

committing himself too far to any very definite predictions about any undeveloped prospect, until he has had opportunity to examine and study closely some mines already operated in the same district.

If we bear in mind this caution, we may venture to lay down a few hints for prospectors in this region.

Enough work has been already done on the placer deposits to prove that the richest ground is always to be looked for : (1) in areas occupied by the black, greasy, highly contorted slates often impregnated with pyrites ; (2) more especially in the old channels buried deep below the present beds of these streams ; (3) and richest of all, just below the points where heavy quartz veins cross these channels.

In regard to quartz veins, prospectors are most likely to find paying ones : (1) among these black slates ; (2) close to the axis of an anticlinal ; (3) not very far from granite ; (4) or associated with dykes of diorite and olivine.

Perhaps we might help to avert some very foolish undertakings by adding that it is never wise to sink deep on any quartz vein that yields no gold at the outcrop, in sanguine hopes of finding a bonanza somewhere below. From what has been stated already, the chances are at least 53 to 1 against its proving to be a gold bearer.

Even if you have a vein that carries some gold at the outcrop, but not quite enough to pay the cost of mining it, the chances are always against its becoming richer as depth increases. We all know that veins are sometimes found to gain in richness with depth. But such cases are the exception. The general abandonment of the theory of vein-filling by injection from below has destroyed all cause for maintaining this costly delusion.

On the other hand, if any company is lucky enough to secure a good vein of paying quartz, and begins to exploit it successfully, the directors should lose no time in establishing a substantial cash reserve, to provide funds for the necessary dead work in sinking shafts or driving galleries to pass through the inevitable barren zones between one pay-streak or chimney and the next adjacent one.

Fifteen years ago I published in the *Gazette* of this city my opinion that, when capital and skill combined should enter this field, the results would astonish the world. I am still of the same opinion.

But the investigations and reports of such men as Sir Wm. Logan, Dr. T. Sterry Hunt, Dr. Selwyn and Dr. Ellis of the Geological Survey carry a far greater weight than the opinions of any private individual.