

strongly foliated zone inside of which the gold-bearing solutions were able to find a most convenient way in their ascent. In this belt are found the majority of the promising deposits—the Great Dome, while appearing to lie outside of this zone, may possibly be regarded as an offset. Inside this zone, however, the deposits appear to be particularly rich where this tectonic zone intersects quartz porphyries and their foliated derivatives. I do not wish to be understood to maintain that promising discoveries have not been made in other parts of the district or that they will not be made in the future or that other zones of the same kind may not be established. The Hollinger zone is nevertheless of the greatest significance for the development of this district. That part of the vein which is to-day hidden by the extensive glacial sediments so as to render difficult the work of the miner, will later play a very important part.

I observed at Swastika a tectonic zone almost identical in character and striking in the same direction. In this region several insignificant gold discoveries were made as early as 1907, but systematic prospecting did not occur, however, until 1911. In July and August, of this year, large veins and very rich occurrences of free gold were discovered along the above-mentioned zone. Rich deposits were specially observable where the veins filled in a fissure between the Keewatin rocks on the one side and an arm of Laurentian granite on the other (Lucky-Cross claims). Prospectors surmise that this zone extends in a northeastern direction as far as Larder Lake. My own observations do not permit me to express an opinion in this matter.

4. Genesis.

Professor W. G. Miller is of the opinion that the gold-bearing magma is connected with great granite intrusions which forced their way upward after the lower Huronian period. Not far from Porenpine at the present time masses of such granite outcrop. The occurrence of feldspar, tourmaline, and inclusions of gas are in harmony with this view; moreover, in certain veins specimens have been found possessing the composition of granite and exhibiting free gold.