tunnel ore was, however, a handicap and to overcome this the mine was operated from February 21st to the end of the year without an hour's shut down.

The chief novelty during the year was the satisfactory operation of the new electric shovel purchased during the latter part of the previous period. Considering the large amount of waste to be handled it is no easy task to get ore out at a cost that is attractive. However, during the past three months the ore from this level, considerably over half of which was from the shovel, cost about 75 cents per ton, crushed, in railroad cars, while the cost per ton for handling all material, ore and waste amounted to 40 cents per ton. Attention is now being directed towards improving the ore cars and haulage facilities. Originally five-ton side dump cars were used exclusively. In order to dump large masses of waste, handled by the shovel with chains, side dump cars in which the door automatically dropped were constructed. These cars have given a considerable amount of satisfaction and will be continued in use. An improvement, however, is a car which will hold close to ten tons, with the automatic side dump feature, but with the door so arranged that when open it will allow the passage of a rock four feet in diameter. One of these has already been built and is shown in the left foreground of the general view of the glory hole. Five more are under construction.

During December wages were subject to a reduction of 25 per cent., in January 20 per cent., and in February 10 per cent. The total deductions from the payroll for these months amounted to $13,482. During March normal wages were paid. With sixteen-cent copper market in April employees received a twenty-five cent daily increase. During May and June, when copper averaged over eighteen cents, the increase amounted to fifty cents per day. These three months, therefore, called for $16,052 in extra wages or $2,210 more than the total deductions for December, January and February.

Diamond drilling was mainly responsible for the increase in the ore developed. Underground drifting also added a little. Usually, stoping operations can be depended upon to add to the tonnage of new ore, but during the past year it was a question if the excess of ore in some places was enough to offset the shortage of ore in other places. The work for the year, however, showed a net increase.

A little work was also done on the Bank of England claim. The ore here is one of the footwall type similar to that encountered in drill hole No. 420, referred to in last year's report. Possibly a car load of ore may be obtained, but so far the ore taken out has been worked at a loss, and unless there is an improvement work here will soon cease.

The total ore that has been developed at the Gold Drop property amounts to 1,431,000 tons, but of this there is only 61,400 tons remaining. It is improbable that much more will be opened up, as the entire ground has been pretty thoroughly prospected. We are now able to say that the stoping loss at this property will be very small, probably about 15,000 tons or 1 per cent. This almost complete recovery can be explained by the fact that most of the orebodies have been small or medium sized and the entire tonnage could be extracted by leaving very few or no pillars. The largest orebody, which, not considering the offshoots, contained over 400,000 tons in one central mass, was almost completely extracted. While being mined, pillars were left which were finally blasted. The broken rock was drawn clean, and almost completely. Owing to the good roof, the stope remained open for several months before it caved.

During the past year the Snowshoe claim has been drawn on heavily for ore. A little ore left there and on the Curlew and part of orebodies 5, 9 and 12 on the Monarch represent the localities where the remnant of ore left is to be found.

Mr. H. J. C. MacDonald, mine superintendent at Anyox, says:

The past year is the first in which the mine has been entirely upon a shipping basis. Some changes, some additions have been necessary, but on the whole the installation has demonstrated that it is well designed for the cheap handling of rock. The year has been one of progression towards smoother operation and lower costs. As the number and sizes of our stopes increased, the amount of powder and labor to break the ore has decreased. As the demands for ore increased, our handling and general charges have shown a corresponding drop. The end of the year finds us in a position to greatly increase our output and to deliver it at a lower cost per ton.

The shipments totaled 477,435 dry tons of ore. Of this amount 314,043 tons were from the heavy sulphide No. 1 orebody, and 163,392 tons were from the more siliceous No. 2 orebody. The tonnage of ore from the two bodies demanded by the smelter became, towards the end of the year, practically equal, proving that these bodies can be smelted in their developed tonnage proportions. This adds distinctly to the value of the mine.

The copper content in the ore has been 2.18 per cent., with a gold and silver content valued at 34 cents per ton. The monthly ore shipments, during the entire year, have analyzed higher in iron and sulphur, lower in silica and alumina than the average estimated for the orebodies.

The mining costs for the twelve months have been $1.03 per dry ton landed in the cars on the railroad to the smelter. This amount includes the handling of 29,310 tons of waste, and a development charge of 10 cents per ton. The period has been one in which we have absorbed many charges which would more exactly belong to equipment and capital accounts. The wages paid to employees have been increased in proportion to the market price of copper. This has amounted to 50 cents per man shift, or 7 cents a ton, for the last two months. The costs for the last six months, exclusive of this bonus, have been 89 cents per ton. Basing our estimate upon the actual conditions and upon the results obtained during the year, with wages and supplies at the level they have averaged during the past three years, future mining costs of 81 cents a ton are attainable upon the completion of some improvements now in process of being introduced.

The further exploration of the mineral area by diamond drilling, in and surrounding the mine, was not attempted during the year. The ore reserves, with the deductions of shipments, remain at practically the same figures as reported for the previous year. To the reserves of the Hidden Creek mine should be added at this time the developed tonnage at the Bonanza mine. The latter mine is also in the immediate vicinity of the smelter and can be handled under the same organization. The following is then a summary of our ore reserves tributary to the smelter at Anyox:

| | High Grade | | Low Grade | | Total | |
|---|---|---|---|---|---|---|
| Hidden Creek... | 9,205,837 | 2.17 | 8,628,000 | 0.63 | 17,833,837 | 1.43 |
| Bonanza... | 414,775 | 2.66 | 489,580 | 0.70 | 904,355 | 1.60 |
| Total.... | 9,620,612 | 2.19 | 9,117,580 | 0.63 | 18,738,192 | 1.45 |