

in the status of gold mining in the last twelve months. Before Porcupine was exploited, the man who suggested spending money upon an Ontario gold prospect was looked upon as possessing more than his share of temerity. Since Porcupine has begun its spectacular appeal, every corner of Ontario is being searched. Both in the east and in the west old mines have been brought to life. Meanwhile, the pent-up energy of Porcupine itself is about to be expressed in terms of gold bars. Two years ago, the value of the annual output of gold in Ontario reached the low level of \$32,445. It may be predicted with safety that in the coming year, 1912, the mines of Ontario will yield at least half a million dollars worth of the much-desired metal. Not a little of this will come from districts other than Porcupine. Gold mining will bulk large in the public eye for some years to come.

Silver, by far the largest single item in either metallic or non-metallic products, was produced to the value of \$15,481,322, a figure greater by \$3,016,600 than the returns for 1909. To the end of 1910, the mines of Cobalt, Gowganda, Elk Lake, and South Lorrain have sent more than ninety-four million ounces of silver to the markets of the world. During the current year an output considerably larger than that of 1910 is expected. Cobalt has not yet, apparently, reached its zenith. With sixteen concentrating plants at work, and several more projected, it is probable that the production of the camp will be maintained at a high level for a long time. During the year 1910, 305,569 tons of ore were concentrated. The concentrates produced amounted to 7,014.3 tons, carrying 7,084,740 ounces of silver. The average ratio of concentration was 43.5 to 1. It is evident that Cobalt depends in constantly increasing degree upon relatively low-grade ores. The general position of the camp is best indicated by the fact that dividends paid during the year amounted to \$7,275,239.90, bringing the total during the life of the camp up to \$21,802,179.58.

The Province's output of copper totalled 9,630 tons, a gain of 1,697 tons over the previous year. Of iron ore 230,656 tons were mined, a falling off of \$131,901. An increase in the quantity of pig iron is reported. Last year's total was 447,351 tons, whereas in the year 1909, the figure stood at 407,013 tons. Seven electric furnaces, producing iron and steel alloys, are in operation.

Materials of construction, including brick, lime, various stones, Portland cement, and special clay products, were manufactured on a larger scale than before.

The value of arsenic produced was \$70,709, an average of only 2.31 cents per pound. It is probable that the market suffers from over-production. Iron pyrites mining, of which 33,812 tons were shipped, more than held its own. Mica, thumb-trimmed, was mined to the value of \$85,294. Salt was produced to the amount of 84,071 tons, a very fair gain.

Of the minor products, talc appears to be the most important. The product of G. H. Gillespie & Co.'s mill at Madoc is valued at \$46,592, which figure does not by any means represent the real market value.

Feldspar is being mined in larger quantities—16,374 tons as against 11,001 tons. Corundum mining is decidedly more active. Gypsum, quartz, graphite, and fluorspar show much increased interest.

For the benefit of the complainer, it may be mentioned that the mining revenue of the Province has fallen from \$979,464.15 to \$941,030.09. The revenue for 1911 will be larger.

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The Report, in its entirety, is a credit to the Department. Mr. Gibson's summary is a model of careful condensation.

### THE STUDENT.

After four or five months of toying with the shovel, the pick, the hammer, and the drill; or the same time spent in fighting the man-eating mosquito; or laborious months with the bucking board, the furnace, and the balance; the mining student has arrived with his "wad" to take up for another year the routine of college.

He is a wiser and weightier personage than he was last spring. Physically he is tougher. Morally and intellectually he is more developed. If he is entering on his last year, he is prepared to look with hostile eye upon the crude sophomore and the frivolous freshman, and with critical tolerance upon his professors. He has been up against the real thing, and he champs his bit. O, for next spring! Oh, for the freedom that graduation brings!

Eight months of hard work will temper this fine autumnal enthusiasm. The pale graduate that emerges next year will need no curb. He will find that billets do not hang on every bush. There is room for him, but he must squeeze and push and shove.

Meanwhile let him take heart of grace. The percentage of mining men that fall by the wayside is low. There is no need of increasing the number. Impatience, lack of actual preparedness, and the desire for soft snaps are the three main causes of failure.

To-day the horizon of the mining man is wider, and must remain wider. Even through the four years of college the student can prepare himself for broader citizenship than is implied by mere technical work. Even in the loneliest mining camp the young graduate need not rust. His interest in professional matters, in general reading, in politics, and in progress should remain unabated. Narrowness is to be avoided. It is deadly.

One specific against dry-rot, one cure for the blues, is letter writing. Within proper limits, a large correspondence is invaluable. The act of writing clears the mind, and exercises and stimulates the mental faculties. A regular and methodical record of work