

lington sections the lode was found, and a trial shaft sunk 75 feet, then drifted on for 200 feet in each direction, viz., east and west, and a small stope put in on the west drift. Work was stopped here because it was said to cost too much to cart the ore to the dressing floors, not half a mile away; but the reason is difficult to understand, as the ore is of good quality, and the writer's assays, taken every six feet, will average over 4 per cent. Probably this was considered too poor in those days.

During the years 1896 to 1875 records show that 47,593 tons, of 2,000 lbs., were shipped, with a copper content of 9,562.96 tons, and sold, according to the best authorities, for \$3,300,000. The average copper contents were 20.09

What quality of ore was mined must be a matter of conjecture, but it is known that the late owners of the property sold 50,000 tons of tailings, or, as they are locally called, "skimpings," and the writer has measured 117,000 tons remaining on the property, whilst a quantity has been washed into the lake, and the Canadian Pacific Railway ballasted their line from here to Sault Ste. Marie, a distance of 36 miles, from the same source. It may fairly be assumed that 400,000 tons of rock were mined, of which 100,000 remain as waste on the dumps, and 300,000 tons probably can be shown as having been treated. With the exception of sinking Bray's or No. 2 Shaft to 420 feet, all this tonnage was won from above the 360 foot level.

If the average value of the ore, after deducting the waste, was four and a half per cent., it should have yielded 13,500 tons of copper, but as only 9,852 tons of copper are shown to have been shipped, it is evident that a loss of 41 per cent. was made in the treatment. Of course, this is merely an hypothesis, but is remarkably close to the estimates of both Messrs. Borron and Plummer, who compute a 40 per cent. loss. It will be noted that there are three epochs of seven years: the first, development; the second, bonanza; the third, gradual diminution for want of development. The debacle came in 1875, but after 1872 no developments were carried on, and presumably the costly experiment of the Henderson process so disheartened the proprietors that orders were given to take everything away worth getting out, at a minimum of cost. The result of this policy can be seen in the "Big Cave" (see Plate IV). Here the junction of the two lodes took place, and the ore must have been surprisingly rich, as it is currently—and the writer believes truthfully—reported that they had at one point 24 feet wide of ore. The greater part, known as "prill," was simply put in barrels and shipped. It is satisfactory to say that there is considerable evidence to show that this shoot of ore continues downwards, and the present company will benefit thereby. At any rate, the result of this way of working caused the "Big Cave." A party of six men had been working on a stope from, October, 1874, to March, 1875, and, according to measurement, the record of which exists, they had broken 33 fathoms, 1 foot 3 inches (width unknown, but probably 10 to 12 feet). Following the usual custom, the ore was left underground. Signs of what was coming were frequent, so much so that some men left the mine rather than run the risk. Fortunately for everybody, "the cave" occurred on a Saturday night, so no lives were lost, and the stope, not having been carried below the fifty fathom level, the sixty fathom level remained intact, the only loss being the ore accumulated as above stated. This was virtually the finish, although small parties of tributers worked during 1876. The mine was then closed down for its long sleep until 1898.

The property was in that year secured by some English capitalists, who, after unwatering the shafts, had an examination made by the celebrated mining engineer, Dr. Hatch. The result of this report was so satisfactory, in spite of the fact as above stated, that for three years the mine was literally robbed, that a company was formed in England and work resumed. Unfortunately, like so many other similar enterprises, the cart was put before the horse, a concentrating mill being erected to treat 400

tons a day, whilst underground development was not undertaken on an adequate scale. They, however, succeeded in proving that the lode is no less than 18 feet wide and over 3 per cent. in value, and this at a depth of 420 feet. Then a fire occurred, burning down the newly erected pit head gear, shaft house, with crusher and ore bin, blacksmith's shop, men's dry, power and boiler house, etc. This, naturally, was discouraging, and, occurring as it did during the South African war, the principal shareholders, who were greatly interested in the gold mines of the Transvaal, called the general manager to England, and, not being



PLATE IV.—No. 1 Lode. No. 2, or Fire Lode. East End of Big Cave, Bruce Mines, Ont.

satisfied that an output of 400 tons a day could be guaranteed, determined to stop all operations except those necessary to keep the mine dry. Even this they eventually stopped on April 23rd, 1904, and in March, 1905, the writer was commissioned to pump out and make an examination. This was done, and, the report being satisfactory, a company was registered in Ontario, but with English capital, and Wellington and Huron Copper Bay sections have been again unwatered.

The property held by the company consists of the entire mineral