

depth than in Australia," that is, if 'auriferous' bear any relation to the economics of mining.

Mr. Faribault refers to large lodes as preferable for deep mining. He says:

"It is acknowledged by the best authorities that the development of the gold fields in Nova Scotia has been retarded by the persistence of the prospector in neglecting for years the problem of large supplies of low-grade ore in favour of isolated rich veins. It is believed that the districts presenting the largest workable saddle-veins offer the best prospects for permanent and deep mining, and should receive the preference. The deepest mines in the Australian goldfields are operated on the largest saddle-reefs."

Of course, the prospector seeks for ore that is profitable, and, like a sensible man, he neglects the opportunity to solve a geological problem. An "isolated rich vein" may yield bigger dividends than "a large supply of low-grade ore." In all talk of this kind there is a lamentable confusion between quartz and ore. The miner wants gold, not silica. The deepest mines in Australia were sunk to exploit profitable lodes, the ability to yield a profit being dependent on the two factors of size and richness. Many large bodies of quartz, at Bendigo and Ballarat, for example, have not been exploited because, after trial, they were found not to contain the proportion of gold required for a profitable mining operation. This idea of size, when divorced from a definite knowledge of richness, has been the cause of much foolish work in Nova Scotia, as in other countries. It may be a stimulant to flamboyant finance, but is not a basis for sound business. The "best authorities" who advocated the grandiose exploitation of large bodies of quartz were poor in gold, knew less of mining than the simple prospector who kept his eye on pay-ore, extracting it by aid of a wheelbarrow or a whim; while the big companies, led by pseudo-scientific advisers, erected expensive mills and sank deep shafts in the expectation of finding large bodies of ore, the existence of which was only an unsubstantiated surmise.

All rules for the development of a mine based merely on geological structure, without such knowledge as comes from careful sampling and assaying, are worse than futile. It has been said, by the Canadian geologist whom we have been quoting, that "underground developments on vertical folds will thus require to be less extensive and will cost much less than inclined folds, and they should generally receive the preference for deep mining." The experience of mining, which antedates the science of geology, has demonstrated that deep mining is remunerative only where profitable ore has been proved to persist sufficiently to warrant further exploration by vertical workings. The purpose of mining is not to elucidate