet high, was built to stop the flow of water down the Nechako River. Before the dam, the river drained a vast watershed, including 12 large lakes. It flowed north-east to join the Fraser River at Vanderhoof, eventually entering the Pacific Ocean at Vancouver. It is interesting to think, now that the project is completed, that this water, except the flow over the spillway at Skins Lake, still finds its way into the Pacific Ocean, but 400 miles further north of Vancouver through the Kemano power house.

To reach the site of the Kenney Dam, a road 60 miles long was built from Vanderhoof on the Canadian National Railway. This road, to carry extremely heavy loads of material and machinery required at the dam, was constructed and was done on time in spite of an early spring.

The West Tahtsa camp was much smaller, but considerably more isolated. Located at the extreme west end of 22 mile long Tahtsa Lake, surrounded by high peaks, 140 miles from the Kenney Dam. This camp was on the furthest west lake forming the reservoir and the point at which the portal to the 10 mile long tunnel is situated. The reservoir is the third largest in the world, covering 335 square miles, and has a storage capacity of approximately 900 million cubic feet.

Once more it was necessary to build a good road. This one 105 miles in length, mainly through virgin forest and over rough terrain. Its starting point was Burns Lake, also on the C.N.R. west of Vanderhoof.

Morrison & Knudsen, known as M-K, maintained a camp and warehouses at Burns Lake for the trans-shipment of material and equipment, etc. on its way to East Tahtsa and eventually by barge to West Tahtsa. M-K also looked after men moving in and out of the West camp.

At the end of the road at East Tahtsa, everything transported that far was reloaded on two huge barges which shuttled the 22 miles between the East and West camps. Only a few regular men were required at this point, but again provision had to be made to accommodate crews moving to and from the job.

The camp at Kemano was a little above sea level, about 11 miles west of Tahtsa, over a mountain named after McNeely DuBose, vice-president at that time of Alcan, and one of the men whose imagination conceived Kitimat.

The camp itself, 2600 feet below the level of Tahtsa Lake and 10 miles from tidewater anchorage at the tip of the Gardner Canal, also needed a good road from salt water to the site and one capable of carrying tremendous loads. Three major bridges were required. One headache was that everything had to be either flown in or sent by barges from Vancouver and there was no dock for unloading. This was accomplished by beaching the big barges and unloading onto the ground, and later by building a barge grid. Approximately 25 barges were in service, each capable of carrying 25 to 30 freight cars from Vancouver to Kemano, a distance of 430 sea miles.

Seven miles of rugged road served ~~Girsinjix~~ Horetsky Creek camp, where the access tunnel was being blasted into the mountain. A

cable car, rather than a road, was erected up the slope above the camp to the adit on the 2,600 foot level where the 2-1/2 miles of tunnel was pushed eastwards. The car, weighing nine tons, was able to transport 26 tons up the slope, a distance of 5,500 feet. The power house and penstocks are about one-quarter mile in a man-made cave inside the mountain, 700 feet long by 80 feet wide and from the arch of the roof, 118 feet high.

Kildala camp and its satellite camps will one day be the subject of a story of their own. They served to build the transmission line, an almost impossible engineering feat over mountain ranges with peaks 7,000 feet high. In fact, if this part of the plan had failed, success of the project was doubtful as it was to some extent, the key to Kitimat. Perhaps a route around by sea might have been considered. However, the line was built.

Kitimat, the plant site, required more than one camp to build the smelter, substation, silos, warehouses, docks, etc., and nine miles away the townsite, fifteen years ago nothing but thick forest.

Roads, and still more roads had to be built, as well as a large bridge to span the Kitimat River to reach the townsite. All these were pushed through either tall timber or muskeg. We will hear more about this camp.

In 1953 Kitimat became a municipality, four years after December 16, 1949, the date on which the Comptroller of Water Rights for British Columbia gave Alcan approval to go ahead with the project on the Nechako and Naniko River, subject to further approval of plans and

specifications and the necessary legislation.

Hats off to the men of imagination!

Pretty dull, but as it has been said, you cannot follow the game without a programme.



## CHAPTER ONE

There is one time when it pays to be somewhat large and a bit overweight. Pilots of single engine Beaver planes like to have the heavy passengers up front.

I discovered this when I set out in late September, 1951, for Burns Lake and then on to West Tahtsa camp, where the tunnel was being driven. From then on, it seemed that when the seating of passengers was left to the pilot and not V.I.P.'s, I generally sat beside the pilot. It was a good vantage point.

With us was a companion from the Vancouver office where I had been hired for duties at West Tahtsa. He was going into camp to explain my duties.

It was a bright sunny morning when we left. I had never flown in a single engine float plane before, but during the next few years did so many times. It was enjoyable, but I was always glad when we touched down. On the project we flew over country that seemed to be made up chiefly of mountains and lakes, and while pilots always said a plane can coast down with the engine to any stretch of water, and admittedly there was much of that around, these lakes gave me the impression of being miles away from anywhere and mixed up in a lot of mountain. We did, however, reach Burns Lake.

The day after we arrived we inspected the M-K camp and warehouses at Burns Lake and got some idea of the immense quantity of shipments being handled. I was puzzled as to why the office manager and his

staff, including the payroll department, functioned at Burns Lake instead of at the camp. No doubt I would discover the reasons and rather suspected I knew already.

Burns Lake, in 1951, was more or less a frontier town, no sidewalks and false fronts on most stores. It was the centre of logging interests and the main street was part of the highway from Prince George to Prince Rupert. It was thick with dust. In wet weather, walking presented a problem as the dust turned to mud.

. You played a game. Choosing a doorway further up the street, you estimated the distance and then estimated the speed of the vehicles on the road, finally your own speed. If you made it, you scored one point. If you did not, you lost a point, but gained a cleaning bill.

A day later, also in a Beaver, and again sitting up front, we flew on to East and West Tahtsa. The country was varied forest, lakes, open spaces in which we saw some moose. As we approached the area known as Mosquito Hills, I observed the pilot put his hand up to brace himself against the roof. Suddenly we dropped, I swear, a hundred feet.

"Better put your belts on," said the pilot, - "turbulence."

"A bit late," I thought to myself, and "definitely an understatement."

Ever after I watched the pilot on that route and acted promptly.

East Tahtsa camp was close to a flat area of open land at the junction

of Tahtsa Lake and the river of the same name. High mountains encroached from both sides. After paying a visit to the cookhouse, we inspected one of the two barges which travel up and down the 22 mile long lake, taking about five hours to do the one way trip.

These barges were designed with steel deck laid on a steel hull, constructed in the form of separate compartments for various types of fuel oil used at the camp. Driven by a 150 horse power motor, they made about four knots, were approximately 90 feet long by 35 feet wide, and carried tremendous loads up and down the lake.

In order that at least one of the barges would be available on time, different methods of getting them to East Tahtsa had been used.

One was dismantled, taken by road to the east end of Tahtsa River in sections and there assembled. A large tractor, complete with winch, was welded to the deck in the bow and then, under its own power, the barge proceeded up the river to the lake. Considerable use had to be made of the winch to manoeuvre this hulking vessel along the swift, narrow, winding river. It got there on time.

Meanwhile, the second barge, also in sections, was loaded on flat deck trucks, taken over the newly constructed road and eventually assembled on time. An SOD North West shovel was also dismantled and sent in sections over the same route.

The mountains loomed high above us and closer as we neared West Tahtsa at the dead end of the valley. Under us the water was clear and blue. It was like looking into a mirror. Not a ripple.



"Is it hard to land a plane on such still water?" I asked the pilot.

"Yes, you cannot gauge how near you are and can plunge through rather than land on it."

"Is there anything you can do about it?"

"Well, sometimes we throw something out to make a small wave."

Some weeks later a plane turned over due to this very reason. The pilot and plane were rescued and apart from the loss of a few cases of eggs - by breakage - no great damage was done.

As we landed on the water and drifted towards our mooring at the ramp, I got a look at what was to be my home for the next seven months.

It looked small and crowded. It was small and it was crowded, very crowded.

The campsite, nestled under high mountains, was a triangular piece of delta-like land with the base of the triangle forming a slight bay in the lake. The shoreline to right and left extended about half a mile, with steep mountain slopes cutting off any passage at either end. At the left was the sea plane ramp, while at the opposite end was the dock for the barges. Behind it was a building to store the dynamite. The right leg of the triangle was also about half a mile in length, the left one a little less.

This left leg was the base of the mountain of Mt. DuBose, where the tunnel would be built. From the apex of the triangle a gentle stream

flowed down the right edge of the site and bisected the camp. It turned out to be not so gentle after the first touch of winter.

On this plot of land, less than 100 acres all told, in addition to the tunnel portal and the access cut running back from the mountain on a four percent grade, were the quonset huts of various sizes and stages of construction. They housed recreation hall, movies and badminton section; mess hall and kitchen; offices for M-K and small combined Alcan offices and quarters; machine shop; electrical shop; carpenter shop; pipe shop; power house to supply needs for light and water, pumps, airlines, and drilling equipment; pump house on edge of stream for camp water supply; two warehouses; the drying room at the mouth of the tunnel above the added slope for drying men's clothes; pump house; emergency food building for four months supply, if necessary; and a railway with switching and dumping facilities.

With so much space required for the permanent construction camp, where were the temporary camp, tents, and small wooden buildings situated?

You guessed it! On platforms connected by duckwalks erected on stilts over the water front.

This camp opened May 10, 1951 and closed at the end of construction in 1953. It was an ideal location in the summer and fall, but when the rains came, life was not so pleasant and my suspicions in Burns Lake were confirmed.

Fifteen men to a tent, without cupboards, and one's clothes - wet - hanging on lines or nails, or dry clothes in a suitcase, is not ideal accommodation. After my first wet day in camp, my thoughts turned to home, or at least the hotel in Burns Lake.

Moving about the camp on wet, narrow, duckboards, is difficult by day, dangerous by night, and disastrous after celebrating. It's a long way down to the water.

The mess hall was a number of tents joined at the centre by a cookhouse tent, from which superb meals were passed out. Nothing but the best. Roast beef, pork, chicken, hams, turkey, steaks at times, and fish. Everything with all the trimmings.

I realized the meaning of surfeit and on my first trip back home, chose stew instead of the traditional fatted calf.

My wife was stunned.

## CHAPTER TWO

A fondness for an occasional poached kipper lead to a situation in camp which started in fun and almost ended in calamity.

One day when visiting the East Tahtsa camp, I discovered that they had kippers there on occasions, so I took back to my camp a small supply for the cook to prepare for Sunday breakfast for myself and anyone else who might like them. When I sat down at my place at one of the tables to enjoy myself, there were a number of rude remarks from my companions, but it was all in fun. In the next issue of the small camp newspaper, there appeared an editorial to the effect that kippers were unwelcome and if they appeared again, either they or Meldrum must go. In league with the editor, I wrote a letter to the paper stating that I reserved my right to eat kippers when I liked. If any attempt was made to intimidate me, I would take my case to the highest authority in the country. This caused a lot of amusement. Then, out of the blue came a notice, signed by the camp manager, who had neither a sense of humour nor a taste for kippers, that kippers would no longer be served in camp. In the meantime, a number of men had intimated that they liked kippers and some had been supplied for their breakfast. The order created so much resentment that it was withdrawn and kippers appeared regularly on the menu. From then on, whenever the office manager came into breakfast and found them being served, he stalked out.

Did he go without breakfast, or wait? I never found out. How

embarrassing if the project had come to an abrupt end because of a kipper!

I guess strikes have been called for less reason.

On a construction job of this type and under the conditions which prevailed, expediting of the highest order is required. Unless materials arrive on time, men become idle and the work comes to a halt.

On the whole, everything went well, but one mishap did occur which ended in a somewhat humorous way.

One day a plane came in with some men on board. The passengers announced they were glaziers. They had been dispatched from Vancouver without advance notice to the camp.

They were a welcome sight. All the window frames were in the huts, or about to go in, and winter was closing in on us, but where was the glass?

At Burns Lake warehouse, where storage was considered safe.

An urgent radio message was sent to Burns Lake: "Rush glass immediately to camp site." Meantime the glaziers finished fishing for two days while trucks hauled glass to the camp at East Tahtsa for trans-shipment by barge to West Tahtsa.

Issue the putty! No sign of it. Had it been ordered? Evidently not. Radio Vancouver: "Rush by plane to Camp Tahtsa supply of putty". Another good day's fishing.

The next day while on my way by plane to Burns Lake, I accidentally intercepted a message on the radio: "Have Meldum bring back as many putty knives as he can lay his hands on". So much for expediting.



### CHAPTER THREE

I don't like tunnels, apart from nice, neat, well made railway or road tunnels. I had never been in one while it was under construction. The main tunnel was 25 feet in diameter, slightly horseshoe shaped, with a rock floor on which the railway lines were laid.

The rock in the Tahtsa section of the tunnel was not good. Considerable water was anticipated and with this in mind, installation plans included sound provision for an adequate pumping system throughout the length of each two and one-half mile section. As it turned out, very little water was encountered; in fact, it was what is known amongst miners as a dry tunnel.

Drilling was done from a jumbo constructed on wheels with three tiers of working space. Crews of four men each, worked on the ground floor and the three upper tiers boring holes in a set pattern in the face of the rock. The pattern ensured that dynamite shots went off in such a way as to shatter the required area, pushing the debris outwards.

After each shot the tunnel was mucked out by loading broken rock by means of overhead loader onto a small conveyer belt into the empty muck cars. These had been pushed by an electric train into the tunnel in trains of about fifteen cars. When the car nearest the face was full, a cherry picker lifted the empty car at the head of the train and passed it over the top to the rear, while the train

was moved forward to allow space at the end for the empty car to be placed. This manoeuvre went on until all the cars were full, at which point the train travelled out of the tunnel up the four percent grade and dumped. The scattered dumping created more building space on the lakeshore. When a full train was going up the access slope, an additional engine standing by on a siding at the mouth of the tunnel, came into play.

It was unfortunate that the grade could not have been more gradual, but it was discovered that a longer slope would have ended up either in the lake or too near the edge. High water mark on the lake had obviously been quite high in some years so no chances were taken of a flood in the tunnel. Proof of this appeared in May, 1951, when trees that had to be cleared to the campsite were cut at the packed snow level line. After all the snow had gone in mid-summer, stumps were about six feet high. During the winter of 1951, we had a total snow fall of 54 feet - feet, not inches - and in the subsequent years 62 and 64 inches.

Some of the rock from the tunnel, after being exposed to the air outside for a short time, became almost pulpy and could be squeezed into a soggy mess with the hand. This caused trouble because although the walls and the arch of the tunnel had been sealed until all loose rock was removed, at a later date more rock became loose and fell down. One of these falls caused our first fatal accident. From the arch of the tunnel in the portion that had been sealed previously, a large rock fell without warning, striking a man who was passing by, on the head.



I was on the jury and ever afterwards whenever I was inside the mountain, I admit I had in mind the possibilities of something falling.

One day while watching a drilling operation on the rear of the second tier of the jumbo, one of the engineers approached me silently. Holding a handful of small loose pieces of rock, he let them trickle onto my hard hat. I was all set to take off, but fortunately for my dignity, held still long enough to realize it was a practical joke. I might have panicked, in which case I would have broken the record for the 100 yard dash.

It was known that high up the mountain over the tunnel route, there was a deep lake, possibly at one time a volcano. A sharp eye was kept on the drilling face for signs of water. As it happened, it was not water in the tunnel that nearly caused disaster, but water from outside.

With the terrific snowfall in this part of the country, people not familiar with the climate assume that it is always in the spring that floods occur, but it is in the fall that the unexpected flash floods happen and generally with little warning.

The tunnel had been barely started when we had a heavy fall of wet snow, followed by rising temperature and rain. Unfortunately, the rain fell not only at lake level, but high up on the mountain slopes. The gentle little stream flowing through the camp was redirected into its original channel and no longer purred like a kitten. It started to growl like a tiger as it rose steadily. It was evident

that we were heading for trouble and by late afternoon, we were in trouble.

While the stream was rising, more water poured down the face of the mountain above the access tunnel.

It had been suggested by engineers who knew the north, that a trench be cut on the face towards the lake and the stream to cope with any such flooding. However, those in charge thought otherwise and this could be delayed until the spring. No precautions were taken.

Meanwhile, things were happening in the stream which was now roaring down to the lake. Part of the bank gave way as the water cut in underneath. More men were called out on the job as it was evident that if the bank continued to cut out, the pumphouse would slip into the water. The only way to save it was to move it back if we could. A tractor was hitched onto the skid base and set to pull back the pumphouse as the water pipes were disconnected. More bank caved in, loosening a pile of lumber down stream into the lake.

In the nick of time more bank fell exposing a large rock on the edge and this rock diverted the current to the other side where it cut away harmlessly. Would it hold?

Meantime, the situation on the access slope was serious. The water level at the bottom of the slope was rising and had reached the rock face of the tunnel. Two pumps at the bottom of the slope near the entrance were almost covered. More men got busy. It was a wet, muddy job, but they worked quickly, disconnecting pipes and hauling

the pumps up to a higher location.

The rock had held. So had the pumphouse, although the grader on standby in case of further developments. The pumps were working and kept the water level down in spite of more rain. Those who could be spared, went back to bed to wake up next day to find all was well. The rain had stopped, the temperature had fallen.

Surprisingly, no-one said "I told you so".

## CHAPTER FOUR

Now that we were occupying our permanent quarters, we found living conditions easier - dry rooms, more living space, a recreation hall and a mess hall, all much more comfortable than tents. Nevertheless, unable to get out of camp, except by barge or plane, and cut off at each end of the area by steep cliffs, we found time passed slowly unless we made our own recreation.

A film was shown once or twice a week in the recreation hall and there was enough room in the same building for a game of badminton on other days, even though the back line of the court was painted at the base of the end wall.

Books and magazines were popular, but the main interest, however, was cards - bridge and poker topping the list. The camp had many enthusiastic bridge players and sometimes games drew a number of spectators. Strangely enough, the bridge games were generally played by the same devoted foursomes, with possibly a spare on occasions. Poker was played for little stakes and big stakes and was more or less an open game. There is a story from "very reliable sources" about one such session.

Late one night one of the men, rather the worse for wear, woke up his pal. Clutched in his hand was a quantity of bills of all



denominations, large and small.

"Jim", he said, "I think they may try and roll me. Will you keep this for me?"

Without counting it, Jim stuffed the packet of money in the pocket of his coat beside the bed and went back to sleep. In the morning he counted it and found to his amazement, it totalled almost four thousand dollars.

Later that day, his poker playing pal came looking for him. Somewhat sheepishly, he said: "Jim, did I leave anything with you last night?"

"Yes," was the reply, "I have it here." Counting out the money, he handed over a little less than four thousand dollars.

"J---- C----," said the man, "I had better get out of camp and give this to my girl friend."

And that is what he did.

The weather was unpredictable and caused some near accidents. One happened suddenly. It had been a sultry day with a slight wind. I had been down at the ramp early in the afternoon when the plane taxied out onto the lake to take off towards the mountain. As the pilot would have to make a tight left-hand bank to head off down the lake, it was necessary for him to proceed quite a distance out from the shore. Waving goodbye, I headed for the dock at the other end of the bay to have a look at a deckload of lumber which had just arrived from East Tahtsa on one of the barges. Consisting

mainly of 2" x 4"'s and shiplap 24 feet long, the lumber was piled 32 pieces in height and stacks of five or six rows with walking space between.

Out of nowhere and heading nowhere, a terrific twisting wind ripped down the valley. It caught the plane as it was about to bank and caused it to plunge headlong towards the water. Fortunately, the pilot was able to regain altitude before touching the water. The wind continued into shore and like an invisible giant, literally dealt the shiplap off the piles as if it was a pack of cards in a game of poker. Shiplap flew in all directions, onto the dock, into the water, across the deck.

Like a ghost, the wind departed. All was as it had been a few moments before. Silent and quite still, but the evidence was there to see.

It took a long time to gather up the pieces, but most of the lumber, including that in the water, was eventually salvaged.

Miners are considered, as a rule, to be big husky men who can bend nails with their teeth, but this is not so. Many a miner is a small wiry man. One in camp who was small, also gave the impression of being timid. A group of miners, including the timid soul, were due to go to Burns Lake by plane for a regular x-ray test for silicosis. With a frank, but scared look, the timid man asked if it was possible to travel by some other way, admitting that he was terrified of flying. As the only other way was by barge and road, requiring

perhaps four, or maybe five days for the round trip, he was advised he would have to fly if he wanted to continue work in the tunnel.

Reluctantly, he and his pals climbed into the junkers which normally carried freight, but was used on occasions by passengers who had to sit on benches facing each other. The pilot and co-pilots seats were separated from the body of the plane by a fixed partition with a small opening through which conversation could be carried on between pilot and passenger.

All went well on the trip to Burns Lake, but not so well on the return flight.

After the x-rays were taken and while waiting departure back to camp, the men had visited the beer parlour. They were feeling, to say the least of it, relaxed. Half way home the pilot had difficulty in keeping the plane on an even keel and realizing something was wrong, and looking through the small window, he saw to his amazement the rear door of the plane was open. In the opening was the timid man, leaning outwards, attending to a call of nature, while his friends were holding on tight to his trousers and the bars on each side of the hatchway.

The pilot nearly collapsed.

He yelled to his passengers to close the door, which after a struggle they succeeded in doing and the plane continued on its even way. I never did find out if the timid man got over his fear of flying, or even realized when he sobered up, what he had done.

## CHAPTER FIVE

I have already stated that I did not enjoy single engine planes. I specifically do not like them when they are equipped with skis instead of wheels or floats.

After the lake had frozen over and the snow had started to pile up, our plane at West Tahtsa was fitted <sup>with</sup>/skis. This necessitated a runway of some sort for an airstrip on the snow.

To construct this, the snowmobile was brought into action. It was an odd looking vehicle, rather like the body of a car set on a set of tracks. It was most efficient and a lot of fun to ride in. The driver sat in the centre of the front seat with a lever on each side of him. The levers controlled the braking action independently and quite a fair speed could be maintained. With three men on the front seat, one running the engine controls and the other two the right and left braking action, the vehicle could go all out. A deserted road with good snow banks on each side is the best place to choose as the machine does not always go where you think it should.

Using the snowmobile for runway packing, only one man was in the front seat. The doors were removed and this was a comfort thought for the driver as he knew he could jump fast in an emergency.

There had been a heavy fall of snow one night and as the camp superintendent and I had to go to Burns Lake the next day, the snowmobile was on the job early.



A good runway was ready and the pilot, the camp superintendent, and myself climbed aboard. Soon we were gaining altitude and able to watch the snowmobile do some further packing.

Past East Tahtsa, serenely enjoying the scenery, our peace of mind was rudely shattered by a message: "Snowmobile at bottom of lake through hole in ice. Driver jumped and is safe. Take care when landing on return."

Needless to say, we were not happy, although noone said very much.

Our chore completed in Burns Lake, we set out on our return trip - pleasant, if one refrained from thinking about the landing. Passing over East Tahtsa we lost altitude and the mountains on each side closed in. It was hard to see where the lakeshore ended and the mountain slopes started. Everything was white.

In due course, ahead of us were a few black dots and a big black hole. Very black!

Slowly the ground came up and the hole, dead ahead, got bigger and bigger, at the extreme take-off of the runway, which, at best, was not too long.

Lower and lower we dropped, and just before touchdown passed over the gaping hole in the lake through which the snowmobile had plunged to the bottom.

"Swish, swish", sang the skis as they bit into the snow. Gradually with props reversed, we came to a halt. All was well.

We had the answer to our unspoken question. The ice at touchdown point was thick enough to hold us.

On second thought, maybe it was a good thing the hole was not at the other end of the runway.

The weather often caused trouble, sometimes minor, sometimes major, as for instance the rain storm that resulted in the flood.

A new problem came with the first snow. There were days when it came down in thick flakes plopping on the surface of the ground. We had lots of equipment to cope with it, but the question was where to put it.

Any amount could be dumped into the lake, but this meant loading it on trucks and hauling it to the lake front. Meanwhile the roads had to be kept open for men and machines, and it was vital to keep open the railway from the tunnel, the adit slope, and the dumping ground.

So, in addition to machines in use, we barged in a fair sized snow blower to assist. This did the trick and soon the roads were lined with high banks which shut out the surrounding view.

It was quite an experience to approach the camp, either by barge or low flying planes knowing that 350 men were in the camp and seeing no one until one landed and walked into the snow maze.

A new problem developed with the quonset huts which were designed

to shed snow. This they did fairly well, but after awhile the snow which slid off the roofs built up against the sides until no more snow could slide.

Two large quonset hut warehouses, side by side, on a raised platform, were almost buried. The snow gathering on the top had to be removed quickly.

I was wakened one Sunday morning with the noise of what sounded like children squealing with laughter. Looking out of the window of my hut, which was like looking down a spy glass as a hole had been cut through the snow slopes from the glass outwards, I saw a group of men sliding down the roof onto the snow banks on their shovels.

Of course, this had to stop, but I did rather want to join them. It looked like fun.

Graders and shovels cleared the snow from the base of the hut, allowing the load on the roof to slide off. From then on the snow was not allowed to gather at the sides of any huts as the pressure could push the base of the structures inwards and cause it to collapse.

The powder house, which was a large building used to store the dynamite required for the tunnel, was located as far away as possible. Although a potential hazard, it had been permitted providing that a stockade of heavy logs was built around it to reduce danger in the event of an explosion. It looked like an old prairie fort and suggested the possibility of Indians appearing on the scene at any moment.

Each morning, we glanced in that direction to see if the roof was still showing above the stockade.

One morning, to our consternation, no roof was visible.

We hurried over and entered the enclosure. What a sight met our eyes! The quonset hut had crumpled under the pressure at the base and the twisted ribs of the roof and sheeting were lying on the boxes of dynamite stacked below.

It was a tricky job getting the mess straitened out. If it had gone up, I think we would have all been blown into the lake. Would the logs have saved us, or would they have been a worse hazard as they landed amongst us?

Another weather problem was in connection with the lake itself.

We could land planes from Burns Lake at East and West Tahtsa, providing all three stretches of water were open, but with the advent of winter, this was not always the case. Sometimes one end was open while the other had a thin coat of ice. It often happened that East and West Tahtsa were different, even though only twenty-two miles apart.

The barges could navigate for quite awhile because they were somewhat of an icebreaker themselves and were able to force a narrow channel. The only danger was sludge ice which, with the flat bottomed barge, could gather under the hull. Unless care was taken, the barge would come to a standstill and have to back off if possible.



Towards freeze-up a barge left East Tahtsa with seven persons aboard. It was a cold trip as there was only room for two extra people in the wheelhouse. The others took shelter as best they could on deck. Ice was thick except for one channel, kept open by the two barges passing backwards and forwards between East and West Tahtsa.

About eleven miles from West Tahtsa, the barge rose up slightly in front with sludge ice piling up beneath it.

The captain ordered the barge to proceed astern, but it could not clear itself. As night fell, the temperature dropped lower and lower, and ice was soon forming on all sides. Fortunately, radio contact was made with both camps and a helicopter ordered out. The passengers managed to make their way from the barge onto the ice and as they trudged towards the camp, picked up one by one by helicopter. Apart from mild frost bite and cold, no one was injured. However, it was warning of what might happen and what to be prepared for.

On board, apart from the deck cargo, was the emergency reserve supply of fuel for the camp if the winter continued longer than expected. Nobody worried. That came later.

Next day, we all realized that the barge was there to stay unless she could be freed, but how? The problem was tackled by mounting a crane on the bow of the other barge, fortunately moored at West Tahtsa. Chained to the deck, its hook was loaded with a rough

ball of heavy tractor tread. As the barge nosed away from the dock, the crane dropped the ball in a succession of thuds. The manoeuvre worked. Blow by blow the ice crumbled and the barge moved steadily out towards its stranded partner.

At the end of the day it had to return to camp to let the crew get some rest and food, and to make sure that the ice did not close the freed channel behind it.

This went on for some days. Each day the rescue vessel inched closer to the stranded barge. The weather got colder and colder, the ice thicker and thicker. With eleven miles to go, it soon became evident that the ice would never be broken the full distance without a danger of both vessels being ice bound in mid-lake. This must never be allowed to happen as come spring one barge must remain at West Tahtsa.

The endeavour was called off with everyone hoping that fuel ~~would~~ stocks in camp would last until the spring breakup. All would have been well except for another unforeseen accident.

While working with a tractor in the vicinity of the oil storage tanks at the campsite, the driver inadvertently drove over a fuel line in the snow. During the night, and well into the next day, thousands of gallons of stove fuel seeped silently out of the pipe unnoticed by anyone.

It was only later in the day while on a routine check that the loss was discovered. Now we were in trouble! Instead of a reasonably

safe margin of fuel on hand, we were left with less than two weeks' supply. All thermostats in living quarters, mess halls and offices were immediately set and locked at 65°, which is a reasonable temperature for sleeping, but not so hot for daily office work and mealtimes.

It was imperative now to free the barge. What else could be done to accomplish this? The solution was ingenious and comparatively simple. Lamp black was flown in and spread by plane and helicopter along the route of the frozen channel. This sped up the natural thawing of the ice by the action of the sun on the black surface. Both planes and helicopters were able to spread a thick layer of lamp black over the channel, which fortunately could be seen distinctly from the air.

It was not a clean job, but it worked. The outline of the channel became more distinct day by day. Finally the rescue barge pushed through the ice the full eleven miles.

We were a happy lot when she docked and the fuel was unloaded.

We might have flown in drums of fuel, but not enough to keep the whole camp supplied and it takes time to move 350 men out in a single passenger helicopter and one small plane.

I have been told recently that a large quantity of escaped fuel was found trapped between the water and the ice and subsequently salvaged.



## CHAPTER SIX

Target date for break-through between east and the west borings in the tunnel was late October, 1953. Three times during the tunnel job, the crews broke world records. One face cut 282 feet in one week and the best day was 61 feet of granite torn out in twenty-four hours. Rivalry between Tahtsa crews and between the crews working on each of the four faces was fantastic.

On the whole, there were few labour disputes. Actually only two strikes occurred to my recollection, one of which was short and had an unexpected twist to it.

The messhall flunkies - waiters, dishwashers, and cooks' aides, decided to walk off the job at West Tahtsa. It was a wildcat strike and I imagine they thought it would cripple the operation.

Management acted fast. Calling Vancouver by radio phone for replacements, fired the entire crew. In a short time after walking off the job, men were being flown off the job, then driven to Burns Lake for their pay and return fare.

This left the messhall without waiters. The tunnel works worked on shift and meals just had to be continued on time.

The system was for carpenters to sit at one table, mechanics at another and so on, each man always sitting in the same place. One table was for senior administrative staff.

The office staff doubled for two days to act as waiters, etc. and



actually everyone was fed on time with considerable banter going on during the process.

At the end of the first meal, for fun, everyone left a penny as a tip under their plate. This backfired at our table because at the next meal there was a slip of paper with an uncomplimentary jingle reflecting on each of our personalities in no uncertain terms.

The radio phone is an exasperating way of getting a message through as you have to speak, then after stating "over", switch to the listening position so that the other person can start talking. This is confusing, repetitions, and frustrating. Another drawback was lack of any privacy. Private conversations had to be sent from the radio hut and there was no sound proof booth. Not that it would have mattered because every radio in camp was tuned in to the station in question in case incoming messages were for them.

People, who would never think of reading another person's mail or eavesdropping, could not help but overhear. Some conversations were humorous, but some were almost tragic.

The other strike was more serious. It not only lasted longer, it was also a legal strike. Miners on the whole project were involved and negotiations were underway at Kemano and Vancouver.

Miners on the Kemano side of the mountain who wished to leave camp could do so as boats called once or twice a week.

At West Tahtsa, the problem was how to get the men to the railhead

at Burns Lake. Barges were out of the question and the only transportation available was small planes which made the trip at a considerable cost. Most of the men chose to remain in camp. With winter weather, confined space, and very little to do but hang around all day, tension mounted quickly. Tempers frayed and there not much could be done about it.

Fortunately, a settlement was reached in a few days and the miners returned to work. During the strike, there was some apprehension as to what could be done if any serious disturbance occurred, particularly when it was discovered the valve on the main water supply had been tampered with. Had this not been spotted quickly, we might have been without water throughout camp.

Christmas 1951 was a major affair in the camp. Everything was gay and everybody had a marvellous time. I, myself, was not present as I had decided to go home for the holidays.

A large number of the men from the camp, including many miners, took time off also and special arrangements had to be made to get them to their destinations in time. Fortunately, the barges were running. Trucks, cars, etc. took them from East Tahtsa to Burns Lake where extra coaches had been arranged for on the C.N.R. to Jasper. There they could pick up the main line train to Vancouver.

By the time the east bound train arrived at Burns Lake there had been ample time for purchasing large stocks of liquor to take home for Christmas. Alas!, the best made plans.

On the train there were four or five members of the R.C.M.P., enroute to Prince George for a murder trial. Somehow or other, word spread that these constables were aboard to keep order. Feelings ran high for a time, then most of the men simmered down. Those who were too difficult were put off at stations along the line, picked up by a following freight train liad on for this purpose and continued their trip in the caboose.

A mild, but slightly intoxicated German plumber, entered the parlor car and announced in a very solemn voice, but with authority: "I have taken over the C.N.R."

To the great amusement of the passengers travelling with us, he proceeded to interview the conductors, porters, and other officials on the train, promoting, demoting, or firing them as he felt inclined. They all took this as a great joke.

He then proceeded to give us a lecture on how to avoid the deaths and injuries that occur in a train wreck. The main reason for the high rate of injuries, fatal and otherwise, he stated, was the fact that so many persons injured were occupying the rear coach. The solution, he said, Get rid of the rear coach. This, he went on to explain was a simple matter. Run the train into a siding, split it in the middle, then with some shunting, take the rear coach away from the end of the train and put it in the centre. Result, no more rear coach! All this was announced in a serious tone of voice.



By morning, which was a Sunday, everyone was looking forward to arriving in Jasper and a wait of 45 minutes to catch the mainline train to Vancouver. But no! The Vancouver train was seven hours late, said the bulletin board.

Almost eight hours in Jasper on a Sunday. No beer parlor open. Hotel unable to serve drinks, no pool room open, and snow. The waiting room at Jasper was crowded. The benches, wooden, and back to back, were not comfortable, but they did form a narrow counter.

It was a perfect place to throw a party! In no time at all the top of the counter was covered with bottles of all shapes and sizes containing all brands of liquor with the possible exception of champagne.

Everyone was invited to join in and feelings were hurt if drinks were refused. Using great discretion, the authorities removed the lone railway policeman on duty. Heaven only knows what he could have done if it had been necessary to call on him.

Actually there was much gaiety and Christmas spirit of both kinds, fortunately no incidents marred the day. At long last the Vancouver train pulled in. With some helping hand, all got aboard. Whether they got to bed or even found the right berth is problematical, but a good time was had by all. Christmas Day itself may have been dry unless supplies were replenished elsewhere. There was certainly little left after leaving Jasper.

## CHAPTER SEVEN

When I returned to camp after Christmas, I travelled as a passenger in a truck going to East Tahtsa, instead of flying from Burns Lake to West Tahtsa. Since it had been snowing quite heavily, the roads were bad. Five trucks made the trip in convoy so that help was available if needed.

Travelling the road Alcan had punched through virgin forest, lakes and gulleys, one sees exciting and wonderful scenes of unsurpassed beauty. Road repair camps had been set up along the way with quite a large maintenance camp situated at Nadina. The road ran through moose country and quite often these magnificent animals could be seen. They ~~were~~ are not easily frightened and are, in fact, stupidly courageous. Stories have been told of moose, particularly the male of the species, trotting for miles in the headlights of a train, then suddenly turning with their large solid antlers down, and charging the engine with disastrous results to themselves but little damage to the train.

On this trip we had seen a few moving through the bush by the roadside.

After leaving Nadina camp and when close to East Tahtsa camp, we spread out according to our own pace and arrived one by one. We washed, sat down to supper, and only then realized that the driver of the last truck was not present. We were about to send



someone down the road to investigate when the missing driver arrived.

"Where have you been?" we asked. "What happened?"

With an excited grin on his face, he said: "I have just met the politest moose in the world."

"What the devil do you mean?"

"Well", he said, "I came around a corner and there in front of me was an enormous bull moose. He came towards me and stopped. I stopped and sounded the horn. No sign of backing up from the moose. There we were, I sounding my horn, he standing still." After awhile, I opened the door on my side, got down and tried to chase him off the roadside. Suddenly, he lowered his head and charged towards me. I climbed back into the cab as fast as I could. He was the politest moose I ever saw. He closed the door behind me."

You should have seen the door or, rather, what was left of it.

The final trip I made from West Tahtsa to East Tahtsa turned out to be almost the last trip I made anywhere. It was not only very uncomfortable, but rather frightening.

This day, for various reasons, it was necessary for the camp superintendent and myself to go to East Tahtsa. Due to weather conditions, planes were ruled out. The only mode of travel left was a fair sized open boat propelled by a small gas engine.

We set out - a boatman, the two of us, and a man who had been terminated and was anxious to be on his way.

With the exception of our "termite", as men leaving were called, we wore thick heavy clothes, topped by oilskin trousers and jackets. He wore his best suit and shoes, a thick sweater and overcoat, and an ordinary hat. He refused to don the oilskin.

We got off to a good start and the water at the west end of the lake was calm because it was well protected in the west by the mountains, but the temperature was cool. The lake has three stretches of open water, quite wide and connected by two narrow cuts. The general route is to navigate from headland to headland by the shortest route. This we did, but on passing through the first narrows, we saw that the water was getting rougher. It seemed advisable to keep closer to the shoreline although this would increase considerably the distance to be travelled and would mean replenishing the gas tank from the spare drum enroute. We turned towards the shore, and immediately the boat started to ship water. There was nothing to do but to decrease the degree of the turn. We were wet and a little anxious as we found it necessary to start baling.

However, we were warm. Our "termite" was not so happy. Fortunately, one of us, for purely medicinal purposes, of course, had brought along a bottle of whisky. For warmth, the owner uncorked it and passed it around.

Our passenger was a non-drinker, and although we were quite concerned

about his welfare, we continued to take naps.

It soon became evident that we would have to tie up somewhere and replenish the fuel tank. We did not dare do this in open water with the engines cut off, so we moved closer to the shore to find a spot to beach the boat. Due to the steep rocky mountain slope, coves were scarce and in desperation we nosed into a small cleft in the rock just large enough for a man to step out and steady the bow of the boat. As fast as possible the almost empty tank was filled up and away we went.

As we rounded the last bay, we pulled into a very small lumber mill where we downed hot coffee, well laced with our whiskey, and again proceeded on our way. During the final half mile, our boat cut its way through thick ice forming on the lake.

There was nothing left in the whiskey bottle.

Shortly after this I was advised I was being transferred to the camp at Nechako where work at the dam was well past the preliminary stage.

A few days later, after briefing my successor, I said goodbye to Tahtsa and after a short holiday at home, set off for my new job at the dam. I never saw the camp again and never will. It was dismantled at the completion of the job and the site is now under many feet of water.



## CHAPTER EIGHT

I have never regretted that I drove into the camp at Nechako Canyon instead of flying. From the air this part of northern British Columbia is undoubtedly magnificent, but the real beauty of the country can only be seen and appreciated when travelled by car.

The road, which was constructed for this part of the project, is an extension of a short road from Vanderhoof to a little Indian village about two miles out of town.

It was from Vanderhoof on the Canadian National Railway that everything - material, equipment, food - was transported to the dam. The size of some of the equipment was fantastic. Bulldozers, trucks, cranes, shovels, pickups, loaders, some of them weighing tons, travelled over this road a distance of approximately sixty miles. The road passed by lakes, pasture lands, forests, over streams, and in many cases muskegs, but in time and in spite of much mud in early spring, it reached the site of the dam.

The Kenny Dam, at the time it was built, was the largest sloping rock-filled clay core dam in the world. It is not, however, the highest.

Consideration had been given to a number of sites, all of which were discarded due to lack of good footings. Finally, a site meeting all requirements was found in the canyon of the Nechako River, which flows out of Nattalkus Lake, the most easterly lake in the

chain forming the reservoir. As the Nechako River leaves this lake it travels in a north-easterly direction to join the Fraser River at Vanderhoof. At its source it moves quietly, but swiftly, between low banks surrounded by patches of open land in thick forest. Here and there are stretches of still water lined with reeds.

Approaching the entrance of the canyon, the river gathers speed and turbulence and races downwards through 300 feet high cliffs, finally plunging down a gorge through rapids and a whirlpool cut deep into the soft rock. It emerges from the gorge three or four miles downstream.

Here, through flat, ranch like country, it becomes a quiet orderly river heading for the mighty Fraser with little sign of its previous rampaging character.

The camp had been in operation over a year at the time of my arrival. Preliminary work was completed and actual work on the dam itself was about to commence.

There were two separate parts of the camp, one on each side of the canyon. The living quarters, mess hall, kitchens, offices, and warehouses, together with some shops, were on the near side of the river and a little downstream from the actual dam site. All the buildings were of wooden construction and strung out along a road perched high up above the river itself.

A larger clearing on the other side of the canyon slightly upstream



from the dam was occupied by oil storage tanks, repair and maintenance shops for the large equipment, garages, and other buildings required for storage purposes. As all of the rock and much of the other fill required in the dam had to be obtained from the far side of the river, a large amount of equipment was kept on that side of the gorge. Until such time as the diversion tunnel was completed and the coffer dams built, it was impossible to get any equipment over at the camp site. This necessitated building a road along the bank for a few miles until a place could be found to ford the river.

A suitable spot was located and a further stretch of road built down the other side of the river to the newly cleared lot on the far side of the damsite. All the equipment got across and arrived safely at its destination.

From then on, men who worked on the far side of the project went to work and returned to camp by means of a suspension bridge high up above the rushing waters of the Nechako River.

By August, 1951, a 32 foot diameter diversion tunnel, 1,539 feet long was bored through the canyon wall. Cutting 30 feet a day, it took less than two months to complete this portion of the job. Concrete portals were poured, gates fitted, and when the coffer dam was finally built, cutting off the canyon and redirecting the water flow into the diversion tunnel, the damsite held no more water. Clearing could begin.

In addition, on both sides of the river approximately 45 miles of access roads, mainly to sources of fill material, were built. A 3,000 foot runway adjacent to the camp, allowed men and materials to be flown from Vanderhoof three air hours away.

A concrete slab or base for the footing of the dam was begun. This slab was 150 feet long, 82 feet wide, and 10 feet thick. It was completed by May 1952.

For the impervious core of the dam, clay of a certain type was required and here again luck was on our side. A considerable bed of just such a clay was found very close to the camp and after the surface was cleaned, almost unlimited amounts of clay became available for pickup by gigantic turnapull machines. This clay laid on the waffle bed of the slab, was rolled with huge rollers and tamped by machine and hand. Due to the design of the slab, the clay could not slide on the river bed and no seepage occurred. The entire cliff walls had been scraped by machinery, and hand where necessary, to ensure a clean exposed surface on both sides where the various materials for the dam would be placed.

This surface was grouted with a film of concrete up to two inches in thickness and then liquid cement was injected under pressure at ten foot intervals horizontally.

The first drill hole was thirty feet deep. Concrete forced into it. The drills were then pushed to a 75 foot depth, the process repeated, and again for a final drilling to 120 feet. The entire shoulder of

the dam on both sides was now impervious to a depth of 125 feet. About 1,000 men worked on this phase of the project and of those, about 100 had their wives and families with them. Just outside the camp gates, a clearing in the woods had been made for a trailer camp, complete with water, sewer, and power. A number of trailers soon gathered and with some prefabricated housing, a very happy community complete with a small school was in full swing. This had a good effect on camp morale and I must say that I have never seen any place where a few women commanded and got the respect of hundreds of men away from home.

At the dam, there was an Alcan owned float plane and pilot, stationed for trips between the camp, Burns Lake, Vanderhoof, and Prince George. A landing strip for bigger planes from points further away was also constructed.

Murray Lake, a long lake a few miles away on the far side of the river, was ideal for a plane dock but it could not be reached by road until the coffer dam was completed and the diversion tunnel in place. So the only available piece of water on the camp side of the river for an airfield was Fish Lake. This lake was really a large, almost circular, reedy slough and certainly not suitable for fully loaded planes. The solution to this problem, however, was actually simple, though nerve-wracking to novices.

On my first trip out, we gathered up early one morning at Fish Lake. After looking us over as if we were cattle, the pilot ordered me two young men from the Bank in Burns Lake and myself



to get aboard. The bank men were returning from a pay mission at the camp as it was easier for the bank to come to the camp with the money than for the camp to go to Burns Lake.

They seemed quite unconcerned and in addition to their cash boxes with some surplus cash, were fully equipped with fishing rods and tackle. The other two passengers did not get on the plane, but made themselves comfortable in the sunshine by the lakeside as we took off. This required the full length of the lake from a start almost in the reeds and a take-off which just cleared the bushes on the far side.

Heading across the canyon and over thick bush, we eventually sighted Murray Lake. We landed near a sandy point jutting out into fairly deep water. We taxied into shore and when close enough to tie up at a post, we were instructed to get out. This we did; I, somewhat anxious as to the reason. My two companions still quite relaxed, immediately put their rods together.

"Will be back in about 15 minutes," said the pilot, as he untied the plane and headed towards the camp. Placing the cash boxes on the sand, the bankers proceeded to the water edge and cast their lines.

All I could think about was the thick heavy bush we had flown over and the distance by foot to the campsite; also, I wondered if anyone other than the pilot knew we were there and did they know where "there" was.

Anxiously watching the sky, I was relieved when a speck appeared in the distance which indue course turned out to be our plane, complete with the rest of the passengers and their luggage.

The fishing stopped, the cash boxes were gathered up, and we climbed aboard. At Burns Lake the bankers went about their business; I a bout mine.

Thinking of that lonely spot, far from anywhere, I thought to myself: "Money isn't everything - the fishing tackel was much more valuable than the cash in the boxes."



## CHAPTER NINE

High up above the walls of the canyon, a short distance from the camp, was an ideal spot for observing all that was going on. For miles around, the countryside revealed many new roads to the pits from which all material had to be conveyed. Through the trees one could see the vehicles rolling along and there was a constant hum of machines, mixed with the sounds of whistles from the loading points indicating load, filled, be off.

Down below was the floor of the canyon on which the dam was already beginning to take shape, more fascinating at night because of the hundreds of lights shining down on the work and the twinkling of the headlights as the machines passed through the thick forest. Along the zigzag road on the side of the canyon and through the narrow gap barely wide enough for two trucks at a time, the loads passed in proper order to be dumped in the respective steps. The activity resembled a colossal ant colony.

One night I had a peculiar experience. From my vantage point, sitting in the dark, close to a light pole on the side of the road, I was peacefully observing the activity below me, when suddenly there was a rustling sound all about me. There was no breeze and I was puzzled. Then I was conscious of little specks of light, very small and dim. I could not figure it out and for a moment, thought perhaps that I had been in the bush too long.

Slowly little black spots, hundreds of them, moved about me in the darkness. The movement and the whispering sounds continued. Suddenly I realized that I was in a favorite place for the scalers lunch break in the early days of the job and I was literally surrounded by hundreds of field mice, who had been living and multiplying on the food crumbs left from their lunch boxes.

It was to this observation post that I took many official visitors who came to see the work in progress.

Here, twenty-three hours a day was constant activity. The only break was an hour off for maintenance at 6:00 a.m. It was the silence during this period that used to wake the camp up.

As the vehicles arrived at the site, they dumped their loads spreading the material in stripes across the canyon. These strips were in steps against the slope of the rock, dumped in turn, from the far side. The dam, when completed, would have a crest link from wall to wall of approximately 1,550 feet with a 40 foot wide roadway at the crown.

Commencing with the downstream side, tons of good rock was monitored with tons of water so that all sand and other material was washed away, leaving clean rock touching clean rock. In succession, built up against the rock, were steps of gravel of two sizes, then sand, then the clay core and from there on in reverse order the same material with a final layer of rip rock on the upstream side.

In effect, everything leaned against the rock, each one lower than the preceding one. To get all this material into the area in the right order, called for logistics of a high quality. This was accomplished by aid of radio equipment, which was installed in the foremen's vehicles and at the machines in the various pits from which the material was dug. Any breakdown or holdup was reported to a central control station and trucks were diverted or added from other areas as required.

Visitors found the pattern most interesting and I used to stand at my observation post with them pointing out the interesting features of the project. One day, shortly after my arrival at the dam, having taken a couple up the hill, I was met by the job superintendent. Rushing up to me with an irate look on his face, he said: "Mr. Meldrum, you must stop taking visitors up to your lookout."

Thinking that there was some <sup>camp</sup> ~~map~~ order against this, I explained: "I'm sorry, I didn't know it was against regulations."

Still looking angry, he replied: "It isn't, but if you must go up there, for heavens sake stop moving your arms about. All my men see you silhouetted against the sky line (I stand 6' 3") waving your arms about and they are going all over the place and in all directions."

Bursting into laughter at my surprised look, he rushed off. We got along famously after that little episode.



## CHAPTER TEN

What do you do if you must have tons of rock - blow up a mountain?

That was what was done to build the Kenny Dam - a small mountain upstream from the site and back a short distance from the river on the far side of the canyon, within easy hauling distance, was literally blown to provide the necessary material.

Preparations for this project took time and consisted of boring hundreds of yards of small tunnels about six feet high into the mountain for a distance of 200 or 300 feet. There, traverse galleries were cut starting 25 feet in from the face until the entire space inside was honeycombed.

Into these passages 200 tons of dynamite were packed. This amount would fill five freight cars and, until later that year when Ripple Rock was blown, this was the largest single shot of dynamite ever used in Canada.

The entire load was prepared for blasting so that on the day of the big bang, the whole mass would lift and shatter into small pieces which shovels would load onto large trucks for dumping at the fill at the rate of a load every 45 seconds. As it was dumped, each load was sleuced down by hydraulic guns under pressure.

With preparations complete, a date was set.

Obviously certain precautions had to be made to ensure the safety

of men and equipment as it was unpredictable what would happen. The living quarters at the camp were safe enough as the canyon lay between and the locations were far enough apart to ensure their unvulnerability. Some buildings a shorter distance away might be affected, but the big danger was on the far side of the river. There lay the shops, oil storage tanks, and other buildings, all close to the face of the mountain.

The oil tanks were emptied to about the quarter mark, leaving enough weight in the tank to hold them to the ground, and guy wires were then attached to prevent them tilting. The machine shop, a large shell of a building, comparatively close, was emptied of everything - tools, parts, machines, and fingers were crossed as to its fate.

Everyone in the camp was notified that their sleep might be disturbed on the following Sunday at the early hour of 5:30 a.m. In spite of this, a large number of men turned out to see the sight from a vantage spot on the other side of the river, about two miles from the blast. It was daylight, and the mountain was in clear view.

Cameras of all sizes, shapes and descriptions were in evidence.

The blasting wire was connected to a plunger some distance away and well protected by an outcrop of rock. Two or three men only were permitted near the scene of the explosion and they too had ample protection.

A siren blew for several seconds and all activity stopped. The signal was given and down went the plunger.



First, a large black and white cloud of smoke rose into the air, followed by a roar which echoed across the valley.

Two miles away, we felt the punch of the blast and had to brace ourselves against a great gust of wind. Through the smoke the whole mountain seemed to heave upwards and then settle back with red flashes appearing and disappearing in the clouds of dust which mushroomed upwards.

Great hunks of rock, some up to 200 tons, scattered over the surrounding area; large pieces even landing with spectacular splashes in the river many feet below.

Trees on the upper level of the mountain caught fire. A few seconds later a hush descended. It was over and we moved back to assess the results.

The oil tanks were still there, upright, and with only a few minor dents in them. However, apart from the slab and some pieces of rock, there was no sign whatsoever of the machine shop. The main objective, shattering the mountain, had been accomplished, but some of the blast had burst outwards instead of upwards, sweeping the structure off its foundation.

A storage shed on the far side of the river, which had been considered quite safe, was leaning in a very drunken fashion, but apart from this, no damage whatsoever had occurred.

On investigation, it was discovered that a small segment of the dynamite filled mountain had not been fired. This presented a problem with an unknown quantity of explosives located an unknown distance inside the mass of crumbled rock. Digging it with machines would be extremely hazardous. As for loading rock far from this point, it was out of the question.

Again, luck was with us.

Poking around in the debris, a short piece of the initial wiring was found extending out from the pile. It was attached to the detonator and once again the ends were connected to a plunger, the area cleared, and the plunger activated. More smoke, more rock, and time and money saved.

The process of dumping rock into the canyon could now commence in earnest.

## CHAPTER ELEVEN

Dams, like other large projects, are usually officially dedicated and the Kenny Dam, named after the Honourable E. T. Kenny, then Minister of Lands and Forests, was no exception.

The planning and arrangements for this ceremony presented problems, not unsurmountable, but rather unusual.

The dam was miles away from the nearest railway station, itself miles from Montreal, Vancouver and Victoria, from which points a large number of the attending guests would come.

Accommodation was restricted so that the event was planned for one day with a few special guests staying overnight at the small company guest house in the camp. The rest were to be located in the local hotel at Vanderhoof and a special train left on the railway siding at that station.

In addition, a large crowd of semi-official visitors were invited from Prince George, Burns Lake, Vanderhoof, and other local points. All these would at least have to be fed.

The fun started after the first official list of guests was received by teletype at the camp. The regular mess hall was, of course, in use by the men employed on the job and therefore was not available for a banquet hall. The recreation hall was pressed into use and tables and chairs set up to accommodate as many as possible. Box lunches would be supplied for the overflow.



Seating arrangements from lists on hand were almost complete when the first of many changes and additions arrived from Vancouver. The lists were revised and new seating arrangements made, and the number of box lunches were increased. Changes in the lists arrived until a halt was called and a final list determined.

I had long since been delegated to the lunch box group.

In addition, the press and radio personnel had to be looked after. They needed office space, tables, chairs, and typewriters, so a building was set aside and all the available office equipment installed.

The teletype and single phone line to Vanderhoof were both going twenty-four hours a day when a new problem arose. The weather turned hot and dry with dust hazard added to the gravel road stretching from Vanderhoof to the Dam. As dozens and dozens of cars and buses were going to travel in convoy along this route, headed by the Lieutenant Governor and an R.C.M.P. escort, something had to be done to lay the dust. Fortunately, we did have a number of watering carts on hand. For a short period before THE day, an attempt was made to lay the dust by watering the roads, but improvement was temporary and with the exception of the lead vehicle containing His Honour, the rest ate dust all the way with the tail end getting a real dose.

The dry cleaning bills must have run into the hundreds of dollars.

Everything was all set. A simple plaque placed in a rock high up above the damsite was draped and close by bleachers were built. Word



was received from Vanderhoof that the cavalcade had started and the camp was alerted. I am sure that the progress of the visitors could have been spotted from any high point ~~many~~ long before they reached their destination because they emerged eventually in a cloud of dust. The passengers disembarked, the special guests went into the rec hall for refreshments and lunch, while those less fortunate were each given a lunch box and settled down in the shade to enjoy it.

I knew that the R.C.M.P. detachment were going to have a regular lunch served at one of the tables in the messhall. I felt it was my duty to see that they were well looked after. When in a camp, it was a useful habit to make friends with the cook. That day we had the best steak I have ever eaten.

After lunch, the guests toured the area, while preparations were made for the official ceremony. Up to this point everything had gone well. One or two of the guests did get into spots which were within danger areas, but apart from that, nothing serious occurred.

At the end of the tour, everyone gathered in front of the bleachers, on which some of the V.I.P.'s were seated. These bleachers faced out across the site. Consequently, everyone ~~xxx~~ else who was going to listen to the few short speeches, had their backs to the actual dam. Half way through the opening remarks, something went wrong with the loudspeaker system. At a certain point in the ceremony, there was a loud boom to simulate the blowing up of the mountain. Smoke rose from behind the hill and a convoy of trucks

full of rock which had been waiting out of sight, came into view and solemnly dumped their load at the dam. Of course, everyone turned to watch and the rest of the speeches were addressed to the backs of the crowd.

However, everyone had a good time and later in the day they all started back to Vanderhoof. Needless to say, they did not travel back in close convoy.

## CHAPTER TWELVE

While there were considerable moose in the neighbourhood of the dam, the country surrounding the site was mainly bear country. These delightful, but sometimes dangerous animals, were a great source of amusement to the children living in camp. Their evening entertainment was a visit to the camp garbage dump where one or more bears, black or brown, and of various size, were usually to be found searching for food. It was delightful to watch them.

The amount and quality of food that is thrown away at any camp is tremendous as left-overs are not used again. The bears seemed to sense this. On most evenings at the dump a number of cars, generally with children in them, would park with lights out.

As twilight came, so did the bears, silently emerging from the dense forest with scarcely a look at the vehicles close by.

The dump itself was a somewhat shallow trench with straight sides into which the garbage was placed. Fire from paper and boxes and other woods were constantly burning and it was interesting to watch a bear making himself overcome his fear of fire for the sake of a tasty tidbit.

I remember one large bear finding a piece of meat under a few bits of burning wood. With one eye on the wood, he pawed the meat gradually towards his mouth. Every now and then he drew back as he felt the heat, but he persevered until at last he got the piece in his mouth.



A burning ember fell over on his snout. Dropping the meat, he gave a yelp and shaking his head, disappeared into the bush. The last view of him we had was his rear end, which was twitching with utter indignation.

During my stay at the camp, I saw many of these animals, including an albino of the brown bear spacie - a rare creature. He was off white in color and handsome. He visited the dump often, but generally alone.

Unfortunately, before steps could be taken to protect this rarity, an amateur bear catcher tried to take him alive. He succeeded in getting a rope around his neck, but having done so, was unable to complete the capture. The bear was found shot through the head with the rope still dangling around his neck. The body had been skinned.

It was a shame, because he was a fine specimen and would have been of great interest in a zoo.

The camp bears seemed quite undisturbed by any noise or action anywhere near them. At one of the gravel pits where trucks were loading every few minutes there was a short tree stump at the point where the truck turned into loading position.

Often during the day, a small bear, little more than a cub, sat on the stump watching the trucks with interest. Back and forth his head turned as if he were checking the number of trucks per hour and



generally keeping an eye on the progress of the work. Trucks nosed up to within a foot of him and it was only if the driver got down from his cab that he then showed any sign of fear and slipped off into the bush. When all seemed quiet, back he would come and take up his position again.

There might have been a little checking machine in his small paw, but I was unable to find any bear on the payroll that month.

Bears have been known in some camps to wait outside the messhall and take snacks from the men coming out. There is a picture of a man with a bun in his mouth, tempting a ~~large~~<sup>large</sup> bear to take it from him. In my opinion, this is overdoing it.

I had discovered what I thought to be a good fishing spot at the mouth of a stream running into the Nechako River. Standing on a point of land, I could cast on my left into a stream running into the Nechako River, and in front into the river itself. On my right was a path going deep into the woods.

One sunny Sunday afternoon I was enjoying myself and had already caught two fair sized trout, when glancing along the pathway, I saw a large bear approaching with a look of determination on his face. Discretion is the better part of valour, apart from which there was not room for two.

Reeling in my line and not waiting to dismantle my rod, I scrambled

up the bank behind me and out of sight.

I hope he enjoyed my fish.

## CHAPTER THIRTEEN

A few miles upstream from the spot on the river where equipment had been forded, a flow gauge machine had been suspended in mid stream. It was connected with a continuous chart record in a box on the bank. The flow of water was measured constantly day and night and from the chart, data could be picked up to determine the length of time it would take to fill the reservoir once the dam was completed and the diversion tunnel gates dropped.

It was first estimated that five years would be required for the reservoir to fill, but in fast water was running over the spillway in two and one-half years and the maximum fill was reached in four and one-half years.

As the gauge had to be checked periodically, an engineer made the trip by boat, generally accompanied by someone else in case of emergency.

One sunny summer day I got the nod to go with him and permission to spend the day up river. We decided it would be interesting to try and make the exit point of the river from Nechako Lake, about twenty miles upstream.

The boat for the trip was tied up at the ford, so we loaded a 50HP outboard motor, ourse lves, lunch and fishing tackle onto a pickup truck and set out early in the morning. Reaching the ford, we baled out the boat, attached the engine, packad in everything, and set out.

Nechako River is interesting as the country it flows through varies. In the dense woods, above our starting point, the river had cut through a short canyon in which it made a right hand angle turn, emerging into an entirely different type of landscape - more open country with grassy slopes running up to thick bluffs.

Fallen trees were everywhere and also signs of forest fires of long ago. Apart from the throbbing of our engine, no sound and no sign of life was heard or seen.

We were aware that very few people had passed this way - maybe a trapper or two, or a prospector, or perhaps an Indian tribe, and later, survey gangs looking for suitable spots for the dam.

The river obviously at one time had been suddenly blocked, not by any fall of rock, but by an upheaval of earth around which it took a wide detour. The two short arms of water, each ending in the mound, still remained to show the original course.

Around this bend we came to a wide stretch of water with a grass bank on one side opposite the reedy mouth of a small stream. The chances looked good for fishing, so we slowed and I dropped my line over the side - splash. Before I could reel out any line, I hooked a good sized fish.

This happened over and over again. There was no sport in it. I believe that if I had held a hook in my hand, I could have caught them with my fingers.



The river is wonderful for fishing anywhere, but I had never seen anything like this. Telling the story on other occasions, I met with the remark:

"Come off it, you can't get away with that fish story."

My reply has always been the same: "HONESTLY, IT HAPPENED."

Further on, we had some difficulty making any headway even with our powerful motor, and had to cross from side to side to find a less rapid current. On a little sandy beach we disturbed a large black bear, who immediately made off as fast as he could uphill to the woods. When I saw the speed he travelled up that slope, I recalled my fishing adventure with the bear and the advice never to run uphill if confronted by a bear. The reason is that his short front legs give him an advantage uphill, but travelling downhill too fast he is likely to turn a somersault.

Apart from this, we saw no sign of an animal or a bird the whole trip.

It took us more than four and a half hours to travel the twenty odd miles to the lake and one hour and a bit to come back. We could have made the return trip in less time but there were a numerous gravel bars to avoid.

xxxxx

Considering the number of vehicles on the job, it was remarkable that so few serious accidents occurred. Perhaps it was because most

of the trucks were sturdy and large enough to survive a major mishap; or perhaps smaller vehicles kept out of their way. Certainly drivers of Volkswagens and pickups gave them a wide berth and many a time I was prepared to take to the bush rather than tangle with the monsters, particularly if it was a turn-a-pull.

These huge machines move along the road with a slight zigzag motion like an alligator due to the fact that the steering is electrically controlled. On winding roads with hairpin bends, they move well over to the far side of the road when making the turn and it is wise to give them the right of way. One failed to make a hairpin turn, crashed over the edge, landed upright on the road below, and with a shake, proceeded on its way.

A huge Euclid truck ~~unloading~~ unloading the rock on the damsite was not so fortunate. At the base of the rock slope on the downstream side on the dry river bed were the pumps for monitoring the rock. They stood on a 15 foot high platform with the pipes running up the canyon wall on one side to the pressure guns on the summit of the rock fill. On the left there was nothing between it and the canyon walls. The whole system was set back a piece from the base of the rock pile.

I happened to be approaching the downstream side of the dam on the river bed watching the trucks with their rock loads rolling in one after the other and backing up to unload on the edge high above me.

It was fascinating to watch the large rocks suddenly slide out of the box and bounce down the slope with little puffs of smoke and spark as they struck other rocks. Suddenly I noticed one of the trucks had a single large rock as its load. Slowly the box started to tilt and the rock slid from the front end to the rear. Then it jammed. The front wheels of the vehicle rose slowly off the ground and turning somersaults, load and truck crashed down the rocky slope. Some distance down the chassis wedged into the rock pile and the body parted company, proceeding downwards and outwards towards the pumphouse. Two men on the platform hearing the commotion, gave one look upwards and headed for safety. The Body, fortunately, passed to the left open side of the platform, but the men swore and I can testify that neither of them touched one of the eleven rungs of the ladder as they fled the pumping station.

I'd have done the same.



## CHAPTER FOURTEEN

Insofar as fatal accidents were concerned, the record on the entire project was very low, taking into account the number of men employed and the nature of the work in each location.

Our worst fatal accident was not a construction accident, but took place at the end of an enjoyable picnic up river, when three people lost their lives and one was rescued.

Late afternoon during a weekend, a message was received at the dispatching office from a pickup truck in the vicinity of the ford, a popular picnic spot, that a boat with four people in it, two married couples, had capsized in the river and had been swept downstream towards the deep canyon, the diversion tunnel, and the gorge and whirlpool beyond.

The camp immediately sprang into action. Fortunately there were a number of men available within call, all of whom responded immediately to the emergency.

Although it was probably too late, a rope net was immediately lowered from the top of the portal of the diversion tunnel into the seething water below in case any of the victims was still hanging onto the boat if and when it reached the dam. There was, of course, no way of closing the gates.

Men were sent off by trucks to the scene of the tragedy with instructions to work downstream on both sides as far as they could



get on the chance that the boat and its occupants had managed to reach the shore or was on some gravel bar in the river. Once they were in the canyon, there was still a hope that they might have reached safety, but locating them would take time, organization and equipment. In places the walls were 200 feet below the roadway and rescuers would have to be lowered by ropes on both sides to make a thorough search. Dusk was falling and lack of light hampered the search.

- As fast as possible, small groups of men equipped with lamps, ropes, and walkie talkies, were sent to various spots along the river bank. Some of these were to scramble down the slopes and investigate every crevice or bar, while others were lowered down the sides to work their way along the water edge. It was a dangerous job, but not one man refused, nor did any man available not volunteer to assist.

The first news received in camp was good. One woman had been found alive on a gravel bar just above the entrance to the canyon where the water was no longer quiet. Ironically, she was the only one of the four who could not swim and perhaps this had saved her life. She had drifted with the current and was deposited on the tip of a small bar jutting out in the stream. She was unharmed except for bruises and shock.

In order to be sure none had survived passage through the tunnel, down the gorge, in and out of the whirlpool, a young engineer, in fact my companion of the river expedition, and I loaded powerful

battery operated search lights into a truck and headed downstream to a point where we could push our way through the woods to a point well below the exit of the gorge.

This entailed a long stiff hike and climb, especially as our load was not a light one and by this time it was almost dark. Forcing our way through heavy woods and falling timbers, we eventually came to a more or less clear spot which surrounded an open part of the river. A fast current was flowing through this in a large circle. Driftwood moved close to shore two or three times before setting off downstream. Here we found two ideal spots within hailing distance.

My companion moved upstream to a place close to where the water still cascaded down the gorge and very soon I saw the beam of his light thrown out onto the surface of the river.

Meanwhile, I set up my equipment to throw the light onto the largest area of water moving in a slow circle in front of me. I was sure that if the boat passed anywhere near me, if unable to reach it, I could at least see it and ascertain if it were empty or not.

Darkness settled down and there was no sound except the water crashing down the gorge and the rustling of a few disturbed animals in the neighborhood.

About 3:00 a.m. my companion called: "There she is" and swung his light around to keep the wreckage in sight until I could pick it up with my beam. As it drew close to me, I saw the smashed boat glide

past on its side. Still some distance away, it appeared to be empty. Following its circular course, it drifted past a second time and on the third time my light fell directly over it, and into the bottom.

Not a sign of anything.

We waited awhile and then packed up. It was a hard climb to the road and we were cold, hungry, and while we had held out little hope of finding anything, were very depressed.

. Back at camp reports were coming in from up river but no word that anything had been found.

Later the next day, it was apparent that there were no survivors and the search was called off.

Many weeks later, one body, that of a man, was found away downstream towards Vanderhoof. To the best of my knowledge, no others were ever found.



## CHAPTER FIFTEEN

Meanwhile construction of the dam had reached a point when the gates of the diversion tunnel could be safely closed and filling of the reservoir commenced. Riprap rock was in place on the upstream side of the river and while more material would continue to be added, there was no danger of the rising water reaching the working level for a long, long time.

It was a tricky job, with a slim chance for a second attempt if the first was not successful. The portal would be submerged within an hour or two of the gates being lowered and pressure of the fast moving water against the steel gates would prevent them being raised once in place.

There were, in fact, two gates side by side, separated by a concrete pillar. These gates were massive steel plates set in grooves and could be lowered simultaneously into two grooves set in the bottom of the structure. They had been fastened in place in a raised position some time before and held there by a series of pins which would be released at the right time.

The method of lowering the gates was ingenious. Adjacent to, and in line with, the gates a flat strip of land had been prepared. At the far end of the strip some tractors were stationed facing away from the gates. To these tractors were hitched steel cables running through steel pulleys and attached to hooks on the steel gates.

When the day came, there were almost as many men and cameras out as



on the day we blew up the mountain. This time the press also was well represented. There was a feeling of great tension in the air.

All eyes were on the portal when the signal was given. The tractors, which had been warming their engines for some time, took up the strain on the cables so that the pins holding the gates could be removed. This was done. The entire mass of steel was now ready to be lowered. On another signal all tractors were slowly put in reverse. Then with a swish of speed, the machines reversed at a fast pace.

With hardly a splash the bottom of the gates hit the water and slid into the prepared grooves. This was tricky. Had a stone or a piece of wood caught in the groove, it would have prevented a complete seal. The cables slackened and the gates were down.

From the exit side of the tunnel word was received that no water was flowing through and all was well. Immediately on receipt of this information, other tractors proceeded to shovel tons of sand into the river at the portal. This formed in a sloping pile against the gates and prevented any seepage.

Later a concrete plug was pumped under pressure against the gates inside the tunnel and fixed into the walls by means of notches. Liquid concrete was also forced into the rock surrounding the plug.

As soon as the gates had settled the river surged backwards in a high crested wave and the level of the river began to rise. Never again would the waters of the Nechako River flow down several miles of its old course. From that point on for four and a half years,

only the water from Murray Lake and the adjoining lakes would reach Vanderhoof.

For the first few days the rise of the water was rapid. Very soon trees on the river banks were surrounded by water. Many of these were eventually completely covered while those on higher land, after the reservoir was filled, still showed their tops.

## CHAPTER SIXTEEN

Determined to be one of the first, if not the first, to ever walk down the river bed, I was at the downstream side of the dam as soon as the gates had been lowered and the water started to rise.

No one was in sight as I reached the empty river bed. It was an amazing sight. Rocks were strewn about and hundreds of hollows were filled with water. These, on examination, turned out to be of all sizes, shapes and depth, many of them quite deep, well over 10 feet, and in many cases of considerable area.

In addition to the rocks lying in the hollows, there were a large number of fish which must have been surprised when they found themselves out of their natural element.

Each of the basins which had been gouged out of the soft rock by the force of water leaping and twisting for hundreds of years, was separated by strips of hard rock of varying thickness from an inch upwards. This rock had not been affected by the constant action.

Many of the rocks were of an irregular shape, but many had a smooth round shape. From the bottom of the shallow ones, I picked up handfuls of pin sized pebbles of brilliant colors, green, purple, red and white, ground to a polished smoothness by thousands of years of water action.

It was an eerie and impressive experience. No one had ever stood there before.



The walls of the canyon were still wet and reflected the colors of the pebbles to the late water level at a height well above my head. As the water dried from the rock surface, these colors lost their brilliance and became dull.

However, over and over again after a rain, the colors returned in all their freshness, and during the short period the sun rays were able to reach in, the canyon again became sparkling and brilliant.

As I stood there I became conscious of a splashing sound from numerous fish flipping from pool to pool in an attempt to reach water deep enough to continue their way downstream.

The whirlpool on the right bank of the river caught my attention. While this was relatively full of water, much of it was exposed.

The left hand wall of the canyon was continuous with a slight outward bow and over the years the river had made little impression on it. On the right, the situation was quite different. There was a large gap in the wall, the entrance to a hole ground out in a perfect circle to a depth well below the level of the river. This caused the river to divide - one part hugging the left bank, the other stream entering the circle where it was sucked down to the bottom of the pool to eventually emerge and continue on its way. The two separate ribbons of water at slightly different levels could be seen quite easily from above when the river was flowing. Now the water lay clear and still and the rocks at the bottom of the



pool could be seen distinctly.

Over in a corner of the pool was a small cave where the soft rock had been scoured out by the action of the swift water. Further down the slope got steeper and steeper. There were fewer and fewer basins. Here, undoubtedly, the water had leaped outwards instead of swirling around. At the very end was a drop, which terminated in a quiet stretch of water on the edge of which we had set up our search lights the day of the tragedy.

Geologists found specimens of many types of rock, but no gold or other precious metal was discovered anywhere. Luck had been with us on many occasion, and I suppose it was asking too much to have at least part of the project pay for itself.

The area to be flooded for the reservoir encompassed 335 square miles and apart from the dam itself, was an almost natural basin.

Eight small dykes, dams, and the spillway dam at Skins Lake, 50 miles from the Kenney Dam on Ootsa Lake, were all that were required to prevent the escape of water as it reached highest potential runoff point.

Skins Lake dam, the major project, required 500 men working all summer. Their living quarters were tents, but a two-storey prefabricated bunkhouse building was constructed for office, warehouse and other uses, together with some other small buildings. The dam itself was 55 feet high and about 200 feet long with two controlled gates, each weighing 58 tons. It is amazing that only

about sixty families would be displaced in the entire watershed area and on the whole a satisfactory compensation was worked out in this connection.

Skins Lake was a very happy camp and, while everyone worked hard, there was plenty of activity even though no real recreation hall was ever built.

The camp was located in open cattle country and a number of horses were available in the neighbourhood for riding. Riding was one of the sports the staff turned to for relaxation. A few even had their own saddles and on occasions work stopped for a short while to round up a missing horse or locate a stray herd of cattle.

Another odd problem involved an old Indian graveyard. This was solved by digging up the coffins and burning them. The ashes were buried with due ceremony and a cairn with an aluminum cross was erected marking the spot.

Until water could flow through the spillway into Skins Lake by way of a man-made channel, and from there into Cheslatta Lake and Murray Lake, fish life in the lakes was protected by a temporary wooden dam at the outlet of the Murray River into the Nechako.

Some valuable timber in the flooded perimeter of the reservoir was salvaged and Alcan agreed to underwrite any loss which a company might incur in logging and processing the natural resources.

Other timber was salvaged later when the reservoir had filled up.

Transportation and booming then became possible. The company also agreed, at the request of the authorities, to cut down all growth at the ends of wild game trails at the new water level to enable moose, etc. to gain access to the actual water.

This solution caused considerable amusement among the local inhabitants and hunters resulting in a number of notices appearing at various points reading "NORTH BOUND MOOSE ONLY" or "CARIBOO TRAIL ONE-HALF MILE DUE EAST".

Down stream from the dam some of the cattlemen were upset about their fences, which terminated at the banks of the Nechako River. For a few years the water level of this river would drop and cattle could then escape around the open ends of the fences. This problem was solved quite amicably by Alcan bearing the cost of building additions to the fences up to the new river bank.

Some animosity was felt in the town of Vanderhoof, residents protesting loss of the bird sanctuary at the junction of the Nechako and Fraser Rivers. As a matter of fact, the shoreline was increased as the water dropped and the bird sanctuary much improved.

By now, friction between the local population and Alcan had disappeared entirely, but the day the gates of the diversion tunnel were closed, the Vanderhoof newspaper came off the press with a black border around the front page and the headline "DEATH OF A RIVER".



## CHAPTER SEVENTEEN

As soon as possible after construction started, a road had been pushed through to Murray Lake and from there all sea planes landed and took off.

This beautiful lake was drained by way of Murray River to the Nechako River seven miles downstream from the damsite. By means of a small wooden dam with a controlled spillway, Murray Lake and others which fed into it were later raised a few feet. Thus a further control of their waters, which in the past had often been in flood, could be carried out.

On this particular occasion advance information was received that two airforce officers would be visiting the camp and it so happened I knew both of them. Accommodation overnight as well as meals would be required. On the day of their arrival, the resident engineer and myself drove out to the seaplane ramp at Murray Lake to welcome them.

Having expected a small plane, I was somewhat dismayed to see an RCAF Canso land some way up the lake and advance slowly towards us. Lined up on the wings and floats were members of the crew keeping a sharp lookout for snags. In due time the plane reached the ramp. My two friends jumped out and we shook hands.

Out of the corner of my eye I saw no less than seven men step down onto the dock and securely tie up the craft. Having only one car



and anticipating lunch for two, I hastened to explain that it would be at least half an hour before I could get a vehicle to pick them up. I did not mention that while lunch for seven would present no difficulty, there might be a problem insofar as accommodation was concerned. The guest house was limited.

I need not have worried, however. Having cast his eye over the craft, the senior officer saluted his group and the moorings were then solemnly untied. The men got back onto the plane, the propellers turned, and the mooring line cast off.

It was just an exercise. They were bound for Prince George and would return for the guests the next morning.

I do wish they wouldn't do things that way in the Airforce.

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Meanwhile in the diversion tunnel, crews had commenced pouring concrete against the inside of the steel gates. They might be there for eternity but could rust or wear away and to prevent water flowing through again, this precaution was considered necessary.

About 30 feet back from the portal, a solid bulkhead was built and a concrete pumping machine set up outside the exit. From this liquid concrete was pumped through a long pipe to within the bulkhead itself. Notches had been cut in the walls and when the concrete hardened, the tunnel was permanently sealed.

As the concrete was pumped in under pressure for about 1500 feet, the pipe had to be strapped in sections to the rock floor.

Someone from Vancouver was curious to see how the job was progressing. We walked in to inspect the work. The walls were dripping wet and the noise of the machine ~~dig~~ chugging away could be heard quite clearly from inside. Gingerly we progressed along the wet floor with the pipe on our left heaving and straining as the liquid was pushed through its length. At the far end we stood for awhile watching the men pack the mass into place. Then we started back.

Some way from the entrance, the engine began to roar and race and the pipe heaved upwards from its strapping. Small jets of white liquid spurted out at the joints. We did not wait for the outcome but ran full belt for the exit.

We made it as the motor was cut off.

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The final job of building a roadway on the top of the dam was about to commence when I received word that I was transferred to Kitimat on the far side of the mountain.

Watching the dam rise had in some way been the most interesting part of the project, but construction at Kitimat was in reality the main purpose behind it.

I was to switch now to the final construction phase.

## CHAPTER EIGHTEEN

Even today after eleven years of construction and in a town of more than 10,000 people, anyone tying up at Kitimat dock might be heard to say: "Where is this place, Kitimat?" Very little of the project can be seen from the ship.

In 1952 this was more accurate.

From the dock, a roughly constructed road wound up the valley, hugging the base of the mountains on the left, and skirting the marshy end of the Douglas Channel on the right where the shoreline gradually slants eastwards through meadow lands on which at one time there were two farms. Ruins of the old buildings can still be discerned.

Close to the river delta is the narrow entrance to Minette Bay, which plays, and will continue to play a major part in the development of Kitimat. The shoreline of the Douglas Channel from Minette Bay runs southwards past the Indian village of Kitimaat, winding down to the open Pacific many miles away.

The day I arrived there were a number of people on the dock. As in other isolated places, the thing to do was to be on hand at docking time. Ships and planes were the only means in or out of Kitimat for sometime and the dockside and landing ramp were the hub of the camp at arrival time and take-off.



The first thing I was aware of was noise. This originated from the dredgers, going full blast on a channel to the company's dock where deep sea vessels would unload their cargoes of alumina once the plant was in operation.

The channel, which is quite deep all the way from the sea, terminates at the north end in low marshy land, on which some of the plant buildings were to be built. This area needed fill. There were two sources available, the material from the channel, two, gravel from a huge gravel deposit a mile or two up the road between the plant site and the townsite.

The gravel deposit, a most fortuitous discovery, was named Alcan's million dollar baby for it contained an almost unlimited supply of good gravel. Both sources were used.

From the dredge, a huge 24-inch pipe on a number of floats ran across the marsh. From it branch lines went out in all directions and day and night mud, water, and rocks, spewed out in great piles, were eventually pushed into place by a fleet of bulldozers. About 12,000 cubic yards of fill were pumped out each day. The noise of the rocks going through the pipes was terrific and a few days went by before I got accustomed to the sound.

From the gravel hill, truck after truck of gravel was hauled daily, spread over the fill, and allowed to settle. The total depth of fill was about 25 feet.



A short distance up the road from the dock were bunkhouses, small homes, the hospital, the bank, the school, and offices. There was also a large two-storey building, housing on the ground floor, the Hudsons' Bay store and the post office and on the second floor the messhall.

It was more than a year since construction had started and at that time there was little sign of any actual plant construction. This, on consideration, was only natural, as the first essential was the welfare of about 1,000 workers and some families. There was no place for them to live.

The first crew of six carpenters and a cook worked on accommodation to house more men who would be coming in to build still more accommodation for still more men. It would be months before the plant itself could be started.

To cut down on the amount of housing required, a Sacramento River stern-wheeler, the Delta King, was towed up from California and on the April high tide in 1952, was beached at the west end of the Douglas Channel.

With gravel pushed up all around it, and with its own power system, it provided accommodation for 300 men, except for water and sewer connections. These were speedily hooked up and the situation eased immediately.

The Hudsons' Bay store was part of the Company's fur division and

was administered from Edmonton. Perhaps it was the last of the posts to be built in British Columbia.

The post office was a busy place. Mail came in by ship and plane, not always at regular times. There were no post office boxes and all mail had to be picked up. This resulted in long queues.

At the Bank of Montreal, which was the first bank in Kitimat, business was brisk and again on paydays long queues were normal. The majority of the men were in Kitimat without their families and thousands of dollars in money orders, etc. were purchased at the bank to send home. Banking hours were unusual - afternoons and evenings, to enable the men on shift to do their financial business.

By 1952 about one hundred small houses had been built on the hillside near the dock for the first families. A school was opened for the first pupils spread through in all grades. A staff of three teachers took care of their education.

A lone R.C.M.P. officer maintained law and order and shortly after my arrival, I was appointed Stipendiary Magistrate at Kitimat.

The future townsite lay north from the dock up the valley and across the Kitimat River. The six mile road link was hard to build. Forest had to be cut down and swamp and muskeg crossed, but that year it was completed past the gravel hill as far as the river bank.

Meanwhile, on the other side of the river the townsite was being cleared, and again a complete camp had to be constructed.

As the bridge was a long-term project, all the men employed on clearing the townsite lived on the far side of the river.

Men, materials, and equipment were taken across on a Yukon ferry, which is a large flat bottomed barge attached to a cable. The current on the river, which is very fast, supplied the force to take it backwards and forwards. Trips were made continuously during the day.

Some clearing was done by ball and chain in light timbered areas where the trees were thirty feet or more in height, but small in circumference. This method entailed the use of two tractors on parallel cables, 300 feet apart. Massive chains connected the tractors to a steel ball, which bowled the trees over like ten pins as the tractors moved forward.

The trees themselves were culled for valuable timber, and the discards were pushed into enormous piles and burned.



## CHAPTER NINETEEN

My quarters were in a small house with three bedrooms and a living room, which I shared with two other men on Alcan's staff. It was located across the main road and above the Alcan office and a small, well equipped, hospital which were situated on the shoreline. Scattered about the hillside were 90 odd very small homes. Also, in this area was a small company guest house and the R.C.M.P. office.

Later a more permanent Alcan construction office was completed further up the road, closer to the site of the plant. The old offices were turned into staff quarters. Our original houses were allotted to the office girls and school teachers and I must say we were sorry to leave them.

Married couples on the project were hospitable to those of us living in the staff house. It was pleasant to be invited out for a meal, always a change from the food supplied in the messhall, which was of the very choicest but lacking in the home-cooked touch. To repay hospitality, on occasions we helped out by baby sitting. It was a much more comfortable way of spending an evening as one could sit in an easy chair in pleasant surroundings instead of lying in one's bed to read.

I looked forward to these breaks, but one time an awkward situation arose and I don't know to this day what the ~~mother~~ mother of the



children thought happened that night. I was in my room when the phone rang. On the other end was a friend's voice. He wanted to know if I was busy. I said no.

Could I come up and sit for awhile as he had been called out on an emergency? His wife, whom I had never met, was a doctor on the medical staff at the hospital. She was in the operating room and could not be reached.

I said I would be up immediately and dashed off. On arrival, I was informed hurriedly a small boy was sound asleep and the very young baby would not stir. Off the father went and I settled down in a chair with a good book.

About twenty minutes went by. All was quiet. Suddenly screams came from the baby's room. I dashed in. The child was in her crib standing up and yelling at the top of her voice. I turned on the light and the cries stopped and she smiled at me. Not having any experience with children, I smiled at her, put her down, and covered her up. Turning out the light I closed the door and headed back to my chair.

More screams.

Opening the door again, I was greeted again with a smile. This went on for sometime. Checking to see if by any chance there was a pin causing the trouble and finding nothing, I decided I would let the screams continue and hope for the best.

The phone rang and against a background of screams, I answered it.

It was the mother, asking anxiously for her husband. I explained that he had been called out and had asked me to baby sit. I gave my name, the baby's screams still sounding off stage, but we were no longer connected.

In a few minutes, seconds it seemed to me, I heard a car outside the door. The door opened and in rushed the mother.

Not a sound in the house. The baby, still with a smile, blissfully asleep.

I stayed a short while and then made my departure.

One of these days I am going to ask the mother if, by anychance, she thought I had been sticking pins in her child. The baby might have had the sense to have gone on screaming after her mother arrived!

Bridge was a favorite pastime in camp and one bridge game I will never forget terminated in an unusual way. Four of us were having a stag evening and had been playing for some time. We had all had a few drinks, but no-one had had too much. About midnight an interesting hand was dealt and the bidding reached four spades.

This called for some consideration and consequently no-one was too concerned at the delay of the next bidder. He might be considering

a double, or a further bid.

We waited. The bidder sat in his chair upright, looking at his cards fanned out in his hand, but no sound.

After a further delay, someone spoke: "Your bid."

No answer.

We looked closely at him. His eyes were wide open, his cards spread firmly in his hand, but he was out cold. The game ended. We forcefully removed the cards and put him to bed.