

nickel mines would amount probably to less than fifty tons; but, of course, this metal is a rare one in all parts of the world. The amount of lead mined and smelted in the province would probably amount to only a very few hundred tons if we had the full statistics.

At present I believe the metals mined in Ontario are gold, copper, nickel and cobalt: the last three in the neighborhood of Sudbury only. Of the non-metallic minerals, mica and gypsum among the solids, brine and petroleum among the liquids, and natural gas, which I believe has been declared in an American law court to be a mineral, exhaust the list of substances.

Our mines of silver, of copper, except as a by-product of nickel ores, of iron and of phosphate, are in a state of suspended animation, if not entirely dead.

The list is not a cheerful one for a patriotic son of Ontario to contemplate, yet it may be useful to consider why mining matters have gone as they have, and also to enquire into the prospects for the future.

Let us take up the chief products of our mines one by one, beginning with the non-metals and ending with the metals.

APATITE OR PHOSPHATE.

Apatite mining was attempted in 1870 or 1871, but apparently the first shipments of phosphate from Ontario took place seven years later. Most of our apatite was shipped *via* Montreal, a smaller portion going directly to the States, and on this account the statistics given by the Geological Survey reports greatly under estimate the production of Ontario, all that went to England or Germany being included in the statistics for Quebec.

In 1891 they report only 1,551 tons from this province, while the first report of the Bureau of Mines for Ontario places it in the same year at 4,900 tons, worth \$50,800. The prosperity of the phosphate mines ended in that year, however, falling to half the amount in 1892, and to only twenty tons in 1893; and since that time there has been no mining of importance, the cheaply mined Carolina and Florida phosphates, though of lower grade, having crowded ours from the market.

Until the best of these southern deposits, which can sometimes be mined with dredges or steam shovels, are exhausted, we cannot expect any important revival of phosphate mining in Ontario; though our

mines should find
as our intelligence

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