

a large amount of extraordinary development work would be required in order if possible to locate the vein west from the then present workings. To this end a system of exploration was planned and carried out as follows:

A diamond drill plant was secured and borings to the extent of 2,200 feet were made at different points from the ground already opened up. In addition to this, the winze from the fourth level east was sunk 110 feet, 400 feet of raises were made from different levels, and 1,600 feet of drifts and crosscuts were run. This extraordinary development entailed a cost of \$33,950.00.

As a result of this work the vein or lode was found in place on the Cariboo claim 495 feet west of the main shaft on the 3rd level. On this level from the point where the vein was struck there has been opened up 320 feet of continuous ore averaging at least 4 feet in width, the face being in ore of the same width. This ore was also found on the 4th level (being 100 feet deeper) at a distance of 350 feet west of the main shaft, and has been opened up on this level for a distance of 220 feet, the vein being of the same average width. For a more particular description of this ore chute reference may be had to the report of Mr. Harry McMaster, M.E., which will be submitted to you.

At a point 45 feet below the 5th level and 30 feet west of the winze on the Okanagan claim, (being the winze hereinbefore referred to) the vein was also found. This ore having been located recently, only 60 feet of drifting has been done. The vein here averages three to four feet in width, and the ore is of high grade.

As a result of the development work carried on during the year, it appears that while the vein on the west end of the present workings on the company's property is continuous, the faulty condition of the vein on the east end, which at this point had been its characteristic from the beginning, would seem to be unimproved at the depth so far reached. In consequence of this it has been considered inadvisable to undertake an extension of the company's milling plant for the present. In the circumstances it appears to be the policy for the company to continue the work on the present lines, following the ore until at greater depth a point may be reached below the disturbances in the vein at the east end of the property, which in the past have been the cause of so much trouble and expense. When this point is reached, and the vein is found continuous at the east as well as the west end of the property, an increase in the milling capacity of the company's plant will be properly in order.

REPORT ON THE CARIBOO-M'KINNEY MINE.

Following out instructions, I left here on December 9th, 1901, for the McKinney mine, where I made a stay of nearly two weeks, making a thorough and careful examination. The following is a report of the condition of the mine as I found it:—

The company's property consists of the Maple Leaf, Emma, Alice, Cariboo, Amelia and Okanagan claims and the Saw Tooth fraction.

Beyond a few test pits and open cuts the work so far has been confined entirely to the Cariboo, Amelia and Okanagan claims and the Saw Tooth fraction and consists of a main shaft 367½ feet deep with levels driven east and west and a winze sunk from the fourth level 590 feet east of the main shaft to a depth of 196 feet, with an intermediate level driven west from it at 57 feet and the fifth level driven east and west at 100 feet.

The ore so far has been divided into three distinct chutes, West, Middle and East.

Taking the Middle Chute first, being to date the most important, as from it the mine has obtained its high

standing among the dividend payers of British Columbia, I find that the ore has practically all been stoped to the third level east of the main shaft from the surface and the fourth level from the surface on the west side. A fault starts from the surface a little west of the whim shaft and follows right down to the fourth level, in fact right through to the fifth, as it is again encountered there having a dip of about 45 degrees east. Below the second level little or no work has been done west of this break, the ore being much broken up and too narrow to work through, further development might again find it of good width. The floor of the third level east is in ore for about 120 feet of workable width; as no connections has been made between this and the fourth level through the ore, there is no knowing to what extent down it is workable.

On the fourth level east a crosscut has been driven which proved the ore to be in place but very much broken and narrow, though still high grade.

On the fifth level, driven west from the winze, only enough work, 300 feet, has been done to cut through the main break, mentioned before as cutting through from the whim shaft, into the solid rock which is here of the same diabase character that has been associated with this chute from the surface down. Judging from this and the throw of the fault, there is little question that a crosscut run south from this point will cut the vein in a very short distance, should no other faulting occur, though whether of good width or not can only be proved by such work.

To a very large extent the early payment of dividends by this company depends upon the vein being found here of workable width; should it not be I would advise work being discontinued on this chute for the time.

The East Chute.—On the surface and down to the second level this is low grade and has not been stoped out to any extent on this account. To this point it varies in width from 4 to 20 feet in places. On the second level it pinches down to one or two inches and continues so to the third level where it again widens to an average of 3½ feet, which width it steadily maintains as far down as it has yet been worked. In the east end faces of the levels, the ore narrows down again and is much broken which has caused work to be stopped in this direction for the present. An important point about this chute of ore, and one of great importance to the mine with regard to its future success, is that though low grade above the third level, from there down it gains wonderfully and has been ever since of a grade that would be considered very high in any mine which had not ore as exceptionally rich as that taken from the middle chute. This increase of values continues down to the 540 level, the lowest point at which it has been tapped as yet.

There is at present enough of this ore in sight to keep the mill running for about six months and every prospect of again finding the lead in place on the sixth level when prospected for there.

The West Chute.—This will, I consider, prove to be the main body and dividend payer of the mine as, though not averaging high, about \$6.00 mill run, it is more consistent and less broken so far as worked up to the present. Being higher up the hill it seems to have had less pressure brought to bear against it.

On this chute no drifting has been done above the third level. The ore was cut on this level 495 feet west from the main shaft and from that point the level is driven all in ore to the end—a distance of about 310 feet with the face of the drift still full in ore. There are indications that the grade is gradually improving towards the west end, though nothing definite can be said on this point without a mill test. Very little stoping has