A review of this sort will not permit of a detailed description of the plant; it is sufficient to say that it will be up to Granby standard, and will include a most up-to-date mine equipment, while the smelting plant will include blast-furnaces, converters, etc. A great part of the plant has already been erected, and it is almost certain that the summer of 1914 should see it in operation.

The mine has been already described in the reports of this department, but it might be said that the company estimates it has blocked out above the working-adit 8,000,000 tons of 2.2 per cent. copper-ore, which estimate is practically endorsed by the mining engineer sent by this Bureau to examine the property. An average of about 1,000 men has been employed during the summer of 1913.

On Alice arm, in addition to the Granby Company's holdings, this Bureau has official reports showing that some twenty miles up the Kitsaulte river, which flows into Alice arm, there are deposits of copper-ore of a workable grade which the present development would give good reason to believe are of very considerable extent, rendering it probable that this section may also develop into an important copper camp.

Near the Granby Company's property—but not included in it—seemingly extensive bodies of copper-ore have been found on the Bonanza and Groundhog claims. It certainly would appear as though the mineral wealth of this section was just beginning to be discovered.

At Kwanitza, forty-five miles up the Grand Trunk Pacific Railway from Prince Rupert, salt has been discovered, and a small quantity extracted in an experimental way. A large basin occurs at this point on the creek, and on the edges of the basin brine was found to be seeping out. Some four boreholes have been put down in the basin, and each yielded a heavy brine, carrying about ¾ lb. salt to gallon of brine. One of the holes had at the bottom crystalline salt mixed with clay. While much yet remains to be proved, it seems probable that the basin contains a large deposit of salt. The quality of the salt evaporated in a crude evaporating pan on the claim is very pure and quite up to commercial standard.

The properties on Princess Royal Island, owned by the Surf Inlet Gold Mines, Limited, described in last year's report, and which were expected to produce this season, have not yet been equipped and made no output.

Portland Canal Mining Division.

As far as can be learned, there was no ore shipped from this division in 1913.

In the Glacier Creek section of the Bear River district, the properties are all awaiting the development of the 2,800-ft. tunnel being driven by the Portland Canal Tunnels Company. This tunnel had at the end of the year just struck the crush zone in which the ore was found 2,000 feet higher, but as yet no development has been done at the tunnel level.

No further development has taken place regarding the Red Cliff and no ore has been produced.

Mr. D. G. Forbes reported on the Salmon River claims for this Bureau, and considers that the present development gives substantial expectation of the development of large ore bodies of workable grade.

KIRKLAND LAKE AND PORCUPINE

Kirkland Lake Proprietary Limited.—The flotation of the Kirkland Lake Proprietary, Limited, in London, has aroused much interest. The prospectus has been criticized as being somewhat vague and indefinite in its terms. The company, according to the prospectus, secures under the contract the benefit of all arrangements now in course of negotiation, or which may hereafter be entered into, by Mr. Clement Albert Foster in regard to mining properties in this mining field or district, including the right to take the same over at cost price and free of any commission or profit to Mr. Foster. The purchase consideration for the above was $125,000. If the capital of the company is increased the vendor will get $5 in cash for every two shares issued up to 50,000.

The company has to date obtained control of the Tough-Oakes Gold Mines and the Sylvanite Mining Company, and has an option on the control of the Teck-Hughes Gold Mines. The Messrs. Tough and Oakes' interests in the the company were bought out and treasury stock was bought to an amount which gives a clear control. Treasury stock in the Sylvanite Mining Company, which holds the Wright Robbins claims, has been purchased. The company is now working both the Tough-Oakes and the Teck-Hughes mines. The shaft at the Tough-Oakes is to be sunk to the 300-ft. level at once, while drifts on the vein at both the 100 and 200-ft. levels are being prosecuted with vigor. Another compressor has been installed which will give considerable additional power. A shaft has been started on the No. 3 vein in the porphyry.

There is no difference in gold content per ton where the main vein is in the porphyry at the 200-ft. level.

There is no intention of erecting a larger mill until ore reserves have been developed to a much greater extent than at present. The last shipment of ore from the Tough-Oakes mine at Kirkland lake brings the total in gold contents to $60,084, and in silver $3,288. This does not include the gold bars produced in the mill. The fifth shipment, though made months ago, has not been settled for until quite recently. It ran slightly higher in gold than any of its predecessors and averaged much better to the ton in silver.

The total shipments totalled 131.55 tons and cover a period of a little over a year. All the ore shipped consists of vein matter alone.

Dome.—The December statement of the Dome mine shows that for the nine last months of 1913 the company milled 104,330 tons and produced $936,106 in bullion. The production for the month of December was 13,475 tons. Gold produced amounted to $106,904. The mill ran 90 per cent. of the possible time. For the nine months of April to December, inclusive, the Dome ore averaged $8.97 per ton recovered from the mill. May showed the highest grade per ton with $13.68, and August was lowest with $6.31. The ore averaged $7.93 in December.

Teck-Hughes.—The test shipment from the Teck-Hughes, Kirkland lake, ran 102 oz. in silver and $38.15 in gold. These samples were taken from the 100-ft. level of the No. 1 vein, where it was about 20 in. wide. The value of the silver content of the car surprised the company. The shipment consisted of four tons.

The drift on No. 3 vein has now been pushed for 125 ft. to the north at the 75-ft. level. The vein varies from 5 ft. to 18 in. in width. At the present time it is narrow in the face. The controlling interest in the Teck-Hughes is under option to the Kirkland Lake Proprietary Ltd.

Huronia.—An order has been placed for an additional five stamps for the five-stamp mill at the Huronia mine in Gauthier township. The addition includes also a tube