Report of the Directors

of

The Consolidated Mining and Smelting Company

of Canada, Limited

For Year ending September 30th, 1918

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 & Smelting Company of Canada, Limited.

Gentlemen:—

Your Directors have pleasure in presenting the Thirteenth Annual Report of the operations of the Company, together with the Managing Director's Report, the Financial Statement and the Auditor's Report for the year ending September 30th, 1918.

The net profit is $867,259.48 after providing for taxes to the amount of $81,986.00 and after writing off $408,557.22 for depreciation of plant and equipment and charging Profit and Loss Account with $219,202.33 in development of your properties. Taking into consideration the recent improvements in metallurgical processes, and the enhanced value of the Company's mining properties on that account, your Directors decided to continue payment of dividends at the rate of 10% per annum, charging to Profit and Loss Account the deficit of $180,485.52. The balance at credit of Profit and Loss Account now stands at $2,148,122.99.

Notwithstanding all the difficulties encountered during the year, the value of the season's metal product exceeded ten and one half million dollars.

The continuous increase of the scale upon which the Company has been operating for the purpose of meeting the copper, zinc and lead requirements of the Imperial Munitions Board, and the development of new processes, especially those involved in the electrolytic treatment of complex zinc ores, have involved the expenditure of a large amount of money for new plant, but your Directors hope that the result will be that the Company will thereby be able to produce metals profitably at prices which may be expected to prevail under peace conditions. The cost of the new construction which was found necessary from time to time greatly exceeded the estimates by reason of the excessive and continually increasing costs of labour, materials and supplies of all kinds. Your Directors, owing to these increased expenditures and to the interruption of operations during the first part of the year, have not been able to reduce the Bank overdrafts as had been hoped and expected.

Your Directors have decided that the power development of the West Kootenay Power and Light Co., Limited, should be extended and that the copper refinery should be increased from its present capacity of 20 tons per day to at least 50 tons per day. It is estimated that capital expenditures for these purposes will amount to not less than an additional $1,500,000.

Your Directors are of opinion that it is in the interest of the Company that the indebtedness to the Bank should be reduced and that the finances of the Company should be placed in some more permanent shape and have therefore decided that an issue of debenture bonds be created to the amount of $3,000,000 bearing interest at the rate of 7% per annum, and that these bonds should be offered to the shareholders of the Company pro rata in proportion to the amount of shares held by them respectively.

In order to make these bonds attractive to the shareholders and to ensure the taking up of the entire issue, it has been decided that holders thereof after January 1st, 1924, may convert the same into stock of the Company par for par.

The by-law of the Company providing for the creation and issue of these bonds will be submitted for your approval at the Annual Meeting of the Company, which will be a Special Meeting for this purpose.

Appended to the Managing Director's report are the reports of the Assistant General Manager, the Manager of Mines and the Comptroller together with Financial Statements and the report of the General Manager of the West Kootenay Power and Light Company, Limited.

W. D. MATTHEWS,
President.

TORONTO, December 28th, 1918.

FINANCIAL STATEMENT

Balance Sheet as at September 30th, 1918

LIABILITIES

CAPITAL—				
Authorized:				
600,000 Shares of $25 each			$15,000,000.00	
Issued and Fully Paid:				
419,098 Shares of $25 each				$ 10,477,450.00
BANK LOANS AND OVERDRAFTS				2,809,071.07
ACCOUNTS PAYABLE				1,386,344.02
DIVIDEND PAYABLE OCTOBER 1, 1918				261,936.25
RESERVES—INCLUDING PROVISION FOR CLAIMS AWAITING ADJUSTMENT				16,998.71
PROFIT AND LOSS ACCOUNT—				
Balance at September 30, 1917			$2,360,274.73	
LESS: Provincial Income Tax 1917, paid in 1918			31,666.22	
			$2,328,608.51	
Profit 12 months ended September 30, 1918		$949,245.48		
LESS:				
Dominion Income Tax	$27,771.46			
Provincial Income Tax	22,429.72			
Mineral Tax	31,784.82			
		81,986.00		
			867,259.48	
			$3,195,867.99	
LESS: Dividend No. 27, declared December 27, 1917		$261,936.25		
Dividend No. 28, declared March 1, 1918		261,936.25		
Dividend No. 29, declared May 30, 1918		261,936.25		
Dividend No. 30, declared August 30, 1918		261,936.25		
			1,047,745.00	
				2,148,122.99
				$17,099,923.04

ASSETS

MINES, MINERAL CLAIMS AND SHARES IN OTHER COMPANIES—		
Balance September 30, 1917	$7,303,443.60	
Expenditure 12 months to September 30, 1918	581,120.82	
		$7,884,564.42
MINING, SMELTING, CONCENTRATING AND REFINING PLANTS—		
Balance September 30, 1917	$4,867,505.25	
Construction 12 months to September 30, 1918	130,660.03	
	$4,998,165.28	
LESS Depreciation	408,557.22	
		4,589,608.06
ORES, METALS AND SMELTER PRODUCT ON HAND AND IN TRANSIT:—		
(Value of metal contents corrected to market quotations)		$2,828,415.66
MINE AND SMELTER STORES AND MATERIALS		1,183,183.30
ACCOUNTS RECEIVABLE		542,825.89
INSURANCE AND TAXES PAID IN ADVANCE		28,192.86
CASH IN BANKS AND ON HAND:		
Head Office, Toronto	$42,148.72	
Sundry Cash Accounts	984.13	
		43,132.85
		$17,099,923.04

Auditors' Report

We have audited the Accounts of The Consolidated Mining and Smelting Company of Canada, Limited, for the twelve months ended September 30th, 1918, including the Mines and Smelter Accounts maintained at the offices at Kimberley, Rossland and Trail, B.C. Inventories of Ore and Smelter Products at September 30th, 1918, are as certified by the Company's officials; the values of the Metal Contents have been corrected to market quotations of that date, and the estimated cost of refining products in course of treatment has been deducted. Subject to the foregoing, we certify that the above balance sheet is in our opinion properly drawn up so as to exhibit a correct view of the financial position of the Company, according to the best of our information and the explanations given to us, and as shown by the books of the Company as at the date of closing the Accounts, September 30th, 1918.

VANCOUVER, B.C., December 18th, 1918.

HELLIWELL, MACLACHLAN & CO.,
Chartered Accountants.

PROFIT AND LOSS ACCOUNT

For the Twelve Months Ended September 30th, 1918

To Smelter Product on hand and in transit from Smelter to Refineries at September 30, 1917		$ 29,242.95
" Ores and Metals on hand and in transit to the Smelter at September 30th, 1917		2,586,421.22
" Customs Ore, Lead and Bullion purchased		4,120,244.06
" Freight on Ore from Company's Mines		190,636.58
" Mining, Smelting and General Expenses:		
"Molly Gibson" Mine	$ 77,890.51	
"Richmond Eureka" Mine	243.39	
"Highland" Mine	37,123.34	
"No. 1" Mine	33,608.66	
"St. Eugene" Mine	25,692.91	
"Sullivan" Mine	339,601.49	
Rossland Properties	388,701.19	
"No. 7" Mine	861.30	
"Lucky Thought" Mine	5,631.22	
"Emma" Mine	47,314.02	
"Ottawa" Mine	4,508.47	
"White Bear" Mine	14,991.11	
"San Poil" Mine	12,225.80	
"Tadanac" Reduction Plant	3,279,826.39	
		4,268,219.80
" Development Expenses:		
"Molly Gibson" Mine	$ 6,348.05	
"Highland" Mine	20,068.77	
"Sullivan" Mine	14,335.93	
Rossland Properties	145,744.57	
"Emma" Mine	26,093.38	
"Ottawa" Mine	6,611.63	
		219,202.33
" Depreciation		408,557.22
" Directors' Fees		8,800.00
" Sundry items written off, including Bad Debts		4,415.80
" Balance—Profit		949,245.48
		$12,784,985.44

By Sales of Smelter Product, Ore, etc	$9,780,564.64
" Ores, Metals and Smelter Product on hand and in transit: (Value of Metal contents corrected to Market Quotations)	2,828,415.66
" Rents and Sundry Revenues	16,005.14
" West Kootenay Power and Light Company Limited, Dividends	160,000.00
	$12,784,985.44

Managing Director's Report

TORONTO, December 11th, 1918.

To the Directors

of The Consolidated Mining and Smelting Company

of Canada, Limited.

Gentlemen:

I submit herewith the Financial Statement (including Profit and Loss Account) for the year ending 30th September, 1918. With it are the reports of the Assistant General Manager, the Manager of Mines and the Comptroller; also, the report of the General Manager of the West Kootenay Power and Light Company, Limited, and the Financial Statement (including Profit and Loss Account) of that Company.

MINES

Notwithstanding heavy shipments from all the properties, the Manager of Mines reports ore reserves to be as large as, if not larger, than they were at the beginning of the year.

Important improvements in metallurgical practice—in regard to treatment of the complex ores of the Sullivan Mine—have added many years to the life of that property and have made it one of the most valuable mineral deposits in America, if not in the whole world.

During the year, in addition to other mineral locations, a fluorspar property was acquired. Part of the product is used to make acid for the Lead Refinery—the remainder is being sold to Steel Companies for flux.

Since his report, Mr. Archibald, the Manager of Mines, states that further development at the Coast Copper Company, Elk Lake, has produced very satisfactory results, high-grade ore bodies having been located by diamond drilling and drifting in other parts of the property.

SMELTER AND REFINERIES

Operations were conducted along usual lines. Efficiency and economy were not possible on account of the unstable conditions referred to in the Assistant General Manager's report.

The solution of the problem of treating the complex ores of the Sullivan Mine was the chief advance made during the year. Its importance cannot be over-estimated.

PRODUCTION

The quantities of metals produced, as shown in the Comptroller's report, compare favourably with those of previous years, considering that they represent the results of not more than ten months' actual operating.

POWER COMPANY

The statement of the West Kootenay Power and Light Company is satisfactory, but it must not be forgotten that this Company was the main contributor to the earnings shown.

The line extension to the plant of the Northport Smelting and Refining Company was completed and became revenue producing early in November, 1918. The work in connection with the transmission line to the Mill and Mine of the Canada Copper Corporation, near Princeton, is being pushed as rapidly as possible. It is expected that this will become revenue producing during the summer of 1919.

NEW FINANCING

An arrangement has been made to treat the concentrates of the Canada Copper Corporation from its Copper Mountain Mines near Princeton and to refine the resultant blister copper. No expensive changes or additions are necessary in the Smelting and Converting departments, but the Copper Refinery must be increased from its present capacity—20 tons per day—to a minimum of 50 tons per day.

In order to market this refined copper in Canada, a Rod Mill must be installed—as under normal conditions a very large proportion of the copper consumed in Canada is in the form of wire rods.

The estimated cost of the extension of the Copper Refinery is $250,000, and of the Rod Mill is $75,000.

Various other changes must be made to take full advantage of the metallurgical improvements above referred to.

The permanent financing of the cost—about $1,000,000—of the line extensions of the Power Company must be arranged. Finally, a substantial addition to working capital should be provided.

IN GENERAL

Operations were conducted under very difficult conditions.

The first part of the year was unprofitable because of the strike which not only caused direct loss, but also interrupted production. A strike is always expensive, but weak submission to unreasonable demands is ruinous.

The latter part of the year produced much better results—largely because of improved metallurgical practice. Materials all tended to appreciate during the year. Labor was more expensive and inefficient. Though at times the metal markets were unstable, all the metals produced were sold.

Following the Armistice, the demand for metals for munitions purposes ceased. It may be worth while to record that from the beginning of the War down to the end of the fiscal year, the Company supplied the Imperial Ministry with 22,356 tons of zinc, 39,606 tons of lead, and 6,831 tons of copper. The average prices obtained for these metals were:—

Zinc	12.43 cents per lb.
Lead	7.96 cents per lb.
Copper	29.68 cents per lb.

The saving to the Imperial Ministry through the supplying of high-grade electrolytic zinc at the price named amounts to a very large sum.

The average Canadian market price for lead during the period was 8.98 per pound.

The appropriation of nearly all construction material to war purposes affected very seriously the normal commercial demand for lead. The Imperial tions Board took the position that they could pay but little, if any, more eir lead requirements than these could be secured for from foreigners, ugh Canadian production costs are necessarily higher because of the heavy s paid on all plant equipment and supplies and for other reasons.

n regard to copper, while the Imperial Ministry made a special allowance ver the cost of refining copper on a small scale, the price obtained was still v the Canadian market price.

Shareholders may rest assured, therefore, that the Company has made at a moderate "money" contribution towards the prosecution of the war, the greatest and finest gift was that made by the employees. In spite e fact that a large percentage of the men were married, and many were gners, nearly fifteen per cent. of the employees enlisted for Overseas ce. Practically eighty per cent. of the unmarried men of military age e staff enlisted without waiting for conscription. Many of the finest of made the supreme sacrifice. Most of them were decorated for deeds of ur, and not one of them has failed to make good in the face of the Hun.

The Company's direct contribution for Red Cross and Patriotic purposes over $30,000.

At the same time, it must be realized that war activities have resulted in establishment on a firm footing in Canada of industries engaged in the uction of high-grade zinc and refined copper. The fabrication of these als is bound to follow in due course.

Since the cessation of hostilities, the normal commercial demand for als has not asserted itself. There may be a temporary lull in actual con- ption, but no apprehension is felt as to markets and prices when usual itions prevail.

The Canadian consumption of copper, lead and zinc prior to the war in excess of the capacity of the Company's plant.

After all, the mines of the Company and their ore reserves constitute the assets. The control of the West Kootenay Power and Light Company ext in importance as through it an adequate supply of electric energy is red, and at reasonable cost.

The Sullivan Mine has been referred to as the great property of the npany, but there are other mineral locations in course of development ch promise as well as the Sullivan did at the same stage.

Temporarily, the Rossland Mines are unprofitable through high operating s—the fixed price of gold and its reduced purchasing power. When nal conditions return, as they are bound to do, Rossland will resume its e as one of the foremost metal producers of the country.

The $700,000 advance from the Imperial Munitions Board towards the ension of the Zinc Plant was repaid in full during the year.

The members of the staff, the Mine and Smelter Superintendents and the er officials of the Company, continued their loyal and efficient efforts oughout the year.

Yours truly,

JAMES J. WARREN,

Managing Director.

Assistant General Manager's Report

TRAIL, B.C., 7th December, 1918.

I beg to submit the following report of the year's operation of the Company's Reduction Works for the year ending September 30th, 1918.

The Fiscal Year began under very unfavorable conditions.

The cost of producing zinc was still very high.

The Imperial Munitions Board had cancelled their lead contracts.

The costs of producing and smelting Rossland ore were steadily increasing and the margin of profit had disappeared.

The coke supply was very uncertain, both as to quantity and price.

All materials were almost prohibitive in price.

Labour was extremely restless owing to the ever increasing cost of necessaries and to the continued agitation of a number of men with strong I.W.W. tendencies who endeavored by every possible means to promote sabotage, misunderstanding and discontent. Every means possible was adopted to avoid a breach with the men, but finally demands were made in such a manner and in such direct repudiation of a definite agreement recently negotiated that they could not be conceded. The men walked out on November 15th, 1917.

The staff closed down the plant, unloaded the incoming freight, shipped out the metals on hand and kept the plant in repair.

After six weeks' cessation from work the views of the majority of the men (who never really favored the strike) prevailed and the men returned to work under the terms of the Agreement.

REVIEWING THE PLANTS SEPARATELY

The Copper Smelting Plant.

The year's operations were very expensive owing to intermittent operation, shortage of tonnage caused by the reduced purchasing power of gold, making mining operations impossible, and heavy overhead expenditure.

The year's work was conducted with a view to holding the loss down as low as possible.

The metallurgical work showed improved gold recoveries.

Lead Smelting Plant.

Operations continued to be unprofitable during the first part of the year. This was owing mainly to the fact that the metal recoveries were not as high as the quantities paid for. The metal losses were smaller than they had been for many years, but the prices paid for the metal lost were extremely high. In former years, each unit of lead lost cost the Company from forty to fifty cents, while in 1917-1918, the same amount of metal cost as much as $2.20.

In the latter part of the year much improvement was made in extracting the values from the lead smoke. The percentage of extraction has already shown a substantial increase, although the installation to take full advantage of the recent discoveries is not yet completed.

For many years the rates charged for smelting Customs Lead ores were much too low to cover the metallurgical losses and operating expenses. On February 1st, 1918, these rates were advanced to cover expenses and make a small profit.

The Lead and Copper Refineries.

Both of these plants worked on small tonnages most of the year and were handicapped on that account.

The Lead Refinery showed a very decided reduction in costs, especially in the last months of the year, and proved that for small tonnage plants the Betts' Process can compare very favorably with the Parkes' Process.

The acquisition of a Fluorspar mine will make a further reduction in cost —fluorspar having formerly been purchased in the East.

In the Copper Refinery the costs have been about as low as could be expected, with the exception of the melting and casting of refined copper.

The great variety of shapes required by munitions orders for the small tonnage handled, and the difficulty in securing competent labor to do this work, made it advisable to have the copper cast in transit at Great Falls, Montana.

In the meantime the Melting Plant is being enlarged and equipped to handle commercial orders.

Acid Plant.

The Sulphuric and Hydrofluosilicic Acid Plants were successfully operated all year. Several improvements were made in the Hydrofluosilicic Acid Plant, and there is now no difficulty in making sufficient acid to operate the entire plant.

The Zinc Plant and Concentrator.

Many very important changes have been made. At the beginning of the year and prior to that date, the cost of producing zinc was so high that it would have been impossible to keep the plant running when zinc dropped to its normal price.

The plant was thoroughly re-organized and very large reductions made in costs.

Large scale experimental work proved that further improvements could be made, more particularly in concentration. These are now being installed in the plant and when completed will reduce the cost of producing zinc very much further and will also enable the lead and silver of the Sullivan ore to be reclaimed.

The whole process has been worked out and designed for the complex ores of the Sullivan Mine. It is possible, though, that other ores may be

treated in the same way, but sufficient work has not yet [illegible] which ores may and which ores may not be so treated.

The year's developments and improvements have demonstrated that at last the problem of handling the complex Sullivan zinc ore has been solved.

With a plant operating on from one to two thousand tons of this ore per day there should be no trouble in producing zinc and lead at a profit on any market that has existed in recent years, provided that the cost of labor and supplies falls with the price of these metals.

This successful solution of the problem makes available many millions of tons of mixed ore in the Sullivan Mine which, formerly, could not be considered commercial ore although very high in metal content.

While all of the present plant will be used, quite substantial expenditures on capital account must be made for the necessary extensions to treat the large tonnage above mentioned; besides, it will take considerable time to do this work.

The Research Department, which has become a very important part of the organization, worked on the concentration of the ores in our own and other mines; the metallurgical smoke problem; the manufacture of different chemicals from by-products and the solution of the various difficulties in our different processes.

As already stated, much has been accomplished in connection with the treatment of Sullivan ore.

Some headway has also been made on the concentration of the low sulphide ores from Rossland. These results are especially encouraging as the portion of the Rossland ores most amenable to concentration is that which is the most difficult and expensive to smelt.

Great strides have also been made in reducing the costs and increasing the efficiency in the mines, though the full force of these will not be felt till working conditions become normal again.

I cannot conclude this report without paying tribute to the whole-hearted loyalty and energy of the staff who have been working out the various problems. The following gentlemen have all contributed to improve the Company's various operations: W. M. Archibald, Manager of Mines, and his efficient staff; T. W. Bingay, Comptroller; James Buchanan, Smelter Superintendent; B. A. Stimmel, Assistant Manager of the Zinc Plant; J. K. Batchelder, Superintendent of Refineries; R. W. Diamond, Superintendent of Concentration and Testing; G. F. Chapman, Construction Engineer; W. E. Jones, Mechanical Engineer; G. E. Murray, Assistant Superintendent of Smelter; A. L. MacCallum, Superintendent of Acid Plants; F. E. Lee, W. H. Hannay, and R. K. Blois, Research Engineers; R. Vaughan, F. S. Willis, H. Woodburn and R. G. S. Anthony, Dept. Superintendents in the Zinc Plant; R. H. Hatchett, Chief Chemist; F. E. Beasley, Assistant Superintendent Refineries.

Mr. E. H. Hamilton resigned from the staff early in the year and Mr. F. N. Flynn resigned on August 31st.

S. G. BLAYLOCK,

Assistant General Manager.

Manager of Mines' Report

TRAIL, B.C., December 5th, 1918.

I beg to submit the following report on the operations of the various mines of the Company, with accompanying tabulated results in development and production.

PRODUCTION

	Year 1917-18 Weight, Tons	1894 to date Weight, Tons
Centre Star—War Eagle—Gold-Copper Ore	49,298	2,660,441
Concentrates	.....	9
Le Roi Ore—Gold-Copper Ore	54,918	2,062,544
Le Roi—Concentrates	.....	612
White Bear Ore—Gold Copper Ore	2,158	2,882
Sullivan—Lead Ore	22,673	.....
Sullivan—First-class Zinc Ore	71,048	.....
Sullivan—Second-Class Zinc Ore	7,563	.....
Sullivan—Pyrites	3,474	595,559
St. Eugene—Company Lead Ore	924	.....
St. Eugene—Leasing Company Lead Ore	267	1,022,127
Molly Gibson—Silver-Lead Ore	1,320	.....
∅ Molly-Gibson—Silver-Lead Concentrates	192	7,357
∅ Number One—Silver Ore	5,185	23,312
∅ Highland—Lead-Silver Ore	283	4,602
Highland—Lead-Silver Concentrates	414	4,727
∅ Maestro—Lead-Silver Ore	.....	463
Maestro—Lead-Silver Concentrates	.....	88
∅ Ottawa—Silver Ore	48	689
Lucky Thought—Lead-Silver Ore	.....	675
Lucky Thought—Silver-Zinc Ore	378	1,141
∅ Richmond-Eureka—Lead-Silver Ore	37	14,734
∅ Silver King—Silver-Copper Ore	.....	17,238
Emma—Copper Ore	24,968	201,050
Phoenix Amalgamated—Copper Ore	.....	2,493
Number Seven—Silicious Gold-Silver Ore	.....	7,388
∅ Ben-Hur—Silicious Gold-Silver Ore	.....	12,075
San Poil—Silicious Gold-Silver Ore	1,491	.....
Blue Grouse—Copper Ore	157	.....

NOTE:—Production given above includes that of previous owners.
∅ Since Company acquired property only. Previous records not available.

DEVELOPMENT

	Drifting and Crosscutting	Raising	Sinking	Total	Diamond Drilling
Centre Star—War Eagle	3,979.5	294.5	.....	4,274.0	4,833.1
Le Roi	2,481.0	164.0	.....	2,645.0	4,641.4
White Bear	634.0	.....	.....	634.0	773.5
St. Eugene	51.0	10.0	.....	61.0	.....
Sullivan	2,448.0	91.0	.....	2,539.0	1,774.7
Molly Gibson	350.0	16.0	.....	366.0	.....
Number One	426.0	127.0	.....	553.0	.....
Highland	2,268.3	158.0	.....	2,426.3	.....
Ottawa	334.0	156.0	.....	490.0	.....
Lucky Thought	148.0	.....	.....	148.0	.....
Emma	1,253.0	398.0	166.2	1,817.2	693.4
Richmond-Eureka	128.0	.....	.....	128.0	.....
Silver King	.....	.....	.....	.....	5,267.6
Coast Copper Company	929.5	.....	.....	.....	867.0
San Poil	.....	.....	.....	.....	1,831.0
Rock Candy	40.0	.....	.....	40.0	492.0
Blue Grouse	.....	.....	.....	.....	.....

Making the total to date as follows:—

	Feet	Miles
Centre Star—War Eagle	216,127.5	40.93
Le Roi	92,926.0	17.60
White Bear	8,956.0	1.70
Sullivan	40,202.5	7.65
St. Eugene	105,971.5	20.04
Molly Gibson	11,108.0	2.10
Richmond-Eureka	9,674.0	1.80
Number Seven	5,934.0	1.12
Phoenix Amalgamated	2,581.0	.49
Number One	8,944.7	1.70
Highland	17,069.2	3.23
Ottawa	11,387.0	2.15
Silver King	20,462.0	3.88
Lucky Thought	3,490.0	.66
Emma	5,894.7	1.11
Coast Copper Company	2,961.7	.56
Rock Candy	55.0	....

About the same tonnage was shipped from the Rossland Mines as in the previous year; shipments, however, were very irregular, but attained considerable proportions from January to April, when an unsuccessful attempt was made to cope with steadily increasing operating costs at mines and smelter by handling fairly large but certain definite tonnages with a maximum output of ore high in iron from the Emma.

Development was less than that of last year by nearly 4,000 feet, and for the most part was confined to extensions of Trunk line drifts and crosscuts in new territory. Promising veins have been disclosed in the work east from the Centre Star 6th and 7th levels and West from the Le Roi 1650 and White Bear workings, but insufficient work has been done on them to permit of any estimate of tonnages. A crosscut is being driven north from the War Eagle 6th level to explore ground optioned during the year. Some additional tonnages have been made available by work north on the 10th level Le Roi under the Josie plane, on the War Eagle 12th and 13th, and Centre Star 6th levels.

In the White Bear, development work consisted in extensions of drifts from the old workings, in some instances into Le Roi ground, and in diamond drilling. Some new ore was opened up on the 8th level. The stopes on the 8th and 10th levels were extended.

Steadily increasing smelter costs on Rossland ore have stimulated experiments along other lines of treatment with encouraging results, which, if definitely established, will make available a much larger tonnage than is included in our estimate of present ore reserves.

Shipments of lead, zinc ores and pyrites were maintained from the Sullivan Kimberley, without materially changing the condition of the mine. Development work on the lower tunnel level, however, did not attain the footage anticipated, on account of labor shortage; the advance being slightly over 2,100 feet with the present face under the productive ground of the upper levels. Diamond drilling on this level has located commercial ore in the vein which the tunnel should intersect within the next 300 feet. A crosscut has been started to the footwall preparatory to making a connection with the upper workings.

With the completion of the lower tunnel and connections to the upper workings, additional equipment by way of ore bins and crushing plant will be red, the size and character depending to a certain extent on the decision preliminary treatment before shipment to the Smelter, but in any case the ruction will be substantial and in keeping with the large ore reserves of the

The Steam Plant was augmented by the transfer of Boilers previously e at the St. Eugene.

A further tonnage of lead ore was taken from the St. Eugene through the tions of the Company from the lower workings and of the Leasing Com- above the 10th level. No new ore bodies were found.

At Ainsworth the Highland and Number One Mines were operated in a way.

The Number One was unwatered and development continued on the lower while shipments of low grade ore of favorable analysis were made from the r workings.

A new and lower tunnel was started on the Highland, at the elevation of ram terminal, for deeper exploration and to facilitate the exploration of artially developed by drifts from the bottom of a winze from the present ings. The mill was operated intermittently.

Power shortage at certain periods and labor shortage when power was able contributed to an unsatisfactory operation of both properties.

At the Molly Gibson Mine snowslides again carried away a portion of the tram. Repairs were made to this section and towers on this and the tram renewed or strengthened. A Hardinge Mill for fine grinding was lled in the mill and the flotation end otherwise improved. Stoping and opment were carried on throughout the year and milling operations May 1st. Ore reserves have been maintained and development pros- are good.

At the Silver King upwards of 5,000 feet of diamond drilling was done g the year, principally on the 7th, 8th, 9th and 10th levels. Some er ore was disclosed on the 8th and 9th near stopes already opened, and a rade vein was encountered on the 10th level. Results of holes in new ory were for the most part disappointing.

Operations were suspended at the Ottawa Mine, Slocan City, in July and rew used elsewhere. Previously, stoping and development were carried a small scale and a car of high-grade silver ore shipped.

At the Lucky Thought Mine, Silverton, development and stoping, ing in shipments of silver-zinc ore, were carried on during the first part e year. The mine was closed down in March on account of annoying agitations out of proportion to the value of the work on hand.

Lessees on the Richmond-Eureka, Sandon, did a small amount of develop- and shipped a car of ore. No new ore bodies were disclosed.

At the Emma Mine the shaft was sunk 160 feet and a new level opened ith satisfactory results, ore reserves being materially increased. Stoping tions and shipments were irregular. Diamond drilling located ore in the ng wall of the lower level and showed the continuation of the vein below. ar work on surface showings on the Minnie Moor claim of the group did how up the necessary values.

No work was done on the Phoenix Amalgamated at Phoenix or Number Seven, Boundary Falls.

Closer investigation in Camp McKinney and Fairview resulted in the dropping of a number of the claims located during the previous year. Assessment was done on several of seeming merit, pending a more opportune time for further exploration.

Work at the Coast Copper Company, Elk Lake, consisted mainly in the continuation of development at the lower level in the extensions of drifts from the bottom of the winze. The results were fairly satisfactory, as high-grade ore similar to that showing in the outcrops was encountered in both North and South workings.

While, perhaps, we are not justified in stating that we have actually developed another mine, our good opinion of the property as a prospect has been considerably strengthened.

A floating dock was built at June Landing, Quatsino Sound, and a launch, equipped with a gasoline engine, provided for Alice Lake, to facilitate the transportation of supplies. The water wheel driving compressors was replaced by a larger one, and a drill sharpener added to the Blacksmith Shop equipment.

A closer investigation was made of the surrounding country, resulting in the discovery of other outcrops on our own ground, and some on vacant ground which are being covered by mineral locations.

The high cost of Eastern Fluorspar delivered at the acid plant at Tadanac was responsible for an energetic search for the mineral in this Province and the State of Washington, which culminated in our taking a lease and bond on the Rock Candy Group on Kennedy Creek, a tributary of the North Fork of the Kettle River. The outcrops are extensive and diamond drilling has shown commercial material to exist in the vein at least to a depth of approximately 350 feet. The indications are that we will have a large tonnage, in excess of our own requirements, for export.

A wagon road is now under construction to the property and a survey has been made for an Aerial Tram from the mine to the extension of the North Fork branch of the Kettle Valley Railroad.

The operation of the Blue Grouse Mine on Cowichan Lake was taken over March 1st, to protect advances made to the Gordon Bay Mines, Ltd., who held an option on the property. Work was continued on the ore bodies already opened and several hundred tons of 4%—5% copper ore taken out. A six months' extension was obtained; and extensive surface exploration, which showed up several mineralized areas, was undertaken preparatory to diamond drilling, which is now under way with no conclusive results as yet.

Ivy Fern Group :—An option was taken on a group of claims on Cultus Creek on the West side of Kootenay Lake. Surface exploration has shown the presence of two large and well defined veins carrying values in lead and silver. A trail from the lake to the property has been built, cabins erected, and a contract let for upwards of 1,000 feet of underground work.

As an assurance against an inadequate supply of silicious ore, the San Poil Mine, Republic, Washington, was purchased at a Receivers' Sale. Some 16,000 tons of ore were broken under contract after which operations were suspended except for the required shipments.

Extensive field operations were carried on during the year through our examining engineers and prospectors. Gold properties in many districts in Canada and the State of Washington were investigated; some of these may be the subject of development later, upon the satisfactory completion of negotiations. A large number of copper prospects at the Coast, as well as in the interior, were examined; several held sufficient merit to warrant development, which is proceeding under satisfactory working options.

The needs of the Munitions Board of the less common metals have been kept in mind and occurrences of Chrome, Platinum, Tungsten and Molybdenum investigated.

Exploratory trips were made in Central British Columbia and Northern Manitoba; also a complete investigation of tonnage possibilities between Republic, Washington, and the Columbia River.

From an operating standpoint the work of the past year cannot be considered as entirely satisfactory; a strike at the Smelter in November and December, 1917, necessitating the suspension of all operations at our producing properties, was followed when work was resumed by a gradually decreasing supply of labour, in many cases unskilled and inefficient. This, coupled with further demands for increased wages, made it impossible to carry forward outlined development and maintain production of necessary metals. Generally speaking, however, the various properties are in as good, if not better, position as regards ore reserves as at the beginning of the year.

Some changes were made in the staff to better facilitate our operations and to meet changing conditions.

The different mines are now in charge of the following men:—

Rossland	Mr. F. S. Peters
Sullivan and St. Eugene	Mr. E. G. Montgomery
Highland	Mr. L. W. Oughtred
Number One	Mr. John Cannon
Molly Gibson	Mr. Ronald Stonier
Ottawa and Rock Candy	Mr. Dan Matheson
Emma	Mr. Edward Nordman
Lucky Thought	Mr. D. M Tattrie
Coast Copper Company	Mr. Wm. Clancy
Blue Grouse	Mr. G. H. Kilburn.

The field operations are under the direction of Messrs. M. E. Purcell, R. M. Macaulay, J. K. Cram and G. H. Kilburn. All have performed their several duties faithfully and have been zealous in promoting the interest of the Company.

Yours faithfully,

W. M. ARCHIBALD,

Manager of Mines.

Comptroller's Report

TRAIL, B.C., December 11th, 1918.

Operations for the year show a net profit of $949,245.48, after writing off $408,557.22 for Depreciation of Plant and Equipment and charging to Profit and Loss Account $219,202.33 expended in development of our operating mines.

As the Balance Sheet indicates, a considerable portion of the operating profit of $949,245.48 has been absorbed in the payment of the various taxes assessed against income by the Dominion and Provincial Governments. These taxes amounted to $81,986.00. In addition, we were obliged by a retroactive provision of the British Columbia Taxation Act, 1918, to pay $31,666.22 income tax for 1917, by which amount the balance carried down in Profit and Loss Account from last year has been reduced. Besides the taxes which are charged against income, we have paid during the year $40,656.61 Provincial and Municipal realty taxes. The total paid in taxes during the year was, therefore, $154,308.83.

The present British Columbia Taxation Act, though considerably improved in some respects by the amendments of 1918, is not yet on a fair basis, in that certain important expenses which are proper charges to Profit and Loss are specifically disallowed as deductions from income, by its provisions. The Income Tax rate is necessarily high, but aside from this the tax is assessed against expenses which are necessary and unavoidable. This is especially the case in its application to mining profits.

The depreciation charge is less than last year on account of the amount allowed on the Zinc Plant being reduced. Developments and improvements in the process have placed it upon a firm basis as a revenue producer in the future; last year, its success appeared to be dependent upon high war prices for zinc continuing, and, therefore, a higher depreciation charge was then made.

The increase in property account during the year is $581,120.82, and this increase includes the purchase of the "Hunter V Group" at Salmo, the "San Poil Group" at Republic, and of claims in the Rossland camp; payments on mining properties under bond; the purchase of bonds of the Coast Copper Company, Limited, to finance development; advances to the Silver King Mines, Limited, for the same purposes; expenditure on trunk line development in several of our mining properties and purchase of additional stock in the West Kootenay Power and Light Co., Ltd.

Plant expenditures during the year have been light. The decrease in Plant account owing to depreciation exceeding expenditure is $277,897.19.

The plant is in better condition now than it was at the end of our last fiscal year.

The stock of metals carried is still heavy. Liquidation has been slow owing to difficult conditions of transportation and marketing. It is, of course, true that an equal quantity of metal at pre-war prices could be carried for a much smaller sum.

Following is the metal production during the year:—

	Tons Ore Treated	Gold Produced Ounces	Silver Produced Ounces
1894 to date	5,551,196	1,831,838	28,714,012
1917-18	374,889	52,917	1,708,692

	Lead Produced lbs.	Copper Produced lbs.	Zinc Produced lbs.
1894 to date	497,171,470	83,030,313	44,857,928
1917-18	38,844,946	7,982,903	21,800,932

Gross Value	
1894 to date	$104,849,121
1917-18	10,533,367

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

	1918	1917
Montreal Lead	$ 8.77	$10.91
New York Silver	93.09	77.75
New York Electrolytic Copper	24.12	28.78
St. Louis Spelter	7.77	9.45

Respectfully submitted,

T. W. BINGAY,

Comptroller.

The West Kootenay Power and Light Company, Limited

Report of the General Manager for the Year ending August 31st, 1918

ROSSLAND, B.C., October 16th, 1917.

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

Dear Sirs:

The Company's net revenue for the fiscal year ending August 31st, 1918, amounted to $30,097.29, which shows a decrease of $833.58 over that of the previous year.

During the year the operations of your different Plants have been practically continuous, and the service has given satisfaction to our customers.

For the year ending August 31st, 1918, our revenue producing load was 22,359.6 H.P. as against 22,511.5 H.P. for the previous year, thus showing a slight decrease in power consumption. In November and December, 1917, owing to a strike at the works of the Mining Company, the revenue producing load for the two months was only 25,323.8 H.P. If November and December had used the average of the months of the balance of the year the revenue producing load would have been 24,299.1 H.P., which would have given an increase over 1917 of 1,787.6 H.P. On account of coke shortage the power consumption in the Boundary Country was affected for part of October and up to the 19th November, this also causing a decrease in revenue.

Owing to the increased cost of producing gold the Consolidated M. & S. Co. have curtailed shipments from their Rossland Mines, the resuming of which depends upon the question of when they feel they can again produce this product with satisfactory results.

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.

The completion of the Company's extension to Northport, Washington, has been delayed owing to the great difficulty of getting the necessary apparatus and supplies in the United States. It is expected, however, that this work will be ready for operation on the 1st November, when our contract with the Northport Smelting and Refining Company for the supply of 1,500 H.P., will come into force.

Work on the Copper Mountain line is under way and is being pushed as rapidly as the labor situation will permit, and it is hoped that service will be commenced by next autumn; the Company being under contract to supply the Canada Copper Corporation up to 5,000 H.P.

I have much pleasure in stating that our Staff throughout is all that can be expected when taking into consideration the conditions under which we are operating.

L. A. CAMPBELL,

Vice-President and General Manager.

WEST KOOTENAY POWER & LIGHT COMPANY, Limited

Profit and Loss Account, August 31st, 1918

1918 Aug. 31.	To Operating Expenses for the year including maintenance, repairs, etc.		$ 181,891.85	
	" Interest on Bonds (W.K.P. & L. Co.)	$90,000.00		
	" Sinking Fund (W.K.P. & L. Co.)	14,400.00		
			104,400.00	
	" Interest on Bonds (C.W.P. & L. Co.)	$13,500.00		
	" Sinking Fund (C.W.P. & L. Co.)	4,063.50		
			17,563.50	
	" Interest Account		4,222.96	
	" Premium on Bonds		172.87	
	" Depreciation on Plant		93,274.00	
	" Dividend Preferred Shares	$ 28,000.00		
	" Dividend Common Stock	155,000.00		
			183,000.00	
	" Adjustments		196.92	
	" Balance carried forward		463,496.07	
			$1,048,218.17	

1917 Aug. 31.	By Balance brought forward	$ 433,398.78
1918. Aug. 31.	" Gross Revenue for the year	614,819.39
		$1,048,218.17

Balance Sheet, August 31st, 1918

ASSETS

Plant, Buildings, Real Estate, Pole Lines, Autos, Furniture, and Fixtures	$3,892,485.25	
Merchandise, Instruments and Food Supplies	69,299.17	
Unexpired Insurance and Taxes	7,884.78	
		$3,969,669.20
Cash on hand	4,145.38	
Accounts Receivable	53,686.32	
South Kootenay Water Power Co.	89,096.47	
Rossland Water & Light Co.	346.27	
		147,274.44
Investments in other Companies controlled or owned by this Company		503,226.21
Expended in Redemption of Bonds for Sinking Fund	222,499.80	
Royal Trust Co.	7,001.58	
		229,501.38
Capital Expenditure, Rossland Water & Light Co.		22,141.13
		$4,871,812.36

LIABILITIES

Accounts Payable	$ 18,840.77	
Bills Payable	30,000.00	
Royal Bank of Canada	154,385.17	
Cascade Water P. & L. Co.	15,557.60	
Amount reserved to provide for Sinking Fund, Premium on Bonds, Dominion Taxes and Dividends on Common Stock and Preferred Shares as at 31st August, 1918	60,031.37	
		$ 278,814.91
Bond Account	$1,500,000.00	
Preferred Shares	400,000.00	
Common Stock	2,000,000.00	
Sinking Fund	229,501.38	
Balance at credit of Profit and Loss Account	463,496.07	
		4,592,997.45
		$4,871,812.36

Verified,
THOS. S. GILMOUR,
Auditor.

F. E. McNALLY,
Secretary-Treasurer.