SON of the NORTH

Charles Camsell

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CHARLES CAMSELL, C.M.G., LL.D., F.R.S.C.

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Ottawa, May 12th, 1954.

Dr. Charles Camsell was born in the Northwest Territories and he spent his adult life in the North until he became Canada's Deputy Minister of Mines in 1920.

The North has always been Canada's frontier, but, in the north, exploitation and settlement did not follow discovery and exploration until the gold rush to the Klondike in 1898. That was at the beginning of Dr. Camsell's working life and it is not too much to say he had direct personal knowledge of every important development in Northern Canada in the twentieth century. For nearly thirty years, as a senior public servant, Dr. Camsell had a large share in fostering that development and guiding its course. No Canadian is better equipped to recount and interpret the story of the Canadian North in our time.

It is a joy to me, therefore, that this distinguished servant of our country has let his friends persuade him that his own story of the opening up of the North is a part of our history and therefore belongs to Canada. It is an honour to commend Dr. Camsell's story to our fellow Canadians.

Louis S. St. Laurent

PURPOSE AND ACKNOWLEDGMENTS

I had two objects in mind when I undertook the writing of this book. First of all, after forty-five years of an active life in the Public Service of Canada I approached retirement at the age of seventy with a considerable amount of apprehension at the possible effect of having nothing particular to do. I had seen so many of my colleagues in the Public Service last only a couple of years after retirement when, through sheer boredom and lack of even a hobby, they found that life had lost its zest and was hardly worth living. I wanted to avoid having the same fate befall me.

The other purpose was to leave for my children and grandchildren a record of a kind of life they knew nothing about and would have no opportunity of experiencing.

The writing provided me with a lot of enjoyment. However, as things turned out I need have had no fear of boredom. Indeed, so many opportunities for useful work cropped up during my retirement that the completion of these memoirs has been greatly delayed.

For the story of my early life I am dependent largely on my memory, but a memory refreshed by later visits to the scenes of my childhood and of my school and college days. For my later life I had much more satisfactory aids to memory. I had, fortunately, the use of my brother Fred's diary, which he kept from September, 1897, when we started up the Liard River on the way to the Klondike gold fields, right through our life in the Cassiar country until our return to Mackenzie River in September, 1899.

For the period from 1900 up to the time I became Deputy Minister of Mines in 1920 I had the benefit of Geological Survey note books, Dr. Mackintosh Bell's and my own. From there on I lived a different kind of life from that which is the main concern of this book.

Geological note books, however, while useful to a degree are a disappointing source for material of human interest. They contain primarily observations of scientific nature which have no place in the kind of book I set out to write.

I am indebted to a great many friends for help on the preparation of the manuscript and the selection of the illustrations. Clifford Wilson of the Hudson's Bay Company provided a number of photographs from the extensive library of the Company. My sister, Mrs. J. W. Mills, whose husband took hundreds of photographs of the north country, gave me the opportunity of selecting a number of photos from his collection. Ernest Lamarque of Vancouver, B.C., sent me a couple of sketches of scenes of particular interest on the Mackenzie and Liard Rivers which he made

himself shortly after I was at these same points. My deepest indebtedness, however, goes to I. Norman Smith, Grant Dexter, Canon B. Heency, Hon. J. W. Pickersgill and Senator T. A. Crerar for helpful criticism and encouragement. Without their prompting I might never have gone so far as to think of publication. I am also deeply grateful to the Prime Minister Rt. Hon. Louis St. Laurent for identifying himself with this work by writing in such generous terms the foreword to it.

C. C.

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1 Northern Background

The Mackenzie District of the Northwest Territories was transferred along with the rest of Rupert's Land from the Hudson's Bay Company to Canada in 1870. The Government of Canada made very little effort to exercise sovereignty or to organize the district for administrative purposes until years after I appeared on the scene. Over a vast territory which extended from latitude 60° to the islands of the Arctic and from Alaska eastward towards the shores of Hudson Bay, more than a million square miles in extent, there were at the time of my birth no civil servants, no police, no military force, no schools or medical service, and only a few score of white people, chiefly officers and servants of the Hudson's Bay Company, and a few missionaries, Anglican and Roman Catholic. These were concentrated in small groups at trading Posts separated by hundreds of miles of trackless wilderness. Law and order were maintained by the Hudson's Bay Company, based upon the prestige of the Company and the character of its officers. There was no government mail service, and no one paid any taxes. The Indian population was small, widely scattered, peaceful and docile. Only the Eskimo presented any problem. The complexities of present-day government were unknown.

In the year 1876, it would have been difficult to find a more inaccessible or isolated habitation in the whole North American Continent than the little fur trading Post of Fort Liard, situated on the south bank of Liard River near the point where the boundaries of British Columbia, Northwest Territories and Yukon Territory now meet.

I have always been inclined to be a bit boastful at having been born at Fort Liard, not because of its remoteness, but because I never knew anyone who enjoyed that distinction other than certain members of my own family. There were eleven children in our family. All except one were born in the north country, at Fort Nelson, Fort Liard or Fort Simpson. None of us had the benefit of expert medical attention, because the nearest doctor was 2,000 miles away and it would have taken six months to go and get him. There were no roads, no steamboats on the rivers, no railways and no airplanes. Mail, carried by the Hudson's Bay Company, only reached us twice a year, and other supplies once a year.

I am often asked how I came to be born in such a remote locality. The answer is that my father was an officer in the Hudson's Bay Company who lived in the Mackenzie River country from 1859 to 1900, forty-one years in all. He was an Englishman, born in Ceylon and educated for the Army at Woolwich. He was given his commission as an ensign in 1855 at the age of seventeen in the Royal Canadian Rifles, and as a lieutenant in the same unit in 1858. He was stationed at St. John's, Quebec, and Kingston, Ontario, for a couple of years, and it was from Kingston that he was sent in June, 1857, as second in command to Major George Seton, with a detachment of troops to Red River. The detachment consisted of 116 men and 14 women. It travelled by way of Hudson Straits to York Factory and thence by York boats to Fort Garry, arriving at that point in September, 1857.

The purpose of the expedition was to provide protection to the settlers in the Red River Valley from the dangers of a possible rising among the Indians, especially the Sioux, south of the border. There was also still some feeling between Great Britain and the United States over the Oregon boundary question, and particularly over the possession of San Juan Island. The anticipated rising did not materialize, and after four winters and three summers the detachment was ordered back to eastern Canada and returned the way it came.

My father, however, remained in the West. In June, 1858, he applied for leave to sell his commission, his reason being the difficulty of making ends meet on army pay. When this was granted in 1859, he entered the service of the Hudson's Bay Company. The record of this transaction, in the Public Archives, Ottawa, shows that he got 300 pounds for his commission.

His name at that time was Julian Stewart Onion, which however he changed for family reasons to Camsell, taking his mother's name, about the time I was born. He was at that time one of the few Englishmen in the service of the Hudson's Bay Company, the majority being Scotsmen.

On joining up he was immediately posted to the Mackenzie River district and sent to one of its most remote points to open a trading Post on Anderson River, northwest of Great Bear Lake. This Post had been in existence only a few years when it was destroyed by the Eskimos. It was never rebuilt.

His next Post was Fort Nelson, near the present airport of that name. His only companion at Fort Nelson was Rev. Father (later Archbishop) Grouard, and here began a friendship which lasted through the life terms of both men. It was at Fort Nelson he set up housekeeping, after being married at Fort Simpson to Sarah Foulds, the daughter of a Yorkshire man, Samuel Foulds, and his wife, Ann Calder, whose father came from the Orkney Islands. The two had met at Fort Garry.

His next move was to Fort Liard, where I was born. His last move was to Fort Simpson in 1882, where as Chief Factor he had charge of the whole Mackenzie River district. Here he not only represented the Hudson's Bay Company, but as Justice of the Peace he was the sole representative of the Government of Canada in that vast region of hundreds of thousands of square miles.

His duties involved a great deal of travelling, in winter by dogsled and in summer by canoe and York boat. His most remarkable journey was a snowshoe trip of about 2,500 miles in the winter of 1876-1877, which started at Fort Liard and ended at Crow Wing in the State of Minnesota, where he took the train to New York on his way to England. The famous explorer Robert Campbell had, twenty years before, made almost the same trip and taken eighty days to do it. Campbell in his diary states that his was the longest snowshoe tramp ever made. If that is so my father set a new record, for he had to go 180 miles farther.

It was for the purpose of having his name changed in London that he made this long trip. He started from Mackenzie River as Mr. Onion. He returned the following summer a Camsell. The summer route at that time was the usual one from Lake Superior by way of the Dawson trail to Fort Garry, and with the York boat brigade from there on by way of the Long Portage to Mackenzie River.

As his family grew up, my father faced the same problem that confronted every officer of the Hudson's Bay Company in the north country, namely the education of his children. Evidently he faced it head on, so that all his sons received an education at St. John's College in Winnipeg and his daughters at St. John's Ladies College or in England. How this expense was met I never knew. He retired from the service of the Hudson's Bay Company in 1900 and settled in Winnipeg, where he died in 1906.

The Hudson's Bay Company was already over two hundred years old when I was born. I was never an employee. It was incorporated in 1670, and up to 1870, when it sold out certain of its rights to the Government of Canada, it exercised overlordship over all of the territory west of Hudson's Bay, and even stretched its authority to the Pacific coast and up to the Arctic Ocean. Its officers therefore occupied very important positions in the administration of the country, and they were quite conscious of their responsibility in relation to the Crown. There has always been a question in my mind as to the right of King Charles II to assign half a continent, as yet unexplored, to a group of his subjects, with power to exercise sovereignty in his name over the territory and its people. But such things were commonly done by European monarchs in those days.

In spite of the adverse verdict of some writers, I have been convinced from a close-up view that the rule of the Hudson's Bay Company over the native people was, on the whole, a benevolent one. The last hundred years of its sway certainly justify that opinion. Before that time, and during the period of intense competition with the North West Company, there was room for criticism of some of the practices adopted. But in later years many of the abuses in the fur trade were due to small independent traders who were out to make a quick profit and then leave. The Hudson's Bay Company, which was in the business to stay, could not afford to do anything but deal fairly with the natives, but it had to take some of the mud that was slung by certain writers at the fur trade generally.

The long history and the traditions of the Hudson's Bay Company developed in its employees an intense loyalty. The commissioned officers, until 1887, were partners in the Company, and though there was not always harmony at the annual council meetings at Norway House, Fort Garry or elsewhere, they would not stand for any criticism or interference by an outsider. It was a sad blow to the prestige of the officers when in 1887, after several years of hard times during which the profits received by the "wintering partners" was small, they decided to go on a regular salary basis. The change was very destructive to morale, and it took a little time to recover.

The loyalty of the officers to the Company is an outstanding feature of its long history. It is illustrated by the case of Chief Factor Robert Campbell, who was dismissed from the Company's service when he disobeyed orders in order to save the furs that he had traded in from the danger of seizure. In his diary he commented: "No officer would take the smallest item for his private use without marking it against his own private account." He goes on to say that in fifty years he never saw any deviation from this rule except in the case of two officers. Then he adds quite frankly, "Neither one of them was a Scot."

These were the men who were responsible for law and order in the north country when I was a child, and it is worth noting that in the 180 years since the first fur trader went into the north country there was never at any time any unrest among its native people.

2 Life at Fort Liard

Fort Liard was one of the earliest posts established by the traders in the Mackenzie River region. Its founding date was 1805, and its builders were the explorers of the North West Company, the most aggressive competitor of the Hudson's Bay Company. The period at which this and other posts were established in the Mackenzie River region was one of intense and bitter rivalry between the older Hudson's Bay Company and the new North West Company. This rivalry often broke out into open warfare, but it was a source of great activity in the exploration of the Northwest. The North West Company was perhaps more enterprising than the Hudson's Bay Company, and its explorers included some of the most outstanding names in the Canadian history of this time. Such explorers as Mackenzie, Fraser, Pond and Thompson pushed far north and west into the unknown, and as the scouts of one company established trading posts here and there, they were leapfrogged by pioneers of the opposing company.

All of these outposts were more or less alike—a small cluster of log huts surrounded by a picket fence, situated in a clearing in the northern forest, usually at some strategic point or at a good fishing place on the river. All were on streams navigable for canoes, because the rivers were the highways and only in the winter time was travel customary or even possible over land.

Fort Liard, like all the early trading posts, was occupied in the first place only by the fur traders and their entourage of Indians or half-breed servants, from four to a dozen people in all. Later came the missionaries, and later still, long after my time, the Mounted Police.

I lived at Fort Liard until I was six years old. My family and the missionary were the only white people in the place; the rest were Indians or half-breeds, employees of the Company. The total population might have been twelve or fifteen persons.

Our nearest neighbours were at Fort Simpson, 180 miles down river to the northeast, and at Fort Nelson, almost as far away up river to the south. In all other directions we were surrounded by hundreds of miles of almost impenetrable northern forest, in which there were only a few roving bands of Indians who came into the post only three or four times a year to

exchange their furs for necessary supplies of tea, tobacco and hunting and trapping equipment.

In York boat days our own supplies, very limited in quantity and diversity, came in once a year, and had to be requisitioned the previous year. Our needs, therefore, had to be anticipated by a year and sometimes longer. The Post Manager was allowed little in the way of imported food: 100 pounds of flour, 20 pounds of sugar and 20 pounds of tea were the main items, and these had to do for the whole year irrespective of the size of his family. The balance of his food supply he was expected to get off the country, mainly fish, rabbits, moose or caribou meat and wild fowl.

Some garden stuff was raised at practically all the Posts of Mackenzie River district except Fort Rae and Fort Macpherson. At Fort Rae there was no soil and all the houses were built on bare rock. At Fort Macpherson the permanently frozen ground did not thaw out more than a few inches, and nobody thought it possible to raise vegetables, though this idea has since been proved quite wrong. Fort Liard, however, had the finest climate and the longest frost-free season of any place in the whole Mackenzie River district. Consequently its gardens produced a great variety of vegetables and in its fields were grown wheat, oats and barley. Its wheat crop was not used entirely for flour; one of the Post employees, who happened to be a Scot, used to add a little interest to life by making whiskey from his wheat. When this practice came to the attention of the authorities in Winnipeg, he was ordered to get rid of his equipment by throwing it into the river. He obediently complied with the order, but he took the precaution to have a rope attached to the equipment, and after he had carried out the instructions, he pulled his equipment in and proceeded to put it to its former useful purpose.

Mail came in twice a year, once in summer with the York boat brigade which brought in the supplies for the trade, and once in the winter with dog teams which carried letters only. The “winter packet,” as it was called, left Fort Garry early in the winter. It called at Posts along its route in the Saskatchewan, Athabasca and Mackenzie districts, and reached Fort Liard about the end of March or the beginning of April. The terminus of this winter mail packet was Fort Macpherson, at the head of the delta of Mackenzie River. The much publicized Pony Express that ran from St. Louis to San Francisco during the gold boom in California was a remarkable undertaking, but it was no more remarkable as a feat of human endurance, or of organization, than the winter packet which ran year after year from Fort Garry to Fort Macpherson, a distance of about 3,000 miles. Neither was it comparable in length of run, nor in the severity of the climatic conditions

that had to be faced. The chief difference was that the Mackenzie River packet had no bandits to contend with.

Fort Liard has changed hardly at all in the last seventy years, and has grown only a little in population. I have visited it only three times since I first left it. My first visit was in October, 1897, when I passed there on the way to the Klondike gold fields by the Liard River route. I passed there again two years later on my return to Mackenzie River by canoe, disillusioned, but not defeated, and attracted by another mining boom. My fortune had not been made, but I was far richer in experience and in a knowledge of the rougher side of life.

My last visit was in 1935, when I had flown across the mountains from the Pacific coast by way of Dease Lake and the so-called "Tropical Valley." The small clearing with its log houses, seen from the air, like a tiny scar in the interminable forest, was a very welcome sight. It was a real homecoming, for it was the end of a somewhat critical first flight across several hundred miles of unexplored mountains and we were nearly out of gasoline. The house that I was born in was still standing and occupied, but there was also a Mounted Police station, an independent trader, the Roman Catholic mission and a few Indian houses. The outward appearance of the Post is much the same today, but there is a vast difference not visible to the casual observer. Now the news of the world comes (by radio) all day and every day, and not twice a year only. Airplanes are constantly in the sky, passing to or from Nelson airport to Fort Simpson, and the river carries steamboats and other craft throughout the summer from Nelson to Simpson. The romance of the old place is gone. *Sic gloria transit mundi*.

While there were many occasions throughout the winter for fun and pleasure at Fort Liard, as at all other northern Posts, all welcomed the day when it could be definitely said that spring had arrived.

Only one who has lived through the long cold winter of the far North can really appreciate the meaning of spring; not only the feel of it, but the smell of it, and the sound of it. After an interval of half a century, the memories of spring are the most vivid of all my northern experiences. To pass from winter to spring in the North country is like entering a new world and a renewal of one's youth. So it was that, at every trading Post from the Saskatchewan River to the Arctic Ocean, the Post's journal recorded first of all the arrival of the first goose and, second, the break-up of the river. These were the highlights of the year, marking the transition from winter to summer.

In my childhood days, life at Fort Liard or Fort Simpson as at every other northern trading Post, was simple but, as I recall it, not unpleasant. Certainly there was lots to do, and we made our own fun. Spring and fall

were the busy seasons. In the springtime, gardens had to be planted and boats built and repaired for the long trip to the Long Portage, 1,000 miles away to the south. Spring also was the time for making syrup from the birch trees and soap from wood ashes and grease.

In the fall, fuel and fish and other food had to be put up for winter, and snowshoes, toboggans and other winter gear overhauled.

Summer, for those who remained at home and did not make the trip to the Long Portage, was the season of relaxation and enjoyment. Winter, on the other hand, even in spite of the short days and intense cold, was a period of great activity. It was the period when everyone's efforts were directed towards the purposes for which the fur traders came, namely, the trapping and trading of furs. Everyone at the Post had a line of traps or rabbit snares which he visited once a week, taking all day to make the round. Indoors there were games of cards, checkers or chess, and on special occasions a dance.

Fort Simpson, because it was the Hudson's Bay Company's headquarters for the whole Mackenzie River district was somewhat different from all the other Posts and enjoyed certain distinctions of its own. The Post was beautifully situated on an island at the junction of the Mackenzie and the Liard Rivers and was first known as the Forks of the Mackenzie. It faced on Mackenzie River which here flowed by in a smooth stream almost exactly a mile wide. The view up stream was a magnificent one, perhaps the best on the whole river. One could follow the river in this direction with the eye for many miles until water and land seemed to merge together in the distant horizon.

The buildings of the fort were laid out in a square with the open side facing on the river. The square was at one time enclosed by a palisade of stakes. In the centre of the square was the office building, the nerve centre of the whole administration, in which my father and his headquarters staff were housed. In front of this building was a tall flag staff on which the Union Jack with the insignia of the Hudson's Bay Company was flown. Alongside was the customary sun dial, the face of which was made from the lead lining of tea chests.

There were five great buildings around the square, all about the same size, two on each side and one at the back. The first one on the left was a store house, the upstairs of which in my time was used as a museum of stuffed animals and birds mounted by Captain Bell of the steamer *Wrigley*. The next building was a provision house for storing bales of dried meat and fish. Behind this building and close against it was an enclosure surrounded by a high picket fence, where in the fall were hung thousands of "sticks" of frozen white fish to be used throughout the winter for *human* consumption

as well as dog feed. It was to this building that the engaged servants of the Company came at the call of a bell, rung every evening at five o'clock, to get their daily rations of dried meat or fish, all of which was weighed out on a huge set of old-fashioned balances.

The building across the back of the square was a warehouse in which was stored the surplus stock of trading goods brought in by the York boats. The rear building on the right was the sales shop, which provided some space for visiting Indians but was used mainly for fur trading. This was my brother Fred's domain, and here all the haggling about the quality of the furs and the price to be paid for them in "skins" was done. A "skin" was the unit of value all over the north.

The front building on this side of the square was the "Big House," the residence of all the senior officers and their families. It was a two storey structure, built like all the rest of them of huge squared logs. A veranda ran across the front and was reached by an outside stairs. The building contained twenty rooms. Downstairs at each end there was a suite of two bedrooms and a sitting room. In the centre was the great dining hall in which the whole staff sat down to meals, and which was also used for dances and receptions. From this a hall led off past the pantries to two kitchens at the back. One of these kitchens was equipped with a wood-burning range. The other had only an open fire place and was for the use of visiting Indians who knew nothing of kitchen ranges and roasting ovens and were accustomed to cook their meals before an open fire. Upstairs there were ten rooms, including a billiard room and a recreation sitting room where most of the people gathered to spend the winter evenings playing cards, chess, checkers or billiards. Another room was the library and another the ivory room which had a collection of fossil tusks, bones and teeth of the mammoth. The remaining rooms were used as bedrooms by officers of the steamer when home for the winter.

There was, of course, no central heating in the building, but there were huge box stoves in the larger rooms and smaller stoves everywhere else. Johnny Berens and his kitchen staff kept the fires going and the wood-boxes full. They also provided all the other services, including the cooking and serving of meals in the mess hall. Meals were simple but generous, and consisted largely of fish and game, dried venison in the summer and fresh moose or caribou meat in the winter, with always plenty of home-grown vegetables. Altogether the quarters were quite comfortable and pleasant, and I do not recall that anyone ever complained of hardship or loneliness.

Outside the fort were a few scattered log huts occupied by the half breed and Indian servants of the Company. At the north end of the settlement was

the Anglican mission with its church and mission house, and to the south was the Roman Catholic mission.

Such was the small settlement of Fort Simpson. It was a world in itself, a few acres of cleared land, a few people huddled together in a few houses, a small, very small, segment of civilization surrounded by the endless northern forest and completely isolated from the rest of the world.

Fort Simpson, because it was the Hudson's Bay Company's headquarters, enjoyed two distinctions. One of these was its library. Many a traveller making the trip down Mackenzie River has remarked about this library and wondered about its origin. It filled a room, just off the billiard room, in the second storey of the big house, and included some hundreds of volumes. The books were all well bound, some of them in leather, and represented a great variety of reading matter, mainly of a philosophical, classical, biographical or similar character. Only a few were in the category of "light literature."

The collection of this library was largely the work of my father during his eighteen years of life at Simpson. Contributions to it were, however, made by most of the officers of Mackenzie River district; some books were donated by outsiders. It was a circulating library, and each officer in charge of a Post was provided in the fall with a selection of books for his winter reading, to be returned the following spring. What the library meant to men living alone at remote and isolated Posts can hardly be imagined. The journals of these Posts reveal stories of discussions that took place as a result of the reading of these books. The library embraced practically all that is contained in Eliot's "five foot shelf," and a great deal more. It undoubtedly added much to the culture and enjoyment of the men of Mackenzie River.

In addition to these facilities, Fort Simpson enjoyed the luxury of a billiard table, parts for which were imported at great labour and cost by my father from England. The table is still there in the Post Manager's house. It was a tremendous undertaking to bring those parts of the table that had to be imported to Fort Simpson, and it was two years from the time they were requisitioned until they were unloaded at the Post. I remember one winter when new balls did not arrive with the year's outfit and the attempt was made by the steamboat engineers to turn balls on a lathe out of mammoth ivory some hundreds or thousands of years old. It was then I first learned of the hell of elliptical billiard balls. This ivory in the form of tusks could be found here and there over the north country and there was one room in our house full of the tusks as well as bones of the mammoth.

While there was a definite daily and annual routine to life at the trading Post, there were certain events which stood out in high relief. I have already

mentioned two—the arrival of the first goose in the spring, followed very closely by the break-up of the river. Then there was the departure of the York boat brigade for the Long Portage early in June; then the long, warm lazy summer with its fishing and berry picking trips and its picnics, followed by the return of the York boats in the fall with the year's supplies. Next came the fall duck hunt and the fishery, when fish in thousands were caught at the outlet of Great Slave Lake and put up for the winter at the various Posts. Then came the freeze-up and the approach of winter.

The red letter days of the winter were the date when the days began to lengthen, New Year's Day, and the day when the winter packet arrived from the south. All events were related to these dates. New Year's Day at Fort Simpson, for example, was a gala occasion. It was the same at all Posts, whether in Mackenzie River district or James Bay or anywhere in the Company's territory. For some days before, the Indians with their families and their dogs would begin to wander in from their trapping grounds. Some of them would arrive the day before Christmas in order to participate in the religious ceremonies. Most of them would have travelled two, three or four days' journey, bringing all their families and belongings with them. They were put up in houses belonging to the Company or to the Missions. There was no other accommodation, and the living space soon became very congested. The housing shortage was very real, but in those days it wasn't identified as such.

Early on the morning of January 1st, the white people of the Post would be awakened long before daylight by the sound of Indian gun shots which grew to a succession of volleys that only ceased when the "Big Master" made his appearance and acknowledged the salute. Then the Indians were invited into the "Big House," and when they were all seated on the floor they were served with sweetened tea and bannock. After they had eaten all they could get, they were given some black twist tobacco, a full pound to each chief and a lesser quantity to the rest, both men and women.

When they had exhausted the hospitality of the Post Manager, they would proceed to call on the Missions where the same performance, only a little less lavishly, would be repeated.

In the afternoon there was always a dog race over a course a couple of miles in length. All the employees of the Company, from the officer in charge down to the engaged servants, each with his team of dogs gaily decorated with bells and tassels, participated in this event.

In the evening there was a grand full-dress ball to which everyone white and Indian, was invited. This was the big social event of the year, and everyone was dressed in his or her best. Everyone wore moose-hide moccasins and it was a mark of social distinction when these were

ornamented with fancywork of coloured beads or dyed porcupine quills. The moccasins, more than any other article of apparel, indicated whether or not a person was well dressed, and his social standing. Music was provided by two fiddlers, who played entirely by ear and marked the time with a beat of their feet. The dances were the old-fashioned square dances, such as were danced by the Scottish settlers of the Red River: the Reel of Eight, Reel of Four, the Red River jig, Drops of Brandy and the Rabbit Dance, all requiring pretty expert and rapid footwork.

At midnight supper, consisting of tea and small biscuits was brought on. After this the white people generally retired. The Indians, however, carried on, and it was usually well on towards daylight before they were ready to quit.

3 1,500 Miles To School

The problem of the education of children born in the north country was always a serious one. It still is. In my youth there were no established schools, and the only educational facilities were those provided by the missionaries, who were few in number and not equipped for secular teaching. Most children had to be taught by their parents. To get a regular school or college education involved very heavy expense, for it meant complete separation from home for years until the period of education was over. It involved also very heavy sacrifice on the part of the parents who had to part with their children at a very early age. Most of the children of the North who were sent away for education went to Winnipeg. Some of them were sent to schools in England and Scotland. My own case was typical, I left home when I was eight years of age and did not return until I had passed eighteen. Even the summer holidays were not long enough to permit my going home, for it took all summer to go one way. Consequently, when the school term was over, I lived with friends or relatives until school opened again.

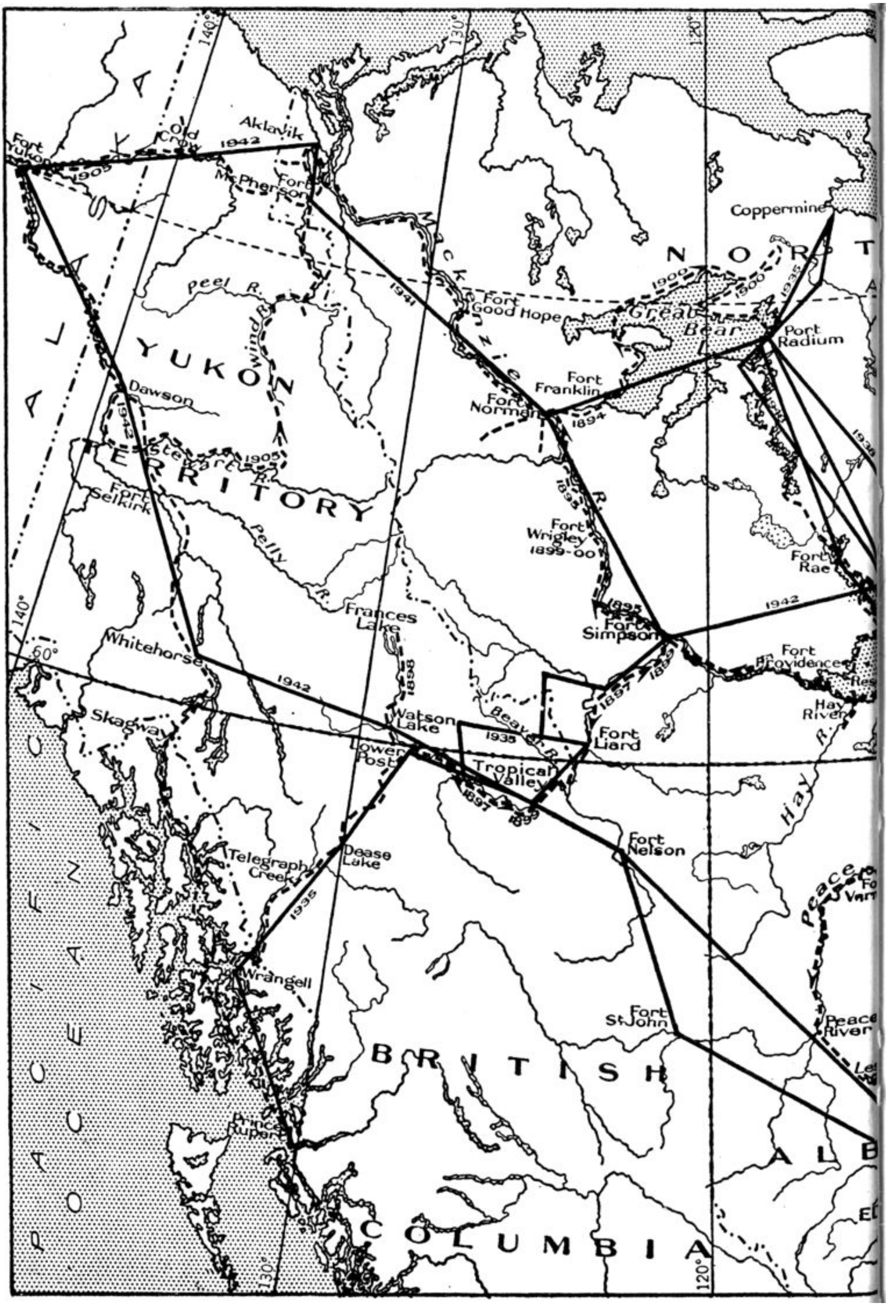
Up to the time I was eight years of age, my book learning was obtained either at home or from that saintly old missionary, Bishop Bompas, who has since become known as The Apostle of the North. Bishop Bompas was not a university man, yet he was highly educated and had an extraordinary linguistic capacity. It was said that he could speak or read seven languages. He was responsible for translating many of the books of the Bible and the prayer book into the languages of the northern Indians. However, he did not have much time for teaching school, because he was constantly on the move from one place to another. In the course of his forty years in the north country he must have travelled many thousands of miles, on snowshoes in the winter and by canoe in summer. He left the north country only twice in that time. He never forgot that his main purpose was to bring Christianity as quickly as possible to the natives of the northwestern part of this continent. He was not a big man nor a strong one. In fact he was considered in his youth to be a delicate child and could not indulge in outdoor games, but the spirit that drove him was irresistible and would not let him rest. Frequently in his travels he accomplished what his companions considered to be

impossible, when they were ready to give up. I remember him as a very gentle person who used a handkerchief instead of a dog whip to spur on his sled dogs. He wouldn't think of setting a trap to catch the mouse that was nibbling at his limited supply of provisions. He considered that the mouse had as much right to life as anyone else.

The last time I saw the Bishop was in 1906 in Vancouver, when he preached in Christ Church there. At that time he was the senior Bishop of the diocese of Rupert's Land and was on his way to Winnipeg to preside at a meeting of the Synod. He appeared nervous and out of place preaching to a large white congregation, and was not happy until he was on his way back to his own people in the Yukon. He died at Carcross, Y.T., shortly afterwards.

My family had moved from Fort Liard to Fort Simpson in 1882, when my father took charge of the whole Mackenzie River district, so it was from Fort Simpson that we started in June 1884, to make the long journey to Winnipeg. In the party, besides my father and mother, were five children, of whom I was the eldest. My father was making one of his periodic trips to England and my mother was going out after nearly fourteen years in the North. Three of my brothers and one sister had left home for school two years before my time came in the spring of 1884. The three brothers were at St. John's College, Winnipeg, and I was to join them there. My elder sister Louisa, had gone to school in England.

By the 10th of June, the boats which constituted the York boat brigade had gathered at Fort Simpson and were ready to make the trip to Portage la Loche or, as it was more commonly known, the Long Portage. This was a portage at the head of Clearwater River twelve miles in length which separated the waters flowing to the Arctic Ocean by way of the Mackenzie from those flowing to Hudson Bay by way of the Churchill River. Here we were to meet the brigade from Norway House. Our brigade carried south the furs traded the previous winter in the Athabasca and Mackenzie district, while the southern brigade carried northward the trading goods and other supplies. An exchange of cargoes was made at the Long Portage.



ALASKA
YUKON TERRITORY
NORT
BRITISH COLUMBIA
PACIFIC OCEAN
ALB
Fort Yukon
Old Crow
Aklavik
Fort McPherson
Peel R.
Wind R.
Mackenzie R.
Fort Good Hope
Great Bear L.
Coppermine
Port Radium
Fort Franklin
Fort Norman
Dawson
Stewart R.
Fort Selkirk
Pelly R.
Fort Wrigley
1899-00
Fort Rae
Fort Simpson
Fort Providence
Hay River
Frances Lake
Whitehorse
Skagway
Watson Lake
Lower Post
Beaver R.
Fort Liard
Tropical Valley
Fort Nelson
Hay R.
Telegraph Creek
Dease Lake
Peace R.
Wrangell
Fort St. John
Peace River
Prince Rupert
1942
1905
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60°
120°
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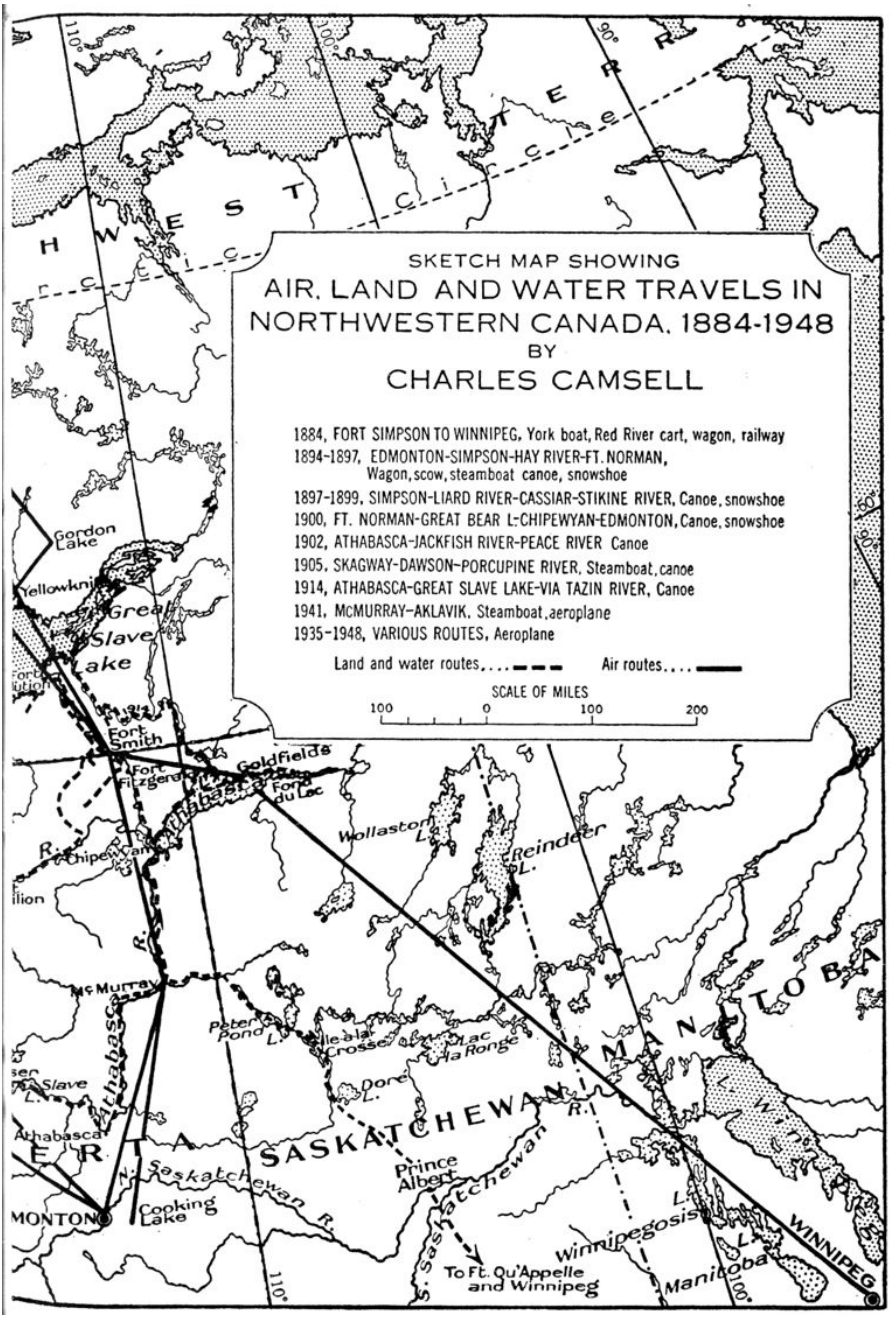


SKETCH MAP SHOWING AIR, LAND AND WATER TRAVELS IN NORTHWESTERN CANADA, 1884-1948 BY CHARLES CAMSELL

Mackenzie River at Simpson breaks up early in May through the force of Liard River. It is, however, two weeks or so before the Mackenzie between Simpson and Great Slave Lake breaks, and it is usually the last half of June before boats can cross Great Slave Lake. The departure of the brigade from Simpson was timed to reach Great Slave Lake about June 20th, when normally the ice in the western arm of the lake would have disappeared.

When we left Fort Simpson about the 10th of June, our brigade consisted of half a dozen York boats each manned by a crew of ten half-breed and Indian voyageurs. As we travelled southward the number of boats was increased by additional ones from the Posts we passed on the way, until the brigade constituted quite an imposing fleet.

The York boat was introduced into the fur trade following the passing of the freight canoe and before the coming of the steamboat. It was a wooden craft pointed at both ends and capable of carrying about five or six tons made up of packages of about a hundred pounds in weight. On the rivers it was towed with a line by the crew walking on the shore. On the lakes it was propelled by sixteen-foot oars, or by a sail stepped in the centre of the boat. Our family occupied a platform at the back, also used by the steersman. In wet weather a tarpaulin was spread over this space, for we travelled whether the weather was fair or foul.

In June and July the days were long and we travelled from daylight to dark, in the early summer as much as sixteen hours. Each night we camped on the beach, usually without shelter except that of a mosquito net. At the first streak of dawn we were aroused by the captain of the brigade with his call of “Leve, Leve” and in a very short time the brigade was again under way. While travelling we had four meals a day.

The route from Fort Simpson followed the Mackenzie two hundred miles to Great Slave Lake and across one hundred miles of its stormy waters to the mouth of Slave River, passing Fort Providence, Hay River and Fort Resolution on the way. Then 180 miles up the winding, muddy Slave River to the foot of the rapids at Fort Smith. Here there was some delay while the boats were unloaded and the cargo transported across the portage.

The portage above Fort Smith is necessary because at this point the Slave River cuts across a ridge of hard granite rocks, making a series of rapids and falls which are not navigable by any kind of boat.

The total fall in sixteen miles of river is over one hundred feet, and some day these rapids will be harnessed in order to provide power to run industries that are bound to be developed in the north.

The sixteen-mile portage in 1884 was nothing but a narrow cart trail which wound over a sandy, forested plain and across swamps and muskegs. This was our first experience of the noisy Red River cart which, when

assembled in a convoy of a dozen or more vehicles, could be heard for miles. It took a full day to make the crossing.

I remember crossing the portage in style on the back of a pony clutching my father's belt as he rode in front of me. I remember also the number and size of the mosquitoes, and the bulldog flies for which the portage has always been notorious. The rest of the family crossed the portage in Red River carts drawn by oxen. Freight and baggage also were taken across the sixteen miles in these carts.

At the southern end of the portage was Grahame's Landing, now Fitzgerald, where we boarded a stern-wheeled steamboat built only a year or two before. For a week or more, while we chugged up the Slave and Athabasca Rivers to McMurray, we enjoyed the luxury of a comfortable and sheltered place to sleep and of meals while on the move. The steamboat *Grahame* was the first of its kind on Mackenzie waters. It was a fearsome thing to the natives, who referred to it as the "fire boat" and fled to the bush as soon as it appeared on the river.

The end of the steamboat run was the trading Post of McMurray at the mouth of Clearwater River, at that time a collection of half a dozen log huts, now of course the northern terminus of the Northern Alberta railway system. Here we changed again to York boats for the voyage up the Clearwater to the Long Portage.

The journey up the Clearwater River was routine except for the portage at Whitemud Rapids, but the arrival at the Long Portage was an event of vast importance, and the occasion one for congratulation especially for those voyageurs who came from far down the Mackenzie. Those who were making the trip for the first time had talked about the Long Portage all summer long, and on their return to their homes they would continue to boast about their accomplishments in making the journey. To these voyageurs a young man was only supposed to reach maturity when he had made the journey to and from the Long Portage and, in the earlier days, had carried his packs across its twelve miles of length. To them it was the big event of the year, for here they were to meet and compete in exhibitions of strength and endurance with men who came from the south and east—Fort Garry, Norway House and even York Factory on Hudson Bay.

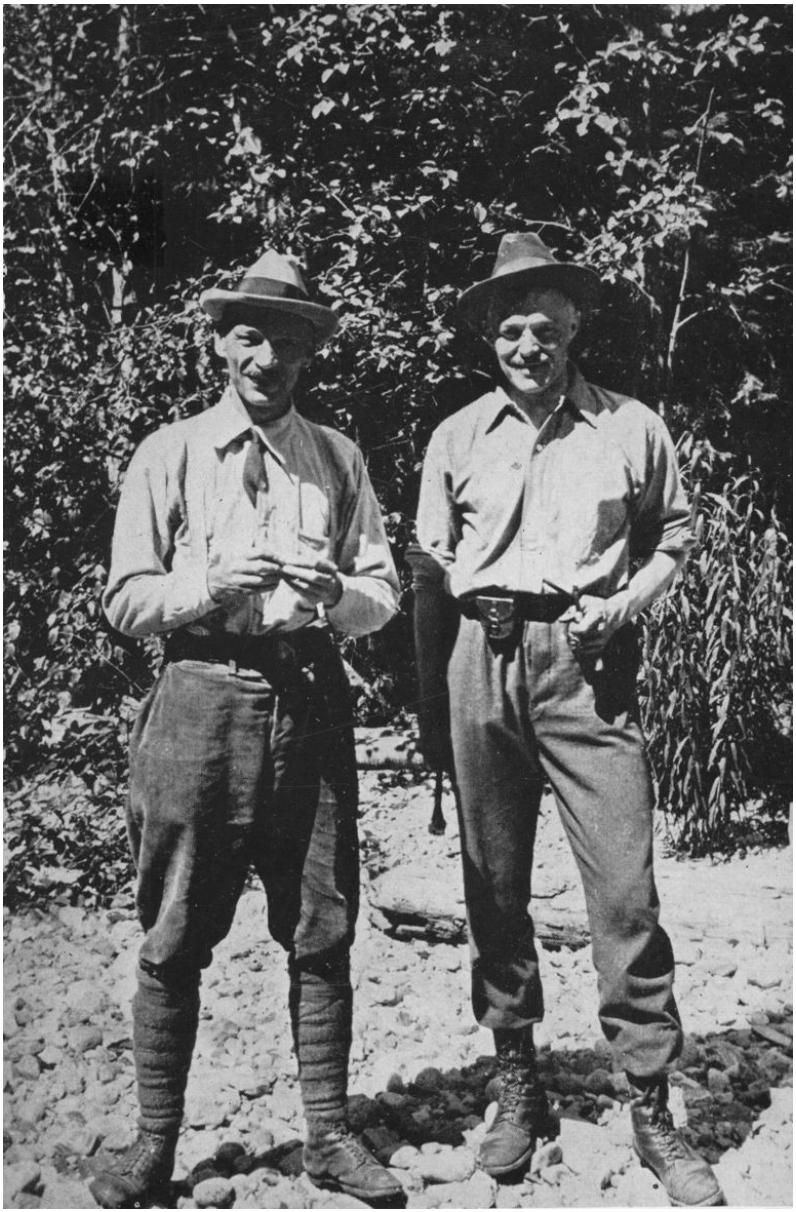
When we crossed the Long Portage in 1884 we travelled in ox carts, but this was only a recent innovation in transport. It was only a short time before that the footpath had been converted to a cart trail; previously everything that went over the portage had to be carried on the men's backs, two hundred pounds to the load. Two packs of furs were carried across going south and the return made with a load of trading goods. It was a man's job and the man who did it had reason to boast that he had reached man's estate.

The Long Portage had been used by the voyageurs of the trading companies for over a hundred years, and it was now shortly to be abandoned as the main entry to the north for a route which left Edmonton by wagon road for Athabasca and followed the Athabasca River to its mouth, joining the old route at McMurray.

York boats carried us from the Long Portage across Lac la Loche and Buffalo Lake, now called Peter Pond Lake, to the Post on Lake Ile à la Crosse, where we rested for a few days before proceeding up the Beaver River to Green Lake.

By the time we reached Green Lake Post, we had been on our way for over two months and our travels by boat had come to an end. As I remember the boat trip, it was a very thrilling voyage for a small boy, and full of change and excitement. I have often thought, however, that in my mother's long, active and eventful life one of her greatest accomplishments must have been the care and handling of those five small children on the long journey from Fort Simpson to Winnipeg. Without proper accommodation, little shelter, if any, sleeping each night on the beach, it was really a formidable task.

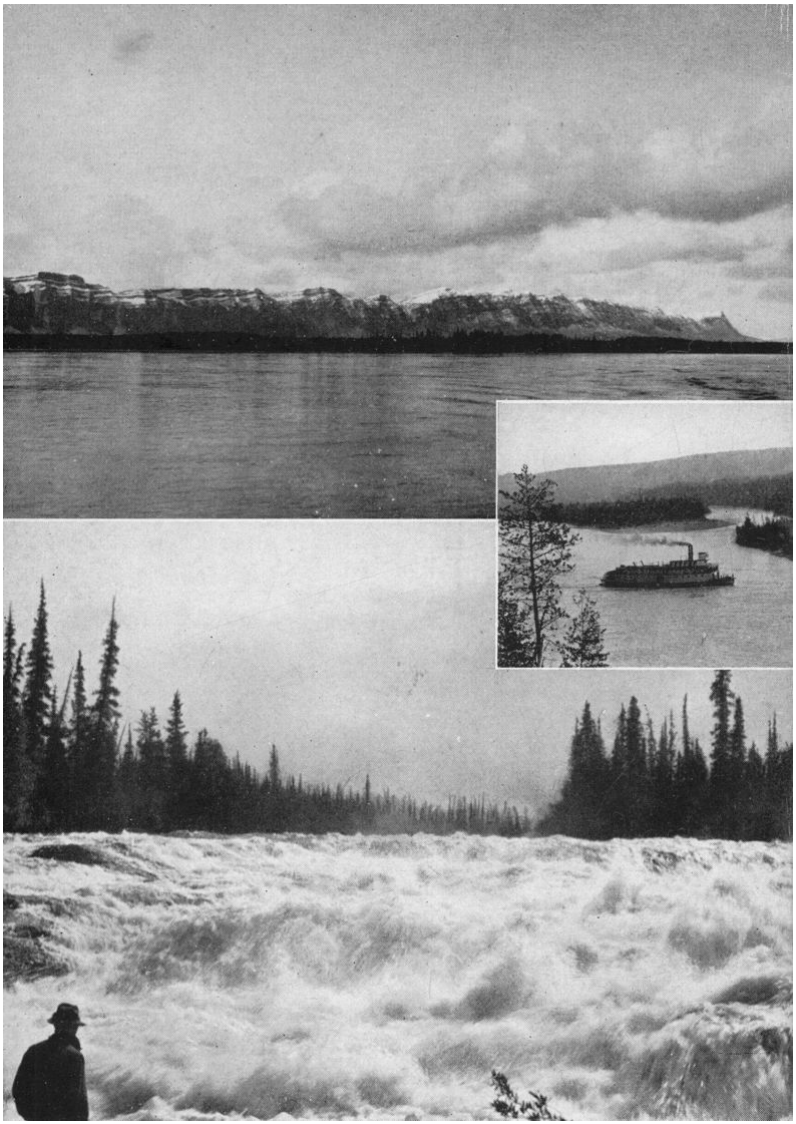
From Green Lake to Prince Albert we travelled over a newly cut bush trail with a train of Red River carts drawn by oxen. Of this part of the journey I remember very little, but I do recall quite clearly our arrival in Prince Albert where we rested for some days under the hospitable roof of my godfather Lawrence Clark, Chief Factor of the district.



Charles Camsell and A. G. Langley, about 1910, examining platinum deposits in southern B.C.

Prince Albert in 1884, just before the outbreak of the North West Rebellion, was an active, thriving town, the biggest I had ever seen, with perhaps 400 or 500 people. The whole of the town seemed to be

concentrated in one street running parallel to the river. It was an important place because it was situated on both water and overland routes and because it was the headquarters of one of the important districts of the Hudson's Bay Company.



The Camsell Range, Mackenzie River, N.W.T.
S.S. *D. A. Thomas* on the Peace River. (*Inset*)
Whiteagle Falls, Camsell River, N.W.T.

It must have been nearly the end of August when we arrived at Prince Albert. There was uneasiness among the people because of the unrest among the Indians. Outbreak of the second Riel Rebellion came only a few months later.

Our route from Prince Albert lay southward across the plains to Fort Qu'Appelle, but it was decided that we should not follow the usual trail by way of Fort Carlton because that route would take us into country which was about ready to burst into rebellion. So with a couple of horse wagons and a democrat we set out for Fort Qu'Appelle by way of Humboldt and Touchwood Hills, the only settlements on the way.

This, as I remember it, was the most delightful part of the whole trip. It was the beginning of September. The flies were all gone, the skies were clear and the weather was lovely and warm. I can still see the winding prairie trail with its three or four furrows stretching mile after mile through rolling country which seemed like a natural park. I can see, among other things, a funny self-confident little black animal with white stripes on its back trotting along on the trail ahead of us and defying anyone to try and drive him off.

At Fort Qu'Appelle, beautifully situated in the valley of Qu'Appelle River, we stayed a while with the family of Chief Factor Archibald McDonald, and then pushed on again to Troy, now Qu'Appelle station, twelve miles away. Here we boarded the Canadian Pacific Railway train for Winnipeg, where we arrived about the middle of September.

Fort Qu'Appelle is one of the important milestones of my life. The other is Fort Providence, which I will tell of later. The significance of Fort Qu'Appelle is this. It was here I first met Edward Ellice McDonald, third son of the Chief Factor. He was only a few months younger than I, but here began a friendship that continued through school and college and persists today. After a brilliant academic career at Manitoba and McGill, Ted McDonald practised medicine in New York and Philadelphia and is now engaged in highly important and fundamental research work on cancer as Director of the Biochemical Research Foundation at Newark, Delaware. His friendship and company have been a source of comfort and pleasure when all other ties of my youth have gradually been severed.

Winnipeg was the end of our journey. We had been on the way from Fort Simpson over three months and had travelled over 2,000 miles by York boat, steamboat, Red River cart, wagons and railway train. It was ten years before I was to go back. In the interval the route was to change and time of travel shortened considerably. With the coming of the airplane, the route has again changed, and distances that took a week to cover are now bridged in an hour.

Of all the experiences on the long journey from Fort Simpson to Winnipeg the one that remains with me most vividly has to do with a Slavi Indian by the name of Friday. The story of Friday is worth recording because it illustrates the hardships that the Indians had to endure in those days and the lengths to which they were forced to go in order to maintain life. Also it was the last occasion on which there had been any resort to cannibalism in the whole of the north country. Not for many years had a combination of circumstances—low temperatures and a shortage of game—forced any of these northern natives to the extreme limit of having to eat human flesh.

The winter of 1883 and 1884 was a hard one in the North. It was the low point in the rabbit cycle. Rabbits, which are the chief food of most of the natives, were very scarce indeed. It was also a very cold winter. The chief cause of the trouble, however, was a change in the course of migration of the caribou. These animals had been in the habit for many years of following a course southward from Great Bear Lake which took them along the shores of Lac la Martre. At this lake the Indians from Simpson and Providence used to congregate during the winter for the purpose of killing the caribou which provided them mainly with food but with clothing as well.

Owing, I believe, to extensive forest fires the previous summer, the caribou did not follow their usual course of migration, and the Indians waited in vain at Lac la Martre for them. With a scarcity of rabbits, starvation soon set in and many of them died. Some of them were only able to maintain life by resorting to cannibalism. It was not done from choice or habit, but solely from necessity.

When Friday staggered into Fort Simpson from Lac la Martre in an emaciated condition just before the spring break-up, he told the whole tragic story, and while there was a great deal of sympathy for him it was felt that some penalty should be imposed as a warning to any others who might follow the same course perhaps with less reason. Unfortunately, Friday had been mixed up a few years earlier in another tragic event. While in camp on Mackenzie River, near Camsell bend, with a small party of Indians, he shot and killed his wife while she was sitting in the teepee nursing her baby girl. What the reason was I don't know. Immediately all the Indians, including Friday, fled leaving the little girl bundled up in her moss bag alongside her murdered mother. The child was picked up next day by a party of Indians from lower down the river when they heard her cries at the abandoned camp, and she was carried to Fort Simpson. There she was taken over and cared for by Mrs. Bompas, the Bishop's wife, who brought her up and took her to England with her when she went home the next summer. The little Indian girl could not stand the transplanting, and died in England within a year of

leaving Mackenzie river. Mrs. Bompas had become so attached to the little girl that she had a beautiful oak font installed in the church at Fort Simpson with the inscription, "In loving memory of Owinda (the Weeping One), Baptized at Fort Simpson, Lucy May."

Mrs. Bompas was perhaps the most cultured and saintly woman that ever lived in the Mackenzie country. She came of gentle, well-to-do people, was educated in both England and Italy, and accustomed to all the comforts of a well ordered English home. Yet she spent a great part of her life under the most primitive conditions, frequently alone, in a log cabin at Simpson or Norman while her husband carried on his missionary activities in a diocese almost as large as Europe.

Whether for the murder of his wife or his resort to cannibalism, it was decided by my father that Friday should go with the York boat brigade to Portage la Loche and then on to the North West Mounted Police headquarters at Regina. So it was that Friday travelled in our party all the way out to Prince Albert. He acted as our personal servant, cooking our meals, pitching camp and attending to the needs of the whole family. Friday was a very resourceful and amiable person, but there were times when I wondered in a small boy way whether or not he might be inclined to take a sly bite out of me.

We parted from Friday at Prince Albert, and while we went on to Qu'Appelle he went to Mounted Police headquarters in Regina. He was kept there for about five years, not in confinement, but doing chores in the stables and about the kitchen. Like all Indians he was an observant chap and saw how the police dispensed justice and maintained law and order. He especially noted the procedure in the courtroom. Eventually he was sent back home and joined a band of Indians who trapped about Mills Lake and traded at Fort Providence.

When I went back north ten years after leaving, I inquired about Friday and found that he was applying all the practices of the Police as he saw them at Regina. Once a week he held court, delinquents appeared before him and sentences were imposed. In fact Friday had become a very useful arm of government within his own limited sphere.

An echo of this same journey came to me some thirty years after when I was making a geological survey in the Similkameen valley of southern British Columbia. This is the story.

My party had been driven out of our camp on Copper Mountain near Princeton about midnight by a forest fire. The horses had been hurriedly saddled and packed and we rode down the trail some miles until we came to an open meadow in the valley of Wolf Creek. In the dark we unsaddled the horses and turned them loose in the meadow. There we made camp. In the

morning, after I had left camp on my geological work, the cook was visited by an irate rancher who claimed ownership of the meadow and threatened all sorts of dire consequences if he were not compensated for the damage done to it by our horses.

When I returned to camp in the evening the cook told me of the trouble, so I went over to visit and, if possible, placate the rancher. I found his name was Scotty MacLeod. His house was a one-roomed log cabin containing little in the way of furniture, all of it homemade. The floor was of mud. There was a sheet-iron cook-stove in one corner, a bunk with a mattress of spruce boughs in another and a wooden table and a stool in the centre. And there was Scotty with a scowl on his face still breathing threatenings and slaughter. A cat slept on the bunk and a gun hung on the wall. The whole place had an unmistakable air of poverty, for there was little or no food to be seen in the cabin and a minimum of spare clothing. Outside in the pasture was Scotty's main asset, a fine looking packhorse.

After we had agreed upon a settlement for the damage done to the hay in his meadow, I began to ask Scotty about his earlier life, a delicate thing to do in pioneer country. He was not inclined to say very much, but I learned that he had come as a young man from the Orkney Islands to join the Hudson's Bay Company. He said he had been sent to Mackenzie River, had been a boatman on the York boats and had carried heavy loads up to two hundred pounds on his back across long portages. He had left the north many years before, gone to British Columbia to work on the construction of the Canadian Pacific Railway, and had finally squatted on the piece of land where we now were.

On further questioning I found that Scotty was actually one of the crew of the York boat brigade with whom I had come out as a small boy to go to school. He had heard nothing of the north country or the people since he left there, because he could neither read nor write. He had in the interval lived the lonely life of a hermit. He had no relatives in Canada, and no friends or associates. When he learned that I was the son of Chief Factor Camsell he was so affected that he almost went into tears. Compensation for the damage done to his meadow was forgotten and I could have anything he possessed. At least I must have a meal with him, even if it consisted only of a partridge and a cup of tea.

For two or three years after that, I used occasionally to ride out from Princeton ten or twelve miles to pay a visit to Scotty. Finally, on a later visit to Princeton, I found that Scotty had died. The doctor told me that he had practically starved to death all alone in his cabin on Wolf Creek.

4 School Days in Manitoba

St. John's College School is the oldest school of its kind in Canada. The school of 1884 was not the one of later years which stood on Main Street in the north end of the City of Winnipeg. The building that I think of and in which I spent my first school years, stood on the bank of the Red River on land that is now embraced by the Cathedral cemetery. It was a log structure of two storeys built in the form of a square, with the rear side open and the front facing on the river and only a few feet from it. When it was constructed I do not know, but it was the second of its kind, the first being the Red River Academy, established shortly after the arrival of the Selkirk settlers at the beginning of the last century. The Red River Academy building was still in use when I first went to St. John's, not however as a school, but as an icehouse. The Historic Sites and Monuments Board had not then been created, otherwise what was probably the oldest place of learning in western Canada would not have been allowed to come to such an undignified end. It stood a short distance back from the river a few hundred yards south of St. John's on land which is now St. John's Park and which we used as an alternative football field.

Life at the old St. John's was pretty rugged and the boys had to be tough to survive. Of the seventy or eighty boarders, most came from homes where the living conditions were not very different from those at the school, sometimes not as good. They were the sons of officers of the Hudson's Bay Company or of the Mounted Police, of Government officials and the wealthier business men of the West. Most of them had been brought up under pioneer conditions and came from various parts of the west and north, even from the Arctic regions. They were a primitive lot of young rascals many of whom had not acquired any habits of self discipline and undoubtedly gave the authorities a great deal of trouble. In my own time there were two attempts to set fire to the school, neither of them very serious, but sufficiently so in one case to result in a few days holiday while repairs were being made.

When I entered the old school on the opening of the fall term in 1884, I already had three brothers there—Ned, Fred and George. The inevitable consequence of that, and of my being the youngest boy in the whole school,

was the nickname "Kid" Camsell, which I carried up to my graduation from the University of Manitoba ten years later. Owing perhaps to a shortage of equipment and bedding, I had to sleep with my oldest brother Ned in a single bed in which there was not much room to turn round. The arrangement, however, made up for the lack of heating in the dormitory.

The indoor conditions of the school would be considered today pretty tough, especially in winter. There was no central heating as we now understand the term. The classrooms on the ground floor were heated by wood stoves which, of course, went out during the night and were only lit just before we came down to study at seven o'clock in the morning. Upstairs there were coal-burning stoves in the two main halls from which the dormitories led off. You can imagine what it was like at the farther end of these dormitories on a cold Manitoba winter's night. There was no plumbing in the building anywhere and the washing water in the jugs was always frozen in the morning. Conveniences were located outdoors and on a cold January night they seemed at least a mile away from the main building.

It is over sixty years since the old school building on the bank of the Red River was abandoned, but my experiences in that building remain more vividly fixed in my memory than those in the later building on Main Street. This may be partly due to the severity of the conditions under which we lived. On the other hand, there is no doubt that the impressions gained were just as much due to the character of the teaching staff. The Headmaster, Bishop Robert Machray, P.C.M.G., later Archbishop and Primate of Canada, Canon S. P. Matheson, who also later became Primate of Canada, Eric Hamber, whose eldest son became Lieutenant-Governor of British Columbia, Tom Warburton and Frenchy Roy—all were men of good training, strong character and high ideals, which they did their best to instil into the boys. It must have been tough going for them at times. Emphasis was placed not so much on book learning as on the development of character and "playing the game." The Headmaster's particular subjects were mathematics and Latin prose. The last licking I got from the old man was for what he called a "maximus error" in my Latin prose examination when I casually joined a plural noun with a singular verb. To him this was the unpardonable sin.

Bishop Machray was a tall thin man with a long white beard. He was a graduate of Aberdeen and a fellow of Sidney Sussex College in Cambridge, and he brought with him the standards, traditions and discipline of those two great institutions. He occupied as his special classroom a small building at the back of the school, a building that was heated by a wood-burning stove, its pipe running through a small room above. Here he held his classes, and here also he meted out punishments for delinquencies. A visit to this

building in charge of a prefect for the purposes of a licking was a memorable event and was undertaken in fear and trembling, but it was something to boast about afterwards.

For correction purposes he used a Scotch instrument, the "tawse," a leather strap cut into strips and knotted. For minor offences the offender got only a half dozen strokes on the hand, but major offences—and this included the "maximus error"—called for something more drastic. After a short lecture on the serious nature of the offence and the consequences of following such a dangerous course, the prefect was directed to take the offenders upstairs and to rap on the stovepipe when all was ready. Preparations were very naturally delayed as long as possible, but there was no avoiding the inevitable.

When the Headmaster arrived upstairs he seated himself in a low chair on which there were two detachable leather straps as arm rests. One boy after another was laid across the Headmaster's knees and, after the straps were adjusted so that the boy could not wriggle himself free, the tawse was applied to the bare skin while the prefect counted the strokes. It must be said for the Headmaster's kindness of heart that he gave us a little warming up with his hand before the tawse was applied. Each offence was apparently classified and called for a definite number of strokes. The whole operation was done in such a dispassionate, objective sort of way that there was never any evidence of ill-feeling or resentment on either side. Indeed the old man was a very kindly, gentle person who had a great love for boys, and he left with us the impression that his lickings were only the natural and inevitable consequence of doing the things that we ought not to do and which we knew were wrong.

The Headmaster was always affectionately referred to by his boys as "Old Bob." To the public generally however he was, at the time of his death in 1904, addressed as The Most Reverend Robert Machray, D.D., LL.D., D.C.L., Prelate of the Order of St. Michael and St. George and Primate of Canada.

The Headmaster was the only one in the whole school who ever applied corporal punishment and yet he is the man whom I, at least, remember with the greatest respect and even affection. He was one of the greatest men who ever lived in western Canada.

Every Saturday morning throughout the year we each got from the Head a weekly allowance of pocket money and with this we usually got permission to go into town. Occasionally and at as long intervals as possible, I was obliged to spend fifteen cents of my meagre allowance on a hair cut, but usually the whole amount went for my own enjoyment. Street cars ran up and down Main Street with a transfer where the Canadian Pacific

Railway tracks crossed, but it was wasteful extravangance to spend even five cents on a ride. The street cars were horse drawn and in winter the floors were covered with straw, and a coal stove at the front end provided a little heat.

We always walked into town and the trail we followed took us along the river bank, across the little creek which marked the southern boundary of the school grounds, past Drewery's brewery and behind the Ladies' College. Beyond that the trail angled across past Dr. Bird's house, towards Main Street which was reached near the corner of Mulvey Street. At this point there stood a long low brick building with large lettering running along the roof, "The North West Trading Company," said to have been the business premises of Dr. John Schultz afterwards Sir John Schultz and Lieutenant-Governor of Manitoba. From there to the C.P.R. tracks there were narrow wooden sidewalks, but only a few scattered buildings. One of these was Tisdale's tin shop; Tisdale was a great lacrosse player. Across the tracks was Mitchell's drug store, but the centre of the town was still farther on at Ryan's shoe store and J. H. Ashdown's hardware near the bend in Main Street.

I don't know what the population of Winnipeg was in the early 1890's, but the college was then pretty well at the northern limit of the City. Street cars ran a few blocks further and stopped at Polson's grocery. A narrow wooden sidewalk, however, ran a little farther to Sheriff Inkster's residence, but only on one side of the street. The roadway was not paved. In the summer of 1893 I spent the holidays in residence at the college and took, morning and evening, the meteorological observations which were telegraphed to Toronto in code. When the prairie chicken season opened in September it was not difficult to walk out across the prairie in the direction of Stony Mountain and return with a bag of several birds. One could not do that today for two reasons. In the first place there are no prairie chickens and second the city's boundaries extend too far out.

After two winters spent on the Red River, mainly in the Hudson's Bay house at Lower Fort Garry, my parents returned to Mackenzie River. Two of my brothers also left at the same time for the North to enter the service of the Hudson's Bay Company. The third brother, George, remained in Winnipeg to continue his studies, finally graduating in medicine from Manitoba Medical College.

With the departure of my parents for the north I had no home to go to for the winter and summer holidays. Manitoba hospitality however, and particularly that of the Red River valley, is the most openhanded and generous in the world. I always seemed to have a choice of a place to spend my winter holidays, while my summer vacations were spent either with my uncle Foulds, my mother's brother, at Lilyfield, with Sheriff Inkster's family

in Kildonan or with the W. J. McLean family at Lower Fort Garry. In all these homes I was treated as one of the family, and I can never be sufficiently grateful to the Inksters or the McLeans for all they did for me during those summers.

After passing through the school, I entered the University of Manitoba in the Natural Science course. Classes were held at that time in the McIntyre block on Main Street and I walked there every day from the school. Our teaching staff consisted of Professor E. B. Kenrick, who taught chemistry, Professor Laird who taught physics and mineralogy, and Professor George Bryce who taught botany, biology and geology. In other words we had a little of everything and not much of anything. The age of the specialist had not yet arrived in Manitoba and I am inclined to suspect that the professor was sometimes only a day ahead of us in the subject he was teaching.

The Natural Science course in those days was only a three-year course. One of the most striking evidences of the progress that has been made in science in the last sixty years is to compare the University courses leading to a B.A. degree in 1894 with the present-day courses in any of these sciences at any University. One would have to have almost as much as I got in my final year to enter a science course today.

On the 8th day of June, 1894, when I had reached eighteen years of age, Isaac Pitblado, then registrar of the University, went through the Latin ritual of presenting me to the Chancellor of the University for a bachelor's degree in Arts, using the customary words: *Dignissime Domine, Domine Cancellarie, presento vobis hunc juvenem*, etc. etc. He then threw a hood over my head, the Chancellor handed me a diploma, and with all the confidence of youth I was ready to face the world.

All the time my education was being acquired in Manitoba I never appreciated the sacrifices that had to be made by my parents, not only the expense, but particularly what the separation involved. It was not until my own children were being educated at school and at college that I fully understood what it means to parents and children to be parted from each other during the most critical period of a child's life. There were many occasions when important decisions affecting one's later life had to be made, and there was no one to consult. They had to be made alone without guidance from anyone really interested. Teachers are all right up to a point but they can never fill the place of parents in guiding young people through the formative period of their lives. It sometimes seems to me that I was lucky to avoid shipwreck during my school and college days.

5 Home by Scow and Steamer

It had long been decided that, after graduation from the University, I was to go north to spend a short time at home in Fort Simpson. It was ten years since I had left the North.

Early in July, 1894, with a railway ticket to Edmonton, I left Winnipeg. At Edmonton I put myself in the hands of the Hudson's Bay Company and its chief officer, Mr. W. T. Livock, who was then occupying the historic old Post on the north bank of Saskatchewan River. From that point northward I accompanied the Northern Transport of the Hudson's Bay Company by steamboat and scow down the Athabasca, Slave and Mackenzie Rivers, but it was October before we reached Fort Simpson and the ice was then running in the river.

The trade route into the north country had changed. The famous old York boat route to Fort McMurray by way of the Long Portage which had been used for one hundred years had been abandoned for the Athabasca River route. This shortened the distance from railhead to the north country and naturally followed the building of the railway from Calgary to Edmonton in 1891. The railway to Athabasca Landing—as the settlement was then called—had not yet been built and it was necessary to make the hundred miles or so by freight wagon. Mrs. Reeve, the wife of the Bishop of Mackenzie River, was also returning to the North after a furlough in England, so we joined forces for the trip across the portage.

The road, which had been opened in 1886, was nothing more than a winding bush trail, not improved anywhere, and many of the streams were unbridged and had to be crossed by fording. I remember it still as a very unpleasant journey. There were no overnight stopping places so we carried both food and camping outfit with us. It rained a great part of the time and, as I had no tent, I slept with the teamster under the wagon which did not shed the water very well. Mrs. Reeve was sufficiently experienced in northern travel to have provided herself with a tent.

After six days we reached Athabasca Landing with our outfit thoroughly soaked. We had, however, a few days there in which to get dried out before the stern-wheeled steamboat left the Landing for the trip down river to

Grand Rapids. During this time I was the guest of Mr. and Mrs. Leslie Wood who kept open house to all travellers to and from the North.

On the second day out from the Landing, we pulled ashore a few miles below House River as near to the head of Grand Rapids as it was safe to venture with the steamboat. From here we travelled on scows to the head of the island which splits the river in two, and then a half mile down the full length of the island over a hand-operated tramway, said to be the most profitable railway in the world. The capital cost of this tramway could not have been very great because, apart from the wheels of the trucks and the strap iron of the runways, everything was made on the spot out of timber growing on the island. The tramway was naturally not available for use by opposition traders, who were compelled to use the methods of the Long Portage and have everything carried over on the backs of their boatmen.

The transfer of cargo from the steamboat to the lower end of Grand Rapids island occupied a good many days, but it was a pleasant and exceedingly interesting interlude. I made myself as comfortable as possible by borrowing a tarpaulin out of which I made an A-tent big enough to keep me dry at night; but I had no mosquito net to protect me from the myriads of black flies and mosquitoes.

It was at Grand Rapids that I first made the acquaintance of the famous Athabasca scow brigade. This was composed mainly of Lac la Biche Crees and half-breeds, a half civilized and unruly gang who guided the scows over the one hundred miles of swift broken water between Grand Rapids and McMurray. The Athabasca scow brigade was a relic of the old York boat brigades. It carried every pound of supplies destined for the whole north country, and operated for about thirty years, up to 1914. It was only disbanded when the railway was completed between Edmonton and Peace River. The Peace River route was then used for only a short time, when the route to the north shifted again on the completion of the Alberta and Great Waterways railway to Waterways near McMurray. The Athabasca scow route was the last portion of the northern transport route to be displaced by the more modern methods of mechanical transport by rail and steamboat.

On this stretch of the river from Grand Rapids to McMurray we first saw the great beds of bituminous sands which have caused so much discussion among geologists as to their origin and value. Here also were to be seen numerous natural gas springs at one of which we camped and where no fuel other than the gas was used for cooking and heating.

The river in this stretch runs like a mill race between steep, high banks of flat-lying beds of sandstone, some of which are so saturated with bitumen that oil men have cast covetous eyes on them for many years. Some day

these beds will be providing motor fuel and plastics to the people of the Great Plains.

It was an exciting run down through these rapids, which were rarely navigated without accident. Such names as the Brule, the Boiler, the Long, the Big and Little Cascades and the Moberly rapids were all named from some special characteristic or were reminiscent of some unpleasant incident in the early history of the river.

The run down river was for the boat's crews the easiest and pleasantest part of their whole summer's work. The return journey, however, was quite a different matter. While most of the scows were broken up at McMurray and those returning south were only partially loaded, mainly with bales of furs, it was no easy job to tow them back upstream to Grand Rapids. Apart from the bowman and the steersman the crews walked every step of the way harnessed to a tow rope by a tump line. There was no laying up on rainy days or Sundays. It took lots of guts to do this job. Yet in 1914 I came up the river by this means with a crew of young university men who had spent the summer with me on geological and topographical work in the country between Athabasca and Great Slave Lakes. Without a guide, in cold dirty weather and without any knowledge of the proper side of the river to follow, those boys certainly had what it takes to travel the Athabasca.

Fort McMurray, named after a former Chief Factor of the Hudson's Bay Company, was another transfer point. Here the cargoes of trading goods and supplies were transferred from the scows to the stern-wheeled steamer *Grahame* for transport down the Athabasca and Slave Rivers to what was then called Smith Landing, now Fitzgerald.

The *Grahame*, built about 1882, was the first steamboat to ply on waters of the Mackenzie River watershed, and on her I had a comfortable trip as far as Fort Chipewyan. This Post is one of the historic Posts of the Mackenzie basin. Already in 1894 it was more than one hundred years old. It was from here that Alexander Mackenzie set out in canoes in 1789 to explore Mackenzie River, and it was from this point that he started two years later on his trip by way of Peace River to the Pacific Ocean.

Even today there is about Fort Chipewyan an atmosphere of history and tradition that is more noticeable than at any other point in the whole North. Lord Tweedsmuir noted it, and Rt. Hon. Malcolm McDonald was affected by it when visiting the place.

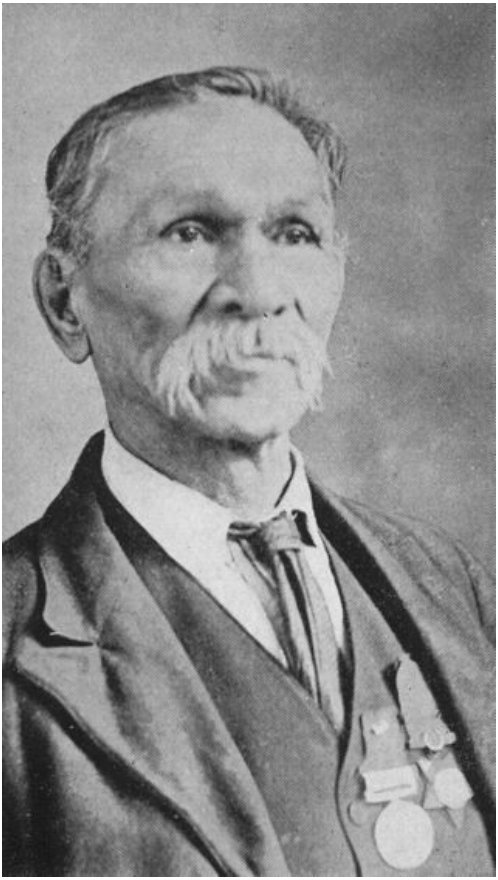
I remember standing in 1942 with Malcolm McDonald on the rocky knoll at the east end of the settlement as the sun was going down. The lake stretched away to the eastward to a water horizon broken only by a few rocky wooded islands. It was a quiet, peaceful evening. Alongside us was a monument to Alexander Mackenzie erected by the Historic Sites and

Monuments Board, and not far away a battered old sundial designed and set up by Sir John Franklin on his first journey to the Arctic. Behind us were the old log buildings of the Hudson's Bay Post set out in the customary rectangular form facing the lake. A little way off on the slope of the knoll was a small square powder magazine.

After a few moments silence, Malcolm said to me, "I have done a lot of travelling in my time and seen many out of the way places, but I have never been in any place in which I felt more at home than I do here."

When I asked him why, he said, "Because it reminds me so much of my own home town of Lossiemouth." His interest in Fort Chipewyan was further enhanced by finding the following day in the possession of Colin Fraser's family the bagpipes that piped Sir George Simpson, Governor of the Hudson's Bay Company, in his travels across Canada and around the world in the second quarter of the last century. Colin Fraser's father was Sir George Simpson's piper.

It was the people of Fort Chipewyan rather than its buildings and its history that interested Lord Tweedsmuir on his visit in 1937. He spoke of them as fine, upstanding, straightforward folk who looked you frankly in the eye and had excellent manners. He observed that many of the residents were of mixed blood, most of them offspring of the old Hudson's Bay employees brought from the Orkney Islands. In addition to the Scotch, there were however many French names among them, a few Irish, and a very few English. When the Hudson's Bay factor, who was himself a native of Fort Chipewyan, was asked for the reason for this scarcity of English names, he replied: "Well, you know, the Indians had to draw the line somewhere." Lord Tweedsmuir always loved to tell this story in the presence of an Englishman.



George Hackett, Iroquois Chief, wearing medals of the Nile expedition, 1881

Camsell and Nettell in camp on Taltson River,
N.W.T., 1914

Charles Camsell with his party on Great Slave Lake, 1914

I spent some weeks at Fort Chipewyan in the home of the Chief Factor, Dr. W. D. McKay, whose sons had been at St. John's College School with me. There I met my father, whom I had not seen for several years. He, with a couple of his officers had come up from Fort Simpson to wind up the accounts of Mackenzie River district and to prepare his requisitions for the following year.

To pass the time I was appointed duck hunter for the Fort, a job that would make any young man's mouth water. I was supplied with a small birch canoe, a shotgun and ammunition, and a camp outfit, and I spent the time in the marshes about the deltas of the Athabasca and Peace Rivers, perhaps the finest wild fowl country in the whole of Canada. There were ducks in thousands and the grey and white geese were just beginning to gather in their migration southward from the nesting grounds along the Arctic coast. This was the duck hunter's paradise and, after poking about through the marshes and loading my canoe with ducks I would return to the Fort every other day for more ammunition.

When my father had wound up his accounts, we pulled out for Fort Smith where the Mackenzie River steamer *Wrigley* was waiting for us on her last trip down river. At the portage the ox carts with which we had crossed ten years earlier had gone into the discard, and we crossed this time with horses and wagons, but the road was still only an unimproved trail.

The *Wrigley* had been built since I left the north and was a comfortable boat one hundred feet long with a screw propeller. She had a maximum draft of five feet, and was designed for navigating not only the river but the dangerous waters of Great Slave Lake, where she had one hundred miles of open water to cross to the outlet. She had already made her two annual trips down the Mackenzie—one of them to the head of the delta at Fort McPherson 1,400 miles away. On this last trip she took us only as far as the head of Mills Lake just below Fort Providence where, in the mouth of Willow River, she was to be hauled out and berthed for the winter.

After a short stay at Willow River, where we had some more good duck shooting, we proceeded down Mackenzie River in canoes and arrived at Fort Simpson in drifting ice about the middle of October.

After ten years absence I was home again.

Klondikers with homemade wheel-barrow overland to the Klondike from Edmonton, 1898

Klondikers on the way to the Klondike with an ox packed, 1898

6 Hay River and Fort Norman

It was good to be back at Fort Simpson again after such a long absence. The welcome that I received from my own family and from all the people that I knew as a child showed that there was no change of feeling there. Indeed the most notable characteristics of the people of the north country are their generous hospitality and their loyalty to their friends.

There were however many physical changes about the place that struck me at once. There were more people and more buildings, due mainly to the officers and crew of the steamer *Wrigley* who wintered at the Fort. Captain Mills and his two engineers, "Judge" Johnson and John Sutherland, added greatly to the social life of the small community. Bishop Reeve and his wife were in permanent residence at the Anglican Mission and the Roman Catholic Mission was in charge of Father LeCompte, who had arrived only a few weeks before me to establish the mission there. My father's staff consisted of C. T. Christie, accountant, and my brother Fred, fur trader. My own family consisted of my parents, my elder sister Louisa, who had only recently returned from school in England, and, besides Fred, three younger children, Frank, Philip and Ethel. These made up the white population. The rest were engaged servants of the Company, the Berens family, the Macpherson family and John Hope's, all employed as interpreters, dog drivers or for farming operations. There were also two or three Indian families, living in log huts on the outskirts of the post.

The cultivated fields adjoining the Post had been extended and were producing all the grain and vegetables required, and there was even a small herd of cattle. The most revolutionary change contemplated, however, was the installation of an electric light system which would do away with oil lamps for the "Big House," the office and the storehouses. The use of the steamer, built in 1887, had made a great change in the place. The natives had by this time lost all fear of what they called the "fire boat", and no longer fled to the bush when it appeared on the river.

Fort Simpson is the oldest Post continuously occupied on Mackenzie River. The site was first occupied by the North West Company in 1804. The Hudson's Bay Company took it over a few years later, about the time of the amalgamation of the two companies.

The Post faces Mackenzie River on an island just below the junction of the Mackenzie with the Liard. The river is here almost exactly a mile wide with a strong smoothly-flowing current. One can stand on the bank of the river and look up stream for about twelve miles, with the huge promontory of Gros Cap in the middle distance separating the Mackenzie from the Liard. Below, the river runs straight away for many miles. The site is the grandest one on the whole river but its location on an island is somewhat of a handicap, for the island is cut off from the western mainland during periods of high water. Also, with the opening up of the river in the spring, it stands in some danger of being over-ridden by the ice when a jam develops in the river below.

The purpose of my return to Fort Simpson was to spend a winter at home and to discuss with my father the future course of my life. Up to this time I had given very little consideration to this problem and had not seriously considered what occupation I should take up. I still remember my father's first comment on this question when he said that, when he was a young man, he had been given the choice of one of four vocations, namely, the Army, the Navy, Law or the Church. He had chosen the Army, but after some years in that service had abandoned it for the fur trade in the Hudson's Bay Company. My mother felt that she would like to have one of her sons in the Church, and that was her choice for me. Circumstances, however, finally settled the question and I found myself without conscious effort gradually working into the profession of a geologist and the mining industry. My contact with Mackintosh Bell a few years later exerted more influence on my choice of a vocation than anything else and I have always had a warm feeling for him for his advice and guidance at that time.

I remained at Fort Simpson for six months, and during that time was reabsorbed into the life of a northern fur trading Post. Like most of the other residents, I had a line of rabbit snares. A trap line for marten was also laid out for me covering a circuit of about twenty miles. The traps were all dead falls. Steel spring traps were not available. I made the round of my trap line once a week with a dogteam. I remember on my first visit to this trap line I only caught one marten, but I found many of the other traps sprung, obviously by Whiskey Jacks who in trying to take the bait had their tail feathers caught in the dead fall and had to leave them behind. There were also snowshoe trips to Indian camps forty or fifty miles away to haul in moose that had been killed by the Indians. I did no moose hunting myself but occasionally got some ptarmigan or partridge.

Indoors we had the use of a good library and we played billiards, cards or chess for recreation. I had two evenings of chess a week with Bishop Reeve all winter long. One evening he would come to the "Big House"

where I lived, and on another I went to the Mission. Mrs. Reeve took an active interest in this tournament and I soon learned that, if I happened to win the game in the Bishop's house, I was very likely to go home without the usual cup of tea and biscuits.

The winter packet came in with mail from the south about the beginning of April, and when the dogteams returned south a few days later I accompanied them as far as Hay River on Great Slave Lake. Here the Rev. T. J. Marsh was establishing a mission to the Indians for the Anglican Church. There was no white person at that point besides himself, and when he appealed to the Bishop for some help in building his houses, I volunteered for the job.

It was an easy and pleasant snowshoe trip of something over 200 miles from Simpson to Hay River. It was, however, a new experience in winter travel because, on account of the heat of the sun during the day and the melting of the snow, we travelled mostly at night when there was a crust on the snow. We slept during the day.

The establishment of the Hay River mission by the Anglican Church is a striking illustration of the problems and difficulties involved and the self-sacrificing spirit of the missionaries in carrying Christianity to the primitive peoples of this country. The Indians of Hay River had never had a resident missionary before the arrival of Mr. Marsh in the fall of 1894. When he arrived there straight from his home in Ontario he found a small group of sixty or seventy Slavi Indians living either in teepees or in small log huts huddled together in a small clearing on the bank of the river. The chief was a fine old man who welcomed Marsh and the purpose for which he came, and he showed him what simple hospitality he could. He was able to provide a one-roomed building for the Mission. In this Marsh lived throughout the winter and in it he taught school and held his services. By the time I arrived an additional room had been added where he could have some privacy.

The first and most important job was the building of the necessary houses for school, chapel and dwelling, and as there was no expert help to be got Marsh had to do everything himself. Only in the rougher work such as cutting and squaring the logs and hauling them in from the woods was he able to get any help from the Indians. His tools consisted of a couple of axes, crosscut and rip saws, a hammer and a few nails—very few. With this equipment he had to build and make everything needed, walls and windows, shingles for the roof, and all the furniture and fittings—fireplace, tables, chairs, benches, bunks. It was a colossal job and it took courage, skill and sheer doggedness to stick at it and bring it to completion.

The work at Hay River was tough for a lad of nineteen years. It was my introduction to the use of the broadaxe for squaring timber and the whipsaw

for sawing lumber. Marsh had, during the winter, cut and squared a sufficient number of logs for a schoolhouse and residence for himself and now required a partner to saw some of the logs into lumber. This was my job. To those who have never tried whipsawing lumber by hand, I can say that it is the most tiring and back breaking job imaginable. First of all a stage is erected on which the squared log is placed and after a line is struck in charcoal lengthwise on the log by a string, one man stands on the top of the log to pull the six-foot saw up and set it, after which the man below pulls down the saw to make the cut. I had the place on the top of the log, with Marsh on the ground below. The job requires the close synchronizing of the efforts of the two men and when well done becomes quite rhythmic in operation. At the end of some hours of this work, I felt that I was not only pulling up the saw, but Tom Marsh with it, and when night came I only wanted a place to lie down and sleep.

I have whipsawed lumber several times since and later became quite expert, but it always developed in me an intense sympathy for the Roman galley slave.

Largely by his own physical effort, Marsh ultimately developed the Hay River mission into an important and influential unit of the Anglican missions in the North. He was imbued by a strong missionary zeal which I am afraid I did not possess to anything like the same degree. It was, therefore, with some relief that I boarded the steamer *Wrigley* about the middle of summer to go to Fort Norman, where I was to remain for two years.

In 1895, Fort Norman was a relatively small place. There were the Hudson's Bay Company's establishment surrounded by the customary stockade, an Anglican and a Roman Catholic mission. The total population was perhaps twenty people. In addition to these institutions, it had when I last visited it in 1942 the Mounted Police, the Royal Canadian Corps of Signals, a doctor and hospital for the Indians, an independent trader, a post office and some houses belonging to white trappers and some Indians—a total population of about seventy-five persons. Our next door neighbours were at Fort Simpson three hundred miles to the south and Fort Good Hope two hundred miles north.

It was established in the first decade of the last century by the North West Company, and, like most of the northern fur trading Posts, its site was chosen for its strategic importance at the junction of two rivers, the Great Bear and the Mackenzie, which made it easy for the Indians to bring in their furs by canoe. Fort Norman was also conveniently situated for the Mountain Indians who hunted and trapped in the fine game country to the west through which the Canol pipe line was later built.

I remained at Fort Norman two years as an employee of the Anglican mission, during which time I taught a small class of about eight youngsters, some Indian but mostly white, the children of the Hudson's Bay officer, William Irvine. I had no experience or training for this job, and I now realize that I had a far greater proficiency in the use of an axe and a whipsaw than in teaching school. The teaching job occupied the greater part of my time though there was much to do in addition.

I find that there is a general impression on the part of people who have never lived the life of a northern fur trading Post that one has ample spare time in which, for example, he can do a lot of reading. My experience is that nobody has any spare time at these remote places, and that a man is fully occupied in providing for his physical comforts.

Think, for example, of the life in a modern city home. When you want light you press a switch. If you want heat you move up your thermostat. If you want hot or cold water you merely turn a tap. If you want food or any other supplies you telephone for them and they are delivered at your door. Now, compare this with the conditions we lived under when I was at Fort Norman. When I wanted light it meant the preparation of a lamp, with oil brought from a couple of thousand miles away and requisitioned the year before, or the making of your own candles from the fat of animals. Otherwise you sat in the evening and yarned in the semi-light of the open fire. For heat you had to go out into the woods and cut down and haul in some dry timber, then chop it up at the door into stove lengths. If you required water you went down to the river for it. In winter you had to cut a hole three or four feet deep in the ice with a chisel and carry up your water in pails slung on a yoke. Your food you got mainly by hunting in the forest or with a net set in the lakes or rivers; and as for your clothing and other supplies, you had to order them a year in advance. Many other comforts and conveniences had to be acquired entirely by your own effort, and sometimes considerable effort.

Of course, if you had someone to do all those chores for you, then there was some spare time, but I did not. The only service I got during the first winter was provided by the wife of Allan Hardisty, an Indian lay reader at the mission and a protege of Bishop Bompas, who had received some education in Winnipeg. During the second winter I was a boarder in the house of the Post Manager, Joseph Hodgson, whose wife was an excellent cook and housekeeper and who made me very comfortable indeed. Hodgson himself was an old-timer in the north and had had some very interesting experiences with the Eskimo of Mackenzie delta before they became used to the presence of the traders there. He told stories in a vivid and dramatic way so that my evenings with him were never dull.

At Fort Norman, for the first time in my life, I was on my own and I had to take the full responsibility for managing my own affairs. I still have a very lively recollection of the time when the full realization of this responsibility came to me. The steamer *Wrigley* had brought me down river in August. She returned south a few days later and, as I stood alone on the river bank and watched her steam away up river until even the smoke from her funnel had vanished, I felt as if I was the last man left on the earth. My tie with the outside world was cut, and I knew that I could not re-establish contact with friends or relatives until the winter packet carrying the mail would arrive by dogsled some time in the following April. This feeling, however, was soon shaken off, and though I was only nineteen I set about the job that I had to do and of fitting myself into the life of the small northern community.

It proved to be an interesting and even profitable experience, the details of which it is not necessary to relate. There were, however, a few outstanding events which I have recorded elsewhere and which might be included here as illustrative of life at that time.

Food was always a problem at these northern Posts. Only a limited supply was ever imported from the outside, and the major portion of one's needs had to be secured from the country, mainly fish and moose meat. It is even a greater problem to obtain enough food for the dogs on which we were dependent for transport during the winter months. In the short days of winter the sun at Fort Norman rises after ten o'clock in the morning and sets again before two in the afternoon. Temperatures are consistently low, reaching sometimes sixty below zero, but the snowfall is light and the days are generally bright and clear. Blizzards are quite rare, and there is always the protection of the northern spruce forest. Altogether the climate is not unpleasant if one is properly dressed and one knows how to protect himself against frost-bite.

Well into the New Year of my first winter, when the days were beginning to lengthen, it became necessary to make a trip to Great Bear Lake to get fish for the dogs, who were becoming pretty gaunt from the scarcity of food. So with one team of dogs and Allan Hardisty as companion I left for Great Bear Lake. We planned to camp at the outlet of the lake with a small band of Indians who were wintering there. These people were living on fresh-water herring which they speared at the edge of the open water where the lake flowed into the river.

Great Bear River is only about 80 miles in length, but as its surface in winter is always pretty rough with broken and tumbled chunks of ice, the winter trail follows the south bank and keeps to the bush. The trail was very indistinct and hard to follow. Also it had not been broken. We had therefore

to camp twice before we reached the Indian camp at the outlet of the lake not far from the site of old Fort Franklin. It was here that Sir John Franklin's party had wintered in 1825. The site had not since been occupied by white men and all that remained of Franklin's buildings were piles of stones indicating the position of his fireplaces. As we came out on to the lake the Indian teepees could be seen among some scattered timber not far back from the lake shore. The smoke rising from them had a warming and hospitable appearance. These terms are used in a relative sense!

The camp consisted of half a dozen teepees. We were given a very cordial welcome, because we brought with us a small supply of tea and tobacco for distribution as presents. The Indians were a miserable, dirty lot, always in a state of semi-starvation. For most of the year they lived on fish, supplemented by an occasional rabbit. Their territory was not a good moose country but at times they were able to get caribou, which provided them with food, clothing and shoes. Like most of their race they were improvident, gorging themselves when food was plentiful and starving quite cheerfully when it was scarce. They were, however, resourceful. They had to be to exist in such a country.

For the men, the dead of winter was a period of idleness; the days were short, temperatures very low, and the fur-bearing animals were not moving about much. There was, consequently, no trapping being done and very little hunting. Most of the time was spent in gambling, and who can blame them when the nights were so long and there was so little else that could be done. It was a simple game they played and not what we could call a big one. Teams of men—women were not allowed—sat on opposite sides of the fire. Each team crouched on their knees and passed a token from hand to hand underneath a blanket, and it was the business of the opposing team to guess where the token was. The operation was accompanied by a shuffling up and down motion and a mournful sort of a song, while two boys kept time with a couple of parchment drums. No money was involved, because there was none in the country, but bets were made with bullets, matches, bits of tobacco and even articles of clothing. Often a man literally lost his shirt.

We were given a place in the chief's teepee where we unrolled our blankets. I didn't, however, stay there very long. Shortly after supper a crowd of men came in and, probably as a mark of hospitality as well as for our entertainment, a gambling game was put on. I watched it for some time but as the enthusiasm continued to mount, I decided if I wanted to get some sleep I had better go elsewhere. So I gathered up my blanket and kit and found a place in an adjoining teepee. The game continued most of the night, because I could hear the beat of the drums every time I woke up.

We stayed with this band of Indians for about ten days and every morning we went fishing, getting our fish with a spear.

The outlet of Great Bear Lake does not freeze in winter; at least it was open when we were there in February. Whether or not it ever freezes over completely I don't know. In any case it is a famous place for herring which seem to concentrate in this bit of open water during the winter months when the rest of the lake is covered with ice.

The method of fishing consists in going out on the thin ice near the open water with a short spear, which is nothing more than a forked stick, notched in the fork and a short nail set in the centre. Then you cut a small hole in the ice and around this build a shelter from the wind with a blanket stretched around a tripod. As the fish swim by across the hole you spear them in the back and throw them out on the ice. In a minute or two the fish are frozen hard. Before this happens, however, your dogs get in their work and gobble up the fish while they are still wriggling about. It was easy to get fifty or sixty in an hour or two. As the fish were fat, before many days the dogs were in good condition. The straight fish diet, however, did not have the same effect on me.

The whole purpose of this trip to Great Bear Lake was to fatten up our dogs, and when this had been done, we loaded up our toboggan with all the fish we could carry and started back for Fort Norman.

That winter Mrs. Irvine, the Post's Manager's wife, died. Her death was a great tragedy, which cast a gloom over the whole community. I can still remember it after sixty years. She was the only white woman at the Post, which housed only four other white adults, her husband and myself, Father Ducot and a lay brother. She left, besides her husband, five small children, four of them girls.

What her ailment was I don't know, but it followed the birth of her last child. There was no physician available within 1,000 miles. We buried her just outside the picket fence of the Post in a grave dug out of the frozen earth. While I read the burial service from the Church of England prayer book, her husband stood by in the snow, the picture of despair, and the children looked on bewildered.

Today, medical advice and a hospital are both available at Fort Norman, and even if they were not, treatment can and is frequently given by radio, and a doctor is brought directly in touch with the patient by airplane.

Irvine took his children out by the first boat the next spring and went to live near Prince Albert.

Spring in the north country is the "between season" time, when the snow is melting, the ice is breaking up in the rivers and lakes and it is difficult to travel about or to get any game or fish. In the early part it is a very

unpleasant time for the natives, with food so hard to get. But it is the season when spirits attain their greatest buoyancy, and it is easy to forget the hard winter and overlook the unpleasantness. What adds more than anything else to the feeling of elation is the arrival of the migratory birds, various kinds of ducks and geese, swans, loons and many smaller birds.

It is near the end of May at Fort Norman before the ducks and geese begin to pass on their way northward. The lakes are still frozen, but the sand bars on the river are free of snow and a strip of open water develops on each shore while the ice is still solid on the river. Mackenzie River at Norman is on the main highway of birds that nest in the delta of the river. In consequence they go by in thousands, stopping only to rest, because there is little for them to feed on at Norman.

It was a Sunday night near the end of May when Allan Hardisty and I decided to go across the river for a goose hunt at the head of an island when the sand bar was clear of snow. There was at that time no Migratory Birds Convention Act and spring shooting was quite legitimate. Besides, we needed the food. We took only enough food for a light meal, an axe and a tea kettle. We carried a small birch bark canoe to ferry ourselves across the strips of open water that adjoined either shore. We took neither blankets nor tent because we intended to be back home the following night. The weather was fine and it was quite light even at midnight. When we got across the ice on to the island we each built a blind out of willows on the sand bar, set out some decoys made of lumps of snow, and waited for the birds to come.

There was a good flight of geese, both white and gray, on Monday morning and again on Monday night. As the sun got up band after band, in irregular line or the familiar “V” formation, went by most of them well out of range. Some were attracted by our snow decoys or by the call of Allan, and from these more venturesome bands we killed about sixty birds. We couldn’t carry all those birds across the river in one load so we cached some of them in a snowbank on the island and with the rest we started late in the evening to cross the mile of river ice to the Post.

We had not gone very far before we heard the ice creak and then felt it shiver; we knew the break-up had come. We hurried back to the island and got there safely before the ice had broken into small blocks. Then for some hours we watched what is perhaps the grandest sight in the whole north, the spring break-up of Mackenzie River. It has always seemed to me to be the outstanding example of irresistible force.

The ice kept moving for some hours and then slowly stopped. We knew that a jam had occurred at some point below. When it finally stopped moving altogether, the surface of the river was piled mountains high with great blocks of ice and it seemed as if it would be almost impossible to cross

to the other shore. However, after sizing up the situation for some time, we decided to make a second attempt to get across, a thoroughly foolhardy thing to do. It was fortunate that we had barely got started when the ice-jam broke and we had to scramble back to the shore over the slowly crumbling ice blocks, barely making the tail end of the island.

We now realized that we were stuck on the island until the river was sufficiently free of ice for crossing in a canoe. Fortunately we had a good stock of geese for food. We also had an axe, with which we made a brush shelter; but we had to keep the fire burning continuously because we only had a few matches and no blankets to sleep in. To add to our discomfort it snowed hard for two days. Once again during the week the ice jammed below, and all but a few square yards at the head of the island became flooded when the water backed up. We built a platform about eight or ten feet up in the trees which we could occupy if the whole island became submerged. The jam broke, however, and we were not forced to take refuge on our platform. For me there was nothing to worry about. For Allan, however, it was a period of great anxiety, for over at the Post across a mile of broken, drifting and impassable ice, his wife was expecting a baby. It was a week before a canoe from the Post was able to pick its way through the drifting ice to fetch us. When we got home Allan found that he was the father of twin girls. We had had roast goose for every meal for a week and it was many a day before I could look at another goose.

One of the interesting features about Fort Norman is what was known to the old-timers and the Indians as “the Smoke.” A few miles above the Post is a small coal basin containing beds of low grade coal. These beds are exposed on the banks of the river and from time immemorial they have been on fire. Alexander Mackenzie noted the smoke that rises from these burning coal seams when he descended the river on his discovery expedition in 1789. They were burning one hundred years later when I lived at Fort Norman, and they are still burning. The burnt-out beds can be seen as a dull red band at several points along the river. They may have been ignited originally by a stroke of lightning, but the Indians have a different story. They say that the coal was fired by a giant long, long ago, in the days when men and animals of immense size roamed the land.

Associated with the Indian story of “the Smoke” are two other features, one the stumps of some huge dead heads whose tops stick out of the water in the great eddy at the junction of the Mackenzie and Great Bear Rivers, the other, two great scars of broken rock outlined by a fringe of trees on the slope of the 1,100-foot Bear Rock, and clearly visible from Fort Norman.

The dead heads represent the arrows of the giant who in travelling down the river killed two beaver with them. He lit a fire on the bank to cook his

beaver, but his fire got away from him and set the coal beds alight. After skinning the two beaver, one large and one small, he set the skins to dry on the slope of Bear Rock using some spruce trees to hold them down. All these features are still there, the fire, the dead heads and the scars on Bear Rock, representing an important event in the mythology of the Indians of Fort Norman.

This is one of many stories told me by the Indians to account for some of the outstanding physical features of the region or to explain the characteristics of the animals. Usually these stories were only told in the winter time and only to white men, when the teller felt that he was not likely to be ridiculed for telling them.

Another interesting and very welcome event at Fort Norman was the arrival in September of the Mountain Indians, who after spending the summer hunting moose, caribou and sheep in the Mackenzie mountains would descend the Gravel River in mooseskin boats loaded with dried meat. Most of our meat supply at the Post came from this source.

These Indians, who were the most intelligent and resourceful of all the Indians trading at Fort Norman, always came in to the Post early in July to meet the steamer *Wrigley* on her first trip north. After obtaining what supplies their credit was good for, mainly tea, tobacco and ammunition, they set out westward on foot with their dogs packed to hunt in the mountains through which the Canol pipe line now runs. The country was then entirely unexplored, and as far as I know no white man had ever entered it. Game was plentiful and as they hunted along the course of Gravel River they dried their meat and cached it along the river course to be picked up later as they descended the stream in their skin boats. I had always hoped to spend a summer with these Indians in this interesting country but the opportunity never arose. J. Keele, of the Geological Survey, was the first to explore Gravel River, when he came across from the Yukon in 1907, after spending the winter on the divide.

At the end of the summer the Indians descended the river in boats made of raw moosehide. Eight or ten skins sewn together, with the seams sealed with hard grease, were stretched over a framework of green pliable poles to make a serviceable boat twenty or twenty-five feet in length with perhaps a five-foot beam. It was the most suitable craft possible for Gravel River, a roaring mountain stream, because if it hit a rock it slid over easily without being punctured. These were the only Indians I ever knew who used that type of boat. They were never used for up stream travel and they were always abandoned on the beach at Norman and were soon devoured by the dogs.

In the early part of the winter of 1895-1896, an occurrence of much scientific interest caused much excitement among the residents of Fort Norman and a considerable amount of apprehension on the part of the natives. It was believed that the end of the world was approaching. This was due to a great meteor which passed low over the southern sky from the east and appeared to fall in the Mackenzie Mountains to the west. I happened to be down on the river in the early part of the evening and was drawing a pail of water from a hole that I had cut in the ice. Suddenly the whole of our neighbourhood was flooded with a bright light and a body which appeared to me about the size of the moon passed rapidly across the sky from east to west and disappeared below the horizon in the Mackenzie Mountains. The passage of the meteor was accompanied by a roaring sound and followed by a noticeable tremor of the earth which, along with the light, brought everybody out of their houses in a state of great excitement. The meteor probably hit the earth somewhere in the high country near the head of Keele river, perhaps in the treeless country through which the Canol pipe line now runs and where some day it may be discovered. This would be important from a scientific point of view because the time of its fall could then be fixed as of November, 1895. There was no evidence of any forest fires at the time, so it is more than likely the meteor fell in the mountains above the timber line.

One more incident, of major interest to the outside world, but of little importance to us in the far North, because like all world events it affected us very little and was over and done with by the time we heard of it, was Andree's attempt to float across the north polar regions in a balloon.

In the summer of 1895 circulars were sent to all northern trading Posts advising of Andree's plans and instructing all residents to look out for the balloon and to report it if seen. Accompanying the circular was a drawing of the balloon for the benefit of those who could not read, particularly the Indians.

When these circulars and drawings arrived at Fort Norman they were distributed to all the Indians, whether from the mountains or from Great Bear Lake, and rewards were offered by the Hudson's Bay Company to anyone sighting the balloon and reporting it. The balloon was supposed to take off from Spitzbergen and therefore we were advised to look for it coming from the north over the Pole.

During the following winter word came to us at Fort Norman that a woman had seen the balloon drifting southward across Great Bear Lake at a high altitude. The story was so specific and detailed and the teller so positive that it appeared to be worth investigating. So when I went to Great Bear Lake a little later in the winter I made further inquiries. The only thing I

found wrong with the story was that the woman who had seen the balloon was quite blind. Another difficulty about the story only appeared a year or more later when we learned that Andree did not leave Spitzbergen at the time planned but was delayed until July, 1897, about a year and a half after it was supposed to have been seen by the old blind woman at Great Bear Lake.

7 Native Life

If life at a northern trading Post was tough for white men, it was doubly so for the natives. Exposed in the summertime to the myriads of mosquitoes and other flies, in winter to the intense cold, and in the spring and fall to a combination of wet and cold, and all this without any kind of protection—no rubbers for their moccasined feet, no rain coats, no mosquito nets and very scanty clothing—they had to be tough to take it. They took it, however, stoically and philosophically because they knew of no easier life. But the death rate was high and not a great many reached old age.

I remember a winter visit that I made out of Fort Norman to the camp of the Mountain Indian Chief, Little Dog. I remember it largely because of one observation that I made at that time and which has always remained with me. Little Dog belonged to the old school, and he never wore trousers, either in winter or summer. His ancestors had never done so, and he was not going to adopt any whims of the fashion makers of the outside world.

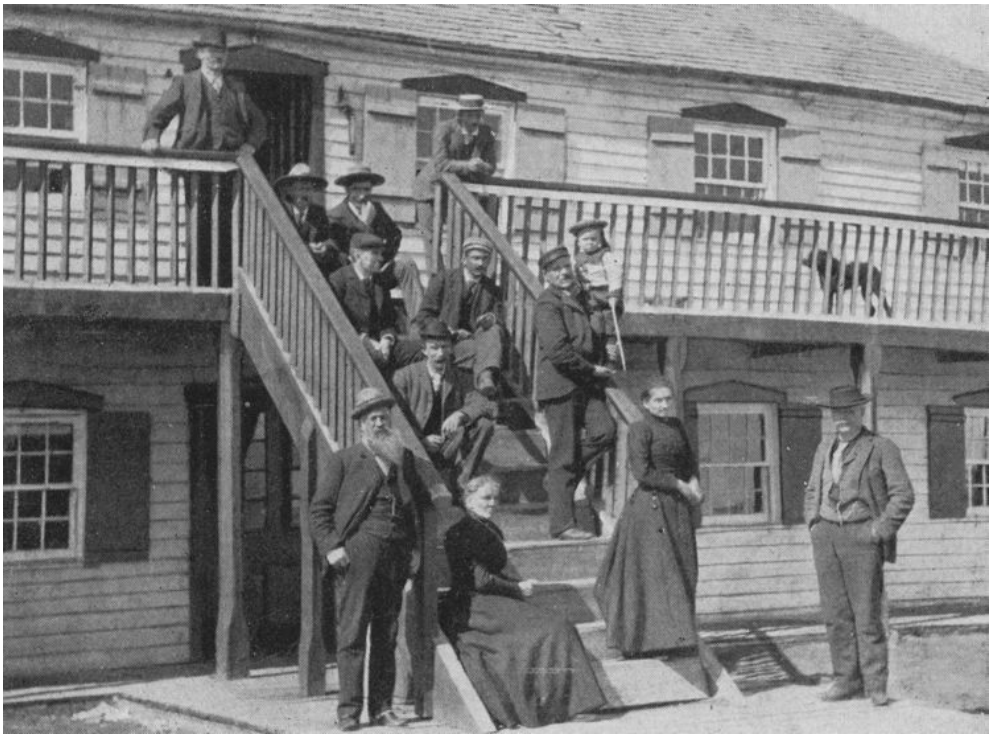
As far as I know, Little Dog, who was then perhaps sixty years of age, was the last of a trouserless generation. All the rest of his band had gone modern in this respect. He was a man of very strong character, honest and dependable in all his dealings with the traders, dignified in his speech and manners and of a philosophical turn of mind. He had a poise which I envied and he was very fond of making a speech. His winter dress was so scanty that any white man would have soon frozen to death in it.

On his feet he wore moccasins of mooseskin, over socks consisting of a square of blanket material. His legs were partly covered with cloth leggings decorated with coloured yarn or bead work and reaching a little above the knees. His thighs were bare. The upper part of his body was covered with a shirt which hung loose. Over this was the black cloth Hudson's Bay capot which overlapped his leggings by a few inches and was held in place by leather strings and by a decorative "assumption" belt about his waist. The capot was surmounted by a hood, usually thrown back on the shoulders except in the coldest weather. His head was bound with a red cotton handkerchief to keep his long black hair tidy. Outdoors he wore mooseskin mittens which were attached to a worsted cord slung around his neck. He had no pockets but tucked under his belt was his tobacco pouch, which

carried his knife, his pipe and the old-fashioned flint and steel with a piece of touchwood for making fire.

With this outfit one would wonder how he could possibly survive the temperatures of forty and fifty degrees below zero quite common in that country, but he did. His hunting grounds were in the deep woods, and he could always find shelter and make a fire to get warm.

Little Dog's band hunted on the slopes of Mackenzie Mountains west of the river, a country now well known to the builders of the Canol pipe line. His people had always hunted there, long before the white man came. It was a good fur country and they were fairly prosperous. They were not so subject to periods of starvation and hardship as the Indians on the other side of the river, and this condition of relative prosperity was reflected in their character and physique.



Chief Factor and Mrs. J. S. Camsell with staff at Fort Simpson, 1895

Group of Indians and half-breeds at Fort Simpson, 1890

Moose were scarce in the Mackenzie valley the last year I was at Fort Norman and the Indians were living a more hand-to-mouth existence than usual. If it had not been that the rabbit population was gradually rising from the low point in the cycle reached a couple of years earlier, there might have been very serious hardship and the much maligned Hudson's Bay Company would have been called upon as usual to provide the necessary relief.

Because we ourselves only had a limited supply of imported food, we also had our difficulties, and our dogteams had occasionally to be sent fifty or sixty miles away to fetch a moose or caribou killed by the Indians.

It was not an unusually cold winter, but even so our thermometer (a spoonful of mercury in a bottle) which hung outside the door of the house was sometimes frozen for days at a time indicating a temperature of at least 40° below zero. Nothing, however, could interfere with the daily routine of cutting and hauling in enough firewood to keep our house warm.

Dease Lake in 1887. Photo by Dr. G. M. Dawson

The house at Fort Liard in which Charles Camsell was born

Our standard diet of dried meat, whitefish and rabbit was only varied when ptarmigan came and perched on the willows about the clearing in which the Post was situated; but these are poor food at any time and fresh moose meat was what we wanted.

The back of the winter had been broken. March had come, and we were looking forward to the arrival of the winter packet in a few weeks with news of the outside world, when a couple of Little Dog's Mountain Indians wandered in one night to tell us that they had a moose for us at their camp in the mountains about sixty miles away. This was cheerful news and an opportunity that I had been wishing for for some time, so I arranged to go out with a team of dogs and a toboggan to fetch the meat.

The two Indians started back next morning, after getting some ammunition and supplies in exchange for their moose and begging what they could not buy. I waited a day longer, to allow their snowshoe trail time to harden, and then started after them with a team of four dogs.

I left before sun rise, and had to travel about eight miles down the Mackenzie River before taking the trail through the bush that led to the camp of Little Dog. The dogs could follow the trail on the river in the

darkness much better than I, so, when I put the leader on to it and shouted "Marche" at them, I jumped on the toboggan and let them take their own gait till they reached the ascent of the opposite bank, eight miles down.

Dawn was just breaking in the east as we began to climb the bank. From the top, where we stopped a few moments to rest, I looked back up the river to see whether there were any wolves on my trail. The Indians had told us that three or four had followed them in from the mountains to the river a couple of days before, and I wondered if they had also followed them back. But I could see nothing. Several of these timber wolves had hung around the fort part of the winter and had annoyed us a great deal. Hunger had made them more daring than usual. They also were suffering from the scarcity of food, and had taken the baits from our traps, eaten the rabbits caught in our snares, and even captured and killed a couple of dogs belonging to the fort. Consequently, I was advised to be on my guard against them. I did not anticipate any attack on myself, but they might kill some of my dogs at night after I had camped. I saw nothing, however, and hoped that they had not heard the jingle of my dogs' bells as I drove down the river.

All day long I followed the winding snowshoe trail of the Indians through the endless spruce forest. Occasionally it took us over a small lake, across which the trail was marked by a line of small spruce boughs planted in the snow, and sometimes it followed the meanderings of a small mountain stream; but always we climbed the gradual ascent of the eastern slope of the Mackenzie Mountains, until when the sun began to get low in the west we were well up in the foothills and it was time to camp.

As we traversed each lake I had looked back anxiously to see if any wolves were following; but I saw nothing. My anxiety began to wear off and I concluded that I had given them the slip.

I camped in the same spot that the Indians had occupied on their way home, and, after feeding my dogs and having my own supper, piled enough wood on the fire to keep it burning for several hours and prepared to go to sleep.

I had rolled myself in my blankets, and was smoking my last pipe, watching the sparks of my camp fire as they floated upwards through the branches of the trees into the blackness of the night, and glad of the rest after the long tramp. The dogs were curled up, peacefully sleeping, in various positions around the fire, and everything was still. Suddenly the dogs began to grow restless. First one and then another would prick up his ears, and glance uneasily into the darkness of the forest in the direction from which we had come. Occasionally one would let out a low whine or a growl, and they all began to crowd closer in to the camp. Evidently they scented some

danger, which my senses could not detect; and that something could only be wolves.

Everything was perfectly still and quiet. I had not noticed it before, but the silence now seemed oppressive. I realized for the first time that I was entirely alone in that great forest, with no human being nearer than thirty or forty miles, only my dogs for companions and with no weapon of defence. I was positive that only wolves would cause such uneasiness among the dogs, and they must be within sight of my campfire. I was sorry then that I had not brought a rifle, for a shot in the darkness might have frightened the wolves away for a time at least, and relieved the tension of my nerves by breaking the deathly stillness. If they ventured to attack me—which was very unlikely—my only weapon was an axe. That I kept near me.

Trusting to the dogs to give the alarm if the wolves approached too near, I got a few snatches of sleep, getting up several times through the night to throw more logs on the fire; and apart from an occasional growl from my dog Darky, who slept at my feet, I was not disturbed till about four o'clock in the morning, when it was time to get my breakfast and go.

When I came to harness the dogs, I found that one was missing. I called and whistled, but he did not come. Some dogs have a habit of sneaking away out of sight as soon as they hear the collars being put on the necks of the others; but this one was nowhere to be found, and after searching around for some minutes in the darkness, I found the imprint of his foot in the back trail heading for home. He had done that once before; but this was the last time he was to do it, for he never reached home.

Before continuing the journey towards the Indian camp with the remaining three dogs, I put up a small cache of provisions for my return journey. I made a small bundle of what I wished to leave, tied this to a long, slim pole and leaned the pole at an angle against a large tree, placing the bundle high enough to be out of reach of the wolves.

The second day's travel was a repetition of the first, except that the pace was considerably slower on account of the loss of one dog. Still we jogged along merrily to the tuneful jingle of the bells on the dogs' backs and the continual swish of my snowshoes, till about mid-day when we stopped for a lunch about ten miles from the Indian encampment.

While taking my solitary meal of bannock and tea by the edge of an open muskeg, I was surprised to hear the shouts of Indians, mingled with the crack of whips and the yelping of dogs, and presently twelve Indians with as many dog teams emerged from the forest on the opposite side of the muskeg and drove their sledges up to my fire.

Soon I was shaking hands with one after another, and wondering at the same time what had induced them to come so far from their camp. They

volunteered no information and I refrained from asking them their intention until they had prepared and eaten their own meal. Then they informed me that when they heard that a white man was coming out to visit them, Little Dog, their chief, had sent them out to give him a welcome to their lodges. I replied that the white man would be glad to accept Little Dog's hospitality, and was pleased at the reception given him.

From there into Little Dog's camp I rode in state, first on one toboggan and then on another. As soon as one team showed signs of exhaustion from the breakneck speed at which they drove, I was transferred to another, and that one took the lead and held it as long as he possibly could. They jerked me along at a terrific pace, up hill and down hill, across muskegs and frozen ponds, and through thickets of spruce trees, while I hung on to the bumping, swaying toboggan. I was relieved when I saw the smoke from their lodges curling up through the trees, and knew that I had reached the end of my journey.

Little Dog's reception was most cordial, and his hospitality lavish. Room was made for me in his own lodge, my dogs were attended to and fed, and myself regaled with all the luxuries that the camp afforded.

Shortly after our arrival the whole party, or as many as could crowd in, collected in the chief's lodge for supper, but before eating, water in a birchbark dish was placed before me. A cake of laundry soap which was hanging from one of the lodge poles was placed alongside. I washed, and after me the chief; after him the same dish and the same water did service for the whole party, men, women, and children. It was then placed carefully in the back of the lodge in case some later arrival should come in and need it. Water and soap were too precious to be lightly thrown away without getting all the benefit that could possibly be derived from them; and, to judge by the solemnity of the procedure, a washing was a luxury—or an ordeal—that was only to be indulged in on special occasions, and that not without some misgivings.

They ate, drank and smoked continuously, far on into the night, and long after I had reached the limit of my capacity for food. There were eight or ten lodges in the encampment, and from each of these a mess of some sort of food would be sent in to me—some tid-bit of the moose, caribou, beaver or bear that they had saved up for some such occasion—and it would be impolite for me to refuse it. Nothing would be taken back, and what I could not eat I had to stow away to take home with me.

Of course these were all gifts to the white man; but he was naturally expected to make some small present of tea or tobacco in return for each of them. "Nothing for nothing" is a saying that I have heard many times from those Indians in the north country, and one that is always acted upon,

excepting only when the recipient of a gift is in such a condition of destitution that he is unable to make any return to the donor. A white man is never supposed to be in such a condition, so that gifts to him are numerous. To avoid accepting any more, and when my supply of tobacco was almost exhausted, I was compelled to retire to bed before the feasting was concluded. The gathering broke up soon after; each of them retiring to their respective lodges to sleep off the effects of the feast. The old chief, too, rolled himself in his blanket, and in spite of the generous supply of moose meat that he had stowed away, was soon asleep, leaving only his bare feet sticking out from the lower end of his blanket.

The night was cold. A storm was now raging outside, and the fine snow sifted into the lodge through the sides and the smoke hole at the top, covering the sleepers, men and dogs, with a fine white dust. The fire soon went out, and I had not been asleep long before I awoke shivering from the cold. To prevent myself freezing altogether I was compelled to get up and put more wood on the embers of fire. The Indians slept peacefully through it all, and every time I got up the old chief's bare feet, could still be seen sticking out from the end of his blanket with the snow falling on them. The old fellow was tough.

Morning came as a great relief, to me at least. The storm was still raging; but to travel in it was much preferable to a day and another night in that camp and in that company, among fighting dogs and squalid children. So, though the old chief pressed me to remain on the chance of the storm abating, I refused all his offers of hospitality.

My toboggan was loaded with moose meat while I was having my breakfast; and as soon as the meal was over I bade a cheerful farewell to my Indian friends and started for home. Little Dog offered to send a man with a rifle back with me in case I should meet up with wolves, but I refused and started back alone.

Three days were necessary to make the trip of sixty miles that I had done before in two. With only three dogs, a heavy load and a trail that had to be broken anew, it was slow travelling and I had to do a lot of pushing to help the dogs.

At noon of the second day I lunched at my old camp where I had made my cache. I found here that a wolverine had climbed the tree and robbed my cache, adding another score to the list that I have never been able to wipe out against him.

The next day I frequently saw traces of my missing dog; his footprints showing up plainly in the hard snow of the lakes. He got as far as Mackenzie River safely, and I began to have hopes that he would have got all the way

home without coming in contact with any wolves; but in this I was disappointed.

Shortly after I came out on the river, and almost within sight of the Hudson's Bay Post, I saw where he had been overtaken by two large timber wolves. A fierce fight had followed. The hard snow was torn up by their sharp claws; blood and bunches of hair were plentifully scattered over a large area. There was every indication that the dog had fought a hard fight and had given the wolves almost as much as they could take before he was finally dispatched. He was a big, powerful dog and in fair condition, but the wolves, though weakened by hunger, were every bit as big and in a condition of ravenous ferocity, so the odds were too heavy. A short distance away from the trail I found all that was left of him, his skull and some leg bones. They had eaten or carried away everything else. I had lost a good dog, not easily to be replaced.

As the sun was dipping behind the snowy peaks of the mountains in the southwest my three weary dogs pulled their heavy load of moose meat up the bank at the Post and into the shed, and I was greeted by the Hudson's Bay officer. The expedition had been very satisfactory, but I was glad to be once more in a comfortable room, taking my supper before a cheerful, crackling fire and speaking again in a civilized tongue.

8 The Klondike Madness

After two full years at Fort Norman I returned up river to Fort Simpson in August, 1897. My purpose was to discuss with my father what course I should follow for the future. The question did not go long unanswered.

The rich placer gold deposits of the Klondike had been struck shortly before and word of this discovery began to trickle through to us in Mackenzie River from Klondikers who were making their way from Edmonton by the Mackenzie and Porcupine Rivers route to the gold fields.

The first arrivals at Fort Simpson didn't have much authentic information about the strike, but they were all feverish with excitement to get to the scene of the discovery as quickly as possible. The main flood of Klondikers went, of course, from Vancouver or Seattle by way of the Pacific coast to Skagway, crossed the mountains on foot by way of the Chilcoot Pass and down the Yukon River by steamboat, canoe or raft to Dawson. Others ascended the Yukon River from St. Michael's, 1,000 miles in paddle wheeled steamboats. This was the most comfortable route, if any route could be called comfortable, but cost more money.

Some started from Edmonton by the overland route blazed by the North West Mounted Police in 1897-1898, using packhorses as transport through densely forested country and through passes in the Rocky Mountains. Only a few of these, however, got through. Others followed a water route by way of the Athabasca, Slave and Mackenzie Rivers, intending to cross the mountains off the delta of Mackenzie River by way of the Peel or the Rat and Porcupine Rivers to the gold fields. This was the most roundabout and impractical route of all. Most of those who followed it turned back and never reached their destination. The feverish excitement of the first arrivals at Fort Simpson with their tales of the fabulous wealth of the new gold fields communicated itself to my brother Fred and myself, and we decided to join in the rush. The infection did not take long to get us.

Because my brother and I were both pretty experienced in northern travel—my brother particularly so—we were invited to join one of the first parties to arrive at Fort Simpson. This party consisted of D. W. Wright and A. M. Pelly, both big game hunters from southern British Columbia. When they were not on hunting expeditions, they were engaged in prospecting and

mining operations in the Okanagan and Boundary country of British Columbia. The other two members of the party were Dan Carey and his son Willie. Dan was an old-time placer miner and trapper from the upper Peace River country. They were a fine group of men, experienced in the sort of life we had to face and quite capable of taking care of themselves in all circumstances that might arise. My brother and I felt we were lucky in being asked to join them.

The party had originally planned to follow the longer northern route to the Klondike by way of Fort McPherson and the Porcupine River. After some consideration, however, it was decided to go west from Fort Simpson up the Liard River, across the divide near Frances Lake and descend the Pelly River to the Klondike. It was a route once followed by the Hudson's Bay Company voyageurs, but had long since been abandoned because of the difficulties and dangers of Liard River. R. G. McConnell of the Geological Survey, coming in from the Pacific coast at Wrangell, had ten years earlier descended the whole length of the Liard River from its junction with the Dease. Dr. G. M. Dawson had in the same year ascended the Frances to the divide and had gone down the Pelly to the Yukon. No one had travelled this route since that time.

A number of factors influenced our decision to take this course. There had been at Fort Simpson some years earlier an old employee of the Hudson's Bay Company, William Irvine (B). It was with him I had spent my first winter at Norman. He was called William Irvine (B) on the records of the Hudson's Bay Company because there were two other William Irvines in that service at the same time, and these other two were referred to as William Irvine (A) and William Irvine (C). Irvine (B) had some years before built and occupied a small trading outpost opposite the mouth of Toad River on the Liard just below Hell's Gate. He had told me that when he built the fireplace of his house at Toad River he used boulders from the river bed and plastered these boulders with clay from the river banks. During his first winter in this house, the fire exposed in his fireplace a nugget of gold about the size of a grain of wheat. Whether or not the story was true I could not tell, but I had no reason to doubt it. I did know, however, that fine gold could be panned from the gravels of the Liard River along most of its course. McConnell had said so. In any case it was one of the reasons why we decided to follow the Liard River route and see if we could verify Irvine's story and perhaps find a new gold field.

Another reason for the selection of the Liard River route was that it would take us through the Cassiar country in which placer mining operations had been going on for twenty years. And finally, Dr. G. M. Dawson had reported that the country about Frances Lake offered good

opportunities for prospecting and that one could pan gold from some of the streams flowing into Frances Lake. All these reasons were good enough for our group of optimistic prospectors, supplied as we were with a six months' stock of provisions and an eagerness to go anywhere that gold might be found.

The story of the Klondike rush has been written many times. Tragedy and romance are interwoven in all the stories; but for the great majority of those who participated in that rush there was far more of tragedy than romance. A few fortunate people made money, some of them lots of money. Of those who struck it rich only a few retained what they made. For myself and my companions, while we were far richer in experience as a result of our part in that rush we were very much poorer in material resources after it was all over. In fact we survived starvation and disaster only by good luck and a knowledge of how to live off the country.

Most of the participants in the rush were greenhorns with no experience in the bush. Many of them had spent all their lives in cities. The results were inevitable. Tragedy befell them in various forms—accident, frost, starvation, disease, and through inexperience. It met them on the trail, on the lakes and rivers, in the forest and on the mountains. I have seen the footprints of a man in the snow leading to a bit of open water in a swift flowing stream, but no footprints returning. For the only time in my life I have been refused a meal when we were half-starved and the persons from whom we asked the food had a boat load of provisions. It was a case of every man for himself and the devil take the hindmost. I have seen these same men months afterwards in the dead of winter stagger into my cabin looking for a meal which they declined to give the previous summer, and for the shelter which they sorely needed. I have rescued persons from drowning when they were stranded on a rock in a roaring stream. I have helped to gather up a number of stranded Cheechacos who were perishing from scurvy on Dease River, men who had followed the trail of our party, but who were unable to take proper care of themselves and would not have survived without help. I have seen men drop from exhaustion on the trail and I have seen the minor diseases of the white man who came in with the rush decimate the native people of the North.

Not only on the Klondike rush but throughout the whole history of the north country tragedy has followed the footsteps of those experienced as well as inexperienced travellers who tried to unlock her secrets; the tragedy of Franklin in his search for the North West passage; of Jack Hornby and his nephew starving to death on the banks of the Thelon River; of Radford and Street stabbed to death through the superstition and fear of the Eskimo; of Fathers Rouvier and LeRoux killed in the same way; the mysterious disappearances in the Nahanni valley. All these events and many others

came to my mind as years afterwards I flew over the country with Rt. Hon. Malcolm McDonald and Senator Crerar. From the plane I could see spots where tragedy had touched my own family, and other places where it had almost reached myself.

The history of the country is full of such tragic events, yet it is a region that stirs strong emotion and takes a tremendous hold on those who know it. You either love it passionately, or you hate it. But the hate does not last long. Your feelings about the north country are never lukewarm. The native will die of nostalgia if forced to leave it, and many white people will not live anywhere else. Whether in the mountains of the west, on the forested plains of the Mackenzie valley or in the nakedness of the so-called barren lands of the north east, there is a fascination that draws men back again and again. Service expresses it perfectly:

> There's a land where the mountains are nameless;
> And the rivers all run God knows where;
> There are lives that are erring and aimless,
> And deaths that just hang by a hair;
> There are hardships that nobody reckons,
> There are valleys unpeopled and still.
> There's a land—how it beckons and beckons
> And I want to go back—and I will.

These sentiments were put into simpler but quite as effective language by an old Dogrib Indian from the barren lands, Saltatha by name, guide for Warburton Pike, when he was being taught the principles of Christianity by Father Dupire at Fort Resolution. Pike writes that after hearing of heaven and hell from the priest, Saltatha said in reply: "My Father, you have told me of the beauties of heaven. Tell me one thing more. Is it more beautiful than the country of the muskox in summertime, when sometimes the mists blow over the lakes and sometimes the waters are blue, and the loons cry very often? That is beautiful and if heaven is still more beautiful, my heart will be glad, and I shall be content to rest there until I am very old." This is without doubt the summer picture; but the winter picture is a bit different.

Such is the north country through which the Klondike rush was made—a country of sharp contrasts, of great beauty and greater desolation, attractive but at times repellent. It induces feelings of elation, and sometimes of despair. Few of her people have not experienced these emotions.

It was late in September when we reached our decision to follow the Liard-Pelly River route to the Klondike. Winter was then not far off and we were anxious to get as far on our way by water as possible before the freeze-up came. So, with the aid of the Hudson's Bay Company, we bought a small

scow and hired a crew of Indians to take us up the Liard as far as we could go before the ice began to run in the river. It was September, 1897. We did not know it, but by this time every inch of ground in the Klondike creeks had been staked and there was nothing left; for the original discoveries had been made a year earlier. It probably would have made no difference if we had known all this, for the fever was on us and we had to go.

We were able to get nearly three hundred miles up river, within about twenty miles of the abandoned Toad River Post, before our Indians became nervous about the approach of winter and protested against going any farther. Argument and cajolery were of no use. Ice was beginning to form on the river and the weather was getting cold. They were away outside the country that they knew and, like all Indians, were afraid of meeting what they called "bad Indians." There was nothing to be done but pay them off and send them back down river to Fort Simpson in the scow.

Our outfit was unloaded on the south bank of the river on a dry sandy bench covered with a good growth of spruce. I was able to pick out the spot forty-five years later from an airplane when making a first flight across the mountains from Wrangell to Fort Liard. Here we built a log cabin big enough to house the whole party and then settled down to preparations for winter travel as soon as the river was frozen over. These consisted mainly of building toboggans and repacking our supplies into convenient packages for transport on them. We did some hunting for big game, but got only one moose. We also tested some of the gravel bars on the river but found no evidence of gold nuggets the size of a grain of wheat as indicated by William Irvine. There was fine flake gold to be got in the pan, but this sort of stuff was of no interest to men who hoped to get it in chunks when they reached the Klondike. In the meantime winter was coming on, temperatures were dropping and snow was falling from time to time.

Here are some extracts from Fred's diary which illustrate our daily activities:

November 1st. Wash day. Overhauled my baggage and found things wet. Dried them and took inventory. Chinook wind in afternoon. Mended and patched my shoes.

November 3rd. Clear day. Temperature 12°. Today being my birthday Wright made a cake. Went for a walk around the island. No tracks of game to be seen. Had a game of poker in the evening and won $1.75.

November 5th. Fine day. Off moose hunting with Pelly. Came across a moose track on a small island. Went back to camp and got Charlie and Wright to come along. We surrounded the island and Wright went through. The moose came out about twenty yards from me. I put a bullet into his lungs and he ran about 200 yards and fell. This being the first moose I ever

killed I was highly elated. It was a young buck of two years. Harnessed the dogs and brought the whole animal home this evening.

This was the only moose we killed all winter though we did a good deal of hunting.

More items from Fred's diary:

November 6th. Clear. Temperature zero. Coldest day so far. Barred and lashed my sled. Ice drifting in the river but very thin.

November 8th. Dan and I went off and set seven marten traps.

November 9th. Snowing all day. Visited the marten traps and got one marten. Tried to make a whip but could not get on to the plait.

November 14th. Cloudy. Small channel in front of our house froze up.

November 16th. Temperature -16°. Cut wood and repaired my dog harness. Dan making hand sled.

November 17th. Temperature -22°. Went up river about five miles and found good ice along shore for travelling. Stretched the mooseskin.

November 19th. As we will commence the snowshoe trip tomorrow we decided to divide up into three parties to cook. Wright has done all the cooking to date so tomorrow Charlie and I cook together, then Wright and Pelly and Carey and son. Took my first lesson in baking today from Wright and baked a loaf of bread in the Dutch oven. It was a success.

The Liard River, like all the northern rivers, freezes with a very rough surface, over which it is difficult to travel until it is smoothed out by drifted snow. It was the 20th of November before travel conditions were right and we were ready to push on. The temperature on that day was 15° below zero.

Before leaving Fort Simpson we had bought a few sled dogs, so that when we started on our winter travel Pelly had three dogs, Fred had one and I had two. Wright pulled his own sled. One of my dogs was a little black mongrel that I named Nugget, not because we were on a gold hunt but because it was something like the name that his Indian owner called him. I only paid one dollar in trade for him but it was the most profitable dollar I ever spent, because in the following spring when our provisions ran out and we were living off the country, Nugget kept us in food by hunting partridge and porcupine.

He hunted on his own and many a time when we heard Nugget barking out in the bush I knew that he had a partridge or a porcupine treed and he would not leave his quarry until someone went out and killed it. He practically saved our lives, but he was himself ultimately hunted by a band of wolves and killed.

Besides our camp outfit we had about 5,000 pounds of provisions, enough to last us all winter but too much to carry in one load. Our plan, therefore, was to load our toboggans to capacity and carry this load up river

ten miles or so, cache it there, and then return to camp the same day, making a round trip of about twenty miles. At first it took us over a week to move our whole outfit ten miles. On the last day we broke camp and moved up twenty miles for our next camp, and from that point as a base we brought our supplies up and then carried them forward another ten miles. This, at least, was what we tried to do, but it was not always possible. Bad weather, deep snow or rough going frequently slowed down our progress so that we only made a fraction of our distance. Fortunately, sickness did not bother us. Accidents were of a minor nature, though I was laid up for a week when I cut a gash in my knee with an axe.

It was slow going at first, but as we consumed our provisions the intervals between moving camp shortened until towards spring we were able to carry everything in one trip. By the first of May when we reached Frances Lake, we must have tramped altogether some 3,000 miles on snowshoes.

On the 30th of November it was 32° below zero, and there were some colder spells in January, but we were never delayed by low temperatures.

It was a pretty strenuous life, but with the exception of Dan Carey, we were all young and physically fit. Dan was in good condition but he was no longer young. He therefore decided, after a few weeks of this travel, that he and his son would take their share of the provisions, about 1,000 pounds, and drop out. We parted near Hell's Gate, where he and his son decided to spend the winter in trapping. What success he had, I don't know, but I suspect that he did much better than we, because we left him and his son in a country which appeared to be a good fur-bearing country. And he was an experienced trapper.

On December 14th, we were at old abandoned Toad River Post. The temperature was 25° below zero and there were about eight hours of daylight. Shortly before Christmas, when we were in camp near Hell's Gate, Pelly and I undertook to make a reconnaissance trip up river about 125 miles to the point where Turnagain River joins the Liard, in order to get some idea of travel conditions on the river. We knew that there was a small trading Post at that point, known as Muddy River Post, operated by an old friend of mine by the name of Scott Simpson, a connection of the former Governor of the Hudson's Bay Company, Sir George Simpson. We particularly wanted to find out if we were going to be able to get through the Grand Canyon of the Liard on snowshoes, because we had no knowledge that any party had ever attempted to traverse this part of the river in wintertime. We knew also that, apart from McConnell's geological party ten years earlier, practically no travellers had been through the canyon at any time of the year since the route was abandoned as a trade route by the Hudson's Bay Company more than thirty years earlier.

The Grand Canyon of the Liard—as it was named by McConnell—is forty miles in length. It had a bad reputation throughout the whole north country, and it constitutes so effective a barrier between the Indians of the lower river and those of the upper that there was never any contact or intercourse between them. Its character may be gauged by some of the names in this portion of the river; Hell's Gate at the lower entrance, the Devil's gorge and portage at the upper end, and the Rapid of the Drowned about a third of the way up, all names given by the early voyageurs and indicating the sinister nature of the stream.

The Canyon has been cut by the river into the northern extremity of the Rocky Mountains where these mountains begin to dip down and die away northward into the plateau of the Nahanni River region. It is not very deep but has steep rocky walls which can only be ascended with difficulty in a few places. Through this gash the river rushes with such tremendous speed that a canoe was once reported to have descended from the Devil's portage to Hell's Gate, forty miles, in a little over two hours.

The Rocky Mountain system dies out just north of Liard River and the canyon is cut into its backbone before it disappears in the plateau to the north. Some fifty or sixty miles away to the northeast, the Mackenzie mountains spring up and continue northward through Yukon Territory. Between these two mountain systems is a great gap with a relatively low altitude, and it is through this gap that the air route, the North West Staging route runs from Edmonton to Fairbanks.

Aircraft which flew over the North West Staging route during the war—and there were thousands which passed over the section between Nelson and Watson Lake airports—carried officers and men of the Canadian, United States and Russian Airforces who looked down on the Grand Canyon of the Liard as they traversed the gap between the Rocky Mountains and the Mackenzie Mountains. In the winter of 1897 and 1898, such a development was unthinkable and a revolution in travel beyond the imagination even of a Jules Verne. Yet it came about in my own lifetime and is only one of many remarkable changes that have occurred in the north country in that time. The airplane does in an hour or two what it took us all winter to do on foot.

Pelly and I entered the Canyon at Hell's Gate on December 21st. We found the surface pretty smooth, but the going was rather heavy on account of the depth of snow. We found also that the canyon was generally frozen over at the Rapid of the Drowned near which we camped on our second night out. On Christmas Day we were at the upper end of the canyon. We had tried on that day to make our way through the Devil's Gorge, but found this impossible because the force of the stream had kept the water open from wall to wall of the gorge. The only alternative was the portage of four miles

over a mountain spur 1,000 feet high by a trail which had never been used in winter and only once in the summer in the last thirty years. This was the notorious Devil's portage, the evil reputation of which was responsible for the abandonment of the Liard River as a trade route from the Mackenzie to the Yukon.

It was not easy to find and follow the old trail, now snow covered to a depth of three feet. Also it was badly overgrown with trees and only here and there could we find an ingrown blaze to indicate the course of the portage trail. The climb of 1,000 feet was pretty heavy going on account of the deep snow and we had to take turns in breaking the trail ahead of the dogs. We were on the summit by the time the sun began to set and we were ready to make camp. It was the strangest Christmas I ever spent. Certainly nobody had ever spent Christmas Day on Devil's portage before and I am sure no one has done it since. Indeed, it is quite possible that no one has ever crossed Devil's portage in wintertime, either before or after our visit.

For Pelly and me, it was an unforgettable occasion because, in addition to our usual fare of bacon, beans and bannock, we had saved a tin of plum pudding which had come all the way from England and was reserved for this day. More remarkable still, however, was Pelly's contribution when he pulled out of his kit a small flask of brandy which he had carried since July without arousing suspicion from anyone. He had kept it for an emergency, and we both felt that that emergency had arisen on Christmas night on the top of Devil's portage.

Beyond the Devil's portage we found the travelling conditions good, and we were only a few days in reaching Muddy River Post. In this stretch of river we passed two interesting points. One was the group of hot springs which afterwards acquired a good deal of notoriety as being situated in the "tropical valley," but where in December, 1897, we found nothing resembling tropical conditions. The other point was the site of historic old Fort Halkett at the mouth of Smith River. Built in the early thirties of the last century and occupied by Robert Campbell, it had been abandoned now for over forty years. We camped one night at the mouth of Smith River but could find no signs of the old Post which must have been very much overgrown by that time.

When we reached Muddy River Post we were warmly welcomed by Scott Simpson who had not seen anyone for four months and who was surprised to have visitors in the middle of winter and particularly visitors who came from the east of the mountains and not from the West. We stayed and rested for only a few days with Simpson. There we found A. J. Stone of the American Museum of Natural History, who had come in by water from the Pacific and was waiting for a chance to get across to Mackenzie River.

Stone's principal interest was mountain sheep and on this particular trip he discovered and described a new variety, now known as *ovis stonei*. When Pelly and I started back to our camp Stone accompanied us with an Indian. We helped him carry some of his equipment down river as far as Hell's Gate, where he planned to cache it and pick it up in the spring. In return, when he went back to Muddy River Post he carried some supplies for us.

On our return trip we were able to go through the Devil's Gorge. It was not an easy passage, and in places pretty risky, as we had at times only a narrow ledge of ice frozen to the canyon wall on which to get by.

When we got back to camp on January 9th we found our party near the entrance to Hell's Gate. Progress in moving the outfit had been very slow. It was heartening to them to know that the canyon was easily passable except for the Devil's Gorge, but we hoped even it would be well frozen over by the time we reached there. That proved to be the case.

On January 11th, an inventory of our food supplies showed that we had 1,050 pounds of flour, 300 pounds of bacon, 200 pounds of beans, 100 pounds of dried fruit, rice, sugar and a few minor items. We also carried a seven-foot whipsaw. Tents and stoves, blankets and personal equipment made up the balance of our outfit.

When Stone and his Indian started back next day for Muddy River, Fred and Pelly went with them. Altogether, on four sleds they carried nearly 1,000 pounds. Owing to cold weather and deep snow they were nine days going up and, with practically empty sleds, twelve days returning.

Our whole party reached the Devil's Gorge early in February, and for several days, from February 12th to the 21st we were in camp on a narrow bench about half way through it with the roaring river in front and a steep cliff behind. The passage of the gorge was the trickiest part of our whole winter's travel, but even at that it was preferable to the hard climb over the portage. While most of it was frozen over from bank to bank there were still open stretches of rushing water around which we had to pass on narrow ledges of ice that clung to the shore. Some of these we had to cross with the aid of a rope, and even the dogs did not like the experience.

By this time we were getting pretty short of dog food. From time to time we all tried our luck at moose hunting but we couldn't even find any tracks of the animals. On one of these trips I managed to kill two partridges, but these did not go very far among four husky men and half a dozen hungry dogs.

9 The “Tropical Valley”

Our next camp, about fifteen miles above our gorge camp on the north side of the river, was the best we had all winter. This region became known years later as the “tropical valley,” and many silly and fantastic tales have been told about it. The Alaska Highway now runs right by this valley and has completely destroyed its glamour. The name, however, persists.

It was the 22nd of February when we reached this point and we stayed there until March 2nd. Our camp was pitched on a broad bench covered with a heavy growth of fine big spruce and poplar. A valley came down from the mountains behind the camp carrying a stream of clear water. On the bench were a number of open spaces which in summer could be identified as meadows, but now were covered with snow.

Here and there were pools of open water which normally would have been frozen over, but which were kept open by springs of warm water. Moose tracks covered the open patches to such an extent that we hoped to be able to kill one of these animals. We organized a drive as soon as we arrived, but we must have disturbed the moose while making camp, because we had no luck. As a matter of fact, we had little luck all winter long in getting game.

Hot springs, with temperatures as high as 100° F., occur in a number of places throughout this region, on the Liard, the Nahanni and Toad rivers. Other localities that appear to indicate hot springs were noted from the air by my party in 1935 on either side of the river at Devil’s portage but, owing to the difficulty of landing, these were not investigated. The best known and most widely publicized were the group about the camp that we made in February, 1898. This is the real location of the so-called “tropical valley.” Fred and I visited the locality again in August, 1899, when we were on our way down river in a canoe from Dease Lake to the Mackenzie. The Alaska Highway now runs alongside the valley and the springs were cleared out by the United States Army during the building of the highway. They are now used by travellers over the highway as a bathing resort.

We were not the original discoverers of the hot springs; they were known long before to the Hudson’s Bay officers and were referred to by Robert Campbell in his diary in 1837, when he was stationed at Fort Halkett.

The only other early visitor to the valley was Colonel J. Scott Williams in 1925.

Here I should digress to tell the modern story of the "tropical valley." The story originates with a Yukon prospector and trapper by the name of Tom Smith, who, with his daughter Jane, came to the hot springs from the West in 1923. Smith and his daughter, who was only fourteen or fifteen years of age, lived at the hot springs for two years and must have been quite successful in trapping furs.

With their two years' catch of furs they set out on the river for Fort Liard. They traversed the Devil's portage, ran the Rapids of the Drowned and successfully navigated the whole canyon. With all the dangerous water of the Liard River behind them they were able to relax. Through some mishap, however, their boat was swamped in a riffle, their whole outfit lost and Tom Smith was drowned. The girl hung on to the upturned boat and was swept on to a sandbar. Shortly afterwards she was rescued by a band of Indians who took care of her and ultimately turned her over to the Hudson's Bay Company at Fort Liard. Later in the summer she was sent the Anglican Mission at Hay River on Great Slave Lake and there she died in 1934.

The name "tropical valley" or "steam heated valley" was first given to the locality following an aerial prospecting trip conducted by Lieutenant-Colonel J. Scott Williams in 1925. Williams and his party of six, flying in a Vickers "Viking," landed on Liard River alongside the "tropical valley" and found the hot springs some distance back from the river and the cabins that had been occupied shortly before by Tom Smith and his daughter. Smith had left a message that he was heading down river for Fort Liard and the Mackenzie.

Stories of the tropical valley with its banana and orange trees, its monkeys and parrots and even its dinosaurs kept cropping up, mainly in the Sunday newspapers, for years after Williams' visit, and on each occasion I had to write a memorandum for Parliament or the Mounted Police refuting them. The legend however, would not die, and in 1935, as part of some other governmental duties, I determined to visit the locality by airplane and once and for all explode the idea that tropical conditions prevailed in a portion of our sub-Arctic regions.

An important purpose of this expedition, however, was to prove by aerial photographs that the Rocky Mountain system actually dies out about latitude 60° N in a broad, high plateau country, and that a great physiographic gap occurs in the eastern face of the Cordillera, separating the Rocky Mountains from the Mackenzie Mountains. Not only were geographers interested in this feature, but the Civil Aviation branch of the Department of Transport was anxious to know if a low level aviation route existed along this line,

which was on the great circle route from Edmonton to Alaska and on to the Orient. McConnell, in 1887, had drawn attention to this gap, but as the country was very largely unexplored little attention was ever paid to his observations.

The plans for my flight were made in co-operation with the Civil Aviation Branch of the Department of Transport, and were carried out by Canadian Airways Limited, which was assigned the contract to provide the airplane, fuel and crew. The party consisted of C. H. Dickens, O.B.E., pilot; W. Sunderland, photographer and mechanic; A. D. McLean, Superintendent of the Civil Aviation Branch of the Department of National Defence; and myself.

As far as the crew was concerned we were exceptionally well staffed. We could not have had any better pilot for the trip than Punch Dickens, who had earned himself a splendid reputation among a group of bush pilots that were famous all over the world. He was competent and careful, and perfectly willing to take a chance, but only after weighing the chances carefully beforehand. His navigating sense was uncanny, and he always appeared to know what he was doing and why he was doing it. Dan McLean, while not a member of the crew, was also a pilot with an enviable reputation both as a civilian flyer and a wartime fighter pilot. It was good to have him in the plane with us on a risky pioneer flight across mountains that had never been crossed before by plane in that latitude. Dan's chief interest was to spy out the land to see if there was reasonably good commercial air route through the mountains in this latitude. Bill Sunderland's duty was to poke his camera out of the window every minute or so and take an oblique photograph of the terrain below. His was a most exhausting job. The plane, a single engine Fairchild 71, weighing with full load some 6,000 pounds, had a range of 500 to 600 miles and was equipped with a radio set and an unmounted aerial camera.

We left Prince Rupert by plane and stopped overnight at Wrangell in Alaska, which I had not seen since March 1898, when Fred and I were making our last trip with the mail to Telegraph Creek. Here I visited one of our topographical engineers, R. Bartlett, who had broken his leg while climbing Anvil mountain in the Cassiar range and was a patient in the hospital at Wrangell. The next day, following Stikine River, we passed Telegraph Creek, and shortly afterwards crossed over the Pacific-Arctic divide to Dease Lake, one of the headwaters of Liard River. We landed at the head of Dease Lake, where I had made my headquarters in the spring of 1899. That night we made a hazardous landing on the narrow water of Dease River at McDame's Creek and spent the night there.

Next day we followed Dease River to its junction with the Liard, from which point down to Fort Liard on the eastern side of the mountains Sunderland took, every minute and a quarter, from an elevation of 2,500 feet, a steep-angle, oblique photograph of the river valley and of Grand Canyon in particular between the Devil's Gorge and Hell's Gate. This was the first airplane crossing of the mountains in this latitude and one that required considerable planning and a great deal of skill and nerve on the part of Pilot Punch Dickens. Before leaving McDame's Creek we had taken aboard some extra gasoline in tins in case our tanks became exhausted. It was a foresighted thing to do because by the time we landed at Fort Liard we had only twenty minutes supply left. To our annoyance, we found that our radio had gone out of business and we were unable to send a message to the outside that our crossing had been accomplished.

From Fort Liard we returned west the following day almost to Dease River, and at a height of 10,000 feet photographed two east-west strips of the unknown territory north of Liard River at the northern end of the Rocky Mountains. A landing was made at the "tropical valley." The next day we made another flight northwest from Fort Liard through this unmapped area toward the headwaters of Beaver River and came out at other hot springs about twenty miles up South Nahanni River.

Our photographs definitely prove that the Rocky Mountains terminate at Liard River, after extending as a continuous group of ranges for about 1,000 miles, and then pass gradually into the plateau region to the north, a fact first recognized by McConnell in 1887, and definitely confirmed by the observations and photographs taken on our flight. South of the river the skyline is cut by a series of sharp peaks which, in some places joined by knife-edged ridges, stand well above the timber line, whereas to the north the topography is subdued, with rounded summits that only very occasionally reach beyond the timber line.

Mackenzie Mountains begin at latitude 60 degrees, immediately west of Fort Liard and across the wide gap which separates them from the Rocky Mountains. They then extend northward and then northwesterly for about 600 miles as a gradually broadening belt of mountains, which, on the line of the Ross and Gravel Rivers, have, according to Keele, a width of 300 miles. Mackenzie Mountains are said to be the greatest single group of mountains in the whole of Canada. They comprise some 75,000 to 100,000 square miles. Their eastern face is visible from Mackenzie River all the way from Fort Simpson almost to Fort Good Hope. They are largely unexplored, and their structure and history are unknown. They constitute perhaps the most difficult region to reach in the whole of Canada, and in all probability will be one of the last areas of this country to be accurately mapped.

On our first flight down Liard River, I identified our camp of February 1898 in the "tropical valley" and on the following day we landed there. After scouting along the bank, McLean and I found a trail running up on to the bench and through the woods. Following this for a third of a mile we came to a broken-down cabin with a tree across the roof. On the door of the cabin was a notice in block letters reading "Moved to the Hot Springs," with a hand pointing northward. Following the trail in this direction we came to an open meadow in which the vegetation was most luxuriant, but of a kind common to the country. Grass in the meadow was seven feet high, and other vegetation was equally rank. We could only follow the trail through the meadow by feeling for it with our feet and we frequently lost it.

Searching around at the end of the meadow we again picked up the trail, and at the end of two or three hundred yards we came into a beautiful grove of large spruce and poplar in which were two log cabins with their roofs crushed in. A whipsaw, an axe, some pots and empty tins were scattered about, but it was apparent that the occupants of these cabins had left many years ago. There were many signs of both bear and moose. A stream of clear water ran near by, and there were many old game and other trails radiating from the cabins. These seemed to lead to no place in particular, and we found it difficult making a way through the thick undergrowth, but when we flew over the spot later in the day we sighted springs a short distance from the cabins.

Examining the cabins more carefully, we found a notice on the door which read "Leaving for Fort Liard." This was no doubt Tom Smith's last message to the world, for it could not have been many days after he had written it that he was drowned in the Liard, and another life added to the many that the river has claimed both before and since.

Below Tom Smith's message was another notice, dated March 25, 1929, four years after Smith's departure. This was signed "Leo and Fred" and indicated that they were proceeding to Wind River, a stream joining the Liard a few miles higher up. Who Leo and Fred were I have not found out, but presumably they were trappers.

There is a curious sequel to the story of Tom Smith. I was making my presidential address to the Canadian Geographical Society in the Chateau Laurier, Ottawa, in January, 1936. My subject was the flight across the mountains from Wrangell on the Pacific Coast to Fort Simpson on Mackenzie River. In the audience was a friend of mine, Dr. Edward Samson, professor of geology at Princeton University. Afterwards, my friend came up to me in some excitement and said: "You have solved a mystery which has been bothering my father and myself for some years." "What was the mystery?" I asked. "Tom Smith," he replied, "was an old friend of my father

and we have been looking for him for years. He disappeared in the Yukon country some time after the Klondike rush, and although we have made inquiries about him, we could not find a trace of him. Now we know what happened."

10 Starvation on Frances Lake

Our progress up the river during the winter of 1898 was pretty slow owing to the number of relays we had to make. As time passed and we used up our supplies, however, we made faster progress. We travelled every day of the week except Sunday, which was devoted to cleaning up and repairs, and to cooking enough bread and beans to last us the week. Our bread was made in a huge iron dutch oven and at bread making Wright was the expert. We each took turns at cooking, a week at a time.

We had hoped during the winter to be able to vary our diet with fresh venison but we got only one moose all winter long and except for our camp at the hot springs we saw no fresh signs of game at all. Our diet became very monotonous, and as usual under such circumstances our conversation was frequently about the good meals we had had and the good ones we would like to have.

Items from Fred's diary at this time indicate our growing concern about dog feed, and he notes that on February the 27th he killed one of his two dogs to feed the others and on the following day Pelly killed one of his. Pelly's dog, however, was so thin that he was not worth skinning.

An item on March 5th reads: "Warm day. Temperature, plus 18°. Pelly, Charlie and I took a load up river. On the way back a sudden storm blew up with hail and snow lasting half an hour. Wright went hunting and returned with five squirrels, two whiskey jacks and one partridge." Not a very satisfactory bag.

Again on March 6th, "Cloudy and windy; temperature, plus 28°. I went hunting and killed one porcupine and one grouse. Charlie is cook this week." The diet was obviously not too good, but I was responsible only for the cooking.

We reached Simpson's Post at Muddy River on March 11th, and for a few days we lived well and enjoyed the comfort of a roof over our heads and a warm place to sleep. It was here that Pelly, who had been getting fed up with our slow rate of progress, decided to push on at the first opportunity as fast as he could, for the Klondike.

On March 17th, Fred records: "We now all have sleighs with runners, instead of toboggans. Charlie took 415 pounds, Wright 260 and myself 300,

a total of 975 pound. Pelly and Co. left for Klondike." "Co." in this case meant an Indian guide.

Another item on March 22nd reads: "Cloudy and mild. Snowing in the evening. Started at 9.30 a.m. and moved twelve miles up river, passing a Chinaman's house (abandoned) half way. Going through a canyon saw a band of wolves coming down the river. Got out my rifle hoping they would come close enough to get a good shot. They came within 300 yards and stopped. I fired three shots and missed. Two of the wolves started across the river in the deep snow. I set out after them but my snowshoes were too small so I gave the rifle to Charlie. He had a larger pair of snowshoes and was able to get a good shot. He killed one as he was going up the bank. Skinned him and will use the meat for dog feed along with rice."

On March 23rd, the diary states: "Clear and cold, blowing and drifting all morning. Went down river for a load at 8.30 a.m. and had a tough trip. Returned at 7.30 p.m. but had to throw off part of our loads four miles back. Wright got in at 8.30 with all his load. He froze his feet slightly from getting them wet."

While we were on the move we had all from time to time tried our hands at hunting for big game, mainly moose or sheep, but at no time were we successful in making a kill. We had counted a great deal on supplementing our imported food supply with venison, but we had no luck. Our hunting expeditions resulted only in a bag of small game, which didn't help very much. Our diet therefore was a monotonous one consisting of flour, bacon, beans and rice. Yet we did not suffer in health and we never had any suspicion of scurvy, a disease which affected a good many others who later followed the same route as ours.

These were some of the difficulties and inconveniences that we had to face at this stage of our journey. One thing, however, we never had to face, and that was quarrelling among ourselves. Certainly there was many an occasion for doing so, but we were all pretty experienced in this kind of life and realized the necessity for tolerance and self control.

We reached Lower Post at the mouth of the Dease on the 12th of April. The Post Manager, Mr. Egnell who was alone at the Post at the time, was on short rations of food and could not spare us anything from his stock except a fifty-pound sack of flour. This we bought from him for $50. He was planning to spend the spring fishing at a lake about fifteen miles north. This is now known as Watson Lake and is one of the principal air fields on the Northwest Staging route. Egnell would have turned over in his grave if he could have seen the wartime fleets of airplanes going by on their way to Alaska and Russia.

We had gradually made up our minds—all except Pelly—that it was not much use pushing on to the Klondike gold fields, as we felt that all the available gold-bearing ground would have been staked by the time we reached there. We therefore decided to go on to Frances Lake and prospect the country that Dr. Dawson had thought so promising.

Pelly, on the other hand, shortly after we left Muddy River, had engaged some Indian help and pushed on across the divide to Pelly River and then on down stream by raft to Dawson. He found, just as we suspected, that there was no open ground left on the Klondike creeks. He stayed long enough to have some money sent to him by wire for his passage out, then left for home.

We were now in the Cassiar country, which had been discovered as a placer gold region some twenty years earlier, and some millions of dollars worth in coarse gold had already been mined from its creeks. The creeks were mainly those flowing into Dease River, the most famous of which were McDame's, Thibert and Dease. There were, however, many others known to carry gold, as well as the bars of the Liard River itself. As a matter of fact, Mr. Egnell, the manager at Lower Post, was mining a bar not far below his trading Post and making as he said, wages from it, that is to say about $10.00 a day. Egnell was systematically working half a dozen bars on the river, taking one each year. Each of these was situated immediately below a thick gravel cut-bank, and as the river cut into this bank in the season of high water it washed away the gold from the cut-bank and deposited it again on the head of the bar immediately below. Egnell merely skimmed a few inches of the surface to get the gold, which he found to be concentrated on the upper end of the bar. He worked half a dozen bars in as many years and by the time he had finished the last one the first had a fresh deposit of gold and was ready for working again.

Generally, however, placer mining in the Cassiar had passed its peak. It had passed out of the hands of the individual white placer miner into the hands of a few Chinese or had gone into the stage of hydraulic operations. No lode mining had yet been undertaken.

Our party, consisting now of Wright, Fred and myself and three dogs, reached Frances Lake on April 29th. The lake was still covered with ice, and snowshoe travel was just about over. Our first job was to find a camp ground where there was good standing spruce from which to get the planks for a boat. We had carried a whipsaw with us all the way from Fort Simpson for this purpose. We found just the spot we wanted on the east arm of Frances Lake at the entrance of a small stream opposite Nipple Mountain, and there we settled down to pass the spring and build our boat. After we had squared enough logs Wright and I sawed them into boards, while Fred dressed them

on a bench of his own making. In a little over two weeks we had a good boat which we used on Frances Lake and which ultimately carried us down Frances River to Lower Post.

Frances Lake—named by Robert Campbell after the wife of Sir George Simpson—is one of the most beautiful lakes it has been my good fortune to see. It occupies two almost parallel valleys each about thirty miles long and about a mile and a half in width. The two arms are separated by a low mountain range, the culminating point of which is Simpson's Tower. The scenery of the east arm is particularly striking; here the rugged peaks of the Too-tsho range rise above the timber line to culminate in Mount Logan, 9,000 feet above the sea. It was the Too-tsho range, snow covered until on into July, that faced our camp across the lake, and it was the Too-tsho range that Dr. Dawson thought might carry some gold-bearing quartz veins.

It was not long after we reached Frances Lake, that is to say early in June, that the provisions we had carried all the way from Fort Simpson became exhausted and we ate our last meal of civilized food. I still remember that meal, because we made a bannock out of the last few ounces of flour. The inside of the flour sack was scraped to produce it and as a good deal of the cotton came off in the scraping the resulting bannock was a mixture of flour and cotton.

It was the 10th of July when we got our next square meal, and that meal also I will never forget. It took me two weeks to recover from it. During the interval of over two months we sampled every living thing that had flesh on it and could be killed with a gun; rabbits, ducks, geese, partridge, porcupine, squirrels, gulls, fish, fish hawks and finally wolf, all helped to keep us going. For the last six weeks of this period we never had more than two skimpy meals a day, and we had to work hard to get those. Occasionally we went a whole day without food and once in traditional style we had to eat stewed moccasins.

We had salt and tea and some tobacco. We also had guns and ammunition and fishing tackle, but what we needed most was a fish net, which we had not been able to get before leaving Fort Simpson. A net would have been invaluable on Frances Lake. For breakfast we could usually count on cranberries that had been preserved under the snow from the previous season and could be found during June in shady spots in the woods. Many a tree we cut down to get at the nests of fish hawks, which contained either eggs or young birds, all of which went into the pot.

My little mongrel dog, Nugget, was after all, the best provider, and I am afraid without his help we might have had some difficulty in pulling through. He was a wonderful little animal. In harness he was always willing. In the spring when the crust was on the snow he never got sore feet and I

never had to put moccasins on him. When we were in our spring camp and all our time was devoted to building our boat he hunted day and night. Often we could hear him barking far up the mountain side or down by the lake shore. Then I knew that he had a porcupine treed and he would bark until someone came and killed it. He had learned by painful experience that it was not advisable to tackle the animal himself.

The mosquitoes were our greatest trial. They are everywhere in the north country and the farther north one goes the more vicious they seem to become. But the upper Liard mosquitoes are also remarkable for their size. According to a wartime story, one of these huge mosquitoes landed one day on the Watson Lake airport and the ground crew filled him up with eighty gallons of gasoline before they found he was not a bomber.

An entry in Fred's diary of June 4th at our boat building camp states: "Wright and I began building the boat today. Finished and nailed on the bottom frame; also the ends. Charlie off gathering gum. Put ourselves on rations today of two tablespoons of stew each and two small slices of bread per meal. Dog rations—nil."

In spite of short rations we worked twelve hours a day, from 11 a.m. to 11 p.m. None of us had ever built a boat before so that when we launched the craft at midnight of June 9th we were speechless with admiration of her lines.

When the boat was finished we moved up to the head of the east arm of the lake and made our camp a little way up the valley of Thomas River on an open gravel plain where we could get some relief from the myriads of mosquitoes. From this base we did a little prospecting for placer gold—when we were not hunting for food. We even made a three-day trip into the Too-tsho mountains on a search for gold quartz veins. Mainly, however, our purpose was to see if we could get some mountain sheep, signs of which we had noted on the lower slopes. The sheep were there all right, but we never got a shot. When we got back to camp we were pretty well exhausted because in the three days we were away the only food we were able to get was one porcupine, and that did not go very far for three men and two dogs.

It was shortly after this that we were reduced to eating wolf meat. The diet is not to be recommended at any time, and I am confident that Duncan Hines would not include it among his *Adventures in Good Eating*. I don't know what wolf meat is like when fresh, but this was from the hind quarters of an animal that Fred had killed a week before and he had only found it after it had been lying in the June sun for four days. He had cut off both hind quarters and carried them into camp thinking the dogs would eat them, but they had refused. Now after three more days of exposure the meat was riper

than ever and could easily be identified down wind from where it was hanging in a tree.

Shortly after this we lost our dogs. They had gone off on a hunt of their own, probably on the trail of a moose, and we could hear them barking far up the mountain side. A little later we heard the howl of wolves in the same direction and when the dogs did not return to camp that night we came to the conclusion they had been killed.

With the loss of our dogs we began to feel, early in July, that it would be advisable for us to go down river to Lower Post in the hope that the supplies we had ordered through Egnell when passing his place in April would have arrived.

As we passed through the narrows at the south end of the east arm of Frances Lake we stopped to see if we could find any sign of old Fort Frances which Robert Campbell had visited fifty or sixty years earlier on his journeys to and from the Yukon watershed. Nothing, however, was left in what once was a clearing except a pile of stones which had been the fireplace. Fort Frances was another of those old Hudson's Bay Company Posts that had to be abandoned because of the difficulty of servicing them by the Liard River route from the Mackenzie. It was never a very important Post.

It was situated in a good fur-bearing country, but the natives were very primitive, difficult to handle and governed by all sorts of queer superstitions. Human life did not matter very much when these superstitions were aroused. Drowning by stuffing the victim through a hole in the ice was a favourite method of disposing of persons who were suspected of practising witchcraft and of bringing about bad luck in hunting or trapping. It was after my time that these practises were called to the attention of the government and a small detachment of the North West Mounted Police had to be sent in to check them.

As soon as we got into Frances River we noticed fish rising. They proved to be grayling. So we camped for several days at the mouth of Tyer's River and fished. We now had lots to eat even if it was only fish for every meal. We were able also at this camp to build up a small reserve of smoked fish for our trip down to Lower Post.

On the three preceding days our main diet had been wolf meat. On the 25th Fred records that we "had some wolf for supper, roasted, not very good, but better than nothing." On the next day we had devilled wolf with cranberry sauce. On the third day, however, when we were in Frances River, Fred says: "Had three square meals today, the first for some weeks. For breakfast we had stewed duck and porcupine; dinner two bluefish and one-third of a trout each; supper, we had one bluefish with half a pound of wolf

steak with cranberry sauce." This, fortunately, was the last of the wolf meat. It was getting much too ripe.

Frances River is not a difficult river to navigate, as far as mountain streams go. At the same time it is not one that a greenhorn can travel without danger of being swamped in the rapids that occur in two, at least, of its canyons. Even with our fairly large boat we had to be careful, and thought it safer to make a couple of short portages instead of risking a run through the broken water. In our weakened condition these portages, even though only a few yards long, required a good deal of manoeuvring.

Shortly after we left Frances River and were drifting down stream on the Liard, we noticed a boat drawn up on the shore and two men cooking their mid-day meal. This looked good to us. It was Sunday, the 10th of July, and we had not seen a solitary human being other than a stray Indian for three months. We were ragged, dirty and half-starved, and we naturally anticipated an invitation to a good square meal.

We pulled ashore, shook hands with the two men and began to ask some questions as to what had happened in the outside world during the last year. We were very much behind the times and the last events that we knew anything of had occurred twelve months ago. We also made some inquiries as to where they were going and found that they were bound for a famous old placer stream, Sayyea Creek, on the upper Liard river which was said to have produced some very coarse gold in the early days of the Cassiar gold rush. They had with them a sketch map of this stream showing the location of the rich portions, a map which they said they had bought for some $300 from a man they had met in a saloon in the United States. Later we found several prospectors with copies of the same map, which the vendor must have sold to dozens of prospectors for the same amount. In one case the owner of the map told me he had got it from a friend while the two of them were engaged in shingling a barn in the Okanagan country in the State of Washington. The maps were no good, as these fellows found out later, and the person who sold them was probably never at the locality in his life.

While this conversation was going on we watched the prospectors eating their lunch, but no invitation came to us to join them. When we offered to buy some food from them, they declined, saying that while they had supplies enough for three months in their boat they could not afford to dispose of any of it. However, they said that there was a large party coming up river behind them with ample supplies and we could no doubt get some from that source. This was the first and only experience of my whole life in the north country, or among prospectors anywhere, that I was not invited to join in a meal when coming into a man's camp. I remember to this day the names of these two men, but the only excuse that I can make for them was that they were

cheechacos. They came from Chicago and they had never been out in the wilds before. They did not understand the customs of the north country, and the spirit of hospitality that characterizes its people.

There was nothing for us to do but push off and continue our course down stream. It was early in the evening when we caught sight of the second party of prospectors. They were obviously in camp for the night. They had finished their supper and were taking it easy about the campfire.

As soon as we landed we were greeted by the cook with the question: "Have you boys had your supper yet?" Our reply was that we had not had a really good meal for over two months and could do with one now. His response was immediate, and soon we were tucking into bacon and beans, desiccated potatoes, bread and butter, dried fruit and sweetened tea with condensed milk—the kind of food we had not tasted for many weeks.

The party was made up of Canadians from Collingwood, Ontario, and known as the Patterson outfit. They were all men who had spent some time in the woods and had acquired the habits and spirit of men who lived close to nature. Our condition must have been perfectly obvious to them and their response to our needs—which did not require expression—was quick and generous.

We stayed with them only a couple of hours and on leaving they provided us with enough food to last three or four days even though we expected to reach Lower Post the next day.

Baggage transfer, Fort Resolution, September, 1914

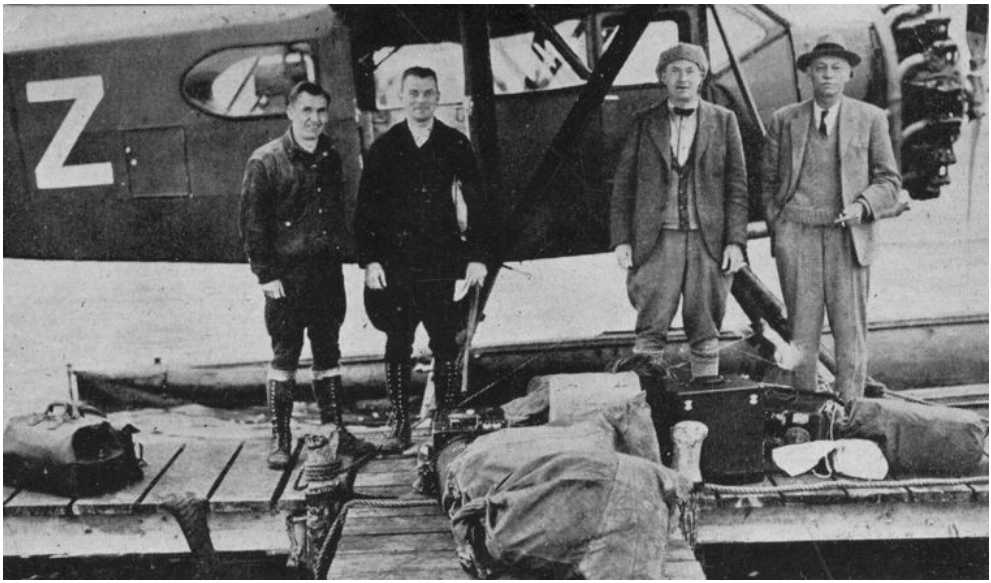
Ox carts loaded with fur at Fort Smith
(*Photo by courtesy of the Hudson's Bay Co.*)

Later the same evening we came across another party of ten men, the Caldwell outfit, in four boats, who were on their way up the Liard river to Sayyea Creek. After a late supper with these people we turned in for the night, beginning, however, to feel a bit uncomfortable in the stomach.

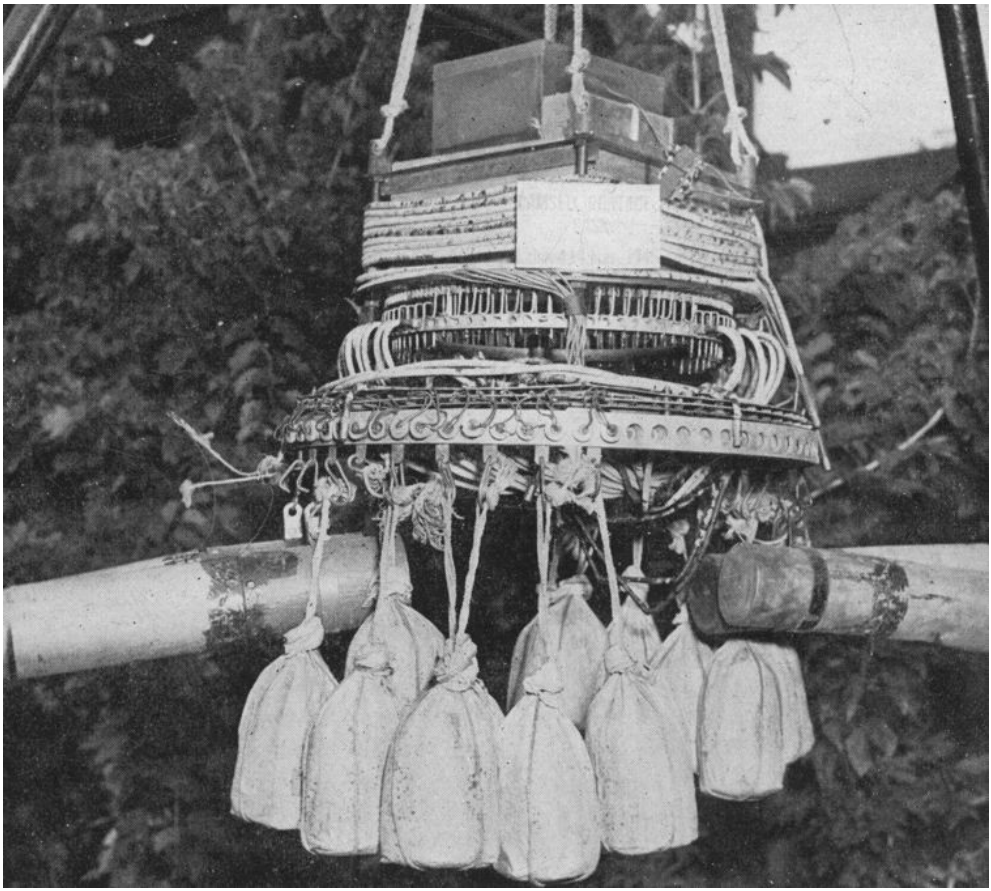
The next day we lunched with two Englishmen who were heading for Frances Lake and the Pelly River. We camped early that afternoon because, as Fred records "Charlie and Wright have indigestion and I feel very full."

We had now only about fifteen miles to go and only one piece of tricky water to run through, at the Canyon, where Dawson had marked the British Columbia-Yukon boundary with a wooden post. It was not long after we left our hospitable Klondikers that we realized that we had eaten unwisely and too much. Pains began to develop in our stomachs and when we camped for the night we got no sleep at all. We reached Lower Post in the morning still suffering acutely from the effects of our heavy meals, and indeed it was ten days before any of us was able to get about and fend for himself. Starvation had come upon us so gradually at Frances Lake that we did not realize how

famished we were and that we should eat carefully and sparingly for a few days before getting back on a full diet.



John Sunderland, Punch Dickens, Dan McLean and Charles Camsell at end of 4,000-mile trip through the Subarctic, 1935



Japanese balloon in 1944 at Camsell Portage, Athabasca Lake

It was fortunate in a way for me, that I did get ill from overeating, because a day or two after our arrival at Lower Post I was invited to guide a party of two men in a boat through the Canyon at the Boundary Line. The men were not very experienced boatmen and the Canyon had some pretty rough water in it. I could not accept their proposition because I was too weak, so they went on alone, one of them on shore with a towline and the other in the boat to steer it. Late that evening we saw an upturned boat drifting by down stream and, as the two men were never seen nor heard from again, we came to the conclusion that they were drowned in trying to get through the Canyon. Nobody at Lower Post seemed to think it was necessary to investigate this case. We were all transients. There was no police or other government authority nearer than Telegraph Creek, 250 miles away, to whom the case might have been reported, so it was simply

forgotten. If I ever knew the names of these men, I have long since forgotten them.

There must have been scores of cases of disappearances like these all along the routes travelled by the Klondikers. I hear even in recent years of men who have completely disappeared in the great untravelled parts of northwestern Canada. The common conclusion is that these men were deliberately killed by other men, but it is far more likely that they died by accident, starvation, scurvy or some similar cause. I knew of many cases of death or disappearance, but never of any proven case of murder. It is more likely that some of those men who disappeared had voluntarily hidden themselves in order to avoid the accusation of failure.

11 DEASE RIVER EXPERIENCES

By the time we returned to Lower Post our illusions about making a quick fortune from placer gold had pretty well vanished. The Klondike madness had passed and we were faced with the necessity of finding the means of making a living. I had very little money, and after buying a few food supplies and clothing from the Post Manager I was quite broke. It was agreed that we should break up our partnership and from then on it would be every man for himself.

Although there were a few prospectors passing through Lower Post on their way to the Upper Liard, where they intended to prospect for placer gold, there was no opportunity to get any employment out of these people. They were men who had put all their money into a prospecting outfit and they all planned to work their own way without help. Fred and I therefore decided to go south to Dease Lake, 180 miles up stream where there was more activity, or even to Telegraph Creek 75 miles farther on where some prospectors were still arriving on their way through to Teslin Lake and the Yukon or to the Cassiar country. Wright elected to come with us to Dease Lake and perhaps later to push on into the Yukon. This he ultimately did. When we finally parted from Wright it was with a great deal of regret, because he was a very capable and resourceful northern traveller, a first-class companion and a good man to have in a tight spot. When we met again he was an old man near his end, blind and a pensioner of the Powell River Lumber Company. All he had left was his radio and his memories.

We disposed of most of our outfit, cached some of it with Egnell, and with a light camp outfit and food enough only for one day started by boat up the Dease River to Dease Lake. The distance by water is about 180 miles but there is an overland trail which cuts across a big bend in the river to McDame's Creek and reduces the distance to 150 miles. It was not a good time of the year to use the overland trail because, on account of high water, the main river was not fordable and the tributary streams flowing into the Dease were not easy to cross. We got as far as McDame's Creek by boat, but from there we followed the overland trail to Dease Lake, carrying our outfits on our backs.

Near McDame's Creek we met a detachment of the North West Mounted Police under Inspector Moodie on their way from Edmonton to Dawson. The detachment, consisting of eight men with the necessary pack and saddle horses, had left Edmonton the previous summer with the purpose of selecting the route of a wagon road to Dawson, and when we met them about the middle of August they were engaged in getting their horses and supplies across Dease River. The detachment ultimately got through to Selkirk on October 24th, about the only party of the numbers who tried it that succeeded in getting through by the overland route. This overland route was widely advertised in all parts of the continent as an easy and quick route to the Klondike but of all the routes this was the most difficult and its course for hundreds of miles out of Edmonton was strewn with the wrecks of material and equipment. It should never have been attempted at any time, and there were proportionately more disasters on it than on any other route to the Klondike. Men came struggling in to McDame's Creek all through the summer of 1898, and even in the spring of 1899 a rescue expedition, of which my brother Fred was in command, had to be sent out by the Government of British Columbia to gather up the human wrecks that were stranded along the way. These men had come over the overland trail or had followed our route up the Liard. Most of them were suffering from scurvy and few would have survived without the help that was brought them.

On this trip up the Dease River in August, 1898, I recall meeting two men who afterwards made their mark in life. One of them was Constable H. S. Tobin, of Inspector Moodie's party, who afterwards practised law with Hon. Duff Patullo in Dawson and, after a very successful military career in South Africa and the first World War, became one of the outstanding business executives of western Canada. The other was Dr. D. F. McDonald of Nova Scotia, who was in charge of one of the Hudson's Bay Company's scows on the river. McDonald afterwards joined the United States Geological Survey and was the chief geologist for the Panama Canal Commission at the time of the building of that waterway. He ended his career in his native province as professor of geology at St. Francis Xavier University, Antigonish.

When we got to the Post of Laketon, about half way down the west side of Dease Lake, we were fortunate in finding our old friend Scott Simpson, whom we had last seen in March at the Muddy River Post on the Liard. He was representing the Casca Trading and Transportation Company, a Victoria organization financed by that great northern traveller Warburton Pike and his partner Clive Phillips-Wooley. The company was not only engaged in trading activities but was conducting some hydraulic operations for the recovery of placer gold on the upper waters of Thibert and Dease Creeks.

Simpson needed some help in building a store and warehouse so we decided to take on what he had to offer in the way of employment and make this our headquarters for the winter.

Whether we rented it or bought it, or whether we simply took possession of one of the empty cabins about the place I have now forgotten. In any case we were soon quite comfortably settled in a one-roomed log hut equipped mainly with a stove and a couple of wooden bunks. Here we lived until some time after the new year. It was very comfortable to be in a house after living for about a year in a tent.

Where living conditions were as primitive as they were at Dease Lake in the summer of 1898, it was inevitable that one should find himself at times in rather strange circumstances. A university education and a cultural background were sometimes not nearly as useful as a knowledge of how to handle an axe, or a paddle or a boat. Brawn seemed often more valuable than brains in a community where all of one's energies had to be devoted to the mere business of living.

One such peculiar situation developed about the middle of September when I was offered a job on a scow loaded with supplies for Lower Post. It was late in the season for such a trip and there was danger that we might be caught by winter before we could finish the 360-mile round trip. However, I accepted the offer because I needed the $3.00 a day paid to a boatman.

The boat was a flat-bottomed scow about thirty feet long and was loaded with seven or eight tons of freight. The crew comprised six men, four of them on the fourteen-foot oars, one in the bow with a pole to help in steering in the crooked narrow stream, and a steersman in the stern. The background of the crew, however, was the interesting feature of this party. The four oarsmen were all university graduates, two from Cambridge, one from Dublin, and one from Manitoba. One of the Cambridge graduates had shipped as cook in addition to oarsman and he got one dollar a day more for the additional work involved. The second in command, the man in the bow, was a half-breed and the captain of the whole outfit was a full-blooded Indian, who could not speak much English and usually gave his orders through the half-breed.

This would appear to be a topsy-turvy set-up, but it was natural and quite logical. A knowledge of the river and how to handle the scow in rough water were far more valuable than the ability to quote passages from Virgil or Homer. I must say, however, that the two Cambridge men knew how to handle an oar. One of them, L. Giblin, was an Old Blue and had represented his college in the boat races. He afterwards became professor of economics at Melbourne University and chief economist for the Government of Australia. The other, M. A. Grainger, became chief forester for the Province

of British Columbia, and afterwards took a prominent part in the timber trade of that province. The Irishman, Johnston from Dublin University, disappeared entirely from my ken; one of the ships that pass in the night.

Some of the experiences of that scow trip down Dease River have been indelibly impressed on my memory. Grainger had shipped as cook and in my judgment he was a good one, certainly the best in the party. He got a dollar a day more than the rest of the crew, but as he had to do the same amount of work as the oarsmen as well as the cooking, the additional pay was well worth it.

The trip down river was relatively easy in spite of very bad snowy weather and the crooked winding nature of the stream in its upper part and the rapids in the lower reaches. At McDame's Creek, however, where we had to unload part of our cargo, the Indian captain protested to Amos Everson, the Post Manager, that he did not like Grainger's bannock and refused to go any farther unless a change were made. Giblin and I were both competitors for the extra dollar a day attached to the position of cook, and when we tossed for the job it fell to me for the rest of the trip.

Whether I was able to satisfy the Indian or not I don't know, but he had to take it as there was no later point on the trip where he could conveniently go on strike and get away with it.

The return upstream from Lower Post to Dease Lake was tough going. It was late in September. Ice was forming in the bays along shore and there were occasional snow flurries. The four University men walked the shore all the way back towing the scow with a tracking line, sometimes up to our middle in the icy water, while the Indian and the half-breed were comfortable and dry on the scow. We travelled every day until darkness came on and by night time the tracking line was stiff with a coating of ice. We started every morning before daylight, while the stars were still shining in the sky, and we ate four meals a day consisting mainly of bacon, beans with bannock cooked in a frying pan before the open fire. The cook certainly earned the extra dollar a day for his job. By the time in the evening when supper was cleaned up, the bannocks for the next day baked and the beans in the pot cooked, it was nearly ten o'clock and everyone else had been asleep for a couple of hours. When we got back to Dease Lake, winter was practically on us, and we were glad to be finished with that kind of boating.

Before we settled down for the winter at Laketon I had to make a trip to Glenora on Stikine River to get some documents and instructions from Warburton Pike. The distance is about one hundred miles but the trail was a good one and was used all summer by trains of pack mules to carry supplies into Dease Lake. The freighting, however, was all over, so I had to make the journey on foot with my grub and blankets on my back. I took no tent with

me but slept in the open under the branches of a spruce tree. It was the last ten days in October and daylight was shortening up. The weather was also turning very cold and snow fell for three days of the return journey. It took me four days each way and the day after I got back to Laketon a howling blizzard blew up and winter had settled down on us.

In the meantime Fred and Scott Simpson with occasional help from Grainger and Giblin had been busy getting out logs for a dwelling house and warehouse at Laketon. These logs were cut wherever good standing timber could be found near the lake shore and within a few miles of Laketon. We skidded the logs down to the lake and then transported them in rafts to the settlement. It was bitterly cold work but Fred and I needed the job and were pretty well paid for it. It became increasingly cold and stormy as winter advanced and rafting only ended on November 19th when our last raft broke up in a storm and the logs got frozen in the ice.

Throughout December we hauled more logs across the ice with a dogteam until we had all that was necessary for the two buildings. Then came the back breaking job of sawing some of these logs into boards with a whipsaw which Simpson and I handled.

On Christmas day we had the usual festivities of the occasion with a bang-up dinner in Simpson's house. Fred describes this dinner in his diary as having all the customary trimmings. On New Year's day Simpson invited us for another dinner and we had with us our friends Grainger and Giblin who just returned in time from a three-weeks trip to Telegraph Creek. The temperature that day was a brisk 38 degrees below zero, but Grainger and Giblin seemed to enjoy travelling and camping out in those temperatures.

12 Winter in Cassiar

With a certain amount of repairs and plastering of chinks with mud our one-roomed cabin at Laketon on Dease Lake proved to be quite comfortable quarters in which to spend the winter. It was just over a year since Fred and I had last slept for any length of time under any kind of a roof except a tent, so we felt as if we were living in the lap of luxury in our new home.

The resident population of Laketon was small, not more than thirty people in all, but there were also a certain number of transients drifting in all through the winter, victims of the Klondike rush. One night, while we were having our supper, a knock came at our door. When the door was opened and the light fell upon the face of the man standing there in his rough winter clothing, I immediately recognized one of the two men we had met on Liard River in July and who had refused to give us a bite to eat. He came into the cabin and in due time was eating supper with us. He obviously did not recognize us and we did not enlighten him. We had evidently changed a good deal since he had seen us on Liard River.

The conversation was gradually turned towards his trip up the Liard and he admitted having found nothing, that his map was no good and he was going home. He also referred to the fact that he and his partner had met three men while on their way up Liard River in July, that they looked half starved and in fact were “bent up like fish hooks.” He said that he and his partner had often talked of that meeting and regretted that they had not given these fellows something to eat. Since that time he and his partner had experienced some of the hardships of the prospector’s life. That experience had taught them understanding, and they had become much more sympathetic to those who were up against it.

After supper he went out of our cabin and found a place elsewhere to sleep for the night. Next day he went on his way and passed out of our lives completely. He never knew, though he may have suspected it, that he was telling his story to the two men who were the victims of his own selfishness, nor that he was accepting the hospitality of these same two men. The wheel of fortune turns that way sometimes.

So many of these stragglers passed through Dease Lake that winter on their way out of the country that they made a considerable drain on the

limited food supply of the Post. Additional food supplies from the outside could not be obtained during the winter as we were ninety miles or so from Telegraph Creek and about two hundred and fifty miles from Wrangell on the Pacific Coast. We had, therefore, to supplement our food supply with game.

During the early part of January Fred and I with Simpson, Grainger and Giblin went off on one of our moose hunting expeditions. We each carried only light packs, with some food, an axe and cooking utensils, but no tent or blankets. We expected that we might be able to get back home the same night. The weather was good but the temperatures were too low for good hunting—somewhere about the freezing point of mercury.

As we snowshoed up the north slope of Mt. McLeod, we killed a bull moose in the open country near the edge of timber line. This we butchered and cached to be picked up by dog sled later on.

On the south side of Mt. McLeod in the valley of a small stream, we killed two more moose. Three moose in one day was pretty good hunting, so, after butchering the animals and caching the meat, it was decided to call it a day and go home. Grainger and I however, elected to stay with the kill over night in order to protect it from any wolves or wolverines who might be attracted by the smell of blood.

It was a bitterly cold night, but we kept a fire going continuously and even without a blanket we were able to get some snatches of sleep in our small brush shelter. We were however very glad to see Fred and Giblin come in the next morning with dog sleds to haul in the moose meat. They told us that the thermometer registered 52 degrees below zero that morning at Laketon. This was one of the coldest spells of the winter. The day before the thermometer registered 40 degrees below zero and the day after 38 degrees below. The low temperatures did not interfere with our travelling, but it was very hard on the dogs.

We were now well supplied with food for the time being. We actually killed about twelve moose that winter in order to feed travellers passing through and we easily could have killed more if it were necessary. There seemed to be plenty of moose about, though sixty years earlier when Robert Campbell was wintering on the lake for the Hudson's Bay Company a few miles north of our location, he and his party failed to get any game at all and nearly starved to death. He and his companions were only saved by the generosity of the Chieftainess of the Nahanni Indians, whom he speaks of as being one of the most remarkable women that he had ever met.

Later in the winter Fred and I undertook to take over a contract secured by the Casca Trading Company for carrying the mail on the Stikine River between Telegraph Creek, B.C., and Wrangell, Alaska. It was not a

particularly difficult job. The round trip was about three hundred miles and the contract with the Post Office department provided for making the return journey once during each of the months of February and March. As our transport would be by dog team, that was the period of the year when the Stikine River provided reasonably good travel on its frozen surface.

When we left Dease Lake for Telegraph Creek the latter part of February, we both looked forward to a new experience in winter travel; because we had never had occasion to face anything but the travel conditions of the interior where snow lies to a depth of only two or three feet. In the lower part of the Stikine valley we were to face conditions in the Coast region where the snow lay to a depth of fifteen feet or more. Neither of us had ever seen the sea nor got the smell of salt water; so a visit to Wrangell, situated on an island off the mouth of the Stikine River, would bring us an interesting glimpse of the outside world and within reach and touch of things I had not seen for nearly three years.

We left Dease Lake on snowshoes with a sled and two dogs, and as the going was not good over the pack trail between the lake and Telegraph Creek we made the trip in five days with some trouble. The trail is about seventy-miles long and was built in 1874 to accommodate the placer miners who had begun to mine the gravels of the Cassiar district the year before. It really followed an old Indian trail by which the coast Indians had been in the habit for generations of crossing the divide between the coast and the interior. This trail has now been converted into a reasonably good motor road.

The village of Telegraph Creek is situated at the head of navigation on Stikine River and occupies a narrow bench on the north side of the river where a small creek joins the main river. It is the point at which the old Western Union Telegraph Company's survey line, made in 1866, crossed the Stikine River, and it is the point at which the present Yukon telegraph line also crosses the river. Glenora, about twelve miles down river, was the head of navigation in the low water season. In high water, however, steamers were able to get as far as Telegraph Creek.

Telegraph Creek was an important point during the Klondike rush because many people came up the river to that point either by boat or on the ice and then pushed on by the overland trail to Teslin Lake and thence down stream to the gold fields of the Klondike. In the winter of 1898-1899, the village had already sagged back to its pre-Klondike quiet, though there still were many tales being told of the ignorance and simplicity of many of the men who came off the boats. I heard tales of men who stepped ashore from the steamboat armed to the teeth and carrying on their shoulders a pair of snowshoes stuck on the end of a rifle—and this in summertime. There was

another story of a man who drove a cow hitched to a sled up the Stikine River and milked the cow every night. Another used a herd of goats as transport animals. All, however, of these people had vanished by the time Fred and I arrived there and there were left only the traders and transport people and the Gold Commissioner, Mr. Porter.

Carrying a couple of sacks of mail on our sled with two dogs to haul it, we made the trip down river to Wrangell and back again twice, usually taking from five to six days each way. On our second trip the snow was so heavy that we took thirteen days one way. The Stikine River cuts clean across the Coast ranges so that one has the experience of passing from an area of low precipitation in the interior into and through a belt of very heavy snowfall bordering the coast.

On our first trip, because we had no experience in a country of heavy snowfall, we carried only the usual equipment that we normally used in the interior, that is to say we had no tent or stove and planned to make open camps all the way. This was all right for the first half of the run but when we got down near the International Boundary line the snow was so deep that we could not shovel down to the ground to make our camp. The camp was consequently made on top the snow on a bed of boughs, and the fire was laid on a foundation of green logs. Even at that we found the remains of our fire in the morning down at the bottom of a deep pit in the snow.

Although we had been warned to keep a sharp lookout, when we got to the boundary line between Canada and Alaska, we almost missed the Mounted Police Post. The houses were completely covered with snow and only the flag pole with the Union Jack was showing. Deep trenches led to the doors of the buildings and others had to be dug to let light into the windows.

We always had a hospitable welcome at the boundary Post from Corporal Bowdridge and Constables Skinner and Ambrose. On our first trip down river Bowdridge came with us to Wrangell to show us the way. Thirty miles below the boundary, snowshoe travel ended on Cottonwood Island and from there we took a row-boat to cross about seven miles of the sea to the settlement on Wrangell Island. As we left Cottonwood Island we were joined by a couple of trappers.

The crossing to Wrangell Island in a small boat was always risky and sometimes dangerous. Our course from Cottonwood Island followed the shore of the mainland south to the garnet ledge, where one could pick garnets an inch in diameter out of the solid rock, then across the strait to the north end of Wrangell Island. It was getting dark when we got to the garnet ledge on our first trip, and in spite of a fairly strong wind blowing we decided to try the crossing. How often have I made that decision, namely to

push on late into the night in order to sleep in a comfortable bed instead of making a cold miserable camp in the bush. Often that decision has almost led to disaster. By the time we were in the middle of the strait we all regretted our rashness in trying to cross at night. The wind had risen a good deal and the tide was against us. Water was coming in over the sides of the boat and we kept her afloat only by vigorous bailing. We even had to jettison some of our baggage, in fact nearly everything except the mail, to keep afloat. Among other things, we threw overboard the trappers' traps, but these fellows preferred that we should dump the mail bags instead, and it required some argument to make them see our point of view. We were lucky to make shore about ten o'clock at night. The story of our adventure as told in the bar of Sylvester's hotel that night was good. It even got better and better as the evening wore on.

The next morning my most urgent duty was to see a dentist. I hadn't seen one for four years and one tooth was giving me a good deal of trouble. All my amateurish attempts at dentistry were no good. Near the hotel I found a man who claimed to be a dentist. He was not even a good butcher. After about two hours in his chair I was in a state almost of collapse. Later in the evening the dentist came into my bedroom in the hotel to see if I was still alive. I was thankful to tell him that I had hopes of surviving his operation.

Going down to Wrangell on this first trip at the end of February, we had pretty good weather and fair snow conditions, so we were able to make Wrangell on the sixth day. On our return journey, however, conditions were very different and we ran into some tough going. We took thirteen days to get back to Telegraph Creek. Our delays occurred in the lower part of the river in the belt of heavy snowfall. It snowed steadily for three days in huge soft flakes, very beautiful to see, but annoying to experience. For three days more we lay in camp waiting for the snow to settle before we could plough through it on our snowshoes. It was no use trying to travel in such a snowfall because the distance we could make in a day was too much out of proportion to the effort required. So we lay in camp day and night and fumed at the weather. There was nothing that could be done about it.

On the way down the river on our second trip we caught up with a man, whose name I have forgotten, but who was one of the leftovers of the Klondike rush. He was on his way out to Wrangell and was pulling his own sled. He was not accustomed to the conditions he was faced with and he was in pretty bad shape. His feet were bleeding from the chafing of the snowshoe lines and he didn't seem to have enough to eat. We helped him on his way and when we arrived in Wrangell late one evening he invited us to breakfast with him the next morning.

We put up at Sylvester's Hotel, while he went to a small cabin situated on the sea shore at the north end of the town. Next morning when we arrived at the cabin for breakfast, he had just lit the fire and was dressing. There did not seem to be much in the cabin in the way of food or cooking utensils. I was not surprised therefore when he suggested that we go out for breakfast. Instead of going to the restaurant as I expected, he picked up a kettle and started off to the beach. The tide was out and from the rocks sticking out of the mud he filled his kettle with shell fish. He then took the mess back to the cabin and after he had boiled it for a few minutes offered it to us as breakfast. There was nothing else to eat so we had to take it. Before we left his cabin he borrowed ten dollars. I never have seen nor heard of him since.

This was the man with whom Scott Simpson had made a bet of $100 that though he was leaving Telegraph Creek for Wrangell two days ahead of us, we would catch up with him before he got to the mouth of the river. Simpson had told us we could have the money if he won the bet. Actually we caught the man at the boundary line but we were not able to collect the hundred dollars. As a matter of fact, instead of being one hundred dollars to the good I was out ten dollars by contact with this fellow.

There were only three points between Telegraph Creek and Wrangell where we could find company and shelter for the night; Hector McLean's cabin near the mouth of Clearwater River where we got a warm welcome; a trapper's cabin at Little Canyon, and the North West Mounted Police Post at the boundary.

We always made Hector's cabin for the first night out from Telegraph Creek and we were always sure of a good bed and a good meal, with coffee made out of roasted barley. Hector was chopping wood for the steamboat and was doing some trapping as well. He had always lived a life of freedom, beyond the fringes of civilization, where he was not disturbed by man-made conventions and restrictions—and where he was at liberty to follow his own inclinations. He came from an interesting family and confessed to having had some differences with the police, involving a killing, in the country north of Kamloops during the early days of the Canadian Pacific Railway construction. Whatever his background, he was a most hospitable person. We became very good friends and he must have patched up his differences with the police for when I last heard from him he was living a peaceful life at Burns Lake, B.C.

The trapper's cabin at Little Canyon was another welcome spot, particularly when I came in there snow-blind on our last trip up river. Though I had been wearing goggles, the bright sunshine and reflection from the snow brought on an attack of snow blindness too severe to permit travelling. The pain was excruciating. And we were forced to lay up for

three days while I was doctored by the trapper. I don't remember his name and I would not recognize him again because I could not see. His treatment for snow blindness was a tea-soaked bandage over the eyes, but I question whether it did any good.

His cabin was only about ten by twelve feet in size. It had a mud floor. There was a bunk in one corner, a sheet-iron stove in another and a small table for eating purposes. I was given the bunk to sleep on while Fred and the trapper spread their blankets on the floor. Light was provided by a candle in a miner's candlestick stuck into a log over the head of the bunk. On the first night when everyone had rolled into his blankets a dispute arose between Fred and the trapper as to who should get up and blow out the candle. After some argument the trapper simply reached over for his rifle and shot at the candle blowing it to pieces, and that within a couple of feet of my head. Then he had to get up and open the door to clear the cabin from smoke.

The striking features of the Stikine Valley are the mountain glaciers that fill some of the subsidiary valleys on the northwest side of the river. There were the Flood Glacier, Dirt Glacier and the Great Glacier and many others. The front of the Great Glacier seemed to us in 1899 to lie only a few yards away from the river bank. In fact there is an Indian legend to the effect that the glacier once extended right across the river to the opposite bank and that the river at the time ran in a tunnel through it. Today the front of the glacier is quite a long way back from the river bank. The other glaciers have had similar recessions. This is characteristic of all mountain glaciers on the west coast of North America and recent studies seem to show that the rate of recession is sometimes as much as 90 feet a year.

Immediately across the Stikine River from the Great Glacier are some warm springs where the winter ice on the river does not freeze to any great thickness. The passage of this point on snowshoes was always a bit hazardous and the man who went ahead of the dog team always carried a rope attached to the sled.

Carrying the mail on the Stikine River in winter time was not a difficult job, but we were dependent entirely on weather conditions for the time we took to make each trip. On the last day of the last trip up river we made about fifty miles, but there were other occasions, on account of heavy snowfall, when we were able to make only a few miles or were laid up for days in a row. We made no money on the job. The manager of the Casca Trading Company at Telegraph Creek, who was our local boss, was instructed to deposit our wages in the Bank of Montreal at Edmonton, but it took us nearly two years to find out that he did not do so. In the interval he died and the Casca Trading Company folded up.

13 The Aftermath of the Klondike Rush

On the 17th of April we left Telegraph Creek to return to Dease Lake. The trail was in bad shape because the spring break-up was on and the going was heavy. So we took four days to reach our base at Laketon.

We killed three more moose at Dease Lake before the end of the month so we had lots of fresh meat to carry us until fresh food supplies came in by pack train. We killed our first duck on May 5th and geese a few days later.

One of our first visitors when the pack trains began to arrive at the head of the lake was the Rev. Mr. Palgrave, an Anglican missionary. The largest room in Laketon was the saloon run by the trader Smith and it was there that Mr. Palgrave held his Sunday services. They were all well attended. On his first service on May 7th, he drew a congregation of twenty people out of a total population of thirty.

The month of May was a very busy one for us, but it wasn't very long before we became involved in a rescue operation, corresponding to what is known in these days of airplanes as a mercy flight. Word had come out from the lower river during the spring that a considerable number of stranded prospectors, men suffering from scurvy and shortage of food, were likely to perish unless some help was sent to them. The story of these derelicts had reached Victoria during the winter and the Government of British Columbia instructed the Gold Commissioner at Telegraph Creek to organize a rescue expedition. They were men who had followed our route up Liard River the previous summer or who had come across the overland trail from Edmonton and had got as far as Dease River. They were now scattered along Dease River to the Liard and some of them on the Liard itself. All of them had spent the winter in little log cabins along the river bank and many of them through lack of proper food or through indolence or inexperience had contracted scurvy. They needed help badly.

Fred had charge of the relief party, which consisted of two scows, each with its own crew, mostly Indians. The ice was still on Dease Lake on May 18th when the expedition started from Laketon, so the scows were hauled over the lake by dog teams. Then they were launched in the river below.

They had to be hauled out again to be taken across the ice of the four little lakes through which the river flows down to Cottonwood Creek. At Cottonwood Creek I left the party to take the dogs back overland to Dease Lake while Fred went on northward.

He ran into more difficulties with ice on the way down Dease River, but he reached the junction of the Dease and Liard Rivers on May 23rd. He had cut his foot very badly with an axe just before he arrived at Lower Post so he had to be carried up the bank on a stretcher. He was on crutches for nearly a month before the wound was thoroughly healed, but he still carried on.

The relief party stayed at Lower Post for a couple of weeks until they had gathered up all those who were sick or destitute and could not fend for themselves. Then they started back up stream for Dease Lake. In the meantime, however, the water had been rising in the river and they did not get very far before they were compelled to lay up. As might be expected they ran out of food, but fortunately there were a couple of good Indian hunters in the party who were able to provide them with moose meat.

The relief party was away nearly two months and when they returned to Dease Lake they had fifty or sixty men on the two scows, some of whom had been so ill with scurvy that they had to be carried on and off the scow at each camp. Others, however, recovered very quickly with a proper diet. The men were taken to the head of Dease Lake and then transported by pack train across to Telegraph Creek. They all ultimately reached Vancouver and were sent from there to their homes throughout Canada. They were a sorry looking lot when they were first picked up, but by the time they had reached the head of Dease Lake they had nearly all recovered from their troubles, whether it was scurvy or semi-starvation.

These men were the flotsam and jetsam of the Klondike rush. They were men who had suffered disappointment and had become disillusioned and were prepared to accept defeat and go back home. Many others, however, both here and elsewhere stuck it out and remained in the country. Either they would not admit defeat or they became so enamoured of the pioneer life that they preferred to remain in the North, and went in for trapping or prospecting. It is over fifty years since the Klondike rush started, yet one can still find men scattered here and there throughout the north country who entered in 1897 and 1898 and are still there. They have never left the country in all that time and they intend to die there, preferably “with their boots on.”

For a short time in the spring I lived alone at Lake House at the head of Dease Lake. My job there was to check the freight brought in by the pack trains coming in from Telegraph Creek. One night there was a strange but

interesting meeting in my cabin, a reunion of old Rugby football players. A pack train of sixty mules had come in from Telegraph Creek. The man in charge of the pack train was Hugh Taylor who was a brother of Colonel Plunket Taylor of Ottawa. Hugh, when a bank clerk in Winnipeg, had played football for the Winnipeg team when I was playing for St. John's College. The third team, competing in those days for the championship of Manitoba and the Northwest Territories, was composed of English public school men from an English colony at Cannington Manor near Moosomin. In addition to Taylor, two men from the Cannington Manor team turned up at my cabin, Tennyson, a relative of the poet, and his friend Messiter. They all slept in my cabin that night and most of the conversation turned to the battles we had fought in palmier days on the football fields of Winnipeg and Regina.

Later in the summer I had charge of the Casca Trading Company's establishment at McDame's Creek, which consisted of one small log cabin.

While at McDame's Creek I had an interesting bear hunting experience. There was said to be good bear country about fifteen miles up the creek and as I had nothing particular to do at my Post I decided to see if I could go and kill a bear. I hired a mule to pack my equipment and started off. When evening came I found myself in what looked like good bear country so I unsaddled and made camp. I picketed the mule in a meadow near by where there was good feed. After a short hunt about dusk I came back to my camp and shortly after was sound asleep. I got up very early in the morning and first of all looked to see if my mule was all right. He was gone. I searched for him for a while and then concluded he had gone home leaving me stranded about fifteen miles out. I did not see a single bear and I had in the end to put my saddle, blankets, rifle and cooking utensils on my own back and with frequent references to the ancestry of the mule, carry the whole outfit back to the trading Post. I have never cared for mules since and never used one again.

It was now nearly two years since we had left Fort Simpson and in that time no mail had reached us from home, or, indeed, from anywhere else. We had not seen a newspaper and of course there was no radio. It was partly our own fault that we had received no mail, because we could give no place where letters could be sure to reach us, and in any case there was no regular mail service into the Cassiar and no post office.

Through roundabout channels and mainly through the Hudson's Bay Company we heard, about the middle of the summer, of a bit of a mining boom on Great Slave Lake in the year previous. It centred about some lead and zinc deposits on the south shore of the lake and some gold deposits on the north arm. The stories, we felt, might be greatly exaggerated as they usually are when passed from one person to another by word of mouth, but

Fred and I decided that we would like to see what it was all about. We had not done too badly in the Cassiar, but employment was pretty precarious, people were leaving the country and it was gradually dropping back to its pre-Klondike state, dependent upon trapping and a desultory sort of placer gold mining. So we thought we might as well move on.

Fred bought an eighteen-foot canoe at Dease Lake and coming down the river he picked me up at McDame's Creek about the middle of August. With our camp outfit and about a month's supply of provisions, we started on the long trip of 700 miles down the Dease and Liard Rivers to Fort Simpson on Mackenzie River. We also picked up at McDame's Creek, an Indian, Johnny Sanderson, and his wife. They both hailed from Fort Simpson and after several years absence from that point were anxious to get home again. We were glad to have them because John was an expert canoeman and knew the river, and his wife could do our cooking and mending.

The trip down Liard River by canoe from Dease Lake to the Mackenzie is one of the finest canoe trips that one can find on the continent. It should, however, not be attempted in high water unless one is well equipped. Indeed, it should not be attempted at all unless one is an expert canoeman. In the low water period of August it is sheer joy. There is enough rough water to make the journey exciting and there are a good many portages of varying length, including the four mile portage at the head of the Grand Canyon to provide some hard work. The fact that in the last sixty years not more than half a dozen parties have made the trip from Dease Lake to the Mackenzie adds very much to its interest.

We had no serious difficulties in navigating the river because the water was at a good stage, and the voyage was completed without mishap. One incident I recall and have wondered about the outcome many times since. This occurred one afternoon on Dease River as we were passing an encampment of Indians. A young woman came out of the camp and ran out over the gravel bar screaming for us to come ashore and help her. When we pulled ashore she pleaded with us to take her aboard our canoe down to Fort Liard. She had come from that country, but was now married to a young Cassiar Indian. She told us that she was suspected of being a witch and her life was threatened by the band because she was believed to be bringing them bad luck in their hunting. We, however, could not help her. Our canoe was not large enough to take another passenger and there was no authority to whom we could report the case; so we had to leave her to her fate. What that was I never found out; but if the hunting luck of the band did not improve, her life would probably soon have been sacrificed to the superstitions of that tribe.

On the way down the Liard we passed the so-called "Tropical Valley" again, where we had camped in February 1898. This time it was August and there was just as little evidence of tropical conditions as there was in winter time. We made no stop at the "Tropical Valley" because the Devil's Gorge and portage were not far ahead and we anxious to get over that obstacle as soon as possible.

Devil's portage with its 1,000 foot climb and length of four miles is the most difficult portage on the whole river. Because I had crossed it in the winter of 1897-98 I knew the point where it took off from the upstream end. If you missed the landing there was real danger that you might be carried into the gorge, in which case there would be no hope of getting through alive.

David Hanbury, the explorer, told me of an interesting experience that he had at the Devil's portage some years after we were there. When he and his party came to make the last trip across with their packs, it was found that there was left over a five-gallon keg still containing some brandy. No one could add the keg to the load that he already had and no one wanted to make an extra trip across the portage for it. What they did, therefore, was to drive the cork firmly into the bung-hole and throw the keg into the river. The following day about forty miles down the river near Hell's Gate the keg was found floating buoyantly in a eddy. With a shout of joy Hanbury picked it up and was able to have his drink that night before dinner.

I have travelled many thousands of miles in a canoe, and it is a pleasant way of travelling, particularly downstream, but I know of no more enjoyable canoe trip than the one from Dease Lake to Mackenzie River. The time was August. The weather was fair and warm. The fly season was well over and the water was at an ideal stage, not too high to make canoeing dangerous and not too low to be sluggish. In addition it is always pleasant to be drifting with the stream. In a country where there was no mechanical transport and all progress had to be made by one's own physical effort, it is comfortable to drop your paddle, lie back and smoke and yet know that you are still making progress. There is nothing that engenders contentment like drifting downstream in a canoe in the soft warm days of summer.

Few travellers have ever canoed the whole length of the Liard River and fewer still have ever attempted its passage in high water. Of these, only R. G. McConnell of the Geological Survey of Canada and David Hanbury have left a detailed written record of such a trip. McConnell traversed it in the season of high water with one companion, and in my opinion no more remarkable canoe journey, or one requiring more courage and resourcefulness, was ever carried through by the Geological Survey in its

hundred years of exploration in Canada than the one made by McConnell in 1887.

When we descended the river in August, 1899, in the season of low water, it was a relatively mild stream. Yet there was sufficient hazard and excitement to make the journey stick in my memory when the experiences of many other exploratory trips have faded out.

Below the Grand Canyon, out through the foothills belt and into the Great Plains region the stream is a broad smooth-flowing one on which we could sleep in a canoe and drift all night without danger of running on to a rock or into any dangerous rapids.

From Lower Post, at the junction of the Dease and Liard for a distance of over 350 miles, we saw no one until we reached Fort Liard. Occasionally a bear was to be spotted on the beach, or a moose, but otherwise there was little or no other sign of animal life. Grayling we could catch with a fly at nearly any point that we liked to try, but we got no other game.

We reached Fort Simpson early in September after an absence of almost two years.

14 The Turning Point

When we reached Fort Simpson early in September, one of our first questions was: “What about the mining excitement on Great Slave Lake?” The question merely provoked a smile. The answer was that the whole thing had quickly petered out; all interest in the mineral discoveries had long since died down and nearly all the prospectors as well as the Klondikers had left the country. The interest had centred about some occurrences of lead and zinc ores a few miles inland from Pine Point on the south shore of Great Slave Lake, and although some claims had been staked no responsible mining interests could be persuaded to spend any money in the development of such ores in such a remote locality. Interest was revived in these deposits twenty-five years later in the period following the First Great War but it soon died down again. Later again, interest has been revived and recent exploration promises to develop ore bodies of considerable importance. In the meantime, Fort Simpson, like all the rest of the country, had settled back to its pre-Klondike calm.

The situation presented by the collapse of the mining boom was a serious one, to me particularly. Fred was able to get back to his old job with the Hudson’s Bay Company, but for me there was nothing in sight. Winter was coming on and it was too late in the season to get out of the country. I was without funds. All my earnings from the Casca Trading Company for several months were supposed to have been placed to my credit in the Bank of Montreal in Edmonton and we had brought nothing with us from the Cassiar except our camp outfit. The only saleable asset we had was our canoe. This we sold to the Bishop of Mackenzie River for $25, half of which went to Fred, and with twelve dollars and fifty cents I faced the winter of 1899-1900.

I was, however, not kept long in suspense as to what I should do with myself. Christy Harding, Post Manager of Fort Wrigley, was at Fort Simpson getting his winter’s supplies and instructions, and he invited me to spend the winter with him. I didn’t hesitate to accept. So about the end of September, when he left in a scow to take up his post for the winter, I went with him as his assistant. The pay was not much, $1.50 a day and board, but there was nothing else to be got in the way of employment.

We had a delightful, lazy trip of about 150 miles from Mackenzie River to Fort Wrigley. There were only three of us in the scow, Harding, myself and an Indian, so we had lots of room. We drifted with the stream day and night and cooked, ate and slept aboard. We only went ashore to get fresh fuel or to do a little fishing. The river flowed smoothly at about four miles an hour, but it became quite rough when the wind blew from the north against the current. Then we simply hitched our scow to a tree that floated deep in the water and the head wind had little effect in slowing down our progress.

Mackenzie River flows northwest from Simpson for nearly one hundred miles to the North Nahanni River. Here it strikes the base of Mackenzie Mountains, and at the great bend, called the Camsell bend, after my father, it turns northward to Fort Wrigley about sixty miles down river.

The Fort Wrigley of that day was at a different site from the one of today, which is well located on a high bank immediately opposite a striking mountain known as the “Rock by the riverside.” Old Fort Wrigley was the meanest and most undesirable trading Post in the whole Mackenzie River district. It was perched on a sloping swampy bank, and was hidden behind an island on the east shore of the river with a small rapid in the channel alongside. There was nothing to commend the place, either as a strategic location for the fur trade or as a place to live. There was neither good hunting nor good fishing anywhere near. Why it was ever established at that point was a mystery to me, and it was a wise move when the present site was taken up.

The Post consisted of only five buildings, scattered in a haphazard way on the sloping bank. Harding and I lived in one of these. In addition, there was the trading store, a house occupied by the Indian interpreter and his wife, and a fourth building in which an Indian family of four lived. The other building belonged to the Roman Catholic mission but was not occupied at the time of our arrival.

This was the setting in which Harding and I were to spend the winter. Aside from the two Indian families at the Post, our next door neighbours were at Fort Simpson to the south and Fort Norman to the north, each about 150 miles away. We had no white visitors all winter and we paid no visits. Our community was entirely self-contained and completely isolated.

When two men live alone together for months at a time with no other companionship, quarrels are almost sure to develop, usually over the most trivial things. Harding and I, however, got through the winter without any serious disagreements. Only once was there a flare-up and as usual over the food.

Harding was an Englishman, born in India, well educated and a good sportsman, particularly as a cricketer, and a very adaptable person. He had only recently joined the Hudson's Bay Company's service, but had quickly adjusted himself to the life of a fur trader and loved it. We had agreed at the beginning of the winter that, because he had a weak knee which easily went out of joint, he would do the housekeeping and I would do the outdoor work.

Being an Anglo-Indian, Harding was very fond of hot dishes and had laid in quite a stock of currie. One day when I had gone out into the woods with the dog team for my daily load of firewood and had cut this up at the door of our cabin into stove lengths, I came in to lunch with my usual ravenous appetite. We had had porridge for breakfast, and what was left over, Harding, in order to conserve his supplies, had taken and made into a currie for our lunch. I thought curried porridge was the limit and told him so. He thought it was good and said so. We could not agree and I marched out of the house in a huff. By night we both realized how silly the whole affair was and agreed to forget it.

Differences of this kind under such circumstances however, do not always end amicably, and quarrels which develop through boredom or trivialities occasionally might even have a very tragic ending.

The winter passed quietly for us. I made a number of trips into the Mackenzie Mountains and up the valley of Root River to get moose meat from the Indians. I also had a line of traps and got a few marten. I also set out some rabbit snares, but the country surrounding Fort Wrigley is not rated as a particularly good fur or game country. Our steady outdoor job was the cutting of cordwood for the use of the steamer *Wrigley*. Indoors we played cribbage every night and did a good deal of reading. It is interesting to note that though we played cribbage nearly every night for five months there was very little difference in our total scores in that time. As the days of winter shortened and the temperature dropped, we were confined more and more to the house and thrown for longer periods in each other's company. I soon got to know all Harding's stories and he was forced from time to time to advise me not to repeat mine.

Up to Christmas time we had no visitors at all, but as soon as that season came on the Indians began to arrive for the Christmas and New Year celebrations. Father Gouy of the Roman Catholic Mission also turned up from Fort Simpson to conduct the religious services of his church. Most of the Indians trading at Fort Wrigley were of his persuasion. He stayed a couple of months with us and when he left to return to Fort Simpson in the latter part of February, I said good-bye to Harding and left with the priest.

I have done a good deal of winter travel in my time, but the trip that I made with Father Gouy from Wrigley to Simpson was the toughest one of

all. We had a team of four dogs and our sled was pretty heavily laden, so that we took seven days to make the trip of 150 miles when we should have done it in five. The reason was that, as we found when we got to Simpson, the thermometer for the whole week had hung around 50 degrees below zero. We knew it was cold because sounds carried a long way and the sled dragged heavily. But it was very hard on the dogs and they lost a good deal of weight.

I remember that for sleeping I had a blanket sewn to a caribou skin robe. Father Gouy had two Hudson's Bay blankets. We both slept in our clothes in an open camp with caps pulled over our ears and mitts on. With my equipment I could stand just a little more cold than the priest. The result was that I usually woke during the night to find him piling more wood on the fire. We were both very glad indeed to see the Hudson's Bay Company flag at Fort Simpson on the afternoon of our seventh day out.

I stayed at Fort Simpson this time for about six weeks. The "big house" was quite full, and with my father's family and his staff and the captain and engineers of the steamer, it must have sheltered more than a dozen people. The great innovation since I had left for the Klondike was the installation of an electric light plant, the first in the Northwest Territories. And what a convenience that was. Central heating had not yet arrived and we still used the old-fashioned box stove.

About the middle of April there were signs of spring everywhere. The days were getting quite long and the sun was throwing off enough heat to melt the snow in the middle of the day. It was time for the steamboat party to leave for Willow River to prepare for the launching of the steamer *Wrigley*. When this party pulled out one night at midnight with six teams of dogs, I found myself the driver of one of these teams, engaged to assist in launching the *Wrigley* and getting her ready for her summer's operations.

Although Willow River, where the *Wrigley* was hauled up for the winter, was about twenty miles short of Fort Providence, our party went right through to that Post in order to get some supplies and provisions. There we found James Mackintosh Bell, of the Geological Survey, with his two men, the guests of John Reid the Post Manager. Bell had just come across Great Slave Lake to Providence carrying his canoe on his sled in order to take advantage of the early break-up of Mackenzie River. Otherwise the ice of Great Slave Lake would have held him up until the middle of June and he would have lost some weeks. He was on his way to make an exploration of Great Bear Lake.

When I met Mackintosh Bell in the Hudson's Bay House at Fort Providence in April, 1900, he was not yet twenty-three years of age. He had graduated from Queen's University in geology the previous spring and had

spent the summer of 1899 on a geological reconnaissance of the north shore of Great Slave Lake as assistant to his uncle, Dr. Robert Bell, who was at that time Assistant Director of the Geological Survey of Canada. When Dr. Bell returned to Ottawa at the end of the field season he left his nephew to spend the winter at Fort Resolution in the home of the Hudson's Bay Post Manager, Fred Gaudet. He could not have had a more hospitable home in which to spend the long winter. It was presided over by Fred Gaudet's sister, who was not only a kindly gentle person but an excellent housekeeper. It was, however, his first winter in the North and the first long absence from his comfortable home in Almonte, Ontario. He naturally missed his friends and relatives. Fortunately he had a capacity to adjust himself easily and quickly to new surroundings and was able to take a considerable amount of pleasure out of association with the few people of the trading Post, white or native.

Apart from the Gaudets, with whom he lived, the most interesting and cultured character was the Roman Catholic priest, an old country Frenchman. Father Dupire's house was a pleasant place to spend the evening, perhaps because he was always able to provide his guests with a little wine made from his own recipe out of raisins imported as part of his food supply. Another resident was the representative of the fur trading firm of McDougal and Secord, but if Bell had any contact with this opposition to the Hudson's Bay Company he had to make it surreptitiously and without the knowledge of Fred Gaudet. Fred was of the old school who would not stand for any encroachment by any fur trader on the God-given rights of the Hudson's Bay Company.

Others included the family of William Norn, who had been a lay reader of the Anglican Mission but had retired from his duties with the church and was living a hand-to-mouth existence as a private citizen.

These were Bell's companions during the winter and it was not long before he exhausted their possibilities for interesting him and he was glad to be on his way.

Bell had two men with him when he arrived at Providence, Charlie Bunn and Louis Tremblay, neither of whom were familiar with the country to the north that he planned to enter and explore. When he heard that I had been on Great Bear Lake, that I could speak the language of the country and that I had had six years of experience in travel both winter and summer in the north country, he asked me to join him. He was all the more anxious to have me with him when he found that my university course included geology and mineralogy. To check my knowledge he put me through an oral examination in these two subjects, even to an identification of the rocks on the shore of the river at Fort Providence.

I very readily accepted Bell's proposal, and so began an association which changed the whole course of my life and influenced my progress from that time on. It was a fortunate meeting for me and the turning point of my career. Life is full of chance incidents, most of them of little importance, but some of them having extraordinary consequences. The chance meeting with Mackintosh Bell at Fort Providence on the banks of Mackenzie River was one of these.

Bell, in his book, *Far Places*, says that this meeting was a momentous one for him in that my experience of the preceding six years added strength to his party and was the beginning of a friendship that was to last for many years.

After a day or two at Fort Providence, the steamboat party went back down stream to Willow River where the *Wrigley* had been hauled out the previous fall, and Bell and his party accompanied us. The next few weeks were spent at Willow River getting the *Wrigley* ready for her summer's work.

The mouth of Willow River is good duck country, and as it was my business to keep the steamboat party supplied with game, I had a wonderful time. Both ducks and geese were plentiful and Mills Lake was a favourite stopping place for the birds on their way to their nesting grounds farther north. Spring shooting of migratory birds had not yet been prohibited by the Migratory Birds Convention Act. I must confess that I have never been in entire sympathy with the Migratory Birds Convention Act as applied to the natives of the far North. Spring for these people is the most difficult season of the year in which to secure food and I have always thought it was unreasonable to expect them to refrain from shooting ducks and geese as they flew north during the spring break-up.

When the Mackenzie River ice moved out we were ready to follow it down to Simpson, which we reached on May 21st.

15 The Exploration of Great Bear Lake

The summer of 1900 was the most important and significant of my whole life. It was during that summer that the decision was made to abandon the purposeless wanderings of the last five years and settle down to the serious business of acquiring a profession, that of geologist. This decision was due to my acquaintanceship with Mackintosh Bell and I can never be sufficiently grateful to him for his help and advice in arriving at this decision.

Dr. Bell's plan, to explore and map as much of the shore line of Great Bear Lake as could be done in the short summer season when the lake was open for canoe travel, was an ambitious one. It was, moreover, no easy task, because the lake is one of the great lakes of the world. It is probably fourth in size on the continent. Its shore line had only been imperfectly sketched by Dr. John Richardson in 1825 and 1826, and since that time it had been visited by very few travellers indeed. Father Petitot was perhaps the most competent explorer in this period.

Our survey of 1900 was to be significant in that, as a result of the observations by us and later development of the silver and uranium ores on the east shore of the lake, a chain of events was started which finally culminated in the release of atomic energy and the dropping of atomic bombs on Japan. It was from Great Bear Lake that much of the uranium came that went into the first atomic bombs.

Bell, with his two canoemen, Bunn and Tremblay, accompanied us on the steamer *Wrigley* from Mills Lake as far as Fort Simpson, but from that point northward to Fort Norman he travelled by canoe. The spring break-up had only just occurred, so the trip down river with the banks piled high with ice was not a pleasant one, but he arrived without mishap at Fort Norman on the 2nd of June. It was about two weeks later that the *Wrigley* landed me at Norman and then went on her way north to Fort Good Hope.

At Norman we attempted to gather together an outfit of provisions and supplies sufficient to last us three months. In that time we hoped to reach Fort Rae on Great Slave Lake by a route which involved about 600 miles of

canoe travel, most of which would be through unexplored country. Norman, however, like all the Posts on Mackenzie River in the spring, was almost completely denuded of supplies and fresh stocks would not arrive until the second trip of the steamer in July. We were able to get a little flour and dried moose meat, some matches and moccasins, and a limited supply of tea, tobacco and ammunition as well as some trading goods which we hoped to barter for food if we should meet any Indians on the way.

We were foresighted enough to include in our outfit some flints and steel with which to make a fire if our supply of matches, the old fashioned sulphur kind, should run out. It was a fortunate thing that we did so, because about the middle of August our supply of matches was damaged by water and for some time we had to light our fires by the primitive method. Our pipes were lit, when the sun was shining, by the use of the lenses used for examining rocks.

We had as well, two rifles and a limited supply of ammunition and a short fish net. In all, our supply of provisions and equipment was very inadequate, with food sufficient to last us only four or five weeks when we really required a three months supply.

It was a poorly equipped expedition, but Bell and I were both young, twenty-three and twenty-four years of age respectively, and we had no fears whatsoever that we could get through and that we could make our living off the country. In fact the thought of failure or disaster never entered our minds.

We picked up another canoe at Norman and an extra canoeman, John Sanderson, who had come with me the summer before from Dease Lake. Johnny claimed to know something of the country we were to explore, but he proved to be just as ignorant of it as any of the rest of us.

On the 18th of June we said good-bye to our friends at Fort Norman, Joe Hodgson the Post Manager and Rev. William Spendlove the Anglican missionary, and with our two canoes pushed out into the stream to enter the mouth of Great Bear River. Johnny and I were in the smaller canoe and Bell and his two men were in the other.

Great Bear River is about eighty miles long. Its course is very straight and it runs with a pretty fast current. Indians are reported to have covered the whole length of the river from Great Bear Lake to Mackenzie River in about ten hours. Its water is perfectly clear and where it flows into the Mackenzie there is a very sharp line of demarkation between the pure colourless waters of the Bear and the muddy, greyish waters of the Mackenzie. They do not merge for many miles below the junction.

The river had only just freed itself from its winter's ice and its banks were still lined with high cliffs of ice. There was sufficient beach between

the ice cliffs and the water to allow the use of a tracking line in towing our canoes, but it was a very muddy, slippery beach.

We used this method of progression most of the way to Great Bear Lake and only occasionally did we have to use poles or paddles. We were six days on the river though one day was taken to climb a mountain at the foot of the rapids about half way up the river. Bell in his notes named the two features as Mount Charles and Charles Rapids. These have since been canonized, for what reason I don't know, but they are now known as St. Charles Mountain and Rapids. The rapids are a long stretch of rough water around which a seven-mile motor road and oil pipe line now run, the latter carrying oil produced at Norman wells for use at the Eldorado mine on the east shore of the lake. The rapids presented no serious difficulty or danger to us but they caused us some delay before we got over them.

We reached Great Bear Lake on June 23rd. When we left Norman, the trees were in full leaf, gardens had been planted and we were in late spring or early summer. When we reached Great Bear Lake we had gone back weeks as far as the season was concerned. It is true the snow had gone from the land and there were plenty of flowers, but the trees were only beginning to bud. Most discouraging of all was the condition of the lake. It was still covered with unbroken ice and only along the shores was there a discontinuous strip of open water.

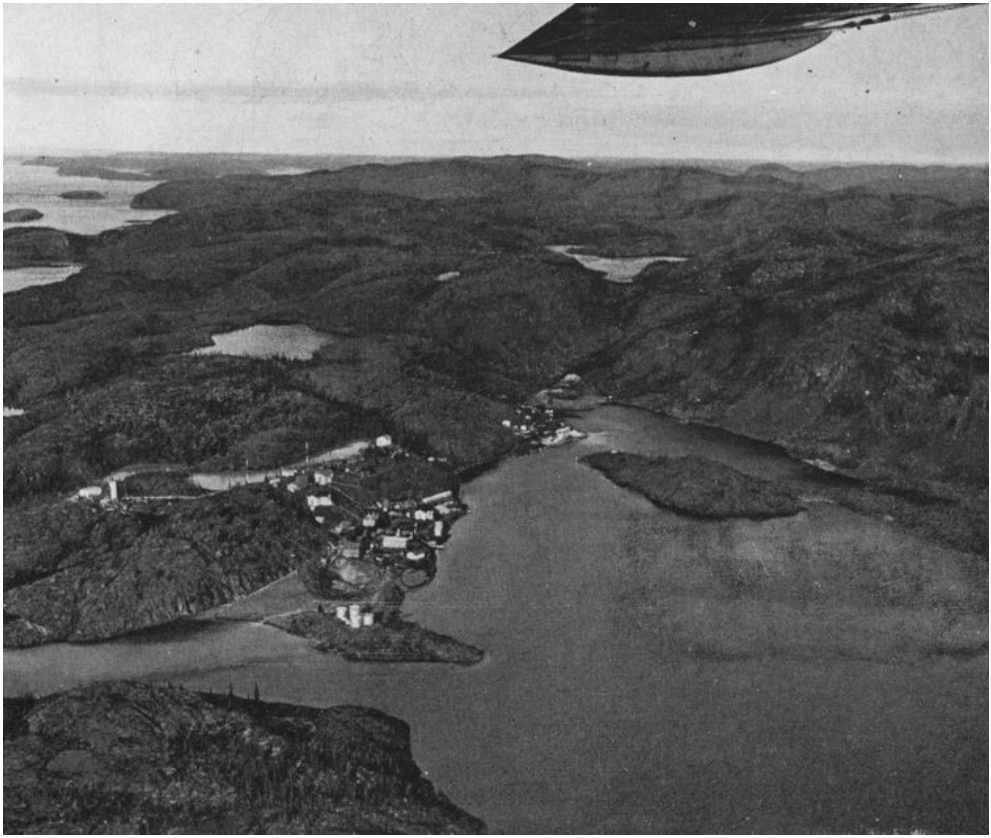
We were obviously stuck for an indefinite length of time. We made our camp on a small rise to the south of the outlet of the lake in open tundra country so that we might have some freedom from the clouds of mosquitoes. We selected the south side also because on the north side a mile or two away we could see the teepees of some Bear Lake Indians, pitched on the edge of the scrubby spruce forest. We expected that they would be in a state of semi-starvation and the farther away we could remain from them and their ravenous dogs the more comfortable we would be. They were still travelling on the lake ice with their dog teams when they went to visit their nets.

It would be hard to find in Canada, or indeed in the world, a people who have more difficult living conditions to face than the Indians of Great Bear Lake. At no time of the year are climatic conditions in any degree pleasant. Their winters are cold and very long. Their summers, which last only about two months, are fairly warm but they are made almost unbearable by the myriads of mosquitoes, black flies and deer flies that plague one at all times, day or night. At no time can one relax and enjoy basking in the sun. The food supply is uncertain. There are not many moose or rabbits, which constitute the principal food supply of the Indians in the valley of Mackenzie River. Caribou are plentiful on the east side of the lake but for only limited periods of time. Generally they are here today and gone

tomorrow. They are continually on the move, southward in the fall and northward again in the late winter or early spring. If it were not for the fish in the lake the natives would starve. Fortunately, the lake has the finest kind of whitefish, lake trout and herring in considerable abundance.

We were not left undisturbed in our camp for very long. Indian curiosity had to be satisfied, and the day following our arrival half a dozen Indians headed by the chief paddled across the river through floating ice cakes to see who we were and what they could get out of us in the way of food, particularly tea and tobacco.

Indian encampment near Fort Norman on the beach of the Mackenzie, 1892. (*Courtesy of the Hudson's Bay Co.*)

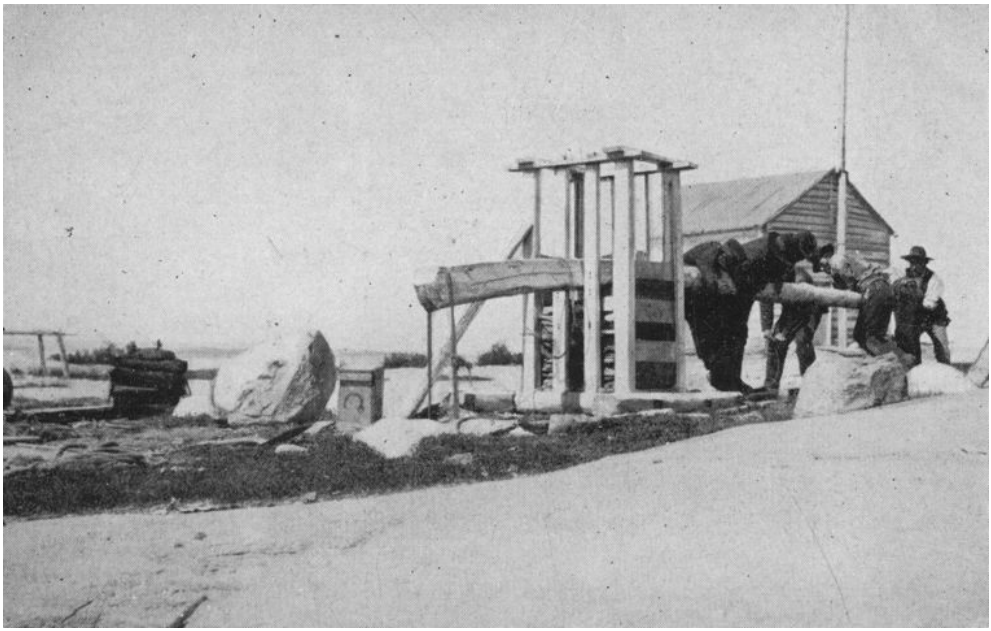


Echo Bay and Eldorado Mine, Great Bear Lake, 1951

They were a dirty, ragged lot, some of them still wearing rabbit-skin shirts that were once white but now a dirty gray from the grease and blood of animals. Others were more presentable in deerskin clothing. They had not visited any trading Post for months and so wanted more than anything else some tobacco and tea and perhaps some flour. They begged and almost demanded these things, but we had too little for our own use and firmly refused to part with any of our limited supply. In any case, they would be on their way to Fort Norman in a few days to trade their furs for such supplies, and a few days more of abstinence would not bother them very much.

We explained to our Indian visitors the purpose of our coming to Great Bear Lake, and after some palaver arranged to have them meet us about the middle of August at Richardson Island in the southeast corner of the lake. From this point the chief promised to have a couple of his young men guide us across the two hundred miles of unknown country to Great Slave Lake.

This was to be the really critical portion of our whole journey and we were very glad to make this arrangement.



Pressing furs, Fort Rae, 1895

Placer gold mining on the Liard River with a grizzly

Just across the bay from our camp and a few miles beyond the outlet of the lake along the north shore was the point at which Captain John Franklin, in the fall of 1825, built and occupied his winter quarters. This was also the site of the first trading Post on the lake, built in 1799. It had been selected by both Franklin and his predecessors because of the excellent fishing—whitefish, trout and herring. There was also some fair sized spruce timber in the country behind which could be used for building purposes. In front was a small sheltered harbour. There was, however, in 1900, very little evidence of Franklin's buildings except the piles of stones which were the remains of his fireplaces. Everything had been destroyed, probably by fire, but more than one hundred years after Franklin's visit I was given two relics, a small pistol and a bayonet, which had been picked up out of the debris of the establishment, left behind by Franklin in the hurry of his departure.

Although we had passed the longest day of the year and were getting on into July, there was no sign of the ice disappearing from the main body of the lake and its surface was still solid. There was, however, a strip of open water of varying width developing along the shore which gave us some promise of providing a way for our canoes.

We had been ten days waiting for the ice to break and were becoming impatient at the delay. Our Indian neighbours too were becoming a nuisance with their constant begging and we were getting anxious to be rid of them, in spite of the fact that when we left them we would be entering an uninhabited region and might not see another soul for probably two and a half months.

On July 3rd there appeared to be enough water along the shore to permit us to travel, but not without much difficulty. From time to time as we paddled along this strip of open water, we found the ice jammed tight against the shore and our passage barred. The only way we could proceed was to portage our canoes and outfit across the obstruction, and this we did several times a day.

Because of these difficulties progress was disappointingly slow and we were able to make only a few miles each day. Fortunately, we could get plenty of fish and an occasional ptarmigan or some ducks so that we were not forced to draw heavily on our supply of food brought from Fort Norman. We were as yet not in the caribou country; but we did kill a grizzly bear—the barren ground variety—near the bottom of Deerpass Bay. The Indians are terrified of this bear because he has all the nasty characteristics of his near relative, the Rocky Mountain grizzly. They would not dare to tackle one except from a canoe or some other safe position. This one certainly had no fear of man because, even after he was hit with a bullet, he continued to come towards our canoe and was only stopped after being shot several times. Johnny used the skin as a blanket for the rest of the summer.

As we crept slowly along the south shore of Deerpass Bay, we could see that the ice was still tight against the shore on the other side of the bay, and it appeared as if we might have trouble in getting around Etacho Point, a high point of land which separates Keith Bay from Smith Bay. Johnny knew of a portage route across the bottom of the peninsula of the Scented Grass Hills, which led through some marshy lakes and down a small stream into Smith Bay, and we decided to follow this. It was not a difficult route and we got through easily and comfortably except for the annoyance of the myriads of mosquitoes which nearly drove us frantic.

The crossing was made in beautiful summery weather. We had a nice fast run down a crooked bouldery stream into the lake, but we were very surprised to find Mackintosh Bay on the north side of the portage choked

with ice through which no canoe passage was possible. We were consequently delayed again for several days until the wind drove the ice out of the bay. The fishing however was good near shore and on one occasion we were able to land a lake trout which tipped the scales at thirty-six pounds.

This is not an unusually large fish for Great Bear Lake where specimens up to sixty pounds have been reported. Our fish however was peculiar because it provides an illustration of how fish continue to grow even after being killed. Bell and I were on James Bay the following summer and the story of this fish was told there to the Hudson's Bay factor at Rupert House. It had now grown to forty-five pounds. Shortly after this Bell went to New Zealand and on his return to Canada I heard him tell the story again and the weight of the fish had now reached sixty pounds. I loyally corroborated the story each time, but I warned him privately that sixty pounds was as far as I could conscientiously go.

Ice and wind delayed our crossing of Smith Bay to the north shore; but when we got across on July 22nd we were through with ice for the season and though there was still a good deal of it to be seen in the main body of the lake we were never again delayed by it.

Strong and persistent winds were our chief trouble and particularly along the north shore which is low, open and flat with the scrubby timber standing some hundreds of yards back from the shore. There was no protection from islands and there were no sheltering harbours even for canoes. Occasionally we found landing places of stones built out into the lake where canoes could be unloaded.

It was the evening of July 30th before we reached the site of old Fort Confidence at the northeast corner of the lake, and even though there was no one there the sight of the abandoned buildings was cheering to us because it was evidence of some one of our own kind having been there before us.

The buildings of Fort Confidence stood at the bottom of Dease Bay not far from the entrance of Dease River. There were three log buildings standing in a pleasant grassy clearing surrounded by open spruce forest. They had been erected over fifty years before by Dease and Bell for Sir John Richardson, who was leading one of the parties in search of evidence of the ill-fated Franklin expedition. Though they were well constructed of squared logs set into grooved posts at the corners I remember remarking at the time that there was not a nail used in their construction. Wooden pins were used instead wherever necessary. The windows probably had been of parchment and the fireplaces were built of local boulders and clay. These were still in good condition. Unfortunately the whole group of houses was destroyed by

fire a few years after our visit, and an interesting relic of the Franklin search lost.

This was the second Fort Confidence to be built on this site. The first was built in 1837 by P. W. Dease and Thomas Simpson and occupied by them until September, 1839. It was destroyed by the natives almost immediately after they left. Simpson gave it its name. He refers in his journal to the many difficulties experienced in reaching the place and writes: "With feelings of sincere gratitude to an Almighty Protector we bestowed upon our infant establishment the name of Fort Confidence."

It seems to have been the practice of the early explorers of this period to apply names of this kind to the places they established. So we see on the map of northwestern Canada such place names as Providence, Resolution, Good Hope, Reliance, and Enterprise. Like whistling in the dark to keep up one's courage.

Fort Confidence is about half a degree inside the Arctic Circle. We were there on the last day of July and the sun had passed its highest point in the sky by some forty days. Though it now dipped below the horizon at midnight, there was no darkness. Simpson states that in winter the sun was not visible at Fort Confidence for forty-three days, and that the average temperature for January was thirty degrees below zero.

We rested a day at Fort Confidence mainly to make necessary repairs to our clothing and to get ready for the overland trip which we proposed to make across the barren lands to Coppermine River. Our chief deficiency for this trip was footwear. This was our most vulnerable point; not food, nor transport equipment, nor firearms, but footwear. We were all wearing moccasins because you couldn't buy a pair of boots at that time in the whole Northwest Territories. Travelling in a canoe was easy on footwear, but when it came to overland travel on foot a pair of mooseskin moccasins would only last a day. We planned to meet this situation by making moccasins out of the raw hide of the caribou we hoped to kill, and for this purpose we carried a supply of three-cornered needles and sinew for thread. Actually on our overland trip I made a pair of so-called mitten moccasins nearly every night out of raw caribou skin.

On August first we began our trip across country towards Coppermine River, first caching what we didn't need for the trip on a rocky island near the mouth of Dease River in the hope of fooling that camp robber, the wolverine. We figured on being away at least a week but we took only a single blanket each, two rifles and ammunition, tea kettle and frying pan for cooking and food enough for a couple of days. We had no mosquito nets and suffered as a consequence from lack of sleep. We fully expected to see caribou—and actually did see thousands—and to live largely on venison.

16 Across the Barren Lands

We paddled up Dease River for about three miles, all five of us in one canoe, and left the canoe in a safe place on the south side of the river. From this point we struck off on foot across country in a direction about thirty degrees east of north, magnetic, following the south side of Dease River. As the compass variation here is about forty-eight degrees east, our true direction was slightly north of east.

The east side of Great Bear Lake is bordered by a belt of small scrubby spruce and some willows which become smaller and more stunted as we approach the barren lands. This belt of timber is ten or twelve miles wide, though a tongue of woods extends far beyond this out into the barren lands along the valley of Dease River. We followed the open country to the south of the tongue of timber, and although the going was pretty good, we found the broken rock over which we travelled to be very hard on our footwear. By mid-afternoon we were well out in the "barren lands" and as our moccasins were worn through we decided to camp early. We were already in caribou country and could see many of these animals here and there in scattered bands. They were all moving southward and each band seemed to be followed by a small pack of wolves, which preyed on the weak and the young animals.

We shot a caribou for our evening meal and cooked the meat on a fire of moss. From the raw hide we made moccasins for the next day. We had not yet become accustomed to the prowling and the howling of wolves so we did not spend a very comfortable night. It was a bit disconcerting when a large grey wolf chased a caribou right through our camp. With that sort of excitement and the clouds of mosquitoes, it was very hard to get any sleep at all and it was really a relief to be on the march again in the early morning.

For the next three days we travelled through open tundra country which became more hilly as we went eastward. Caribou became more and more numerous until we were never out of sight of hundreds. They were all moving southward and it was obvious to us that we were passing through one of those great herds which the French half-breed calls *la foule*. These herds were supposed to have spent the spring and early summer near the shores of the Arctic sea and were now on their way to winter grazing

grounds in the forest south of the barren lands. We saw also a few muskoxen in the distance.

For three days we were never at any time out of sight of migrating caribou and in that time must have seen some tens of thousands. A week later when Tremblay and I passed through the same country they had all gone and we had to hunt hard to find even one.

As we proceeded farther into the barren lands we saw more and more signs of Eskimo, mainly fireplaces built of stones in which they did what cooking was necessary. These signs were rather disturbing to Johnny Sanderson, who like all the local Indians had at that time a wholesome fear of Eskimo, just as the Eskimo had a fear of the Indians.

At noon on the fourth day we killed a caribou for lunch, and after we had eaten what we needed Johnny announced that he would stop a little while and cut up the caribou and hang the meat on some rocks to dry. We could then pick it up on our way back. He then indicated the course we were to follow, a course which would take us into some mountains to the northward, now known as the Teshierpi Range. He himself would follow and catch us before we made camp for the night. All this sounded very reasonable and we agreed, but when we parted with Johnny we did not see him again until we got back to Great Bear Lake several days later.

That afternoon Tremblay and I scouted ahead of the party looking for a good place to camp, while Bell and Bunn were occupied in geological work.

We entered the Teshierpi Mountains and followed a small creek downstream looking for a suitable camp ground with some fuel other than moss. We finally found a nice little bench on the farther side of the creek with a few gnarled and stunted spruce trees growing on it.

We waded across the stream and were about to throw off our packs when we saw a huge polar bear climb out of the creek and follow us on to the bench. He looked as if he knew what he wanted, and as we backed up to the cliff at the back of the beach he came at us. We continued to back up until we were standing on the top of the talus slope of broken rock at the foot of the cliff and could go no farther. We carried no means of defense, neither gun nor axe, so we armed ourselves each with a huge chunk of broken rock. The bear still came on until he reached the foot of the talus slope and we had nowhere to go.

Probably through sheer terror Tremblay began to shout, and as the bear had probably never heard the sound of a human voice, he stopped in amazement. When I saw the effect of Tremblay's shouting I added my voice to his. The chorus must have been terrifying because the bear stood and looked at us for a few seconds, then turned and in two or three leaps was across the creek and going at high speed across the shoulder of the mountain

opposite. He appeared more frightened than we were, because as he ran across the open slope of the mountain his head would swing around to see if we were after him. Bell and Bunn saw the same bear a couple of miles away still in high gear, fleeing for his life.

This happens to be a true bear story, though zoologists have thrown some doubts about the presence of a polar bear so far inland. All that I can do is to reiterate that the story is quite true and I didn't dream it.

It was a very pleasant camp that we made that night by the side of the creek, the only good one we had had since we left Great Bear Lake. Bell and Bunn came in shortly after we had the fire going, but we waited in vain for Johnny. He told us afterwards that he had lost us, but the truth of the matter was he felt we were getting too far into Eskimo country and started back for Great Bear Lake for fear of meeting some Eskimo. Unfortunately for us, he took with him the only rifle for which we now had any ammunition, and left us without the means of killing caribou.

When we came to take stock of our food resources that night, we found we had only a caribou kidney that I had slipped into my pack at noon, a small tin of Army rations that Bell had kept in his pack for an emergency, and a rifle for which the ammunition had already been used up.

Next morning, after thoroughly discussing the situation, Bell decided to send Bunn and Tremblay straight back to Great Bear Lake, while he and I would continue northward to the top of a range of hills to see what was on the other side. We all agreed on the plan and each party set out. As might be expected, when Bell and I reached the summit of the hills ahead there were others beyond which drew us onward, and beyond these there were others again.

We tramped on and on all morning crossing one ridge after another. In the afternoon it began to snow. It was the fifth of August and we were somewhere in the neighbourhood of Dismal Lake. By four o'clock the snowfall had become much heavier and we suddenly realized that our position was becoming precarious and some revision of our plans was necessary. We took shelter in the lee of a huge boulder to discuss the situation while the snow whirled about us. By this time we were very tired. We were also cold and hungry and our footwear was giving out. We had not been able to make a new pair of moccasins the previous evening and we had been compelled to use strips of blanket to wrap our feet. Home seemed a very long way off to two very young explorers.

Caribou were to be seen in numbers, but we had no means of killing them. I tried to knock over a fawn with my geological hammer but he was too agile and I couldn't hit him. I did however manage, by pure accident, to kill a snowbird with a stone and we planned to have this for supper.

We rested for half an hour in the shelter of the boulder and then decided to strike off southwestward to hit the second camp we made on our outward journey. It was still snowing quite hard. Visibility was not good and we had to travel by compass.

Within a few miles of our turning point, as we plodded through the storm, we suddenly caught sight of some figures in the distance, dimly visible through the falling snow. There were some thirty or forty of them grouped together on a small rounded hill. Judging by their agitation they had also seen us and were obviously disturbed about it. Their dress indicated that they were neither Indian nor white and therefore must be Eskimo. If so we wondered what kind of a reception we were going to get. Johnny Sanderson had always told us that the Eskimo we might meet in this country would certainly be dangerous and might want to kill us. We debated for a minute or two what we should do and finally decided to put on a bold front. It was really the only thing to do as we were badly outnumbered and we had no means of defence whatsoever. So we marched forward walking abreast, and expecting every moment to be shot at with arrows.

Instead of standing their ground, we were surprised and also very pleased to see these people hurriedly gather together some of their belongings and then run into the hills behind the camp.

When we got to the camp there was not a soul left. Men, women and children had fled. Much of their effects however had been left behind in the rush to get away. There were a number of slab stone shelters circular in outline and a couple of feet high, evidently sleeping places, caribou-skin robes, seal-skin shoes, stone lamps, arrows tipped with native copper or bone and bows made of bones lashed together with rawhide. Everything in the camp was of local origin, food, clothing and implements. There was nothing of white man's manufacture, or anything to indicate contact with the white man. It was an encampment of a Stone Age people.

What was most important to us at the time was the huge pile of caribou meat that we found on one side of the camp, and equally important a small bundle of dry twigs tied up with a rawhide thong. It wasn't long before we had a fire going and some caribou meat roasting in front of it on the end of a forked stick.

We spent about two hours in the camp, but the Eskimo never returned. We felt certain that they would be watching us from a safe distance away and might even be looking for an opportunity to kill us. These same people actually did kill the next two visitors to this locality, Fathers LeRoux and Rouvière, by sticking a knife into them.

It was getting on to nine o'clock in the evening and we thought we had better be moving on. We first loaded our packs with caribou meat. Then I

searched my kit for something that I could leave behind as an evidence of good-will and payment for the meat we had taken. All that I could find that might be of some value to the Eskimo were a couple of three-cornered steel needles. These along with a tin plate were left in a prominent spot where they could be quickly and easily found. There is no doubt that this small gift saved our lives for they could easily have killed us that night if they had wanted to do so.

That night we made a very uncomfortable camp in a cave a few miles from the Eskimo camp. The following morning, after a few hours' rest and as soon as there was light enough to travel, we continued on our way. It was still snowing, but before night came it had changed to rain. We spent a second very uncomfortable night, without any shelter at all from the rain and only caribou meat to eat. Actually what we did that night was to make a very smoky fire with some willows that we found growing by the side of a stream. With this we heated some flagstones which we spread out on the ground. We covered the warm flagstones with moss and then lay down to sleep on this bed, covered with a single blanket. It drizzled most of the night and though our blanket was soon sopping wet we slept through sheer exhaustion.

I got up early the next morning leaving Bell still sound asleep. The rain had stopped but there was still a raw wind blowing. Dark clouds drifted across the sky and the sun shone through only occasionally. The temperature was only a little above freezing. I needed a fire badly so I wandered off to see if I could find some dead dry wood.

I was perhaps a quarter of a mile away, but out of sight of the camp, when I heard Bell shouting at the top of his voice. He was evidently concerned about my disappearance so I hurried back to camp to relieve his anxiety. He was quite certain that I had been kidnapped by the Eskimo while he slept. I found out a few days later that the Eskimo had actually followed us to that camp and may have been in sight of us at the time. However we were quite unconscious of their presence.

It was very late on the following evening that we reached our base camp on Great Bear Lake. We were the first to arrive there. There was no sign of Bunn and Tremblay nor of Johnny Sanderson.

The next morning Tremblay turned up alone, looking pretty much all in. Shortly afterwards on the same afternoon Johnny Sanderson appeared carrying a load of choice pieces of caribou meat and looking well fed and none the worse for his experiences. On inquiring about Bunn, Johnny said that he had seen no one since we left him four days previous and he told a cock and bull story about trying his best to find us. Tremblay assured us that Bunn would soon be in and that he had left him only a short distance back.

Bunn, however, never turned up that night and the next morning he was still missing.

It was at once decided that I should take Tremblay and go back and see if Bunn needed any help. So, carrying only a minimum of equipment and a rifle with which to get food, Tremblay and I set out the second time into the barren lands. We expected that we would find Bunn in a few hours. Instead Tremblay took me back about fifty miles, a day and a half of hard walking, to the point where he said he had seen him last. It did not come out until months afterwards, when Bunn came out to Edmonton, that he had sprained his ankle shortly after he had parted from us at the polar bear camp and Tremblay refused to help him or even to wait for him.

In spite of very bad weather, Tremblay and I scoured the country thoroughly, but could find no trace of Bunn and finally had to give up the search and return to Great Bear Lake. We did find a good many signs that the Eskimo had followed Bell and myself when we left their camp a few days earlier.

The story of Bunn's rescue by a band of Indians, his return to Fort Norman and his trip on snowshoes from there, 1,500 miles to Edmonton, is told in Bell's book *Far Places* and need not be related here. I do know that, when Tremblay and I got back to Great Bear Lake after a week of hard travel on nothing to eat but caribou meat and berries, I was pretty well exhausted and could hardly drag one foot after the other. I found then that fresh caribou meat eaten alone is not very sustaining and is not in the same class as beef or even moose meat as a food.

There is a sequel to the story of our contact with the Eskimo which can be most appropriately referred to here.

In August of 1935, thirty-five years later, I flew over the same ground that I tramped over in 1900, making the trip comfortably from Cameron Bay to Coronation Gulf and back in one day. Our old route could here and there be picked out. I could spot the place where I had the encounter with the polar bear. I was actually looking for the huge boulder in the shelter of which Bell and I sat and rested in the snowstorm. A few caribou could be seen here and there on the shores of Dismal Lake. Musk oxen and wolves were nowhere visible, but I could easily identify the site of the old Eskimo encampment at the south end of Lac Rouvière. In the interval of thirty-five years, however, a great gap had been bridged in the progress and development of these Eskimo. I had passed from the Stone Age to the present age of highly developed civilization, for I was flying in a modern airplane, with radio and all the other instruments with which such a plane is usually equipped. When we reached the trading Post at the mouth of Coppermine River I shook hands with some forty or fifty Eskimo, some of

these, perhaps, men who had fled from us thirty-five years earlier but who now greeted me in a most friendly manner. As I walked down through the village of tents to the Hudson's Bay Company's trading Post at the end of the village, women and children smiled pleasantly at me and I could hear modern music coming from several of the camps. While still using the old style skin clothing, these people were equipped with modern rifles, sewing machines, radios or gramophones, and outboard motors or motor boats. They were no longer a Stone Age people, but one which had become adapted easily and quickly to modern methods of living as far as these methods were applicable to Arctic conditions.

The experience of August, 1900, was gradually becoming little more than an interesting memory until actively revived in August, 1936, by a conversation with D'Arcy Arden during a brief visit that I made to Great Bear Lake.

Some years after my first visit to that country Arden had gone on a fur-trading expedition to the same region, and in the course of his operations established friendly relations with the Eskimo of the Coppermine River, the same group which later became known as Blonde Eskimo through the investigations of Stefansson.

They proved to be quite a friendly people, and Arden soon found himself on a very satisfactory footing with them. When in time he was able to converse with them, they told him the story of the visit of two white men to their camp some years previous—possibly the first many of them had ever seen.

They told Arden that on catching sight of us they first took us to be Indians, but when they found that we did not run away at the sight of them, they came to the conclusion that we must belong to the same race as the people who had visited the country many years ago of which their fathers had told them, visitors who belonged to one or the other of the expeditions searching for the remains of Sir John Franklin's party.

They were naturally suspicious of all strangers, for the locality was not far from Bloody Falls on the Coppermine River where Samuel Hearne's party of Chipewyan Indians had, in 1772, slaughtered a band of Eskimo men, women and children in their sleep, and no doubt the story of this massacre had been handed down to these people from one generation to another.

They told Arden of having watched us from behind some rocks as we ate our meal in their camp. They were determined to kill us if it could be done without risking their own lives; but as their only weapons were arrows and broad, foot-long knives beaten out of native copper found in the neighbouring hills, this could not be done without coming to close quarters.

When we left their camp in the evening some of the men followed us, and when we camped for the night in a cave in the rocks they still watched us, looking for an opportunity to stick a knife into us. The chance did not come during the night because one of us always remained on guard while the other slept.

In the meantime our needles had been found in the camp, and from that time on our lives were safe. The Eskimo, however, did follow us all of the next day and part of the succeeding day until we were well out of their country. When we entered Indian territory near the shores of Great Bear Lake they turned back to their own camp.

While we had our suspicions at the time that we might be followed by the Eskimo, we never at any time caught sight of them, and these suspicions were only confirmed by D'Arcy Arden's story.

Human life has never been held in very high regard by these Eskimo, and killings were perpetrated sometimes for very trivial reasons. A few years after the visit of Bell and myself to this locality, two Roman Catholic missionaries were killed in almost the same locality, and possibly the murderers of these two priests may have been the same men who watched for an opportunity to murder us also. Death by the thrust of a blunt, copper knife is not one of the pleasantest things to contemplate, and it makes one shiver even after a lapse of fifty years to think what might have been the result if we had not left those two needles behind us in the Eskimo camp. Such a gift meant little to us, but to those people a steel needle was not only of great value intrinsically, but it carried a far greater significance as an evidence of friendship and good-will, a fact which meant the difference between life and death to us. Stefansson is convinced that we owed our lives to these needles.

17 Great Bear Lake to Edmonton

Our failure to find any trace of Bunn left Bell, as chief of the party, with a very serious decision to make. It was now the 13th of August and we were due at our rendezvous with the Indians at the southeast corner of the lake on the 15th, only three days to make some hundreds of miles. If we failed to make contact with them at the agreed rendezvous, we took the chance of being caught by winter hundreds of miles away from any help and without proper equipment or supplies. On Bell's decision rested the lives of himself and the three other members of his party.

It was a very difficult decision to make but it was decided after a conference with the whole party that we should push on, try and reach the rendezvous before the Indians had left, and if we were not in time, to review the situation again.

There was also a possibility, if he had lost his bearings in the snowstorm, that Bunn might reach Great Bear Lake at the bottom of Hornby Bay where we knew that the Indians frequently camped. This was what actually happened. He was found by a small band of Indians camped at the bottom of the bay and taken in to Fort Norman before winter came on. From there he went out to Edmonton during the winter with the Hudson's Bay Company mail.

Before leaving our camp at the mouth of Dease River, we left a tent and our small canoe, all of Bunn's outfit and as much supplies as we could spare from our meagre stock. We then pushed on. From this point we were headed south for Edmonton, which was probably 1,500 miles away by the course we had to follow. Practically all of this distance we had to cover by canoe or on foot.

We were now four men in one canoe and with the aid of a sail and long hours of paddling we made good progress along the south shore of Dease Bay and around the bleak and treeless Cape McDonnel. As we proceeded along the low north shore of MacTavish Arm we saw and killed our last caribou. The weather was quite stormy and we were occasionally delayed on this account. Minimum temperatures ranged from 35° to 45° and the noon day temperatures from 45° to 55°. It was not unpleasant travelling but one had to work hard to keep warm. Wherever we found a suitable place we set

our net and in the morning usually found either trout or whitefish in it. They were the finest fish I ever tasted. For size and quality there are no better fish than those to be found in Great Bear Lake.

As we approached the east shore of the lake, the country became more and more rugged. Due to a change in the character of the rocks, the shore line grew steeper and was bordered by rocky islands. While these gave us shelter from the wind, they occasionally caused us delays by throwing us off our course.

We were here in typical Laurentian country with deep fiords running far into the interior of the country, and hills of granite or greenstone rising steeply from the water's edge to heights of 600 or 800 feet. Here and there the rocks were stained and coloured by the oxidation products of iron and copper.

The weather continued stormy and at one point we were compelled to camp in the same spot for three days. Temperatures dropped lower until ice was forming on the rocks on the lake shore. Snow fell occasionally.

On the 24th of August we took a latitude observation not far north of the point where the buildings of the Eldorado mine now stand, and that afternoon we were forced to seek shelter in a little bay behind this point. The bay was bordered by steep cliffs of rock which reflected the sound of our voices, and for that reason we called it Echo Bay. We camped in Echo Bay that night. It was a well sheltered camp and there was plenty of firewood available.

The name Echo Bay has since been applied to the larger bay which runs back inland to the old station of Cameron Bay.

Bell's notes on this locality refer to the colours on the rocks at the entrance to our Echo Bay, and in his official report published by the Geological Survey in 1901 there is this sentence:

> "In the greenstones east of MacTavish Bay occur numerous interrupted stringers of calcspar, containing chalcopyrite, and the steep rocky shores which here present themselves to the lake are often stained with cobalt bloom and copper green."

This statement of Dr. Bell's lay buried in the reports of the Geological Survey for thirty years until in 1930 Gilbert Labine, on reading the reports of the Survey covering the far north, ran across it. Labine came from Cobalt, Ontario, and had had a lot of experience in prospecting for cobalt ores in that country. He knew the significance of cobalt bloom and he knew of the close relationship of cobalt to native silver. His experience suggested that, where there was cobalt, there should also be silver.

At that time, 1930, there was a widespread fever of interest in the mineral resources of the Northwest Territories, and many flying expeditions into the north country were organized. Labine determined to have a look at the country and see if he could locate the occurrence referred to by Bell.

He left for the north by air in the early spring with Charles St. Paul as his only companion. They were landed on a lake near the mouth of Camsell River and from there continued northward on snowshoes following the east shore of Great Bear Lake and pulling a sled with their supplies and equipment as well as a sectional canoe.

They reached Echo Bay on May 14th and there St. Paul became snow-blind and was not able to travel. Labine had to prospect alone. On the 16th of May he located the occurrence that Bell had described. He examined this carefully, and with his background of experience he easily found the cobalt bloom and also the native silver that he expected. Examining the exposure of rock more intensively, he broke off a piece of heavy black mineral which responded to all the field tests for pitchblende, which is the ore both of uranium and radium. His field tests were afterwards confirmed in the Bureau of Mines laboratories in Ottawa.

After this began his long and difficult fight for the development, transportation and treatment of the ores. Later again the marketing of radium and other refined products brought him other problems and the opposition of powerful interests; but he was able to overcome all these obstacles. The whole story of these events and the solution of the problems step by step was told at the Chateau Laurier, Ottawa, on November 16th, 1936, in the presence of the Governor General, Lord Tweedsmuir, the Prime Minister and members of his Cabinet at a dinner presided over by Colonel Harry Snyder. At this dinner, as Deputy Minister of Mines, I was presented with a silver plaque in recognition of the work done by men in the Mines Department on the problems of mining, treatment and recovery of radium from these ores.

This discovery by Labine was the second step in the long series of events that finally led to the explosion of the first atomic bomb in the desert country of New Mexico.

It was at the southern end of the big island, called after Sir John Richardson, which blocks the entrance to Conjuror Bay, that we had planned to meet the Indians whom we had seen at the outlet of the lake in early July. These Indians were to guide us across the two hundred or more miles of unexplored country to Great Slave Lake. We arrived at the rendezvous on August 27th, about two weeks late. There was no one there, though there was plenty of evidence that there had been shortly before. It was impossible for us to tell where our friends had gone and it seemed hopeless to try and

find them. This left us with a very difficult decision to make; but as so frequently happens fate or accident decided this for us.

A few miles off Richardson Island to the west is a small, lonely isolated island only a few feet high, covered by light scrub. It was called Superstition Island and could be seen from our camp. To it is attached an interesting and tragic Indian legend. According to the story a young Indian fell violently in love with a young woman, the wife of another Indian. The two lovers eloped one night from the encampment on the mainland and paddled out to the island. Here they camped. The husband, however, got wind of the elopement and followed them to the island. While they slept he took away their canoe and returned to the mainland. When the lovers woke up they found themselves stranded on the small island with no means of getting to the mainland and only a little food. For days their cries for help could be heard coming over the water when the wind was favourable, but no one went to their rescue. By and by the cries became weaker and weaker and finally there was silence. Death from starvation was the penalty of their love. No more effective punishment, it seems, could be devised for a breach of the marital laws of the tribe than this.

The night of August 27th the thermometer showed twelve degrees of frost and the next morning snow covered the ground. We felt, however, that we should take a look in Conjuror Bay in the hope of finding our Indian friends. But we could find no one. We did know that the Indian canoe route to Great Slave Lake followed a stream flowing into Conjuror Bay and from the head of that stream a series of portages led through lakes into the headwaters of Marian River which emptied into the north arm of Great Slave Lake. Father Petitot had been over this route many years before in winter but his record was very sketchy and not good enough to travel by in summer.

On the 29th we found the entrance to a good sized stream which Bell called Camsell River, and a short way up this we stopped for a latitude observation and a conference as to what course we should follow from there. There were two alternatives: one to attempt to find our own way without a guide across to Great Slave Lake, and the other to return to Fort Norman. The first alternative was more risky, but if we were lucky it was the shorter way out. The second alternative would involve a retreat and an admission of failure.

As frequently happens, our decision was determined by a circumstance which was entirely unexpected and not under our control. That circumstance was the appearance of a moose swimming across the river within sight of our latitude station. Johnny Sanderson immediately set out to stalk the animal and shot it as it reached the shore.

This settled the question for us. Here was food for several days and here also was footwear. We decided to try and find our way south to Great Slave Lake and immediately began the ascent of Camsell River. That night I made myself a pair of moccasins out of the rawhide of the moose. The hair was left on and worn inside the shoe. A good deal of flesh, however, still remained on the skin and in a few days I was politely asked by Bell to leave my moccasins outside the tent when we went to bed.

Camsell River flows through typical Laurentian country and anyone familiar with a Laurentian drainage system knows that it is not an easy matter to follow streams in that kind of country. There are no well defined valleys and the water courses really drain a succession of lakes. The lakes themselves are very irregular in shape and frequently full of islands so that it is very difficult to find either the inlet or the outlet. The connecting stream is usually broken by rapids or falls which make portaging necessary. In other words, the drainage system is completely disorganized and very immature.

We found these conditions to characterize the course of Camsell River throughout its whole length. Progress was consequently disappointingly slow and we had many discouraging experiences in which we did not know which way to turn. Usually when we came into a lake we paddled across to the south side looking either for the incoming river or a portage trail out. If we found neither we portaged our outfit through the bush into the next lake south and so on again. Occasionally we ran into a *cul-de-sac* and had to back out.

Our latitude observations showed us how much progress we were making southward, but it was apparent that winter was catching up on us and unless we were able to make greater progress we would be frozen-in before we could reach Fort Rae on Great Slave Lake.

Always the low point in our experiences seemed to come with falling snow, for we had to travel whatever the weather was. There is nothing so unpleasant and depressing as to be wet and cold at the same time. On the 11th of September we were both very wet and very cold and we had lost all signs of the Indian canoe route. In addition, our food supply was again almost exhausted because we had finished our moose meat and had killed only a few ducks since leaving Great Bear Lake. Our fishing also had not been very successful and we had used up all our matches. Actually our whole food supply consisted of four ducks killed that morning and we had to use the old-fashioned method of flint and steel to make our fires. Yet I do not recall that anyone expressed any serious feeling of apprehension.

On the following day we were crossing a fairly large lake, headed for a patch of burnt timber on the south side where we expected to find a portage trail leading out. Looking backward when we were about half way across

the lake we saw in a bay to the westward the smoke of some teepees curling up through the trees. A shout of joy went up and we were not long in paddling the mile or two that separated us from the camp. It was a camp of Dogrib Indians who traded at Fort Rae. They said they were the only people along this canoe route between Great Bear Lake and Great Slave Lake.

We were lucky to find them, and very fortunate in the treatment that we received. They were a most generous and hospitable group. They were naturally curious to hear our story, but having heard it and realizing our condition, there was nothing that they would not do for us. Out of their own limited stock they provided us with some clothing, especially moccasins, and with some matches and tobacco.

We spent the night with these Indians and while we slept our clothes, which were pretty ragged, were mended by the women. In the morning they gave us some food, dried meat and dried fish, and the Chief agreed to send two of his young men to guide us in to Fort Rae. He was somewhat reluctant to do this as it would interfere with his programme and it was doubtful if the young men could get to Fort Rae and back again before winter came on. He even suggested that we spend the fall in his camp, and as soon as there was snow on the ground and the lakes were frozen he would have us taken in to Fort Rae by dog team.

Our latitude observations indicated that we had made about 100 miles south from Great Bear Lake in about two weeks, and we estimated that we still had another 120 miles to go to reach Great Slave Lake, and the height of land to cross at the same time.

We were fortunate indeed to run across these people. If we had not done so, we would have had great difficulty in finding our way across to Fort Rae, and the freeze-up would certainly have come before we could have reached there, in which case we might well have perished. With the two young men, in their own birch bark canoe, we had no difficulty in following the canoe route across the divide and down Marian River. We reached Fort Rae in seven days.

Both at Hislop's Trading Post, which we reached first, and at Fort Rae, the Hudson's Bay Post, we had been expected for some little time and our friends were becoming a bit anxious at our non-arrival. They were almost as glad to see us as we were to see them.

We paid off our Dogrib guides at once, as they wanted to hurry back home before the freeze-up. They seemed to take their service to us as a matter of course, but we looked at it differently. Bell made our feelings clear in the compensation he made to them.

When we reached Fort Rae we were in familiar country and we felt that our difficulties were over. From that point southward it was only a matter of

how far we could get on our way to Edmonton before winter caught up with us.

From Fort Rae we followed the regular canoe route along the east shore of the north arm of Great Slave Lake through Frank Channel, where years later a younger brother of mine was drowned by breaking through the ice, and gave his name to the bit of water. We pushed on past a maze of islands and across Yellowknife Bay, where an active gold mining industry is now being carried on, to Gros Gap. From there we made the risky crossing of the east arm of the lake to Stone Island, only however, after being rescued by a band of Yellowknife Indians from a small island where we had been wind bound for three days; then through and across the delta of Slave River to Fort Resolution.

We parted from Tremblay and Sanderson without regret at Fort Resolution, and Bell and I went on alone from there up Slave River. I never saw Johnny Sanderson again. He returned to Great Bear Lake that winter, and died there shortly afterwards. Tremblay got into trouble with the police at Resolution, and when I saw him two years later on the portage at Fort Smith, he was being taken out by the Mounted Police for trial at Lac la Biche on a charge of breaking and entering. He, also, died soon afterwards at Lac la Biche.

It was the 12th of October when we reached Fort Chipewyan and as there was no hope of getting any farther by water, we decided to wait until we could go out to Edmonton by dog sled. Winter had been chasing us for a month and a half and had at last caught up with us.

J. W. Tyrrell and C. C. Fairchild of the Interior Department were also at Fort Chipewyan returning from an exploration of the Thelon River. After a delay of six weeks at Fort Chipewyan, where we were the guests of the Hudson's Bay Company, we joined forces with Tyrrell and with some of the Hudson's Bay Company men to make a party of sixteen dog sleds for the journey to Lac la Biche. We were three weeks snowshoeing up the Athabasca River to McMurray and across the bush country to Lac la Biche.

Except for a certain amount of rivalry between the different groups in the party, there was nothing unusual in the 500-mile journey to Edmonton, except the "undeclared" race that took place between Tyrrell and Bell the day before we got into Lac la Biche. Tyrrell and his dog driver, Johnny Kipling, had to make a run of sixty miles in a day to win the race. I tried my best to keep up with the two contestants, but because my sled was quite heavily laden and theirs were light I finally gave up, and some time after dark pitched camp by the side of the trail. All the rest of the party were behind us, so in order to prevent them passing me in the night I blocked the trail with my sled and turned in to my blankets.

At Lac la Biche we acquired more modern methods of travel, and drove in to Edmonton with horses and sleighs, reaching there about the middle of December.

It had taken us a little more than four months to travel from Fort Confidence on Great Bear Lake to Edmonton, and except for the short bit from Lac la Biche to Edmonton, we had to do the whole distance under our own steam, by canoe or on foot. The next time I visited Great Bear Lake, in 1935, I came out to Edmonton in about eight hours flying time. Like the Eskimo on Coronation Gulf I had passed from the Stone Age of travel to the modern in thirty-five years.

Bell had been away from Edmonton a year and a half and I six and a half years so we both needed much in the way of clothing and other supplies. I learned here that my father had retired from the service of the Hudson's Bay Company and the family had gone to live in Collingwood, Ontario. So, after completing our outfit we headed for the east and arrived in Ottawa for Christmas.

18 James Bay

Before arriving in Ottawa, I spent a few days with Mac Bell in Almonte where he had a comfortable home presided over by his charming old mother. Here I had a most hospitable welcome and was made to feel very much at home.

I was not so happy, however, when Mac decided that he was going to demonstrate to his family and friends how we travelled and camped on our winter snowshoe trip from Fort Chipewyan to Lac la Biche. On Christmas Eve, in below zero temperature, we loaded a toboggan with some camp equipment, blankets and grub and set out from a comfortable, warm house down the ice of the Mississippi River to find a place to camp for the night. Good places to camp are not as easy to find in the neighbourhood of the towns of Ontario as they are in the far north, but before dark we were able to locate a place about a mile down where there was a clump of cedar trees and some dry wood. There was also nearby an old log fence which we thought might come in handy before morning. Here in the approved northern style we made camp in the snow—a small brush shelter—and started a fire. After an uncomfortable meal, we settled down for an uncomfortable night. It was a long cold night and we got little sleep. When morning came I had been weaned forever from such adventures, particularly when within easy reach of a good hot meal and a warm comfortable bed. I never tried that sort of thing again.

In Ottawa I was the guest for the week following Christmas of the late Robert Bell and as his two eldest daughters were in all the social activities of the town I was privileged to participate in these activities with them. It was an interesting experience, but I could not help contrasting the social life of Ottawa and the comfort of a modern home with the life that I had been living for the previous six years, when my home was either a tent in the snow or on the edge of some water or a log cabin sometimes built by my own hands. It appeared to me at first that the northern life was more purposeful and more satisfying. My main purpose in coming east with Bell was to go back to college. My last year in the North, and particularly my contact and talk with Bell, had convinced me that there were few opportunities in the north country and that, if I was to face life on the outside

in any field, a lot of additional training was necessary. It was with those ideas in mind that, as soon as the Christmas holidays were over, I went to Kingston and registered for courses in geology and mineralogy at Queen's University. This, I suppose, was the most momentous decision of my life.

I have always been grateful to Queen's University for taking me in, but there was probably more room in the universities in those days than there is today. Unfortunately, I was not able to finish out the term because of an attack of appendicitis which put me in hospital and into the hands of four doctors. This experience set me back in my plans a bit, but as soon as I was able to walk, and contrary to the doctors' advice, I took a job with the Algoma Central Railway of Sault Ste. Marie, under the general supervision of Mac Bell, for a canoe trip to James Bay. It was a very foolish thing to attempt a trip to James Bay before I was able to walk much, and I was to suffer for it later.

My instructions from the Algoma Central Railway were to outfit at Biscotasing on the Canadian Pacific Railway and after crossing the Hudson's Bay divide to descend the Mattagami River by canoe to James Bay. On the way down river I was to make frequent trips inland to the east and west and prospect for minerals, mainly iron ore. On arrival at the mouth of the Moose, I was to cross-section the river to find out if there were any possibilities of developing a harbour for the terminus of the railway at that point. Later I was to survey the mouth of the Harricanaw River in Hannah Bay for the same purpose. This was fifty-three years ago and the Algoma Central Railway has not yet reached James Bay because there was no reason to go there and there is no natural harbour either at the mouth of the Moose River or in Hannah Bay which would bring traffic for the railway.

The southern shores of James Bay from the Nottaway River westward are low and flat, and even though the rise and fall of the tides is not great the water recedes for miles over grass and mud flats until from the edge of the forest it is difficult to see where land ends and the sea begins. It would be hard to find a more difficult shore on which to develop a harbour for ocean-going vessels. The principal value of that shore line seems to be as a feeding ground for wild ducks of all kinds and for the blue geese which stop here for some weeks on their way southward from breeding grounds on Baffin Island to winter quarters on the Gulf of Mexico. The Algoma Central has got no further than Hearst at the intersection of the Canadian National, but the Northern Ontario Railway has pushed a branch line through to Moosonee.

Biscotasing, where I disembarked, was in 1901 a small railway village with a little frame hotel, a couple of stores, the railway station and a few log cabins. Beyond and to the northward was the northern wilderness in which there were no settlements other than the fur trading Posts of the Hudson's

Bay Company. The country had not yet been awakened by the great mining development that later followed the building of the Temiskaming and Northern Ontario Railway. When I got off the train at Biscotasing I was barely able to walk the few score yards from the railway station to the hotel.

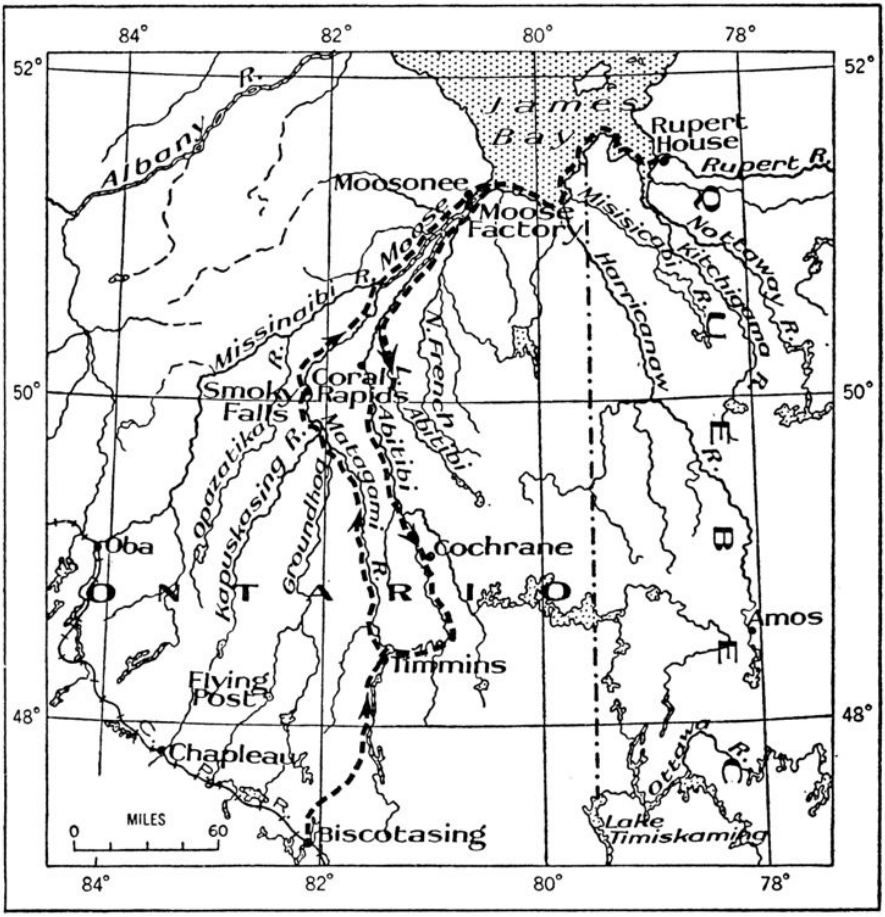
An eighteen-foot canoe had been shipped to Biscotasing for my use, and after assembling my party of two men, Louis Miron and my brother, Philip, and outfitting with enough supplies to take us to Moose Factory, we set out on Biscotasing Lake to cross the Hudson Bay divide at the north end of the lake. Beyond the divide we got into the upper waters of the Mattagami River which we were to follow to its mouth.

Between Biscotasing and Moose Factory there was only one habitation, Fort Mattagami, at the narrows of Mattagami Lake. The canoe and portage route from the railway to Fort Mattagami was well marked and easily followed because it had been used by the Hudson's Bay Company for many years for the transport of supplies not only to Fort Mattagami but to Fort Matachewan.

None of us had been over the route before, but we had no difficulty in following it. The portages were well marked and well cleared and here and there on prominent points there were "lop-sticks" to assure us that someone had passed here before and we were on the main road.

Mr. Miller, the Post Manager at Fort Mattagami, welcomed us with characteristic Hudson's Bay hospitality and offered the shelter of his house and the courtesy of his table.

I have travelled a great deal over the northland of Canada in so-called Hudson's Bay Company territory and I have never known the cordiality of the welcome of Hudson's Bay officers to fail when you landed at one of their Posts. It wasn't that I was specially favoured because of my father's connection with the Company, but the welcome was the same whether they knew who I was or not.



SKETCH MAP INDICATING ROUTE FROM
BISCOTASING TO RUPERT HOUSE
ONTARIO AND QUEBEC

We only stayed overnight at Fort Mattagami, but when we left there we were on the main river and there was never any danger of going astray. All we had to do was to follow the current and make portages where difficult rapids occurred.

On nearly all the rivers of the Moose River basin there is a strong break in gradient where the stream leaves the rocky pre-Cambrian country to enter the flat-lying sedimentary rocks that border James Bay on the south and west. The Mattagami is no exception, and at this geological contact there is a stretch of rough water around which a long portage has to be made on the Mattagami. Smoky Falls is near this contact.

Up to this point I had been taking things pretty easy and was allowing my canoemen to do nearly all the work. By the time we reached the long portage I was beginning to feel well enough to attempt to carry a small pack across the portage. Before I got half way across with my pack, however, I was suddenly seized with a sharp pain and collapsed on the ground. I found then that my appendix wound had ruptured and I needed medical help quickly.

We knew that there was a doctor at Moose Factory so my two men put me aboard the canoe and paddled day and night to get me to the trading Post and the doctor. There Dr. Ross made me a temporary truss and in a few days I was able to get about again.

On approaching Moose Factory we were greeted with a round or two from a pair of old brass cannon and the hoisting of the house flag of the Hudson's Bay Company. This was in response to the Union Jack that we flew at the bow of our canoe. This performance was the usual thing in those days, when visitors to the northern trading Posts were few but were likely to be of some importance. The practice was abandoned shortly after that, but Chief Factor Broughton, who had charge of the whole James Bay district, belonged to the old school and was determined that the formalities should be observed. He showed me all the courtesies that he was in the habit of showing to all visitors who were not his competitors in the fur trade. His attentions included an invitation to dinner which was quite a formal affair. I remember being waited on by an old manservant who surprised me by asking what I wanted to drink. "Will you have spruce beer or water, sir?"

We only stayed a few days at the mouth of Moose River, long enough only to make several cross-sections of the river and to satisfy myself that from the nature of the topography the construction of a deep water harbour at this point would be a very expensive business and not warranted by the volume of traffic that could be foreseen in the near future.

The Hudson's Bay Company had about that time arrived at the same conclusion, and though their ships had come into the mouth of Moose River to "Ship's Hole" nine miles below Moose Factory for a couple of hundred years, they ultimately had to develop a harbour on Charlton Island from which to serve the whole of James Bay.

We found Hannah Bay and the mouth of the Harricanaw River even more impracticable from the point of view of railway terminal facilities. It was hard enough to find water deep enough to allow us to get ashore in a canoe. The banks of the Harricanaw and West Rivers were all of mud, and when the tide was out we sometimes launched our canoe by sliding it down the slimy and slippery mud banks with full cargo and crew in her.

It was on the south shore of James Bay that I first heard the story of how the hummingbird finds its way there from its winter quarters in the south. When I asked a local Indian, John Fletcher, a very intelligent person, how such a tiny bird could fly such a long distance he told me that it rides on the back of a goose, burrowing in the big bird's feathers just behind the shoulder. It is an interesting bit of bird lore and may have something in it.

To my mind the most enjoyable way to travel in northern Canada is by canoe, particularly on streams or lakes that are not too big. On such waters there is always a feeling of pleasurable anticipation as to what is around the next bend. It may be a moose or a bear or a rapid or even a change in the rock formation which might carry some valuable mineral. All add to the interest or even excitement of that sort of travel.

Nothing, however, could be more monotonous or uninteresting than canoeing along the flat muddy shores of James Bay. When the tide is out a canoe cannot get anywhere near the shore for a landing, so that we had to get going at high tide and make shore again at the next high tide. This of course involves the risk of getting caught by bad weather when no landing can be made between high tides. We were caught only once this way, and during a blow we had to throw overboard a good part of our load in order to keep the canoe afloat. It is not pleasant to think of being dumped into the cold dirty water of James Bay a mile or two from shore and no one within fifty miles or so who could bring you help.

Before leaving the railway, Bell and I had agreed to meet at Rupert House in the early part of August in order to make our plans for the remainder of the season. We met at this interesting old spot, the oldest English trading Post on the whole of Hudson Bay, where Groseilliers had wintered in the *Nonsuch* in 1668-1669. Here, while exchanging notes and discussing our plans, we were entertained by Mr. Nicholson of the Hudson's Bay Company and the Reverend R. J. Renison of the Anglican Mission. The latter is now Archbishop of Moosonee and Metropolitan of Ontario. These were the only white people in the place. Bell had been up the east coast of the bay as far as Paint Hills but had found nothing of interest from a mineral point of view. My report was just as discouraging, in so far as harbour possibilities were concerned.

Although I had to report that the south shore of James Bay offered no possibilities for a deep water harbour except at enormous cost in dredging, it was evident that as soon as the east shore was reached in Nottaway Bay the water near the shore became deeper and the land rose more rapidly inland to hills composed of granites and other pre-Cambrian rocks. Unfortunately for us, these deep water conditions lay within the Province of Quebec, and the

charter of the Algoma Central Railway applied only to the Province of Ontario.

After a few days' rest at Rupert House, we turned back to make some further geological explorations in the basin of Moose River.

On the way back south, Bell and I travelled together up the Moose River as far as the mouth of the Abitibi, and then we parted. He was to travel south by way of the Mattagami and Kapuskasing Rivers to the Canadian Pacific Railway and I was to follow the Abitibi and Frederick House Rivers to Nighthawk Lake, then portage over to the Mattagami by way of Porcupine Lake and up the Mattagami to Biscotasing, the point from which I had left the railway in June.

It was getting on to the end of August as I started up the Abitibi River. The season had been very dry, the streams were low and the canoeing was not too good. The worst feature of the late summer of that year was the number and extent of the forest fires that raged over the lower Moose River region. I remember the day when we had to camp early in the afternoon because, though the sun was still up, it was completely obscured. The smoke was so heavy that we could not see well enough to travel on a strange river. Fish by the score were lying dead on sheltered beaches and in the eddies. It was a weird scene and gave one a very uncanny feeling. When we did make camp at the back of a gravel bar, the cook got lost in making a trip from the canoe to the camp and had to shout for help.

Later in the day, as we sat at the door of the tent having our supper, the gloom of evening was broken by occasional flashes of lightning accompanied by the roll of distant thunder. As the storm approached the lightning flashes became more frequent and vivid, and the thunderclaps louder. I could see the anxiety growing on the face of the cook. After a crack of thunder more violent than any that we had previously, a torrential downpour of rain commenced, and the cook quietly retired to the back of the tent. He was quite certain, he said, that the end of the world was coming!

A day or two after this experience we met Sydney Ells and my brother Philip returning downstream to Moose Factory in an empty canoe. They also were doing some exploratory work for the Algoma Central Railway. They had been caught in one of these bush fires and lost practically their whole outfit. They were the most disreputable looking pair that I had ever seen and hardly distinguishable as white men. Their faces were black, their clothes torn and their shoes almost burnt off their feet from walking in the hot ashes of the burnt-over forest.

Their story was that in making a cross country traverse from the river where they had left their canoe, tent and outfit, they were cut off from their camp by a bush fire. They couldn't get away from it, so they lay down in the

water of a small creek, covered their heads with their coats which they had to soak at frequent intervals, and let the fire go over the top of them. They were trapped in the creek for some hours, and when the fire died down they had to walk for several miles through blackened smouldering forest before they reached the river and their camp. They found their tent destroyed, but the canoe was safe. They had left it some distance out on a gravel bar where the fire could not reach it. When we met them they were on their way back to Moose Factory for more food and equipment.

On account of very low water the canoeing on the Abitibi and Frederick House Rivers was not good. Most of the way we used poles or the tracking line. By these methods we made faster progress than by paddling. Poling is the most effective way of ascending swift shallow streams in a canoe, but it requires far more skill than any other method of canoeing.

We saw no big game in the whole distance between Moose Factory and the railroad. In fact there was little of any kind of life to be seen. It was only at the small trading outpost of New Post on the Abitibi and the establishment at Fort Mattagami that we met any human being. The Porcupine area, where there are now twenty-five or thirty thousand people, was still undiscovered, unexplored and uninhabited. The gold deposits were not to be exploited for some years to come.

Frederick House Lake at that time was a fine body of water about six miles long and two miles wide. Years later it was drained by cutting through the rock ridge which dammed the outlet. It is now a dry plain through which the river flows in a meandering course. When we reached Nighthawk Lake we turned west up Porcupine River to make the portage across to the Mattagami River by way of Porcupine Lake, through what was afterwards to prove the greatest lode gold field in the whole of Canada. Professor Parks of the University of Toronto had made this portage two years before. Otherwise the route was only known to, and travelled by, the local Indians.

On a small rocky island near the mouth of Porcupine River there were a number of prospector's stakes indicating that someone had noted evidence of mineralization at that point. It seemed to me that the stakes were placed there by some incorrigible optimist because I could not see anything to write home about. This was the only evidence of any prospecting operations in the whole region.

Porcupine River was not navigable even for canoes. It was shallow, crooked and choked with fallen trees. We consequently had to portage our outfit nearly the whole way to Porcupine Lake over a trail that badly needed cleaning out.

We camped at the east end of Porcupine Lake and when we got up the following morning, there was snow on the ground. It was still too early for

winter, but the first snow in the north country always makes one think of looking for a place to den up for the winter like the bears. The effect on us was to make us hurry on, and from this time on we travelled whatever the weather was like; and it was consistently bad.

Somewhere on the route between Porcupine Lake and Mattagami River and in the neighbourhood of Gillies Lake, the trail passed by an outcrop of quartz. A sample of this was taken at the time, and when assayed at Sault Ste. Marie, gave me a result of $5.20 to the ton in gold. This was probably the first sample of gold ore taken from a locality that has since yielded about a thousand million dollars in gold from the Hollinger, McIntyre, Dome and adjoining mines. How often has it happened in the mining business that the original discoverer got nothing out of his discovery? The only grain of comfort in the thought that I had missed something by failing to follow up the evidence of gold is the fact that $5.20 a ton at that time and place was not worth bothering about. It was only good enough to show that there was gold in that locality.

The last portage to Mattagami River ran through what is now the town of Timmins and joined the river about the point where the highway bridge now crosses that stream. It was a dismal looking prospect at the time of our arrival at Mattagami River for it was raining hard and quite cold. From this point on to Fort Mattagami it rained without ceasing day and night, and when we reached the Post after about fifty miles of hard paddling we were soaked to the skin and there was not a dry thing in the canoe. I was never more pleased to get under a roof that did not leak than when I was received into the hospitable house of Miller, the Post Manager.

We stayed here two nights and got all our clothes, blankets and tents thoroughly dried out before we pushed on to Flying Post at Groundhog Lake where we were to meet Bell.

Bell had planned to travel up the Groundhog River to Flying Post, but was forced to abandon that route for the Kapuskasing River when he found the water too low. He reached the railway at Chapleau and from there sent me word at Flying Post not to wait for him but to get out to Biscotasing as soon as possible.

It was getting along to the end of October and there were many warnings that winter was not far away. As soon as we got Bell's message, therefore, we struck out for Biscotasing travelling each day from daylight to dark. I remember making camp one night in the dark in a nice open grassy spot. Inside the tent there was a gentle ridge which made a fine pillow for my head. I might not have slept so peacefully if I had known that the ridge was a grave and underneath were the remains of a human being who must have died in the course of his travel along that route.

Our last night out, the 31st of October, we camped at the north end of Biscotasing Lake, and when we got up the next morning the lake was covered with a sheet of ice for a considerable distance out from the shore. We had to break this ice with our paddles before we got out into open water. We got to the railway station that day and the following morning the lake was frozen over. We had beaten the winter only by the skin of our teeth.

My party was disbanded at Biscotasing and I took the train for Collingwood where I expected to find my parents and to winter with them. I was surprised to find, however, when I got there that my people had moved to Winnipeg during the summer. There was only my mother's sister, Mrs. Sinclair, to receive me. A few days later I took a boat across the lakes to Fort William and thence to Winnipeg, where I found my family settled in a house on Cathedral Avenue.

19 The Wood Buffalo Country

I had hoped to get back to the University for the winter of 1901-1902; but, owing to my illness at Kingston, there were financial difficulties in the way which forced me to postpone this for another year, or until I could accumulate a more substantial surplus. In the meantime, I applied for some work under Colonel H. N. Ruttan, the city engineer of Winnipeg, and found employment surveying and drafting in the assistant engineer's office. This was purely voluntary work, but I took it for the experience it gave me.

Early in the spring of 1902, I was invited by the Acting Director of the Geological Survey of Canada, Dr. Robert Bell, to undertake an exploratory survey of the country to the southwest of Fort Smith. There were two matters on which information was required. One of these was the natural salt deposits; the other was the extent and range of that remnant of the great buffalo herds which occupied the angle between the Peace and the Slave Rivers. As it was my intention to try and find a permanent place on the Geological Survey some time in the future, I accepted Dr. Bell's offer even though the salary was not great, and immediately started to make my plans to carry out the survey.

Dr. Bell was an old-timer on the Geological Survey. He belonged to the period of the great Canadian explorers, G. M. Dawson, J. B. Tyrrell, A. P. Low, R. G. McConnell and others, and was a great explorer himself. He had conducted explorations in many parts of Canada, so that when it came to an expedition of the kind assigned to me he knew all about it, how it should be equipped and how conducted. Accustomed to making his appropriations go a long way, he was very economical, and was in the habit of living to a large extent off the country while in the field. I thought, however, that he was carrying economy too far when he deleted butter from my list of provisions, and told me that during forty years of geological survey work he had never carried a pound of butter with him, depending entirely on bacon grease. Another of his obsessions was that accidents were quite unnecessary and that a competent explorer should never have any.

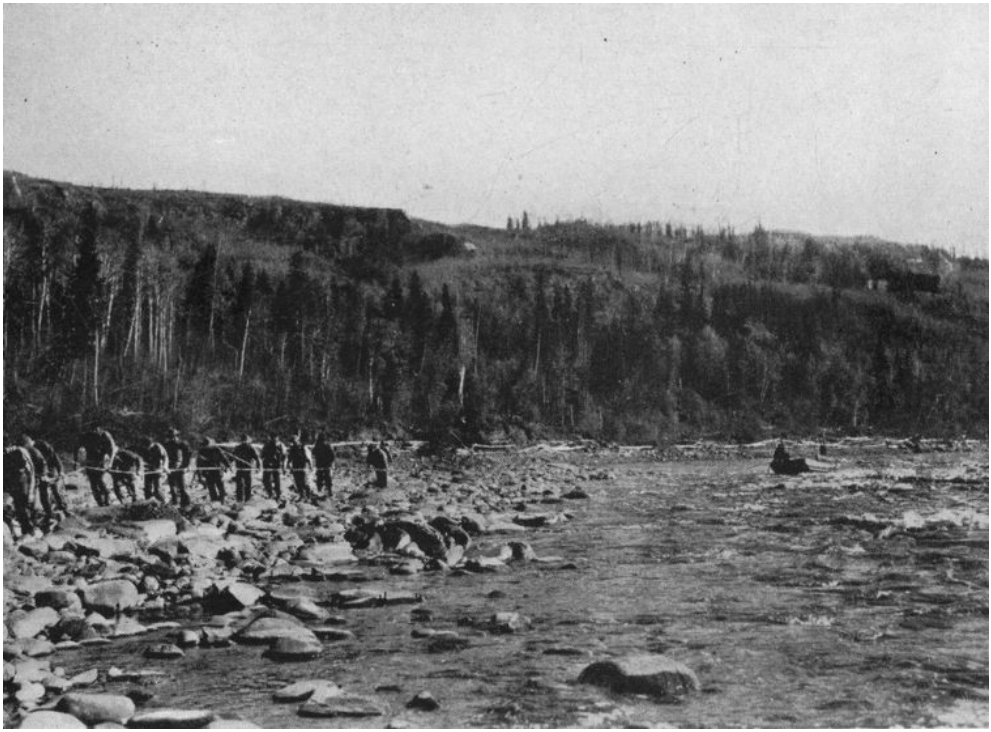
A. F. Camsell, Charles Camsell, D. W. Wright and A. N. Pelly on the road to the Klondike, 1898

J. S. Camsell, Chief Factor, Hudson's Bay Co., on a winter trip of inspection, 1896

My party was organized in Edmonton. I engaged Duncan McKay, a schoolmate of mine, as my sole companion, paying him $40 a month and keep. We took an eighteen-foot Peterborough canoe for transport purposes.

It was still pretty early in the spring and the ninety-mile wagon road to Athabasca Landing was not in good shape. As a matter of fact, the road was nothing more than an unimproved trail with no grading and few bridges across the streams. Recent floods had washed these all out. I was able to hire a wagon and a teamster, Montrose McGillivray, to take our outfit and canoe across, but I had to pay what I thought at the time was the terrifically high price of $40 for team, wagon and man for the journey. It took us six days to make a trip normally done in three days. We were frequently stuck in the mud; we had to build short stretches of corduroy, and once we had to ferry our supplies in our canoe across a stream too deep to ford. Fortunately there were other freighters going over the trail, and we were able always to get help when we needed it.

York Boats at Norway House



Tracking up Athabasca River, October, 1914

Athabasca Landing, at the time of our arrival, was a scene of great activity. It was on the main trade route to the north country and springtime was boom time at the Post. Wagon loads of freight were arriving from Edmonton at all hours. Flat-bottomed scows were being built to carry trading goods down river about three hundred miles to Fort McMurray, and fleets of these were constantly being dispatched. Everyone was busy and no one seemed ever to go to bed. We only stayed at the Landing one night.

The trip down the Athabasca River from Athabasca Landing to Fort McMurray is perhaps the most interesting and exciting part of the whole water route to the Arctic, especially when done in a canoe. I had made the trip once before, eight years earlier, but I was then a passenger with the Hudson's Bay Company transport and I had no responsibilities. This time I had a small canoe, and a companion who had not been over the river before, and was responsible for safe conduct particularly through the ninety miles of rough water between Grand Rapids and McMurray. I was advised to take a guide, but I didn't have money enough to pay for one, because I had not allowed for such an expense.

When Duncan and I left Athabasca Landing on the morning of June 17th, we were embarking on a journey by water of about 1,500 miles, a journey that was to take us down the Athabasca and the Slave to Fort Smith, then across to the Peace by way of the Salt, Little Buffalo and Jackfish Rivers, up the Peace to the Crossing, overland to Lesser Slave Lake and down the Athabasca River to our point of departure at Athabasca Landing. The only part that was quite new was on the Little Buffalo and Jackfish Rivers, which up to that time had not been surveyed or even travelled by any white man. The rest of the route was well known and was constantly being used, though neither of us knew anything of it except the part as far as Fort Smith.

It was a full summer's work to cover the whole route, and in looking over my notes I find constant references to getting away from camp before six o'clock in the morning and camping at eight or nine in the evening. The hours seem long, but that was what I was used to in the Mackenzie River district, and indeed it was the practice of all Geological Survey parties doing exploratory work anywhere at that time. We did not observe Sunday as a day of rest because there were occasionally other days throughout the summer when it might be too wet or too stormy to travel and we took our rest and perhaps did our washing on those days.

When we left Athabasca Landing we carried a comfortable load of about 600 pounds of equipment and food in our canoe. It was a light load and we made good time, at least fifty miles a day as far as Grand Rapids. Here the river drops eighty or ninety feet in about half a mile, forming a rapid which cannot be navigated. Everything had to be carried across an island which splits the channel in two.

The Hudson's Bay Company had built a hand-operated tramway, but we did not use this on account of the difficulty and danger of getting away from the lower end of the island where the water was pretty rough for a small canoe. Instead, we portaged our outfit down the east bank of the east channel, the route usually followed by small parties.

The run down Athabasca River from Grand Rapids to McMurray was the most exciting part of the whole summer's trip. We had been urged to take a guide here, and this is where we needed one, because while there are long stretches of easy but rapid flowing water, there are a dozen or so places where the river breaks into rapids and expert knowledge of canoeing and good judgment of water are necessary to get through safely. Only at the Big Cascade was it necessary to take the canoe out of the water and portage it. We covered this part of the river—ninety miles in length—in a day and a half, and thoroughly enjoyed it. We reached Fort McMurray on June 21st.

Below McMurray the Athabasca River has a more gentle gradient and we made slower progress. The days, however, were long, and we were on the move from early in the morning until late at night. We reached Fort Chipewyan on the 24th, and Smith Landing, now known as Fitzgerald, at 9.30 in the evening of June 28th. I was very anxious to run my canoe through the rapids to Fort Smith, but it was too risky without a competent guide. It was impossible to get a guide, as every available man had already been engaged by the Hudson's Bay Company and other traders. So I had to go across the portage with a wagon and team of horses provided by François Villebrun, a local French half-breed.

I had first crossed the sixteen miles of this portage by oxcart eighteen years earlier, and at that time it took all day to make it. This time the trail was still in very poor condition—swamps, muskegs and mud-holes for the first half, and deep sand, clouds of dust and flies in the second half. Again we took all day to make the portage and again we were pestered to distraction by mosquitoes, black flies and "bulldogs." The portage has always been notorious for the numbers and size of its insect pests.

Fort Smith was an important point in the Hudson's Bay Company's system of northern trading Posts. It was, in 1902, the headquarters of the Mackenzie River district, and was in charge of Angus Brabant, who afterwards became the Fur Trade Commissioner of the whole system. It was important also because it was at the head of navigation of the lower Mackenzie River watershed, and steamers ran from here 1,400 miles northward to the Arctic Ocean without meeting any serious obstacle. Fort Smith had no hotel or stopping place, nor any restaurant. Duncan and I consequently pitched our tent on the top of the bank at the upper end of the settlement and cooked our own meals at an open fire. There were no wells in the settlement and water was drawn up from the river by the Hudson's Bay Company in a stone boat hitched to a team of oxen.

The most annoying feature of camping in the village of Fort Smith was the difficulty of protecting ourselves and our supplies from the bands of starving dogs that roamed all over the place. We had to put our food on an elevated stage where the dogs could not reach it. They would even steal and eat our shoes if they could get at them, so we had to sleep with these under our pillows.

Both the Hudson's Bay steamer *Wrigley* and the R.C. Mission steamer *St. Alphonse* were loading supplies for the trading Posts and mission stations in the North. Travelling day and night it would take them a month to make the trip to the delta of Mackenzie River and return.

Our first trip out of Fort Smith was by canoe, when we explored as much of Salt River as we could cover by that method. That wasn't much, because

the water was low and the stream crooked and choked with log jams. We located the salt springs from which the supply of natural salt for the whole of the north country was obtained. The salt came out in the form of brine from beds of gypsum and rock salt which lay at the base of a wooded escarpment facing upon a wide, open grassy plain. The salt was precipitated from the brine by natural evaporation. In the six days we covered all of Salt River that it was possible to do in a canoe and on foot, and then we returned to Fort Smith.

During our absence an epidemic of measles had hit Fort Smith and already there had been one or two deaths. There were to be a good many more before the end of the summer. The epidemic seemed to follow the steamers all the way north down to Fort Macpherson and there were a number of deaths at each of the Posts along the river. Six died at Fort Smith in one week, out of a population of less than 100 persons. All of these deaths were among the native people, indicating that they had not acquired any immunity. The white population was not seriously affected, probably because of an immunity acquired through generations of exposure to the disease.

My next trip out of Fort Smith was overland with horses into the wood buffalo country. In planning this I had difficulty in finding a guide. Everyone seemed to be sick. Ultimately I got a man at extra pay, but he also was a pretty sick man by the time the short trip of ten days ended, and ultimately died of measles. No exact count was ever made, but there must have been hundreds of deaths in the Mackenzie River district that summer from measles.

On my overland trip into the wood buffalo country, the only animals I saw were a small herd at Flat Grass Lake where I camped the first night out. I saw quite a number of tracks in this and other localities, but no other animals. There is no doubt that the wood buffalo covered at one time a very wide range of country, extending as far west as Fort Nelson and north across Great Slave Lake. At that time they must have been numbered in the thousands. Samuel Hearne claimed to have seen a great many animals when he made the first exploration of the Great Slave Lake country in 1772.

I questioned everyone, white and Indian, who might have some knowledge of the wood buffalo, and I came to the conclusion that there were probably only about 300 animals left. These were said to be in two herds, the larger one ranging over the country between Salt Plain and Peace Point, the other farther north about the watershed of Nyarling River.

In spite of the protests of zoologists, who didn't like mixing the wood buffalo with the plains buffalo, about 7,000 plains buffalo were shipped into this country from Wainwright Park about ten years after my visit, and given

the protection of Wood Buffalo Park. As a result, the present buffalo population is now estimated unofficially at over 20,000. This is undoubtedly the largest herd of buffalo on the whole continent.

The most difficult part of the whole summer's exploration was the canoe trip I proposed to make from Fort Smith southwesterly across to Peace River. The route I intended to follow would take me up Salt River a few miles, then across an eight-mile portage to the Little Buffalo River. I was to follow the Little Buffalo upstream until, as an Indian told me, "I could not push my canoe any farther." The same Indian also said that from that point I was to strike across country in a direction "where the sun is at two o'clock in the afternoon," and after four miles I would reach the Jackfish River. From there all I had to do was to follow that stream down until it took me into the Peace.

There were no maps of the route as no white man had ever made this canoe trip. My only guidance was the few directions I had from an old Indian, Pierre Squirrel, who also told me that I could not take a canoe over that route. He said the Indians never did it, and certainly a white man couldn't do it. However, it was the only trip left for me to make, and I had to try it.

Our troubles began as soon as we got across the eight-mile portage from Salt River and put our canoe in the water of the Little Buffalo. It was August 2nd when we left Fort Smith, and it was the end of the month when we reached Peace River. It was the low water season and Little Buffalo River was nearly dry. In addition, it was blocked in numbers of places with log jams. The only scenic attraction in the twelve days we spent on the river was where the river falls over an escarpment about one hundred feet high, cutting a rock-walled gorge in which there are three beautiful waterfalls, the highest with a drop of forty feet.

We paddled, poled and dragged our canoe up Little Buffalo River until the stream wasn't wide enough to permit us to make the bends. Then we followed the Indian's advice and struck across country in a southwesterly direction through muskeg and down timber, and in about five miles we reached Jackfish River. It looked as if no one had ever been there before, but we thought we were over the worst of it as from here on we had the stream with us.

We followed Jackfish River for ten days. It is not a stream for canoeing. It meanders in the most exasperating way across a flat plain. In many places it is choked with logs and to add to the natural obstructions beavers had built a great many dams on it. These, however, were helpful because when we opened the dams we went down stream on a good flood of water.

We saw, besides beaver, a few moose and one of these I killed. He was swimming down stream when we spotted him, and when he would not leave the river we simply ran the canoe on to his back, grabbed a horn and made him tow us. He finally resented being used in this way and turned on us, but we were easily able to avoid being struck by his front feet.

One of my most interesting encounters with a bear happened at the mouth of Jackfish River where it empties into the Peace. I like to tell this story, because it illustrates the intelligence of the black bear and his capacity to copy humans. Here is the story.

For several miles before joining the Peace, the Jackfish River meanders in a very tiresome way, and we had to travel three or four miles to make one mile in a straight line. In the last few miles we saw a black bear in every bend. It was probably the same bear, keeping a bit ahead of us by cutting across the bends. We camped that evening at the junction of the two streams. On the opposite side of Jackfish River was a log cabin standing in a clearing in which there was a potato patch.

After the tent was pitched and while Duncan was cooking supper, I paddled across the river to the clearing and went into the small garden. The potatoes were full-grown, so I dug a few and filled a bucket with them. Then I went to the cabin and after trying the door and windows, which were all locked, I rolled up a dollar bill and stuffed it in the keyhole in payment for the potatoes I had taken. In the meantime a black bear, probably the same one we had seen farther up the river, stood on the opposite shore watching all my operations very carefully. I didn't attempt to disturb him or drive him away, but crossed the river to the camp with my bucket, and that night we had potatoes for supper.

While we were having supper, I saw the bear swim across the river and walk up into the clearing. He pottered about the potato patch for a while, evidently digging his own supper. Then he went to the cabin, sniffed and scratched at the door and tried the windows, and finally walked away into the woods in a leisurely way.

After supper it struck me that I had better go and see if my dollar bill was still safe in the keyhole. The bear might have pulled it out and destroyed it. When I got over to the cabin, I found that everything was all right. But, not only was my own dollar bill still there, but there was another one alongside it!

We were three weeks tracking our canoe up 450 miles of Peace River to the Crossing. On the way we rested only a couple of days at Fort Vermilion, where we were the guests of Frank Wilson, the Hudson's Bay factor. Here we had to get a new supply of footwear, as a pair of moccasins was only good for about a day on the stony beaches of the river. Some snow fell on

September 15th, but we could not afford to lay up for it. Winter was following close on our heels.

It was by pure luck that we found a teamster at Peace River Crossing, because at that time no one lived there and there was only a warehouse for the storage of freight. Now, of course, there is a thriving town. The teamster had only arrived there the day before and was going right back. Four days over the most primitive kind of trail by wagon brought us to Lesser Slave Lake. Here I met for the first time that interesting character, J. K. Cornwall, who was in the fur trading business with Fletcher Bredin. Inspector West represented the North West Mounted Police. From there across Lesser Slave Lake and down Athabasca River to Athabasca Landing we were passengers in a scow with W. T. Livock of the Hudson's Bay Company.

I was home in Winnipeg by October 13th.

20 Harvard University

I had only been home in Winnipeg a week when I was engaged by a small syndicate composed of MacKenzie and Mann of the Canadian Northern Railway, Hugh Sutherland and William Martin, to go on a prospecting expedition into the country about the north end of Lake Manitoba. The purpose was to prospect for gypsum deposits.

I engaged Campbell Bedson, an old school friend, as companion, and in the beautiful Indian summer weather of Manitoba we started out not knowing too much about how and where to look for beds of gypsum, but with a confidence that frequently accompanies a little knowledge.

We crossed Lake Manitoba from the south end on the steamer *Petrel* and, after running aground two or three times and being delayed for some hours each time, we reached Fairford on the second day. Here I bought some provisions from the Hudson's Bay Company, rented a canoe and engaged a Cree, Quaquakahsit by name, to guide us overland from St. Martin's Mission to Gypsum Lake. At the Mission I got some more help. The country between St. Martin's Lake and the gypsum deposits is nothing but muskeg and swamp with a few dry ridges crossing them, and the tramp across this country with fairly heavy packs on our backs is one to remember. I am sure Campbell Bedson hasn't forgotten it either. We were up to our knees in muck most of the way across, and our trail was marked by bits of our clothing discarded to lighten our packs.

By the end of a week we had staked two full sized claims. One of these we called the "Five Moose," because while staking the claim we saw five moose on it, one of which we killed for food.

There was evidence to show that some claims had been staked ten years earlier. These, however, had lapsed. Our claims were recognized as being good by the Interior Department in Ottawa, and they formed the original holdings of what afterwards became the Manitoba Gypsum Company.

We were home in Winnipeg by November 6th, and glad to get back, because the weather was breaking and winter coming on. I spent the first half of the winter in Winnipeg at my father's house on Cathedral Avenue in the north end. By December I had finished my reports on the Lake Manitoba

gypsum deposits and the geological survey of the Salt River region, and was able to enjoy a little relaxation.

One evening just before Christmas, I stood with my sister Ethel looking out of the window of our home at a fierce blizzard. There were no snowplows then in that end of the city; roads and sidewalks were blocked with snow and we could hardly see across the street. Nobody seemed to be outside the shelter of their homes. Suddenly we saw a small figure loom out of the swirling snow, carrying a bundle under each arm and struggling towards the street car. Ethel said to me, "Why, that is Doucie Thomas. She has been to the Hartleys' and is on her way back to the Carmens. You better go and help her or she will never find her way to the street car." So I put on my cap and overcoat and went out to help the lady with her bundles. That was the beginning of an association which within three years culminated in our wedding in Christ Church, Vancouver, in October, 1905.

I had begun to realize that my studies at Manitoba and Queen's had not carried me very far into the realm of economic geology. Certainly not far enough to give me confidence in that field. It is true that the geology of ore deposits was a relatively new phase of the science, and had not yet produced any large body of literature. But it was the field for which I had a decided preference, and I was determined to follow it up. At home in Winnipeg with the help of Professor Laird of the University of Manitoba, I had obtained all available literature on the subject, and had also studied the elements of drafting and surveying. I found, however, that this was not good enough. So when Mackintosh Bell, who was studying at Harvard University for his doctor's degree, suggested that I join him there, I readily agreed. Immediately after Christmas I went to Cambridge, Mass., to enroll in the school of Graduate Studies. There, I found modest lodgings at Irving Place and took my meals at Randall Hall, where the more impecunious students of Harvard dined. I couldn't afford the more swanky Memorial Hall.

I registered for courses in General and Structural Geology, Petrography, Mineralogy and Physiography, but I soon found that the subject that really fascinated me was Physiography. It was not that the subject was more important than the others. It was not. It was simply that the man who taught Physiography not only knew the subject thoroughly and was a pioneer in it, but had the capacity to present it to his students in a most fascinating way. Professor W. M. Davis was a great teacher, perhaps the greatest that I ever studied under, with the possible exception of Waldemar Lindgren of M.I.T. It was from Professor Davis that I learned the technique of drawing deductions from a set of observational data. Studying under Professor Davis at the same time were two men who later on made notable places for themselves in the academic life of the United States. One of these was Dr.

Isaiah Bowman, late President of Johns Hopkins University and one of the outstanding geographers of the world. The other was Ellsworth Huntingdon, late Professor of Geography at Yale, also a world authority on geographical subjects and climate.

It was during the winter that I was at Harvard that the Harvard Travellers Club was formed, and I had the honour of being invited to become one of the Charter members. Periodic meetings of the club were held either in Boston or in Cambridge, and one of these I consented to address. My subject was the observations and experiences of my trip up the Liard River on the road to the Klondike in the winter of 1897 and 1898, and my return by canoe in the summer of 1899. The address was given in the lecture hall of the Agassiz Museum, and the experience was one at which I still shudder. It was my first public address, and as I stood on the platform before the whole faculty of geology and geography of Harvard University and all the distinguished travellers of the Club, I suffered an agony of mind which fifty years have not been able to erase from my memory.

Exactly forty years after that first address, when at the invitation of Dr. Thomas Barbour, then Director of the Agassiz Museum, I spoke again from the same platform to the same kind of an audience, I felt so easy and comfortable about it that I could not help referring to the change in my mental condition since the earlier occasion.

The atmosphere of Harvard, which is an outgrowth of its historical associations and its standing among the universities of the world, left a very deep impression on my mind. I remember with gratefulness the patience and kindliness of my teachers. In fact, I was treated, not only at Harvard but later at the Institute of Technology, not as a foreigner but as if I were a citizen of the United States, even to the extent of being provided with a scholarship at each place. I was then and have been ever since deeply appreciative of this treatment. I found later on, that Canadian students were always welcomed at any of the larger eastern universities of the United States. In addition to Professor Davis, there were Professor Woodward, Professor Wolff, Dr. T. A. Jaggar and Dr. Palache. Professor Shaler had only just retired from the teaching staff, but his influence could still be felt and he occasionally appeared in the lecture halls. It is something to say that I knew him. President Eliot was still in office, though I never had the privilege of any contact with him.

For nearly two years I had been going around wearing a truss on account of the rupture I had suffered on Mattagami River in 1901. It was such a serious handicap in my field work that it became advisable to undergo an operation to rectify the trouble.

One of the members of the Harvard Travellers Club, Dr. Cunningham, was also house surgeon in the Boston City Hospital. With his help I was taken in to that hospital in the spring and with his help also I was able to get the services of one of the best surgeons in Boston, Dr. Thorndike, to perform the operation of stitching me up again. When I was convalescent but still in hospital, Dr. Cunningham prescribed two pints of champagne a day for me, and then gave me his best help in consuming it. Under this care and treatment I made a good recovery. As soon as I was able to walk and after a short stay as a guest in the home of Dr. Cleghorn, I was on my way back to Winnipeg, and reached there by the beginning of May.

21 Prospecting Operations

During the term at Harvard, I had been in communication with the Canadian Northern Railway group, by whom I had been engaged the previous fall, with a view to further explorations in the gypsum area of Manitoba. As a result I arranged to do some more prospecting in the same field. This arrangement was reached merely by an exchange of letters and some later discussions, but there was no formal contract. The time came later on when I regretted the looseness of the arrangement with my principals, because with a written contract I might have benefitted by my discoveries far beyond a mere monthly salary. I didn't fully realize at the time that no one in the mining industry ever makes a fortune on a salary alone, but usually by participating in the discoveries that he or someone else makes.

When I left Winnipeg on May 14th for the gypsum deposits that I had staked the previous summer, I had with me Harold Hamber, a younger son of my old school teacher at St. John's College School.

We followed the same route to St. Martin's Lake as before, crossing Lake Manitoba on the same steamer *Petrel* and getting stuck again here and there on the same shoals on the lake. Forest fires were raging about Fairford, so that the captain of the *Petrel* was afraid to enter the river, and as he was far behind his schedule for the round trip he put us and our outfit ashore at Big Fox Point and went on south. We walked the four miles into Fairford and then sent a man back with a skiff for our outfit.

The trading Post at Fairford, like all trading Posts in the North country in the spring, was out of food supplies. All we could get from Mr. McDonald, the Post Manager, were a few canned goods. I was, however, able to get a small boat and a couple of men, one of whom was my friend of last year, Quaquakahsit, and we went on to the mission at St. Martin's Lake. When I had stopped here the year before the missionary, Mr. Dobbs, had a good garden, and I hoped we might get some supplies from him. But all I could get were a few potatoes and the advice to go and see the Indian Chief David Marsden a few miles down the lake.

I called at David's house early the next morning, not so much to try and get some food as to hire one or two of his young men to help me across

country. David was not up when I got to his log cabin, but his wife was busy getting the breakfast. He got up when I came in and sat cross legged on the bed. Before he would talk business with me he called all his family and friends together, and when they were all in, most of them seated on the floor, he read a passage out of the Cree Bible and then gave quite a lengthy extemporaneous prayer in English. This I am sure was a departure from his usual practice, and English was used in order that I might feel that I was included in the service. His English was obviously a translation of his Cree thoughts, because his sentences were of Cree construction. His prayer dealt with simple concrete things of life, food and the means of getting it. There were no abstractions in it. Food was the main theme. His breakfast of fish was eaten only after one of his boys had visited a net set in the lake.

When we crossed the swamp and muskeg country between St. Martin's Lake and the gypsum field it was still early in the summer. Flood waters had not yet all run off and the country was water-logged. There were six of us in our party and as we were going to spend three or four weeks prospecting for gypsum, our back packs were as heavy as we could carry. There was no trail, and each man picked his own way, those behind being governed by the troubles of the man in front. It was the toughest back packing that I ever did. If there hadn't been frost beneath the moss and muck it is hard to say how far we would have sunk in the muskegs. As it was, it was sometimes only the bulk of a man's pack that prevented him from sinking out of sight; when he fell it was almost impossible to get up again without help. At the end of the day we had only made about six miles.

A note in my diary says that it was the vilest country I ever tried to get through, and that opinion still stands in spite of a lot of similar experiences at other times and other places.

We prospected this country for three or four weeks, examining natural outcrops of gypsum and sinking test pits on the ridges. The amount of gypsum on the surface indicated by our prospecting was estimated in millions of tons, but with varying grades of purity. Much of it was a fine creamy white alabaster, very much like marble, but most of it was a dirty grey colour, all however usable.

When we came out of that country in June, the frost had gone out of the muskegs and, if the trip in was bad, the trip out was infinitely worse. There was no bottom at all to the muskegs, and it seemed as if a man might easily sink out of sight in the muck.

I spent part of July in the examination of mineral occurrences, mainly iron ore, on the east side of Lake Winnipeg and on Badthroat and Hole Rivers for the same principals, but by the beginning of August I was back in the gypsum country. This time I took a Dominion land surveyor and a fairly

large party, so that the lands that I had staked should be properly surveyed with a view to buying them outright from the Government of Canada.

The surveyor, J. L. Doupe, was an experienced and very capable person, and was quite able to handle any situation that might arise. The chainmen, Sam Martin, and his nephew Willie, were new to this kind of work. In addition to these I had an Indian cook and half a dozen Indian axemen. It was the height of the fly season and there were all the varieties that are to be found in the northern Canadian bush country, mosquitoes, black flies, sand flies and bulldogs. Doupe knew how to protect himself against these pests, and before he went out in the morning he covered his face and neck with a coating of bacon grease from the frying pan. He kept his hands free of this mess, covering them with gloves so that he could keep his note books clean. The Martins were quite inexperienced, and at first did not think it necessary to protect their hands and faces. When they came in at the end of the first day they were not recognizable as the same men who left camp in the morning. Their faces were swollen and streaked with blood, their eyes practically closed, and they were very sorry for themselves. Even the Indian axemen complained, and threatened to go on strike. My first crew actually did quit at the end of the second day, and I had to tramp into St. Martin's Lake to get a fresh gang. I also had to pay a higher scale of wages.

The transport and provisioning of the party kept me very busy. Dysentery broke out among the men through drinking water that was heavily charged with calcium and magnesium sulphate. The Indian crew was not dependable. I had as well to attend to all Mr. Doupe's requirements. He was a great student of the old Egyptian civilization and many of his ideas were developed from a knowledge of the theories and practices of those times. His tent had always to be pitched north and south magnetic. He was most entertaining when around the camp fire in the evening he described the construction of the Great Pyramid and expounded its meaning.

The job of surveying the gypsum deposits was completed by the beginning of September, and I was very glad to be done with it. Over thirteen sections of land were later acquired from the Dominion Government, with enough gypsum to last indefinitely. Later the Manitoba Gypsum Company was formed and the Canadian Northern Railway Company built a branch line in to the deposits to provide for year-round transportation. It was then that I regretted I had not an agreement providing for an interest in the deposits I had located.

A far more interesting job occupied my time during the month of September, when I was sent to the Atikokan country of Ontario to do some surface geological work and to study the drill cores of some operations on Steep Rock Lake financed by my group. This was one of the early attempts

to locate the iron ore deposits of Steep Rock, and to trace the source of the boulders of hematite that were scattered over the hills and valleys to the south of the lake.

I went over a great deal of the country surrounding the lake with a prospector by the name of Hogan. He was particularly anxious to get my views as a geologist about where the numerous boulders of hematite came from. He showed me many of these boulders in Hogan's Valley and drew my attention to the bright red earth that clung to the roots of upturned trees. All of these things were evidence of a source of high grade ore somewhere to the northward. The movement of the continental ice sheet, as indicated by glacial grooves and striae was from north to south. This led me to write a note in my book stating that "the source of the iron ore float is probably in the bed of Steep Rock Lake." It was nearly forty years before this opinion was confirmed and bodies of iron ore were found by diamond drilling in the bed of the lake. Later explorations have proven that here is one of the large high grade iron ore deposits of the world. Today, ore is being mined to the extent of over one million tons a year from this deposit.

My trip in the summer of 1903 was again to the gypsum fields of Northern Manitoba. This time the objective was copper, and the reason was a sample of rock containing native copper resembling the occurrence of copper ore on Keweenaw peninsula in Michigan, where the great Calumet and Hecla mines are situated.

Colin Inkster and I went off on this adventure together, taking with us a case of dynamite, caps and fuse, for blasting purposes. It wasn't easy to get dynamite in those days, but I managed to have a case sent down by the dealer to my father's house in Winnipeg. The case was delivered on a Saturday afternoon when no one was home, and left by the back door step. I didn't locate it until Monday morning when I was horrified to find our washer woman using the case full of high explosives as a bench for her wash tub. I quickly rescued the dynamite from that precarious position, but did not venture to tell the washer woman of the danger she was in.

There was at that time no approved method of transporting dynamite by boat or wagon to the place we wanted to use it, so I had to adopt safety precautions of my own. Many years later when as Deputy Minister of Mines I found myself responsible for the administration of the "Explosion Act" I realized how futile those precautions were and how easily I might have had an accident.

Our copper prospecting trip was a fizzle. We found a very small outcrop of a copper-bearing conglomerate but soon came to the conclusion that there was not much chance of finding any body of commercial ore. We buried our

dynamite in a wet muskeg and returned to Winnipeg. The remains are probably still there, but undoubtedly quite harmless.

22 Appointment to the Geological Survey

I spent the greater part of the winter of 1903-1904 at home in Winnipeg, glad of the opportunity to see something of my family. From the age of eight years I had spent, in all, only about two years at home, the longest stretch being about six months, and I was now nearly twenty-eight years old.

It was impossible to find any remunerative work in Winnipeg during the winter months, so I employed myself in studying what books I could get on geology and topographical mapping. Professor Laird of Manitoba University was good enough to lend me books out of his own library and I regret to admit that I still have one of those borrowed volumes—*Ore Deposits of United States and Canada*, by J. F. Kemp—on my bookshelf. But if Dr. Laird could know to what good use I put his book on ore deposits, he would be content, I am sure, that I never returned it to him.

My friend, young Colin Inkster, had also been unable to find any satisfactory employment in Winnipeg, and he decided to go back to the Klondike. He had gone into that country with a number of Winnipeg boys in 1898 and had worked some good ground on Bonanza Creek. Now, after about a year in civilization, the North was calling him and he had to go. We agreed to travel together as far as the Pacific coast, where with some introductions from Mr. Hugh Sutherland I hoped to be able to find some work. Another reason for my desire to go west was the fact that the girl that I had rescued from a blizzard the previous winter had also moved out to Vancouver and taken up residence there with her brother.

I was three months in Vancouver and Victoria, but couldn't find a job anywhere. My only income during that period was from articles that I wrote for sporting and outdoor magazines. But the pay was pretty small, and I had to be very economical. So I lived largely off my capital.

Towards spring I began negotiations again with Hugh Sutherland, representing the same Canadian Northern group, with a view to carrying on some explorations for coal in the Peace River country. I went so far as to go to Edmonton in anticipation of completing arrangements with him. But it wasn't easy getting there. I was by that time flat broke, and my only

negotiable asset was a small insurance policy. I borrowed all that I could get on this, but it was only sufficient for transportation and food. There was nothing for a berth on the sleeping car so I sat up in the train all the way to Edmonton. The railway route in those days was by way of Calgary, with a change at that point.

When I got to Edmonton I immediately called upon my old friend the Rev. Henry Allen Gray, Anglican Rector of All Saints Church, and asked him to put me up until I started work. Gray, who afterwards became the Bishop of Edmonton, had been a room mate of mine at St. John's College. His rectory was a quite large building and he had only his mother staying with him. He was an exceedingly hospitable person, and he readily took me in.

My negotiations with Mr. Sutherland did not proceed very satisfactorily, because I demanded a written contract, and this he was not inclined to give. In the midst of those negotiations, and right out of the blue, I got a telegram from Dr. Robert Bell, Acting Director of the Geological Survey of Canada, advising me that I had been appointed by Order-in-Council to the Geological Survey staff. He had never asked me if I wanted the job and I had made no application for it. I didn't even know there was an opening. Immediately following the telegram, however, a letter arrived from Dr. Bell advising me of his action in recommending me for a position as "Technical Officer" with a salary of $1,150 a year. With this was a copy of his letter of recommendation to the Minister of the Interior, Hon. Clifford Sifton, which read as follows:

Ottawa, November 24th, 1903.

Dear Sir,

Referring to the accompanying list showing the present condition of the Staff of the Geological Survey, I beg to say in regard to the item "Permanent Staff, Technical Officer, vacancy, Salary $1,150," that I would recommend the appointment of Mr. Charles Camsell, B.A., of Winnipeg to fill this vacancy. This gentleman has studied in Manitoba University, Queen's and Harvard. He has had four years' experience in field geology, namely, on the Geological Survey, one year as assistant on Great Bear Lake, and one in charge of work west of Slave River, one for the Algoma Commercial Company and one for the Canadian Northern Railway Company. He is about twenty-six years of age, a son of Chief Factor Camsell of the Hudson's Bay Company. He is a tall, strong young man, can make surveys, map his work,

understands geology, full of resources and in all respects well qualified and deserving of permanent appointment.

Yours faithfully,
Robert Bell,
Acting Director.

The Hon. Clifford Sifton, M.P.,
Minister of the Interior,
Ottawa.

It was the beginning of June, 1904, when I received the notification of my appointment from Dr. Bell. The recommendation to the Minister had been made almost exactly seven months earlier. It took just that length of time for the wheels of government to complete a full turn and end in an Order-in-Council approving Dr. Bell's recommendation.

Appointments to the Public Service are made much more rapidly today, but the machinery of appointment has become more complicated. At that time there was no Civil Service Commission and the Minister of a Department made all the appointments.

I didn't hesitate very long in accepting the Geological Survey appointment, but when I told Mr. Sutherland of my decision he was not pleased. My instructions from Dr. Bell were to proceed at once to Dinorwic, Ontario, and there to prepare and outfit for an exploratory expedition northward to the Severn River. My party was to be assembled at Dinorwic. This was the beginning of a connection with the Public Service of Canada which ended forty-two years later when I was occupying the position of Deputy Minister of Mines and Resources and Commissioner of the Northwest Territories. I was at last in a field of work which I had wanted to occupy.

Including my years of temporary service, I put in nearly forty-four years in the Civil Service of Canada. Of this about five years were overtime during the war. As a result of all this I can truthfully say that I could not have selected a more desirable life work. With all its petty annoyances and discouragements, and particularly its frustrations, I found my work in the Public Service of Canada more satisfying than anything I could possibly have undertaken.

23 Severn River Exploration

I was not very sure what sort of a party I would find awaiting me at Dinorwic, because the men were to come from the east and were to be selected not by me but for me. I thought it advisable therefore on my way through Winnipeg to pick up my younger brother Frank. I knew that in him I would have someone that I could depend upon, someone who could handle a canoe and a paddle and who knew his way about in the bush. It was well that I did, because the men whom I found waiting for me at Dinorwic had had little or no knowledge of trips of this kind and needed a good deal more experience.

Only one of them was an experienced canoeman. He was George Hackett, an Iroquois Indian Chief; but he was sixty-nine years of age. George had had an interesting life. He had been one of the guides to the late King Edward VII during his visit to Canada in 1860, when as Prince of Wales he had gone on a moose hunting expedition north of Ottawa. George had also been one of the Canadian boatmen on the Nile expedition in 1884 when the relief of General Gordon was undertaken. He told so many tales of his Egyptian experiences that he was soon known among the Indians that we met as "the Warrior." His contact with Edward VII developed in him an intense loyalty to the Crown, and we frequently heard him wind up his stories when sitting about the campfire by saying that he would die happy if he could see his King once more. Indeed, when the Duke of Connaught became Governor General, George was one of the first to call at Rideau Hall with a gift of a pair of moccasins and an expression of devotion and loyalty to the Duke's brother. George was engaged as my cook, but gave out before the trip was over and had to be sent home.

The other two members of the party were Gordon Greenshields of Montreal, who had read my articles in the sporting magazines, and a young Englishman, Dawes, who was a cousin of one of the Governor General's aides but had never been in a canoe in his life. Shortly after we got under way I picked up an Ojibway Indian, Jimmy Cook, from Lac Seul. Altogether it was not a strong party for a difficult expedition, but I must say that by the end of the summer every one had developed into an expert canoeman and each man was pulling his weight.

I knew before I started that I was not going to have any picnic, because the country beyond the height of land was unexplored and unmapped, the streams were broken by rapids and many portages would have to be made. It was just as well that I was not aware that a Geological Survey party into this country had been turned back the year before by the Crane Indians before it had reached the height of land. I found out something of this before the summer was over, and I got the whole story when I got to Ottawa in the fall.

It was fortunate for me that when I got to Dinorwic I found there William McInnes of the Geological Survey also outfitting for an exploratory trip to the northeast. McInnes was an experienced explorer and this year he was to explore the upper waters of the Attawapiscat River. As our routes were to follow the same course as far as Sioux Lookout and a little beyond, we decided to travel together to the point where these routes diverged.

We left Dinorwic on June 17th and had our outfit and two canoes shipped by wagon to Sandy Lake. Here we embarked very early in the morning of the 18th in order to cross Sandy Lake before the wind rose. We were very heavily laden and Sandy Lake had the reputation of being pretty rough in windy weather.

The first portage, out of Sandy Lake into Minnitaki Lake, was not long but it was very tough on green men or those of us who had done no hard work all winter. George took it in his stride. We were all across the portage by ten o'clock in the morning and I was a little inclined to agree when one of the party asked me where I wanted my tent pitched. He thought he had already done a full day's work. I thought, however, we had better push on a little farther.

We camped that afternoon on an island in the narrows of Minnitaki Lake, and most of us didn't lose any time in rolling into our blankets as soon as supper was eaten.

The next day McInnes and I decided that we would not move out of camp, ostensibly so that we could repack and rearrange our canoe loads, but actually because some of my party were all in. One of them told me later in the summer that he would have given anyone one hundred dollars that day to take him back to the railroad. Exploring expeditions were not what they seemed to be when you read about them in magazines. However, he soon got over his discomposure and in a short time was pulling his weight without effort.

Our route to Lac Seul took us past Sioux Lookout, a fairly high hill where the local Indians used to watch for the coming of the Sioux Indians, much feared when they went on the warpath. Then on through Pelican Lake and past Pelican Falls, where a short portage had to be made. We entered

Lac Seul by Canoe River and had to cross the lake in stormy weather to get to the Hudson's Bay trading Post on the north side of the lake.

Just before we got into the main body of Lac Seul, we passed a fleet of York boats under full sail on their way out to the railway for supplies. It was on this route between Albany and Lake Winnipeg that York boats were first used by the trading companies, and this was almost the last locality in which they survived before they were superseded by more modern methods of transport. They had been used for well over one hundred years.

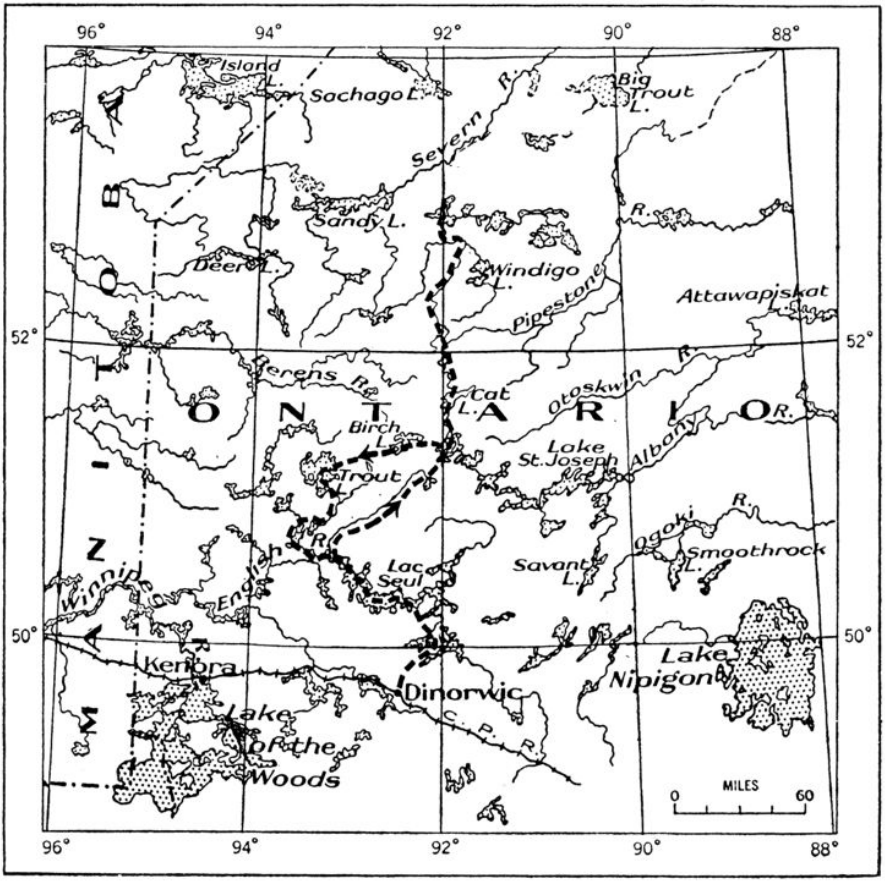
Through the efforts of Mr. MacKenzie, manager of the Lac Seul Post, we got a good birch bark canoe and an Indian guide, Jimmy Cook, who hunted in the country we were to pass through on the way to Cat Lake. Jimmy was to get $1.25 a day, and he was well worth it.

The Indians of Lac Seul were mostly Anglican and the missionary the Rev. J. Sanderson, an Indian himself, was a graduate of my old school, St. John's College. He was a great help to me in working out my plans for the summer's survey.

The regular canoe route to Cat Lake led up to the northeast end of Lac Seul, then across the divide to Lake St. Joseph, then northward through a chain of lakes to Cat Lake Post. I decided, however, to follow a different route which would take me to the lower end of Lac Seul and then up the Wenasaga River to its headwaters near Cat Lake. Our guide Jimmy knew this route as well as a policeman knows his beat, so we had no trouble in getting through. We only crossed one band of rocks that might contain metallic minerals, and years later a gold deposit was found in this band. This was developed into a mine, the Uchi, which, however, only lasted a short time.

With delays due to bad weather and a couple of side trips we were twenty days in reaching Cat Lake Post. By this time everyone was getting to know his job, and the whole party was functioning like a well-oiled machine.

The Post at Cat Lake was a shabby looking establishment consisting of three small log houses standing on a sandy bench on the north shore of the lake. The houses were not occupied at the time because the Post Manager was on his way to Dinorwic to get his winter's supplies. He had taken all the available men with him and there were left only two families of Indians. Neither of the heads of these families was willing to come with me northward as guide, for fear of meeting what they called "bad Indians."



SKETCH MAP INDICATING
EXPLORATIONS IN NORTHERN ONTARIO
FROM
DINORWIC TO SEVERN RIVER

Our birch bark canoe was leaking badly, as birch bark canoes will do if they are not very carefully handled, so while I was making a micrometer survey of the lake I arranged to have a new bottom put on her. By the time I finished the survey, Mr. Jabez Williams, manager of the Hudson's Bay's Osnaburgh House, turned up and with his help I was able to hire a local Indian by the name of Moses to guide us on northward to the wilderness of the Severn River. This entailed a good deal of palaver. In fact both the Indians who had come with Mr. Williams and the Crane Indians who had come in from the north to meet him and do their trading were very much opposed to our going north into their country, and did their best to persuade

us to go back home. They even tried to frighten the two Indian members of our party by horrible tales of "bad Indians" and dangerous rapids in the country we proposed to explore. However, we finally got away from Cat Lake on our northern journey.

We were now entering new country that had never been mapped, at least I could not find the record of any explorer who had ever been across the divide and on to the headwaters of Severn River.

We left Cat Lake Post on the 29th of July, and that night as we were about to camp we met a large party of Crane Indians, headed by their Chief, on their way to trade at Cat Lake Post. The Chief invited us to camp with him, and as his invitation was the equivalent of a command I thought it wise to accept, because it was within his power to make things difficult for us if he wished. As soon as we had the canoes unloaded and the tents pitched, I sent over to the old Chief a small present of tea, tobacco, flour, bacon and sugar. The old fellow expected something of this kind for it was then the customary thing for the white man to do when he met Indians in the northern woods.

After supper he came over to my tent and sat down by the fire in front of it. After a short silence he began to ask, through my own Indian, Jimmy, who we were, where we were going, and what was our purpose in planning to enter his country. The implication was that his permission was necessary before we went any farther.

I explained as clearly as I could that we were sent out by the Government to explore and map the country through which the Severn River flows, and that we did not intend to kill any game except what we might need for food.

His reply was that he did not like white men coming into his country. He had been told by Indians who lived nearer the railroad that everywhere the white man went he took anything of value in the country and left the Indian to starve. So as long as he was Chief of his band he would not permit any white man in his country, and we would have to go back south in the morning.

It was a moving speech, even as it came to me through the interpreter, and there was a good deal of truth in it. I confess that I had a great sympathy for the old man and his people, particularly as they were the most impoverished looking Indians that I had ever seen. I could only tell him that I was under orders from the Government and had to carry them out.

When the pow-wow was ended and the Chief went back to his own tent, he left my own Indian, Jimmy, in such a nervous state that he got his blanket and spent the night in my tent. Old George, the Iroquois, showed no sign of nervousness whatever; he did not share Jimmy's conviction that we would

all be killed during the night. He had the contempt of the Iroquois for the lesser breeds of Indians.

When morning came we had our breakfast and then proceeded to break camp and load our canoes. Just as we got aboard and were ready to push out into the stream, the Chief came over to my canoe and again asked me where I was going. When I told him we were going north, he again tried to persuade us to go back south. When he found that our plans were not to be changed he decided to send one of his young men with me in his own canoe. I was quite glad of this arrangement, but was a bit amused when he told me that I was to follow the river closely and not make any expeditions to one side or the other. His young man was directed to see that these instructions were followed. Also, I had permission to cut enough wood to make my fires and brush for my camps, and when I returned later in the summer he would meet me along the way. He intended then to search my canoes, open my bags and boxes to see if I had any gold or silver. He wasn't going to allow any of these metals to leave the country, his idea being that if I found any gold, his country would soon be overrun by white men and the Indian brought to starvation.

I couldn't argue with the old man on this point because I knew that was exactly what would happen. Ours however was a geological expedition and valuable mineral was what we were looking for. Before we parted I gave him a note to Jabez Williams at Cat Lake, asking the latter to explain more fully to the Chief who we were and why we were there. Also, I suggested he might tell the Chief that it might be awkward for his band if anything happened to us while in his country.

With this we parted. I don't know what the fur trader told him, but when we met the Chief again on my return southward a month later he made no attempt to carry out his threats or to molest us in any way.

The following day we passed through White Stone Lake and because we were now in the region where the Albany, Winisk and Severn Rivers rise, it was difficult to say what watershed we were on, and my guide couldn't or wouldn't tell me.

On the morning of August 1st we had frost, and that day, after making a number of portages, we found ourselves definitely in Severn River waters on Kishki-Sagaigun or Cedar Lake. Here we had a unique experience.

We made camp late that afternoon near the north end of the lake. After our tents were pitched and while George was getting the supper ready, we four white men thought a swim would be a good thing after our hard day. We undressed in our tents, then walked up the beach a hundred yards or so around a point and plunged into the cool, clear water off a smooth flat rock. While we were enjoying ourselves in the water, a second party of Crane

Indians, composed of old people and the families of the Chief's party, which was following a couple of days behind, landed at our camp behind the point where we could not see them. It wasn't until we were on our way back to our tents wrapped only in our towels that we found we had visitors, and these visitors had to be greeted in the customary northern way by shaking hands. With as much dignity as we could command and with the gravity that the occasion demanded, considering our informal costume, we shook hands with about fifty people, slapping with the other hand at the hordes of mosquitoes that were trying to eat us alive.

This party was still more dilapidated than the Chief's party and most of them were dressed in rags or dirty old rabbit skins. The children particularly were noticeable because most of them wore only a single garment, a shirt made out of rabbit skins that had once been white; no trousers and no shoes. They did not look starved, but how they stood the myriads of mosquitoes and other flies I don't know. They did not seem to mind them at all. The party only stayed with us long enough to shake hands and then they went on. I was afraid we would have to feed them, but fortunately we were spared this drain on our stores.

When we left Cedar Lake the next day we entered a well defined Severn River, and from here on for the next two weeks we never had any difficulty finding our way, guide or no guide. A couple of days later the local Crane Indian guide began to cause us trouble, and tried by every means to get us to turn around and go back south.

We camped one night at the mouth of Anamabine River, and when I told the guide I wanted to make a side trip up this stream he raised all sorts of objections. First he said the stream was very swift and dangerous, with many rapids and no portages cut around them. When I told him that I had been exploring that kind of stream all my life he produced the old bugaboo of the Windigo, an evil spirit who had feet as big as snowshoes and who lived up the stream we wanted to explore. His final argument was to produce a prayerbook written in the Cree syllabics, on the flyleaf of which was a picture of the Crucifixion with some Roman soldiers standing at the foot of the Cross. He gravely told me that these were the people who lived up the stream and he was quite sure they would kill me in the same way if we went there.

A few days later, at Little Cedar Lake, we had to stop to repair our birch bark canoe which was leaking badly. On the north side of this lake a canoe route leads off northeastward to Windigo Lake, where the Crane Indian Chief had his main camp and where he had built himself a house. Our guide said the camp was about thirty miles distant and he assured me that we could get a good birch bark canoe at that point. I thought I had better try it, so I

sent off two men in our canoe along with the guide in his own canoe to Windigo Lake. The party was gone three days, and came back with a new canoe, but without the guide. He had decided to quit, I suppose because he felt he could not continue to take the responsibility of carrying out the Chief's instructions to keep us from straying off the main stream. I wasn't disturbed about his leaving us, because we could now get along quite well without him.

From here on the river was easy to follow, but there were a great many rapids, most of which we had to portage. The portage trails, however, were very indistinct, and it was evident they were only rarely used. This was the reason the Indians avoided this portion of the river and made a detour by way of Windigo Lake and Windigo River. We passed the mouth of Windigo River on August 13th. From then on the going was good and we were again on a well travelled route. The river here is wide and the current gentle. Here and there we passed fish weirs designed to catch sturgeon, but in our net we only got suckers, pike, pickerel and whitefish. There were many signs that the Indians spent a good deal of their summer on this part of the river. At the mouth of Jackfish River, which is not far from where we turned back, there was a well-used camp ground. Nets and other gear, old rabbit-skin robes and discarded clothing were scattered about as if the owners had only planned a short absence. The interesting feature to us was that a band of schists and greenstones crosses the Severn between Windigo and Jackfish Rivers, and we spent a few days examining this for signs of mineralization.

On the 17th of August we turned to go home. Our supplies were getting low, and my old Iroquois Indian, George, was beginning to feel the strain on his vigorous 69-year-old frame.

The trip back to Cat Lake was tough, particularly so on old George. The weather also was bad and we had a lot of rain when we were delayed for two or three days at a time.

The Crane Indian Chief with a large fleet of canoes met us, as he had said he would do, on a lake near the height of land. It was early in the afternoon and he suggested that we camp together so that he could get the story of my trip. I protested that the season was getting on, I had to hurry and could not afford to lose any time. He looked casually into my canoe as we floated side by side on the lake, but he made no attempt to carry out his original intention of making a thorough search. I suspected that the Post Manager at Cat Lake had warned him that he might get into trouble with the Government of Canada if he molested us in any way.

When we got back to Cat Lake old George was in pretty bad shape; he had lost about fifteen pounds coming up the river. I still had some difficult country to get through before we reached the railroad, so I put him in the

care of the Hudson's Bay Company and arranged that he should go out to Dinorwic as a passenger in their canoe.

On my way back to Lac Seul I followed a canoe route north and west of the Wenasaga River route. This took us through Kaygat, Birch, Shaboumeni and Pugwash Lakes and down to the English River at Mattawa. We didn't get quite as far west as Red Lake. We just skirted the eastern edge of that goldfield which has since become one of the major gold producers of Canada. It was a route well known to our guide Jimmy, and most of the large lakes had already been named. One lake about three miles long was nameless. To this I gave the name "Kaygat" (the Geographic Board spells it "Keigat"), because it was here that I escaped by the skin of my teeth from being shot by my Indian guide. Kaygat is the Cree word for "almost." This is the story:

As we paddled down along the south shore of the lake we rounded a point and there, in the bottom of the bay about 100 yards away, stood a fine big bull moose. I was in the bow of the canoe and my rifle was alongside of me. I shot at the animal as he stood in the shallow water. I must have hit him pretty hard, because he staggered up on to shore and then stood for a minute under the branches of a spruce tree. I shot at him again, and although I hit him the second time he plunged off into the woods and disappeared. When we landed I saw by the blood under the spruce tree that he was badly wounded, and I didn't think he would go far. I handed the gun to Greenshields who said he would follow up the wounded animal. Greenshields was only gone a few minutes when he returned saying that the moose was lying in the muskeg, perhaps a hundred yards away, apparently dead.

The whole party then debarked and after gathering up tump lines, gunny sacks, an axe and a skinning knife, started off into the woods to butcher the moose. I remained at the canoe to finish my sketching, and when this was done I put a tump line into a gunny sack, threw this over my shoulder and went off to help in cutting up the moose and packing the meat down to the canoe. I hadn't gone far into the woods before I realized that something must have happened, because there was no sign of men or moose. However, I kept on going; and suddenly, as I stood in a fairly open piece of woods, I saw my party about forty yards away to the right, one behind the other with the Indian at the head of the line. When I saw him he had his rifle up to his shoulder pointed directly at me. Before I could stop him he shot. I was sideways to him, and the bullet went through the bag I had on my back, within perhaps an inch of my skin. When he saw that I was his target, the Indian was horrified. If he could have done so he would have turned pale. I myself felt a bit sick in the stomach, but fortunately no damage was done.

The explanation of this incident was that the moose had not been killed, and when Greenshields and the others got back to where he was supposed to be lying dead, he had gone. They followed his tracks, which ran in a circle, and when I crossed these tracks the Indian took me for the moose and fired at me. And so I called the lake Kaygat Lake, a name that has been accepted by the Geographic Board.

That ended moose hunting for the time being, and we went back to the canoe. As the weather had turned bad, we decided to make camp. Later in the day Jimmy and I went out to see if we could follow up the moose, and in a short distance we found him lying on the shore of the lake quite dead.

That evening, after the whole party had turned in for the night, Jimmy crept quietly into my tent, where my candle was still burning. He told me again how sorry he was to have made such a terrible mistake, and he pleaded with me not to say a word to any of his people at Lac Seul. His reputation as a moose hunter would be gone forever if I did, and he would never be able to live down the incident. I assured him that I would keep it as a secret until the story could do him no harm.

When I had made the portage across from the south end of Shaboumeni Lake to Woman River I closed my survey. D. B. Dowling of the Geological Survey had surveyed Woman River a few years before, and it was not necessary for me to do it again. It only remained for us to get out to the railroad as soon as possible and disband the party. In the meantime, however, the weather had been turning cold. Day after day we were delayed by rain. On September 19th it snowed hard and continued to do so all of the next day. We were very glad to get under the hospitable roof of the Hudson's Bay Post Manager at Lac Seul on the 24th. Here we got dried out and settled up our accounts. In those days a letter of credit from the head office of the Hudson's Bay Company in Winnipeg was honoured at any Post in the north country and was a great convenience in meeting accounts for wages and supplies. Canadian currency had not yet been introduced to the natives as a medium of exchange. The barter system was still in effect.

It was the last day of September when we reached Dinorwic. We were a very different party from the one that had started out in June. All of us were bronzed with the sun and wind. We were tough as nails and didn't mind a twelve-hour day with the paddle. We were also very ragged, and my first need was to see a dentist. I found one at Dryden.

Before heading for Ottawa, I went to Winnipeg to see my parents, settle my final accounts with the Hudson's Bay Company and play my last game of football with my old team, St. John's College. When I got to Ottawa about the middle of October and settled down in an office chair, I was

leaving the freedom of an outdoor pioneering life behind me, and entering a very different kind of world.

24 Preparations for the Peel River Trip

I settled down for the winter in Ottawa in a terrace at 73 O'Connor, in what is now the Bytown Inn. There were a number of young men in these quarters, and we ganged up for the winter. There were Rowley Lewis, Walter Boyd, Trout Lewis, Charlie Cowan, Hal MacLaren, and my field assistant, Dawes. They were all in one Department or another of the Civil Service except Dawes who, because he came from a brewing town in England, took a job in Brading's Brewery. We all had our meals across the street in the Sherbrooke, run by Mrs. McLaughlin, who treated us all in a motherly way. Leslie Macoun and J. B. Hunter also took their meals there.

My chief recreation, after winter made walking difficult in the Gatineau hills, was curling in the old Rideau Curling rink on Waller Street. Most of the men who were playing in the winter of 1904-1905 have given up the game and many of them have passed on. It is, however, good to see that E. L. Brittain is curling with as much skill today as he did at that time.

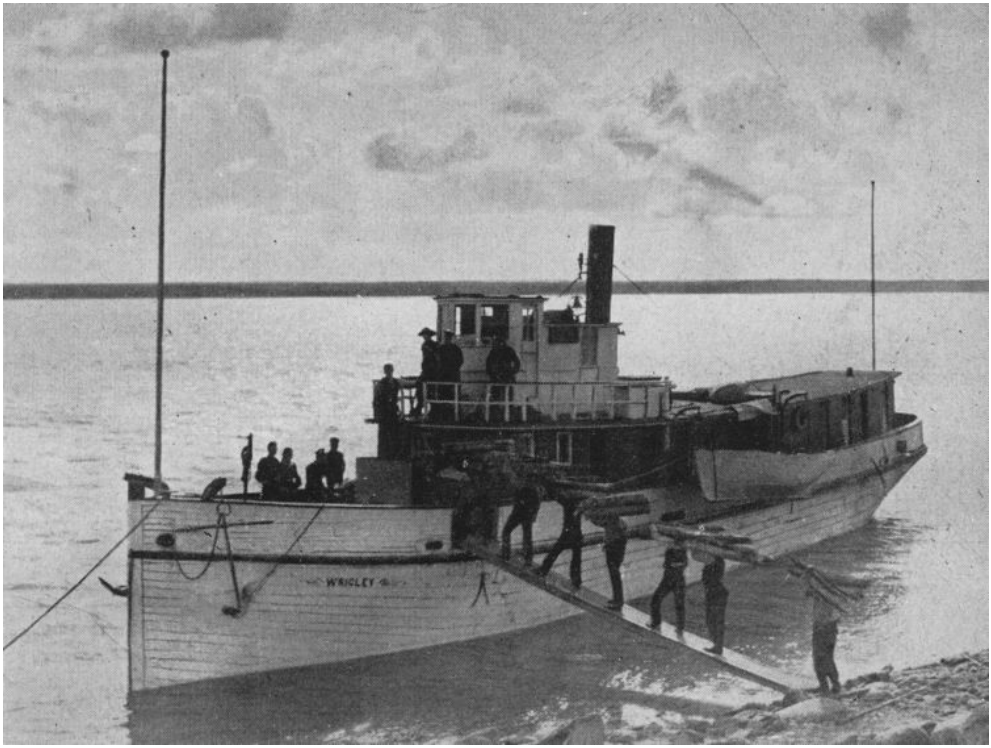
Shortly after the new year, a story reached Ottawa from Dawson in Yukon Territory that there had been a mysterious stampede out of Dawson into the country to the east where a new placer gold field was said to have been found. Dr. Robert Bell, who was then acting Director of the Geological Survey, called me into his office at the corner of Sussex and George Streets and instructed me to prepare for a trip into Yukon to investigate the reason for the stampede. There was no information to be got from anyone regarding the importance of the stampede, how many men were involved or what was the objective of the stampeders.

Before I left Ottawa, however, my instructions were made somewhat more specific. I was to go by canoe from Dawson up Stewart River to its head waters, find, if possible, a pass across the mountains into Wind River, and descend that stream to the Peel. Placer gold was reported to have been found on a tributary of Wind River known as Hungry Creek, and this locality was to be examined carefully. Having done that I was to explore and survey the Peel to its junction with MacKenzie River at the delta, and then

find my way back to Dawson by the best and quickest route possible. The round trip would involve about 2,500 miles of river travel.

My mapping of the route was to commence when I left Beaver River at the head of the Stewart. From that point on to the delta of MacKenzie River was new country that had never been mapped. I did, however, get a copy of a sketch by Count de Sainville of the lower part of Peel River, but it made no pretence of being an accurate map. Some Klondikers had tried to ascend Peel River in 1898 on their way to the goldfields and the majority of these had wintered below Hungry Creek at a place they called Wind City. In the spring some of these men turned back to Fort Macpherson but a few of them continued up Wind River, crossed by Bonnet Plume Pass to Hell Creek and thence down that stream and the Stewart to the Yukon. Among these were Cecil Merritt and Jack Patterson of Hamilton, Ontario. These travellers made no surveys at all. In fact, I never knew any Klondiker to make a survey of his route. They were all in too great a hurry to get through to the goldfields.

All that I had in the way of maps to travel by then were J. Keele's surveys of the lower parts of the Stewart River and Ogilvie's survey of Peel River up to Fort Macpherson from the MacKenzie, a distance of about thirty miles. Between these two surveys were hundreds of miles of unknown country, and this country I had to cross.

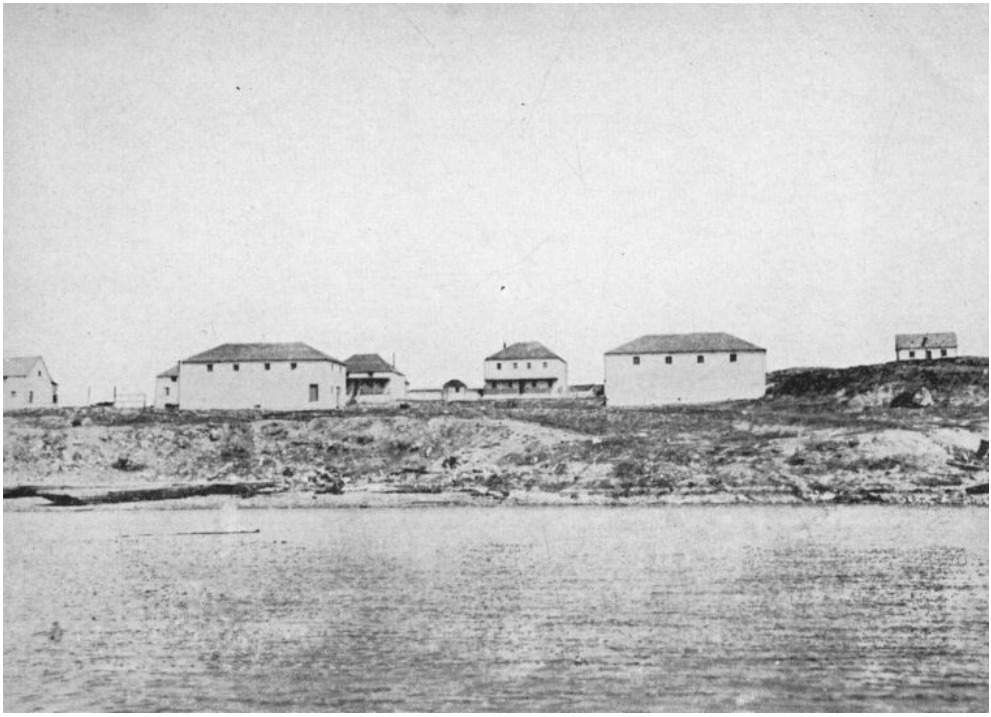


The first S. S. *Wrigley* on the Mackenzie River, loading firewood.
(*Courtesy of Hudson's Bay Co.*)

Indians arriving at Fort Simpson.
(*Courtesy of Hudson's Bay Co.*)

I began to assemble my equipment early in March, compasses, sextant, Rochon micrometer, cameras, guns, geological note books and hammers. Then there were tents, blankets and proper clothing to be obtained from local outfitters. Mosquito dope was important. Cooking utensils and other hardware I expected to be able to get at Dawson, as well as most food supplies.

By the middle of March I was ready to pull out for the west coast. A short stop in Winnipeg allowed me to arrange with the Hudson's Bay Company for the shipment of some supplies to Fort Macpherson, where I hoped to be about the end of July, and to secure the necessary letter of credit. At Winnipeg, too, I picked up my younger brother Frank, who had been with me on the Severn River the year before, and together we headed for Vancouver.



Hudson’s Bay Company post at Fort Chipewyan, 1915

Fort Simpson, Mackenzie River, 1940

There was only a weekly steamer service during the winter months from Vancouver to Skagway, so I had a few days in which to buy canoes and finish up any business that remained. The most important business, however, was to set a date in the fall with my future wife for our wedding. I did not know definitely when I could be back in Vancouver. It was even possible that I might get caught by winter in the far north and not be able to get out until the following summer. However, we fixed on a tentative date about the 25th of October, and hoped that I would be able to make it.

The Canadian Pacific steamer to Skagway, when we left Vancouver, was pretty full with Yukoners, prospectors, miners returning to operate their claims, or business men and others engaged in the transport service on the Yukon River. It was an interesting crowd of travellers, who kept things pretty lively on board ship. It was also a spectacular journey up through the inside passage and through the maze of islands that border the Pacific Coast right up to Skagway. On the way we passed Wrangell, which was the terminus of my snowshoe travels in 1899. On the fourth day we were at Skagway. The town had changed a great deal since the hectic days of the

Klondike rush and since Soapy Smith had terrorized the residents and taken toll of those who were passing through. One of the points of interest was the grave of this bandit, on which was recorded the name of the public-spirited man who had shot him in the interests of law and order.

The White Pass and Yukon Railway carried us over the divide. It was an effortless trip, very different from the one faced by those who crossed in the days of the great gold rush. But I can still recall the thrill of riding on railway tracks that seemed to cling precariously to the side of the mountain hundreds of feet above the valley floor. It was a relief to arrive safely at the end of the railway line in the frontier town of Whitehorse.

Whitehorse was a very quiet place at that time of year. Though there were many signs of spring and the days were lengthening, it would still be a month and a half before navigation on the river started. It was then that Whitehorse really came to life. The opening of navigation at Whitehorse is controlled by the ice on Lake Laberge, which remains ice bound some time after the river is open below. To overcome the delay occasioned by these conditions Joe Keele of the Geological Survey, who was also going on to Dawson, took all our canoes across Lake Laberge on dog sleds to the outlet of the lake. There he intended to camp, ready to descend the Lewis River as soon as the stream was free. He could thus reach Dawson by water some ten days before the steamers which wintered at Whitehorse.

I stayed at Whitehorse for a few days waiting for the weekly stage to take me over the winter road to Dawson. I had a room in the original White Pass Hotel, where the meals were hearty and good but the bedrooms were very public. The walls dividing the bedrooms from each other were either of canvas or very thin lumber, and while one could not see what was going on in the adjoining rooms there was no difficulty in hearing everything that was said.

The winter trail to Dawson did not follow the Lewis and Yukon Rivers, but struck across country from Whitehorse to the upper part of Nordenskoild River which it then followed to its junction with the Lewis at Carmacks. At that point it crossed to the east side of the Lewis, then across the Pelly near Fort Selkirk and the Stewart at Rosebud Creek, coming down into Dawson through the placer mining fields by way of Dominion and Bonanza Creeks. The whole distance was about 350 miles, and was done in six days with a six-mule team making about sixty miles a day. There were road houses every fifteen or twenty miles where we got excellent meals and lodging and a change of mules. Altogether it was a very pleasant trip, reminiscent of stage coach days. The day of the six-mule team ended with the appearance of the tractor and the snowmobile.

Spring was well advanced when we reached Dawson and the snow was disappearing rapidly. In fact we had to use wheels on the last stage of the route from Whitehorse and the going was slow as a result of mud and melting snow.

One of my first encounters in Dawson was with venerable old Bishop Bompas, whom I had last seen when I was a small boy at Fort Simpson. He was plowing through the slush of the city's streets holding in each hand a small Indian child. The Bishop had left Mackenzie River when that diocese had been divided and had selected the Yukon, an entirely fresh field in which no missionary work had yet been done. He had no doubt hoped to Christianize the natives of the Yukon before they came under the influence of the white man's civilization, but he was almost too late. The Klondike strike made only a few years after he entered the Yukon, brought in some of the roughest and toughest people in the world, not the best models in conduct and morals for the natives, and made the good bishop's task more difficult. He lived a life of sacrifice in that north country, and in forty years left it on two occasions only. He died and was buried in Yukon Territory among the people that he loved and served so well.

Before leaving Ottawa, J. B. Tyrrell had very generously offered me the use of his house in Dawson. It was situated a little way up the slope of the mountain, and there Frank and I stayed until we left on our exploration trip to the east. We were very comfortable indeed in spite of having to do all our own housekeeping.

My chief problem in Dawson was to gather a competent crew. I needed three additional men and all had to be good canoemen. The first man I selected was Jack Deslauriers, formerly of Ottawa, who was in the Civil Service in Dawson. Jack was engaged as cook and proved to be worth his weight in gold. A second good man was Louis Cardinal, a native of Lac la Biche, Alberta, who had come into Yukon as a dog driver for the Mounted Police. He was a first-class canoeman, very anxious to go with me, but admitted that he might be hard to find about the time I was ready to pull out on the trip. This difficulty, however, was solved for me by Sergeant Major Bowdridge of the Mounted Police.

I had still one more canoeman to get, and though I had numerous applications it was hard to find just the man I wanted. One of the applicants was a former world heavyweight champion, Frank P. Slavin, who claimed to have fought his last championship fight with bare fists. I had a decided leaning towards Frank, a fine character and in splendid condition. But his experience of canoeing was limited to a trip down the Yukon from Whitehorse to Dawson and he would be little use in the highly expert business of poling several hundred miles up the fast waters of the Stewart

River. It was hard to turn him down, especially after he had given me a ringside seat to a sixteen-round bout that he had with Jim Burley for the championship of Yukon and Alaska. Frank lasted the sixteen rounds all right, but because of his opponent's wide advantage in age he lost the decision on points. This was the beginning of a friendship between us that lasted until his death about twenty years later. Frank was an Australian, but in the First Great War, though over age, he enlisted as a private in the same Canadian battalion as his son. He got over to France, but he was too old for the life in the trenches. He was invalided back to Canada and settled in Victoria. When his son was killed in the war he lost heart, and this combined with the hardships of a strenuous life left him without much will to live. And so he passed on leaving behind him the record of a fine character and a patriotic spirit.

The last place in my party was finally filled by F. Heron, a man whose knowledge of canoeing was not as good as the others' but who in time acquired a skill which made him a very useful man. To help us up the river and across the main divide, I also engaged Percy Nash, a fur trader from Lansing Creek, and an Indian boy, also from Lansing Creek.

I was in Dawson about six weeks waiting for the opening of navigation. During that time I was a frequent guest at the homes of Superintendent Zachary Wood of the Mounted Police, or of Mr. Cameron, Manager of the Bank of Commerce. I participated in the Yukon sweepstakes, still an annual event, but my guess as to the time when Yukon River would break up was not very good and I got nowhere near the money.

The midnight sun is not visible at Dawson at any time of the year, but from the top of the mountain, 2,000 feet or so above the town, the sun can be seen at midnight on the 21st of June. It was a regular thing for many of the residents to climb the mountain on that date. Frank and I went up one day in May just to get the view from the summit. It was about that time I first heard the story that sun flowers cannot be grown inside the Arctic circle. The reason given was that sun flowers always keep their faces towards the sun, and when the sun is above the horizon during all of the twenty-four hours the plants keep turning until they twist their heads off.

The break-up took place about the middle of May, and shortly afterwards Joe Keele came down the river with our canoes following the ice all the way from Lake Laberge. On the 22nd of May, at midnight, we got aboard the Mounted Police steamer *Prospector* bound for Fraser Falls 300 hundred miles up Stewart River on the first leg of our trip to Fort Macpherson nearly 1,000 miles away.

My party consisted of seven men with three canoes. Keele with four men and two canoes was also on the *Prospector*. He was to survey the upper part

of Stewart River and to tie on to my survey where I left Beaver River. We were to travel together only as far as Fraser Falls.

Among the people who were on the dock to see us off was my friend Colin Inkster, who offered to bet me $200 that I would not make the trip and get back to Dawson before the freeze-up. I didn't take the bet because Colin did not know that, come hell or high water, I had to be back before the last boat left Dawson in the fall to keep an important engagement in Vancouver.

The water in Stewart River was rising as we travelled upstream and when the *Prospector* landed us at the foot of Fraser Falls on the fourth day it had reached full flood and it was useless to attempt to ascend the river in canoes. We were consequently laid up for ten days.

We had only passed one settlement on the way up Stewart River, but at Fraser Falls we found, living in a small log cabin, Bob Watson, a graduate of Toronto University in mathematics and a fellow alumnus of Joe Keele's. Watson claimed to have been gypped out of his placer gold claim on Bonanza Creek. In disgust he had cut himself off from his fellow men by going into the bush. There he made a precarious living by trapping. As a pastime he made a close search of Shakespeare's works for the origins of modern slang terms. Stomach trouble, due no doubt to improper diet, carried him off not long after our visit.

Some trappers passed down the river shortly after our arrival at Fraser Falls and warned us against the danger of attempting to ascend the river in high water. They gave us ten days more before the river would be safe to travel on.

In the meantime we explored the surrounding country, by climbing the mountains on either side of the falls. We hunted game for the pot and got enough to allow us to conserve our regular food supplies. Moose were plentiful and I got one of the finest big game photographs that I have in my album.

We got away from Fraser Falls on June 5th, but the water was still too high to give us any poling or tracking and we made very slow progress, hugging the shore very closely and sometimes pulling ourselves up by the overhanging branches of trees. Out in the stream the water flowed at six to eight miles an hour. The day after we left Fraser Falls we met Frank Braine, Nash's partner, on his way down river from Lansing Creek to Dawson. He was very much surprised to see us trying to buck the Stewart River in high water and strongly advised us to lay up until the water had dropped three or four feet. He gave us a quarter of fresh-killed moose meat and generously told us to make use of his Post and what supplies he had at Lansing Creek.

The next day we had a serious misadventure which might have compelled us to abandon the whole expedition. The most annoying obstacles

we had to face in canoeing upstream were the number of trees, with roots attached to the shore, which hung out over the water sawing up and down in the swift current. The only way to get round these "sweepers" was to paddle. The water was too deep for poling. On this particular occasion the first two canoes got round the "sweeper" safely but the last canoe tried to turn in too quickly. Before one could wink the canoe was broadside on the tree and then upside down. I heard a shout and when I looked around I saw two men clinging desperately to the sweeper, with the canoe drifting rapidly down stream. I knew the men were in no danger and could look after themselves so we went after the canoe. We caught up with it about three hundred yards down, pulled it ashore gently and when we righted it we found some of the load still in it. The heavy stuff however had sunk and this included most of our cooking utensils and stove, all our tea and sugar and some of our dried fruit. The men lost their rifles and some of their personal equipment as well. Fortunately, Nash knew of an unoccupied trapper's cabin about half a mile upstream, and there we found some cooking utensils and some tea cached away. We took what we needed and I asked Nash to replace this from his stock at Lansing Creek before the trapper returned to his cabin in the fall.

It was fortunate that moose were very plentiful between Fraser Falls and Beaver River, for our accident made us dependent on moose meat. Higher upstream on Beaver River we got mountain sheep and bear. We killed one caribou on Wind River shortly after we crossed the divide; but in the lower part and all the way down the Peel we saw no game at all and couldn't even catch any fish.

We found the trading Post at Lansing Creek deserted except for a trapper by the name of Frank Williams, who was acting as caretaker during the absence of Braine and Nash. The Post consisted of half a dozen log cabins, but the stock of supplies in it was reduced to a small quantity of dry goods and a few cans of condensed milk and two pounds of tea. We took over the whole stock of condensed milk and the tea. I figured it might be eight weeks before we could reach Fort Macpherson and we had supplies on hand enough to last us only six weeks.

We stayed at Lansing Creek four days to repair our canoes and consult with Williams on how to get across the divide to Wind River. I had planned while at Dawson, to cross the divide at the head of Hell (Rackla) Creek through Bonnet Plume Pass. It was through this pass that Jack Patterson and Cecil Merritt had entered the Yukon from Mackenzie River in 1898. Braine and Williams, however, both of whom knew Hell Creek, advised me to avoid that stream at all costs and try a pass about sixty miles higher up Beaver River. Williams had wintered in a cabin not far below this pass and had been across it in the winter time. He assured me that it was an easy pass

to cross, but when we got there we found it was not at all easy. Actually we had to carry our supplies on our backs something like fifteen miles, a great deal of it over snow and ice, before we launched our canoes in water flowing into Peel River. My impression is that it would have been better to cross the divide by way of Hell Creek and Bonnet Plume Pass.

It was heart-breaking work poling up the last hundred miles of the Stewart and Beaver Rivers. A good part of the time we were in ice cold water, dragging the canoes up water that was too swift for paddling or too shallow for the heavily laden canoes.

One night we captured a timber wolf cub who soon became quite a pet with the whole crew. We took him along with us as far as the summit of the pass and when Nash and the Indian returned from there to Lansing Creek they took the little wolf with them. Nash actually kept him for a couple of years and trained him as a sled dog, but as he grew older he became very savage. Ultimately he had to be killed. This seems to be the experience of all attempts to domesticate the timber wolf and convert him to a draft animal.

When we turned off Beaver River to ascend Braine Creek to the summit of the pass, we left canoeing behind us for a while. It is about seventeen miles from Beaver River across the divide to Nash Creek and for about fifteen miles of that distance we had to carry all our supplies on our backs. There was no trail through the scrubby forest and for some miles we had to traverse fields of ice that, even at the beginning of July, filled the floor of the valley. The altitude of the pass I estimated at about 3,400 feet above sea level, with the adjacent mountains rising about 3,000 feet higher. Timber line was just a little bit higher than the summit of the pass.

We got across the summit and launched our canoes in Nash Creek on July 5th and the same day I sent Nash and the Indian back to Lansing Creek. Our chief trouble now appeared to be over and although we had about four hundred miles to go to reach Fort Macpherson, it was down stream all the way.

25 Exploration of Peel River

On the 6th of July we launched our two canoes on Nash Creek for the descent of the Wind and Peel Rivers. We soon found that Nash Creek was not a navigable stream and we spent as much time out of the canoes easing them over the shallows as we did inside paddling. My own time was now fully occupied in my micrometer survey of the stream, so Heron and I exchanged places and I took my seat in the middle of the larger canoe with Frank and Louis Cardinal. Not only was Nash Creek swift and shallow but it was sometimes blocked by snowslides from the bordering mountains. Once we had to run our canoes through a snow tunnel rather than portage over the slide. In two days we only made about twelve miles and ultimately had to make a portage of six hundred yards into Wind River because Nash Creek at its mouth split into innumerable small channels none of them with enough water to float our canoes.

Canoeing improved as we descended Wind River and the volume of the stream increased as it was joined by tributary streams. All the way through the mountains, however, and even beyond, it remained a braided stream with numerous channels interlocking with each other. It was not always easy to pick the main channel, and when we didn't we were in trouble.

With the improvement in canoeing my own day's work lengthened and sometimes extended from six or seven o'clock in the morning until nearly midnight. This was done in order that I might avoid being frozen-in in the North country. Two or three times a week, as we descended the river, I would leave camp after supper and spend three or four hours climbing the mountains on one side or the other of the river to sketch in what could be seen of the surrounding topography. On one occasion I remember I got back into camp at three o'clock in the morning after having been on the go for nearly twenty hours. The practice of making these side trips alone is not wise because in case of accident the consequences might well have been fatal. It would also have been very unfair to the rest of the party if such a fatal accident should have happened.

On one of these side trips, shortly after we had passed out of the high mountains, I left the party immediately after lunch to climb a mountain a few miles back from the river, telling the men to go on downstream and

camp at the first good place they could find. I expected to be ready to leave the top of the mountain at six o'clock in the evening, and they were to make a big smoke so that I could locate the camp. Everything went according to plan and at six o'clock I had finished my geological work and my sketching of the topography and was ready to leave the mountain top for camp. I looked carefully for the smoke and at first I saw nothing. After a while I saw far down the river, perhaps eight or ten miles away, and directly in the eye of the sun, what appeared to be a smoke. I took a compass bearing on this point and then struck out down the mountain side.

When I got down on the level plain I found myself in the typical northern muskeg country with a wet moss surface, frozen a few inches below, out of which grew a forest of small black spruce. It was the most difficult kind of walking, especially in country covered by "nigger heads," and I could only make very slow progress. Here and there were small muskeg ponds and the mosquitoes were in myriads. They rose up in clouds with every step I took. I had no protection from these pests, neither head net nor mosquito dope, and from time to time as I got tired I also became almost panicky. When I felt myself beginning to run I immediately pulled up and made a small fire so that I could get some relief in the smoke. I could easily imagine a man going off his head if he should have to endure such torture for any length of time.

It was after ten o'clock when I reached the point on the river bank where I thought I had seen the smoke. But here was a cut-bank a couple of hundred feet high running right down into the water. There was nowhere to camp at this point. After lighting a small fire I sat down for a rest. While I sat there on the top of that bank with the sun almost down, I saw a great chunk of peat break off from the top of the bank and roll down into the river. As it rolled down the steep bank it sent up a huge cloud of dust. I realized then that it was a dust cloud that I had seen from the top of the mountain and not smoke. The question then was: Where was the camp? It could only be back upstream and so I started back along the top of the bank.

As I struggled through the forest of spruce and willows my course was interrupted by deep V-shaped valleys. To scramble down one side and up the other took a lot out of me. But when I tried to stick to the shore of the river I was faced with cliffs which I could not get around, so I had to climb to the top of the bank again. About four hours of this kind of travel brought me in an exhausted condition almost to the point where I had left the party at noon. Here on rounding a point I saw the tents pitched on a beautiful bench. There, also, was a bushy spruce tree which had been set afire to make the smoke that I had ordered and looked for. Everybody however, was sound asleep.

Jack heard me coming in and got up to make me some supper, which I needed badly.

Shortly before we reached Peel River we passed the site of Wind City where some ninety Klondikers on their way to the Yukon gold fields dug in for the winter of 1898-1899. They had reached this point in their ascent of Peel River some time in September and on a nice bench on the west side of the river built themselves a number of log shacks all of which were now broken down.

This was the only group of men who attempted to reach the Klondike by the Mackenzie-Peel River route. The leaders of the group were men whom I got to know later on, George Mitchell of Quebec City and Cecil Merritt and Jack Patterson of Hamilton, Ontario. Merritt and Patterson got through to Dawson all right early in 1899 by way of Bonnet Plume Pass and Stewart River, but many of the rest turned back in the spring to Fort Macpherson and were carried south to Edmonton by the Hudson's Bay Company. Most of them suffered badly during the winter from scurvy, and quite a number died. Mitchell broke his leg during the winter, but an excellent job of surgery was done on it by a Loucheux Indian woman who used pegs of caribou bone to join the fracture. He was nursed through his convalescence by the Indians but he had a stiff leg the rest of his life.

We panned the river gravels here and there as we proceeded down Wind River, but only in a few places did we find any showing of gold, none of them worth following up. Even Hungry Creek did not yield anything but a few small colours. We saw a great deal of iron ore float at Bear Creek, and there were evidences of oil at Hungry Creek and in the canyon of Peel River. This oil undoubtedly came from some bituminous shales that outcropped in the canyon, and in one place filled a fissure which cut through the overlying sandstone. Some day an oil field may be found in this region. It was the occurrence of this fissure of bitumen that was one of the reasons why I suggested in 1942 that the Canol pipe line should pass through this area and go around the Mackenzie Mountains and not over them to Fairbanks, rather than follow the course it did by way of Whitehorse.

In an expansion of Peel River near the mouth of the Bonnet Plume there are seams of lignite, one of them thirty feet in thickness, exposed on the slopes. These seams were burning when first seen by Count de Sainville in 1893 and were still burning when I passed there. Judging by the land slides the seams must had been burning perhaps for centuries, because the banks are slumped in and the valley of the river is widened to three or four times its normal width. The conditions are similar to those at Fort Norman on the Mackenzie River where burning lignite seams were noted by Alexander Mackenzie on his exploration of the river in 1789 and are still burning.

From the mouth of Bonnet Plume River I had Count de Sainville's sketch map, and for the first time since we left Lansing Creek I had an idea of what lay before us on the river down to Fort Macpherson.

From the time we left Lansing Creek we did not meet a single person, white or Indian, until we got within a few miles of Fort Macpherson, and after leaving the mountains we did not get any game at all. When we reached Fort Macpherson, therefore, on the 29th of July, we were about at the end of our supply of provisions. It had taken us sixty-seven days to get from Dawson to Macpherson. The steamer *Wrigley* had come and gone back up the Mackenzie, but she had brought for me the supplies that I had ordered in Winnipeg in March.

Fort Macpherson is situated on the last high land before the surface drops off to the low marshy lands of the Mackenzie delta. It consisted of about a dozen log buildings which housed the establishments of the Hudson's Bay Company, the Mounted Police and the Anglican Mission. I was greeted most cordially by that famous old fur trader and an old friend, John Firth, of the Hudson's Bay Company, and by Inspector Howard and his detachment of six policemen.

I had made such good progress in my survey up to this point that I still had a couple of weeks before it would be necessary to start on the return trip to Dawson and catch the last boat out from there. The western channel of Peel River below Fort Macpherson, known as Huskie River, had never been mapped, so I spent the following two weeks in a survey which took me down to a point where Aklavik is now situated. There was nothing there at the time but a camp ground for the natives. I returned to Macpherson by another channel of Peel River immediately to the east of Huskie River.

During this survey I made a side trip to the top of Mount Goodenough so named by Sir John Franklin. This is the highest point of the steep escarpment facing on the delta of Mackenzie River. It is about 3,000 feet high and reaches a couple of thousand feet above the timber line. I made the trip alone because there was other work for the rest of the party to do. As I could only reach the summit by following up a valley and coming on to the mountain from the back, the trip took me a whole afternoon and the following night. I got back to camp at six o'clock the next morning.

The great delta of Mackenzie River, perhaps 5,000 square miles in extent, is built up of sediment carried down and deposited by the river. Its surface is perfectly flat. It is, however, faced on the west by the steep 3,000-foot escarpment of the Richardson Mountains. The delta and the escarpment give the finest illustration of the theory of isostasy that I have ever seen. According to this theory the crust of the earth is in such a delicate state of equilibrium that the load of sediment in one area so depresses the surface

that there has to be a compensating rise elsewhere. So in accordance with the theory of isostatic adjustment the escarpment has been pushed up along a line of faulting as the delta was depressed.

The view from the top of the mountain looking over the delta of Mackenzie River is a magnificent one and I can still picture it after a lapse of many years. I have looked down on the surface of the earth from airplanes many times since, and from various altitudes up to 20,000 feet, but from a rapidly moving point such as an airplane, the scene changes too quickly to allow one to absorb all its aspects. As I rested on top of Mount Goodenough, while the light faded from sunset to midnight but did not vanish altogether, I had time to digest the view and allow the impressions of its grandeur to consolidate in my mind, and there those impressions remain. I can shut my eyes and still see the vast expanse of the Mackenzie delta.

The delta is a triangular area about one hundred miles from north to south and about as wide along the seaward face. I could see the Reindeer Hills on the east side of the delta, and I was told that on a very clear day I could have seen the Arctic Ocean. The surface of the delta is perfectly flat and covered almost to the sea shore with a tangled growth of Arctic willows. Channels ramified all through it but what struck me was the extraordinary number of lakes that dotted the surface of the inter-stream areas. There were hundreds of them. From my experience in crossing the fringe of the delta to the foot of the mountains it would have been a dreadful thing to attempt to travel anywhere over the delta on foot. It appeared to be the “abomination of desolation.” Yet it is one of the finest muskrat areas in Canada and is the breeding ground of all kinds of wild fowl, mainly ducks and geese.

When I got back to camp, I found that the men had killed two white mountain sheep on the face of the escarpment farther north. This was good news because we had had no fresh meat since we left the upper part of Wind River in the early part of July.

When I got back to Fort Macpherson after a round trip of nearly two hundred miles, Inspector Howard had also just returned from a quick trip to Herschel Island. There was only one regular mail during the summer to Macpherson and this had already come and gone, so the Inspector asked me to wait a couple of days until he could prepare some reports to send out with me. This I was very glad to do.

26 Legends of the Loucheux Indians

The night before I reached Fort Macpherson, returning from the delta, I camped at a place called Nelson's Fishery at the mouth of a small creek which drains some of the muskeg lake country back of the fort. Here I found an Indian by the name of Peter Ross who with his family was engaged in netting and drying whitefish caught in the main river.

I gained Peter's good-will by a gift of tea and tobacco and some food. And I flattered his vanity by asking him what part of Scotland he came from. Actually he was a full-blooded Loucheux Indian who had been born and lived his whole life in the vicinity of the delta. I visited him after supper in a small teepee in which he was sitting alone by the side of a bit of a fire making a fish net. After a good deal of casual conversation and some questions and answers about my trip, I led rather cautiously up to the origin and history of the Loucheux people and the legends that had been handed down through the generations. I knew that I was on delicate ground, because few Indians will tell their legends to the white man for fear of being ridiculed and some tribes will only tell their legends in the winter time even to their own people.

However, my approach had created a favourable atmosphere, and besides that he knew that I was the son of Chief Factor Camsell and hence one who had some understanding of the Indian people. He spoke English quite fluently, having been educated at the Anglican Mission School at Fort Macpherson.

It was only the 10th of August and in that latitude the sun barely dipped below the horizon; there was no darkness even at midnight. As the evening advanced a chill came into the air and even the small fire was very comforting. In this atmosphere and with only a little encouragement from time to time, Peter told me stories of his people until long after midnight. I didn't dare to take any notes while he was speaking, but as soon as I returned to my own tent I put down in my note book all that he had told me.

These legends have been published in the *Journal of American Folk-Lore*, where unfortunately they are read only by the scientist interested in that field. I find, however, that such stories have an appeal to the general public and most of them I have told to my own children when they were

young and later to my grandchildren. Peter told me stories to account for the characteristics of the animals; why the bear has a short tail; what made the beaver's tail flat or the ermine's skin white; how the man got into the moon; the origin of the earth; and how the grizzly bear once stole the sun out of the sky. Then there were the tricks that the crow played upon the other animals and even upon the Indians, and the miracles that he worked with his magic wand. There were also stories to account for some of the natural physical features of the Loucheux country, such as the pillars of sandstone on the bank of the river a few miles above Fort Macpherson.

Some of Peter's stories centred around a mythical hero whom he called Chitacholi, a hero who was the Loucheux counterpart of the Ojibway Hiawatha. I was amused to learn later on from another Loucheux Indian that Peter had given his own Indian name to his mythical hero.

The story of the flood and the origin of the earth seems to be part of the mythology of most North American Indians. The Loucheux version as told me by Peter Ross is something like this:

> Long before there were any men on the earth and the land had become covered with water, the animals lived together on a great raft. The Crow who was a great medicine man, said to the other animals, "If anyone will get me a piece of earth, however small, I will make it grow large enough so that all the animals can get ashore." So all the divers, including the Muskrat and the Otter, went down one by one into the water to try and bring up some earth. They all failed. Finally the Beaver said he would try. But before going overboard he tied a line around his body and told the Crow to hold the end of it. He then plunged into the water. Down and down he went until he felt himself dying for want of air. His instinct, however, drove him to the bottom and there he died, but not before he had clutched the bottom with his paws. When the Crow pulled him up to the surface he found a little piece of earth in his front paw. He took this and after passing his walking stick through it planted it on the surface of the water. Immediately the piece of earth began to grow larger and larger. When it was big enough to hold all the animals they stepped from the raft on to it and have lived on the land ever since.

To supplement his story and perhaps confirm it, Peter said to me, "You are going West from here across the mountains and will follow the Porcupine River down to the Yukon." I said, "Yes, that is what I plan to do." "Well," he said, "if you will stop on the way at the mouth of the Old Crow

River and climb to the top of Old Crow mountain, which lies on the north side of the Porcupine River, you will find the Crow's magic stick still standing where he made the first land." In other words, the Old Crow mountain was the Mount Ararat of the Loucheux Indians.

The other type of story that Peter Ross told me has to do with the origin of the characteristics of the animals. For example, the Beaver, whose tail was originally round like the Muskrat's, had his tail flattened out when Chitacholi one day stepped on it. The ermine was given a white skin when he befriended an old man by killing the bear who was pestering him. The most amusing of these tales, however, is the following which tells why the bear has a short tail.

> In the beginning all bears had long tails. One day just before winter came on, the Bear was wandering about looking for a place to sleep for the winter. He was tired and hungry and in bad humour. In his wanderings he came across a Fox camped on the shore of a frozen lake and he had a lot of fish stored up for the winter. The Bear asked him for some fish, but the Fox would not let him have any. He said, "Why don't you go out on the lake and catch some fish like I do?" The Bear replied, "I don't know how to catch fish when the lake is frozen." "All right," said the Fox, "I'll show you how it is done." So he took the Bear out on the ice to a place where there was a small hole. "Now," he said, "sit down on that hole and let your tail hang in the water. The fish will bite your tail, and it will hurt, but the more it hurts the more fish you will have when I tell you to jump up." The Bear did as he was told and after a while when the Fox saw that he was firmly frozen-in, he said to him "Now, jump up quickly." When the Bear jumped up his tail came off near the body. Ever since then all bears have had short tails.

27 Return from Peel River

There are two routes across the mountains from Fort Macpherson to Porcupine River. One is an overland route of some sixty miles which ends at Lapierre House on Bell River. Owing to the very difficult walking, travellers usually take between four and five days to make the portage even with light packs. We had so much to carry that the portage route was out of the question and we had to take the alternative route by canoe. This runs by way of the Rat River and MacDougal Pass to Bell River and is considerably longer in distance and time than the overland route. It joins the portage route at Lapierre House.

Each of these routes was well known and had been used for many years. The canoe route, however, is only feasible for a short time when the water in Rat River is high. The middle of August was not supposed to be a good time to ascend Rat River, but we had had a good deal of rain since we reached Fort Macpherson and the local opinion was that we might have reasonably good canoeing up to the divide. This opinion proved to be inaccurate, and if we had not had the rain and snow that fell while we were on our way upstream, we would have had a tough time on the river and a very much longer portage to make across the divide.

The canoe route from Fort Macpherson to Fort Yukon is about five hundred miles in length. I expected to cover that distance in about three weeks so I took provisions to last us four weeks in case of accident or delays by bad weather. Actually we took twenty-five days to reach Fort Yukon because we were delayed several days by rain and snow on Rat and Bell Rivers.

Inspector Howard had finished up his reports by the evening of August 14th and the next day we left the Post with mail for the outside from the Post Manager and the Police. It was the last mail they could send out until the following summer.

Instead of following the usual route up the north branch of the Rat River, I took the middle branch in order that I might map it. I found the canoeing quite good for the first two days. Then as we entered the mountains we ran into rapids which followed each other in quick succession. In these we were ourselves most of the time in the water dragging the canoes up shallow

stretches and over rocks and boulders. The gradient of the stream is very steep because the river rises over 1,000 feet in about forty-five miles from the delta flats to the summit of the pass. We were delayed a good deal by rain and snow on the way upstream, but this only improved the river and allowed us to take our canoes farther up towards the divide without taking them out of the water. On account of high water the portage across the divide was reduced to six hundred yards or thereabout, instead of several miles, but the surface over which we portaged our outfit was very wet and boggy and the walking was consequently very difficult. Fortunately the mosquito season was almost over, otherwise we would have had a still more unpleasant time. Rat River has a very evil reputation in the mosquito season, when those pests are so thick that one not only eats them but actually breathes them. The summit of the pass is about 1,300 feet above sea level and is almost at timber line.

It was the 25th of August when we got to the divide. Snow had fallen to a depth of several inches and made travelling very unpleasant. Our troubles were over, however, when we reached Bell River on the Yukon side. From here it was downstream all the way to Fort Yukon on a good river without any portages.

We found Lapierre House to consist of three log cabins. Apparently they had not been occupied for several years and there was nothing of interest or value in them except an old flintlock gun, a relic of earlier days. I since have wished that I had taken it as a souvenir. Lapierre House was never an important trading Post. In fact it was never more than an outpost of Fort Macpherson used for storing goods that were carried across the portage in the winter time and which were destined for Rampart House farther down on the Porcupine River.

We floated into Porcupine River out of the Bell on the 30th of August and found ourselves in a broad, smooth-flowing stream with no dangerous rapids.

It was a beautiful clear day with something of the tang of winter in the air when we arrived on September 1st at the mouth of Old Crow River. We found, just inside the mouth, a couple of Indian teepees in which two families of Loucheux were living. We camped alongside them that night on a good site with the bald and rounded shape of Old Crow Mountain facing us across the river. I learned during the morning from the Indians that there was a possibility of getting some caribou in the open tundra country to the north, so I engaged a young Indian, Little Joe by name, to join us on a hunting trip the next day.

We left early in the morning, Louis Cardinal, Frank and myself, with Little Joe in the lead as our guide. Our course took us over the top of Old

Crow Mountain and for about fifteen miles into the country beyond. Here was where Peter Ross, my Loucheux story teller, told me we could find the Crow's walking stick still standing. Needless to say there was no such stick to be found there; in fact, there were no sticks at all on top of the mountain and very little in the tundra beyond. We even had difficulty in finding enough wood for a fire with which to boil our kettle of tea at noon.

Little Joe was an innocent youth who had an idea that all white men were soft and could easily be outdone by any Indian on such a trip as we were making. It was soon evident by the pace he set that he was going to try and prove his theory. He didn't know that we were all tough as nails and had been travelling hard for the last three months and he was a bit surprised when we stuck close to his heels all the way out. After we had had our lunch and were about to start back to camp I said to Louis Cardinal, "Louis, you know the way home. Take the lead and go as fast as you like. We will see what this Indian can do." Louis set a fast pace across the tundra where, I may say, the walking was not any too good. The Indian stuck it out for a while, but by the time we strolled into camp he was struggling hard to keep up, still hundreds of yards behind. He came into camp a bit crestfallen with his tail between his legs.

Thirty-seven years went by before I visited Old Crow River again, this time in the company of Rt. Hon. Malcolm McDonald and Hon. T. A. Crerar. The story of this trip is told in Malcolm McDonald's book *Down North*. We had flown all the way from Ottawa to express our respective Governments' appreciation of the generous contributions made by the Old Crow Indians to the Canadian Red Cross and the fund for London children evacuated during the Nazi bombing. We stopped overnight with the Mounted Policeman, Corporal Bayne at Old Crow village, and because I slept on the floor with no mattress under me, I got up very early the next morning. I went outside and stood alone on the bank of the river, thinking of the vast difference in travel methods that had taken place since my earlier visit. We were travelling this time all the way by airplane. As I stood there I was joined by an Indian whom at first I did not recognize. After a short pause he said to me, "You have been here before." "Yes," I said, "I was here thirty-seven years ago." He said, "You camped at the mouth of the Old Crow River." "Yes," I said. He went on, "You went over the top of Old Crow Mountain to hunt caribou." "Yes," I said, "But we didn't get any caribou." "You had a young man with you." "Yes," I said, "I remember him very well, but I have forgotten his name." "Well," he said, "that was me." Evidently after thirty-seven years he had not forgotten his futile attempt to demonstrate how much better the Indian was as a traveller than the white man.

That night, following our tramp over Old Crow Mountain, it snowed hard and when we got up in the morning there were four inches of snow on the ground. It was a dirty day for travelling and it was hard to keep warm in the canoe. So when we passed Bluefish River and a little below saw a neat log cabin tucked away in the shelter of the forest on the south bank of the river, we pulled in to make camp. Here I found an old friend, Campbell Young of Edmonton. Campbell was one of those who had tried to reach the Klondike by the Mackenzie, Rat and Porcupine River route, but had decided to stop on the Porcupine and trap furs as a more certain means of livelihood than placer gold mining. He was fishing and making his preparations for the winter's activities. His cabin was a very comfortable spot in which to spend the night and he was very glad to see us.

We reached Rampart House on September 4th and there I closed my survey, because at this point the International Boundary line between Canada and Alaska crosses the Porcupine River. Rampart House was not an imposing place, nor very important from the point of view of the fur trade. It consisted of a cluster of log huts situated in a draw on the north side of the river. The location of the Post was characteristic of Arctic habitations, with its back to the hills on the north and facing south across the river in order to get the full benefit of the sunlight on the short winter days.

There were only four white men at Rampart House, three of them trappers—leftovers from the Klondike rush—and Dan Cadzow, the fur trader. All were waiting anxiously for supplies from Fort Yukon and were on pretty short rations. I was able, however, to get some dried caribou meat from the trader.

By this time the weather was getting pretty bad and we had a good deal of rain. We had to push on, however, because the last boat upriver from St. Michael's to Dawson was supposed to be due at Fort Yukon in a few days, and I had to catch her, otherwise I would not get out until the freeze-up.

We arrived at Fort Yukon on September 8th. Five days later one of the Northern Commercial Company's fast stern wheel steamers from St. Michael's picked us up and on the 17th we were back in Dawson. Since we had left Dawson nearly four months earlier on the steamer *Prospector*, we had covered 2,500 miles, most of it by canoe, and a great deal of it entirely new country.

It took a few days to wind up my business in Dawson, when I took the last boat up river to Whitehorse, then across the White Pass Railway to Skagway, where I caught one of the Canadian Pacific steamships to Vancouver. I was in plenty of time to meet my engagement in Vancouver, and in Christ Church on the 26th of October, 1905, I was married to Isabel Doucie Thomas.

28 The Similkameen Country

We had planned to spend our honeymoon in California. Although my salary cheque from the Geological Survey was not large, I had been able during eight months of field work to accumulate a considerable bank balance. When we reached Portland, Oregon, however, we were so attracted by the climate and surroundings that we decided to spend our time there. We made our headquarters in Portland and for two weeks made short trips up and down the Columbia River and inland to Mount Hood.

Since that time and after seeing many other parts of the North American continent, I have become convinced that it would be hard to find a more pleasant and attractive country to live in than the region surrounding the city of Portland. I have always thought that it was a great pity that Great Britain did not press our claims for sovereignty more vigorously to that portion of what was known as the Oregon territory which lay north of Columbia River and to which we had a reasonably good claim on account of the discoveries and occupation by the North West and Hudson's Bay Companies. The story that Great Britain would not press her claims to this territory because the salmon of its rivers would not rise to a fly is pure fiction. The fact is that the United States' cry of "fifty-four forty or fight" brought about a compromise and the boundary line was set at the 49th parallel.

When we got back to Vancouver we took up residence in a house on Pender Street near the intersection of Dunsmuir, close to the shore of Burrard Inlet, and there we lived for nearly two years. It was here that our son, Charles, was born. As my work as a geologist took me away from home for four months or more every year, it was a fortunate arrangement that my wife's mother, Mrs. Thomas, consented to become a member of my household. This proved to be a very happy arrangement indeed, and lasted for about twenty years.

During those two years in Vancouver I carried on geological field work in the southern part of the province of British Columbia, first in the Princeton district and next year at Hedley on Similkameen River. This work in this part of British Columbia was to continue for several years, and I certainly enjoyed the change from the bitter cold of the Arctic and sub-Arctic regions to the warm semi-arid climate of the Okanagan country with

its sage brush, cactus and grease wood and even its rattlesnakes. I liked also the change from canoe and snowshoe travel to the saddle horse and the pack train.

I outfitted the first season at Penticton. I stayed one night in the old Penticton Hotel. That was quite enough for me. I found the night life in the bedroom too active, so the following night I took my sleeping bag and got a comfortable night's rest in an adjoining hay loft. With the aid of Fraser Campbell, whom I hired as packer, I bought a string of pack horses and four saddle horses, mostly from the Indian Chief, Joe Brant, who had picked them out of the bands of wild horses that roamed the country between Okanagan Falls and Osoyoos. The pack horses were all small, but good, and only cost me an average of $10 apiece. The highest priced horse was my own saddle horse, Nigger, who cost me $20. I rode him for the next five years, and he became so geology conscious that he would stop for me at every rock outcrop we came to. With a well trained horse and a long handled geological hammer I was able to reduce the work of examining rock outcrop to a minimum.

The work around Princeton was of a reconnaissance nature and involved tying in with Dr. R. A. Daly's work along the International Boundary line. In this I had as my chief assistant, Dr. J. A. Allan, afterwards professor of geology at the University of Alberta. The following two years I settled down to a detailed study of the gold deposits of Nickel Plate Mountain near Hedley, and had with me as assistants, J. A. Allan, Leopold Reinecke, Stanley Wookey and A. C. Hayes, later professor of geology at Rutgers University in New Jersey. It was a most interesting study in economic geology because the deposits were unique. There was nothing like them in the world. The description and analysis of them constituted my thesis to the Massachusetts Institute of Technology, and they are now classified in the text books on Economic Geology as a distinct type.

There were no maps of the area so I had to make first of all a topographic base map and on that put my geology. The topographic work was entirely new to me, so W. H. Boyd, Chief Topographer of the Geological Survey, came out to start me on the base line and triangulation work, but beyond that all I had was his blessing. The vertical relief at Hedley is about 6,000 feet, so we made good use of the gravity tram that ran up the mountain side and carried ore from the mine on the top of the mountain to the mill at its foot. We camped in the valley bottom and every morning we took the tram to the top of the mountain and later in the day worked our way through the canyons and down the cliffs of the mountain side back to camp. It was risky work, but interesting and sometimes exciting.

There was no road in those days up to the top of the mountain where the mine was situated, so everybody going up or down had to use the gravity tram. It was all right going up but it took some nerve to go down perched on top of a load of ore. There is a story that a man who was engaged as cook at the mine was so afraid of the trip down that he refused to face it and lived at the mine for years. He only left his job years afterwards when a motor road was built connecting with the town of Hedley in the valley bottom.

A five-ton car loaded with ore was attached to a steel cable which ran around a drum at the top of the mountain. When the loaded car descended the mountain it pulled the empty car up. One morning as my party gathered at the lower ore bin to ascend the mountain we were joined by a lady, wife of one of the miners, who was going up to the mine to visit her husband. Dutch Charlie, who had charge of the lower ore bin, and had only a limited English vocabulary, was about to signal the hoist man at the top to release the loaded car when he saw that our lady passenger was seated on the bale at the front of the car to which the cable was attached. He knew that this was a very unsafe seat so he rushed up to the lady and said: "Be careful, Mrs. T. Be careful. When that cable tightens you might pinch your—ah, your—ah." There he stuck. He didn't know the English word for it, so he turned and fled to the shelter of his ore shed.

During my stay in Vancouver there was a considerable amount of interest in the possibilities of oil in the lower Fraser Valley. A great many claims were staked and while there was some exploration for the oil by drilling there was much exploitation of the public by mushroom mining companies. A situation of this kind always places the Government geologist in a difficult position. On the one hand he does not want to retard exploration and development by adverse reports, but on the other hand he has a certain amount of responsibility to the public to protect them from unscrupulous persons.

The persons who gave me the most trouble and the most difficult to size up were those who claimed to put their faith in the "divining rod" as a means of locating underground pools of oil. To put myself *au fait* with the virtues of the "divining rod" I looked up the literature on the subject and found a bibliography of some forty works. I found that the use of the "divining rod" went back some thousands of years, and that it had possibly been used by Moses when he found water in the desert. In all cases, however, it had been used for the location of water, and never to my knowledge successfully for oil. It appealed to my curiosity, therefore, when I was asked one day to witness a demonstration in the use of the "divining rod" for finding oil. I was also influenced by the fact that the demonstrator

had important connections in Ottawa and was actually the relative of a cabinet minister. He had therefore to be given some attention.

He took me out one day to Lulu Island where he said there was a favourable rock structure and his rod indicated oil in it. When we got out to a vacant five-acre lot, which was nothing but pasture, he produced his rod from a metal case and walked across the lot with the rod upright in his hand. About the centre of the lot the rod turned down. When he walked across the lot at right angles to his first course the rod turned down at the same spot. "Here," he said, "is where the oil pool lies." Every time he held the rod over that spot it turned down. It actually turned down thirteen times and on the fourteenth time it went down only half way and stuck. "There you are," he said. "Every time the rod turns down it indicates 100 feet in depth. That oil is down 1,350 feet."

I said to him, "I know that the divining rod has been used for finding water, but I have never known it to be used for oil. How can you tell that it isn't water that is indicated." The question stumped him for a moment, but he finally said as he put his hand on his chest, "There is something inside here which tells me whether oil or water is indicated." It was my turn to be stumped and I could not reply.

As we drove back home in my old Model T Ford through South Vancouver where the streets are cut through ridges of gravel, my friend, assuming that the gravel ridges expressed the rock structure underneath, tried again to show me how his rod could be used to locate oil. As we approached one of these ridges the rod in his hands turned down in a forward direction. As we passed beyond the ridge the rod turned down backwards. As we passed out into the level country beyond, the rod remained upright in his hands and would not move at all. "That's a very strange thing," I said, "If that rod indicates oil it ought to be turning down all the time because you are sitting on five gallons of oil." Those were the days when the gasoline tank was under the front seat.

That closed the demonstration and my friend parted from me in disgust. Actually he did later get some gullible people to back him in drilling a well on that vacant lot on Lulu Island. At 700 feet he struck a heavy flow of salt water, but no oil.

In October, 1907, I moved with my family to Ottawa and took a furnished house on Waverley Street near O'Connor. There we lived all winter, and there our eldest daughter, Isabel, was born in January, 1908. When I returned from field work in September of that year, we moved to Boston, Massachusetts, and I enrolled as a graduate student in the Institute of Technology.

"Tech" at that time had what I believed to be the finest group of professors in the various branches of geology to be found in North America. There was Waldemar Lindgren in economic geology, R. A. Daly in igneous geology, Shimer in palaeontology and stratigraphy, Jaggar in vulcanology and Warren in mineralogy. In mining engineering, R. H. Richards was still teaching ore dressing and Hoffman metallurgy, so I "horned in" on some of these lectures as well as those in geology. It was the most profitable year I ever had and the influence of these great teachers remained with me all the rest of my life. Those men were all giants in their own fields.

During the winter we had a comfortable flat at Coolidge Corners in Brookline, and from there I walked every morning to the Institute, which at that time was situated on the Boston side of the Charles River.

The Institute of Technology was the second United States university that I attended. I was accepted in both places as if I were a citizen of the United States, and not a foreigner. In each place I was granted a scholarship. As a result I have always felt, and still feel, a great sense of obligation and gratitude to these two great institutions. It has also given me a warm feeling towards many of the other United States universities who later opened wide their doors to Canadian students of geology who formerly had gone to European universities for post graduate work. Now, of course, there is no necessity to leave Canada in order to get a post graduate degree in geology.

One of my interesting contacts while at "Tech" was a visit one night in our flat at Coolidge Corners, from Harry V. Radford who had come up from New York to visit me. Radford had a great desire to do some exploratory work in northern Canada, and he came to discuss a plan he had of carrying on some work on the Arctic coast. Radford at that time was quite inexperienced in northern travel and his ideas required a good deal of revision. In this I was very glad to help him. He did go north the following summer by the Athabasca River route and made some useful studies of the wood buffalo back of Fort Smith. About a year later, with a companion, George Street of Ottawa, he was attempting to cross the Barren Lands from Chesterfield to Bathurst Inlet when he met his end. He had engaged some Eskimos to accompany him across country, but he had no experience in handling these natives, and when he attempted to force them to do certain things they stuck a knife into him. Though they had nothing against Street they killed him also to cover up the murder of Radford.

When I left the Institute of Technology in Boston, I had finished my academic training. I had completed all the work necessary for a Ph.D degree, including my thesis, but another year of residence was required before I could secure my diploma. The Geological Survey did not think it necessary that I should be granted leave of absence to complete the residence

requirements so I never went back. The judgment was that I had obtained the training and a diploma was only decoration and not necessary. In any case, I could not afford, with three children and others to provide for, to spend another winter in Boston. So we took up residence in Ottawa and for the next nine years we made our home there.

29 Tulameen Characters

The next two summers, 1909 and 1910, I spent in the Tulameen country of southwestern British Columbia, doing both topographic and geological mapping of an area about 180 square miles in extent. This involved two full seasons of field work. I was assisted in the first season by Dr. W. J. Wright and Walter Agassiz. The second season I had Dr. W. S. McCann and J. D. Galloway, afterwards Provincial Mineralogist for British Columbia. Dr. Leopold Reinecke of South Africa was my assistant in the topographic mapping.

The Tulameen district was at that time not easily accessible. It had a wagon road connecting with Merritt to the north and with Princeton to the east. Beyond this the country was traversed only by a few pack trails which were not in good shape. They were overgrown and strewn with dead falls and had to be reopened by every new traveller. It was a pocket in the mountains which was by-passed by the tide of travel. In consequence it harboured a number of queer characters, eccentrics, some of them persons who had deliberately removed themselves from the regular haunts of men to live a life of seclusion and peace, individualists, every one of them, but hospitable and generous to the extreme. Any one of them would share his last penny with you and give away his shirt, but they all held very decided views on politics and world affairs and the freedom of the individual.

They were really a likeable lot, but quite undisciplined in their emotions. All of them were engaged in prospecting and all had claims which they believed to be worth millions. There were Lucky Todd, Dan Coutney, Pete Galarneau and John Marks, all operating on the upper Tulameen River and looking for platinum or copper. There were also Bob Stevenson, an old Cariboo miner, Sailor Jack, who was said to be a sailor from the British Navy, Gus Spearing, who was drawing a pension from the United States Government for service in the Civil War, and Capt. Thompson, a British Army pensioner who had followed every mining stampede in the previous fifty years and was now looking for diamonds. These and a few others, such as Mike Gaynor, Dave Leggett, each of whom cooked for me at one time or another, and Billy Britton, comprised the interesting portion of the Tulameen population.

It was the habit of the more gregarious of these characters to come into town on Saturday night and participate in an all-night party at the Mackenzie Hotel. I was always invited to those parties when in town, and usually, when I refused to participate, Sailor Jack would go over to the store and buy me a pound of candy. I remember one night the noise was louder than usual, for we could hear it from our camp some distance away, and it seemed to come mostly from Todd. His companions ultimately became so annoyed at his boisterousness that they took him and stuffed him into an empty piano box that lay just across the road. When he would not keep quiet, they nailed the cover on the box and let him yell to his heart's content. He was a very contrite prospector when they let him out next morning.

It was the same night that Sailor Jack left his partner in an adjoining cabin while he himself went to join in the party. His partner was quite ill and when Jack came back about six o'clock the next morning, he found him dead. Jack was broken-hearted. He was also a bit annoyed that his partner should have taken that particular night to pass out.

Bob Stevenson, whose home was at Chilliwack, was a frequent visitor to my camp. Though he was something over seventy years of age he was in good physical condition and spent his summers in going from one group of his claims to another doing, or pretending to do, his assessment work. He travelled with two horses, one for riding and the other packed. He was notorious for his stories, some of which had to do with his own feats of strength. At the same time he had a record of accomplishment which could not be discounted. In the early days of the Cariboo gold fields, he was a partner of Cariboo Cameron, and these two mined a rich claim on Williams Creek near by the town of Barkerville. When Mrs. Cameron died at Barkerville in the fall of 1863, Cariboo Cameron was determined that his wife should be buried in her own country near the town of Cornwall in Ontario. Bob Stevenson undertook to take Mrs. Cameron's body out to New Westminster and this he did with a pack train of eight horses. The body was finally buried at Cornwall in December, 1863, after a long sea voyage by way of Panama.

One night as I was camped on the Tulameen River near its head waters, Bob Stevenson dropped in just in time for supper and accepted my invitation to spend the night with us. After supper Bob and I sat on a log by the fire while he told me of his search for a vein of pure platinum which he had found many years ago not far from our camp. He had tried year after year for many years to relocate the outcrop, but was not successful and was now making another and perhaps his final attempt to find it.

After my boys had left the camp fire and gone to bed, Bob edged up a little closer on the log and whispered to me, "Can you tell by the formation

when you are coming to rubies?" It was an unusual question, but I was not going to admit any lack of knowledge on this point, so I said, "Yes, I can." Then I went on to indicate the kind of rock formation with which rubies are associated and the places where these formations are found. Then in a low tone of voice, so that he could not be overheard, he told me his story.

It was when he was Customs officer at Osoyoos in 1860. He had been out riding over the hilly country on the western slope of Okanagan Valley when he came into a small open, grassy basin. In the bottom of the basin he saw a number of huge ant hills and as he rode down to examine these hills he was met by an army of great black ants, each one about four inches long, with what Bob called "patent leather wings." When he came to examine the ant hills he found that each of them was surrounded by a ring of dark red stones about an inch in diameter and regularly spaced about each hill. He picked up one of the stones and gave it a casual examination. Then he threw it down and rode on. Years afterwards in San Francisco he met the famous diamond expert, Gardner Williams of Kimberley, South Africa, and to him he told his story. Williams, according to Bob, became greatly excited and said, "Why, Mr. Stevenson, those ants were the famous ruby ants, and the stones surrounding the ant hills were undoubtedly rubies." Every year afterwards for thirty years Bob hunted for the little basin containing the ant hills, but had failed to find it. Now, when he learned that I could "tell by the formation when we were coming to rubies", he offered me a share in the venture if I should help him find the basin containing the hills of the ruby ant.

Bob was full of such stories. Like all the old-time prospectors, he was quite happy in spite of his poverty and his strenuous life, because he lived in continuous anticipation of finding the "mother lode" or the fabulously rich deposits of platinum, gold or rubies that he was positive lay in the valleys just beyond the hills.

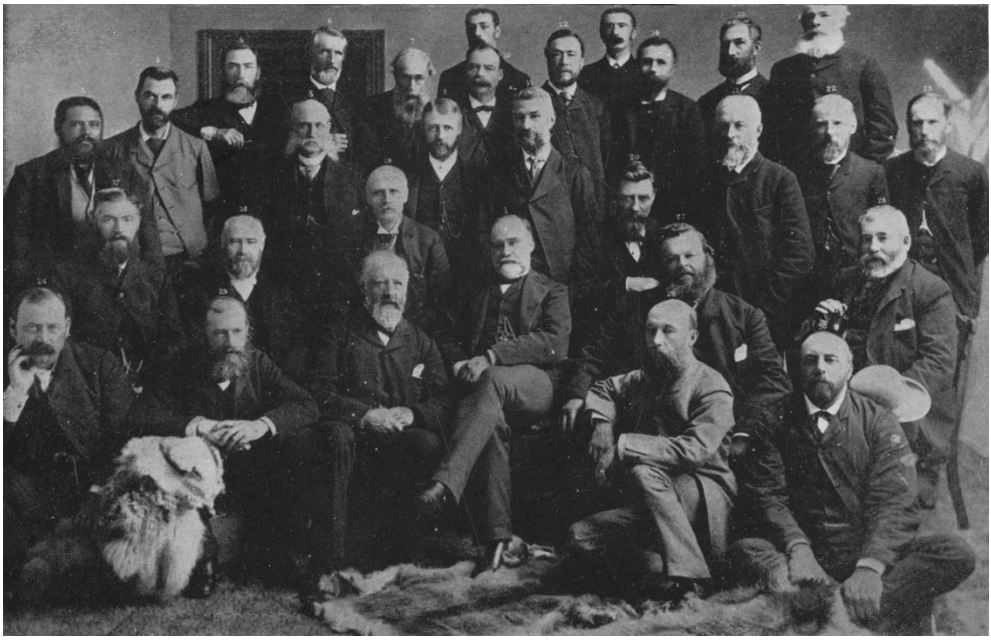
Captain Thompson had a different up-bringing. He was a cultured English gentleman, educated at Rugby School, with military experience in the British Army in Canada in the sixties, actually in my father's old regiment. He was stationed in Ottawa at the time of the assassination of D'Arcy McGee and recalled that event quite clearly. He was with the United States Army in Dakota and Montana, in the early seventies and could tell a good story of a Sioux Sundance. Later, in the British Army in South Africa, he fought in one of the Zulu wars. He had prospected or mined for gold in Australia, Yukon, British Columbia, Oregon, South Africa, Nigeria and the Gold Coast. He had been employed on the geodetic survey of Nigeria, and was the author of a book on the use of the sextant in surveying. He later published a book on his own experiences entitled, *Life is a Jest*, cynical in

tone, and at the time of his death was engaged in writing a second volume of reminiscences.

Thompson was attracted to the Tulameen country following the reported discovery of diamonds on Tulameen River in 1910 by myself. His wife, who was the daughter of a South African Dutch minister and whom he always called "Chum", had accompanied him on all his travels and came with him to Tulameen. They spent three years at Tulameen, living in a tent in summer and a one-roomed log cabin in the winter. During this time he prospected for diamonds for a while, and when he had no luck in this he turned to mining platinum out of the gravels of Tulameen River. Both he and his wife were very interesting and entertaining and most hospitable. I never dared to pass their camp without calling in for a cup of coffee. The pot was on the stove for visitors all the time. He was always dressed in rough working clothes—blue jeans and a flannel shirt—so that until you got into conversation with him you would never suspect his background of education and culture. Certainly he fooled me on this score.

I remember the occasion very well when he and his wife were camped on a bench alongside the trail not far from Slate Creek, where he was placer mining. I had got off my horse for a short visit and a cup of coffee with them. We finally got around to talking about my explorations and methods of making exploratory surveys. He asked me what method I used for making latitude observations and how I made the calculations. I told him that I used a book called, *The Manual of the Sextant*. He then asked who was the author of the book. When I said the author was Charles W. Thompson, he looked at me in a quizzical sort of way and said, "You know, I never made a penny out of that book." He had written the book while engaged on the survey of Nigeria.

I was never able to find out much about the background of some of the other characters at Tulameen. I never asked. In fact it would have been very unwise to do so as it was never considered to be anybody's business but their own where they came from or what they had done. One always felt however that there was an interesting story in the background of each of those men.



Group of Hudson's Bay Company officers, taken September, 1887, at the meeting of the Council in Winnipeg, Manitoba

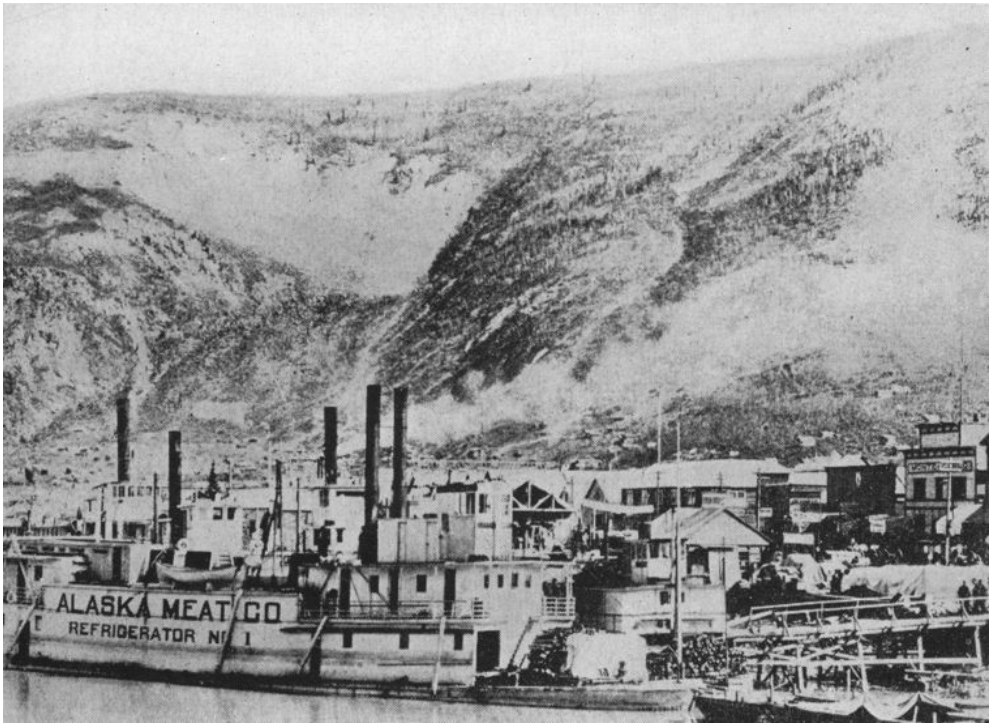
The old-time prospector has had his day, and there are hardly any of them left. He marked a stage in the history of the mining industry now past, and has been replaced by a group of men technically trained and using a variety of scientific methods. The modern prospector is more thorough and hence more efficient. He doesn't work on "hunches" as the old-time prospector did. Yet these old-timers were a grand lot of men. I have lived in their cabins, eaten their food and travelled and prospected with them. Their outstanding characteristics were honesty, generosity, independence and loyalty to their associates. I never had any of them try to put anything over on me.

I like, however, to recall the occasion at Princeton, B.C., when I was explaining the origin of some fossil ferns in the shale to a group of prospectors. One of them, Charlie Asp, said in a sneering sort of way, "Why, that's nothing. I can show you a place where there are petrified birds singing petrified songs on the petrified trees."

I like to illustrate this appraisal of the prospector by an experience I had with one of them some years ago. We were making an extensive tour of the Northwest by airplane, and as we left Winnipeg my prospector friend asked me to carry his roll of money for him. When I found the roll contained five

thousand dollars in bills I refused to take the responsibility. On the second day out we stopped at a small gold mine on the shore of a lake in northern Manitoba. As we taxied up to the dock my friend saw an old partner of his standing on the dock waiting to greet us as we landed. The two hadn't seen each other for years so they fell on each other's necks and pounded each other on the back. Then they went to calling each other names, using terms which had to be said with a smile in order to avoid giving offence.

Wrangell, Alaska



Dawson waterfront, 1902

Finally my friend crept back into the plane and when he came out he had a cheque in his hand which he gave to his old partner. The partner saw that it was made out in his favour and was for $10,000. He knew also that it was good for the amount. But he never said a word. He simply looked my friend square in the eye, tore up the cheque and threw the bits of paper into the lake. Then he mumbled something about not wanting to be like a “kept woman” to any man.

A couple of days later we were at The Pas waiting for good weather before taking off for Flin Flon and the Northwest. Our pilot wanted us to leave on short notice, so I packed up and paid my hotel bill and then looked for my friend. I found him in his bedroom, but he was not dressed. I suggested that he let me have some money and I would pay his bill while he was getting dressed. He then confessed that he didn’t have any money. I asked him what he had done with the five thousand dollars he had started with only four days earlier. His only answer was that he had a lot of friends in that part of the country and that he was still quite capable of writing cheques with which to pay hotel bills.

30 Fraser Canyon Guide

The Twelfth International Geological Congress was invited by the Government of Canada to meet in Canada in 1913, and for two years preceding the meeting my time was very largely taken up in preparations for that event. I was appointed one of the vice-presidents of the Congress. Dr. Frank D. Adams of McGill University was president. My duties involved a certain amount of field work in British Columbia, gathering data for one of the guide books, and also the editing and preparation for printing of all the guide books, thirteen in number, for the excursions throughout Canada.

Before settling down to this work, however, I had two or three rather ticklish jobs to do. One had to do with a stampede of prospectors into the Tulameen country to stake claims for diamonds, and the other was to explode what was known as the Steamboat Mountain gold boom in the Skagit Valley.

The diamond excitement was a relatively mild affair, even though some hundreds of claims were staked on Olivene and Grasshopper Mountains which lie on either side of Tulameen River. The interest died down when the so-called diamonds were found to be embedded in the solid rock and of microscopic sizes. Later they were thought to be spinels.

I was myself primarily responsible for this stampede because it was from a sample of chromite that I brought in that our chemist claimed to have identified microscopic diamonds. His opinion was supported by the crystallography and by radioactive tests by Dr. Kuntz of Tiffany's, New York. It was this that brought Captain Thompson and his wife to Tulameen. They were at the time living in London, and when one evening the news boys were heard shouting, "Mountains of diamonds in British Columbia," they decided to cross the Atlantic and the continent of North America to see what the excitement was all about. Thompson was the only experienced diamond prospector in the lot, but after searching the gravels of Tulameen River for two seasons he was able to be sure of only one small "splint" in his panning.

The Steamboat Mountain boom was a more serious affair, even though it was afterwards shown that there was no gold whatsoever in the deposits and that the samples submitted for assay must have been "salted." The location

of the deposit was on the side of Steamboat Mountain in Skagit Valley about 100 miles due east of Vancouver. The stampede started in the winter when the snow lay deep on the Hope-Princeton trail. The assay values in gold reported to have been obtained from the property were so high that hundreds of stakers rushed in and some hundreds of claims were staked on the snow. Three townsites were surveyed into lots in the valley of Skagit River. In the town of Hope, which overnight became a city of tents, a newspaper was started.

After the original discovery became accessible early in July, Alan Bateman, later professor of economic geology at Yale University, and I went in on behalf of the Geological Survey to make a report. We found a number of prospectors in the district and quite a long tunnel driven into the side of Steamboat Mountain. But after examining the tunnel very carefully we found not the slightest evidence of mineralization from one end to the other. We had to make a very careful inspection, because a good deal of money had been spent on outfits, transportation and staking of claims, and some hundreds of people were waiting anxiously in Hope and even in Vancouver for our report. We wasted no time at the property, and after our examination we rode back the thirty miles or so into Hope. There, late one evening, we gave a written statement to the local newspaper and then quietly but hurriedly left town. The newspaper had the courage to publish the statement the next day and the boom burst. I did not go back to Hope for many years.

Another of these odd jobs came to me as a result of a story that made the newspaper headlines in British Columbia. A prospector was reported to have discovered oil on Mission Creek back of Kelowna. As this was my general territory, I was instructed to examine the occurrence and make a report. The locality was one in which oil was not likely to occur, but that did not prevent prospectors and others from staking some hundreds of acres in claims. It was at a time when oil occurrences were being reported from a number of localities and particularly in the lower Fraser River country, so that the Kelowna story caught the public interest. When I got to Kelowna I called on a mining engineer friend of mine, Bill Dickson, with whom I had been at Queen's, to get the real truth of the story. When I asked him about it, he smiled sadly and told me that the excitement had died down and disillusionment had set in and there was no oil.

The story was that a hunter scouring the hills for blue grouse was driven by a thunderstorm into a cave in the rocks. The cave was evidently the abode of bush rats who during their occupancy had left behind a deposit of black shiny material which the hunter took to be bitumen. Before examination could be made of this deposit by some knowledgeable person,

the story was broadcast that here was a seepage of oil, and everyone rushed to stake claims.

It is of such things as the Steamboat Mountain and Kelowna affairs that mining stampedes have been made. A mining stampede is a curious thing. The reactions of those who participate in one are entirely psychological. They act somewhat like a mob and it only requires a simple discovery, whether valuable or not, told about in a whisper, to pull the trigger and set off a chain reaction which usually goes to absurd lengths before it dies down. In a great many cases more money is lost than is ever recovered from the exploitation of the discovery. This sort of thing is still going on today and all through our mining country there are men waiting and ready to rush out and stake claims at the first whisper of a new discovery. The technique, however, has changed and more intelligence is usually exercised in the staking of claims.

In the course of preparing guide books for the International Geological Congress, I had to cover the territory between Midway and Vancouver, not only along the Kettle Valley Railway, but along the Canadian Pacific Railway as well, from Nicola to the coast. The only way to get the information necessary for the guide books was to traverse the route on foot, and consequently I walked nearly the whole way between these two points —a distance of nearly five hundred miles. The most interesting stretch was down through the Fraser Canyon between Spence's Bridge and Agassiz, and I tramped this portion twice, once on each side of the river.

I had that year the brightest group of young assistants I ever had. There was Dr. Alan Bateman, later professor of economic geology at Yale, Dr. N. L. Bowen of the Geophysical Institute, Washington, and Dr. E. L. Bruce, late professor of geology at Queen's, each of whom reached in the course of time the peak of his profession and became world-famous among geologists.

For me it was a most fascinating experience. I travelled light and alone, carrying with me only my hammer, note books and camera, and my lunch. I slept wherever I could find lodging for the night, most frequently with the engineers or construction gangs of the Canadian Northern Railway, which was then being built opposite the Canadian Pacific on the Thompson and Fraser Rivers.

I usually had my lunch by the side of a creek that flowed under the railway tracks. There I frequently met and lunched with other travellers who were carrying all their possessions on their backs, and who took me for one of their own kind. They were tramps who had wandered over much of the North American continent. Their winters were spent in the south, but in the summer they moved north into Canada. They claimed to be looking for work, but most certainly prayed that they would never find it. They always

offered to share their lunch with me, hoping of course that I would reciprocate. Naturally, I could not do anything else, but was well rewarded by the insight I got into the life and the philosophies of a section of society of which I had known very little.

The Canadian Pacific Railway hotel at North Bend had not yet been completely closed, and was one of the best places to stay between Spence's Bridge and Vancouver. One afternoon in July, I was working down the east side of the canyon and decided to cross over the river to North Bend and spend the night in the hotel. The old Alexandra Bridge built during the Cariboo gold rush still spanned the river near Boston Bar but had been condemned and was impassable. The new suspension bridge had not yet been built. My only chance of crossing the river then was a little way down stream at Hell's Gate, where a wire cable had been strung across right over the gorge. A platform of half a dozen short planks was suspended from the cable, and if you had the nerve, you could pull yourself across on the platform. It looked simple enough, so I got aboard.

The cable was not very tight and there was a good deal of sag to it. I slid down quite smoothly until I reached the middle of the gorge, and there I stuck, suspended over the roaring water of the river. The platform was heavy and the incline of the cable so steep that with all the strength I had I could not pull myself either forward or back. It was three o'clock in the afternoon of a hot day and there I remained suspended over the middle of Hell's Gate until five o'clock when the Canadian Pacific Railway section gang on their way home saw me and hauled me ashore. In the meantime I had nearly two hours of a very unpleasant time and was nearly roasted with the heat of the sun. The salmon run in the river was just starting and I had lots of time to watch them trying to surmount the swift waters of the gorge. They were having a hard time because of a great fall of rock on the Canadian Northern side of the river. This has all been made easy for them now by salmon ladders cut through the solid rock.

When I guided the International Geological Congress through the Fraser Canyon in a special train the following summer, a stop of twenty minutes was arranged at Hell's Gate so I could explain to the party the geology of the valley and my conception of the origin of the canyon which I thought I could trace back some three million years. There were about 125 geologists on the train from all parts of the world. I gathered them on a rock bench by the side of the railway track, then I got up on a large boulder and began to tell my story. Dr. Henry Ami of Ottawa translated for me into French for those who did not understand English.

I had barely got started when some one looked over the brink of the gorge, and there in the big eddy below the rapids were hundreds of salmon

milling about trying to gather strength to make the rush up the swift water. A shout drew everyone to the edge of the cliff and no one would listen to my story. Some of them scrambled down to the water's edge and with a hooked stick actually pulled out salmon on to the shore. There was nothing that I could do, so I gave up. When a little later we got back on to the train, I complained to some of the geologists that they would not listen to me. The answer I got was, "Oh, we can read your story in the guide book, but we will never see salmon like that in the Fraser River again." That was quite true.

The building of the Canadian Northern Railway on the other side of the river so blocked the channel that as the years went by fewer and fewer salmon went up the river. Only with the building of the new fish ladder by the International Sockeye Salmon Commission has the run of salmon a chance of coming back.

An amusing story of this Geological Congress illustrates a characteristic of certain of our European guests. On our transcontinental excursion we had solid pullman trains and when a man was travelling with his wife he was assigned a full section with upper and lower berths. When this excursion got back to Toronto, the President of the Congress asked one of his foreign friends how he liked the arrangements. The foreigner was enthusiastic. One thing, however, had disturbed him. His wife had found it rather awkward climbing into the upper berth.

31 Taltson River Exploration

On the 1st of January, 1914, Dr. R. W. Brock, who had been Director of the Geological Survey for some years, was appointed Deputy Minister of Mines. He succeeded Dr. A. P. Low in that position, but only held it until December 1st of that year when he resigned to join the Army. He was immediately succeeded by R. G. McConnell, a famous explorer.

A number of realignments of staff accompanied these changes, and I was involved in them. I was given a new job and a new title, that of "Geologist in Charge of Exploration," and was instructed to make plans for an aggressive programme of geological and geographical exploration of the unknown part of northern Canada. I was to be back in my old field.

My first task was to find out the size of the job to which I had been assigned.

The existing map of northern Canada had been built up from a network of canoe traverses which followed the main water courses. Between the lines of this network were blank spaces indicating that the geography was absolutely unknown. Taking only those blank spaces, which exceeded 4,000 square miles in extent, I found there were thirty-one blocks, the real extent of which added up to over 900,000 square miles. And this did not include the islands of the Arctic.

There was my job. Between a quarter and a third of the Dominion of Canada to explore! Considering the methods of exploration in use at the time and the limited staff and funds likely to be at my disposal, it was a formidable job and one that would take several lifetimes to complete. Actually, however, the introduction of aerial photography made it possible to photograph the whole of northern Canada by 1950.

When my compilation of the unexplored areas was completed, I submitted a paper to the Royal Geographical Society in London, entitled, "The Unexplored Areas of Canada," and this paper created quite an interest in northern Canada on the part of private and non-governmental organizations. But the war of 1914-1918 intervened, and that kind of work, while not halted completely, was considerably slowed down until the war ended.

Of the unexplored blocks of territory in northern Canada, the nearest and most accessible was one about 50,000 square miles in area, lying between Athabasca and Great Slave Lakes and extending eastward from Slave River towards the head waters of Dubawnt and Thelon Rivers. The only explorer known to have entered this country, was Samuel Hearne, who had travelled from Churchill to Coppermine River and back, in 1771-1772, and while he had written a sketchy story of his travels his map was so unreliable that geographers are still at a loss to know what actually was his route. I selected this block of country for my first season's work.

I planned at first to enter the area at Black Bay on Athabasca Lake and work northeastward to the Thelon River and come out at the east end of Great Slave Lake. Later I changed my plans and decided to make a south-to-north traverse directly across the area and come out on Great Slave Lake at the mouth of the Taltson River.

When my party gathered at Athabasca Landing to descend the Athabasca River, it consisted of seven men with three Peterborough canoes. A. J. C. Nettell, technical assistant, Francis Harper of the Brooklyn Museum, naturalist, and myself constituted the scientific group. The canoemen were Stan McMillan and three Ojibway Indians from Sault Ste. Marie, John Soulière, George Greensky, and cook Joe Nolan. Accompanying us down the river to Fort Chipewyan was another geological party under Dr. F. J. Alcock and W. S. McCann, and a topography party under A. G. Haultain, which was to map the shores of Athabasca Lake. Two mining men, G. G. Gibbins and I. Thomas, who were to do some prospecting on Great Slave Lake for Mackintosh Bell also joined up with us for the trip down the river. Altogether there were nineteen of us in the party, including a local guide, David Cardinal, who was to pilot us through the rapids to McMurray.

Although we had eight canoes in all for our survey work, we loaded our outfit into a large scow which I got for the Athabasca River run. The canoes we tied alongside.

The scow party left Athabasca Landing at three o'clock in the afternoon of May 19th, but Alex. Haultain and I stayed behind for a few hours to wait for the evening mail coming by train from Edmonton. I had dinner before I left with D'Arcy Arden, who was getting ready to go on a trading expedition to the Coppermine River region in Eskimo country. I had been in the same country fourteen years earlier with Mackintosh Bell, and warned him that he might not be welcomed there. My warning only stimulated his interest, and he went the same summer. I saw him twenty years later at Great Bear Lake, when he told me that he had had some difficulties at first, but ultimately established friendly relations with the Eskimos and lived among them for several years.

After supper Haultain and I pulled out in our canoe to catch up with our party. We found them ashore some miles down the river having supper. The guide was dead drunk in the stern sheets of the scow. Apparently he had smuggled a bottle of whiskey aboard with him and two or three stiff drinks had put him out of business.

There was no use paying any attention to the guide and we got under way again at once. The party was divided into three shifts of six men each and we drifted down stream all night long. In the morning we were thirty miles from Athabasca Landing. We followed this system of sleeping aboard most of the way to Grand Rapids and again, after we had passed through the rapids, from McMurray to Chipewyan, and we saved a lot of time by it. Most of the time we didn't go ashore even for meals. We had a cook stove set up in the bow and Haultain's cook always served us fresh hot cakes for breakfast.

It was a pleasant way of travelling. The trees were just coming out into leaf, the weather was sunny and bright, there were as yet no mosquitoes, and everyone appeared to be quite happy, none more so than Harper, who was seeing something new in bird life every few minutes. There were four mouth organs in the party, and we sang a lot of our old barber shop songs as we drifted down stream. It was a cheerful crowd and a "happy ship." When bad weather or rough water compelled us to tie up to the bank for the night we were away again by three or four o'clock in the morning.

On the 22nd we passed the natural gas well near Pelican Rapids. The well is 820 feet deep and had been drilled by the Geological Survey sixteen years before. The gas had been set afire, and threw up a flame twenty feet high with a roar that could be heard for miles. It had been blocked from time to time by the Government, but always some irresponsible person would open it up again and set it afire. There were half a dozen people living at the well, and they were all using natural gas for heat and light.

The next morning we were at the head of Grand Rapids Island, an island about one-third of a mile long extending the full length of Grand Rapids, which is the worst piece of water on the whole river. We ran all our stuff over the island on the Hudson's Bay Company's tramway, and lowered the scow down the eastern channel with ropes. By nighttime we had everything across the portage and were in camp on the lower tip of the island. Here we found Bishop Lucas of Mackenzie River and Rev. J. Whittaker and his wife and an Anglican missionary party of six or seven others on their way down river to the delta of Mackenzie River. They had been at Grand Rapids for some days because of the difficulty of getting the mission boat *Atkoon* down through the rapids. The boat was equipped with an engine and was designed

for work on the Arctic Coast so that she had to be handled very carefully in descending the rapids.

In deference to Bishop Lucas and his party, we rested in camp all the next day, which was Sunday. It was an opportunity to do some washing and to get cleaned up generally. We had, however, two open air services. In the morning we had a sermon from the Bishop and in the evening one from Mr. Whittaker. All our party attended both services except the Indians and the French Canadians, who were Roman Catholics. It was something to remember, but it was sometimes difficult to hear the voice of the preacher because of the roar of the rapids alongside.

By the following afternoon we had loaded the scow with our supplies and even with some of the canoes and pushed out into the boiling, tossing water of the river below the island. The other canoes were run through light. Here I had my first real experience with Joe Nolan as a canoeman. He was one of the best I have known. Always for the rest of the summer we handled our canoe in the rough waters of the rivers, he in the bow to pick out the channel and I in the stern to keep the canoe straight on the course he indicated. By the end of the summer we were working well together. Joe frequently made the vain boast that he could pilot a Peterborough canoe through the rapids of Niagara gorge.

This was my third trip through the rapids of Athabasca River, so it was an old story to me. The others, however, got a great kick out of running the rapids. The Mountain, the Boiler, Big and Little Cascades and other rapids were all passed without mishap and we reached McMurray on May 27th. We were hung up here for three nights with winds so high that it was not worth while to try and buck them. When we left on the 30th we had no further navigation difficulties, with an easy river all the way down to Athabasca Lake.

We again followed the plan of sleeping aboard the scow and drifting all night with the stream. I took the first watch from eight o'clock to midnight and Haultain followed me from midnight to four a.m. It never got really dark and even at midnight there was a glow in the northern sky. The birds appeared to sleep only for about three or four hours and the peace and quiet of the night were disturbed only by the occasional howl of a wolf or the hoot of an owl. There was great excitement one night during Haultain's watch when his party thought they saw a moose swimming the river. Everyone was aroused but interest died when the moose turned out to be just a piece of driftwood.

We were out just two weeks from Athabasca Landing when we landed at Fort Chipewyan at five o'clock in the morning; an unusual hour, but we had to cross the lake before the wind began to blow. We camped on the sand spit

that juts out into the lake almost in front of the Anglican Church, and there we remained for three weeks. The ice was still in the main body of the lake. Mainly, our delay at Fort Chipewyan was occasioned by the difficulty of getting an Indian guide to leave the Post and come with me.

The Indian Commissioner, Mr. Conroy, who had arrived just after us, had to pay out the annual treaty money to the Indians before any of them would leave the Post. Even then there seemed to be some sort of conspiracy among the natives to prevent anyone from going with me. Every man I tried to get had the same excuse: his wife wouldn't let him. When I did get old Baptiste Forcier to agree to come with me, they all tried to frighten him with stories of the difficulties and dangers of the canoe route. The old fellow, however, stuck to his promise, largely because he had made many winter trips with my father in his younger days. Baptiste proved to be all right in spite of the fact that he didn't know the route. All summer long he was on the lookout for a spot where an evil spirit lived and the water was supposed to boil up and engulf the canoe.

The delay at Fort Chipewyan was not wasted, for we spent our time checking our instruments and doing some geological work on the west end of the lake. Particularly I had to check my Rochon micrometer over a carefully measured distance.

We finally left Fort Chipewyan on our scow, towed by Colin Fraser's steamer, the *Keewatin*. Along with us were the Indian treaty party under Mr. Conroy and a small detachment of Mounted Police on their way to Fond du Lac for the annual treaty payments.

My own party was landed the following morning, June 25th, at the bottom of Black Bay at a spot which has since become known as Camsell Portage. The locality later became famous to the Army as the place where, during the late war, one of the Japanese incendiary balloons landed.

I went on with the steamer to Fond du Lac. There were to be about five hundred Indians gathered there from the country to the north and east to collect their treaty money of five dollars a head, and I hoped to be able to pick up some additional information that would help me find my own way across to Great Slave Lake. But I might just as well have not gone to Fond du Lac. I did get a sketch of sorts from an Indian, but it proved to be more misleading than useful. When I got back to Black Bay on June 29th, I realized that I had obtained very little sound information about the route and I would simply have to feel my way across nearly three hundred miles of blank country.

The canoe route that I followed leaves Athabasca Lake at the bottom of Black Bay. From here five portages with a total length of almost three miles leading from one lake to another took us into Tazin Lake, which is on the

north side of the divide and drains to Great Slave Lake. Actually, the height of land is only about three miles from Athabasca Lake. From Tazin Lake we followed Tazin River down through a series of lakes and connecting river to its junction with Taltson River, crossing Samuel Hearne's route at Hill Island Lake. We then followed Taltson River down to its outlet in Great Slave Lake at a point about sixty miles east of Fort Resolution. We had to make about forty portages in all and to run dozens of rapids as well.

The country is typical Laurentian country, rugged, broken and rocky with only moderate relief. There are lakes everywhere and the streams flow in ill-defined and irregular valleys. The greatest elevations are on the shores of Athabasca Lake where the hills rise six hundred feet or so above the lake. From there the country slopes gradually northward to Great Slave Lake.

Both the Tazin and Taltson Rivers are typical of streams in the Laurentian plateau, that is, they have no well defined valleys, nor have they evenly graded profiles. The drainage is characterized by a succession of lakes or level stretches of water connected by rapids or sharp falls. The whole country is very rocky and except for a few sand plains there is very little soil. The drainage and topography of the whole region has been completely disorganized by the scouring action of the great ice sheet that overrode the region during the Glacial period. We saw no game all the way, but were able to get fish nearly anywhere.

For three or four weeks, old Baptiste was in a state of nervous apprehension on the lookout for a rocky canyon with quiet water in which an evil spirit was supposed to live. He called for silence as we passed through such places, because if we talked too loudly the spirit would cause a tremendous turmoil in the water and we would be caught in a whirlpool and drowned. As we passed safely through one after another of these canyons his courage gradually returned. After we had passed through a very ominous looking gorge just below Tsu Lake, he came to the conclusion that we must have passed the actual danger spot and eluded the evil spirit. He was much happier after that.

We didn't see a soul from the time we left Lake Athabasca until we got to the mouth of the Taltson River, a distance of about three hundred miles. The country belongs to the Caribou Eaters and the Dogribs, but they have no permanent homes in it and merely pass through by canoe in the summer and on snowshoes in the winter on their way to and from their hunting grounds on the edge of the Barren Lands.

We reached the mouth of Taltson River on August 15th, and there we camped for a few days so that we could take some latitude observations, measure the flow of the river and do some washing and other necessary things. We had been a month and a half on the way from Athabasca Lake

and we had not taken much time off en route, so there was much to do to repair our outfit and get ourselves clean again.

We had had no particular hardships and no accidents. I think the late Robert Bell was to some extent right when he warned me on my first exploratory trip for the Geological Survey that "accidents are unnecessary." I think also, however, that his statement was an over-simplification, because I can recall several occasions, not alone on this trip, when disaster was avoided only by a hair and some good luck. It is one of the fascinating features of travel in the North country that on occasions one has to take chances which, if you don't have a bit of good luck, might result in disaster.

We camped on an island just off the mouth of Taltson River, one of a string of islands that extend off to the eastward. On one of these islands we could hear the continuous howling of dogs. There were no Indians on the island and we wondered why the dogs were alone. When we went to investigate we found the dogs in a terribly emaciated condition, nothing but skin and bones, and snapping at anyone who went near them. We found out later that the Indian owners had gone off some weeks earlier to hunt caribou at the eastern end of the lake and left their dogs on the island to fend for themselves. All they had to eat were some berries, but the Indians knew that when they came back some weeks later those dogs that survived would be found on the island, because it was too far off shore to swim to the mainland.

When we left Taltson River we followed the south shore of Great Slave Lake westward past Stone Island and across the broad delta of Slave River, crossing the numerous channels through which the river empties its muddy water into the lake.

On the 21st of August we reached the small trading Post of Fort Resolution, and were back again among the haunts of men. The last southbound steamer was not due for some time, and in any case it could not take us any farther south than Fort Smith, so we had to plan on working our way homeward under our own power.

Before starting south I paid a quick visit of a few days to the lead-zinc deposits about nine miles inland from Pine Point on the south shore of Great Slave Lake. These were the same deposits that had brought me back from the Klondike rush in 1900. The deposits had been staked during the Klondike rush and had just been examined by Gibbins and Thomas. Because of their resemblance to the great lead deposits of Joplin, Missouri, I felt that some day they might be important and therefore should be investigated.

It was a round trip of about seventy-five miles, and I remember having some difficulty in persuading an Indian to come with me as a guide. However, when he saw me burn water, as he thought, he felt he had better

not displease me and agreed to come along. As a matter of fact, I had merely spilled some gasoline by accident on the surface of the water and put a match to it. The Indian's eyes popped when he saw the flame.

On the way back from the deposits to the shore of the lake, and as we were tramping through some fairly open muskeg country, I saw and shot at a caribou. The animal dropped to the ground, but was not quite dead when I reached him. As I went to slit his throat to bleed him, he looked at me with his great soft eyes and my courage nearly failed. I vowed then I would never kill another animal of that kind, and I have never done so.

The day after we got back to Fort Resolution, Gibbins and Thomas turned up from their prospecting trip to Yellowknife Bay. They had found some high grade gold ore, but the vein was narrow and short so they did not stake the ground. This was one of the first discoveries of gold in an area which thirty-five years later was to have some very profitable mines and a community of two or three thousand people supplied with all the conveniences and services of modern civilization.

We left Fort Resolution all together in our canoes on the 1st of September on the last leg of our way home. The air line distance to Fort Smith is only about ninety miles, but the Slave River meanders in such an exasperating way that the distance by canoe is about two hundred miles. We made it in nine days of hard going. The river is too fast for easy paddling and the bottom is too soft for good poling. So we had to use the tow line nearly the whole way. Even this method of travel was bad because the shores were muddy and frequently blocked by fallen trees. The weather by this time was turning cold and we had rain and head winds to contend with.

The day before we reached Fort Smith, the 8th of September, we met a canoe with two Indians going north. They told us in a garbled sort of way of the outbreak of war in Europe, but they could not say who was involved. They were carrying dispatches from the Hudson's Bay Company to all Post Managers in the North country advising of the possible effect of the war on the fur trade and the price of furs. The war had then been going on for about six weeks but this was the first news we had of it, and it made us very anxious to get out to Edmonton as soon as possible.

The forest patrol boat of the Interior Department, the S.S. Ray picked us up at the south end of Fort Smith portage and carried us in ease and comfort in a couple of days up to Fort Chipewyan. There we were joined by the two parties under Alcock and Haultain who had spent the whole summer on the survey of Athabasca Lake. When the nineteen of us got aboard the patrol boat she was a bit crowded but it was a whole lot better and faster than canoeing up the Athabasca. The S.S. Ray let us off at McMurray on September 22nd. There we were faced with the most difficult transportation

problem of the whole summer; how to get nineteen men with their equipment up to the end of the railway at Athabasca Landing nearly 350 miles upstream.

The overland route was out of the question. It was only a pack trail, and we would have had to leave most of our stuff at McMurray. Freighting on the river was over for the season and the last brigade had gone south some weeks earlier. I finally bought a scow and engaged old John McDonald to come with us as guide and steersman, and with our own canoemen and university men on the tracking line we started up river. It was the toughest work these men had ever done, but there was no alternative and they were game.

On the third day out, after we had got past the Cascades and Long Rapids, we came upon the Forman party of seven men, two women and three children in a scow. They were stuck on a huge rock in the middle of the stream with the water rushing by at about eight miles an hour. They had been there for 24 hours with no means of getting ashore. An attempt by another survey crew to rescue the party the day before in a canoe resulted in one man being drowned. It took some nice manoeuvring to get our scow along side the other scow because the rock was in pretty deep water and the current was very strong. We were all day getting the scow unloaded and the stranded party ashore. The scow itself was badly broken but we were able to get it off the rock and make enough repairs so that it could be used again for the rest of the journey to McMurray.

At this point John McDonald thought we could get along very well without him, so he left us and went back to McMurray with the Forman party. We missed him a great deal but there was no holding him when he found the other party was well supplied with all sorts of good things, while we lived on the regular scow rations and had in addition a very tough trip ahead.

When we got to Grand Rapids we abandoned our scow at the lower end of the rapids rather than try and take her up to the upper end, but not until we knew we could get another one at House River. With this one we got as far as Pelican Rapids, where we were forced to lay up until I could get a power boat to come down from Athabasca and tow us up. By that time we were a pretty wretched looking crew. No one had any shoes left. Our clothes were in rags and provisions were running low. The tents and cabins at Pelican Rapids, equipped as they were with stoves burning natural gas, looked too inviting for us to pass by. There we laid up, enjoying the rest and warmth of comfortable quarters. Two days later the gasoline boat came down the river, hooked on to our scow, and on October 10th we were landed at Athabasca Landing.

When we got to Edmonton we heard all about the progress of the war, and the younger men of my party were keen on getting into it as soon as possible.

Robin Haultain, being an R.M.C. graduate, was especially restive. We arrived in town late in the afternoon after the banks had closed. Robin, however, was able to borrow enough money from the rest of us to take the night train to Calgary and from there eastward, where he enlisted. He was followed later on by other members of our party. Some of them did not come back. Gwynne Gibbins was killed at Salonika, Alex Haultain and Sydney McCann were both badly wounded on the Somme.

I reached Ottawa on October 18th, after being away for over five months. Actually I was engaged in exploratory work only six weeks of that time. The rest of the time had been consumed in going to and coming back from the area that was to be explored. It was because of such a waste of time that, not long after I returned to Ottawa, I made a recommendation to the Director of the Geological Survey that we should use airplanes for transporting men and supplies into the area to be explored and then call for the party again at the end of the season. This, I think, was the first time that the use of airplanes was considered by the Geological Survey for this kind of work. We were still a long way from using airplanes for mapping purposes.

The early part of the winter of 1914-1915 was spent in the writing of my report on the exploration of the Tazin and Taltson Rivers. It was the last report of an exploratory trip that I was to write, and it represented the last chapter in a career that had been devoted very largely to life and travel in the northern parts of Canada.

So ended a phase in the history of my life; another one of an entirely different character now opened up. The change brought me some regrets because of the strong appeal that the earlier life made to me. I have often wondered why such a life makes the appeal that it does, especially to young men. I think I know the reasons.

Exploration, mountain climbing, canoeing on strange rivers, facing the bitter cold of the Arctic winter and similar experiences all give one a great thrill, because in facing up to those things one is fighting and overcoming not his fellow man, but the forces of nature. Perhaps, however, a greater thrill comes from conquering oneself, from overcoming the fear that on occasions accompanies these activities and finding out if you can take it. I may not have been always conscious of it, but this, after all, may be the fundamental reason why explorers, as well as many others, get such a kick out of that sort of life.

Certainly I have known fear, many a time, sometimes almost panic, either on a steep mountain side, or crawling on my stomach over a snow bridge across a crevasse, or alone in the fly-infested northern muskeg, or running the rapids of an unknown river, or going out into a blinding blizzard. These things have brought me fear, but, as Hilaire Belloc says, a fear “steeped in exhilaration” and I realize now, if I did not do so at the time, that if they did bring me a temporary thrill they brought afterwards a deep sense of satisfaction that was much more lasting than the momentary fear of disaster. This, I think, will be the judgment of most men who have been engaged in northern travel, mountain climbing or any kind of exploratory work.

32 Fond du Lac to Omineca

As the winter of 1914-1915 wore on and the war in Europe progressed, it became apparent that the plan for the systematic exploration of northern Canada would have to be abandoned for the time being and all our energies would have to be devoted to the more important job of fighting the war. In consequence, I joined the No. 3 Field Company of the Canadian Engineers as a sapper, and trained in the Drill Hall in Ottawa.

I managed to reach the rank of Lance-Corporal before it was indicated to me by my Deputy Minister that I could be more usefully employed in investigations for needed strategic minerals. I was then assigned to work in an advisory capacity for the Munitions Board and later for the Canadian Munitions Resources Commission.

Before undertaking the new work, however, there was an unpleasant job to do for the Geological Survey—an aftermath of the previous season's work. This involved a hurried visit to the east end of Athabasca Lake. The reason was the reported discovery of very high grade silver ore near Fond du Lac, the authenticity of which was open to some question. The samples of ore were said to have been taken from near Stony Rapids, and when assayed in Edmonton showed 13,000 ounces of silver to the ton. The prospecting fraternity, thinking of the Cobalt excitement some ten years earlier, was startled by the assays, and immediately some hundreds of these people rushed off to Athabasca Lake by dog team and later by canoe.

Parliament was sitting at the time the newspaper story came out, and questions were asked of the Government in the House of Commons as to the truth of the story. Dr. Fred Alcock had spent the previous summer on a geological survey of Athabasca Lake and I had also been as far as Fond du Lac, so between us a statement was prepared for the Minister to make in the House. The statement discounted the possibility of such high grade silver ore being found in those rocks. We did not, however, say that I suspected that some samples of high grade silver ore from Cobalt, Ontario, which I had taken up there with me in 1914 for demonstration purposes, and which I left with Colin Fraser at Chipewyan, had gone astray and one of these may have been the sample assayed in Edmonton. In any case the Opposition in the House argued that if the discovery was not genuine it was all the more

necessary that some geologist from the Geological Survey should be sent up to investigate and report the facts. Unfortunately, I was selected for this job.

My first effort was to get in touch with the prospector who was responsible for the story. The best advice that I could get regarding his whereabouts was from my friend and colleague, Dr. O. E. Leroy, of the Geological Survey. Leroy knew the man very well and advised me to write for information to the Governor of the jail at Nelson, B.C. If the prospector was not in that establishment the Governor would surely know what other jail he was in.

I left Ottawa on May 29th, with one assistant, Laurie Hart, and on the way west picked up my old cook and canoeman, Joe Nolan, at Sault Ste. Marie. I had an eighteen and a half-foot Peterborough canoe at Athabasca Landing, and in this we followed the route down past Grand Rapids and the other rapids below, which was now quite familiar to me. The life of the river had changed a good deal because the scow brigades of the Northern Transport were now gone and all freight was being moved northward by the Peace River route. We passed, however, a large party at Grand Rapids which was transporting supplies and equipment for the construction of the railway terminal at Waterways. The rapids of the river had not changed. They were still as risky as ever to navigate and at a couple of spots we shipped a good deal of water and at another we broke our canoe and lost some supplies.

From McMurray to Chipewyan we were very fortunate to get a tow from J. M. Hill of Ottawa, who had an outboard motor on his canoe and was doing fire patrol work for the Interior Department on the Athabasca River. His motor broke down as we reached the mouth of the river so we had to paddle across the lake to Chipewyan, which we reached a little after midnight.

When we got up to the east end of the lake where all the staking of mineral claims had been done, we found only thirty or forty men left out of the hundred or so who had come in during the rush. These fellows were very disappointed with the prospects of developing any mines and most of them had become convinced that they had been victimized and they were ready to go back home. Some of them, however, were hoping that the author of their misfortunes might return, in which case he would be given a warm reception. He himself probably knew that he might get some pretty rough handling so he discreetly stayed away and never returned even to do the assessment work on the claims he had staked. He did, however, make a small fortune out of the sale of his claims.

My own examination of the mineral claims confirmed the opinion that I had before leaving Ottawa, and when I made my report interest in the

locality, insofar as silver was concerned, faded away and most of the claims lapsed.

I returned from Athabasca Lake by way of Peace River travelling up to Peace River Crossing by steamer to the Chutes and by canoe from there up.

The Edmonton, Dunvegan and British Columbia railway had not yet reached the Crossing and we had to travel thirty-two miles by wagon before we struck the end of steel at Reno. From there in to Edmonton it was a very unpleasant all-night journey in a crowded train without any sleeping or dining facilities. We were glad to get to Edmonton.

Before returning to Ottawa, I paid a short visit to the old placer mining field of Omineca in northern British Columbia, entering the country by way of Vanderhoof and Fort St. James. The trip did not yield any information of value with respect to strategic minerals for war purposes, but it was interesting because of certain characters that I met on the way.

The first of these was the Indian Gun-a-noot, who was wanted for murder by the police and who came into my camp at Takla Landing the night before I left for Manson Creek. He stayed only a short time with us, and it was only after he left that my guide got up enough courage to tell me who our visitor was. If I had known about him, I might have felt as uncomfortable as my guide appeared to be. Gun-a-noot was a Bear Lake Indian who had killed one or two white persons because he did not want any strangers, either Indian or white, encroaching upon the territory in which his people had hunted and trapped for generations. Gun-a-noot ultimately gave himself up to the police.

At Takla Landing I sent my two canoemen Nolan and Hart back in the canoe to Fort St. James while I engaged a packer, Frank Ellsworth, with two saddle horses and four pack horses to take me across country to Manson Creek and from there overland to Fort St. James. Ellsworth had worked his way with pack horses all the way along the mountains from Mexico and ultimately hoped to get into Alaska. He was an observant chap with an inquiring mind and for the next ten days we had some interesting discussions on geology and the origin of land forms and particularly on the problems of glaciation. The country through which we passed was strewn with boulders of glacial origin, even on the high plateaus, quite evidently the product of Continental glaciation. Many of the valleys were filled with terminal and lateral moraines, the leavings of valley glaciation. All these things interested Ellsworth very much. They interested me also because in all my travels I never saw such a glacial dumping ground as in that portion of the Omineca country between Takla Lake and Manson Creek.

When we got to the Kildare mine on Slate Creek where the Forty-Third Mining Company of Ottawa was carrying on some placer mining operations,

I sent Ellsworth over to see the old caretaker, Sullivan, to find out if we could have the use of one of the empty cabins belonging to the mining company during our stay in the locality. Sullivan was a typical old-time placer miner with a poorly disguised contempt for anyone who came from the cities. After a considerable interval Ellsworth returned, and when I asked him what kept him so long with Sullivan he said that he had been telling the old man some of the things that we had discussed on the way over from Takla Lake, regarding the glaciation of the region. Sullivan listened patiently for a while but when he could not contain his impatience any longer he blurted out: "What does that fellow know about it? He wasn't here then." Considering that these events had happened some thousands of years ago it was quite natural that I had not been there to witness them. Sullivan, like all the old-time Cariboo and Omineca placer miners, was convinced that history only really began with the discovery of gold in the Cariboo country in 1860 and nothing had been added to the sum of human knowledge since that date.

It was here that I heard of a peculiar incident that illustrates in a striking fashion the strange idiosyncrasies that sometimes develop in men who live alone, or nearly so, in some of the remote parts of our North country. It happened right here at Slate Creek when two partners were spending the winter together in a small log cabin. Early in the winter one of them died. The other was afraid to bury the body of his partner until he could get the coroner from Vanderhoof, 170 miles away, to come and certify to the cause of death. On account of deep snow he couldn't himself go in and get the coroner so he partitioned off a part of his cabin, placed the body of his partner in the blocked off space, and lived in the other part of the cabin all winter. In the spring he walked the hundred miles to Fort St. James and brought out the coroner, who quite readily certified that the man had died of natural causes.

There were not more than a dozen or two people in all of Omineca when I visited the country, and all these were engaged in the summer time in placer mining operations by simple hand methods. In the winter they trapped.

There was not very much for me to see, so Ellsworth and I soon found ourselves on the pack trail out to Fort St. James. The trail was good and ran through fairly high country but there was always good feed and water to be found for the horses. The rounded summits of the mountains reached just above timber line at 6,000 feet altitude but the trail ran along wide flaring valleys two thousand feet or so below the mountain tops. One of the pleasant camps with good feed and water was called "Gillis' Grave." Gillis was a placer miner who with his poke containing $15,000 in gold dust, was on his way out from Omineca to be married to his boyhood sweetheart. A miner

returning to the Omineca met him at this point and handed him a letter from his fiancee in which she told him that she was tired of waiting for him and was going to marry another man. Gillis was so stricken with grief at the news that he blew his brains out and was buried right there.

On our sixth day we were at Fort St. James. This historic old place is one of the most interesting trading Posts in all of British Columbia. It is also one of the oldest in that Province and was established by Simon Fraser in 1806. My oldest brother had charge of this Post for the Hudson's Bay Company for some years, so there were many things to interest me in the place. There was, however, nothing to keep me here and as it was the beginning of October and winter in that high country was not far off, I headed for Ottawa.

33 War Work

During the remaining war years the search for mineral deposits of strategic importance took me into various parts of Canada, from the Atlantic to the Pacific and up into the Northwest Territories. The minerals or metals most badly needed because of usefulness and their scarcity were tungsten, molybdenum, mercury, platinum, potash manganese, chromite and magnesite. Bauxite, the ore of aluminum, also was high on the priority list, but with little chance of finding it in Canada on account of the peculiar geological conditions under which bauxite occurs and the absence of those conditions throughout this country. The literature referring to the occurrence of minerals of this group was carefully searched during the winter months and examinations of these occurrences were made during the summer.

Tungsten occurrences took me to Burnt Hill brook of the South-West Miramichi River in New Brunswick and the Moose River Mines in Nova Scotia. Molybdenum deposits were examined in the Ottawa Valley and parts of British Columbia; platinum in the Tulameen Valley and on Jervis Inlet; magnesite and chromite in the Cariboo country; and mercury about Kamloops Lake were all investigated more or less intensively. Potash is usually associated with salt and gypsum beds, so wherever those deposits occur it was necessary to examine the geology of the beds and analyze the water of any springs that flowed out of them. It was a search for potash that took me back in 1916 into the lower Peace River country and to brine springs back of Fort Smith. But I didn't find any potash in the deposits.

On my way back from the salt springs near Fort Smith in the summer of 1916, as we were travelling up Peace River on the paddle wheel steamer *D. A. Thomas*, I had an amusing experience. There was on Tar Island, some miles below Peace River Crossing, a spring of natural gas which bubbled up through a small bed of coarse gravel. I wanted a sample of the gas so that I could have it tested for helium, which was then being used for the filling of airships. My equipment for taking the sample consisted of a five-gallon glass bottle with a cork, a length of rubber hose and a fairly large tin funnel. The captain of the boat agreed to stop long enough at the island so that I could have time to take the sample.

There were about twenty passengers on the boat and while no one asked me any questions there was a good deal of speculation among them as to how I was going to get a clean sample of the gas from the spring. Several bets were made that I could not take gas from its source in a bed of gravel and fill the bottle without contamination with air.

When the steamboat landed at the lower end of the island all the passengers and some of the crew got off with me to see how the sample was to be taken. They were full of curiosity and very skeptical, but they said nothing as we walked up to the gas spring together. When we got there I first filled the large glass bottle full to the top with clean water and put the cork in tightly. Then I placed the funnel over the gas spring, packed it around with mud and connected the rubber hose to it. I let the gas flow through the hose for a few minutes until all the air had been removed. Then I turned the glass bottle upside down in a bucket of water so that when the cork was removed the water remained in the bottle. As soon as I led the hose into the neck of the bottle and the gas began to flow in and displace the water, my audience, which had been standing around watching the operations, began to laugh and started quietly back to the boat. When the sample was analyzed in Ottawa later on, it was found to contain no helium.

A lot of money was spent in trying to find platinum in commercial quantities, but apart from some rather lean deposits in the gravels of Tulameen River in British Columbia nothing of much consequence was turned up. The occurrence that I examined on Jervis Inlet was clearly salted and no one could be fooled by it.

34 Appointment as Deputy Minister

In 1918, the Geological Survey decided that it would be much more satisfactory, and the mining industry of British Columbia would be more effectively served, if a branch office were opened in Vancouver. This decision was influenced by the fact that one of the conditions of union when British Columbia entered Confederation was that the Federal Government should be responsible for all geological work done in that Province. So in the spring of that year I was instructed to open up and take charge of the branch office. I moved with my family to the West and took up residence in Vancouver. In this position I had charge of all geological work carried out in British Columbia and Yukon Territory, and I had supervision over all geological survey parties sent there from Ottawa. There were quite a number of these parties and as it was necessary to visit most of them at least once during the summer, I was not able to do much in the way of geological field work myself.

We were just two years in British Columbia when I received one evening, a telegram from Rt. Hon. Arthur Meighen, who was Prime Minister at the time, advising me that Mr. R. G. McConnell had retired as Deputy Minister of Mines and, on the advice of Hon. Martin Burrell I was appointed to succeed him. I left immediately for Ottawa to take up my new duties and it was first of all as Deputy Minister of Mines and later as Deputy Minister of Mines and Resources and Commissioner of the Northwest Territories that I put in my last twenty-five years in the Public Service of Canada.

That, however, is another story. The job of a Deputy Minister is purely an administrative one involving a permanent seat in an office chair. So I soon began to suffer from digestive troubles through physical inactivity. Fortunately there were many diversions and compensations which relieved the monotony of the unaccustomed sedentary life. These took me to Great Britain for Imperial Conferences and meetings of the Imperial Institute, to Washington, Germany, Sweden and Italy for sessions of the World Power Conference, and to France and Belgium for other scientific meetings. My longest absence occurred when I headed a large Canadian delegation to South Africa and the Rhodesias for the Third Empire Mining and Metallurgical Congress. There were also frequent visits to the United States,

both in my capacity as Chairman of the Dominion Fuel Board and for consultation with my opposite numbers in the U.S. Bureau of Mines and the Geological Survey. Particularly I kept in touch with the progress of mining in Canada by visiting most of the mining fields and later when they came under my administration I inspected most of our National Parks.

One of the most interesting periods of my life in the Public Service was the time, covering about fifteen years, that I spent as a member of the National Research Council. This was the Council's formative period, commencing just before Dr. H. M. Tory came into office and running through his whole time until he was succeeded by General A. G. L. MacNaughton. It required the vision, and later the energy and driving force, of Dr. Tory first of all to convince Parliament of the necessity of supporting the Council with adequate funds and later of laying the foundations for an expansion both in buildings and research programmes. It required also a tremendous amount of tact and diplomacy to co-ordinate the views of the members of the Council, some of whom were strong individualists or highly trained specialists.

I remember when General MacNaughton came in as President following Dr. Tory, he faced a difficult situation because he was a soldier and not a university professor. Yet before he was in office more than a few months the opposition to him was broken down and he had the unanimous support of the whole Council. He served during a critical period of the Council's history and planned much of the war work that was so ably carried out and expanded by his successor, Dr. C. J. MacKenzie.

The special International Niagara Board set up in 1926 was another of those extraneous duties which carried with it a great deal of responsibility but also a great deal of interest. I was appointed to this Board in March 1926 to represent Canada along with J. T. Johnston, Director of the Dominion Water Power Service. On the United States side were Major DeWitt C. Jones of the Corps of Engineers and J. Horace McFarland, Chairman of the Art Commission of the State of Pennsylvania.

The purpose of the Special Board's investigation was to determine how the scenic beauty of the Falls could best be preserved and by what means the impairment by erosion could be overcome. There was also the important question of how much additional water, if any, could be diverted for power purposes without reducing the scenic beauty of the Falls and river. J. T. Johnston and his staff made most of the hydraulic studies, while I was assisted by W. A. Johnston of the Geological Survey in making the geological studies. W. H. Boyd, head of our Topographical Survey made the necessary surveys of the Falls and their surroundings and in the course of doing so had to devise and apply an entirely new method of using

simultaneous photographs to locate the exact crest line of the Canadian Falls. This was a delicate job, but highly important because on these results were based the figures for the rate of recession of the Falls in the past and the probable rate in the future.

The really practical purpose for which the Board was set up was to determine what additional amount of water could be diverted from the river above the Falls for power purposes without affecting the scenic beauty of the Falls themselves. This point was stressed by the United States Government in its proposal for the appointment of a Board, and it was done because of a shortage of power at that time in adjoining parts of New York State. We in Canada were just then not pressed by a lack of power, but readily agreed to join in the investigations as a neighbourly act.

The Board took three and a half years to complete its work, and after the presentation of the final report to the two Governments an agreement was signed by our Prime Minister and the United States Minister to Canada in January, 1930. This agreement was ratified by the Canadian Parliament at the next session, but when it was presented by the President to the United States Senate that body refused to ratify it. It was sent up a second time later on but again it was turned down. This was my first experience in being caught up on the relative responsibilities of the President and the Senate in dealing with foreign treaties.

The report of the special International Niagara Board has since been accepted by the United States authorities and the recommendations approved. The recommendations are now being carried out.

The Dominion Fuel Board, another of my responsibilities from its creation, was always a headache. It was a very necessary Board, because of the unfortunate location of our coal fields relative to the great consuming centres of the country and the concentration of our population in the coal-less areas. The difficulty of overcoming the handicap of geography is illustrated more acutely in our fuel problem than in any other field of domestic economic relations. We did, however, introduce one new factor into the problem when we were instrumental in bringing Welsh anthracite into Canada to replace anthracite brought from Pennsylvania. The problem of coal still remains, and indeed seems to become more acute as time goes on. There is not a great deal that can be done about it, because geography refuses to be changed.

I had been about fifteen years in office as Deputy Minister of Mines in a field which I knew thoroughly and liked, when, following the defeat of the Conservative Government in 1935, it was decided by the Prime Minister to make a reduction in the size of his Cabinet by the amalgamation of several departments of government. This was the primary reason for Mr. King's

action when he ordered that four departments of Government, Mines, Interior, Immigration and Indian Affairs should be joined into one, to be known as the Department of Mines and Resources and to be presided over by one Minister and one Deputy. It wasn't so much a matter of amalgamation of related functions, as of economy of overhead, because these departments embraced the most diverse activities. Hon. T. A. Crerar was appointed Minister of the new department and I became Deputy, as well as Commissioner of the Northwest Territories.

The new department lasted about twelve years, and shortly after I retired it was split up again and is now back to very much the old set-up that existed in the first place, the most important change being that Indian Affairs has been combined with Immigration in a new Department of Citizenship and Immigration.

The administration of the Department of Mines and Resources was not an easy job, but I was very fortunate in having in Hon. T. A. Crerar, a capable, understanding and sympathetic Minister who was also an experienced administrator who had run a big organization outside of the government.

With all these diverse duties, however, and because of my early associations, my most interesting and gratifying duties were those concerned with the administration of the Northwest Territories. In my capacity of Commissioner I made frequent trips into the western part of the Territories where most of the administrative problems lay. These trips were made possible and easy by the use of aeroplanes, and for that reason were in striking contrast to my earlier travels in the same region. What used to take a week on snowshoes or by canoe was easily done in an hour and without any of the physical effort.

Great changes have taken place in the North country since my boyhood days. Virtually all travel in and out of the country is now done by aeroplane. Freight, however, still moves mainly by water, but the York boat has been replaced by boats operated by mechanical power. Highways are being pushed deeper and deeper into the country. The Alaska Highway has made Yukon Territory, particularly, much more accessible than formerly. The Mackenzie Highway to Great Slave Lake puts that inland sea on the highways of the continent.

The radio keeps people in constant touch with the outside world instead of our annual or semi-annual mail. Educational facilities are being extended to all the white people and most of the natives. High schools have been built in the larger centres of population. A health service is being provided to every community and trading Post of any size and to all the natives. This has resulted in a great improvement in the health of the native population.

All this makes a striking contrast with the time when I was a boy, when the nearest doctor was 2,000 miles away and it would have taken six months to get him. The population is still not very great but the percentage increase has been enormous. The first white people to enter the country were of course the fur traders, but while the fur trade is still carried on its expansion has not been great. Increase in population has been due entirely to the mining industry and wherever ores rich enough to mine occur, whether of gold, silver, uranium or the base metals, there population centres have developed. Yellowknife with its population of 2,000 or more is a modern community enjoying all the amenities of modern civilization. Eldorado, Keno Hill, Dawson, Whitehorse, Beaverlodge are all of a like character.

To my mind the whole future of the North country depends primarily upon its mineral wealth. Fortunately this is very great, and where minerals are associated with hydro-electric energy the potentialities for profitable development are vastly increased. Wherever the precious or base metals or oil occur there you will find that communities will spring up, for there is nothing about the North country which will prevent people from living the kind of happy, normal life that is lived by Canadians in other parts of Canada.

THE PUBLISHER'S CURRICULUM VITAE OF CHARLES CAMSELL

CHARLES CAMSELL: C.M.G.; B.A.; LL.D.; F.R.S.C.; F.R.S.A.; F.C.G.S.; HON. F.R.G.S.; F.G.S.A.; M.E.I.C.; F.G.A.C.; HON. MEMB. A.I.M.E. and C.I.M.M.; F.A.I.N.A. Born at Fort Liard, in the Northwest Territories, in the year 1876. One of 11 children he was educated at St. John's College, Winnipeg, and the University of Manitoba, graduating with a B.A. degree in Natural Science in 1894. Later he took postgraduate work at Queen's University, Harvard and the Massachusetts Institute of Technology in Boston. He holds the LL.D. degree from three Universities, Queen's (1922), Alberta (1929) and Manitoba (1936), and is an honorary fellow of St. John's College.

Dr. Camsell is a member of a great many technical and scientific societies. He was a charter member of the Harvard Travellers Club; Fellow of the Royal Geographical Society (1916); Fellow of the Geological Society of America, Vice-President in 1937; Fellow (1918) of the Royal Society of Canada, President in 1930. Vice-President of the International Geological Congress in 1913; Member of the Canadian Institute of Mining and Metallurgy, President in 1947 and Honorary Member in 1948; Member of the American Institute of Mining and Metallurgical Engineers, Director 1939-44 and Hon. Member (1947); Member of the Engineering Institute of Canada, President in 1932; Founder and Fellow of the Canadian Geographical Society, President 1929-1941; Fellow of the Arctic Institute of North America, one of its founders and first Chairman of the Board of Governors; Fellow of the Royal Society of Arts (1946); Hon. Fellow of the Geological Association of Canada (1950).

He was made a Companion of the Order of St. Michael and St. George by King George V in 1935.

Dr. Camsell holds the Confederation, Jubilee and two Coronation medals and has been awarded the Gold medal of the Institution of Mining and Metallurgy (1931); the Murchison Grant (1922) and the Founders Medal (1946) of the Royal Geographical Society; the Julian Smith Medal of the Engineering Institute of Canada, the Special Medal of the Professional Institute of the Civil Service of Canada (1946), and the R. B. Bennett prize of the Royal Society of Arts (1945).

He joined the Public Service of Canada as a geologist in the Geological Survey of Canada in 1904 and held that position until he was appointed Deputy Minister of Mines in 1920. In 1935 on the amalgamation of the Departments of Mines, Interior, Immigration and Indian Affairs he was appointed Deputy Minister of the combined departments under the title of

Department of Mines and Resources. He was appointed to the Council of the Northwest Territories in 1921 and was Commissioner from 1935 to 1946.

Dr. Camsell organized in 1922 the Dominion Fuel Board which was concerned with a fuel supply for Canada; was chairman of the Board for 20 years and was instrumental in first bringing Welsh anthracite to Canada. He was a member of the National Research Council from 1921 to 1936; member of the Mineral Resources Section of the Imperial Institute from 1921 and attended many of the meetings in London. He has been Chairman of the Canadian section of the World Power Conference since this organization started in 1925, and headed the Canadian delegations to the plenary meetings of the Conference in Berlin in 1930 and Washington in 1936. In Berlin he spoke on behalf of the North American Continent at the opening meeting in the Stoll Theatre, and at Washington he spoke along with Mr. Cordell Hull at the opening meeting in Constitution Hall. He also attended the Council meetings of the Conference at Lake Como, Italy, in 1928, and Stockholm in 1948.

He was Canadian representative of the Special International Niagara Board which was created for the purpose of studying the question of further diversion of water from Niagara River for power purposes. He was one of the Commissioners appointed in 1939 to study the question of conservation of waste gas in the Turner Valley field of Alberta. He was Chairman of the Matamek Conference on Biological Cycles in 1931 and Canadian representative on the North Pacific Planning Project organized jointly with the United States in 1943.

Dr. Camsell was one of the Canadian delegation at the Imperial Conferences in London in 1923 and 1930 and again at the Ottawa Conference in 1932. He was also the head of the official Canadian delegation at the meeting of the Empire Mining and Metallurgical Congress in South Africa in 1930.

He was Chairman of Civil Service Committee for all the Victory Loan Campaigns during the war 1939 to 1945.

On retiring from the Civil Service after serving for about 44 years, he was offered by the Prime Minister the post of Ambassador and again that of High Commissioner. Each of these posts made a strong appeal to him but he was strongly advised by his doctors to remain in Canada.

Dr. Camsell was appointed by Prime Minister King to the Federal District Commission in 1947 and is still a member of the Commission. He was Chairman of the Canadian Section of the North West Development Committee of the Joint Canadian Chamber of Commerce and the United States Chamber of Commerce and is now a member of the Joint Chamber.

He became a member of the Board of Directors of Ventures Limited soon after leaving the Public Service of Canada, and represents that company in Ottawa.

His name is attached to the leading tuberculosis hospital for Indians and Eskimos, situated in Edmonton (400 beds) and called the Charles Camsell Hospital. The hospital was opened by the Governor General Lord Alexander in August, 1946.

Transcriber's Notes

Obvious typographic errors have been corrected silently and hyphenation made consistent.

The spelling of James Mackintosh Bell's name has been made consistent.

[The end of *Son of the North* by Charles Camsell]