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FELDSPAR AND QUARTZ MINES

1965

The Feldspar and Quartz Mines are part of Other Non-metal Mines – Industry 079 of the Standard Industrial Classification Manual, Catalogue No. 12-501.

Owing to the very close physical association of feldspar and quartz in many Canadian deposits (pegmatites), it is difficult for some operators to make a separation of all data pertaining to the mining of each individual mineral; for this reason, the general statistics relating to 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.

Quebec produced feldspar; nepheline syenite output came from Ontario only; quartz (silica) in various forms was produced in Quebec, Ontario, Manitoba, Saskatchewan and British Columbia.

Data presented in this report under the heading of Feldspar and Quartz Mines (Tables 1-6) reflect the full implementation of the revised Standard Industrial Classification (S.I.C.) and the New Establishment Concept including an extension of the latter to cover total activities of mining establishments (see Explanatory Notes section of 1964 report). Commodity statistics reflecting total production from all sources, world figures on production, trade data, etc. are presented along the same general lines as in the earlier issues of this report.

The combination of improvements in internal procedures with the introduction of the final stage of the establishment concept in the annual Census of Mining produced changes which, for some industries, required major adjustments in industry statistical data – see Explanatory Notes, 1964 issue. However, in the case of the industry under review in this report, the changes were relatively minor. The reduction in the number of establishments which is indicated is the result of the exclusion of non-producers. These latter are no longer being included as establishments under the new definition.

SYMBOLS

The following standard symbols are used in Dominion Bureau of Statistics publications:

.. figures not available.

... figures not appropriate or not applicable.

— nil or zero.

– amount too small to be expressed.

p preliminary figures.

r revised figures.

x confidential to meet secrecy requirements of the Statistics Act.

TABLE 1. Principal Statistics, Feldspar and Quartz, Mines,[1] 1961-65

Basis: Revised Standard Industrial Classification and New Establishment Concept

Year	Establishments	Mining activity							Total activity				
		Production and related workers			Cost of fuel and electricity	Cost of materials and supplies	Value of production	Value added	Working owners and partners		Employees		Value added
		Number	Man-hours paid	Wages					Number	Withdrawals	Number	Salaries and wages	
	No.		'000	$'000						$'000		$'000	
1961	11	240	509	909	284	794	4,866	3,789	x	x	307	1,274	3,800
1962	13	293	636	1,176	327	875	5,756	4,554	x	x	361	1,540	4,586
1963	15	268	551	1,068	343	1,033	5,728	4,351	x	x	338	1,449	4,365
1964	16	303	657	1,296	453	1,326	7,552	5,773	x	x	395	1,784	5,795
1965	15	291	670	1,348	478	1,591	8,272	6,202	x	x	381	1,882	6,205

[1] Refer to Explanatory Notes, 1964 issue for explanation of concepts and definitions. See also text, page 3.

Note: Includes details for nepheline syenite mines.

TABLE 2. Employment and Payroll, Feldspar and Quartz Mines, 1961-65

Basis: Revised Standard Industrial Classification and New Establishment Concept

Year	Employees										Salaries and wages				
	Production and related workers				Administrative and office		Sales and distribution		Total		Production and related workers		Administrative and office	Sales and distribution	Total
	Mining		Other												
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Mining	Other			
	number										$'000				
1961	239	1	–	–	57	10	–	–	296	11	909	–	365	–	1,274
1962	293	–	–	–	59	9	–	–	352	9	1,176	–	364	–	1,540
1963	268	–	–	–	63	7	–	–	331	7	1,068	–	381	–	1,449
1964	303	–	–	–	79	13	–	–	382	13	1,296	–	488	–	1,784
1965	291	–	–	–	78	12	–	–	369	12	1,348	–	534	–	1,882

Note: Includes details for nepheline syenite mines.

TABLE 3. Production and Related Workers, Feldspar and Quartz Mines, 1964 and 1965

Basis: Revised Standard Industrial Classification and New Establishment Concept

Month	1964				1965			
	Surface	Underground	Mill	Total	Surface	Underground	Mill	Total
	number							
January	81	–	159	240	85	–	161	246
February	81	–	161	242	79	–	164	263
March	93	–	157	250	89	–	168	257
April	114	–	174	288	100	–	190	290
May	137	–	173	310	110	–	182	292
June	149	–	200	349	134	–	201	335
July	152	–	201	353	126	–	198	324
August	160	–	193	353	135	–	193	328
September	136	–	209	345	123	–	195	318
October	145	–	199	344	126	–	193	319
November	105	–	181	286	116	–	174	290
December	96	–	174	270	88	–	166	254
Averages	121	–	182	303	109	–	182	291

Note: Includes details for nepheline syenite mines.

TABLE 4. Purchased Fuel and Electricity Used, Feldspar and Quartz Mines, 1964 and 1965

Basis: Revised Standard Industrial Classification and New Establishment Concept

Description		1964		1965	
		Quantity	Cost	Quantity	Cost
			$'000		$'000
Bituminous coal:					
(a) From Canadian mines	ton	–	–	–	–
(b) Imported	"	–	–	–	–
Sub-bituminous coal (from Alberta mines only)	"	–	–	–	–
Anthracite coal	"	–	–	–	–
Lignite coal	"	–	–	–	–
Coke	"	–	–	–	–
Gasoline (including gasoline used in cars and trucks)	Imp. gal.	112,215	41	123,000	47
Fuel oil including kerosene or coal oil	"	1,315,080	170	1,155,377	182
Wood	cord	–	–	–	–
Gas:					
(a) Liquefied petroleum gases	Imp. gal.	3,540	1	3,232	1
(b) Other manufactured gas	M cu. ft.	–	–	–	–
(c) Natural gas	"	9,367	4	10,500	4
Other fuel	"	...	–	...	–
Electricity purchased	kwh.	23,698,879	237	25,810,001	244
Steam purchased		...	–	...	–
Total fuel and electricity used		...	**453**	...	**478**
Electricity generated:					
(a) For own use		–	...	–	...
(b) For sale		–	–	–	–

Note: Includes details for nepheline syenite mines.

TABLE 5. Materials and Supplies,[1] Feldspar and Quartz Mines, 1964 and 1965

Basis: Revised Standard Industrial Classification and New Establishment Concept

Description	Cost	
	1964	1965
	$'000	
Ore or other semi-processed materials purchased and used in mine/mill operations	63	14
Containers, shipping materials and supplies used	193	230
Operating, maintenance and repair supplies used (excluding fuel)	927	1,180
Amount paid out to others for work done on materials owned by establishments	142	167
Totals	1,326	1,591

[1] Refer to Explanatory Notes, 1964 issue, for explanation of differences in Tables 5 and 6 with data published in earlier years.

Note: Includes details for nepheline syenite mines.

TABLE 6. Value of Production, Feldspar and Quartz Mines, 1964 and 1965

Basis: Revised Standard Industrial Classification and New Establishment Concept

Description	Value	
	1964	1965
	$'000	
Value of production	7,552	8,272
Amount received in payment for work done on materials and products owned by others	–	–
Less adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above	–	–
Total value of production and work done	**7,552**	8,272

Note: Includes details for nepheline syenite mines.

TABLE 7. Drilling Completed on Feldspar and Quartz Deposits, 1964 and 1965

	Footage drilled[1]	
	1964	1965
Diamond drilling for exploration (testing):		
By companies with their own equipment and personnel	–	–
By contractors	4,534	2,087
Other drilling:		
Diamond drilling for breaking rock or ore:		
By companies with their own equipment and personnel	–	–
By contractors	–	–
Drilling by percussion and other machines[2]	413,748	343,882

[1] Drilling as reported by firms classified to this industry.
[2] This is not complete as some firms do not compile these data.

TABLE 8. Taxes Paid by Feldspar and Quartz Mines,[1] 1964 and 1965

Taxes paid	1964	1965
	$'000	
Dominion income taxes	31	17
Provincial taxes	45	52
Municipal taxes	21	29

[1] (a) Includes nepheline syenite mines and other mines classified to this industry.
(b) Includes corporate activities associated with operations of feldspar and quartz mines.

TABLE 9. Specified Miscellaneous Expenditures by Companies Engaged in Feldspar and Quartz Mines Operations,[1] 1965

	Dollars
	$'000
(a) Workmen's compensation	59
(b) Silicosis assessment	32
(c) Unemployment insurance	14
(d) Aggregate cost of structures, roads, machinery, equipment, etc., built by or purchased from outside contractors or suppliers and chargeable to Fixed Assets Account	491
(e) Book value of fixed assets (new structures, roads, machinery, equipment, etc., including major repairs and alterations) produced by own employees and chargeable to Fixed Assets Account	57
(f) Other capital expenditures not reported in (d) and (e)	–
(g) Cost of materials and supplies used in the production of machinery and equipment and in the construction of roads and new structures (including major repairs and alterations by own employees and chargeable to Fixed Assets Account)	41
(h) Cost of office supplies used during the year, not chargeable to Fixed Assets Account. Excludes cost of stamps and meter expenses	26

[1] (a) Includes nepheline syenite mines and other mines classified to this industry.
(b) Includes related corporate activities associated with Canadian operations of feldspar and quartz mines not allocable separately elsewhere.

FELDSPAR

Feldspar shipments in 1965 amounted to 10,904 tons valued at $252,868 compared with 9,149 tons valued at $212,052 in 1964. During the past ten years all of the feldspar shipped was mined in Quebec.

The greater of the production of feldspar is used in the pottery, glass, enamalware, and other ceramic trades, and the remainder mainly in scouring soaps and cleansers and for bonding of fired abrasive wheels and other shapes. Some coarsely-crushed spar, usually made from impure waste or quarry fines, is sold for stucco dash, artificial stone, chicken grit, etc. Small tonnages of specially selected crude (dental spar) are used in the manufacture of artificial teeth, and such material commands a larger premium.

Most of the feldspar used is of the high-potash type, though some high-soda spar is used for blending purposes and in low-fired enamels and glazes. Practically all colours are equally acceptable for ceramic uses, but for cleaner purposes the pale shades of white to buff are demanded.

TABLE 10. Producers' Shipments of Feldspar, Crude and Ground, All industries,[1] 1956-65

Year	Quantity	Value[2]	Year	Quantity	Value[2]
	tons	$'000		tons	$'000
1956	18,153	356	1961	10,507	230
1957	20,450	393	1962	9,994	222
1958	20,387	360	1963	8,608	197
1959	17,953	301	1964	9,149	212
1960	13,862	239	1965	10,904	253

[1] Includes shipments from other industries which produce, as a secondary activity, the commodities listed therein.
[2] Value of containers excluded.

TABLE 11. Available Data on Consumption of Feldspar, 1961-65

	1961	1962	1963	1964	1965
	tons				
By uses					
Scouring powders, cleansers	603	883	537	521	–
Clay products (pottery, tile, insulators, etc.)	5,975	5,407	5,068	5,396	5,716
Electrical apparatus	292	...	...	...	...
Total accounted for	**6,870**	**6,290**	**5,605**	**5,917**	**5,716**
By provinces					
Quebec	2,986	2,525	787	546	288
Ontario	2,671	2,388	2,726	3,253	3,943
Alberta	10	–	30	–	–
British Columbia	1,203	1,377	2,062	2,118	1,485
Canada	**6,870**	**6,290**	**5,605**	**5,917**	**5,716**

TABLE 12. Imports and Exports of Feldspar, 1963-65

	1963		1964		1965	
	Tons	Value	Tons	Value	Tons	Value
		$'000		$'000		$'000
Imports	2,600	59	...	...	...	...
Exports	3,282	79	3,386	80	3,746	87

Source: Trade of Canada, "Imports by Commodities", Catalogue No. 65-007 and "Exports by Commodities", Catalogue No. 65-004.

TABLE 13. World Production on Feldspar, by Countries[1]
(Taken from the "Minerals Yearbook" published by the United States Bureau of Mines)

Country[1]	1961	1962	1963	1964	1965
	long tons				
North America:					
Canada (shipments)	9,381	8,923	7,686	8,169	9,670
United States (sold and used)	496,808	492,476	548,954	587,194	624,598
South America:					
Argentina	11,474	7,245	12,599	6,390	7,000[2]
Brazil[2]	39,000	39,000	39,000	39,000	39,000
Chile	2,280	1,138	417	814	408
Columbia	14,800	15,250	12,300	11,426	14,600
Peru	992	287	217	837	926
Uruguay	877	692	282	883	1,227
Europe:					
Austria	3,907	4,976	2,077	1,603	1,397
Finland	13,303	14,921	12,618	10,561	11,685
France	170,470	170,194	170,764	193,260	190,000[2]
Germany, west	265,450	269,770	273,610	278,355	329,968
Italy	93,228	98,367	100,487	106,905	90,803
Norway	68,895	54,100	65,000	65,300	67,900
Poland	..	..	26,300	26,300[2]	26,300[2]
Portugal	2,892	3,674	396	10,994	5,000[2]
Spain	8,194	10,728	12,401	16,466	15,000[2]
Sweden	55,868	53,348	44,920	50,785	50,000[2]
U.S.S.R.[2]	195,000	195,000	195,000	195,000	195,000
Yugoslavia	20,215	31,578	29,413	33,260	34,400[2]
Asia:					
Ceylon	106	56	109	4	605
Hong Kong	1,206	937	1,680	1,556	1,119
India	9,706	18,918	20,901	19,781	23,829
Japan[3]	50,986	46,991	53,339	61,445	61,000[2]
Korea, Republic of	7,520	4,651	11,392	13,468	15,000[2]
Pakistan, West	..	55	1,520	48	1,000[2]
Phillippines	14,526	15,325	6,564	7,924	12,095
Viet-Nam, South	—	—	—	—	—
Africa:					
Angola	—	—	796	493	500[2]
Eritrea	2,953	425	490[2]	9,800[2]	.. [4]
Ethiopia	..	..	.. [4]		
Malagasy Republic	13	—	—	1	..
Rhodesia, Southern	—	—	—	—	167[2]
South Africa, Republic of	23,290	28,209	41,372	35,525	41,636
South-West Africa	89	465	2,197	1,893	2,281
United Arab Republic (Egypt)	—	—	—	4,653	5,000[2]
Oceania:					
Australia	8,209	8,513	8,842	9,012	8,400[2]
World totals[1,2]	**1,600,000**	**1,600,000**	**1,710,000**	**1,815,000**	**1,900,000**

[1] Feldspar is produced in China, Czechoslovakia and Rumania, but data are not available; no estimates are included in the total except for Czechoslovakia.
[2] Estimate.
[3] In addition the following quantities of aplite and other feldspathic rock were produced: 1961, 132,041 tons; 1962, 168,543 tons; 1963, 211,814 tons; 1964, 258,510 tons; 1965 not available.
[4] less than ½ unit.

NEPHELINE SYENITE

Nepheline syenite shipped by Canadian producers in 1965 amounted to 339,982 tons valued at $3,415,387 compared with 290,300 tons valued at $3,097,172 in the preceding year. All of Canada's output of nepheline syenite was mined in the Blue Mountain area, Peterborough county, Ontario, by two firms, the Industrial Minerals of Canada Ltd. and the International Minerals and Chemical Corporation (Canada) Limited.

Nepheline syenite is quartz-free crystalline rock consisting principally of nephelite (a silicate of alumina, potash, and soda), albite, and microcline feldspar. To be of commercial interest it must be amenable to treatment for the removal of iron-bearing impurities such as magnetite, biotite, hornblende, and tourmaline, so that the iron-oxide Fe_2O_3 content can be reduced to under 0.08 per cent. Finely divided iron impurities frequently cannot be removed by dry milling methods, and render otherwise promising deposits of nepheline syenite useless for commercial operation.

Specifications for glass-grade nepheline syenite call for all minus 28 mesh material, and, for pottery grade, all through 200 mesh or finer. High-intensity magnetic separation reduces the iron-oxide content from about 1.50 per cent in the feed to under 0.08 per cent in the finished product. Dry milling methods are used throughout the processing.

Nepheline syenite finds wide use in the ceramic industry where it replaces feldspar as a source of alumina and the alkalis in making glass pottery, floor and wall tile, refractory cements, whiteware and porcelain products, enamels, and varied ceramic products. The lower fusibility and greater fluxing action of nepheline syenite as compared with that of the traditional vitrifying agents enables a manufacturer to either fire the ware at lower temperature or use a reduced amount of vitrifying agent and still attain the desired properties. In glass batches, the low iron content (0.06 to 0.08 per cent Fe_2O_3) of nepheline syenite, combined with its high alumina and alkali content, makes it a desirable means of introducing alumina, especially where low iron is important.

TABLE 14. Producers' Shipments of Nepheline Syenite, All Industries,[1] 1956 - 65

Year	Quantity	Selling value	Year	Quantity	Selling value[2]
	tons	$'000		tons	$'000
1956	180,006	2,574	1961	240,320	2,572
1957	200,016	2,754	1962	254,418	2,533
1958	201,306	2,613	1963	254,000	2,699
1959	228,722	2,931	1964	290,300	3,097
1960	240,636	2,891	1965	339,982	3,415

[1] Includes shipments from other industries which produce as a secondary activity, the commodities listed therein.
[2] Value of containers excluded.

TABLE 15. Available Data on Consumption of Ground Nepheline Syenite, 1961 - 65

	1961	1962	1963	1964	1965
			tons		
(a) By uses					
Glass and glass wool	31,849	35,864	33,838	33,858	37,825
Clay products	1,715	2,985	4,195	4,953	6,098
Mineral wool	3,127	4,109	3,424	4,336	6,664
Total accounted for	**36,691**	**42,958**	**41,457**	**43,147**	**50,587**
(b) By provinces					
Quebec	14,171	15,241	16,203	17,144	19,185
Ontario	18,324	22,399	20,464	20,680	23,415
Other	4,196	5,318	4,790	5,323	7,987
Total accounted for	**36,691**	**42,958**	**41,457**	**43,147**	**50,587**

TABLE 16. Exports of Nepheline Syenite, 1956 - 65

Year	Quantity	Value	Year	Quantity	Value
	tons	$'000		tons	$'000
1956	139,305	1,935	1961	194,598	2,249
1957	164,342	2,236	1962	193,658	2,211
1958	160,081	2,098	1963	203,262	2,214
1959	178,120	2,345	1964	226,971	2,630
1960	193,298	2,373	1965	247,200	2,969

Source: Trade of Canada, "Exports by Commodities", Catalogue No. 65-004.

QUARTZ (SILICA)

Shipments of quartz or siliceous material during 1965 amounted to 2,433,685 tons valued at $5,123,942 compared with 2,117,273 tons worth $4,506,038 shipped in the preceding year. The production included crude and crushed quartz, quartzite and sandstone, as well as natural silica sands and gravels which were used as fluxes. No shipments were made from a quartz crystal deposit near Lyndhurst, Ontario.

In Quebec substantial tonnages of silica rock were crushed and screened for use in the manufacture of ferrosilicon or further milled to produce sand for silicon carbide. In Ontario most of the shipments were for use in making silica-brick, silicon carbide and ferrosilicon, and the fluxing of nickel-copper ores. In Manitoba silica flux is also used in the smelting of nickel-copper ores. In Saskatchewan the output consisted of low-grade natural silica sands or gravels for use as flux at the Flin Flon Smelter of Hudson Bay Mining and Smelting Co. Ltd. Core and moulding sand which have a high silica content was included in the quartz or silica industry.

TABLE 17. Producers' Shipments of Quartz (Silica), All Industries,[1] 1956 - 65

Year	Quantity	Value[2]	Year	Quantity	Value[2]
	tons	$'000		tons	$'000
1956	2,142,234	3,037	1961	2,194,054	3,153
1957	2,139,246	3,185	1962	2,085,620	3,817
1958	1,453,656	2,538	1963	1,836,612	3,688
1959	2,163,546	3,437	1964	2,117,273	4,506
1960	2,260,766	3,267	1965	2,433,685	5,124

[1] Includes shipments from other industries which produce, as a secondary activity, the commodities listed therein.
[2] Value of containers is excluded.

TABLE 18. Producers Shipments of Quartz[1,2] by Provinces, All Industries, 1964 and 1965

Province	1964		1965	
	Tons	Value	Tons	Value
		$'000		$'000
Nova Scotia	–	–	–	–
Quebec	459,195	2,692	522,474	3,246
Ontario	1,127,425	837	1,301,583	790
Manitoba	301,472	644	392,320	739
Saskatchewan	187,179	170	182,349	178
British Columbia	42,002	163	34,959	171
Canada	**2,117,273**	**4,506**	**2,433,685**	**5,124**

[1] See footnote 1 Table 17.
[2] Includes both crude and crushed quartz, crushed sandstone and quartzite and natural silica sands.

TABLE 19. Production[1] of Natural Low-Grade Silica Sand and Silica Gravel as Non-ferrous Smelter Flux, All Industries,[2] 1963-65

	1963		1964		1965	
	Tons	Value	Tons	Value	Tons	Value
		$'000		$'000		$'000
Ontario	609,878	189	651,493	150	681,039	150
Manitoba and Saskatchewan	307,482	186	328,023	270	397,187	330
Canada	**917,360**	**375**	**979,516**	**420**	**1,078,226**	**480**

[1] Included in totals shown in Tables 17 and 18.
[2] See footnote 1 Table 17.

TABLE 20. Imports and Exports of Silica and Specified Products of Silica, 1964 and 1965

	1964		1965	
	Tons	Value	Tons	Value
		$'000		$'000
Imports:				
Ground flint stone	...	...	...	...
Silica sand for manufacturing	771,900	3,060	834,780	3,452
Silex and crystalized quartz	5,176	327	5,104	395
Silica fire brick	...	1,564	...	1,540
Quartz, piezo electric	..	..	..	..
Exports:				
Quartzite	146,206	425	111,533	369

Source: Trade of Canada, "Imports by Commodities", Catalogue No. 65-007 and "Exports by Commodities", Catalogue No. 65-004.

TABLE 21. Available Data on the Consumption of Silica Sand and Ground Quartz, 1961-65

	1961	1962	1963	1964	1965
	tons of 2,000 pounds				
By industries					
Paints, pigments and varnishes	1,236	1,376	1,494	1,597	2,093
Soaps and cleaning compounds	14,824	28,467	15,059	15,297	15,431
Clay products	5,866	5,938	7,131	4,895	5,418
Refractories	674	2,851	899	1,291	1,259
Miscellaneous non-metallic minerals	1,968	2,066	2,830	3,371	4,608
Roofing paper	4,555	5,139	5,160	6,222	17,510
Glass	312,828	341,649	329,563	298,009	322,411
Abrasives	132,006	105,731	111,646	130,746	145,270
Iron foundries	438,092	117,486	139,192	164,589	274,353
Heating equipment	16,282	15,116	13,870	9,514	7,920
Boilers, tanks and platework	2,037	1,432	1,584	654	1,923
Farm implements	5,419	2,937	3,133	3,429	3,673
Railway rolling stock	6,726	3,874	3,705	9,311	8,537
Iron and steel mills	72,623	92,896	99,367	143,700	123,763
Industrial chemicals	24,108	24,210	25,446	29,787	33,518
Miscellaneous chemicals	1,555	1,762	2,131	2,286	2,574
Stone products	975	689	625	1,078	1,573
Cement manufacturing	207,118	115,257	142,491	134,634	297,124

TABLE 21. Available Data on the Consumption of Silica Sand and Ground Quartz, 1961-65 – Concluded

	1961	1962	1963	1964	1965
	tons of 2,000 pounds				
By industries – Concluded					
Mineral wool	18,433	22,979	22,686	27,901	31,004
Brass and copper products	979	907	1,365	1,678	2,078
Gypsum products	3,549	1,608	3,909	1,062	1,525
Fabricated structural metal	1,255	1,598	1,322	603	750
Miscellaneous machinery and equipment	22,888	27,541	31,087	27,884	42,360
Motor vehicle parts	31,162	34,692	73,233	97,330	39,016
Hardware, tools and cuttery	314	470	278	300	825
Miscellaneous metal fabricating	24,902	27,318	28,506	30,782	38,650
Asbestos products	–	–	–	–	–
Total accounted for	**1,352,374**	**985,989**	**1,067,712**	**1,147,949**	**1,425,166**
By provinces					
Nova Scotia, Newfoundland	1,645	1,000	1,769	2,967	6,560
New Brunswick	3,123	2,669	2,651	2,557	3,046
Quebec	422,117	401,894	419,192	409,187	349,873
Ontario	824,840	489,474	536,641	628,512	816,979
Manitoba	21,182	22,077	45,885	35,509	63,126
Saskatchewan	321	358	339	235	17,743
Alberta	47,518	57,595	50,893	56,028	57,038
British Columbia	31,628	10,922	10,342	12,954	110,801
Canada	**1,352,374**	**985,989**	**1,067,712**	**1,147,949**	**1,425,166**

List of Establishments classified to this Industry, 1965

(Exclude establishments classified to other industries, which as a secondary activity, recovered products typical of this industry)

Name of firm	Head office address	Location of mine or mill
Quebec:		
Baskatong Quartz Products	Suite 1520, 360 St. James St., Montreal	Baskatong Twp.
Charette, F.	Glen Almond	Papineau
Dominion Industrial Mineral Corp. Ltd.	25 St. Joseph St., Lachine	St. Donat De Montcalm
Donaldson, Wilfred	Glen Almond	Papineau
Industrial Minerals of Canada Ltd.	7 King St. E., Toronto, Ontario	St. Canut
International Minerals & Chemicals Corp. Ltd.	4 King St. West, Toronto 1	Derry Twp., Baskatong
Lachaine, Regis	St. Pierre de Wakefield	St. Pierre de Wakefield
Montpetit, E., & Fils	133, rue Principale, Melocheville	Melocheville
Sicotte, Armand & Fils	Laflèche	Howick
Union Carbide Exploration Ltd.	123 Eglinton Ave. E. Toronto, Ontario	Melocheville
Ontario:		
Industrial Minerals of Canada Ltd.	Nephton	Nephton
International Minerals & Chemicals Corp. Ltd.	4 King St. West, Toronto 1	Blue Mountain
Union Carbide Canada Ltd.	123 Eglinton Ave E., Toronto	Killarney and Little Current
Manitoba:		
Selkirk Silica Co. Ltd.	8th Floor, Boyd Bldg., Winnipeg	Black Island
British Columbia:		
Pacific Silica Ltd.	Box 39, Oliver	Oliver

SUPPLEMENT

(The following establishments classified to other industries e.g. Smelting and Refining recover the commodity indicated and are included for information purposes to support the statistical material relevant to these commodities which is presented in this report.)

Quebec:		
Bare de Sable Edouard Goyer	St. Bruno	St. Bruno
Bigelow, Venard	Glen Almond	Glen Almond
Ontario:		
Falconbridge Nickel Mines Ltd.	7 King St. E., Toronto	Flaconbridge
International Nickel Co. of Canada Ltd.	55 Yonge St., Toronto	Mongowin Twp.
Manitoba:		
International Nickel Co. of Canada Ltd.	55 Yonge St., Toronto, Ontario	Thompson
Norquin Construction Ltd.	Thompson	Thompson
Saskatchewan:		
Hudson Bay Mining & Smelting Co. Ltd.	333 Broadway Winnipeg, Manitoba	Creighton
British Columbia:		
Mountain Minerals Ltd.	Box 700, Lethbridge, Alberta	Carson