BRITISH COLUMBIA

HINANCIAI LIMES

A Journal of Finance, Commerce, Insurance, Real Estate, Timber and Mining

Vol. VI. No. 2

VANCOUVER, JANUARY 18, 1919

SINGLE COPY 10e THE YEAR \$2.00

British Columbia and Iron and Steel Industry

Dr. Stansfield's Report Shows Electro-Smelting Process, With Pre-concentration of Ore, Hold Out Most Promise for Prompt Establishment of Industry.

Dr. Alfred Stansfield, Professor of Metallurgy in McGill University, under the order of the Provincial Government has been investigating the possibilities of the establishment of an iron and steel industry in British Columbia. He has recently presented his report to the Hon. William Sloan,

Minister of Mines, which has been made public.

Dr. Stnasfield has made a comprehensive report of the materials at hand, which report is a very interesting and valuable basis for the consideration of this problem which is fraught with such large possibilities for provincial development. His conclusions are very carefully worked out, and are deserving of the closest scrutiny and study. Without having had an opportunity of investigating the iron ore resources of the Province, he accepts the existing reports as to the amount, the sources of iron ore occurrence in the Province, and on that basis analyzes the ores with a view to determining their metallurgical treatment.

At the beginning of his summary of conclusions he states that the iron ore of the Province, being of a general magnetite variety, are unsuitable without mixing for blast furnace treatment. Since these magnetites would have to be mixed with hematites, which are not known as yet to exist in commercial quantities in the Province, he decides not to take into consideration the

matter of importation of these ores from elsewhere, with a view to the establishment of blast furnace treatment. In consequence he devotes his entire attention to the matter of the electrical furnace process, with consideration of the

costs, materials, labor, markets, etc.

Dr. Stansfield takes as his premise the acknowledged fact of the existing iron ore resources, that there is available 50,000 tons per annum of iron ore possessing from 50 to 55 per cent. of iron content, and is practically free from phosphorous and titanium, and is well within the Bessimer limit of sulphur content. He estimates that this ore could be delivered at a suitable smelter site at a cost, under present conditions, of \$4.00 per net ton.

Since the electric process is the only process that holds out any hope of developing the iron industry, this process is determined by the quantity and cheapness of electric power. The available amount of power, Dr. Stansfield is assured, is large, and can be produced at a cost of \$10 per k.w. year. He, however, takes into consideration the price of \$15 per k.w. year as one that will admit of economic handling of the electric furnace process. the large power companies now operating will not make

a price less than one-half cent per k.w. hour, which causes considerable concern as to immediate steps to be taken for the erection of an electric fur-

Dr. Stansfield points out that charcoal in the electric furnace process for the treatment of the ore, is available in large quantities at cheap prices. He estimates the net cost of charcoal, using Douglas fir waste, delivered at the smelter, at from \$6 to \$8 per ton, which, in the treatment of the ore, would cost from \$2.40 to \$4.00 per ton of pig iron produced. He states that charcoal is superior to coke on acount of its higher carbon content, and, on account of its cheapness, would considerably aid the electric furnace process.

Dr. Stansfield regards the labor situation as fairly good, and could be adequately handled when the demand arose. He states that the labor cost for the production of pig iron would be from \$4 to \$5 per ton. The location of the plant must be established with low transmission loss, and at the same time be near the larger markets. He thinks that, under existing conditions, there is a

consumption of iron and steel of between 20 and 30 tons per day, which would grow as the industry developed. Existing prices for foundry pig vary between \$60 and \$80 per long ton, as against the pre-war price of \$25 per ton. He presumes that foundry iron will not fall below \$35 per ton in the location of Vancouver for the next few years.

The Professor reviews the existing type of electric furnaces and points out their adaptability to British Columbian conditions. The establishment of a Swedish furnace plant, consisting of three electric furnaces of 3,000 k.w. each, producing a total of about 80 tons pig iron daily. would cost from \$350,000 to \$400,000 to erect in British Columbia. With the establishment of such a plant, and

BRITISH COLUMBIA AND IRON AND STEEL INDUSTRY

RESEARCH TO RELATION OF SCIENTIFIC INDUSTRY

POSSIBILITY OF DISTURBING INSURANCE LEGISLATION

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assuming that electric power costs \$15 per k.w. year, pig iron could be produced at a price of \$29.75 per long ton. If, on the other hand, power would need to be purchased from the existing companies at the offered rate of one-half cent per k.w. hour, then the cost of producing pig iron would be approximately \$40.50 per ton, which leaves little margin under the probable conditions which will exist shortly, and, under the estimate of \$35 per ton for the next few years, would preclude its economic operation.

On the other hand, Dr. Stansfield submits the possibility of the treatment of the ore with the concentration of its iron content by means of the electro-magnetic process, and in this connection makes the following four-headed statement:

- 1. If the ore is of such a nature that, after breaking down to a size of about one inch, the ore can be concentrated magnetically so as to reject a large part of the gangue, it will usually pay to do this before smelting.
- If the ore is so finely grained that it is necessary to crush it to a sand before magnetic dressing, there will be involved the cost of the fine crushing and also the cost of briquetting or sintering the concentrates to make them suitable for smelting.
- 3. In the case of an ore that does not contain over 50 per cent. of iron, if the ore lends itself readily to magnetic concentration so that very fine grinding is unnecessary and a clean separation can be obtained, the saving in the cost of smelting will probably pay for the cost of crushing, magnetic dressing, and sintering with sawdust on a Dwight-Lloyd machine. The ore will, incidentally, be improved by the removal of phosphorus and sulphur, and will be left in a condition more favorable for smelting.

4. If preliminary reduction of the ore is employed, the ore will have to be crushed to a coarse powder, and magnetic concentration will then form an essential step in the process; being applied either before or after the reducing operation.

Under these conditions the electric power needed for the final smelting of metallic powder would be less than one-third of that required for smelting the iron ore by existing methods, and it seems quite possible that the preliminary production of the ore, using waste wood or other cheap fuel, can be effected so cheaply that there will be a substantial saving on the whole process. In this regard it will be seen that but one operation will be necessary for the conversion of iron ore into steel, eliminating the intermediate step of pig iron. He estimates that the metallic powder could be produced at a cost of from \$15 to \$16 per ton and that foundry pig iron could be produced at a cost of from \$25 to \$26 with ingot steel at about \$30 per ton.

Dr. Stansfield continues: If it is found possible in practice, even to approach these estimates it will be clear that an electric iron industry can be undertaken immediately in British Columbia and in some other parts of Canada, and that the plants that are now employed for the electric smelting of iron ores may have to be remodelled. I must repeat, however, that, although the results indicated appear to me to be very probable, I have not as yet enough information to speak with entire certainty, and further experimental work must be undertaken before it would be safe to proceed to the erection of a plant.

The metallic powder can be made into steel equally easily, by smelting in electric furnaces, and steel ingots could be produced at a cost only a little higher than that of foundry iron-say at about \$30 per ton. This would render possible a large steel industry in British Columbia.

In view of the abnormal prices of products and supplies and the high cost and uncertainty of labor, it is almost impossible, at the present time, to arrive at any reliable conclusions with regard to the commercial side of a new industry. The high prices obtainable for iron and steel make the present time appear suitable for undertaking the

(Continued on page 17.)

Relation of Scientific Research to Industry

Chief of Advisory Council, Dr. Macallum, Outlines Need for Industrial Research, Benefits Which Industry Derives and Outline of Plans Proposed for Development.

The following interesting and illuminative summary of the work of the Canadian Council for Scientific and Industrial Research appears in The Toronto Globe's annual financial survey issued on January 2nd. Dr. A. B. Macallum, the administrative chairman of the Council, reviews the situation in Canada in regard to the application of science

to industry as follows:-

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"Re-construction and development" in Canada in the new era of international girding for supremacy in the arts of peace means to the Canadian Honorary Advisory Council for Scientific and Industrial Research much in so far as "development" is concerned, but little in regard to "reconstruction." Re-construction postulates the building up again of what existed before; and up to the outbreak of war there was constructed in Canada no national organization for research work. The glowing path of Canada's opportunity for industrial development runs wide and far, but the Council's research path has to be blazed through a comparatively unexplored forest. It is almost entirely new ground to be covered.

Where Germany and, though perhaps in lesser degree, the United States had builded before the war great organizations for industrial research founded on wide-visioned realization of the commercial value and necessity of applying science to industry, in Canada, as in Great Britain, state encouragement and individual enterprise had, until the war started, been content in the main with a laissez-faire policy. Germany had her trained technologists and research workers by the thousands in every field of industry, and, through the organized application of science to industry, was winning her trade victories in every foreign mart.

In the United States, which early took a leaf from Germany's book, the great universities like Harvard, Yale, Chicago, Columbia, and Cornell had staffs and equipments in pure and applied science, which kept pace or almost kept pace with the demand from great American industrial establishments for trained scientific investigators, chemists, electrical engineers, metallurgists, etc., to solve industrial research problems. The annual budget of the Massachusetts Institute of Technology, for instance, exceeded before the war, and still exceeds, the total of the annual expenditures of all the Faculties of Applied Science in Canada. There are some two thousand research laboratories in connection with large industrial concerns in the United States, and each of more than fifty individual firms expend annually sums ranging from \$25,000 to \$500,000 for research.

In Canada in a score of years less than twenty students have received the advanced (Ph.D.) degree in science from the University of Toronto and fewer still from McGill. Not two per cent. of Canadian firms have research laboratories and only about ten per cent. have routine laboratories, chiefly for the testing of materials. If Canadian industries were to seek for a supply of trained technical men capable of applying the most advanced scientific knowledge to industrial processes sufficient to meet even their most ordinary needs, the number of adequately trained men available would not be sufficient to satisfy five per cent. of the demand.

That, briefly put, is the situation with regard to the needs in Canada for equipment and men for research work. That is the situation which has confronted the Research Council since its creation in December, 1916. And that has been, and is, the crux of all the problems of scientific and industrial research in Canada, handicapping the carrying out of the large research programme planned for the past year and for the coming year, jeopardizing Canada's position in the international rivalry fro export trade and demanding prompt remedy if the full measure of our opportunity is to be grasped. In resources of capital and ma-

terials, in all the natural advantages for industrial supremacy we are in an enviable position as compared with our trade competitors. But in regard to the vital question of scientific organization of our industrial processes of finding new uses and, hence, new markets for the raw materials and the by-product sof manufacture, and of keeping pace with the advances made in other countries through research, we have as yet hardly touched the fringe of opportunity.

Confronted with this situation and with a slowly awakening public and individual realization of its portent, the main task of the Council this past year has been, while carrying on the immediate needs of research work with the means at hand, to pave the way for meeting adequately the urgent needs of the future. The goal has been a supply of trained men for research work, adequate equipment and facilities for research and the enlistment of industrial organization in co-operative effort to solve common problems, the solution of which lies in the application of science to industry. The great frward step taken has been to promote the establishment of a Central Research Institute at Ottawa, combining the functions of the Bureau of Standards at Washington and of the Mellon Institute at Pittsburg.

The proposal for such an Institute, submitted to the Government in November last, was the result of many months' careful investigation by the Council. In view of the situation above outlined, the argument advanced in support of it is so obvious as to need no restatement here. There has been a prompt and appreciative response to the proposal by the Government and by all the public interests concerned. There is good reason to believe that the Institute will be established without any unnecessary delay. It will involve an expenditure of \$500,000 for a four-storey building, having initial provision for fifty laboratory rooms, and with plans so drawn as to provide for expansion as the needs develop. The cost of the scientific equipment is estimated at \$100,000, and the cost of maintenance, salaries, etc., at about \$100,000 per annum for the first few years.

The establishment of the Institute is the necessary first step towards placing industrial research work in Canada upon an adequate and permanent basis and towards enabling the Dominion to keep abreast of similar progressive methods in the United States, Great Britain, Japan, France, Australia, and our other trade competitors. It will, doubtless, be followed by the organization of trade guilds or associations for research in each branch of industry, formed to pool resources in solving common problems and to take advantage of the laboratory equipment and opportunity offered, under the Council's proposals, by the Government-maintained Institute.

A further necessary step will be the working out of the Council's plans for more adequate provision by the universities for the training of qualified scientific workers. In the more generous investment of state funds for this purpose, starting, say, with Toronto, McGill, and L'Ecole Polytechnique in Montreal, lies the hope of securing for the ensuing years of the world's strenuous and pitiless trade warfare the nation's leaders in scientific and industrial research.

Apart from these crucial phases of the work and aims of the Research Council, space permits of only passing reference to some of the many research problems already undertaken.

As a result of the Council's initiative, governmental action was taken in June last to secure federal co-operation with the governments of Saskatchewan and Manitoba in establishing a demonstration plant in the Souris coal areas of Southern Saskatchewan, to prove the commercial feasibility of carbonizing and briquetting the Western lignites for heating, in domestic furnaces. This year will see a plant established with an outlay of \$400,000 and an annual output of 30,000 tons of coal equal to the Pennsylvania anthracite and marketed in Regina or Moose Jaw at, at least, two

dollars per ton less than the imported anthracite is now costing. The success of the initial plant, about which there can be little doubt, will lead eventually to the development of the immense and little realized latent lignite resources of Saskatchewan and Alberta, relieve for Ontario and Quebec the present coal famine through limited American supply, and save to Canada the five or six milions of dollars now annually going to the United States for coal for the prairie provinces.

A systematic study of the rate of reproduction and growth of Canadian forest trees of the commercial species has been undertaken through scientific survey of some eighty square miles of an old cut-over lumber district on the Petawawa Military Reserve. The data being secured will in the course of a few years give, for the first time, the essential definite information enabling the Dominion and Provincial Governments to inaugurate on a scientific and practical basis a scheme of re-forestration paralleling the best results obtained in the past in Europe. Our forest wealth, now in danger of exhaustion through reckless waste and disregard of adequate conservation systems, can only thus be preserved a sa great and permanent national resource.

The tar fog research, initiated in 1917, has been continued with satisfactory practical results which will doubtless lead in the near future to the application to various plant sin Canada of a new electrical process for the recovery of valuable by-products now lost in the destructive distillation of coal, wood, etc. The research on sound measurements and fog signalling conducted in 1917 by Dr. Louis King of

The Standard Bank of Canada

QUARTERLY DIVIDEND NOTICE No. 113.

NOTICE is hereby given that a Dividend at the rate of THIRTEEN PER CENT. PER ANNUM upon the Capital Stock of this Pank has this day been declared for the quarter ending 31st of January, 1919, and that the same wil lbe payable at Head Office in this City, and at its branches on and after SATURDAY, the 1st of February, to Shareholders of record of the 23rd of January, 1919.

The Annual General Meeting of the Shareholders will be held at the Head Office of the Pank in Toronto, on Wednesday, the 26th of February next, at 12 o'clock, noon.

By order of the Board.

C. H. EASSON, General Manager.

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McGill also made further progress this year and forecasts a new type of sirens for use in the St. Lawrence River and Gulf. Research work connected with the recovery of industrial alcohol from the enormous sulphite liquor waste of our Canadian pulp mills points to the installation of recovery plants and the production in Canada, at decreased cost to consumers, of the alcohol increasingly needed for industrial

purposes and as a substitute for motor fuel.

There have been a score or more of other phases of industrial research initiated or continued during the year, each having a practical bearing on some branch of national production. More should and could be done, were trained men and money available. The Council's budget for the year has been under \$100,000. In Great Britain Parliament has recognized the need and the opportunity by creating a separate Department of Scientific and Industrial Research and ha svoted one million dollars per annum for five years to be expended by the Research Council. In Canada we, too, are learning the obvious lesson taught by Germany and already adopted by British industry. The path has been blazed for replacing rule of thumb methods in Canada by scientific investigation.

DOMINION REVENUES INCREASE

The present fiscal year will show heavy increases of revenues. For the nine months' period, ending December 31, according to finance department returns, current revenues totalled \$222,485,552, an increase of nearly \$32,000,000 over the same period of the year previous. For the month of December alone the revenue was \$28,552,723, an increase of practically \$8,000,000 over December, 1917. Despite prohibition, both excise and customs revenues have increased. Expenditures on consolidated fund account was last month \$16,547,263, as compared with \$17,361,674 in December, 1917. For the whole nine months' period, however, expenditure on the same account was \$124,539,099 in comparison with \$96,982,537 for the nine months ending December 31, 1917. The net debt was increased by \$22,799,237 during the month of December. It now is \$1,330,328,898.

IMPERIAL BANK GENERAL MANAGER RETIRES

Mr. E. Hay, General Manager of the Imperial Bank of Canada, has retired. Mr. William Moffatt, Assistant General Manager, and previously Chief Inspector, has succeeded him. Mr. Hay retires on account of ill-health. He was the close associate and able successor of the late D. R. Wilkie, President and General Manager of this bank, and one of the outstanding financial figures in the financial history of Canada.

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As a result of the vital importance to Canada that the foreign trade of the country should be extended to the greatest possible extent, the Royal Bank of Canada has made the most important announcement of plans for new branches that has yet been made by any of the larger Canadian banks. The Royal Bank has had twenty years' experience in the foreign fields of Cuba, West Indies and Central and South America. On this account it is especially equipped to handle foreign business and to help attract more of it to Canada. Following on a careful investigation extending over the past couple of years, the Royal Bank now announces that it will help to direct a larger amount of South American trade to the Dominion by the immediate establishment of important branches at Rio de Janeiro, Brazil; Buenos Ayres, Argentine and Montevideo, Uruguay.

As is well known in Canadian banking circles no Canadian capital has been required for the extension in foreign countries by the Royal as the foreign deposits at every point have always greatly exceeded the foreign commercial loans.

In addition, the Royal has concluded arrangements to open a branch at Paris, France, in order to secure for Canada a share of the commerce which is expected to develop.

FINANCIAL TIMES

A Journal of Finance, Commerce, Insurance, Real Estate, Timber and Mining

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VOL. VI. VANCOUVER, B.C., JANUARY 18, 1919

No. 2

Dr. Alfred Stansfield's report on the possibilities of establishing an iron and steel industry in the Province of British Columbia is the most valuable contribution that has been made on this important subject. The Provincial Government is to be congratulated on having selected such an able metallurgist to investigate this problem for it, and Dr. Stansfield is to be congratulated on his illuminating and adequate treatment of the problem in so far as the material submitted to him admitted. The report, which is lengthy, the general summary and conclusion of which is presented on the front page of this issue, is worthy of keen and intense study by both the Dominion and Provincial Governments and the mining interests as well as the people of British Columbia in general.

Dr. Stansfield will, perhaps, be criticized for his failure to treat of the blast furnace process. It, perhaps, has not been called to his attention that there exists in limited quantities bog iron deposits and other hematite occurrences in the Province. It must, however, be stated that the information is so circumstantial and scant with regard to these deposits that little consideration could be given to them. The known existence of magnetite and the development that has taken place on claims where this ore occurs. were the bases for him to disregard the blast furnace process and devote his attention to the electric furnace. The report is, on the whole, discouraging, and yet not without hope for a production of small capacity, which may yet lead to larger and more substantial operations.

Even by the establishment of the electric smelting process, Dr. Stanfields points out that, at the present cost of electric power, the cost of production would yield little profit, if any, but if a process can be worked out—and a process which he points the way for a beginning to be made in iron and steel production—being a process of powdering the iron ore and concentrating it by the electro-magnetic method, then the electric smelting process can be established under the present high price of electric power at a price which would enable it to compete in the provincial market against eastern and imported iron and steel.

We think it highly desirable that the way which Dr. Stanfield has shown should be tried out, with the assistance

The services of this journal are offered through an inquiry column, which is open to subscribers and the public generally without charge, for detailed information or opinion as to financial or industrial affairs or institutions throughout the Province of British Columbia. Wherever possible the replies to these inquiries will be made through this column. Where inquiries are not of general interest, they will be handled by letter. We think that we can assure our readers that the opinions expressed will be reliable and conservative, and that all statements will be as accurate as possible.

of both the Provincial and Dominion Governments, probably working through university or other experimental laboratories. The matter is very important and, we belive, should receive the immediate consideration of those capable of carrying on these experiments, so that as soon as possible some start may be made in this direction.

If the recent election in Vancouver is any indication of the way the wind blows, it will be very difficult for any municipal council to secure authority to borrow money and spend the proceeds on public improvements, at any rate until the financial situation has cleared, or the ratepayers feel they can stand an increased burden of taxation. The defeat of the money by-laws in Vancouver was emphatic, large majorities were registered against their approval. It is worthy of note that the ratepayers of Vancouver used discrimination in passing the transfer by-law, which involves authority to use money for another purpose than was previously approved. This involves simply a book-keeping entry and does not give authority to borrow money. It was feared that the overwhelming sentiment against borrowing further funds was such that this transfer, which was highly desirable, would be swept aside in the general condemnation.

The election points out two conclusions, either one of which, or both, might have led the ratepayers to vote against the money by-laws. The one consideration was probably that the ratepayer found that his taxes were sufficiently high and all that he chose to bear, and therefore he would countenance no increase to his municipal burden. This same consideration might also have actuated a large number of those who are not paying their taxes in the same way, that they did not wish to increase the burdens which they hope at some future date to discharge.

The other consideration may have been that the ratepayers who pay their taxes wished to register a protest against the defiance of the best interests of the city in refusing to hold a tax sale. These ratepayers probably argued to themselves that, since the last municipal council had proved so recreant in their duties to the financial interests of the city, they were not worthy to be entrusted with the custody of increased funds, which would involve a larger amount of scrutiny and management. ESTABLISHED 1875

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54th Annual Statement—30th November, 1918

The Fifty-fourth Annual Meeting of the Shareholders of the Union Bank of Canada was held at the Head Office of the Bank in the City of Winnipeg, at twelve noon, on Wednesday, the 8th instant.

The President, Mr. John Galt, in the chair.

Directors' Report

The Directors have pleasure in presenting their report showing the result of the business of the Bank for the year ending Novem-

During the year, owing to the depletion of the staff caused by enlistment for miltairy service, the following offices were closed: Coatsworth, Eastons Corners and Toledo, in the Prov. of Ontario; Adanac, Guernsey, Jansen, Major, Netherhill and Salvador, in the Province of Saskatchewan; or which all except Adanac have since been reopened.

The number of Branches and Agencies in operation on Novem-

ber 30th, 1918, was 299.

The usual inspection of all Branches and Agencies has been made.

Mr. S. E. Elkin, M.P., of St. John, N.B., has been elected to fill a vacancy on the Board of Directors.

JOHN GALT, President.

Profit and Loss Account Balance at credit of account, 30th November, 1917...... Net profits for the year, after deducting expenses of management, interest due depositors, reserving for interest and exchange, and making provision for bad

and doubtful debts, and for rebate on bills under dis-..... 824,174.56 count, have amounted to

\$930,798.90

Which has been applied as follows:

Dividend No. 124, 21/4 per cent., paid 1st March, 1918.......\$112,500.00 Dividend No. 125, 21/4 per cent., paid 1st June, 1918....... 112,500.00 Dividend No. 126, 21/4 per cent., paid 3rd September, 1918 112,500.00 Dividend No. 127, 21/4 per cent., payable 2nd Dec., 1918.... 112,500.00 Transferred to Rest Account 200,000.00 Contribution to Officers' Pension Fund 10,000.00 Contribution to Halifax Relief Fund Contribution to Canadian Red Cross, Manitoba Branch.... 5,000.00 Contribution to Young Men's Christian Association Over-3.000.00 Contribution to Salvation Army Overseas 2,000.00 Contribution to Belgian Relief Fund 1.000.00 Contribution to Knights of Columbus, Army Hut Appeal 1,000.00 Contribution to Navy League of Canada, Sailors' Week 2.500.00 War Tax on Bank Note Circulation to 30th November, 1918 50,000.00

Balance of Profits carried forward...... 126,298.90

\$930,798.90

General Statement of Liabilities and Assets

AS ON 30TH NOVEMBER, 1918

LIABILITIES

Capital Stock		5,000,000.00
Balance of Profit and Loss Account carried forward	126,298.90	
	\$3,726,298.90	
Unclaimed Dividends		
Dividend No. 127, payable 2nd December, 1918	112,500.00	3,849,060.33
Harrist and the second and the second		8,849,060.33
Notes of the Bank in circulation 12,7	134,649.00	
Deposits not bearing interest	305,207.86	
	437,490.47	
	124,601.94	
Balances due to Banks and Banking Correspondents elsewhere than in Canada 1,		
- The control of the		41,553,127.02
Acceptances under Letters of Credit		2,706,467.06
Liabilities not included in the foregoing		72,797.11
	\$1	53,181,451.52
ASSETS		
Gold and Silver Coin	940,446.58	
Dominion Government Notes15,	113,307.00	
- William - Will	\$	16,053,753.58
Deposit with the Minister of Finance for the purposes of the Circulation Fund		260,000.00
Deposit in the Central Gold Reserves		7,800,000.00
Notes of other Banks		763,793.00
Cheques on other Banks		3,817,392.16
Balances due by other Banks in Canada		92,051.67
Balances due by Banks and Banking Correspondents elsewhere than in Canada		2,933,356.72
Dominion and Provincial Government Securities not exceeding market value Canadian Municipal Securities, and British, Foreign and Colonial Public Securities	other	12,527,937.82
than Canadian		15,720,338.76
Railway and other Bonds, Debentures and Stocks not exceeding market value	d 04 - 3	2,501,824.71
Call and Short (not exceeding 30 days) Loans in Canada, on Bonds, Deb's an Call and Short (not exceeding 30 days) Loans elsewhere than in Canada	1 Stocks	6,508,728.64 3,389,150.00
		72,368,327.06
Other Current Loans and Discounts in Canada (less rebate of interest)		74,021,028.40
other Current Loans and Discounts elsewhere than in Canada (less relate of inte	rest)	1 944 112 25
Real Estate other than Bank Premises		268,152.80
Mortgages on Real Estate sold by the Rank		141,656.39
Overdue Debts, estimated loss provided for		327,941.58
Dank Fremises, at not more than cost loss amounts written off		1,237,606.70
Liabilities of customers under Letters of Credit, as per contra		2,706,467.06 166,159.28

Report of the Auditors to the Shareholders of the Union Bank of Canada

In accordance with the provisions of subsections 19 and 20 of Section 56 of the Bank Act, we report to the Shareholders as follows:

We have audited the above Balance Sheet with the Books and Vouchers at Head Office and with the certified returns from the branches.

We have obtained all the information and explanations that we have required, and are of the opinion that the transactions of the Bank which have come under our notice have been within the powers of the Bank.

In addition to our verification at the 30th November, we have, during the year, checked the cash and verified the securities representing the investments of the Bank at its chief office and principal branches and found them to be in agreement with the entries in the books of the Bank relating thereto.

In our opinion the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the affairs of the Bank, according to the best of our information, and the explanations given to us, and as shown by the books of the Bank.

> T. HARRY WEBB, E. S. READ, C. R. HEGAN, Auditors, of the firm of

> > WEBB, READ, HEGAN & CO., Chartered Accountants.

Winnipeg, 20th December, 1918.

Established 1887

PEMBERTON & SON

Bond Dealers

Pacific Building

Vancouver, B. C.

Representatives

WOOD, GUNDY & CO., TORONTO

The General Administration Society

Associated with and under the same management as

Credit Foncier Franco-Canadien

With full power to transact a General Trust Business Head Omce, Mondouver
British Columbia Branch, Vancouver
A. C. STIRRETT,
Manager.

850 Hastings Street West.

The Toronto General Trusts Corporation

Assets under administration: \$83,286,782. TRUSTEES EXECUTORS FINANCIAL AGENTS

British Columbia Advisory Board: A. H. Macneill, K.C., (chairman) and Eric W. Hamber of Vancouver, and R. P. Butchart and F. B. Pemberton of Victoria.

BRITISH COLUMBIA OFFICE :

407 Seymour Street H. M. FORBES, Manager

Vancouver, B. C.

A SECRETARY-TREASURER FOR VARIED INSTITUTIONS

Fraternal Societies, Hospitals, Colleges, Churches, Charitable Bodies and other like institutions, may be afforded much relief in their care of finances and other business details by using the Standard Trusts Company's

THE STANDARD TRUSTS COMPANY

833 HASTINGS ST. WEST

VANCOUVER, B. C.

Colonial Trust Company

INCORPORATED 1909 Registered in the Province of British Columbia and Alberta Solicitors introducing business to this Company are

retained in the professional care thereof. An estimate of the Company's charges for acting in any of its capacities will be gladly given.

Head Office: 1221 Douglas St., Victoria Cable Address: 'Conall'

Prudential Trust Company, Limited

Head Office, Montreal

EXECUTORS, TRUSTEES, ADMINISTRATORS RECEIVERS, LIQUIDATORS, ETC.

British Columbia Branch: Vancouver A. E. PLUMMER, Manager 456 Seymour Street

Canadian Financiers Trust Company

Incorporated 1907. First Company to Obtain Registration Under the B. C. Trust Companies' Act. (Certificate No. 1).

Executor, Administrator, Trustee under Wills, Mortgages Marriage Settlements, Receiver, Liquidator and Assignee. Fiscal Agent to B. C. Municipalities. Agent for Real Estate and Collection of Rents, Insurance and Investment.

Vancouver, B. C. 889 Hastings St. W Enquiries Invited

General Manager, LT.-COL. G. H. DORRELL

EXTRA-PROVINCIAL COMPANY LICENSED

"Canadian Johns-Manville Company, Limited;" head office, Montreal, Quebec; Provincial head office, 511 Winch Building, Vancouver; John Payne, manager, is attorney for the Company....\$2,500,000

PROVINCIAL COMPANIES INCORPORATED

Hutchinson Securities, Limited, Vancouver\$	100,000
The Nippon Trading Company, Limited, Vanc'r	30,000
Commercial & Financial Corporation, Limited,	
Victoria	25,000
Discovery Mining and Power Company, Limited,	
Prince Rupert	20,000
Clayoquot Fisheries and Cold Storage Limited,	100,000
Smithers Club, Limited, Smithers	10,000
Brenton S. Brown, Limited, Vancouver	20,000
Pacific Marine Engineering Company, Limited,	20,000
Vancouver	10,000
Ritherdon Packing Company, Limited, Nanaimo	20,000
Abbotsford Lumber, Mining and Development Co.,	20,000
	,000,000
Tillitock, 1200 to the control of	50,000
Wallace Mountain Mines, Limited, Penticton Redonda Iron Copper Company, Limited (N.P.L.)	00,000
	100,000
Vancouver Limited Vancouver	20,000
Argyle Investment Company, Limited, Vancouver	20,000
Canadian-Siberian Exploration and Development	50,000
Company, Limited, Vancouver	10,00
Village Bay Logging Co. Limited, Vancouver	300,000
British Columbia Breweries, 1918, Liimted, Vanc'r	300,000
Mountain Chief Mining Company, Ltd. (N.P.L.)	50,000
Nelson Limited	30,000
Hotel Laundry and Supply Company, Limited,	25 000
Vancouver	25,000
Victoria Estates, Limited, Victoria	750,000
-	

TRUST COMPANY REGISTERED

Trust Companies Act—Certificate No. 36

The Interior Trust Company of Winnipeg, Manitoba, has been registered under the Trust Companies Act of British Columbia. The chief office in the Province is Victoria. Mr. H. H. Rowley, Victoria, is the attorney for the company.

COMPANY CEASING BUSINESS

The "Hoosier Manufacturing Company of Newcastle, Indiana," has ceased to carry on business in British Colum-

"The Canadian H. W. Johns-Manville Co., Limited," has ceased to carry on business in British Columbia.

COMPANY CANGES NAME

The Drum Lummon Copper Mines, Limited, 1115 Dominion Building, Vancouver, has applied for change of name to "Drum Lummon Mines, Limited."

The J. S. Penny Company, Limited, has applied for change of name to "Premier Timber & Trading Company, Limited."

ASSIGNMENTS, CREDITORS' NOTICES, ETC.

Charles D. Ashley, logging contractor, of Thurlow, has assigned to Donald B. McNeill, 207 Hastings Street, West, Vancouver.

We Buy and Sell

Dominion Government and Municipal Bonds

Bond Department BRITISH AMERICAN TRUST CO.

Phone Sey. 7620, 7621

Vancouver and Victoria

WINDING UP PROCEEDINGS

The Ruth Mines, Limited, has gone into voluntary liquidation. George A. Mitchell and Thomas B. R. Scott, of 2 Suffolk Lane, London, E. C., England, are the joint liquidators.

At an extraordinary general meeting of the Nanaimo Gas and Power Company, Limited, special resolutions were passed calling for the voluntary winding up of the Company and the appointment of Fred. G. Peto, Accountant, Nanaimo, as liquidator.

COMPANIES TO BE STRUCK OFF PROVINCIAL REGISTER.

(Continued from January 4th issue.)

The Registrar of Joint Stock Companies has published in the British Columbia Gazette the following list of companies which have not replied to registered letters addressed to them, or have failed to fulfil the lawful requirements of the Registrar or have notified the Registrar that they are not carrying on business or in operation. These companies will, at the expiration of two months from December 19th, 1918, unless cause is shown to the contrary, be struck off the register and the company will be dissolved:

Companies Incorporated Under the "Companies Act, 1910."

Pacific Market Gardens, Limited. ,

Pacific Properties, Limited.

Palmer & Von Graevenitz, Limited.

Panama Silver Mining Company, Limited (N.P.L.).

Peachland Lumber and Manufacturing Company, Limited.

Pelton Garter Company, Limited.

Phoenix Investment Company, Limited, The.

Pier Island Syndicate, Limited.

Plester Livery Company, Limited.

Port Haney Poultry Ranch, Limited.

Port Mann Properties, Limited.

Port Moody Building and Trading Company, Limited, The.

Port Moody Sand & Gravel Co., Limited.

Prince Rupert Grain Exchange, Limited.

Prince Rupert Planing Mills, Limited, The.

Progress Mining Company, Limited (N.P.L.).

Queen's Hotel, Limited.

Red Mountain Mining Company, Limited (N.P.L.).

Reliance Sash and Door Co., Limited.

Rennell Sound Development Company, Limited.

Royal Theatre Company, Limited, The.

Saanich Inlet Land Company, Limited.

Sacramento Mines Company, Limited (N.P.L.).

Salmon River Mining and Smelting Company, Limited (N.P.L.),

r

Scientific American Compiling Department, Limited.

Scouller Sheet Metal Company, Limited.

Selwyn Investment Company, Limited, The.

Seymour Apartments, Limited.

Shamrock and Rose Boarding and Sales Stables, Limited, The.

Sheep Creek Land Company, Limited, The.

Silica Sand & Gravel Company, Limited.

Silver Island Mining Company, Limited.

Similkameen Power Company, Limited.

Siwash Creek Mines, Limited (N.P.L.).

Slocan-Payne Mines, Limited (N.P.L.).

Southern British Columbia Orchards, Limited.

Star Scenic Studio, Limited.

Stickney Furniture Exchange, Limited, The.

St. Margaret's School Site Company, Limited.

Sunset Irrigation and Power Company, Limited, The.

Sunset Lumber Company, Limited.

Swedish Club, Limited, The.

Tamerton Ranch Company, Limited.

Technical Manufacturing & Supply Company, Limited.

Teta River Mining Company, Limited (N.P.L.).

Thomas Catterall Company, Limited, The.

Trail Curling Association, Limited, The.

Transcombe Valley Orchard & Poultry Company, Limited, The.

Tsimpsean Fish Company, Limited.

Tudhope Motors, Limited.

Tulameen Gold and Platinum, Limited (N.P.L.).

United Buildings Corporation, Limited.

University Sanitary Cooler Company, Limited.

Utility Can Manufacturing Company, Limited.

Van Anda Water Company, Limited.

Vancouver Art China Company, Limited.
Vancouver Coffee & Tea Company, Limited.
Vancouver Discount Company, Limited.
Vancouver Discount Company, Limited.

Vancouver Estates, Limited. Vancouver Island Farm Company, Limited, The.

Vancouver Lacrosse Club, Limited. Vancouver Marble and Tile Company, Limited. Vancouver Milling & Grain Company, Limited.

Victoria Hotel Company, Limited. Victoria Shingle Mills, Limited. Walter Hayes & Co., Limited.

Ward Investment Company, Limited.
W. C. Fry, Limited.
Webster Bros., Limited, The.
Western Canada Motors, Limited.

Western Canadian Realty Investment Company, Limited.

Western Farming and Colonization Company, Limited, The.

Western Plumbing & Supply Company, Limited, The. Western Provinces Co-operative Realty Company, Limited.

Western Sash and Door Factories, Limited.

Westminster Thoroughbred Association, Limited, The.

West Pacific Canning Company, Limited.
West Vancouver Stores and Trading Company, Limited.
Whatshan Lake Land Company, Limited.
White Island Sulphur Company, Limited.
Wilmer Water Works Company, Limited, The.

Windsor Hotel Company, Limited.

W. J. McMillan & Co. (Prince Rupert), Limited.

Yellowhead Pass Light and Power Co., Limited.

Provincial Forestry Returns for November, 1918

TIMBER SCALED IN BRITISH COLUMBIA IN MONTH OF NOVEMBER, 1918.

Districts	Douglas	Red			Balsam	Yellow	White	Jack		Cotton-	
Cranbrook	Fir	Cedar	Spruce	Hemlock		Pine	Pine	Pine	Larch	wood	Cypress
Cranbrook	1,159,115	778	***************************************		10,568,788	953,458		2,001	938,729		
Fort George	165,655	142,820	3,687,650	10,977	650,393			19,000		65,243	
		162,212	120,562	17,884	5,444	6,246					***************************************
	T OTT AME	2,324,109	138,987	1,269,325		1,190,372	780,674		1,364,273	809	
	363 006					641,052					
Total Interior	4 742 951	2,629,919	3,947,199	1,298,186	11,224,625	2,791,628	780,674	21,001	2,303,002	66,052	
Island	6,484,783	552,835	1,420,553	1,153,447	49,295		82,725		***************************************		***************************************
		1,406,944	15,358,235	2,218,007	1,091,732			***************************************			***************************************
Vancouver	41,588,198	20,811,703	5,799,017	8,107,824	1,565,513		242,054			224,312	230,463
Total Coast	48,221,577	22,771,482	22,577,805	11,479,278	2,706,545		324,779		***************************************	224,312	230,463
Total for B. C	52,965,328	25,401,401	26,525,004	12,777,464	13,931,170	2,791,628	1,105,453	21,001	2,303,002	290,364	230,463

Birch—Ft. George, 223; Nelson, 1,410;; total, 1,633.

Aspen—Ft. George, 428; total, 498.
Maple—Vancouver, 2,807; total, 2,807.
Total for British Columbia, all species—138,347,316

H. BELL-IRVING & CO. LTD.

INSURANCE

AND

Financial Agents

Represent The Caledonia and British Columbia Mortgage Co., Ltd., of Glasgow, Scotland

322 RICHARDS STREET

VANCOUVER, B. C.

WHAT THEN?

Should the PROP of your home be broken, the head of the house suddenly removed, WHAT THEN?

There are thousands of homes, happy and prosperous, where all goes smoothly and will continue so if the homebuilder lives to carry out his plans.

"IF"! There is the question! Should the unexpected happen, what then?

Happily there is a sure solution. However narrow one's circumstances, however difficult it may be to "get ahead" of the daily expenses, Life Insurance offers a safe and easy way of laying aside for the future.

The Great-West Life Policies provide Insurance on terms in every way attractive. Low rates of premium, liberal conditions, and exceptional profit returns to Policyholders are the reasons why thousands of the shrewdest men in Canada hold Great-West Policies.

Let us explain the best Policy for your needs.

The Great-West Life Assurance Co.

Dept. "D. 4." Head Office: Winnipeg

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Oldest Insurance Company in the World

AGENTS

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PACIFIC BUILDING VANCOUVER, B. C.

THE DOMINION OF CANADA GUARANTEE AND ACCIDENT INSURANCE COMPANY

(The Oldest and Strongest Canadian Casualty Company)

British Columbia Branch Canada Life Building, Vancouver

MACAULAY & NICOLLS General Agents Pacific Bldg., Vancouver

LIVERPOOL & LONDON & GLOBE INSURANCE CO., LTD.

INSURANCE General Agents

CEPERLEY, ROUNSEFELL & CO.

WINCH BUILDING, VANCOUVER, B. C. Losses Adjusted and Paid in Vancouver

"A CANADIAN COMPANY FOR CANADIANS"

The British Colonial Fire Insurance Co.

Head Office, Montreal AGENTS FOR B. C. Agents wanted in unrepresented districts.

Royal Financial Corporation, Limited

Seymour 4630

Vancouver, B. C.

RECENT FIRE LOSSES

Recent fire losses reported to Superintendent of Insurance, Victoria:

Vancouver, May 15, 1918.—Front and Columbia Streets; owner and occupant, J. Coughlan's Steel Shipyards. Value of ships, \$6,796,000; insurance on hulls, \$6,796,000; value of building, \$150,-000; insurance on same, \$122,500; value of contents, \$135,000; insurance on same, \$90,000. Total loss, \$1,561,204. Cause, acetylene tank exploding. Prot. Underwriters, Northwest Nat. Ins. Co. of Penn., New Jersey, Stuyvesant, Mount Royal, Merchants, London Mutual, National of Paris, National of Hartford, Phila. Underwriters Springfield, Prov.-Wash., Union of London, St. Lawrence, British Empire, London Assur., Connecticut, Norwich Union, Nat. Ben., Franklin, Millers National, Dominion, Boston Ins. Co. of N. Amer., Firemen's Fund, Royal Exch., Mechanics' & Traders, Scottish Union, Canada Acci., Palatine, Mer. Cantile, National Union, Phoenix of London.

Vacouver, May 15.—141 Front Street, west; owner and occupant, Watson & Ross, fish curing plant, frame. Vale of building, \$2,088; insurance on same, \$1,000; value of contents, \$16,897; insurance on same, \$7,000. Total loss, \$18,985. Cause, adjoining Coughlan. Boston, Minneapolis, Phoenix of London.

Burnaby, Dec. 17.—Government Street; owner, W. H. Sproule; occupant, R. J. McGivern; value of building, \$5,000; insurance on same, \$4,000; yalue of contents, \$4,000; insurance on same, \$4,000; yalue of contents, \$4,000; insurance on same, \$2,125.

same, \$4,000; value of contents, \$4,000; insurance on same, \$2,125. Cause, defective flue. Firemen's Fund, Guardian.

PACIFIC COAST INSURANCE MANAGER RETIRES

Mr. James C. Johnston, manager for the Pacific Coast of the Insurance Company of North America, after a service of 44 years in the insurance business, of which 37 years have been devoted to the service of the North America Company, has retired. He is succeeded by Mr. McClure Kelly, Assistant General Manager at San Francisco. Mr. Kelly has recently made a tour of inspection of the Province in company with his special agent, Mr. Horace Reed, well known in insurance circles in the Province.

R. P. RITHET & CO. LTD.

Established 1871

Wholesale Merchants, Shipping and Insurance Agents General Agents for British Columbia for Queen Insurance · Company

Provincial Agents for National Fire Insurance Company Wharf Street - - - - - Victoria, B. C.

The North West Fire Insurance Company

OF WINNIPEG

Guaranteed by

UNION ASSURANCE SOCIETY, LIMITED, OF LONDON, ENGLAND.

General Agents:

McGregor, Johnston & Thomas, Limited, Vancouver, B.C. Payne & Pitts, Victoria, B. C.

CANADA ACCIDENT ASSURANCE COMPANY

(Owned by the Commercial Union Assurance Company, Limited, of London, with assets of over \$159,000,000.)

Fullest facilities for agents in Fire, Automobile and all progressive Insurance Lines.

Branch Offices for British Columbia and Alberta

401-7 Bower Building, 543 Granville Street, VANCOUVER, B.C. A. W. ROSS, Manager.

The British Crown Assurance Corporation, Limited

Security Exceeds \$65,000,000

A. S. MATTHEW & CO, 509-511 Richards St., Vancouver General Agents, Province of British Columbia

FACILITIES UNEXCELLED

OFFICIAL ORGAN OF THE INSURANCE FEDERATION OF BRITISH COLUMBIA

Possibility of Disturbing Insurance Legislation

President of Insurance Federation in New Year's Greetings to Members, Points Out Necessity for Wholehearted Co-operation in Combating Inimical Legislation.

Mr. William Thompson, manager for Alberta and British Columbia of the London and Lancashire Fire Insurance Company, as president of the Insurance Federation of British Columbia has sent out to members the following careful presentation of conditions as a new year's greeting, which is in part:

'Every thinking man will admit that we will be inevitably faced with serious and far-reaching problems, as the result of the readjustment that has commenced, with the

"The newly formed Farmers' Association is advocating for the Dominion, inter-alia, a system of Life Insurance

for returned soldiers, who are physically unfit.

"Nearer home, Major (Dr.) McIntosh, M.P.P., advocates accident insurance for returned men and incapacitated soldiers in British Columbia that could, in his opinion, be added to the duties of the present Workmen's Compensation Board.

"The underlying principles are commendable, and worthy of our support. Is it not, however, only reasonable to suppose that, if the above schemes are inaugurated, and prove successful, that their scope will be enlarged at a later date, to the detriment of the insurance companies? Is it not, in the most insidious form, likely to prove the insertion of the thin end of the wedge? Would it not be fitting for us to at once impress upon the life and accident com-Panies the wisdom of their undertaking this necesary work at cost—no commission to be paid agents—as a patriotic duty to returned men as the primary motive; and the elimination of Governmental invasion of these important insurance fields, as the secondary consideration?

"It is clear that the war has introduced a new element into the business, and it is equally evident that this insurance must be available for those men who want to purchase 1t. I think that it would be a statesmanlike action for both the life and accident companies to immediately evolve some concrete plan, satisfactory to all interested parties, and offer their organizations to carry it out, on an absolutely cost basis. If delay occurs, there is grave danger that the schemes will become political issues, and the greatest opportunity in this age, to popularize corporate insurance, will

be lost.

'At the present time those in favor of State Fire Insurance are publishing in the Ontario papers the results of the New Zealand operations, laying stress upon the point that since the introduction of this competitive system in that country, rates, in some instances, have been reduced about 40 per cent.

'The object of this propaganda is clear-Governmental action has already been taken on this continent in regard to life, accident and marine insurance, and it is desired to create a favorable 'atmosphere' so that the fire business will be similarly treated. The New Zealand results are hardly a fair criterion by which to guide North America, where mercantile and industrial conditions are vastly different, and further, they forget entirely to mention places where the system has proved a failure.

"Our Federation is an organization of agents, and is essentially defensive, pledged to prevent, to our utmost, the passage of legislation inimical to the best interests of the insurance companies, which must, logically, also prejudicially, affect us. It is, therefore, doubly necessary for us now, when our business is likely to be continuously and unfairly attacked, to be ready to strike well home for the recognition and preservation of our rights, also to deal immediately and effectually with any emergency that may

arise.
"The ensuing year is likely to be a critical epoch in therefore, be alive to the insurance history, and we must, therefore, be alive to the issues. Insurance men do not ask for preferential treatment, but they are entitled to see that their business is not made a football of between political parties, each anxious to curry favor with those of the more aggressive of the So-

cialistic type.

'Threatened, as we are, by perils from within and without, I therefore specially appeal for your support of the vital defensive work of our federation, to the limit of your capacity; because we may be called upon at any moment to act as a unit, to insist upon the withdrawal of pending legislation framed—not because it was either necessary or fair—but merely that some one should gain political kudos by its introduction."

INSURANCE INSTITUTE MEETING

The Insurance Institute of British Columbia held its opening session of the season on Tuesday, January 14, in the board room of the Mainland Fire Underwriters' Association, in the Rogers Building. Mr. Fred Burgess, President of the Mainland Board, was in the chair, with an attendance of about 25 members. Mr. R. W. Douglas, of Douglas, Mackay & Co., delivered an address on the subject of "The Humorous Side of the Insurance Profession," which was very warmly received and heartily applauded. A resume of Mr. Douglas' address will be printed in our issue of February 1.

The Institute contemplates some very interesting meetings during the remainder of the winter and spring, which will be of exceptional value to the young men and women of the profession, and should enjoy the hearty support and co-operation of the various insurance offices in the city. The next meeting will be on January 28, when ex-Fire Chief Davis, of Victoria, wil give an address on the subject of "Experiences of a Fire Chief."

TO IMPROVE VICTORIA FIRE INSURANCE SERVICE

The Fire Chief of Victoria makes the recommendations

with regard to improvement of the service:

(1) That an up-to-date drill tower be built at the rear of the headquarters station, equipped with fire escapes and stand pipes, so that the members of the department can be thoroughly drilled in the various methods of fire-fighting and life-saving, as the present hose-tower is not well adapt-

ed for drill purposes.

(2) That the present contract with the Oak Bay Municipality for the response by No. 8 station to alarms of fire within the limits of Oak Bay be terminated. Chief Stewart's reasons are that owing to No. 3 station being closed, No. 8 station now covers a larger area of the city and also takes a share of filling in in respect to alarms, and that should an alarm be received while the No. 8 station is out in response to an alarm from Oak Bay it necessitates the response of the headquarters which is already short-handed.

(3) That No. 3 station be re-opened, it being in close proximity to the mercantile district as well as the shipipng interests on the waterfront, and this station would be a decisive factor in case of an outbreak of fire in those locali-

ties, according to the Chief.

(4) That steps be taken to obtain the use of a scow or float on which could be placed one or more of our steam fire-engines, so that the department may be enabled to fight possible fires along the harbor front.

The total loss by fire on buildings and contents for the year 1918 amounted to \$14,896.85, a decrease of \$136,982.46

when compared with the 1917 figures.

LONDON GUARANTEE AND ACCIDENT COY., LIMITED

WRITE

FIRE INSURANCE

FIDELITY GUARANTEE
ACCIDENT and SICKNESS
PUBLIC LIABILITY
AUTOMOBILE
TEAMS
ELEVATOR
COURT and CONTRACT BONDS

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Head Office for Canada:

TORONTO

General Manager for Canada:

GEO. WEIR

BRITISH COLUMBIA LOSSES SETTLED IN VANCOUVER

B.C. Rep.-J. H. WATSON, Ins. Agencies, Vancouver

303-306 ROGERS BUILDING, 470 GRANVILLE STREET VANCOUVER, B. C.

MARINE INSURANCE

AETNA INSURANCE COMPANY of Hartford, Connecticut

VANCOUVER INSURANCE AND VESSEL AGENCY, LIMITED

W. A. LAWSON, Managing Director British Columbia Agents:

Telephone Seymour 7540

Vancouver Block

Vancouver, B. C.

STRONG AS THE STRONGEST.

The Northern Assurance Company Limited

of LONDON AND ABERDEEN.

Established 1836.

Accumulated Funds over \$39,000,000.00

R. V. WINCH & CO., LIMITED

General Agents for Mainland

WINCH BUILDING

VANCOUVER

Telephone Seymour 279

INSURANCE ADJUSTER GOES TO SEATTLE

Mr. Carl E. Schlingheyde, of Richardson and Schlingheyde, insurance adjusters, Vancouver, will, on February 1st, establish himself in Seattle, Melhorn Building, and earry on the adjusting business from that centre. Mr. Schlingheyde is one of the best known and most popular insurance men in the Province, and he takes with him the cordial good wishes of the entire insurance fraternity.

ELECTION OF NEW WESTMINSTER ASSOCIATION

At the recent annual meeting of the New Westminster Fire Insurance Agents' Association, held in that city, Mr. Alfred W. McLeod was re-elected President; Mr. E. D. Sutherland, Vice-President; Mr. Stanley Tyler, Secretary-Treasurer; Messrs. St. Mark, J. J. Johnston, Joseph Dorgan, James Keary, and H. L. Hutton Executive Committee.

NORTH AMERICAN LIFE'S INCREASED BUSINESS

Received business by the North American Life for December, 1918, amounted to over \$1,700,000, the largest in the history of the Company; while the total amount of the applications received during 1918 amounted to over \$14,700,000, an increase of 16 per cent. over last year. The Nalaco Cup contest closed for the year with British Columbia agency winners under Manager E. W. Keenleyside. They hold the cup during 1919.

The Dominion of Canada Guarantee & Accident Insurance Company require the services of a capable salesman, who is a producer, in our personal accident department for the City of Vancouver. Apply to branch office, 640 Hastings Street, West, Vancouver.

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Union Insurance Society of Canton, Limited

Established 1835

FIRE

MARINE AUTOMOBILE

WESTERN CANADA BRANCH OFFICE, 309-313 Yorkshire Building, Vancouver, B. C. Telephone Seymour 616. C. R. Elderton, Branch Manager

Union Bank Annual Statement

The Union Bank of Canada added a further nine and three-quarter million dollars to its total assets during its fiscal year ending November 30th, for which the report is just issued, and this, notwithstanding that the balance sheet was made up after the Victory Loan payment date, with its heavy drafts upon the savings deposits; indeed, the amount of money in the savings accounts of this bank at November 30th last was five million less than the year before, a condition which is entirely due to the temporary effects of the loan subscription. The loss on savings was more than made up by the gain in non-interest-bearing deposits, which rose 14½ million dollars to \$58,805,208.

While the growth in the volume of assets was less striking than in recent years, the business was of a much more profitable character. It is noteworthy that the Union Bank is now finding itself free to make a very considerable expansion of its commercial loan business, and that there is, evidently, a plentiful demand for this kind of accommodation. Current loans in Canada are now 74 millions of dollars, an increase of 50 per cent. in two years, and an increase of over 15 millions since 1917. In spite of this loos-

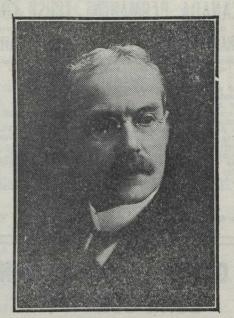


H. B. SHAW

The General Manager of the Union Bank of Canada. The 54th Annual Report covering the year ending November 30, 1918, shows nearly ten million added to Assets.

ening of the purse-strings towards general business, there is still a very strong reserve of liquid assets, totalling \$72,-368,327, against public liabilities of \$141,553,127, or over 51 Per cent.—a very ample ratio, though considerably below what was maintained during the later years of the war.

As a natural consequence of this more active state of the Bank's funds, profits were materially larger than in 1917. Before deductions for taxes and donations they amounted to \$824,175, as compared with \$763,464 in 1917, and \$651,184 in 1916. But the profits in 1917 and 1916 both were subject to a deduction of \$150,000 for contingencies or depreciation, while no such appropriation is necessary in 1918; so that it has been possible this year to transfer \$200,000 from profits to the Rest Account, bringing that account up to \$3,600,000, as well as writing off \$75,000 from bank Premises. This is the first addition to Rest Account made since the war began, and is a striking evidence of the earning power of the Bank under more normal conditions, with its present enlarged volume of assets. The earnings this



W. H. MALKIN, Vancouver, B. C.

Representing the Pacific Coast on the Directorate of the Union Bank of Canada.

year, after deducting war tax, pension fund and \$19,500 of donations are \$,744,675, which is at the rate of 8.8 per cent. on the combined Capital and Rest Account, a result which abundantly justifies the aggressive and enterprising policy of the directorate and management in the last few years.

BRITISH COLUMBIA SHINGLES EXPORTED

The exportation of shingles to the United States for the month of December, 1918, amounted to 136,343,200 shingles, valued at \$571,767. For the year 1918 British Columbia shingles were exported to the United States to an amount of 1,459,247,300 shingles, valued at \$6,154,321. For the year 1917 there were exported 1,411,420,000 valued at \$5,182,856. The increase, therefore, for the year 1918 was 47,827,300, with an increased value of \$971,465.

MONETARY TIMES ANNUAL

The Monetary Times, of Toronto, has just issued its Annual Number, which is replete with information, financial, industrial and insurance, as carried on in Canada. The review of the issue is carefully and comprehensibly recorded by authorities in the various lines. The statistics are inclusive of a wide variety of subjects and are very valuable to the student of current economic questions in Canada. This volume, which is an annual one, is fully up to the mark of recent issues and an extremely handy reference book for the desk of any business man.

The Standard Trusts Company, head office Winnipeg, Manitoba, with Vancouver branch at Metropolitan Building, has just issued a handy memorandum book as an advertisement which may be had on application to the head office or to the manager of the branch office. It contains valuable information as to the services which the trust company offers to the public and useful data of general information.

BAN AGAINST ISSUE OF SECURITIES RAISED

The order-in-council prohibiting the issue in Canada of bonds, debentures and other securities and shares of stock without the consent of the Minister of Finance, has been wholly repealed, and they may now be issued without wartime restrictions.

THE CANADA PERMANENT TRUST COMPANY

which is under the same direction and management as the CANADA PERMANENT MORTGAGE CORPORATION

will be pleased to serve you in any of the various capacities in which a Trust Company may be of service

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Executor or Trustee of an estate level.

Administrator
Agent for Executors or Administrators.
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Financial Agent for the Management of Property, Collection of Rents, Dividends, Coupons, or other income, or for the Investment of Moneys, etc.
Guardian or Trustee for the Estates of Minors, etc.
Committee of the Estate of Persons mentally afflicted.
Trustee for Bond Issues.
Transfer Agent and Registrar.
All Interviews and correspondence confidential

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RRITISH COLUMBIA BRANCH:

Vancouver

432 Richards Street
Manager, GEORGE L. SMELLIE

THE GREAT WEST PERMANENT LOAN COMPANY

Paid-up	Capital	\$2,410,925.31
Reserve		685,902.02
Assets		7,426,971.18

4% Paid on Deposits withdrawable by Cheque.

One of the best Authorized Investments for Trust Funds is our $5\frac{1}{2}$ per cent. Debentures.

Head Office: WINNIPEG Vancouver Office: ROGERS BUILDING R. J. POTTS, Manager.

The London Assurance Corporation

Paid \$7,600,000.00 gross losses arising from the San Francisco conflagration. This is a much greater amount than paid by any other company operating under a single name in this or any other conflagration and stands without parallel in the history of insurance.

Law Union & Rock Insurance Co. Ltd.

has the largest excess of assets over liabilities IN CANADA of any fire insurance company in the world.

AGENTS

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Vancouver Financial Corporation, Limited

R. Kerr Houlgate, General Manager

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PROVINCIAL GOVERNMENT TO ISSUE LOAN

The Provincial Govenrment will shortly call for tenders for a \$3,000,000 bond issue, to take up a loan made by the Province of British Columbia to the Dominion Government. This loan costs the Province 61/2 per cent. interest, and the Province is under obligations to make a public flotation when the financial situation has sufficiently improved to enable the Province to obtain a lower rate of interest. This time has arrived, and the Hon. John Hart, Minister of Finance, will test out the market. It is hoped, when the issue is made, that British Columbians will largely participate.

The Province of Alberta sold to Messrs. Wood, Gundy & Company and A. E. Ames & Co., of Toronto, an issue of one million dollars of twenty-year, five and a half per cent. bonds at \$99.14 and accrued interest. This is considered a remarkable good figure, and indicates an improved condition in the investment market.

PREPARATION FOR INCOME TAX RETURNS

A despatch from Ottawa states that the Department of Finance is making arrangements for the collection of the increased income tax which was enacted by legislation last session. Under this bill returns must be filed by February 28, 1919, and provide for taxation on the income of 1918. The increased income tax provides for taxation on incomes of unmarried men over \$1,000, and on married men of over \$2,000. There is provision for exemption of \$200 per child. The taxation from \$2,000 to \$3,000 is 2 per cent., and is graduated upwards. There is a super tax on incomes over \$6,000.

The income tax for the past year has brought in from eight to ten million dollars. The increased tax, it is estimated, will double this amount. The machinery is being gradually perfected for the collection of the tax, but it takes time to perfect such organizations. In the United States it was several years before the income tax could be properly collected. It is taken for granted that the income tax will be permanent and it is not believed in Ottawa that the law will ever be repealed.

It is doubtful, though, whether the business tax will be reimposed at present unless the law is re-enacted. The tax does not apply after December 31, 1918.

A. E. AUSTIN & CO.

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London Building

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ance Co.

We respectfully solicit a share of your business.

MACAULAY & NICOLLS

Vancouver, B. C. 746 Hastings Street West Telephone Seymour 8010-8011

Recent Annual Reports

Annual Statements Filed with the Registrar of Companies, Victoria, B. C.

OKANAGAN LOAN & INVESTMENT TRUST COMPANY Trust Companies Act—Certificate No. 2 Registered Office, Belgo-Canadian Block, Kelowna Balance Sheet as at June 30, 1918: LIABILITIES— Guaranteed Mortgage with accrued interest	
Registered Office, Belgo-Canadian Block, Kelowna Balance Sheet as at June 30, 1918: LIABILITIES— Guaranteed Mortgage with accrued interest. \$ 35,331.3 Trust Accounts	LIABILITIES— Debenture Stock authorized, £1,600,000. Debenture Outstanding
LIABILITIES— Guaranteed Mortgage with accrued interest. \$ 35,331.36 Trust Accounts 19,772.96 Deposit Accounts 13,285.55 Sundry Creditors 4,580.83 Contingent Reserve for Losses 34,834.66 Capital Authorized, \$500,000.	Debenture Stock authorized, £1,600,000. Debenture Outstanding
Guaranteed Mortgage with accrued interest \$35,331.30 Trust Accounts 19,772.90 Deposit Accounts 13,285.50 Sundry Creditors 4,580.80 Contingent Reserve for Losses 34,834.60 Capital Authorized, \$500,000.	Debenture Outstanding
Trust Accounts 19,772.98 Deposit Accounts 13,285.55 Sundry Creditors 4,580.85 Contingent Reserve for Losses 34,834.65 Capital Authorized, \$500,000.	
Sundry Creditors 4,580.83 Contingent Reserve for Losses 34,834.63 Capital Authorized, \$500,000.	Capital authorized, \$500,000.
Contingent Reserve for Losses	Capital paid up
Capital Authorized, \$500,000.	and boots of deposit of a per cent. Hells, with
	accrued interest
Capital paid up	
Reserve	Ψ1,001,110.21
Unappropriated Profits 747.90	ADDEID-
Agency Accounts, \$21,200.	Standing Timber, Real Estate, Sawmills, Plant and Equipment, logging road, etc
Total	Stocks on hand
ASSETS \$588,344.50	Suldry Debtors and Debtt Balances
Cash on hand and in Bank \$12,799.2	Cash in hand
Loans, Security First Mortgage and Agreement for sale	Discount on Debentures 104 490 76
Victory Bonds 10,000.00	Pront and Loss Acount
Trust Fund invested in Victory Bonds 12,850.00	Total \$7.967.415.24
Sundry Accounts Receivable 20,673.00	The state of the s
Real Estate 31,163.0° Office Furniture 1,033.1°	
Agency Accounts as per contra, \$21,200.	- Additional Societies
W-1-1	FUREIXA CORRED MINES LIMITED (N.D.L.)
Total \$588,944.50	EUREKA COPPER MINES, LIMITED (N.P.L.) Registered Office: 509 Cedar Street, Nelson
G. C. R. HARVEY, Acting Secretary	
Acting Secretary	THE CONTRACTOR TO SERVICE AND A SERVICE ASSESSMENT OF THE SERVICE ASSE
NEW HAZELTON GOLD-COBALT MINES, LIMITED	LIABILITIES— Capital authoried, z\$250,000.
Registered Office: 520 Pacific Building, Vancouver.	Capital paid up
Balance Sheet as at August 31, 1918:	Accounts payable
LIABILITIES—	Bills payable
Sundry Creditors	Suspense 135.26
Capital paid up	Cons. M. S. Mortgage Account
Premium on sale of shares	Profit and Loss Account 2,513.75
Total \$362,231.73	Total\$249,745.63
ASSETS—	ASSETS—
Cash on hand and in bank6 \$ 681.54	
Sundry Debtors 177.30 Mining Claims at cost 306,500.00	
Tunnels 17,568.62	7
Trails and Roads	5,489.78
Equipment 1,966.28	
Bindings, etc. 2,231.50 Inventories 988.00	
Development Account 12,066.52	701 701 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
General Expense Account 4,135.4	
Ore Expense Account	
Incorporation Expenses 500.00	J. C. DUINI AIN.
Total \$362,231.73 R. DALBY MORKILL,	
Secretary	THE FORT FRASER LAND COMPANY, LIMITED
	Extra Provincial
DOMINION LAND CORPORATION	Head Office, 3 Lombard Street, London, EC, England.
Extra-Provincial	Provincial Head Office: 525 Seymour Street, Vancouver.
Head Office, 728 Traders' Bank Building, Toronto, Ont.	Balance Sheet as at June 30, 1918. LIABILITIES—
Provincial Head Office: 407 Seymour Street, Vancouver Balance Sheet as at December 28, 1918:	Capital authorized, £100,000.
LIABILITIES—	Capital paid up£ 87,500 0 0
Capital Authorized and paid up\$ 250,000.00	Directors' Fees 1,575 0 0
Mortgages and accrued interest	Onpaid Taxes and Interest
Loan Account 48,760.00 Bank Account 1,515.04	
Shareholders unrealized surplus	
	ASSETS—
Total \$ 860,344.64	
Lands disposed of \$ 793,676.8	Underwriting and Brokerage
Purchasers' Accounts	Government Securities 6,483 11 3
Bills Receivable and Acc. Int. 4,093.3° Cash on hand and in Bank 1,409.80	Cash at bank and in management to the state of
OA AMAN WAS IN DOCUMENT OF THE PROPERTY OF THE	Total £101.487 2 0
Total\$ 860,344.64	
THOMAS BRADSHAW, Secretary	Constant

Western Power Company of Canada Limited

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Power, Heat and Light Rates

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We are constructing in Vancouver Ten Steel Cargo Steamers, 8,800 deadweight tons capacity. Scotch boilers for these vessels are being built in our Shops in Vancouver.

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VANCOUVER, B. C.

SOUTH VANCOUVER ASSESSMENT ROLL

South Vancouver's assessment for 1919, as returned to Commissioner Gillespie on Friday by Assessor William Thompson, shows a total taxable assessment, including improvements, of \$24,607,255.90, as compared with \$24,876,883 in 1918. The latter figure, however, included church property improvements, now valued at \$136,150, which have this year been deducted as non-taxable.

Details of the 1919 assessment are as follows: Wild land, \$13,887,423.99; taxable improvements, \$9,153,585; non-taxable church improvements, \$136,150. Total, \$24,743,

405.90.

In 1918 the details of the assessment were: Wild land, \$1,569,447.91; improved land, \$13,884,185.09; improvements,

\$9,423,250. Total, \$24,876,883.

In giving the above figures to the press Commissioner Gillespie points out that the figures representing the assessed value of improvements for 1919 do not altogether show the reduction that has been made in the assessments of residential property, owing to the fact that this year there is an increase in the assessment of the B. C. E. R. Company "improvements" in South Vancouver of approximately \$235,000. This increase, together with the deduction of \$136,000 for non-taxable church property, the Commissioner states, brings the reduction on ordinary improvements to about \$400,000.

CANADA NATIONAL FIRE DECLARES DIVIDEND

The Canada National Fire Insurance Company, head office Winnipeg, has declared a dividend of 6 per cent. Mr. W. T. Alexander, managing director, reports that last year was the most profitable in the history of the company. The loss ratio was only 43½ per cent., against an average of the past fifty years for all Canadian companies of slightly over 50 per cent.

Wait Until the "Number" Answers or the Operator Reports

Very often a subscriber will call a number and, if an almost instantaneous connection is not established, will hang up and try again later. He feels that minutes have elapsed, while, in reality, it has been but a matter of a few seconds.

This hanging up of your telephone receiver means that your time and the time and labor of the operator has been wasted. If the called party comes on the line, the operator has to explain.

Remaining at your telephone until you get a report or the called party answers means the saving in the time and effort of three parties.

British Columbia Telephone Company, Limited

Canadian National Railways



THROUGH Mount Robson and Jasper Parks, across the prairies through the most fertile grain belt in the world to Winnipeg, Toronto, Ottawa, Montreal and Quebec.

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For Tickets, Literature and Information, apply to

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605 Hastings West Phone Sey. 2482 Vancouver

BRITISH COLUMBIA AND IRON AND STEEL INDUSTRY

(Continued from page 2.)

production of these materials, but the increased cost of supplies and of labor largely neutralize this advantage. If it seemed probable that pre-war prices would return in the course of a year or two we might base our calculations on this assumption, but, in view of the profound change that is taking place in the position of labor, it seems unlikely that wages will ever return to their original level. effect of this will be that the prices of supplies and products

will all reach correspondingly higher figures.

If electric power could have been obtained immediately at a reasonable price it appeared reasonably safe to undertake the electric production of pig iron by standard methods, but if we are dependent on developing a water power for this purpose, the delay and the increased uncertainty in regard to costs and prices makes prediction almost impossible. In a general way, however, we may assume that in the course of a few years costs and prices will again reach some steady relationship to one another and that this relationship will not be very different from what it was before the war.

On this assumption it would seem that, after prices have once more reached a steady level, the electric smelting of iron ores will occupy, commercially, about the same position as before the war, and by considering the condition in Sweden, which resembles Canada in many respects, we can form a fairly good judgment of the possible development

of electric smelting in British Columbia.

We may, therefore, expect with the present methods of electric smelting, that the industry would be successful commercially, but that it would depend, ultimately, on the production of special qualities of iron and steel, and Would be unable to compete with the blast furnaces in the Production of ordinary grades of pig iron. If, however, the new process for the reduction of iron ores is found to be satisfactory it should produce a decided improvement in the commercial status of electric smelting.

The following are the conclusions in regard to the elec-

tric smelting of iron ores in British Columbia:

1. The three most essential requirements are: ore, electric power and charcoal or similar material. In the coast districts of British Columbia there is a sufficient quantity of suitable iron ore conveniently located, water Powers available for the development of electrical energy, and waste wood from sawmills for the production of charcoal.

2. Having regard to the present market for pig iron and the probable price for this material during the next few years, it appears that the iron ore, electric power and charcoal could be produced sufficiently cheaply for the com-

mercial smelting of iron ores in electrical furnaces.

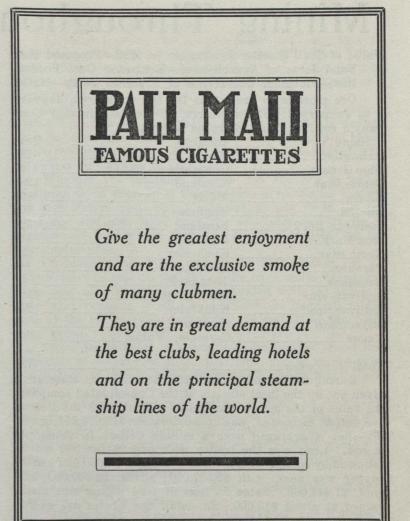
3. The development of a water power is, however, a long and costly operation and one which it would be highly inadvisable to undertake at the present time. For present operations therefore we are dependent on the purchase of electric power from the power companies.

4. It appears that one of these companies has a sufficient amount of unused electric power, but it is asking a higher price for this power than the industry can bear.

5. In view of the original cost of development, it would appear that the company could afford to offer the power at a decidedly lower price, but it should be remembered that the company must keep a reserve of power for other purposes and that it cannot, at present, afford to maintain this reserve by undertaking fresh development.

6. A new process is now being investigated by means of which it may be possible to produce electric furnace pig iron commercially in spite of the high price charged for

7. In view of the small demand for pig iron in British Columbia it would be almost essential, if a smelting plant is to be established on an economic basis, that additional Products shall be turned out. Steel for castings and small



rolled sections, and ferro alloys such as ferro manganese, ferro chrome and ferro silicon, could be made suitably in such a plant. These additional products would permit of more economical operation, would enable larger profits to be made, and would allow the plant to continue in profitable operation if at any time the price of pig iron were to fall below the cost of production.

In view of the present situation it appears advisable:

(a) To develop one or more of the best iron ore deposits and to make complete tests of the ore.

(b) To reserve a suitable water power for future development.

(c) To establish a plant for the economic production of charcoal from mill waste.

(d) To investigate the new process for the production of electric pig iron, and if this is found satisfactory to begin immediately to produce pig iron; purchasing power for this purpose until the water power can be developed.

TRANSFER OF VICTORY BONDS

The Deputy Minister of Finance has made arrangements with the receiver-general whereby the Deputy receivers throughout Canada were authorized to convert the small Victory Bonds of \$50 and \$100 denominations into those of \$500 and \$1,000. This will obviate what has been a matter of considerable inconvenience to bond dealers. The arrangement goes into effect at once. It is understood that a charge of 25 cents will be made for the transfer in

The registration of coupon bearer bonds and the transfer of coupon registered bonds to bearer may be effected at the offices of the assistant reciever-general. No transfer of coupon bonds to fully registered, or from fully registered to coupon can be effected until further notice. At the earliest, such transfers cannot be effected until May 1st next.

Mining Throughout British Columbia

Value of Trail Smelter Production in 1918-Proposed New Bond Issue of Consolidated-Estimated Coal Production-Platinum Occurrence at Franklin Camp-Notes.

Ore receipts in gross tons for the week from January 1 to January 7, 1919, inclusive, at the Consolidated Company's smelter, Trail, were as follows:

Total for week.....

Name	Locality	Tons
Arlington	Slocan	224
Blue Grouse		
Center Star	Rossland	1289
Emma		113
Eureka	Taghum	104
Josie (Le Roi 2)	Rossland	596
Iron Mark	Kamloops	104
North Star		
Paradise	Athalmer	141
Retallack	Retallack	28
Sullivan, zinc	mark a second se	4186
Sullivan, lead	771 7 7	253
Silversmith	CI 7	
Venus	Q TT 1	42

During the calendar year 1918, according to statements given out by the local officials of the Consolidated company, the value of the metals smelted or refined, with the December output estimated, was approximately \$12,676,247, meaning that it averaged over a million dollars in value per month. Lead was the leader with over \$3,500,000 worth, followed by spelter with a value exceeding \$3,500,000 worth; copper was next, with \$2,557,000; silver, \$2,000,000, and gold, \$1,444,000. Some 75 tons of lead piping was made, valued at about \$15,000. In detail the figures are as fol-

10WS:	
Lead, 40,662,704 pounds	\$3,537,655
Spelter, 25,453,797 pounds	3,023,290
Copper, 9,951,781 pounds	2,557,000
Gold, 72,205 ounces	1,444,000
Silver, 2,088,331 ounces	2,000,476
Sulphuric Acid, 3,926 tons	98,150
Bluestone, 174,178 pounds	15,676
Total	\$12,676,247

The annual meeting of the shareholders of the Consolidated Mining and Smelting Company of Canada has been called for January 16 in Toronto, when the annual statement

for the past fiscal year will be presented.

It is generally expected in the street that the report will show that the company has had a trying year owing to the excessive cost of operating, the loss of revenue from gold mines which could not be operated to yield a profit during the war, as well as handicaps arising from lack of working capital.

In connection with the latter feature the notice of the meeting intimates that power will be sought for the issuance of 3,000,000 debenture bonds. It is understood that financing arrangements of this character will place the company in a much easier position as the amount of business handled has been altogether out of proportion to the working capital available.

Faith in the future of the industry is indicated by the large extensions which are being made for developments, and it is declared to be absolutely essential to have plenty of working capital to enable the company to cope with the expanding nature of its business, and the length of time for which capital is tied up in the various mineral processes.

From the latest statistical data supplied to him from the Provincial Department of Mines, the Hon. William Sloan, Minister of Mines, makes the announcement that during the year 1918 British Columbia mined 2,573,139 long tons of coal, or an increase over the production of the previous year amounting to 174,424 long tons.

Of the above mentioned amount the collieries of Vancouver Island were responsible for 1,666,582 tons, from the collieries of the Nicola-Princeton District came 174,278 tons, and from the Crows Nest Pass fields, 731,951 tons. The product from the new mine of the northern district at Telkwa

It should be noted, however, that there were an umber of factors during the year which prevented the increase in 1918 being considerably larger than indicated in the above figures. The strike in the Crow's Nest Pass field was responsible for the loss of approximately 60,000 tons, while the ravages of the Spanish influenza epidemic and other contributory causes added a debit in the same district of at least another 75,000 tons.

On Vancouver Island the East Wellington mine of the British Columbia Coal Mining Company was closed down for the first eight months of the year on account of a fire in the mine which resulted in a loss of approximately 50,000 tons. The influenza epidemic amongst the miners of the island is also reputed to have caused a loss of production amounting to at least another 75,000 tons. The Nicola Princeton shortage is also placed at 8,000 tons attributable to the same cause.

Spanish influenza, a strike and a fire are therefore to be held responsible for a loss in production in the coal mines of British Columbia during the year that has just closed of 268,000 tons. From the "flu" cause alone there is a loss of 158,000 tons, while the remainder of the drop was caused by what may be dubbed more or less natural causes.

The following are the comparison tonnages of the various companies and districts for 1917 and 1918 respectively: Coast District, Victouver Island: Canadian Collieries (Dunsmuir), Ltd., 1917, 797,348 tons; 1918, 789,614 tons; Canadian Western Fuel Company, Ltd., 1917, 658,427 tons, 1918, 731,-922 tons; Pacific Coast Coal Mines, Ltd., 1917, 150,538 tons, 1918, 829,629 tons; British Columbia Coal Mining Company, 1917, 61,586 tons, 1918, 14,716 tons; Nanaoose Collieries, 1917, 27,822 tons, 1918, 30,436 tons; Granby Consolidated Mining and Smelting and Power Company, Ltd., 1918 (new mine), 17,625 tons. Total for 1917, 1,695,721 tons; for 1918, 1,666,-

Production from the Vancouver Island mines, therefore, shows a decrease of 29,139 tons in 1918, when com-

pared with the output for the preceding year.

Middlesboro Collieries, Ltd., 1917, 83,458 tons, 1918, 100,000 tons; Merritt Collieries, 1917, 13,357 tons; Pacific Coast Colliery, 1917, 206 tons (neither of the foregoing were producers in 1918); Fleming Coal Company, 1917, 7,296 tons, 1918, 31,000 tons; Coalmont Collieries, Ltd. (new producer), 1918, 4,500 tons; Princeton Coal and Land Co., 1917 46,926 tons, 1918, 38,778 tons. Here an increase over 1917 is shown in last year's output amounting to 23,035 tons.

Figures in this field are more eloquent from the point of view of an increase last year. The Crow's Nest Pass Coal Company mined 450,686 tons in 1917 and increased the figures to 605,979 tons in 1918; Corbin Coal and Coke Co. produced 101,065 tons in 1917 and 125,972 tons in 1918. The increase here is 180,200 tons for the year just closed.

The Telkwa Mine, as already stated, produced 328 tons

last year; this is a new mine in the northern field.

Mr. William Thomlinson, of the Canadian Munition Resources Commission, has made public the following letter regarding the occurrence of platinum in the Franklin Camp:

Mr. Geo. C. Mackenzie, Member and Secretary of the tionCanadian Munition Resources Commission, has authorized me to make public the following information regarding the tests for platinum made on the material taken by myself, during the month of September last, from mineral

claims situate on the so-called "Black Lead" in Franklin

Camp, Grand Forks Mining Division.

Early in the month of August, under instructions from Mr. Mackenzie, I visited Franklin Camp and took samples from the various workings on the "Maple Leaf" mineral claim, and sent the samples to the Dominion Assay Office at Vancouver, to be assayed for Platinum. Two of the samples from the "Maple Leaf" claim, taken from an open cut from which two cars of copper ore had been shipped, were found to contain, respectively, 0.15 oz. and 0.17 oz. of platinum per ton, and the results appeared to me to indicate that the platinum content thereof was roughly proportionate to the amount of the primary copper minerals, especially chalcoprite, showing in the ore.

Later, Mr. J. J. O'Neil, of the Dominion Geological

Survey, visited the "Maple Leaf" claim with me, and being much interested in the mode of occurrence of the platinum, he took a sample of almost pure chalcopryite, occurring as a small lense in the pyroxenite, and had the sample assayed for platinum at the Dominion Assay office at Vancouver. This sample showed a content of 0.38 oz. platinum

per ton.

The mineral-bearing gangue, on the "Maple Leaf" claim, is mainly pyroxenite, with some tongues or inclusions of augite-syenite on the hanging-wall side of the lode, and the copper minerals, principally chalcopryite, occur in bunches and veinlets, and as disseminated specks, through-

out the pryoxenite and syenite.

Owing to the good results from the "Maple Leaf" samples, and noting that the pyroxenite zone or so-called "black-lead" extends almost entirely across the Franklin Camp, I obtained permission from Mr. Mackenzie to remain in the camp until I had visited and sampled all of the principal properties situate on the pyroxenite-syenite contact

On most of the claims situate on the pyroxenite forming the "black-lead," the lode material appeared to be barren of economic minerals; but, on several of the claims there could be seen, at or near contacts, a tendency for the copper or iron sulphides to form mineralized belts or masses.

Most of my samples were taken from places where such segregations of copper and iron sulphides occurred, and especially from where copper-bearing minerals were in evidence; although the oxides and sulphides of iron were also included in the samples.

Although most of the samples taken, on being assayed, showed appreciable amounts of platinum, it cannot yet be stated with certainty that more than very small portions of the "black-lead" or pyroxenite belt can be mined on a commercial basis.

In the samples assayed there appeared to be certain proportions btween the copper-bearing minerals present and the platinum contents; but, at the "Mountain Lion" claim the platinum appears to be entirely associated with sulphides and oxides of iron.

Whether the platinum occurs in the ore as native platinum or as sperrylite, the arsenide of platinum has not yet been determined; but, I presume, it may be in the latter form, and associated with the sulphides and oxides of copper and iron where they are found segregated in the

pyroxenite zone.

On several properties, such as the "Gloucester" M. C., situate near to and on the dip of the pyroxenite zone, platinum may also be found to be associated with the sulphide ores; and, perhaps, it may be advisable to have all of the ores of the entire camp tested for the metals of the platinum group.

There is, however, much still to be learned regarding the mode of occurrence of the platinum, and as to the average values of the material forming the so-called "black-

It is probable that only certain portions of the pyroxenite zone contains platinum, copper or other metals in economic amounts; therefor, much further investigation may be required but I certainly consider the matter worthy of detailed research on the part of the Government or of the large mining corporations.

Samples from the undernamed properties contained

platinum as follows, viz.:

"Maple Leaf," 3 samples, 0.15, 0.17 oz. and 0.38 oz.

"Lucky Jack," 3 samples, 0.04 oz., 0.06 oz. and 0.08 oz.

"Lucky Jack," 3 samples, 0.04 oz., 0.06 oz. and 0.08 "Mountain Lion," 2 samples, 0.02 oz., and 0.09 oz. "Golden Age," 1 sample, 0.06 oz. "Averill Gp.," 2 samples, 0.09 oz., and 0.09 oz. "Buffalo," 2 samples, 0.08 oz. and 0.19 oz. "Ottawa," 1 sample, 0.06 oz.

"Columbia," 1 sample, 0.04 oz.

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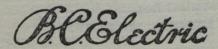
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