

# FROZEN FROM BELOW

Theory Advanced By Miners in the Klondike to Explain Great Depths of Frozen Ground.

## MOSS ADDS TO THE DIFFICULTIES.

Effectually Conceals Outcroppings of Quartz Leads, and Makes Prospecting Extremely Laborious—John R. Watson Tells of Some of the Peculiarities of the North.

"The difficulties of mining in the Klondike have not been exaggerated in the least," said John R. Watson at the Grand Central hotel yesterday. "The country is the most peculiar one I ever visited and unlike, I suppose, any other on earth, unless it is Siberia."

Mr. Watson, who is one of the oldest pioneers in Helena, left for Dawson last January, arriving there June 1. He had proposed to stay through the summer and the coming winter, but his eyes began to trouble him, and he was forced to return home and have an operation performed on them. He expects to return, but just when he will start will depend upon the condition of his eyes.

Mr. Watson opened the first store in Helena. He arrived at Last Chance in 1864, when there were not more than 25 persons in the camp. He had crossed the plains with a small stock of groceries, and upon his arrival opened a store, and continued in business many years. He suffered loss through the early Helena fires and several years ago retired from active business. Being an old timer and familiar with mining and mining booms, it was but natural that he should have an attack of Klondike fever and when he made up his mind to go he was as good as there. Mr. Watson crossed one of the Alaskan passes in January, and with a party of 18 camped for some time at the head waters of the Yukon, floating down to the gold fields when the ice went out. He returned by way of St. Michael's, leaving Dawson July 26.

"I do not think that hydraulic mining will ever be applied with success there," he continued. "The ground is frozen to a great depth, and the country from one end to another is covered with two feet of moss, beside a great deal of timber. While there may be rich veins of quartz, I don't see how they are going to be discovered. They may talk about quartz mining all they please, but in my opinion, it will be many years before it amounts to anything up there, if it ever does. Lowlands and mountains are covered with this peculiar moss, which conceals the formation as thoroughly as a yard of sod would in this country. How they are going to find quartz veins through that moss is a mystery to me. If they discover any veins it must be by mere accident and a prodigious amount of work."

"The moss of that region is indeed a remarkable growth. As I said before, it covers everything, and while it does not offer unusual difficulties in winter, in summer it practically prohibits mining or prospecting. Around Dawson, for instance, where the country is level, the moss is as full of water as a sponge might be. The snow of the winter melts and the moss is saturated with water, forming a kind of swamp in which you sink up to your knees in walking about. As there is no drainage there to amount to anything, it is impossible to dispose of this water and so mining cannot be carried on in the summer, except in a very few bench claims. If you take a quantity of this moss and throw it over a chunk of ice in the summer, the ice will be preserved even in the sun. Now, as the ground in that section is frozen to an enormous depth—miners have gone down as far as 60 feet and still found it frozen—the question is how did it become so deeply frozen with the moss and snow covering it. Most of the miners I talked with up there believe that the ground was frozen from beneath, and while I haven't any theory to account for it, it seems certain that the whole country was frozen before the moss made its appearance. The moss thaws in the summer, but below the moss the ground is frozen."

"I am told by some old-timers up there that below the river beds the ground was frozen in summer as well as winter. In winter, streams that are not rapid, freeze to the bed, but there are parts of the Yukon that never freeze over owing to the current. It seems strange to think that the river bed for an unknown depth is frozen solid, but I can well believe that it is true, although I do not know that it is so."

"If powder could be used to advantage there, the frozen ground could be blasted out, but a shot of giant merely blows a small hole in the bank or the bottom of the shaft, as the case may be, and does not tear any considerable amount of ground loose, as it would set off in rock. As you have heard, the ground is thawed out from the top by means of fires, built in peculiar fashion so as to direct the heat downward as much as possible. While this method seems primitive, I don't see how it can be improved upon up there. One thing I noticed was that the miners are not put to the expense of purchasing quicksilver as they used to be in the Montana diggings. The gold is so coarse up there that quicksilver is not needed when cleaning up the sluices, except in rare cases."

"Yes, the country is wonderfully rich, but it is greatly overdone. Normally it would not support a greater population than 7,000 or 8,000, but if there is a man there now, there are 50,000. The people realize that the camp is overdone and many of them are getting out as fast as possible. Those who have money are coming out now, either up the river, which is the cheapest and shortest route, or down to St. Michael's, which at this season of the year is the easier way to go out. In the spring and fall, however, the Bering sea is extremely rough and ordinarily in those seasons, the trip up the river can be made with more comfort."

"There are more men from Montana in that region than from any other state. I believe that I saw at least 150 persons that I had known around Helena alone. I don't look for any scarcity of provisions this fall or the coming winter. There is no more danger of people starving in that country now than there was of the people who came to Montana in the early days of the territory. In places up there the moose and caribou are as numerous as the buffalo used to be down the Yellowstone and as long as game is plen-

tiful the miners are not going to starve. I think there are plenty of provisions in there now, or will be at least, for all who remain in the Klondike through the winter."