1918. At the shaft the vein has a well defined vertical wall. The shaft has been timbered and the surface outcrop has been covered with rock in levelling around the collar. The dump shows the rock excavated in sinking the shaft to be a greywacke, a fine grained grey-colored sedimentary.

The vein matter is chiefly quartz with some calcite and small particles of pyrite. On the fracture faces there is a soft dull green mineral that looks like serpentine. There is a thin layer of pale brownish grey calcite on some of the fracture surfaces—evidently a secondary filling. The vein matter is said to show good values for a minable width in the shaft. Samples show high grade ore in the shaft for a width of 5 feet. Mr. Rogers, who is consulting engineer for the Herrick, has sampled the vein as exposed in the shaft. I am advised by Mr. F. C. Sutherland that the samples show high grade ore to the bottom of the shaft.

The Herrick ore deposit is a well defined vein. The surface sampling showed good ore, and the development work has exposed such ore to a depth of 50 feet. Further development work by shaft sinking and drifting may very reasonably be expected to prove up an excellent orebody. I understand that this work will be undertaken as soon as the necessary machinery can be taken in. Exploration by diamond drilling will be begun shortly. I look for interesting developments at the Herrick this summer, and will be surprised if development work does not prove similar ore at depth. Changes in rock formation accompanied by changes in character of the fissuring are to be expected as development proceeds.

The chances of making a small profitable mine at the Herrick seem very good. There is also a good chance that it may become a big mine.

Other Properties.

There are a number of promising properties in the area in addition to those I have mentioned above. I made brief visits to some of them—the Churchill, Queen of Sheba and the Bennett.

At Churchill some work has been done on a vein exposed along the southern edge of an andesite outcrop. The vein strikes west. The accompanying photograph shows two men at work cutting samples. I know so little about this property that I do not care to venture an opinion about it.

At the Queen of Sheba, north of the Churchill, there was no work being done. A few minutes spent at the outcrops showed a deposit of different character from those already described. The ore is red with iron rust, and when broken shows an abundance of fine grained pyrite. The rock is a felsite with the glassy appearance and clean fracture of the more siliceous volcanic rocks. In places it has been squeezed laterally into sericitic schists.

The Bennett vein, on the Bennett claims east of the Montreal river, is shown in the accompanying photographs. It is undoubtedly rich, and should be carefully tested. I have not seen the assay plan, but the presence of much gold is easily detected in parts of the vein. Some of the structural features, and the topography of the outcrop are indicated by the photographs. It will be noted that the location is very favorable for mining the upper part of the ore deposit, and that the deposit could easily be tested at depth by short diamond drill holes. At the time of my visit H M. Roberts and Wm. Smith were examining the property for the E. J. Longyear Company. The Bennett is the only property east of the Montreal River that I visited on this trip. The ore and wall rocks are of similar character to those at the Wasapika. The quartz vein shown in the photographs is enclosed in grey andesites. Near the shaft it is distinctly faulted. At another place it is crossed by a narrow basaltic dyke. In either direction along the strike are masses of diabase.

Among other promising properties in the area are the Atlas and Saville-McVittie. I have not visited these recently. A number of men are at work on the Atlas.

Present Surface is a Mere Incident, Not a Governing Factor in Life History of the Ore.

The gold in the ore deposits here described is certainly not present as a result of concentration at the present surface. I do not believe that the present rock surface existed when the ore was deposited in the form in which it is now found. The present surface has no genetic connection with the ore deposits, and there is no good reason to fear the bogey of "surface enrichment." The ore exposed near the surface is of a type that is formed at depth and similar ore may confidently be expected to occur for any minable distance downwards. I do not mean to suggest that values will be uniform. I don't know whether they will be lower or higher, but I do believe that the conditions are favorable for the occurrence of deep ore deposits in which ore of similar mineral composition to that near the surface will be found at any depth to which mining operations can be carried. The individual deposits will doubtless vary in depth as they do in length, but the present surface is a mere incident in the lives of these ore deposits—not a governing factor.

A Promising Area.

After a second visit to Wasapika I still regard the area as one of great promise. There are difficulties to be encountered in developing the deposits, for they are 25 miles from the railway and the roads are not yet in shape for use in summer. There is as yet no large amount of underground work done, and there is a chance that when done it will prove disappointing. Some of the properties need to be tested by diamond drilling before one may even guess at their value. There are many things to be done, and the result of doing them is uncertain; but the work that has been done has given results that should prove encouraging to those who are willing to risk something in a bold attempt to make mines in the wilderness. To such adventurers I would strongly recommend this area. The deposits are promising enough for the venturesome, but not yet sufficiently developed for those who think they cannot afford to or will not knowingly take a chance.