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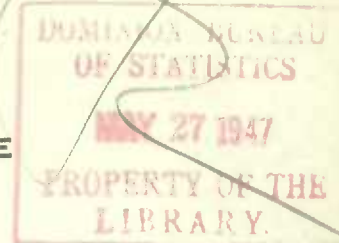
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Minister of Trade and Commerce

CANADA

DEPARTMENT OF TRADE AND COMMERCE

DOMINION BUREAU OF STATISTICS



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+++ *Census of Industry* +++

MINING, METALLURGICAL & CHEMICAL STATISTICS

THE
FELDSPAR & QUARTZ MINING INDUSTRY
IN
CANADA
1945

(including data relating to Nepheline-Syenite)



OTTAWA
1947

Price 25 cents

Office of the Secretary of the
Department of the Interior

WASHINGTON, D.C.

THE SECRETARY OF THE

DEPARTMENT OF THE INTERIOR

TO THE

COMMISSIONER OF THE

LANDS

IN REPLY TO A LETTER OF THE

COMMISSIONER

OF THE

LANDS

THE FELDSPAR AND QUARTZ MINING INDUSTRY, 1945

Owing to the very close physical association of these minerals in many Canadian deposits (pegmatites), it has been found difficult for some operators to make a separation of all data pertaining to the mining of each individual mineral and, for this reason, the general statistics relating to capital, employment, fuel and electricity, etc., have been combined in this report. Since 1936, corresponding statistics relating to the production of nepheline syenite have been included with those pertaining to the commercial production of feldspar and quartz.

Production in 1945, as measured by the sales of feldspar, nepheline syenite and quartz, was valued at \$2,093,880, which was slightly less than the corresponding total of \$2,104,030 for 1944. Feldspar production came entirely from Ontario and Quebec; all of the nepheline syenite came from deposits in Ontario, and quartz (silica) in various forms was produced in Nova Scotia, Quebec, Ontario and Saskatchewan.

In 1945 there were 31 active firms in the industry, but only 27 of these properties made shipments during the year. The industry employed 483 persons to whom \$767,517 was paid in salaries and wages. The cost of fuel, electricity, process supplies, containers and freight amounted to \$467,290 which, if deducted from the gross output value, yields a net value of \$1,626,590 compared with \$1,636,093 in 1944.

Table 1 - PRINCIPAL STATISTICS OF THE FELDSPAR AND QUARTZ MINING INDUSTRY(*), 1939-1945

Year	Number of shipping mines	Average number of employees	Total salaries and wages	Cost of purchased fuel and electricity at works	Cost of process supplies	Gross value of shipments f.o.b. works
1939	38	338	330,170	79,114	99,607	1,352,671
1940	41	400	377,254	76,134	138,383	1,508,999
1941	35	506	610,489	91,165	159,818	1,838,054
1942	34	533	782,903	124,100	287,928	1,998,996
1943	34	535	768,199	134,247	322,605	2,138,229
1944	41	529	772,385	166,501	241,400	2,104,030
1945	27	483	767,517	180,799	220,873	2,093,880

(*) Includes nepheline syenite.

Table 2 - PRINCIPAL STATISTICS OF THE FELDSPAR AND QUARTZ MINING INDUSTRY, 1944 and 1945

	Quebec		Other Provinces (b)(c)	
	1944	1945	1944	1945
Number of active firms (a)	19	13	22	18
Number of shipping mines	19	12	22	15
Number of employees: On salary	26	36	34	39
On wages	238	231	231	165
Total	264	267	265	204
Salaries and wages: Salaries	\$ 36,518	62,064	61,742	65,012
Wages	\$ 339,396	340,843	334,729	299,598
Total	\$ 375,914	402,907	396,471	364,610
Selling value of products (gross)	\$ 816,700	873,321	1,287,330	1,220,559
Cost of fuel and purchased electricity	\$ 87,814	91,166	78,687	89,633
Cost of process supplies, freight and containers	\$ 118,775	106,855	182,661	179,636
Net value of sales	\$ 610,111	675,300	1,025,982	951,290

(a) Small shippers whose production is recorded from consumers' returns are sometimes not included in the total.

(b) Includes data relating to nepheline syenite.

(c) In 1944 includes 2 firms in Nova Scotia, 17 in Ontario, 2 in British Columbia and 1 in Saskatchewan, and in 1945 includes 2 in Nova Scotia and 1 in Saskatchewan.

Table 3 - NUMBER OF WAGE-EARNERS ON PAY ROLL, BY MONTHS, 1945

Month	Quebec			Ontario			CANADA	
	Surface	Under-ground	Mill	Surface	Under-ground	Mill	TOTAL	
	Male	Male	Male	Male	Female	Male	Male	Female
January	100	...	122	70	1	...	35	...
February	97	...	129	69	1	...	37	...
March	85	...	121	111	2	...	33	...
April	95	...	121	157	1	...	30	...
May	106	...	103	149	2	20	36	...
June	109	...	108	149	2	22	40	...
July	112	...	108	142	2	19	39	...
August	120	...	109	150	2	20	42	...
September	147	...	107	134	2	19	48	...
October	148	...	126	129	2	11	44	...
November	133	...	125	90	...	...	34	...
December	104	...	124	80	...	...	31	...

(*) Includes a few employees in Nova Scotia in some months.

Table 4 - HOURS WORKED BY WAGE-EARNERS, 1945 (During one week in month of highest employment)

Hours Worked per Week	Number of Wage-earners		Hours Worked per Week	Number of Wage-earners	
	Male	Female		Male	Female
30 hours or less	40	...	51-54 hours	51	...
31-43 hours	34	1	55 hours	23	...
44 hours	12	...	56-64 hours	138	...
45-47 hours	16	...	65 hours and over ...	106	...
48 hours	129	1	TOTAL	569	2
49-50 hours	20	...	Total wages paid in week	\$ 18,354	43

Table 5 - FUEL AND ELECTRICITY USED, 1945 (b)

Kind	Unit of measure	CANADA		Ontario (a)		Quebec	
		Quantity	Cost at works	Quantity	Cost at works	Quantity	Cost at works
			\$		\$		\$
Bituminous coal -							
Canadian	short ton	931	9,830	4	30	927	9,800
Foreign	short ton	5,105	46,814	3,406	28,745	1,699	18,069
Anthracite coal -							
United States	short ton	26	558	...	...	26	558
Lignite coal	short ton	...	...	...	...	...	...
Coke	short ton	4	43	1	8	3	35
Gasoline	Imp.gal.	129,457	52,403	83,573	39,114	45,884	13,289
Kerosene	Imp.gal.	2,133	352	2,053	336	80	16
Fuel oil	Imp.gal.	326,771	37,264	90,314	10,951	236,457	26,313
Wood	cord	456	3,533	1	3	455	3,530
Gas: Manufactured	M cu.ft.	...	...	...	...	...	...
Other fuel .....	...	...	...	...	...	...	...
Electricity purchased ...	K.W.H.	3,452,730	30,002	1,675,116	10,446	1,777,614	19,556
TOTAL .....	...	...	180,799	...	89,633	...	91,166
Electricity generated for own use	K.W.H.	2,590,387	...	...	...	2,479,800	...

(a) Includes data for 2 properties in Nova Scotia.

(b) Data relating to production of silica flux by some smelting companies are included with those of the non-ferrous smelting and refining industry or the sand and gravel industry.

Table 6 - POWER EQUIPMENT, 1945

Description	Quebec		Ontario (*)	
	Number	Horse power	Number	Horse power
<u>Ordinarily in Use</u>				
Steam engines .....	...	...	8	508
Steam turbines .....	...	...	...	...
Diesel engines	11	1,525	13	992
Other internal combustion engines	17	731	19	1,129
Electric motors operated by purchased power ...	65	1,353	55	1,155
Electric motors operated by establishment power	120	1,184	14	83
Stationary boilers	1	150	10	818
Motor-generator sets	8	64	7	267
<u>In Reserve or Idle</u>				
Steam engines .....	...	...	...	...
Steam turbines .....	...	...	...	...
Diesel engines .....	...	...	...	...
Other internal combustion engines	1	100	2	6
Electric motors operated by purchased power ...	5	32	1	50
Electric motors operated by establishment power	16	99	...	...

(*) Includes 2 properties in Nova Scotia.

FELDSPAR

Production of feldspar, crude and ground, during 1945 was 30,246 tons valued at \$282,656 compared with 23,509 short tons worth \$227,632 in 1944. Quebec produced the major portion, namely, 26,389 tons worth \$247,242. Most of the feldspar mined in Canada is of the high-potash type.

Exports of feldspar from Canada totalled 16,888 tons at \$125,028 in 1945 and imports of ground feldspar amounted to 826 tons at \$15,052.

The consumption of ground feldspar in Canada amounted to 12,944 tons in 1945, including 4,847 tons for scouring powders, 2,740 for glass, 2,347 for pottery and other clay products, 2,684 tons for enamelling and 326 tons for other purposes.

Table 7 - PRODUCTION OF FELDSPAR, CRUDE AND GROUND, IN CANADA, BY PROVINCES, 1930-1945

Year	Quebec		Ontario		Manitoba	
	Tons	\$	Tons	\$	Tons	\$
1930	17,074	163,802	9,722	104,667	...	...
1931	10,381	86,842	7,962	100,119	...	...
1932	3,390	39,063	3,657	42,920	...	...
1933	6,183	59,283	4,387	45,350	88	484
1934	9,207	78,853	7,302	61,665	1,793	6,763
1935	7,002	63,075	8,656	75,003	2,084	6,252
1936	8,115	75,703	8,409	70,840	1,322	7,932
1937	12,285	105,612	9,061	72,610	...	...
1938	5,874	62,878	8,106	65,964	78	451
1939	5,399	60,923	7,061	51,056	40	330
1940	8,548	89,004	12,907	98,619	...	...
1941	14,218	137,160	11,822	107,124	...	...
1942	16,802	164,588	5,468	49,353	...	...
1943	17,199	176,222	6,659	61,549	...	...
1944	17,842	177,271	5,667	50,351	...	...
1945	26,389	247,242	3,857	35,414	...	...

Table 8 - CONSUMPTION OF GROUND FELDSPAR IN CANADA, 1940-1945

	1940	1941	1942	1943	1944	1945
	(Tons)					
(a) By Uses						
Glass	350	909	2,880	2,614	2,382	2,740
Scouring powders	1,100	5,411	4,344	5,892	4,617	4,847
Abrasives	38	40	119	58	75	60
Clay products (pottery, tile, insulators, etc.) ..	3,707	3,755	3,234	2,947	2,625	2,347
Enamelling	1,472	2,030	1,676	1,667	1,372	2,634
Miscellaneous .....	...	...	...	...	102	266
TOTAL	6,667	12,145	12,253	13,178	11,173	12,944
(b) By Provinces						
Quebec	1,866	4,763	5,626	7,555	6,388	6,815
Ontario	4,662	7,223	6,588	5,210	4,485	5,769
Manitoba .....	...	...	...	166	...	...
Alberta	139	159	39	247	300	360
CANADA	6,667	12,145	12,253	13,178	11,173	12,944

Table 9 - IMPORTS INTO CANADA AND EXPORTS OF FELDSPAR, 1944 and 1945

	1944		1945	
	Tons	\$	Tons	\$
Imports -				
Crude feldspar .....	...	10,658	826	15,052
Ground feldspar	546			
Exports -				
Feldspar	13,081	102,918	16,888	125,026

NEPHELINE SYENITE

The American Nepheline Corporation Ltd. at Lakefield, Ontario, was the only producer of nepheline syenite in 1945. Shipments were valued at \$275,766 compared with \$217,989 in 1944. Exports in 1945 totalled 48,351 tons at \$153,311 compared with 35,310 tons at \$123,905 in 1944. All of the exports went to the United States.

Consumption of ground nepheline syenite in Canada amounted to about 8,102 tons in 1945, including 7,778 tons in the glass industry and 324 tons in the pottery industry.

Table 10 - PRODUCTION(*) OF NEPHELINE SYENITE IN CANADA, 1936-1945

Year	Value	Year	Value
	\$		\$
1936	37,426	1941	227,583
1937	121,481	1942	246,893
1938	142,737	1943	292,010
1939	140,148	1944	217,989
1940	117,849	1945	275,766

(*) Only one or two producers in recent years; quantity not available for publication.

Table 11 - CONSUMPTION OF GROUND NEPHELINE SYENITE IN CANADA, 1942-1945

	1942	1943	1944	1945
	(Tons)			
(a) By Uses				
Glass	6,145	5,630	7,285	7,778
Pottery .....	...	...	257	324
Total	6,145	5,630	7,542	8,102
(b) By Provinces				
Quebec	2,031	1,268	1,498	1,570
Ontario	4,001	4,133	5,107	4,991
Alberta	113	229	937	1,541
Total	6,145	5,630	7,542	8,102

QUARTZ (SILICA)

Production of quartz or natural silica during the year under review was 1,513,628 short tons valued at \$1,535,458 compared with 1,740,262 tons at \$1,658,409 in 1944. Output includes crude and crushed dyke quartz, quartzite, sandstone and natural silica sands and gravels. The mineral in one or more of the forms thus defined was produced during 1945 in Nova Scotia, Quebec, Ontario and Saskatchewan. Shipments of silica in Nova Scotia were made to steel plants largely for the making of silica brick. In Quebec, high-grade silica sands were produced for the manufacture of glass and chemicals while a considerable tonnage of these same sands was sold for sand-blasting, moulding and various other purposes; in the same province relatively large quantities of crushed quartzite were mined and milled for the manufacture of silicon carbide and other products. The greater part of the tonnage of silica shipped in Ontario during 1945 represented material intended for use in the production of silica brick, cement and ferro-silicon and for the fluxing of nickel-copper ores. Quartz production as recorded for Saskatchewan represented low-grade natural silica sands or gravels shipped as flux to the Flin Flon smelter of the Hudson Bay Mining and Smelting Co. Ltd.

Table 12 - PRODUCTION(*) OF QUARTZ (SILICA) IN CANADA, 1930-1945

Year	Ton	\$	Year	Ton	\$
1930	226,200	418,127	1938	1,380,011	961,617
1931	195,724	303,158	1939	1,582,935	1,100,214
1932	189,132	276,147	1940	1,858,302	1,203,527
1933	185,783	297,820	1941	2,052,878	1,366,187
1934	272,563	482,265	1942	1,738,174	1,538,162
1935	233,002	424,882	1943	1,776,749	1,608,448
1936	1,046,649	597,781	1944	1,740,262	1,658,409
1937	1,377,448	1,129,011	1945	1,513,628	1,535,458

(*) Complete data for production of this material in Ontario previous to 1936 are not available.

Table 13 - PRODUCTION OF QUARTZ, BY PROVINCES, 1944 and 1945

	1944		1945	
	Short tons	Value	Short tons	Value
Production (shipments) (*)				
Nova Scotia	10,100	27,350	10,734	36,171
Quebec	236,091	639,429	195,857	626,079
Ontario	1,326,288	868,389	1,165,238	820,664
Saskatchewan	143,101	50,085	141,799	52,544
British Columbia	24,682	73,156	...	...
CANADA	1,740,262	1,658,409	1,513,628	1,535,458

(*) Includes both crude and crushed quartz, crushed sandstone and quartzite, and natural silica sands.

Table 14 - PRODUCTION(a) OF NATURAL LOW-GRADE SILICA SAND AND SILICA GRAVEL AS NON-FERROUS SMELTER FLUX, 1943-1945

	1943		1944		1945	
	Tons	\$	Tons	\$	Tons	\$
Ontario	666,452(b)	233,258	608,403(b)	212,840	523,558	183,245
Saskatchewan	163,102	57,086	143,101	50,085	141,799	52,544
CANADA	829,554	290,344	751,504	262,925	665,357	235,789

(a) Included in totals shown in Tables 12 and 13.

(b) Exclusive of low-cost quartzite used in smelting nickel-copper ores.

Table 15 - IMPORTS INTO CANADA AND EXPORTS OF SILICA, 1944 and 1945

	1944		1945	
	Quantity Tons	\$	Quantity Tons	\$
Imports -				
Ground flint stone	1,481	30,487	712	20,550
Ganister	346	2,463	426	3,384
Silica sand for manufacturing	457,602	914,390	410,427	926,648
Silex or crystallized quartz	8,774	530,200	7,251	247,393
Silica fire brick .....	...	713,538	...	741,394
Exports -				
Quartzite	126,608	260,181	121,435	282,578

TABLE 16 - CONSUMPTION OF SILICA SAND AND GROUND QUARTZ IN CANADA, BY INDUSTRIES AND BY PROVINCES, 1941-1944

	1941	1942	1943	1944
	(Tons of 2,000 pounds)			
(a) By Industries				
Steel foundries	91,192	134,724	129,881	89,807
Iron foundries	13,255	9,146	15,104	7,498
Ferro-alloys	2,347	4,338	4,535	6,481
Enamelling	1,447	632	1,071	394
Brass foundries	1,094	1,874	3,237	2,514
White metal foundries	178	42	12	41
Smelters	644	321	3,774	191
Electrical apparatus	1,150	329	681	...
Glass	114,761	145,005	132,992	131,987
Artificial abrasives and abrasive products	57,362	76,943	89,022	73,771
Products from imported clays	3,467	3,036	2,773	3,441
Monumental and ornamental stone	2,035	1,385	980	759
Prepared foundry supplies	602	1,082	126	169
Cement mills	16,110	20,711	19,473	23,942
Refractories	1,635	1,642	1,365	1,023
Roofing paper	2,641	2,879	2,135	4,307
Chemicals	16,397	15,296	17,305	19,708
Fertilizers	not available	15,848	37,988	20,715
Paints	1,019	1,310	1,239	1,767
Soaps and washing compounds	628	180	246	4,545
Cleaning preparations	3,719	2,282	3,004	58
Matches	269	333	334	349
Miscellaneous	308	402	236	74
TOTAL	332,260	439,740	467,513	393,541

Table 16 - CONSUMPTION OF SILICA SAND AND GROUND QUARTZ IN CANADA, BY INDUSTRIES AND BY PROVINCES, 1941-1944 (Concluded)

	1941	1942	1943	1944
	(Tons of 2,000 pounds)			
(b) By Provinces				
Prince Edward Island .....	...	309	335	...
Nova Scotia	3,395	4,836	2,364	1,087
New Brunswick	296	3,996	6,810	705
Quebec	155,950	207,244	210,909	204,970
Ontario	146,828	190,465	210,875	153,871
Manitoba	10,042	12,635	11,989	11,168
Saskatchewan	39	35	59	72
Alberta	12,202	14,777	16,205	16,947
British Columbia	3,508	5,443	7,967	4,721
CANADA	332,260	439,740	467,513	393,541

DIRECTORY OF FELDSPAR AND QUARTZ MINING INDUSTRY, 1945

- | | |
|--------------------------|--------------------------------|
| (a) Produces silica | (e) Produces nepheline syenite |
| (b) Produces feldspar | (f) Produces grinding pebbles |
| (c) Operates a mill | (g) Contractor |
| (d) Also produces kaolin | (h) Produces scapolite |

Name of Firm	Head Office Address	Location of Mine or Mill
<u>Nova Scotia -</u>		
Nairn, J. (a)	24 Whitney Ave., Sydney	Leitches Creek
Stevens, Archie (a)	11 McKenzie St., Glace Bay	Melford
<u>Quebec -</u>		
Bigelow, Gordon (b)(g)	Glen Almond	Derry Tp.
Bon Ami Ltd. (b)(c)	13719 Notre Dame St. E., Montreal	Montreal
Buckingham Feldspar Inc.	276 St. James St. W., Montreal	Buckingham
Canadian Carborundum Co. Ltd. (a)(c)	Box 57, Niagara Falls, Ont.	St. Canut
Canada China Clay & Silica Ltd. (a)(d)	1600 Royal Bank Bldg., Toronto, Ont.	Amherst Tp.
Canadian Flint & Spar Co. Ltd. (a)(b)(c)	Room 512 Victoria Bldg., Ottawa, Ont.	Buckingham
Consumers Industrial Minerals Ltd.	8661 Drolet, Montreal	Montcalm Co.
Hill, Wm. (a)(f)	Glen Almond	Buckingham Tp.
Industrial Silica Corp. (a)	Room 408 .. 266 St. James St., Montreal	Roberval Co.
Lafrance, Ovila (a)	Angers	Buckingham Tp.
Law, S. H. (a)(b)	Room 28, 14 Toronto St., Toronto, Ont.	Derry Tp.
Montpetit, Euclide (a)	Kelochville	Beauharnois Co.
Morin, A. H. (a)(b)	Box 3, Buckingham	Buckingham Tp.
St. Lawrence Alloys & Metals Ltd. (a)(c)	Beauharnois	Beauharnois Co.
United Mining Industries Ltd. (a)(b)	1451 Notre Dame St.W., Montreal	Buckingham
<u>Ontario -</u>		
American Nepheline Corp. (e)	Lakefield	Methuen Tp.
Bancroft Mica & Stone Products (b)(c)	Bancroft	Faraday Tp.
Bathurst Feldspar Mines Ltd. (b)	Room 508 .. 21 King St.E., Toronto	Bathurst Tp.
Buffalo Ankerite Gold Mines Ltd. (f)	Box 533, South Porcupine	Deloro Tp.
Canspar Mines Ltd. (b)	100 Adelaide St. W., Toronto	Barry's Bay
Conger Feldspar Mining Co. Ltd. (b)	10 Adelaide St. E., Toronto	Conger Tp.
Dominion Mines & Quarries Ltd. (a)(c)	Canada Life Bldg., Toronto	Killarney
Frontenac Floor & Wall Tile Co. Ltd. (b)(c)	Kingston	Kingston
International Nickel Co. of Canada Ltd. (a)	Copper Cliff	Lawson Tp.
Kingston Silica Mines Ltd. (a)(c)	R.R. No. 1, Kingston	Pittsburg Tp.
Manitoulin Quartzite Co. (a)(c)	732 Langlois Ave., Windsor	Manitoulin Island
Quartz Crystals Mining Co. of Canada Ltd. (a)	712 Federal Bldg., Toronto	Lansdowne Tp.
Verona Rock Products Ltd. (a)(b)	330 Bay St., Toronto	Verona
Wright and Co. (a)(c)	960 Queen St., Sault Ste. Marie	Deroche Tp.
<u>Saskatchewan -</u>		
Hudson Bay Mining & Smelting Co.	Flin Flon, Man.	

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