

costly than by shafts and tunnels, and a tool like the diamond drill, capable of drilling from 20 to 40 feet per day and bringing out cores of the material passed through, seems to fulfil, in a great measure, these required conditions.

Through its use, prospecting of a mineral property can be exhaustively and reliably carried out in a few months, and cross-sections delineated, showing the number and size of the deposits, from the plotted profiles of which the quantity of ore contained may be approximately calculated, showing if the quantity discovered is large and near enough to bear the greater expense of sinking a shaft or driving tunnels to reach it.

Thus, by the expenditure of a few thousand dollars in the prospecting machinery and the cost of the necessary boring operations, the owner of a property is able, figuratively, to cut his property into slices and see what is inside. The accuracy of which depending, of course, on the number of cuts made.

And, instead of risking a large sum in the purchase of a costly permanent plant and machinery to begin active mining operations for a mineral only doubtfully believed to exist, it may be ascertained by a properly arranged system of borings (practically constituting an approximately accurate underground survey showing the extent and location of detached and irregular deposits) whether it is advisable to lay out money in plant at all, or how much, and even if it is advisable to mine a property or not.

If valuable the very best machinery can be laid down without hesitation or risk for the most economic method of sinking or driving to and winning the mineral when reached.

At the same time an approximate knowledge of the quantity, making it feasible to determine in advance all the questions of transport and annual yield, the laying down of tramways and the transport generally and the use of available water or other gratuitous power to the best advantage.

Negotiations for sale or purchase would also be much simplified from the fact of the real value of the mining estate being established, the cores of mineral and country rock, with the accompanying chart and sections, being the best evidence of the character of the property.

In mining phosphate of lime in Canada the prospecting drill is certain to prove of the greatest possible service.