

had undergone transportation and modification by the action of rivers and streams. Prolonged shifting of the gravels and their gold content in this manner, assorting and reassorting the materials and the sifting out of the least weighty, allowing the gold and other heavy particles to settle to the bottom—were the processes which brought about the conditions which we now find existing as regards these auriferous deposits.

In the glacial period which followed, these river beds were buried beneath sheets of boulder-clay. The thickness of the boulder-clay in the Chaudiere valley is 100 feet or more. The ancient valley of the Gilbert was likewise filled with it to a depth of 25 to 50 feet.

On the withdrawal of the ice of the glacial period the rivers began to clear out their ancient channels cutting down into the boulder-clay and other beds, and in many places eroding the gold-bearing gravels beneath, and once more exposing them to view. But in some valleys, as for example in that of the Gilbert, the river was diverted from its original channel and caused to form a new one, and the auriferous gravels in the pre-glacial channel have thus been preserved from erosion. In these valleys the ancient channel is generally at a lower level. The pre-glacial channel of the Gilbert is from 30 to 85 feet below the bed of the present river in that part wrought for gold, and from 100 to 400 feet or more to the south of it. All the river valleys have, however, undergone dislocations during and since the glacial period, so that while some parts of a pre-glacial river channel may be considerably lower than the present one, in other places it is not.

From all the facts which have been obtained it would seem that the alluvial gold is entirely of local origin, that is, the gravels and the gold they contain belong to the rocks of the particular valley in which we now find them. But just from what rocks the gold came, whether from the pre-Cambrian or Cambrian or both is by no means evident. There is no question but that it is derived from some of the quartz veins in the vicinity of where it now occurs; but as little or no quartz mining has been carried on, no new facts were obtained by us which would elucidate the problem. Logan and Hunt regarded the gold as belonging to the oldest rocks of the region, that is to the crystalline schists of the Notre