

having foreclosed a mortgage he held over it, as the recent sale was made on his behalf, he being represented in this matter by Mr. E. J. Wilson, manager of the Standard Pyritic Smelting Co. The erection of the buildings and equipment of the smelter proceeded for some time under the direction of Mr. Andrew Laidlaw, now of Chicago, who also took a prominent part in organising the Standard Pyritic Smelting Co., but before the plant was installed he sought the assistance of Mr. Jas. W. Neill, for many years manager of the Taylor & Brunton Ore Smelting Co., of Salt Lake, Utah. Later Mr. Wilson, who had for some time been metallurgist in charge of the blast furnaces of the Great Falls smelter, Montana, arrived to take charge of the new works, but owing to the lack of a sufficient ore supply to keep the smelter running continuously and for other reasons, he advised that the furnace be not yet blown in.

The following description of the works has been supplied to the writer:—The large main building—the smelter proper—182 feet in length by 120 ft. in width. Measuring from the feed floor in the centre of the building the height is 64 feet, and from the furnace floor to the roof nearly 80 feet. Facing from the north, on the west end of the building is the sampling department, in which there are two 36-inch and two 48-inch automatic samplers, a 7x10 Blake rock crusher, two sets of 12x20 rolls and two belt elevators. East of the sampling department are located the bins for the sample discard. Next are placed two parallel rows of ore storage bins, eight in a row and each bin 34x16 ft. Farther east are lime and coke storage bins, the whole group of bins occupying the central portion of the building from north to south and over them run double railway tracks. At a lower level the furnace floor extends east from the stone retaining wall 60 feet and has a length of 140 feet. The dust flue, of stone walls with arched brick roof, runs about 200 feet to the steel smokestack which is 9 ft. 6 in. in diameter and 112 feet high above a 14 ft. brick base. On the furnace floor level are two 75-horse-power engines, one to run the No. 7 Connorsville blower and the other the sampling machinery. The furnace is 40 in. x 176 in. inside the tyler line and has a normal capacity of 300 tons each 24 hours. It is a larger furnace than those of the Granby and B. C. Copper Co's smelters. A 250-light Siemens-Halske dynamo run by a high speed Atlas engine furnishes lighting facilities. A well-equipped laboratory for assay purposes, and commodious offices also form part of the establishment.

Dr. Wilson has already placed the purchasers in possession of the smelter, and it is stated that Mr. H. C. Belling, the well-known smelter expert, who reported on the works for the new owners, is preparing plans for a coarse crushing plant and various other improvements. The requisite additional machinery will be ordered very shortly and preparations for starting up the works as soon as possible are being pushed, the intention being to smelt ores in the ordinary manner. There is a lot of coal and coke on hand and it is claimed that the Montreal and Boston Copper Co's Sunset mine is now in shape to maintain an output of about 400 tons of ore per diem. Mr. Albert I. Goodell, of Pueblo, Colorado, has been strongly recommended for the position of metallurgist, and it is probable he will shortly arrive at Greenwood to take charge of operations. Mr. Goodell has been engaged at the Philadelphia smelter, Pueblo, and the Kokomo smelter, near Leadville, Colorado, and recently had charge of the Needles Smelting Co's copper-matte plant at Needles, California. Mr. C. R. Craig has already arrived from Seattle to take the post of accountant at the smelter.

The Montreal and Boston Copper Co., Ltd., was organized last year with a capital of \$3,000,000 in 600,000 shares of \$5 each. The leading men in the company are Messrs. J. N. Greenshields, K. C., Montreal; William Mitchell, Drummondville, Quebec; T. Crockett, Riviere du Loup, Quebec; H. H. Melville, Boston, and G. H. and A. A. Munro, Montreal. The company owns the Sunset, Crown Silver, C. O. D. and Florence Fraction mineral claims, all adjoining and situated in Deadwood camp, near Greenwood.

The Sunset is opened up to a depth of 400 feet and the Crown Silver to 262 feet, the total footage of work done on these properties in underground development to January 1st, ult., being 4,516 lineal feet. It is stated that there are at least 250,000 tons of ore in sight above the 200-foot level of the Sunset, and that ore has been cut at both the 300 and 400 levels. Last year 800 tons of ore were shipped to smelters chiefly for test purposes. The equipment at the Sunset includes two 80-horse-power horizontal return tubular boilers, half of a 20-drill duplex air compressor, two air receivers, ten 3½ machine drills, a 100-horse-power, double-cylinder, double-drum, link-motion Jencks hoisting engine; Laurie feed water-heater, safety-platform cage, electric light plant, well-found tool and repair shop, assay plant, etc. Recently commodious bunk and boarding houses were erected, ore bins with a holding capacity of about 2,000 tons, and an elevated tramway from shaft to ore bins built, and other substantial improvements made. A railway spur was also put in, to facilitate shipment of ore to the smelter. Latterly there have been between 50 and 60 men on the mine pay roll. Captain Harry Johns is in charge and Mr. H. Galbraith, a McGill graduate, is assayer at the mine.

CASCADE'S WATER POWER.

THE development of 3,000 horse-power on the Kettle river at Cascade, 15 miles east of Grand Forks, will soon be an accomplished fact. The work has been in progress for nearly two years. Electrical power will be conveyed by wire to the various mining camps,

thus reducing the cost of mining development. Several of the smelters are also figuring in utilising the same energy. Spring will see the plant in operation. The cheapening of power as compared with steam will permit the handling of mineral bodies that now cannot be worked.

The Cascade power is controlled by the London & British Columbia Goldfields company, of London, England.

At Cascade, the Kettle river rushes through a rock gorge for a distance of half a mile, and has a natural fall of 121 feet. A dam 400 feet long and 50 feet high has been constructed at the head of the gorge, which raises the water 36 feet above the natural level, thus giving a working head of 156 feet at low water.

The permanent water level will be 10 feet below the top of the dam. Provision has also been made to control the water level during periods of high water by a series of sluice ways.

From the dam the water is to be conveyed to the power house, first by an open cut 233 feet long, thence through a tunnel through the solid rock a distance of 410 feet, the tunnel being 12 x 14 feet, thence to an open cut in the rock a distance of 500 feet; from this point, where a concrete bulkhead will be built, the water will be conveyed through a circular flume 12 feet in diameter to the power-house. About 35,000 cubic yards of rock have been excavated from these cuts. The areas are so large that no appreciable loss of water will occur, and the water will enter the flume with a head about equal to the level of the water in the dam.

The power-house is nearing completion. It is a fire-proof structure of stone and brick, 215 x 45 feet in size, and is situated at the foot of the falls, 5,000 feet from the dam.

Electrical machinery of the most improved pattern, together with six turbine wheels of the horizontal type, are now being manufactured especially for this plant.

At the outset the horse-power developed will be 3,000, but later it is expected that a maximum of 6,000 horse-power will be reached. A right of way has been cleared from Cascade to Phoenix via Grand Forks, a distance of 21 miles. This clearing is 122 feet wide. Two separate duplicate lines are being constructed. The poles have already been erected. A heavy copper wire will be used for the transmission of the electrical energy.

SLOCAN CITY MINING DIVISION.

(From Our Own Correspondent.)

A HEAVY mid-February thaw has cut our sleigh roads out, and traffic is practically suspended. The shipments for the six weeks of the year amount to 657 tons, made up from four properties:—

	Tons.
Arlington.....	570
Enterprise.....	60
Neepawa.....	20
Ottawa.....	7
	657

Of these, the last two, though old prospects, are new shippers. The Neepawa is being developed by London capital under Mr. Sandford's management, and the expectation is that the shipments will be steady from this on. The Ottawa has been opened by the leaseholders and seven tons shipped were taken out in developing and in cutting through one ore body, and returned, according to smelter returns, \$1,308.00 net. This high grade ore running 1.162 oz. to the ton, and the balance of the shipment 318 oz. News of the development in camp seems to be very satisfactory. The Iron Horse struck ore at the 50-foot level, and are increasing their force. The Slocan Republic Co. are asking assistance toward the construction of a wagon road up Republic mountain. As this will reach the Viking or Phoenix-Viking mine, as well as the Erin and Peerless groups and form the first step toward the groups at the head of Twelve-Mile creek, they will doubtless get what they ask for. The management are about to put in a hoisting plant on Mount Speculator.

RECENT DEVELOPMENTS IN YMIR DISTRICT.

(From Our Own Correspondent.)

IT is expected that the big cyanide works at the Ymir mine will be ready for the first charge about the first of March. About the end of the same month it is probable that the big crosscut tunnel which has now been run nearly 2,000 feet, will be the subject of great interest, as the estimated distance of the vein is only 2,100 feet from the mouth of the tunnel. Should the vein be encountered and prove to be of as great dimensions and of the same average grade as in the upper levels the life of the mine is assured for a great number of years. The element of doubt as to meeting the vein is however almost eliminated now by reason of the depth obtained in the shaft which has followed the vein down to meet the tunnel, and has now reached a depth of about 800 feet. The London Statist, which is always an extremely conservative paper has made an estimate of the total ore which may be calculated upon above the 1,000-foot level, its estimates being based upon figures supplied by the London directors. According to the estimate there will remain to be worked 370,000 tons which, with the present mill practice