

the amount of capital be limited this is doubly important. Perhaps the only exception to this rule will be found in the case of a vein that is known to pass through adjacent properties that are being successfully worked. The prospect, by development, having now risen to the dignity of a mine, the next step is to secure the plant—mills, smelters, etc., that may be needed to bring the ore into a marketable shape. And here a word of caution may not be out of place. Having ascertained the proper method of treating the ore, procure the best plant obtainable for that work, and remember that the best machine is not always of the newest design.

We have in proof of this only to look at the thousands of dollars worth of new-fangled mills, etc., that have been discarded at some of our mines, and have had to be replaced by others of a more ancient pattern.

Reliable assays are, of course, essential. When the sampling has been properly done an assay will give one an accurate idea of the value of the body of ore from which the sample has been obtained.

There are cases in point where so-called experts have selected from a vein samples which assayed over one hundred dollars per ton, and on the strength of their report a mill has been erected, small, it is true, yet costing far more than the company could afford to lose. It could not be understood why the amalgam did not form more quickly on the plates until an assay of a sample obtained from eight or ten tons of ore revealed the fact that the average ore did not carry more

than three dollars' worth of gold per ton. The company, having a limited capital, was stranded; but had they had assays made from reliable samples, they would not have invested in machinery when they did; and had the money, foolishly wasted, been utilized in developing their property, pay ore might have been struck deeper down, and the company been to-day in a position to go on with their undertaking.

Sampling should be done as much as possible by rule of thumb, and should be effected without relying any more than can be helped upon the judgment of the sampler. With regard to ore that is mined, by using well-known methods there is no difficulty in obtaining a portion of rock that fairly represents the whole, but in a vein that has only been stripped, and where no blasting has been done, the matter is more difficult. In this case, small portions about the same size should be taken from every square foot or two of the vein (being guided to a certain extent by its superficial area) and the whole ground and well mixed together. While this involves more trouble than the taking of small samples here and there at random, yet in the first case we obtain a sample that represents with tolerable accuracy the surface value of our ore deposit, while the sample obtained by the latter method is practically valueless.—*Canadian Mining Gazette.*

The announcement has been made in shipping circles that thousands of tons of iron ore have been purchased in Newfoundland by local capitalists for shipments to this port to be manufactured into steel.