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THE  
GYPSUM INDUSTRY  
IN  
CANADA  
1935

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DEPARTMENT OF TRADE AND COMMERCE  
DOMINION BUREAU OF STATISTICS  
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OTTAWA - CANADA

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THE GYPSUM INDUSTRY, 1935.

I. PRIMARY PRODUCTION - THE GYPSUM MINING AND QUARRYING INDUSTRY

Finally revised figures for 1935, as issued by the Mining, Metallurgical and Chemical Branch of the Dominion Bureau of Statistics at Ottawa, indicate a distinct improvement in the Canadian gypsum mining industry; the tonnage of crude gypsum shipped and including the mineral calcined at quarry plants totalled 541,864 tons valued at \$932,203, as compared with an output of 461,237 tons worth \$863,776 in 1934. Increases in the value of production were realized in Nova Scotia, New Brunswick, Ontario, Manitoba and British Columbia, the five gypsum-producing provinces of the Dominion. The advance attained in the industry during 1935 continued into 1936 as was evidenced by a production of 265,309 tons valued at \$462,857 during the first six months of the current year against 174,970 tons at \$343,120 during the corresponding period of the preceding year.

During 1935 there were six firms with thirteen plants employed in the mining or quarrying of Canadian gypsum. Some of the gypsum mining companies in Canada confine their operations to the production and shipment of crude gypsum or anhydrite, while others, in addition to marketing various grades of crude gypsum, produce a calcine for sale or consumption in their own gypsum products plants.

The industry during 1935 provided employment for 467 persons and distributed \$367,007 in salaries and wages, of which 219 employees and \$163,907 were credited to the gypsum mining industry in the province of Nova Scotia.

Exports of crude gypsum in 1935 totalled 439,341 tons valued at \$508,338 as compared with 354,978 tons at \$413,961 in 1934; of the 1935 exports 374,317 tons valued at \$441,574 went to the United States while 65,024 tons at \$66,764 were consigned to the United Kingdom.

Gypsum deposits have been known in Nova Scotia since the time of the earliest settlers and shipments of the crude rock were made from the Windsor district to the United States a number of years before the Revolutionary War. After the war of 1812 these shipments assumed larger proportions and have been increasing almost ever since. The first recorded production in Ontario was in 1822 when a small amount was mined and crushed for fertilizer. During the first half of the nineteenth century the industry in Canada had a varied career, Nova Scotia and Ontario being the principal producers. Of the first discovery of gypsum in New Brunswick very little is known, evidence of very early work having been carried on in the district adjacent to the town of Hillsborough. The deposits in Manitoba were first operated in 1901 and have produced extensively ever since. The first production of gypsum in British Columbia was made in 1911 but it was not until 1926 that the industry was put on a sound basis in this province. Extensive deposits of gypsum are known in Northern Ontario and these deposits form a potential reserve which in years to come may be called upon to supply material to the northern parts of Ontario and Quebec. The deposits in Northern Alberta, although situated at a distance from markets are of good grade.

The Department of Public Works and Mines, Nova Scotia, reports on the gypsum mining industry in that province for 1935 as follows: "At Cheticamp, Inverness County, Atlantic Gypsum Products Ltd. is carrying on extensive gypsum operations. No. 1 quarry was enlarged by connecting two open-faces into one long face of gypsum. The mineral is removed in 10 ton cars equipped with tractor treads and hauled by caterpillar tractors to a chute for discharge into railway cars in the valley below; drilling in this quarry has encountered a 30 foot belt of anhydrite below the floor followed by over 40 feet of good gypsum. The same company conducted gypsum mining operations at Dingwall, Victoria County, where No. 1 grade is worked by hand selection and the balance or No. 2 grade is handled by 1/2 cubic yard power shovel; Atlantic Gypsum Products also operated at Walton on the shore of Minas Basin; here the rock removed from the new quarry is a good grade of soft white gypsum, shipments of which are made for calcining in New York; the anhydrite from Walton is shipped to Norfolk, Va. for use as a fertilizer and moisture retainer around peanut plants. The largest gypsum operation in the province is conducted by the Canadian Gypsum Co. Ltd. at Wentworth, Hants County. The quarries here are overlain with about eight feet of overburden which is stripped by draglines; the face, which is approximately sixty feet high is drilled in successive rows of eight foot holes from the bottom up; the displaced gypsum is loaded by power shovel into ten ton railway cars. The new Retreat quarry at Walton was opened by driving a 700 foot tunnel through anhydrite a raise was then driven to the surface. The Connecticut Adamant Gypsum Co. Ltd. operates a quarry at Cheverie, Hants Co.; a face 18 feet high has been opened for about 500 feet and a light overburden is stripped by gasoline shovel; production was steady during the year, the gypsum being shipped to New Haven, Conn. The Victoria Gypsum Co. commenced operations during the summer at Little Narrows, Victoria County. Work consisted in the erection of a crushing plant at the base of the quarry, installation of live storage and completion of a conveyor belt system; a diesel electric power plant of 500 h. P. is to be erected to supply power for the entire operation; two diesel shovels will be used in the quarry. The following companies did not operate in Nova Scotia during the past fiscal year: the North American Gypsum Company at Baddeck, Victoria County; The Nova Scotia Coal and Gypsum Co. at Mabou, Inverness County, and The Windsor Gypsum Co. at Newport Station, Hants County."

The only gypsum mining operations in New Brunswick during 1935 were those conducted at Hillsborough by the Canadian Gypsum Co. Ltd.; the mill of the company was in continuous operation throughout the year, while the quarry was in steady production from April until the end of December.

In Ontario mining and milling operations were steadily maintained by both Gypsum, Lime and Alabastine, Canada, Ltd., and the Canadian Gypsum Co. Ltd. The first-named company obtains its crude gypsum at Caledonia and manufactures an extensive range of gypsum products. The Canadian Gypsum Co. Ltd. conducts mining operations at Hagersville and in addition to shipping crude gypsum is also a producer of various building materials.

The mining and calcining of gypsum was conducted throughout the year in Manitoba by Gypsum, Lime and Alabastine, Canada, Ltd. and Western Gypsum Products Ltd.; the former company obtains its supply of crude mineral from deposits located at Gypsumville, while Western Gypsum Products conduct quarrying operations at Amaranth. Both of these companies utilize calcined gypsum in the production of building materials. In British Columbia the only company engaged in the mining of gypsum was Gypsum, Lime and Alabastine, Canada, Ltd. This company's deposits are located at Falkland where continuous operations were maintained during 1935. Crude gypsum quarried at Falkland is shipped for processing to the company's plant situated at Port Mann.

Recent results in the reduction of sulphur dioxide by coke in the Pilot Plant of Imperial Chemical Industries at Billingham, England, are of interest here; an article appearing in Canadian Chemistry and Metallurgy states -- "The process has other possibilities beside the production of sulphur from metallurgical gases. In the first place.

sulphur from anhydrite becomes a practical possibility, as the I. G. and I. C. I. have both produced sulphur dioxide from anhydrite by heating with clay and carbon----" A new type of heat insulating building material was reported in the United States during 1935; this material consists of ordinary 5/8 inch gypsum board, one surface of which is covered with a thin sheet of aluminium.

Table 1 - PRINCIPAL STATISTICS OF THE GYPSUM MINING INDUSTRY IN CANADA, 1934 and 1935.

	Nova Scotia	New Brunswick, Ontario, Manitoba, British Columbia	TOTAL CANADA
Number of firms - 1934 .....	5	3	8
1935 .....	4	2	6
Capital employed - 1934 .....	\$ 2,935,705	4,416,859	7,352,562
1935 .....	\$ 3,129,545	2,607,569	5,737,114
Number of employees - On salary -			
1934 .....	16	23	39
1935 .....	20	34	54
- On wages -			
1934 .....	198	191	389
1935 .....	199	214	413
Salaries and wages- Salaries -			
1934 .....	\$ 28,906	30,628	59,534
1935 .....	\$ 33,560	59,790	93,350
Wages -			
1934 .....	\$ 136,733	128,464	265,197
1935 .....	\$ 130,347	143,310	273,657
Fuel and electricity - Cost			
1934 .....	\$ 44,430	74,130	118,560
1935 .....	\$ 45,184	76,430	121,614
Value of process supplies used -			
1934 .....	Data not available		
1935 .....	\$ 23,973	41,440	65,413
Selling value of products -			
1934 .....	\$ 488,044	375,732	863,776
1935 .....	\$ 523,216	408,987	932,203

Table 2 - FUEL AND ELECTRICITY USED IN THE GYPSUM MINING INDUSTRY, 1934 and 1935.

	Unit of measure	1934		1935	
		Quantity	Cost at works \$	Quantity	Cost at works \$
Coal, bituminous - Imported .....	short ton	878	5,486	900	5,799
Canadian .....	short ton	4,223	23,801	4,182	24,566
Coal, lignite - Canadian .....	short ton	687	2,404	44	407
Coke .....	short ton	180	1,863	289	2,564
Gasoline .....	Imp. gal.	59,979	19,822	57,985	15,140
Kerosene .....	Imp. gal.	400	95	470	104
Fuel oil and diesel oil .....	Imp. gal.	76,252	5,471	103,913	6,017
Wood .....	cord	537	2,148	2,118	8,137
Gas - Manufactured .....	M cu. ft.	192	1,098	...	...
Natural .....	M cu. ft.	17,197	6,883	20,748	8,302
Other fuel .....	xx		59		
Electricity purchased .....	K. W. H.	2,912,955	49,430	2,656,014	50,578
TOTAL .....	xxx		118,560		121,614
Electricity generated for own use.	K. W. H.	907,492	...	494,657	...

Table 3 - NUMBER OF WAGE-EARNERS ON PAYROLL OR TIME RECORD ON THE 15th OF EACH MONTH OR NEAREST REPRESENTATIVE DATE, 1933, 1934 and 1935.

Month	1933		1934		1935	
	MINE	MILL.	MINE	MILL.	MINE	MILL.
January .....	89	101	110	92	51	121
February .....	86	92	78	124	37	145
March .....	81	86	110	154	56	159
April .....	164	116	116	134	140	225
May .....	224	120	270	153	267	205
June .....	279	171	318	180	262	201
July .....	393	204	353	150	324	237
August .....	495	180	358	181	343	218
September .....	345	150	388	184	369	201
October .....	367	173	326	147	382	199
November .....	333	119	245	149	275	191
December .....	209	112	213	112	185	155

Table 4 - NUMBER OF WAGE-EARNERS IN MONTH OF HIGHEST EMPLOYMENT DURING 1935 WITH REGULAR HOURS WORKED PER WEEK

Hours per week	Number	Hours per week	Number
40 or less .....	81	51 - 53 .....	24
41 - 43 .....	10	54 .....	33
44 .....	35	55 .....	35
45 - 47 .....	12	56 - 59 .....	19
48 .....	257	60 .....	82
49 - 50 .....	19	60+ .....	12

Table 5 - POWER EQUIPMENT INSTALLATION, 1935.

Description	Ordinarily in use		In reserve or idle	
	No. of units	Total h. p. (manufacturers' rating)	No. of units	Total h. p. (manufacturers' rating)
1. Steam engines and steam turbines	5	778	5	298
2. Diesel engines .....	3	525	...	...
3. Gasoline, gas and oil engines, other than diesel engines .....	39	2,002	5	148
4. Hydraulic turbines or water wheels .....	...	...	...	...
5. Electric motors:-- (a) Operated by purchased power .....	227	6,229	25	535
TOTAL (1), (2), (3), (4), and (5a) .....	274	9,534	35	981
(b) Operated by power generated by the establishment .....	22	660	9	187
Boilers .....	7	810	4	455

Table 6 - PRODUCTION IN CANADA, IMPORTS AND EXPORTS OF GYPSUM, 1934 and 1935.

	1	9	3	4	1	9	3	5
	Quantity	Value		Quantity	Value		Quantity	Value
	Tons	£		Tons	£		Tons	£
<b>SHIPMENTS BY GRADES</b>								
Crude (1) - Lump or mine run .....	53,165	41,475		38,403	54,122			
Crushed .....	369,696	473,558		437,699	488,186			
Fine ground .....	652	3,494		369	2,893			
Calcined gypsum (2) .....	57,724	345,249		65,393	387,002			
TOTAL .....	461,237	863,776		541,864	932,203			
<b>SHIPMENTS BY PROVINCES</b>								
Nova Scotia .....	378,287	488,044		454,703	523,216			
New Brunswick .....	50,398	104,709		30,796	105,960			
Ontario .....	53,234	141,389		38,247	164,807			
Manitoba .....	9,657	81,553		10,500	85,885			
British Columbia .....	9,661	48,061		7,618	52,335			
TOTAL .....	461,237	863,776		541,864	932,203			
Total gypsum mined and quarried (1) .....	493,295	...		562,471	...			
Total gypsum calcined (2) .....	74,356	...		82,569	...			
<b>IMPORTS</b>								
Gypsum, crude (sulphate of lime) .....	18	320		17	196			
Gypsum ground, not calcined .....	173	4,933		262	7,846			
Plaster of Paris or gypsum, calcined and prepared wall plaster .....	551	15,890		1,727	27,676			
TOTAL .....	742	21,148		2,006	35,718			
<b>EXPORTS</b>								
Gypsum or plaster, crude .....	354,978	413,961		439,341	508,338			
Plaster of Paris, ground, and prepared wall plaster .....	712	16,078		717	38,074			
TOTAL .....	355,690	430,039		440,058	546,412			

Table 7 - PRODUCTION IN CANADA, IMPORTS AND EXPORTS OF GYPSUM, JANUARY 1 to JUNE 30, 1935 and 1936.

	1	9	3	5	1	9	3	6
	Quantity	Value		Quantity	Value		Quantity	Value
	Tons	£		Tons	£		Tons	£
<b>PRODUCTION</b>								
Crude (1) Lump or mine run .....	31,396	35,715		26,798	30,075			
Crushed .....	113,123	131,011		204,069	221,247			
Fine ground .....	174	1,078		385	2,591			
Calcined (2) .....	30,277	175,316		34,057	208,942			
TOTAL .....	174,970	343,120		265,309	462,857			
Crude gypsum mined (1) .....	179,153	...		302,514(x)	...			
<b>IMPORTS</b>								
Gypsum, crude (sulphate of lime) .....	13	27		4	135			
Ground gypsum, not calcined .....	80	1,976		169	5,336			
Plaster of Paris, or gypsum calcined and prepared wall plaster .....	639	11,652		339	8,737			
TOTAL .....	...	13,755		...	14,208			
<b>EXPORTS</b>								
Gypsum or plaster, crude .....	91,357	104,294		108,618	122,829			
Plaster of Paris, ground, and prepared wall plaster .....	339	13,468		286	7,080			
TOTAL .....	...	117,762		...	129,909			

(x) Partly estimated.

(1) Includes some anhydrite quarried in Nova Scotia.

(2) Does not include gypsum calcined in manufacturers' plants at Montreal and Calgary.

Table 8 - PRODUCTION (SALES) OF GYPSUM IN CANADA, 1926 - 1935.

Year	Tons	Value \$
1926	883,728	2,770,813
1927	1,063,117	3,251,015
1928	1,246,368	3,743,648
1929	1,211,689	3,345,696
1930	1,070,968	2,818,788
1931	863,752	2,111,517
1932	438,629	1,080,379
1933	382,736	675,822
1934	461,237	863,776
1935	541,864	932,203

Table 9 - CONSUMPTION OF GYPSUM IN CANADIAN CEMENT INDUSTRY, 1930 - 1935.

Year	Tons
1930	74,227
1931	56,677
1932	27,537
1933	13,319
1934	19,172
1935	21,611

Table 10 - WORLD PRODUCTION OF GYPSUM, 1933 - 1935.

(Taken from the Imperial Institute's publication "The Mineral Industry of the British Empire and Foreign Countries.") (Long tons)

Producing country	1933	1934	1935
<b>BRITISH EMPIRE -</b>			
United Kingdom	985,055	961,581	981,913
Union of South Africa	11,622	22,929	21,249
Canada	330,974	440,442	483,807
Cyprus (estimated)	14,000	14,000	16,000
Palestine	2,561	3,377	4,471
India	33,142	46,757	45,318
Australia	60,572	89,654	118,136
<b>TOTAL</b>	<b>1,438,000</b>	<b>1,572,000</b>	<b>1,671,000</b>
<b>FOREIGN COUNTRIES -</b>			
Austria	44,000	33,000	38,000
Estonia	5,580	4,828	6,139
France	1,626,253	1,404,413	(a)
Germany	555,000	851,000	(a)
Greece (b)	7,070	9,050	(a)
Italy (including alabaster)	525,395	451,729	463,706

(a) Information not available.

(b) Converted from cubic metres at the rate of 1 cubic metre = 2 long tons.



Table 10 - WORLD PRODUCTION OF GYPSUM, 1933 - 1935. (concluded)  
 (Taken from the Imperial Institute's publication "The Mineral Industry of the British Empire and Foreign Countries") (Long tons)

Producing country	1933	1934	1935
<u>FOREIGN COUNTRIES - concluded</u>			
Latvia (exports) .....	48,209	80,524	97,372
Luxemburg .....	12,643	10,520	29,008
Roumania (b) .....	56,192	46,430	(a)
Spain (c) .....	1,070,509	1,042,135	(a)
Sweden .....	48	119	(a)
Yugoslavia .....	927	(a)	(a)
Algeria .....	82,083	80,026	54,476
Egypt (estimated) .....	130,000	130,000	130,000
Tunis (estimated) .....	25,000	25,000	25,000
Mexico .....	(a)	(a)	59,944
United States .....	1,192,136	1,371,580	1,729,900
Argentina .....	34,255	43,445	(a)
Brazil (estimated) .....	2,000	2,000	2,000
Chile .....	14,964	10,729	(a)
Peru .....	6,889	8,018	(a)
China .....	63,009	66,650	(a)
New Caledonia .....	11,380	13,400	(a)
TOTAL / .....	5,570,000	5,740,000	(a)
WORLD'S TOTAL / .....	7,010,000	7,320,000	(a)

/ Gypsum is also produced in Poland, Switzerland, U. S. S. R. (Russia), French Morocco, Cuba and Japan.

(a) Information not available.

(b) Converted from cubic metres at the rate of 1 cubic metre = 2 long tons.

(c) Including 364,768 cu. metres of gypsum converted as per (b) for 1934.

LIST OF OPERATORS IN CANADIAN GYPSUM MINING INDUSTRY, 1935.

<u>Name of Firm</u>	<u>Head Office Address</u>	<u>Quarry Location</u>
<u>NOVA SCOTIA</u> -		
Atlantic Gypsum Products Company	40 Central St., Boston, Mass., U. S. A.	Aspy Bay, Cheti- camp and Walton
Canadian Gypsum Co. Ltd.	1221 Bay St., Toronto, Ont.	Wentworth
The Connecticut Adamant Plaster Co.	10 River St., New Haven, Conn., U. S. A.	Cheverie
The Nova Scotia Coal & Gypsum Co. Ltd.	Box 13, Mabou	Mabou Harbour
North American Gypsum Co.	96 Curtis Ave., Rutland, Vt., U. S. A.	Baddeck Bay
Windsor Gypsum Co. (x)	Box 727, Newburgh, N. Y., U. S. A.	Newport Station.
Windsor Plaster Co. Ltd.	Windsor	Brooklyn, Hants C
Victoria Gypsum Co. Ltd. (x)	Little Narrows	Cape Breton
<u>NEW BRUNSWICK</u> -		
Canadian Gypsum Co. Ltd.	1221 Bay St., Toronto, Ont.	Hillsborough
Thompson, F. M. (x)	Hillsborough	Peticodiac Co.
Fraser, Donald (x)	Plaster Rock	Plaster Rock
<u>ONTARIO</u> -		
Canadian Gypsum Co. Ltd.	1221 Bay St., Toronto	Hagersville
Gypsum, Lime and Alabastine, Canada, Ltd.	Paris	Caledonia
<u>MANITOBA</u> -		
Gypsum, Lime and Alabastine, Canada, Ltd.	Paris, Ontario	Gypsumville
Western Gypsum Products Ltd.	503 McArthur Bldg., Winnipeg	Amaranth
<u>BRITISH COLUMBIA</u> -		
Gypsum, Lime and Alabastine, Canada, Ltd.	Paris, Ontario	Falkland

(x) Active, but not producing.

## II - SECONDARY PRODUCTION - THE GYPSUM PRODUCTS INDUSTRY

Only 3 companies manufactured gypsum products in 1935 but 8 separate factories were in operation. Production was valued at \$1,418,793 in 1935 compared with \$1,477,646 in 1934 and included wallboard, tile, hardwall plaster, roofing slabs, etc. Detailed statistics of production are not published because of the small number of companies in this line of business.

The average number of employees in 1935 was 173, to whom \$136,297 were paid in salaries and wages. Capital employed was reported at \$2,685,222. Fuel and power cost \$60,968.

Table 11 - PRINCIPAL STATISTICS OF THE GYPSUM PRODUCTS INDUSTRY, 1934 and 1935.

	1934	1935
Number of establishments .....	8	8
Capital employed .....	\$ 2,549,037	2,685,222
Number of employees .....	173	173
Salaries and wages .....	\$ 144,923	136,297
Cost of fuel and electricity .....	\$ 60,826	60,968
Cost of materials at works .....	\$ 668,222	581,945
Selling value of products at works .....	\$ 1,477,646	1,418,793

MANUFACTURERS OF GYPSUM PRODUCTS, 1935.

- Canadian Gypsum Company Limited - Head Office - 1221 Bay St., Toronto, Ont.  
 Plants - Hillsborough, N. B., and Hagersville, Ont.
- Gypsum, Lime and Alabastine, Canada, Ltd. - Head Office - Paris, Ont.  
 Plants - Montreal, P. Q.; Caledonia, Ont.  
 Winnipeg, Man. East Calgary, Alta.  
 and New Westminster, B. C.
- Western Gypsum Products Ltd. - Head Office - 503 McArthur Bldg., Winnipeg, Man.  
 Plant at Winnipeg, Man.





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