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PRELIMINARY ESTIMATE OF CANADA'S MINERAL PRODUCTION, 1939.

(FOR RELEASE BY THE PRESS - MONDAY, JANUARY 1st, 1940)

Canada's mineral production, valued at \$470,179,000, reached an all-time high in 1939, according to a report just issued by the Mining, Metallurgical and Chemical Branch of the Dominion Bureau of Statistics at Ottawa. This is an increase of 6 per cent over 1938 and 3 per cent over the previous high record of \$457,359,092 established in 1937. New output records were established for antimony, gold, copper, zinc, nickel, cadmium, crude petroleum, natural gas, gypsum, sulphur, and lime. Several new gold mines reached the production stage and the gold productive field was widened. Iron ore was produced on a commercial scale for the first time in sixteen years and considerable prospecting and development work occurred in connection with the search for metals and ores which have not as yet been produced to any great extent in Canada but are strategic for war purposes in the manufacture of various alloys. These include such metals as molybdenite, manganese, mercury, and tungsten. Several new wells were brought into production in the Alberta petroleum field. In the output of refined copper, nickel, lead and zinc, Canada is now in a better position to assist in the successful prosecution of the war than at the outbreak of the World War in 1914. In fact, since that time, large refineries have been established in the Dominion for the production of the above metals.

VALUES OF MINERAL PRODUCTION OF CANADA, BY CLASSES, FOR YEARS SPECIFIED

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Year	Metallics	Coal, natural gas, peat and crude petroleum		Other non- metallics	Clay products and other structural materials	T O T A L
		\$	\$ (a)	\$	\$	
1913	66,361,351		48,463,709		30,809,752	145,634,812
1914	59,386,619		43,467,229		26,009,227	128,863,075
1915	75,814,841		43,373,571		17,920,759	137,109,171
1916	106,319,365		53,414,983		17,467,186	177,201,534
1917	106,455,147		63,354,363		19,837,311	189,646,821
1918	114,549,152		77,621,946		19,130,799	211,301,897
1919	73,262,793		76,002,087		27,421,510	176,686,390
1929	154,454,056	76,787,397		21,073,959	58,534,834	310,850,246
1932	112,041,763	49,047,342		7,740,837	22,398,283	191,228,225
1934	194,110,968	54,262,099		10,501,762	19,286,761	278,161,590
1935	221,800,849	54,824,200		12,504,008	23,215,400	312,344,457
1936	259,425,194	59,983,320		16,740,117	25,770,741	361,919,372
1937	334,165,243	65,828,879		22,495,271	34,869,699	457,359,092
1938	323,075,154	64,803,294		20,066,123	33,878,666	441,823,237
1939 (estimated)	339,534,000	70,757,000		24,427,000	35,461,000	470,179,000

(a) 1913-1919 shows a combined value for fuels and other non-metallics.

Metals as a group were valued at \$339,534,000, an increase of 5 per cent over 1938. Fuels, including coal, crude petroleum and natural gas, totalled \$70,757,000, representing an increase of 9 per cent; non-metallics, other than fuels, aggregated \$24,427,000 compared with \$20,066,123, and structural materials reached \$35,461,000, a gain of 5 per cent over 1938.

OFFICIAL ESTIMATE OF THE MINERAL PRODUCTION OF CANADA - 1939 - WITH COMPARATIVE FIGURES FOR 1938.

		1938		1939	
		Quantity	Value	Quantity	Value
			\$		\$
METALLICS					
Gold	fine oz.	4,725,117	97,676,834	5,045,766	104,305,000
Estimated exchange on gold produced .....	\$	...	68,529,156	...	76,969,000
Silver	fine oz.	22,219,195	9,660,239	22,775,374	9,238,000
Nickel	pound	210,572,738	53,914,494	227,089,730	51,099,000
Copper	pound	571,249,664	56,554,034	606,705,278	60,721,000
Lead	pound	418,927,660	14,008,941	391,499,038	12,375,000
Zinc	pound	381,506,588	11,723,698	394,955,897	12,066,000
Platinum metals	fine oz.	292,219	8,874,136	292,035	9,368,000
Other metals (x) .....	\$	...	2,133,622	...	3,393,000
TOTAL .....	\$	...	323,075,154	...	339,534,000
NON-METALLICS					
Fuels					
Coal	ton	14,294,718	43,982,171	15,507,000	48,098,000
Natural gas	M cu.ft.	33,444,791	11,587,450	35,187,600	12,250,000
Petroleum, crude	brl.	6,966,084	9,230,173	7,743,300	10,409,000
Peat	ton	620	3,500	...	...
TOTAL .....	\$	...	64,803,294	...	70,757,000
Industrial Minerals					
Asbestos	ton	289,793	12,890,195	353,151	15,454,000
Feldspar	ton	14,058	129,293	12,452	103,000
Gypsum	ton	1,008,799	1,502,265	1,396,098	1,879,000
Magnesitic-dolomite .....	\$	...	420,261	...	462,000
Quartz (a)	ton	1,380,011	961,617	1,538,560	1,060,000
Salt	ton	440,045	1,912,913	423,272	2,303,000
Sodium sulphate	ton	63,009	553,307	71,679	626,000
Sulphur	ton	112,395	1,044,817	182,082	1,769,000
Talc and soapstone .....	\$	...	144,648	...	164,000
Other non-metallics (b) ..	\$	...	506,607	...	607,000
TOTAL .....	\$	...	20,066,123	...	24,427,000
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS					
Clay products (brick, tile, sewer pipe, etc.) .....	\$	...	4,536,084	...	4,370,000
Cement	brl.	5,519,102	8,241,350	5,554,920	8,668,000
Lime	ton	486,922	3,542,652	560,668	4,022,000
Stone, sand and gravel ...	\$	...	17,558,580	...	18,401,000
TOTAL .....	\$	...	33,878,666	...	35,461,000
GRAND TOTAL .....	\$	...	441,823,237	...	470,179,000

(x) Includes arsenic, bismuth, cadmium, cobalt, molybdenite, selenium, tellurium and titanium in 1938 and in addition, in 1939, manganese ore, mercury, tungsten ore and iron ore.

(a) Includes low grade silica sand used for fluxing purposes.

(b) Includes mica, nepheline-syenite, etc..

GOLD - Canadian gold mining continued to expand. Fields that were under development the last two or three years came into production in 1939 and 20 new mills began production. Gains in output were recorded in every province except Manitoba. Production from placer mines in the Yukon showed an increase. The production from the Con and the Negus mines in the Northwest Territories definitely put this area on the map as a commercial source of gold. Quebec production was some sixty-three thousand ounces higher than the previous year; the Porcupine camp in Ontario showed an increase while the Kirkland Lake area was slightly under that of last year. The total production of gold mines in other parts of Ontario and from other sources was also higher. In addition to gold produced by the auriferous quartz mines and placer diggings, a substantial amount is recovered annually from base metal mines. The output during the year from all sources passed the five million ounces mark for the first time, the figures being 5,045,766 fine ounces worth \$181,274,189, an increase of 6.8 per cent in quantity and 9 per cent in value.

The price of gold during the first eight months was slightly more than \$35 per fine ounce. After war was declared, the price rose in September to an average of \$37.208 as the result of the adverse exchange with the United States; more recently, in view of the premium of 10 per cent on United States funds, the price has been in the neighbourhood of \$38.50 per fine ounce. The average at which Canada's gold production was computed for the year was \$35.926 per fine ounce.

PRODUCTION OF GOLD IN CANADA for the CALENDAR YEAR 1938 and ESTIMATED PRODUCTION FOR 1939.

	1938		1939	
	Fine ounces	Value	Fine ounces	Value
		\$		\$
Nova Scotia	26,560	934,248	26,785	962,278
Quebec	881,263	30,998,426	943,069	33,880,697
Ontario -				
Porcupine	1,258,671	44,273,752	1,306,683	46,943,893
Kirkland Lake	1,030,829	36,259,410	1,025,960	36,858,639
Other	606,977	21,350,416	718,562	25,815,058
Total - Ontario	2,896,477	101,883,578	3,051,205	109,617,590
Manitoba	185,706	6,532,209	178,388	6,408,767
Saskatchewan	50,021	1,759,489	77,926	2,799,569
Alberta	305	10,728	272	9,772
British Columbia	605,617	21,302,578	627,664	22,549,457
Yukon and Northwest Territories .	79,168	2,784,734	140,457	5,046,059
CANADA	4,725,117	166,205,990	5,045,766	181,274,189

In 1939 the estimated average price of a troy ounce of fine gold, in Canadian funds, was \$35.926 and in 1938 the price was \$35.175.

SILVER - Silver production reached 22,775,374 fine ounces against 22,219,195 fine ounces in the preceding year. For many years the silver-cobalt camp of Ontario was the leading producer of silver but the bulk is now produced in association with base metals. British Columbia produces over 42 per cent of the total and the largest single producer in that province, and in fact in the whole of Canada, is the famous Sullivan mine where the white metal is recovered in association with lead and zinc. The next largest silver producing province is Ontario, the principal source there being the ores of the nickel-copper mines. The Yukon Territory contributed 16.7 per cent of the total; the mines of Manitoba and Saskatchewan, principally the Hudson's Bay Mining and Smelting Company, accounted for 9.2 per cent; Quebec, 5.1 per cent, and the remainder is made up of ores mined in Nova Scotia and the Northwest Territories.

The price of silver averaged, during the year, 40.563 cents per fine ounce. For the first six months of the year the price of silver in New York, expressed in Canadian funds, ranged from 43.087 cents in January to 42.044 cents in June. The July price averaged 34.94 cents, rose to 40.42 cents in September and dropped again to 38.225 cents in November.

COPPER - Copper output constituted a record, amounting to 606,705,278 pounds, an increase of 6 per cent over the high point established in 1938. Of the total, the nickel-copper mines of Ontario accounted for 54 per cent; Quebec, 19.4 per cent; Manitoba and Saskatchewan combined, 14.3 per cent, and British Columbia, 12 per cent. A small amount was also recovered from concentrates exported from Nova Scotia and from the pitchblende ores of the Northwest Territories. The price

of copper averaged 10.092 cents per pound (London prices converted to Canadian funds). Several large Canadian copper producers co-operated in arranging a contract with the United Kingdom Government to supply 210,000 tons of electrolytic copper at prices prevailing immediately prior to the outbreak of the war. Producers on the Pacific Coast are continuing to export their concentrates for treatment abroad.

LEAD - Lead production during the year just passed totalled 391,499,038 pounds valued at \$12,375,000, a decrease of 7 per cent in quantity and 12 per cent in value from the preceding year. Over 97 per cent of the total Canadian lead production comes from the mines of British Columbia, of which by far the largest producer is the Sullivan which is owned by the Consolidated Mining and Smelting Company of Canada, Limited, at Trail. Production is also recorded in ores exported from the Yukon Territory and Nova Scotia. The price of lead on the London market, transposed to Canadian funds, averaged 3.161 cents per pound during the year.

NICKEL - Nickel production was a record also at 227,089,730 pounds, exceeding slightly the previous high point established in 1937. Production includes the refined nickel made at Port Colborne by the International Nickel Company of Canada, Limited, and nickel in matte exported by this Company and by the Falconbridge Nickel Mines Ltd.. The International Nickel Company also manufacture nickel oxide and the nickel content of the oxide is also included with the total.

ZINC - More zinc was produced than in any previous year and output amounted to 394,955,897 pounds. This total was made up from the refined zinc made at Trail, British Columbia, at Flin Flon, Manitoba, and zinc in ores exported. The price of zinc for the year averaged 3.055 cents per pound, London prices converted to Canadian funds, and which gave a total value of production of \$12,066,000.

IRON - Perhaps the most significant thing in connection with the mining industry in Canada during the year just passed was the production of iron ore at Michipicoten. This is the first iron ore produced on a commercial scale in Canada since 1923. The ore is beneficiated by sintering before being shipped to the smelter. In addition, development work was carried on at Steep Rock Lake near Atikokan, 135 miles west of Port Arthur, for the production of high-grade iron ore. By the aid of magnetic and electrical surveys and diamond drilling through the ice, the existence of a large ore body was determined. It is the intention to do more exploration work this winter and at the present time a shaft is being sunk on the property. If preliminary indications are a guide, this is perhaps one of the most important mineral discoveries in Canada for some time.

Metallic antimony was produced at Trail for the first time for some years. Tungsten concentrates were shipped from the Hardscabble mine by the Columbia Tungsten Company Limited. Refined arsenic, cobalt metal and cobalt oxide were produced by the Deloro Smelting and Refining Company, Limited. Cadmium recovered as a by-product in the production of refined zinc at Trail and Flin Flon constituted a record.

Production of metals of the platinum group was about the same as last year; selenium and tellurium were produced in lesser quantities. Some mercury was produced in British Columbia and bismuth metal was made at Trail. Operations by the Eldorado Gold Mines Limited at its radium property on Great Bear Lake were carried on without interruption, pitchblende shipments being made to the company's refinery at Port Hope, Ontario. No figures of production are available for publication.

FUELS

COAL - Coal production in Canada rose 8 per cent to 15,507,000 tons from 14,294,718 tons in 1938. Output increased in all coal producing provinces except Saskatchewan and Manitoba. Nova Scotia's output rose 12 per cent; New Brunswick's, 31 per cent; Alberta's, 7 per cent, and British Columbia's, 5 per cent. Production from Saskatchewan mines declined 3.5 per cent.

During the ten months ending October, 1939, Canada imported 10,777,139 tons compared with 10,936,888 tons a year ago. Anthracite importations from the United States during the ten months increased 38 per cent to 2,303,484 tons. Great Britain supplied 903,633 tons as against 996,894 tons during the first ten months of 1938. Imports from Germany were 290,126 tons compared with 340,940 tons, and French Indo-

China supplied 43,537 tons. Imports of bituminous coal during the period consisted of 7,174,714 tons from the United States and 61,625 tons from Great Britain. A small shipment amounting to 20 tons was also received from Norway.

OUTPUT OF COAL IN CANADA, BY PROVINCES, DURING 1938 and 1939.

	1 9 3 8		1 9 3 9	
	Short tons	Value	Short tons	Value
		\$		\$
Nova Scotia	6,236,417	22,523,802	6,933,000	24,902,000
New Brunswick	342,238	1,133,346	447,000	1,491,000
Manitoba	2,016	5,660	900	2,500
Saskatchewan	1,022,166	1,380,416	986,000	1,303,000
Alberta -				
Bituminous	2,310,479	6,506,156	2,559,000	7,152,000
Sub-bituminous	488,915	1,269,131	518,000	1,342,000
Lignite	2,451,839	5,923,183	2,547,000	6,502,000
Total - Alberta	5,251,233	13,698,470	5,624,000	14,996,000
British Columbia	1,440,287	5,237,077	1,517,000	5,403,000
Yukon	361	3,400	...	...
CANADA	14,294,718	43,982,171	15,507,000	48,097,000

IMPORTS OF ANTHRACITE COAL INTO CANADA, BY MONTHS, FROM THE UNITED STATES, GREAT BRITAIN, GERMANY, and FRENCH INDO-CHINA(x) (Short tons)

	UNITED STATES		GREAT BRITAIN		GERMANY		FRENCH INDO-CHINA	
	1938	1939	1938	1939	1938	1939	1938	1939
January...	179,952	176,325	7,527	18,609	5,721	755	...	...
February ..	161,173	175,549	11,438	15,594	...	...	...	...
March	164,100	201,455	21,171	10,432	4,149	2,240	...	...
April	110,502	122,317	35,316	167	...	...	...	...
May	181,754	321,608	166,802	231,785	60,296	28,199	...	...
June	267,821	264,591	144,464	129,084	44,426	68,564	...	...
July	161,541	184,416	157,094	192,774	73,956	69,068	...	8,727
August ...	118,584	144,173	142,369	134,191	48,931	64,476	9,790	...
September.	143,456	361,917	184,299	76,161	56,716	52,890	...	8,838
October ..	177,352	351,133	126,414	94,836	46,745	3,934	18,066	25,972
November .	152,740		163,855		51,740		...	
December .	154,635		38,382		14,351		...	
TOTAL - Calendar								
Year	1,973,610		1,199,131		407,031		27,856	
TOTAL - TEN MONTHS ending								
OCTOBER..		2,302,484		903,633		290,126		43,537

(x) In addition, Canada imported 37,594 tons from Netherlands, 34,182 tons from Belgium, 19,645 tons from Morocco, and 14,952 tons from Russia in 1938.

IMPORTS OF BITUMINOUS COAL INTO CANADA, BY MONTHS, FROM THE UNITED STATES, GREAT BRITAIN, GERMANY AND OTHER COUNTRIES (Short tons)

	UNITED STATES		GREAT BRITAIN		GERMANY		OTHER COUNTRIES	
	1938	1939	1938	1939	1938	1939	1938	1939
January ..	334,187	263,353	5,668	8,107	...	...	417	20
February ..	261,221	228,973	6,920	9,954	...	...	...	...
March	301,082	314,934	6,855	9,063	...	...	...	...
April	394,060	138,710	5,327	3,256	...	...	...	...
May	923,008	202,956	7,239	8,492	...	...	...	...
June	1,145,741	907,309	2,889	2,103	8,114	...	...	...
July	1,046,084	1,128,733	8,312	7,150	8,112	...	...	...
August ...	1,116,122	1,276,820	12,318	8,556	2,022	...	...	...
September.	1,137,860	1,242,334	2,310	2,148	8,115	...	...	...
October ..	1,077,331	1,470,592	3,375	2,796	...	...	...	...
November .	1,269,546		3,920		7,895		...	
December .	637,778		824		...		...
TOTAL - Calendar								
Year	9,544,020		65,957		34,258		417	
TOTAL - Ten Months ending								
OCTOBER ..		7,174,714		61,625		...		20

NATURAL GAS - Natural gas production advanced 5 per cent over the preceding year to 35,187,600 thousand cubic feet; this constituted a record. Natural gas is produced in New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta and the Northwest Territories. The provinces of Alberta and Ontario are the largest producers, the former having an output double that of the latter.

CRUDE PETROLEUM - The production of crude petroleum and natural gasoline in Canada in 1939 set up a new high record of 7,743,000 barrels worth \$10,409,000; the previous high mark of 6,966,084 barrels valued at \$9,230,173 was reached in 1938. The Turner Valley of Alberta continued to be the focal point of interest in the petroleum industry in Canada. Twenty-six new wells were brought into production and an intensive programme of exploration was conducted. As the market for petroleum products from the Turner Valley is at present confined to the three Prairie Provinces the market is on a pro ration basis, the allowable production being governed by the demand.

NON-METALLIC MINERALS - OTHER THAN FUELS

ASBESTOS is the most important non-metallic mineral from point of view of value produced in Canada. The total value of asbestos produced in 1939 was more than half the total of all non-metallics, with the exception of fuels, combined. Output reached 353,151 tons valued at \$15,454,151. Practically all of Canada's asbestos is produced from the mines in the Eastern Townships of Quebec. One company in Ontario reported production during the period.

SALT is the next most important non-metallic mineral, the largest production being from the salt wells in Ontario where it is recovered as natural brine. The Malagash mine in Nova Scotia produced substantial quantities and production was also reported in Manitoba and Alberta. Of the total output, 45 per cent is used in the manufacture of chemicals and the remainder for domestic and other purposes. These heavy chemicals consist principally of sodium hydroxide, soda ash, hydrochloric acid and chlorine.

GYP SUM production was the highest ever recorded in Canada and totalled 1,396,098 tons valued at \$1,379,095. Nova Scotia is the largest gypsum producing province and a large part of the output from this source is exported. Production from New Brunswick, Ontario, Manitoba and British Columbia mines is made up principally into gypsum plaster, wallboard, and various other gypsum products.

Another non-metallic which has become of increasing importance is nepheline-syenite which is supplanting feldspar in the manufacture of glass and other ceramic products because of its relatively high alumina content.

SULPHUR production was also a record at 182,082 tons. The Canadian sulphur production consists of elemental sulphur produced at Trail, British Columbia, sulphur in pyrites shipped from various Canadian mines in British Columbia, Ontario and Quebec, and sulphur contained in sulphuric acid made from waste smelter gases at Trail, British Columbia, and Copper Cliff, Ontario.

Many other important non-metallic minerals produced in Canada include pyrites, diatomite, feldspar, fluorspar, graphite, iron oxides, magnesium sulphate, mica, mineral waters, phosphate, quartz, talc, sodium carbonate, and sodium sulphate.

STRUCTURAL MATERIALS

Improvement was indicated in the sales of structural materials which have minerals as their raw materials. Cement sales were slightly higher and the sales of lime increased 15 per cent. Clay products were off 3 per cent. Using this information as an indicator, it was estimated that the production of stone and sand and gravel would be slightly higher than last year. The total for the structural materials group was put at \$35,461,000, an increase of 5 per cent over 1938.

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