1st. The general levelling has left no great elevations. There is consequently practically no post glacial drift and the ore deposits are in plain sight. What is practically a deep level section of the ore body is laid bare with all its characteristics and since it is axiomatic in mining that "as the length is so is the depth," the underground behaviour of these ore bodies can be predicted with almost absolute certanty.

2nd. The contacts between the granites and traps, as the Laurentian and Huronian formations are commonly called, are always in plain sight, and since it has been established by actual work that these contacts are in some way connected with the presence of gold in the ore-bodies in the vicinity a useful guide is always at hand in exploring new areas.

3rd. There is practically no surface decomposition or surface enrichment to be met with in the entire district. A few feet of sinking as a rule reveals the character of the ore and that character is maintained in depth.

4th. There is no "water level" such as is commonly met with in other mining districts below which decomposition ceases and the ore changes in character. If an ore is found to be "free milling" on the surface it will retain that character to an indefinite depth.

5th. The solidity of the rock in this district is such that very little timber is required and although shafts are commonly sunk for hundreds of feet within a few feet of the shores of great bodies of surface water no trouble has been encountered from an excess of underground water.

6th. The rocks of this district are the hardest known to the mining world and more steel is used both in mining and crushing than in any other part of the world.

7th. The absence of any considerable elevations and the consequent lack of rapid streams, coupled with the facts that there is no loose material except glacial drift, would seem to preclude the probability of any areas of placer ground being found unless the streams which must have flowed to the south from the retreating southern edge of the ice sheet during the close of the glacial period have concentrated the gold contents of some of the terminal moraines.

As have been mentioned above the most promising auriferous deposits occur on or near the contact of the Laurentian and Huronian formations but gold has been found as well in veins in granite areas far removed from any contact and benches and segregations of gold bearing quartz are found everywhere in the Huronian schists with no apparent connection with any later eruptive.

A number of interesting occurences may be cited to show the wide spread diffusion of the precious metal in this district and the varying character of the auriferous deposits.

On Gold Brook, near the Mattawan River, a number of locations have been taken up on a band of fine grained gneiss with sparsley disseminated grains of iron pyrites which carries gold throughout from a trace to 50c per ton. This deposit is nearly half a mile wide and several miles long, and although the gold content is too low for profitable working the occurrence must be regarded as highly interesting from a theoretical standpoint.

At the Hammond Reef, a band of shattered granite with quartz filled seams has been found to carry a workable amount of gold over a width of 300 feet and a length of some miles.

On Shebandowan Lake a number of very coarsely crystalline dykes of porphyry carry from a trace to $20.00 per ton.

On Eagle Lake a band of schistose granite thirty feet in width is being actively worked with satisfactory results.

A large number of locations have been taken up on felsite dykes, many of which carry gold *per se* as well as in the fissures now filled with quartz which were produced by the shrinkage of the dyke rock in cooling or by subsequent movements along the line of weakness which caused the primary dyke fissure. Among these may be mentioned the Bully Boy on Camp Bay. The Champion, near Rat Portage, No. 2 vein at the Big Master, on the Manitou, and the Sakoose in the New Klondyke, all of which have proved to contain workable amounts of gold.

True Fahl bands or belts of schist impregnated with pyrite and other sulphides are unknown in the district but numerous bands of pyritous schist with intercalated seams of quartz are to be found in the country. These generally contain lenticular bodies and stringers of quartz and are rather to be regarded as bedded deposits although generally claimed as Fahl bands. Among this class may be cited the Scramble near Rat Portage, the Flint Lake on Flint Lake and the Little Bobs on Denmark Lake. Bedded or lenticular or segregated veins are the usual form of ore deposits in schistose rocks, and these occur in great variety in Western Ontario.

At the Sultana, a series of great lenses in sheared porphysitic gneiss have produced a large amount of gold. At the El Dorado, on Eagle Lake, a bedded deposit in sheared granite is being developed with satisfactory results. At the Big Master, a bedded vein in chloritic schist has produced a large amount of gold. The Gold Hill veins, the Black Jack and Golden Gate veins in Hornblende schist have been worked with satisfactory returns.

The Olive, in the Seine River District, lying in a bed of schistose diorite is also auriferous, has produced a good deal of gold.

The Golden Horn, on the Lake of the Woods, in chloritic schist, is being actively developed with satisfactory results. The Wendigo, on the Lake of the Woods, is working a bedded vein in a band of pyritous Hornblende schist which carries a workable amount of gold.

The Triggs, Reliance, Gold Panner, Virginia, Cameron Island, are among many others worked on bedded veins in schistose formations with more or less success

So called true fissure veins are numerous in the granite areas, but as might be expected, are comparatively rare in the schist. The Ferguson, Foley and Lucky Coon on the Seine River, the Golden Eagle on Eagle Lake, and the Nino in the Deer Lake country may be cited as notable examples of this class of deposit in granite, and the pebble vein at Gold Hill Mine, and the Jubilee vein on the Manitou may be cited as examples of true fissures in schistose formations.

Of contact veins no typical examples have been worked, although many such are known. The Mikado vein and the Black Eagle each cross a contact between diabase and granite, and since by longitudinal faulting in each case, one wall of the vein is granite and the other diabase for a short distance, these veins are in part true contact deposits.

It may be noted as a curious feature that the richest ore in the Mikado vein lies in this zone of contact, while the leanest ore in the Black Eagle's lies in the corresponding position.

As to the primary source of the gold in these deposits, not enough data are at hand to enable one to generalize with any degree of certainty, but from the fact that many of the felsite dykes carry gold *per se*, and that no gold has been found in the Couchiching series and but rarely in the sedimentary members of the Keewatin, and that eruptive contacts have been proven to be favorable to the presence of gold, it would seem that the gold came up from deep seated sources both with the Huronian eruptions and the later Laurentian granites to be distributed in its present situations with the quartz and accompanying minerals by the circulation of water under unknown conditions as to time, temperature and pressure.

As to the character of the ore, it may be noted that in all classes of deposits the gold, whenever found in workable amounts, is invariably associated with quartz in some form, and with the sulphides of iron, copper, lead and zinc, and that no complex minerals, and but few rare minerals are present.