

CANADA AND THE

PRESENT

W.H.R.

Contents 1939- 1940

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A NATIONAL ELECTRICAL SERVICE..

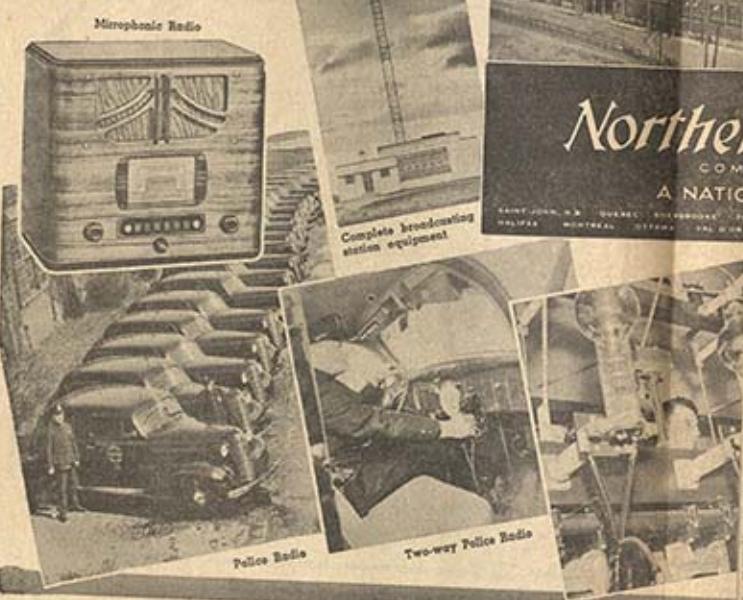


Traffic or pedestrian-operated traffic controls; street lighting; police signals.

In the great Northern Electric plant in Montreal are centred manufacturing, distributing and merchandising services, vast in scope, varied in character, and always keyed to meet the ever-changing problems of to-morrow. Whatever equipment is required to generate, transform, distribute or use electricity for industrial, residential or any other purpose is available from any one of the twenty-one branches of the company strategically located in the important centres of the Dominion.



Special treatment of power cable



Fire Alarm Systems

Microphone Radio

Complete broadcasting station equipment

Northe
COM
A NATION

Saint John, NB Quebec Sherbrooke
Halifax Montreal Ottawa Toronto

Police Radio

Two-way Police Radio

Trans-Canada Telephones

Co-operative Effort Enables
Halifax To Talk With West Coast

The Trans-Canada Telephone System, providing long distance telephone service from Halifax to Vancouver, is a co-operative enterprise.

Partners in the enterprise are the seven major telephone systems in the Dominion, serving the principal towns and cities of the nine provinces. These are the three government-owned systems of Alberta, Saskatchewan and Manitoba; British Columbia Telephone Co.; New Brunswick Telephone Co.; and the Maritime Telegraph and Telephone Co.

Establishment of the Trans-Canada Telephone System followed many years of investigation. By the beginning of 1929 circuits were available between each of the adjacent provinces and worked satisfactorily for that purpose. It was not possible, however, to utilize them for a Trans-Canada service. A connection between Halifax and Vancouver

profit for the period amounted to \$124,838, as compared with \$168,743 in the first six months of 1928.

In the early part of the third quarter however, the company improved and expectations are the second half of the year will show better results, according to H. Horrell, president.

Earnings declined sharply in 1928, net profit amounting to \$461,655 as compared with \$794,320 in 1927.

Capital of the company consists of 1,000 shares 6½% cumulative preferred stock par value \$100 each; 29,609 Class "A" shares; and 150,000 Class "B" shares.

Improves Position

In recent years the company has greatly improved its position. Expansion of earnings has enabled it to pay off preferred dividends, arrears and dividends on the Class "A" and "B" shares were resumed this year. Dividends totaling \$4 a share are to be paid on the Class "A" shares this year and 23 cents a share was paid on the Class "B" stock on March 1.

Investment in land, plant and equipment, after deducting depreciation of \$1.5 million, amounted to \$2.1 million at Dec. 31 last. Working capital totalled \$3 million.

Copper wire and cables of all types from the finest enamel wire to the heaviest underground and aerial cables are manufactured by the company. In addition it makes steel wire rope and cables, brass fittings and copper pipe.

Noranda Mines and General Cable Corp. of New York, both hold a substantial interest in the company. Directors—Herbert Bentall, pres. & genl. manager; W. H. Morris, vice-president; J. Y. McLean, treasurer; G. E. McLean, secy.; A. C. L. H. Thomas, P. A. Thomas, Montreal; D. R. G. Polson, C. R. McLean, Toronto; J. D. McLean, St. John, NB.

Officers & managers—J. E. McCollum, secy.; A. J. Stevenson, Ass't secy. & ass't treas.; P. G. Turner.

would have required seven switches, and the type of facilities used was not satisfactory.

Work Started In 1928

Work on the Trans-Canada System started in 1928. Among other things, it was necessary to completely rebuild more than 2,000 miles of line and to add pole lines in other sections.

Trans-Canada circuits are designed now so that a call from Halifax to Vancouver requires only two switches. Such a call travises over 4,200 miles of line.

It is well known that a current travelling along a telephone circuit diminishes in value. Unless some means is used to bring current back to its original value, it is impossible in the case of long circuits, to hear the voice at the receiving end. To overcome this the Trans-Canada System uses repeaters at 22 points to bring the voice current back to its original volume.

Ready For Emergencies

Because the length of the circuits in the Trans-Canada System the possibility of line trouble and interruption of service due to weather conditions is great. Constant attention must be given. Standby facilities are available to which the regular circuits may be switched in time of trouble.

Management of the Trans-Canada System is provided by a committee composed of a representative from each of the seven organizations participating. This committee has access to the data pertaining to all branches of telephone operation. It acts as a clearing house which receives reports of Trans-Canada revenues and sees that it is properly apportioned between the seven systems. This eliminates the necessity of each system having to settle with all other systems.

One of the marvels of the system is the speed with which connections are made. A call from Halifax to Vancouver can be completed in a minute or two. Voice currents travel from Halifax to Vancouver in about one thirtieth of a second.

Tax \$4 Per Telephone

Taxes paid by the Bell Telephone Co. of Canada continued to increase from 1928, reaching a total of \$1,025,644, or \$42,584 more than for the previous year. Based on average number of stations in service, this meant that the company paid out approximately \$4 in taxes on each telephone during 1928.

Radio-telephone Spans Big Gaps

Service Provided to Outlying Sections of Canada

Radio-telephony plays an important part in Canada's communications industry.

Through the Dominion, there are numerous radio-telephone circuits providing communication with outlying sections. For instance, many mining areas in northern Quebec, Ontario, Saskatchewan, Alberta, Yukon and North West Territories, as well as interior of British Columbia, have their only direct contact with the outside world through radio-telephones.

Another important service is that operated between the north and south shores of the St. Lawrence River, below Quebec, by the Quebec Telephone and Power Co. and the Canadian Marconi Co. Radio-telephones are also used to conquer the isolation of Lake Coosan, where the large pulp and paper mill of Quebec North Shore Paper Co. is located.

Ship-to-Shore Service

It is an important factor in the operation of steamships on the Great Lakes. For years, most of the ships on the Great Lakes have been equipped with wireless apparatus. In recent years, however, a great many have changed over to radio-selective phone.

Ship-to-shore radio-telephone service on the Great Lakes was established in 1927 by the Canadian Marconi Co. in collaboration with the Transport Department of the Dominion Government. There are ultra-modern, high-power radio-telephone installations at Port Arthur, Sault Ste. Marie, Midland, Port Edward, Port Burwell, Toronto and Kingston, providing complete radio-phone ship-to-shore service through the entire length of the Great Lakes.

Most of the equipment used in radio-telephone circuits in Canada is designed and manufactured by Canadian Marconi Co.

Radio-telephone service also plays an important part in aircraft communication. For instance, planes of Trans-Canada Air Lines keep in touch with their bases by radio-telephone. By this means, pilots of the planes are furnished with vital information regarding weather conditions and landing facilities.

Longest Voice Channel

The longest direct voice channel in the British Empire is that from Toronto to Calgary on the trans-Canada line. It is 2,300 miles in extent.



Lead sheathing of cable

40-909

Prairie Systems' Outlook Better

Publicly Owned Services Operations Are Improved

Outlook for the Government-owned telephone systems in the 3 prairie provinces has improved. The larger crop should mean greater business activity in the West and in turn an increase in telephones in service and greater long distance traffic.

Financial results of the three government systems last year were satisfactory, improvements being shown over 1937. Reports for the current year should show continued success of that trend.

The larger crop and increased purchasing power should result in larger revenues not only for the provincial systems but also for the numerous municipal systems operating in the rural areas.

Alberta System

Operations of Alberta Government Telephones improved in the year ended March 31 last. The system, operating from 1921, now has 11,372,687 operating expenses to date \$1,308,938, leaving telephone net earnings at \$1,463,960. Net surpluses for the year before provision for bad debt and depreciation was \$1,000,000, compared with \$541,350 the previous year.

\$17.5 Millions in Fixed Assets

The balance sheet of Alberta Government Telephones shows physical assets at \$17.5 millions. Capital debt of the system is about \$14.4 millions. Part of that represents bonds held to finance the construction of rural lines which have since been sold. Losses on sales and abandonment of rural lines, toll lines and equipment are shown at \$3 million. Reserves, including sinking funds, total \$1.1 millions.

As previously mentioned, the Alberta Government telephone system has 22,759 telephones in service and has extensions in Alberta servicing an additional 38,605 telephones.

It has 275 exchanges and 43,000 miles of long distance lines. In 1937-38 there was an gain of 1,270 in the number of stations in service.

First Government System

Alberta was the first province in the Dominion to have a Government-owned telephone system. The province entering into direct competition with the Bell Telephone Co. in 1906, and buying out the latter for \$75,000 two years later.

Construction of the first government line was commenced in the fall of 1906 and put into service in the spring of 1907 between Calgary and Banff.

System Extended Rapidly

Under government ownership the telephone system was extended rapidly. It was not until 1910 that local toll lines and urban exchanges which have proved self-supporting, but was immediately extended to rural districts. The original rural rate schedules were calculated to pay the cost of installation and maintenance only, without any allowance for capital charges. Annually, in spite of subsequent increases, rural earnings

were not even sufficient to provide for maintenance charges for that part of the development.

Control of the telephone system was shifted in 1912 from the Department of Public Works to a new Department of Railways and Telephones. In the years 1912-1914 the history of telephones in Saskatchewan dates back to before formation of the province. In 1884, that is, in North West Territories days, Regina had nine telephones and by 1900 the number had grown to 200. An exchange was established in Prince Albert in 1901 and in Saskatoon in 1903. Yet, when the provincial Government entered the field in 1907-08, Saskatchewan was largely undeveloped from the point of view of telephone service.

Bought Private Companies

The first step taken by the telephone department of the Government was to buy out the existing telephone properties in the province which consisted of 17 local exchanges and 450 miles of long distance pole lines.

The telephone system now provides telephone service to all the cities and towns. However, the city of Edmonton has its own telephone system.

Sask. Govt. System

The past 10 years have been difficult ones for the Province of Saskatchewan - and the Saskatchewan Government Telephone System has shown a remarkable record in maintaining its services in the face of continued improvement in the system.

Despite a decline in the number of subscribers the system has been maintained in an efficient condition, physical plant modernized, equipment improved and long distance rates reduced.

The telephone system has expanded into the northern section of the province. Tanglefoot or Frenchman's Butte may not mean anything to the outer world, but their addition to the roster of places served by the telephone system means a great deal to the agricultural settlements on the fringe of civilization.

In the use of automatic equipment Baskerville was ahead of some of the larger provinces. As recently as 1936, the Baskerville plant was converted to automatic operation. When the Regina plant was destroyed by a cyclone in 1912 it was replaced with an automatic exchange.

The financial statement for the year ended April 30, 1938, is not available as yet, but in 1937-38 the telephone system had net earnings of \$941,134. After providing for interest charges, depreciation and a write-off of intangible capital there was a net deficit for the year of only \$4,277.

Assets of \$17 Millions

The balance sheet of the system at April 30, 1938, shows total assets of about \$17.4 millions. Of this \$14.7 millions is invested in plant, buildings and equipment. The placement reserves total \$3.6 millions. Government investment in the system amounts to \$12.2 millions.

Operations of the Government system are largely confined to that portion of the telephone field that serves agricultural, mechanical and centralized handling. This includes the city, town and village exchanges, and the long distance telephone network.

In the farming districts telephone service is provided by small rural companies, which have been actively fostered and supervised by the Gov-

ernment. At present there are over 1,500 of these rural companies and all of them interchange service with the provincial system.

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Total reserves and surplus now stand at over \$12.2 millions an increase of \$374,620 over the previous year.

The balance sheet of the system as at Nov. 30, 1938, shows total assets of \$33.8 millions as against a government investment in the system of \$21.2 millions and a placement reserve of \$12.2 millions. Of this amount, \$6.4 millions is invested in securities and \$1.5 million in plant. \$1.7 million has been appropriated for a sinking fund and \$2.2 millions appropriated for reduction of bonded debts.

Plant expenditure in 1938 amounted to \$615,548. Of this amount \$144,952 was capital and \$470,596 replacement.

System Dates From 1888

Telephone service in Manitoba dates from 1888 when it was first introduced by private individuals operating a small exchange in Winnipeg. In 1891, the Bell Telephone Co. bought out this exchange. The telephone system was then extended to other settlements in the province.

Edmonton installed an automatic exchange and dial telephone in 1909, being the first city in the Dominion to use this equipment. The installation was made by the Alberta Government in Strathcona, but in 1910 Strathcona was merged with Edmonton and the telephone exchange was operated by Edmonton. Equipment used by the system is of the most modern kind.

In 1923 the system had gross earnings of \$67,856, and after capital and depreciation charges of \$116,642, maintenance, \$30,783, and operating expenses of \$89,242, net surplus of \$17,483. The same figure paid to the province amounted to \$118,827, compared with \$117,285 in 1927.

At Dec. 31, 1938, debentures outstanding totalled \$1.4 millions, unpaid interest \$489,437, leaving net funded debt at \$800,143.

1,976 Calls a Year For Each 'Phone in Use

Canadians like to use the telephone, judged by the average number of conversations held during the course of the year. In 1938 there were 1,976 calls placed on each telephone, of which number 1,677 were local and 311 long distance. In 1937, the latest year for which complete returns are available, the telephone was busier than ever for an average of 1,853 local and 317 long distance calls, or a total of 1,976 recorded for each instrument.

Not through the Trans-Canada Telephone System has connections with all points throughout the world.

Edmonton

The City of Edmonton telephone system has shown substantial profits for many years and has contributed large sums in taxes to the city. Since inception, the utility has had surpluses to 1938 of more than \$2.3 million.

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100 Years of Communication

1899—First Canadian steamship launched at Montreal.

1905—Morse discovers passage of electric pulses through electro-magnetic circuit can be made to record on paper tape.

1907—First railway in Canada.

1914—Samuel Morse granted patent for a writing telegraph.

1923—Morse made experiments with telegraphy through submarine cable.

1927—Telegraph line between Toronto and Hamilton opened.

1930—First common battery exchange in Canada opened at Ottawa.

1941—Wireless telegraphy receives first test between St. John's, Newfoundland, and Polda, Cornwall, England.

1942—First telephone system organized in Canada.

1943—First telephone line between Toronto and Vancouver completed.

1944—Multiple switchboards installed in Montreal and Toronto.

1947—Montreal-Ottawa telephone line opened.

1948—Trans-Canada telephone system opened by the Earl of Bessborough.

1952—Overseas telephone service started.

1954—Radiotelephone service opened between America and Australia. Two-way television demonstrated.

1955—Trans-Canada telephone system opened by the Earl of Bessborough.

1956—Overseas telephone service extended to India.

1957—First round-the-world telephone talk over 21,000 miles.

1958—First telephotographs in Canada.

1959—Overseas telephone service extended to China.

1960—95% of world's telephone within reach of practically any telephone in Canada.

Manitoba Rural Lines Cover 10,716 Miles

Rural lines of the Manitoba Telephone System have a total of 10,716 miles of poles and 28,294 miles of wire. This compares with 1,211 miles of poles and 1,209 miles of wire in 1908.

At the present time the average miles of poles and wires per subscriber stands at 10 poles, or miles wire, 2.3 miles. This compares with 1,211 miles of poles and 1,209 miles of wire per subscriber in 1908.

There has also been a large increase in both pole and wire circuit length, and a decrease in long distance mileage during the past 20 years. At present there are 1,329 miles of poles and 8419 miles of wire. This compares with 1,209 miles of poles and 1,201 miles of wire in 1908.

Services to Suit all types of Business Enterprise!



Whether your business is very extensive or relatively small, there is a type of telephone equipment best suited to your needs.

To help you obtain the best, our staff is prepared to make a survey and submit recommendations for your consideration. This is done without obligation to you.



WIRING PLANS consist of simple switching devices with push buttons and enable you to —

— place or receive calls on one or more lines

— 'hold a line' while talking over another line

— intercommunicate between telephones.

PRIVATE BRANCH EXCHANGES (with attendant) for firms requiring the centralization of telephone traffic. Manual or dial equipment may be had, depending on your telephone needs.

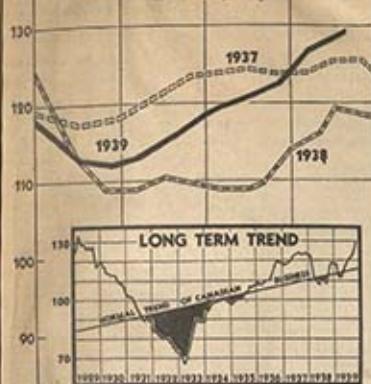
FIRST HOME of HEAD OFFICE
UPPER STOREY, OLD REGINA
TRADING Co., BLDG., REGINA.

Founded on Service Built to Endure

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

BUSINESS INDEX

1936-100 Monthly Average



BUSINESS CONTINUES UPWARD

Canadian business continues to show improvement. The Financial Post's Business Index has been rising since the first quarter of 1936. In November reached the highest point since the early months of 1936. Mineral production and the pulp and paper industry were particularly active. Gain in the output of iron and steel and automobile however, were less than normal for the season. The construction industry was more or less static. An increase was shown in the railway freight movement after seasonal adjustments.

F. W. Rossiter, Industrial Economist, has been quoted as follows:

British business is still recovering.

Bank deposit growth is strong.

Copper exports are up.

Wheat exports are down.

Iron exports are up.

Automobile exports are up.

Sugar manufacturing is up.

Chemical, textile products are up.

Coal, coke, rayon production is up.

Electrical equipment is up.

Newspaper production is up.

Plastics and leather exports are up.

Aluminum exports are up.

Automobile production is up.

Construction is up.

Carbides are up.

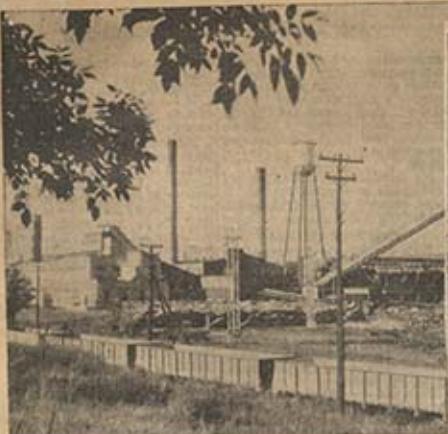
Electric power is up.

Gasoline is up.

Automobiles are up.

Electrical equipment is up.

Automobiles are up.



BIG CONSOLIDATED UNIT

At Fort Alfred, Que., Consolidated Paper Corp. operates a newsprint mill having four newsprint machines and a daily capacity of 480 tons of newsprint, 50 tons of board and wrapping paper and 100 tons of sul-



Striking epitome of progress in the West in less than half a century is the Hudson's Bay Co. new million-dollar store in Edmonton. Pictured above, it presents a notable contrast with the lower photo of the company's 1894 store, which was only up-planted in the early years of this century and stood on part of the site of the present new building. Founded by the company, Edmonton has grown with Hudson's Bay and the company with Edmonton, the Hudson's Bay site and premises having been replaced, enlarged or rebuilt in few months time, since 1894. Inside the building of the new store are 67,000 cubic feet of cement, 48 of brick and tile, 28 of reinforcing steel and 17 of stone and travertine.

Canada produces more than third of world output

Production of newsprint in all countries of the world during 1938 totalled 7.5 million tons. This compares with almost 9 millions in the preceding year; with the depression low of 6.3 millions; the pre-depression high of 7.3 million tons; and the 10-year average 1928-1937, of almost 7.3 millions.

Canada continues to hold her position by a wide margin as the principal newsprint producing country in the world. Great Britain, which has been in second place since 1938, produced 954,000 tons last year, while the United States remained in third place with an output of 820,000 tons.

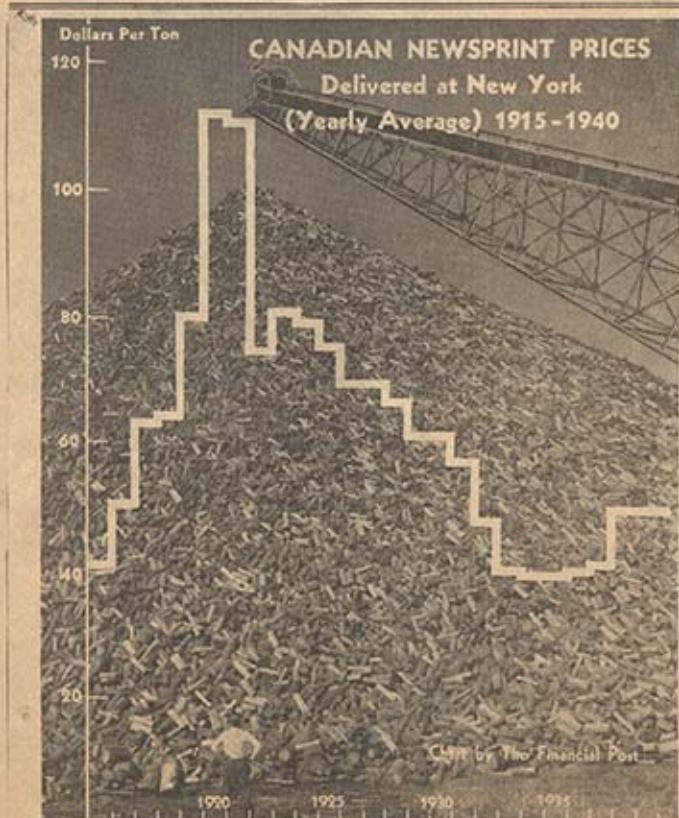
Changes in Output

Last year Canada produced more than a third of the world's newsprint, almost three times the total of any other country. The Dominion's output, however, was sharply down from 1937, when not far short of half the world's total originated in this country.

This abnormal output in 1907, however, was chiefly responsible for the curtailment last year. Manufactured stocks started to accumulate at the same time, due to the depression of a year ago in United States, consumption fell off. The combination resulted in sharply curtailed Canadian production in 1908.

Comparison of the returns for last year, with those for 1937, shows that Japan, Russia, Holland, Italy, Latvia, Hungary, Chile and Belgium produced a somewhat greater quantity of newspaper paper. Finland's production did not vary much, while Lithuania entered the ranks of producers for the first time with an output of only 2,000 tons.

The trend of production in each of the principal countries follows:



Newspaper prices moved up substantially during the first Great War but it was not until after the conclusion of hostilities that quotations really went through the roof. Rereading following the war as the chart shows, was a more gradual process though just as definite. For the first quarter of 1945
prices have been guaranteed by Canadian producers at present levels.

Country	World Production of Newsprint Paper (Thousand short tons)			Per Dependence Year	Per Dependence Year	30-Year Average
	Dependence	Dependence	Dependence			
Canada	1,938	1,932	1,936	1,903	1,878	2,022
United States	2,625	2,625	2,598	1,514	1,529	2,222
Great Britain	1,025	1,025	1,025	1,025	1,025	1,025
Germany	523	521	523	428	428	517
Finland	407	405	405	214	217	219
France	217	214	214	100	100	210
Newfoundland	200	202	200	200	206	202
Sweden	188	188	188	217	217	202
Australia	164	171	178	179	180	181
Russia	224	205	217	125 ⁽⁷⁾	125 ⁽⁷⁾	200 ⁽⁷⁾
Netherlands	103	97	91	51	51	51
Belgium	71	69	69	24	24	25
Austria	55 ⁽²⁾	60	57	22	20	45
Belarus	28	30	30	48	48	48
Czechoslovakia	55 ⁽²⁾	50	50	43	43	43
Poland	27	44	44	29	29	32
Spain	-	25 ⁽⁷⁾	25 ⁽⁷⁾	8	8	4
Egypt	6	7	8	1	1	1
Mongolia	3	4	4	1	1	1
Bulgaria	12	12	12	1	1	1
Mexico	-	14	14	2	2	2
Denmark	10	12	12	1	1	1
Iceland	2	2	2	1	1	1
Total output	7,208	7,205	7,209	4,278	4,278	7,209

Power Shortage Revives St. Lawrence Pact

By KENNETH R. WILSON
Associate Editor, THE FINANCIAL POST

Again the spotlight of public attention, focusing on the St. Lawrence Seaway, there is talk of a formal pact between Canada and United States in the near future. Some optimistic hope for ratification in the spring. M. Olaf Hansen, U.S. Senator, is now a major figure in the group that has been under discussion for 18 years.

Actually, it was in December, 1921, that an International Joint Commission recommended that Canada and the United States make a treaty to develop and regulate the Great Lakes Waterway.

Two years ago last July such a treaty was actually signed at Washington, but failed to pass the U. S. Senate. Again in May, 1926, the United States breached the pact by passing a bill which would prohibit any dam being built on Ontario's Niagara River "by any means."

Now Mr. Stephen has completely changed his mind. Immediately, the U. S. Government has again made ready to pass a bill to prohibit any diversion of the two countries getting together. However, the fact that Canada is at war are said to be better by any time in just two decades.

Why the Rebirth?

What is behind it all? Why the sudden return of interest in this old project?

The answer can be had very simply:

All over this continent, the demand curves for electric power have been rising steadily. In both Canada and the United States there is a constant need for energy established new all-time records during 1926. In Canada, each month showed an increase over the same period in 1925. The increase between January and October averaged more than 10%. This goes to prove that Canada and the United States, in both countries the war was almost entirely irrespective of war loads.

The story in Ontario, as told in the most recent news items of the press, is typical of the trend. These figures are especially important since it is directly because of them that Mr. Stephen, provincial power minister, has again insisted on getting Premier King he was ready and eager to tap the great unused sources of electric energy in the international section of the St. Lawrence River.

Irresistible Load Growth

The H.E.C. of Ontario is now generating at its 45 stations more than 13 million k.p. of electric energy. To supplement this, it purchased in 1925 over 400,000 k.p. of power from the Ontario Hydro-Electric Power Commission of this year. Its primary load had averaged 22% above the same month a year ago.

In 1926, load (including secondary power) reached the highest point in Canadian history—110,000,000 k.p., the corresponding figure for Ontario alone, increased peak load for 1926 will probably be in the neighborhood of 200,000,000 k.p.—an increase of no less than 600,000 k.p., or approximately three times the rate shown the retrospective total in the previous year.

No good person was ever so served by telling here the long, complicated story of the association of power companies by Ontario, with the subsequent resulting of those a year or two later, of the hydro-electric power available in the river system and while the Hydro-Electric Power Commission of Ontario share of hydro-electric power, in the International section of the St. Lawrence River,

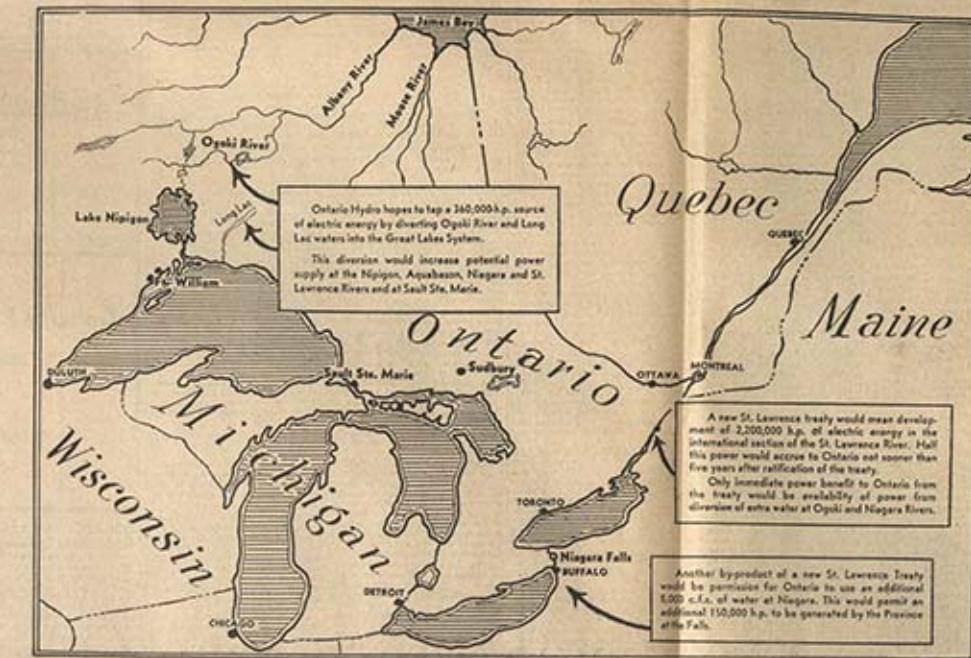
"we make the effort," says the present Minister of Electricity, Mr. J. C. MacLennan. "The first step was to negotiate the 1925 Treaty, which provided for diversion of 100,000 c.f.s. per second at Niagara Falls and a further amount of 100,000 c.f.s. per second at Osgoode Falls, and also to divert 100,000 c.f.s. per second at Long Lake.

The Osgoode River now feeds the way into the Albany River and thence into the James Bay, Ontario water to diversions into Lake Nipigon and thence into the Great Lakes-Lake Ontario system.

Thus far, however, Niagara and Osgoode Falls are the only hydroelectric power plants in the river system.

They are important, however, particularly as they are the only source of generating and hydro-electric power from the international section of the St. Lawrence River for less than five years.

Supporting all the political, financial and economic obstacles were to be over-



found. Especially important is the need for clarifying the long-term outcome.

In Ontario to make heavy new capital needs by purchases from Quebec?

Is it to develop its own power assets on the Ottawa River?

Is the answer to be found in a St. Lawrence Treaty?

These are the questions which have caused the Ontario Government to ask Ottawa, "Can a Great Lakes-St. Lawrence Treaty be negotiated with the United States?"

Mr. Ontario says, "We are our part in the negotiations—indeed, we are the driving force in whatever movement may occur to develop Ontario's share of hydro-electric power, in the International section of the St. Lawrence River."

"We make the effort," says the present Minister of Electricity, Mr. J. C. MacLennan. "The first step was to negotiate the 1925 Treaty, which provided for diversion of 100,000 c.f.s. per second at Niagara Falls and a further amount of 100,000 c.f.s. per second at Osgoode Falls, and also to divert 100,000 c.f.s. per second at Long Lake.

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Pyramiding Power

Closely linked with a St. Lawrence Power and Seaway Treaty is the Great Lakes basin, waters of the Long Lac and Osgoode Rivers which now empty into the James Bay watershed.

To prevent negotiations, Ontario wants to divert 4,000 c.f.s. per foot per second from the Osgoode River into the Great Lakes. This diversion would result in reading additional potential hydro-electric power at various points in the Great Lakes-St. Lawrence system as shown in the following table.

ESTIMATED CONTINUOUS HORSEPOWER THAT WOULD BE MADE AVAILABLE AT VARIOUS POINTS BY JAMES BAY ST. LAWRENCE DIVERSIONS

Long Lac	By Osgoode	Total-Osgoode
20,000	30,000	50,000
30,000	45,000	75,000
40,000	60,000	100,000
50,000	75,000	125,000
60,000	90,000	150,000
70,000	105,000	175,000
80,000	120,000	200,000
90,000	135,000	215,000
100,000	150,000	250,000

In addition to the 100,000 k.p. which would be made available at the Osgoode River, there is a further 100,000 k.p. potentially available if agreement was reached on the "source control" plan of remedial works which would provide a further 10,000 k.p. each for Ontario's H.E.P.C. and the Great Lakes-St. Lawrence basin, waters of the Long Lac and Osgoode Rivers, for power purposes.

The Long Term Programme

Accordingly, this part of the St. Lawrence basin could not be locked up by Ontario as anything more than the above in a long-term programme of development of the Great Lakes-St. Lawrence basin.

It would take perhaps three to five years to commence and complete a large-scale diversion project in the International Section, which is at present the primary and object of the treaty.

In addition to this the 1925 and 1926 proposal gave both power for diversion of additional waters into the Great Lakes-St. Lawrence basin. This power could be used immediately if a treaty were signed and, conceivably, even in advance of completion of remedial work at the Falls.

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Canada's War Metals—Iron

Ore Deposits in Canada
So Far Little Developed
May be Tapped in War

This week The Financial Post presents the fifth of its series of articles on the resources article and reviews the position of iron in Canada and the world.

How is the British Empire situated as regards iron resources?

While potential sources of iron supply are many, the British Empire is compelled to import iron ore, which is only slightly less than required for her own needs. This may not be a very serious situation, but the fact of it can cut off Germany's iron supplies by buying in its sources of ore supply. Great Britain has large supplies of iron ore at home, but much higher grade ore must be imported.

The Welsh iron mines in New South Wales are the largest in the world, but the high phosphorus content of the ore is a factor that makes difficult mining for it. Little higher grade deposits have been found.

Gravels and beach potential sources of supply of iron ore for the British Empire are numerous. They serve as the largest in Asia but rival those of Brazil for supremacy. One billion tons of actual ore and another billion tons of potential ore are reported.

What are the world's chief producers?

From a list of the world's largest producers of iron ore, the United States, which is in second place, turns out about 125 million. Output of the Soviet Union, one of the leading countries in 1938 was as follows:

Country	Tons
United States	125,000,000
U.S.S.R.	100,000,000
Sweden	25,000,000
United Kingdom	20,000,000
Australia	15,000,000
Brazil	10,000,000
New Zealand	5,000,000

*Figures for 1938.

How much iron ore is used in Canada?

Last year 1.2 million long tons of iron ore were used in Canadian blast furnaces. As far as we know, there is no iron produced in Canada, the little amount is imported from the U.S. from the Lake Superior iron region of the United States. The remaining 1.2 million tons are re-exported.

At least demand for iron in Canada is not seriously affected by imports of iron ore. The amount of iron imports reported as previously quoted is but a small part of the total iron ore we brought from the U.S. The Algoma Steel Corporation, Ontario Steel and Cold Steel of Canada and Algoma Steel Corp., are equipped to handle iron right through.

How does Canadian iron ore measure up to iron ore produced in the U.S.?

Iron ore production in Canada is closely comparable to that of the coast of the U.S. In 1938 Canada produced 200,000 long tons while no iron ore was produced in Canada since 1928. By July of this year, output is currently running at the rate of 100,000 long tons per month. In the war later a period of years, production should exceed average annual output last year.

All iron ore, at present comes from new mines of Algoma Steel Corp., but production from these mines will be increased to accommodate an expected increase next year. The latter property



IRON MINE DEVELOPMENT ADVANCES

The new three-contaminated head of the lake here is being developed. The lake here is said to be about 200 feet deep, and the sea bed is about 100 feet below the sea level. The water is to be treated before it reaches the sea.

What are the principal iron deposits of Canada?

Extensive iron deposits are known to exist in Canada but only the few are developed. The new mine at Algoma is being utilized at present.

Stony Brook Iron Mines at Algoma has a deposit of high grade iron ore. The company engaged in the necessary preparation of it for production across the area and a below ground plant is being built. The plant has been completed and has reached over 100 ft. depth. Construction is being given to dressing Stony Brook Lake.

The new St. John's mine in the Midland section of Ontario started production in 1938 and is currently producing 200,000 long tons monthly from the first sheltered and launched.

Iron is also extracted as a by-product of zinc and lead at the Zinc and Lead Smelter at the Almaden Copper Corp. mines in Quebec.

Deposits of iron ore in Quebec are not yet developed. The cost of developing them has been under way for some years. Like the local deposits of the St. John's mine, Stony Brook and St. John's are rather inaccessible, which may prevent their profit-

able exploitation for some time.

The general area in which the Stony Brook deposit is located contains a number of other deposits while many portions of Canada should be favorable for finding of new deposits. The new mine at Stony Brook is one sufficiently situated to allow an accurate estimate of reserves but a very large amount of work remains to be done. The iron ore is so hard that drill holes have only been able to penetrate the surface a short distance. It is estimated that 100,000,000 million tons of high grade iron ore will be obtained above the 1000-ft. level. The deposit has been worked for a number of years and indications are for possibly much greater depth. Two other deposits have also been indicated by drilling by which could prove important.

At the Algoma Steel Corp. plant near Sault Ste. Marie, iron ore is being processed at \$3 million tons sufficient to operate a plant of twice the present size for 100 years.

Canadian iron ore is available at that imported from the United States.

Working of a large number of iron deposits since the United States to produce a larger number of grades

completed in about 1,000 feet away from the near shore. All buildings have been completed and the charges have been made. Construction of hydroelectric power will be effected day by day.

of iron ore than Canada. From this angle, the United States has an advantage over Canada, which is not so far from many deposits but its extreme hardness may in some cases prove a disadvantage.

What effect will war have on iron production in Canada?

Canadian iron ore production should be affected by war. Already the price of iron ore has risen and raised the price of iron ore imported from the United States. This provides some incentive toward the increasing production in Canada.

From the moment viewpoint, domestic production of iron ore is very desirable in wartime. It cuts down the cost of shipping iron ore to be purchased abroad. Steel manufacturers of mountains require a great deal of iron ore and the cost of iron ore as it did in the last war, more indispensable might be considered for iron ore production in our own country.

Does Germany produce iron for her requirements?

No. Production of iron ore in Germany is only about 10 percent of the requirements. An amount of German iron ore has been imported. Five million tons have been secured from France annually and a smaller amount from Sweden and Poland. Germany no longer hope for supplies from either of these sources.

Of Germany imports of 12 million tons of iron ore, however, approximately 10 million tons come from Sweden which cannot be sent without British control of the Baltic.

What is being done to prevent exports of iron ore reaching Germany?

The British blockade is, of course, the chief factor in preventing iron ore reaching Germany. Responsibility for this blockade lies in the United Kingdom for half the Swedish output of iron, most of which is passing Germany and is being converted into steel. Due to a shortage of foreign exchange, British money never proves very attractive to Swedish ports and the British are well aware of this.

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Canada's War Metals - Zinc

British Empire Now Produces

10% Above Own Requirements

The Financial Post reviews zinc in the fourth of a series on munition metals. Attention is paid particularly to the change in situation from the last war.

Why is zinc so important a metal in wartime?

Zinc is essential for making brass widely used in the manufacture of shell casings. Announcement that Great Britain is already turning out six times as many shells as at the peak last war shows need for zinc is undiminished.

Zinc is also extensively used in manufacture of die castings. These castings are big business in manufacturing munitions. Many important anti-friction metals also contain zinc. Anti-friction metals are used as linings for bearings of high-speed engines. Lead, tin, copper, aluminum and nickel are all alloyed with zinc for various uses. Storage batteries require zinc and zinc oxide is a valuable filler in the rubber industry.

Zinc is widely used in galvanizing. Old soldiers will remember the galvanized sheet-free Nissen huts of the last war.

What was the zinc situation in the last war?

"The outbreak of war cut off from the allies the greater part of their normally available supplies of zinc," states a British Government report of the time describing the situation. "There was no shortage of zinc ore, but nearly all the smelting plants in Europe were situated either in German or in territory overrun by German troops (Belgium and northern France)."

The United States was producing only its domestic needs, but the Allies turned to it for much needed supplies. Zinc consequently jumped from 4½ to 27 cents a pound in a single year. Efforts were made to remedy the Allies' productive position. New smelting works were either erected or projected in Aus-

tralia, India and Canada as well as in many non-combatant countries.

Is the British Empire zinc output now sufficient for all needs?

In 1938 smelters within the British Empire were able to produce all the Empire's needs with a surplus of 10% for export. War will likely increase demand but production can likely be increased also. The British Empire now has the smelter capacity so sadly lacking at the start of the last war.

How is British Empire self-sufficiency in zinc likely to be of benefit?

Self-sufficiency can prevent zinc supplies being cut off by some neutral country. In the last war neutral countries were anxious to take advantage of high metal prices offered by belligerents. Now there is a desire for more strict neutrality, which might conceivably involve refusal to sell zinc to warring countries.

Foreign exchange is saved if zinc can be produced from sources within the Empire. If war should be long, an actual shortage of foreign exchange for purchase of supplies might arise. In this case production of zinc requirements would be all-important.

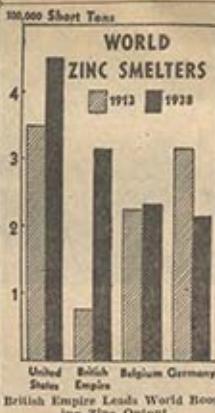
What facilities have we in Canada for fabrication of our own zinc output?

In the last war Canada had no plant for producing refined zinc. Now the Trail Smelter of Consolidated Mining and Smelting Co., one of the largest metallurgical plants in the world, is in operation. Hudson Bay Mining and Smelting Co. is also producing refined zinc.

All facilities for fabricating zinc are available in Canada. Canadian zinc is probably already being used in manufacture of shells. If Canada is to become the arsenal of the Empire, a larger proportion of zinc produced should be fabricated in this country than ever before.

Can production of zinc in Canada be increased if the need arises?

Yes. Several methods are open. Consolidated Mining & Smelting Co. could treat ore with a higher zinc content, if necessary. Hudson Bay Mining and Smelting, which has been pioneering in the making of a very pure zinc, hence opening a vast new field in zinc die-casting, could step up output considerably. Waite Amalgam Mines will have a much larger zinc output with its new 1,000-ton mill. The Notre Dame des Anges mine in Quebec has an important zinc content as well as lead. It is at present on stand-by notice. Work is to be resumed at the Quebec Manitou property. Sherman Gordon Mines in Manitoba has a large zinc content in its ores but no



British Empire Leads World Boosting Zinc Output.

Equipment is installed to recover zinc values. Little capital expense would be involved in putting in zinc recovery equipment.

Shoeless production of British Columbia are a number of lower grade lead-zinc properties which could be reopened. Zinc production is largely a by-product of lead production and any step-up in lead output should result in higher zinc production.

Will the precipitate price rise of zinc at the last war's cost be repeated?

Experts say no. Britain and France took steps to secure adequate zinc stocks before the war broke out. The British Ministry of Supply has now fixed a zinc price of approximately 24 cents a pound. Canadian funds, with buyer paying freight and insurance. Contracts are planned with leading Empire zinc producers to provide a steady flow of zinc at a fixed price.

In the United States zinc has risen to 6½ cents a pound but this represents domestic demand. Exports of zinc from the States are small.

How does Germany's zinc position compare with that of the last war?

Prior to the last war Germany was a net zinc exporter but last year production was only 80% of home requirements. Poland had considerable zinc productive capacity, but metallurgical works may have been partially destroyed before German occupation. Germany may have to import much zinc if war raises use of zinc.

In the "totalitarian war" metallurgical plants will probably be an objective of air raids. Germany's zinc production is limited. Britain's zinc comes chiefly from Canada, however, and these are beyond the range of bombing planes.

What are the chief uses of zinc in wartime?

Created single use in wartime manufacturing airplanes. Near

all the material going into

aircraft is aluminum al-

uminum lends itself ad-

eptly to framework, wings, spar-

verriars, propellers, etc., and

used in airplane engines for

valve seats, crankcases and

piston rings, cylinder blocks,

Aluminum is also important in

manufacture of mechanized equipment especially where light weight is important. Automobiles and motor trucks make a wide use of aluminum alloys, particularly in engines.

During the present emergency we have been compelled to devote the whole resources of our organization to war service requirements with the consequent restriction of the range of alloys available. Until further notice, therefore, we regret that it will not be possible to fulfill ordinary industrial contracts."

As Canada is the Empire's largest aluminum producer, increased United Kingdom orders are sure to come to Canada. Of 58,717 metric tons of aluminum exported from this country in 1937, 30,763 tons went to the United Kingdom.

To be able to meet this increased demand the big new aluminum plant is under construction at Kingston,

MILLION CWT'S.

ALUMINUM EXPORTS

Chart by The Financial Post

1



1918 1938
Canada is a big exporter of Aluminum today.

Out to be ready for production in May 1940.

Germany is not self-sufficient in either nickel or manganese, two of the alloy metals used to give aluminum strength and hardness. If Germany is unable to secure proper alloying metals, much of her aluminum productive capacity is likely to become valueless. Russia may be able to help in supplying some alloy metals.

Germany purchases almost her entire requirements of bauxite outside her own boundaries. Because of the blockade, it will probably become increasingly difficult for her to finance large purchases of bauxite. The British may compete in the German market of supply, perhaps offering more than the world market price to keep Germany from getting supplies.

Where does the world get its bauxite requirements?

Although aluminum is the third most common element in the world, production of bauxite, the present source of aluminum, comes from a relatively limited number of countries. Output in 1937 was as follows:

	Metric
France	622,446
U.S.S.R.	545,117
Yugoslavia	360,000
Italy	360,000
Japan	271,002
United States	250,000
Sweden	250,000
Norway	250,000
United Kingdom	230,000
Austria	210,000
Ireland	200,000
Greece	127,419
Turkey	418,363
Poland	113,000
British India	113,000
Brazil	113,000
Australia	107,806
Brookhaven	7,000

* Figures for 1937 are not available.

What is the difference between aluminum and aluminium?

There is no difference. Aluminium is just an alternative name for aluminum.

The term aluminum is used commonly in both the United States and Canada. In Great Britain, it is more usual to hear aluminum.

War Metals—Lead

Consolidated Smelters Produces
99 Per Cent of Canadian Output

In the second of The Financial Post series on munition metals, the position of lead is discussed with special reference to Canadian production.

What are chief wartime uses for lead?

Lead finds its chief wartime use in the manufacture of ammunition. Bullets are made of lead, and even nickel-steel bullets are filled with lead. Lead is also valuable in the manufacture of equipment where strength is not an important factor. It also forms a covering for cables. The manufacture of batteries absorbs a large amount of lead in peacetime and this is likely to be important in wartime with the increased emphasis on mechanization. Motorized equipment and signalling apparatus require a large supply of batteries and submarines have batteries as a source of power when under water.

The production of lead from the British Empire sufficient to meet the requirements of Britain and France.

Yes. At the beginning of the last war Britain and France produced little over half their needed supply of lead, but the British Empire now produces sufficient to meet the full requirements of both Britain and France. While war needs will likely cause an increased demand for lead, Empire producers have been operating at less than capacity so production can be increased immediately to meet needs. Equipment can usually be operated beyond its normal capacity in case of necessity, and this is expected in the present struggle. New mines will undoubtedly be opened up if the price of lead is sufficiently attractive.

Has Germany sufficient lead to meet her own requirements?

No. In 1938, production of lead in Germany totalled 194,000 tons.

against German peacetime consumption of around 250,000 tons per annum. It appears that requirements in wartime will be much greater than in peace and a shortage will be experienced if supplies on hand are not sufficient to meet the deficiency. Lead production in the rest of Europe would be sufficient to meet German deficiency in lead but most of it will not likely be available due to the British blockade.

Soviet Russia cannot help Germany for it is not a great lead producing country. In fact her output is only about two thirds of the Belgian total. Spain was formerly a big lead producer and its productive resources are likely being re-

stored at the present time. The allied blockade should be effective in preventing the Spanish output reaching Germany, however.

What are the chief sources of lead supply in Canada, and what are the chances of increasing Canadian production by the opening up of further mines?

Canadian lead production is almost entirely obtained from the Sullivan mine of Consolidated Mining and Smelting Co. Canada produces about 420 million pounds annually, or 45% of the British Empire's lead and with Consolidated Smelters producing over 99% of the Canadian total. There are further potential sources of output in Canada but at present no much is being done to tap them. A small 100-ton mill is located on the property of Lake Geneva Mining Co., and this will likely be the first new producer to start up.

Probably best chances of increasing present lead production exist in the Slocan district of British Columbia where many old mines are known to exist which could be reopened if the price were high enough. Consolidated Mining and Smelting Co. is interested in a large lead-zinc property in the North West Territories, and consideration might possibly be given to the opening up of the deposit there. In Ontario, the old Kringling mine of Treadwell Yukon Corp. might be turned into a lead producer, while the nearby Sudbury Basin mine also has some lead. Calumet Mines owns a property on Calumet Island in the Ottawa River on which diamond drilling has indicated a considerable tonnage with a good lead content. The Notre Dame de Sante deposit in Quebec might be reopened. Many other properties undoubtedly exist which could be developed under the insistence of a heavy war demand.

What facilities are there in Canada for the refining and fabrication of our lead output?

Consolidated Mining and Smelting has a large lead refinery at Trail, B.C., where it not only treats its own output but the production of other properties on a customs basis. This is the only lead refinery in Canada.

Fabrication of lead can be carried out very readily in Canada. Ammunition was turned out in large quantities in the last war and our supply of precision equipment and skilled personnel should be even greater at the present time. It appears likely a considerable proportion of lead output will now go abroad in fabricated form in order to avoid any strain on the productive resources of the mother country.

What is the likelihood of Canadian lead producers receiving more than the present fixed price of £17 sterling a long ton for their output?

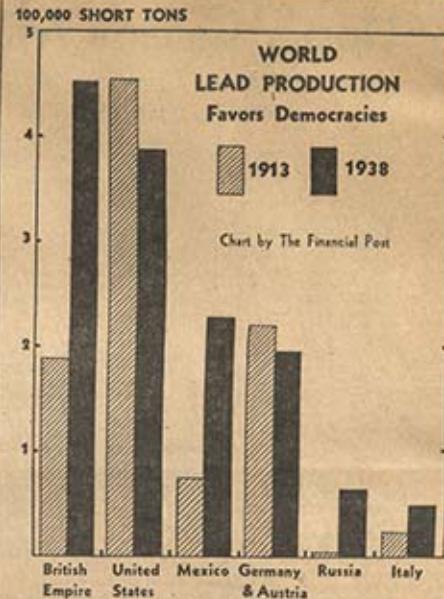
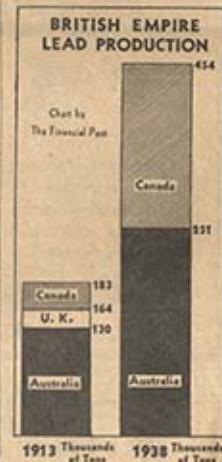
The price of £17 sterling for lead will not necessarily be maintained indefinitely by the British Ministry of Supply, but may be varied from time to time particularly if the

100,000 SHORT TONS

WORLD LEAD PRODUCTION Favors Democracies

1913 1938

Chart by The Financial Post



needed supply is not forthcoming at that price. From the Canadian viewpoint, the price is considered a very fair one to lead producers as long as the pound sterling does not go to an excessive discount in terms of Canadian currency. Consolidated Mining and Smelting Co., the dominating factor in the Canadian lead-producing industry is stated to be negotiating with the British Government with a view to selling its output at a fixed price but no definite statement has been made as yet.

If Consolidated Mining and Smelting Co. and other large Empire producers sell their output at a fixed price it is felt that the price may not be fixed for other producers and the price might be allowed to go up to encourage the bringing in of new producers. The United States market will remain closed to Canadian production unless the price of lead should go up considerably as the United States has had a tariff to protect for over a century, ranging from a low of 15% ad valorem to as high as 3¢ per lb.

What is the position of the International Lead cartel now that war has broken out?

So far the lead cartel has not changed its policy since the outbreak of war and what its future policy will be is not clear. The lead cartel is estimated to control 75% of the output of lead outside the United States and during the last year cartel members have been restricting lead output to 90% of capacity. Object of the lead cartel was to stabilize lead at £15 to £18 sterling. The fixed price for lead is now £17. Any increase in demand appears likely to mean a removal of restrictions by the cartel or a break-up of the cartel itself. Producers outside the sterling block may regard £17 a long ton for lead as too low due to the decline in the pound, however, but Empire producers can supply all the allies' requirements. With a big demand for lead it is felt that British Empire producers will open up to capacity, cartel or no cartel, and that steps will be taken to hold down any increase in the price of lead.

PRICE RANGE OF LEAD

St. Louis Refined
1900 - 1939

Chart by The Financial Post

Canada's War Metals—Nickel

This Dominion Dominates Field in Vital War Need

In the third of The Financial Post's series of articles on munitions metals, the position of nickel is studied.

Where is nickel used in armaments manufacture?

Nickel is found in gun forgings, trucks, airplanes and armor for battleships. It will likely be used extensively in armament for tanks. There is no nickel in rifle or machine gun barrels, but bullet jackets are often made of nickel alloys. Over 1,000 alloys of nickel have been developed and a considerable number adapt themselves to war use.

Did the price of nickel rise along with prices of other base metals in the last war?

No. The price of nickel rose from 40 to 50 cents a pound by 1917-8 but this was a very small increase in relation to the over 100% increases in prices of other base metals. In 1932, nickel dropped to 20 cents a pound but since 1936 the price has been stabilized by International Nickel at 35 cents a pound, American funds.

In the last war International Nickel increased production and used its weight to keep price increases in line with increases in costs generally. At present, International Nickel is trying to keep sufficient supplies of nickel on hand to assure maintaining the price at 25 cents a pound. Plant and equipment have been extended so that increased demands can be met.

What was the source of nickel production in 1938?

Canada produced 80% of the world's nickel in 1938, maintaining the position it has held many years. Next largest output was from New Caledonia, a French colony in the East Indies, which contributed 6% to the total. The U.S.S.R. was next largest producer with an output of only 2% of the world total. The remaining 4% was divided among many countries, including Burma, Norway, Germany and Greece.

How does present Canadian nickel production compare with that of 1937?

In 1934 Canadian nickel production amounted to 46 million pounds. The earlier output than was either produced by International Nickel Co. or by companies it later absorbed. Last year, Canada's output of nickel was almost five times as great at 211 million pounds. International Nickel Co. still produces the bulk of the output, turning out 194 million pounds in 1938. Falconbridge Nickel produced practically the entire balance of 17 million pounds.

Has the British Government been able to secure the information necessary to prevent nickel supplies reaching Germany?

Canadian nickel companies are

making available to the governments of Great Britain and Canada all information dealing with sales, shipments and consumption outside the British Empire. This information is of immense importance in preventing neutral countries buying for transhipment to Germany. Nickel is not re-exported by the United States, according to International Nickel Co. This allows Canada to supply the United States without nickel ultimately reaching Germany.

German submarines came to the United States last war to purchase needed supplies with millions of dollars of chemicals. Nickel formed a part of return cargoes.

Is nickel essentially a war metal? No. The great bulk of nickel now produced is used in the industries of peace. Over \$19 million spent on research since the last war has been entirely devoted to finding new peacetime uses.

In the last war, most nickel was used in armament manufacture and it was easy to check on the ultimate destination of all nickel production.

Why is nickel so valuable in the manufacture of armaments?

Armor plate can be made much harder by the addition of a small percentage of nickel. Addition of nickel also creates resistance to heat. It forms a valuable constituent.

What are chances of Germany either increasing production or tapping other sources?

No appreciable increase in German nickel production is expected. The one German nickel mine is low grade with nickel content about a third of that formerly obtained.

New nickel mines may supply Germany. International Nickel has a large mine in Finland scheduled to produce in 1940. Russia and Germany, singly or together, might bring pressure on Finland to force working of the mine despite International Nickel.

What are chances Germany will use substitutes for nickel if supplies are not available?

Cobalt, molybdenum and other metals can be substituted for nickel but the substitutes are usually much more expensive to produce. There appears no reason for believing supplies of substitutes would be more available than nickel supplies. Any large-scale use of substitutes appears out of the question unless some unexpected new discovery is made.

What are chances Canada will use substitutes for nickel if supplies are not available?

Production of chrome comes chiefly from Asia, South Africa and Europe. The British Empire produces over a third of the total. Chrome production in 1938 was as follows:

nickel in many non-ferrous alloys. Alloyed with aluminum, it becomes important in airplane construction, the aluminum alloy having both strength and lightness. "Inconel," a nickel-chromium alloy, is resistant to both heat and corrosion. Generally speaking, a larger percentage of nickel is used in non-ferrous alloys than in iron alloys. Nickel steel has from 6% to 7% nickel, while copper-nickel alloys may have from 15 to 30% nickel content.

Where is Germany's nickel coming from now she is at war?

Reserves of nickel built up prior to war are likely being used by Germany. Nickel coins can also be melted down. After reserves are exhausted, Germany will have to secure nickel either from domestic production or other countries. Domestic output is only 5% of requirements, with salvage from scrap negligible. The Dutch East Indies and France's New Caledonia are biggest sources of nickel outside of Canada, but these supplies are barred by the British blockade. Soviet Russia's nickel output is relatively small and does not nearly meet her own requirements.

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	Metric Tons
U.S.S.R.	121,000
Turkey	36,000
Soviet Russia	35,000
Union of South Africa	30,000
Philippines Islands	20,000
Burma	15,000
Greece	10,000
Jugoslavia	8,000
Portugal	6,000
Cuba	40,000
Japan	20,000
Hungary	10,000
Bulgaria	10,000
Cyprus	10,000
Australia	8,000
United Kingdom	8,000
South Africa	7,000

*Figure for 1937; latest available.

Is Germany likely to have a shortage of chrome ore?

Germany itself produces no chrome ore and all requirements must

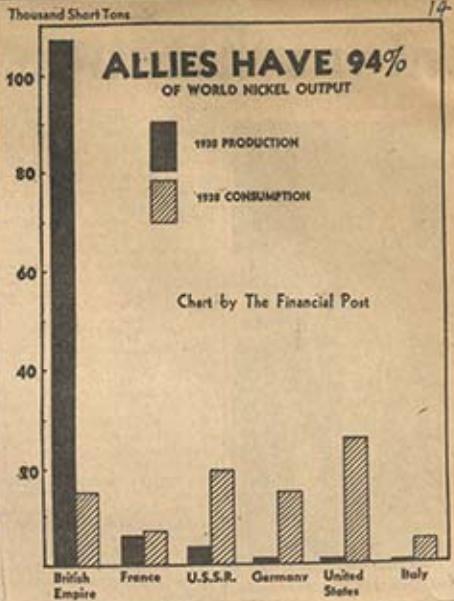
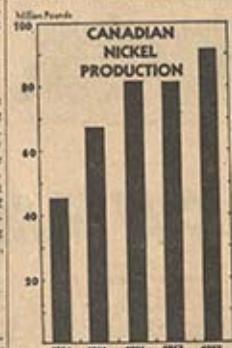


Chart by The Financial Post



Metals—Chromium

Big Supplies Chromite Ore in Empire Countries

—Germany Has None

What are chances Germany will use substitutes for nickel if supplies are not available?

What are chances Canada will use substitutes for nickel if supplies are not available?

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The actual processes for making Chrom-x are trade secrets.

How does Chrom-x, the product of Chromite Mining & Smelting Corp., differ from ferro-chromite, the usual vehicle for making high-chrome steel?

Directly in the open hearth furnace is the chief industrial advantage claimed for Chrom-x. The structure of high-chrome steel with ferro-chromite requires electric furnaces, resulting in much higher costs.

Chief steps of the Udy process for production of Chrom-x are the following:

1. Beneficiation of chrome ore.
2. Controlled reduction of chrome ore through control of slag composition.
3. Use of oxidized ferro-chromite in forming exothermic mixture.

The actual processes for making Chrom-x are trade secrets.

The War Will be Short —

Author of This Article is a European Economist
Who is Now a Refugee From the Greater Reich

For six years it was believed in democratic countries that Nazi Germany could not afford a major war. Now that the major war has got well under way, the same opinion continues to find general expression, while many one word after the other, instead of "major," write in a "long" war.

It does not seem to have occurred to many people that there was obviously something wrong with their reasoning in the first place; they cannot expect that reasoning to apply in the second. The Nazis will not win even a long war, but those who are looking for economic collapse are looking in the wrong place. When the collapse comes, it will be moral and not economic; it will be the result of positive idealistic longings, rather than of negative, materialistic privations.

Wrong Yardstick

The tendency to overestimate the political significance of Nazi economic organization seems to be due to a faulty general misconception. The democratic countries have persisted in judging the Nazi economy by capitalist standards, and have found it inadequate to meet, first, the demands of a long war, and then the demands of a short war. For the post-war economy requires a system of controls and strict shortages within the Reich, no matter how speculative has been seized and swallowed whole.

If these theories were true, the German nation would have run out of almost everything some time ago. Those who have their opinions upon statistics are right, with their terms; for there is nothing worse, with their theories. It is simply their facts which are at fault. Nazi Germany is not capitalist but socialist, and as such, governed by a different set of economic laws.

Under cover of a barrage of words about the Communist menace, the National Socialists converted the former capitalist structure into a rapidly functioning machine, differing little in its aims but, at all points, from that of Soviet Russia. The social plan was retained; the economic organization within was annihilated. Men like Krupp and Thyssen were not taken out and shot, but they were reduced from their former positions as owners and proprietors to the status of directors, safeguarding not their own interests, but those of the state.

The Nazi Government has absolute control over capital and labor, the production and distribution of goods. The German manufacturers or industrialists is told where he shall buy his raw materials and how much he shall pay for them; where and what is to be produced, how much, how much, it must cost him; where he shall hire his labor, what holidays his employees shall receive and the amount of those wages. The quantity, quality and price of his products are also entirely controlled by the government.

Living on Substitutes

As everyone knows, the shortage of food-stuffs, raw materials and manufactured goods which formerly constituted the bulk of Germany's imports trade has been met partly by increased production and partly by the substitution of synthetic for synthetic substitutes. In spite of inflation, Germany may easily shorten her unemployed, but she made very serious inroads on the foreign trades of theoretically much more powerful countries.

The effects of the occasional food shortages in a country with a non-monetary conception of life have been greatly exaggerated by the outside world, and all run in the contrary. The German people have had quite enough to eat. In 1933 Germany produced 20 million tons of foodstuffs. Although 1933 was a very bad year, the increase is still not without significance.

The lack of gold, credits and raw materials did not prove too much optimism and concern for the Allies peoples as far as the war is concerned. The Nazis do not play the economic game according to orthodox rules. The actual hardships which the German people will have to endure will remain relatively unimportant for some time to come, and it is no more reasonable to expect them to revolt against those hardships than, for example, to expect the British people to revolt against a 37% increase in meat and a 3.5% blackout.

From a psychological point of view, by overrating the economic aspect of the Nazi war problem to the exclusion of muscle, the Allies are aiding Germany in her efforts to divert a fight to self-preservation, and indirectly serving the Nazi cause very well.

There is no question that British and French peoples are in distinction between the word "Germans" and "Nazis" something more than a verbal whim. It is one of the Allied weapons, and if it were not potentially effective, the Nazis would not be enraged by it. There must be some very good reason why they have tried, over and over again, not only to deny that the Allied leaders are telling the truth, but also to convince their people that they are fought because they are German.

The statement of the British Government that "we have no quarrel with the German people" received no space in the German press; on the other hand these newspapers

including some published in England have sought to infect the German public with the idea that the war will go well under way, the same opinion continues to find general expression, while many one word after the other, instead of "major," write in a "long" war.

It does not seem to have occurred to many people that there was obviously something wrong with their reasoning in the first place; they cannot expect that reasoning to apply in the second. The Nazis will not win even a long war, but those who are looking for economic collapse are looking in the wrong place. When the collapse comes, it will be moral and not economic; it will be the result of positive idealistic longings, rather than of negative, materialistic privations.

Morale Already Cracked

German morale, however, Hitler rises to the top of the country is in very terrible condition. Some of those difficult combined strains of the same due to the heavy toll pressure on a heavily loaded front for six years he carried out a risky programme securing six years the time of success.

Then came the Russian aggression followed by the invasion of Poland.

The effect of the agreement economy, Hitler had been enough to sustain his confidence in his war aims. But now very beginning Russia has us burden of which is almost certain to further our own ends at Ge

At Munich, Chamberlain handed the European hegemony the sake of peace; three months later it was Hitler for the sake of victory of revenge. And the rest enough, it is at last a genuine although they have still to go, the German people will not be able to stand up to Hitler's will.

But Hitler's direct helped by the German people. If a democratic victory of such a blunder his past lead him somewhat difficult, for it will prove fatal. He is no less and prove a dictator's cause is he only a question of time before

There was indeed a financial breakdown;

but it was deferred for a number of years to darken our days in 1933 and 1934.

Hopes Renewed

Somewhat similar expectations to those of 1914 (expectations, that is, of a brief, victorious war) have been, and are evidently still held in 1939. Nor is it difficult to quote strong authority for the belief that this new venture on the field of Armageddon is unlikely to last long. As recently as Nov. 5, 1938, no less a statesman than Dr. Edward Heath was quoted (in the London Sunday Times) as stating that "the war may be over in a year."

There, I suppose, as reader of The Times, Dr. Heath does not with all his heart hope that Dr. Beneš may be right. But our hopes are conditioned by the no less pessimistic assessment on our part, that the war will end with an Allied victory. Indeed, no small part of the British Empire's strength consists in that. Some of the British peoples even contemplate a peace which would leave Hitler still dominant in Europe.)

Probably most people whose thinking accords with that of Dr. Beneš have their expectations of a short war on the belief that, not least, there will be revolution in Germany. For the present situation on the Mainz-Berlin front gives an prospect of an early and violent battlefield.

Moreover, blockade (a long-range weapon in the last war) is a long-range weapon still,

in line. It will strangle a country, dependent on its effects, while becoming progressively more deadly, take time to show themselves.

Effect of Blockade

Without possessing special knowledge as to Germany's present and prospective supplies of food, coal and raw materials, I personally believe he somewhat surprised if the blockade were to become a factor of crucial importance.

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Opposition in Large

After all, the opposition is very strong in the former Polish, Austrian, Italian, South Slav, Catholic, Moslem, and army leaders apart, especially lower-middle and who are exasperated by the years' harshness.

There is nothing more it is still not

It becomes necessary, therefore, to look at the possibilities of revolution in Germany, bearing in mind that most of us know more than a very little about political conditions in that country.

Few people anywhere regard the Nazi regime as permanent. To men like ourselves, whose political institutions have already

widened the western front during many centuries,

Hitler's hour is gaining office in 1933, that the Nazis had a flavor of the ridiculous. In that

on the western front during the past three months has been, for both sides, an opportunity to conserve war stocks—including

head, food and clothing as well as shells

and gasoline.

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bearing in mind that most of us know more

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Few people anywhere regard the Nazi

regime as permanent. To men like ourselves,

whose political institutions have already

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It becomes necessary, therefore, to look at the possibilities of revolution in Germany,

bearing in mind that most of us know more



They Know Germany

The writers of the two articles herewith have extremely good reasons for not signing their names. Both are much too well known to the Nazi Gestapo; both have intimate connections with people in Germany who would be almost certain to suffer concentration camp or worse if either of these writers were known to be vocal opponents of the Nazi cause.

As several Canadian writers and speakers have recently learned to their surprise, the press of Canada is constantly watched by the Nazis for information and mostly distorted versions of sentiments expressed here are frequently and promptly broadcast throughout Germany.

In truth, experience and up-to-date knowledge of the situation in Europe, both writers are uniquely qualified to argue the vital question every Canadian is now asking: Will it be a long or a short war?

A Middle View

Claims Germany Strongly Entrenched but Cannot Fight Expensive War Either on Land or Sea

BONNIE LEE between the views of the two writers whose opinions on the possible duration of the war appear elsewhere are the conclusions of a third well-informed authority obtained by *The Financial Post* this week.

This man also must not be identified, although for reasons of identification (and privacy) in the case of the other two writers, *The Financial Post* assures its readers that he has unique opportunities for keeping his information on Central European economic matters up to the minute. He made these points:

"Germany's economic position as regards supplies of vital materials is very strong at the moment. She has built up **LARGE RESERVES** stocks of petroleum, copper, fats, etc.

"In addition she has the advantage of having a continental economy. Her degree of self-sufficiency in most key materials, which includes supplies from her southeastern neighbors and the occupied countries, is very high.

"Britain, on the other hand, is an island economy. She is less well stocked up with raw materials. Britain must maintain her life-line of supplies from overseas. If she were effectively blockaded she would starve much sooner than would Germany under blockade conditions.

"This provides the reasons why Germany has carried on the war as she has. She cannot afford any expensive warfare on land or sea that would cut off her supplies. And, of course, the concentration of effort to set England off balance supplied by submarine mines and air attack. And as neutral vessels in the North Atlantic and the North Sea can land at British ports but cannot reach German ports, she sinks every ship she sees, whether British, French or neutral.

"Of course Germany can only win what are the equivalent of minor military engagements by this process. She would have to subdue Britain off completely in order to win by such methods.

"That is the situation at the moment. Germany is well entrenched with key materials and unable to draw further supplies from overseas. Britain is less well supplied but is able to bring in materials from the outside world.

"What will be the situation in six months?"

It should be vastly different.

"Germany will gradually use up her accumulated reserves. Of some materials she may be short in three months, of others in six months or in nine months.

"If in meantime, Great Britain and to a lesser degree France (which has a larger degree of self-sufficiency than Britain), build up their stocks of raw materials and foodstuffs, as well as those of armaments and aircraft, Germany will be very much the stronger. Within a year, Britain's economic strength should be as overwhelming as that of Germany that is both the psychological and the practical sphere; the result would be devastating to Hitler.

"This is the situation as I see it now. I reserve the right to modify my views in the spring when one has had a better opportunity to size up Britain's ability to increase her stocks of materials and to study the effect of unforeseen developments that may occur in the meantime."

"But to me the important thing is that Britain has reserve strength and Germany has none. And remember that when one speaks of reserve strength, one speaks of more than ability to increase supplies. One speaks also of the ability to reduce consumption. Germany has for several years been on a war basis. She has anticipated wartime restrictions on consumption. There is very little room that she can budge without putting her people on short rations. They are on shorter rations already than any people should be on, if they are to work for the home front or prevent a German victory."

"Britain, on the other hand, has imposed only the most modest restrictions on the consumption of her people. They can economize on shipping and save much money by tightening their belts. If only a fraction of the amount that the Germans have already had to tighten their belts.

"The German High Command and even the Nazi economists realize these facts. The German authorities know the economic position of their country as intimately as a hunting man knows his hunting sheet. They know that it is only a question of time when they must

lose bloody affair than the old-fashioned type of military war."

The authority in question, who by the way is not a resident or citizen of Germany but is a thoroughly well-informed student of German economics, speaks of it as a "long war." But by that he means a war that may be won in a year, as long as it reminds the present war and not a new war between a different line-up of nations from those now engaged in it.

This authority's views on the possibility of a revolution in Germany are of interest. He said to *The Financial Post*:

"Talk of an early revolution is pure illusion. The German people, according to the Hitler regime, in that extent, they may be regarded as a united nation."

"The revolution will become a possibility either when Germany suffers a major military defeat or when the tightening restrictions on consumption (as a result of the cutting up of present supplies of foodstuffs and material) put such pressure on her people that social discontent becomes very widespread."

"That could happen, so far as one can foresee, in six months or a year from now. But there is no chance of it in the immediate future."

Middle View

(Continued from page 12)

some way. For it is primarily an *it*. I hope it remains such. An *it* is a much more humane and

Food Industries Look For

War Conditions Completely Upset Normal Trading and Processing

R. T. Blodin, editor of *Canadian Grocer*, has been secretary of the Food Producers Association since its formation in 1920. The idea of establishing the outstanding display of food products in Canada was born in 1920, and the Canadian Grocer is entitled to 50% interest. He is now editor of *Meatless*, published by the Canadian Grocer, and is one of the chief authors authority on food merchandising in the Dominion.

By R. T. HUNTON

War conditions are gradually increasing food prices. Future prices will depend largely on length of hostilities. Most imported raw materials will be up on a higher level, because of increased cost of production, rising demand, and a general increase in world shipping rates. Along with probable wage advances, all this will mean added costs. Shipping rates are invariably higher during a long war, and war risks insurance applies especially to shipping supplies from European or Asiatic waters.

The present food situation cannot be compared to that existing a year ago. It may be summarized as follows:

1. Imported raw materials and finished products will be up, because of higher freight, war risk insurance, shipping delays, uncertainties of arrival.

2. Exchange on U. S. funds will add to end-of-war costs of all foods paid for in U. S. dollars.

3. Sales tax of 5% applies on duty

paid values which are higher by the amount of the duty than prices paid in exporting country.

4. It is likely that Canada will be unable to purchase vital foodstuffs and other food requirements abroad.

5. While Great Britain is in the past several months has been laying in heavy supplies of foodstuffs, there is still a big future as long as war lasts for Canadian food producers.

6. There is a big western wheat crop at present, which with better export demand in sight.

7. Better years in sight for canners with heavy carryovers as prices are up.

8. British firms paying more for sugar and flour but likely to maintain these prices.

9. Biscuit manufacturers continue to sell at old prices, and on replacement values.

10. Improved future for canned milk trade.

11. Price competition still keen among food chains in Eastern Canada.

12. Anxiety on part of manufacturers using imported raw materials is speeded

up demand. This is evident in the recent purchases by confectionery manufacturers of sugar made from beet pulp. Canners have at least \$1 per pound above Canadian rates to make sure factories would not have to shut down.

A good many foreign food products are paid for in United States funds and this is also adding to end-of-war costs, at the moment, to the extent of 12%.

Lower shipping rates over continental British Empire is offset largely by higher freight rates and war risk insurance. Markets are therefore likely to follow the trend in the 1914-18 war; but this time advances will be more general and will affect all countries as well as both the British and Canadian Governments. It is also evident from the start that Canadian industry, while not losing sight of a return on operations, is keeping the interests of the entire country in mind.

Food for Britain

Canada will be much greater extent than in 1914-18 provide the United Kingdom with essential food products. With the varying system of the British Government effect much earlier than in the preceding war, the country stands in a better position to meet the demand for wheat has already pushed prices upward, which is relieving the Government of its 70 cent per bushel guarantee that otherwise would have had the country many difficulties.

Flour is in short supply and is in greater export demand with the future for both wheat and flour looking brighter. Great Britain will continue to take our bread and probably in increased quantities. The United Kingdom has evidently been purchasing wheat at about 50 cents per bushel, sending various types of goods. Seven months exports this year of canned vegetables were more than three times as great as last.

Britain has been purchasing heavily of beans from Western Ontario, to such an extent that production and export output of the wheats double what they otherwise would have been. There is an assured market for a big percentage of the wheats export, while butter exports are small. More than 50% of the wheats are sold at 50 cents per bushel, many times greater than last year. Exports of packaged cereals—they were more than \$1 million in last fiscal year, with \$1 million going to the United Kingdom—are not likely to be reduced.

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Imports Continue

On the other hand, Canada will continue to import fancy biscuits, jams and marmalades from the United Kingdom; dried fruits and shelled walnuts from France; imported cheese from Switzerland; dried fruit from Australia; and some of the standard require. Even sardines are coming from Norway and Canada is getting supplies of shelled walnuts from France. Manufacture now excelled by Japan dates from long ago from Turkey, dried fruit from Australia.

There is, therefore, little reason to see food wholesalers and retailers so far affected through lack of imports.

Canada certainly did not produce food products to capacity this year. Canners and meat packers are continuing to buy out vegetable products because of surpluses carried over from past two years.

The canned tomato pack may not exceed 15 million cans, whereas two years ago it was 18 million. This is due to the very limited production capacity.

It is not expected that the War-time Prices and Trade Board will attempt to control the food business to any extent. It has already indicated that it is not keen about fixing prices. What it will endeavor to do is to prevent price advances—these will be instantaneouly—and to stop speculation. All of which means that advances will be permitted to conform with increased costs and replacement values and those, with few exceptions, will be made gradually.

Loss Leader Legislation

Loss leader legislation has run its course in eastern Canada, but in British Columbia, Alberta and Manitoba have loss leader legislation, which, in effect, is designed to prevent the sale of any food products at less than 50% over the recognized wholesale cost. Other provinces are likely to follow suit, but have not come forward in these laws, but there have been some trouble arise because of evasion schemes. The Ontario Government has turned down a similar request from independent retailers in that province.

The result of price control in Ontario was left with the Trade and Industry Board under the chairmanship of E. J. Young. This Board has been calling in members of the trade against whom complaints were made and has been investigating the evidence. But it has not yet made any announcement. Similarly, there is no legislation in Quebec or the Maritimes dealing with loss leaders.

Canning Industry

Fruit and vegetable canning in Canada has been in a general decline for three years. This would have been the case even if there had been no war, inasmuch as canners had sprung food it necessary to secure higher prices through reduction of容积 and cost. Canadian packers in 1917-18 had new laws for a decade or two. In many instances goods were sold at less than cost of production, and some of the smaller independents eliminated financial difficulties by paying prices of others reduced considerably.

Carryover of peas, tomatoes, beans, peaches and corn from the 1917 and 1918 packs and live prices prevailing, compelled canners to cut average extraction for last spring. There are no official statistics available, but if the estimates are correct, the pea pack, which ended in July, was not much more than 30% of a year ago. It is calculated that the tomato pack, on account of reduced storage and a comparatively short season, may not exceed 50% of 1918.

The corn pack may run up to 40%. Jobbers and large retail distributors have been coming into the market since early the last three or four months, buying tomatoes anywhere from 10 to 25% higher levels.

Following figures show three-year pack production:

	1917	1918	1919
Total cans	600,000	600,000	600,000
Tomatoes ...	3,200	2,000	1,200
Pea pack	1,800	2,000	1,200
Corn pack	1,700	1,800	1,200
Total cans	7,700	4,000	3,600

*Estimated.

It is this prospective decrease, estimated to be between 30 and 40% from 1917, that started the market upward. War or no war, price would have been higher.

British Embargo

Great Britain has put an embargo on certain luxury items. Import licenses are now required for tea, coffee, dried fruits and vegetables but not tomatoes. That we still have a free market into the United Kingdom for all tomato products (except ketchup), such as canned, homogenized, whole juice, puree, pulp and puree. This is a fact, but there is a limit to the market and unless Britain feels it is good business from an international political standpoint to buy most of her canned tomatoes from Italy, Canadian exports must speed up. Lastly the Dominion has been asked to increase 600 to 700,000 cans annually and more than that of other tomato products.

Carryover of the above vegetables was mostly in the hands of one or two of the large canners as they will benefit most from the higher price.

Canadian packers have been low because of substantial packs in the past couple of years. But it is not easy to curtail fruit production, and this year crops have been good, especially in the west. As a result of the present state of marketing markets it is likely that the Canadian pack pack will equal or exceed last year when it announced to 63,000 cans.

Lemon trouble is experienced in getting supplies from California. The crop is not quite so good but there should be little difference in size of the pack when completed next month. Last year it totalled 10,000 cans. The United Kingdom is a big buyer of Canadian packed peaches, having taken 11,000 cans in the first half of the fiscal year against 8,000 million years before. In the past couple of years she has also been buying more canned peaches.

Tomato and marmalade prices are higher after what seemed like quotations at



In the laboratories of the canning industry tireless workers have furthered food chemistry, brought revolutionary changes into the business. Their efforts have increased the varieties of vegetables and fruits preserved and broken down geographical barriers. Here is a sketch depicting in developing new methods of preserving fruit juices.



Export business has always been of vital importance to Canadian meat packers. The British market offers an outlet for the home that it has not been able to completely supply. With ever increasing tides demands, meat packers are assured of a steady demand for their products. Here is a truck of Willard's sides being loaded in the hold of a transatlantic steamer. The sides crust be handled with extreme care.

Capacity Production

19

work of production at below in the last year of its

If the war lasts any length of time consumers are likely to experience considerably better prices and profits. At the moment the embargo (which may only be temporary) in the United Kingdom against tomato ketchups seems to be the only fly in the ointment from the country's standpoint.

Sugar Refining

The trouble of sugar refiners, wholesalers, retailers, candy makers, and confectioners seems somewhat of war in Europe are gradually subsiding. At least 95% of the trouble was attributable to consumer raids on stores, resulting in about half of the houses of Canada having practically all the sugar available. Persistent demand put the Canadian refiners in a short position, which in many instances caused more or less strained relations with large buyers.

ations with large buyers. At times refiners were working at capacity, which had been reached their supplies. Retailers could not buy enough. Thus Great Britain reported the purchase of all British West Indies rums which tended to further complicate the situation. Later, however, the announced release of some supplies to Canada, small temporary relief was obtained when a number of beverages and candy firms at request of the War Price and Trade Board gave up some of their surplus for regular retail channels.

Sugar jumped 25¢ a cwt. on Oct. 2 because of the difficulty of getting cane into the country, higher prices paid for

To relieve the situation several things have been done. Ottawa announced the Dc, a cost sharing duty would be im-

etc., a new, dumping duty would be removed from United States and Cuban refined sugars until Nov. 23 although this may not mean very much. Certain refiners purchased Cuban raws at a high price (one firm is bringing in £300 total and Refining Sugar is Canada, although taste, we are told, is not so good).

little or no raw sugar had been coming from that country. Canada's own beet sugar began to be palmed early in October.

at the reduced period to examine some more in detail.

more than \$1 a cwt. above the prevailing price of Canadian sugar after the 1924-25 season. The Ontario sugar companies wanted to be sure of stocks so there would be no jobbing in plain operation.

From a world standpoint there does not look to be any future sugar shortage. I recently compiled figures to show that in the 1933-1934 sugar year-opening of the First World War — total world sugar production amounted to some 30 million tons. In 1937-1938 it had risen to 36 million, as follows: sugar from beet 26½ million, cane sugar 8½ million and beet 2½ million.

Unless transportation difficulties are encountered, as is conceivable now, there should be no world shortage of sugar as was experienced toward the end of 1941 and in 1949 when wholesale prices in Canada had the high mark of \$24 a short ton against \$13 at end of October, 1944. But if the demand is extended further, greater trouble would occur in raw and refined sugar, as in Canada, where it is not sufficient to satisfy Canada's demands, which requires upwards of 300 million lb annually up to about 1950.

Salmon Caviar

Salmon Canning
Salmon canners in British Columbia are not having difficulty selling their packs this year. Export demand has been heavy. Usually about two-thirds of the pack is exported in a normal year. Apart from pinks, packs of the various important grades are well down from last year.



Business makers are looking for an eventual stimulation of their business during wartime, although prices of ingredients have risen sharply since the outbreak of war. Canadian plants are highly mechanized, possessing the most modern equipment available. Here is a large dough mixer pouring forth the ingredients which were mixed into a fine, smooth, soft dough.



The handling of fluid milk is a most exacting process. Milk is highly susceptible to abuse and vigilance cannot be relaxed for a moment. The milk goes through the dairy weekly to places where cleanliness is a religion. The process is almost perpetual motion for delivery of milk must be made 365 days in the year. Here is one of the bottling machines which every day of the year places the fluid

Higher prices are prevailing this year (19) with the exception of Cobles. Sockeye salmon opened \$1 a can above a year ago and pink and King were marked \$0.50 up. So short is the market grade salmon at British Columbia Packers Ltd., that it makes only price rates delivery on

A new phase of the salmon situation

The September Wartime Budget. It applies to all armed forces.

Replacement value policy was not generally adopted by tea and coffee purveyors following the substantial increases in taxation in the War-time Budget. The rates were increased from £1 to £1.50, based on quantity and a £1.50 per unit of 1 lb. The result was that the replacement value of tea and coffee duty was increased from 3d. to 1d.

So the problem was to gauge what the new prices on the labels should be, whether \$2., \$4. or \$6. higher. On this occasion we from at Saitels Tea Co., and some others had no change to make by October. On the other hand, Pure Gold Milk Co. advanced one grade of its Blue Ribbon tea flat, in the hope Standard Brand would mark up its price while dealers

The supply situation is clearing. Producing countries have decided to reduce exports by 20% of the basic 1980

Index to Food Companies

(Question 28 on page 28)

War Solves Canada's Major Wheat Problem

Allied Market Guaranteed so Long as War on — Supplies Greater Than in 1914

By GORDON L. SMITH

Staff Writer, The Financial Post
For the duration of the war, Canada's wheat market problem is over.

The time may continue to be critical of prices, there may be temporary hold-ups in shipping, but generally, so long as the war lasts all the wheat that the country can produce should be wanted and the bulk of it will find its way across the Atlantic.

In the last three weeks grain has been moving across the Great Lakes in record volume. At eastern terminals were choked a month ago and railways were forced to embargo further shipments, one naturally assumes the new flow means that Atlantic conveyors have now been organized and are operating at capacity.

Normally, Canada faces two major wheat problems. The first is to grow it, the second is to sell it. Both of these problems have reached acute proportions in the last decade.

From 1922 to 1932, fair to excellent crops plus decreasing sales resulted in piling up huge overhead surpluses. At one period, Canada started off the new year with more than a normal crop still left unsold.

Under such conditions, naturally, prices tumbled. Then came the worst drought this continent has seen in a whole century. Crop fell away in pitiful proportions. Over large areas of western Canada, growers considered themselves lucky to get their seed back. In many districts youngsters grew up to manhood without even seeing a field of wheat sown.

Solved for Time Being

Now both of these major problems appear solved for the time being. Undoubtedly the war should mean sufficient demand to take every surplus bushel we can grow, while past experience would indicate that the long drought cycle is over for a good many years to come. It is, of course, possible and indeed unfortunately probable that next drought will again occur in the fairly near future. But only time before in the long agricultural history of this continent has anything comparable to the five lean years of 1922-26 been experienced. The last visitation was about a century ago and that is about as often as weather authorities figure such calamities are probable.

With the outbreak of major war in Europe, many people, including holders, expected wheat to repeat the price performance of the Great War period. At first it did so. Even prior to the actual outbreak, each war scare put a wave of strength in the wheat market, just as it put a shiver through industrial stocks. Once Britain and France definitely broke with Germany, however, the market tumbled. Within a month the price was back to where it started and although there has been improvement since, it is still almost 5 cents below last September's peak.

of any account from the previous season, as farmers in those days followed the simple old fashioned rule of selling their crops as they harvested them.

Outside of United States, the only big bushel of wheat in shipping position was being stored in Russian Black Sea ports. Unfortunately for the Allies, in between them and the stored wheat in the late fall of 1914, was the closed and fortified Turkish Dardanelles. So long as no narrow waterways remained open, it was obvious that wheat was going to be scarce and the price advanced quickly from a dollar a bushel at the outbreak of the war to \$1.20 by mid-winter.

Russians Once Dominated

In this Russia surplus was a dominant factor in the world situation at the time was demonstrated when the Allies began to seriously tackle the Dardanelles in 1915. Every quarter of a mile of penetration, up the Straits in the first and most successful attack brought wheat prices tumbling. From peak of \$1.25 in May they dropped to under 90 cents a bushel in September. But, of course, the Dardanelles attack failed, Russian wheat remained out of the Crimea until it rotted and the world prices rose steadily to a peak of over \$2 a bushel in the spring of 1920.

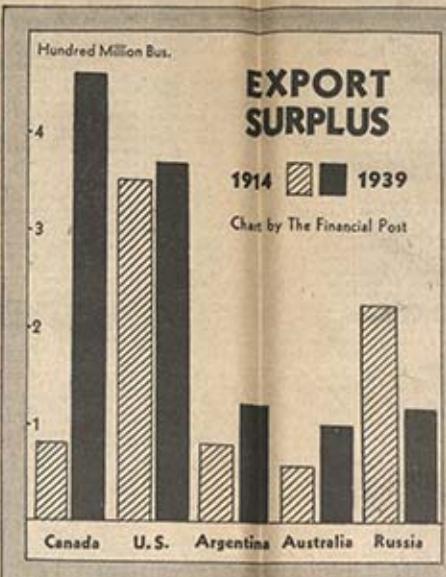
Now let us look at the contrast today. Instead of poor to fair crops throughout the world in the year the new war was broken out, there have been bumper crops.

Canada has produced close to half a million bushels or the third largest crop in its history. Carried over from the previous year was at least 100 million bushels additional. Carryover plus crop in the United States is estimated at 900 million bushels. Harvests in Europe have only been slightly behind the excellent yield of 1914.

Big Reserves Now

In contrast again with 1914, reserves in the big consuming countries, especially in the countries now at war, have been built up to large proportions. One time Great Britain almost boasted of the fact that on her tight little island was never carried more than a ten-day supply of food. Though definite figures have never been revealed, it is believed today that wheat and food reserves in Great Britain may well equal a six month supply.

Potentially, too, the situation is vastly changed since 1914. Then there were but two major sources of surplus wheat sup-



The world wheat supply picture today is vastly different from the beginning of the first Great War. Then only big surplus stocks were in United States and Russia and latter were cut off.

ply—United States and Russia. And the latter was soon cut off by Turkish and German guns on one side, totally inadequate railway facilities on the other. Canada, the Argentine and Australia were just beginning to develop as major wheat exporters. Today acreage in the three latter countries is not far short of double that of 1914. Even in the United States there has been a substantial expansion.

With shipping space available and rates open there should not be the remotest possibility of real wheat shortage today. But, of course, shipping space is not unlimited and neither are all trade routes open. And it is because of this "second" condition that Canada should have no trouble in selling wheat during the war.

WHW storerooms completely filled with ample supplies offered, in fact, sub-

sidiaries, in many of the big producing countries. Great Britain was in no panic to buy wheat at the outbreak of this war. And it is now a matter of actual record that her buying did not develop in a hurry. It is also a matter of record that in some accessible parts of continental Europe there were some small wheat surpluses which Britain decided should be bought ahead of Empire supplies. In some cases, it was simply a matter of getting stocks that would otherwise fall into German hands, in others an opportunity to win favor with warring neutrals.

All this plus some political bargaining with the Canadian Government plus again the organization of necessary coverage meant initial war delay in purchasing wheat from this country, but that phase is over now. In the last month wheat has been moving out of Canada in

bumper proportions, most of them were well satisfied when the Dominion Government decided to guarantee a minimum price of 90 cents. Indeed, many of them would have been satisfied with less, and the average buyer, fearful of staggering wheat losses to the public treasury, believed that 60 cents would have been quite sufficient.

Once the war broke out, however, growers' opinions abruptly changed. Although there was absolutely no difference in the cost of production between the first day of August and the first day of September, some growers immediately decided that the minimum price was far too low. Ottawa, they said should kick it up by a mere 10 or 15 cents, but to at least a dollar and not well below that figure either.

Many of these growers were so convinced that soaring prices were inevitable, that they decided to hold back their grain. To no avail. Even so, two full months after a late harvest, there are still probably 150 million bushels of new wheat stored in farmers' granaries in western Canada. But so far farmers and other holders of wheat have not received any profit. Far, far, they would have been better off had they sold early in September and let someone else pay storage charges.

wheat states was the shortest on record and fall moisture for fall wheat means life. In the southern tier of states, and Canada's prairie provinces, where practically nothing but spring wheat is grown, fall moisture is only one factor in producing a crop. If spring and early summer rains are timely, it doesn't matter a great deal whether the autumn is dry or wet. But this does not apply where wheat is sown in the fall, germinates in the fall and must make some preliminary growth in the fall.

So far as distance is concerned, Canadian ports and Canadian ships will have a decided advantage over the more southerly American, but there are other important factors in the situation, foreign exchange. This favors British purchases in Canada rather than in the United States. U.S. Damage Serious

So long as elevators this side of the Atlantic are choked with wheat and they have been doing in the last two seasons, the wheat market must be regarded as a seller's one even in wartime. That is the situation today, with total imports of wheat to the fall sales.

No less at the few neutrals mentioned are not occupied an ender and the Allies will undoubtedly permit normal wheat requirements to be imported, and thus the 300 to 400 million import of the whole group may be treated as a single block. Practically all the wheat these countries use must come through the Allied blockade and the bulk of it will be carried in British ships or ships under British protection.

In wartime, as every schoolboy knows,

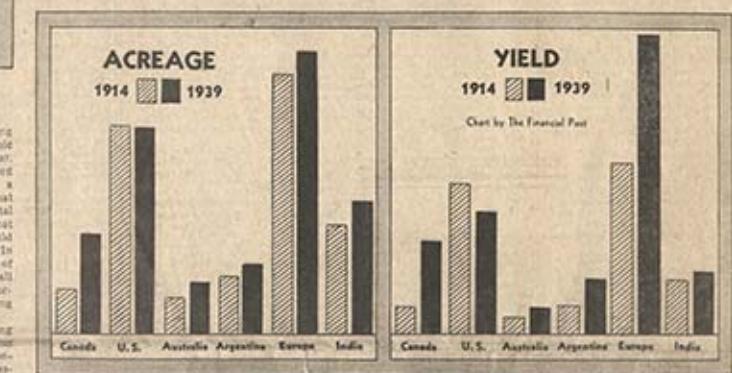
it costs more to carry goods than it does in times of peace. In addition to a shortage of ships and more money for speed, there is the active danger of mines and

submarines. For a long time to come, probably for the duration of the war, grain ships will have to be convoyed.

All of this boils down to one thing. Apart from political purchases, the Allies will certainly confine the bulk of their wheat demand to the shortest possible route. This means North Atlantic ports, so long as there is grain at these ports to move. It is this quickly available wheat that is going to govern the world wheat market and world wheat prices during the war.

So far as distance is concerned, Canadian ports and Canadian ships will have a decided advantage over the more southerly American, but there are other important factors in the situation, foreign exchange. This favors British purchases in Canada rather than in the United States. In six weeks to two months, the amount of damage will be definitely determined, but already observers are freely hinting that United States next year may not match with the present wheat production, do, will only be able to grow enough to feed itself. If weather conditions unfavorable, there will have to be a dip into carryover; there may be some importation from Canada.

So far in this war willingness of overseas buyers, plus the ability of the British Admiralty to provide and protect ships, have determined value and export volume of Canada's wheat. In a relatively short time, the weather over Kansas and adjacent states may supersede these other factors and become dominant.



Wheat acreages in major exporting countries except United States are considerably larger today than in 1914 with Canada showing the biggest gain, total rising from 18 to almost 22 million acres. In yields, Canada harvested a crop of 181 million bushels in 1914 and this fall over 415. Chart based on Sanford Evans statistics.

Reasons for Sluggishness

The reasons for the sluggish action of world wheat markets since the outbreak of this war are not hard to discover. Times have changed radically since the first Great War. Wheat, along with other commodities, has been affected.

The world wheat picture of 1914 was entirely different from what it was in 1939. A quarter of a century ago, there was no big carryover of wheat from the previous year and the belligerents, so confident were they that modern warfare couldn't last more than six or eight weeks, built up no special food reserves.

Then Russia was a major factor, good for as much as 250 million bushels of wheat which crop in the Ukraine were terrible. Next came the Argentine. Australia and Canada, both dependent on the big surplus producers, they are today

United States, it is true, was a big exporter in normal years, and contrary to Canada's experience, harvested a good crop in 1914. But there was no carryover

Wartime Wool Tangle Slowly Unravelled

By RONALD McNEACHER
Staff Writer, The Financial Post

It takes the fleece of five sheep to outfit one Canadian soldier, which means it already some half million sheep have made their wool contribution to Canada's war effort.

The stupendous, in some ways the most troublesome of the common farm animals, the sheep has recently been the subject of much official concern, a white hope of cash income for the farmer, and a headache for thousands.

Politicians squirmed under charges that Canada didn't have uniforms, overcoats, etc., for her rapidly recruited army. The farmer worried about the price he was going to get for his wool. The textile manufacturer was worried whether he was going to get one tenth enough wool. The man in the street worried about having to pay \$100 for his ordinary suits as in the last war; wondered whether he would get an overcoat at all for next winter.

Chaotic Months

The wool industry has indeed come through some very chaotic troublesome months. But prompt action by responsible leaders of the industry, assisted by the Canadian Government and the natural evolution of events has now pretty well solved that so-called wool problem.

World supplies of wool were large when war opened. Germany was virtually eliminated as a consumer because British purchases and her dominating position in many markets. Over—rather than under—production had been the wool industry's problem the past decade.

Despite repeated statements to the contrary, leaders in both the wool producing and processing industries state that there will not be a real wool scarcity as far as Canada or the British Empire is concerned. Scarcity may, for a short time, continue in that type of wool in demand for military purposes. But that, too, will soon disappear, they are confident.

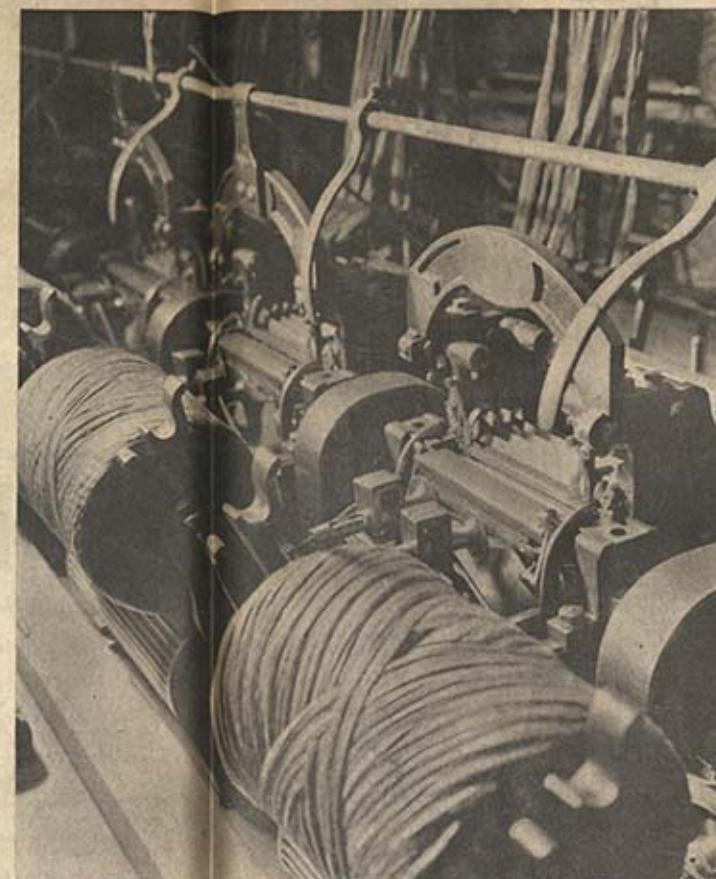
Shortage Threatened

As soon as war was declared, wool prices soared. Some Canadian wool supplies were hustled off to the United States to catch the very high prices. Canada found herself pretty close to nakedness in the military types of wool.

The Canadian Government set up the Wartime Prices and Trade Board, September 15, appointed David C. Dick, Cobourg wool dyer, boss of the wool situation, and made it illegal to ship wool out of the country without a license.

Fluctuating Demand

A few days ago a textile journal ex-



After wool comes from the sheep it is scoured to remove all grease and dust. It is then carded, which has the same effect as raking grass, that of giving the fibers into some kind of order. Next process is combing, which is a further straightening. The long wool fibers are separated from the short. The short go into "woolen" goods, the long into "worsted." Photo shows a "mixing machine," blending several types or colors of wool fibers into yarn.

plained a picture of part of a young lady from her waist to her knees. The caption asked: "What has become of the manufacturer who used to cover this territory?"

Therein lies much of the trouble of the sheep grower and the woolen textile industry. A U.S. compilation found out that the woman who wore 64 yards of wool in 1909 was wearing only 34 yards in 1929. Presumably today's wool yardage is still lower, though the whole sport development of the past half-decade is undoubtedly improving the situation. Silk, rayon, the short skirt, generally less clothes, more cen-

tral heating—all these things have been the technological problem of the wool interests.

War and the sudden enormous demand for uniforms, great coats, socks and blankets threw the wool industry into serious if短暂的 chaos.

But the Canadian woolen textile industry is better able to meet the new demand than ever before, provided it

gives half a chance with raw materials. There are about 140 woolen textile plants in Canada with a capital investment of not far from \$50 million. Gross value of annual production has been well over \$45 million. Most are located in Ontario and Quebec, and, as the figures show, are smallish operations.

Following the first Great War they entered a period of small profits and

hopes. By 1930, the Canadian industry turned out only \$14 million yards of woolen goods. Since then it has enjoyed very definite improvement and recently has been up to around 18 million yards production—some 60% of Canadian requirements.

Canada is in the fortunate position that a large percentage of the wool grown here is of the type suitable for

The farmer is interested only in wool in the grease. Some farmers, especially in rural Quebec, take the trouble to give the clipped wool a washing in the home wash tub, but for the most part the farmer sells his wool as the sheep left it.

But 100 pounds of raw wool obviously isn't 100 pounds of clean wool. Last year the average was 36 pounds of clean, scourred wool per 100 pounds of raw.

And it's the amount of clean wool the wool buyer is interested in. He buys, therefore, on an "estimated clean" basis, which means that long experience enables him to make a good guess how much clean wool he is going to get out of a bundle of raw wool.

The 45-cent price established by the Canadian Government was for scourred, clean wool. Taking average wool of the type now most in demand, with 44% of its original weight waste, that leaves the farmer 23.2 cents per pound for his wool. On top of that he has the charges of grading and transportation which may account for another two cents a pound,

the approved military cloth. It was to a large degree because of that fact that this particular type of cloth was selected for military purposes.

For some time it was expected that there might be shortages of wool in the 44-50% grade, the trade name for the type of wool in demand for military purposes. The action of the Canadian Government in lifting the heavy duty on South American wool, major non-Empire source of 44-50% grade wool, pretty well dispels of that possibility.

At the same time, the Canadian wool producer gets protection. The duties are suspended only from January 1 to April 30 of this year. During this period South American wool can pour into Canada to supply a special need. Then, back on goes the duty as the Canadian clip starts to come in May and June.

The 44-50% is a heavier, coarser wool than the 60-70% wool the average reader of this article will have in his suit. Genetics of these terms is the length to which a single fiber can be spun.

Fine Wools

Fine wools, the kind used in the good to excellent man's suit, come mainly from Merino wool in which each fiber is very fine in diameter—about 1/1,000th of an inch, also quite short. With a long and notable record behind it, the Merino sheep was originally the monopoly of French aristocrats who found its fibers so attractive that export of the sheep outside the boundaries of France was for centuries punishable by death. A few pair of Merinos, however, got to Spain. The same sheep soon turned up in Saxony in Germany; soon in England.

Australians got the sheep-raising start when a small flock of these Merinos were sent out to Botany Bay with an early cargo of convicts; hence Botany sheep, etc.

Canada had different needs. Pioneer Canadians needed food, also rough, warm clothing. That need was aptly met by crossing Merinos with the old English mutton sheep. Merino is a bigger animal with more meat, harder, rougher wool more easily spun and knitted by the housewife into socks and sweaters.

Canada is Importer

Progeny of this first Merino-mutton sheep pair are what the trade calls crossbreds which produce a larger and longer wool fiber with which all Canadians are familiar in outdoor and laboring classes. One big reason for this kind of wool in Canada is by paper manufacturers as a necessary part of the machinery in producing newspaper paper.

In peacetime Canada uses about 40 million pounds of crossbred wool of the 44-50% qualities. Of that amount Canada produces only about eight million pounds. Most of the remainder is imported from New Zealand, the other big producer of this type of wool.

The following table shows some of the big wool-producing countries of the world with the amount of each type of wool produced. Since United States uses all the wool it produces, Uruguay re-

mains the main source of the kind of wool needed here outside the Empire.

Total Wool Production

	Merino breeds	Cross-breeds
Thousands of lbs.	%	%
1,800 Australia	50	20
2,000 United States	40	20
285 Argentina	47	33
264 New Zealand	8	82
264 South Africa	82	8
120 Uruguay	10	90

British Control

Much of the early alarm about a wool shortage resulted from the action of the British Government in taking over the entire wool clip of both Australia and New Zealand. Britain's purpose is plain. She wanted to know where the entire available supply was and where it was going. She also wanted to prevent runaway prices and artificial scarcity when her armies were in immediate need. She didn't want to give any wool interests the chance to hold out and wait for higher prices.

Britain's aims were poorly understood. Because she took over the entire clip, it was, for instance, feared that Canada would get none. Time has shown this is not the case. Canada is getting her allotment of wool from the British supply.

Runaway Market

Because of this broad control, both of price and supply, the danger of having to pay \$60 to \$100 for an average suit of men's clothes which was a feature of domestic economy in the last war is most unlikely to recur.

As already indicated, the Canadian wool price is already up more than 100% in the raw state. Other factors such as labor, freight, and so on are likely to increase, but unless the entire British and Canadian control system breaks down, a runaway appears definitely out.

Wool-producing interests in Canada aren't satisfied with the 45-cent clean price. They want a 48-cent price and say the farmer's marginal is still high.

Perhaps they will get part of their wish. The Financial Post has been given to understand that the Government can be expected to repeat its 45-cent fixed price as soon as it has evidence to show that the fixed price has done its work in pulling out of hiding all the would-be bidders of the profiteers.

Price Factors

With Canadian wool allowed to find its natural price, it is probable that today that price would be considerably higher. The same grades of wool in South America, United States and elsewhere are higher.

On the other hand, what wartime wool demand is going to be can't be determined until it is seen what kind of a war this is going to be. So far, armies are relatively small and the battle conditions in the sea and skies. Unless the war turns into a struggle like 1914-18 with vast armies locked in trench warfare,

(Continued on page 27)

Paper Stocks Future Brightens

War Cuts Off Bulk of Competition From European Mills

MONTREAL.—Pulp and paper securities have staged a strong comeback. The sharp fall off in tonnage and profits in 1938, after the big year of 1937, produced an apathy toward this group which was reflected in a relatively big drop in values earlier in the year.

During the earlier months production stepped up slowly. Operations were on a better scale, but there was no marked revival of confidence in pulp and paper securities until September.

The declaration of war and the consequent disruption of international markets for pulp and paper products greatly affected the outlook for the Canadian industry. Demand rose sharply. The advance in the premium on American funds added appreciably to the earning power of the operators, particularly those producing newsprint and pulps.

Strong Basic Conditions

With operations in the past three months on a larger scale than at any time since 1937 and with much better prices prevailing, the returns of the manufacturers have shown a sharp jump, so much so that several have resumed dividend payments.

The effect on the market has been to strengthen both investment and speculative interest. Current security values have recovered to a point where they are at or near their high for some years.

This advance has not been confined to one or two stocks, but to the group as a whole. Newsprint, fine paper and pulp stocks have all shared in the advance in values.

This is clearly shown in the following table:

Price Range 1939 (Dec. 31)	High		
	Low	Current	Change
Abitibi	25%	25%	2%
Abitibi, 4% pfd.	25%	25%	2%
Bathurst	25%	25%	2%
Crown Pulp	25%	25%	2%
Dominion A	25%	25%	2%
Dominion B	25%	25%	2%
Dixie	25%	25%	2%
Fraser V. L.	25%	25%	2%
Hewitt	25%	25%	2%
Lake Superior	25%	25%	2%
MacLaren	25%	25%	2%
Pine Street	25%	25%	2%
Pulpstone	25%	25%	2%
St. Law. Chemicals	25%	25%	2%
St. Law. Pulp	25%	25%	2%
St. Law. Paper, pfd.	25%	25%	2%

Resume Dividend Payments

Improvement in earnings is reflected to the interest statements of such companies as Abitibi, and the dividend declarations of a number of other operators.

Bathurst Power and Paper Co. has declared a dividend on its class A stock and the president of the company has issued a number of "bulletin" statements on the current market.



Above map shows why war conditions have reduced Scandinavian newsprint shipments, and indirectly improved prospects for Canadian sales in the United States. Location of Swedish, Norwegian and Finnish mills makes it logical and economical to export through Baltic ports. Egress is being made difficult if not impossible by German and Russian blockade systems. In the case of Finland, production has also been retarded by Russia's invasion.

turn paid a dividend on its class A shares.

Price Bros. & Co. has declared two quarterly dividends on its preferred stock.

The resumption of dividends, the first to be paid by some companies in many years, has been decidedly encouraging.

Earnings Move Ahead

While pulp and paper have not been general, and the position of the companies which have made any distribution has also undergone a marked improvement as far as earnings are concerned.

It is confidently expected that the financial statements for 1939 will show the industry's earning power on a considerably better scale than

beside the more important fact that the current rate of earnings is the best experienced in years and, if maintained throughout 1940, should result in the production of many exciting statements.

Prospects for next year, at this time, continue good. Of course there are a number of factors which are still in the course of development, but the outcome is expected to be along favorable lines.

The principal uncertainty in regard to the outlook for next year is whether or not the Scandinavian mills will be able to maintain production and shipments. This is of the utmost importance to producers of Canadian pulp while the newsprint manufacturers in this country

are concerned.

October northern

are particularly

up their trade

shippers of

Canadian Travel Rechannelled by War

Exchange, Sea Travel Risk Affect Tourist Movements

For Canadians travelling for either business or recreation a variety of war-bred factors have wrought far-reaching changes in the range and method of travel movements.

The longer the war goes on the more will choice of destination, length and variety of journeys, selection of mode of travel and accommodation and ease of visits to other countries be influenced by abnormal considerations.

For many business and official travellers, and for especially zealous tourists with time, money and determination, such considerations will become merely war-necessary obstacles that have to be surmounted. But for the great majority of travellers the war will inevitably work changes in their plans and largely reroute the main flows of travel both within and out of Canada.

In a sense the diversions and restrictions imposed on travel by war may prove a boon to Canada and Canadian travellers. Travel alternatives that otherwise might not have been considered will capture favor, particularly the wide variety of travel resources of Canada itself—too long neglected by many Canadians.

And undoubtedly the favorable exchange rate on American currency and avoidance of bothersome restrictions on entry of Americans into Canada should stimulate the already sizeable tourist traffic into the Dominion.

Testing Period

So far the war has not had time to react upon any major travel movement. At best of times October is never a heavy month for general or tourist travel, certainly not to Europe or U. S. points. Within the next few months the first act of new trends arising out of war should become evident. The coming period should reveal any war changes in normal Canadian travel to the southern states and the West Indies and in American tourist movements to Canadian winter sports resorts.

As far as Canadian travel southward is concerned, any curtailment is likely to spring more from the exchange discount on the Canadian dollar than from such regulation as has been established over taking funds out of the country by Canadians. Travellers can take out up to \$1,000 without difficulty, an easily obtained permit being required for amounts between \$100 and \$1,000. Proof of necessity and a special permit is required for exports over \$1,000.

The exchange discount is admittedly a potential curb on normal travel into the U. S. by Canadians, particularly the longer trips and more expensive visits to the southern states. Present indications are, however, that this will be offset by several factors. For one thing, many of those with the time and means to take winter holidays in the south will make their usual trips regardless of the additional cost from exchange.

And those who might otherwise have gone to winter resorts requiring overseas journeys, such as the Riviera, the Orient, New Zealand-Australia, and the West Indies, will turn to the southern states or California as less risky alternatives.

As far as exchange alone is concerned, Canadians are of course at an advantage in financing travel to

the West Indies, the Antipodes or Europe, where they get a premium in pounds on their Canadian dollars. This may offset to some degree the effect of the risk, real or imagined, of wartime ocean travel.

Hopes are expressed that Canadian travel to British winter resorts, especially the West Indies, will show no serious effect from the war. Since the war started the authorities have required passports for West Indies trips, but their issue for legitimate travel is not being restricted. Canadian National steamships are still operating to the Bahamas, West Indies and Caribbean ports, and thus far no threat or disruption affecting this route appears in prospect.

Travel to Europe

Current travel to Europe is pretty well restricted to essential business and official trips, together with a gradual flow back to their homes of English visitors in Canada when the war broke out. Because of wartime emergencies and the need for secrecy, sailings are irregular and accommodation is limited, the number of ships available having been reduced by Admiralty requisitioning.

While passport officers are somewhat more diligent in checking up on applicants for passports to go to Europe, there is no restriction on reasonably necessary trips, both for business and official purposes.

As far as can be learned under the limitations imposed by wartime, all transatlantic vessels under British registry are being convoyed by warships. The convoy system is becoming better organized and more effective as time goes on.

A striking phase of Atlantic travel is that some people now seem to believe that the safest way to cross is by Pan-American Clipper. Up to two or three years ago any suggestion that the safest way to cross the ocean was by air would have been regarded as preposterous.

U. S. Tourist Traffic

The maintenance and possible increase of American tourist traffic into the Dominion, especially during the coming winter and next summer, will depend largely on success of efforts to publicize the lack of wartime restrictions on travel into Canada.

The only exchange regulation applied to U. S. travellers is that they cannot take out of Canada any more than they brought in, unless the transaction has gone through authorized channels and a permit issued if necessary for the excess export. The stipulation that they must declare the amounts brought into Canada, so as to leave them free to take back equivalent amounts on departure, only applies to amounts over \$500.

These and other favorable aspects of American travel into Canada have already been publicized by both American and Canadian tourist organizations.

Interest in the south has shown a similar increase in the south as of the bus to be absorbed by Canadian business travel agencies are in survey.

Canadians



Among the summer pastimes available to winter visitors, expected in increasing numbers at Victoria in the coming season, horseback riding holds a favored place. Golf, tennis, swimming, fishing and hiking are among the other recreations possible in the mild and equable winter climate of Vancouver Island.

TOURIST TRADE

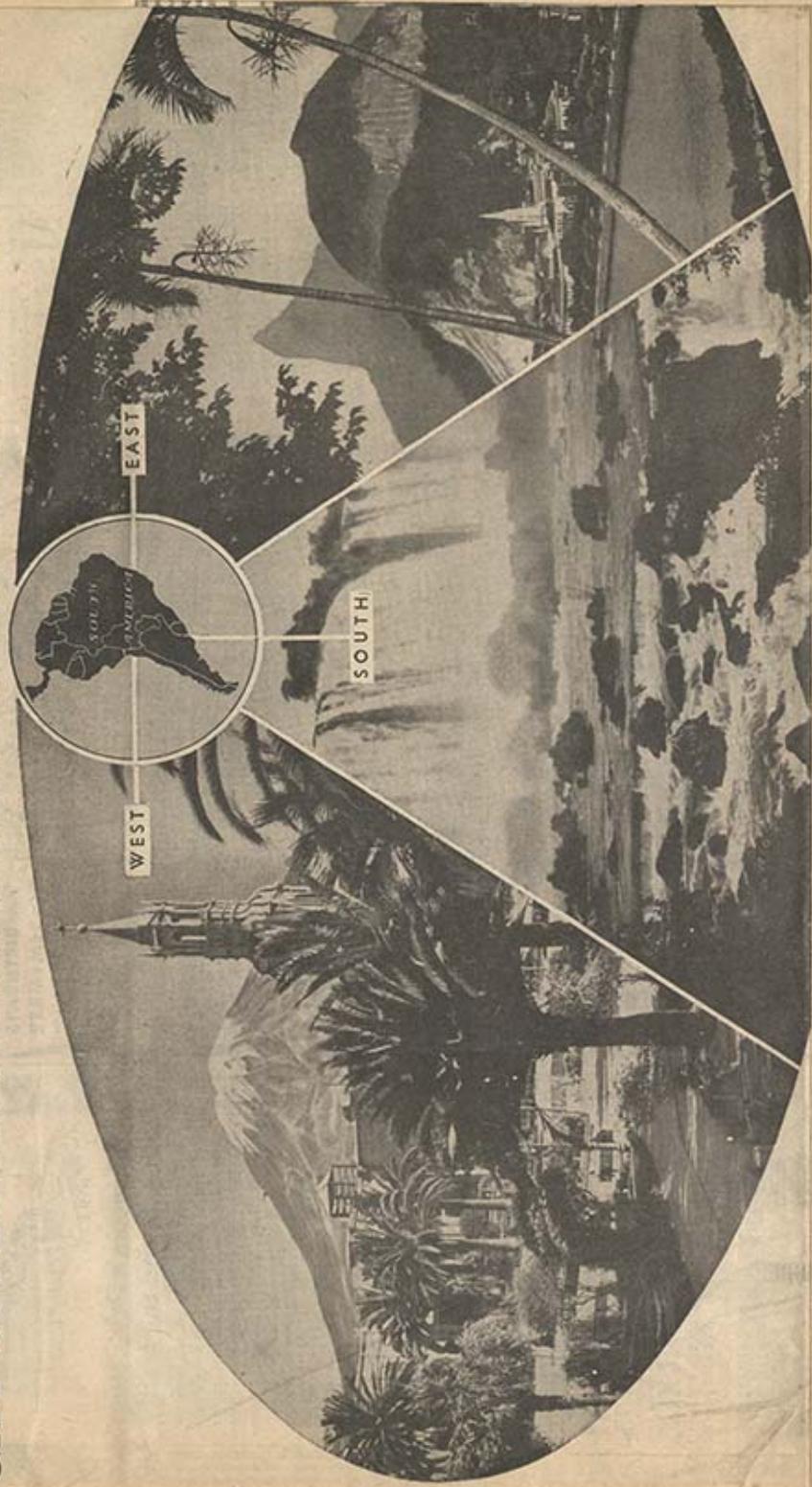
Efforts to Attract Tourists Should be Redoubled

Referring to the Importance of the Tourist Trade Under War-Time Conditions, Mr. Wilson said:

"It seems to me also that the war affords Canada a unique opportunity to develop further its tourist trade. Obviously, under existing conditions, travel to Europe will practically cease. It therefore behoves our governing bodies, both Federal and Provincial, to bring the unquestioned attraction of Canada as prominently as possible to the attention of prospective visitors from the United States, with special emphasis upon the fact that such visitors will find in Canada practically none of the restrictions usually associated with a country at war. In normal years, tourists spend as much as \$200/300 million in Canada. This trade is thus an important factor in our international balance of payments. As a means of strengthening our economy and providing foreign exchange, our efforts to attract tourists should be redoubled."

SUNDAY, FEBRUARY 4, 1940.

GAY SUMMER SEASON AWAITST TOURISTS IN SOUTH A.



Canada's Snow Now Tourist Trade Asset

Draws Thousands to the Hills For Skiing and Other Sports

In majority of Canada's provinces winter snows are as eagerly awaited and as expertly appraised as are the spring rains in our chief farming areas.

Once tolerated as a nuisance which impeded traffic and intensified winter discomforts, snow has become a major aid to our business and economic health. Capitalized in recent years, it has expanded our tourist trade and put it on a year round basis. It has added substantially to revenues of various branches of transportation industry. And it has bolstered the profits of resort operators and business generally in resort areas.

For snow—particularly the crisp powder snow which mantles Canada's highland and mountain areas—has proved a first class lure for devotees of skiing and other winter sports. It has drawn in increasing numbers skiers and winter tourists from the United States. It is also attracting thousands of Canadians from our urban centres to choice spots for skiing, tobogganing, skating, curling, snowshoeing, etc.

Developed Resources

The tremendous enthusiasm for winter sports which has swept this continent in recent years, especially for skiing, has found Canada with lavish resources to satisfy beginner and expert alike.

In the past few years, there has been carried out an impressive programme to enhance these resources with special transport services; hotel, chalet and ski-lodge accommodation; clearing and improvement of old trails; jumps and cross country courses; and construction of such facilities as ski lifts to save the wearisome "walk back."

In four or five of Canada's provinces, notably Quebec and Ontario, this exploitation of the country's natural winter sports endowments has attained impressive proportions. Hundreds of thousands of dollars have been invested in making enjoyment of skiing and other sports readily accessible and enjoyable. The accommodations are as varied as the purposes and inclinations of the patrons.

See Successful Season

All indications point to a successful season in the winter sports districts. Canadians have been flocking to these areas in rapidly rising numbers in the past five or six years, and U. S. visitors have been quick to take advantage of unexcelled facilities developed among Canada's snow-clad hills. Latest reports indicate that U. S. tourist traffic into Canada, which fell considerably following the war, is resuming more normal proportions with correction of the wild rumors which were spread among Americans about Canadian wartime conditions.

As an indication of the huge American patronage for winter sports, reliable estimates are that there are 1.5 million American skiers with \$150 millions to spend. While many of these, of course, go to areas in their own country, a large proportion have turned to Canada for their sport. This winter, many who formerly went to European resorts are expected to come to Canada instead, because of difficulty in going abroad.

Even without American visitors, there would be a trek of impressive size by Canadians themselves to the winter playgrounds. A check by Canadian Pacific Railway statisticians revealed 115 bona fide ski clubs in Canada, with membership of over 25,000. In addition, it is estimated, there are more than 100,000 Canadian skiers unaffiliated with any club.

Week End Exodus

That these fans are by no means armchair enthusiasts is indicated by the proportions of the winter sports exodus which occurs every winter

week end from Canadian towns and cities. From Montreal last winter, for instance, Canadian Pacific week end ski trains alone carried a total of 113,177 passengers to ski districts in the favored Laurentian Mountains region. As recently as 1939-40, traffic on the C.P.R. Laurentian ski trains was only 14,307.

Last winter a total of 12,326 or almost as many as the whole winter a few years ago, were carried during one week end. During the Christmas-New Year holiday season just past, the C.P.R. carried 23,564 on Laurentian ski trains.

In addition to this, of course, many other thousands travelled to the ski grounds of the Laurentians by the C.N.R., bus and private auto, horse and sleigh, and even on foot. Add to that the treks to other parts of Quebec and the rest of Canada and you have some idea of what Canadian snow and the current real for winter sports mean to beneficiaries of tourist-travel activity.

Centres of Activity

While nearly every province can offer excellent winter sports resources and facilities for enjoying them, factors of snow quality, type of terrain, resort development, and geographical location have tended to concentrate activity in Quebec, Ontario, New Brunswick, Alberta, and, to a growing extent, British Columbia.

The greatest development has probably occurred in Quebec and Ontario, the highlands of which enjoy the combined advantages of desirable snow conditions; sporty inclines and ski trails; wide variety of transport services and accommodations; and proximity to the big population centres of both Canada and the United States.

The mountains north of Montreal and Quebec City are dotted with ski spots especially favored by the skiing fraternity for week end jaunts. The resorts and accommodations near these areas range from modest cabins or farmhouse accommodation, to elaborate resorts such as the Mont Tremblant project of Joseph H. Ryan of Philadelphia, where the chair-type ski tow alone reportedly cost \$20,000 to erect.

Among the better known resorts are Gray Rocks Inn, Chaudiere, Domaine d'Exeter, and the Hotel and chalet at Lac Beauport, only 11 miles north of Quebec City. Facilities at Lac Beauport are operated in affiliation with the C.P.R.'s Chateau Frontenac in Quebec, and bus service connects the two establishments. Despite its closeness to a large city, the Lac Beauport area offers a wide range of skiing terrain, from gentle slopes for beginners to challenging trails and slalom courses for the experts.

In Ontario

In Ontario, the urban dweller has to travel a bit farther than in Quebec for his sport, but excellent skiing spots may be found within journey of an hour or two by train or car from Toronto. The ski centre at Summit is only 20 miles from Toronto. The districts adjoining Huntsville, Dugmar, Bethany, Collingwood, have won increasing favor among Toronto skiers in recent years.

Playground for the Ottawa district is in the Gatineau hills, which have drawn thousands of skiers every week end in the past few years. Also adjacent to Ottawa is the St. George Club. Another district showing great activity is that around Fort William and Port Arthur.

Far famed skiing regions in Alberta are accessible through Lake Louise, Banff and Jasper Park, where first rank hotel accommodation can be had. In British Columbia, choice winter sports districts can be reached through either Vancouver or Victoria.



C. P. R. photo

Splendid slopes with snow quality, steepness and length that draw skiers from many parts of the continent, feature the winter sports playgrounds of the Canadian Rockies. Their lights and shadows also render them highly photogenic, as demonstrated by this striking shot of skiers at Sunshine Valley, one of the districts accessible from Banff.

War Effect on Foreign Trade

(Continued from page 1)
 those dealing with the United Kingdom, trade which accounts for around 40% of Canada's export. Immediately following declaration of war, Great Britain posted a long list of commodities and manufactured products for which licenses had to be secured before import was permitted. Purpose of the licensing was to conserve foreign exchange and admit only those imports considered essential.

Definition of "essential" and "non-essential" is still anything but clear. At present for instance, Britain permits entry of a certain type of bookkeeping machine as "essential" but prohibits cash registers as "non-essential." Many manufacturers are in the same predicament. On the other hand, expectation is that many items now classed as "non-essential" will move over to the "essential" list.

Complete, if probably temporary, ban is the result for producers in these categories.

Hits Specialties

The main class of goods to be affected by the British import licensing system are the specialty manufacturers which largely have been brought to a high productive efficiency by the high standard of living on this continent. Especially concerned in this group are some of the branch plants of U.S. firms which have established in Canada mainly to enjoy Empire tariff preference. Also affected are some firms canning certain fruits and vegetables, fish and poultry.

Hence, while Canada's volume of trade with the United Kingdom is likely to rise during war because of war supply shipments, it will be trade of a different kind. With peace, there is every reason to believe, however, that the former type of trade will be restored.

Main new markets which may be opened up or in which ground may be gained are South America and in the various Dominions of the Empire.

South America Promising

South American trade prior to the war was about 70% in the hands of Great Britain and of Germany. War virtually closes this market to both countries. United States is making big plans to capture the South American market but Canada already has good trade contacts there. A currency advance made over U.S. shippers and some officials think our South American trade can be materially enlarged. In recent years our main products to South America have been paper and its products, farm machinery, rubber tires and other rubber manufacturers, sewing machines, wheat, metals and their manufacturers.

Germany is still hoping to retain an important part of its South American market by shipments through Italy, but this is regarded as rather a forlorn hope.

The Dominion Government has already taken steps to protect the purchasing interests of the Canadian producer. So far, positive action with regard to manufacturers is lacking, but department of trade and commerce officials and other bureaus fostering trade are already seeking to develop alternative markets.

Shipping has been seriously dis-

A goodly proportion of Canadian trade prior to war has been handled by ships of nations now neutral. On the outbreak of war, most of these immediately refused to handle cargoes between ports of differing nationalities. In such cases, cargo was discharged after loading without the consent either of consignee or shipper. This widespread breaking of contracts threw shipping into chaos. British shipping was also seriously disturbed until the Atlantic convoy system went into operation a fortnight ago.

It is the belief that the situation will now improve and that there will be ample shipping to handle an expanding Canadian export trade. Neutral shipping is beginning to show some inclination to take cargoes from Canadian ports to European ports. It is considered doubtful if the U-boat campaign is likely to have serious effects along the Atlantic coast to South America, for instance. And so far, Pacific seafarers for shipping from Canada to Australia, for instance, have not been threatened at all.

Freight rates have generally doubled. Generally speaking, shipowners have cancelled all contracts on the outbreak of war, reinstating them at an advance in freight costs of around 50% or more. In most cases, these advance costs are paid by the consignee in advance to get his goods before another freight rate increase came along.

In 1935 Canada's aggregate volume of exports, as computed by the League of Nations, ranked fifth among all nations of the world while our imports were seventh. In 1937 Canada ranked first among the world's trading nations in newsprint exports, fourth in automobiles, second in wheat, third in rubber tires and wheat flour, and fourth in wood pulp.

Now we find this trade with other nations operating under an entirely different set of circumstances. It is a new thing for this generation of Canadians to have to obtain a permit from Government authorities to import or export any goods from this country. It is not nearly so new, however, to many other countries of the world which have been operating for the past decade under various measures of control and restrictions. This is one important example of how conditions in 1939 differ from those of 1931.

When the Foreign Exchange Control Board started work the middle of last month, one of its first moves was to require all importers and exporters of goods, money, securities or capital to obtain licenses on the multitude of forms which had been printed and held in readiness. The first reaction closely resembled consternation but now we have found that we can operate under the new set of conditions with reasonable facility.

When war broke out in 1914, the Canadian Government did not take any immediate steps to place any such controls in effect as was the case in September, 1939. The War Measures Act, passed during the short war session of parliament in August, 1914, gave to the Governor-In-Council authority to control

break-up of export business among different types of Canadian producers is inevitable, at least for the duration of the war. Some Canadian firms will find markets closed or strictly limited. New export opportunities will arise for producers hitherto largely indifferent to this form of business. On the whole, however, Canadian business should find its export trade materially larger.

That briefly is the way export traders are sizing up the situation so far. Trade, generally, has not yet recovered from any means from the first shock of war. Government regulations are still coming out. It is by no means clear just what kind of a war this is going to be nor what the main theatre will be. But within these limits, the above generalizations are the consensus among key figures in Canada's export pipeline.

U.K. Trade Shake-up

Capturing of new trade now will be indiscriminate. Main problem involves on the longer term view is to get markets in countries which can sell something to us.

Main group of Canadian producers who are already beginning to suffer from war trade conditions are some

(Continued on page 2)

present, however, and this trade may disappear for perhaps a year.

Producers of foodstuffs and raw materials in South America, like Canada and other parts of the Empire, seem assured of a market for their output now.

Agencies Active

What agencies are there for opening new markets to replace interrupted sources of supply in other countries? There is still the Dominion trade and commerce representatives in many centres. Also the Canadian Manufacturers' Association has been active.

Many enquiries about Canadian capacity are coming in. A Mexican buyer of a special type of bottles for displaying wines has been after Canadian supplies and has been directed to the appropriate source. From the West Indies have come other inquiries. South America has sent equivalent offers. And other similar general products. A mailing company is reported to have received anxious inquiries for supplies from former customers who had not been heard from for years. These are only a few examples of what is already taking place since the outbreak of war. The trade is there if we can supply it.

Not All Favorable

It is true, however, that not all the early reaction to the war has been favorable. For example, an important maker of office equipment in Canada which depended on export trade to keep its Canadian factory going has lost four of its markets: Australia, New Zealand, U.S. and Japan. At present no change, a matter of faster and better service than others, regular business and there was a move under way to establish a new direct service to three Dominions before the outbreak of war. This is hardly likely to go

Decline in the Throughput at Present

South America

The decline in the throughput at present is as follows:

U.S. dollar, for example. It is possible that Canadian exports' factor in aiding may be able to add to South America's shipping facilities which currently the company should be made more certain when time comes. This brought the talked-of building program to modify to make it the West Indies, South Africa and port goods quoted at Europe, there are established British Canadian funds, Exports Canadian lines, that are showing that the former method Zealand, U.S. lines at present to change, a matter of faster and better service than others, regular business and establish a new direct service to three Dominions before the outbreak of war. This is hardly likely to go

At present, previa credit to assume prompt payment by sea compare with which to pay for imports as follows:

Rate per ton



Two points underlined on above map mark the location of Canadian owned nickel mines menaced by European war developments.

Russian Threat To Finland Imperils Our Nickel Firms

With the Soviet putting the squeeze on the Baltic states and now apparently maneuvering to repeat the performance on Finland, Canadian mining is getting much too closely involved for comfort.

Already one small shipment of nickel matte, bound for Norway, has been sunk by a German U-boat.

The accompanying map shows the International Nickel's new mine in Finland and the refinery and smaller of Falconbridge Nickel in Norway.

The International Nickel property in Finland, opposite close to the Soviet frontier, Russia lacks nickel and the Inco mine is a big one. Nickel authorities are keeping their fingers crossed, and are continuing development which calls for getting the mine into production in the fall of 1940.

Already Nickel has spent about \$1.2 million in developing the property. Name of the mine is Kustaanmaki and it is located at Petamo. Early this year a tunnel 8,500 feet long into the ore body had been completed plus a vertical 600 foot shaft. Many of the service buildings are completed and work on the smelter is under way. It is to be a large plant, planned for production of one million pounds of nickel and 300,000 pounds of copper per month. The smaller would produce Bouscaren matte. The company has constructed a giant hydroelectric power development to run the plant.

Early this year L. M. Simons, assistant to the general manager at the Copper Cliff property, went to Finland to take complete charge of the operation, accompanied by G. H. Robson and Norman Kearns, construction engineers.

International Nickel feels there is not much can be done about the predicament. In the last war some foreign-owned plants manufacturing

vital war materials were virtually taken over by the German Government and forced to continue production at top speed for the enemy and virtually at cost.

With the Soviet policy of state-owned industry, and its violent convictions about raw materials, especially minerals, belonging to the State, International Nickel probably considers it will be lucky if it comes off with nothing worse than Government management.

Falconbridge Nickel's big refinery at Kristiansand, Norway, is still apparently several jumps away from the lion's (or Bear's) paw, but is rather vulnerable to air or batheless bombing from the Skagerrak.

Company officials, however, think that if it were going to be bombed it would have been done already. German U-boats and airplanes have been quite active in the area and a couple of ships have been sunk within sight of the plant.

The nickel-copper ore is mined and smelted at the company's property near Sudbury, Ontario, then shipped for refining to the Norway plant, capable of handling about 8,000 tons of refined nickel annually. Some of the refined product has been coming back to Canada in the form of blanks for melting Canadian five-cent pieces.

All Falconbridge output is under control of British and Norwegian authorities. Norway takes part of the output for domestic use; Britain, the remainder. A convoy is provided for nickel shipments from Norway to the United Kingdom.

The Norwegian plant was purchased in 1929 and has been completely reconditioned and much enlarged since then. Most of the ore travels in British and Scandinavian ships. Freight and insurance rates are sharply higher, of course.

MINERALS VITAL IN WAR Canadian Production Shows Phenomenal Gain Since 1914

Mr. Wilson in referring to Canada's Mining Industry said:

"War power to-day depends largely on minerals, particularly metals. The example of the Canadian output of such products since 1914 has been nothing short of spectacular. In 1914 Canada produced 722,000 fine ounces of gold. In 1939 production exceeded 5,000,000 ounces, or nearly seven times as much as in 1914, with the dollar value increased more than ten times. Nickel, an essential war material in which Canada enjoys a practical monopoly, increased from a production of 45½ million pounds in 1914 to 227 million pounds in 1939. Copper production has increased eight-fold during the past twenty-five years — from 76 million to 607 million pounds. Lead output is eleven times as great — 351 million pounds as compared with 36 million in 1914. Zinc production has gone up from 22 million to 311 million pounds. The output of silver is fifteen times as great, and when plant extensions now under way are completed, production will be increased to nearly fourteen times what it was in 1914."

War Moves Coal East From Alberta

Imports From Foreign Countries Are Greatly Reduced

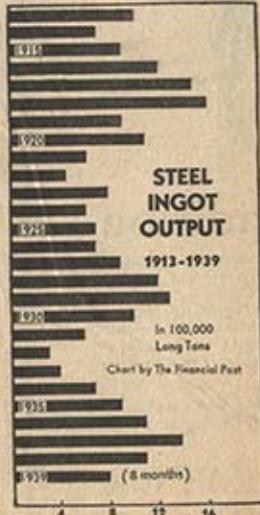
From Our Own Correspondent

EDMONTON. — Wartime curtailment of Canadian imports from foreign countries may provide a major factor in the sale of Alberta's coal industry. Increased movement of Alberta coal to the Ontario market is reported with the war only several weeks old.

With imports restricted, coal operators here believe Alberta will gain a wartime hold on the Ontario market, and even may acquire a permanent eastern outlet for their product.

Alberta coal men have sought to break into the eastern market for years but could not overcome Ontario consumers' preference for types of coal provided by importers. Now Alberta's producers feel they may be given a chance to sell coal in Ontario for a sufficient period to create among consumers a desire for the western coal, gaining a permanent market of considerable proportions.

Imports have been greatly cut down from Wales, Belgium, Germany, Russia and even from the Pennsylvania fields, coal mine operators here report.



Actually Canada's output of steel ingots and direct steel castings has not been able to exceed the 1935 record as yet. There is good reason to believe, however, that this long standing record will soon be broken.

Canada Has Big Stake in Ship World

Now Needs Neutral Aid But Outlook Improves

By RONALD McEAHEEN
Staff Writer, The Financial Post

Calling for tenders for construction in Canada of \$17 million worth of seafarers brings into sharp relief the vital importance of ships and shipping for this Dominion.

France was Canada's trade with the rest of the world is the most important single phase of our national life. This is fundamentally a trading nation. In peace, external trade is the mainstay of our business activity. In war, it is even more vital because of the additional strain on the national economy.

Some 72 craft of the Canadian and British navies, ranging from 100 tons to 340,000 anti-submarine ships, are to be built in this country. C. D. Howe, Minister of Transport, has announced.

Britain's interest in maintaining the freedom of the seas has not meant merely freedom for British ships. Britain must have freedom of the seas for ships of many nations for this very realistic reason: Britain has never had enough ships of its own to carry the enormous volume of her trade.

Britain's interest is readily understood. But the fact that Canada has an almost equal interest in the freedom of the seas is less realized.

Study of the Allied shipping situation brings the conclusion that Germany will have to sink a very great deal more shipping before Canada or Britain will even begin to feel a pinch.

On the other hand, Pacific coast lumber and shipping interests have been experiencing a serious ship shortage. Though Britain wants enormous supplies of B. C. timber, Canada's west coast exporters are finding it hard to get good bottoms.

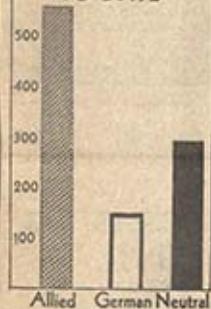
West Coast Problem

There are several reasons for the present west coast difficulty. Ships on long voyages, such as Vancouver to Liverpool, can carry 10 tons more than they did when they came from Canada to Liverpool for Vancouver is harder to get under way conditions and that pretty much determines the routes ships take.

Also it is not economic to provide a convoy for only three or four vessels and it is understood that some west

thousand tons.

TONNAGE SUNK TO DATE



coast carriers have rounded Panama canal and crawled up the east coast of the United States to join an Atlantic convoy off Halifax.

But under the new British control of shipping, no ship can get cargoes where they are needed to get cargoes when they are needed. It would seem that Britain is going to make sure that Britain is going to get the timber she requires.

Whether she will take B. C. timber, of course, is a different matter. To make it possible to compete in the lumber market, some B. C. timber interests feel that nothing but a special trans-Canada rail road will permit them to take part in this cause of the Canadian cause.

ing of Great War I. A table elsewhere on this page shows that Britain's shipping is reduced very considerably both in number and in tonnage. But position of Allied shipping—British, Canadian and French—shows that tonnage is up considerably, but that number of ships is considerably lower.

While the present British fleet of merchant tonnage has greater capacity, is faster and more efficient than in 1914, the reduction in numbers makes it somewhat less useful and, because the ships are larger, more vulnerable to enemy action.

The present gross tonnage of handy tonnage is between 1,000 and 4,000 tons, excluding tankers, declined between 1913 and 1919 from 2,700 vessels of over 43 million tons to 1,600 vessels of 2.2 million tons. Included in that total are large liners, and many small veterans, neither of which classes are of great value in war.

Neutrals Better Off

The ship position of the important maritime neutrals Denmark, Greece, Holland, Norway and Sweden, is very much better than it was in 1914.

Ship capacity, certainly until war was almost invariably exceeded. With economic self-sufficiency the dominant political theme of the past two decades, the merchant fleets of many nations enjoyed fat government subsidies with consequent overproduction and retention of an increasing number of obsolete vessels.

In June, 1919, the aggregate gross steam and motor ship tonnage of the world, according to Lloyd's Register was 68,509,000 tons, an increase of 51% over the tonnage available in 1914. This has only been reduced by 1 million tons since June in the war to the end of last year.

The effective increase is very considerably greater than the 51% shown. For ships today are on the average considerably faster. Loading and unloading facilities do these jobs much more speedily. Perhaps the effective world shipping tonnage is now 25% greater than it was in 1914.

Offsetting Factors

But so far as Canada and Britain are concerned, there are various factors offsetting this gain which point to a possible serious shortage.

Especially since Germany declared unrestricted warfare against every vessel on the seas, neutral shipping has shown an increasing and not surprising willingness to travel in the war zone.

The Norwegians, for instance, among the greatest of neutral shipowners, are cannily diverting their craft into less troubled waters. One of their greatest national industries, shipping, is nationally regarded as a "plant" which must be protected and conserves. After all in the last war Norway lost more than half her entire merchant fleet. Nearly all neutrals had similar, though less severe experience in the last war.

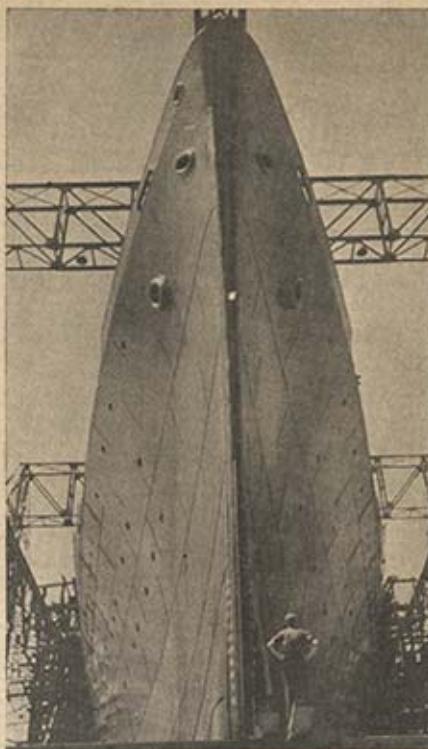
Under the terms of the revised neutrality act, United States ships cannot handle cargoes which take them into the war zone.

This flight of neutral shipping and the consequent necessity of Britain finding a large supply of substitutes has already affected the war tonnage, though not for the first two and half years of war until the unrestricted sea warfare was begun in 1917. An index of the neutral tonnage entered with cargoes in British trade shows a decline from 32 to 24 in 1918, 16 in 1917 and only eight in 1916.

Offsetting this flight of neutrals, however, are the deals Britain has just concluded with Finland and Sweden whereby ships of these countries will be given convoy protection. Last war, only British Empire ships got this protection.

Reduction in Speed

Further decreasing the effective tonnage available to the Allies is the



This scene may soon be duplicated in Canada when present government shipbuilding plans get under way. The photo shows the launching of the United States Lines 725-foot "America."

convoy is reduced to that of the slowest ship.

Zig-zagging and other precautionary manoeuvres lengthen the real distance of a voyage. All these factors reduce the effective carrying capacity of the ships the Allies can command on any one of their trade routes.

Shipbuilding Capacity

The Allied shipbuilding capacity has been considerably restricted since the last war. New launching in Britain and France have been declining. In Canada, shipbuilding has remained steady but small. While there has been an increase in the output of ships among the maritime powers, this increase has not been enough to overcome the Allied decline.

Britain, the Dominions and France produced a total tonnage of new shipping of 1,165,000 gross tons in 1919 compared with 2,135,000 tons in 1912.

SHIP TONNAGE—ALLIES AND NEUTRALS

	June, 1919 Change from June, 1914	
	No. gross tons	No. gross tons
United Kingdom	6,722 17,881	- 1,601 - 1,601
Dominions	2,235 3,111	+ 719 + 1,479
France	1,221 2,934	+ 206 + 1,912
Total	10,178 23,926	- 900 + 1,480
Neutral Countries		
	June, 1919 Change from June, 1914	
	No. gross tons	No. gross tons
Denmark	705 1,135	+ 129 + 465
Greece	607 1,581	+ 200 + 969
Holland	1,432 2,970	+ 834 + 1,498
Norway	1,987 4,634	+ 331 + 2,676
Sweden	1,221 1,977	+ 143 + 342
Total	6,053 12,307	+ 1,617 + 6,301
U. S. A. (less)	2,943 8,920	- 1,232 - 6,682

Information from The Economist, London.

make under 12 knots compared with less than 45% for the British.

Already some U. S. merchant ships have been sold to Britain, others to Canadian shipping interests, subject to U. S. Government approval.

Canadian shipbuilding capacities are a second line of defense for the Empire. Canada has magnificent shipbuilding facilities on the east and west coasts and along the Great Lakes. British Columbia turned out a costly fleet of wood and steel ships in the last war. Some of the east coast yards can turn out steel monsters as well as yards anywhere else in the world. They have ready access to the enormous iron mining areas of both Canada and the United States.

Though Canadian yards have had very limited activity since the boom of the last war, when some were employing as many as 3,000 men, repairs and construction has in most cases kept organizations and personnel fairly well intact.

Shipyards on the Great Lakes recently turned out the Lemoyne, the largest fresh-water carrier in the world.

War and Chemicals

By RONALD A. McEACHERN

With war, the chemical industry has had to take on a new role. It takes things like coal and salt and air, then does something most of us don't understand and triumphantly shouts a word like dichlorodifluoromethane. That doesn't give us much of a chance to know what's going on.

But it's the chemical industry on which our "modern civilization" is based. In war, it's chemistry that makes the wheels turn and the shells burst.

Most of us have been told that the biggest things that have happened in the past quarter century have been in the chemical industry; that it has been undergoing a sweeping revolution.

In Canada last year the production of

the chemical and allied industry was worth \$145 million with 774 plants in operation, paying \$29 million in salaries and wages, \$60 million for supplies and materials. The output was not many millions less than our vaunted gold mining industry. About 15% of our enormous electric power output was used by the chemical industry.

These are the most conservative figures. If you include all the industries which either make chemicals or use a chemical process in their manufacture, you get a startling total for last year's production of \$394 million from 1,322 plants.

Chemistry has been doing astonishing things ever since, a good many million years ago. A cave woman found that a burning leaf tasted better after it was burned a bit. Since then chemistry has been grow-

ing in stature and in its importance in our daily life, but without many of us paying much attention to it.

One of the difficulties is that chemistry deals with processes we can't watch. The important things in chemistry are unseen. Most of them are as cataclysmic as if the sun didn't rise in the sky. But we take the results for granted and don't know about these epic dramas of the atom.

Just what is the chemical industry?

It really includes three groups: industries manufacturing chemicals for the use of other industry such as the familiar Canadian Industries Limited or Shawinigan Chemicals. Second are the industries which produce a chemical at some point in the process of manufacturing something else, like the soap industry, which has by-products to sell such widely dissociated fields as rayon and explosives. Third, are the industries which use chemicals and chemical processes in the manufacture of goods like the automobile tire, paints or the food processing industry.

Invades Every Industry

Here are the industries which the Dominion Bureau of Statistics consider belong in the chemical and allied product group: coal tar distillation, acids, alkalis and salts, compressed gases, fertilizers, medicaments and pharmaceuticals, paints, pigments and varnishes, soaps, washing compounds and cleaning preparations, toilet preparations, printing and writing inks, hardware distillation, adhesives, polishes and dressings. Finally there is a great big category named miscellaneous which includes a spate of things including munitions.

The list can properly be expanded very considerably. The food processing and packing industry hardly ever turns around without using a chemical process. Chemistry is a major factor in the making of automobile tires and rubber products, in the brewing and distilling business, in mining, in pulp and paper. Hardly a single modern industry, big or little, but uses chemicals or chemical techniques somewhere.

It was Great War I that produced the sudden flowering of the chemical industry on this continent. Germany had very successfully spread the belief that her chemists were ultra expert. She backed that up by keeping a careful world monopoly on many of the most important chemical processes. They realized very clearly that many a chemical plant is a potential munition plant.

Medicines, fertilizers, dyes, a long string of essential chemicals and the production of optical glass were some of the arts and sciences that this country and this continent did not have when Germany ruled the chemical world.

There was no respect for patent rights held by Germany once the 1914 war was declared. Scores of chemists at once started figuring out the tricks of the German chemical industry. Scarcity and sudden demand put hundreds of other chemists at work trying to find new ways of doing old things.

The modern chemical age was born. Results were spectacular.

business works.

Here is another hint: the development that followed Great War I when explosives manufacturers found their factories filled with acetone, benzene and nitrocellulose. Chemists got busy and soon found a vast new outlet in plastics, in a brand new lacquer—the kind that makes your motor car shine.

The many-barreled words of the chemist's jargon are very specific descriptions of the chemicals they represent. But, using them to a minimum, look at the "genealogy" of some of the things with which most of us are mildly familiar.

As already demonstrated simple, common elements form the basis of the whole chemical line-up.

Broken down, coal becomes coal tar, coke and ammonia. Salt becomes chlorine and caustic soda, plus hydrogen. Lime becomes quicklime and carbon dioxide (the "bits" in pop). Sulphur with air becomes sulphur dioxide. The immensely important nitrogen is now largely trapped from the air.

In explosives, there are two fundamental types, propellants—the stuff that makes shells go, and disruptives, the stuff that bursts the shell, doing the damage.



Photo courtesy Canadian Industries Ltd.

Modern equipment and adaptability of plants make Canada's chemical industries an important asset in prosecution of war efforts.

It's from a very short list of things that the chemist works his magic. Coal, ash, limestone and sulfur are his chief needs, plus the so-called free things, air and water. Hundreds of other raw materials have specialized uses in chemical processes. Scientific permutations and combinations blend those things and their products in tens of thousands of ways creating a bewildering crisscross of relationships.

With some sacrifice of completeness, those things can be brought down to terms that we can understand.

The Explosives Business

Take the explosives business.

Perhaps the authorities have some novel explosive up their sleeve which they're not telling about. But in any case, they are the basic factors in explosives production.

In explosives, there are two fundamental types, propellants—the stuff that makes shells go, and disruptives, the stuff that bursts the shell, doing the damage.

From certain Thomas A. Edison, the electrical wizard, and their own engineers, Dominion Steel Corp., of Sydney, N. S., promptly designed a plant to catch a by-product of its cooking ovens and produce the base of TNT. Algoma Steel at Sault Ste. Marie was soon doing the same thing.

Just about 80 days after the idea struck, the first Canadian-made school was shipped, Canadian Explosives Co. was to finish the job, turn school into TNT. In six weeks it built 20 new buildings, bought and set up a lot of new equipment and started deliveries several weeks ahead of schedule.

During the war, Canada turned out about 42 million pounds of TNT.

Cordite was the second big explosive, 22 million pounds manufactured here. It was with this explosive that British and Canadian chemists made one of the most important discoveries in the explosives field in the century.

Acetone, a colorless liquid, is about the best solvent for gun-cotton, the basic material of cordite. But the main source of acetone had been from a destructive

process.

Commercial acids—Hamilton, Sudbury acid—Copper Cliff.

Hydrogen peroxide—Shawinigan, Mining and organic chemicals—dissolving rubber and mining chemicals, rubber, coal.

Salt—all grades at Windsor.

Explosives—Beloeil, Que., Nobel, Ont., East Selkirk, Man., James Island, B. C.

Safety fuse—Brownsbury, Que.

Ammunition—Brownsbury, Que.

Fertilizer—New Westminster, B. C., Halifax, Que., Hamilton, Chatham,

Germany's key position in the world of chemistry was smashed, never to be recovered. So was the Chilean nitrate monopoly. In 1888 the British scientist Sir William Crookes was prophesying that mankind was headed straight for starvation because the fertility of the world's soil would play out and so would the great fertilizer beds of Chile. A new development soon made the need for Chilean nitrates just about nil. It was hard on Chile and Sir William Crookes, but vital in war, and of immense importance in bringing down fertilizer prices to where the large scale farmer could use it.

Catching Nitrogen

The nitrogen fixation process was the new development. It literally catches the essential thing, nitrogen, out of the air—by means of enormous quantities of electric power. The gigantic United States power development, Muscle Shoals, was conceived largely as a nitrogen producer.

The old saw about the meat packing industry using everything but the hen's teeth and the pig's squeal makes it a prodigal compared with the thrifty chemical industry. A drip here, a smell there, something invisible, odorless and colorless over there are the sources of chemical wonders and profits. Because of this, chemicals turn up in all sorts of places. So it is almost impossible to draw the line and say these are chemical makers and those are chemical users.

How does Canada stand in chemicals for the making of explosives and war chemicals?

Virtually one hundred per cent. There is nothing in this line Canada can't make. Chemical science has gone so far in the past 25 years that even if Germany should come out with some gaudy new shell or gas, our chemists would likely be able to duplicate it promptly. Today Canada is producing or has the capacity to produce virtually everything in the chemical line needed for war.

One of the remarkable things about the

Penit de Nemours & Co. Inc., of United States.

The company operates the following groups and divisions:

Cellulose Products:

Cellulose—plant at Shawinigan, Fabrikoid—plant at New Toronto, Paper and Varnish—West Toronto, Mastic—Hespeler.

Plastics—Brownsbury, P.Q. (combs, tooth brushes, molding powders, etc.).

Chemical Group:

Alkali division—chlorine, caustic soda, etc.—plant, Shawinigan, Windsor and Cornwall.

Commercial acids—Hamilton, Sudbury acid—Copper Cliff.

Hydrogen peroxide—Shawinigan, Mining and organic chemicals—dissolving rubber and mining chemicals, rubber, coal.

Salt—all grades at Windsor.

Explosives—Beloeil, Que., Nobel, Ont., East Selkirk, Man., James Island, B. C.

Safety fuse—Brownsbury, Que.

Ammunition—Brownsbury, Que.

Fertilizer—New Westminster, B. C., Halifax, Que., Hamilton, Chatham,

How Vulnerable are Our Mines?

North Country is Now Few Hours' Hop From Europe By Air

How vulnerable are Canada's mines to possible enemy action?

More than any other Canadian industry, mining has already felt the impact of war. Canadian mines have made their contribution to the Empire cause by signing long-term contracts for essential war metals at very modest prices indeed; at prices which may mean a big sacrifice in profits if the course of metal prices is anything like that prevailing in the last war.

Canada's gold mines are going ahead with their vital work; the production of the basic war metal, basic, because it is the possession of gold now and in the future that will determine the ultimate victor.

That very rich output of Canadian mining the Kaulauhanu mine of International Nickel in Finland is now in the heart of a bloody battlefield. Reports claim that the retreating Finns have already blasted the "inwards" of the mine to separate as many months or years as possible the Soviets and their much-needed new source of nickel and copper.

Will War Come to Us?

Ever since the outbreak of war Canadians have been asking: "Will war ever come to us?" Many have commented on the remoteness of our mines and many of our electric power stations.

Professor Thomas Loudon, who has taught higher mathematics to a generation of scientists at University of Toronto, and has coached a couple of decades of rowing crews, has many times pointed out the need for alertness on this Canadian front.

Canada's position in war is very different from what it was in 1914. Canada is no longer insulated from the battle scenes of war by 1,500 miles of Atlantic ocean on the east and 4,700 miles of Pacific ocean on the west.

The evolution of aircraft has changed all that. The modern fighting airplane is said to have an effective range of 500 miles—that is, can go 250 miles from its base, do a job and return. The medium bomber stretches this range to 1,500 to 2,000 miles. The big bomber—so far as the public knows—can work over half a continent—2,500 to 3,000 miles. While it is perhaps too much to expect that aeroplanes will make a rapid progress along this improved air route as they did in Great War I, it is nevertheless altogether likely that the range of aircraft will lengthen out almost every month this war continues.

Aircraft Carriers

But apart from long range, there is the aircraft carrier, the sea-going base for a swarm of air demons. Informed observers discount the importance of the aircraft carrier as regards Canada with the British navy and its swarm of Canadian coastal patrols in command of the seas.

J. M. Forbes, well-known mining engineer, on the other hand, recently told a Montreal gathering that from long familiarity with the Labrador coast, he believed the many deep bays and fjords of Canada's long exposed northeastern coast presented



Canada's hinterland may become our new international frontier. In the new dimension of the air, the Dominion may be closer to the European stage than we used to think. In the above map, the reader is looking head-on at the North Pole.

favorable circumstances for enemy raids.

A military informant points out against that argument the magnificent record of Canada's sea-going men last war, fishermen and traders of the coast whose ceaseless vigil in small craft over a phenomenally long coast line was not divided until long afterward and has been poorly appreciated by most Canadians.

"New perils and new defenses," he said, automatically suggesting that Canada's military leaders know how to feed off effective raids from aircraft carriers or other craft.

But it is the fastnesses of Canada's Northland, that continent almost uninhabited and untravelled that concerns Professor Loudon and many other Canadians. In the new dimension of the clouds, Canada finds herself very close indeed to the European stage she has hitherto thought she was remote.

Knows the North

What, asks Professor Loudon and others, were German aircraft doing in northern Canada in recent years? The Nazi explanation was prompt

and satisfactory: Making tests for a transatlantic airplane route; testing weather, etc.

But such information collected for such purposes equally useful in peace or in war. Maps, air photographs, maps inland flights into that region of altitude were quite conceivable on the Nazi programme. Myriad lakes offer tens of thousands of "emergency" landing fields in summer; millions of acres of scrubby tundra vast flying fields in winter.

Flying over the roof of the world is no longer a startling airfeat. Not long ago Russian flyers did it and crossed down through Alberta as the short route to New York. Air navigation has become so safe, according to Sir Hubert Wilkins, that 1,500 miles down the coast of Greenland on a tiny speck of island, hardly a mile in size, too small to rate even a dot on the ordinary large size map. Such flights have emerged from the experimental, pioneering, heroic stage. And aren't the tests of war far more desperate than any-

thing dared by the scientific peace-time pioneers?

Mines on the Frontier

Generally speaking, Canada's mining empire stretches across the northern boundary of inhabited Canada. The richest concentration of mines is the more than 500 miles chain of mines from Quebec on the west to Labrador in the east. Farther west are the rich clusters of mines in northwestern Ontario, Sudbury and Copper Cliff, the Pickle Lake, Red Lake, Little Long Lake areas. There is Flin Flon, an isolated and very rich contributor to the Empire cause. There are the mines of British Columbia, most of them on the eastern side of the Rockies or well down toward the U.S. border.

The accompanying map graphically pictures the Canadian frontier created by the new dimension of the air. The reader is looking head-on at the North Pole—from a box seat in the Polar Star as it were. The map carries a few representative distances.

As the French say: "It gives to think."

Appetite of Mars

Even Defensive War Uses Staggering Amounts of Materials

By W. BRUCE MACKINNON
Staff Writer, The Financial Post

Almost every effort to relate the war to industry bogs down on the question of how long and how intense the war is going to be. It's one thing to tabulate the known facts of industrial capacity, reserves of raw material and manpower, but it's considerably more difficult to find out just how fully we will have to exercise our war-making capacities.

Thus, in 1930 a London economist by the name of Stephen Poseney tackled the problem in a book called "Tomorrow's War." Going first to the leading strategists of Europe, the men who have devoted their lives to working out the problems of modern warfare, he arrived at the requirements for the kind of war the strategists thought would be carried on. There are two types of warfare that may be carried on against Germany:

Two Kinds of War

Type I is defensive on land, with the offensive delegated to the naval and air arms.

Type II is offensive on land, involving heavy fighting of the 1914 variety with a few modern improvements.

To arrive at the requirements for these types of war, the calculations have been based on a war lasting one year along a 1,000-kilometre (approximately 600 miles) front. It would require about 3 million men for a defensive war on such a front, of whom 1.6 million would be organized into fighting divisions, the remainder in reserve and in army services. An offensive war is estimated to require approximately 4 million men.

The length of front involved is longer than in the Great War and considerably longer than in the present war. In the Great War, the longest front in France occupied by the British troops was about 125 miles or about one third the total. The use of the 600-mile front is probably explained by the fact that the book was written before the actual lines of battle had become clear. The author was careful not to disclose the intelligence by name but presumably regarded Italy as an ally of Germany, which would have extended the front in Europe and probably in Africa as well.

Naturally, the requirements for Type II (offensive) warfare are considerably heavier than for Type I, owing to the heavier losses entailed by attacking against strong modern fortifications. The requirements as deduced by Poseney are as follows:

Supplies Per 600 Miles of Front

	Normal Strength	Annual Requirements
	Type I	Type II
Machine guns	100,000	100,000
Artillery guns	20,000	20,000
Anti-aircraft guns	8,000	24,000
Anti-aircraft guns	20,000	32,000
Tanks	20,000	20,000
Armored cars	12,000	48,000
Armored transports	12,000	23,000
Planes	100,000	100,000
Reconnaissance and defense	4,000	8,000
Artillery observation	4,000	12,000
Mines	2,000	2,000
Fisheries	2,000	2,000
Searchlights and listening devices	100,000	100,000

Astronomical Figures

If these figures appear astronomical, it is because the average person does not realize how heavy casualties can be in modern warfare against a well-equipped enemy. For example, the statistics exist that in a large-scale bombing attack on a well defended city, 20% of the attacking planes would be put out of action. In a major offensive on the front, 25% of the attacking planes will be brought down daily, and an even heavier rate of casualties is expected for the tanks and armored cars. It is worth noting that in the last war allied plane production reached 60,000 planes in 1918, and the monthly output had reached 20,000 planes by the end of the war.

The figures for the artillery are fairly well in line with experience during the Great War. At the begin-

ning of the war, General Sherman was probably much nearer the truth than he realized when he made his famous remark about the helplessness of war. But the American commander concerned only one phase of the conflict. He might well have added that war is also expensive.

The amount of equipment over-

all to put a modern army on a war footing is staggering, the amount necessary for it to wage an offensive, stupendous. The accompanying article goes into details.

Some 13 men will be required behind the lines making munitions etc. for every man at the front in Type I warfare, and that the number will rise to 17 to 20 men if the more active Type II warfare develops.

This undoubtedly has something to do with Britain's decision to use Canada as an arsenal. The men behind the lines can work more efficiently when they are out of reach of enemy interference; even a false air raid alarm can stop the work of all munitions workers in a wide area for over an hour.

Flying Tanks and Subs

Poseney deals fairly thoroughly with the possibility of new and terrible weapons being introduced, among which he lists as possibilities a flying tank and a flying submarine. It will come as a surprise to many that flying tanks are actually under development. The trouble with airplanes of this sort, and this applies to the manned use of airplanes, is the difficulty of obtaining sufficient skilled labor to produce them on a worth while scale and the even greater difficulty of finding men to operate them. The advantages of artillery fire over bombing are considerable. If long-range guns, like the "Big Bertha" used by the Germans in the last war, were employed, the range of these guns can drop as low as 200 yards. A single gun could two hundred heavy bombers in the same time. Add to this the fact that you could normally expect to lose 10% of the bombing planes in the attack, while the battery of 20 guns might be too far behind the lines to suffer a single casualty.

Double Offensive Needed

Because of high casualty rates and the difficulty of replacing men and equipment, Poseney suggests that a full-blown war on the scale planned by the strategists of Europe is impossible. A really big offensive could only succeed if the enemy had

already been exhausted by a previous offensive, hence the side which risks everything on a big offensive cannot do so safely if it has not enough trained men and equipment in reserve to follow up with an second offensive as big as the first. Poseney is somewhat sceptical of the ability even of the allies to perform such a feat, hence it seems more likely that both sides would keep their "Blitzkrieg" in reserve until such time as they had been able to exhaust the enemy by other methods. His conclusion is that "a blockade will be the only real effective measure, not because it reduces the enemy population to starvation, but because it makes production impossible."

More than ever before war has become a matter of economic resources.

Consider how well Poseney's de-

scription of the Great War Canada had a total hydro-electric generating capacity of 1,551,000 horsepower. Today capacity is estimated at 8,250,000 horsepower or more than four times as much. The latter figure represents about 35% of the total capacity for all central electric stations both water and steam powered.

are, the answer to the experiment is already known.

The other chance for really intense warfare would arise when the Allies had accumulated a striking power overwhelmingly greater than Germany's. This is apparently what is going on at the present time. Already strong enough to deal with any attack that Germany may launch, the Allies are steadily building up the reserves which will permit them to take the offensive if need be.

Against German Judgment

The work that Poseney has done is of value chiefly because it reduces the problems of modern warfare to economic essentials and reveals that the present war has been undertaken against the better judgment of the German strategists. While it is never to be denied, too, many predictions on the facts which have been revealed, it appears that prolonged warfare is most likely to occur as a result of Hitler's desperation.

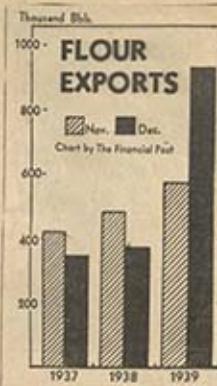
If Hitler succeeds in overcoming the objections of his generals, it is fairly clear that Canadian industry will be called upon for capacity operations for the duration of the intensive fighting. Germany is in no better position to interfere with Canadian war production than she was in the last war. Both English and French plants are considerably more vulnerable. In addition, Canada's improvement in productive power has been in those fields such as base metal mining and automotive production, which are most readily adapted to the needs of modern war. Geography and the technique of war seem to have combined to give the Canadian a greater value in a factory than in a trench.

Prospects

POWER



1939



Flour Exports Are Booming

December Shipments More Than Double Rate a Year Ago

Canadian flour exports boomed in December. Total of over 900,000 barrels was more than double that for the same month in 1938 and 1937. It was up nearly 400,000 barrels over November, whereas normally at this season of the year exports decline. In this climb flour is following the trend of wheat exports which began to rise steeply a couple of months after war was declared last September.

Total flour exports for last year are estimated by the Dominion Bureau of Statistics at slightly over 3.3 million barrels, up almost a million and a half for both 1938 and 1937.

Volume per barrel while increasing in December over the same month a year ago was far below the figure for 1937, 1936 or 1935. Average for the year of slightly over 43 was also down considerably from recent years and as a result total value of flour exports for 1939 of approximately \$164 million was slightly below 1938 and well below that for the three previous years.

Data of flour exports for last month and last year with comparisons follow:

FLOUR EXPORTS		
	Dec.	Total Value per barrel
1938	800,714	2,048,212 33.8
1937	720,000	1,968,212 27.1
1936	227,058	1,265,212 5.5
1935	415,382	1,262,644 4.8
1934	300,000	1,260,000 4.2
12 Months Ended December		
1938	3,000,376	18,278,367 3.6
1937	2,400,000	17,280,000 3.6
1936	2,000,000	12,072,483 4.8
1935	2,000,000	10,936,718 4.2
1934	1,600,000	10,000,000 3.8

Canada Has Developed

By RONALD A. McEAHREN
Staff Writer, The Financial Post

Representative of the Empire was the old name for us. But as Canada goes to war this time she is called, Armistice of the Empire.

There is much meaning in the change. What have we Canadians learned from the last war?

Canadians today are tragically familiar with war. Especially in recent weeks, memories of 1914 and '15, the moment, as vivid as a friend's face.

What have our memories taught us? We find that we Canadians should have another look at this problem of war.

All of us are by this time familiar with the role we are being called upon to play, a very different role from the one we have had in the past. Our men have their job to do. But the men that expected of Canada is to be the Empire armed, to supply vast amounts of food and ammunition, the fuel and the machinery of victory.

How well is Canada going to do that job?

Greater Stability

The Canada of 1914 and the Canada of today are very different. In 1914, the nation was a frontier. Today it is a world citizen. She is comparatively few factories and they were devoted mainly to supplying the needs of a farming country. Every Canadian knew that Canada was far more than a frontier. One could buy in Canada the world's greatest products of gold and base metals. Canada is one of the world's greatest producers of food products. And we have great factories that turn out the necessities of life.

Canada is no longer a nation of one great dominating industry. We are now a nation of world importance in those four great industries.

That is extremely important in two respects. It gives the Canadian greater security in his investments and it gives him more life and drama in any one industry. Second, it makes it possible for Canada to contribute more now than ever before to the war effort.

In 1914, the last year for which these figures are available, Canada's total output

was valued around \$1,000 million, compared with \$750 million in 1914, an increase of about 47%. But in the same period value of Canada's manufactures soared from around \$12,000 million to \$122 million, an increase of over 900%.

The value of Canada's mineral production has increased from \$120 million to \$462 million.

Such mere statistics, however, of the fundamental change taking place in Canada's national life is told. In the period 1914-1918 Canada's exports have increased nearly 50%, from \$619 million to \$106 million. But our exports increased 140%, or from \$101 million to \$180 million.

Very important for wartime is the change in agriculture. Agricultural good prices for farm products are a fine stimulus of production. Technically, scientific and mechanical methods of farming are changing old standards of production and according to man's taste.

On the other hand, we are less complete slaves. Our output of food for the Allied armies and for Allied soldiers at home and overseas has increased 100% in three years. But there is no limit to the number of machines that can be built.

How much Canada can add to her productive force is obscure. But evidence before the "Borden Commission" shows that Canada's agricultural increase in acreage is unlikely to be the source of greatly increased agricultural production.

Can Raise Output

In other words, Canada can easily increase the volume of her manufacturing output. Though increases in the agricultural field is definitely restricted.

Perhaps the most important single factor in the Canadian business picture is that we are entering war with one of the greatest wheat crops of our history. Only on this retaliation in the life of the

British Empire's Br

Senior Dominion is

of War

Dominion have we had a crop as large as that now indicated. Those years were 1912, 1917 and 1920.

But here is the most important point. The average yearly value of the Canadian wheat crop over the past 10 years has been \$100 million. Last year it was better than \$100 million, or \$100 million. This year, as early as can be calculated, it appears that our wheat crop is likely to be worth around \$200 million—perhaps considerably more than that by the time it is harvested, in April, May or June.

This prospectus is like a ray in the clouds of depression—for the Canadian wheat-grower is extremely fortunate in the nation in many ways. It helps the farmer with some of the burdens of agriculture, and will help him to get a loan to buy new machinery, repair his buildings, fix up his house. This compensation gives the Canadian farmer the chance to get into good shape for greater and more efficient production in coming years of the world requires.

Better Prepared

The second important difference between 1914 and today has to do with Canadian industry and finance. In 1914 Canada was debt-free and self-sufficient. Canada was coming to the end of a period of expansion and prosperity. The world was easy to get, when it seemed as if expansion and prosperity were going to last forever. In fact, I believe probably existing immigrants to come to this country from all parts of the world would never touch Canada.

By the outbreak of the last war, the boom was breaking. The era of railway building was ending to an end. Economic travails of many kinds were breaking. Canadian business was getting into difficulties. But was intervened.

Today Canadian business has just escaped from the greatest depression of modern times. And not in a hundred years has a nation, in the history of the world, emerged from such a depression as Canada today. Conditioned in two ways, in the first place, Canadian industry today is the most poor, industry that survived the great depression. In order to survive, it had to be strong, efficient. It had to be alert to changing needs and new opportunities. In the second place most Canadian business leaders today are men who fought the last war, either on the battlefront or in the rear. They know what war is about; war. Very important, too, is the fact that as Canadian business emerged from the post depression, it didn't start building up its war hoards. It didn't get a break. Even since 1918 it has had to build its hoards again, because prices are still hanging out somewhere. There have been a succession of economic and political upheavals and, of course, always the recurrent threat of war, increasing in certainty and in frequency.

It seems impossible to find more dramatic evidence that business was prepared—that it had learned something in the last war—than to glance into the minds of the most enterprising businessmen of what business there is.

Doors Locked

August, 1914, the stock exchanges locked their doors and kept them locked for six months. Frightful invention can transform a nation's confidence reflected in their fate and fortune of any body who would buy at almost any price. Contrast that with Sept., 1919. The stock exchanges stayed wide open on this occasion. Please to meet the unfortunate, war-torn, peace-making public. After all, the time had come. No need, inventors were sold, their trading orders premised. For months they had known almost exactly what their world would be the moment war was over—what that world would be like. That was the secret of the last boom.

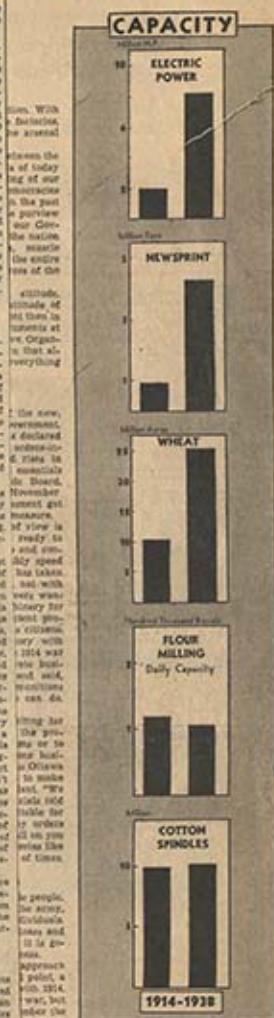
Canada knew about war. In 1914 it took six months to get the financial world readjusted. In 1919 it didn't take six months.

Canada at what Canadian industry can do for the Allies at war. Take Canada's dynamic young pulp industry, which has largely replaced farming as the means of expanding our frontiers, carrying out of the wilderness great new areas of community life, and making those weakly provinces for the nation.

The mines of Canada have two major jobs in wartime. Gold is the essential war material. Hitler has been saying gold is no good, but he is wrong. Years ago, he said that gold supplies in the first thing he does in any conquered country. Canada's continued production of gold during war is just as important as the growing of food and the making of steel. In 1914 Canada had less than a score of little gold mines. That year they produced less than \$10 million in gold. Last year, Canada's gold mines produced more than 20 times that amount—about \$180 million.

Register Great Gains

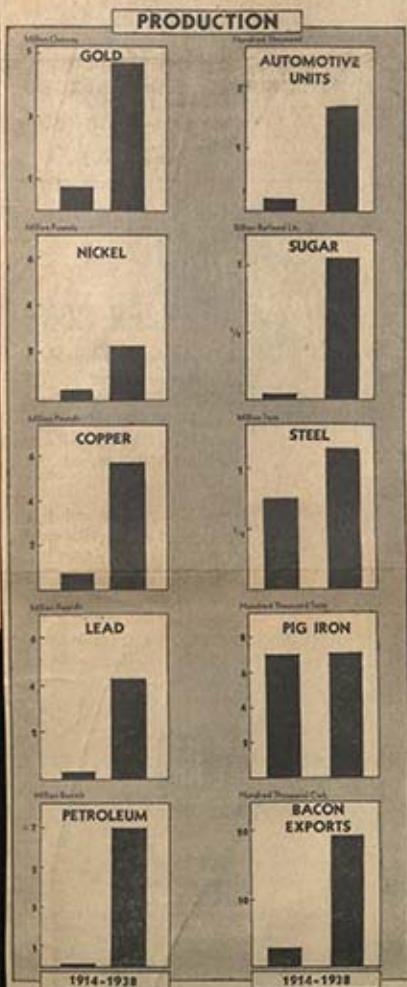
There is the same story of growth with the base metals—the metals that are as vital in the making of war supplies. In the years between 1914 and 1918, Canada's production of nickel has increased from \$10 million to \$100 million, and her production of lead, 12 times.



Canadian industry can be speeded up to meet war needs.

now profile tax of the war budget is proposed to take many of the attractions out of excited or greedy speculators.

And in another way, the Canadian Government seems to be thinking about money, while it considers the war... In



*Canada is now a producer of world importance of many things the Allies need most.

War Demand Quickens Business in Canada

Dominion's Role as Source of Supply for Foodstuffs and Munitions Means Larger Purchasing Power—Trade Already More Active

Canada is losing no time getting into large scale production of war materials and equipment. Already operations in various industries have been speeded up. Right across the country, effort is being concentrated on the conversion of industrial and agricultural facilities to production on a wartime scale.

While an active service force will be sent overseas by Canada, the need for such materials will be enormous.

Power comes in the modern industry bottleneck. New more mobile guns are being turned out in record numbers and the increased use of mechanical transport. Airplanes and tanks will form a large part of the army equipment than ever before. These all require personnel to handle while on the lines of communication a vast number of artisans, mechanics and drivers will be required. These men will have to be educated and fed.

It is in the supply of the materials and foodstuffs required that Canada has already made its contribution to the Allies, and will do so.

The speed with which the necessary adjustments in industry are being made this time, contrasts sharply with the situation some 23 years ago. For months past, there shifting the situation on both sides of the Atlantic have been recognized that Canada can be most useful to the Allied cause by acting as the arsenal or base depot from which the Allies can draw stores of their own manufacture and imports, underwritten by Canadian foodstuffs and equipment.

Her enormous resources of basic metals and other raw products combined with the fact that she is in the center of the scene of action, of all the dominions of the Empire, naturally fit her for such a rôle. The Government has taken cognizance of this by encouraging investments from certain classes of industry to be encouraged in areas and projects that will help the war effort.

With the message to Canadian business and industry a welcome. Already it is having its effect. Employment is increasing. Payrolls are expanding. Buying power is stronger. Retail stores are busy. Business generally is more active. One striking indication of the increase in activity that has already occurred is flour milling, where plants have been working night and day to meet the demand. Output in Canada is large enough to justify an announced plan to double its foreign trade. And Canada is only at the beginning of her war effort.

But the effect is further reaching still. The money paid out in wages in the machine industry is already stimulating demand in other lines, and will do so in increasing volume. Added purchasing power and greater reliability of equipment is bound to result in a better demand for services about the home. In fact, business in engineering, mechanics, and various other articles now in necessary in warlike life.

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

BUSINESS INDEX

1926-1933 Monthly Average



FURTHER ADVANCE IN BUSINESS —

Canadian business showed further advances in August, continuing the upward trend as evidenced since the first quarter. The Federal Budget was passed, and the new budget was adopted for 1934-35. The new budget is \$102.2 million larger than the old. This was due to some increase such as increased production, treasury output and tribal and Indian exports, distance showed increases over 100% well in the mining and lumber industries. Mining and forest products industry were among those which showed greatest activity.

Major Economic Factors

Present Value (Amounts in Dollars)	Aug.	Sept.	Oct.	Change
Production (Food, Agriculture, Lumber)	\$1,200,000,000	\$1,250,000,000	\$1,300,000,000	+5%
Manufacturing	1,200,000,000	1,250,000,000	1,300,000,000	+5%
Trade	1,200,000,000	1,250,000,000	1,300,000,000	+5%
Transportation	1,200,000,000	1,250,000,000	1,300,000,000	+5%
Construction	1,200,000,000	1,250,000,000	1,300,000,000	+5%
Finance	1,200,000,000	1,250,000,000	1,300,000,000	+5%
Government	1,200,000,000	1,250,000,000	1,300,000,000	+5%
Total	1,200,000,000	1,250,000,000	1,300,000,000	+5%

Pulp and Paper Industry

Trade Enters New Phase

Ending of Finnish-Russian War Opens Way For Resumption of Scandinavian Trade

From Our Own Correspondent

MONTREAL—Ending of the Russo-Finnish war has had a decided bearing on production and sales in the United States during the indicated period. The American market, for instance, was also weighing the early severity of the Scandinavian pronouncements in its judgment.

Now, however, Sweden and Finland negotiate the bulk of their United States commercial pulp and paper purchases, and the American requirements. Then, too, they are well represented in both American and other markets.

War conditions affected the ability of the Scandinavians to produce and sell large quantities of water pulp on overseas shipping routes, and the market could not be maintained. January trade returns show that this additional cost was largely met by the shippers, with the result that pulp prices were held up. These were not only able to maintain, but actually increase, shipments of paper pulp to the United States in the first quarter of 1933.

It was obvious that after Finland had been beaten, the market for Finnish paper pulp volumes of business could not be maintained. January trade returns show that this additional cost was largely met by the shippers, with the result that pulp prices were held up. These were not only able to maintain, but actually increase, shipments of paper pulp to the United States in the first quarter of 1933.

This state of affairs was reflected in the return of the Canadian industry to the market. The United States advanced its rates sharply. All even more pronouncedly than did the British and South American trade areas.

Paper Sales
The outcome of the Finnish-Russian war has had a decided bearing on the Canadian manufacturers for the balance of the year. It is a good project to have in mind that the Scandinavian countries, particularly Finland, will continue to be in a position to dominate the market.

There is no doubt that the European market for paper pulp and paper will remain strong. This will be due to the fact that they will attempt to re-establish their share of the world market. Canada will be in a position to compete with them.

Trade of Trade
Canadian mills are rapidly reducing their prices between Scandinavia and the United States. This is a natural result of the increased competition of the European market for the United States market.

Finland, Principal Source
The volume of imported business handled by these mills has increased in the last few months.

Look for Success
In January 1933, the United States government imposed a ban on foreign shipping with Spain, Portugal, Sweden, Norway, and Norway. All these countries have adopted the

same policy as Finland, namely that the Scandinavian countries will be able to find a market for all their surplus paper and pulp.

Denmark Poly Market

The situation in respect to paper is quite interesting. The American market is the largest import market for Denmark, and a large proportion of her requirements. In this she has been joined by the United States, which established the domestic price of chemical pulp in the former.

Last year, the American market absorbed 1,000,000 tons of available pulp. Last year, 400,000 tons originated on the island of Zealand, and 600,000 tons from the three Scandinavian countries and Germany.

With the same situation existing in Europe, particularly in the United Kingdom, Canada appears to have a relatively large proportion of total requirements.

As with American, shipments of Scandinavia pulp held by remarkable well in the closing months of the year, and have since dropped sharply.

While the political situation has improved, shipping conditions in the Scandinavian area are not yet normal. This should keep down shipping, but Canadian and American requirements are likely to remain high. This may have to reverse earlier estimates of the extent of foreign trade, but the Canadian market will continue to be strong.

While the political situation has improved, shipping conditions in the Scandinavian area are not yet normal. This should keep down shipping, but Canadian and American requirements are likely to remain high. This may have to reverse earlier estimates of the extent of foreign trade, but the Canadian market will continue to be strong.

MARCH 2, 1940

The Problem of Dollars

By JOHN DICK

Last Saturday Prime Minister Clement Attlee said that the British Government had spent over £200 million from Canada this year.

The figure will probably turn out to be a conservative one. Recently The Financial Post quoted Ottawa figures that total exports to Britain last year were about \$100 million less than this year. In recent years they may have been between \$200 million and \$400 million.

That huge increase in exports to Britain, unexplained by the wartime demand for war materials, has been due to raw materials, munitions and a host of other commodities so gratifying to Canadian producers. It still leaves full pay dividends and a good farm income.

Two Serious Problems

But it produces some serious economic problems of which few are giving attention in official circles at the present time.

First, there is the question of how to keep our present reserves of dollars? If Britain does not pay us, U.S. dollars, because we in Canada buy more than we export, we are faced with the United States?

The second, triangular aspect of settling Canada's international accounts comes into the picture.

Overseas, the overseas has for two generations produced something like this:

Canada sends to Great Britain furs, wheat, timber, raw materials from us. These Canada always has a surplus of dollars after paying its debts.

On the other hand, Canada buys more from the United States than the Canadian dollar can buy. The result is that Canada's money has a shortage of American dollars.

So the dollars have been easy to get. All we had to do was to start in New York. That gave us the income to square off.

Most Americans, victims of Canada's balance of payments difficulties, want to be entirely convinced before they be modified considerably to allow for such a variety of factors as capital, exports, imports of non-tradeable services, remittances and payments, and many others. But the truth is that it must be modified in the summary just given, as anyone can easily see from the figures in the *Review of Statistics* recent samples to study the problem.

Wartime Complications

Now, as we know, there is no American, that is, no Canadian, unemployment.

We are now in the middle of a process of expanding our exports to the United States. Most measures prove successful.

We are also engaged in a process of expanding our imports from the United States. That means a greater shortage of dollars.

The very funds of who need to benefit us the most. Supplying a Canadian manufacturer goes an order for steel or wire or castings or whatever he needs, and is a small part of his machinery, steel and other raw materials from the United States. He will have to pay out good American dollars and get nothing in return.

"But, but why not just sell the surplus in New York at a loss and get U.S. dollars to square the account?" the reader asks.

Here we run up against the salient of war economy.

American dollars are precious to Britain, and to the Allies, precious to the war effort.

The United States is not lending any money to Britain or France due to the existing law which forbids it to do so.

British credits which all the world it needs to the United States simply by exporting wheat to it. This is done, but the United States is not lending the wheat to Britain, whose currencies can be turned into U.S. dollars.

Treasury Difficulties

War makes export trade difficult. For instance, as close to the heart of battle as Britain engaged in fighting was when we sent our British ships to the United States to find them held up to pay debts.

It would be hard to find U.S. dollars—hundreds of millions of Canadian

sterling worth the same as the Canadian dollar.

But whatever these troubles, they must be balanced carefully. Britain must not offend.

These are back to the Canadian problem. If Canada were to take the starting gate from Britain and sell that starting gate New York, it would be creating a new British, it would be creating a new set of available dollars.

It would be no particular or great advantage for us to support by Canadian form of support by Canada to Britain. It would be no particular or great advantage for us to support by Canada to Britain.

Canada has been like Thackeray's *Pendennis* Tom, who did not fail to make his fortune in the United States. Already, negotiations of the Canadian Central Bank, the Bank of Canada, have come to a standstill.

Canada has been like Thackeray's *Pendennis* Tom, who did not fail to make his fortune in the United States. Already, negotiations of the Canadian Central Bank, the Bank of Canada, have come to a standstill.

We are getting paid for what we are selling Britain. We are getting paid with dollars.

As between Britain and Canada the arrangement is ideal, even if it does mean that Canada is getting richer and Britain is getting poorer.

The Canadian government does not like that either picture: the picture of a bridgehead settlement of interest on all continents.

They have been there several times in the United States exchange on loans. And while Americans are buying a certain amount of Canadian bonds and while that amount is increasing monthly, it still represents a capital movement that falls far short of investment.

We have, of course, ways of getting American dollars other than selling sterling. There are our own exports to the United States. There are our own imports from the United States, up to the form of dollar balances in New York. There are our shipments of newly minted gold. There is the very tremendous balance in our favor on our gold.

Led Dollar Fall?

All these come as a long way toward helping us to balance our account from the United States and our bills for interest and dividends due to United States citizens.

In the last few years we have been able to balance our account with the United States without necessarily drawing upon our existing balances. What we have, in effect, done, has been to use our existing balances to balance our existing account of net assets held in England and the United States. We have balanced our debts abroad by about \$600 million.

It would appear then, that there is no immediate problem of serious concern to bring American dollars to meet our needs in the United States and our bills for interest and dividends due to United States citizens.

Such a situation, however, has led to a number of the reversal of trade agreements.

3. Distinguishing Canadians from Americans. There is a growing tendency among the more enterprising Americans to import what Canada must import and export to get at the lower price level. There are others who import what Canada must import and export to get at the lower price level.

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March 9, 1940

How Eldorado is Operating in Wartime

Radium Market Shifts But Company Benefits By Exchange Premium

Changed markets and selling conditions have been met with by Eldorado Gold Mines since the outbreak of war. Probably no other company in Canada is so dependent on the export market as Eldorado. Even before the war it was obvious that hostilities would mean a reorientation of the whole business of mining.

Most important of the new development was how has brought about:

1. Emergence of the United States and the Far East as the most important outlet for radium either cut off or closed to Europe.
2. An increase of 15% in the price received for radium, in Canadian funds, due to the premium on the United States dollar in which radium is paid.

3. The British Government's consideration of the purchase of the maximum allowed under its option despite the outbreak of war.

Besides these, there are other important changes in the Eldorado picture. Uranium, used for coloring in pottery, is well on the way to becoming radium, the company's chief product. After years of research work, a commercial use has also been found for polonium by spark plug makers.

In financial end of things, inventories have been built up as far as desired and attention is now being directed to restoration of indebtedness. When the latter task has been completed, directors will then begin a program to start thinking about dividends.

The European Situation

Although Eldorado officials do not know of any direct use for radium in warfare, supplies are not only prevented from reaching Germany, former Czechoslovakia and Poland, but cut off for Eldorado to any neutrals adjoining any of these countries. This cuts off Eldorado's European market except for the Allies, Spain, Portugal, Romania, Greece, Turkey and Bulgaria.

Eldorado is unable to send radium to any of its neighboring Germany, there are other sources from which supplies can be obtained, should Germany so desire.

Used in Finding Flaws

Two indirect uses for radium in wartime exist but the material required is in such short supply. The first use is for detecting flaws in steel. But a few hundred dollars worth would be all that is necessary, and it would last almost indefinitely. The other possible use in wartime is in the production of the manufacture of luminous paint. The Germans, however, have a chemical that can be used either with or without radium for making luminous paint. It is better to have radium than to have it by no means essential. Luminous compound is not a large part of Eldorado's business.

An radium can hardly be classed as a strategic war metal, the foreign exchange value of which is far from being equal probably more than offset any loss through Germany securing more radium than would otherwise be the case. At present Eldorado has a list of 10 pages of contracts with which they cannot do business.

No Radium Barred

Contrary to recent radium has not been "barred" in England to avoid danger to the public through a quantity of it being scattered. Radium supplies are simply lowered and the public is given permission to bring back by weather. Down a shaft is the safest way to keep radium even in peacetime.

Great care has been taken by Eldorado to ensure economy of operation and economy of shipping. The head of rail are now sufficient to keep the Port Hope refinery in operation for more than a year.

While radium has been the chief product to date, officials anticipate that the future may see a good place that of radium in importance. Uranium has as far practically only one use—in ceramics, or pottery—but it is quite possible that research will find outlets for it.

Radium and uranium are the only products marketed by Eldorado.



Pictured are the few buildings on Great Bear Lake which mark the largest source of radium in the world, the Eldorado mine. After pitchblende ore has been mined and the resulting concentrates have been shipped 400 miles to the refinery at Fort Norman, a complicated recovery process takes place. In the lower picture is seen about \$10,000 worth of radium in fragile white crystals in a beaker. Crystals contain radium and barium, representing the final stage of the evaporation process in the recovery of radium. Three tons of chemical are required to refine one ton of ore.

In addition there are cobalt, copper, silver and polonium, the latest addition to the Eldorado products.

\$1 Millions An Ounce

Polonium is probably one of the most valuable substances in the world, because it sells at \$1 million an ounce. It is the decay product of Radium D which in turn is the decay product of radium. Just recently, the element entered commercial use in spark plug wires where it is used in the form of a alloy. The new plug is stated to have superior starting qualities for motors and to give an improved performance generally. The Firestone people had the idea of using spark plug wire and the demand broadened still wider. The demand is by no means unusual. Luminescent compound is not a large part of Eldorado's business.

An radium can hardly be classed as a strategic war metal, the foreign exchange value of which is far from being equal probably more than offset any loss through Germany securing more radium than would otherwise be the case. At present Eldorado has a list of 10 pages of contracts with which they cannot do business.

The Giant Bear Lake Pitchblende

is a chemical museum and represents the most comprehensive ever made. It is known to contain about 33 elements in greater or less amount.

Radium is usually thought of as just one element, but as a matter of fact there are 11 in all. These elements have a life varying from .005 of a second to 22,000 years. Some are dead even before their extraction can be completed.

The Protactinium Series

Some day a commercial use may be found for the protactinium series of elements in pitchblende ore. There are ten elements in this group. Protactinium elements have twice the life of radium and there are many

other interesting elements among them. The very short half-life of radium to carbon was very short. But the evenings are cool and one gets a good sleep, although the days are many.

Competitors Keen

gold is swamped with salesmen looking for business and the

times as much of them present in pitchblende as there is in radium. They are radioactive.

Uranium is another element in pitchblende ore which has peculiar properties. It is not radioactive. There is no commercial demand as yet. It is estimated there is 40 times as much of it present as there is radium. Work of the National Research Council suggests that it is just as valuable as radium in preparation of sunburn pastes.

The Price of Radium

How much does radium cost is subject on which there appears to be considerable confusion. Only recently, however, the price was set at \$10,000 a gram. Actually, the price is about \$12,500 a gram. This is in United States dollars. Payment is accepted in various currencies, either Canadian or United States dollars, on United States dollars.

Up to the previous command by United States funds, Eldorado is now reaping additional revenue since practically all its costs are incurred in Canadian dollars.

In 1938, the price of radium was the highest since production was commenced in this country. In 1938 the British Government agreed to purchase 15 grams of radium that had been提炼 from Eldorado and to consider this price as the minimum for this product. This grant was for a period of five years. So far 20 grams have been purchased under the option, the British Government taking up the maximum. November even when war was under way. All the radium purchased by the British Government is understood to be for medical purposes. Surgery and radium are still the two chief methods for treating cancer, it appears.

New Routes In Selling

The amount of routine involved in selling radium abroad has been greatly increased since the outbreak of war. A person must now be secured from the Bank of Canada or some company, like other exporters, agrees to sell the currency received to the Bank of Canada as required by the Foreign Exchange Control Board. Sales with people outside the country are now conducted in Canadian dollars, as this would circumvent the efforts of the Foreign Exchange Control Board.

Recently an eastern customer purchased radium from Eldorado with the price payable in United States dollars. Instead of making payment in United States dollars, as should have been done, the price was converted into Canadian dollars at the rate of 1.25 Canadian dollars to the United States dollar.

Due to the premium commanded by United States funds, Eldorado is now reaping additional revenue since practically all its costs are incurred in Canadian dollars.

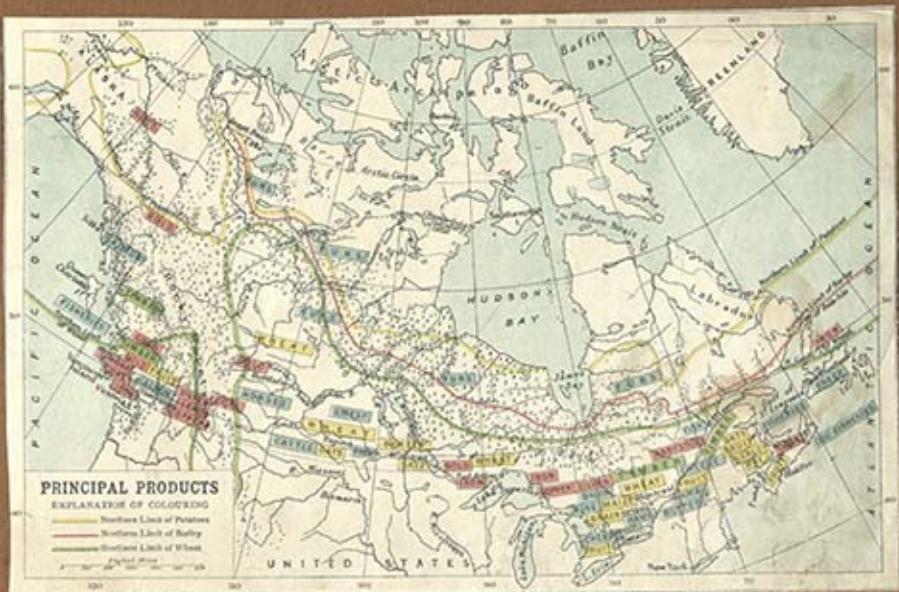
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Over a period of years, freight costs to and from the company's mine at Great Bear have shown a great reduction, partly due to the activities of the Eldorado subsidiary, Northern Thelonian Co. Ltd. Since then Imperial Oil has built a new refinery at Fort Norman which is solving the company's fuel problem. Airplane gasoline is now expected to drop from 95 to 40 cents a gallon with installation of this refinery.

Many of the Eldorado boats are equipped with high-speed Diesels which previously could not use Fort Norman crude for their operations. In fact, the boats had to be brought in some 1,500 miles from the head of rail at Waterways. The new Fort Norman refinery now gives a processed Diesel fuel which satisfies all Eldorado's requirements.

In the days of the Great Bear there was a great deal of traffic, most of which was inbound. Traffic, however, fluctuated in volume due to the changing amount of prospecting activity. It was not the type of traffic that could be expected and reduction in freight rates. North West Territories mining is now more mature, however, and the flow of freight is steadier and more dependable.

Development of the Yellowknife area has been an important contributing factor in providing a good volume of freight. Smelters and Negaus have proved mines in the area and several others are proposed and promise of becoming active. All the Negaus freight is handled by the Eldorado subsidiary and shipments of high-grade ore are being taken out from the property of Giant Yellowknife Gold Mine.



CANADA AND THE

PRESENT

W.H.R.