

PART II

PATROL REPORTS

INSTRUCTIONS TO, AND DIARY OF, INSPECTOR J. D. MOODIE IN
CHARGE OF PATROL FROM EDMONTON TO THE YUKON 1897.

NORTH-WEST MOUNTED POLICE,
OFFICE OF THE COMMISSIONER,
REGINA, 27th August, 1897.

To Inspector MOODIE,
North-west Mounted Police.

You have been selected to command a small party about to leave Edmonton for the head waters of the Pelly River, the object being to collect exhaustive information on the best road to take for parties going into the Yukon via that route, and with this object in view you must map out the route, and carefully mark the portions over which a wagon trail can be made without expense, and the portions that require corduroying, grading or ditching; stating whether the work would be great or small. The portions of the road that cannot be made practicable for wagons, except at enormous expense, must be reported on as practicable, or otherwise, for pack trains, driving cattle over, etc., and you must report on all creeks and rivers that require bridges or ferries, their width, approaches, etc., and all along the route you must note the supply of fuel, feed and hay.

The main object is to get parties with wagons as far as possible, and then, when not practicable with wagons, with pack horses and cattle, to the navigable waters of the Pelly River, avoiding the dangerous navigation of the Liard River, if possible. You will also report on favourable sites on the route for depots of provisions to be placed, either by public or private enterprise. In fact you will be expected on return to supply such reliable information that a party leaving Edmonton will know exactly what they must expect at all points en route. You must be careful in preparing your report to stick to actual facts, and not be influenced by any one.

No unavoidable delay must occur in obtaining this information.

(Sgd.) L. W. HERCHMER,
Commissioner.

NORTH-WEST MOUNTED POLICE,
EDMONTON, 2nd September, 1897.

To Inspector MOODIE,
North-west Mounted Police.

On leaving St. John, in my opinion, based on the information I have been able to collect, the best route for you to travel with a view of reaching the Yukon is to follow up the Peace River to the vicinity of the mouth of the Halfway River, and then to travel along that river to its upper waters, where it comes out of the mountains. Immediately across are several lakes, one called Pyke and another Tacherdy Lake. If possible you should get across to these lakes from whence there is said to be a pack trail to Fort Sylvester on Dease River, and then down Dease River to its confluence with Liard, and then up that river or its branch to Frances Lake. You

may find it possible to strike the junction of the Liard and Dease rivers where there used to be a winter post, and may still be, without going to Sylvester's, which will greatly shorten the distance. Your point is Pelly Banks, and the shortest route you can make the better, always bearing in mind that the route must be by land, and practicable, where possible, for wagons and always for pack horses.

Your party consists of 4 men and any Indian or Indians you may from time to time find it expedient to engage who have local knowledge. The surveyor with you must make himself generally useful, and must take full notes for you of everything en route. You must read his notes daily and see that he has everything down, particularly noting places suitable for settlement, hay available and land suited for farming. I think it would be advisable for you to keep full particulars yourself, and if you find that you differ from the surveyor, it will be advisable to talk the matter over with your men, and settle the point on the spot. You have 100 lbs. of pemmican with you, this must be kept until the last resource, and may be the means of taking your party into the Klondyke.

It is impossible to give you detailed instructions, but with good men, plenty of provisions and fair luck, you should be able to get to the Klondyke during the winter. Remember that you have a reserve of provisions at St. John, on which you can give orders, and take every chance of sending back letters reporting your progress. The Hudson's Bay Company at St. John's or other posts will forward them, and you have a letter from their commissioner to all Hudson's Bay officials. It may be necessary at Sylvester's or elsewhere, to get dogs for the rest of your trip, owing to snow. You have full authority, but remember, that the object is to find a horse and cattle track where a wagon road is impossible.

(Sgd.) L. W. HERCHMER,
Commissioner.

OTTAWA, ONT., 14th January, 1899.

SIR,—I have the honour to report that I left Edmonton on the 4th September, 1897, with constable F. J. Fitzgerald, Richard Hardisty, son of the late Senator Hardisty, Frank Lafferty and H. S. Tobin, graduates of the Royal Military College, Baptiste Pepin a half-breed, and an Indian guide, 24 pack and 6 saddle horses; another saddle horse was procured at St. Albert in accordance with instructions. The Indian who was to be our guide knew nothing of the country and was perfectly useless. I hired other guides at different points as required.

In accordance with verbal instructions from the commissioner, and those contained in letters of 27th August and 2nd September, I proceeded to Fort St. John on the Peace River, by way of Lac St. Anne, crossing the Athabasca at its junction with the McLeod River, thence via Sturgeon Lake to the old Hudson's Bay Co.'s ranche 15 miles south of Dunvegan, and keeping the south side of the Peace, arrived at Fort St. John on the 1st November.

The old Hudson's Bay ranche, 15 miles south of Dunvegan was reached on the 6th October and next day I went to the Hudson's Bay Company's post at Dunvegan to see Mr. Tate, the officer in charge, and get all the information possible regarding the country ahead. I had instructions from the commissioner to get at least one or two trains of dogs at Fort St. John. Mr. Tate assured me that it would be perfectly impossible to go through the mountains with horses at that time of year, and the breeds and Indians whom I saw corroborated his statement. As dogs could not be obtained either here or at Fort St. John, I sent back to Lesser Slave Lake asking the Hudson's Bay Company to purchase for me seven or eight trains of 4 dogs each, and if possible to hire an expert driver, and forward the outfit to St. John with as little delay as possible. I sent Hardisty by boat to the Peace River crossing with instructions to hire a team from there to Slave Lake and return with the dogs.

After giving the horses a few days rest I left for Fort St. John hiring a guide, Edward Wilson, to go with us. This man missed the trail amongst burnt and down timber and I regret to say lost himself when out from the camp next day looking for the trail to the north. We hunted for him for four days, but, although his last

fire was found, no trace of him could be got. I am of opinion that he went crazy as his trails led in every direction from the camp, returning to it after he had gone a short distance. If he had kept his wits he could have returned on back trail to camp. He has not been heard of since.

On arriving at St. John I sent a runner out to find the camp of the chief of the Indians in this locality, he came in, and after considerable difficulty and several interviews, I succeeded in getting an Indian named Dick who knew of a pass through the mountains to Fort Graham on the Finlay River. I also, according to instructions, hired an Indian hunter. It was not until the 19th November, that these arrangements were completed, as Indians are very unwilling to leave their own district, more especially in the winter. In the meantime I had set Indians and squaws to work making flat sleighs, snow shoes, moccasins and other articles necessary for a winter trip in that region, and had engaged men as dog drivers, etc. These were completed by 30th November, and the following day the dog trains left with half our supplies to make a cache about 13 miles up the river, returning the same day. I picked out the 13 best horses, and shafts having been made for the 10 sleighs, and harness made from pack outfits, started the outfit on 2nd December, intending to take the horses as far as possible, and so save the dogs for the hard work in the mountains. This would also save carrying so much dog feed, as I could kill horses and dry the meat when I took to the dogs. No tents were carried being too heavy for the dogs.

I remained another day at Fort St. John, settling up accounts, etc., and left with Constable Fitzgerald and 2 dog trains on the 3rd of December, overtaking the main party that night about 20 miles up the river. I sent Hardisty back from St. John for reasons reported at the time.

All went well until the 22nd December, when the guide announced his intention of returning, saying he was sick. The Indians here are useless and quite unreliable, but this man was, without exception, the worst I came across. Owing to this desertion we went considerably out of the direct course, but it is doubtful whether we could have made better time going direct through the bush than we did by following the rivers.

On the 26th December I had to give up using the horses, but got them on loose to next camp (21). Here 7 were killed and the meat dried for the dogs. This work occupied 4 men until the 31st December, and in the meantime the supplies were taken on and cached about 12 miles ahead, as the dogs could not haul them all at once. From here we made several trips to camp 23, where we finally cached supplies which could not be carried.

We arrived at Fort Graham on the 18th January and were then entirely out of supplies both for men and dogs. There was no dog feed to be procured here, and very limited supplies in the company's store. Hearing that fish could be procured from some lakes about 25 miles S.W. I next day sent out some of the men with the dogs to fish with nets through the ice, whilst others tried their luck after moose. Neither, however, were successful, and bannocks had to be made for the dogs. I sent out in different directions to find Indian camps which were supposed to be somewhere within 50 miles of the post. These, however, could not be located. The dogs were almost starving, the snow from 4 to 5 feet deep in the bush, and no guides to be had. I had, therefore, reluctantly to give up all idea of going further until spring.

It was not until the beginning of March that sufficient food could be got together to enable me to send for the supplies in cache. Even then the dogs were so weak that several trips had to be made between the cache and the Ospica. Here another cache was made, and Fort Graham was reached for the second time on the 26th of March. By this time the Indians had killed several moose and dried the meat which had to be sent for. It arrived on the 29th March.

On the 1st April I left for Stuart Lake with Lafferty, Tobin, Baptiste Pepin and Thomas (a Hudson's Bay Co. employee) as guide, and 4 dog sleighs. Constable Fitzgerald was laid up with a very bad hand which required continual poulticing, and had, to my regret, to be left behind. After several narrow escapes on the Finlay and Parsnip, we arrived safely at Stuart Lake on the 19th April.

Failing to procure there the supplies required, I went on by canoe to Quesnelle, on the Fraser River, purchased what was needed and returned to Stuart Lake, arriving on the 11th May. The supplies arrived on the 19th. I was delayed there until the 30th owing to the difficulty in procuring horses, the Indians holding them at \$60.00 to \$75.00 each, and also to want of feed along the trail and over the mountains. The horses had to be shod.

I left Stuart Lake on the 30th May, arriving at Manson Creek on the 8th June; trail was very bad and rocky; some of the horses required to be shod here.

Before leaving Fort Graham I had engaged two Indians to go to Manson Creek and cut out and blaze the trail. These, as usual, failed me. They made two trips, but neither cleared nor blazed a trail. In consequence it took until the 7th of July to make Fort Graham.

The country from Manson Creek to Fort Graham was the worst since leaving Edmonton, in fact, the Indians told Mr. Fox that I would never get through, as the country was impassable for horses.

Next day I sent party, under Const. Fitzgerald, with 11 pack horses to bring in cache from the "Ompica" River. He returned on the 13th, reporting that cache had been opened and a large quantity (more than half) of supplies stolen. I received information later which led me to believe that this was the work of Indians, who were almost starving at the time.

The final start was made from Graham on the 15th July, a guide having been obtained to Sylvester's Landing, also a boy to return with guide. Both of these worked well. Sylvester's was reached on the 19th August. The Hudson's Bay Co. here were out of almost all supplies, but I was able to procure flour and some bacon from outsiders. The pass, in the mountains, between the headwaters of the Finlay and Turnagain rivers, I named "the Sifton" pass.

All the parties which left Fort Graham ahead of me, some nearly six weeks ahead, were passed, and but few arrived at Sylvester's before I left that place on the 24th August.

In order to save the horses as much as possible, I purchased a boat here for \$25.00, and sent all the supplies in charge of Lafferty, to the Liard Post by water, allowing most of the horses to run loose. This boat was also used at two crossings of the Dease River, thus saving us two days in making rafts and also enabling us to travel much faster than with loaded horses.

The Liard was reached on the 29th August and crossed same day.

Here I found a Pelly Indian and engaged him as guide to the banks, also a lad as interpreter. The former, however, cleared out during the night and we never saw him again. I fancy he was afraid of the horses, never having seen any before. I made arrangements with the Hudson's Bay Co. to look after the horses during the winter, and engaged a whiteman to go to the Pelly banks and bring them back assisted by the Indian lad. I am afraid some of them will not stand the return trip, even returning without packs.

At the Liard I obtained a few things to complete my stores and left on the 31st August, arriving at upper end of Frances Lake on the 23rd September. Several large parties of prospectors who had gone in by the Stikine route were met here. Some intended wintering here and some were returning to Wrangel and the south for the winter.

On the Frances River I met the chief of the Liard Indians and engaged his son to go through to the Pelly Banks, he stating that he knew the route. This statement proved incorrect as he had been to Pelly Lakes but not to the "Banks" by route I was taking. He, however, was very useful in assisting to cut out the trail.

From one of the parties at Frances Lake I purchased a portable canvas canoe, as I was afraid that if we had to build a boat on the Pelly the river would be frozen before we could get through. Next day, 24th September, I left for the Pelly, arriving on the 1st October. Here I made a cache of aparajos, saddles and such articles as could not be taken in the canoe, and sent the horses back in charge of the three men returning.

On the 4th October we started down the river, with difficulty forcing the canoe through the thick ice running.

From the "Pelly Banks" to Fort Selkirk the river was very shallow, with frequent riffles and small rapids, and in many places we had to get out and wade through the former, there not being sufficient water to float the canoes. This, with the ice running thick was cold work, as we had no rubber boots, only moccasins. We were from Tuesday morning until Friday night making 43 miles. I had intended to build a boat at the Pelly, but the ice was running so thick in the river and the weather getting so cold, that I deemed it unwise to delay our start and therefore left with the canvas canoe only. It was fortunate that I did so, as we could not have portaged a boat over some of the ice jams, or over Hoole's Canyon. When we reached the latter, I found it would be impossible to get out with our one canoe before the river froze up. I tried to lighten our canoe by rafts, but the two made both came to grief in the ice and rapids. We were short of provisions, had no snow-shoes and only two pairs of moccasins each in addition to those we were wearing.

Here we found three prospectors wintering, one of whom had a twenty foot Peterboro' canoe. After great difficulty I was able to purchase it for \$450, he asked \$500, and did not wish to sell even at that. Considering the cost and difficulty of taking it there, it was not really so dear as it appears at first, in any case it was a matter of absolute necessity, and without it some of us at any rate would most likely have left our bones up there. As it was, with the party divided up, we had several close calls in running rapids and certainly would not have got through safely with the canvas canoe only. After several portages and many times having to drift for some miles jammed in ice floes, we eventually had to abandon canoes, bedding, kits and everything but provisions, a ground hog robe each and some actual necessities, on account of an eight mile jam, and pack down about 30 miles to Fort Selkirk. This took us from noon of Saturday until about 4 p.m., Monday. There were still some open places in the river, but it was virtually blocked for the last thirty miles or so, and I had to press on fearing that the Yukon would be impassable for boats and we only had sufficient rations, on short allowance for 4 days, when we left the canoes. We arrived opposite Fort Selkirk about 2 p.m. and crossed at 4 p.m., when we were met by Col. Evans, commanding the militia there, and most hospitably received by him and his officers.

The same evening an extra steamer arrived from Dawson, and I took passage on her, arriving at Skagway on the 7th November, where we got passage to Victoria on the steamer "Dirigo," arriving about 9 p.m. on the 17th, and taking the steamer to Vancouver at 2 a.m. I arrived at Maple Creek on the morning of the 20th November. Tobin went on to Dawson from Fort Selkirk, at his own request. Constable Fitzgerald returned with me to Maple Creek, Special Constable Pepin went to Edmonton and Lafferty stopped at Calgary.

My diary gives full details of daily travel, description of country, &c., and it is unnecessary to mention these in this report.

ROUTE.

Regarding the route from Edmonton to St. John, my opinion, as previously reported, is that the best to follow would be via Lesser Slave Lake to the Peace River Crossing, thence by wagon road via Dunvegan to the old Hudson's Bay Co.'s ranche, 15 miles south of the river, or better still direct to the ranche from the crossing, following the line of an old Hudson's Bay Co. trail which, from all accounts, passes through a fine country, with good feed and hay, and where but little chopping would be required. From the ranche a cart trail would follow our route on south side of the river to the mouth of the South Pine, where the Peace would be crossed, and then on north side of latter to St. John.

All whom I have seen are pleased with the route from St. John to Graham, but say that they can now understand the difficulties we had in the winter.

From St. John to the Halfway I followed the Peace River instead of going by land as, although good for pack horses, the trail would have been very difficult for

flat sleighs. A good route over this portion could be surveyed in the summer in a round trip from St. John of six days. I did not consider it worth the delay to me to go over this and cut out the fallen timber. Should a road be made through this country I would suggest that the Hudson's Bay Co. be interviewed as to putting supplies at some point between Edmonton and St. John, and at St. John, Graham, Sylvester and about the mouth of the Pelly River. Should they do this and sell at reasonable prices, parties coming through could do with fewer pack horses or carts and thereby save both expense and time, as they would be able to replace their stock every 300 miles or so.

At Manson Creek, between Stuart Lake and Graham, mines are being worked and a considerable amount of capital invested. A large number of bench and river claims were staked out during April, 1898, on the Finlay and Parsnip Rivers. From one bar, about eight miles up the Finlay, a large amount of gold has already been washed. "Horn" Creek, shown on accompanying map of route, is also said to yield good prospects; it flows into the Peace River, a short distance below the Parsnip. The "Ingenica," "Ospica" and "Omenica" rivers give good colours in many places. In fact, as I have said, almost every creek and river will give "colours" in more or less paying quantities. No man should, until the Hudson's Bay Co., or others make preparations, trust to replenish his supplies at any time of the year at any post west of Slave Lake.

About sixty miles up the "Peace" from St. John, is a dangerous cañon quite impassable for boats or rafts, and between that and the "Parasnip" are the "Parle Pas" (commonly called "Paw-Paw") rapids. There is a portage of twelve miles around the former, and the latter can generally be navigated. With the exception of the cañon there is nothing to prevent a small steamer going from Peace River Crossing to thirty-five miles above Graham. Here is another cañon. With two small steamers, one above and one below the former cañon, freight could be run very cheaply to Graham and intermediate posts.

The route by junction of Athabasca and McLeod Rivers, is through heavy timber, with numerous bad muskegs, and feed is scarce until Sturgeon Lake is reached. From there to Dunvegan Rancho is almost without exception, fine open country with fine feed and plenty of water. Reports say that the country from Peace River crossing to the rancho is similar to this. As I previously reported, I am of opinion that a small steamer from the Crossing to the Canyon, a tramway (about 12 miles) around this (there is already a fair road), and another small steamer on the Finlay would be the best way to take in supplies to posts on these rivers, and would be a paying speculation.

From St. John to Fort Graham the route taken, I am confident, is the only practicable one. The pass through which our route lay was not known previously even by the Indians. The guide Dick was the only man amongst them who had ever been through it. About 30 miles from the junction of the Peace and Halfway Rivers, are the "forks" of the latter. One branch (the only one previously known and shown on the maps) runs from the north, the other from north-west. The former rises between the headwaters of the Nelson and North Pine Rivers. We followed the west branch which also heads near the Nelson, running at first nearly south and then south-east. The Cypress Creek coming from the west joins the west branch about 63 miles above the "forks." This creek heads near the summit of pass and we followed it up. The valley from the Peace to the summit is level and thickly timbered with fair sized pine, &c. There is a gentle and gradual slope up the valley or rather valleys to the summit 4,500 feet above Fort St. John or about 6,900 feet above sea level. From the summit of this pass (which I named the "Laurier") through the Rockies, west through the "Herchmer" pass, in the Wolverine mountains, the country is rougher and grades steeper, but most of these could be got around. The heaviest grade for any distance was $2\frac{1}{2}$ per cent. There would be comparatively little cutting or trestle work required in running a railroad through here. From the Wolverines to Fort Graham would, I think, be a fairly easy country through which to build, by following the valleys. Certainly at no part would there be the slightest difficulty in making a good wagon trail. The Halfway River and

Cypress Creek would, I think, be fordable at most times, possibly the first crossing of the former would have to be rafted. There is a pass through the Rockies where the Nelson rises, but Indians on both sides of the mountains report this as full of heavy down timber, and heavy chopping would be required to clear a trail. Moreover, after getting through the first range, the trail west is blocked by mountains and would have to turn south between the two ranges and strike the "O-peca" near to where my trail crossed it. A trail could be got from this point to about 30 miles above Fort Graham, but there would be no advantage in it as there would then be no place at which to procure supplies until the "Dease" was reached. Should a cart trail be opened to the Pelly, the route could be considerably shortened by continuing down east bank of east branch of the "Black" River, called on some maps the "Turnagain" River, to the Forks where "Sylvester's Outpost" formerly was, and thence direct to the Liard Post. My guide knew nothing of this country and I could not persuade him to go with me, as the "Finlay" Indians are afraid of those on the "Liard."

From the Liard Post, if going over the route again, and I had sufficient time, I would go up the Liard and Frances Rivers, cross the latter at the mouth of Simpson Creek and continue up the valley past lake of same name and endeavour to get a direct route from there to the Pelly. I am confident a good country would be found west of the mountains, bordering on Frances River and Lake. In fact from the foot of Frances Lake a cart trail would have to keep to the west until the Finlayson was struck near lake of that name.

FEED.

From Edmonton to St. Anne none, thence to Sturgeon Lake is fairly good, but very few open places. Thence to Dunvegan Rancho is splendid, through fine open country, and from thence to St. John it is generally good.

From St. John to Fort Graham I can say but little regarding feed, although from what I could see, the ground being covered with snow, I should judge that it was plentiful, and this opinion is borne out by the reports I have had from parties who crossed the mountains in the spring, following my route. A few miles below Fort Graham there is good hay to be got and in considerable quantities, also ample feed for horses of a detachment. Anywhere west of the Rockies, as far as I have seen, until the Dease River is reached, horses would have to be stabled and fed during the winter. About half way between Sylvester's Landing (McDames Creek) and the Liard is a fair winter range, but, even here, horses would have to be looked after when the crust forms in the spring.

Many of the parties we passed intended to try and make Frances Lake, and winter their stock in that vicinity, believing the lake to be surrounded with flat hay marshes. This is an erroneous idea, as there is no hay and very little feed there. The lake is surrounded with high mountains thickly wooded and the ground is mostly covered with thick moss into which horses sink nearly to their knees, making travel very heavy. Indian reports say "Simpson" Lake is surrounded with hay meadows and fine feed.

HAY.

A considerable quantity could be put up at several places on our trail, but none beyond Sylvester and only a small quantity there. These places are noted in diary.

ROAD MAKING.

This as a rule would not be difficult. The timber west of the mountains is smaller than on this side, although there is fine timber in places, and I think as a

rule, roads could be made through muskegs by ditching and grading up, with sometimes a foundation of poles and brush, easier and cheaper than by corduroying. The muskegs are not as bad as east of the mountains. Where corduroying is necessary, there is usually an abundance of timber handy; many of these places also could be got around, if cart trail was to be located. Grading almost without exception, would be easy, owing to the nature of the soil. There is also an abundance of timber suitable for the class of bridges which would be required.

When I mention in my diary that timber is open, I mean to imply, that trees stand some distance apart and that there would be but little chopping to be done. Some of the grades might be rather steep, but at such places it would be easy to double, or if lariat harness was kept on some loose horses, or on saddle horses, it would save time.

One peculiarity of the country is that muskegs are as frequently found on high land and hill sides as in valleys.

HORSES.

On arriving at Fort Graham I found horses Nos. 10 and 12, which I had left in the mountains last winter, had been seen and brought to that place by one of the parties following our trail. They were in good condition.

I left instructions with the Hudson's Bay Company at Sylvester to keep a look out for the three horses lost there, and if found to keep them and notify their head office in Victoria. I hired a man at the Liard Post to accompany me to the Pelly Banks and take the horses back to the Hudson's Bay Company who will take charge of them. They will be sent to the range above mentioned and looked after at a cost of about \$50 for the bunch. The Indian lads will assist in bringing them back to the Laird. I had to shoot two horses between Laird Post and the Pelly as they were unable to follow even without packs, and I doubt if some of the others will reach the Liard.

WEIGHT OF PACKS.

The experience of this trip has shown me that 150 pounds is as heavy a pack as a horse should start with on such a long journey. Packs of 300 pounds are often carried, but only for short trips over good roads and the return journey is made "light." Those horses are fed when not on the trail and also when packing late in the fall. Our horses had nothing but what they could pick up, and in the northern country there is but little nourishment in feed after the middle of September and even a month earlier in places, when one gets to the Frances River and north.

INDIANS.

Those in the Finlay district are a miserable lot, half-starved most of the winter, and utterly unreliable. From the middle of November until beginning of March they have to depend almost entirely on the dried meat they have cached, or on what the Hudson's Bay Company will give them on credit, as the snow is so deep and light that they can seldom get a moose. Should the Indian Department decide to assist the Indians, I would suggest that arrangements be made with the Hudson's Bay Company to issue a certain quantity of rations through their representative here and thus save all unnecessary expenses. \$1,000 would, I think, be ample for the purpose. This would satisfy the Indians and go far to prevent any trouble arising. Some of the head men have asked for this assistance and I told them that I could not make any promise, except that I would represent their case to the proper authority, and I, at the same time, impressed upon them the fact that the white men had the right to go anywhere through the country and hunt, trap, fish or dig for gold, also that their only chance of obtaining help was to behave well.

One bad feature of these Indians is their proneness to fire the bush, this they often do from sheer mischief, without giving a thought as to the destruction of

game caused by it. Their morals are of the lowest, their anger is easily aroused and they are very vindictive. I have been assured, on good authority, that the murder of the aged and helpless and any supposed to be bewitched is no uncommon occurrence. This is also the case among the Liard Indians.

TRAIL FROM MANSON.

When at Manson Creek, I spoke to Capt. Black, Manager of the Omenica Consolidated Hydraulic Mining Co., who told me that he had spoken to Messrs. John Irving and Rogers, M.P.P. for Cassiar and Cariboo, and to Col. The Hon. James Baker, Minister of Mines, also to Mr. Gore, Deputy Commissioner of Lands and Works and Gold Commissioner for British Columbia, regarding the opening of a trail to head of Finlay, and that they expressed themselves as quite willing to give assistance. As this patrol is making a trail to the northern part of the province, he (Capt. Black) states that there will be no difficulty in getting a grant from British Columbia of \$500 or possibly \$1,000 towards our expenses if application is made. \$3,000 was granted last year on Capt. Black's representation to open a trail from Hazelton to Manson Creek and this was not sufficient.

When possible, on account of feed, I remained in camp on Sundays to give both men and horses a much needed rest. As far as possible I tried to make eight hours a day actual travel. During the summer we were up at 4 a.m. and sometimes earlier. It was generally 10 p.m. or later before everything necessary was done in camp. Baking bannocks was quite a heavy piece of work, and the cleaning of saddle blankets, &c., and keeping the aparajos in order entailed a lot of work.

GAME.

All through the mountains to the Pelly, game, judging from the tracks, must be very plentiful, but when travelling with pack train it is impossible to get any. Tracks of moose, black and brown and grizzly bear, and in some places sheep are very thick. The only moose seen between these points was a magnificent bull which I shot on the Finlayson. It weighed in solid meat without bone over 600 pounds. It was great good fortune, as without it we would have been without meat, and had nothing but flour and beans long before reaching Fort Solkirk. Partridges are plentiful, also in some places porcupine, which are good eating.

Fish are plentiful in most of the lakes and rivers, and we got one now and then at night. They cannot be caught through the ice in the winter in the lakes. I saw some fine fish caught on one occasion through the ice on the Halfway River, but this is the only case I know of personally.

TRAIL.

With regard to the usefulness of this trail as a route to the Yukon, I should say it would never be used in the face of the quick and easy one via Skagway and the White Pass; but on the other hand, I have not the slightest doubt that if the country were opened up and thoroughly prospected it would be found immensely rich. Almost every stream yields colours, and it only requires that these streams be followed up and properly prospected. Some of those going through this summer professed to have prospected and exclaimed against the country, but I never heard of one who had gone to bed-rock. I believe from what I have seen, and experienced miners have told me, that there is a great future for quartz mining west of the Mountains, and in the Mountains themselves.

CONDUCT.

The conduct of those of the original party who remained with me after leaving Fort St. John was all that could be desired. They were cheerful and always willing, and even when things looked very "blue" not a murmur or word which would

add to my anxiety was to be heard. Had it not been that I knew I could depend upon Const. Fitzgerald, Lafferty and Tobin standing by me, I would most probably have had to abandon the trip when the half-breeds and Indians wanted to return to Fort St. John from the Mountains. I have already reported on this to you and would again respectfully recommend Constable Fitzgerald to your favourable notice, feeling sure that he would make a fine non-commissioned officer.

HEALTH.

We were most fortunate in having throughout good health. With exception of an accident to Tobin, from a dry tree striking him in the face, and an injury to Constable Fitzgerald's right hand which laid him up for some time, we had no cases requiring treatment for more than a day. Tobin was struck in the face when riding through very bad down timber just as we were going to camp. The socket of the right eye was fractured about the centre below the eye, but the eye is not injured. The whole side of the face was much swollen when we got to camp about 15 minutes later. I applied arnica bandages night and next day until the pain was nearly gone and all the swelling—he is all right now. An American doctor saw him at Graham and said there was no danger now. Constable Fitzgerald was unable to use his hand for nearly a month and even now the finger is somewhat stiff.

Wet feet with frozen moccasins, duffles and socks, from early morning to night camp has been the rule and not the exception, and yet there has not been a case of freezing.

DOGS.

I left the 16 dogs which I took from Fort Graham in charge of the Hudson's Bay Co. at Stuart Lake, eight of them, however, followed Mr. Rathbone, a mining expert, to Manson Creek. I shut them in an old shack there leaving about 60 lbs. of bacon to feed them on their way back with one of the men returning in a few days. One of the dogs got out at night and followed us and I had to take him on, so that there are only 15 dogs with the Co. at Stuart Lake Post. In consequence of having to leave this bacon we ran short ourselves, and for the last four days had only beans and muskeg tea.

NEWSPAPER REPORTS RE JACK OR "CAYUSE" GRAHAM.

From what Graham told Mr. Fox in June, and from statements made to others, by the men who were with him last summer, they reached eventually some river which they took to be either the Nelson or the Liard. On the way Graham found very bad country and was thirty days in crossing a muskeg which, when returning, took him four days to cross; it was frozen then. I heard from several sources that the party who went towards the Nelson, intending, or thinking, to cross north of the Laurier Pass, turned back and made for the latter. On his next trip Graham followed our trail.

POLICE PROTECTION.—ST. JOHN DISTRICT.

One of a party of prospectors going through this district shot two stallions belonging to Chief Montaigne, because they were, he said, chasing his horses. On hearing of this the chief sent two parties in different directions to intercept the white men, declaring that if he was not paid for his stallions he would shoot all the prospectors' horses and then the man who killed his. I believe the matter was settled. Another man stole an Indian pony, and the owner followed him to Fort Graham and recovered it. As the man said he was poor and had no money, the Indian did not press his claim for payment for use of horse or his own time coming after it. A white man told me that he had been robbed in a wholesale way between Dunvogan and Fort St. John by a hired man, who then decamped down the River.

FORT GRAHAM.

Mr. Fox informs me that the Indians here at first refused to allow the white men to come through their country without paying toll, and it was only after much talking that they agreed to keep quiet this summer in the hope that the Government would do something to help them. They threatened to burn the feed and kill the horses; in fact, several times fires were started, but the head men were persuaded by Mr. Fox to send out and stop them. A large number of horses have been lost, but whether these have merely strayed or have been driven off it is impossible to say. A guide engaged by several parties (who joined in the expense) deserted a few miles up the river on hearing of a party of St. John Indians having come over to intercept the horse killer as above mentioned, at least this is the reason given.

Even amongst the whites there have been several rows, with threats of shooting, and Constable Fitzgerald was appealed to and quieted things, by threatening to arrest and hold until my arrival any one making a disturbance.

There is no doubt that the influx of whites will materially increase the difficulties of hunting by the Indians, and these people, who, even before the rush, were often starving from their inability to procure game, will in future be in a much worse condition; and unless some assistance is given to them by the Indian Department, they are very likely to take what they consider a just revenge on the white men who have come, contrary to their wishes, and scattered themselves over their country. When told that if they started fighting as they threatened, it could only end in their extermination, the reply was, "We may as well die by the white men's bullets as of starvation." A considerable number of prospectors have expressed their intention of wintering in this neighbourhood and I think it would be advisable to have a detachment of police stationed here, as their presence would go far to prevent trouble. The number of Indians, men, women and children in this District is about 300.

CACHE ROBBED.

When cache on the Ospica was robbed, all the ammunition with exception of a few rounds 45-75 was taken. In consequence I purchased two rifles here. 45-75 cartridges cannot be obtained in that country. This cache was the means of saving the life of one man in the spring. Two men tried to go through from Fort St. John on our trail in May and got to within six miles of Fort Graham, when they branched off on a fresh track. Some Indians found them and took them in. They then started to go back to summit of the Mountains and in some way one man got astray, and coming to the cache, stayed there until found. He repaid all he took.

COUNTRY.

The route I followed may be roughly said to be through heavy timber almost all the way, with the exception of from Sturgeon Lake to a short distance west of Dunvegan Ranch. Owing to this thick timber, horses cannot be picketed at night and frequently, in consequence of down timber, cannot even be hopped but have to be turned loose. The time spent in collecting in the morning twenty or thirty horses thus turned loose in the bush at night and wandering about to find good feed can easily be imagined. From the Rockies (about fifty miles east of Graham) to the Dease, the country is simply one mass of mountains. There is no such thing as making a "bee" line between any two places. From the Dease to Frances Lake is rather better, but from there to the Pelly is again very mountainous and covered with about two feet of moss, making travel very hard on both men and horses.

TIME OF YEAR WHEN PARTIES SHOULD LEAVE EDMONTON.

Any parties proceeding from Edmonton should start early enough to arrive at Fort St. John by the 10th of May, they could then give horses a week's rest and proceed as soon as the snow is sufficiently cleared in the mountains and before the

rivers rise, arriving at Graham about the middle of June or earlier. The delays at Fort St. John and Fort Graham arose from our leaving in the fall instead of the spring.

When I arrived at Fort St. John on the 1st November it was perfectly impossible to go through the mountains with horses, mine were tired and weak as all the feed was frozen and had no nourishment in it on which to work horses hard. Even had I got through, the horses, without hay and with snow four to five feet deep, would have died, and then, without dogs, I must have waited until the rivers opened and gone to McLeod Lake by canoe and thence ninety miles overland to Stuart Lake as best I could. Moreover had I been able to go on west of Graham with dogs during the winter, I could have given no account of the country, covered as it was with snow. Then again, the ice had not taken on the rivers at St. John and west, and yet it was running too thick to ford or swim horses.

One of the 'Frisco party which left Edmonton before I did, told me that of about 350 horses they had lost more than half on the trail, and only about twenty were alive at St. Johns in the spring.

The two men sent out by the town of Edmonton got as far as Dunvegan and turned back saying it was too late in the year to go further. Mr. Tate of the Hudson's Bay Co. told me this.

CROPS.

I saw some splendid vegetables at Dunvegan and Fort St. John and fine wheat grown at the latter place. At Fort Graham good root crops can be raised, and I saw some good samples of wild timothy seed.

MINERALS.

Copper was found near Deadwood Lake about 40 miles east of McDame Creek, and a good seam of coal near camp 50, north of the Divide between the Finlay and Turnagain river.

HUDSON BAY COMPANY'S STORES.

I arranged with Mr. Camsell in charge of New Caledonia District, that the M. B. skin which is there valued at 75 cents, should be charged to the police at 50 cents, this will effect a large saving on purchases made at Stewart Lake, Fort Graham and McLeod Lake.

I have the honour to be, sir,
Your obedient servant,

J. D. MOODIE,
Inspector

The Commissioner,
N. W. M. Police, Regina, N.W.T.

DIARY.

Saturday, 4th September.—Left Edmonton.

Sunday, Monday, 5th and 6th September.—En route to St. Anne.

Tuesday, 7th September.—Wet morning. Left St. Anne at 11.15 a.m. and arrived at the Narrows at 12.30 p.m., distance 7 miles. Bad trail but can easily be made good for wagons. Sent Hudson's Bay Co.'s boat over by team and freighted our packs. Swam horses and crossed packs 4.15 p.m. Packed horses and left at 5.40 p.m., made 5 miles and camped. Heavy rain at 7.30 p.m. Good pack trail S.W. along lake through timber, very little trouble to make good wagon trail. From end of lake we struck open country with low willow scrub. Fine feed and water at camping ground.

Wednesday, 8th September.—Heavy rain until late in the afternoon, followed by sharp frost at night. Stayed in camp and practised packing ponies.

Thursday, 9th September.—Breakfast at 5.30 a.m. Made one drive of 15 miles to-day, as unpacking and packing at noon takes too much time. Good pack trail all the way. First 2 miles through fairly open country covered with thick willow scrub and scattered timber. Course N.W. Then heavier timber with fallen burned trees and undergrowth. Every mile or so open space with good feed and water. These are usually covered with low willow bushes. No trouble to make a cart trail, and not much to cut out except undergrowth. A few wet places which could be bridged with poles; any soft swampy places can be avoided by taking the ridges. Twelve miles from the Narrows is Island Lake, a good sized piece of water. Camped for the night at "Stoney Lake Creek." A bad camping ground, in timber, but good feed for horses in swamp close to. Day's travel about 15 miles. Course last 12 miles nearly W.

Friday, 10th September.—Left Stoney Lake Creek and camped for the night at first crossing of "Paddle River" at 5.15 p.m., distance about 20 miles. Course, 3 miles N., $1\frac{1}{2}$ mile S.W., then W. by N. Rolling country with bush, but trees are not large. Here and there open swampy places with willow brush. Fair feed. Some of these would need to be corduroyed, but only short stretches (100 yards or so). No difficulty in making road. Crossed the Pembina this afternoon; the south side has steep banks from the bench land; approach would need some grading, which would be easily done, or another trail found. River is shallow at present, and ford runs up the river along a bar for about 500 yards. From signs on banks I should judge this river to be very high and swift in spring. Actual width about 150 yards. W. or N. bank not so heavily timbered as E. or S. From crossing there is about $1\frac{1}{2}$ miles fairly open country, then 3 miles brush and small timber, then open country to Paddle River. This is narrow and fordable, only requiring about 30 yards grading for approach on each side. It is really only a creek and could be bridged with poles for high water in spring. $1\frac{1}{2}$ miles W. of the Pembina is Deep Creek, with high steep banks requiring zigzag graded approaches. East side is the worst. A few short soft places on trail would require filling in with brush and poles. No hay could be got on this trail so far. Easy for cattle, wagon or cart trail. A gang of 10 men could cut out 6 or 7 miles a day at least.

Saturday, 11th September.—Engaged two Half-breeds who came to Paddle River with some Americans, to go to the Athabasca and help us across; also to pack, etc. Made 25 miles in two drives. Crossed Paddle River again to-day. Country much more open, with frequent small patches of prairie. Splendid feed, but not large enough pieces for haying. No trouble in making good roads. Small muskegs are frequent where there are openings, but are not more than 50 or 100 yards across, and could be avoided in most cases by following the ridges of land chiefly to the south of pack trail. Where we camped to-night, 25 miles from first crossing of Paddle River, is a fine hay meadow of about 600 acres, with fine water (Paddle River again) at edge of bush to the S. of W. end of meadow. About four miles east of this we struck a very bad swamp, large trees, both standing and fallen, all burned. This was about $\frac{3}{4}$ mile across, but could be avoided altogether by keeping to the south along ridge; in fact a better wagon trail could be got I think by keeping south of present pack trail throughout. Course to-day W.N.W. (Camp No. 4.)

Sunday, 12th September.—Left camp at 8 a.m. and nooned at Good Creek, 10 miles west. Country as a rule not so thickly wooded, although some bad places. For first 10 miles we followed the ridges, crossing the various valleys which all trended towards the valley of the Athabasca. A considerable amount of grading, corduroying and bridging would have to be done on to-day's route, but the latter would only need to be poles and logs, which are alongside, and the spans would be quite short, and even then I doubt if present pack trail would be passable in the spring. It follows the shortest trail, but a wagon trail would have to follow the ridges and so avoid most of the bad places. The muskeg referred to yesterday is very large, extending almost, if not quite, to the Athabasca. There is good feed all along, but no places where hay could be got in any quantity. Water plentiful and good. From noon camp, named by the Half-breeds "Moodie's Creek," $1\frac{1}{2}$ miles takes us to the river. This we follow for $3\frac{1}{2}$ miles to the mouth of the Macleod. At present these rivers are very low, but the current is very swift at the junction. A ferry would have to be put in here, or some good boats. The Hudson's Bay Co., and Alex. McAllister, a Half-breed (formerly interpreter for the police at Edmonton) are building log shacks and starting trading posts here. The Athabasca River here is about 450 yards wide; banks on both sides are easy. Some heavy cutting out of dead and standing timber would have to be done in last three miles. Good feed about a mile up McLeod River. The Hudson's Bay Co. put up about 20 tons of hay here this year, and more could be got. The California party which left Edmonton 22 days ago are camped on north side. General direction for to-day's march, about west by north. (Camp No. 5.)

Monday, 13th September.—Crossed outfit this a.m. in dug out hired from Stony Indians camped here hunting. These killed four bears last week.

Tuesday, 14th September.—Heavy rain all morning. Swam horses across Athabasca at noon, and started in heavy rain. This trail runs W. up river; another, and one used lately, goes N. and then S.W. forming two sides of triangle. Fair sized hay meadow about 1 mile from crossing. About 10 loads might be cut here. Route W. by N. Good country for making cart trail. Distance 5 miles. Sprinkle of snow this p. m. (Camp No. 6.)

Wednesday, 15th September.—Two horses missing this morning; country is so heavily timbered that horses cannot be picketed, all are close hopped and have bells. Waited until 2 p.m. for return of men hunting for these. Then went on 6 miles and camped. Trail very bad with fallen timber and soft places, but a little work would make it all right. Hardisty and Pepin arrived at 7 p.m. with missing horses; they had broken their hobbles and returned to old camp on S. side of Athabasca. Fine night. (Camp No. 7.)

Thursday, 16th September.—Left camp at 10 a.m. Breakfast over before 6 a.m., but it is very hard to collect horses in the timber. To-day was very bad travelling, the worst we have had, through fallen burnt timber with here and there small muskegs. A good road, however, could be cut at small cost, as the timber for bridging creeks, corduroying, &c., is alongside. The McLeod creek was crossed about 4 miles from last night's camp. It is about 30 yards wide, shallow, and good gravel bottom. Good approaches. Somewhere in the thick timber we lost a horse, and only discovered it on arriving at an open spot where they could be counted. Two men returned to hunt for it, and we went into camp at 2 p.m. at a beaver dam with fine feed, open ground and good water. Californians pulled out of this camp yesterday. We passed the Owl River again to-day. It is about 100 yards wide here, with a number of bars, and very shallow at present. Easy country for wagon trail. Distance about 8 miles. Course W. N. W. (Camp No. 8.)

Friday, 17th September.—Hardisty and Pepin returned at 10 a.m. with lost horse. It had returned to old camp. We pulled out at noon and made about 9 miles; best country for travelling we have had. About 5 or 6 miles out we crossed Owl River; shallow and good bottom. Good camping here, and also 3 miles farther on where we camped on small creek amongst open pines. Fine night. Course W. N. W. (Camp No. 9.)

Saturday, 18th September.—Breakfast at 5 a.m. Started at 8 a.m. Open country, easy to make road through up till noon when we camped. Good feed and

water. Distance 13 miles. In afternoon, trail for 8 miles very bad, through fallen timber, two bad muskegs and some small ones, but none of them long. No feed for 2 miles farther on than camp. Camped W. side of second large muskeg and took horses on three-quarters of a mile to feed. Quite dark when we unsaddled. Muskeg about 200 yards wide and very bad. Passed 3 camps of Californians east of here. Course slightly South of W., 2 horses very bad colds. (Camp No. 10.)

Sunday, 19th September.—Did not leave until 9.30 owing to a horse getting away. Fallen timber, bad holes and muskegs were the rule to-day. Lots of water but no feed until we camped after 17 miles travel. We passed the leading party of Californians to-day. Fine nights. Camped on "Two Creeks." Course W.S.W. (Camp No. 11.)

Monday, 20th September.—Very hot day. Travelled 3 hours through bad muskegs. Had to cut brush and make a trail. Some of the horses mired and a lot of trouble to get them out. No feed. At noon we camped for the day at good feed and water. Hardisty, Const. Fitzgerald, Pepin and Half-breed went on this afternoon and made road through "Long Muskeg" and some small ones for about 5 miles. Advance party of Americans arrived at 4 p.m. Although these muskegs in present state are very bad yet a road could be put through at small cost for pack horses, cattle or carts, as the timber is thick but not large as a rule. The amount of feed here is not great, but enough for 100 head of stock for a day or two. Course to-day nearly W. (Camp No. 12.)

Tuesday, 21st September.—Fine day and easiest travelling we have had, but no feed for 16 miles. Camped at 3 p.m. as no feed within half a day's travel. A few small muskegs were bad, but nothing to speak of. Fine feed and water in open space where we camped. Some Indians killed a bear here two days ago. (Camp No. 13.)

Wednesday, 22nd September.—Roads very bad for last 6 miles to-day. Long muskegs, fallen timber and hard travelling. We made 16 miles. The first 10 miles good but no feed. The last 6 miles took us nearly 4 hours. Splendid feed on fair sized meadow on W. side of small river which runs out of lake (good feed for about one mile on east side of river also, but no water). Good feed amongst burnt brush for the last mile to river. Cross the river for best feed. Course about W.S.W., but trail very winding.

Thursday, 23rd September.—Lay over all day. I went on with four men eight miles, making bridges, brushing bad places and blazing trail through burnt and fallen timber. Good trail for one and a half mile, then very bad for six miles or more. Impossible to travel until it was fixed. Returned to camp at 5 p.m. Hard frost last night. (Camp No. 14.)

Friday, 24th September.—Travelled five hours. Very hard trail, even after work done on it yesterday. Camped on Moose Lake, as too far to go on to next feed. Good feed and water. Indian shack here. Lake about two miles by three-quarters of a mile. Course about W.S.W. Small patch of feed with a little water about two miles east of here (just after leaving last muskeg). Bears plentiful, Indians killed one last night close to camp, and same family has killed 12 since 1st of month. Good fish in this lake. Trail crosses the creek (about 40 yards wide) close to camp. Fine feed here, but not very much of it. "Moose" the Indian who has the shack here, says that by keeping either north or south of present pack trail along the ridges, the muskegs can be avoided, but that the country is covered with fallen burned timber and it is not worth his while to cut a trail. As Indians travel light these muskegs do not bother them much, and they don't care to cut new trails. Fine weather. (Camp No. 15.)

Saturday, 25th September.—Travelled three hours, mostly through bad trail. Small muskegs and fallen burnt timber, when we arrived at good camping place. Fine feed and water only about five miles from last night's camp, and one mile further west, another fairly good sized place, but not as good as the first. We could have made these yesterday if guide had not said there was no feed for 16 miles. After half an hour's rest we travelled on about nine miles and camped for the night. Travelling very slow, and horses tired, as we took a branch trail by mistake, and so

lost about two miles. Fairly good feed to-night. Distance 15 or 16 miles. General course W.N.W. (Camp No. 16.)

Sunday, 26th September.—Six miles from camp found good feed and water. Trail not good the first part, muskegs and fallen timber. Stopped for three-quarters of an hour at 1 p.m., and let horses feed without unpacking. Camped for night 4.30 p.m. on west side of Little Smoky River, fair feed. At 3 p.m. we first sighted this river running through deep valley. We travelled down a spur to the level, where there was good feed of considerable extent, but broken up by willow (green and burnt). Followed the river and camped on west side. River about 200 yards wide, very shallow, but shows signs of a rapid stream in flood. Good bottom. Course N.N.W. No hay except where valley is first struck. Distance to-day, 15 miles. Wet night. (Camp No. 17.)

Monday, 27th September.—Six horses missing this morning, packed the rest and went on. Hardisty and Pepin recrossed the river to look for horses. I went on eight miles and camped at large meadow on Little Smoky River to await return of men. Course nearly north. First three miles good open travelling, next two miles bad, with muskegs and fallen timber, last three miles heavy open timber, fair travelling. "Smoky" crossed the second time about two miles from last night's camp. Rain in afternoon. Fine camping ground all along valley of "Smoky," but none on high land. Men returned with four horses at 6 p.m. One pack horse and one belonging to Half-breed could not be found. I could not spare more time and came on. (Camp No. 18.)

Tuesday, 28th September.—Left at 9 a.m. and camped for noon at 1.15 p.m., having made about 15 or 16 miles. Fine feed almost all the way through bush. Last five miles through some fine stretches of meadow with willow scrub scattered over them. At 4 p.m. pack train started and I went ahead with Hardisty to Sturgeon Lake to try and get guide to St. John, and get some more rations. Arrived there at 7.15 p.m., about 20 miles. Some heavy fallen timber for first five miles, then bush, but easy travelling; the last eight miles or so almost entirely open country. Fine feed. Grass quite green. No sign of frost. So far there is nothing to prevent a good trail being opened up at a comparatively small cost. (Camp No. 19.)

Wednesday, 29th September.—Went to the Narrows, about six miles around the lake, and hired Half-breed to go to Grand Prairie. Pack train arrived at lake at noon. Purchased rations at Rivets, as Hudson's Bay Co. store closed; gave orders on officer commanding Fort Saskatchewan. Constable Fitzgerald reported Half-breed's second horse missing this morning, he would not hopple it. Discharged Half-breed. (Camp No. 20.)

Thursday, 30th September.—Went to Narrows and crossed outfit in canoe, swimming horses. Will start for St. John in morning. (Camp No. 21.)

Friday, 1st October.—Did not leave camp until 9.30 as Indian had not got his horses. Traded the "gray" got at St. Anne's and chestnut mare ridden by Tobin for a fine red roan Hudson's Bay horse 4 years old, and hired another at 75 cts. per day to Grand Prairie. Made 6 miles through heavy burned fallen timber and nooned. Were delayed nearly an hour this morning by two pack horses taking the crossing of a creek at N. end of the Sturgeon Lake and going nearly out of sight in quicksand. After dinner made about three miles and camped at fine feed and water. Travelled through easy bush this afternoon—some of the best we have had yet. Easy matter to make good trail. Weather fine. Course nearly W. from lake. Distance about 9 miles. (Camp No. 22.)

Saturday, 2nd October.—Left camp at 8.30 a.m. and made camp at 12 noon at Prairie Lake, six miles from last night's camp, good feed—in fact there is fair camping anywhere. At Prairie Lake (between 9 and 10 miles) is splendid feed and about 1,000 tons of hay could be cut around lake which is about three miles long and one mile wide at the broadest part. Hay in many places was up to the rider's knees—heavy bush surrounds the prairie. Trail leads up E. side of lake. Left camp at 3.30 p.m. Camped for night at 5.45 p.m. Fine easy trail and good feed and water anywhere—good camping place to-night about 7 miles from noon camp. Trail led along rather high plateau, on W. side, a creek ran through good feed for



DEAD HORSE CANYON.

SUMMIT OF LAURIER PASS, ROCKY MOUNTAINS, LOOKING WEST.

about three miles starting about three miles from noon camp. Here we came across another good sized meadow with shallow lake about $\frac{1}{2}$ mile in circumference. Trail appears to be improving all the way from Sturgeon Lake. Distance about 16 miles. Course W. N. W. (Camp No. 23.)

Sunday, 3rd October.—Left camp at 9.30. The creek here is almost dry and we had to water the horses with pails out of a hole. Had fine travelling although there was some fallen timber at first. About three miles brought us to another good camping place. From here we ran along a valley for about 2 miles, with creek in it and good feed on N. side but south bank bad for horses getting down. Camped for noon at 12.45 p.m. at fine feed and water (old beaver dam) distance about nine miles. In afternoon we had fine travelling and made good time camping on some ground which had been burned over, beside small swamp patch. Good water and feed. A peculiar grass grows on these burnt places of which horses are very fond. All along to-day the feed in bush was good and road making easy, no muskegs or bad holes. Distance about 16 miles. Course W. N. W. (Camp No. 24.)

Monday, 4th October.—From camp the trail ran S. W. and we crossed a deep coulee about $\frac{1}{2}$ mile. The course continued S. W. for about $4\frac{1}{2}$ miles through fine open spaces with some times burnt timber. Splendid feed all through with vetches and wild peas. Then reached small lake with some hay. About 8 miles from camp ran along ridge of mountain with deep valley of Smoky on our right—banks of river valley are usually high. Very little sign of frost so far. Most of the peas and vetches quite green still. Arrived at Smoky at 12.45 p.m. After dinner swam horses and crossed all the outfit in a dugout. Some bad quicksands on both sides of the river. Distance travelled about 13 miles. Course S. W. then N. and W. We made this detour to avoid bush and keep on ridge near valley. Very steep and long hill going down to river. River at present about 200 yards wide and slow current. At high water width would be about 300 yards. (Camp No. 25.)

Tuesday, 5th October.—Very steep, long rise from river to bench, about a mile and one-half. After first rise over bank (country rises in sort of terraces to the level country) a level plateau about $\frac{1}{2}$ mile wide is reached with fine feed. Then there is a steep, long pull to bench land, but good road could be got by winding up coulees. From top of this the trail follows a stretch of fine open prairie with here and there some bush, but even through this the trail is almost good enough for carts in most places. About 10 miles from river a deep valley with creek is reached. On E. side the descent is fairly easy for cart trail but W. side is very bad and no coulee could be seen from the pack trail. The only apparent way would be to grade a trail zigzag down the hill. The pack trail up this is about 500 yards—not more. From here is the same kind of country to this night's camp. In fact it may be said there is no work to be done on this day's march except at coulee mentioned. The east side of this coulee is steep in places, but 10 men would make a cart road in a day at most. The feed is splendid and soil good, only drawback being scarcity of water. The creek at coulee and one slough being all there was near trail. Creek will be high in spring. We camped to-night about 16 or 17 miles from river. About 400 yards before reaching camp the trail branches off from west to south-west right at an Indian grave on the left of the trail. Leave what looks like main trail and take the left hand one. Where we camped here, at sort of creek, is good open prairie and fine feed. At the Smoky a good sized flat boat would be required. (Camp No. 26.)

Wednesday, 6th October.—Rain last night and until about 7 o'clock this morning. Left camp at 10.30 and made one march to old Hudson's Bay Rancho on Ghost Creek, arriving at 3.15 p.m. Distance about 16 or 17 miles. Four miles after leaving camp we passed Mountain Lake, a good size with fine hay. It lies close to trail on north side, and one mile further west came to an old beaver dam with good feed and water. Up to this we had traversed fine open prairie with small bluffs of poplar and scrub. Here we struck some bush, open and of no great extent. At about 13 miles we came to a deep coulee with high bank, but quite practicable for road, with creek running through it called "Burnt Creek." All to-day's travel was through splendid feed and fine ranching country but water is—on trail—6 or 7 miles apart. We travel on high ground and looking to south, is range of high hills, the White Mountains. Open prairie can be seen in many places amongst the timber, but our

course can be easily traced by the line of prairie. Very little sign of frost. Out of our whole distance to-day about two miles will cover amount of bush passed through. Both "Ghost" and "Burnt" creeks would be deep in spring. Ed. Wilson, who came in from the States in 1890 with a party, is settled here and working for Bremner & Gunn, who have purchased the Hudson's Bay Ranch from the company together with stock and buildings. Wilson is the only one of the party remaining. Snow generally comes, to stay, about the middle of November. Summer frosts are rare. This is the first year that wheat has been tried in this vicinity and it did well. It has done well near the mouth of the "Smoky" at the Peace River crossing for some years. Other grain and all kinds of vegetables are fine crops and sure. Cabbages and cauliflowers of immense size are still in the Hudson's Bay Co. garden at Dunvegan. Cattle find their own feed almost all winter. Snow never over two feet and seldom as much, grass generally showing above it. Soil is fine black loam. There is good wagon trail to Dunvegan 15 miles north, not 35 as shown on map. There is another trail from Sturgeon Lake, running to south of this but it is longer and very bad in places with muskegs. (Camp No. 27.)

Thursday, 7th October.—Hired horse and went to Dunvegan to inquire about dogs, &c., from St. John. Campbell and Reed, the men sent out by Edmonton, have gone back, going no farther than Dunvegan, deciding it was too late in the year to go farther.

Friday, 8th October.—No dogs to be had here or at St. John, and have decided to send Hardisty to Slave Lake with letter to Hudson's Bay Co., there to purchase and forward 7 or 8 trains at once. Returned to camp this p. m. Purchased some necessary supplies from company at Dunvegan.

Saturday, 9th October.—Lay over in camp. Hardisty returned to Dunvegan last night to start this a.m. by boat and road to Slave Lake. This p.m. a fire was started by a Half-breed, Cunningham, guide to Johnson from Edmonton. We all turned out and saved Bremner's stacks, but could not prevent the fire getting into the bush. Rain at night with high wind. Cunningham will be brought up for trial on Monday. Indians and Breeds rather mad against Johnson, although he was not to blame.

Monday, October 11th.—Last night another turn out to prairie fire; took out two rawhides and stopped fire from coming back on ranche from west. Lay over to-day waiting for return of wagon from Dunvegan.

Tuesday, 12th October.—Tate came out from Dunvegan. Wilson had lost one of his team. On Sunday one of the sorrels (No. 25) got a bad sore on near fore foot, just in the coronet. Brimner thinks it is foot rot. To-day it is worse with proud flesh; have cauterised it, but the horse will be useless for some time. I have traded it with the Hudson's Bay Company for a good pack horse, raised in the "Beaver" country.

Wednesday, 13th October.—Wilson returned last night and I engaged him as guide to St. John. Discharged "Chanteur" from 12th instant.

Thursday, 14th October.—Left camp at 10.30 a.m. and camped at 2.30 p.m., first nine miles over prairie where wagon could go. We then struck bank of deep coulée, main branch running north and south. We crossed it opposite mouth of branch running east and west, creek in main coulée. We descended on regular hog-back, very steep and narrow, but a cart or wagon trail could be made. The pack trail on the other side (west side) is steeper and unpracticable for road, which would have to go up branch coulée a considerable distance to work up to bench. After leaving this we struck two miles of fallen timber, but small thin bush with underbrush; easy road making. Distance travelled about fourteen miles; course nearly west by compass. Good feed all the way; water at coulée, but not good, and no feed for horses in the bottom. Horses would have to be driven up to the bench. Good feed in open space at to-night's camp, but water some distance; a camp made on the dry creek (half mile back) would have been closer to water. (Camp No. 28.)

Friday, 15th October.—Left camp at 8.55 a.m. and ran through fairly thick bush of standing timber, with here and there patches of underbrush. Timber open and no trouble to cut trail. At noon crossed coulée with high steep banks, but easy to get fair grade down to, and up from creek in coulée, shallow at present, but

will be wide in spring. It is known as "Turn Creek" or "Pine Bluff Creek." Good feed in open space on west side. At about a mile farther west is another fork of same creek with better feed, good camping place. Then bush and fallen timber for a short distance, but not bad travelling. About four miles from last creek we came to burnt timber with large patches of open country, fallen burnt timber and small standing burnt trees, only about half a mile across this space. Then bush for a short distance and again large space of burnt. Across this is good travelling, lying burnt timber is no trouble here. Crossed creek again at 2 p.m., where a horse slipped down the bank into creek and had to be unpacked and some logs cut away to get it out; no harm done. Good feed on west side. Distance to-day said to be 19 or 20 miles; I call it about 17 miles. General direction nearly west. Heavy rain to-night; rained nearly all day. (Camp No. 29.)

Saturday, 16th October.—Fine morning; left camp at 9 a.m.; warm wind. After crossing burnt ground where we had camped we ran into standing timber, with here and there open spaces. Good travelling for nine miles when we came to open space on east side of small creek; good feed but water hard to get at. About a mile further is splendid camping place with fine water; we made this in three hours. From here there is bad travelling through fallen timber for about five miles, with here and there a better piece of trail; then open country with willow scrub to "place where the horses died." Magnificent feed and water here on the east fork of Bear River. This is the same creek that we crossed previously. The trail ran along this creek for some miles, touching it here and there. At half a mile or so from to-night's camp is a fine hay meadow; about 400 or 500 loads could be cut. Good place for winter ranche. Distance travelled about twenty miles; general direction W.S.W. creek runs nearly south-east to north-west. This fork runs into west fork which rises in a lake near Grand Prairie. (Camp No. 30.)

Sunday, 17th October.—Five horses strayed last night and we did not leave camp until 10.30 a.m. Fine travelling across open ground, no bush but thick willow brush in most places. After seven miles we came to a deep valley running nearly east and west. Water to the south-east in valley and splendid feed. Trail crosses creek and runs nearly W.S.W.; a mile further on we again sight the valley with east fork of Bear River (same we camped on last night). A mile further again touch same; a mile further across dry coulee running down to above river. Very little bush to-day; fine feed anywhere. To-night we camped on west side of Bear River, in the valley, on fine open ground, fine feed, water and wood; good A 1 camp. Steep incline to bottom of valley (about half mile long), but not too much for good trail. Distance travelled 18 miles good; course W.S.W. Ranges of high mountains running from Spirit River are visible all the way to the south of trail; they are in a sort of spurs. Bear River is almost always fordable except when snow first melts and is then high for only a week or two. If ford where trail crosses is not good there is another about a quarter of a mile below which is always good. River is about 75 yards across from the bank to bank, with stony bed. It is known as Bear River throughout the country, but maps call it Mud River. (Camp No. 31.)

Monday, 18th October.—Heavy rain and hard frost last night, and as it is an easy drive to-day I did not pull up until 10.10. Watered at lower ford and got to top of hill at 10.30 a.m. Steep incline but fairly easy grade could be got. All to-day was across "Pus-qui-qua" prairie; splendid country like north of Battleford to Jackfish. About three and a half or four miles west of last night's camp we crossed coulee with small creek. To-night we camped at lake at west side of prairie; good water and feed. Distance about 12 miles and course nearly west as a rule, although we ran south of west for a time. Fine warm day. No other camping place for fully 10 miles west. (Camp No. 32.)

Tuesday, 19th October.—Breakfast at 5.15 a.m. and left at 9 a.m. First mile or so open to west, then ran north-west to escape heavy timber for about two hours. Then south-west for another two hours through fairly good country for travel. Then struck heavy fallen and burnt timber, and had to thread our way through the best way we could; very slow travelling. Course almost west. At 4 p.m. completely blocked by heavy fallen timber on all sides, a regular trap. Turned in a "V" and travelled south-east, then edged into tamarack bush, and after travelling about a mile

west, again struck down timber, and night coming on (5.30 p.m.) made a dry camp. Travelled to-day, including time lost in looking for trail out of down timber, eight and a half hours, actual time of travel about seven hours. A hard day on horses, travelling very bad and slow; average made barely two miles an hour. Distance about 13 miles; general direction west. A good trail could be got north of our route to avoid all this down timber. (Camp No. 33.)

Wednesday, 20th October.—Pepin and Wilson out this a.m. to find trail. Got good water and fair feed for horses within 200 yards of camp. Decided to stay here to-day and give horses a show and let men go out again to look for trail, as it only uses up horses wandering through this country. Pepin returned at night; no success. Wilson not back.

Thursday, 21st October.—Pepin out again this a.m.; returned in two hours. Sent him out again to south to work along creek; returned at 4 p.m.; no success. Wilson not back.

Friday, 22nd October.—Some of the horses strayed on back trail; Pepin, Fitzgerald, Lafferty and Tobin went after them. Fitzgerald and Tobin will bring them back and the other two go on to follow trail. Pepin found running north. My opinion is we should have gone north of fallen timber instead of south, but the difficulty is now to get round that way, and knowing nothing of the country there may be more timber down there. Wilson still absent at 9 a.m., and have no idea of the direction in which to look for him and it is unsafe to let any of the party but Pepin go into the bush alone. Will wait to-day and if Wilson has not returned, will take up back trail for about six miles and strike north round down timber until we can strike direct to St. John ourselves and there send back to look for Wilson.

Saturday, 23rd October.—Johnstone and an Indian came over to camp just as we were starting to go back on trail, they having followed our trail from the ranche. We found trail about five miles back in straight line. It took round N. of burnt timber then nearly W. through open country and green bush. Camped on Creek at W. end of bush amongst burnt standing timber. Frank Lafferty "off duty" with bad cut at base of thumb. Wilson had found this trail and started back blazing return trail to camp across down timber. (Camp No. 34.)

Sunday, 24th October.—Sent Pepin and Indian back to look for Wilson following his blaze and went on ourselves. No trail after first half mile and crossed creek at the mouth of another by creek very steep, and high banks. Then on W. over burnt fallen timber to "Kis-cab-is-kow" River, good approach can be got, but steep high banks. Heavy fallen timber. Fair feed. Slight fall of snow. (Camp No. 35.)

Monday, 25th October.—Const. Fitzgerald, ill, cramps and diarrhoea. To ill to move. Tobin and I crossed river and rode about six miles up river W. to find a good trail. All fallen timber which can be got round by going further north.

Tuesday, 26th October.—Three horses missing. Met Baptiste and Indian bringing them from last camp where they had returned during night, hobbles broken. The last trail of Wilson was going towards St. John's from a camp fire, but it could not be followed far. Went out to try and find a way round fallen timber on S. side of river. Found one, but too late to go on. Considerable fall of snow this a.m. until about 11 a.m., when weather cleared and snow soon disappeared.

Wednesday, 27th October.—Packed and ready to start at 9 a.m. when heavy rain began. Tobin very sick, same as Fitzgerald, fainted once; too weak to be moved. Slept all day. Remained in camp all day, putting horses across river to get better feed. Weather cleared early in afternoon.

Thursday, 28th October.—Left at 9.20 a.m., and kept to S. side of river (Kis-cab-is-kow) which here flows E. and W. After travelling up it for about five miles we struck St. John's trail, and at 2 p.m. crossed the above river and camped on W. side. River here flows N. and S. Country generally covered with bush, easy of travel, with occasional pieces of open with fallen timber and bush. About three miles E. of river crossed muskeg about 500 yards with burnt timber. This is now drying up. Tobin still very weak, and as no certainty of water before reaching the "Pine" River, decided to camp for the day. Distance about 11 miles. From not knowing character of country I travelled on the 24th a due west course, whereas to avoid bad country trail was here S. W. Banks of this valley very high and steep

(about 200 ft.), but could be made practicable for carts. River about 100 yards wide. Signs that it is deep and swift in spring. Good feed almost anywhere, and water in small creek about half way. Lafferty's hand nearly well. Indian guide sick last night, same as Tobin and Fitzgerald, but not so bad. Gave him medicine and better to-day. Distance travelled about 11 miles. From high land approaching E. bank of river we got first view of the Rockies, free from snow. Good feed at camp. About 20 tons hay could be cut half mile up the river. (Camp No. 36.)

Friday, 29th October.—Raining hard and lay over.

Saturday, 30th October.—Left at 9.30 a.m. Making almost north for about 5 miles through thick timber with small open patches generally thickly covered with scrub. At 11.30 a.m. crossed small creek with good water and feed, but no great extent of latter. Found an Indian here who had just killed a bear and two cubs. Bought the carcass of a cub for \$1.50, as we were out of meat. From this N.N.W. for about half an hour was standing bush, then heavy burnt timber, with considerable fallen, for about 4 miles; then more green. Course nearly N.W. Then nearly N. through very heavy down timber for about a mile to open country with Indian grave on a knoll on W. bank of small creek at the crossing. After about $1\frac{1}{2}$ miles we again ran into roughish travelling through burnt fallen timber, &c., looking across very deep coulée to W. with steep rough banks impassable for anything on legs. A small creek runs N. through this into the Pine River. On coming out of this through a small streak of small timber we are on high land about 500 feet above the Pine and Peace Rivers, about a mile W. of their junction. We descended this and camped about 5.45 p.m. on the S. bank of the "Pine." Bad camping place and very bad feed. (Camp No. 37.)

Sunday, 31st October.—Tried to ford river but found it too deep. Sometimes it is fordable. At 9 a.m. started to build raft and completed it at 2 p.m. Had dinner and made two trips across in the afternoon. Another load still to be crossed. This river at present runs nearly 5 miles an hour, and raft was swept down 400 to 500 yards before landing was made on a gravel bar about 75 yards from the wooded bank of an island. It there had to be tracked up above starting place, and river recrossed when it was tracked up to where supplies were piled. This was very hard work. We had previously put the horses over (swimming), good feed of goose grass on island. At present this is not properly an island, but at high water a deep stream flows all round it. Opposite centre of this island the creek mentioned yesterday flows into the Pine. The climb out of this valley is like the half pitch roof of a house, but a road I think could be got at its mouth by fair grades where the bench trends down to junction of Peace and Pine Rivers. (Camp No. 38.)

Monday, 1st November.—Crossed last of the outfit and started at 11.30 a.m., arriving at St. John, the long looked for place, at 1.45 p.m. Unpacked and tried to swim horses, but only succeeded with ten of them. The others refused to face the music of swift current, cold water and high wind. Hopped them on south side, where there is good feed. Mr. Gunn, the representative of the Hudson's Bay Co. here, came over for us in a skiff, and gave us a hearty welcome to his house.

Tuesday, 2nd November.—Took Hudson's Bay Co.'s large boat and a canoe across and tried again to swim horses, but no use. We then led them across behind the boat by ropes, two men handled the ropes, four pulled the oars and I steered. We crossed all but seven before dark. The last trip one horse gave out in the middle of the river, and would have been drowned had it not been hauled along side and its head held above the water. This is the advantage of these large river boats. Sharp frost and cold to-night. Mr. Gunn sent out this a.m. to get in Indians to make sleighs, mocassins, &c.

Wednesday, 3rd November.—Started squaws making mocassins, &c. Got balance of horses across the river; another one nearly drowned. Cloudy, and looks like snow. Attending to horses' backs, &c.

NOTE.—Referring to diary of 31st October; I learn from Mr. Gunn that old Fort St. John was 25 miles down the river from here, but was attacked by Indians and the clerk killed. It was then abandoned for some time. Afterwards a post was built on south side of river opposite here, and this was subsequently moved to the present site on north side, to facilitate trade with Indians. The river known to the Indians

and others here, and previously referred to as the "Bear" River, is the one shown on the maps as the "Mud" River, and the "Pine" River we crossed is the "South Pine" of the maps. I also learn that there is a good gentle drop from the high lands on south of the "Pine" to the "Peace," just below the junction of the two. This I should judge would be the best route for a cart trail, and by crossing the "Peace" there instead of at St. John, the crossing of the "Pine" would be avoided. From the "Peace" a trail could be easily graded to first bench up coulée, and from there the hills rise gradually to the top, and thence is good open country to Fort St John.

Thursday, 4th November.—Fine weather. Indians came in to see me. I could not get a guide from this band, but learned that a Beaver Indian named Dick had gone through a pass in the mountains opposite head waters of "Halfway" River, and traded at a post on the opposite side. I take this to be Fort Graham. Feed is said to be good to the mountains, but on the other side is thick bush. Am sending out for "Dick," also for Napoleon Thomas, reputed to be the best hunter about here. Above band is taking out skins for caps, mitts and moccasins, of the last we shall require at least 100 pairs. They are also making some sleighs for me, as there is no birch known to be where we are going.

Friday, 5th November.—Traded a mare for strong pack pony with Hudson's Bay Co. It is fat and used to the country. I hope to trade some more. Weather fine.

Saturday, 6th November.—Hardisty arrived this a.m. with boat. Brought 33 dogs with harness, five sleighs, some more stores, &c. Unloaded boat and put stores in company's store-house. Snowing slightly to-day. Writing report and copying diary for information of the Commissioner up to date. These go down by boat returning to-morrow. No news of Wilson, who I fear, will never be heard of again alive.

Sunday, 7th November.—No work done. Will camp on Sundays, if possible, in the future. Boat returned to Dunvegan. One party of Americans arrived at Pine River on our trail.

Monday, 8th November.—Made dumplings of flour and grease for the dogs. Had about four hours' talk with Indians this p.m. re country, and with Napoleon Thomas, a Half-breed Iroquois, as to going as hunter. I offered him \$75 a month, and if he gets back under five months, his pay will be increased to \$90 a month. His average hunt for the winter five months amounts to \$500 worth of furs. He will come if he can arrange about his children being taken care of. Report says he is the best hunter in the district. His brother Duncan, wanted \$90 a month and \$5 extra for each moose he killed. "Montaigne," the chief of the "Beavers," came in with four men, and I had a long talk with them. They all have to be fed and given some tobacco according to the custom of the country, before discussing anything.

Tuesday, 9th November.—Hired Tom Sinclair to go through as dog driver, &c. Gunn reports him as an A1 man. He worked for the government at Lake of the Woods and for the company as boatman, &c. All these men are to be brought back via the coast. They would not consent to being left to come back overland. Snow last night, but nearly all gone.

Wednesday, 10th November.—Snow last night, but Indians say "winter is not yet." "Dick Eggs" came in to-day, and I engaged him at \$75 a month as guide. This amount will be paid as long as he acts as guide, but if I have to hire others at Sylvester or elsewhere, his pay will then be cut down one-half. I am to take him through and send him back here, via the coast and Edmonton, if I cannot send him back direct with a party. These are the only terms I can get him on, and he is the only one who knows the passes through the mountains. We go by Half-way River to Fort Graham and thence to Sylvester. He says there is no chance of taking horses through the mountains now, too late in the year, snowing.

Thursday, 11th November.—We helped Gunn to draw up the big boat out of the river. Repairing dog harness and getting things made for trip, snowing.

Friday, 12th November.—Shot blind mare to feed dogs and make dried meat for them. No fish here. The 100 pounds dried meat from Regina was fed on the way up from Dunvegan. No dried moose to be had. Heavy snow storm.

Saturday, 13th November.—Working on dog harness, &c. Snowing all day. Nearly blinded by smoke in teepees. At night had to bandage our eyes.

Sunday, 14th November.—Fine bright day. Indians came in this p.m. with sleighs, moccasins, &c. River closing fast.

Monday, 15th November.—Making shafts for sleighs for horses. Fine day. Packing supplies for transport. Women working on clothing. River closing fast.

Tuesday, 16th November.—Heavy snow storm and rough day. Bought bull from the company and killed him to make dried meat for dogs. Got 175 pounds of dried meat and two feeds for dogs out of him. I have to keep at least 14 or 15 of the best horses for sleighs and to kill at the mountains, and the rest are thin, and very little meat on them. Sold Pinto, pony, to Dick Eggs for \$40 to go against his pay.

Wednesday, 17th November.—Napoleon returned from camp to-night. He is still uncertain about going with us, as he says his children are sick. I hope to get him, but will not wait after things are ready. Two men looking for birch for snowshoes. It is hard work getting Indians to do anything, and they cannot be hurried like white men. Snowing hard and rough day. Hauling wood for camp. Working on shafts, sleighs, &c.

Thursday, 18th November.—Work getting on slowly. Snowing hard. It seems endless work, but there is no use starting out until everything is in order, and I can only keep on hoping for the best. Weather also may change for the better with change in the moon, and the snow is very light for sleighing yet. Gave Napoleon medicine for his children. Ice running today.

Friday, 19th November.—Fine bright day. Hard frost. Shafts finished to-day. Killed a horse which I took in trade for a small bay mare, and dried the best parts for dogs. Napoleon's children much better and he has decided to go with me. He got wood for two pairs snowshoes to-day. Women working on snowshoes. Working on sleighs and horse collars. Four of the Americans came over on the ice to-day.

Saturday, 20th November.—Snowing in morning. Afternoon fine. We hauled 17 loads of wood with the dogs this afternoon (5 of us including Gunn). The rest working on sleighs, &c. Cold.

Sunday, 21st November.—42° below zero last night.

Monday, 22nd November.—One horse "Stick in the mud" died last night. It was not frozen hard when found, and was cut up for dog feed. Working on collars, &c., "Joe Moosekeyah" sick.

Tuesday, 23rd November.—Three teams hauling wood. Working on harness, &c. Fine but cold. Milder towards evening.

Wednesday, 24th November.—Usual work. Mild. Lafferty got nasty bite on left wrist from a dog. I cauterized and dressed it.

Thursday, 25th November.—Hauling wood. Sleighs finished. Killed another horse which would not have wintered. Two men looking up horses. Cold day. Snowing slightly. Working on sleigh covers, collars, &c. Lafferty's wrist doing well, dressed it afresh.

Friday, 26th November.—Last night very cold. Coldest yet this winter. Packing things to be left behind and others to be sent back. Two men out for horses. Killed chestnut horse for dried meat. Very sharp to-day. Hauled two loads of wood. Lafferty's wrist doing well.

Saturday, 27th November.—Usual work. Killed horse to make dried meat. About 30° below, but fine. Hauling wood this p.m.

Sunday, 28th November, 1897.—Went ten miles up Peace River (from St. John to see if it was safe and good travelling for horses; found it all right. Fine but cold.

Monday, 29th.—Cold and dull. Sent out for horses; hauled hay and wood.

Tuesday, 30th.—Fine; sent dog trains with half our supplies to Dog Island to cache; trains returned same evening.

Wednesday, 1st December.—Clearing up and finishing everything. Very cold.

Camps are indicated in black figures and correspond with numbers on accompanying map.

Thursday, 2nd.—(1) Cold; ten sleighs with horses, and three spare horses with six trains of dogs left to-day to camp at Dog Island; I stay over with Constable Fitzgerald to settle accounts; we will overtake the men at Cache Creek twenty miles up river. Hardisty turns back from here.

Friday, 3rd.—Settled all accounts and certified to Hudson's Bay Company's accounts, gathered up miscellaneous things and balance of dried meat and left with Fitzgerald at 2.30 p.m. Made camp (2) at Cache Creek (20 miles) at 8.30 p.m.—a good deal of water on the ice. It has been thawing all day—a long day for dogs and men for a start and no stop en route, but it had to be done. Found main party camped here.

Saturday, 4th.—Got some extra loads on my sleigh and Fitzgerald's. The horses had strayed some distance and we only started at 11 a.m., when we travelled up the "Peace" to mouth of "Halfway" River and camped (3) at 4 p.m. on the north side of the "Peace." This river was open in many places and hard to get around—distance twelve to thirteen miles—fine feed on the flat where pack trail runs.

Sunday, 5th.—Remained in camp. Weather turning colder; made up and equalized loads.

Monday, 6th.—Breakfast before daylight, but 10.30 a.m. before horses were all found and we started. On leaving camp we crossed a flat to the "Halfway" River, about a mile. A hame broke and another had to be made. Left again at 11.30 a.m. and proceeded up river on the ice; river very winding. Camped (4) at 4 p.m. on west side of river about ten miles up. Travelling good; feed fair. Weather fine; banks of the river from 200 to 300 feet high. Pack trail follows level ground on top of, and a short distance from, the east bank; good travelling.

Tuesday, 7th.—Left camp at 10.30 a.m. by my time; I think I am about one hour fast as it is not daylight until about 9 a.m. Travelled until 3.30 p.m. in heavy snow storm (5). Travelling on the river fairly good, but river very winding and a good deal of open water and glare ice. The latter had to be "roughed" to get horses over; distance 12 to 13 miles; fine towards midnight; feed good.

Wednesday, 8th.—Left camp at 10 a.m., but delayed until half-past by one of the horses "baulking." He threw himself and rolled on the shafts, breaking one of them, which had to be repaired; only two of the horses had been driven previous to this trip, and we had a circus with some of them, but all are doing well now. Camped (6) at the Forks of the river at 12.45 p.m. as we had travelled fast and Napoleon said it was a good place for fishing (trout); travelled about eight miles this morning; snow deep; all well and hopes high. Banks of river getting lower.

Thursday, 9th.—Left at 9.40 a.m. (our time). Camped (7) for the day about 3.45 p.m.; banks getting lower and valley widening; pack trail crosses East Fork near the mouth, and runs up east bank of West Fork close to the river. This West Fork is not shown on the maps. The river is full of islands from 100 yards to half mile long; river open in many places; snow fairly deep, but ice good; fair feed along pack trail and on the banks; course west south-west. Distance 14 miles.

Friday, 10th.—Napoleon and Joe went ahead at 9.45 a.m. We waited for some missing horses and left at 10.15 a.m. Banks of river continue to get lower, and valley widens, trail runs along bottom, and benches through small poplar and pine, feed fair, but nothing extra. Camped (8) at 3.30 p.m.; horses tired, having travelled fast, course nearly west. Saw the Rockies, which appear to be comparatively low, with not much snow. The west branch, it is said, flows from the mountains nearly east and then south-east, and the guide says we are at the mountains when we leave the river. Distance, about 14 miles.

Saturday, 11th.—Four horses missing. Sent Napoleon and Joe on ahead with two sleighs. Left with the rest at 9.50 a.m. (our time), made fast time until 1 p.m. when we camped for tea; started again at 1.40 and camped (9) at 3.45 p.m. There is good feed for horses on open ground about 200 yards back from the river on south or west side. Course about west by north, taking general direction, and distance

about 15 miles. The hills are getting much lower. South side is almost level country. At about eight miles from last night's camp we passed mouth of Saskatchewan Creek, coming in from the north-west; it is quite narrow. Here is the first crossing of the pack trail from St. John to the mountains (after having crossed the East Fork). The branch of river which we follow leads nearly west, from forks of river, about 25 miles north-west of the Peace. What I call the east fork appears to be that shown on maps as the Half-way River. The west or south fork is not shown. Dick had cache at or near to-night's camp, and I got 78 lbs. dried meat for dogs at 3 lbs. for a skin.

Sunday, 12th.—Lay over; fixed up sleighs; good feed for horses.

Monday, 13th.—Napoleon and Tom went ahead; marched until 1.30 p.m., and again for one hour and 20 minutes in afternoon (10). Made good time. Hills on south side gradually receding from river from first crossing, until the flat is about one and a half miles wide. Hills on north side approach river, and from last night's camp are right up to water's edge. They are high and steep, and thickly covered with timber. Hills on south side appear to run up to about 300 feet. The whole flat is timbered, with occasional comparatively open spaces back 200 yards or so from river. There is fair feed on these, and generally back to the foot of the hills. The trail runs along this flat almost parallel to the river and distant about 200 or 300 yards. The trail crosses the river again (2nd crossing) to north side, about two miles above, or west of to-night's camp. Timber is chiefly pine with a little poplar, and is of fair size. The river for the last twenty miles is fairly straight, with numerous islands and bars; the former covered with small scrub and scanty feed. Course this morning about west by north, and this afternoon north-west. Distance about 12 miles. Hills on north side are a succession of "beehives," with frequent deep coulees, with steep sides running back from river, and quite impracticable for any trail even "pack." Last night a heavy snow storm for a short time, and all day to-day we travelled in slight snow storm. Cloudy with cold wind. We have splendid weather so far.

Tuesday, 14th.—Sent two sleighs ahead at 9.30 a.m., and followed with remainder at 10 a.m. Morning cold. Good travelling until 11.30 a.m., when we found Napoleon getting tea ready for lunch; left again at 12.30 p.m. At 1.30 we left the river and travelled on trail, which here crosses the river for the second time, taking the north side of river (11). Made to-day about eight miles. Not much feed around camp, but good feed on an island opposite, here we put the horses. At the second crossing some "Hudson's Hope" Indians were camped; I tried to get some dried meat but they would not sell. Napoleon was very anxious to camp here, and Dick had sneaked off ahead under pretense of getting a cache he had, but as I found in reality to visit these Indians. As I am in their hands entirely, I cannot afford to offend them at present, and so had to make a virtue of necessity, and camp. The dogs got three fine trout cached alongside a hole in the ice, and we confiscated them; two weighed about ten pounds each, the other about four and a half. I sent a piece of bacon to the Indians to repay them for these. The valley widened out considerably to-day, the hills on both sides being about a half to one mile from the river. River very winding to-day with several small creeks coming in on both sides. Hills are from two to four or 500 feet high and broken by rough coulees; general direction of valley, north-west.

Wednesday, 15th.—Left camp at 10.30 a.m. as usual lately, half an hour after Napoleon and Tom, and travelled two and three-quarter hours and camped for lunch. About six miles from last night's camp we came to where the trail makes third crossing of river, and from this on it follows the south side. At the crossing, the hills on north side close in to edge of river and are steep, high and rugged. Before coming to the crossing, the hills are more lightly wooded. On the south side the hills also close in slightly on river, and back 200 or 300 yards there is comparatively open country, with fair feed. Our course in the morning was about north-west, river fairly straight. In afternoon we travelled about one and a half hours, making about five miles or 13 miles in all. We camped at 3.15 p.m., (12) at some good feed; this afternoon our course was nearly west by north. At 2.30 we came to a creek running from the west and followed this to our camp. The trail runs close

to south bank through small pine and brush, country level. The "Halfway River" runs north-west from this creek, and the mountains appear to be about 25 miles distant. We leave a range of mountains behind us, apparently running from north-west to south-east. The Indians we met said there was not much snow in the mountains. Indians have a large number of steel traps and deadfalls along trail, so we put harness on all the dogs to keep them together. Ice was good and I took it all along, as trail runs close to it and I could see the country well. The country from East Fork of "Half way" is easy for cart trail and feed fairly good.

Thursday, 16th.—Left camp at usual time and travelled west partly on creek and partly on trail on north side. There is a trail on both sides, the one on the north is a new one and through lighter bush than on south side, the country is also more level. We were delayed for about an hour in all, bridging some small creeks where the ice was not safe; we only made about three and a half hours in the morning and three in the afternoon. I camped (13) early, as there was some fine feed, and I expected to get a moose from Indians who were coming after us. We are getting close up to the mountains; Dick and Napoleon are trying to dissuade me from taking horses further, saying, "no feed," but as there is good feed in summer, and Indians say very little snow in mountains, I shall take them on as long as they will last. Weather fine but cold. Last night was very cold. The Cypress (creek we are following) is small, very winding, with lots of bars and small islands, and cannot be deep at any time. All well so far, but Indians are lazy and not to be trusted. If we get over the mountains I shall not care so much, but I have to humour them at present.

Friday, 17th.—Lost one of the horses and did not leave camp till 11.30 a.m., Tom, Napoleon and Dick went on ahead. Met Indians with some moose meat at 1.30 p.m., and camped for lunch. Traded 60 pounds of flour for 125 pounds meat. At 2 p.m., we left again and travelled one and a half hours, travelling good. We followed the creek, sometimes on the ice and sometimes on trail. A trail could be made on either side, but I think the north would be the best. The flat is level and timber is not heavy, but there is a good deal of scrub underbrush. This afternoon the hills closed in on south side. From the signs I should say that this creek is fordable almost anywhere, except when ice is breaking up, and in June rise. This would be only for a short time. At these times the Halfway River would also be unfordable. Our course to-day was a little north of west, but very little, and to-night we are close to entrance to pass (14). Feed all along has been very fair, and in summer I should judge it would be good, but there are no hay swamps to speak of. Indians insist that there is no feed for horses further on. Time will show. Distance to-day about nine miles.

Saturday, 18th.—Left at 9.50 a.m., and travelled two and three-quarter hours before lunch. About one mile west of camp the Cypress Creek forks. South fork going nearly west, and north fork north-west. The north fork would have to be crossed by trail, but crossing easy. About two and a half miles further on, the hills on north side close on river for about 200 yards, and cart trail would have to be graded to top of lowest bench which is about 40 feet high, and down again at west end which is lower. Another creek runs in from north-west, but it is narrow. The river valley on the north side is the best for a trail all the way up Cypress Creek, and is level, but the trees are thick, though small with considerable underbrush, especially close to the creek. About 150 yards back it is usually slightly more open. After lunch we continued for one and three-quarter hours partly on the creek and partly on Indian trail, and camped (15) on the north side of main Creek at 3.30 p.m. A small branch of this creek runs north north-west about two miles east of this camp. Feed is only middling, but in summer I should judge it to be good for a pack train, although not much for a bunch of cattle. Horses are doing well so far, but travelling is heavy, and with the feed they are getting they cannot make longer marches than they are doing. When a patch of good feed is struck I camp, even though short of the five hours which I laid down as the time of actual travelling each day. About 11 a.m. a warm chinook wind struck us and it continued mild all day. Napoleon went off hunting this morning. All well. Course about west by south.

Sunday, 19th.—Lay over; repaired sleighs. Napoleon returned empty handed, fired at a moose, but missed. Lafferty and Tobin made noon, and I found my watch was from $1\frac{1}{4}$ to $1\frac{1}{2}$ hour fast. Their watches are all out, don't know what has happened to them. Last night it blew a regular chinook gale, and to-day everything is wet. The creek is here about 35 yards wide with banks six to eight feet high.

Monday, 20th.—Left camp at 11.40, several horses missing. Four sleighs went on ahead and I waited until balance of horses were found. We ran along river for about 300 yards as hill on north side comes down to river for that distance and is too sloping for sleighs. We then took the land, and for the first five miles the travel was very bad over fallen timber, but a pack train could get through all right and a good cart trail could be cut out. We then took the creek for about a mile, when ice gave out and we had to take the bottom, travelling for about two miles across burnt muskeg, with fine feed to-night's camp (16). Course about south-west by west and distance eight miles; good feed all the way, but no hay.

Tuesday, 21st.—Sent guide with two men ahead to cut trail in bad places as the sleighs will not stand a repetition of yesterday. Baptiste took the lead and kept near pack trail on north side. It was over level ground and good travelling. The snow is going down fast as strong chinook continues. The creek (17) in many places is open. We crossed it twice and for about half a mile where it was frozen took advantage of it to cut off a bend. Easy country for trail, cart or pack, all along north bank which is to-day what Indians here call "prairie"—in reality burnt timber in a few places the trees are standing, but mostly fallen and almost rotted. There is splendid feed to-day, but no hay to speak of. About five or six tons might be put up from small patches of swampy grass. About four miles west of last camp would be a fine place for a detachment. The mountains are high and lightly timbered nearly to the top, with fine grass on the sides. We had to double up two short hills, the snow being so wet and slippery that horses could get no footing. Distance a good nine miles. Course S. W. Mountains closing in. Valley here is about three-quarters of a mile wide.

Wednesday, 22nd.—Sent Napoleon to hunt yesterday. He returned late at night, having killed a cariboo south of Sunday's camp. Sent Joe with dog train for it this morning. Dick refused to go further to-day, saying he was sick and was going back. We went on about an hour when Napoleon said he saw cariboo and I sent him after them. Had a cup of tea and, a heavy snow storm coming on, we camped (18) to wait for Joe and Napoleon. We had travelled on north side of creek on good level country through small pines with large spaces of thick willow, and some quite open. These are where fires have been over, but fallen trees have almost rotted away. The feed was excellent all the way, and to-night is the best we have struck yet. About five tons hay could be put up by taking a load or two here and there, but there are no hay meadows of any size. Course was south-west and mountains drawing closer together. Height varies from, I should judge, 1,500 to 2,500 feet. Weather very mild, too much so, distance six to seven miles, all on land.

Thursday, 23rd.—Sent Baptiste and Napoleon on ahead. Travelled up north side of creek through small green pines, burnt timber and open spaces, the latter thickly covered with willow scrub. The snow was considerably deeper to-day and walking heavy. Valley is from half to three-quarters of a mile wide and trail was, with exception of two hills, over level ground, with a gradual rise, according to the aneroid, of 300 feet from last night's camp. At 1.30 we camped (19) as horses and men were tired out. Cariboo and sheep seen on mountains. Tom and Napoleon went after them. Tom not yet returned. Napoleon had no luck. I am afraid I may have trouble with some of the men at Graham. Distance travelled about six miles and I think we are getting close to the summit. Feed is excellent with small patches where a ton or so could be cut. So far this would be an easy pass for a railroad. Aneroid barometer gives a height above St. John of 4,300 feet. Joe overtook us to-day with cariboo meat. Course about south-west by west. Tom says he wounded a sheep but did not get it.

Friday, 24th.—By mistake the camp cooks were called at 5.30 instead of 6.30 this morning, and Joe, who was cook for the men, was very sulky, finally asking if

this was to go on all winter, explaining that he meant were Tobin and Lafferty not to take their turns in lighting the fire. Baptiste, I think is at the bottom of it, at any rate he does nothing to allay it. When I asked who were the kickers he said they were all in it. I told them that there certainly would be no change made—that they were paid, and well paid, to do the work and the others were not paid for such work. The fact is I have treated them all too well and if they do not alter very considerably will dismiss them at Graham as I can now do perfectly well without them. To-day Baptiste and Napoleon went ahead and at noon camp (20) we sighted sheep close to us. The horses were tired and I camped for the day about $\frac{1}{2}$ mile further on. Travelling was very slow. We left camp at 9.45 a.m. and nooned at 1 p.m. making about six miles. Snow deeper, and one hill to double up. We are camped on north side of valley on plateau on summit. There is fine feed on large meadow to the east, but ground is too rough to cut hay. Horses are doing much better than I expected, but are getting played out now. To-morrow is X'mas day and I will remain here the 25th and 26th, the two days rest on this good feed will do the horses good. Weather slightly colder to-day with about one inch snow fall last night. Valley about three-quarters of a mile wide.

Saturday, 25th.—X'mas day—remained in camp, horses feeding in bottom—fine camp (20) good feed. Went on about two miles to get a view up pass. It appears to narrow considerably with a bend to the south. Some of the men hunting, others fixing their sleighs.

Sunday, 26th.—Fine day. As I wanted to see pass ahead I went on with six dog sleighs loaded light for about eight miles and cached the loads at a good camp over summit plateau. The snow was deep and continues to deepen. Horses must be given up but I shall endeavour to drive some through over this march and kill for dog feed. All along the plateau of summit extending about 12 miles is fine feed; a good place for a post. About two miles from this cache a small creek comes out of a coulee on the north, and runs down south-west. Before returning to camp I went on about three-quarters of a mile to view the valley ahead, and found a cañon through which the creek flows. The sides at entrance are perpendicular rock and about five to six feet apart. The actual entrance is only five or six yards long; it then widens from 20 to 30 yards for about 50 yards, when it again narrows to from 10 to 15 yards, and the creek falls into a deep circular basin, which, I should think, was 30 to 40 feet deep, and about 60 feet in diameter; but as the snow was deep it was impossible to ascertain exact depth. On each side this cañon the hills rise abruptly, and are rough and covered with burnt pines. The pack train follows south side here, but is too sidling for sleighs. We returned to our Saturday camp in afternoon. Baptiste spoke to me, assuring me that if any one had told me he was dissatisfied not to believe it; that he would go with me anywhere I went and stay with me as long as I wanted him. He said he thought Napoleon wanted to turn back from here. I am glad he has spoken so, as he is a good man. He suggested that he, Napoleon and another should go on ahead to Graham with one train to break the trail and get Napoleon away. I decided this was a good scheme, and, on giving the necessary orders, things were brought to a climax. Napoleon told me he wanted to go back, as he was afraid if he went further that he would not be able to return, and he did not mean to go beyond Graham in any case. I told him that Arnold was going back, and I was leaving some of the horses and some sleighs and they could use them to return. After a lot of talk he agreed to go on. I left a cache of 50 pounds each bacon and flour here for the return journey.

Monday, 27th.—Moved camp to cache made yesterday, having advantage of good trail. Left Arnold to bring on seven horses loose, but he could not get them through deep snow of a long flat, and had to leave them. I left six horses behind at this camp (21), and I think some of these took the back trail to St. Johns; I also left four sleighs (nearly worn out) and the harnesses, after taking off straps and buckles from all but those required for the men's return, as they may be useful in repairing dog harness. Most of the sleighs are badly cut up with rough ice and stones, and will not last beyond Graham. This evening, after making camp, etc., I had Baptiste's sleigh loaded up and 10 days' dog feed and rations packed, and wrote letter to Hudson's Bay Company, Graham, asking them to get all the dried

meat or fish possible ready for me, and keep any Indians who may be around there until my arrival. My plan is, if possible, to hire Indians to take on part of our loads to Sylvester. This will give us a trail, and we can travel quicker and easier; the cost will not be much more than hiring a guide. In order to give Baptiste's party a help I am going on with them a day's march to-morrow. Course to-day, S.S.W.; distance 8 miles.

Tuesday, 28th.—(21) Baptiste's party left this morning, and I went with them with Tobin, Tom and Joe, taking about 250 pounds each. Fitzgerald and Lafferty went back for horses, and brought seven through. Snow was very deep, and we had to help the dogs at every hill. We took the north side over the hill at the cañon. This hill I should estimate to be about 150 feet high where we crossed it. From the top is a long steep drop into the valley. At the foot we crossed the creek and passed across a point of bush, taking the creek again for 7 or 8 miles, where it flows into another creek coming along a fine valley (not very wide) from N.N.W. Here we had lunch and then after following the second creek up for about one mile, we struck west across a high hill and cached our loads at the night camp of advance party. This hill could be got round by following a coulée to the north with creek in it, but cutting a road would have taken too long. The trail runs along the south side of the first creek from cañon to valley. We reached here at 4.30 p.m., had a cup of tea and started back at 5 p.m., arriving in camp at 7.30 p.m. after a long and hard day. Fitzgerald and Lafferty had returned at 4 p.m. and killed and cut up a horse. The dogs had a good feed to-night. In going over this trail again I can give a better account of it as it took all one's time attending to sleigh.

Wednesday, 29th.—Lay over in camp (21) and killed three horses, sliced up the meat and hung up to dry. Warm with light snow.

Thursday, 30th.—Killed remaining three horses and dried meat.

Friday, 31st.—Tobin's sleigh was badly broken on the 27th, so sent him back to last camp to change for best of those left behind, also to bring up all pack blankets except two pairs. He returned about 4 p.m. I left Inkster in camp to keep up fire for drying meat, as he was complaining of heavy cold on his chest, and loaded 300 to 350 pounds on remaining sleighs and went on to cache made on 28th. We had fine day and good trail from former travel. The trail leads on south side of creek to within about 2 miles of its junction with creek from N.N.W. The mountain on this (south) side of creek rises at a steep angle (I should say 25° or thereabouts) and considerable grading would have to be done from the cañon to near the mouth of creek (about 8 miles) if Indian trail was used, but I think by keeping near base of hill and taking advantage of flat, which in some places runs for a considerable distance along south side of creek, a fairly easy road could be got at considerably less expense. The trail crosses the creek to north side about 2 miles from its junction with creek in valley, but this is not necessary and by continuing on south side it would save one crossing. These creeks might have to be roughly bridged with trees. The drop from Friday's camp to mouth of creek is 1,100 feet. The valley through which the creek from N.N.W. flows is about $\frac{1}{2}$ to $\frac{3}{4}$ mile wide with mountains on west side, but at this point the hills are comparatively low and covered with burnt and fallen timber on east side. Good feed should be abundant here in the summer. Where we leave this creek and strike S.S.W. over the mountain would be an easy road. There is a gulch on our north here with small creek emptying into second creek. This mountain forms a divide between east and west and is covered right over with standing and fallen burnt timber, with patches of green pine. The snow is waist deep in some places. Napoleon killed two doe moose near here to-day and we met him with Baptiste and dog train coming for some of the meat. Their camp was about 8 miles from here. We got back from camp about 5.30 p.m.

Saturday, 1st January, 1898.—Left camp this a.m., taking everything, and camped about one mile west of our cache. Sent Tom and Joe with two sleighs for moose meat. Lafferty and I with two sleighs brought up the provisions, about 1,000 lbs., from cache. The weather is splendid, in fact hardly cold enough for travelling. Slight falls of fine snow every 24 hours. The rise from

Second Creek (in valley) to this is 300 feet, course nearly south, south-west, and distance from last camp about twelve miles.

Sunday, 2nd.—Lay over as usual. Here I cached (22) 10 bags flour and 675 lbs. of bacon as dogs could not take them and make trail, in fact, could not carry them at all and carry their own feed. I have moose meat and 750 lbs. dried horse meat besides the fresh horse meat which kept them five days. Baptiste has moose meat and about 60 lbs. pemican.

Monday, 3rd.—Went on to next camp of Baptiste's party and found them still there, (23) so decided to go on myself with Tom and Napoleon. Sent the others back for balance of supplies. Here our final cache was made. The course to-day was about west and followed a creek for greater part of the way, fair travelling. The camp is in a basin, with a creek running in from north north-west, and is distant about 10 miles from last camp. Napoleon, when I am away, does as he likes. If it had not been for his going off hunting, this party would have been at least four days ahead of us, this is a serious delay and upsets all my plans. Baptiste is A1, when away from the other breeds, but appears to be afraid of offending them, this is why I am going on ahead in his place. I will try to keep a day ahead.

Tuesday, 4th.—Left camp with Tom, Arnold and Napoleon and two sleighs and kept south-west course for about three miles, up steep hill, through small green pines until 1.30 when we had tea. Snow very deep all the way giving no footing to the dogs. From here, kept same course through good country, rising gently and covered sparsely with green pines for about two miles, then down gentle slope for a mile or two to a lake lying north north-west; and south, and south-east, through nice open country which should have fine feed. The lake is about one mile long by half a mile wide (fine place for detachment in summer, but no hay as far as could be seen). About half a mile west of this we struck a rocky valley which dropped very steeply for about a mile, then crossing creek, running at bottom, three times, we camped at 7.30 p.m. (24), in a valley, thickly wooded, running nearly east and west. Distance travelled eight to nine miles, but snow was so deep that even after being over the trail with eight pairs of snow-shoes the dogs sank to their bellies and it was a case of helping them all the time, general course west, south-west.

Wednesday, 5th.—Left camp at 10 a.m., and travelled about three-fourths of a mile when we had to make trail down slight incline to creek running about west, south-west (here another creek comes in from north or north-west). We crossed creek and followed blazed trail for about four miles. Mountains are getting much lower, most of them being wooded to summit. Snow from two to four feet deep and travelling very heavy. Lunch at 1.15 p.m., and left again at 1.45 and followed creek down. It varies from 50 to 60 yards wide, and is only from one to two feet deep, with good stony—not rocky—bottom. Trail follows right or west bank. About four miles from noon camp, creek turns south to south-south-east. We camped at 5.40 on left bank (25); good timber. If we had kept trail it would have been much slower travelling. Good feed in summer from appearances; snowing more or less all day. Course for first eight miles west-south-west and for last four or five about south by east. Distance 12 to 13 miles.

Creek is rapid and country falling quickly; weather quite mild; camping without any shelter.

Thursday, 6th.—As creek was running south-south-east I sent Napoleon and Tom on ahead to see if it turned west again, and sent Arnold back to look at an old blaze on river bank a short distance back. This appeared, he reported, to be an old hunting trail. Main party arrived about 2 p.m. They travelled to-day in one and three-fourths hour on our trail, a distance which took us four hours yesterday, breaking a trail. Baptiste and Joe went on the trail of Tom and Napoleon, and returned with them about 3.30 p.m. Had lunch and started at 4.20 p.m. on a good trail, made about nine miles and camped for night (26). After about three miles the creek had turned round the hills to west-south-west, and continued on about this course. Snowed mountains are visible back from the hills on each side of the creek. These hills are high, but covered to summit with pine. The trail runs chiefly on the left bank, but crosses sometimes. The banks of the creek

could in most cases be utilized for a trail by crossing and recrossing, which would save distance and could be easily done when water was low. Feed appears to be fairly good all along. A short time spent in surveying the last 20 miles would, no doubt, show an easier route for cart trail, but no other that I could find was practicable at this time of the year. Tom and Napoleon have gone on to break a trail for a few miles this evening. Mild night; distance to-day about nine miles; course south-east and then west-south-west.

Friday, 7th.—After proceeding about eight miles we came to cañon with steep rocky sides, very high and impassable. Went into camp (27) 200 yards above this and Napoleon went on over hill on east side to pick out trail for sleighs. I went back five miles to make trail better. Napoleon came back reporting that trail could be got and that creek came into a big river a short distance ahead, and two other creeks from north and north-west also came in. Tom and Joe arrived at camp. I had ordered them to come on to help to break trail as two of us could drive three trains on this route. The creek we are on runs south by west for about three miles from last camp, with flats same as yesterday on alternate sides, but in most places a trail could be got on left bank without much grading. From this on for last five miles a fairly easy trail could be got along same (left) bank. Snow about two feet deep on creek, but in bush much deeper. Last five miles, general direction, south-west and hills much lower and thickly timbered with fair sized pine; distance, eight miles.

Saturday, 8th.—Sent three men on to cut trail over hill and make camp on river and return in time to go on to-night. Fitzgerald and main party arrived at 12.30. After lunch we all walked over the hill to river and met Tom and Joe; they reported rapids preventing passage of river about one and one-half miles down; I went on to see these, remainder returning to camp (28). Tom, Joe and Baptiste brought on our sleighs. These rapids are about a mile long through narrow cañon with high rocky sides. We got trail over hill on left, or east side. A fork appears to come in from west or north-west a few miles above the junction of creek with this river, but it is not certain. I am sure now that this is not the summer trail, although a trail could be cut through, and expect to get another trail back from Graham to cache.

Sunday, 9th.—Made trail around rapids and returned to camp (28).

Monday, 10th.—Trail was cut over steep hill on east side of rapids and we struck a big river soon after getting on old creek; this runs north and south. Camped (29) about six miles from yesterday's camp; trail would be easy on east side.

Tuesday, 11th.—Arnold and Napoleon had gone on yesterday and broken trail about five miles. We left camp at daylight and travelled, with an interval of three-quarter hour for tea in middle of the day, until nearly dark, making between eighteen and twenty miles (30); snow heavy; general course of river nearly south; river varies from 100 to 200 yards wide and is full of islands, with big blocks of drift-wood in places. Flat bottom on both sides to hills which are getting much lower. We see the mountains away to the east; trail would be easy and I judge, feed good.

Wednesday, 12th.—Left at daylight and camped (31) an hour before dark; river widening, also valley, which is covered with dense forest of fair sized pines with here and there birch and poplar; distance travelled about sixteen miles; travelling heavy.

Thursday, 13th.—Left at daylight and about one mile down struck large river running in from north north-west. This is evidently main branch of the Finlay; doubtful whether "Graham" is up or down stream; think we are too far south, but going on information given by "Dick" we travelled down fourteen miles and camped (32).

Friday, 14th.—Napoleon thinks he recognizes the mountains near the mouth of the Parsnip River, in which case we are below Graham. I took the back trail, sending Joe ahead to stop Fitzgerald. We came up to him at noon at junction of creek with river, and travelled on up the Finlay until dark, making about 12 miles N.N.W. this afternoon (33).

Saturday, 15th.—Continued up stream 18 miles. Dog feed out to-night (34); very heavy travelling.

Sunday, 16th.—Continued up stream 16 miles, and fed dogs with bacon to-night (35). Nooned where there had been some buildings once (heard since that the company's post was here one winter).

Monday, 17th.—About one and a-half miles up river came to two old empty shacks and saw notice that G. W. Sibley's house was one mile further up. After a long search found this (a dug out) up a back water. No one there. He is evidently a trapper, and I left Tom to wait, if by chance he should return, and find out where Graham is. Travelled on until dark, making to-day about 12 miles (36). Same course as yesterday. Fed the last of the bacon to the dogs to-night.

Tuesday, 18th.—Travelled about four miles and struck an old trail filled in with snow, but hard bottom, and about two miles further on arrived at Graham, just around a bend of river. This post is very short of supplies; only has about 1,500 lbs. of flour and less than 200 lbs. bacon. No dog feed to be had. No Indians near. I learnt that I can get a much shorter cut to *câche*. The river we came down, and which runs into the Finlay, is the Ospica,—but there being no dog feed here I cannot send for it. Am told there are some lakes which have fish in them, about 20 miles south-west of here across the river, so determined to send men and dogs out to try fishing; borrowed some nets from Mr. Fox, the company's clerk here, and bought hooks and lines. Got what supplies I could here. On Monday (yesterday) I *câched* everything but provisions in order to lighten the loads, as dogs were getting weak.

Total distance actually travelled, Fort St. John to Fort Graham, 406 miles, deducting 28 miles travelled down and returning on Finlay River, 378 miles. Difference between route by river and that by land, direct between *câche* and Graham, about 79 miles, making distance St. John to Graham about 300 miles. For description of proper trail from camp 23 to Ospica, see diary 18th to 26th March, and from thence to Fort Graham see diary 13th July.

Wednesday, 19th.—Sent men and dogs, except one train, and Inkster to lake this morning, sending Thomas, a company's man, as guide. Tom returned this morning and I kept him also. Sent Napoleon and an Indian boy named Charlie to try and find a band of Indians supposed to be near the "Indionica" and get them to come in to see me. They are said to know the country between here and Sylvester.

Thursday and Friday, 20th and 21st.—Nothing to note. Two dogs returned from lakes. Got barley and buckwheat flour to feed the six dogs here.

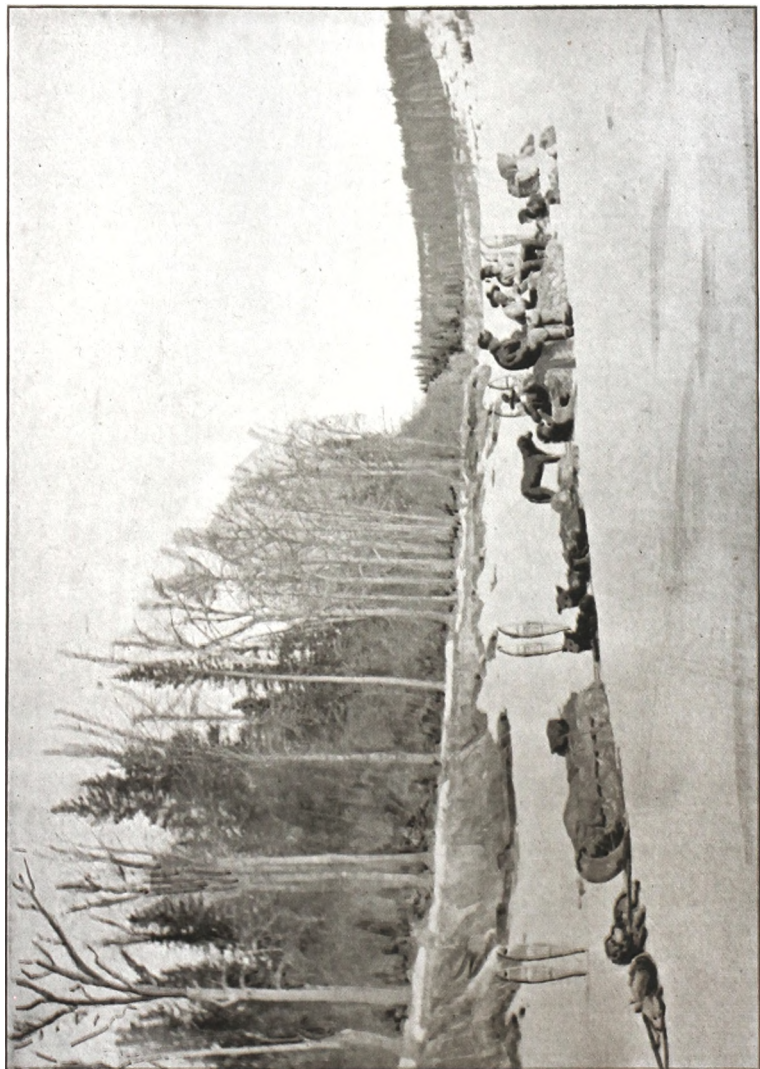
Saturday, 22nd.—Napoleon returned, having left the boy.

Monday, 24th.—Sent Napoleon out to hunt. Indian Charlie returned at noon. Had been without food for three days and had to turn back. Napoleon brought grub back with him, the boy only taking a bannock as he thought he was near Indian camp.

Tuesday, 25th.—Baptiste and Joe arrived for grub from camp. Fitzgerald reports only 17 fish caught so far, but it took them three days to get out to lakes, and they only got the fourth net down last night, so I hope for better luck yet.

Wednesday, 26th.—Sibley came to the post a few days since, and I hired him to-day to go with Charlie again to try and find Indians. Charlie thinks he can find them all right. Sent Tom and Joe with two trains to last *câche*, to bring up our things. Baptiste left for lake with provisions. It is impossible to get our *câche* down here until I can get a supply of dog feed, and dogs will have to be well fed up before they are fit for work. If I cannot get guide and dog-feed, the only plan I see is to go to McLeod Lake and thence to Stuart Lake, winter there and get pack horses and go on as soon as spring opens. Weather is all that can be desired, except that if it was cold the travelling would be much better. Monday, the 24th January, at noon it was 62° in the sun, and Saturday night 30° below zero. At daylight this morning when I was out, seeing the men away, it was like a spring morning.

Thursday, 27th.—Inkster and Napoleon making sleighs; fine day; 8° above zero last night; 40° above at noon to-day. Tom and Joe returned with *câche* left on "Finlay." I got eight dried salmon to-day from Sibley's shack.



GOING DOWN FINLAY RIVER EN ROUTE TO STEWART LAKE FROM FT. GRAHAM, APRIL 2ND, 1898.

Friday, 28th.—Sent Tom and Napoleon after moose to-day; Napoleon has just told me, he thinks he killed a moose he fired at last time he was out. Inkster working on sleighs; Joe repairing snowshoes; 2° below zero last night; 34° above to-day; slight snow storm to-day.

Saturday, 29th.—Working on sleighs and looking for suitable birch for snowshoes of which we require several new pairs; 2° below zero last night; 76° above to-day. Fox informs me that the average winter, really cold weather, only lasts about four to five days in November, and the same in January. The remainder of winter is mild and foggy; last November the coldest day was 44° below, and this month (January), 38° below zero. Fogs are prevalent; March is the best time for travelling, as there is then usually a heavy crust which carries like ice; horses he says would winter out here, but would have to be fed in the spring on account of this crust. This, I doubt, as snow is too deep. There are good open places to winter in along the foot of the mountains; about 50 tons of hay could, he says, be put up within six miles of here, and he thinks that with a little work in clearing the heads of some of the small creeks rising in swamps, these could be drained and a large quantity of fine hay be procured; most of the hay would have to be cut with scythes. He also states that "timothy" does well here, and thinks if sowed on the swamps would yield well; he showed me sample of seed obtained here.

Sunday, 30th.—Fine day, with heavy fall of snow for about 15 minutes in middle of the day. Zero last night; 86° above to-day in the sun.

Monday, 31st.—Lafferty and Baptiste arrived from lake; average catch of fish so far about 18. Tom and Napoleon arrived at 1 a.m.; the former had killed three moose (a cow and two young ones). Am sending out another net by Lafferty, any more made will be large meshes. Thomas arrived from lake at 6 p.m. Last night zero; to-day 38° above.

Tuesday, 1st February.—Lafferty, Baptiste and Thomas returned to lake this a.m., taking out another net. Sent Tom, Joe and Napoleon with two trains of dogs to bring in moose and hunt for more. Joe to cut up and dry the meat as well as possible whilst the other two hunted. Fox and I started another net with 2½-inch mesh. Last night 2° below zero; to-day 65° above.

Wednesday, 2nd.—Working on net and snowshoes. Last night 26° below.

Thursday, 3rd.—Sibley and Charlie returned without finding Indians. Charlie wanted to go on, but Sibley took all the grub and reported he thought Charlie said he was sick, and that it was not safe to go on. Charlie says if Thomas will go with him he will go again, and is sure he can find the camp. Working on net, &c. Snowing to-night. Last night 18° below; to-day 60° above.

Friday, 4th.—Dull day; working on net. Sent note to Constable Fitzgerald to-day by Sibley (who was going out to lake) to send in Thomas. I will send the latter and Charlie out after Indians. 2° below zero last night; 20° above to-day.

Saturday, 5th.—Tom, Joe and Napoleon returned but got no more moose. They brought in 453 pounds of meat and three hides. Only a few pounds of the meat partially dried. Tobin, Thomas and Arnold arrived from lake. Finished net to-night. Heavy fall of snow with cold wind all day. 2° below last night; 20° above to-day.

Sunday, 6th.—Getting outfit ready for men to start after Indians to-morrow. Slight snow all day. 2° below last night; 18° above to-day. Am sending Joe and dog train with Thomas and Charlie as far up the river as Sibley and Charlie went last time. This will save them the fatigue of carrying rations, &c., at least three days. Arnold stays here in Thomas's place so that Inkster can go on with snowshoes and sleighs.

Monday, 7th.—Above party left this a.m.; also Tom and Napoleon hunting. Finished "backing" the net. All ready now for sinkers and floats. 2° below last night; 60° above to-day. Fox commenced another net.

Tuesday, 8th.—Tobin and I left with one train of dogs for lake, taking flour, &c. Travelled from 9 a.m. until 5 p.m. without stopping, and camped in snow storm; hardly any trail; all snowed up. It took 50 minutes to haul the sleigh up one hill.

Wednesday, 9th.—Started at 9.30 a.m. and reached the fishing camp at 4 p.m. Only four fish caught to-day. These and bannocks were fed to the dogs. Snowed hard this p.m.

Thursday, 10th.—Snowed nearly all day, with high wind. Out of seven nets only seven fish were got to-day. Baptiste left for a lake to the west to get a trail over but broke through the ice and had to come back. Fine night.

Friday, 11th.—Returned to Graham to-day with Fitzgerald and brought in 16 dogs as there is no use hauling out flour to feed them. Dogs are very poor and useless for work until they have been well fed for a time. Met Sibley taking out letter to me from Fox saying an Indian had come in and he was keeping him until my return. As Indian (Pierre) speaks French, I sent Sibley on with message to Lafferty to send Baptiste in without delay. We arrived at 5.45 p.m. Very tired. Distance from camp is 25 miles.

Saturday, 12th.—Baptiste arrived at 9.15 a.m., having left during night. I made Pierre a present of tea, tobacco, pipes and ammunition, as he had none. Also sent some to two other men at his camp. Have arranged that they are to hunt for me and dry all the meat they kill. When they get four moose, word will be sent me and I will send for the meat and pay him one skin (75c.), for every four pounds dried meat; he tells me the fishing is better in the west lake, and camp will be moved there at once. Pierre will go to cache with us when we get sufficient dog feed, and show us the direct trail. Sharp morning.

Sunday, 13th.—Heavy snow storm last night and up to 1 p.m. to-day, 17 (seventeen) inches of loose snow fell on the level, this of course will settle down. Baptiste and Fitzgerald left this morning for the lake with three dogs on light sleigh, taking out some rations, &c. Pierre and two Indian boys left the same time for their camp. 12° above zero last night; 76° above zero to-day. Sent out two pairs new snowshoes to Lafferty and Tobin in place of theirs which are broken and useless. Feeding dogs on the moose meat. I had a long talk with Fitzgerald and Fox to-night, and can see no other plan, than as soon as we get cache down from the mountains (and this depends on our getting dog feed), to go to Stuart Lake. I can get fish there for the dogs, and either trade them for horses, of which there are a good many there, or leave them with the company for disposal and buy horses, get what supplies, if any are required, and start as early as the snow goes, picking up the rest of our supplies here en route. Pierre and two squaws who have been to Sylvester say the country is level and no mountains to cross and that from the pass we came through the nearest and in fact, only practical way is, via Graham.

Monday, 14th.—Sibley returned from lake. Joe, Tom and Napoleon returned, got nothing. Day fine. Working on snowshoes and sleighs, travelling in bush almost impossible, snow four feet deep. 16° below zero last night; 76° above zero to-day.

Tuesday, 15th.—Same work continued. Cloudy and cold; 12° above zero last night.

Wednesday, 16th.—Same work; made house for dogs. 26° below zero last night; 60° above to-day.

Thursday, 17th.—Same work. Fine, but cold; 36° below zero last night; 16° above to-day.

Friday, 18th.—Discharged Napoleon last night and paid him balance due him up to that date. As he had notified me in the mountains that he would not go beyond Graham, I refused to take him further, although he had changed his mind, and his pay ceases from yesterday. Also gave Tom and Joe their choice to go back from here and they elected to return. Discharged Inkster as I found out he intended to leave at Sylvester in any case. These four men went out hunting to-day and I will buy any meat they get. 16° below zero last night; 8° above to-day.

Saturday, 19th.—Thomas and Charlie returned to-night; 13 days out, did not find Indians. Report snow in bush over four feet deep in most places. Indians evidently short of food as they are constantly moving. 50° below zero last night; 10° above to-day.

I see nothing for it now but to go to Stuart Lake as it is impossible to go to Sylvester through such snow even if I got dog feed, as the dogs could not haul the loads.

Sunday, 20th.—Frank Lafferty and Baptiste arrived from lake with all the dogs. Too cold to fish; cloudy and snowing part of morning, three inches fell this a.m.; 16° below zero last night; 32° above to-day.

Monday, 21st.—Sibley and Inkster returned from hunting, got nothing and saw no tracks. Cold and cloudy, put some hooks in the river. 10° below zero last night; 66° above to-day.

Tuesday, 22nd.—Baptiste and Arnold left for lake this a.m., to bring in Tobin and Fitzgerald and some things cached there, as if weather gets milder and it is necessary, I will send out again. Heavy storm of fine, wet snow all day; 10° below zero last night; 32° above to-day.

Wednesday, 23rd.—Inkster and Sibley went off hunting. Baked bannocks for dogs. Thomas and Charlie returned from hunting, got nothing. Tom, Joe and Napoleon returned, got nothing, saw some tracks. Snow very soft and deep. Water again on the ice and travelling very heavy and unsafe. Cloudy, mild and damp; 8° above zero last night; 30° above to-day.

Thursday, 24th.—Men arrived from Lake Camp. 2° above zero last night; 38° above to-day.

Friday, 25th.—Pierre arrived this p.m., reported he had meat of four moose drying and one green carcase on trail. He returns in the morning with party going for meat and hunts for seven or eight days more after reaching his camp. If he kills more moose he will send in word and if not, will come in himself and go on to cache with us to guide us over direct route. 6° below zero last night; 66° above to-day.

Saturday, 26th.—Pierre left with following party this a.m. for meat:—Fitzgerald, Baptiste, Tom and Joe, four sleighs and all the dogs. More rain than snow to-day; regular sleet; 6° above last night, 66° above to-day.

Sunday, 27th.—Very mild, thawing nearly all day, but colder at night; 14° above zero last night, 100° above to-day.

Monday, 28th.—Cloudy. 16° below zero last night; 46° above to-day.

Tuesday, 1st March.—William and Poole (Indians), came in to-day for supplies. I had a long talk with them. They say trail to Manson Creek is fairly good, and not much cutting out required; few hills and no swamps. Poole has been more than once to Sylvester Landing. He will return here by 5th June and will go as guide. None of the rivers can be forded except in the fall when water is low. These Indians are to hunt for me for two weeks and dry any meat they get. 26° above zero last night; 50° above to-day. Lafferty and Tobin plotting maps of our route to here.

Wednesday, 2nd.—Repairing harness, &c. Zero last night; 67° above to-day. Cloudy.

Thursday, 3rd.—Went about three miles up river. Ice fairly good; fair crust on snow. Repairing harness. 6° below zero last night; 76° above to-day.

Friday, 4th.—Thomas and Charlie returned this a.m., having killed a moose about fourteen miles away in the mountains. Working on maps. Cool and cloudy. Fitzgerald and party returned from Pierre's camp with 296 pounds dried and 456 pounds green meat, five tongues and four noses. 6° below zero last night; 76° above to-day.

Saturday, 5th.—Dull and cloudy. Finishing new, and repairing old sleighs and sleigh covers. Fox, Lafferty and I walked out about three miles north to look at place where a detachment could be placed. There is a fairly open space of about 100 acres, which has been burnt over. Lots of good dry wood and according to Fox fair feed for five or six horses in summer. There is, he reports, good hay within five miles of this, and good country to it. A creek and good spring are on the 100 acres. To the east of this open space is a nice level bench which would make a good site for barracks if not too much exposed to the wind. This bench is about 30 feet above the level of open ground; behind this again the mountains rise

and to the west the valley goes down to the river. 4° below zero last night; 74° above to-day.

Sunday, 6th.—Fine day. Decided to send for c  che to-morrow and go myself with Constable Fitzgerald 35 miles up river to get a c  che of dried meat. Charlie and Thomas went out after a moose they wounded yesterday. They returned this p.m. Moose in attempting to cross river broke through the ice and went under. 6° below zero last night; 96° above to-day.

Monday, 7th.—Frank, Baptiste and Thomas, with three sleighs went to c  che to bring it down to Ospica. They have all the meat—16 days feed—Tom, Joe, and Napoleon, go with them to c  che and return to Ospica, where I meet them and pay off the two former, and they then return across mountains. About four miles up the river I met the owner of the c  che, who said they had been starving and had used the meat—(he had previous to our arrival, told Fox he could take the meat and I had agreed to buy it from the latter). I returned to Graham. The Indian was accompanied by four boys—he says his camp is starving, no moose to be got and three men left in camp hardly able to move. They came in for grub. Tobin working on map Edmonton to St. John, made from my notes and rough sketches taken en route. 6° below last night; 76° above to-day.

Tuesday, 8th.—Left this a.m. with my train, and Fitzgerald to bring in moose killed on 4th instant. Fox and an Indian boy went with us. Trail very bad—one succession of steep climbs, and dogs sinking to their bellies at every step. It took us hard work to make eight miles in seven and three-quarter hours steady travelling. Expecting to get to the meat that night, as Thomas told us it was only fourteen miles and a good trail, we took no dog feed. When the moon rose about 10.30 p.m. Constable Fitzgerald and the boy started to get some meat for the dogs and returned at 4.15 a.m. packing some back. The round trip was about twelve miles. Constable Fitzgerald volunteered for this, as he does for any hard work which is to be done.

Wednesday, 9th.—Left camp late (10 a.m.), leaving the boy behind and arrived at the Moose C  che at 1 p.m.—three hours with empty sleighs—got meat and fed intestines to the dogs. A wolverine had got into the c  che and taken some ribs, but had not spoilt any of the remainder. Slight fall of snow. After boiling a kettle of tea we left again at 3 p.m. and reached camp at 6 p.m. The trail was much better returning as we had only two bad hills to climb.

Thursday, 10th.—Left camp at 8.15 a.m. and arrived at Graham at 5 p.m.—trail very soft. The hills are very bad and some of them the dogs can hardly get up even without a sleigh—These we just have to haul up ourselves foot by foot, and with no footing, and sinking to the waist, even with snowshoes on, it is killing work. Snow is four feet deep and in many places between five and six feet. Trail is very winding and the driver has to be constantly on the watch to guide the sleigh around stumps and trees. About 7 p.m. there was a heavy shower of rain, but the night was clear and fine. Charlie Hunter and Pierre came in—they have killed three moose and the meat is being dried.

Friday, 11th.—Hired Pierre to go across to Ospica with me to meet party which had gone to c  che.

Saturday, 12th.—Left this a.m. with Fitzgerald, Tobin and Pierre and three sleighs—travelled about twenty-one miles down the river and struck across for the Ospica—camped on the top of the hill about one and a half miles from river. Distance twenty-two and a half or twenty-three miles.

Sunday, 13th.—Travelled through fairly good country to within three miles of Ospica at east end of a lake about two miles long. We crossed one deep creek with steep approaches—course south-south-east.

Monday, 14th.—Struck down very steep banks to Ospica, up which we travelled about twenty miles—sun and wind hard on the eyes—I got a touch of snow blindness.

Tuesday, 15th.—Left camp and travelled about eight miles passing the rapids and camping at creek about one-half mile below first ca  n at old camp where we expected to meet first party returning with loads from c  che—I had to bandage my eyes and ride on one of the sleighs.

Wednesday, 16th.—As Pierre told me he could get a much better, and more direct, trail from above the cañon to Fort Graham, I sent him on with a note to Lafferty instructing him to camp where he was until my arrival. Shortly after Lafferty arrived in camp and told me his last night's camp was about five miles up the creek. We went on and camped with his party at their last night's camp. They had brought down about 300 pounds on each sleigh. Lafferty reported that Napoleon had killed two moose on trail to cache. We cached the three loads here.

Thursday, 17th.—Left this a.m. with six sleighs for cache, following up creek in a north-east direction and moving where moose meat was, taking on one night's feed (meat) for the dogs and making cache to-night.

Friday, 18th.—Left camp this a.m. with about 225 pounds on each sleigh, and took loads to top of very steep hill (divide) and returned to cache for balance, taking on the whole as far as Moose Cache, where we camped for the night. Leaving the cache (original) the trail goes nearly west about 300 yards, then turns sharp to the left and up a very steep pitch and through a sort of dry cañon (small), thence south-south-west over a fairly steep mountain (but easy going) for about one and one-half miles; thence through a widening valley about 50 yards wide and dotted with green pine; then about three-quarters mile easy descent on to a nice piece of clear land about one mile across; then a gradual descent through mountain pass with creek in it for about two and one-half miles, where the pass turns nearly west. The trail continues along the creek through burnt pines. From appearances feed should be good in summer and trail easy. The open space alluded to above and the sort of basin in which cache was, should be good places for a summer detachment. We camped at 6 p.m.; distance from cache about nine and one-half miles. About one mile before this camp was reached we passed a small cañon, through which a pack trail could, I think, be got, but a cart trail would have to be cut around over the hill, which, however, ought to be easy and only a short distance. It is an easy trail to follow as it is next to impossible to get out of the valley unless done purposely.

Saturday, 19th.—Heavy snowstorm with high wind until noon, when it cleared somewhat. Repaired harness and snowshoes in the morning. In the afternoon sent part of the supplies to our next camp, as we could not take all these and moose meat in one trip.

Sunday, 20th.—Left camp in snowstorm with very cold north-east wind at 8.30 a.m. Trail leads south south-west for about six miles through valley covered with burnt pine; valley about 200 yards wide; then one mile nearly south and one and one-half west south-west. We camped for noon at foot of hill, where we leave the valley for the Ospica and Graham. Good easy country to make cart trail through. Snow very deep. Sent Baptiste, Thomas and Pierre over to Ospica to break a trail and make a cache, as it will be impossible to take all our supplies over to Graham with the dogs, and we shall have to come for them on our return from Stuart Lake. Baptiste returned to-night.

Monday, 21st.—Thomas and Pierre left the Ospica, the latter to go through with letter to Fox to send him with Arnold on with two sleighs and the best dogs, to bring in the dried meat from his camp, Thomas to return after first night's camp. Sent four sleighs with light loads to Ospica, the men to finish the cache; remained in camp myself. Very cold last night. Men returned at 8.15 p.m.

Tuesday, 22nd.—Not so cold last night. Sent four sleighs to Ospica, men to finish cache not completed yesterday. Thomas arrived at camp at 10.15 a.m.; reports trail as far as he went good. Dogs got into temporary cache and destroyed one bag of flour; fed remainder to them. Cloudy all day with high wind. Cooked sufficient bannocks to last us three days, so that we can make a late camp to-morrow night. A great deal of timber through the Herchmer Pass has been burnt.

Wednesday, 23rd.—Very high wind, with blinding snowstorm until noon; impossible to travel. Left at 1 p.m., and camped on the west side of the Ospica. Distance, about 8 miles; course, $\frac{1}{2}$ mile W., then N.N.W. Easy pack trail, which crosses a creek with steep approaches, about three miles from camp; but quite practical for pack trail, and with a little grading would do for a cart trail. The

Ospica where we crossed is about 175 yards wide, and from the appearance of the banks would be shallow, except at high water (by report it is fordable except in June). After reaching the Ospica the land is fairly open (on west side of river), and is said to be a favourite haunt of grizzlies. The trail crosses the river at right angles, then follows up the west bank about 300 yards, and strikes out west for Graham (or *B.L.O.* as it is called on this side of the mountains).

Thursday, 24th.—Made about 12 miles, the first seven of which were up a steady quick rise, following the south side of creek; very heavy trail for dogs with five feet of snow actual measurement. Last five miles good, gentle descent; trail skirts north side of two small lakes. These five miles are through comparatively open country, with high mountains on each side, and there should be good feed. First two miles to-day ran nearly west, then five miles south south-west, then four miles south by west, and then one mile bending west to camp. The mountains through which we are now passing are known on the maps as the Wolverine Mountains.

Friday, 25th.—Left camp at 8.15 a.m., and continued down valley in a south-westerly direction, following the north side of creek; travelling rather rough, but would be easy for horses. Following the creek for about 10 miles, the trail rises on to a bench, along which we went for about four miles, then descended to the creek bottom, and a mile further on were confronted by a steep hill about 200 yards long, up which it took four hours of hard work to haul five sleighs. We camped at the top at 9.25 p.m. A cart trail could be got up here by keeping more off to the left and zigzagging up. Course, south-west for six miles, then west, then south-west.

Saturday, 26th.—Left camp at 8.30 a.m., and followed up the gully, climbing a fairly gentle rise, which brought us to the top of the creek bank. Our course now lay south of west, and we had several steepish descents to a flat which skirts the Finlay. This is wooded, but fairly easy for travelling, and would be good for a pack or cart trail. We continued on, descending from bench to bench, arriving at Davie's Creek at 5.25 p.m. Here we made tea, and then proceeded about one and a half miles down the creek to the Finlay, arriving at *B.L.O.* at 9.40 p.m. Coming down a very steep slope to above creek, the bow of one of the sleighs was broken—it had been split before—and it had to be left behind. The pack trail from here (Davie's Creek) to *B.L.O.* would lead up east bank of the Finlay. A fuller report of this trail and nature of the country can be given on our return from Stuart Lake with horses.

Sunday 27th.—Boy arrived from Pierre's camp with a note from Arnold, stating that he had sprained his leg, and asking for two more sleighs to be sent out for meat. Shot three dogs that were useless, and gave away three more, as we do not now require them, and cannot spare feed for them.

Monday, 28th.—Lafferty, Thomas and an Indian boy left for Pierre's camp with two sleighs for meat. Baptiste went down to river to creek, and returned at 3 p.m. with broken sleigh and load. Last night and to-day fed rice to the dogs; no meat left. 6° below last night; 80° above to-day.

Tuesday, 29th.—Arnold returned with sleigh and 80 pounds meat at 6.30 p.m. Pierre and Charlie Hunter arrived at 9 p.m. Lafferty and Thomas with two sleighs and 320 pounds meat, arrived at 11.30 p.m. Constable Fitzgerald's right hand began to swell badly on night of 23rd instant, and he has been unable to use it since. On arriving here on the 26th it was very painful and much swollen, the middle finger especially, swelling extended over the whole hand and wrist. It has been continually poulticed ever since and is drawing to a head. I think it was caused by heavy pulling on ropes, hauling sleighs up hills, as Fox had the same thing in a mild way on his return with us from bringing in the moose. Fitzgerald will not be able to go on to Stuart Lake as it would be impossible for him to travel or be attended to on the trail, and I cannot wait for him. He will, however, be of use here looking after things until my return. I have engaged Arnold to remain here until Fitzgerald is better, as I have got Thomas (Fox's man) to go as guide to Stuart Lake. I have lent four dogs to Indians and four to Fox, they to feed and

use them until they are required by the police when they will all be delivered at Fort Graham. Tobin cut his left hand badly on knuckle of first finger on 16th instant, and the strain of hauling the sleighs up the hills coming from Ospica caused it to inflame and swell. It has been poulticed since arrival here and is now healing rapidly. Zero last night; 86° above to-day.

Wednesday, 30th.—Fixing up things generally and getting ready to start for Stuart Lake on Friday morning. Used two of the moose sleeping bags in making mocassins and for snowshoes and repairing harness since arrival here, and sold the other two to the company for \$8 each. In place of sleeping bags I have purchased two ground hog robes at seven and eight skins. These do instead of waterproof sheets which cannot be procured. I leave our blankets behind taking only our rabbit robes.

Thursday, 31st.—Working on sleighs, stroud shoes for dogs, fixing up kits, &c., to start for Stuart Lake to-morrow. 24° above last night; 86° above to-day.

Friday, 1st April.—Left Graham soon after daylight with Lafferty, Tobin, Baptiste and Thomas and four dog teams. I have hired the latter at \$40 per month as guide to Stuart Lake as he knows the rivers well and they are dangerous to any one not familiar with them. We arrived at McLeod Lake on the tenth day about 3.30 p.m. The travelling was fairly good in early morning, and for the first three days started at daylight and made three marches of three hours each. Then I found that the dogs would not stand it, so made two marches from 5 to 9 a.m., and 11 to 1 p.m., when I camped. The Finlay, Parsnip and McLeod Rivers were open in many places, and frequent portages had to be made. My snow blindness came on again, and the 5th and 6th days I had to bandage my eyes and ride on a sleigh the most of the time. I had also sprained my left instep, and it was much swollen and very painful. The travelling then became bad and I took to walking again, and was almost all right on arriving at McLeod Lake. Tobin got a gathering on his right hand, which swelled considerably and had to be poulticed. This and the cut on his left hand are nearly well now (11th April).

Monday, 11th.—No dog feed at McLeod Lake, but we put nets in the lake and got a few fish, and also tried spearing by torchlight, but altogether only got enough for one good feed for the four teams. I fed them flour, grease and turnips boiled together. Lafferty's team was completely played out. As soon as the dogs are a little better, I will start for Stuart Lake, 90 miles; a bad trail, according to all accounts. Working on maps, &c.

Friday, 15th.—Left for Stuart Lake at 4 a.m., and arrived there at 8.30 a.m., on the 19th. We travelled from 4 to 9 a.m. and 11 to 1 p.m. each day. One sleigh was worn out and had to be left on the way; travelling good on the crust in the morning, but when the sun got strong it was very hard on the dogs; I got snow blind again but managed to get along; I found on arrival here it would be necessary to go to Quesnelle for various things required which cannot be procured here. Mr. Camsell, the manager of the Hudson's Bay Company here, is going down by canoe to-morrow and I go with him and will be back some time before it will be time to start on account of feed; I can buy horses here for about \$40 each, and will leave the dogs here until orders regarding them are received; in the meantime pack outfits which I can get from the company second hand, will be put in thorough repair, and everything got ready for our start as soon as feed is good enough. I leave Lafferty in charge here during my absence.

Wednesday, 20th.—Left with Mr. Camsell, Hudson's Bay Company, for Quesnelle, by canoe; arrived at Fort George on Fraser River, on Friday, 22nd. The cañon is blocked with ice; so lay over until Sunday the 24th, when we made fifteen miles to cañon.

Sunday, 24th.—Only made fifteen miles and found cañon still impassable.

Monday, 25th.—Portaged the cañon and proceeded, arriving at Quesnelle the same evening; distance from St. George is ninety miles; the Cottonwood cañon was not bad. Remained at Quesnelle until 30th April, awaiting instructions from the commissioner to whom I had telegraphed on my arrival. On receipt of these I left for Stuart Lake arriving there on 11th May. Supplies purchased at Quesnelle

arrived 19th May, but I was delayed until the 30th by difficulty in procuring horses and waiting for feed to improve on trail to Manson Creek.

May 30th.—Left Stewart Lake at 1.30 p.m. with six men, six saddle and nine pack horses, with ten aparajos, and camped on the big prairie, 18 miles. I could not get the full number of pack horses—they are very scarce, and very few to suit me.

May 31st.—Lay in camp to restuff aparajos and lengthen lash ropes which were found to be too short. Mosquitos very bad. Trail from Stuart Lake is one succession of bad mud holes.

June 1st.—Left for Manson Creek where we arrived on the 8th June at 1 p.m. On the afternoon of the 1st we reached "Poison Creek" and forded about 75 yards above the regular crossing, at which place it was not fordable.

June 4th.—We arrived at Nation River at 4.30 p.m. Water very high and regular crossing dangerous for swimming horses on account of bad cañon just below it. Fed horses some grain, crossed the packs in a very ricketty old dug-out, and then taking horses about 400 yards higher up the lake out of which river flows, crossed them safely to night. No feed to speak of on north side.

June 5th. Fed some grain and pulled on about two miles, where we struck some fair feed and camped for the day (Sunday). Horses tried to break back along the trail during the night, but I heard them and got them headed back.

June 8th.—On arriving at Manson Creek, camped at Col. Wright's claim (43rd Mining and Milling Co.), and sent the horses about two miles up Mill Creek, where there is good feed. The trail from Stuart Lake is almost one succession of climbing up and down hill and is very rocky and hard on horses feet and legs—no end of mud holes, which at one time have been bridged, but bridges have rotted away. Feed generally good, it will be especially so next month, and lots of good water. Snow still lying on the mountains. Mr. Cotton, brother of Supt. Cotton, is engineer of the 43rd, and showed me every hospitality. I decided to give horses a rest in good feed whilst we got aparajos fixed up and pads made for them, &c. Mr. Valteau, the Gold Commissioner and Stipendiary Magistrate, was absent at "Tom Creek" settling a dispute. Indians have been here twice from B. L. O., but have returned—stated that they had blazed a trail for me. The 43rd has what is expected to be a good claim. They have a compact saw-mill (water power), blacksmith's forge and all necessary outfit, and have about three miles of flume and ditch completed on west side of creek. On the east side Capt. Black is managing another good claim. There is great difficulty in getting in supplies. One of my best pack horses staked himself badly under the off fore leg and will be unfit for work for some time. I feared at first that I could not take him on. Purchased three pack horses and saddles, &c., from two miners here for \$120. Two are very good horses, the other not so good. I will get horses shod at the old village on Monday. I had to pay cash for these horses and borrowed it from Lafferty, giving him an order. Distance from Stuart Lake, 150 long miles.

June 13th.—Capt. Black, of the Omenica Consolidated Hydrant Mining Co., arrived on the 10th June. Came down this morning to old village and blacksmith started shoeing horses. Messrs. Rathbone and George arrived to inspect mine with a view to purchase by a syndicate for \$130,000. Purchased two good horses with saddles, blankets, ropes and hobbles for \$90 from Rathbone. Eight of our dogs followed them from Stuart Lake. Donald Prince, a half-breed who is with them, returns in a few days and will take them back.

June 14th.—Horses shod by noon to-day, and started camping on Wolverine Creek about nine miles distant. First 2½ miles to Slate Creek good trail—then over mountain on new trail very steep—with muskegs and down timber to Wolverine Creek.

June 15th.—Left at 7 a.m. and travelled until 11.20 up and down mountains and lots of muskeg. Made 3½ hours in the afternoon; same style of country, but heavy down timber; a great deal of chopping to clear trail. Distance about 16 miles. Heavy rain all afternoon and evening.

June 16th.—Left at 7 a.m. one man ahead to chop trail; very heavy down timber; sent two more men ahead to chop. Steep mountains with muskegs between; camped for the day on creek. Distance eight or nine miles. The latter part was one continual chopping; sent three men in afternoon to cut out trail up almost perpendicular mountain; returned at 6.30 p.m.

June 17th.—Sent two men to continue cutting trail for about three miles up same mountain. I had sent horses up about $\frac{1}{2}$ mile for feed last night. Horses brought in at 9.30; left at 11 a.m. After about three miles of the hardest climbing we reached fairly open country, high up, and travelled this for over a mile. High mountains with lots of snow just across the gorge through which the last creek runs. Nothing but snow-topped mountains and the roughest country in sight. On reaching the top of mountain we went down through easy open country—inclined to muskeg, owing to springs and small streams of melted snow, to a nice creek with fair feed—then up graduated rise to near the summit of another range about $2\frac{1}{2}$ miles from summit of high mountain and about $6\frac{1}{2}$ from last camp. Camped at 3.30 p.m. Though short, it was a very hard day on men and horses. The climb from last night's camp was, for three miles or more, the hardest work with pack horses since leaving Edmonton. Snow lies around us and the air is decidedly chilly. Distance about $6\frac{1}{2}$ miles.

June 18th.—Left at 8 a.m. and travelled without stopping until 6.30 p.m. The first four or five miles fairly good going over the summit and down north side of mountain. We were far above timber limit and frequently crossed large patches of snow. Very little grass—chiefly moss—rather stoney and wet in places, then another rise of about one mile to heavy green timber with lots of down timber. Here blazes entirely ceased at the head of a precipitous gulch and as there had been a thick fog all morning we could see nothing of the lay of the country. At this point the fog turned into a drenching rain which lasted into the night. We cut trail down gulch to a large creek with heavy fall to the E. and N.E. and thence up the other side to an old Indian trail leading in right direction. Followed this over the mountain and finding no better feed camped in standing dry timber at 6.30 p.m. Down timber very thick and hardly any feed. The cutting to-day was very heavy. Distance about 13 miles.

June 19th.—Heavy rain in morning and heavy showers frequently during day. Lay over, although but little feed as horses were tired out; looked up horses three times during day.

June 20th.—Only 12 horses to be found, sent on 11 of these with three men to cut trail and followed myself with Lafferty with seven more at 2.30 p.m. Baptiste remained to look for missing horses. Travelled through thick timber with muskegs arriving at chain of lakes with good feed at 6.30 p.m. Advance party was just ahead of us, having taken ten hours to cut about seven miles of trail. Baptiste arrived with missing horse about half an hour later. Slight shower this p.m. No feed between camps; hard day on horses.

June 21st.—Sent three men and saddle horses to cut trail to Omenica, which I thought must be about eight miles. Fine day. Returned at 6.30 p.m., having cut about four miles; horses remained in camp; employed on restuffing apparatus, &c.

June 22nd.—Sent on two men to continue trail and left at 8.45 a.m. arriving at river at 1.35 p.m. Distance nine to ten miles. Omenica in flood. A great deal of to-day's march was through newly burned timber—saw two paddles on opposite bank about 500 yards up—sent horses to small swamp about $\frac{3}{4}$ of a mile back. Made raft, crossed just below the Black Cañon and found canoe on north bank. Very bad crossing for horses on account of swiftness of current and drift piles on opposite banks. Two other channels to cross horses before reaching main land. These could be avoided if we could get good landing, but this is impossible on account of the drift piles. Green timber on other side. Heavy rain this p.m.

June 23rd.—River down about six inches. Crossed supplies and pack outfit this a.m. The cañon mentioned is very bad having several sharp turns; at one place, as far up as I could see, it narrowed to about 30 yards—river at crossing about 120 yards wide. Nearly lost two horses, they were carried under four logs in succession

but came up all right. Got them all safely crossed after much difficulty by 7 p.m. Had to cut a trail for them across an island between river and sloughs or back waters. Kept camp on south side to-night. Rained nearly all day.

June 24th.—Moved camp to north side this a.m.; horses O. K. Sent canoe with two men to the Finlay to find the best crossing and leave the canoe then returning here to-morrow, as I did not know where to strike the Finlay for best crossing. It will only take about one and a half hour to go down the Omenica and I think the crossing is about eight miles above mouth of that river. Heavy rain all day.

June 25th.—Heavy rain all night and most of to-day; river down about eighteen inches since we arrived. Went in direction of Finlay crossing, about four miles, fairly good travelling (for this country). Men returned from Finlay at 5 p.m. report country very bad, much cutting to do and some bad muskegs, some good travelling.

June 26th.—Horses much scattered and did not get away until 8.10 a.m. although we were up at 4.30 a.m. First three-quarter mile heavy climbing after that good going nearly all the way through Jack pine—burned timber and some heavy green standing—very little cutting for about six miles; then we struck heavy green timber with down timber in it. Too much cutting to get through, so I skirted it to the east for a half mile and then went through good fair travelling on rise to east of muskeg. Camped for one and a half hour at noon and sent two men ahead in afternoon; they kept ahead to the river when we arrived at 5.35 p.m. Steep descent from beach to river flat which is soft. River high and current about three miles an hour. Banks soft mud and no bottom; laid brush to get horses through to water. They would not swim it, and we had to take them over with canoe two at a time. Crossed 13 and most of the supplies, &c., by 9.55 p.m. Day fine. Distance about 12 miles.

June 27th.—Reveillee 4 a.m. Baptiste went after one horse which was missing last night and returned with him at 10.30. Sent two men on to cut trail this a.m.; they returned at 10 a.m. Crossed remainder of horses and outfit, had dinner and left at 1.15 p.m. Morning fine but the bull dogs and black flies very bad. Horses nearly crazy; made remedies. When half through packing a heavy thunder storm came on and wet us through in about three minutes. After about two hours of fairly good going we struck a big muskeg covered with down timber lying in every direction and had to bear west, then south-west and finally camped in thick down burned timber at 5 p.m., about two miles from last night's camp, having travelled almost in a circle. Heavy rain. Fair feed along edge of muskeg but flies very bad.

June 28th.—Reveillee 4.30. Sent three men ahead at 7 a.m. to locate and cut trail and remained in camp. Rain commenced at 6.45 a.m. cleared about noon and turned hot. Flies worse than I ever saw them. Men returned at 8 p.m. having cut about seven miles of trail. It is not desirable to go on as I know nothing of the country, whether there is feed or water.

June 29th.—Flies so bad horses would hardly stand to be packed. Bad travelling with trail winding and muskegs for about 4 miles, then fairly good through fresh burned timber along first bench above river, then through small poplar and thick brush. I arrived at end of cutting with one man and four pack horses at 11.05 a.m., found a fair camping place with sufficient feed and water for horses. The rest of the train got in from 12.35 to 1.05 p.m., horses simply covered with bulldogs. These are different from any I have seen in the North-west Territories being about one inch long with yellow bodies. They are more like bees. Went into camp and sent two men on to blaze and cut trail this afternoon, it is slow work travelling in this way, but I can see no way of bettering things through such a country. We should strike a bench with good going very soon. Distance seven miles.

June 30th.—The two men returned at 7 p.m., last night, having cut about three miles. Sent two men ahead this a.m., and left with horses at 11 a.m. and overtook choppers at 1.30 p.m. bridging a small creek, bad hole unless filled in, as although only six or seven feet wide it has soft yielding banks at bottom of a coulée. Went into camp on north side and sent two men on as before after dinner. The horses

can travel in three or four hours or less, as much as the men cut in a day. Bulldogs and other flies in myriads; horses will not feed in day time, only at night when the flies go down. Distance about seven miles, half of which was heavy down timber, the rest fairly easy going. Men returned at 8 p.m.

July 1st.—Thomas Hunter and family (Indians from B.L.O.) arrived at camp at 6 a.m., said it would take us three days to get to a place where there was a trail; tried to get him to go with us, but he would not. Sent on two men to cut trail and overlook them at 1.15 p.m. Went into camp and sent two men ahead with provisions for the night. Travelling bad. Some muskeg and three small creeks, but have to be bridged as bottom bad. Some heavy cutting. Trail cut along first bench above river; sometimes it has to make a detour to the E. away from river but usually going is worse further back than on this ridge.

July 2nd.—Caught up to choppers at 1.50 p.m. They went on after lunch as before and we camped. Made about seven miles through the roughest imaginable country. One mile only was fairly easy through poplar scrub with but little down timber. Just as we caught up to choppers we came through some very heavy down timber along a creek. Tobin got a bad blow in the face from a dry stick which caught on a saddle; think the socket of right eye is fractured; he is badly shaken up.

July 3rd.—Travelled between eight and nine miles through country similar to previous days and camped at 2 p.m. Overtook choppers at 1.40. Trail winding.

July 4th.—Heavy rain last night and up to about 11 a.m. when it cleared a little, and by 2 p.m. was a fine day, though some showers. Cool breeze and few flies. Lost one horse this a.m. and hunted until 1 p.m. for him without success, and went on, trail very bad, and horses badly scratched about legs from climbing over big logs. Overtook choppers at 3 p.m. Made about five miles. Sent Baptiste back to look for horse, and two men ahead to cut trail. Tobin better; cheek does not pain him much.

July 5th.—Baptiste returned with missing horse at 1 p.m. very tired and hungry; had hardly any sleep last night. He had dinner and a rest and we got horses in and packed and left at 4.30 p.m. Had some trouble to find all the horses although they were rounded up at noon. Two men went ahead at 6.30 a.m. Overtook them at creek at 7 p.m. Thus doing in 2½ hours, what it took 1½ days to cut through. Distance about six miles.

July 6th.—Sent three men on at 5 a.m., they returned at 7.15, having got our winter trail to cache. Had breakfast, got horses in and packed and left at 9 a.m. and we went on until 5 p.m., as packs are light and horses have been doing so little. We crossed three creeks, bridging two of them roughly, and making a good 18 miles; fine travelling all day; camped on E. side of creek, no name, and after supper and dinner combined, cut approaches to it through very heavy fallen timber; travelled on winter trail about two hours.

July 7th.—Sent three men to cut trail at 5.30 a.m. They returned at 7.15 a.m. and reported having struck good going up towards pass through which our trail (from cache) in March passed; got horses in and started at 9 a.m. Travelled north-east through small jackpine, then north along muskeg for about three miles when we struck our old trail at 8 from cache, and the one followed by the pack trains which have come through. Passed one camp of pack oxen about six miles east of B. L. O. Found several parties waiting at B. L. O., where we arrived at 2 p.m. Others are on ahead up river.

July 8th.—Sent party with 11 pack horses to cache for supplies and remained here to settle accounts, &c. Have engaged Poole (Indian) as guide to Sylvester, at 50 skins per month, with promise to make it 70 skins if he gives satisfaction, and to allow him time for returning. I had partly arranged with him before leaving for Stuart Lake, but he would not give a definite reply. Fine hay meadows about five or six miles down river from here. Three of the horses left behind got into a creek close to house this a.m., the banks and bottom are quicksand. If it had not been for the assistance of seven or eight men with ropes they would have been lost.

July 13th.—The men returned from *câche* at noon to-day, and Constable Fitzgerald reports that it has been plundered of more than half its contents.

I instructed Lafferty and Fitzgerald to give me report on the trail used by the pack trains from *câche* to Graham. It follows, except for a short distance, the trail made by us when returning in March last. The following is the report:—

"From *câche* the trail followed up west bank of *Ospica* for one mile through heavy bush, containing good feed. Here it meets another trail from another crossing of the river. The lower crossing at the *câche* is at present fordable about three feet; the upper crossing is about a foot deeper. The trail takes a course about south south-west, and half a mile from the river ascends a very steep hill, about 250 feet high. Continuing in the same direction for about seven miles up and down some very bad hills with a creek always on the left and a mountain rising to right. Five miles from the river there is a small patch of feed extending up the mountain. Seven miles from the river the summit is reached, and the trail passes through very soft and marshy country, which is a nest of mudholes. (I do not think there would be much work required to fill these in, a plough and scraper could be used and the work is not heavy). These mudholes and the hills passed would require a great deal of grading and corduroying before it could be made into a cart trail. This marshy country continues for three miles and then the trail passes to the right of two small lakes, each about one-quarter of a mile long and close together. The passing of these lakes is difficult because of the steep sides. The trail crosses to the left side of the valley and the mudholes continue. There is fair feed in all this valley, but much traffic would soon exhaust it. For three miles from the last the course remains the same, then turns about, slightly more west. About 12 miles from the lakes a creek comes in from the east, 200 yards up this from the trail there is excellent feed. The trail keeps occasionally on the side hills and occasionally in the bottom, but in the bottom there are numerous mudholes. Timber is handy and these could easily be bridged with poles and earth on top. After three miles from this feed, the trail turns sharply west north-west on to a bench and up another valley for three-quarters of a mile and then south for one-half mile and south-west for one mile and crosses a creek. The descent to this creek is by a series of three steps—the last two so steep that they would require a great deal of grading for a cart trail. These two steps are not high and a grade can easily be cut either in line or zigzag; the ground is loose gravel. From here the trail takes a course west south-west and west rising from the creek on the bench again and continuing for seven miles through small poplar and jack pines. One mile from the creek the trail passes on the north edge of a muskeg through a little feed. At this point, five miles from the last creek, the trail crosses a kind of swamp with some good feed and then continues for four miles through large burned timber to Davy's Creek. The descent from the bench to the creek could easily be graded. The creek flat has several mudholes and is full of heavy fallen timber. These mudholes do not amount to anything and the fallen timber can be cut through and cleared in a few hours. Davy's Creek would be fordable in the latter part of summer but earlier it is too deep. (This creek is fordable in end of July and in August there is usually hardly any water in it; the east bank, however, is bad and would require grading for about 15 or 20 yards to make approach good for carts). There is not much feed here. The trail continues on the bench again for six and one-half miles descending into one *coulée* and rising again to the bench. Here the trail descends into the flat and takes a south south-west direction for three miles to Fort Graham. From this point on the bench excellent meadow land may be seen in the flat below from which a good hay crop could be obtained."

Davy's Creek would require to be bridged for June traffic, this could easily be done as many trees would reach from north to south bank, in one place where there is a large gravel bar on north side—or a boat capable of carrying a cart would be sufficient, good swimming for horses. A fair bridge for temporary traffic was thrown across it this summer in this way. Width to bar at this point is about 20 yards at present.

We leave to-morrow morning; good feed up the river but all within 30 miles of here is considerably eaten down.

July 14th.—Heavy rain all day.

July 15th. Camp 37.—Had some difficulty in getting all the horses in this morning, and did not start until 9.40 a.m. Mr. Fox rode out about three miles with me. He leaves in the morning for Stuart Lake by canoe, taking out mail and my report. For first $1\frac{1}{2}$ miles there would be a good deal of cutting, and soil is a sort of peat. We crossed three small creeks and camped for dinner on "Big Creek," about 14 miles out. This creek is fordable at present, the channel being about 30 yards wide, but we crossed about 75 yards gravel bars (covered in high water, but to no great depth). There is an island in centre, and channel between it and N. bank would be about 35 yards. I think channel is on S. side; dry at present. Could be forded at almost any time, and a small scow run with a cable would not cost much to construct. Judging from appearances, the current would be very rapid at high water and a scow would be necessary. For the first five miles from Fort Graham (or B.L.O.—"Bears Lake Output"—as it is called locally) there is good feed a short distance to right of trail, and all along feed is plentiful. At "Big Creek" feed is good.

After crossing we go up steep incline to bench and have good travelling, mostly on edge of this, and from 1 to $1\frac{1}{2}$ miles from foot of high mountains; patches of snow still on these. The river (Findlay River) valley is usually 100 to 150 feet below, and at foot of bench a swamp runs for some miles, necessitating the curves of the bench being followed. It runs in a general N.W. direction, parallel to river and in a series of curves. Several deepish dry coulees run down from mountains at intervals, and banks of these would require side hill grading. Grades suitable for carts would be on an average from 100 to 150 yards long. Soil is light and could be worked with plough and scraper. Pack trail is as good as could be desired to-day, with exception of small bridges being required at creeks. These would be usually about 30 feet long. The approaches to all these are steep, and about 200 yards of grading on each side would be required; easy work. Chopping along bench is light and fallen timber is small and need not be taken into consideration in estimating for cart trail. Camped at 7.30 p.m., two miles below "Ingenica" river. Distance to-day, 18 miles. We were delayed about one hour at last creek by a temporary bridge giving away, and nearly lost a horse, which broke away, and tried to cross before bridge was repaired. One horse was badly cut and slightly staked in belly. Several heavy showers to-day.

July 16th. Camp 38.—Left at 8.10 a.m. and half a mile further went down to valley and travelled through high willow brush and scattered trees. Descent to valley would require about 250 yards of grading—easy travelling, no cutting required. Three miles from camp is good feed and water, half a mile beyond is small piece of muskeg, about 20 yards. About two and a half miles on came to creek with steep hill on south side—north side not so steep; fair feed on north side. About 500 yards of grading would be required on each side, but work easy. Two miles beyond is good feed in bush by small creek. About three miles beyond is splendid feed on north side of small creek. Here the "Good Hope" party have been camped for some time, and will remain for 14 or 15 days waiting for return of men prospecting up the "Ingenica" and arrival of pack train from Fort St. John. The foreman of the "Good Hope" outfit has three private horses bought at Dunvegan from Tate of Hudson's Bay Company—two roan mares and one black gelding. He asked \$200 for the mares and \$80 for the gelding. I gave him the three worn out horses and \$165 for the three he had. The price was high, but the horses are well worth it. Left this camp at 3.20 p.m. and travelled until 8 p.m. Travelling was splendid for about eight miles when we crossed a small creek at its mouth below cañon on the "Finlay" and kept close along the "Finlay" for about two and a-half miles. These two and a half miles are bad with holes and muskeg patches. Then gradually worked up hill away from river, and after one and a-half miles struck small jack pine, good going; crossed

this and camped at far side above small creek in a coulée; ground burned over and new growth of small pine and poplar. Good feed. Distance to-day about 24 miles.

Sunday, 17th July.—Lay over as usual. Steady down pour of rain all last night and to-day. No chance to dry my kit which was soaked yesterday by horse falling into creek and lying with it under water.

Monday, 18th July. Camp 39.—Showery and threatening rain, but cleared and was fine day. On leaving camp descended into coulée which would require rough bridging as bottom is soft—on neither side is the hill very long—about half a mile is soft and bad and would require grading and ditching which would be better than corduroying. Two miles out came to another coulée which would require a short culvert; no chopping to speak of required. Shortly after we went down steepish hill and turned to our left to ford of "Posaca" river, about 60 ft. wide. This is an easy ford just now, but river is swift, banks are good and only short piece of grading required. On N. bank is excellent feed. About 200 yds. after crossing a trail runs off to the Finlay, whilst our trail goes to right and up to the bench about 150 yds. further on. From this rise is fine going through willow scrub, small poplar and jack pine for nearly nine miles, when we descend slight slope—good feed all the way. Then there is a steep grade to a boggy creek which would require a culvert; grading easy work. One-quarter mile further on we struck splendid going through almost an avenue for about one mile when we came to 1st channel or slough of "Ac-qui-ica" about 40 yds. wide, good bottom—crossed an island about 300 yds. to another and wider channel full of gravel bars, this at present is from 60 to 100 yds. wide and very swift, fully 6 miles an hour. A bar runs down centre of channel and is the ford which is about 150 yds. long. This slough, or channel, is full of drift piles. Camped on the island for dinner. Two horses were swept off bar in fording channel and had difficulty in making lower end by swimming. After dinner we crossed another narrow channel very swift and deep and bad at far side; this landed us on another sandy island, crossing which we came to main river and found it unfordable. There was no timber for rafting and we had to camp and wait for water to go down, which, if there is no more rain, will most likely be to-morrow. At the "Posaca" we passed Mansfield's full outfit which left "B. L. O." yesterday week. Put the horses back to near dinner camp for feed; repaired and cleaned outfit and dried blankets, ropes, &c., which were wet in fording. Distance about 13 miles. Cut and dried grass and restuffed some of the aparajos and pads. Main channel is so rough and swift that it would be dangerous to raft, and the piles of drift wood make swimming horses very risky work. Saw all horses at noon and again at night in good shape.

Tuesday, 19th July.—Still camped in same place. Sent out to see that horses were all right and found one lying dead on gravel bank at edge of a shallow channel, no sign of any wound and no blood. Had carcase opened and could find no trace of injury. I think he must have got hold of some poison weed.

Wednesday, 20th.—Baptiste tried to ford but got into deep water. I then tried, and by keeping down centre of river and gradually edging across got fair ford for saddle horses but too deep for packs. Found Garner and his wife on their way back; they are going to California, having given up the idea of trying to get through. With them are Housley and Boots. These all started from Edmonton about three weeks before me last September. Housley has scurvy and is going home. Jack or "Cayuse" Graham has it also and is going down river on a raft to Fort Graham. Other parties not far ahead of me. Had dinner with them and tried two other places. I then went up stream with Baptiste (as horses could not face the current in returning where I forded) and forded about three-quarters of way across, when we had to swim. River still going down slowly.

Thursday, 21st July. Camp 40.—Left camp at 7.15 a.m. and crossed safely, only one horse leaving the ford and having to swim a short distance. Bought a black mare with saddle and ropes from Garner for \$35 to replace the one dead. Left N. side of river at 8.10 a.m., course for $1\frac{1}{2}$ miles S. W. through willow bush, small poplar and pine. Then N. W. and N. through open timber, chiefly poplar and jackpine, for $3\frac{1}{2}$ miles, then through thick willow brush for $\frac{1}{2}$ mile to opening of

about 150 acres—this was covered with willow bush and some down timber. Good feed. One mile further there is good feed extending some distance. About 8 miles from river is small creek requiring bridging, and $\frac{1}{2}$ mile beyond came to fine open going, scattered poplar and a little underbrush, but no feed. About $\frac{1}{2}$ mile came to fine creek about 20 ft. wide with stony bed—no bridging or grading required—it runs S. or S. W. from mountains. Two miles beyond is fair sized lake with good feed all around it. Camped for dinner. Left again at 2.15 p.m. and ran alongside lake for 400 yds. or so and into the bush. Half mile on, a culvert would be required, and there is a muskeg and bad going, with many mudholes, for about 1 mile. Then a piece of good going for $\frac{1}{2}$ mile along side hill of narrow valley, then up on to bench. Grading would be required for carts all along side hill. Two miles on we came to good creek, with ford about $1\frac{1}{2}$ ft. deep and 15 yds. wide, at bottom of a steep hill about 60 yds. long. Heavy side hill grade required for at least 200 yds. Then we followed the bottom, which has willow scrub and a little feed, for about $\frac{3}{4}$ mile and ascended to bench with open timber and a good deal of down. A mile beyond, we crossed a dry coulee with very steep sides about 100 yds. Nearly 500 yds. grading on side hills would be required for cart trail. About 2 miles on came to another very deep dry coulee, about 75 yds. down on S. side (this is length of our trail with pack horses). N. side not bad. Boulders and down timber all the way from 1st coulee. A short distance on we turned N. along bench, over deep, narrow valley running up into mountains. Valley thickly wooded. Descended to valley and found parties ahead had gone up it. Camped for the night. Feed bad but no other water near. Distance to-day about $18\frac{1}{2}$ miles.

Friday, 22nd July. Camp 41.—Left 7.45 a.m. and commenced cutting new trail. Had half mile of heavy down timber and a small muskeg. Then crossed small creek about five or six yards wide (same one we camped on) and up gentle slope to top of cut bank of a small cañon of good sized creek, which varies from 40 to 50 yards in width and is very winding, flowing S. W. from mountains and joining the first mentioned one a short distance below our crossing. There is good feed on top of hill above creek, amongst small poplar and jackpine. About one and a half miles from camp we passed the cañon. The banks on W. side of second creek are very steep and high. About one and a half miles on we cross this creek and finally leave it. After crossing we come to the Finlay and run along edge of bench which slopes to river bottom in almost a cut bank. This bench is covered with poplar and jackpine with a little feed, about one mile on there is good feed, some down timber but fair travelling and little cutting, only small stuff. We kept more or less along edge of high bench with only one steep hill which would require about 300 yards of side hill grading. Easy to work but would have to be wide on account of slope of hillside. Good feed, but no water, cutting light, chiefly poplar and small pine. The top of this hill or upper bench is about 300 feet above river. To top of grading distance six miles. A good pack trail can be got along edge of bench for about one mile, but cart trail further in would necessitate a good deal of cutting out of down timber. About one and a half miles further we came to about 300 yards of very heavy cutting through large down timber, then came to large standing pine, good easy going, but inclined to be soft. About another one and a half miles brought us to fairly deep valley, easy grade, about 60 to 70 yards grade required on hillside. Went about one-half mile across valley, and rose to the other side. Then bore to W. through thick small brush for a short distance and then N. W. and came into large open pine (fine feed but no water since crossing creek) for about two miles. Then down steep hill about 75 yards long, with a good deal of down timber on it, and through fair feed and good open going for one-half mile. Then up steep hill about 70 yards to open burned pine with fallen timber and new growth, fair feed. This hill requires 150 yards grading. Went about 200 yards and camped. Water in swamp below us. Time on trail to-day $7\frac{1}{2}$ hours. Distance about 12 miles.

Saturday, 23rd July. Camp 42.—Left at 8 a.m. For one mile there is good feed, then 250 yards of not bad muskeg, then about $1\frac{1}{2}$ miles of jackpine and small brush with bad, heavy down timber. Shortly after we came to dry coulee and turned N. along top of bank for about 200 yards when we gradually resumed our direction

N. W. and crossed the coulée which ran out to a head by gentle slope about one-quarter mile beyond. Here we found large open pine, with not so much down timber, for about two miles. Then struck good going in small poplar with no down timber for about two miles and camped at noon on top of high bench above Finlay.

The only water was about 120 feet below in flat. Left again at 3 p.m. and continued up the bench—north-west—which follows more or less the curves of the river. (I could have gone straight and saved in distance, but by keeping to edge of bench, good going was obtained, whereas, if straight course was made there would be a large amount of chopping to do). Through small poplar for $1\frac{1}{2}$ miles, then through spruce and poplar for about 2 miles, with some small down timber, chiefly dead willow brush. We then descended to a lower bench by rather steep descent, which could easily be made good for carts by a grade about 150 yards long, and crossed this diagonally to Finlay. Down timber on this bench for about one-quarter mile, then good going and feed. Arrived at the river (banks are here 50 feet high) and to my surprise the guide said we would have to cross and go up west side as trail on this side "no good." He had repeatedly told me at Graham that trail kept east side all the way to the Divide. He says I shall have to cross again higher up and points out a narrow pass about five miles higher up through which a very deep and swift creek comes from the mountains to the east. The sides of this pass are almost perpendicular. He also states that there is a bad river further up again and by crossing the Finlay here we avoid these. Camped after taking all but our bedding and camp outfit down to river at 5 p.m. Distance about $10\frac{3}{4}$ miles—six hours travel.

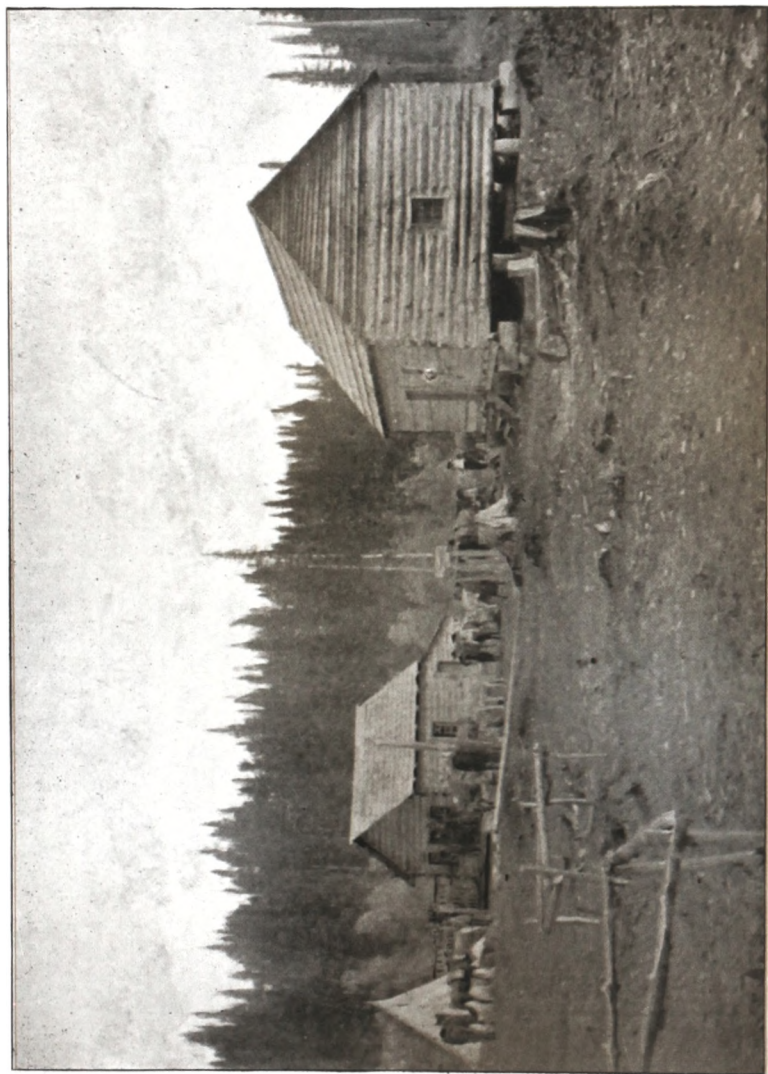
Sunday, 24th July.—Lay over. Looked out logs for raft. High rugged mountains back from the foothills on both sides of river—appear to be very rough.

About 2 p.m. two men, Anderson and Sloan, passed down river on raft—the latter going to his home. Several outfits are camped at the forks and a few are going on. Adsit and his partner left Edmonton 12th April and arrived at Fort St. John, 20th May over my trail—packed 150 pounds and under.

The Finlay at this crossing is about 250 yards wide and runs nearly north and south on this reach. High cut banks just above this on east side. Good landing on other side. A good sized scow to be rowed with long oars would do here for crossing carts and outfits, as it could be tracked up the west bank, which is level, to allow for drift in coming back—road down bank on this side could be graded very easily with shovels or plough and scraper. Good pine trees growing on both sides—flat on west side is covered with poplar except along river bank. Heavy rain to-day.

Monday, 25th July. Camp 42 (across river.)—Breakfast 4 a.m. All hands busy building raft 35 feet by 12 feet which was completed at 4 p.m. Horses were crossed this afternoon. All outfit crossed safely at 6 p.m., when we camped on what would be an island when river is in flood, but slough is dry in places just now. None of the other parties got across to-day but most of their horses crossed. Very heavy rain nearly all day until 5 p.m.

Tuesday, 26th July. Camp 43.—Sent two men ahead to cut trail this a.m. Started at 3 p.m. and camped at 5:50 p.m. On leaving the river we had $\frac{1}{2}$ mile rather bad, down timber, then $2\frac{1}{4}$ miles good travel through comparatively open timber and fine feed, through the flat in this bend of river. It is A1, especially on side farthest from river, and under the hill there is a small lake. Then rising gently to bench, $\frac{1}{2}$ mile farther on we came to the river again and travel was rather rougher for a short distance. Then $\frac{1}{4}$ mile of small spruce and muskeg, but not bad to get through. From this, $\frac{1}{2}$ mile brought us to small creek which would require merely a culvert of about 10 feet. This is close to river bank—descent to creek is about 20 feet and requires slight grading. About $\frac{3}{4}$ mile beyond we ascend a very steep grade of nearly 200 yards, S.W. away from river. This would require a considerable amount of zig-zag grading—roughly about 800 yards—but work is easy. On getting up to bench, course is again resumed W.N.W. This rise is made as river banks here are alternately cut banks and flats according to the flow of current. River here fully 300 yards across, $\frac{1}{2}$ mile further brings us to steep descent and ascent to and from dry coulée—grading required about 200 yards on each side, $\frac{1}{2}$ mile on another similar coulée; fine feed



FT. GRAHAM—H. B. CO. POSTS—FINLAY RIVER, B. C.

JULY, 1898, N. W. M. P. PACK TRAIN PREPARING TO LEAVE FOR SYLVESTER'S LANDING ON DEASE RIVER.

in this coulée, and for $\frac{1}{2}$ mile beyond. Then there is small thickset poplar with rather thick brush, chiefly high bush cranberry, for about one mile and then a slight descent brings us to a creek with three separate channels about six to ten yards each across, and bad bottom. These would require to be bridged. This creek flows out of a lake to the south and through another small one into the river, which is about two miles north of crossing. On N. or W. side of creek is the finest feed I have seen this year, amongst open poplar with slight willow scrub; no other water near. Distance about eight or nine miles and all good going; no difficulty in making trail; grades easy to work.

Wednesday, 27th July. Camp 44.—Left at 8.10 a.m.; good travelling; two men went ahead cutting trail; $2\frac{1}{2}$ miles out came to low bench with small thick pine, and ran along edge for $\frac{1}{2}$ mile; not bad going; then over spur of hill which could be got around by a very short circuit, then up short steep pitch to upper bench; a little grading required, with fairly open going for about $1\frac{1}{2}$ mile. Here we skirted a small muskeg for about $\frac{1}{4}$ mile, then into open pine poplar; good travelling.

This muskeg can be avoided by cutting trail in bush a little way in from it. Seven and a half miles out we came to N.W. end of good lake with open going for last $2\frac{1}{2}$ miles. Where we strike lake there is no feed, and about 150 yards muskeg; 11 miles out we came to E. end of another good lake with high grass around it, but this is too wet either for feed or hay. Between these lakes is fine open country. No chopping to do, and down timber is mere "fishing poles," and there is very little standing timber. After leaving lake we crossed $\frac{3}{4}$ miles burned ground with some small dead timber. Mountains here close to about two miles and we can see the "divide" at head of Finlay Valley. Then there is about $\frac{1}{2}$ mile of good going, followed by about $1\frac{1}{2}$ miles of bad burned muskeg. Then we cross three creeks, all of which would require bridging, but approaches are good. These bridges would be 18 to 30 feet long. Trail from first creek is chiefly through large green pine, with some brush and a little down timber for about one mile. There is nothing to prevent a good cart trail being made over to-day's trail with but little work. The worst part of above muskeg can be avoided by keeping around the edge on hill side. This would necessitate a side hill grade (very slight and easily worked) of about one mile; trail N.W. General direction of trail a little W. of N.W. Distance to-day 14 to 15 miles. Camped at 2nd crossing of Finlay just below the forks and above Beaver Creek at 3 p.m.; seven hours on the trail, but were delayed 50 minutes by horses getting down twice in muskeg. Three men went about five miles up river to look for dry logs for raft. They found none, but saw canoe on E. bank; made raft of two logs and brought it over and down to camp.

Thursday, 28th July. Camp 45 (across river).—Crossed all outfit in canoe by 9.30 a.m. Five horses missing; men out hunting for them. At 2 p.m. crossed remainder, and at 7 p.m. the missing horses were brought in and crossed. A man named Snyder, who had kept close to us from Graham, arrived and we crossed his outfit in canoe. Slight showers during the day; will send canoe back in the morning. This camp is about $4\frac{1}{2}$ miles below the Forks, where west or main branch comes in and joins N. branch of Finlay, and about $\frac{1}{2}$ mile above Beaver Creek, which comes in from N.E.

Friday, 29th July. Camp 45.—Left at 7.50 a.m. Trail went up east bank of Finlay; level country; good travelling through poplar scrub. Mountains vary between half and one mile on our right. Heavy green pine on W. bank. Tobin and William (Indian boys) took canoe back up river. Day fine. Some of my horses are very tired. There was good feed last night, and this extends for two miles up river. About two miles up trail turns nearly S. to river and follows up the bank for $\frac{1}{2}$ mile, then runs N. N. W. $\frac{1}{2}$ mile along edge of a bench, then N. W. From river there is good open going through pine; hardly any cutting required for cart trail for three or four miles; feed generally good. The river flat to our left is thickly wooded. About seven miles out we came to a steep drop of about 60 feet to a bottom with good feed. This drop would require a side hill grade, but work is easy. From this bottom a gentle ascent

brought us to the bench about $1\frac{1}{2}$ miles, when we got a nice piece of open with A1 feed. (At bottom of last named grade is a kind of creek which would require a log brinje; easily made). Then good feed all the way, and fine travelling, except about one mile to river, which has down timber, Camped for noon at 1.05 p.m.

Left at 4.15 p.m. and rose to low bench by a cou  e with easy grade. On this bench there is a good deal of small down timber in willow scrub for one and a half miles. There are two small creeks within three-quarters of a mile of noon camp, but neither would require bridges at any time of year. From camp we circled north north-west to south-west back to river to avoid bad going in bottom. About one and a half mile came to creek where a 20 foot bridge would be required—slight grade about 200 yards west of same. Then down easy slope to low bench; good open going and no chopping required for one mile, but rather stony. Ran along river on edge of this. Mountains rise about 150 yards to our right; half a mile green pine along river then three-quarters of a mile bad side hill with down timber and many mud holes; three bridges and three or four culverts required. Two of these bridges would need to be good ones, being over creeks which, I should judge, would be in high water from 60 to 75 feet wide. We then went along river edge through about 50 yards of not bad muskeg, then rose to slight bench with open timber where we got good going for one mile. Then again rose to higher bench, about 30 feet rise; no grading required. Same open going for 300 yards and another slight rise; some places slightly stony. After $\frac{1}{4}$ mile we came to slight dip where about 30 foot pole bridge would be required—50 yards further on is steep pitch about 40 feet high requiring about 100 yards side hill grading, then good going until within one mile of camp which last mile was down timber, thick but small, with muskeg. Camped at 6.45 p.m. at chain of small lakes; fine feed. Distance 18 miles.

Saturday, 30th July. Camp 46.—We left camp at 7.30 a.m. and for about one mile had bad down timber and muskeg along edge of lakes. This might, I think, be avoided to a great extent by keeping to the left on higher ground, then struck green pine; rough and stony ground for $\frac{1}{4}$ mile. In fact the first four miles are bad with muskeg and down timber alternating. We then had $\frac{1}{2}$ mile fairly open through big green pine, then $\frac{1}{2}$ mile on small creek (no bridge required); then thick small pine and brush to a creek requiring about a 30 foot bridge; the north approach would require short grade. At seven miles out came to steep hill leading to creek, and $\frac{1}{2}$ mile on another creek, both these have good bottom but would require bridging. At present they are 18 to 20 feet wide, but look as though they would be deep and bad in spring. Between these creeks is a bad hill side which would require a lot of grading. From second creek there is good going with some down timber; no feed since leaving muskeg, where there is a little in places but rather wet. At nine mile came to the river and should have crossed but too much drift wood requiring to be cut through. Trail we took here goes over a very high hill, a cut bank at the river, and is very rough and would be almost impossible for a cart trail without large outlay; came to the river again above this, crossing the face of a fairly steep gravel and clay bank and forded the Finlay $\frac{1}{4}$ mile above the regular Indian crossing. Nooned at 12.30.

By regular crossing, above bank would be avoided. River is easily forded at present, but in spring and June a ferry would be necessary; river is about 60 yds. across. Left again at 3.30 p.m. and travelled S.W. for 200 yds. and up steep ascent to hog back and along this for about 200 yds. and down a similar slope to a muskeg. Both hills would require about 150 yds. side hill grading. Muskeg is about 300 yds. across. Then up slightly to good going. Then resumed course to N.W. At $2\frac{1}{2}$ miles struck another river flowing from Divide (I named it "Non-tha-ha-ca" or "Fox" river as it had no name previously) and got fine open going for 200 yds., then up slight rise to bench and good going again for $\frac{1}{2}$ mile when a steep rise 100 yds. long took us to a higher bench; a long side hill grade would be required on this hill. Good going again through small jackpine, with good feed in bush at $3\frac{1}{2}$ miles but not much of it. Then up very steep rise to another bench, then good open going for 2 miles or so, followed by thick down timber with about 250 yds. muskeg, then more down timber. Then down steep hill 75 yds. and along face of stony

bank (about 150 ft. high) of river for 150 yds., then up steep rise and along fair going to night camp. Some feed in willow scrub in bend of river but not much. No feed beyond for long distance. Distance about 17 miles.

Sunday, 31st July. Camp 47.—As feed was poor I decided to travel to-day. Left at 7.30 a.m. and got 200 yds. down timber and $\frac{1}{2}$ mile muskeg, then up to low bench on to about 200 acres open swamp, then $\frac{1}{2}$ mile down timber and 200 yds. muskeg. Then small poplar brush and down timber. Then muskeg and down timber for about 1 mile followed by small standing pine and willow brush. Then slight rise and through jackpine and some down timber. Then more muskeg. Then up rise to jackpine and down timber for 1 mile. Then up steep rise of 100 ft., and again, almost directly, another rise of 50 ft. to poplar and jackpine for $\frac{1}{2}$ mile. Here we passed nice lake with a little feed, but wet. Rose slightly and went through rolling sand hills sparsely clothed by open jackpine for about 3 miles, last $\frac{1}{2}$ mile was nearly S. to avoid big muskeg, end of which we cross here (not bad) into fairly good going with here and there patch of muskeg for 2 miles. Then open going through jackpine for about 1 mile. Then across patch of willows with several mud holes into green pine. From here we followed up course of "Fox" river, over high banks, but without any steep grades which could not be avoided, through fallen timber and rather stony going for about 3 miles. We passed some nice lakes lying below us, but although the grass is luxuriant around them and in some of the bends of the river the ground is all too swampy to put horses in. If dry a considerable quantity of hay could be cut. Camped at 1.15 p.m. on E. bank of "Fox" river, fording the horses to fine feed opposite in green timber. River is about 30 yds. wide and easily forded just now, only knee deep. Distance about 13 miles. Bull dogs bad. Mosquitoes and black flies have been bad for the last few days.

Monday, 1st August. Camp 48.—Left at 7.40 a.m. and passed over high bank on E. side of river. This rise would require about 75 yds. grading. Then jackpine and poplar for 1 mile along on edge of bench above river with down timber. Grading most of the way. A great deal of this grading, and up and down hill, I afterwards found, could be avoided by keeping nearer to the river. Then followed some small down timber. Course was W. N. W., rough and rocky. No feed. Willow scrub chiefly, with down timber and going bad. After $\frac{1}{2}$ mile went S. for 400 yds. along bottom of hill to avoid very bad muskeg, then up to a kind of low hogback on east side of a small lake. Good for cart trail. Some small down timber and brush. Then down steep incline and crossed about 150 yds. muskeg. Then up to ridge and followed this up and down slight inclines, which are easy for cart trail with a little care, between chains of lakes which occupy the centre of valley. These have large quantities of grass around them, but it cannot be got at for swamp. At 4 miles from camp crossed narrows between two of these lakes. Bottom is good. About 50 yds. grading would be required on each side to make approaches good. Then over top of spur and down other side. Easy grades can be got. Half mile beyond come to poplar and pine with a little down timber for $\frac{1}{2}$ mile to steep ascent, having a natural grade up a sort of coulée a little to left, and by following around spur a similar descent on N. side. This would make trail a little longer but save a lot of work. Travel is then through jackpine with down timber. From here 200 yds. brings us to steep, long descent to a muskeg, but greater part of this can be got around by keeping more to the left. From this we go over another hill for 500 yds. or so and across 200 yds. muskeg—not bad. Then into small poplar good going. The last muskeg could be avoided entirely by keeping to the right and going around it. Half mile beyond we come to the river and travel along bank above it. At this place it is merely a good sized creek, quite shallow; open going in jackpine with some down timber. Half mile on we rise to top of high cut bank, about 70 feet above river. This bank is on E. side of river, and there is good open going for $\frac{1}{2}$ mile to deep coulée. Cart trail should go to left of our trail, descending into this, and would be easy. Creek at bottom of this has drop and rise in and out. Easiest way would be to throw a log bridge from top of banks about 30 feet across and so save grading approaches. At nine miles we come to S. end of large lake and travel on E. side, up and down, inclines for one mile. Then come to deep coulée and creek.

Then good going through brush and jackpine to edge of small swamp, where we got feed enough for noon. Camped 12.25 p.m. All these up and down grades can be, to a great extent, avoided by a cart trail if engineer has time to pick his ground. Pack trail takes shortest, and most direct route possible, as a rule.

Left again at 3.30 p.m. First $1\frac{1}{2}$ miles bad, with many mud holes and small creeks. Then three miles fairly good, but a good deal of grading required—about one mile of it is heavy work. Then good going through open pine. Some good feed in bush 200 yards. Water here. Then came a coulee about 40 feet deep with a creek (dry at present) in bottom. Both sides of this would require grading. Culvert required. We then travel on bench above river for a short distance. Good travelling. Half mile really good feed. From here is good going to night camp about five miles below summit of divide. Fine feed. Camped at 6.30 p.m. Distance to-day 18 miles. All this afternoon's travel has been along, or near to, chain of lakes connected by small creeks. There is abundance of grass all around these, which, if it could be got at, would yield thousands of tons of hay, but those places I tried were too wet. Very possibly dry places, where 100 tons or more could be got, might be found. Where I camped was similar in appearance but dry enough for cutting, and intercepted by natural ditches. The hay would not be worth much the first year as the old grass has formed regular bee-hive shaped structures and the new grass comes through the top like the leaves of a pine apple.

Tuesday, 2nd August. Camp 49.—As I only intended to make one drive to-day and then give the horses two entire days rest, if good feed was to be had, I did not start until 9.50 a.m., letting the horses have a good feed which has been rare with them lately. We passed on up valley through magnificent feed, well watered, and where abundance of hay could be cut with the scythe, through good open going, although a few places were soft. As the swampy lakes, as a rule, occupy the whole width of the valley, we had to keep to foot of the hills and consequently a good deal of grading would be required for cart trail for first three miles, but there would not be much chopping to do. About three and a half miles out is small muskeg, then splendid open hard going across a piece of prairie for a quarter of mile. This is the actual summit of divide. The pass between the head waters of the Finlay and Black Rivers, I named "the Sifton" pass. At five miles we cross a creek 20 to 25 yards wide, good gravel bed. From appearance of the banks this can be forded at any time. It runs to the W.N.W. From this is fine open going again with a little dead standing timber for quarter of a mile. Then through green pine and poplar. Good going and feed. Across the same creek again close to junction with another. 100 yards further and we cross a third creek and go up easy rise to bench. 100 yards beyond is coulee with very steep sides, but 150 yards higher up to right of trail is natural grade up and down. At seven and a half miles out is smaller lake with a little feed. Then one and a half miles of good going to steep descent to another small lake with, also, a little feed. At 10 miles is a small lake close to river, with fair feed, and just beyond is a very steep ascent which can be got around to the left. Then a bad mud hole with creek, approach from south would require grading, and a bridge or culvert would be needed. Then good going again. At 12 miles we cross a large creek up to horses girths in present (main) channel, would be wide and swift in spring, from bank to bank would then be from 80 to 100 yards, but there are bars with small poplars about six feet or eight feet high dividing the actual river bed and these would be shallow. Creek now is only about 15 yards across. Banks low and thickly timbered. This creek joins the previous mentioned ones a little below our ford. Open going to fine piece of open feed, with some willow scrub, about 200 acres. As there is, according to Indians report, no good feed near ahead, I went back 200 yards to the creek and camped there, putting the horses on to the open ground. Distance 12 miles.

NOTE.—When I speak of "good open going" it is to be understood that the trees are larger than ordinary and do not stand so close together as to require chopping out to make a trail, and not that it is "open country." The description of courses of various creeks crossed by trail must not be taken as, in every case the

actual direction of stream. Sometimes the current at actual ford may be running north to south whereas the stream is actual flowing south to north. The three creeks mentioned 2nd August, take their rise from numerous springs north of the divide and run down the valley from south-east to north-west, joining and eventually forming the "Black" River, east branch, called on some maps the "Mud" River, flowing into the "Liard." There are also numerous tributary creeks starting in the mountains on either side, which may in some of their windings come from the north.

Wednesday and Thursday, 3rd and 4th August.—Lay over to give horses and men a good rest. Two of the men prospected up the creek but got no colours. They report what appears to be a good seam of coal a short distance up on east bank and brought in specimens. It is soft coal and judging from quality of sample, would be good further in. Seam faces 40 or 50 feet. Very hot and mosquitos bad.

Friday, 5th August. Camp 50.—Did not leave camp until 8.10 a.m. owing to five horses having strayed from "round up." This was again made later by stampede of three horses through the bush and before they could be headed and brought back to train, with which I had gone on for one and a half miles, it was nearly 10 a.m. I therefore decided to make only one drive and camped for the day at 3.15 p.m. From camp 49, we had good open going for one and a half miles through green pine with several open places with good feed, then a rough piece along bottom of hill. Trail on side hill. Beside a bad muskeg for a quarter mile. Then for 200 yards good going through willow brush. Then 150 yards side hill, alongside muskeg. These pieces of side hill are bad for a cart trail, necessitating considerable work for their distance in length in cutting out roots and grading up by hand (shovel and pick). Then for about one mile it was good open going through willow scrub with large burnt standing timber. At two and a half miles from camp we crossed a good sized creek with gravel beds—banks good, no grading required—width of stream at present about 15 feet but when in flood it would be about 150 feet. There is good feed amongst the burned timber and willow. Then for half a mile we got good going through open green pine, but no feed. Then about 300 yards of muskeg, not bad—then fair going again through mixed burned and green pine for about one mile. Then crossed a creek with good gravel bed. South side would require about 20 yards grading for approach. Width of stream about 15 feet; when in flood about 140 feet. Stream is about the same as previous one. From here is open, smooth going through standing burned pine, large, no brush, fair feed. Valley is here about one mile wide, hills low and unbroken, well timbered, especially on west side. Trail runs close to foot of hills on east side. No work in making road for one mile. Then half a mile along edge of muskeg, but not bad. Then quarter mile burned pine, brush, &c., on low bench, stony in places. From here for half a mile it is rather bad, then through small green pine, good going for half a mile when another creek about 20 feet wide is reached—gravel bottom—approaches good. This, I think, would always be fordable. It runs across valley from north north-east and joins main creek. Then small burned timber with some down timber for quarter mile and a quarter mile alongside and through muskeg. Then small burned timber with a few green pine and some feed for half a mile which brings us to small coulee, which would require grading, both sides, for about 50 yards—also a short culvert—then small green pine.

About $\frac{3}{4}$ mile on there is a creek with perpendicular banks about 10 feet high, gravel bed, but badly blocked in places with drift wood, in consequence of which it would be dangerous to swim horses in flood time, if drifts were still there. Stream is quite shallow and small at present. It is only about 50 yards wide, so that good sized boat or small scow would run on a cable even if horses had to swim across with assistance. Then comes $\frac{1}{2}$ mile heavy going where there would be considerable side-hill work, and a steep ascent of 150 yards or so requiring to be graded. Then green pine and shortly after a fairly steep descent with good going. I think if bench was taken to earlier, a good deal of grading would be avoided. Two miles on is big creek, present width is about 20 yards, but in flood it would vary from 50 to 75 yards, and be deep. Scow or large boat required, latter would be preferable as at low water fording is easy, only about 2 feet deep. After crossing river we go

W.N.W. along gravelly flat, sparsely timbered with pine and poplar and some brush for about 2 miles. Then rise gradually to edge of bench above deep coulée with creek, and on above main creek which is here, in width at least, a river varying as it does from 75 to 200 yards in width with numerous channels between gravel bars. It is fordable at present. At 3.15 p.m. I camped $1\frac{1}{2}$ miles out at junction of small creek with main one. Very steep banks to coulée of former (about 40 feet). The main river is called in Sikani "Ta-ta-chi-ca."

Distance 15 or 16 miles.

Big bush fire is visible about 10 miles ahead.

Saturday, 6th August. Camp 51.—Left camp at 7.30 a.m., and after rising out of coulée had $\frac{1}{2}$ mile of good going through small pine. Then about 300 yards along gravel flat through some scrub; then rose to low bench $\frac{1}{4}$ mile, then up steep short pitch to higher bench to get over and around cut bank. Then piece of rough hill side, gravelly and broken above river—a cart trail would have to continue upward on slight slope of bench to get around this. The river here is about 50 yards wide and about 60 feet below pack trail. We then passed along river flat with scrub and up steep rise to bench—there are natural grades up and down, and then down to lower bench, good going and but little cutting required for road. About $4\frac{1}{2}$ or 5 miles out crossed a creek about 15 yards wide; south approach requires slight grading (creek runs across valley to river). It is much blocked with drift wood, but is fordable except where water is very high; a good sized boat would be required. Open going continues, with good feed after crossing through small pine, for about three miles. At eight miles we rise over cut bank and take side hill trail for 300 yards. Then good open going for one mile. At nine miles a creek about 30 yards wide at high water, now about 10 feet—no grading required—boat required in spring, June and July. Then across gravelly flat with pine and willow; good open going and but little work for a road for one mile; camped for noon.

Left at 2.30 p.m. One mile of bad hillside, rough and broken. About $1\frac{1}{2}$ miles came to creek and found tremendous bush fire burning on opposite side. I decided to cross the river, so took down creek and crossed some distance below and struck for river which we crossed at 3.30 p.m. by fording. Fair going along river flat for about one mile, then crossed creek coming out of pass to the S.W. and and running N.E. to river—good crossing of about 40 yards. $\frac{3}{4}$ mile beyond, crossed another with rather soft bottom, width about 20 yards. Then proceeded over rocky hill and crossed small creek—soft going. Then up slight rise with good going for $\frac{1}{4}$ mile and down steep incline to river flat again, and about 3 miles on crossed river again on account of cut bank and drift wood on W. bank. Then ran along river bottom with heavy down timber for about one mile, when we came out on a flat which, in high water, would be overflowed, and proceeding $\frac{1}{2}$ mile down, camped at 6.30 p.m. on the bank of river. Fair feed, goose grass, &c. A very bad bush fire lower down and the one passed to-day is blazing up in great style. Distance, 17 to 18 miles.

Sunday, 7th August. Camp 52.—Left at 7.30 a.m. and travelled along river flat and crossed slough, and at 8.10 a.m. struck trail up over cut bank and down other side where we crossed small creek and travelled through flat with willow scrub and small down timber for $\frac{1}{4}$ mile, then for $\frac{3}{4}$ mile across open flat, then through open pine for 3 miles, then a short piece of bad going on side hill along edge of swamp. Then we had fairly good going until noon through small standing pine. Then crossed corner of burnt ground. All feed gone for about one mile and ground covered with hot ashes. Camped for dinner. Just as we commenced, fire was seen within $\frac{3}{4}$ mile of us to the N.W. The wind was blowing towards the east away from our camp and I thought all was safe, but as soon as dinner was over I ordered in horses and commenced packing without delay and saddled riding horses. When about half the horses were packed the wind changed, bringing the fire right to us, and a large pine about 200 yards away caught. I ordered all packs still on the ground to be abandoned and men to make for the river with horses. Before getting 50 yards, I remembered that my small valise with my notes was with a pack on the ground, and ran back to save it. As I picked it up the wind suddenly again turned, and as I saw that the fire would pass on the other side of small slough

we were on, stopped horses, got remainder packed and started at 2 p.m. It was the closest thing I want to be in. I never expected to save the packs and thought we would be lucky to get ourselves and horses out. After leaving this camp we had $\frac{3}{4}$ mile fair going, and then crossed river and crossed a flat with scrub. At 3.30 p.m., about 3 miles out, we re-crossed river below the fire and went across flat, then up a steep rise of about 80 feet, with much down timber to bench, and resumed our course. From here we had good going with but little work required for cart trail. On coming down slight descent to sort of creek bottom with a little water, at 6.15 p.m., I left trail and cut through a half-dry muskeg to river, to avoid any risk of being caught by bush fire during the night. Camped at 6.30 p.m. in fair feed. Distance about 20 miles.

Monday, 8th August. Camp 53.—Left at 7.30 a.m. and went back through muskeg to trail for $\frac{1}{4}$ mile. Then had fairly good going, except for some down timber for $\frac{1}{2}$ mile, when arrived at creek in deep coulee. This would require about 150 yards grading on south side and 50 yards on north side. Then came one mile green pine and poplar with open going, rising gradually to high bench, then up another rise of 50 yards to higher bench about 300 feet above the river. We went for about 100 yards along a sort of hogback formed by cut bank between river and pothole on land side. This would require a little work to widen it on top for carts. Then on through fair feed with good going in pine and poplar for 500 yards to small creek which could be bridged from top of bank, to top of bank, by 20 foot logs, so saving a good deal of grading. Then shortly crossed small creek—12 foot bridge required—and on through small pine and down lumber for about $1\frac{1}{2}$ miles and crossed dry creek—15 foot to 18 foot bridge required, no grading. Then through large thick willow and small poplar with about 100 yards not bad muskeg—for $\frac{1}{2}$ mile. Then better going through open pine with splendid feed for two miles, hardly any work required here. Then $\frac{1}{2}$ mile through small thick pine with no feed. Then more open travel—easy and fine feed for about 5 miles. Here the country, although remaining easy for travel, with fine feed—commences to be more rolling with sharp ascents and descents, but none that could not be negotiated by carts by taking advantage of natural grades, a little out of the course of pack trail. About $1\frac{1}{2}$ miles on we rise sharply to high bench above river. Valley is about 300 feet below us. From this bench we descend again almost immediately by equally steep grade to a lower bench and so up and down several times, until about 2 miles on we strike a high level bench and run along edge of it following bend of it which is an arc of 8th of a circle for $\frac{1}{2}$ mile. Distance between 17 and 18 miles. The drawback to-day was want of water. There was none between the creek and the river about 15 or 16 miles—in fact through all the fine feed there was no water.

Tuesday, 9th August. Camp 54.—Along yesterday afternoon's and to-day's route the mountains are very high and rocky, their base being almost on edge of valley with only a bench of from 150 to 300 feet intervening. Valley is heavily wooded and banks of the "Ta-ta-chica" appear to be high and rocky. As far as can be seen down the valley is mountain after mountain broken into high rugged peaks with frequent patches of snow appearing. The whole country appears to be of the same character, as peak after peak is visible to the west and north. The view is magnificent and grand but the smoke of bush fires, previously referred to, was too great to allow of an extensive view. We left camp at 7.40 a.m. and left the top of hill above the river at 8.15 a.m. I morely went down the hill last night to camp at water, trail would not go down. There was the same good open going, chiefly along the edge of flat plateau or bench with splendid feed for about 4 miles in a W. S.W. direction. Timber, chiefly poplar and jack pine, and little or no work required for cart trail. We then changed directions to W. N.W. and proceeded along about $2\frac{1}{2}$ miles when we bore sharp to our left to cross the river above the forks. On arriving at river, or rather a slough, from it about $\frac{1}{2}$ mile on, I found nearly $\frac{1}{4}$ mile made up of slough and sandy islands covered at high water. As this would be useless for cart trail, I decided to return up stream and try for good crossing. Had dinner and proceeded up about one mile and camped on an island whilst we looked for crossing. Distance in right direction to-day about five miles. Actual travel $9\frac{1}{2}$ miles.

Wednesday, 10th August. Camp 55.—Left at 7.30 a.m. and went about one mile up river on island on which we had camped and found good ford by keeping down stream on a bar running diagonally almost across river. There is a large island, about 200 yards across, on opposite side. By crossing to this in a boat I think the slough on other side of island could be forded excepting perhaps at exceptionally high water. This would be a good place to cross, though a better might be found if time to look up and down river. Width of main channel in spring about 150 yards, slough about 60 yards; there is also another narrow slough on east side. River has many gravel bars carrying a good deal of drift wood. This crossing is about three miles almost W. from main trail. After crossing we had good going and fine feed for $\frac{1}{2}$ mile through open pine. Then came to a dry lake of about 15 acres with good feed. If this was cut there should be good hay the following year. At present it is almost useless on account of mass of old grass. Then came about 150 yards dry muk-gut with thick small pines. Then fine open going through scattered small pines with fine feed for two miles, course W. by S., when we changed to W.N.W. through small jackpine for $1\frac{1}{2}$ miles, $\frac{1}{2}$ mile beyond we crossed creek, wide but shallow, fordable at any time, good bottom and banks. Then through small jackpine and scrub for one mile to slight rise of 30 feet or so to bench where we had fine level open going through jackpine and poplar with good feed for about seven miles. There is a low range of precipitous rocky hills on our left between us and the mountains to W., well wooded on top apparently, and about $\frac{1}{2}$ mile distant. It is too smoky to see much. Camped at 1 p.m. for dinner on bank of creek only a few yards wide, but width of channel at high water must be, where we crossed, 100 yards or more; banks on S. side high, those on N. low. Main channel is now only about 30 feet wide, bed of river or creek is full of gravel bars, must be bad in very high water and boat would be required. At present it is about 12 to 18 inches deep. No water between last crossing of river and here; easy trail, especially last eight or nine miles.

Left again at 4.15 p.m.; four horses strayed, left two men to bring them on. Crossed creek and passed through 100 yards of tangled brush then into fair going; poplar and some brush for $\frac{3}{4}$ mile. Then crossed two gullies close together, would require about 20 feet bridges; $\frac{1}{4}$ mile beyond is about 300 yards low brush, then up rise of about 40 feet and into good open going through jack pine and poplar; good feed, level country. At about $1\frac{1}{2}$ miles we ascended to bench by steep side hill grade of about 75 yards by pack trail. Then good going and feed for $2\frac{1}{2}$ miles, when we camped close to small creek. Course about W.N.W. Distance 18 miles.

NOTE.—I have since heard that "Ta-ta-chica" is fordable at present above the forks, but there is a cañon there and in high water it might be dangerous to swim horses.

Thursday, 11th August. Camp 56.—One horse missing this morning; left two men looking for him and to follow. Let at 7.40 a.m. and climbed to bench up very steep hill about 200 feet through small poplar and pine, then W. by S. along edge of bench in open going through poplar and jack pine; splendid feed for $1\frac{1}{2}$ miles. Above climb would be avoided by leaving our trail at yesterday's noon camp and a fairly easy slope to bench obtained. It was too smoky to see far but valley to S. or W. is apparently about two miles wide with precipitous rocky sides; height about 300 to 500 feet. I could not see anything beyond this range. At $1\frac{1}{2}$ miles there is an open clear space in valley to S. running E. and W. about $\frac{3}{4}$ mile with some good feed. West end has been a lake but is dry now; $\frac{1}{4}$ mile on we bear to left down slight sloop, and cross end of dry slough with good grass; then over narrow hog back through open going with splendid feed for $\frac{1}{4}$ mile. Then cross narrow, very rocky creek; no work required here; most likely a torrent for short time in the spring but will soon run out. At very high water I should think it would be impassable with a boat; 200 yards beyond cross dry water course, very rocky steep incline in bed, about 75 yards wide. Then 100 yards beyond up steep pitch about 40 feet to bench. Thick small timber for about $2\frac{1}{2}$ miles then $\frac{1}{4}$ mile small thick timber with willow scrub; no feed. Then up gradual rise to bench with large timber; good grade up; $1\frac{1}{2}$ mile good going partly along edge of bench above valley to S. At 11.20 came to steep descent to creek. Good and

fairly easy grade can be got down hill side on S. side of this creek. Bed of creek is very rocky and about 40 to 50 yards wide. Stream at present is only 12 to 15 feet wide. Camped for dinner; fair feed on north side. Last named creek would be a torrent in spring, but would soon run out. Left again at 2.20 p.m. Splendid feed and a good open going with exception of a few yards here and there for a little over three miles, when we descended by fairly steep hill about 75 yards and cross creek with good bottom; no work required. Then into good open going again for one and a half miles, course about west north-west. We here come to edge of valley to east in which is a succession of fair sized lakes or sloughs, and 100 yards on to a rather deep coulee with creek in bottom; grading required for about 15 yards on each side. This creek flows into, and apparently across, valley into river which can be seen about two miles distant to the right. This valley has good hay and I should think 200 tons could be cut. The meadows are broken slightly with scrub. It is 40 to 50 feet below bench and lakes or sloughs appear to be shallow. Eight miles from noon camp brings us to bend of valley, apparently to south west, and we turn west to go around it, soon again resuming our course. One mile beyond we come to small shallow creek in willow scrub. Camped here at 5.40 p.m. The feed here is splendid for which reason I camped earlier than usual. This afternoon's travel has been almost without a break, through magnificent feed, and for the last hour we have traversed as fine a summer range for stock as could be desired. The country appears to be much more open and bush thinner than formerly. Timber is chiefly jackpine and poplar, and general aspect of country is that of a well wooded park. Moose tracks are plentiful, and to-day we saw those of mountain sheep. Distance about 15½ miles.

Friday, 12th August. Camp 57.—Left at 6.50 p.m., crossed creek, and after half a mile came to another small one eight or nine feet wide. No work required at either. For two miles from camp there was good going, open poplar. We then crossed about 50 yards muskeg and up slight rise to level country and fine travelling; open poplar and pine. A 1 feed. About three-quarters of a mile beyond, come to poplar and cottonwood with tangled brush for a short distance. Course north-north-west for latter part. At six miles crossed small dry muskeg and into small thick pine, etc., for half a mile, then good going again for one mile and crossed open space about half mile with scattered chumps of small poplar, etc., good feed. At 10½ miles came to large scattered pine and cottonwood and black poplar with rather bad dry willow scrub for half mile. Then by sharp rise to bench of about 60 feet, and soon after by short pitch of about 20 feet to still higher bench; then had a short piece more of good going and then about 500 yards small down pine and muskeg, but not bad. Then again good going and fine feed to creek about 45 yards wide from bank to bank, but stream at present only a few feet. On north side is good feed, also a short distance back on south side. Camped here at noon. Banks of creek are six feet to nine feet high, but easy grade down. From scrub, etc., growing in rocky bed of creek, I should judge that water is deep only for a very short time in spring. Left again at 2.45 p.m. On leaving creek there is a steep pitch of 40 or 50 feet, requiring side hill grade, and we then rise gradually for a mile or so, with three sharp but short ascents of from 30 to 60 feet in this distance; then comes ½ mile level with small thick timber, a little down timber and ½ mile beyond is dry bed of water course, about 15 feet wide. This, in spring, must be at least 7 or 8 feet deep, as banks are this height and show signs of being overflowed. Feed from noon camp good, but not so good as yesterday and this morning. At 2½ miles out we again come to good open going and fine feed; 400 to 500 yards further we cross narrow gully about 25 feet deep. This would require from 30 to 50 yards side-hill grading. We then got into a short stretch of thicker small timber and again good going and at about 6 miles arrive at, and cross, creek about 20 to 30 feet wide, but bed of same is about 35 yards and very stoney. This must be bad in flood. Approach from south is a very steep drop of about 60 feet to a narrow flat place on edge of river. On the north, banks are about 8 to 9 feet high; cut banks prevail on south side, except

where we cross. Good feed on north side where we camped, with a few large pines, but chiefly small poplar. Course, W.N.W. Distance, 17 or 18 miles.

Of this day's travel it may be said roughly, that the trail is through splendid country, offering no obstacles to cart trail, and some as fine grazing as any one could desire; in fact when I say "some" it should be that "no feed" or poor feed" is the exception, and only occurs here and there for 200 or 300 yards at considerable intervals. It was too smoky to see much of the surrounding country, but what could be seen now and then appeared to have a good many open spaces, free from timber in it.

Saturday, 13th August. Camp 58.—Left at 6.50 a.m., and went up very steep rise, which can be avoided in making cart trail, by going to the left up coulee, then to sort of platform and again up another steep grade where a road would have to be cut along hillside for at least 200 yards, but work easy. Then through a sort of valley between two hog backs and up another between mountains on left and a hog back or ridge on right for $2\frac{1}{2}$ miles; small poplar and a few jackpines; good feed. There are a good many rises and descents, but nothing of any consequence. We then passed small lake about 150 yards across, where two or three tons hay might be cut; good feed for camping all around in bush. This lake is about 75 yards to right of pack trail. For first $3\frac{1}{2}$ miles from camp the country is not so open and park-like as yesterday, but travelling is good, timber is smaller and thicker with a good deal of scrub, but here it improves, with many large poplars and splendid feed. At 4 miles there are 60 or 70 yards of rough going, with a little down timber to either side of trail, and only a few yards distant it is rough and bad; $\frac{1}{4}$ mile on is tangled dry brush and large willow scrub for 200 yards or so, and then for two and a half miles a succession of muskegs divided by small pine and some down timber. Most of the muskeg is dry and no trouble to go through. This brings us to a long narrow lake, about 100 by 500 yards. Lake is deep in most places, with some good feed at south end, where a creek flows in. Camped for dinner at 10.20 a.m., as feed and water good. Two small creeks crossed above muskegs, but both have good firm bottoms and are only 4 to 6 feet wide. Mountains are about 1 mile distant from trail to the left and run nearly parallel to it, viz.: N.W. to S.E. Left again at 1.10 p.m., and travelled along side of hill on right side of lake for 250 yards or so, gradually rising a little and then got on level going; 100 yards of down timber and then good going through small pine and poplar. Valley to the left has marshy lake in it and very little grass. After about $1\frac{1}{2}$ miles out we came into small thick pine and some down timber for 150 yards, then a fire clearing with small down sticks and good feed. There is a good sized lake $\frac{1}{4}$ mile to left with some feed but no hay. Rolling valley between mountains is here about 3 miles wide. Trail is on low level above valley of lakes and at end of this bench comes down to and crosses end of muskeg and up slight incline to good open going with fine feed. At about $2\frac{1}{2}$ miles out came to mixed green and dry standing timber with a good deal of down timber in places but not bad. Some good feed in patches and generally fair throughout. Cart trail would follow above named bench for about 1 mile with considerable cutting; pack trail takes principally the edge of muskeg to save chopping. At 4 miles crossed muskeg and through piece of burned timber, then about $\frac{1}{4}$ mile around end of bad muskeg and through burned ground with young poplar, fine feed for $\frac{1}{4}$ mile and resumed course W.N.W. About 5 miles struck large dry and green pine with poplar scrub, good feed and a little down timber for $\frac{1}{2}$ mile. Here we passed two small lakes, with some feed, on our right in hollow. Then across open space through young jackpine 2 or 3 feet high, and small down sticks for about 2 miles, then good going for 3 miles. Here we came to good sized lake to our right a few yards from trail, good feed in bush, and $1\frac{1}{2}$ mile on small creek about 8 feet wide, good bottom, a few poles would bridge it. Another $1\frac{1}{2}$ mile and we get steep ascent to hog back and descent on other side. These would require about 200 and 300 yards side hill grade respectively. Then through fairly good going with some down timber in places, but small, and a few rises and falls, but nothing of consequence, to banks of W. branch of Black river, where we arrived at 8 p.m. I made a long march as to-morrow is Sunday and I was anxious to get here. Banks on E. side are

about 120 feet high, and in most places almost "cut banks." River comes out of deep pass in mountains to the S.W. or nearly W. This range is approximately N.W. and S.E. Bed of river is full of large boulders, which make it bad for fording. There is good feed on both sides of river; N. or W. side is a large flat. Width of river about 120 yards and very swift. The ford is about 500 yards above where we descended the bank and a fair cart trail could be made down coulee about opposite to it. The soil is easy to work and by making the trail wide there would be no difficulty. A cable ferry would be required here. I tried the river in two places as soon as we arrived but water was too deep for packs; my horse had hard work to keep his feet in the swift current. The water fell at night and we got the ford the following day. Distance about 23 miles.

Sunday, 14th August.—Got a ford, as noted, about 500 yards up river, which has gone down about 4 inches since yesterday. Black and sand flies have been very bad the last few days and horses have suffered considerably. I have them all well greased to abate the nuisance as much as possible. Weather very hot during the day, but cold at night.

Monday, 15th August. Camp 59.—Left at 7.30 a.m., and forded river, leaving the N. side at 8.40 a.m. One pack got wet from horse tumbling over a boulder. Current here a good 4 miles an hour. River is falling fast. Worked our way along valley to pass nearly S.W.; good country; small poplar with some down timber. There is a sort of hogback ridge, rocky and steep, on our right. Very soon after leaving the river we strike the old pack trail from Sylvester's Outpost to the Landing. At about $2\frac{1}{2}$ miles out we crossed coulee with good grades on both sides and then along side hill with spurs running down side. These ups and downs are slight, and but little grading is required for $\frac{3}{4}$ miles or so. The trail here is about 100 feet above river. Soil is gravelly, and grading is easy; in fact it is only to widen old pack trail sufficiently to allow of carts going over it. Old pack trail is A1 here. At $2\frac{3}{4}$ miles is another coulee similar to last; from here is gradual descent to the river bench, which the trail follows not far from the foot of the high hills to the right through young poplar with some down timber. At $3\frac{1}{4}$ miles we descend gradually to coulee and then up very steep high hill by zigzag graded road, which is A1 and could easily be taken by carts if widened; even if too steep for one horse it could easily be doubled up. These grades, I should say, aggregate nearly $\frac{1}{2}$ mile, when over the top, trail goes along hillside for a short distance and then there is a gradual descent of nearly $1\frac{1}{2}$ miles to low bench above river, and from there through easy country to sharp descent to coulee with nice creek, where we nooned. Creek will always be fordable and both banks are good. A good deal of down timber needs to be cut out on N. side.

Left again at 3 p.m., and travelled over a hill about 60 to 70 feet and down by gradual slope to low bench above river. Spurs run down from hill but trail avoids them. Mountains on right are high and rather broken, with not much timber. Trail good from striking bench, and level; feed A1; some small poplar. About 1 mile out we came to small down timber. At 2 miles come to river bank again and here there is again small down timber. River here is about 80 yards wide and banks 15 feet high. At $2\frac{1}{2}$ miles is small coulee where some slight grading would be required. Then there is $\frac{1}{4}$ mile through poplar and pine to nice creek about 8 feet wide, fordable at any time; no grading required, and on through gravelly flat with willow scrub, &c., for about $\frac{1}{4}$ mile. At about 4 miles came to good sized creek coming in from nearly N. but general direction found to be nearly W. to E. It is winding and shallow with good bottom; 20 to 25 yards from bank to bank. Trail ran alongside for a short distance. At $4\frac{1}{2}$ miles crossed this creek twice in 50 yards to avoid cut bank; from the 8 ft. creek to here is more or less heavy down timber with fine feed and no standing timber. I do not think this creek could be forded in high water, but the actual bed of creek would not be over 20 feet. The course here taken by pack trail would not answer for carts except at low water and would require some work. The best route, and I think quite practical, would be to keep up over top of cut bank and along bench. We camped at 6.30 p.m. on creek in good feed. Valley here is about $\frac{1}{4}$ mile across with rocky hills on each side. The cart trail would come

down to valley after about 3 miles. The pack trail runs along river bottom, crossing and recrossing and running along bars. Distance $13\frac{1}{2}$ miles.

Tuesday, 16th August. Camp 60.—Left at 7.30 a.m. First 4 miles lay along river bed and any description of trail would be impossible. Trail winds along river bottom on bars crossing and recrossing frequently and sometimes going up on low banks. Indian guide says this can be done at any time of year, but I doubt its feasibility for carts, and think that in most places a road would need to follow the flat and be made there with fewer crossings. At 4 miles we passed forks of pass, one with main branch of creek runs almost S. W., the other with a smaller branch runs W. N. W. Between the forks are some rolling foot hills almost bare of timber, except on N. side, and with good grass. There is a considerable extent of flat valley here with good feed. Then we have 2 miles through standing burned timber and a good deal of down timber to good pine but no feed. The creek is on our left and course W. S. W. Then came 5 miles of alternate dry and green timber with a good deal of down timber. We then crossed the creek; no feed near to the water. Pass then turns nearly S. for $\frac{1}{2}$ mile, and $\frac{1}{4}$ mile on we camped on creek in fair feed. This creek, since yesterday at noon, is said by Indians to be always fordable, but I much doubt the feasibility of taking carts along the pack trail. The road would have to be cut along flat after leaving bench mentioned and still a good many crossings of river would be required. The country beyond the valley we travel in is one mass of mountains on each side and such a thing as a direct route is out of the question.

After dinner we crossed river almost at once and travelled along south side through bush. Good in most places except the first $\frac{1}{2}$ mile which is rough. We gradually rise to higher ground through small green pine—no feed. Good pack trail. Two small dry creeks are crossed in first $\frac{1}{2}$ mile which would require pole bridges of 8 feet to 10 feet or banks graded for approaches. Three dry water courses are also passed and at 2 mile small shallow creek about 9 feet wide. At $2\frac{1}{2}$ miles came to good sized lake about $\frac{1}{2}$ mile by 300 yards with apparently some good feed at W. or S. end and a little hay. It occupies entire width of valley. Trail runs alongside of hill on the south and is rough, with a great deal of down, burned timber, but hardly any standing. At $3\frac{1}{2}$ miles we gradually rise for about $\frac{1}{2}$ mile and cross dry bed of mountain torrent—very rocky—then fair travelling but stony all the way. Then $\frac{1}{2}$ mile gradually descending until we come to another large lake, about $\frac{1}{2}$ mile by 500 yards—some feed at W. end. About 1 mile beyond came to better country for trail and more feed. At $\frac{1}{2}$ mile on we crossed narrow marsh and ascended high hill by fairly sharp grade of $\frac{1}{4}$ mile, then on up and down slight grades. Then up short steep zigzag graded trail and up gradually for 1 mile. Then down long gradual slope to bottom of coulee with small creek. Camped at 8.40 p.m. Not much feed. Distance about 17 miles.

Wednesday, 17th August. Camp 61.—Having had a hard day yesterday, I intended making only a drive of 13 or 14 miles and so did not leave until 10.15 a.m. It was reported that there was good feed and water at this distance. On leaving camp we rose gradually to bench on N. side of coulee and travelled along edge with good open going for about $\frac{1}{2}$ mile, course S. W. We then descended by fairly steep side hill grade to valley almost at right angles to coulee and crossing small creek, arrived 2 miles out, at "Deadwood" lake. At east end is another small lake and some marshy land where there is feed and possibly a little hay. We forded at the junction of these two lakes. In above valley is some clear ground with feed, some small timber and scrub. The coulee in which we camped falls very fast to valley. From bench, mountains are visible in every direction. About 3 miles on our left a range of high, very rugged, snow-capped mountains appears bending W. to S. On west side flows Mosquito Creek. On our right is range of low wooded hills. At the lake I found Mr. Walker and a companion prospecting for the C. C. R. Co. They have found some good prospects of both gold and copper in quartz. Here we leave the lake and after $\frac{1}{4}$ mile ascend the hill to the S. and rise gradually through down timber for $1\frac{1}{2}$ miles. Then turn S. to go around head of very steep coulee and again resume our course nearly W. S. W. We again ascend gradually for $1\frac{1}{2}$ mile to the summit. Then over-burned open country with some standing green and dry timber, down to

valley. Fair feed all the way. In valley we come to C  che Creek and travel along the right bank and cross at about $7\frac{1}{2}$ miles from lake. Here another creek from W. S.W. joins it and our course is W.N.W. along N. side of these combined creeks, on bench. At 10 miles another creek comes in from East. Crossed there and descended short slope of coul  e and crossed this, proceeding along N. side of creek nearly W. crossing and re-crossing until we arrived at Rapid River, which we forded at 6.10 p.m., camping on W. side. This river is very rapid and at present about 3 feet deep, with boulders in bed. There is a small scow worked by rope and block and tackle for use at high water—approaches good—width about 60 yards. The trail this afternoon for last 8 or 9 miles takes mostly to the bed of creek to avoid chopping. Cart trail would have to be cut along river flat and even then must cross several times to avoid cut banks. Distance to-day about 19 miles.

Thursday, 18th August. Camp 62.—Left at 7.05 a.m., and rose to top of bank about 40 feet and travelled W.N.W. through young jackpine and thick down sticks, across fairly deep coul  e and up very high, steep hill—about 300 feet—and by zigzag grade got to top at 7.30 a.m., and travelled along good wide ridges between potholes, and scattered small jackpine. Soil gravelly. Road making easy. Two and a half miles out crossed coul  e by side hill grade, going around near to head of it, where it is comparatively shallow, and then got level going through scattered jackpine and a little down timber. At $3\frac{1}{2}$ miles passed small lake on our right, with some feed. One mile farther on passed two more and $\frac{1}{2}$ mile or less passed between these and a fourth. Good feed. As feed was poor last night, I camped here at 8.50 a.m. Left again at 12.15 p.m. and continued along N. side of lake at foot of hill which comes down to the water. Lake is about 500 yds. long. After leaving west end of lake, trail goes W.S.W. through small burned pine for about $\frac{1}{2}$ mile. At 1 mile out another good lake is passed on the right. This is a large lake about $\frac{3}{4}$ mile long, with several islands. There is good feed all along in same kind of country. Here we cross a dry coul  e requiring but slight grading. At W. end of lake a pass comes through the mountains from the N. and apparently extends a long way, bending in the distance to the N.W. From end of lake we travel on ridge between numerous sort of potholes for about $\frac{1}{2}$ mile, when pass forks by long, low mountain running directly across it, one pass going W.N.W. whilst we take the one W.S.W. up and over high mountain by steep incline and about 250 feet above river. Then down by zigzag trail to a large rocky creek just above a deep ca  on and close to junction of another and smaller creek coming from S. This would require a bridge of 30 to 40 feet. Fifty yards on we cross main creek requiring a bridge of 50 to 60 feet. The ascent and descent of this mountain would entail a good deal of heavy pick and shovel grading, with most likely some blasting, and with the following ascent on N. side would entail something like 4 miles of zigzag cutting. It cannot be got around on account of rocky ca  ons in river—the side of mountains forming one side of ca  ons. After crossing main creek, trail leads up on bench on N. side by steep ascent and is about 250 feet above river in fairly open going for $\frac{1}{2}$ mile. Then it crosses coul  e, with dry bed of creek, by a drop of about 50 feet. Grading required on both sides. Then through jackpine and level going for $\frac{1}{2}$ mile and up rise of about 40 feet to higher bench. After a few yards it again rises about 60 feet by a steep pitch to another bench and along edge of it in good open going. Jackpine, poplar, &c., for about $\frac{3}{4}$ mile. Then another short, steep hill and open bench with young, low jackpine and fair feed. This bench is intersected by several shallow coul  es—not bad or deep. When crossing this a very high, bare mountain is close on our left and low range on right. At some distance in front right across our course is range of high, rugged, snow clad mountains. Our pass lies to the N. of these and on the E. side. This range is about E. and W., our course here is S. After about $1\frac{1}{2}$ miles we bear to right (W.) and go over high hill, 100 feet or more, by steep ascent. Then bear W. up coul  e. Crossing this about $\frac{1}{2}$ mile on we ascend another hill by zigzag trail and get S.W. course over some country cleared by fire. A little down timber and scrub for $\frac{1}{2}$ mile. Then down gradual side hill grade to flat with good feed, scattered timber and brush, about 200 acres in extent. Again we have short rise over hillside, then down long gradual slope to good shallow creek in valley.

Good feed, seven miles from Duck Creek crossing. Then over short rise to clear rocky cut bank and down to creek bottom for 1 mile, when we camped at 5 p.m. with good feed. For the last $4\frac{1}{2}$ miles there is no bush and easy country for trail, except some little grading. Distance 18 miles.

Friday, 19th August. Camp 63.—Cold morning, revillée 3.30. Left at 6.25 a.m. and proceeded up creek to W. for $\frac{1}{4}$ mile. Then up a coulée, fair grade, N.W. and over top of hill 1 mile from camp. Then along bench S.W. through scattered jackpine and a little small down timber for about another mile. At W. end of bench and $\frac{1}{4}$ mile below trail, to S., is small meadow with feed—no hay. After crossing bench, we cross a few yards of soft ground and a small creek with rather soft bottom. Would require about 16 foot culvert or bridge. Then on through same kind of timber and level going. Two miles out, trail crosses small creek with good bottom—no work required—and rises slightly to sort of bench; course S.W. $\frac{1}{4}$ mile. On our left about $\frac{1}{2}$ mile is lake, with feed. The creek appears to rise here. The valley bottom is merely soft marshy land with a few pools of water and pass runs W.S.W. from the lake. Here we travel along the side of high rocky mountain, to N. This side hill is intersected by several dry water courses, only one being deep enough to require bridging, and this is only a few feet wide. The side hill is easy to grade for road except for the stones—no timber—and is about $2\frac{1}{2}$ to 3 miles long. Here we come into thick standing timber, chiefly poplar—good for road—this is about $5\frac{1}{2}$ miles out from camp. Then some small dry brush for $\frac{1}{2}$ mile or so. Then on to an open piece of muskeg, but not bad for $\frac{1}{4}$ mile or rather less. These too are on down slope. Then $2\frac{1}{4}$ miles through thick small poplar again, and scrub, on gentle down slope and we came to creek and continued down it on N. side, crossing it about 2 to $2\frac{1}{2}$ miles further down to get past a very high rocky cañon. If crossing was made about 200 yards above, a good gradual grade over this hill would be obtained with side hill grading. The pack trail is very steep and bad and quite impracticable for carts. The down slope on other side is not so bad but road would have to be made by lengthening the steps of zigzag grade. We then go on S. bank for $\frac{1}{2}$ mile up and down another similar hill, but not quite so bad, and cross river to N. again. Bridges of logs would be required at both crossings, about 40 feet long each. From here for 5 or 6 miles is good road, through mixed small and big bush to Four Mile River, which is fordable, but bridge of 50 or 60 feet would be required in spring. There was one formerly, and abutment of same is still standing on W. side. From this we rise slightly to level bench with small jackpine, and again another rise to higher bench, and continue on good trail until we descend to Dease River, 4 miles from last river. Descent is good and easy. River is fordable three-quarters of the way across with good hard bottom—hardly any current—it is about 175 yards across here. Hudson's Bay Company's post is on W. side close to mouth of McDame Creek.

Distance travelled to-day is called 21 miles. There were no provisions in H. B. Co.'s store here, but I was able to purchase sufficient flour and beans from outsiders to make up what I required, also some bacon. The country around here is covered with thick large willow, making it very hard to find horses, and on account of the numbers ranging here it was impossible to track them. I lost three horses here (as reported to the Commissioner at the time) and could not afford any more time looking for them. Purchased four horses to complete number required. Horse "Mac" completely used up, but I took him on to relieve any horse for a day. In order to save my horses, which were very tired, and to make better time to the Liard post, I purchased a large boat for \$27.50 and sent all my supplies, except one week's provisions and some bedding, in it down the Dease River with Lafferty, Brewster and the former owner of the boat who worked his passage for his rations. Told Lafferty to hire an Indian to take the boat through the two last rapids which are bad. He paid him \$10, a big price, but the H. B. Co. said it was regular charge and it was paid before I arrived. All the outfits which arrived from Graham before I left abandoned the idea of going on to the Pelly this year and went out by way of Glenora. Some intended trying to get some work freighting to Tealin Lake or bringing the supplies for the company to head of Dease Lake, and if possible going

in to Dawson by Teslin Lake route, others were returning east, and some said they would follow my trail next year.

Wednesday, 24th August. Camp 64.—I had hired an Indian guide to the Liard Post, and left this morning at 9.20 a.m. Travelled up N. bank of McDame Creek N.W. After going a short distance up coulée trail rises to bench and continues on this above coulée through small jackpine for 2 miles. Then through pine and poplar with some down sticks for 1 mile. Then through more open timber. Valley or coulée is heavily timbered and has numerous grassy swamps. At about 4 miles out come to large open pine with some brush and have good trail until we come, about 10 or 11 miles out, to a large lake with a fair amount of feed; small creek runs in from the S. We cross end of this lake to W. side of valley and continue up same to the N.W. with some side hill requiring grading, and a few rises and descents, but nothing worthy of note until we come to the N. end of chain of 5 or 6 lakes of which above forms one. The last of these is about $1\frac{1}{2}$ mile long by $\frac{3}{4}$ mile wide and has several wooded islands. There is good feed all along the hills and a good deal around the lakes in patches. Camped for dinner at 2.10 p.m.

Left again at 4.30. Course N.N.W. through open burnt pine and up a gently rising coulée with brush and scrub trees, and after about one mile came to dry bed of rocky creek and then N.N.E. down side of another similar bed, crossed this soon and passed on down W. side of its valley. This is open in places with scattered timber and not much feed; some small down sticks. A short distance further we came to another lake over 2 miles long, feed all along but no hay. At $4\frac{1}{2}$ miles we climb up on and travel along side hill for $\frac{1}{2}$ mile to bench above lake. At 5 miles we came to another large lake where, I think, a good amount of hay might be cut with care. Trail goes along this, divided from it by fringe of timber, and is through good open going with good feed for $1\frac{1}{2}$ miles. Then through dry muskeg with good going for 1 mile, then fine open going poplar and pine for $1\frac{1}{2}$ mile. Then up on to level bench about 100 feet above marshy bottom of valley and along edge for a few 100 yards, then through good going for about 1 mile to small creek (no work required) where we camped. Part of the trail this p.m. was stoney but nothing to stop road. Distance 23 miles.

Thursday, 25th August. Camp 65.—Very heavy rain from 4 a.m. and did not leave camp until 8.30 a.m. Rain ceased for about half an hour enabling us to pack horses and then commenced again and continued with very little intermission until 5 p.m. We continued along bench of valley, which is full of swamps, no hay for about $\frac{1}{2}$ mile passing a fresh bush fire still smouldering in some places, it would not run, after the rain. Course N.N.E. Then N.N.W. through good open level going with some feed. At 3 mile out strike sand hills with scattered poplar: fair feed. One mile to right of trail is large lake about 3 miles long by $\frac{1}{2}$ mile to $\frac{3}{4}$ mile wide. Mountains here are 6 or 7 miles apart and much lower. At about 6 miles out pass, on hills, the end of above lake and bear N.N.E. through fire country arriving at Dease River at 11 a.m. Where the trail strikes the river, this bend runs E. and W., the N. bank is almost a cut bank and about 90 feet to 100 feet and we come down at a long slope; easy to cut out trail. The opposite shore is flat and low. River is not fordable being deep on S. side for about $\frac{1}{3}$ of its width, which is here about 120 yards. Scow or cable ferry required. I had ordered the boat to wait here to cross us and so we were not delayed. No timber on N. side suitable for rafting. Crossed horses to good feed and after dinner crossed outfit and started again at 2.10 p.m. and went up river for $\frac{1}{2}$ mile and then struck about N.N.W. for 1 mile. Then passed along right of swamp, A 1 feed. Soon after we crossed end of meadow with large lake and good hay of which 20 or 30 tons could be cut, if season is a dry one. Then on through large scattered poplar with fine feed. It rained hard all afternoon. The whole afternoon, however, was over splendid country for trail. Only 2 steep rises and these easy to grade along hill side. Passed several good lakes at a distance. There was some very thick small poplar and brush, the former only 2 or 3 inches in diameter or less, so the chopping required is nothing. Camped at 5.35 p.m. on small creek in good feed. Distance 17 miles.

Friday, 26th August. Camp 66.—Left at 7.10 a.m., crossed creek and travelled north north-west up valley. Good feed in scrub, poplar and brush. This flat in valley is very stony and intersected by several dry creek beds. The creek at last nights camp would require a little fixing, also the descent from bench to camp about 60 feet. From camp the first quarter mile is very rough and stony. We then climb to ridge at south end of two lakes and cross 100 yards of soft ground, and through brush with lots of stones. At about one and a half miles travel along side of large lake with numerous islands, this is about four miles long by $\frac{3}{4}$ wide. Travel from south end of lake is, for about six miles, along ridges between the large lakes and some smaller ones on our right, through poplar scrub, a good many ascents and descents, but all easily graded. This morning's route is through a perfect nest of lakes, large and small. Where no lakes there are potholes. Soon after passing large lake, we crossed end of small one and went along west bank for quarter mile, then through level grassy rolling plain with pine and poplar course north north-west, until, at about nine miles out, we came to small lake with good feed and camped for noon. There is feed and water anywhere along the trail.

Left again at 2.10 p.m., course north north-west, through rolling grassy country. A large lake is to our left and some smaller ones on our right, country is covered with small scattered poplar and jack pine, with good feed every where. At two miles we came to small lake and bore west to go around it. At four miles we came to another large lake and travelled along the east shore for some distance to avoid chopping. Road would have to be cut through some small thick timber on low bench. We then went up on to bench and through small poplar with fine feed. About three-quarter miles we again strike the large lake and run along shore for 200 yards to avoid thick pine and down timber, then through open standing pine with a good deal of small down timber for about two and a half miles, when we come to edge of bank about 100 feet above first bench above river, and go along this for about $1\frac{1}{2}$ miles, when we descend to river just where the "Blue" river comes in from the west. The "Dease" here is not fordable but has good banks, runs just now about three and a half miles an hour and is 75 to 80 yards across, at high water it would be about 150 yards wide and swift. Distance about $17\frac{1}{2}$ miles.

The valley of pass through which we have travelled is one succession of lakes, large and small, and is seven to nine miles across. The trail runs on ridges and sometimes on level plateaus 100 feet or so above lakes which are principally to the west of it. None of the grades between these ridges are bad, and where grading is necessary it would be easy. The chopping also would be light. The feed is simply superb, but is already frozen and the leaves are falling fast. From the bench above the river, the country on west side appears to be for some distance back, flat table land 100 feet or so above the river and a good deal of it open; free from timber. Sand flies to-day were very bad. I had ordered the boat to await us here and crossed the horses at once hopping them on west side. Camped on east side. By having this boat we have saved at least three days on the trip. No dry wood for rafting.

Saturday, 27th August. Camp 67.—Very heavy fog this morning—could not see to look for horses until 7 a.m. Crossed outfit but did not get horses all in until 10.30 a.m., as it was so late had dinner and left at 11.50 a.m. The "Blue" river is about 50 yards wide where it can be seen from the "Dease" and would have to be crossed if trail was taken on west side—trail would also be much longer. After leaving the "Dease" our course all day is N.N.E. by N. and we come on to the river bank every few miles as it bends in towards the trail. At 3 miles we crossed 300 yards of open flat, slight descent to it and ascent from it of about 15 feet, when trail again leads through open poplar and pine and small dry sticks, with some down timber. Then 1 mile across dry burned muskeg and up slight rise to level, through small pine and poplar for 1 mile and up very steep hill of about 100 feet to bench and again up a second hill to another bench and along edge of latter up and down easy grades for 1 mile N. by E. These hills could be avoided by keeping to river flat, but cutting would be heavy, there is no chopping to speak of on benches and the

rise would after all have to be graded, although it would not be so heavy. We then leave the edge and go N.N.W. by N. for 1 mile through small, thin, burned timber, and come to coulée with narrow creek about 6 feet wide—coulée is about 20 feet deep and would require considerable grading. Then on level for about one mile through burned pine with small down timber, some burned, dry muskeg with small burned pine and piece of thick down timber. From there to camp on N. side of a small creek at its mouth, we travelled through very thick large willow bush, very slow going for about 3 or 4 miles. This creek would require bridging as banks are bad. Took horses down into river and crossed mouth of former and then up to bank. Distance about 12 miles which took us from 11.50 a.m. to 6.30 p.m.

Sunday, 28th August. Camp 68.—Very wet morning, with slight intermission, until nearly noon. Left at 9.10 a.m. and made one drive until 3.30 p.m. Course throughout N.N.W. by N. After rising to bench by fairly easy grade from camp, we had $2\frac{1}{2}$ miles of fairly level going, chiefly through small jackpine. Then came to rolling hills with scattered timber and a little down timber and soon descended to some rather marshy ground among rolling hills, but not bad, with $\frac{1}{2}$ mile partly dry muskeg with small down timber. Then a short stretch of open jackpine with some down timber. At 5 miles out came to a river and gained bottom by a descent of about 25 feet, crossing creek about 12 feet wide which would require bridging. The descent would require grading. Trail runs away from river, but latter soon comes back and we go along bank of slough or back water for about $\frac{1}{2}$ mile through large thick scrub. We then gradually ascend by side hill trail to bench, through a good deal of down timber for $1\frac{1}{2}$ miles. Along this bench is better and more open going for one mile, when we come to coulee with narrow creek—a little grading would be required. Then up steep pitch of about 30 feet to bench with scrub poplar. This pitch also requires zigzag grading. We then travel on bench for about $1\frac{1}{2}$ miles and strike shallow, narrow coulée—very little work required here. From this we have open going along edge of bench through small jackpine for $\frac{3}{4}$ mile N.E. Then striking away from edge we resume our former course, through small jack pine—no feed. After about 1 mile we rose to slightly higher bench and after about $1\frac{1}{2}$ miles came to deep narrow coulée, very steep on S. side and climbed to N. side. A good deal of grading and some chopping required especially on S. side. A large lake lies to our right close to the river and we descended to it for about 1 mile, through small brush and some small down sticks. Camping for the day at 3.30 p.m. with fair feed. Distance about 13 miles.

Monday, 29th August. Camp 69, North side of "Liard." Left camp at 9.25 a.m., and soon rose to high bench, 50 feet above lake, and travelled along edge on succession of ups and downs, usually about 50 or 60 feet above valley; clear going, course north-east. In the first 4 miles there was a good deal of up and down, but not heavy, and some down timber. No heavy work either chopping or grading. One creek about $1\frac{1}{2}$ miles out would require a little grading, but no bridge, or if one was put in it would be a short one of poles. After this first 4 miles, going was through small poplar with some small Jackpine and some open larger jackpine and poplar. About 1 p.m. came to river, and went along banks for $\frac{1}{2}$ mile through thick large willow bush, then up on to bench; slight side hill grade required, on to good going north north-east, along edge for $1\frac{1}{2}$ miles. Then struck north north-west by north through small jackpine and up very steep hill about 40 feet on to another bench. Good going, and at 3.30 p.m. arrived at "Liard" River, opposite, but just above, the Hudson's Bay Co.'s post. Swam horses at once and crossed outfit in our boat. River is 300 yards and runs about 4 miles an hour. Cable ferry would be required here, or large "sturgeon head." Banks are good, higher on north side than south. Distance 10 to 12 miles.

Wednesday, 31st August. Camp 70.—Left Liard Post at 10.15 a.m., course north-west. Good going through poplar. At $\frac{1}{2}$ mile we crossed a dry slough or back water from river and went through jackpine and some down timber for another $\frac{1}{2}$ mile, then up steep pitch of about 30 feet, $\frac{1}{2}$ mile further on another similar rise and through scrub and burned down timber on bench. This continued for

about 4 miles with two or three slight rises and falls. At 5 miles trail went to high bench, about 45 feet or so, by very steep ascent and through thick small poplar, with no feed. At 7 miles came to very thick heavy scrub and much down timber, although not piled up very much or of any great size, and soon rose to top of high bank above river by two grades. Considerable work required here. At about 9 miles we crossed coulee about 30 feet deep by steep grade and went on through small pine and poplar, and $\frac{1}{2}$ mile beyond came to another very deep coulee, with steep banks running back from river with nice creek at bottom (these grades could be made easier by going a little way higher up, as coulee runs up into the hills very suddenly), crossed this and rose to top of hill 50 to 60 feet. A bridge of about 15 feet would be required across creek. Travel was then through jackpine and poplar, with no feed. At 12 miles we passed lake with a little feed in valley about 1 mile to our right, and travelled along edge of bench above river flat. This travelling continued until 6 p.m., where we came to another large lake on our right, and travelled alongside through thick small pine for $1\frac{1}{2}$ miles, where we camped at north end. Fair feed but not much of it, in fact where there was water to-day there was no feed, and vice versa. Distance about 18 miles, hard on horses, as it had to be done in one drive, and it was a pouring rain for the last 3 hours. Compass course is N. W. by N.

Thursday, 1st Sept.—Very heavy rain all day, so did not move, as everything would have been soaked whilst packing.

Friday, 2nd Sept. Camp 71.—Left at 9.50 a.m. Six horses had gone off in opposite direction to remainder, which caused delay. Course W. N. W. Fine morning after fog cleared off. Fair going through small poplar and some burnt down timber. At $\frac{1}{2}$ mile crossed end of dry muskeg and through small timber along edge of it to our left for about $\frac{3}{4}$ mile. There was then some feed with good going, through some small timber wide apart for a mile, when we bore nearly W. to avoid a steep hill on our right. No feed here. At $2\frac{1}{2}$ miles out ran into narrow coulee about 60 feet deep and went up it into thick, small pine for $\frac{1}{2}$ mile, then into open timber, chiefly poplar, for a short distance. From this we had stretches of good hard going alternating with soft ground for nearly 6 hours travel. About 6 miles out we came to large lake and travelled through muskeg and bad down timber along side of it for about $1\frac{1}{2}$ miles, when we got on to good hard going with down timber, not bad, for about 2 miles. Camped at a little feed on edge of lake at 5 p.m. Distance 9 miles. It may be said that there is no feed between camps 70 and 71, and a good deal of road would need so be made through muskeg.

Saturday, 3rd Sept. Camp 72.—Sent 3 men on ahead to cut out trail at 7 a.m., and after early dinner left at 12.50 with horses. Trail runs away from lake W.N.W. and after $\frac{1}{2}$ mile crosses end of dry muskeg. Then there are 3 miles of good open going over rather rolling country, but no grading required. Timber small—some down. Here is another fair sized lake with a little feed around it. At $3\frac{1}{2}$ miles came to a muskeg about $\frac{1}{2}$ mile wide, with small creek. Fifteen foot bridge required. Then some more muskeg and down timber for short distance. Then crossed swampy creek, requiring 18 or 20 foot bridge, and on through open pine with small down timber, and here and there open patches of scrub willow and poplar. Between 4 and 5 miles leave lake and pass along N. or E. edge of muskeg on dry part at foot of low bench, which rises very gradually and in one place recedes from trail some distance. There is some down timber along this part, but not bad, with small jackpine. At about $6\frac{1}{2}$ mile we had to bear to our left to avoid fresh burned ground with fire still smouldering in places, and crossed a narrow creek, bad hole, but only about 5 feet wide. Then crossed a piece of newly burned ground, very soft in places, and a wind springing up, 2 or 3 horses had narrow escapes from falling trees. At N. end of this is small patch of feed. Then came a piece of very heavy willow scrub, and then good open going for about $2\frac{1}{2}$ miles. Soon after leaving above scrub, trail runs up very steep hill about 40 feet high, which would require grading (side hill). Then $\frac{1}{2}$ mile muskeg and again open going for 2 miles or so, when we camped alongside of large marsh which if dry would yield 60 or 70 tons hay. There is good feed

around edge, and at S. end in willow scrub. It is intersected by winding creek, soft bottom. Distance 13 miles.

NOTE.—D.T. stands for down timber; J.P. for jackpins; S.D.T., small down timber; P. for pine.

Sunday, 4th September. Camp 73.—Sent three men ahead at 7 a.m. to cut trail, and left at 12.45 p.m. Course for $\frac{1}{2}$ mile W.N.W., through D.T. We then rose about 20 feet, fairly sharp incline, requiring grading, and travelled $\frac{3}{4}$ miles through S.J.P., then down gradually and across 200 yards dry muskeg, when there is slight gradual rise about 10 feet to another bench; good going through S.J.P. for $\frac{1}{2}$ mile. Then dry muskeg; short stretch of hard ground and again muskeg; dry all but about 50 yards, which is wet and bad. More swamp than muskeg; road can easily be made through it. Then on to low bench with J.P. and poplar for $\frac{1}{2}$ mile, and on to open old burnt ground with some small down sticks, and after about $1\frac{1}{2}$ miles no feed; came to good feed on similar ground for $1\frac{1}{2}$ mile, but D.T. larger. Then came to good creek requiring about 45 foot bridge; water is dammed back by beaver just above crossing, and bottom is gravelly. Then through some thick scrub with burnt standing and D.T. for $\frac{1}{2}$ mile, with about 100 yards soft ground. We then came to what has all the appearance of muskeg, but water only appears here and there in places, with thick small pine and a great deal of S.D.T., with here and there spaces of larger poplar, pine and underbrush, for about $4\frac{1}{2}$ miles. Then came dry ground, slightly rolling with fair sized poplar and pine, with thick brush, and changed our direction more W., on slight down grade, to reach water. A high cut bank appeared some distance to our L., and after about $1\frac{1}{2}$ miles camped on edge of this about 40 feet above almost dry bed of large stream. The actual stream at present is only about 25 feet wide and 18 inches deep, but it must vary at high water from 130 to 200 yards. Banks are from 20 to 60 feet high. Hardly any feed here, except a little about 400 yards down from camp on E. side. Our course is up from here, leaving river on our L. after about $\frac{1}{2}$ miles. High mountains visible far away to S.S.W. Distance about $11\frac{1}{2}$ miles as nearly as can be estimated in such travel.

Monday, 5th Sept. Camp 74.—Sent three men ahead at 7 a.m., giving course W. N.W. Three horses missing, so left with constable Fitzgerald, two saddle and four pack horses at 3.15, leaving Baptiste to hunt for horses and come on with remainder of men and horses. For $\frac{1}{2}$ mile there was pretty thick brush with underbrush and D.T. Then about $\frac{3}{4}$ mile of dry muskeg, when we crossed a narrow creek about six feet with good bottom and on through thin S. P. Then through rolling country, with very bad tangled small dry sticks and ditto bush with S. J. P., many of them dead, for four miles, with here and there short bits of better going. This D. T. and brush, although troublesome to get through, would be of little hinderance in making a road, and there is no heavy chopping to be done. At about 5 miles out we crossed the river, same we camped on last night, which here is about 35 yards wide with low bank on E. or S. side and about nine feet high on opposite side. Approach on former is rather soft and would require making for 50 or 60 yards, and opposite bank requires grading down about 25 or 30 feet. About 150 yards from crossing rose to bench about 20 feet and again a short distance to another about same height, both would require some grading, and on through thick small pine in better going, but by no means good, for 1 mile, no feed. Then $\frac{1}{2}$ mile dry muskeg with some patches of feed, and then S. J. P. with S. D. T. here and there, for about 2 or $2\frac{1}{2}$ miles when we changed our course more W. in search of water, and crossing dry muskeg, came, at 7.15 p.m., to small lake with some good feed, through fairly open timber to S.W. and camped. There is some good grass around edge of lake, but bottom is too soft for horses. Overtook choppers at 6 p.m. Distance 9 miles. I had instructed Lafferty to remain another day at last camp if horses not found, as we had provisions, and train could easily be overtaken.

Tuesday, 6th Sept. Camp 75.—Sent choppers on as usual. Directed Brewster to strike into Frances River by bearing more W. where I think better going will be found along river benches. Left camp at 3.15 p.m. Lafferty arrived with train and

missing horses at 2.15. For 3 miles there was good going through open poplar and some pine over rolling country, no grading and very little cutting until we came to coulée about 30 feet deep with rather soft rough bottom (easily made good) and small creek in it. The N. side of coulée is not as high as S. about 15 feet, both require grading. After crossing we rise to bench about 100 feet high above valley of Frances, by gradual short steps and after $\frac{1}{2}$ mile pass good meadow with slough down in valley. This meadow appears to be dry and if so, 20 tons of hay might be got. After 1 mile of travel on bench, it runs alongside river which is about 120 feet below, going, as far as this, has been good. We then cut in to bush and go through about 75 yards of bad D. T. amongst S. J. P. Then more open poplar with some S. D. T., troublesome to horses but of slight hinderance to road making. At about 6 miles out we descended from bench and cross dry muskeg with burnt standing and D. T. for about 1 mile, coming out on river bank. Fine feed all along the shore flat, and camped at 7.15 p.m. The 1 mile across muskeg was very bad taking us about $1\frac{1}{2}$ hours to make. Cart trail would have to go along bench, with a good deal of cutting for $1\frac{1}{2}$ miles. Distance 7 miles, course W. and W. N. W. River here is about 200 yards wide and banks low, especially on W. side. On E. side there are high benches back from the river about 100 yards, sometimes less, with generally good feed. I make compass deviation at this camp 39° east.

Wednesday, 7th September. Camp 76.—Sent 3 men ahead as usual and left at 1.50 p.m. Climbed up to bench by very steep hill, about 60 ft. If cart trail was taken by edge of bench two grades and the muskeg crossed yesterday would be avoided. For 1 mile N.W. there was some down timber with fair travelling. Soon we came to coulée with steep banks about 30 ft., about 30 yards across at bottom, which is muskeg with down timber; banks would require some grading. Then some jack pine and some down sticks for about 4 miles; course W.N.W. through alternate jack pine and poplar and always down timber. Crossed about $\frac{1}{2}$ mile dry muskeg with down timber and passed small patch of feed. After coming out of muskeg, came through some larger; more open pine on a down grade to a small lake or slough with some feed at N. or W. end, and shortly after came in sight of river. Climbed over an almost perpendicular hill of 60 or 70 ft. to a bench which bore W. and ran into river bank. By gradual slope descended through small timber, chiefly dry and down timber, to river, camping at 6.20 p.m. at some fair feed along bank and edge of a back water. The only real work in making trail for carts to-day would be the grading, as the down timber is so small that in most cases it would simply be thrown to one side, and the standing timber, although in some places close, is small, in fact this work might be called "brushing" instead of chopping. The muskegs do not amount to much, but some levelling would have to be done in places. Distance 8 miles.

Thursday, 8th September. Camp 77.—Three men ahead as usual; 1 horse missing until 2.30 p.m.; $\frac{1}{2}$ mile nearly N. then $\frac{1}{2}$ mile W. and through dry muskeg W.N.W. Then 300 yards bigger timber and more open going; then muskeg again and at 2 miles out passed small lake on our left with a little feed around it, but not much—too wet; bench with almost cut banks close on our right; $\frac{1}{2}$ mile beyond came to spur of high bench with coulée up one side. Our direct course lay right up this and along top, but down timber was so thick we had to turn back and keep to the left around foot of spur, travelling through dry muskeg with swamp on left across a horse-shoe shaped valley. There is a fine creek, very small, with cold spring of water at foot of this spur. After crossing, as above, came by slight incline to higher ground and travelled through a piece of more open and larger timber and then dry muskeg until 6.30 p.m. when we camped alongside a small swamp, too wet to get much feed, and bad for water. There is good feed all around in the willow brush. The whole of to-day's travel is through tangled down timber, sticks and muskeg. If trail was taken up spur to bench it would be more direct, but grading and chopping would both be heavy. Distance 5 miles. Lately the horses can easily travel in from three to four hours what it takes three men all day to clear, therefore I do not start with them until afternoon.

Friday, 9th September. Camp 78.—Three men ahead as usual. Horses left at 1.15 p.m. Course west north-west and had two and a half miles through good going S.P. and standing burnt T., with a little D., ditto, good feed. At three and a half miles there is a bad place in muskeg between two small swamps, which would require corduroying. At four and a half miles came in sight of river below us and descended to coulée about 30 feet deep, sides not steep, and turned towards river, running along north side of coulée, and then turning up river and along sort of level narrow bench or flat on hill side, coming up to choppers at 3.35 p.m. Waited for half an hour to let them go ahead, and went west-north-west through small J. P. and poplar down easy slope to river and overtaking choppers again, camped at good feed on level flat on river bank, choppers going on until 6.30 p.m. There is a flat or low bench along the river between it and foot of hills, with small T. chiefly poplar and some D.T. Fair feed. Distance seven miles.

Saturday, 10th September. Camp 79.—I went ahead with three men at 7.10 a.m., and continued up river flat for about half a mile, then slightly more on bench to our right, west north-west, then a short distance nearly north, and again north north-east. These deviations were made principally to get past bad places, and thick D.T., also some on account of curves of river, going good and not much cutting. Kept as much as possible in touch with river whilst cutting off bends. At five miles passed a large rapid which could be seen from bench and half mile beyond came to fresh burned jackpine, nearly all the down timber burned out. Good travelling north-west by north. After another half mile came to small jackpine and then larger timber ground newly burned, and at about one mile further came to coulée about 80 feet wide with small creek nine feet or ten feet wide, with good bottom. A sort of cross gully runs down one side and up the other, which could be utilized for cart road, but would require some grading. Very little down timber. Good going through newly burned timber. All feed destroyed. Camped for noon about six miles out at 11 a.m. Left again at 12.10 and travelled through green timber. Good going. Very little down timber for two miles or a little more, when we came to deep rocky coulée and had to retrace our trail for about half a mile and turn towards river, crossing coulée by easy grade and rising to low bench above river by gradual easy slope. There is a nice creek in coulée with good hard bottom and only 12 inches to 18 inches deep. No grading required. Soon after we ran down to river and along narrow grassy strip along the shore for half a mile, banks about 10 feet high, passing mouth of shallow creek about 10 feet wide. After this half mile we had to take to bench with small jackpine and a lot of down timber, and 1½ miles beyond came to small green jackpine, and then after awhile to more open going with scrub and some down timber, coming again to river and camping where there was some feed at 4.20 p.m. Feed is so scarce that if struck at 4 or 5 p.m., it is not safe to pass it as it may be dark before we get any more, and with so much down timber one cannot travel after about 7 p.m., and even then it is dark long before camp is made. Horses arrived at 6.10 p.m.

A range of mountains runs from south-east or nearly east and strikes the river about one and a half miles further up, and another comes from west, river running between them. We saw a cañon and many rapids on river during to-day's travel. Distance 12 miles.

Sunday, 11th September. Lay over.

Monday, 12 September. Camp 80.—Went on with three men, 7.30 a.m., rose by gentle slope to top of bench 150 yards east of camp and travelled north north-west. After one and a half miles bore to right, a short distance to cross deep rocky coulée. Grade on both sides is slight and no work required. Narrow creek in it with good bottom. Fifty yards on came to about 25 yards muskeg, then small poplar and jackpine and shortly after to shallow coulée with creek six feet wide, stoney bottom, no work required. Then through same style of travelling for half mile, skirting muskeg at foot of low bench on right. Crossed end of this and at about half mile on ran into slightly swampy ground with good feed. Travelling not bad for quarter mile. Then up slight rise with poplar and green pine. A mile beyond crossed small piece of muskeg. Then 100 yards thick down timber. Then some good

going through small poplar, jackpine and scattered brush for one mile or so. Soon after had to bear towards river to avoid heavy down timber and one mile on came to good piece of feed in swampy ground and camped at noon. There is a small creek with hard bottom where we crossed, running through this swamp. Left again at 1.05 p.m., and for two miles it was over rolling country with easy grades, but a good deal of down timber. Here we passed a nice lake on the right in valley between the ridge, or plateau, and foot of mountains on our right, about 300 x 250 yards, another smaller lake lay to the north of it, some little feed around these. Here we bore slightly to right and travelled on side hill as the down timber on top was bad. A cart trail would go along the top. Course between north-west and north-west by north. We then had a short piece of bad down timber. Then about 50 yards of heavy willow in wet ground, not bad. Then a piece of rather bad muskeg and rise again through down timber. This brought us about three miles from noon camp. From this on for the next one and a half miles, it was fair travelling over rolling hills with low easy grades, through jackpine and poplar with some pieces of rather bad down timber to cut through, until we reached a small swampy piece to right of trail, with good feed all around in the small timber and camped at 4 p.m. Camp is about quarter of a mile off trail to right. We went on cutting trail for another hour. Pack train arrived at 6.35 p.m. Travel to-day was chiefly on ridge lying between river and foot of mountains to the east, a valley being between this ridge and the mountains. This range of what may be called the foothills is rolling. Going was good with exception of two short pieces of muskeg and some pieces of heavy down timber. The mountains are, I should judge, about 400 feet above river and are covered with small pine and poplar. Distance $10\frac{1}{2}$ to 11 miles.

Tuesday, 13th September. Camp 81.—Heavy rain during night and up to 10 a.m. Left with three men at 10.30 a.m. After striking back to trail from camp, took up course N.W. and continued on ridge above valley to right, with fairly good going and some down timber. About $\frac{1}{2}$ mile from camp, and $\frac{1}{2}$ mile on passed small lake in valley, with feed, crossed a small muskeg. The ridge is covered with small pine and poplar. At 2 miles out crossed small creek, 6 feet wide, which would require a bridge. Three miles out descended into a coulée, not deep and no grading required on either side. Here there is a small creek with good bottom. Four miles crossed a small creek about 4 feet wide and ran into a lot of down timber. Had to bear sharp to left and descended to river flat, as cutting on bench was heavy, cart trail would go on bench. Followed river up near to bench and found some feed about 6 miles from last camp. Camped at 5.10 p.m. Our course all afternoon, with exception of bend to river, was about N.W. and going was fairly good. Easy country to make trail through. Distance between 6 and 7 miles.

Wednesday, 14th September. Camp 82.—Went ahead with three men at 7.30 a.m. Course N.W. over spur of hill. After rising by easy slope to bench from camp, the first mile was small pine and some down timber. About $1\frac{1}{2}$ miles crossed small creek about 8 feet wide, with drop from banks, which would need bridge for cart trail, although fordable by pack horses. Then for $2\frac{1}{2}$ miles we had fine open going through large jackpine over rolling country. No grading of hills required, and but little down timber. Then came $\frac{1}{2}$ mile down timber and then again open small poplar for about $\frac{1}{2}$ mile, when we ran right on to river which turns sharp to the right and to get good travelling, we retraced our trail about $\frac{1}{2}$ mile and kept on high land above river, through open green pine, for $\frac{1}{2}$ mile. For the next 2 or $2\frac{1}{2}$ miles we had good going over rolling country and through open jackpine with hardly any down timber. Then came a stretch of alder brush with down timber, for 1 mile round side of mountain, heavy cutting. Our course was almost due N. Then $\frac{1}{2}$ mile through green pine on side of hill with thick moss under foot, crossing two small dry creeks, and a coulée. A few hundred yards further on we edged down to left to river flat, as cutting was too heavy on hill side, $\frac{1}{2}$ mile on camped at river at noon. Left again at 1.20 p.m. and continued along river flat through green pine with thick moss underfoot. In first $1\frac{1}{2}$ mile we crossed two bad land slides, or more properly washouts, and a short piece of dry muskeg with some rather bad down timber and

in second $1\frac{1}{2}$ miles had somewhat similar travelling, but rose to bench after $\frac{1}{2}$ mile or rather over a cut bank. Some little side hill grading would be required here, about 150 yards. We then had to edge down gradually to river to cross a coulée which higher up had steep cut banks. Crossed this at 3.30 p.m. We then had good travelling over top of high bench above cañon, rather rocky, a little grading would be required on this ascent but not much. This was almost clear of timber but had some down timber. Then through green pine with soft moss on to open burnt ground. Fine travelling to good feed on burnt ground on bank of river, just below where it bends abruptly to the left again. Camped at 4.30 p.m., a short distance before we first struck river to-day and about $2\frac{1}{2}$ miles from last camp, a creek runs in from N.W. between the mountains, which here bear away from river on W. side, and the low range along river. This I take to be "Simpson" Creek coming out of lake of same name. Distance to-day about 13 miles over easy country for cart trail. Course, after first 5 miles, N. by compass.

Thursday, 15th September. Camp 83.—Left with three men at 7 a.m., 300 yards from camp rose to bench above river by gradual rise and travelled along edge about 1 mile, through burnt timber with some down timber, good going, when we came to deep coulée where creek comes in from the east. This has steep cut banks about 250 yards from the river, but on the flat the banks are low. We edged down to this bottom from bench, 250 yards side hill grade would be required. There is open pine of good size in this bottom, with some fallen timber. We crossed this creek by fording about 100 yards from the mouth, it has good bottom but bad banks, which would require grading for carts. I think a scow would be needed in the spring or during high water, as at present the water just wet the bottom of our pack. On N. side of this creek there is about 200 yards of very heavy down timber and then open green pine for $\frac{1}{4}$ mile. When we rise slightly and then descend to good piece of feed about 400 yards in diameter amongst a little burnt timber. This is about 3 miles from last camp. Then rising gradually through small open poplar and jackpine to bench and again rising slightly, travel along side hill, good going and not too much siding for cart trail, for 1 mile. We then dropped slightly to narrow level place and continued N. following course of river for $\frac{1}{2}$ mile. Then we got fairly open going through green pine with some down timber, not bad, and came again to river at noon, where we camped for dinner. We were delayed nearly two hours crossing and fixing the creek mentioned above and some time with Indians, so that we only made about $4\frac{1}{2}$ miles this a.m. I do not think any crossing could be found higher up the creek for cart trail. I tried up to the cut bank.

Left again at 1.15 p.m. and travelled through green pine with soft moss for $1\frac{1}{2}$ miles, when we crossed creek 6 feet wide, good bottom, but bad soft banks, and came into about 100 yards bad muskeg which would require to be corduroyed the whole distance. Then on to 1st bench and along slight side hill, through small poplar and pine. Three-quarters of a mile on we descended to creek by easy slope, though going somewhat soft. Approaches require building and grading slightly as banks are soft. Width of creek 10 feet, stony bottom. Then on through green pine, inclined to muskeg, to river where we camped at 4.30 p.m. in pouring rain.

Friday, 16th September. Camp 84.—Went ahead with four men at 7.30 a.m. Course N.W. up river flat and through small green pine and soft deep moss, almost muskeg, for $\frac{3}{4}$ mile and crossed small creek 8 feet wide, requiring bridge. One-half mile on another similar creek, and $\frac{1}{4}$ mile further a large creek, about 20 feet bank to bank, large stones in bed. Then bore towards river on account of spur of mountain and continued around latter. Up to this ($2\frac{1}{2}$ miles) the travelling has been rather wet muskeg. Then about 150 yards dry, through burnt timber. Then the same sort of muskeg again, with numerous small streams 3 to 6 feet wide, good bottom; some down timber but not bad or much. This is all on low bench between river flat and foot of mountains, which are about $\frac{3}{4}$ mile as a rule on our right. About $\frac{1}{2}$ mile on we bore to left to avoid bad muskeg and came on slightly lower ground to some good small sloughs with fine feed and camped 1 mile or so on in large and open jackpine on the edge of a backwater of river with some fine feed at 11.30 a.m.

Left again at 12.40 p.m. and after about $1\frac{1}{2}$ miles of good open timber, with more or less feed, came to burned muskeg about 200 yards across and crossed good creek, shallow, about 25 feet bank to bank, stony bed. Then we had green pine for $\frac{1}{2}$ mile when we came to river bank and ran along it for about 250 yards through muskeg moss. There are a number of islands in river here. Then climbed to bench about 40 feet, about 100 yards side hill, grading would be required here, and had good going for over 2 miles although a little soft, good feed all the way. We then crossed shallow creek about 45 feet wide from bank to bank, stony bed, banks good. This would, I think, always be fordable. Then on, keeping in touch of river, through open going and but little down timber until we came to good feed beside slough or backwater of river at 3.20 p.m. when we camped. All the muskegs, as I call them, to day had stony bottoms and the creeks intersecting them had also hard bottoms. If this was not the case they could not be crossed without much bridging. Only a few really bad places were crossed and I think a road could easily be "graded up" through them. Some smart showers. Distance 11 to 12 miles. Last night in a long talk with the chief of Liard Indians he said snow would be here in 28 days and that the Pelly would be frozen by the time we got there, also that it would be impossible to bring horses back.

Saturday, 17th September. Camp 85.—Went ahead with four men at 6.50 a.m., course north-west. After half mile through fairly good muskeg on flat, rose to low bench about 15 feet through pine and poplar and some little down timber for one mile, when we came again to softer moss for about half a mile, and descending again struck the river and continued along the bank through small jackpine, fair going, but rather soft, for three-quarters of a mile. At three-quarters of a mile on we passed a single high mountain on west side of river, those on the east side run off to north-east. Here we cross a stony creek varying from 20 to 40 feet in width from bank to bank, both banks low. It would not be fordable at high water. Then for one mile through small pine and down timber to slough, crossed this and travelled along the island formed by it, to avoid heavy cutting on main land, fine feed here, slough dry in many places. Cart trail would be cut through on mainland. The slough is about 60 feet wide where we crossed. Travelled up this about half a mile and recrossed to main land and followed along river through down timber for one mile, when we gradually rose to low bench, leaving river on left, and through small poplar, some green pine and again poplar for two and a half miles good going, and camped at 11.15 a.m., on second of two small lakes about quarter mile apart, some feed. Left again at 12.30 p.m., and about 100 yards on came to river and followed it along bank for about half mile and gradually rose to low bench about 20 feet, and travelled through small pine, tamarack and down timber, with some soft places for another mile, when we rose again slightly and crossed stony ridge. Three-quarters of a mile on came through burnt pine with good feed along river. Here we crossed a large creek, stony bed, close to its mouth. It is about 40 feet from bank to bank, which are good. It would not be fordable in high water, about 12 inches deep now. Here our course was west north-west, and quarter mile on we leave the river which turns to the left. The upper canon is a short distance above this. We then go through fresh burned muskeg, rather soft in places, for three-quarters of a mile and cross another similar creek 18 inches deep and 30 yards from bank to bank, narrower in some places. Landing on north side (where we cross it it runs nearly east and west) is not good as most of it is quicksand. On crossing there is a piece of green pine, which escaped the fire and good feed there, and on edge of creek. Camped here at 2.50 p.m. The high mountains in the distance on our right are covered with snow, also some of those across the river to our left. Distance about $11\frac{1}{2}$ miles. Feed until we came to burned ground is plentiful and travelling fairly good, but with a good deal of down timber. In fact there is down timber all the way, although it is usually small.

Sunday, 18th September. Lay over as usual—hard frost last night.

Monday, 19th September. Camp 86.—Left with 4 men at 6.45 a.m. Course N. W. First $\frac{1}{2}$ mile through burned muskeg, then small poplar for short distance and rose about 30 feet through small jackpine, and over top of rise, descending again by

easy grade and rising almost immediately again about 40 feet by side hill trail. Then on through small pine and down timber for $1\frac{1}{2}$ miles. From this on for 1 mile a regular muskeg—bad. Here, after making about 50 feet of bridging, we struck to left towards river to get out of muskeg on to better ground. This necessitated a longer trail, but saved time. Cart trail would have to be corduroyed, through muskeg. Cart trail should take this route near river all the way from last camp. After getting clear of muskeg, we came on to good hard going through jackpine by gradual rise of about 30 feet and then on to another rise of about 40 feet, also gradual, and a short distance beyond, looked down on 3 lakes—1 small and 2 long and comparatively narrow—about 70 feet below. Descending by 3 steps (only one of them steep), we passed the narrows between the last 2 lakes and ascended about 60 feet—good travelling, through open poplar chiefly and small down timber. Country is rolling and course W.N.W. by N. One-half mile on a lake is passed on our left with some good feed around it. Had we gone direct through muskeg, these lakes and feed would not have been passed. From here we soon strike a cut bank above the river, then leave it and strike direct for mountains above Frances Lake, over beautiful country for cart trail, with good feed. Country is undulating plateaus and shallow valleys for about 4 miles. It is sparsely covered with small dry jackpine and very little down timber. We strike bend of river again here and again leave it, going straight and strike river where we can cross it to go up W. side. At 11.50 a.m. camped for noon and to wait for pack train which arrived at 2.30 p.m. Splendid feed, $\frac{1}{2}$ mile before this we passed a small lake on our right, about one-quarter mile off the trail, with fair feed. Our guide had never been through here before, having either travelled on foot through muskegs or by the river. About 10.30 we had passed two boats (Auston and Holmes party) coming up by the river—they came in by the Stikine. Distance about 9 miles.

There is good timber for rafting here but as we would have had to use our lash and sling ropes, and it would have taken a day to dry them again, I bargained with the boats to cross the outfit for \$5. This as it turned out saved us at least one day. The above boating party left in February.

All the high mountains in sight are white with snow to-day. The crossing of Frances river is about 6 miles above the upper Cañon and is 80 yards wide—slack current—but deep, 12 feet or more in places. Above and below the crossing, river widens. A scow or ferry would be required here. Banks low and landing for horses good. No hay.

Tuesday, 20th September. Camp 87.—Ahead with four men at 6.45 a.m. The first three miles was good open travelling, through pine, J. P. and poplar—rolling country. Then 100 yards of tangled swamps and again good going through S. J. P. Then $\frac{1}{2}$ mile open, with good feed and S. J. P. Then more J. P. and poplar and some D. T. At 5 miles out came to fine feed in long shallow dip between 2 ridges. No hills requiring grading, or any work but easy clearing from timber. Trail runs up this dip. One-quarter mile on are 2 small lakes in hollow to our right—some feed—it looks to be wet. Then about $\frac{1}{2}$ mile side hill—would require some grading—soft moss with stony soil beneath. Then fair travelling with a little muskeg and D. T. for 1 mile when we had a short piece of thick willow scrub and crossed a stony creek about 30 feet wide—bridge required, but lots of timber long enough for the purpose. Stream is rapid—at present 18 inches deep—deep at high water—good bottom—approaches bad and would require grading up. Then 150 yards rather bad, D. T. and rose to low bench about 15 feet (grading required) and on through rolling country, travelling chiefly on ridges through S. J. P.—open poplar and good feed for $\frac{1}{2}$ mile. Then large J. P. Then about 3 miles of fine feed and going, past chain of lakes lying in valley on our R. Some feed around these and plenty on hillsides—This valley continues for about 1 mile when we went down easy grade into valley and along it for a short distance—rather soft going in a sort of mossy muskeg—and over low rise down to the river, reaching at 11.50 a.m. Camped for noon.

Left again at 1 p.m. and continued along side line for about 300 yards through D. T. and then rose to bench about 40 feet and got better travelling on hard ground with a good deal of S. D. T. Side hill and rise mentioned would require to be

graded for cart trail. From this we keep along bench parallel to the river for about 3 miles, when we get good hard going and not much D. T. for $\frac{1}{2}$ mile. Here we cross coulée running up from river, deep at mouth but shallowing rapidly and running out about 100 yards above where we crossed. From this on for 1 mile or so, was fair with some D. T. Then we came to another deep coulée with narrow creek, about $2\frac{1}{2}$ feet at bottom, and some muskeg. South side of coulée is about 50 feet, but grading easy. North side about 25 feet and steep. Then on through very small J. P. and little down timber for about $\frac{1}{2}$ mile and went down fairly steep hill to river flat to get feed and water for our night camp. Trail would not, otherwise, have been taken down, but gone on direct. The travelling to-day, especially this a.m., was good and easy. Distance about 15 miles.

Wednesday, 21st September. Camp 88.—Left with 4 men at 7 a.m. First 3 miles fair travelling, through pine chiefly, N.W. from camp, when we got to large lake on left and rose to hog back between this and river flat, about 30 feet high, and continued about $1\frac{1}{2}$ miles on. Then we descended to river flat and got good going for $\frac{1}{2}$ mile, then open glade for 200 yards and again small pine. Then rose to another hog back, between river and large lake, which after about $\frac{1}{2}$ mile widens into bench. After $\frac{1}{2}$ mile or more descended into deep coulée—S. side 80 feet or so, N. side not so steep and only about 25 feet. There is a creek in bottom about 8 feet wide—bridge required. Then $\frac{1}{2}$ mile of burned pine; then open going for $\frac{1}{2}$ mile, and then some more fair travelling; then another similar coulée and creek. Travelling was heavy all morning, being chiefly through thick pine, with a lot of small D. T. Coulée requires grading, but work would be easy. Soon after crossing last coulée we ran down to river for feed and noon camp, arriving at 12.20 p.m. Snowing all morning, making travelling bad.

Left again at 1.20 p.m. and continued along river flat through small pine, about $\frac{1}{2}$ mile, where to save cutting we took the shore, and $\frac{1}{2}$ mile on struck Frances Lake and continued on the shore—good travelling—for about 6 miles, when we camped at 4.25 p.m. A cart trail should, I think, either follow the bench where we left it to go to noon camp and continue for about 4 miles before coming down to the lake flat, or a short cut might be got from first mentioned place to somewhere considerably higher up the lake. The guide, however, knows nothing of the country back from the lake, and it would have taken too much time to locate and cut such a trail. A trail for carts could not be made between noon camp and here along the lake flat, as precipitous rocky cliffs come right to lake shore in places and are about 100 feet high. The route we are taking is good for pack trail and there is considerable feed in places. About 4 miles from noon camp about 8 tons of hay could be cut. Our camp to-night is right opposite the entrance to the east arm of lake. Distance about $13\frac{1}{2}$ or 14 miles. Heavy rain to-night.

Thursday, 22nd September. Camp 89.—Some of the horses missing and did not get away until 10 a.m., partly on this account, and partly through morning being too wet to pack. Travelled on lake shore until 12.50, when we camped for dinner and left again at 1.50 p.m., camping at 6.20 p.m. Cold wind, good travelling with exception of a few places where a sort of gravel, with almost a blue clay, but as soft as quicksand, underneath was found. But little feed and that poor, in from the shore.

Friday, 23rd September. Camp 90.—Travelled from 10 a.m. until 2 p.m., when we got to head of lake and had dinner. From here trail has to be cut across to Finlayson above canon, so sent four men on and camped for the day where there is some feed. Regarding our route up lake, a cart trail could only be made at considerable expense close to shore. In some places rock work would have to be done by blasting, throwing a slice of the rock into the lake or a road built around the point. This route also would be bad on account of want of feed. A trail will have to be found west of the hills. To-day's travel about 9 miles.

Saturday, 24th September. Camp 91.—Four men ahead at 8 a.m. C. S. Watson, camped here, has 2 canvas portable canoes 20 x 4 feet beam, steel ribs. I asked him yesterday if he would sell one but he would not. This morning he said he would

sell one for \$175, cost at factory in the United States, is \$90, this with duty and express would make \$175 a fair price. I purchased this fearing we would not have time to build a boat. Travelled 4 hours to noon camp and thence for $1\frac{1}{2}$ hours when I found choppers camped at some feed on river. I had told them to camp between 4 and 5 p.m. if they got good feed for to-morrow. Horses are tired and weak as they have travelled fast up lake with but little feed. Our trail starts on an old Indian winter trail about 300 yards S. of the mouth of Finlayson and goes over the hill nearly W. (compass course) by gradual ascent for about $\frac{1}{2}$ mile through pine. About 3 miles out we descended rather steep hill to swamp with small creek running out of small lake to the W. About 50 yards of bad hill side here. Both sides of creek are soft. A little feed is around lake, but hardly sufficient for 1 night. Then on through pine and some burned ground and descended to river flat about 7 miles out. About 1 mile beyond came to noon camp, after which we went on the same course for $1\frac{1}{2}$ miles when we came to a bend of river, and bore to the left along rather steep side hill and going along this above river came to night camp $\frac{1}{2}$ mile on. All the feed here is along the edge of river and only a few yards wide, but it extends $\frac{1}{2}$ mile or more up river. From the lake to this, there is no feed, except a small lake mentioned and that can hardly be taken account of. The travelling is very heavy through thick soft moss where one sink $\frac{1}{2}$ way to the knees at every step. If there was feed, a pack trail would soon be worn by the horses, but I would not recommend this route. About 30 yards of muskeg had to be bridged and several bad holes filled in. Snow was lying thick on all the surrounding hills and our route was white until the sun got through the trees. Cold east wind to-night. River here is about 30 yards wide and very swift but shallow—a succession of rapids from here down to Frances Lake. Distance about 10 miles.

Sunday, 25th September. Lay over as usual. Cold day.

Monday, 26th September. Camp 92.—Four men went ahead at 8 a.m. and we did not get away until 1.15 p.m. owing to 5 horses being missing. The canoe is a bad pack and both horses carrying the long packs must be led, so I stayed with pack train to-day, to help in driving the others. Went along the flat about $\frac{1}{4}$ mile then up slight rise and along hillside—soft going for $1\frac{1}{2}$ miles to creek, then $\frac{1}{2}$ mile open J.P.—then soft for $\frac{1}{2}$ mile—then S.J.P., &c., for some distance and descended to river and went along it for some distance. There is feed on both sides of the river here and 2 good looking meadows on N. side about 150 yards back. From this we had more moss and D.T. and at about 4 miles out rose slightly to some better going—200 yards on we crossed some bad holes and rose about 80 feet. On opposite sides of river were two good meadows about 1 mile apart, then alternate moss and good going for $1\frac{1}{2}$ miles when we came to a wide creek with stony bed and ran along side for $\frac{1}{2}$ mile. Then crossed it into open going and good feed in burnt pine. Then on through alternate dry and wet moss for about 3 miles to good creek about 25 feet wide, fordable, and into small pine, good travelling for $\frac{1}{4}$ mile and then into large pine for $\frac{3}{4}$ mile to open space with lots of good feed, and camped at 6.15 p.m. Distance, 11 to 12 miles.

Tuesday, 27th September. Camp 93.—Went ahead with 3 men at 7.30 a.m. Good going, but some pieces of soft moss and muskeg to big creek about 40 feet wide about 6 miles out. Would be about 3 feet deep at high water. Good bottom and banks. A good deal of burnt timber with good feed for first 5 miles in valley near river. This valley averages $1\frac{1}{2}$ miles in width. We then after 6 miles rose by steep grade to bench about 30 feet high and from there had good travelling for about 7 or 8 miles, with some soft moss and a few soft places, chiefly along the hill-sides above the river, until we came to a small creek about 4 feet wide. We camped just on the other side in green pine; good feed on river banks and back from river, which is quite shallow at present. Distance 14 miles.

Wednesday, 28th September. Camp 94.—Sent 3 men ahead at 7.30 a.m. and followed them at 8.15 a.m. Went along river flat for about 1 mile through ground inclined to be swampy. Guide had never been over this route before; only having gone N. to the Pelly lakes. He wanted to cross the Finlayson River and up on side of high mountain on N. side, but I decided to keep the S. side as far as possible. After

going 1 mile, came to soft moss with some burnt timber, and here and there a soft hole for about $2\frac{1}{2}$ miles, when we crossed a creek about 30 feet wide, with good bottom and banks. Except at high water this would be fordable; only about 12 inches deep now. After crossing, we got about 1 mile the same as before, and then through green pine. Fair travelling for another mile, and going along hillside above river we saw a large bull moose come up on the S. bank and towards us. I got a shot at him and hit him hard, giving me time to get in two more shots. The third dropped him dead. We camped for noon and dressed the meat. Weight, dressed, over 600 pounds. Cut 350 pounds of meat off the bones and packed it on two horses, leaving the balance, more than 250 pounds, cached for men returning. The head was the largest I ever saw and the only moose we have seen since coming through the mountains last winter. Left again at 1.30 p.m. and continued along hillside, and $2\frac{1}{2}$ miles on crossed the river, which is here about 50 feet wide and fordable almost any time. Good bottom and banks. About 3 miles from noon camp rose by easy grade to top of bench, or more properly butte, about 40 miles high and saw Finlayson Lake about $2\frac{1}{2}$ miles ahead. On our left was the valley of the river, which runs down the N. or E. side, and a large creek comes out of the mountain to the west, and running down west side of the valley joins the Finlayson near to foot of hill. All along this valley to the lake are fine meadows. We descended gradually through burnt timber and fair feed to the Finlayson river, and after skirting it about 300 yards, crossed and continued up valley through a stretch of fine grazing of fully 1,000 acres, until we arrived at the east end of the lake, where we camped in heavy hailstorm at 5.10 p.m. The lake is very shallow along the shore, and the creek is about 20 feet wide. Where we crossed the latter, it was about 2 feet deep. Where it leaves the lake, it is a little wide but only about 12 inches deep, with good bottom. Logs for building are abundant at the crossing. Distance 11 to 12 miles.

Thursday, 29th September. Camp 95.—Sent 3 men ahead at 7.30 a.m. On account of heavy mist could not find all the horses until about 9.30. Left with pack train at 9.45 and travelled up the lake, chiefly on hillside, keeping from 200 to 400 yards from lake shore. The hills on S. side are fairly high—in some places rising rather abruptly from the water. Where there is any flat along the river, it is muskeg and bad travelling. The N. side appears to have more of these flats, but the distance as I had laid out our route would be considerably longer. Travelling all day was heavy, through thick moss and many soft places. One creek is crossed about $3\frac{1}{2}$ miles out, it is only 3 to 6 feet wide according to place and about 18 inches deep, but would require a small bridge, as the drops from bank incline horses to jump it, which is dangerous with packs. There is some D. T. but not much and the standing is chiefly burnt. There is no feed until we leave the lake and bare nearly W. for about 1 mile, when we come to some small meadows and sloughs. Around these, which are too wet for feed, is some standing, burnt timber with fine bunch grass. S. W. and N. are ridges. Distance about 9 miles, which took us 6 hours to do. A heavy snow storm this p.m. for about $\frac{1}{2}$ an hour.

Friday, 30th September. Camp 96.—Went ahead with 3 men at 7.10 a.m. course S. W. for first mile was bad with burnt timber. Then 1 mile N.W. through green pine fair going, but over moss. At about $2\frac{1}{2}$ miles we bore again to the left to get across some sloughs and wet holes. Then by gradual rise, with fair going over burnt ground, back to our course on the top of rise for about 1 mile. Then gradual descent through good going and at 5 miles came to a narrow valley with good bunch grass, some meadows and sloughs, I think dry enough to cut a few tons of hay. We crossed this and travelled along the hill side for some distance. There was a small creek running between some of the above sloughs, which would need bridging, and approaches grading over about 30 feet of marshy ground. After travelling along hillside, we ran along a sort of ridge with burnt timber, and then through green pine for a short distance. At about 7 miles from camp, came to east end of long narrow lake and camped for noon. A little feed in vicinity but not much. After dinner we travelled along the N. side of lake and close to it, through green pine and $1\frac{1}{2}$ miles out rose to low bench by easy grade. After a $\frac{1}{2}$

mile descended slightly and travelled through slight depression and good feed. There is a high hill almost a cut bank on the right. After about 4 miles from camp we came to a large deep creek flowing out of lake above mentioned, and crossed the dry bed of a small one running from N. N.W. into it, width of the latter about 6 feet, bridge required. Then through large green pine, with spur of mountains on our right; rose slightly by 2 steps to bench, and continued about $1\frac{1}{2}$ miles when we descended slightly and crossed small creek running from N. or N.E. into the large creek, and camped for the day. The crossing of this small creek requires to be made good, it is about 6 feet wide but banks about 4 feet high and soft. Some fair feed. This I take to be the forks shown by Professor Dawson and the large creek is really the beginning of Campbell Creek, but it flows almost W. N.W. proper course.

Distance about 12 miles. Heavy hail and snow storm this p.m. but cleared just as pack train arrived at camp. Horses very tired—feed has no nourishment in it.

Saturday 1st October. Camp 97.—Left at 8.30 a.m. with 3 men—dark morning and could not see to bring horses in earlier. For $1\frac{1}{2}$ mile travelling was bad, through burnt muskeg and soft moss, with standing burnt timber. We then came to bend of creek and travelled along low ridge on N. side, crossing spur of mountains. In some places the hills on the right come close to the river with cut banks. In others there is a flat. From $2\frac{1}{2}$ miles out the travelling improves, except for D. T. of which there is a good deal, until we camped for noon on the same creek about 7 miles out. About 4 miles from last night's camp, we struck low rolling country with dead timber, except a small patch of green pine, all the timber was burnt. About $5\frac{1}{2}$ miles out we passed through good going and feed along a hog back, with sloughs, meadows and a creek in valley to our left, which after about $\frac{1}{2}$ mile ran into bench land. Travelling would be good if it were not for the down timber, but this is principally small. The whole country ahead appears to be pot holes and ridges and the route is much lengthened by having to pick a trail through and along these. Left noon camp at 2 p.m. and had $\frac{1}{2}$ a mile of fair travelling with some D. T., then $\frac{1}{2}$ a mile of bad D. T. and descending slightly to lake or rather slough, travelling along N. shore for about a $\frac{1}{4}$ of a mile and rose to low bench—about 25 feet rise—no grading required. Then through D. T. for $\frac{1}{2}$ a mile, then green pine for $\frac{1}{2}$ a mile and out of this into D. T. along continuation of bench. On our left the valley of the Campbell has gradually widened out to about $1\frac{1}{2}$ miles and in front of us are numerous buttes, with mountains on N. side of Pelly; beyond them, mostly covered with snow. After about $\frac{3}{4}$ of a mile we descended to valley, crossed about 400 yards beside slough and rose to hog's back and then, turning sharply to right continued along this about $\frac{1}{2}$ of a mile when we descended about 80 feet to banks of the Pelly. Fine feed all around here in river flat and on inland side of hogback—green pine, but small, on flat. Arrived at 4 p.m.—pack train at 4.40 p.m. and camped just above mouth of Campbell River.

Note.—On lake referred to 30th September were two camps with sawpits, where boats had been built and taken down to the Pelly. This would be possible in high water, but not at present. In some places the "Campbell" is badly blocked with fallen timber and there are many shallows just now—current must be swift in spring and June. Distance 10 or 11 miles.

Sunday 2nd October.—Fine day. Took a look around for gum for repairing canoe and for place to make cache. Fine feed here and on the bench.

Monday 3rd October.—Built cache right behind camp, a short distance back in bush. Put canoe together, put in thwarts, braces, etc; packed cache and issued rations for men returning with horses.

Tuesday 4th October.—River thick with floating ice; loaded canoe and started down river and ran through ice for one and a half hours, river very shallow, struck frequently and had to land at noon to repair canoe, six patches required. Made a raft for two men and some supplies in order to lighten canoe. Cut a pack cover in strips and sewed them to cover of canoe and land this lightly over her as a protection against ice and rocks. Started at 4 p.m., raft capsized, fortunately in shallow water. Took the two men on canoe again and went down one and a half miles and camped.

Wednesday 5th October.—Made another long and wide raft with large dry logs. This carried three men well and steered well—and sent her ahead of canoe so that we could run down to her assistance quickly in case of need. All went well for about two hours, when raft ran into a channel in ice which was only open for a short distance. Ice closed in behind it and she was completely blocked. I threw the men lines and an axe, and they cut her out whilst we pulled it into shore. Ice was slush to the bottom, about ten feet, and would not bear. Had a three-quarter mile portage in consequence; camped.

Thursday 6th October.—Had fair run down to above Hoole River. Polly very shallow; had frequently to get out and lift canoe off and over bars; cold work in running ice. River nearly blocked in some places. Portaged outfit over rapids at mouth of Hoole River, about half a mile. Dropped empty canoe down these with ropes, and ran on about five miles when canoe taking water we had to camp and repair her.

Friday 7th October.—Ran with many shallows to rapid about one mile above Hoole cañon. Here three men got out to lighten canoe and walked down to cañon. Canoe stuck badly in rapids and canvas badly cut. On account of low water, had to portage from about $\frac{1}{2}$ mile above cañon and it took us until midnight to get outfit to top of first rocks above, about 50 feet.

Saturday, 8th October.—Portaging outfit and getting canoe to camp, drying and repairing her. Found 3 men in shack about $\frac{1}{2}$ mile below cañon. Chas. Clement John's, of the Rogers party and Fyffe. They are prospecting and will winter here. Clement has Peterboro' canoe and I am trying to buy it but he refuses to sell at any price. Must leave kits, bedding, medicine chest and every thing except rations, unless I can get her; and think it very doubtful if canvas canoe will carry us all. Water has dropped, men say, nearly $2\frac{1}{2}$ feet during the last two weeks.

Sunday, 9th October.—Finished portaging and got canoe and everything down below the cañon, and shallow bad rapids opposite miners shack. Clement has put value on his canoe, \$500. I offered him \$400 and he finally split the difference and I gave him \$450.

Monday, 10th October.—Started at 8.45 a.m. and ran for $1\frac{1}{2}$ hours when the canvas canoe having made a little water we landed for repairs and had lunch. Started again at 11.40 a.m. and had good going, just scraping over many shallow rapids and touching lightly sometimes, to about 7 miles below Ross River, when Lafferty who was following with Pepin in the Peterboro' hailed to say it was leaking. Landed at once. They had from 5 to 6 inches of water, having struck hard on boulders in rapid and stove in a board. This was at 4.40 p.m. Started repairing. Weather fine but cold wind.

Tue-day, 11th October.—Had repairs completed and started at 9.30 a.m., and had a good run for rest of day until 5.30 p.m., when we camped on S. side.

Wednesday, 12th October.—Touched up canoe which had made a little water yesterday, and left at 8.30 a.m. and ran until 12.30. Had good run and camped for dinner. Left again at 1.30 p.m. and camped below 1st rapids above "Glenlyon" River at 6.30 p.m. Very cold yesterday and this a.m. Snowing a little to-day, but milder to-night. Snow about 7 p.m. To-day rapids were good with, generally, plenty of water, but channels narrow.

Thursday, 13th October.—Left at 9 a.m. in snow storm, cold wind against us and river full of very heavy slush ice, making paddling very hard work and slow. Ran through Glenlyon rapids without any trouble. They would be bad in high water. Camped for dinner at 1 p.m., river slightly clearer. Camped at night at 5.50 p.m. Snowing and blowing hard, very cold.

Friday, 14th October.—Did not get away until 9.45 a.m., and ran until 6.30 p.m., camping for dinner. Much heavy ice in river and very cold head wind; had hard work to get through some, almost jams, especially one just before we camped. Poor camp but getting dark.

Saturday, 15th October.—Left at 9.30 a.m., delayed by fog on river and having to go down stream to see if ice was running out. The jam we came through last night was closed fast to-day. Had good run for 2 hours when we ran aground in shallow

rapid and had to get out and haul canoes ashore below a long edge of ice. Left again at 12.45 after getting dry socks and moccasins and having lunch. At 2.30 were stopped by heavy ice jam; got to shore just in time as canoes would have been swept under the ice 150 yards lower down. Had to portage everything back up stream about 600 yards, by which time it was getting dark and we camped. This camp was a short distance below Indian Grave on north bank, marked on Dawson's map.

Sunday, 16th October.—At daybreak sent two men in Peterborough across river to find out how far jam extended and find trail for portage. Had to cross outfit and cut nearly $\frac{3}{4}$ mile of trail through thick pine for canoes. Completed portage and started at 4.20 p.m. and camped at 6.30. Warm stern wind, and snow going.

Monday, 17th October.—Left at 9.15 a.m. and ran to $\frac{1}{2}$ mile below Macmillan River and camped for noon. A large camp has been on N. bank of Pelly, just at confluence of this with the Macmillan, and was named by those leaving it "Humbug" city. One and a half miles below junction of rivers, there are three parties wintering. They have two large boats. A man and his wife are with them. They intend prospecting on a creek, 15 miles up Macmillan, this winter. Had quick run down to Cañon (granite) and sent Brewster on to see if all was clear. He reported ice jam about $\frac{1}{2}$ mile around bend. Camped for the night. Heavy snow storm and fog this a.m. when we left camp and up to about noon, when it cleared. Very mild and stern wind. Good going and not nearly so much running ice, and what there was, was soft. Passed two small boats and rocker on N. beach below Macmillan River, but no signs of men. Upper boards of boats had been removed. Also passed several rafts and many old camps.

Tuesday, 18th October.—Made portage of about 1 mile and then had to line canoes most of the way through the cañon as water was too shallow over some of the rapids to run the canoes loaded. Ran two miles below cañon and camped at 5.45 p.m.

Wednesday, 19th October.—Had good run about 27 miles to entrance to cañon like valley and found it blocked, could not travel on south side, so camped for night.

Thursday, 20th October.—Sent Pepin across river with Fitzgerald and Laferty to make place for leaving Peterboro'. The two latter to go down to river on north side and see how far jam extended as there was no travelling on south side. They were absent 5 hours and reported jam extending about eight miles by river and no hope of portaging. In meantime had made cache on south side—divided outfit and made my packs for starting in to Selkirk in the morning. Took canvas canoe apart.

Friday, 21st October.—Heavy rain last night which turned to snow towards morning. Slept up to 4 p.m. to-day. I had four days rations put in packs and decided to remain in camp to-day, or as long as we had provisions without touching these four days, as walking in the bush in this weather is very bad. There are signs of one or more horses having been on north side this fall. Hay has been cut on south side near our camp and boats built here this fall, lots of good timber and dry wood. Made lists of all articles, kit, etc., to be left here in cache. Snow and ice, to the width of about 35 yards, is piled on each shore, landing from canoe both difficult and dangerous. Sent Pepin, this p.m. to see if ice jam had moved, as water has fallen so much. He returned reporting clear channel ice river as far as he could see, except about 50 yards, and he thought this would go and that jam had gone out below. Put "Dreadnaught" (canvas canoe) together again.

Saturday, 22nd October.—Finished pitching canoe and left with both at 10 a.m. and ran about three miles when we found river completely closed for over one mile how much further could not tell. No possibility of portaging here on account of danger of landing across piles of ice and rocky cañon like nature of banks. Had to paddle back up stream for over two miles to effect a landing. Landed on north side at noon under high cut banks. The heavy slush ice mixed with heavy cakes extends out from either shore from 25 to 50 yards. I piled up all property together with canvas canoe taken to pieces and folded for transport on toboggans, on poles on the beach, well covered with tents, etc., and upturned Peterboro' alongside. Had

lunch and left with our packs to walk in. Snowing and very foggy, making walking through the bush very heavy, and disagreeable. Camped about five miles down, —in snow storm—and off the river as we were cutting across to get better travelling than the banks afford.

Sunday, 23rd October.—Continued on to-day and made about 15 miles and camped on the river. Very cold wind with dry snow from N.E. Fine feed all the way.

Monday, 24th October.—Continued on until we struck the cut banks above mouth of Pelly when we climbed the hill and struck across for the Yukon, coming out on top of very high perpendicular rocky cut bank right opposite the barracks. Went down stream about $\frac{1}{2}$ mile looking for trail to descend. Saw some men below chopping and found from them that there was a way down about $\frac{1}{2}$ mile above where we had struck the banks. Turned back and found this a very steep descent and then found trail through heavy bush nearly to where we saw the men. They were putting up cordwood for sale to steamers next year. They crossed us in one of their boats. We were received by Colonel Evans and his officers with the greatest kindness. This officer gave me blankets and what clothing we required from his stores. I instructed Sergeant Service to send up for cache as soon as ice took on the river, and gave him list of articles, government and private, left there. After mess a steamer was reported in from Dawson and going on in the morning to connect with same company's boat on Lake Bennett. Took passages for all but Tobin who wished to remain in this winter. Tobin will go to Dawson by first chance.

There appears to be fine feed all the way down the Pelly on N. side.

Tuesday, 25th October.—Left at daylight and arrived at foot of White Horse Rapids at dark on the night of the 31st October. On Tuesday, 1st November, crossed the portage to head of Miles Cañon and stayed that night at the detachment. There was no steamer there to meet us as the "Ora" was not expected up from Dawson again.

Wednesday, 2nd November.—Took canoe with Constable Dickson and Special Constable Pepin and left for Tagish Lake intending to go on to Bennett and take steamer down, but passed the "Olive May" going down through Marsh Lake, for some freight. Arrived at Tagish Post same night having made a good run of 50 miles. Stayed at Tagish until arrival of steamer which left again on the morning of the 4th November, but owing to breakdown of her machinery she did not arrive at Bennett until Sunday morning the 6th November. I here got pack horses and one constable to bring them back, from Inspector Primrose and went as far as the log cabin, and next day reached Skagway. Here we had to remain until noon on Saturday when we sailed on the steamer "Dirigo" arrived at Victoria about 9 p.m. on Thursday, 17th November. Left by steamer at 2 a.m. on Friday for Vancouver and took the train same day arriving at Maple Creek on the morning of the 20th November. Lafferty and Pepin got off at Calgary, the latter to proceed to Edmonton on Monday morning, 21st November.

J. D. MOODIE,

Inspector.