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THE ASBESTOS MINING INDUSTRY

1956



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NOTICE

The annual reports prepared by the Industry and Merchandising Division of the Bureau of Statistics are divided into 3 volumes, as follows: **Volume I** — The Primary Industries, including mining, forestry and fisheries; **Volume II** — Manufacturing; **Volume III** — Merchandising and Services. The volumes are made up of parts, and the parts in turn are subdivided according to the industries which they comprise.

Volume I consists of the following parts:

- Part I — Mineral Statistics
- Part II — Forestry Statistics — Operations in the Woods
- Part III — Fisheries Statistics

Part I includes the following reports which constitute the complete series on Mineral Statistics of Canada. Individual reports are issued as the information becomes available; they are arranged in a form suitable for binding.

- A — General Review of the Mining Industry, 50¢
- B — The Gold Mining Industry, 50¢
- C — The Silver-Lead-Zinc Mining Industry, 25¢
- D — The Nickel-Copper Mining, Smelting and Refining Industry, 25¢
- E — The Iron Mining Industry, 25¢
- F — The Miscellaneous Metal Mining Industry, 25¢
- G — The Smelting and Refining Industry, 25¢
- H — The Coal Mining Industry, \$1.00
- I — The Crude Petroleum and Natural Gas Industry, 25¢
- J — The Asbestos Mining Industry, 25¢
- K — The Feldspar and Quartz Mining Industry, 25¢
- L — The Gypsum Industry, 25¢
- M — The Peat Industry, 25¢
- N — The Salt Industry, 25¢
- O — The Talc and Soapstone Industry, 25¢
- P — The Miscellaneous Non-metal Mining Industry, 25¢
- Q — The Cement Manufacturing Industry, 25¢
- R — The Clay and Clay Products Industry, 25¢
- S — The Lime Industry, 25¢
- T — The Sand and Gravel Industry, 25¢
- U — The Stone Industry, 25¢
- V — Contract Drilling in the Mining Industry, 25¢

THE ASBESTOS MINING INDUSTRY

1956

The Canadian producers of asbestos shipped 1,014,249 short tons valued at \$99,859,969 in 1956 compared with 1,063,803 tons valued at \$96,191,317. These figures exclude the value of containers. The quantity of asbestos decreased by 4.7 per cent but the total value increased by 3.8 per cent.

The largest producing area continued to be in the eastern townships of Quebec in the vicinities of Thetford Mines, Black Lake, East Broughton and Danville. Ontario's production came from Munro township. In northern British Columbia the Cassiar Asbestos Corporation milled asbestos ore. Development work was done by Eastern Asbestos Co. Ltd. at Notre-Dame-de-la-Salette, in Papineau county, Quebec. There were announcements of asbestos discoveries in Newfoundland.

The average number of employees in the asbestos mining industry was 7,065 to whom \$30,411,878 was distributed as salaries and wages. Fuel and electricity cost \$5,541,309 which included

425,144,433 kwh. of purchased electricity valued at \$3,156,404. Process supplies and containers cost \$12,335,772.

Asbestos has a variety of industrial uses. The longer-fibred spinning material is formed into textiles, packing and certain insulating and heat-resisting friction materials. Other fibres are used in the asbestos cement industry for the production of pipe, shingle, tile, millboard, siding, roofing, etc., and for the production of asbestos paper. The short-fibred material is used in protective coatings, plastics, in the manufacture of lubricating greases and in a number of specialized applications where it has characteristics desired as an industrial filler.

Price quotations in Engineering and Mining Journal for December 1956 were: U.S. dollars per ton; crude No. 1, \$1,400-\$1,725; crude No. 2, \$750-\$1,100; spinning fibers, \$350-\$650; shingle fibers, \$190-\$210; paper stock, \$114-\$137; waste, \$82-\$84; shorts, \$28-\$75.

TABLE 1. Principal Statistics for the Asbestos Mining Industry, Significant Years, 1921-1956

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity at works	Cost of process supplies and containers at works	Gross selling value of products (f.o.b. works)	Net value of production ¹
	No.	No.	\$	\$	\$	\$	\$
1921	15	2,694	2,657,425	737,689	N.A.	4,906,230	N.A.
1929	8	3,391	4,410,535	1,335,610	"	13,179,884	"
1931	8	1,675	1,836,115	849,047	"	4,818,838	"
1933	8	1,629	1,279,093	771,327	"	5,211,177	"
1937	11	3,842	4,232,507	1,346,434	2,729,801	14,509,092	10,432,857
1939	9	3,784	4,347,064	1,376,568	2,086,945	15,862,142	12,398,629
1941	10	3,760	4,996,101	1,524,450	2,721,796	21,475,645	17,229,399
1944	10	4,050	6,401,185	1,635,829	2,380,230	21,836,376	17,820,317
1946	12	4,547	7,771,921	1,759,462	3,216,430	25,245,579	20,269,687
1949	17	4,053	10,569,071	1,499,439	4,668,869	39,784,651	33,616,343
1951	24	5,923	20,024,208	2,988,149	10,085,645	81,624,009	68,550,215
1953	24	6,482	24,567,463	3,783,653	10,305,046	86,078,924	71,990,225
1954	25	6,563	24,850,100	4,130,806	9,924,166	86,441,436	72,386,464
1955	30	6,729	28,116,049	5,117,137	11,180,264	99,675,651	83,378,250
1956	23	7,065	30,411,878	5,541,309	12,335,772	103,304,309	85,427,228

1. Gross value less cost of fuel, electricity, process supplies and containers.

TABLE 2. Production and Shipments of Asbestos by Canadian Mines, 1955 and 1956

Grade	1955			1956		
	Production	Shipments		Production	Shipments	
		Quantity	Selling value less containers ¹		Quantity	Selling value less containers ¹
	tons	tons	\$	tons	tons	\$
Crude—No. 1, No. 2, and other	717	724	608,052	728	717	692,677
Milled—Group 3 (Spinning)	41,844	43,081	16,040,789	37,754	33,929	14,071,703
Group 4 (Shingle)	249,682	234,998	36,596,691	265,477	246,295	42,124,569
Group 5 (Paper)	110,548	117,017	12,824,780	114,505	112,759	13,200,835
Group 6 (Stucco)	171,918	172,339	12,253,423	174,523	168,942	12,685,874
Group 7 (Refuse)	462,843	469,149	17,408,573	427,360	428,159	16,676,452
Group 8 (Sand)	26,458	26,494	459,009	22,704	23,448	407,859
Total, all grades	1,064,010	1,063,802	96,191,317	1,043,051	1,014,249	99,859,969
Gravel and stone (waste rock only) ²	28,582	28,582	34,553	45,428	45,428	52,507

1. The value of containers amounted to \$3,449,781 in 1955 and \$3,391,833 in 1956.

2. This production is included in the Sand and Gravel Industry.

TABLE 3. Tonnage of Asbestos Rock Mined and Milled, 1952-1956

	1952	1953	1954	1955	1956
Rock mined	12,989,320	13,912,839	14,793,760	17,696,357	21,922,874
Rock milled	10,915,938	11,189,027	11,394,571	12,427,002	13,740,326

TABLE 4. Shipments of Asbestos by Canadian Mines, 1947-1956

Year	Tons	Selling value at works	Year	Tons	Selling value at works
		\$			\$
1947	661,821	33,005,748	1952	929,339	89,254,913
1948	716,769	42,231,475	1953	911,226	86,052,895
1949	574,906	39,746,072	1954	924,116	86,409,212
1950	875,344	65,854,568	1955	1,063,802	96,191,317 ¹
1951	973,198	81,524,345	1956	1,014,249	99,859,969

1. Value of containers excluded in 1955 and 1956 but included in preceding years.

TABLE 5. Shipments of Asbestos by Canadian Mines, by Months, 1955 and 1956

Month	1955	1956	Month	1955	1956
	tons			tons	
January	61,609	58,550	August	98,799	98,316
February	68,520	67,853	September	95,039	81,953
March	78,524	76,778	October	97,656	90,920
April	98,658	99,558	November	112,626	111,645
May	94,485	101,934	December	83,041	60,453
June	91,389	79,773	Total	1,063,802	1,014,249
July	83,476	86,511			

TABLE 6. Imports and Exports of Asbestos and Asbestos Products, 1955 and 1956

Item	1955		1956	
	Tons	\$	Tons	\$
Imports				
Asbestos clutch facings for automobiles, motor vehicles and chassis	...	381,491	...	394,673
Asbestos brake linings for automobiles, motor vehicles and chassis ....	...	395,979	...	486,776
Asbestos brake linings and clutch facings, n.o.p. ....	...	160,326	...	224,704
Asbestos in any other form than crude, and all manufactures of, n.o.p.	...	2,872,276	...	3,951,187
Asbestos packing	131	243,760	203	326,295
Total accounted for .....	...	4,053,832	...	5,383,635
Exports				
Asbestos (crude)	586	480,613	560	526,215
Asbestos milled fibres	365,980	63,435,005	377,044	69,027,600
Asbestos waste, refuse and shorts	635,261	30,887,997	586,317	30,341,032
Asbestos brake lining facings .....	...	367,451	...	613,267
Asbestos packing .....	...	42,316	...	43,098
Asbestos manufactures, n.o.p. .....	...	2,492,500	...	3,086,863
Total accounted for .....	...	97,705,882	...	103,638,075

TABLE 7. TAXES PAID BY THE ASBESTOS MINING INDUSTRY, 1955 AND 1956

	1955	1956
	\$	\$
Dominion income tax, including tax on non-operating revenue	6,651,078	8,561,616
Provincial taxes:		
Mining taxes paid on net profits from production, including portion paid to municipality	1,772,173	2,468,871
Taxes paid on capital and places of business	71,634	94,098
Acreage taxes	1,682	2,805
Total provincial	1,845,489	2,565,774
Municipal taxes:		
Based on property evaluation	742,663	540,879
Based on non-operating revenue	1,266	5,773
Total municipal	743,929	546,652
Grand total taxes paid	9,240,496	11,674,042

TABLE 8. SPECIFIED MISCELLANEOUS EXPENDITURES BY THE ASBESTOS MINING INDUSTRY, 1954-1956

	1954	1955	1956
	\$	\$	\$
Workmen's compensation	406,147	392,694	504,664
Silicosis assessment	21,154	10,139	10,817
Unemployment insurance	163,161	174,685	212,030
Aggregate cost of all supplies purchased	14,160,955	19,268,357	18,681,791
Aggregate cost of plant and equipment purchased	16,888,261	10,528,490	8,376,077
Cost of buildings, machinery and equipment erected or installed during the year	19,808,345	14,181,462	15,067,243

TABLE 9. Employees and Their Earnings in the Asbestos Mining Industry, 1952-1956

Year	Number of employees				Total	Number of man-hours worked (all employees)	Earnings				
	Office and administrative		Workmen				Office and administrative	Workmen	Total		
	Male	Female	Male	Female							
1951	649	96	5, 151	27	5, 923	14, 337, 061	2, 824, 100	17, 200, 108	20, 024, 208		
1952	714	96	5, 481	27	6, 318	14, 012, 175	3, 570, 040	20, 055, 391	23, 625, 431		
1953	761	109	5, 582	30	6, 482	13, 934, 305	3, 766, 891	20, 800, 572	24, 567, 463		
1954	799	104	5, 626	34	6, 563	13, 846, 938	4, 022, 507	20, 827, 593	24, 850, 100		
1955	819	124	5, 764	22	6, 729	15, 165, 117	4, 626, 636,	23, 489, 413	28, 116, 049		
1956	897	132	6, 009	27	7, 065	15, 199, 540	5, 303, 697	25, 108, 181	30, 411, 878		

TABLE 10. Number of Workmen, by Months, 1955 and 1956 (Administration and office employees not included)

Month	1955		1956						
	Total	Mine			Mill			Total	
		Surface		Underground	Male	Female			
		Male	Female	Male					
January	5, 505	2, 487	21	989	2, 313	6	5, 816		
February	5, 563	2, 513	21	990	2, 298	7	5, 829		
March	5, 560	2, 513	19	1, 028	2, 304	8	5, 872		
April	5, 606	2, 488	20	1, 165	2, 322	7	6, 002		
May	5, 516	2, 585	20	1, 221	2, 351	7	6, 184		
June	5, 966	2, 778	21	1, 163	2, 324	6	6, 292		
July	6, 070	2, 981	20	1, 112	2, 317	6	6, 436		
August	6, 086	2, 694	22	1, 121	2, 276	6	6, 119		
September	6, 001	2, 677	23	1, 106	2, 297	6	6, 109		
October	5, 992	2, 580	23	1, 080	2, 317	6	6, 006		
November	5, 750	2, 552	23	1, 026	2, 320	6	5, 927		
December	5, 773	2, 506	24	1, 009	2, 300	6	5, 845		
Average	5, 786	2, 613	21	1, 084	2, 312	6	6, 036		
Man-hours worked	13, 203, 259						13, 249, 259		

TABLE 11. Fuel and Electricity Used in the Asbestos Mining Industry, 1956

Kind	Unit of Measure	Quantity	Cost at plant
Bituminous coal (a) From Canadian mines	short ton	11, 213	171, 232
(b) Imported	"	9, 975	143, 621
Sub-bituminous coal (from Alberta mines only)	"	—	—
Anthracite coal	"	26, 704	384, 712
Lignite coal	"	—	—
Coke (for fuel only)	"	—	—
Gasoline, (includes gasoline used in cars and trucks)	Imp. gal.	693, 416	265, 075
Kerosene or coal oil	"	18, 887	6, 046
Fuel oil	"	8, 311, 785	1, 362, 377
Wood (cords of 128 cubic feet of piled wood)	cord	2, 981	39, 389
Gas (a) Liquefied petroleum gases (propane, etc.)	Imp. gal.	28, 350	12, 453
(b) Other manufactured gas	M cu. ft.	—	—
(c) Natural gas	"	—	—
Other fuel	k.w.h.	425, 144, 433	3, 156, 404
Electricity purchased for power and lighting	"	—	—
Electricity purchased for other purposes			
Total (cost only) .....		...	5, 541, 309
Electricity generated (a) For own use	k.w.h.	6, 197, 133	...
(b) For sale	"	—	—

TABLE 12. World Production of Asbestos by Countries¹
 (Taken from the "Minerals Year Book" Published by the United States Bureau of Mines)

Country ¹	1951	1952	1953	1954	1955
short tons ²					
North America:					
Canada (sales) ³	973,198	929,339	911,226	924,116	1,092,384
United States (sold or used)	51,645	53,864	54,456	47,621	44,580
Total	1,024,843	983,203	965,682	971,737	1,136,964
South America:					
Argentina	4	4	4	4	198
Bolivia (exports)	348	513	810	33	—
Brazil	1,456	1,439	1,357	2,816	1,250 ⁵
Chile	4	4	4	4	4
Venezuela	287	434	185	743	1,757
Total ⁵	2,500	2,800	2,800	4,000	3,400
Europe:					
Finland ⁶	13,062	11,464	12,047	7,853	18,674
France	7,814	8,338	11,419	11,795	10,913
Greece	37	28	1	6	—
Italy	24,925	26,387	22,484	25,955	33,266
Portugal	344	185	105	30	56
Spain	45	33	—	176	4
U.S.S.R. ⁵	240,000	240,000	240,000	240,000	240,000
Yugoslavia	1,679	2,762	4,131	3,598	4,305
Total ^{1,5}	290,000	290,000	290,000	295,000	310,000
Asia:					
Cyprus	18,938	18,250	15,966	17,146	17,143
India	580	765	637	435	440 ⁵
Iran	—	3	55	—	—
Japan	6,478	3,370	4,495	6,916	6,950
Korea	4	4	4	233	2,048
Taiwan (Formosa)	39	26	—	163	405
Turkey	88	—	—	50	259
Total ^{1,5}	28,000	25,000	27,000	33,000	38,000
Africa:					
Bechuanaland	41	528	548	729	1,426
Egypt	1,375	66	220	—	—
French Morocco	666	635	600	597	631
Kenya	418	390	166	224	152
Madagascar	19	3	8	—	—
Mozambique	—	—	—	193	301
Rhodesia and Nyasaland, Federation of:					
Southern Rhodesia	77,663	84,834	87,739	79,962	105,261
Swaziland	34,964	34,769	30,103	30,142	32,613
Union of South Africa	107,368	133,839	94,817	109,151	119,699
Total	222,514	255,064	214,201	220,998	260,083
Oceania:					
Australia	2,865	4,546	5,566	5,279	5,993
New Zealand	911	764	—	—	—
Total	3,776	5,310	5,566	5,279	5,993
World total (estimate) ¹	1,570,000	1,560,000	1,505,000	1,530,000	1,755,000

1. In addition to countries listed, asbestos is produced in China, Czechoslovakia, and North Korea. Estimates are included in the total.

2. This table incorporates a number of revisions of data published in previous asbestos chapters.

3. Exclusive of sand, gravel and stone (waste rock only), production of which is reported as follows: 1951, 33,762 tons; 1952, 39,664 tons; 1953, 21,118 tons; 1954, 26,429 tons; 1955, 28,582 tons.

4. Data not available; estimate included in total.

5. Estimate.

6. Includes asbestos flour.

Canadian Chrysotile Asbestos Classification —
 (List of Standard Grades set up by the Committee on Uniform Classification and Grading of Asbestos Mines Products. This committee was formed in 1931 at the instigation of the Minister of Mines of the Province of Quebec, and the list of grades has been revised from time to time.)

The asbestos mines products are divided into two classes: "Crude Asbestos" and "Milled Asbestos", respectively, defined as follows:

"Crude Asbestos" consists of the hand-selected cross-vein material essentially in its native or un-fiberized form.

"Milled Asbestos" consists of all grades produced by mechanical treatment of asbestos ore.

"Crude Asbestos" and "Milled Asbestos" are sub-divided into groups designated and defined below.

Classification of the "Milled Asbestos" grades, in groups Nos. 3 to 7, inclusive, unless otherwise specified, is based on the Quebec Standard Testing Machine.

"Shipping Test" is the average for each carload or smaller shipment of tests representative samples taken at the time of shipping.

"Guaranteed Minimum Shipping Test" is that below which the actual shipping test shall not fall.

Crudes:

Group No. 1, Crude No. 1.	Consists basically of crude $\frac{3}{4}$ inch staple and longer
Group No. 2, Crude No. 2.	Consists basically of crude $\frac{3}{8}$ inch staple up to $\frac{3}{4}$ inch
Crude run-of-mine	Consists basically of unsorted crudes .
Crudes, sundry	Consists of crudes other than above specified .

Fibres:

Standard designation of grades	Guaranteed Minimum shipping test				
	No. of ounces on: ½-inch screen	4-mesh screen	10-mesh screen	Pan	
Group No. 3	3F 3K 3R 3T 3Z	7 4 2 1 0	7 7 8 9 8	1.5 4 4 4 6	0.5 1 2 2 2
Group No. 4	4H 4K 4M 4R 4T 4Z	0 0 0 0 0 0	5 4 4 3 2 1.5	8 9 8 9 10 9.5	3 3 4 4 4 5
Group No. 5	5D 5K 5M 5R	0 0 0 0	0.5 0 0 0	10.5 12 11 10	5 4 5 6
Group No. 6	6D	0	0	7	9
Group No. 7*	7D 7F 7H 7K 7M 7R 7T	0 0 0 0 0 0 0	0 0 0 0 0 0 0	5 4 3 2 1 0 0	11 12 13 14 15 16 16
Group No. 8	8S			Under 75 pounds per cubic foot loose measure.	
Group No. 9	9T			Over 75 pounds per cubic foot loose measure	

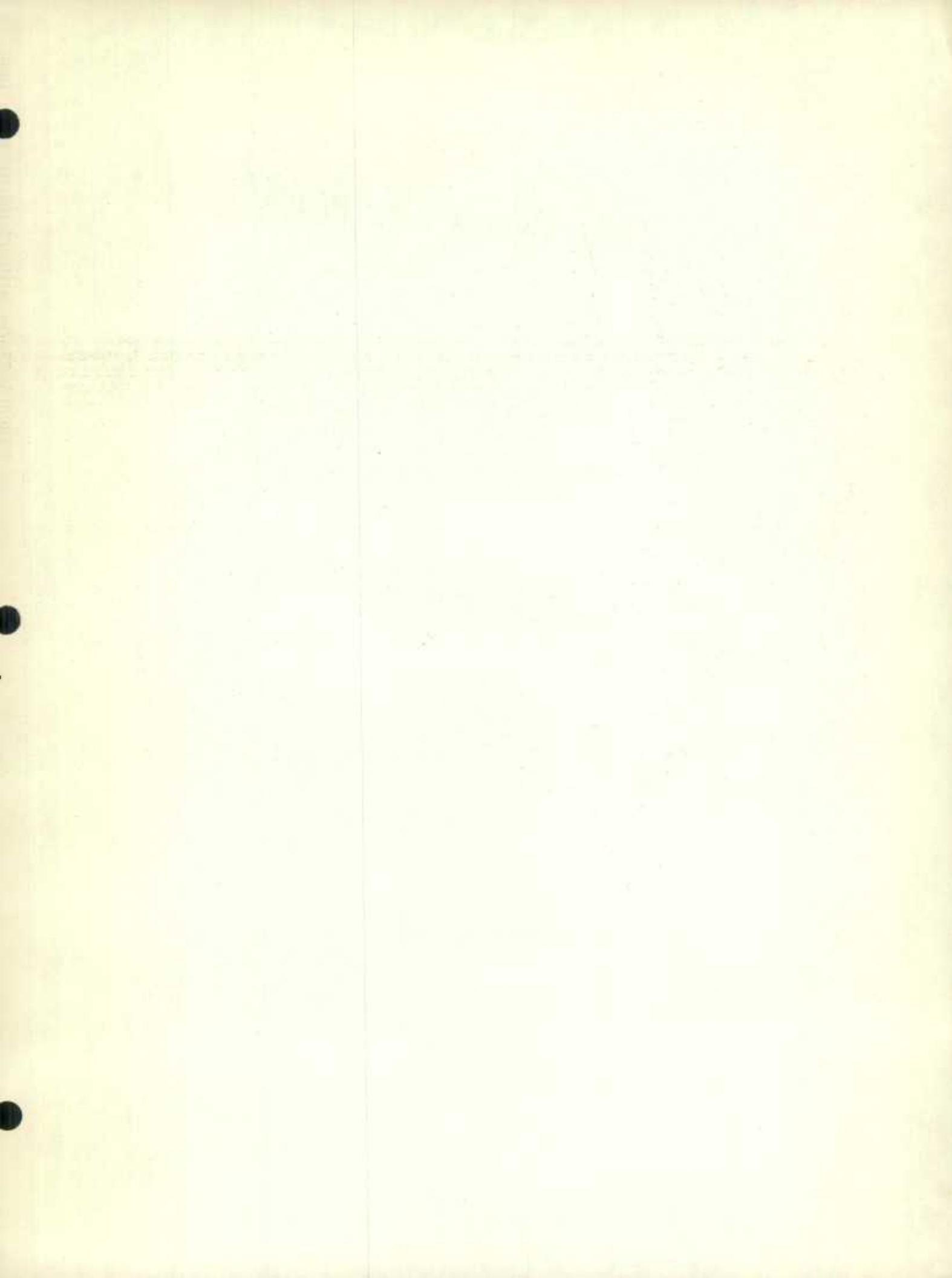
* The affix "F" designates "Floats" in all subsections of Group No. 7.

Directory of Firms in the Asbestos Mining Industry, 1956

Name of firm	Head office or general office	Location of mine
Newfoundland:		
Advocate Mines Ltd. ¹	330 Bay St. Toronto, Ontario	Baie verte
Quebec:		
Asbestos Corporation Ltd.	Thetford Mines	Thetford Mines, Black Lake, Coleraine
Bell Asbestos Mines Ltd.	Thetford Mines	Thetford Township
Canadian Johns-Manville Co. Ltd.	310 Victoria St., Montreal	Asbestos
Carey Canadian Mines Ltd. ¹	East Broughton Station	East Broughton
Chibougamau Asbestos Ltd. ¹	132 St. James St. W., Montreal	Roy Twp.
Cumberland, E.C. (Superior Asbestos)	1430 Peel St., Montreal	Broughton
Dominion Asbestos Mines Ltd.	660 Ste. Catherine St. W., Montreal	St. Adrien de Ham
Eastern Asbestos Co. Ltd. ¹	132, rue St-Jacques, Montreal	Coleraine
Empire Asbestos Ltd. ¹	934 - 12th Ave., Thetford Mines	Thetford
Flintkote Mines Ltd.	Thetford Mines	Thetford Mines
Golden Age Mines Ltd. ¹	85 Richmond St. W., Toronto, Ontario	Beauceville
Johnson's Asbestos Company	Thetford Mines	Coleraine
Johnson's Company Ltd.	Thetford Mines	Thetford Mines
Lachance Mines Ltd. ¹	161 Notre Dame St., Thetford Mines	Chesham Twp.
Lake Asbestos of Quebec Ltd. ¹	Box 88, Black Lake	Black Lake
National Asbestos Ltd. ¹	360 St. James St. W., Montreal	Thetford
Nicolet Asbestos Mines Ltd.	Norbestos, Warwick	Norbestos
New Lafayette Asbestos Co. ¹	80 Richmond St. W., Toronto	St-Odilon
Paradis, J.A. ¹	934 - 12ème Avenue, Thetford Mines	Thetford
Quebec Asbestos Corp. Ltd.	East Broughton Station	East Broughton Station
Ontario:		
Canadian Johns-Manville (Ontario) Ltd.	Matheson	Munro Township
British Columbia:		
Asbestos Corporation (Explorations) Ltd. ¹	Thetford Mines, Quebec	Ainsworth, Slocan
Cassiar Asbestos Corp. Ltd.	85 Richmond St. W., Toronto, Ontario	Cassiar

¹. Exploration or development work only.





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