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GYPSUM 1932.

The Mining, Metallurgical and Chemical Branch of the Dominion Bureau of Statistics at Ottawa reports that the production of gypsum from Canadian deposits during 1932 amounted to 438,629 tons valued at \$1.080,379 as compared with 863,752 tons worth \$2.111,51.7 in 1931, a decrease of 49.2 per cent in quantity and 48.2 per cent in value. Gypsum quartied during the year totalled 439,695 tons of which 80,755 tons or 18.4 per cent was calcined in Canada.

Gypsum is mined or quarried in Nova Scotia, New Brunswick, Ontario, Manitoba and British Columbia. There are about 52 distinct areas in Nova Scotia containing gypsum; these cover approximately 625 square miles. Anhydrite, the anhydrous calcium sulphate, also occurs in the Maritime Provinces, in Ontario, in Manitoba, Alberta and also in British Columbia. At present a considerable tonnage of anhydrite is exported from Nova Scotia to the Southern States where it is used principally as a fertilizer for the peanut crop. The statistics relating to Canadian anhydrite production are combined with those for gypsum

Anhydrite has been used in large tonnages in Europe and the United States for fertilizer purposes, some consumers preferring it in place of gypsum, it being found especially satisfactory for leguminous forage crops such as clovers, alfalfas, etc., and also for peanuts. The use of anhydrite for the manufacture of ammonium sulphate has been successfully adopted both in Germany and England.

NOVA SCOTIA -- In Nova Scotia the Connecticut Adamant Plaster Company quarried crude gypsum at Cheverie during 1932, the output of this company being exported to its own plant located at New Haven, Conn. Shipments were made by the Atlantic Gypsum Products Co.; this company shipped from both its Walton and Cheticamp deposits. At Newport Station, Hants Co., the Windsor Gypsum Co. quarried and shipped crude gypsum. Gypsum was also quarried by the Windsor Plaster Co. at its Brooklyn quarry and calcined at the company's mill at Windsor. The Nova Scotia Coal and Gypsum Co. made shipments of crushed gypsum from Mabou Harbour and at Baddeck Bay, Victoria county, the North American Gypsum Co. produced and shipped the mineral in crushed form. At Wentworth in Hants county the property of the Canadian Gypsum Company was in continuous operation throughout the year; shipments of both crude anhydrite and gypsum were made by the company

NEW BRUNSWICK In New Brunswick shipments of crude gypsum were made from deposits located at Plaster Rock. Petitodiae and Hillsborough. At the last named place the Canadian Gypsum Company also produced calcined gypsum for the manufacture of gypsum products. The following information relating to the operations of this company is contained in the 1932 annual report of the Department of Lands and Mines of the Province of New Brunswick; "This is the largest plant of its kind in Canada and has for many years supplied Eastern Canada with calcined gypsum products. These include plaster in its various forms of hardwall plaster, plaster of Paris, dental plaster, wall board and gypsum tile. The making of wall board was begun about two years ago and has added materially to the business of the mill. The manufacture of gypsum tile including the hollow form for partitions and solid tile for roofs was begun in 1932

In former years shipments of the manufactured product went to Australia and New Zealand but this trade was lost in 1932 owing to adverse exchange. The English market for gypsum products is, however, opening up. The company report that as great a number of men as possible were employed.

ONTARIO — At Caledonia, the Gypsum, Lime and Alabastine, Canada, Ltd., conducted continuous underground and milling operations throughout 1932, shipments of both crude and calcined gypsum being made. Mining and milling operations were also conducted by the same company at Lythmore. Gypsum, Lime and Alabastine manufacture an extensive line of gypsum products some of which are: hardwall plaster, wood fibre plaster, coloured finishing plaster, beam and column fireproofing, roof and partition tile, building insulation and stucco.

The Canadian Gypsum Co. Ltd., carried on mining and milling operations at Hagersville during the twelve months of 1932. Crude gypsum shipments were made and calcined gypsum utilized for the manufacture of various gypsum products.

MANITOBA .Gypsum, Lime and Alabastine, Canada, Ltd., report both quarry and mill operations in Manitoba for the twelve months of 1932. The quarry of this company is located at Gypsumville and the mill at Winnipeg. Shipments of crude gypsum were made by the company and calcined gypsum utilized for the manufacture of tile, wall board, etc.

Western Gypsum Products Ltd. carried on both surface and underground operations at Amaranth. Crude lump and crushed gypsum was shipped and calcined gypsum consumed for the manufacture of wall board.

BRITISH COLUMBIA - At Falkland, the Gypsum, Lime and Alabastine, Canada, Ltd., operated throughout 1932. Crude gypsum was quarried and shipped; the company also employed calcined gypsum in the manufacture of gypsum products. No shipments of gypsum or gypsite were reported from the Clinton Mining Division; gypsum mining operations were previously recorded in this district.

A bulletin on the gypsum industry issued by the United States Bureau of Mines contains the following information:

"New building construction of all kinds was at unprecedentedly low levels during 1932 and the total demand for gypsum products declined. There were practically no developments of major importance in the domestic gypsum products industry during the year. Most producers limited their efforts to retaining the present markets for standard gypsum products and only a few new products were reported, some of which were: a regular gypsum wall board, one side of which is covered with aluminium foil and is used for heat insulation; a wood veneered wall board and a lithographed wall board, the latter resembling wood grain. Another product introduced in the United States during the year which may play an important role in lowering the costs of certain types of construction is a wall board for exterior use.

According to Trade Notices, the International Gypsum Co. Ltd. was incorporated in St. Johns, Newfoundland, during the latter part of the year. Plans have been formulated for mining and crushing crude gypsum which will be exported to plaster mills on the Atlantic coast.

H. W. Paul in "Contract Record and Engineering Neview" states that gypsum as a roof deck material has been in use for a decade and a half and in that time has so well established itself because of fundamental advantages peculiar to gypsum that

there are now more than 100,000,000 square feet of gypsum roof in use. There are the general types of gypsum roof, poured and pre-cast. The poured deck typically consists of gypsum slab reinforced with an electrically welded, galvanized steel fabric supported on sub-purlins. Gypsum fibre concrete is the most widely used material for pouring the slab. It consists of gypsum stucco and water and not to exceed 12½ lb. of fibre (usually wood planer shavings) to 87½ lb. of calcined gypsum. A slab of this character weighs only 55 lb. to the cubic foot. The other type of roof, made of precast gypsum units, provides virtually the same characteristics in a roof deck as a poured slab and has some construction advantages that make it better suited to certain types of work. Standard precast units are 12 x 30 inches. However, larger units that accomodate a greater purlin span are available. Gypsum derives its popularity as a roof deck material from three basic advantages; light weight, which means a saving in supporting steel; fire proofness, and insulation value.

PRODUCTION IN CANADA, IMPORTS AND EXPORTS OF GYPSUM, 1932.

	Quantity Tons	Value
SHIPMENTS BY GRADES -	TONS	₩
Crude(1) - Lump or mine run	98,672	114,504
Crushed	268,645	514.53 6
Fine ground	1.826	10,459
Calcined gypsum (2)	69,486	641,080
TOTAL	438,629	1,080,379
SHIPMENTS BY PROVINCES -		
Nova Scotia	341,508	398,861
New Brunswick	38,019	297,520
Untario	3 5,655	186,175
Manitoba	12,719	115,739
British Columbia	10,728	84,084
TOTAL	438,629	1,080,379
Total gypsum mined and quarried	439,695	0 • •
Total gypsum calcined	80,755	n + 4
IMPORTS -		
Gypsum crude (sulphate of lime)	55	1,581
Plaster of Paris, or gypsum ground, not		2,002
calcined	171	3,434
Plaster of Paris or gypsum calcined and		
prepared wall plaster	1,384	-51,165
TOTAL	1,610	3 5,980
EXPORTS -		
Gypsum or plaster, crude	372,314	470,247
Plaster of Paris, ground, and prepared wall	0,011	210,621
plaster	799	15,979
TOTAL	373,113	484,226

(1) Includes some anhydrite quarried in Nova Scotia.

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

PRINCIPAL STATISTICS OF THE GYPSUM MINING INDUSTRY IN CANADA, 1931 and 1932.

	1931	1932
Number of firms	15	15
Capital employed	7,941,082	8,054,148
Number of employees - On salary	64	46
On wages handanananananananananan	612	432
Total accommend	676	478
Salaries and wages - Salaries\$	131.887	90.419
Wages\$	524,703	278,066
Total\$	656,590	368,484
Cost of fuel and electricity\$	1.88, 524	122,926
Selling value of products	2,111,517	1,080,379

FUEL AND ELECTRICITY USED IN THE GYPS	M MINING 1	INDUSTRY,	1931 and 193	52.
	1	9 3 1	1	9 3 2
Unit of		Cost	at	Cost at
measure	Quanti	ity wor	ks Quantit	ty works
		\$		\$
Coal, bituminous Imported short t		,507 20,	524 1.0	080 6,225
Canadian abort		,874 50,	522 4.1	341 22 115
Goal, lignite - Canadian		450 4,	060	557 2,678
Coke short t	con	347 3,	81.2	287 2,600
Gasoline Imp. gs	1. 146,	,820 33,	41.9 58_1	152 13,931
Kerosene Imp. ga	1 3,	610	736	542 121
Fuel oil and diesel oil Imp. gs	1. 244.	291 17,	275 189,4	105 10,110
Wood cords		4	24	27 1.62
Gas, natural M cueft	6,	210 2,	567 4,0	084 1,674
Klectricity purchased K. W. H.	3,760,	429 55,	585 4,012,5	65 63,310
TOTAL		1 88,	524	122,926

(Taken from the report by the Imperial Institute "The Mineral Industry of the British Empire and Foreign Countries")

(Long tons)

A STATE OF THE PARTY OF THE PAR	P agrid		
Producing country	1.929	1930	1931
BRITISH EWPIRE			
United Kingdom	967,491	838,208	754,895
Union of South Africa	16,973	16,828	14,613
Canada	1,094,400	982,186	788,286
Cyprus	(e)12,556	12,000	1.5,300
Palestine	1,475	3.635	483
India	52, 726	56,316	55,632
Australia	1.24,515	(c) 45, 276	(c) 26,167
TOTAL and so and	2,270,000	(c) 1,950,000	(c)1,650,000
FUREIGN COUNTRIES			
Austria (d)	42,000 9,835	3 6,760 1,9 3 2	(a) 7,727
Estonia			
France	2,529,420	3,03.5,323	(a)
Germany	EO 047	41 374	00 797
Davonio	59 241	41.114	26_737

396

Prussia (alabaster)

122

287

TORLD PRODUCTION OF GYPSUM, 1929, 1930 and 1931. concluded.

(Taken from the report by the Imperial Institute "The Mineral Industry of the British Empire and Foreign Countries)

(Long tons)

The second secon	1929	1930	1931
FOREIGN COUNTRIES concluded			
Creace	0.00	1,343	(a)
Italy (including alabaster)	658,678	674.703	576,592
Jugoslavia (Serbia only)	1,585	1,440	(a)
Latvia (exports)	26,629	36,077	32,014
Luxemburg	7,092	10,451	9,117
Roumania (b)	75,414	50,442	(a)
Spain (b)	960,250	1,557,380	(a)
Sweden	120	133	(a)
Algeria (including alabaster)	105,300	164,100	(a)
Belgian Congo	2 9 9	0.00	1,000
Egypt (estimated)	130,000	130,000	130,000
Tunis	19,231	(a)	(a)
United States	4,478,689	3,099,458	2,284,857
Cuba	25,000	26,800	(a)
Argentina	36,051.	48,667	(a)
Chile	15,190	16,907	12,965
Peru	1.9,830	(a)	(a)
China	50,700	61,100	70,400
New Caledonia	7,004	5,082	(a)
TOTAL	(f)9,200,000	(f)9,000,000	(a)
WORLD'S TOTAL	(f)11,500,000	(f)11,000,000	(a)
NOME ANA OCC lave tone of comment work			

NOTE 404,068 long tons of gypsum were recorded as produced in Russia during year ended September, 1928 - later figures are not available.

(a) Information not available

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

(c) Excluding production of Victoria, which is not available, but amounted to 13,195 long tons during 1929.

(d) Estimated by Bundesministerium fur Handel und Verkehr,

(e) Exports

(f) Excluding the production of Russia.

Data for 1952 not yet available.

The statistics as thus given for Canada cover the primary production of gypsum; these include data for gypsum quarries and for calcining and plaster works when operated in connection with the quarries. In addition there are the secondary or manufacturing plants which include the works making wallboard, blocks, tile, etc.; some of these works purchase crude gypsum from the primary producers and calcine it before using it to manufacture the gypsum products.

In 1932 there were 8 manufacturing plants as follows: a plant at Montreal, P.Q. brought crude gypsum from Nova Scotia, calcined it, and produced gypsum wallboard and wall plasters. At Caledonia, Ontario, another manufacturing works purchased calcined gypsum and made gypsum blocks, wallboard, tile, accoustical plasters and insulex. Gypsum wall plasters were manufactured at Hagersville, Ontario, by the Canadian Gypsum Co. Ltd., who, during 1932, erected a new plant at Hillsborough, New Brunswick. At Winnipeg, 2 plants utilized calcined gypsum, obtained from the primary

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producers in that province, in the manufacture of wallboard and tile; Keene's cement, a hard finish plaster, also was made in one of these works.

At Calgary, Alberta, gypsum wall plasters and tile were manufactured from crude rock obtained from quarries in British Columbia or Manitoba and at Port Mann, B.C., a plant using calcined gypsum obtained from the Falkland quarries, produced gypsum blocks, wall board, tile and dry insulex.

These 8 establishments employed a capital of \$2,246,738 and provided employment for an average of 232 employees with salaries and wages amounting to \$173,995. The value of products made during the year was reported at \$1,222,004.

DIRECTORY

OPERATORS IN THE CANADIAN GYPSUM MINING INDUSTRY, 1932.

Name of Company	Head Office Address	location of mine
NOVA SCOTIA -		or quarry
Atlantic Gypsum Products Co.	40 Central St., Boston, Mass., U.S.A.	Cheticamp and Walton
Canadian Gypsum Co. Ltd. Connecticut Adamant Plaster Co.	1221 Bay St., Toronto, Ont. 10 River St., New Haven, Conn.,	Wentworth
North American Gypsim Co.	U.S.A.	Cheverie
Mova Scotia Coal & Gypsum Co.Ltd.	96 Curtis Ave., Rutland, Vt., U.S.A. Box 13, Mabou, N.S.	Baddeck Bay Mabou Harbour
Windsor Gypsum Co. Windsor Plaster Co.	Box 727, Newburgh, N.Y., U.S.A. O'Brien St., Windsor, N.S.	Newport Station Newport and Brooklyn
NEW BRUNSWICK		
Canadian Gypsum Co. Ltd. Fraser, Donald	1221 Bay St., Toronto, Ont. Plaster Rock, N.B.	Hillsborough
Thompson, F. M.	Hillshorough, N.B.	Plaster Rock Petitcodiac
ONTARIO -	7007 D. C	
Canadian Gypsum Co. Ltd. Gypsum, Lime & Alabastine,	1221 Bay St., Toronto, Ont.	Hagersville
Canada, Ltd.	Paris, Ont.	Lythmore and Caledonia
MANITOBA -		
Gypsum, Lime & Alabastine, Ganada, Ltd	Paris, Ont	Gypsumville
Western Cypsum Freducts Ltd.	505 McArthur Eldg., Winnipeg, Man.	Amarenth
BEITTSH COLOMBIA -		
Gypsum, Lime & Alabastine, Canada, Ltd.	Paris, Ont.	Falkland