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CANADA

THE ASBESTOS MINING INDUSTRY 1955



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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 Miscellaneous Metal Mining Industry, 25¢
- F — The Smelting and Refining Industry, 25¢
- G — The Coal Mining Industry, \$1.00
- H — The Crude Petroleum and Natural Gas Industry, 25¢
- I — The Asbestos Mining Industry, 25¢
- J — The Feldspar and Quartz Mining Industry, 25¢
- K — The Gypsum Industry, 25¢
- L — The Peat Industry, 25¢
- M — The Salt Industry, 25¢
- N — The Talc and Soapstone Industry, 25¢
- O — The Miscellaneous Non-metal Mining Industry, 25¢
- P — The Cement Manufacturing Industry, 25¢
- Q — The Clay and Clay Products Industry, 25¢
- R — The Lime Industry, 25¢
- S — The Sand and Gravel Industry, 25¢
- T — The Stone Industry, 25¢
- U — Contract Drilling in the Mining Industry, 25¢

THE ASBESTOS MINING INDUSTRY

1955

Producers' shipments of asbestos during 1955 amounted to 1,063,802 tons valued at \$96,191,317 compared with 924,116 tons valued at \$83,157,344 in 1954. In both years the value of containers has been excluded. There was an increase of 15.1 per cent in quantity and 15.7 per cent in total value.

The asbestos mining industry employed 6,729 persons at the mines or plants and distributed \$28,116,049 as salaries and wages. Fuel and electricity cost \$5,117,137 which included 359,880,254 kwh. of purchased electricity valued at \$2,765,590. Process supplies and containers cost \$11,180,264.

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 the Chibougamau area of Quebec.

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 per ton in December, 1955, were: Crude No. 1, \$960-\$1500; crude No. 2, \$595-\$900; spinning fibres, \$321-\$514; shingle fibres, \$150-\$200; paper stock, \$109-\$137; waste, \$77; shorts, \$35-\$70.

TABLE 1. Principal Statistics for the Asbestos Mining Industry, Significant Years, 1921-1955

Year	Establishments	Employees	Earnings	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	1,329	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
1952	23	6,318	23,625,431	3,092,959	10,044,266	89,295,913	76,158,201
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

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

TABLE 2. Production and Shipments of Asbestos by Canadian Mines, 1954 and 1955

Grade	1954			1955		
	Production	Shipments		Production	Shipments	
		Quantity	Selling value f.o.b. shipping point ¹		Quantity	Selling value f.o.b. shipping point ¹
	tons	tons	\$	tons	tons	\$
Crude—No. 1, No. 2, and other	766	725	645,608	717	724	610,830
Milled—Group 3 (Spinning)	41,189	35,208	13,408,238	41,844	43,081	16,205,846
Group 4 (Shingle)	195,257	192,285	31,995,977	249,682	234,998	37,400,073
Group 5 (Paper)	105,420	99,160	11,320,370	110,548	117,017	13,207,315
Group 6 (Stucco)	163,284	168,960	12,626,426	171,918	172,339	12,797,081
Group 7 (Refuse)	399,694	396,639	15,824,079	462,843	469,149	18,885,498
Group 8 (Sand)	31,257	31,139	588,514	26,458	26,494	534,455
Total, all grades	936,867	924,116	86,409,212	1,064,010	1,063,802	99,641,098
Gravel and stone (waste rock only) ²	26,429	26,429	32,224	28,582	28,582	34,553

1. Includes value of containers amounting to \$3,251,868 in 1954, and \$3,449,781 in 1955.

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

TABLE 3. Tonnage of Asbestos Rock Mined and Milled, 1951-1955

	1951	1952	1953	1954	1955
Rock mined	12,623,529	12,989,320	13,912,839	14,793,760	17,696,357
Rock milled	10,219,658	10,915,938	11,189,027	11,394,571	12,427,062

TABLE 4. Shipments of Asbestos by Canadian Mines, 1946-1955

Year	Tons	Selling value at works	Year	Tons	Selling value at works
		\$			\$
1946	558,181	25,240,562	1951	973,198	81,524,345
1947	661,821	33,005,748	1952	929,339	89,254,913
1948	710,769	42,231,475	1953	911,226	86,052,895
1949	574,900	39,746,072	1954	924,116	85,409,212
1950	875,344	65,854,568	1955	1,063,802	96,191,317 ¹

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

TABLE 5. Shipments of Asbestos by Canadian Mines, by Months, 1954 and 1955

Month	1954	1955	Month	1954	1955
	tons	tons		tons	tons
January	56,800	61,609	August	80,783	98,799
February	61,629	68,520	September	90,834	95,039
March	74,775	72,524	October	88,610	97,656
April	82,950	98,658	November	87,443	112,626
May	79,709	94,465	December	71,240	83,041
June	78,960	91,389	Total	924,116	1,063,802
July	70,383	83,476			

TABLE 6. Imports and Exports of Asbestos and Asbestos Products, 1954 and 1955

Item	1954		1955	
	Tons	\$	Tons	\$
Imports				
Asbestos clutch facings for automobiles, motor vehicles and chassis	...	259,560	...	381,491
Asbestos brake linings for automobiles, motor vehicles and chassis..	...	271,723	...	395,979
Asbestos brake linings and clutch facings, n.o.p.....	...	127,818	...	160,326
Asbestos in any other form than crude, and all manufactures of, n.o.p.	...	2,636,262	...	2,872,276
Asbestos packing	136	243,769	131	243,760
Total accounted for	...	3,539,132	...	4,053,832
Exports				
Asbestos (crude)	641	578,380	586	480,613
Asbestos milled fibres	312,844	53,875,653	365,980	63,435,005
Asbestos waste, refuse and shorts	574,243	28,112,456	635,261	30,387,997
Asbestos brake lining facings'.....	...	365,475	...	367,451
Asbestos packing	5,008	...	42,316
Asbestos manufactures, n.o.p.	931,891	...	2,492,500
Total accounted for	...	83,868,863	...	97,705,882

TABLE 7. TAXES PAID BY THE ASBESTOS MINING INDUSTRY, 1954 AND 1955

	1954	1955
	\$	\$
Dominion income tax, including tax on non-operating revenue	6,185,683	6,651,078
Provincial taxes:		
Mining taxes paid on net profits from production, including portion paid to municipality	2,146,164	1,772,173
Corporation income tax where levied in addition to mining tax	—	—
Taxes paid on capital and places of business	53,123	71,634
Acreage taxes	2,220	1,682
Royalties	—	—
Total provincial	2,201,507	1,845,489
Municipal taxes:		
Based on property evaluation	787,315	742,663
Based on non-operating revenue	10,492	1,266
Total municipal	797,807	743,929
Grand total taxes paid	9,184,997	9,240,496

TABLE 8. SPECIFIED MISCELLANEOUS EXPENDITURES BY THE ASBESTOS MINING INDUSTRY, 1953-1955

	1953	1954	1955
	\$	\$	\$
Workmen's compensation	376,568	406,147	392,694
Silicosis assessment	20,732	21,154	10,139
Unemployment insurance	164,191	163,161	174,685
Aggregate cost of all supplies purchased	11,886,894	14,160,955	19,268,357
Aggregate cost of plant and equipment purchased	13,213,582	16,888,261	10,528,490
Cost of buildings, machinery and equipment erected or installed during the year	17,529,859	19,808,345	14,181,462

MINERAL STATISTICS

TABLE 9. Employees and Their Earnings in the Asbestos Mining Industry, 1951-1955

Year	Number of employees						Number of man-hours worked (all employees)	Earnings		
	Office and administrative		Workmen		Total	Office and adminis- trative	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	815	124	5,759	22	6,720	15,145,101	4,616,236	23,476,435	28,092,671	

TABLE 10. Number of Workmen, by Months, 1954 and 1955 (Administration and office employees not included)

Month	1954		1955						Total	
	Total	Mine				Mill				
		Surface		Underground	Male	Female				
		Male	Female	Male						
January	5,538	2,496	22	1,005	1,975	2	5,500			
February	5,530	2,456	22	1,002	2,076	2	5,558			
March	5,517	2,470	21	991	2,071	2	5,555			
April	5,491	2,521	22	978	2,078	2	5,601			
May	5,620	2,484	23	974	2,028	2	5,511			
June	5,797	2,820	24	977	2,138	2	5,961			
July	5,819	3,011	15	944	2,093	2	6,065			
August	5,848	2,992	17	957	2,113	2	6,081			
September	5,721	2,882	18	946	2,148	2	5,996			
October	5,742	2,838	16	986	2,145	2	5,987			
November	5,638	2,562	23	982	2,176	2	5,745			
December	5,596	2,540	20	995	2,211	2	5,768			
Average	5,660	2,675	20	978	2,106	2	5,781			

TABLE 11. World Production of Asbestos by Countries¹
 (Taken from the "Minerals Year Book" Published by the United States Bureau of Mines)

Country ¹	1950	1951	1952	1953	1954
short tons ²					
North America:					
Canada (sales) ³	875,344	973,198	929,339	911,226	924,116
United States (sold or used)	42,434	51,645	53,864	54,456	47,621
Total	917,778	1,024,843	983,203	965,682	971,737
South America:					
Bolivia (exports)	183	348	513	810	33
Brazil	930	1,456	1,439	794	5
Chile	190	5	5	5	5
Venezuela	209	287	434	44	743
Total ⁶	1,700	2,400	2,700	2,000	2,500
Europe:					
Finland ⁷	12,069	13,062	6,724	12,047	7,853
France	8,219	7,814	8,338	10,251	11,795
Greece	33	37	28	—	2
Italy	23,626	24,925	26,387	22,484	25,955
Portugal	283	344	185	105	5
Spain	45	45	33	—	5
U.S.S.R. ⁶	240,000	240,000	240,000	240,000	240,000
Yugoslavia	1,056	1,679	2,762	4,131	3,598
Total ⁶	290,000	290,000	290,000	295,000	295,000
Asia:					
Cyprus	16,523	18,938	18,250	15,966	20,343 ⁸
India	233	580	765	637	5
Iran	—	—	3	55	5
Japan	6,243	6,767	3,373	4,495	6,916 ⁹
Korea	5	5	5	5	233 ⁹
Taiwan (Formosa)	238	39	26	—	163
Turkey	270	88	—	—	50
Total ⁶	25,000	29,000	25,000	28,000	35,000
Africa:					
Bechuanaland	—	41	528	548	729
Egypt	287	1,375	66	220	5
French Morocco	563	666	635	600	597
Kenya	252	418	390	166	224
Madagascar	1	19	3	8	5
Southern Rhodesia	71,527	77,662	84,834	87,738	79,962
Swaziland	32,667	34,964	34,769	30,103	30,142
Union of South Africa	87,413	107,367	133,838	94,816	109,151
Total	192,710	222,511	255,064	214,200	221,000 ⁶
Oceania:					
Australia	1,811	2,865	4,546	5,566	5,279
New Zealand	46	911	764	—	—
Total	1,857	3,776	5,310	5,566	5,279
World total (estimate) ¹	1,425,000	1,575,000	1,550,000	1,500,000	1,525,000

1. In addition to countries listed, asbestos is produced in Argentina, China and Czechoslovakia. 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: 1950, 48,007 tons; 1951, 33,762 tons; 1952, 35,317 tons; 1953, 21,118 tons; 1954, 26,429 tons.

4. Produced in Bahia only (incomplete figure).

5. Data not available; estimate included in total.

6. Estimate.

7. Includes asbestos flour.

8. Exports.

9. Excluding North Korea.

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:

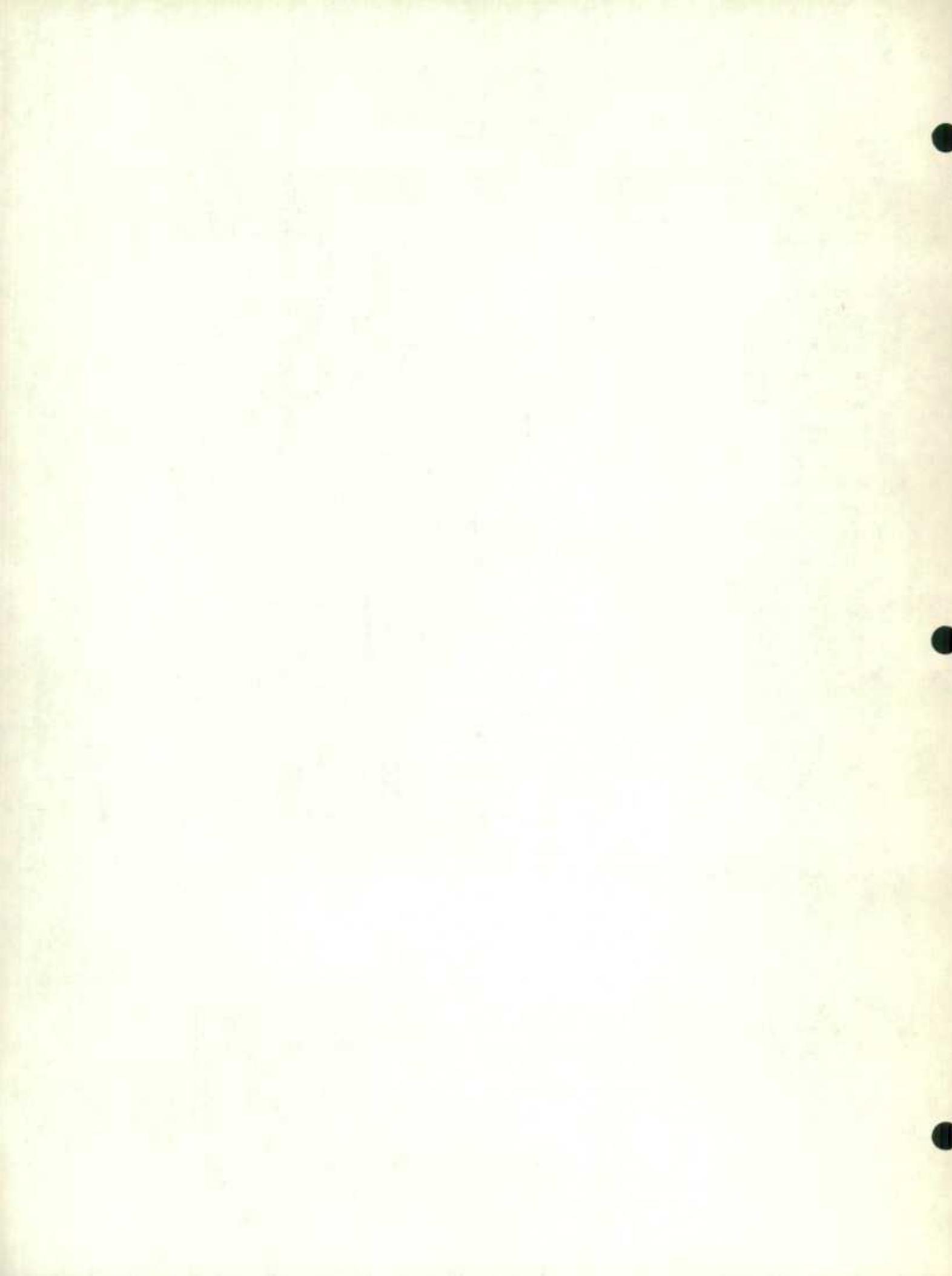
Standard designation of grades	Guaranteed Minimum shipping test			
	$\frac{1}{2}$ -inch screen	4-mesh screen	10-mesh screen	Pan
Group No. 3	3F	7	7	1.5
	3K	4	7	4
	3R	2	8	4
	3T	1	9	4
	3Z	0	8	6
Group No. 4	4H	0	5	8
	4K	0	4	9
	4M	0	4	8
	4R	0	3	9
	4T	0	2	10
	4Z	0	1.5	9.5
Group No. 5	5D	0	0.5	10.5
	5K	0	0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

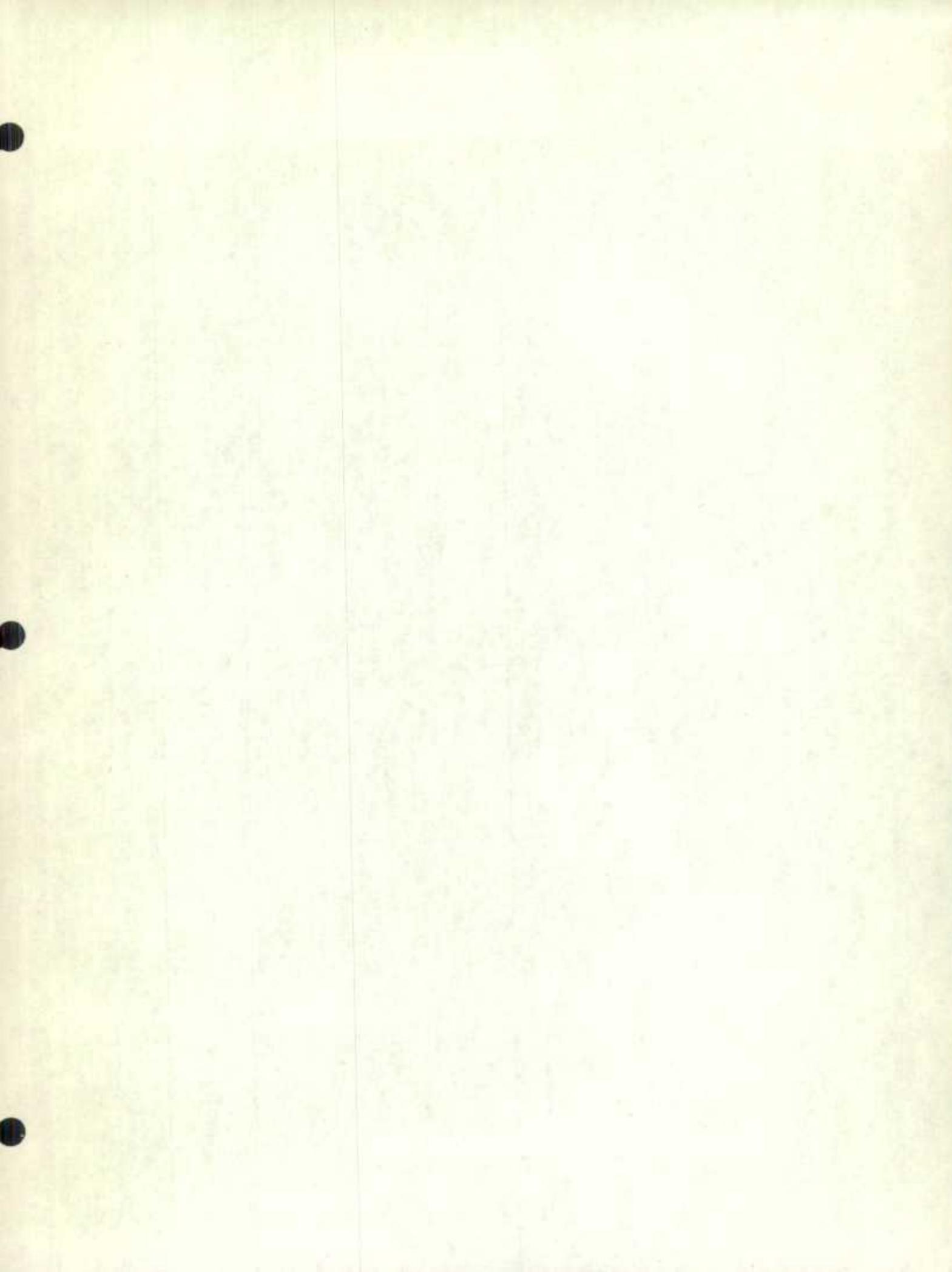
* The affix "F" designates "Floats" in all subsections of Group No. 7.

Directory of Firms in the Asbestos Mining Industry, 1955

Name of firm	Head office or general office	Location of mine
Quebec:		
Asbestos Corporation Ltd.	Thetford Mines	Thetford Mines, Black Lake, Coleraine
Asbestos Producers Corp. ¹	1410 Stanley St., Montreal	Coleraine
Atomic Mining Corp. ¹	492 Grant St., Longueuil.....	Garthby
Bell Asbestos Mines Ltd.	Thetford Mines	Thetford Township
Canadian Johns-Manville Co. Ltd.	Sun Life Building, Montreal	Asbestos
Central Asbestos Mines Ltd. ¹	1200 Alexander St., Montreal	Coleraine
Continental Asbestos Co. Ltd. ¹	Coleraine	Coleraine
Cumberland, E.C.	1430 Peel St., Montreal.....	Broughton
Danville Asbestos Ltd. ¹	132 St. James St. W., Montreal.....	Arthabaska
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.	934 – 12th Ave., Thetford Mines	Thetford
Flintkote Mines Ltd.	Thetford Mines	Thetford Mines
Giroux, Douglas, Mineral Exploration ¹	630 Dorchester St. W., Montreal.....	Roy Township
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.	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	St-Odelon	St-Odelon
Pentagon Mining Corp. ¹	1410 Stanley St., Montreal	Coleraine
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. Carried on exploration or development work only.





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