

month. His report on the mine was most disappointing, and the board had no alternative but to shut down the mill and confine operations to taking out such payable ore as could be easily obtained. Since Mr. Hill's arrival, he had cut down expenditure and managed to make the production of the mine cover all outgoings, which was, in itself, a satisfactory thing. How long the ore would last it was impossible to say. Their one hope of getting any really good return on their money appeared to be in the coal lands of the Blairmoore district. Mr. Hill had formed a high opinion of these lands, and said that there was reason to believe that the company's area would be the most valuable coal property east of the Fernie coal field. The extent of their holding, jointly with other parties, was 9,000 acres, and at the present time negotiations were proceeding with a view to the sale of the land. It would be unwise, at the moment, to state what the probable profit on the transaction would be, but there was ground for hoping that the amount would be satisfactory. Should a sale be effected, the next step would be for the directors to summon a meeting of the shareholders to consider the future of the company.

BANK OF BRITISH NORTH AMERICA.

The net profits of this institution for the half year ended June 29 are £2,360 in excess of those for the corresponding period of last year. The directors have declared an interim dividend at the rate of 6 per cent. per annum, which is the same as a year ago, leaving a balance of £6,099 to be carried forward. The following appropriations from the profit and loss account have been made for the benefit of the staff: To the officers' widows' and orphans' fund, £470; life insurance fund, £380; pension fund, £459. The progressive nature of this bank's business is evidenced by the steady increase of its dividend distribution. Thus, for 1895 and 1896 it paid 4 per cent; for 1897 and 1898, 5 per cent.; for 1899, 5½ per cent., and since then it has paid 6 per cent., while a satisfactory increase of profit is shown by the report just issued.

BOSUN MINES.

The third ordinary general meeting of the Bosun Mines, Limited, was held in London last month. The Chairman, after paying a high tribute to the efficiency of the manager, Mr. Sandiford, explained that although the condition of the mine was excellent, it had been considered expedient to discontinue operations for a period, as the decline in lead and silver prices and the fact that the company was obliged to pay the miners a higher rate of wage, left little if any margin of profit. Recently, however, a considerable deposit of zinc-bearing rock had been encountered, and spelter being at present in great demand, it was hoped that the mine might soon again be worked. It was further stated that Mr. Sandiford had offered to accept a reduction of salary until operations were resumed, while the board agree for the meantime at least to waive their fees.

YMIER GOLD MINES.

Mr. Edward Hooper, who recently visited and examined the Ymier mine on behalf of the company, reports as follows:

The general economic conditions appertaining to this mine, as well as the ordinary details with regard to underground development, machinery and plant, etc., are well known to the directors, and it will not, therefore, be necessary to recount same here, but it will probably suffice to give a general description of the ore deposit, together with a summary of the results of the present examination.

The ore body being worked in this mine is more or less lenticular in shape, and is contained in a fissure-fault traversing the slates which prevail in this district.

The quartz is found at times to follow for a short distance along the bedding planes of the slates where disrupted by the act of fissuring, and these "spurs" have some times been followed for some distance under the impression that they were the main vein.

Several small dykes of igneous rock (probably gabbro) are found crossing the vein and country rock, and as no movement is noticeable they are evidently contemporaneous with the formation of the ore body.

Other disturbances of later origin have somewhat faulted the vein in places, although the dislocations so caused do not play any very important part in the economic working of the property.

The permanence of the fissure is evidenced by the workings at the 1,000 feet level, where the vein is strong and highly mineralized.

The Mine.—The vein has been proved from the surface to a vertical depth of about 1,000 feet, the payable portion varying from 2½ feet to 42 feet in width.

The length of the pay chute at No. 1 level was about 440 feet; at No. 2 level the lateral extent of the vein worked by the stopes increased to 470 feet, but at No. 3 level the "chute" shortens to about 350 feet, and at No. 4 level the payable ore is only found, so far, to have a length of about 200 feet, although the assays for the last 70 feet of the west drift (which is not included in above measurement) would seem to denote that a certain amount of ore exists between this distance. The limits of the pay chute at No. 5 level have not as yet been fully determined, though present appearances indicate a decided tendency for it to pitch to the eastward, and a length of about 120 feet on this level, east of the shaft, has been proved to be payable.

At levels Nos. 6, 7, and 10, no amount of payable ore has yet been found, and all work at these points is suspended until connection has been made with the main shaft of level No. 10. This last mentioned work is of great importance with regard to the extraction of ore below No. 3 level.

It was not found possible to inspect No. 7 level on account of its being temporarily flooded with water.

During the last six months over 80 per cent. of the ore has been obtained from the stopes above levels Nos. 2 and 3, since it was not feasible, owing to inadequate hoisting arrangements, to extract much of the ore exposed below No. 3 level.

The presence of bunches or seams of zinc-blende, galena or iron pyrites in the quartz has hitherto been regarded as the chief indication of the presence of sufficient gold and silver in the ore to render it payable. That the occurrence of these minerals in the ore is no criterion as to the accompanying precious metals, is sufficiently borne out by the recent development in No. 10 level, where the quartz carries about the same quantity of the sulphurets as near the surface, but very little gold or silver. However, at the present east face of No. 10 level the ore shows an increased quantity of sulphurets, and a selected sample taken here gave a value of \$7.51, which is a higher result than any hitherto obtained. This is undoubtedly a favourable indication, and coupled with the fact that the pay chute in the upper levels has shown a decided tendency to pitch to the east, gives one every encouragement for continuing this level to the eastward.

For the same reason levels Nos. 6 and 7 should be extended without delay, confining the drives to the foot wall portion of the vein. The high assay at the west side of the shaft on No. 6 level was taken from the only portion of the footwall which was opened up, as the dyke interfered with the taking of a proper sample from the foot wall on the other side of the shaft.

The Ore and Its Treatment.—The ore is chiefly composed of quartz, with which is associated about 8 to 10 per cent. of sulphurets of lead, iron and zinc. The gold evidently occurs for the most part in a free state, over 60 per cent. being saved by amalgamation in the stamp mill and about 15 per cent. by concentration over the vanners, the average value of the gold left in the tailings being about \$1.75 per ton of ore treated.

The concentrates shipped to the smelters from the commencement of operations by the company to 31st December, 1901, contained the average of 1.01 oz. of gold and 12.22 ozs. of silver per ton, and over 20 per cent. of lead. The efforts of the management are directed towards keeping the zinc contents of the concentrates down to about 10 per cent., since a penalty of 50 cents is imposed by the smelters for each unit over 10 per cent.

The average duty of the stamps is not high, viz., 2½ tons per stamp per day, but this is chiefly due to the necessity of giving the free-vanners ample time to make a close concentration.

The newly erected cyanide plant has a reputed capacity of 200 tons of tailings per day, and originally it was proposed, for the double purpose of ensuring a better and richer leaching product as well as increasing the duty of the stamps, to use screens of a larger mesh in the mill. Owing chiefly, however, to the backward state of development in the mine, and consequent inability to keep more than 50 stamps supplied with ore, the same necessity for increasing the duty of the stamps does not now exist, and the older practice will be adhered to.

Cyanide operations commenced in March, and up to the 30th June, 11,126 tons of tailings had been treated. According to the assays of the tailings and residues about 835 ozs.