PLAINTIFF'S EXHIBIT
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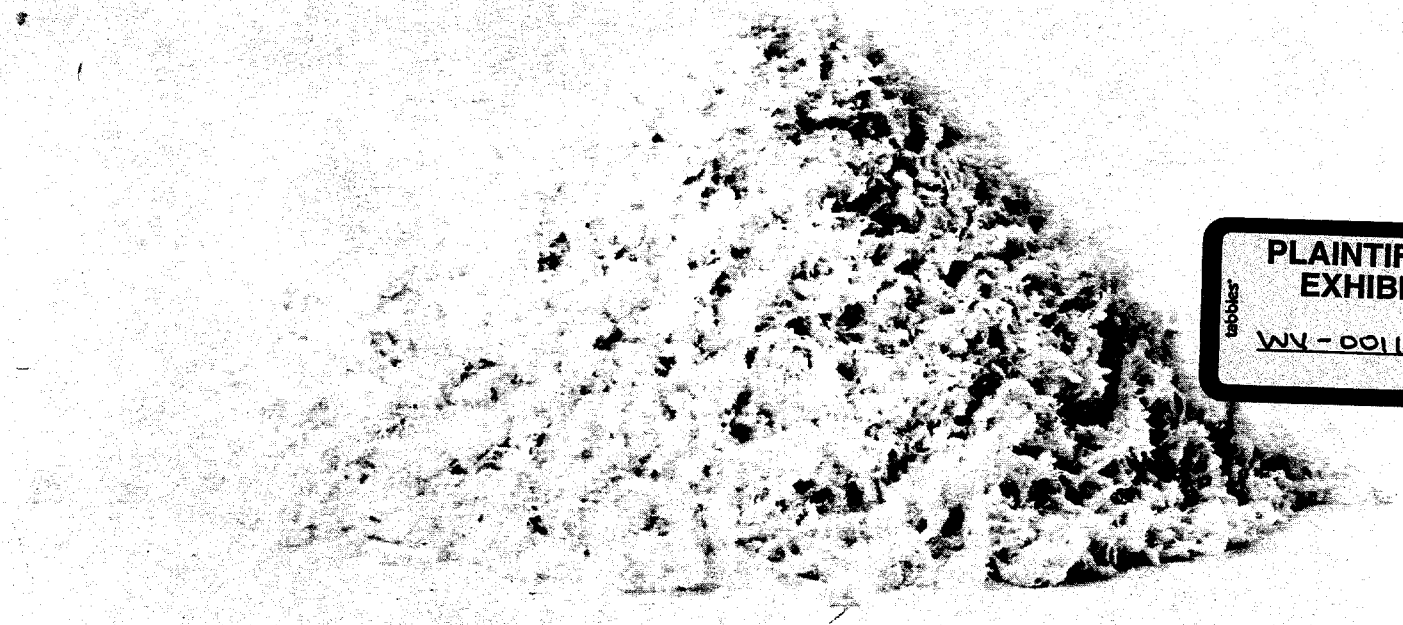
Carey-Canadian Asbestos



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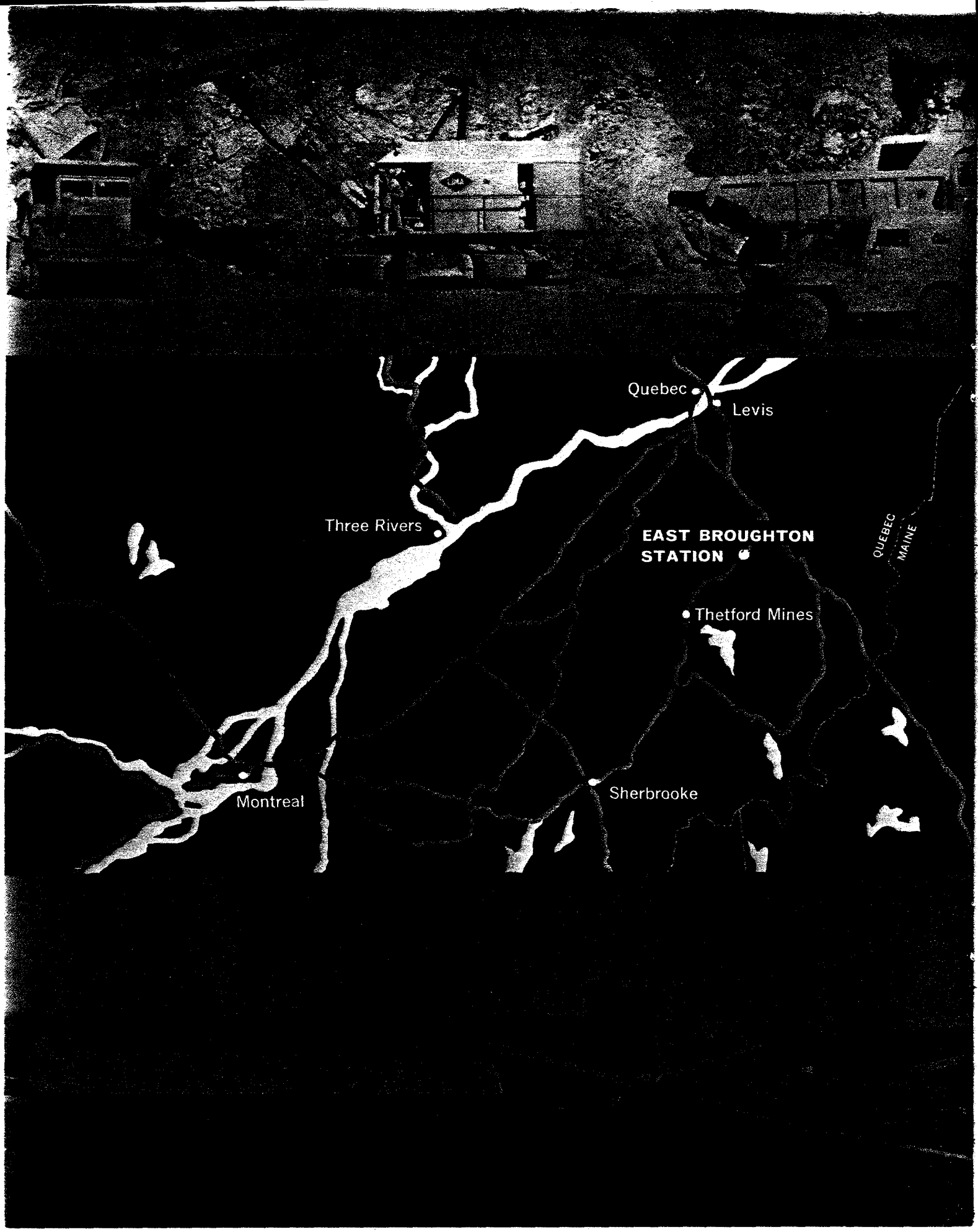
Quebec
Levis
Three Rivers
EAST BROUGHTON
STATION
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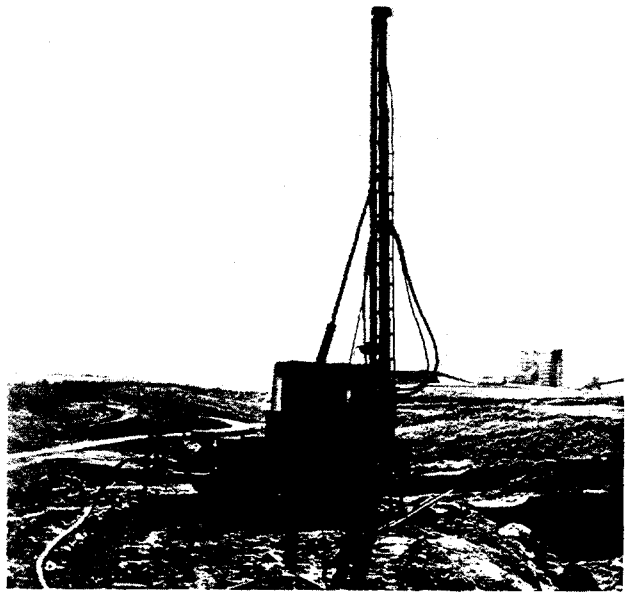
MAINE
Thetford Mines
Montreal
Sherbrooke



Self-Propelled Pneumatic Drill

fibre of many uses

Canadian Chrysotile Asbestos

Asbestos! One of the most fascinating developments of Nature, it serves man through its unique combination of properties. Found in serpentine rock, Chrysotile Asbestos is a fibrous mineral which can be made into such products as textiles and papers, and, at the same time, maintain the qualities of an indestructible mineral.

Many varieties of asbestos, found throughout the world, have commercial value. But of these, one—Chrysotile Asbestos—is so superior that it accounts for ninety percent of the world's industrial consumption. Of the world's total requirements for Chrysotile Asbestos, about sixty-five percent is produced in Canada. Soft, white, silky and yet as strong as steel, Chrysotile inorganic fibres serves mankind in many ways. Canadian Chrysotile Asbestos has increased the world's standard of living in traditional fire and heat resistant products and in numerous exciting new developments in this Age of Science.

CAREY-CANADIAN MINES, LTD.

Nowhere did Nature produce a finer Chrysotile Asbestos than in one small rectangle in the eastern section of Quebec. The deposits are located in the Serpentine Belt running northeasterly through the Eastern Townships of the Province. To this small rectangle, The Philip Carey Manufacturing Company came in 1918, acquiring an interest in two operating companies at East Broughton Station. In 1924, Carey took over complete control of the two properties and formed the Quebec Asbestos Corporation, Ltd., as a Canadian subsidiary. For thirty-four years Carey mined, milled and supplied high quality Chrysotile Asbestos from its Quebec Asbestos Corporation property.

In 1948 it became apparent that ore reserves were becoming exhausted and company geologists began a search for new deposits. A magnetic survey in 1949 indicated the possibility of an exciting discovery, a large anomaly four miles northeast of East Broughton Station on the northeast end of the Pennington Serpentine Dike. After extensive title searches, options were obtained and, later, drilling and sampling were started.

It soon became evident that not one but several large ore bodies had been discovered. The overburden of clay and gravel was removed from one of these ore bodies and a modern asbestos mill was erected on the property. The new mill went into operation on September 1, 1958, under the newly organized subsidiary, Carey-Canadian Mines, Limited.

CAREY-CANADIAN MINING OPERATION

Highest quality Carey-Canadian asbestos ore is mined by the efficient open pit method. A track-mounted, self-propelled pneumatic drill bores 4" holes for blasting. After blasting, power shovels load the ore into diesel trucks which haul the ore a short distance to the mill.

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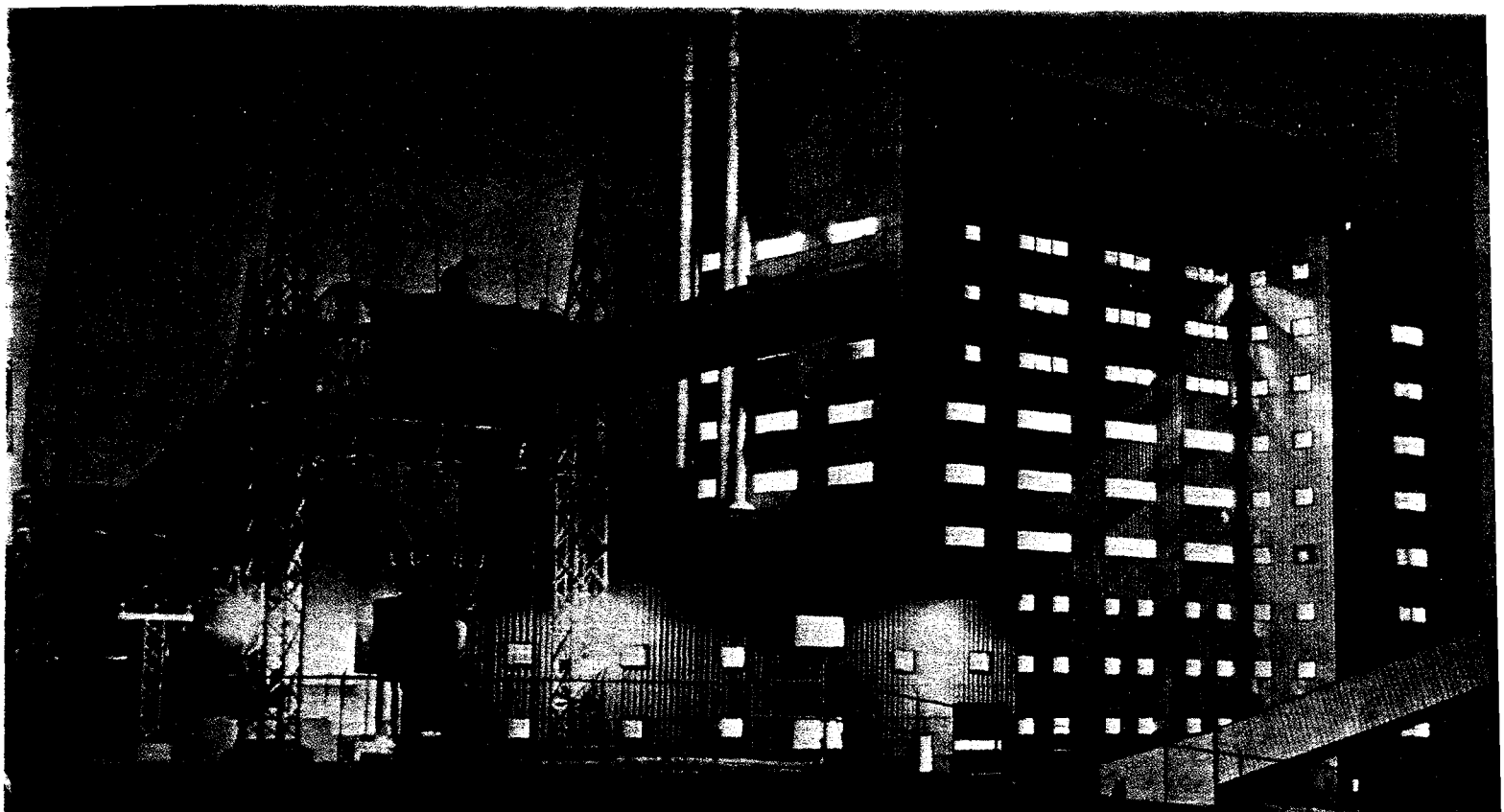

Carey-Canadian Milling Operation

The large twelve-story asbestos mill was designed to process 2,000 tons of ore per 24 hours. However, the mill can handle a maximum of 2,400 tons of ore per day and is now being expanded to treat even more. The mill is powered by electricity. The hundreds of motors consume 5,000 H.P. The heat dissipated by these motors is sufficient to keep the mill building warm in the winter time.

The ore is unloaded at the primary crushing building where it is reduced to a maximum of 4″ pieces by a primary jaw crusher. The ore is then conveyed to the drying building for further crushing and drying. After the ore has been dried by two louvre-type, oil-fired rotary dryers and reduced to a maximum 1″ size, it is stored in a 24,000-ton-capacity rock storage building.

Quality control begins at Carey-Canadian's rock storage building—which is unique in the asbestos industry. Asbestos ore differs in length of fibre from one section to another in the mine. Ordinarily, the ore is milled just as it comes from the mine. Thus, the character of the ore going directly from mine to mill dictates the milling operation. However, Carey-Canadian's new method of selective storage and selective feeding provides complete control of this problem. Ore from different sections of the mine is stored in separate locations in the rock storage building. From a central control panel in the mill, a particular type of ore can be selected and fed to the mill at a regulated rate. Or two or three varieties of ore can be blended and fed simultaneously.

Thus the right selection or mixture of ores can be fed to the mill for the desired grades of asbestos. This modern system of uniform and selective mill feeding is a most important engineering advance for superior quality control.

The ore is conveyed from the dry rock storage building to the main mill building where the fibre is released from the rock in vertical hammer mills, then picked up by air from standard and gyrating screens and collected in cyclone collectors. Huge fans at the top of the mill are capable of moving 700,000 cubic feet of air per minute. This air is used to pick up asbestos from screens and to lift asbestos from one operation to another. Thirteen tons of air are required for every ton of ore treated.

Fibre collectors retain all but the fine fibres which pass on through to be gathered in the large fines-collection-system at the top of the mill. Carey-Canadian's Asbestos Floats are produced from the material collected by this system. The released and collected fibres are cleaned and graded with standard graders and gyrating screens. Bulk densities are controlled with vertical fiberizers, and grit content is controlled with whizzers, or specific gravity separators.

Maximum flexibility was designed into the circuits of this new mill to allow production of many grades for various industrial requirements. Quality control was foremost in the minds of the designers of this mill; e.g., large-capacity fibre bin blenders were provided to assure uniformity.

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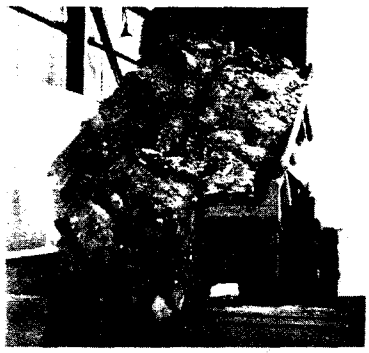
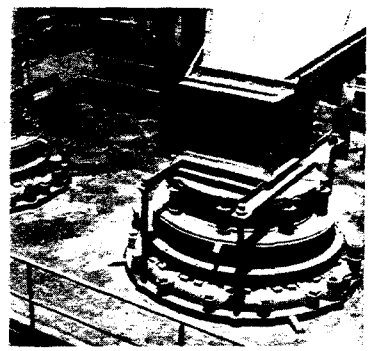
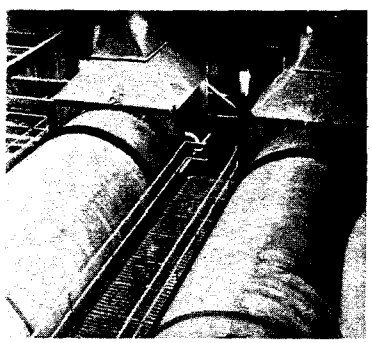
1. Unloading ore at primary crusher building



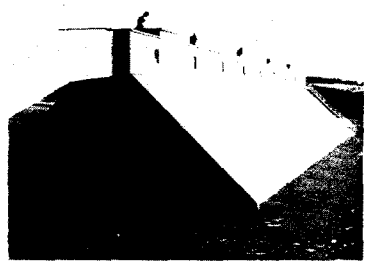
2. Secondary and tertiary crushers



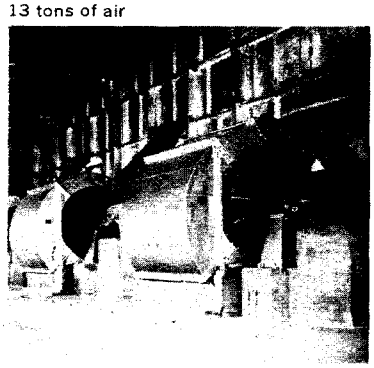
3. Oil-fired rotary dryers



4. 24,000-ton ore storage bin. Push buttons control feed to mill



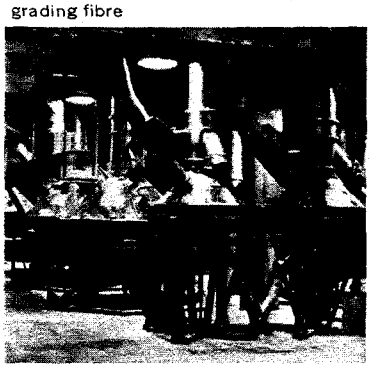
5. Every ton of ore processed requires 13 tons of air



6. Cyclones collect fibres from the air stream



7. Gyrating screens for cleaning and grading fibre



8. Specific gravity separators remove unwanted grit



Quality Control

To assure asbestos of the highest quality and uniformity, two laboratories operate continuously in Carey-Canadian's asbestos mill. The Production Control Laboratory runs quick tests at frequent intervals to check uniformity and grading. Samples are obtained by pushing buttons. The buttons actuate solenoid valves in the finished fibre flow lines, and the samples drop through piping into small bins installed in the wall of the laboratory.

The Shipping Test Laboratory performs specific tests for individual customers to check the fibre before shipment. Samples are taken from every tenth bag throughout each lot and composited for testing.

MILLED GRADES OF CANADIAN CHRYSOTILE ASBESTOS

Standard Canadian Chrysotile Asbestos Grades were set up by the Committee on Uniform Classification and Grading of Asbestos Mines Products, by authority of the Minister of Mines of the Province of Quebec.

Classification of milled asbestos grades is based on the Quebec Standard Testing Machine. This machine separates and classifies into its component fibre lengths a one pound sample of asbestos fibre on ½", 4 and 10 mesh screens and pan by shaking action. The screens are shaken exactly 600 times at a speed of 328 R.P.M. The weight, in ounces of fibre, retained on each screen and in the pan determines the grade. For example, Grade 5R tests 0-0-10-6. ½" mesh screen—0 oz. 4 mesh screen—0 oz. 10 mesh screen—10 oz. Pan—6 oz.

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Canadian Chrysotile Asbestos Classification

Uses of Asbestos with Corresponding Recommended Carey Grades

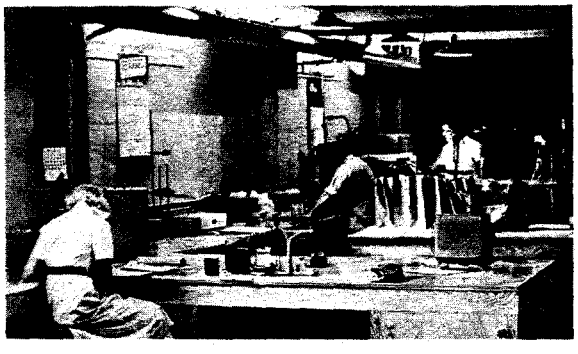
Growing Importance of Asbestos Short Grades

The use of Canadian Chrysotile Asbestos Shorts has grown tremendously until today, use of the 7-group fibres exceeds the usage in tons of all other grades combined. Shorts are used in liquids, semi-solids, and solid compositions where strong, flexible, inorganic fibres are needed to form interlocked reinforcing webs which add durability and toughness for resistance to heat, wear, breakage and abrasion. Carey-Canadian is a large producer of uniform grades of asbestos shorts.

COMPOSITION OF CHRYSOTILE ASBESTOS

Chrysotile asbestos is a hydrous magnesium silicate represented by the chemical formula $3Mg\ 0,\ 2Si\ 0_2,\ 2H_20$. The fibre is finer than cotton, but, at the same time, the fibre is tough, flexible, infusible and resists time, fire, weather and many acids and alkalies. The fibre is as dense or heavy as the rock in which it occurs, yet these fibres when milled are light as thistledown.

Chrysotile asbestos was formed millions of years ago when a combination of high pressures, hot liquids and gases acting at great depths dissolved the serpentine. Later the mass cooled and the liquified material recrystallized in the form of fibrous asbestos in cracks and seams in the serpentine. The percentage of fibre to rock in the ore is relatively low. Therefore, tremendous quantities of ore must be treated to produce finished fibre.



Research laboratories at the mine and in Cincinnati are ready to assist you with asbestos problems.

Physical Properties of Carey-Canadian Asbestos Fibres

Carey-Canadian Chrysotile Asbestos is noted for very light color, uniformity of grading, relatively low iron content and freeness from rock particles and large fibre bundles.

Other physical properties are: Specific gravity—2.2 to 2.3. Hardness—3.5 on Moh's scale. ph value—9.4.

Carey-Canadian Research

Two complete research laboratories, one at East Broughton and one at Cincinnati, Ohio, constantly probe for better methods, to produce, test and use asbestos. Carey's extensive experience with asbestos and asbestos products is at your service to help solve problems relating to grade selection, blending and application of asbestos.

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Packaging and Shipping

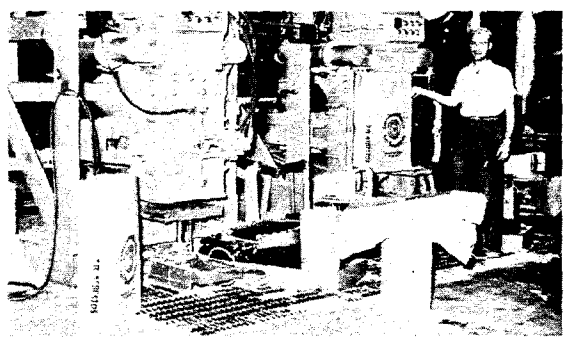
The following 100 lb. bags are available for particular grades as shown below:

Type of Bags	*Grades Available*
Loose filled jute	All grades
Pressure-packed jute	All grades except 3 group and floats
Pressure-packed 4 ply paper (Pressure-packed 5 ply paper for overseas shipments only.)	All grades except 3 group, floats and 7M-90.
Loose filled 4 ply paper (Loose filled 5 ply paper for overseas shipments only.)	Short grades only except 7D grades.

Asbestos short grades may be packaged in 50 lb. loose filled paper bags at an additional cost.

When packages other than standard bags listed above are required, quotations will be furnished on request.







Palletized with interlocked stacks for stability or unitized with bags glued together to prevent shifting.

PRESSURE-PACKED BAGS

This new type bag has many advantages: a. Suitable for palletizing for lower handling costs. b. Smaller, squared off package takes up less storage space and is easily stacked. c. Lower ocean rates on export shipments.

The 3 ply kraft paper pressure-packed bag has these additional advantages: a. Not only can this bag be palletized, but it can be unitized to allow mechanical handling. b. Paper is cleaner, and keeps fibre dryer. c. No contamination from loose jute fibres, bag ravelings and twine. d. Easier grade identification. e. Faster bag opening.

Palletized and Unitized Shipments

All pressure-packed bags can be palletized by interlocking during stocking to make a stable pallet load. Pressure-packed paper bags can be palletized and unitized on expendable fibreboard pallets at point of shipment to allow mechanical unloading at destination. Mechanical unloading with fork-lift trucks can effect big savings over manual labor.

Overseas Export Shipments

Overseas export shipments are made through the Port of Quebec. Freight rates are higher during the winter months than for the other months of the year. Information on inland and ocean freight rates, surcharges, insurance, etc., is available from the Sales Department upon request.

Service

Excellent facilities and trained personnel at Carey-Canadian Mines, Ltd., assure you of high quality asbestos and prompt service. A staff of qualified Sales Engineers is at your service for information and assistance. Strategically located Carey-Canadian Distributors stock popular grades for prompt service.

For further information please write Carey-Canadian Mines, Ltd., at either address: East Broughton Station, Province of Quebec, Canada or P. O. Box 95, Cincinnati 15, Ohio

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FORM 6461—7-60—7.5M RP

LITHO IN U.S.A.