

The diabase intrusions occur in belts, generally stretching across the colony in a north-westerly and south-easterly direction. The intrusions vary from narrow dykes, only exposed in the courses of the rivers during very dry seasons, some being not more than from two to three feet across, to low hills and to mountain ranges, some of which—for example, the Eagle mountains in the Potro gold district—exceed in height two thousand feet. The tops and sides of the hills and mountains, except where they have suffered great denudation, are covered with ironstone gravel, while the lower parts of the districts in which diabase forms the country are covered up with strata of laterite, frequently over one hundred feet in depth, and in places interspersed with nests of secondary quartz, or traversed by veins and stringers of quartz, or, less often, by lenticular layers of secondary quartz, closely resembling, when cut through by mining shafts, tunnels and trenches, true quartz-reefs. The quartz rock in all these forms is not unfrequently auriferous, the metal being dispersed through it in a very irregular manner, especially in the larger lenticular layers, which in many parts are nearly, or even entirely, barren of gold, and in others are "bonanzas" carrying at rates from twenty to, in places, several hundreds of ounces of the precious metal to the ton of the rock. Unfortunately hitherto these bonanzas have proved few and far between; but there is no reason for assuming that they will not be found in many places in the enormous area of the laterite deposits which up to the present has not been prospected, as they have been in similar places at intervals in the past. Gold also occurs as paint gold, as gold dust, and as nuggets of varying sizes in the laterite.¹

No quartz veins occur in the diabase, whilst in the unaltered epidiorite and hornblende-schist only, as a rule, narrow veins and stringers of quartz are found. But veins and lenticular masses of quartz which are, not unfrequently, rich in gold are of common occurrence in the decomposition-products of the epidiorite, hornblende-schist and diabase.²

Where the country rock traversed by these veins has decomposed to a great depth their size has been largely increased, having been added to by silica dissolved from the decomposing rocks by percolating waters. At the same time as silica was thus deposited a concentration and deposition of the gold contained in the decomposing rocks took place, and thus the quartz veins became enriched in this metal in proportions varying with those present in the country rock, with the result that the veins found in decomposed epidiorite and hornblende-schist are, as a rule, richer in gold than are those found in decomposed acidic rocks.³

The veins of quartz which traverse the dark-red decomposition-products of the basic rocks are frequently very rich in gold at and near their outcrops, these parts being far more auriferous than are the remaining portions of the veins. Similarly the talcose selvages of these veins are often highly auriferous.⁴

¹ Ibid., pp. 22, 23.

² Ibid., p. 186.

³ Ibid., pp. 186, 187.

⁴ Ibid., p. 187.