

quite satisfactory." Mr. Hooper's report concludes as follows: "The estimated amount of ore blocked out at the end of 1903 is given in the manager's report as 92,880 tons, having an approximate net value of \$3.50 per ton. Owing, however, to the new method of mining adopted, this amount may be approximately stated as 45,000 tons, which should yield \$7.75 per ton. At level No. 3 pay ore has only been found for a distance of about 70 feet east of the Ymir shaft; but the supposed pitching of the ore shoot in depth to the east has been proved by levels Nos. 4 and 5, where payable ore exists more or less continuously for the respective distances of 317 feet and 330 feet east of the shaft. Level No. 6 has only been driven 190 feet east of the shaft, exposing payable ore up to within 15 feet of the face, and the stopes above this level are now producing ore of a higher grade than any other part of the mine. The driving of level No. 4 was restarted at the end of December with most encouraging results. In conclusion, the ore now exposed can be profitably worked, and there are good reasons for believing that the extension of levels Nos. 6 and 7 further to the eastward will prove the continuation of the main ore shoot in that direction." It is proposed to decrease operations to the basis of 20 or 25 stamps for the present.

Cariboo Consolidated.—Cable from the resident manager in British Columbia: "La Fontaine—The tunnel has already been driven a length of 262 feet; dry, compact gravel struck 4 feet above the roof; present appearances most encouraging."

Ymir.—Returns for February: "Thirty-five stamps ran 27 days and crushed 2,750 tons (2,000 lbs.) of ore, producing 716 ozs. bullion. The estimated realizable value (gross) of the product is \$7,400; 250 tons of concentrates shipped, gross estimated value \$7,400; cyanide plant treated 760 tons (2,000 lbs.) of tailings, producing bullion having estimated gross value of \$1,100; sundry revenue, \$800—\$16,700. Working expenses, \$16,250. Profit, \$450. There has been expended during month on development \$575."

#### MINE MODELS IN GLASS.

Messrs. E. R. Faribault and J. A. Robart, of the Canadian Geological Survey, have constructed a large plate glass model, for exhibition purposes at the St. Louis Exposition, to illustrate the mode of occurrence of gold in one of the 49 gold mining districts of Nova Scotia, which is of great interest in connection with a bill passed last session by the government of that province to assist in the sinking of shafts from the surface to a vertical depth not exceeding 2,000 feet.

The model is improved from one exhibited at the Paris Exhibition of 1900, which won high praise from the British juror in the class of mines and quarries, Professor C. Le Neve Foster, who, after speaking of the collections of the geological surveys of Canada and Western Australia, as the only exhibits worthy of a nation possessing so much mineral wealth and having such vast sums invested in mining undertakings, adds to his report:

"Mr. Faribault's ingenious model, explaining what parts of the Nova Scotia gold veins are likely to prove rich, deserves special mention on account of the geological interest and commercial importance of the problem he has endeavoured to solve."

The section represented, one mile long, by 2,000 feet wide and 2,000 feet deep, shows by lines of different colors the veins at the surface and in the workings to a depth of 475 feet, the probable succession of deeper veins, their richest portions on the north and south dips and in the direction that should be followed in deep mining.

On the model are given the following explanatory notes: The gold-bearing rocks of Nova Scotia cover an area of some 5,000 square miles along the Atlantic coast. Their total thickness is about 27,000 feet and they are probably of lower Cambrian age. Since their deposition on a sea floor, they have been folded into a series of anticlines and synclines, roughly parallel with the coast line, the folds having an average distance of three miles apart. This folding was accompanied by a fissuring of the strata along the planes of sedimentation at the summits of the anticlines, and gave rise to a succession of superposed saddle-shaped auriferous veins.

Mining operations have so far been confined to the veins outcropping at the surface, and have not reached a greater depth than 600 feet, and, although often conducted in a very unskillful manner, they have been remunerative. The recent

study of this region by the geological survey, has proved conclusively, however, that the auriferous saddle-veins recur one below the other on the anticlinal domes, like the "saddle reefs" of Bendigo, Australia, which are mined so extensively to depths reaching 4,000 feet. This succession of saddle veins presents a most important field of operation for deep and permanent mining.

#### MACHINERY NOTES.

**M**R. L. C. Park, of Vancouver, has installed a plant for saving the gold in the tailings at the Oyster-Criterion mine, at Camborne.

The White Bear Company, of Rossland, has placed an order with the Canada General Electric Company for two seventy-five and one thirty horse-power motors. The machines are to be used in the company's Elmore oil concentrator. The plans for the structure have been completed and an order is now being placed for the timbers, so that operations will not be hampered once the weather conditions are propitious for construction.

The directors of the Velvet and Portland mines (Rossland) have authorized by cable the commencement of operations as previously outlined. It is proposed to erect a concentrator and a small smelting plant to treat the ore on the spot, and thus avoid the heavy expense of the long haul by wagon.

Mr. Couldrey, manager of the Le Roi No. 2 Elmore mill at Rossland, is reported to have stated that since the plant has been in operation a fair profit has been made by the treatment of the mine's second grade ores by oil concentration.

The Daly Reduction Company is making steady progress with the construction of its reduction works at Hedley, Similkameen. It is reported that the water for power purposes has been turned into the big flume and that the stamp mill will probably be in operation in May.

It is reported that the contract for the erection of the zinc enriching plant at Rosebery, on Slovan Lake, was let yesterday. Messrs. Fernau and Lefebvre were out there recently in connection with this scheme, which also includes the erection of a smelter in the neighbourhood of Fernie.

It is announced that the ores of the Iron Mask mine, at Rossland, are to be shortly tested to ascertain whether or no they are suitable for treatment by the Elmore process.

The B. C. Copper Company has received five of the nine carloads of machinery to be used in the new converter plant. The work of installing the machinery will be started immediately.

The experiments conducted by Mr. Neil Cochrane with the Hendryx process at the Montana Lion mill, in Republic camp, have been brought to a close, and are believed to have proved successful. But it is said that the results of the clean-up cannot be definitely ascertained until the gold and silver bullion recovered is assayed. It seems probable that upon these experiments will be based an order for new crushing machinery for the mill.

The Kootenay Engineering Works has added the following equipment to its Nelson plant: A six-foot lathe, boiler-rolls and a large key-seating machine.

It is reported that a 100-ton concentrator is to be built at the Alic mine, at Creston.

A contract has been let for the construction of a large wharf at Britannia beach, Howe Sound, on which will be built a large ore bin on the northern side of the wharf, a gridiron will be built to receive scows which may rest there for loading or unloading irrespective of the stages of the tides. A concentrator will be also erected at the beach, the ore being brought from the mine by means of an aerial tramway three and a half miles long.

The B. C. Standard Mining Company is about to enlarge the carrying capacity of the aerial tramway from its Hunter V. mine, situate near Ymir, so as to admit of the daily output of ore being increased to about 200 tons.

#### COMPANY MEETINGS AND REPORTS.

##### Slough Creek, Limited.

An extraordinary general meeting of shareholders was held in London at the end of March, for the purpose of considering and passing upon the following resolution: "That the directors be, and they are hereby authorized to call up the 1s. per share at present uncalled on the shares of the company, to be payable at such time and place and by such installments as the directors deem advisable." The chairman said that both the consulting and resident en-