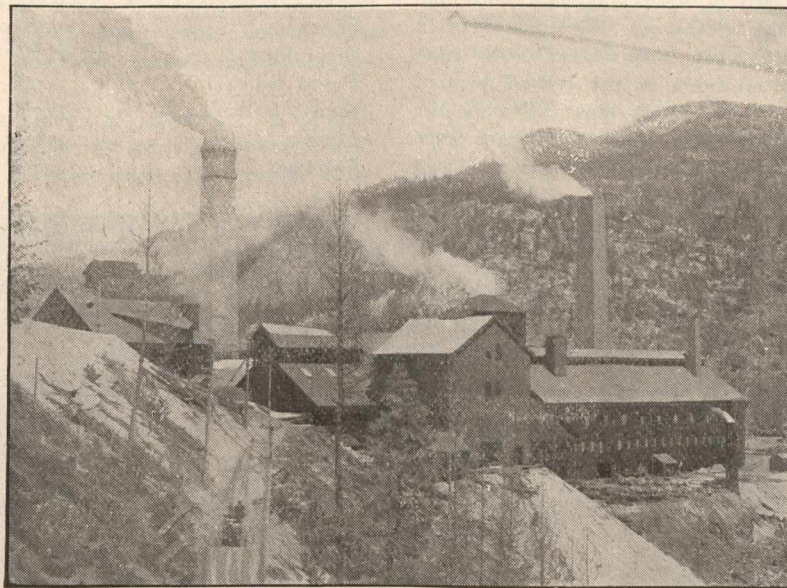


effort is now being made by the lead producers to secure such changes in the Canadian customs tariff as will conserve the entire Canadian market for Canadian lead. Under the present tariff, and because of the absence of corroding works, it is possible for the refiner to dispose in Canada of only such lead as is used in the metallic form. This amounts to only 3,000 or 4,000 tons per annum. All lead mined in British Columbia is bought by the smelter according to the English price, and after deducting the costs of freight on the bullion and marketing charges, the miner now receives a miserable pittance—about \$1.35 per 100 pounds—for his product.

The gold-copper districts continue to be Rossland and the Boundary region. Rossland in 1902 turned out approximately 350,000 tons (an increase of about 50,000 over 1901), all of which is smelted either at Trail, B.C., or Northport, Washington. The camp has been free from any labor disturbances, which so much interfered with its output in 1901; and in spite of some distrust as to the result of manipulation in the shares of some of its mines in London, it appears to have entered on a period of permanent, if moderate, prosperity and progress. Aside from the large amounts of high-grade material which go direct to the smelters, Rossland's mines hold much larger quantities of low-grade ores, which are doubtless amenable to a preliminary concentration, and much thought is now being directed to the dressing of these ores, with success in sight. The great bulk of the tonnage of the

where the Cascade Water Power and Light Company, Limited, has recently completed the installation of an extensive electric equipment, with transmission lines to Phoenix, the centre of the chief mines. The important mines of the year are the Snowshoe, the B. C., Knob Hill and Old Ironsides, all near Phoenix; and the Mother Lode and Sunset, west of Greenwood. Beside these the Emma for several months past has been putting out daily over 100 tons of iron flux, which is used by the smelters at Trail and Nelson.

The gold-milling ores of the province are, apparently, not very abundant. They are found chiefly in the Nelson district, and the Ymir mine continues to be the chief producer, having crushed about 50,000 tons of profitable ore during the year. At the Ymir mill about 60 per cent. of the gold is amalgamated, although 7 per cent. of concentrate is produced, carrying 20 per cent. of lead, besides much zinc and iron sulphides. The Arlington, of Erie; the Wilcox, of Ymir, and the Poorman, near Nelson, help to make a respectable total for the year. Another important mine of this class is the Cariboo, at Camp McKinney, Yale District, which has been a steady and profitable property for eight years or more. The free-milling ores at Fairview, Yale District, have not as yet proved of any importance, although it seems probable that one or two properties may yet turn out to be valuable. A portion of the Lardeau District, a few miles from the head of Arrow Lake, West Kootenay, has been the scene of a good



Trail Smelter, British Columbia.

year has come from the Le Roi No. 1, Le Roi No. 2, Centre Star and War Eagle. No. 2 declared a dividend in May last, but No. 1, although it has published large operating profits for several months past, appears to have devoted its earnings to cancellation of debts. The Boundary district continues to uncover astonishing bodies of very low-grade smelting ores. The ores are, and will be for a long time to come, won by quarrying, and, being self-fluxing, are cheaply smelted (in the ratio of about 25 tons of ore into 1 of matte), at three plants, all within a few miles of the mines. The tonnage smelted in each furnace daily runs from 350 to 425, and the resulting matte is converted (to blister copper) at one of the smelting plants. Thus, with the assistance of the most economical exploitation, these extremely low-grade ores are turned to profitable account. Although no new producers have been added to the list, the old ones have materially increased their output, and it is probable that there will have been nearly 500,000 tons smelted during 1902. Along with the other smelters of the province, those of the Boundary suffered from shortage of coke supplies, and one of them was handicapped severely by a lack of water-power. These retarding factors kept the tonnage much lower than it might have been, but during the coming year the tonnage will probably be largely increased, and the costs decreased, by the use of the power of the Kettle River, generated at Cascade,

deal of activity in the development of free-milling quartz, of which there appears to be extensive bodies. Thus far, however, little has been accomplished in actual output. The Similkameen River portion of Yale District is still without railway communication, and its several excellent copper-gold properties are therefore unable to produce.

On Vancouver Island several discoveries of copper pyrite of low-grade in gold, but comparatively high in copper, have been made, and they are developing favorably. On the east side of the island the Lenora and Tyee are important mines, and are now possessed of smelting facilities. The coming year will probably see a large production of copper from this district.

The coal measures of British Columbia are a source of much wealth to the province. The mines of Vancouver Island continue, as they have for many years, to produce largely, mainly for export. The other producing mines are those of the Crow's Nest Pass Coal Company, in the southeastern corner of the province. One of the company's mines suffered from a disastrous explosion in the early part of the year, and this was immediately followed by a prolonged strike of the employees. Agreement was finally reached in August, and, except during some minor labor disturbances, the several openings have since been outputting largely. The cessation of output seriously affected the oper-