## FORESTRY IN RELATION TO MINING.

By Professor J. C. Gwillim, School of Mining, Kingston. Ont.

THE forests of the present and future are likely to be found in the rough places of the earth, such places as mountainous districts and the rocky thin-soiled regions, which at least afford refuge and nourishment for the hardy conifers.

It is in such districts that mines are largely found. A natural condition, not a coincidence, associates metallic minerals with rocky and mountainous places. In such districts, often inaccessible and undesirable from other points of view, the mines alone make a demand upon the forests. As time goes on the more accessible forests will be cut out and replaced by permanent industries. The land so won will seldom revert to forest, or be planted with trees. The last resource of the lumberman will be in the awkward places, such as surround mining districts. Here the axe and fire of the mining industry will have largely forestalled him.

The mining operations spare nothing above a few inches in diameter up to two feet; they lay tribute to the surrounding hill-sides for lagging, stulls and sawn timbers. These are placed in the mines to support operations temporarily; they quickly rot, collapse, and are of no more use. The mine itself on the average is of only a few years' duration. The miner having robbed the forests above and the mineral below passes on leaving the wilderness to mend his destruction.

The nomadic tribes of Siberia are reported to consider mining a sacrilege and insult to the earth. To hoist its mineral treasures to the light of day, while casting its green trees into the dark passages of a mine, does seem a violence to nature.

Considering for a moment the demands of a large mine, producing say 100,000 tons of ore per annum. The cost in timbers is from 5 cents to 30 cents per ton of ore in Canada, or about one to two lineal feet of 12 inch timber per ton. At one lineal foot per ton this would be one million two hundred thousand feet board measure. This demand soon denudes the adjacent forests and calls