

# The International Gold-Copper Mining Co.

LIMITED LIABILITY.

Incorporated under the Laws of British Columbia.

CAPITAL STOCK, 1,000,000 SHARES,  
PAR VALUE \$1.00 PER SHARE.

TREASURY, 350,000 SHARES

Head Office, Rossland, B.C.

Organized for the purpose of developing the SNOW DROP MINE, located in the South belt, about 3½ miles from Rossland, and adjoining the Summit mine.

## STOCK:

The first block of stock is now offered at the low price of 1½¢. The second block of stock will go on shortly at 5¢.

Full information upon application.

Address all communications to

WM. BENNISON &amp; CO.

MINING BROKERS,

ROSSLAND, B. C.

Sole Agents.

Remittances may be made to the Manager of the Bank of B. N. A., Rossland, B. C.

A. E. BARRETT.

W. F. NEWELL, M.B.

W. T. McDONALD

## BARRETT, NEWELL & McDONALD,

HEAD OFFICE,  
SPORANE, WASH.

MINING BROKERS,

IN OFFICE OF

California and Big Three Gold Mining Company,  
Burns' Block, ROSSLAND, B. C.

NOW OFFER 50,000 SHARES OF THE TREASURY  
STOCK OF COLONNA GOLD MINING  
COMPANY AT 12½ CENTS.

We strongly recommend this purchase to investors. The

### Colonna Gold Mining Co.

is capitalized for 1,000,000 shares, par value, \$1.00, 200,000 shares of which is Treasury stock. Officers of Company are: President, Chas. Schmidt, Butte, Mont.; Vice-President, A. Klockmann, Rossland, B.C.; Treas., Louis Lienemann, Butte, Mont.; Sec'y, Harold Kingsmill, Rossland, B.C.

**Situation**—Buckeye No. 2 on west slope Monte Cristo Mt.; size 22 acres. Bounded by the well known properties Monte Cristo, Evening Star, Silverine and Eddie J. claims.

**Title**—Absolutely perfect, company possessing crown grant and has no indebtedness, bonded or otherwise.

**Stock Pooled**—Individual stock pooled for 3 months from Oct. 1, 1896.

**Veins**—Three separate veins on Buckeye, 6, 18 and 25 ft. wide, running full length of claim. The Colonna or South vein has been traced 1000 feet, an extension of the Evening Star vein, by whom it is being developed.

**Ore**—Is auriferous copper in sulphide form. It is generally a massive chalcopryite in quartz and calcspar gangue.

**Assays** from this ore run as high as \$40 gold, 20 per cent. copper, and \$85 gold. These assays are not picked.

*The Buckeye is first mining property in camp placed on market with body of pay ore actually in sight.* Twenty tons already on dump, commanding a premium at Trail Smelter on account of its copper.

**Development**—Shaft 25 ft. deep, showing solid copper ore at bottom. A tunnel along hanging wall 47 feet, headed for shaft tapping ore chute at depth 125 feet, opening vast stoping area. Open cut 250 ft. east discloses 4 feet \$60 gold and copper ore. Arrangements have been made with Monte Cristo Co. to use two air drills, Monte Cristo Co. furnishing the power.

We strongly recommend this purchase and request investors to visit the property to verify facts as stated.

allels the mill on the side hill, but is separated from it by a space of 12 feet. Owing to this position no elevators are required except the drum hoist used in hoisting the roasted concentrates from the cooling floor of the roaster to the storage bins in this building. From the storage bins the roasted concentrates feed through chutes to the charging hoppers, over the chlorination barrels, where measured charges of 1½ tons each, this being the capacity of the barrels, are made. When required, these charges are drawn from the feed-hoppers into the chlorination barrels, where the chemicals necessary to generate the chlorine gas and sufficient to make an easy flowing pulp are added. The barrels are then closed and set to revolve 15 times per minute for three hours, the time in which the full effect of the chlorine gas is obtained. The chlorination barrels, of which there are two, are charged alternately, so as to best occupy the time of the attendants. When their charge is chlorinated they are stopped and their charge drawn off into filter barrels, there being one of the latter under each of the former. When empty, the barrels are hosed out, recharged with pulp and chemicals and revolved as before.

The chlorinated pulp and solution are now in the filter barrels, which are closed and compressed air applied. This application quickly forces the gold solution from the pulp through the filter heads of the barrels from whence it is conducted through lead pipes to the solution storage tanks.

After the filtration of the solution is thus affected, the pulp is washed by introducing clean water, which is filtered through the pulp and conducted to the storage tanks as before, until a simple chemical test shows such wash water to contain no gold. The barrel is then revolved and the pulp discharged into the waste sluice underneath, from whence it is flushed to the tailings dump by water. The filtered solution, including the wash water in the storage tanks is drawn off and distributed to the precipitating tanks, where the precipitation of the gold is affected by the addition of ferrous sulphate. The liquor, being now worthless, is run to waste, and the tanks refilled with fresh solution from the storage tanks, and the precipitation of the gold contained effected as before.

The gold precipitate is allowed to remain on the bottom of the tanks and receive additional precipitations, in a similar manner to that described, until the regular clean-up day, when the accumulation is carefully drawn off into buckets, poured into the clean-up tank, washed, filtered, dried, melted and cast into bars. The gold bars thus produced average about 995 fine—almost chemically pure.

The entire plant is run by water and lighted by electricity. The power is generated by two Pelton wheels under an effective head of 82 feet, one wheel running the vanners and dynamo, and the other all the rest of the machinery.

## COMMERCIAL RESULTS.

As will be seen from the foregoing description, the gold is recovered by two processes; 1, amalgamation of free gold on copper plates; 2, the chlorination of the roasted concentrates. A year's operation of the mill has demonstrated that a fraction of over 40 per cent of the value in the crude ore has been saved by amalgamation and about 53 per cent of the gross value has been saved in concentrates, 7 per cent being lost in the tailings. In the chlorination of these concentrates, when roasted, a saving of 95 per cent is effected. Allowing 1 per cent for mechanical losses, a recovery of 94 per cent of the values in the concentrates is made; 94 per cent of the 53 per cent total value of the concentrates would be 49.8 per cent of the value of the crude ore. Hence of the total in the crude ore we have a saving of 89.8 per cent by both processes. That is, a total recovery of \$8.98 from each ton of \$10 ore, or \$898.00 from each day's run of 100 tons. From this amount the expenses of mining and the reduction of the ores are of course to be deducted, when the remainder will be profit.

The cost of mining and delivering the ore at the mill is \$3 per ton. The total daily cost of roasting and chlorinating 20 tons of raw concentrates is \$81.95 or \$4.09 per ton, with a saving of 94 per cent of the assay value, \$25.61 per ton over the realizable value of the concentrates if shipped to the nearest smelter.

As these sections have the capacity to treat about double the amount of concentrates resulting from the milling of 100 tons of crude ore, by reason of which

they are in operation only about half the time, unless treating custom lots of concentrates, the average daily costs of these sections, including repairs, will be one-half of that given above, which was for full capacity and continuous operation. Therefore an equalized statement of the daily cost would be: Mill, \$41; roaster, \$20; chlorination, \$20.97; making the daily average cost amount to \$81.97 cents, or about 82c. per ton of crude ore.

From the foregoing the following statement is deduced as the result of one day's operation, the unit of calculation:

20 tons at \$40 per ton.....	\$1,000
Cost mining and delivery of 100 tons at mill.....	\$300
All losses of concentration and chlorination.....	102
All treatment costs.....	52
Net profit.....	516
	\$1,000

—Bernard McDonald, in The Engineering and Mining Journal.

## A GENTLE REMINDER.

We would remind our readers—those, at least, who are not subscribers that THE MINING REVIEW will be sent to any address in Canada or the United States for \$2.00 a year or \$1.25 for six months. Subscriptions are payable in advance, and the paper will be sent only to those who remit cash or money orders with their subscription. Though only a few weeks in existence, THE MINING REVIEW has succeeded in making its presence felt and already occupies a not unimportant position among the newspapers of the province. It will be the endeavor of the publishers to make it a necessity to all who wish to keep in touch with Trail Creek affairs, and the mining news—all of it—will be given, fully and fairly every week.

Toronto capital and Toronto men are now very much in evidence in this camp. There are over a score of the Queen City's business men here at the present moment, and no small share of the future profits of the camp will fall to the lot of the Torontonians who have made and are making judicious and timely investments. It must also be said that most of the stocks sold in Toronto are proving good, and not one can be named that has not a fair chance to become a payer.