# Report of the Directors

*of*

# The Consolidated Mining and Smelting Company

*of Canada*

*Limited*

**For twelve months ending December 31st, 1923**

---

## BOARD OF DIRECTORS

| | |
|---|---|
| JAMES J. WARREN, Montreal | President |
| Sir EDMUND B. OSLER | Toronto |
| CHARLES R. HOSMER | Montreal |
| H. S. OSLER | Toronto |
| W. L. MATTHEWS | Toronto |
| J. C. HODGSON | Montreal |
| HENRY JOSEPH | Montreal |
| J. K. L. ROSS | Montreal |
| S. G. BLAYLOCK | Trail, B.C. |

J. E. RILEY, Secretary

### Transfer Agents

THE TORONTO GENERAL TRUSTS CORPORATION, TORONTO
THE ROYAL TRUST COMPANY - - - MONTREAL

*The*

# Consolidated Mining and Smelting Company of Canada, Limited

## DIRECTORS' REPORT

To the Shareholders of
The Consolidated Mining and Smelting
Company of Canada, Limited.

Gentlemen:—

Your Directors submit the Eighteenth Annual Statement, duly audited, along with the usual reports from the General Manager, the Manager of Mines, the Comptroller and the Sales Manager. The Annual Statement of the West Kootenay Power and Light Company is also exhibited.

After taking care of current Development, Depreciation of Plant, Depletion of Property and paying interest on Bank loans, the net profits were $2,401,346.71 as compared with $1,467,528.11 in 1922, and $570,043.77 in 1921.

After providing for Bond Interest, the remainder, $2,125,-143.34, was transferred to Profit and Loss Account.

You will notice that the sum paid and reserved for taxes from this remainder amounts to no less than $443,980.82, or over 4 per cent on your total capitalization. This compares with $252,881.63 in 1922 and $67,724.62 in 1921. It may be said that this huge levy is because of large profits, but the profits are not abnormal considering the large capitalization and the hazard inevitably incident to mining. Moreover, on the basis of taxation before the war and on the same profits, the amount payable this year is six times as large as it would have been in pre-war days.

Everyone is clamoring for the development of our national resources as the remedy for our unfortunate financial plight—and, undoubtedly, the cure must come from the production of additional wealth—but primarily there must be some incentive to start development and, of course, there must be a margin over the cost of production.

Your Company, having the plant equipment and mines that you have, must carry on; but, what Company or group of men having the large amount of money needed to make a mine in British Columbia, will take the risk of total loss in case of failure—which happens at least nine times out of ten—and face the certainty of practically confiscatory taxation in case of success.

If the Provincial and Federal debts were being reduced, it would be a different matter, but that is not the case.

Therefore, unless and until a substantial reduction be made in the rate of taxation of the mining industry, it is not at all likely that those having the necessary money will embark in this very hazardous business. Meantime, private enterprise lags and the natural resources of the Province remain dormant.

The year was favorable both as to production and prices so far as your lead-zinc-silver production was concerned. In the early part of the year copper advanced somewhat in price, but it soon receded. Though the copper consumption in America and the Orient is large, its production is larger still. Unless Europe stabilizes and becomes a large purchaser, it is not probable that market prices will appreciate—at all events so long as the present rate of production is maintained.

On this account very little progress has been made by the Allenby Copper Company (the successor of the Canada Copper Corporation) towards the resumption of operations at Copper Mountain, near Princeton.

On the other hand, during the year your Rossland properties were made ready for operation and will produce considerable quantities of gold-copper ore during 1924.

The concentrator for the treatment, at the mine, of the Sullivan ore, was finished late in August—it is a complete success. Its operation though has been and still is interrupted by the erratic and intermittent supply of power by the East Kootenay Power Company. This Company has now almost completed the development of additional electrical energy. It is hoped a steady supply of sufficient power will be available in the near future.

Shipments of ore from Rossland will go forward as soon as the power situation in East Kootenay is right. Meantime, it has been necessary to resume the treatment at the Smelter concentrator of Sullivan ore so as to maintain metal production. It is this concentrator at the smelter that will treat Rossland ores.

The bonds (guaranteed by you) of the West Kootenay Power and Light Company were disposed of at a satisfactory price and the work of developing additional power at Bonnington Falls is proceeding satisfactorily.

The amount ($1,493,213.94) shown in the statement as an advance from the Power Company is the remainder of the proceeds of these bonds—unexpended at the end of 1923. Under an arrangement with the underwriters the whole proceeds of the issue were turned over to your Company to be paid out to the Power Company according to the progress of the development of the new power. Your Company allows the Power Company interest at 6 per cent per annum on the balance in hand from time to time.

Your plants are in good condition.

The Sullivan Mine continues to develop quite satisfactorily.

There is no particular change in your other properties.

The lead refinery was again extended during the year—its daily capacity is now 178 tons.

A number of improvements and extensions were made in some of your other plants to bring about increased efficiency and production.

Capital expenditure during the year amounted to $2,078,018.32, $214,040.58 being spent on property account and $1,863,977.74 on plant account. The principal items were:—

| | |
|---|---|
| PROPERTY: | |
| Coast Copper Company Development | $ 66,226.77 |
| Purchases of shares in other Companies | 82,817.43 |
| Payment account Le Roi II purchase | 25,092.00 |
| Purchase Mineral Claims at Sullivan Mine | 24,326.44 |
| Fluorspar property purchase | 12,500.00 |
| PLANT: | |
| Sullivan Mine | 152,036.02 |
| Sullivan Mill | 1,285,743.04 |
| Smelter Additions | 117,572.92 |

Though your Directors felt that they would have preferred the cash position of the Company to have been stronger before resuming dividend payments, they realized the long period during which dividends had been suspended, and in December last authorized the payment of a 6 per cent dividend for the year 1923.

The increased production shown in the accompanying statements demands increased working capital—while the development of your mines and the extension of your plants call for still more funds—then your Treasury should be made strong so that in case of a reaction in the metal markets you could maintain your operations without borrowing from your Bankers. Your recent experience in this connection demonstrates that the accumulating of adequate cash and liquid assets is the only prudent policy to pursue.

It is not deemed advisable to issue any more securities for the present—in fact, the plan is to pay off as soon as possible the remainder of the $2,000,000 loan shown in the 1922 statement. You will notice that $500,000 was repaid on this loan during 1923—it now stands at $1,500,000.

At the same time, the policy of your Board is to favor such distributions of profits to you as conditions warrant from time to time.

Your Operating Staff, and that of the Power Company, performed their duties zealously and satisfactorily.

Your Sales Manager and his staff, and your British and Foreign Sales Agents, continued to look after your interests faithfully.

Cordial relations were maintained with your employees.

The present year has opened with high lead and zinc prices, but low copper prices. It is difficult to predict the future even a few months ahead—but, it would seem that current prices of lead and zinc, though they are considerably above the average, will continue for some little time.

On behalf of the Board,

JAMES J. WARREN,

MONTREAL, March 6th, 1924. President.

# The Consolidated Mining and Smeltin

## Balance Sheet as

### LIABILITIES

| | | |
|---|---|---|
| CAPITAL: | | |
| Authorized: | | |
| 600,000 Shares at $25.00 each.......... | $15,000,000.00 | |
| Issued and Fully Paid: | | |
| 421,348 Shares at $25.00 each.......... | | $10,533,700.00 |
| BONDS: | | |
| Authorised.............. $7,500,000.00 | | |
| Issued and sold including Bonds held for exchange of those of first issue......... | | 4,000,000.00 |
| Hypothecated as security for Special Loan | $2,000,000.00 | |
| SPECIAL LOAN: | | |
| Secured by Hypothecation of Bonds...... | | 1,500,000.00 |
| ADVANCES FROM WEST KOOTENAY POWER AND LIGHT COMPANY, LIMITED............... | | 1,493,213.94 |
| BOND INTEREST ACCRUED WITH EXCHANGE THEREON............................. | | 141,283.05 |
| RESERVES FOR PROVINCIAL AND DOMINION TAXES................................ | | 490,519.69 |
| DIVIDENDS PAYABLE JANUARY 15, 1924...... | | 632,022.00 |
| ACCOUNTS PAYABLE...................... | | 995,134.04 |
| CONTINGENT LIABILITIES: | | |
| As Guarantor of Principal and Interest of West Kootenay Power and Light Company, Limited, Twenty-Year Six Per Cent Bonds of a Par Value of.............. | $1,750,000.00 | |
| In respect of Guarantee in connection with Lands for Sale...................... | $26,960.00 | |
| PROFIT AND LOSS ACCOUNT: | | |
| Balance December 31, 1922.............. | $2,055,185.21 | |
| Profit for Year ended December 31, 1923.. | 2,125,143.34 | |
| | $4,180,328.55 | |
| LESS: | | |
| Income and Mineral Taxes Paid and Reserved for in 1923................... | 443,980.82 | |
| | $3,736,347.73 | |
| LESS: | | |
| Dividend 39, Declared December 19, 1923.. | 632,022.00 | 3,104,325.73 |
| | | $22,890,198.45 |

## Audit

We certify that we have audited the Accounts of The Consolidated Mining and Sm
Smelter Accounts maintained at the offices at Kimberley, Rossland and Trail, B.C., and t
Stores and Materials and of Ore and Smelter Products are as certified by the Company's o
that date, less estimated cost of refining, and the refined Lead and Zinc unsold at Decem
Shareholders that the above Balance Sheet is, in our opinion, properly drawn up so as to
and the explanations given to us and as shown by the books of the Company in British Co
as at the date of closing of the Accounts, December 31, 1923.

VANCOUVER, B.C., MARCH 3RD, 1923.

# mpany of Canada, Limited

## ember 31, 1923

### ASSETS

| | | |
|---|---|---|
| MINES, MINERAL CLAIMS AND SHARES IN OTHER COMPANIES: | | |
| Balance December 31, 1922.............. | $10,174,209.37 | |
| Expenditure for year ended December 31, 1923................................ | 214,040.58 | |
| | $10,388,249.95 | |
| LESS: | | |
| Provision for Depletion of Mineral Properties | 323,835.13 | $10,064,414.82 |
| MINING, SMELTING, CONCENTRATING AND REFINING PLANTS: | | |
| Balance December 31, 1922.............. | $7,352,556.73 | |
| Expenditure for year ended December 31, 1923................................ | 1,863,977.74 | |
| | $9,216,534.47 | |
| LESS: | | |
| Depreciation........................... | 805,224.46 | 8,411,310.01 |
| ORES, METALS AND SMELTER PRODUCTS ON HAND AND IN TRANSIT.................. | | 2,021,667.20 |
| MINES AND SMELTER STORES AND MATERIAL. | | 1,667,082.67 |
| ACCOUNTS RECEIVABLE.................... | | 426,225.79 |
| INSURANCE PAID IN ADVANCE.............. | | 26,445.04 |
| CASH IN BANK AND ON HAND: | | |
| Montreal, Toronto and Trail............. | 272,652.92 | |
| Sundry Cash Accounts.................. | 400.00 | 273,052.92 |
| | | $22,890,198.45 |

## port

pany of Canada, Limited, for the year ended December 31, 1923, including the Mines and received all the information and explanations that we have required. The Inventories of values of the Gold, Silver and Copper contents have been corrected to market quotations of have been included at the cost of production. Subject to the foregoing, we report to the rect view of the financial position of the Company according to the best of our information the Accounts of the Montreal Office, as audited by Messrs. Edwards, Morgan and Company,

HELLIWELL, MACLACHLAN & CO.,
Chartered Accountants.

# The Consolidated Mining and Smelti

## Profit and Loss Account for t

| | |
|---|---|
| To Ores, Metals and Smelter Product on Hand and in Transit at December 31, 1922 | $2,023,763.92 |
| " Customs Ores, Lead and Bullion Purchased | 1,631,766.34 |
| " Freight on Ores from Company's Mines | 580,342.46 |
| " Mining, Smelting and General Expenses | 4,905,554.07 |
| " Development Expense | 381,824.53 |
| " Depreciation of Plant and Equipment | 805,224.46 |
| " Provision for Depletion of Mineral Properties | 323,835.13 |
| " Bond Interest and Exchange on Coupons | 276,203.37 |
| " Interest on Loans | 220,063.99 |
| " Directors' Fees | 3,800.00 |
| " Sundry Items Written Off | 743.02 |
| " Balance—Profit, Before Provision for Dominion and Provincial Income Taxes | 2,125,143.34 |
| | $13,278,264.63 |

# Company of Canada Limited

## ar Ended December 31, 1923

| | |
|---|---|
| By Sales of Smelter Product, Ore, Etc. | $11,229,162.89 |
| " Ores, Metals and Smelter Product on Hand and in Transit at December 31, 1923 | 2,021,667.20 |
| "Rents, Royalties and Sundry Revenues | 27,434.54 |
| | $13,278,264.63 |

# General Manager's Report

TRAIL, B.C., Feb. 19, 1924.

TO THE PRESIDENT AND
MANAGING DIRECTOR.

DEAR SIR:—

I beg to submit the following report of the Company's operations for the year ending December 31, 1923, including the reports of the Manager of Mines and the Comptroller.

In comparing the year under review with the year 1922, the most outstanding features are the more satisfactory prices received for metals and the increased tonnage produced. The improvement in the balance sheet is largely due to these two factors.

In spite of an increase of 12% in wages, which are partly based on the metal markets, and of a considerable drop in the grade of the ore shipped from the Sullivan Mine, the production costs for the year have remained about the same as in 1922.

Towards the end of the year the operation of the Kimberley concentrator began to affect the first cost of metals at Tadanac. Although the power supply was very short, it was demonstrated that the concentrator was a complete success and would materially reduce production costs of both lead and zinc. Both the Sullivan Mine and Concentrator have been badly hampered through shortage of power from the East Kootenay Power Company. As soon as the Elk River Power Plant is completed, sufficient power should be available to run both of these plants to full capacity, when the full effect of concentrating the ore at Kimberley will be reflected in the production costs.

The present wage scales are about 50% higher than the pre-war scales; ordinary supplies are about 50%, and Coal and Coke are still 100% above pre-war prices.

The metal output of 1923 was 15% higher than that of 1922. This increase was mainly on Pig Lead and was largely made in the last part of the year.

With a sufficient power supply at Kimberley, the Tadanac Reduction Plant will, for the first time, be assured of a steady tonnage to run all its lead and zinc plants to full capacity. In fact, substantial additions may safely and profitably be made to both the electrolytic zinc plant and the lead refinery.

### The Sullivan Mine:

Exploration work carried on during the year gave further assurance that the construction of the large and up-to-date crushing and concentrating plants was thoroughly justified. Mining costs, which are still high, will be rapidly reduced as the development gets ahead of extraction. To date there has not been a sufficiency of power to keep up to the ever-growing needs of the reduction plants. This shortage should be over some time in March, 1924.

### The Kimberley Concentrator:

This concentrator, on which work was started on June 1, 1922, was turned over on schedule time on Aug. 24, 1923. On August 25th, the feed was turned into the mill, which was not shut down again for a month.

This mill has exceeded expectations in every way and has indicated that estimated concentration costs, tonnages and recoveries will all be beaten when there is sufficient power to run the plant to capacity.

The cost of the concentrator was much in excess of the first estimates given, before either the plans or flow sheet were made; but checked very closely with the final estimates which were made as soon as the drawings were sufficiently complete to make an intelligent estimate. It is also worth mentioning that the cost per ton of actual capacity is much less than even the original estimate which assumed a 1500-ton plant throughout, while the plant, as it stands, will provide sufficient crushed rock for a 6,000 or 7,000 ton Concentrator, and will concentrate approximately 3,000 tons daily.

I would like to make special mention of the work done by the staff in getting this construction through on time. The steel work, which was supposed to be delivered in time to get some, at least, of the main buildings housed in before winter set in, so that these could be completed during the winter, was several months late necessitating the installation of practically all the complicated concrete work in the middle of an East Kootenay winter on an exposed side hill location—the thermometer frequently registering 35° below Zero. Not one yard of concrete was lost on this account, and the mill was put in operation on time.

The Mill was designed and built by the Company's staff and most of the machinery was made in the Company's shops at Tadanac. The construction of this machinery was a great success both financially and in regard to the quality of the machinery made. The machines were also delivered as required. A further advantage is the possession of various patterns and templates, enabling quick delivery of spare parts in future.

### The Lead Smelter:

The tonnage of ore treated in this plant increased from 179,000 tons in 1922 to 225,000 in 1923, and the lead produced, from 39,300 to 48,000 tons. Further improvements made in this plant during 1923 and a better ore supply will insure greater production still in 1924.

The smelting costs were reduced slightly during the year in spite of higher wages.

### The Lead Refinery:

In 1922 additions were made to this plant to increase its capacity to 150 tons daily. The bullion supply during the first half of 1923 was not sufficient to keep the full plant in operation. Towards the end of the year the refinery was turning out 165 tons of refined lead per day and further additions were necessary.

As the capacity of the present plant could be increased 13 tons per day without much extra construction, the necessary tanks were added. This will give the refinery a capacity of 178 tons per day early in 1924. Present indications are that a still further increase will be needed in the near future.

Costs in this department were also reduced slightly during the year.

### The Copper Smelter, Refinery and Rod Mill:

These plants were not operated during the year.

### The Tadanac Concentrator:

This plant worked on Sullivan during the first half of the year, after which it was used to clean up old ore stock piles and sands from the Zinc plant preparatory to closing down zinc-lead concentration at Tadanac permanently.

In October, it was overhauled and adjusted to concentrate Rossland Ore.

Rossland shipments were started, but, by the end of the year, it was necessary to again suspend shipments from Rossland and to concentrate Sullivan ore at Trail on account of power shortage at Kimberley.

The Rossland run was not of sufficient duration to base any conclusions on.

## The Zinc Plant

Production of bar zinc increased from 28,145 in 1922 to 30,025 tons in 1923.

Costs increased slightly during the year, more noticeably during the last half. While there was nearly sufficient increase in wages to account for this additional cost, I believe the upset conditions during the transition period of starting up the Kimberley Mill, together with working up the old ore stocks, had a greater effect than the increased wages. I look for a considerable improvement in this plant in 1924.

## Efficiency Bonuses:

A system of efficiency bonuses has been established by which all the workmen share equally with the Company in any saving that can be made by their efforts. The scheme has met with universal approval and much satisfaction and improvement has resulted from it with indications that the beneficial results, both to the Company and the men, have not yet reached the maximum.

## The Workmen's Co-operative Committees:

The Committees, now entering their fifth year, continue to be of great assistance both to the men and the management. Things affecting the welfare of the men and the Company are jointly discussed and adjusted with mutual satisfaction. These friendly discussions create better understanding on all sides.

The work of the men serving on these Committees shows that fairness and loyalty are not confined to the members of the staff, but that the average workman can be as fair as anyone, if he understands the condition and is given the opportunity.

I wish to acknowledge the co-operation and assistance of the entire organization.

The following Officers have been in charge of the various Departments:

General Offices: T. W. Bingay, Comptroller; R. C. Crowe, Solicitor; R. Walker, Chief Accountant; W. R. Baxendale, Purchasing Agent; H. B. Fuller, Asst. Chief Accountant.

Mines: W. M. Archibald, Manager of Mines; and Staff.

Concentration: R. W. Diamond, Superintendent; W. H. Hannay, C. T. Oughtred, Asst. Superintendents.

Smelter: James Buchanan, Superintendent; G. E. Murray, Asst. Superintendent; R. K. Blois, Supt. of Smoke Treaters.

Zinc Plant: B. A. Stimmel, Superintendent; F. S. Willis, H. Woodburn, and Graham Cruickshank, Departmental Superintendents.

Refineries: J. J. Fingland, Superintendent; H. A. B. Motherwell, Asst. Superintendent.

Engineering: G. F. Chapman, Chief Engineer; E. M. Stiles, Chief Draftsman; W. B. Kinnear, M. O'Brien, Asst. Engineers.

Research: F. E. Lee, A. L. McCallum, D. G. Bisset, S. Gray.

Assay Office: G. W. Cotton, Chief Chemist.

Yours respectfully,

S. G. Blaylock,

General Manager.

# Manager of Mines Report

TRAIL, B.C., February 25, 1924.

TO THE GENERAL MANAGER.

Dear Sir:—

I beg to submit the following report on the operation of the various mines of the Company for the year 1923, with tabulated results in development and production.

## Production

| | | 12 Months 1923 Tons | 1894 to Date Tons |
|---|---|---|---|
| Rossland Mines including Josie | Gold-Copper Ore: | | |
| | Smelting | .... | 5,349,386 |
| | Concentrating | 18,439 | 207,951 |
| White Bear | Gold-Copper Ore | .... | 3,002 |
| Sullivan | Zinc-Lead Ore | 424,835 | |
| | Lead Ore | 25,435 | 2,143,839 |
| | Pyrites | 1,982 | |
| St. Eugene | Lead Ore | .... | |
| | Zinc Ore | .... | 1,026,435 |
| *Molly Gibson | Silver-Lead Ore | 72 | 9,178 |
| *Number One | Silver Ore | .... | 24,999 |
| *Highland | Lead-Silver Ore | .... | 4,996 |
| | Lead Concentrates | .... | 5,238 |
| *Ottawa | Silver Ore | 19 | 1,647 |
| | Concentrates | .... | 164 |
| Lucky Thought | Lead-Silver Ore | .... | 675 |
| | Silver-Zinc Ore | .... | 1,141 |
| Richmond-Eureka | Lead-Silver Ore | .... | 19,420 |
| *Silver King | Silver-Copper Ore | .... | 17,238 |
| Emma | Copper Ore | .... | 262,560 |
| Phoenix Amalgamated | Copper Ore | .... | 2,493 |
| Number Seven | Siliceous Gold Ore | .... | 7,388 |
| *San Poil | Siliceous Gold Ore | .... | 18,470 |
| Rock Candy | Fluorspar Crude Ore | .... | 299 |
| | Fluorspar Concentrates | .... | 19,741 |

Note:—Production given includes that of previous owners.

* Since Company acquired property only.

## Development

| | Drifting & Cross cutting | Raising | Sinking | Total | Diamond Drilling |
|---|---|---|---|---|---|
| Rossland Mines including Josie | 2,783.5 | 545.0 | 197.0 | 3,526.0 | 1,789.2 |
| Sullivan | 2,843.0 | 566.0 | | 3,409.5 | 8,350.5 |
| Molly Gibson | 209.0 | | | 209.0 | |
| Ottawa | 118.0 | 101.0 | | 219.0 | |
| Highland | 76.0 | 63.0 | | 139.0 | |
| Coast Copper | 1,073.0 | | | 1,073.0 | |

making a total to December 31st 1923, of:—

| | Feet | Miles |
|---|---|---|
| Rossland Mines | 415,334.0 | 78.66 |
| Sullivan | 52,109.0 | 9.87 |
| St. Eugene | 106,321.5 | 20.10 |
| Molly Gibson | 12,390.0 | 2.35 |
| Number One | 10,198.0 | 1.93 |
| Highland | 19,417.0 | 3.68 |
| Ottawa | 11,847.0 | 2.24 |
| Lucky Thought | 3,490.0 | .66 |
| Richmond Eureka | 9,699.0 | 1.80 |
| Silver King | 20,462.0 | 3.88 |
| Emma | 7,644.0 | 1.47 |
| Phoenix Amalgamated | 2,581.0 | .49 |
| Number Seven | 5,934.0 | 1.12 |
| Rock Candy | 1,884.5 | .36 |
| Coast Copper | 7,295.5 | 1.38 |

## Rossland Properties

During the first six months of the year a skeleton organization was maintained and a crew of picked men was employed underground in renewing timber in haulage ways and stopes and concreting additional sections of the Centre Star shaft. The Centre Star hoist was overhauled and the bushings renewed in the east drum.

A set of 54 x 20 inch rolls was installed as part of a secondary crushing plant to reduce the milling ore to the proper size for ball mill feed.

Mining operations were resumed with 7 machines in July and the crew gradually increased. The workings of the recently acquired Le Roi No. 2, comprising the Josie and Number One Mines, were connected with our main haulage ways on suitable levels preparatory to handling their production through the Centre Star shaft. Some of these workings were also of value in promoting our plans for development in the west ground. Apart from the connections with the Le Roi No. 2 workings, a large proportion of the development performed, consisted of driving comparatively short drifts, crosscuts, and raises for extraction of ore as accredited reserves. In some sections this work was necessary on account of caves in old workings, which would have been too expensive to catch up. In several of these blocks the ore broken was disappointingly low in grade, necessitating a reduction in tonnages carried.

Development of the southwest ore shoot was continued in the sinking of the winze from the 1650 level Le Roi, a further distance of 197 feet, to a total of 356 feet below this level. A station was cut and short drifts run at an elevation corresponding to the 1850 Le Roi, it being the intention to continue sinking to the 2000 foot level Le Roi and ultimately to make a connection through it and the 14th level Centre Star to the Centre Star shaft. While irregularities in the dip of the vein did not permit the winze to follow it continuously, sufficient ore was encountered in sinking and in the drifts at the 1850 foot level to strengthen our opinion of the productiveness of this ore shoot at depth. Copper values were well maintained although gold values remained lower than in the eastern section.

Stoping operations in this same ore shoot above the 1650 level Le Roi and from the 10th level White Bear, were fairly satisfactory.

Shipments of milling ore to the Tadanac Mill commenced early in November but were stopped the latter part of December on account of power shortage in East Kootenay seriously curtailing milling operations at Kimberley, so that the Tadanac Mill had again to be utilized on Sullivan ore.

During the short milling operation on ore from these mines it was demonstrated that the 54-inch rolls would not reduce the ore fine enough to permit of a capacity output for the ball mills, and in order to balance the secondary crushing operation, a Symons Disc Crusher was installed between the jaw crusher and the rolls.

The rapid deterioration of timber in some of our producing stopes during the shut-down and lack of sufficient values on mining definite blocks of our reserves, were sources of anxiety. The result of our deeper development in the west ground, however, and our knowledge of geological conditions warrants a hopeful view of the future when milling operations are resumed.

**Sullivan**

Shipments from the Sullivan Mine were again expanded during the year, comprising 424,835 tons of zinc-lead ore, 25,435 tons of lead ore and 1,982 tons of pyrites.

The completion of the installation of the second 3,000 ft. Nordberg Air Compressor early in the year enabled a more vigorous policy of development to be pursued.

The main haulage tunnel was extended 501.5 feet all in the vein in the north ore zone. Substantial progress was made in carrying out the plans of footwall development for the extraction of ore in the south and north ore zones between the 3,900 tunnel level and the upper workings; some 2,736 feet of crosscuts, drifts and raises being driven in connection with this undertaking. Exceptionally hard rock (originally a mineralized quartzite, now altered to a typical chert with concoidal fracture) was encountered in the footwall of the vein in the north ore zone and progress through it was necessarily slow. The crosscut from which the raise to the upper workings will be driven, was advanced 775 feet in this material. Vein exploration by diamond drilling from footwall stations was continued and has resulted in a better delineation of the ore body in the north ore zone, while the footwall development already performed has materially increased the number of working faces.

New productive stopes have also been opened in the south ore zone on the 4,400 level and on the 1,100 in the upper mine.

The new coarse crushing plant at McDougall was placed in operation July 20th and a section of the new concentrator on August 22nd. After a few minor adjustments the production of the mine was successfully handled until late in December when lack of electrical power from the East Kootenay Power Company interrupted the operation, and necessitated the shipment of zinc-lead ore to the Tadanac Mill, which in turn caused a stoppage of shipments of milling ore from Rossland. Sufficient electrical power for the Sullivan operation will not be available until the Elko plant of the East Kootenay Power Company is in operation.

Some 600 feet of the main haulage tunnel near the portal was widened and the timber replaced with concrete on the sides and steel I beams for caps.

Three new bunk houses were constructed to accommodate additional employees as well as dwellings for married men, both at McDougall and at the new concentrator.

**Miscellaneous Properties**

In consideration of the expansion programme at the Sullivan and work in progress at Rossland, no development was undertaken for the benefit of these properties during the year.

Leases in effect were continued on the No. One, Richmond Eureka, Ottawa and Molly Gibson, and new ones given on the St. Eugene and Lucky Thought.

At the Ottawa the lessees performed 219 feet of underground development, as well as considerable surface trenching and shipped a car of high grade silver ore.

At the Molly Gibson 209 feet of development was done and 72 tons of ore shipped.

Operations at the No. One and St. Eugene also resulted in small production although no shipments were made during the year.

At the Highland Mine 139 feet of development was performed by those looking after the upkeep of the property. The result of this was satisfactory and increased to some extent the reserves of milling ore.

The Rock Candy Mine, Fluorspar, was not operated, but 4,880 tons of reject from the mill there were shipped to Tadanac for retreatment and resulted in the production of 2,400 tons of concentrates assaying 91% $CaF_2$, 4% $SiO_2$, covering the requirements of the hydrofluoric acid plant for the ensuing year.

## Controlled Properties

A caretaker only was employed at the Silver King.

At the Sunloch necessary assessment work was performed on uncrowngranted claims and geological data accumulated.

At the Coast Copper, development operations were resumed in the late spring, the object of the work undertaken being to connect the lower adit, by drift on the vein and raise, with the winze from the upper workings. Of the advance attained, 1,073 feet, almost entirely in vein, the last 500 feet were productive of very encouraging results, opening up shoots of copper ore of commercial importance. Gold values, while irregular, were also important. The drift for the most part followed the footwall and as the vein is wide the possibilities of large ore bodies on this level are bright.

Assessment work was also performed on locations, so that a number are now ready for crown granting.

## Exploration

No exploratory party was placed in the field, but a number of properties, which were presented for the consideration of the Company were investigated. The Le Roi No. 2 Mine in Rossland was optioned and purchased.

## Labor and Mine Supplies

With the exception of skilled miners, of which at times there was a shortage, the supply of labor was ample throughout the year. The base wage for miners and muckers remained at $3.50 and $3.00 per day respectively. The cost of living bonus of fifty cents (50c.) and metal bonus which averaged fifty-six cents (56c.) were continued in force throughout the year and increased the daily wage by that amount. Opportunities for contract work and efficiency bonuses were also incentives, so that in many cases the skilled employee was able to earn a much higher wage.

There were no appreciable reductions in the cost of general mine supplies, although explosives and drill steel were slightly lower. Steel products generally, were some 13% higher than the previous year.

While mining costs were not materially lowered the year registered a definite expansion in underground operations, especially at the Sullivan, where, when ample power is available and a balanced operation can be maintained between mine and concentrator, much better costs are anticipated.

I most heartily acknowledge the faithful and efficient work of the members of the operating staff, all of whom were zealous in their endeavors to promote the interests of the Company.

The following gentlemen were in charge of the various properties:—

| | |
|---|---|
| Mr. F. S. Peters | Rossland Mines |
| Mr. E. G. Montgomery | Sullivan and St. Eugene Mines |
| Mr. Dan Matheson | Rock Candy Mine |
| Mr. L. W. Oughtred | Ainsworth Properties |
| Mr. C. A. Seaton | Coast Copper Company |
| Mr. Geo. H. Kilburn | Sunloch Mines |
| Mr. R. M. Macaulay | Examining Engineer |
| Major A. B. Ritchie | Operating Assistant at Trail |

With the completion of the Kimberley Concentrator Mr. M. M. O'Brien, who had been engaged on construction there, was transferred to Rossland as Assistant to Mr. Peters.

Yours faithfully,

W. M. Archibald,

Manager of Mines.

# Comptroller's Report

TRAIL, B.C., February 26th, 1924.

TO THE GENERAL MANAGER.

Dear Sir:

Operations for 1923 show a net profit of $2,125,143.34 after charging to Profit and Loss $381,824.53 expended in the development of our mines, writing off for depreciation of plant $805,-224.46, for mine depletion $323,835.13 and providing for bond interest and exchange on coupons $276,203.37.

Adequate provision has been made for both Dominion and Provincial Income taxes accruing to December 31st, 1923. The amount, $443,980.82, is 21% of the year's profit. Beside this are the Provincial and Municipal Real Estate taxes and many other taxes both direct and indirect.

During the year interest paid on loans amounted to $220,-063.99. The Special Loan Account was reduced $500,000.00, and the current bank loan of $1,271,086.66 was replaced by cash advanced temporarily by the West Kootenay Power and Light Company, less cash in Bank and on hand.

The Power Company will draw on this account as construction of its new Power Plant proceeds during the year.

Metal stocks are at about the same figure as at the end of the last fiscal year. There is practically no finished metal unsold in these inventories.

Stocks of material and supplies increased $156,099.34, almost altogether in fuel, fluxes, reagents and other supplies that are in daily consumption, the increase being due to the larger scale of operations.

Expenditure on property account was $214,040.58, covering chiefly the acquisition or crown-granting of outside claims at Kimberley and Rossland, payments on the Rock Candy bond and advances to the Coast Copper Co., Ltd., and to the Sunloch Mines, Ltd.

Expenditure on plant was $1,863,977.74, the chief items as in the preceding year, being at Kimberley on the new mill and in preparing the mine for increased production, and at Trail, in providing further sintering and refining capacity and thaw sheds, to the same end.

In December, 1923, a further revision of Customs lead ore rates was made in favor of the shipper. This was done in accordance with our policy of passing on the benefits of larger operations to the Customs shippers.

The reduction was made in spite of a continuance of the excessive prices for coal and coke, and of no relief from an unprecedented load of taxation.

There was a further increase in Customs ore business during the year, the increase being from $1,194,389.06 in 1922 to $1,631,766.34 in 1923.

Following is the metal production for the Tadanac Plant, and the tons of ore treated in Tadanac and Kimberley Plants together from 1894 to date and for the year 1923.

| | Tons Ore Treated | Gold Produced Ounces | Silver Produced Ounces |
|---|---|---|---|
| 1894 to date | 7,485,536 | 2,037,359 | 38,553,271 |
| 1923 | 519,613 | 11,113 | 2,960,714 |

| | Lead Produced Lbs. | Copper Produced Lbs. | Zinc Produced Lbs. |
|---|---|---|---|
| 1894 to date | 818,570,309 | 101,199,099 | 274,948,920 |
| 1923 | 95,941,200 | .... | 60,050,951 |

| | |
|---|---|
| 1894 to date | $151,582,687 |
| 1923 | 11,352,004 |

Average metal quotations for the present, as compared with the previous fiscal year, are as follows:—

| | 1922 | 1923 |
|---|---|---|
| London Lead | £24.097 | £27.147 |
| New York Silver | 67.521c. | 64.873c. |
| New York Electrolytic Copper | 13.382c. | 14.421c. |
| London Zinc | £30.003 | £33.058 |

Respectfully submitted,

T. W. Bingay,

Comptroller.

# Sales Manager's Report

To the President

and Managing Director:

As predicted in our last report, we were favored with satisfactory markets throughout the year 1923.

LEAD: The high prices ruling over the first quarter caused buyers to become cautious, bringing about a hand to mouth policy and a somewhat easier tone, but the break was not serious. By the middle of July a drop of 1½c. per pound was recorded from the high level of March, after which the market slowly recovered, and continued to show improvement over the remaining months, notwithstanding that world production was at a remarkably high level.

Canadian consumption, while good throughout the year, was not quite equal to 1922. There was a steady demand for the manufacture of storage batteries, bearing metals, plumbing supplies, foil and other miscellaneous products, and the consumption of lead for paint pigments and covered cable was exceptionally good.

The outlook for 1924 is promising. World consumption is keeping pace with a record production and as the present volume of business is expected to continue, it is logical to assume that lead prices will remain high.

ZINC: The market opened strong at £36½ London, with an upward trend until the middle of March, when an excess of production brought about a decline which was not checked until the price reached £27⅝ in the early part of July. It recovered to £33 in August, and for the remaining months held more or less closely around this mark, closing the year at £32⅞.

Consumption in Canada was good, although it did not quite come up to our expectations. Galvanizers in general enjoyed good business during the first half of the year, but there was a slight falling away during the second half.

World production was 35% greater than for 1922, but consumption also shows a strong increase with every prospect of continuing in sufficient volume to absorb still heavier production. Prices for the current year to date, show a marked improvement, and while we do not anticipate a high market to be reached, we have good reason to expect a better average price than for 1923.

EXPORT: After taking care of Canadian requirements for Lead and Zinc, we were successful in finding satisfactory foreign markets in the Orient and throughout Europe for our surplus.

TOTAL SALES, 1923:—

| | Lbs. |
|---|---|
| Lead | 94,974,000 |
| Zinc | 64,406,000 |

Respectfully submitted,

W. S. RUGH,

Sales Manager.

MONTREAL, MARCH 11th, 1924.

# The
# West Kootenay Power and Light Company
## Limited

**Annual Report and Statement**
**for Twelve Months Ending**
**December 31st, 1923.**

# The West Kootenay Power and Light Company, Limited

## TWENTY-SIXTH ANNUAL REPORT OF GENERAL MANAGER

### For the 12 Months' Period Ending December 31st, 1923

ROSSLAND, B.C., March 3rd, 1924.

To the President and Directors,
West Kootenay Power & Light Co., Ltd.

GENTLEMEN:—

The Company's Gross Consolidated Revenue for the year ending December 31st, 1923, was $690,574.98.

The Revenue-Producing Load for the twelve months ending December 31st, 1922, was 27,778.4 H.P., and for the year ending December 31st, 1923, was 30,515.4 H.P., showing an increase of 2,737 H.P.

### Penticton, Kelowna and Southern Okanagan Extensions

As advised in my report for the year ending December 31st, 1922, the revenue throughout the Okanagan country was rather disappointing, and it was expected that through the improved selling organization an improvement would be brought about. However, this has not taken place, as apparently, the Sales Organization were not able to dispose of the crop harvested to advantage, and I do not expect that conditions will very much change as to the revenue we may expect from this district until such time as the cost of production and handling is decreased, and, this, in my opinion, can only be brought about by increased efficiency.

### Copper Mountain Extension

During the past year the Granby Consolidated Mining, Smelting & Power Company took over the holdings of the Canada Copper Company at Copper Mountain and Allenby.

It was expected that after reconstructing the mill at Allenby they would be able to resume operations. However, due to the very unsettled conditions of the Copper market, and the fact that such a large tonnage of copper is being delivered in New York from foreign countries at a price which apparently many of the American and Canadian Companies cannot compete with, the Granby Company no doubt found themselves in the position whereby it was impossible to resume operations, and, due to the existing conditions of the copper market, it is, in my opinion, doubtful as to whether or not we may expect any increased revenue for some time to come from our Greenwood Copper Mountain Extension.

### Bonnington No. 1 Extension

As per authorization from your Managing Director, preliminary work was started at Lower Bonnington early in May, 1923. This consisted of changing all transmission lines between Upper Bonnington and one-quarter mile west of Lower Bonnington, as the location of these lines was such that it would interfere with the service had they been left in their original location during the construction period. In addition, the necessary camp quarters were erected, and work started on rock excavation in July, but, due to labor shortage, very little was accomplished until October, when a full crew was secured and work then proceeded in a satisfactory manner.

Your Generating Stations and all distributing lines have been maintained in the usual high operating condition, and I have much pleasure in stating that our staff throughout has been held up to a very high state of efficiency, which enabled us to put up service to the entire satisfaction of all customers.

L. A. Campbell,

Vice-President and General Manager.

# The West Kootenay Po

Consolidated Profit and Loss Ac
Amalgamating Accounts of West Kootenay P
Companies, viz: Cascade Water, Pow
Company, Rossland Water & Light
Northport Pow

| | |
|---|---|
| To Operating Expenses | $211,839.00 |
| " Interest on Bonds | 88,334.08 |
| " Bad Debts Written Off | 30,514.92 |
| " Depreciation | 284,264.81 |
| Balance | 75,622.17 |
| | $690,574.98 |

## Balance Sh

### LIABILITIES

| | | | |
|---|---|---|---|
| Share Capital $5,500,000.00: | | | |
| Issued 32,120 Common Shares at $100.00 each | | $3,212,000.00 | |
| Issued 5,000 Preferred Shares at $100.00 each | | 500,000.00 | |
| | | | $3,712,000.00 |
| Bonds Issued | | $3,550,000.00 | |
| Less redeemed through Sinking Fund | | 520,312.99 | |
| | | | 3,029,687.01 |
| Accounts Payable | | | 26,739.74 |
| Accrued Liabilities | | | 35,966.28 |
| Amount reserved for Bond Interest, Sinking Funds and Premium on Bonds. | | | |
| Reserve Account | | | 421,294.69 |
| Profit and Loss Account | | | 11,309.65 |
| Balance 31st Dec., 1922 | | 8,672.08 | |
| Profit for year | | 75,622.17 | |
| | | $84,294.25 | |
| Sinking Fund Contributions to Reserve Acct | $37,984.60 | | |
| Dividends declared (Pref.) | 35,000.00 | | |
| | | 72,984.60 | |
| | | | $7,236,997.37 |

# Light Company, Limited

Year Ending December 31, 1923
ight Company, Limited with its Subsidiary
t Co. Ltd., South Kootenay Water Power
agan Water Power Company, and
t Company.

| | |
|---|---|
| By Gross Revenue | $690,574.98 |
| | $690,574.98 |

# st December, 1923

## ASSETS

| | |
|---|---|
| Plants, Transmission Lines, Buildings and Real Estate | $5,228,579.94 |
| Autos., Mdse., Meters, Instruments, Furniture and Fixtures | 185,773.35 |
| Cash on Hand | 25,239.34 |
| Accounts Receivable | 1,509,416.23 |
| Accounts Receivable Suspense Account | 225,000.00 |
| Prepaid Operating Charges and Expense | 59,731.35 |
| Sundry Investments | 1,860.55 |
| Royal Trust Co. Sinking Fund Acct | 1,396.61 |

I have audited the books and accounts of the West Kootenay Power & Light Company, Limited, and Subsidiary Companies, for the year ending December 31st, 1923, and have obtained all the information and explanations I have required, and certify that the above Balance Sheet and Profit & Loss Account present in my opinion a true and correct view of the Companies' affairs at the said date as shown by the books of the Companies. Inventories have been certified to by the Accountant of the Companies.

THOMAS S. GILMOUR, C.A.,
Auditor.

Rossland, B.C., February 15th, 1924.

$7,236,997.37