

mines, the Mother Lode having sent to the smelter about 180,000 tons, and the Emma the greater part of the remainder. Some 5,000 tons, chiefly of silicious ores, were received from the United States.

The company also operates here a copper converting plant, and besides the matte from its own smelter furnaces it received 2,110 tons of matte from other smelters, which was converted into blister copper.

The total production of metals during the year was as follows: Gold, 28,229 oz.; silver, 99,286 oz.; copper, 5,776,711 lb.

The company has made public its intention to enlarge its smelter to an extent that practically means reconstruction and re-equipment along the latest and most approved lines. Contracts have been made for the supply of the new machinery and plant, as under: Three blast furnaces of a size and capacity—approximately, 600 tons per diem each—larger than any of the copper furnaces now in Canada. The hearth area of each furnace is given as 48 by 240 in. Furnace charging will be from side dumping cars hauled by trolley locomotives. Molten slag will be hauled to the dump in 25-ton cars by electric motors. The slag cars will each have an electric motor for tilting the car. There will be three large Roots' blowers, each driven by a 300-h.p. induction motor. A 100-kw. motor generator and several smaller motors will also be installed. Five trolley locomotives will be used for hauling ores to the furnaces and slag to the dump. Ore bins are to be enlarged, coke bins constructed, railway trestles raised, a larger railway scale put in, a machine shop with full equipment of power tools provided, together with all accessories requisite to make the smelting plant modern and complete. The new furnace building will be of steel and generally buildings and plant will be such as to make the works second to none in regard to completeness of equipment and in provision for economy in operation.

The changes have been designed by and are to be made under the direction of the manager, Mr. J. E. McAllister, who before taking charge of these works had the benefit of a valuable experience, in the capacity of assistant superintendent at the Tennessee Copper Co.'s large and modern smelting works in Tennessee.

#### DOMINION COPPER CO.'S SMELTER, BOUNDARY FALLS.

The Dominion Copper Co.'s smelter was idle the greater part of the year. It was operated by the Montreal & Boston Consolidated Mining & Smelting Co. until May 20, when it was shut down and remained idle until, at the end of November, one furnace was blown in, the Dominion Copper Co. having meanwhile acquired possession of the works. Altogether between 150,000 and 200,000 tons of ore were smelted here during 1905.

No additions of importance were made to plant, but should the Dominion Copper Co. decide to keep it running for any great length of time additions and improvements will no doubt be made to the full extent required.

(To be continued next month.)

#### CROW'S NEST PASS COLLIERIES.

TWO MILLION tons of coal and 500,000 tons of coke per annum is the advertised present capacity of the coal mines and coke ovens at Coal Creek, Michel and Carbonado, the three collieries of the Crow's Nest Pass Coal Co., Ltd., which now has a payroll of between 1,700 and 1,800 men, receiving in the aggregate more than \$1,500,000 per annum.

The operations at the company's collieries during the past few years have been briefly summarised for the *Fernie Free Press* Souvenir Edition, just issued, as follows: At Coal Creek colliery six separate mines have been opened up, and five of them are at present producing coal. Electric, compressed air, and main and tail-rope systems of haulage have been installed in these mines, and the present output of 2,000 tons per day could, at short notice, be doubled. At Michel colliery six separate mines have been opened up, but at present only two of them are being operated, producing 1,200 tons per day. The total capacity of this colliery is more than 2,000 tons daily. At Carbonado colliery (Morrissey Mines), five mines have been opened up, but only three are being operated. The full capacity of these mines is 1,000 tons per day.

It will be seen, therefore, that the combined capacity of the three collieries at present is about 5,000 tons per day. This could quickly be increased to 6,000 tons, so that any rapid increase in the consumption of coal in the territory tributary to this coal field could easily be provided for by the production of these mines.

The chief additions made to plant, machinery, etc., during the year and underground developments at the several collieries were as follows:

At Coal Creek the two tipples destroyed by fire last March were replaced by a steel structure, which is one of the largest and most modern tipples in the country. It crosses Coal Creek valley from one side to the other, so as to connect with the mines on both sides. Its length is 832 ft., and it is equipped with modern coal-handling machinery and appliances, all selected with a view to labour-saving and expedition in handling coal in large quantity. Electric locomotives, trip and auxiliary feeders, dumps, and kickbacks handle the loaded and return cars; shaking tables, belt conveyors and picking tables provide for the screening and dry-cleaning of the coal, and a gravity box car loader delivers it into cars ready for shipment.

No. 2, which is one of the most productive of the mines, now has a main level 6,000 ft. long. No. 1, on the opposite side of the valley, i. e., the north side, is still producing first class steam coal; its main level is in about 5,000 ft. No. 9, on the same seam, was largely developed in 1905; its tunnel is in 2,000 ft., and its output of coal is steadily increasing. No. 5, also a new mine on the north side, is developed to about the same extent as No. 9.

At Michel colliery the most important change made in 1905 was the installation of a high pressure haulage system, including a 400-h.p. four-stage air compres-