

Report of the Directors  
of  
The Consolidated Mining  
and Smelting  
Company  
of Canada, Limited

For fifteen months ending December 31st, 1919

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**BOARD OF DIRECTORS**

JAMES J. WARREN, Montreal	-	-	President
GEO. SUMNER, Montreal	-	-	Vice-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

J. KITTO, 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 have pleasure in submitting the Fourteenth Annual Report of operations along with the General Manager's Report and the Report of the General Manager of the West Kootenay Power and Light Company, Limited, covering the Financial Statement of that Company. The General Manager's Report includes the reports of the Manager of Mines and the Comptroller.

After charging \$280,271.38 in development account, setting aside \$150,391.80 for taxes, writing off \$102,139.50 for depreciation of plant and equipment and providing for capital renewals as well as all ordinary repairs, the net profits were \$1,011,212.68, of which \$185,539.35, were disbursed for bond interest, and the remainder transferred to Profit and Loss Account,

Your Directors felt justified in declaring the usual dividends because the deficit was attributable largely to non-operation and non-production through temporary conditions not likely to recur.

Heavy disbursements were made on Capital Account, the principal items being:

1—Advance to West Kootenay Power & Light Company, Limited, in connection with extending its power line to Copper Mountain.....	\$754,000
2—Expended on property and plant account, Fluorspar property.....	217,304
3—Expended on property account Sunloch Mines, Limited	105,861
4—Advances to Coast Copper Co., Limited.....	170,045
5—Smelter improvements and extensions including the Mineral Separation Mill and the Magnetic Concentrator in the Zinc Plant.....	637,413

The results from most of these disbursements were not felt during the period, but they will be in evidence in future operations.

The plants have been well maintained during the period, the General Manager reporting them in better condition than at the beginning of the term. During the five fiscal periods ending December 31st, 1919, \$1,629,620.20 have been written off on account of Depreciation, which your Directors feel has been amply provided for. Capital renewals were large during the fifteen month period. They were provided for from current revenue.

The ore reserves have been largely increased, the developments in the Sullivan Mine being most satisfactory.

Owing to a strike the prosecution of the Power Company's line extension to Copper Mountain was seriously interrupted. It should be completed early in the coming Summer. As usual, your Company was the large consumer of the Power Company's output.

For many years your Directors have been ambitious to make your Company a large producer of Copper. Originally The Rossland Mines promised to contribute considerable quantities of this metal, but latterly the copper content is almost negligible, the gold values being the important ones.

With the acquisition of controlling interests in the Coast Copper Company (Quatsino) and the Sunloch Mines (Jordan River) both properties being situate on Vancouver Island, and the satisfactory developments in these properties, the ambition referred to seems about to be realized.

Outside of the remarkable advancements in the Sullivan Mine, the outstanding occurrence of the period was the demonstration of a satisfactory process of treating the lower grade ores of the Rossland Camp—a problem that it has taken over twenty years to solve. This followed months of operating of a large sized experimental mill. As a result, many years have been added to the life of the Rossland Mines.

Another important incident of the period was the improved practice brought about in the Concentrating Mill at the Fluorspar property, in consequence of which a product of the highest grade can be turned out, and also the lower grades can be produced more uniformly and economically.

The Copper Refinery is being enlarged to a capacity of 50 tons per day. A Rod Mill of the same capacity is being installed.

These extensions are necessary to take care of the concentrates of the Canada Copper Corporation, shipments of which will begin in the coming Summer. Three Dwight & Lloyd Sintering Machines are being provided to treat these concentrates prior to the main smelting operation.

You are aware that in July last, under the authority of a special meeting, the Head Office was moved from Toronto to Montreal.

Following this, your Selling Department took over the marketing of all your product.

Your former selling representatives in Montreal, Messrs. Thomas Robertson & Co., Limited, always performed their duties faithfully and satisfactorily.

Heretofore your Fiscal Year terminated on September 30th in each year. In order to avoid extra expense through having to prepare practically two annual statements, one for shareholders and the other for tax gatherers, your Directors decided in September to have the fiscal year terminate with the calendar year.

In May last Mr. W. D. Matthews, who had been your President from the inception of the Company, passed away. Mr. Matthews was untiring in his efforts on your behalf. His loss has been keenly felt, and is very much regretted.

Your Directors filled the vacancy caused by his death, by electing Mr. J. K. L. Ross, of Montreal, to the Board.

The \$3,000,000 bond issue authorized at the last Annual Meeting was taken up in full.

The Staff worked loyally and energetically throughout the period. On behalf of the Board.

JAMES J. WARREN,  
President.

MONTREAL, March 15th, 1920.

# The Consolidated Mining and Smelting

## Balance Sheet as at

CAPITAL:	LIABILITIES	
Authorised:		
600,000 Shares of \$25.00 each.....	\$15,000,000.00	
Issued and Fully Paid:		
421,348 Shares of \$25.00 each.....		\$10,533,700.00
TEN-YEAR SEVEN PER CENT. BONDS.....		3,000,000.00
BOND INTEREST DUE.....		105,000.00
BANK LOANS AND OVERDRAFT.....		3,067,435.21
ACCOUNTS PAYABLE.....		1,183,503.36
DIVIDEND PAYABLE JANUARY 2, 1920.....		263,342.50
RESERVES:		
Provision for claims awaiting adjustment	\$ 15,423.75	
Provision for Dominion & Provincial Income Taxes.....	40,000.00	
		55,423.75
PROFIT AND LOSS ACCOUNT:		
Balance as at September 30, 1918.....	2,148,122.99	
Profit 15 months ended December 31, 1919.....	976,065.13	
		\$3,124,188.12
LESS Dominion and Provincial Income Taxes paid and reserved for.....	150,391.80	
		\$2,973,796.32
LESS		
Dividend No. 31 declared November 29, 1918... \$262,717.50		
Dividend No. 32 declared March 3, 1919..... 262,717.50		
Dividend No. 33 declared June 3, 1919..... 263,342.50		
Dividend No. 34 declared September 3, 1919... 263,342.50		
Dividend No. 35 declared December 3, 1919... 263,342.50		
		1,315,462.50
		1,658,333.82
		\$19,866,738.64

### Auditors

We certify that we have audited the Accounts of The Consolidated Mining and Smelting including the Mines and Smelter Accounts maintained at the offices at Kimberley, Rossland, as certified by the Company's officials; the values of the metal contents have been corrected treatment has been deducted. Subject to the foregoing, we report to the shareholders view of the financial position of the Company, according to the best of our information Columbia and the audited Accounts of the Montreal Office, as at the date of closing the

VANCOUVER, B.C., March 22, 1920.

# Company of Canada Limited

December 31, 1919

## ASSETS

### MINES, MINERAL CLAIMS AND SHARES IN OTHER COMPANIES:

Balance September 30, 1918.....	\$7,884,564.42	
Expenditure 15 months to December 31, 1919.....	1,476,289.91	
		<u>\$9,360,854.33</u>

### MINING, SMELTING, CONCENTRATING AND REFINING PLANTS:

Balance September 30, 1918.....	\$4,589,608.06	
Construction 15 months to December 31, 1919.....	802,271.38	
		<u>\$5,391,879.44</u>
Less Depreciation.....	102,139.50	
		<u>5,289,739.94</u>

### ORES, METALS AND SMELTER PRODUCT

ON HAND AND IN TRANSIT (Value of  
metal contents corrected to market  
quotations)..... 2,987,297.22

MINE AND SMELTER STORES AND MATERIAL 1,251,842.38

ACCOUNTS RECEIVABLE..... 939,257.02

INSURANCE AND TAXES PAID IN ADVANCE... 28,553.02

### CASH IN BANKS AND ON HAND:

Head Office, Toronto and Montreal....	\$ 8,869.73	
Sundry Cash Accounts.....	325.00	
		<u>9,194.73</u>

\$19,866,738.64

## Report

ing Company of Canada, Limited, for the fifteen months ended December 31, 1919, in  
and Trail, B.C. The inventories of Ore and Smelter Products at December 31, 1919, are  
to market quotations of that date, and the estimated cost of refining products in course of  
that the above Balance Sheet is in our opinion properly drawn up so as to exhibit a correct  
and the explanations given to us, and as shown by the books of the Company in British  
Accounts, December 31, 1919.

HELLIWELL, MACLACHLAN & CO.,  
Chartered Accountants.

# The Consolidated Mining and Smelting

## Profit and Loss Account for the Fifteen

To ORES, METALS AND SMELTER PRODUCT—		
On hand and in transit at September 30, 1918.....		\$2,828,415.66
“ CUSTOMS ORE, LEAD AND BULLION PURCHASED.....		3,066,580.34
“ FREIGHT ON ORE FROM COMPANY'S MINES.....		358,376.50
“ MINING, SMELTING AND GENERAL EXPENSES:		
Molly Gibson Mine.....	\$ 68,972.80	
Richmond-Eureka Mine.....	202.87	
Highland Mine.....	35,736.28	
No. 1 Mine.....	6,896.13	
St. Eugene Mine.....	29,621.96	
Sullivan Mine.....	533,208.35	
Rossland Properties.....	413,830.18	
No. 7 Mine.....	1,753.89	
Lucky Thought Mine.....	217.82	
Emma Mine.....	46,091.94	
Ottawa Mine.....	689.40	
San Poil Mine.....	16,826.23	
Tadanac Reduction Plant.....	4,041,592.78	
	<hr/>	5,195,640.63
“ DEVELOPMENT EXPENSES:		
Molly Gibson Mine.....	\$16,705.78	
Highland Mine.....	27,072.50	
Sullivan Mine.....	40,888.62	
Rossland Properties.....	175,119.54	
Emma Mine.....	20,484.94	
	<hr/>	280,271.38
“ DEPRECIATION.....		102,139.50
“ DIRECTORS' FEES.....		7,050.00
“ BOND INTEREST.....		185,539.35
“ SUNDRY ITEMS WRITTEN OFF, INCLUDING BAD DEBTS.....		2,420.27
“ BALANCE—Profit.....		976,065.13
		<hr/> <hr/>
		\$13,002,498.76



# Company of Canada Limited

Months Ended December 31, 1919

By SALES OF SMELTER PRODUCT, ORE, ETC.....	\$9,761,005.20
“ ORES, METALS AND SMELTER PRODUCT—	
On hand and in transit (Value of metal contents corrected to market quotations).....	2,987,297.22
“ RENTS AND SUNDRY REVENUES.....	11,659.13
“ WEST KOOTENAY POWER AND LIGHT COMPANY, LIMITED, DIVIDENDS.....	242,537.21

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\$13,002,498.76

# General Manager's Report

TRAIL, B.C., March 12th, 1920.

JAMES J. WARREN, ESQ.,  
President,  
The Consolidated Mining & Smelting  
Company of Canada, Limited,  
Trail, B.C.

Dear Sir:—

I beg to submit the following report of the Company's operations during the fifteen months period ending December 31st, 1919.

Although apparently not reflected in the general financial results, *there has been very marked progress in nearly every branch; recoveries of metals have been much better in every department and many parts of the various processes have been greatly improved.*

Early in the period, operations were demoralized through the "Influenza" epidemic, less than one-half of the force remaining at work. This was followed by a very severe downward adjustment in the prices of base metals which had the effect of curtailing production all around. Towards the end of the period shipments from the Sullivan Mine were interfered with by a strike, and finally unprecedentedly cold weather caused a shortage of water supply and crippled the plants very seriously.

Labour remained scarce throughout the entire period, making it impossible for the mines to hold up the tonnage and still keep up the grade of the product. Nearly all materials increased in price, so that operating costs generally were excessive and abnormal.

Reviewing the Plants separately:—

## **The Copper Plant**

The main source of tonnage for this Plant is the Company's Rossland property. Owing to the very high cost of operation and the small available tonnage of ore sufficiently high in grade to offset this cost, it was not considered advisable to mine a large tonnage at Rossland. Mining operations

were, therefore, conducted on a very small scale and only one copper furnace was operated at the Smelter. While the tonnage was so small that both mining and smelting costs were high the metallurgical recoveries were the best that have ever been obtained in the Smelter, and, tonnage considered, the costs were very low.

### **The Lead Plant**

Most of the ore treated came from the Sullivan Mine and consisted of crude ore or zinc plant tailings, but there was an insufficient supply of ore, a condition that will be remedied when the new Sullivan Concentrators have reached the point where they can provide the required lead tonnage. There has been much improvement in the class of Customs ore received, shippers taking more care to eliminate the zinc from their Lead Concentrates.

The metallurgical work of the Lead Plant has been greatly improved, this year's work, considering the analyses of the ores treated being better metallurgically than that of any of the last ten years.

### **The Zinc Plant**

Owing to the delayed completion of the Magnetic Concentrator through the non-delivery of machinery, the cost of production in this plant did not decline as expected. This cost was increased too through the raw ore dropping in grade owing, mainly, to shortage of labour at the mine. The Magnetic Concentrator is now completed so that much lower costs and higher production should prevail.

### **The Copper Refinery**

Improved methods have been introduced and better practice prevails. The product is now admitted to be thoroughly high grade and most suitable for the trade. The present capacity (20 tons of refined copper per day) is being increased to 50 tons of refined copper per day to take care of the production of the Canada Copper Corporation under a contract with that Company.

### **The Lead Refinery**

This Plant has continued to turn out its uniformly high grade product and has shown very marked improvement in costs which are now well below the costs of a Parkes' Process plant operating on the same tonnage.

### **Gold and Silver Refinery**

The Gold and Silver Refinery has been practically rebuilt and is now thoroughly up-to-date.

## **Acid Plants**

These Plants operated satisfactorily during the period.

## **The Concentration Department— Zinc Lead Ores**

Concentration has been carried on on a part only of the Sullivan ore, and has raised the percentage of metal recovered in spite of the drop in the grade of the ore supply. Concentrator capacity is now built to handle 600 tons of Sullivan ore. The operation of this Plant will bring about a very great improvement in the cost of producing zinc and lead. The Concentration Processes have been much improved during the year and very rapid developments are expected in these lines.

### **Rossland Ores**

A Flotation Mill of 200 tons daily capacity was run for several months on low grade Rossland ore; this mill proved beyond a doubt that the Rossland ores can be concentrated at reasonable cost and with good recoveries. Plans are well under way for a Concentrator to handle 1,500 tons of Rossland ore daily.

## **Research Department**

This department is a very important factor in the development of new processes and improving old methods, and has done much good work during the period under review.

## **In General**

Many improvements have been installed and some very heavy renewals have been made during the period. The Plants are in better condition than at the beginning of the period.

## **Mining Department**

Mining costs have been affected by the low tonnage produced in the same manner as the reduction plants.

While the developments in the Coast Copper and Sunloch properties have been very satisfactory, probably the most gratifying thing has been the actual opening up of the ore bodies on the lower tunnel level at the Sullivan Mine. The ore opened up here, while slightly different in character is richer and larger than any one expected and assures even greater tonnages in this tremendous ore deposit. The tonnage developed at this Mine easily justifies the building of a concentrator of from 2,000 to 3,000 tons of ore per day. The erection of such a plant at the mine will make great savings in freight besides which the operation on such a large scale will greatly lower the cost of production.

Another advantage derived from a mill of this size will be that it will insure a sufficient supply of lead concentrates to make a very substantial lead production.

### **Fluorspar**

The opening of the Rock Candy Mine and the building of a concentrator at that mine has added a new industry to the list. The Company are now able to supply practically any grade of Fluorspar required in the Trades.

In spite of the fact that it was impossible to follow the highest wage scales paid in the country, the best of our employees remained in our service and have raised the standard of efficiency.

The Staff have worked faithfully and loyally in the face of difficult conditions and it is largely due to their efforts that the Company's operations are as successful as they are.

The following officers have been in charge of the various departments: W. M. Archibald, Manager of Mines, and his efficient staff; T. W. Bingay, Comptroller; James Buchanan, Smelter Superintendent; B. A. Stimmel, Superintendent Zinc Plant; F. E. Beasley, Superintendent Copper and Lead Refineries; J. J. Fingland, Superintendent Gold and Silver Refineries; R. W. Diamond, Superintendent Concentration and Testing; G. F. Chapman, Construction Engineer; G. E. Murray, Assistant Superintendent of Smelter; A. L. MacCallum, Superintendent Acid Plants; R. K. Blois, Superintendent Smoke Plants; F. S. Willis, H. Wood-burn, Graham Cruickshank and R. G. S. Anthony, Dept. Superintendents in the Zinc Plant; D. G. Bissett, Chief Chemist; J. L. Maclachlan, Chief Accountant; E. M. Stiles, Chief Draughtsman, F. E. Lee, W. H. Hannay and H. R. Motherwell, Research Department.

Attached please find the reports of Mr. W. M. Archibald, Manager of Mines, and Mr. T. W. Bingay, Comptroller.

Yours respectfully,

S. G. BLAYLOCK,  
General Manager.

# Manager of Mines' Report

TRAIL, B.C., March 1st, 1920.

S. G. BLAYLOCK, Esq.,  
General Manager.

Dear Sir:—

I beg to submit the following report on the operation of the various mines of the Company, together with tables showing production and development for the 15 months ending December 31st, 1919.

## Production

	15 months 1918-19 Weight, tons	1894 to-date Weight, tons
Rossland Mines—Gold, Copper Ore, Smelting..	78,756	4,802,362
Rossland Mines—Gold, Copper Ore, Concentrating.	20,714	20,714
White Bear—Gold Copper Ore.....	.....	2,882
Sullivan—Zinc Ore.....	147,759	.....
Sullivan—Lead Ore.....	24,876	.....
Sullivan—Pyrite.....	4,335	772,545
St. Eugene—Lead Ore.....	986	.....
St. Eugene—Zinc Concentrates.....	2,192	1,025,305
†Molly Gibson Silver Lead Ore.....	984	.....
†Molly Gibson—Concentrates.....	331	8,772
†Number One—Silver Ore.....	638	23,950
†Highland—Lead, Silver Ore.....	127	4,729
Highland—Lead, Silver Concentrates.....	392	5,119
†Ottawa—Silver Ore.....	429	1,118
Lucky Thought—Lead, Silver Ore.....	.....	675
Lucky Thought—Silver Zinc Ore.....	.....	1,141
Richmond-Eureka—Lead, Silver Ore.....	3,570	18,307
†Silver King—Silver, Copper Ore.....	.....	17,238
Emma—Copper Ore.....	24,703	225,753
Phoenix Amalgamated—Copper Ore.....	.....	2,493
Number Seven—Siliceous Au-Ag Ore.....	.....	7,388
†San Poil—Siliceous Au-Ag Ore.....	5,373	6,864
†Blue Grouse—Copper Ore.....	298	455
Rock Candy—Fluorspar Crude Ore.....	172	.....
Rock Candy—Fluorspar Concentrates.....	1,466	1,638

NOTE:—Production given includes that of previous owners.

† Since Company acquired property only.

## Development

	Drifting & Cross-Cutting	Raising	Sinking	Total	Diamond Drilling
Rossland Mines.....	6305.5	291.0		6596.5	22328.2
White Bear.....	719.0	69.0		888.0	1661.0
St. Eugene.....	100.0	74.0	5.0	179.0	
Sullivan.....	2545.0	299.5		2844.0	2379.5
Molly Gibson.....	664.5	76.5		741.0	
Number One.....	371.6	251.7		623.0	1274.2
Highland.....	1528.4	339.0		1867.4	3276.4
Ottawa.....	17.0	10.0		27.0	
Lucky Thought.....					
Emma.....	1054.1	287.0	129.0	1470.1	1932.3
Richmond-Eureka.....	25.0			25.0	
Silver King.....					1218.6
Coast Copper Company	1332.0			1332.0	7509.0
San Poil.....					
Rock Candy.....	962.5	106.0		1068.5	
Blue Grouse.....					3094.1
Iva Fern.....	266.0			266.0	

Making the total to December 31st, 1919—

	Feet	Miles
Rossland Mines.....	315,650	59.8
White Bear.....	9,675	1.8
Sullivan.....	43,046	8.15
St. Eugene.....	106,150.5	20.1
Molly Gibson.....	11,849	2.24
Number One.....	9,568	1.8
Highland.....	18,936.6	3.58
Ottawa.....	11,414	2.15
Silver King.....	20,462	3.88
Lucky Thought.....	3,490	.66
Emma.....	7,364.8	1.4
Richmond-Eureka.....	9,699	1.80
Phoenix Amalgamated.....	2,581	.49
Number Seven.....	5,934	1.12
Coast Copper Company.....	4,293.7	.81
Rock Candy.....	1,123.5	.2
Iva Fern.....	266	.05

## **Rossland Properties**

Shipments of smelting ore from the Rossland Mines were intermittent and somewhat below those of last year in volume. The grade, however, was rather better, due in part to selective mining, and the shipment of the lower grade material to the experimental mill at Trail, where practical milling operations were carried on for several months—some 20,000 tons were treated in this way.

Although substantial improvements were made in drilling practice and in underground work generally, operating costs continued high, betterments being more than offset by increases in cost of supplies and by the operation of the 8-hour bank to bank law.

About the same amount of development was done in the period under review as in the previous 12 months, and consisted for the most part of a closer exploration, comprising drifting, cross-cutting and diamond drilling in the new territory opened last year.

The work in the East ground opened by extensions of the Centre Star 6th, 7th and 8th levels disclosed a small shoot of ore carrying high gold values, and some important tonnages of lower grade material.

Results of development in the north ground opened by the crosscut on the War Eagle 6th level, while not altogether conclusive, did not warrant taking up the option on the adjoining claims.

A large proportion of our work was in the west ground in the new territory opened last year from the 1650 Le Roi. While no large ore bodies were encountered, veins were shown to be well defined and persistent, and to carry commercial ore: in some instances, appreciable increases in silver values were shown. With the advent of regular milling operations, this section promises a considerable production.

While increases in operating costs at the mines and in freight and treatment charges on Rossland ores have made it necessary to revise downward the estimated reserves of smelting ore, the results of the experimental milling operations have justified an appreciable increase in the total reserves over those of last year.

In the White Bear (operated under lease) ore of a milling grade has been developed on the 1650 Le Roi, in extensions of some of the veins traversing the Company's ground; and on the White Bear 8th level: while assays at times indicated ore of a smelting grade, it is doubtful if selective mining will be profitable. With, however, a regular milling operation on the other ores of the camp, it is expected that a fairly large tonnage will be available.

## **The Sullivan Mine**

The principal development work was on the lower tunnel level, and comprised the extension of the main drift north, a continuation of the crosscut in the footwall to the point of raising to the upper workings, a



diamond drill hole 2 11-32" in diameter from the upper level to this point, following the plane of the proposed raise; various crosscuts and raises in the hanging wall to the vein, by which new stopes were opened, and certain definite information obtained about the vein on this level which enabled previous estimates of ore to be substantiated.

On the 10th level, some definite tonnages were developed west of a north and south fault in a section which heretofore had not been productive, although always regarded as having good possibilities.

Labor conditions here were rather unsatisfactory throughout the year, culminating in an O.B.U. organization of the employees in midsummer, and an unreasonable demand for wage increase and walkout in September. The technical and clerical staffs, with 3 employees who remained loyal to the Company, looked after the livestock, plant and equipment generally. Notwithstanding intimidation by the strikers on the ground, and false representations of the situation by their agents at employment centres, a few men were put to work in October, and from that time forward the crew was steadily increased until it now numbers 225 men.

Although very few expert miners were procured, and only a small percentage of the new men had previous underground experience, operating costs at the present time are as good as were obtained previous to the strike, and the broken ore in the mine has increased 15%.

Shipments of lead, zinc ore, and pyrites, were made with regularity except for the period covered by the strike. While the reserves of lead ore are not as great as at the close of last year, further development on the lower tunnel level is expected to enable the usual shipments of crude lead ore to be maintained.

Temporary loading bins were erected to accommodate ore coming from the lower tunnel, pending the construction of the larger and more substantial ones necessary to handle the complete output.

### **Miscellaneous Properties**

While development at the St. Eugene did not show up new ore bodies of consequence, the operation of the mine resulted in regular shipments of lead ore until October when sympathy with the Sullivan strikers lead these employees to refuse to load zinc concentrates which had resulted from former milling operations. They were consequently paid off, and the mine closed temporarily.

At the Highland Mine, Ainsworth, development on the lower tunnel level and diamond drilling improved the outlook for the property. Operating conditions during the year were unfavorable and the resulting production small.

The Number One Mine was closed part of the year. Development on the lower level by drifting and diamond drilling did not produce any very

definite results. Recent work on the upper levels, however, disclosed some ore of fair grade.

The "Flu" epidemic of last year was particularly severe at the Molly Gibson, resulting in the death of Superintendent Ronald Stonier and four other employees.

Stopping and development were carried on on a moderate scale, and the mill operated during the summer. The condition of the mine shows improvement with better possibilities of crude ore production.

In the Slocan, the Richmond-Eureka and Ottawa Mines were operated under leases, with satisfactory results.

Owing to the continuance of annoying agitation, and the general unsatisfactory labor condition, the Lucky Thought Mine was not worked.

The Emma Mine was operated in accordance with the requirement of the smelter for that class of ore. Development on the lower level showed the presence of a large dyke which materially decreased the area which was expected to have been productive. Ore was encountered below this, and the possibilities have not been entirely exhausted.

The Phoenix Amalgamated, at Phoenix, and the Number Seven, at Boundary Falls, were not operated.

Development work on the Fluorspar property, Rock Candy Group, was continued with satisfactory results, the deposit bidding fair to open up according to the indications of its extensive outcrop.

Permanent camp buildings, including ore bins, were erected at the mine. A concentrator of 100 tons daily capacity to eliminate Silica and other impurities was constructed on the extension of the North Fork branch of the Kettle Valley Railroad, as well as an aerial tram, approximately 10,000 feet long, to connect the concentrator with the mine ore bins.

Some difficulties were experienced at first in getting a suitable product, but with the installation of a dryer and some minor changes in the method of treatment, satisfactory results are now being obtained.

At the Iva Fern, on Kootenay Lake, development was retarded through scarcity of efficient hand miners, and sufficient progress was not made in the underground work to warrant a definite opinion of future possibilities. Additional surface exploration disclosed another vein carrying good values in copper and silver.

Shipments of Silicious ore were made from the San Poil Mine, Republic, Washington, when required by the smelter.

The result of diamond drilling and further underground work on the Blue Grouse property did not warrant the completion of the arrangement with the Gordon Bay Mines, Limited. While fair possibilities of developing ore in quantities existed, it was felt that the property could not be operated at a profit under the prevailing royalty conditions.

## Controlled Properties

At the Silver King, some further diamond drilling was done on the 4th and 10th levels, but no ore of importance was disclosed.

At the Coast Copper Company, Elk Lake, Vancouver Island, development was continued with satisfactory results. Diamond drilling from the lowest levels disclosed ore of good grade at greater depth, and from the surface showed the presence of commercial ore in a parallel vein (Idaho vein) lying approximately 800 feet in the footwall. The extension of the Old Sport vein, or main vein, north for a considerable distance was also proven.

A new adit tunnel to cut the Old Sport vein 250' below the present lower workings was undertaken, and in its advance has encountered the Idaho vein carrying commercial ore, thus confirming the results obtained by diamond drilling.

Necessary assessment work was done on new locations. Transportation facilities were improved by placing a gasoline launch on Kathleen Lake, repairing trails, and in driving additional piles at June Landing.

A controlling interest was acquired in the Capital Stock of the Sunloch Mines, Limited, owning a very promising copper prospect at Jordan River, Vancouver Island. Development work, which comprised drifting, cross-cutting and diamond drilling, produced very satisfactory results.

Present ore reserves, which contain a fair proportion of ore of a shipping grade, justify the erection of a concentrator of 500 tons daily capacity.

## Field Investigations

These covered a wide range, and many properties were examined. An exploratory party was sent into the Peace River district and valuable information collected. Some of the properties examined have since been the subject of negotiation, others of equal merit were thought to be too far away from transportation to have development undertaken under present conditions.

Options were taken on the Voigt copper properties at Voigt's Camp, near Princeton, and on the Fitzsimmons Group (Copper) near Alta Lake on the P. G. E. Railway.

Detailed investigations were made along with preliminary exploratory work by diamond drilling and surface trenching. The results, however, did not warrant a continuance of either option.

Generally speaking, it was difficult to obtain a satisfactory operation of any of the properties, due in part to the ever-increasing cost of supplies, but more to the lack of efficient labor, which especially hindered the development of new properties situated at a distance from employment

centres. Notwithstanding adverse conditions, the total ore reserves in the various properties owned or controlled by the Company show a marked increase over those of last year.

Some changes were made in the staff, and at the present writing the following gentlemen are in charge of the various properties:

- Rossland Properties and White Bear.....Mr. F. S. Peters
- Sullivan and St. Eugene.....Mr. E. G. Montgomery
- Kootenay Lake properties, comprising Highland,  
Number One, Molly Gibson and Iva Fern.. Mr. L. W. Oughtred
- Rock Candy.....Mr. Dan Matheson
- Emma..... Mr. R. M. Macaulay
- Coast Copper Company..... Mr. Wm. Clancy

Examinations and exploratory work were under the direction of Messrs M. E. Purcell, G. H. Kilburn, J. K. Cram, R. G. Mellin. Major A. B. Ritchie rejoined the staff after more than four years' service overseas.

All have been faithful and zealous in the performance of their duties, and have loyally co-operated in an endeavor to promote more efficient operations in the face of increasing costs.

Yours faithfully,

W. M. ARCHIBALD,  
Manager of Mines.

# Comptroller's Report

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TRAIL, B.C., March 12th, 1920.

S. G. BLAYLOCK, Esq.,  
General Manager.

Dear Sir:—

Operations for the fiscal period of fifteen months show a net profit of \$976,065.13 after charging to Profit and Loss Account \$280,271.38 expended in development of our operating mines, and writing off \$102,139.50 for depreciation of plant and equipment.

Provincial and Dominion income taxes have absorbed \$150,391.80 of the operating profit of \$976,065.13 and adequate provision has been made for such taxes whether due or accrued.

The increase in Property Account during the year is \$1,476,289.91. This increase includes the purchase of additional stock in the West Kootenay Power & Light Co., Ltd., the purchase of bonds of the Coast Copper Company, Limited, to finance development; the purchase of stock in the Sunloch Mines, Ltd.; payments on properties under bond and for their development; the acquisition of additional claims in the neighbourhood of some of our older properties; expenditure on trunk line development in several of our mining properties; advances to the Silver King Mines, Ltd., for development, and expenditure on exploration.

Following is the metal production during the fifteen months:

	Tons Ore Treated	Gold Produced, Ounces	Silver Produced, Ounces
1894 to date.....	5,952,314	1,891,443	30,496,067
1918-19 (15 mos.).....	398,118	59,605	1,782,025
	Lead Produced, Lbs.	Copper, Produced, Lbs.	Zinc Produced, Lbs.
1894 to date.....	538,882,617	89,964,275	75,601,389
1918-19 (15 mos.).....	41,711,147	6,933,962	30,743,461
	GROSS VALUE		
1894 to date.....			\$114,569,652
1918-19.....			9,720,531

Average quotations for metals for the present as compared with the previous fiscal year are as follows:

	1919	1918
New York Lead.....	6.12	7.14
New York Silver.....	109.12	93.09
New York Electrolytic Copper.....	19.82	24.12
St. Louis Zinc.....	7.22	7.77

Respectfully submitted,

T. W. BINGAY,  
Comptroller.

# The West Kootenay Power & Light Company, Limited

## REPORT OF GENERAL MANAGER

For year ending August 31, 1919

ROSSLAND, B.C., October 1st, 1919.

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

Dear Sirs:—

The Company's gross revenue for the fiscal year ending August 31, 1919, shows a decrease under that of last year amounting to \$54,690.18. This decrease is accounted for as follows:

Decrease in revenue from Granby Company. . . . .	\$60,097.85	
Decrease in revenue from Canada Copper Corporation. . . . .	42,250.45	
Sundry Decreases. . . . .	1,949.23	
Total decreased Boundary Business. . . . .	<hr/>	\$104,297.53
Increased revenue from Rossland, Trail and Northport District:		
Northport. . . . .	\$18,835.57	
Rossland and Trail. . . . .	30,771.78	
Total increase in above district. . . . .	<hr/>	49,607.35
Net decrease. . . . .		<hr/> <hr/> \$54,690.18

In connection with the Granby Company, their revenue dropped from \$10,000.00 to \$12,000.00 per month, to \$7,000.00 in April, 1918, and continued to decrease until they were compelled to shut down on account of coke shortage brought about by strike in the Crow's Nest Pass, on May 24, 1919, and on account of the low copper contents of the ores in the Phoenix Camp it is questionable as to whether or not this Company will resume smelting operations.

The Canada Copper Corporation at Greenwood discontinued operations in December, 1918, and I am led to believe that it is not their intention to resume operations.

During the past year the operations of your different Plants has been such that the service put up has given every satisfaction to our customers. For the year ending August 31, 1918, our revenue producing load was 22,359.6 H.P. For the year ending August 31, 1919, our revenue producing load was 21,046.1 H.P., showing a decrease in power consumption under the previous year amounting to 1,313.5 H.P., this decrease brought about by the discontinuing of operations in the Boundary country.

Your Plants, including Nos. 1, 2 and 3 Power Houses, as well as all distributing stations have been maintained in the usual high operating efficiency. Due to labour shortage it has been impossible to put the usual amount of work on the maintaining of transmission lines, but we expect that conditions will be such before winter sets in that we will be able to give all lines the usual overhaul.

The extension to Northport, Washington, for the supplying of power to the Northport Power & Light Company was completed and service started on November 4, 1918. Owing to strike the Northport Smelting & Refining Company were compelled to shut down February 22, 1919, and remained down until May 31, 1919. Owing to second strike the Smelter was compelled to close on August 27, 1919, and is still down, so therefore this Company was not able to extend as anticipated.

Work on the Copper Mountain extension from Greenwood to Allenby has been seriously interfered with on account of 'Flu epidemic and labour troubles. On November 1, 1919, employees on this work, due to the influenza scare left all camps and it was impossible to persuade them to return to work until the spring of 1919, and camps were started at Midway, McKenney and Keremeos. Construction work was progressing in a very favourable manner until May 28, when organizers were successful in persuading men to strike at Midway camp, and strike spread from one camp to the other until all employees were out on strike on June 10. We resumed operations on August 15, but due to the scarcity of labour are



experiencing difficulty in securing the necessary help for the carrying on of this work, and unless labour conditions change it will be impossible to have this line completed this year.

L. A. CAMPBELL,  
Vice-President and General Manager.

# THE WEST KOOTENAY POWER

## Profit and Loss Account

1919

Aug. 31	To Operating Expenses for the year including maintenance, repairs, etc. . . . .		\$171,620.74
	To interest on Bonds (W.K.P. & L. Co.)	\$90,000.00	
	To Sinking Fund (W.K.P. & L. Co.) . . . . .	14,400.00	
			<hr/> 104,400.00
	To interest on Bonds (C.W.P. & L. Co.)	13,500.00	
	Less interest on Bonds redeemed . . . . .	2,767.50	
			<hr/> 10,732.50
	To Interest Account . . . . .		6,315.91
	To premium on Bonds . . . . .		1,184.39
	To Depreciation on Plant . . . . .		98,280.89
	To Dividend Preferred Shares . . . . .	28,000.00	
	To Dividend Common Shares . . . . .	180,414.48	
			<hr/> 208,414.48
	To Adjustments . . . . .		133.28
	To Balance carried forward . . . . .		479,290.34
			<hr/> \$1,080,372.53

## Balance Sheet,

### ASSETS

Plant, Buildings, Real Estate, Pole Lines, Autos, Furniture and Fixtures . . . . .	\$3,815,139.56	
Instruments, Meters, Food Supplies and Mer- chandise . . . . .	85,429.35	
Unexpired Insurance and Taxes . . . . .	11,815.91	
		<hr/> \$3,912,384.82
Cash on Hand . . . . .	\$76,299.03	
Accounts Receivable . . . . .	50,239.22	
South Kootenay Water Power Co. . . . .	20,493.68	
Rossland Water & Light Co. . . . .	697.27	
		<hr/> 147,729.20
Investments in other Companies . . . . .		597,208.55
Copper Mountain Extension . . . . .		625,652.04
Expended in Redemption of Bonds for Sinking Fund . . . . .	258,999.80	
Royal Trust Co. . . . .	285.13	
		<hr/> 259,284.93
Sinking Fund (C.W.P. & L. Co.) . . . . .		63,578.25
		<hr/> \$5,605,837.79

Verified—

THOS. S. GILMOUR,  
Auditor.

# & LIGHT COMPANY, LIMITED

as at August 31, 1919

1918		
Aug. 31	By Balance brought forward.....	\$463,496.07
1919		
Aug. 31	By Gross Revenue for the year.....	560,129.21
	By Sinking Fund (C.W.P. & L. Co.).....	56,747.25

\$1,080,372.53

August 31, 1919

## LIABILITIES

Capital Authorized 55,000 Shares of \$100.00—\$5,500,000.00		
Issued—26,640 Common Shares at \$100.00 each.	\$2,664,000.00	
4,000 Preferred Shares at \$100.00 each.....	400,000.00	
		\$3,064,000.00
Bond Account.....		1,500,000.00
Accounts Payable.....	\$127,785.39	
Bills Payable.....	100,000.00	
Cascade W.P. & L. Company.....	18,909.11	
Amount reserved to provide for Sinking Fund, Premium on Bonds, Interest and Divi- dends on Common and Preferred Shares as at August 31st, 1919.....	56,568.02	
		303,262.52
Sinking Fund.....		259,284.93
Balance at Credit of Profit & Loss Account.....		479,290.34
		<u>\$5,605,837.79</u>

F. E. McNALLY,  
Secretary-Treasurer.

