

nal; some 750 feet of development work was done on the property last year, and 202.4 tons (dry weight) of ore shipped, the metal contents of the ore having been 13,846 ounces of silver and 13,711 pounds of lead. In addition several hundred tons of lower-grade ore was set aside for treatment in the future. Of the Hope, little is known to the writer; in 1911 the Florence Mining Company undertook the work of driving a tunnel to gain a depth of 500 feet. In 1912 40 tons of ore was shipped to Trail; no information of work done has been received.

**Whitewater and Vicinity.**—Shippers were: The Whitewater mine, operated by J. L. Retallack & Company, about 1,100 tons of hand-picked ore, averaging about 75 ounces of silver to the ton and 35 per cent. lead; the Utica, stated to have shipped \$50,000 worth of ore; and the Panama, from which 61 tons of high-grade ore was sent to Trail.

### NELSON MINING DIVISION.

Work is being continued at the Granite-Poorman gold mines, the Queen Victoria and Eureka copper mines, and the Molly Gibson and La France silver-lead mines, all situated in the northern part of this division. Of these, the Granite-Poorman group is having its ore milled, shipping to the Trail smeltery only the concentrate produced after the pulp has passed the amalgamating plates; the Queen Victoria shipped to the British Columbia Copper Company's works at Greenwood by the end of December about 1,000 tons of low-grade copper ore, that having been the output from the time production was commenced late in November, after this mine had been purchased by that company and work resumed at it; the Molly Gibson's output for the year was between 2,000 and 3,000 tons, much of it concentrate.

Concerning the Dundee, in Ymir camp—development work has been in almost continuous progress on this property for the past three years. The most important work done was that of driving a tunnel, starting from a point at the southwestern corner of the property, where recommended some years ago by Mr. Bernard MacDonald in his report, made after he had examined the Dundee. The main adit has been driven 1,851 feet, and there has been some later drifting to the extent of about 600 feet. In addition some 400 feet of diamond drilling has been done. By far the greater part of this work was cross-cutting in country rock, only the last 200 feet having been driving on the vein. In the course of the cross-cutting several showings of ore have been met with; these will be opened later. The present object is to continue the main drift until it shall be under the old shaft, which will involve driving nearly 500 feet farther. The drift is being advanced about 5 feet a day; when it shall be under the old shaft, raising will be undertaken and continued until connection shall be made with the old workings, which are down to a depth of 260 feet from the surface, and approximately 640 feet above the level of the long tunnel above-mentioned. This means that when the connection shall have been made, the mine will be opened to a depth of 900 feet from the surface.

No continuous bodies of ore have yet been found at the greater depth worked, but the vein is there, well defined and running on a similar course to that shown in the old shaft workings. The diamond-drill shows it

to be about 40 feet in width between walls. Some bunches and small streaks of ore were lately encountered, and it is expected that an ore shoot of considerable size will soon be entered. The drift has latterly been chiefly in quartz, heavily mineralized with iron pyrites and having small quantities of galena and zinc and some intrusive rock. A water-driven compressor supplies air for operating the machine drills used in drifting. No other work is planned for the time being—just to continue development along similar lines to those now being followed.

Other mines in Ymir camp are being worked, and still others about Salmo and Erie, and in Sheep Creek camp, of which some information will be given in the early future. Of these, the Yankee Girl, near Ymir, the Emerald, near Salmo, the Second Relief and Arlington, at Erie and the Queen and Motherlode in Sheep Creek camp, are the chief producing mines in the southern part of Nelson division.

### ROSSLAND AND TRAIL.

While exact figures of production of Rossland mines are not yet available, it is known that the quantity of ore produced in 1912 in Trail Creek division, which includes Rossland camp, is approximately 240,000 tons, as compared with 254,000 tons in 1911. Information received to date makes it appear that the Centre Star group shipped 31,000 tons less ore in 1912, and that Le Roi No 2 Company's mines also show a decrease in quantity; on the other hand, Le Roi made a gain of about 25,000 tons. There must be some good reason for the decreases in output mentioned, since it is well known the Centre Star group has much ore in sight, for it was reported to shareholders in the Consolidated Mining and Smelting Company at the last annual meeting, held in October, that "our Rossland mines show an increase in the amount of ore developed, with, we believe, a higher average value." Le Roi No. 2 reported, for its fiscal year to September 30th last: "Beside the discoveries of numerous oreshoots in the better-known veins in the upper ground, the most important development is that of an orebody on the 1650 (Le Roi) level. This is the deepest ore known in our ground and is of good metal content, size and character, and augurs well for the future of this part of the property in depth. Development is in progress here."

The smaller shippers in Rossland camp did not as a whole come up to expectations in the matter of output, since together they made a decrease in quantity. However, the outlook for some of them—the Blue Bird and Phoenix particularly—is decidedly promising, in both cases much better than at the close of 1911.

The Inland Empire, situated in an outlying part of the division, in the mountains westward from Rossland camp, completed the installation of its 10-stamp mill and commenced crushing ore late in the year. While production was small, it is an advance to have got to the producing stage, especially as it is expected an output will be regularly maintained. The mine has been developed to a depth of 300 feet, and levels have been opened at 70, 140, 200 and 300 feet respectively. The ore is of such a character that the saving of gold on the amalgamating plates is light, most of the value being recovered in concentrate, which is smelted at Trail.