

Page No. 109
Name of R. J. Merrill
April 15/55
Shannon Kernaghan
Official Reporter

QUEBEC
ASBESTOS MINING
ASSOCIATION

SPECIAL SPRING MEETING
THE BELLEVIEW-BILTMORE
BELLEAIR

CLEARWATER, FLORIDA

APRIL 17-20, 1969

Karl V. Lindall
President

Paul A. Fikens
General Manager

QUEBEC
ASBESTOS MINING
ASSOCIATION

ASBESTOS CORPORATION LTD.,

THETFORD MINES, QUE.

BELL ASBESTOS MINES LTD.,

THETFORD MINES, QUE.

CANADIAN JOHNS-MANVILLE CO. LTD.,

ASBESTOS, QUE.

CAREY-CANADIAN MINES LTD.,

EAST BROUGHTON, QUE.

FLINTKOTE MINES LTD.,

THETFORD MINES, QUE.

LAKE ASBESTOS OF QUEBEC LTD.,

BLACK LAKE, QUE.

NATIONAL ASBESTOS MINES LTD.,

THETFORD MINES, QUE.

NICOLET ASBESTOS MINES LTD.,

NORDBESTOS, QUE.

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1. LIST OF OFFICERS AND DIRECTORS

QUEBEC ASBESTOS MINING ASSOCIATION

OFFICERS AND DIRECTORS

1969

Mr. K.V. Lindell	-	President
Mr. R.J. Merrill	-	Vice President
Mr. R.S. Coleman	-	Director
Mr. J.A. Main	-	Director
Mr. M.J. Messel	-	Director
Mr. W.W. Cughtred	-	Director
Mr. F.P. Smith	-	Director
Mr. Ivan Sabourin	-	General Counsel
Mr. George Robinson	-	Treasurer
Mr. Paul-A. Filteau	-	General Manager
		Secretary

2. STANDING COMMITTEES

QUEBEC ASBESTOS MINING ASSOCIATION

STANDING COMMITTEES

1969

TECHNICAL COMMITTEE

Chairman - R. Dodds-Hebron

Members - G.F.A. Brink, J. Ciansante, M.C. Pharo,
W.H. Smith, W.P. Archer, V.C. Lindsay,
J.J. Sztuke, J.C. Blais, R. Lefebvre,
R. Gale, M. Cossette.

UNIFORM CLASSIFICATION AND GRADING COMMITTEE

Chairman - W.H. Foster

Members - R.J. Merrill, V. Lindsay, J.P. Wiser,
J.C. Blais, R. Dodds-Hebron, R. Gale,
W.H. Foster.

PUBLIC RELATIONS COMMITTEE

Chairman - I.C. Campbell

Members - R.S. Coleman, Y. Couture, R.J. Merrill,
L.C. Piere.

TRAFFIC COMMITTEE

Chairman - I.C. Campbell

Members - W.J.W. Smith, L.J. Webster, D. Poirier,
L.R. Calanoy, G.R. Bison, M. Roy,
D.M. Akers.

INDUSTRIAL RELATIONS COMMITTEE

Chairman - J.O. Eby

Members - H. Gagnon, J.L. Cartshore, W.H. Bonneville,
M. Le Couvé, J.C. Mooney, J. Camiré,
D. Poirier, Y. Bolduc, R. Fillion.

LEGISLATION AND TAXATION COMMITTEE

Chairman - Michael J. Messel

Members - G. McCann, D. Rousseau, G. Vaillancourt,
G. Moad, R.S. Coleman, Al Dennis, D. Poirier.

OCCUPATIONAL AND ENVIRONMENTAL HEALTH COMMITTEE

Chairman - Karl V. Lincell

Members - M.W. Cugnet, F.P. Smith, M.J. Messel

ENVIRONMENTAL CONTROL COMMITTEE

Chairman - J.R.M. Hutcheson

Members - M.H. Foster, L.C. Pluze, M. Prus.

3. LIST OF MEMBERS AND GUESTS

QUEBEC ASBESTOS MINING ASSOCIATION
SPECIAL SPRING MEETING - BELLEVUE-BILTMORE, CLEARWATER, FLORIDA

MEMBERS AND GUESTS

Asbestos Corporation Limited:	Mr. W.W. Doughtred Mr. P.H. Riordon Mr. I.C. Campbell Mr. W.H. Foster
Bell Asbestos Mines Limited:	Mr. F.P. Smith Mr. R.M. Bateman Mr. C.W. Smith Mr. R. Dodds-Hebron Mr. W.J.W. Smith
Canadian Johns-Manville Co. Ltd:	Mr. C.B. Burnett Mr. D.T. Colton Mr. D. Pouliatine Mr. A.A. Fisher Mr. K.V. Lindell Mr. J.O. Eby Mr. H.W. Hendry Mr. J.R.M. Hutcheson Mr. Y. Couture
Carey-Canadian Mines Limited:	Mr. R.J. Merrill Mr. A.H. Eagenstoss
Flintkote Mines Limited:	Mr. J.A. Main
Lake Asbestos of Quebec Limited:	Mr. R.D. Bradford Mr. R. Hannesbach Mr. M.J. Messel Mr. L.C. Plouffe Mr. R.P. Gagnon
National Asbestos Mines Limited:	Mr. J.W. Duncan Mr. E.J. Killian Mr. R.S. Coleman
Cassiar Asbestos Corporation Ltd:	Mr. J.D. Christian
Institute of Occupational and Environmental Health (IOEHA):	Dr. G.W. Wright Dr. P. Pelner
Quebec Asbestos Mining Association:	Mr. George Robinson Mr. Ivan Sabourin Mr. Paul-A. Filteau

4. AGENDA

SPECIAL MEETING OF THE
QUEBEC ASBESTOS MINING ASSOCIATION
TO BE HELD APRIL 18th & 19th, 1969,
AT 9.30 a.m. IN THE BELLEAIR ROOM OF THE BELLEVIEW-BILTMORE,
CLEARWATER, FLORIDA

AGENDA

APRIL 18th, 1969

1. Minutes of the Meeting of March 25, 1969.
2. Committee Reports:
 - a) Technical
 - b) Uniform Classification and Grading
 - c) Industrial Relations
 - d) Traffic
 - e) Legislation and Taxation
 - f) Public Relations
 - g) Environmental Control
3. New Business.
4. Comments on General Business Conditions.
5. Adjournment.

APRIL 19th, 1969

1. Occupational and Environmental Health Committee.
 - a) Report from Secretary of Executive Committee.
 - b) Remarks by Chairman of Scientific Committee on developments up to date.
 - c) Review by Scientific Secretary of his activities and status of projects under direction of:
 - Dr. J.C. McDonald (2)
 - Dr. E.C. Vigliani
 - Dr. B. Pernis
 - Dr. L. Neri
 - Dr. Dumont

2. Adjournment.

5. MINUTES OF MEETING OF MARCH 25th, 1969.

MINUTES OF THE 109th MEETING OF THE
QUEBEC ASBESTOS MINING ASSOCIATION
HELD ON TUESDAY, MARCH 25th, 1969,
AT THE MOUNT ROYAL HOTEL, MONTREAL, P.Q.

Present:

Messrs.	K.V. Lindell	I.C. Campbell	M. Frus
	R.S. Coleman	M.C. Carpenter	P.H. Riordon
	J.A. Main	R. Dodds-Hebron	Geo. Robinson
	M.J. Fassel	J.O. Eby	I. Sacourin
	W.W. Dugntred	W.H. Foster	P.-A. Filteau
	F.P. Smith	D. Poirier	

The President, Mr. K.V. Lindell, chaired the meeting.

Comments, if any, as to minutes of Meeting of January 28th, 1969, were requested and in this connection it was

Moved and seconded that minutes of January 28th be corrected to reflect the appointment of Committees as previously constituted.

CARRIED.

The President elaborated on the matter of the medical research expenditures left unsolved at meeting of January 28th. (See page 6 of minutes). To this effect, he distributed a list of approved research expenditures to date and for future years, indicating that Johns-Manville was prepared to put up $\frac{1}{4}$ of 1% of sales in addition to the approved budget of the I.O.C.H., and hoped that other companies

would follow. Naturally, this is a pledge and any recommenced commitment by the Scientific Committee has to be approved by the Executive Committee of the Institute. Following an expression of views by all directors, it was

Moved and seconded that member-companies share the expenses of the total budget of the I.O.E.M. on the basis of $\frac{1}{3}$ of 1% of sales, with companies reserving the right to limit their allocation to $2\frac{1}{3}$ % of net profits. Sales figures to be prepared by Riddell, Stead, Graham and Hutchison.

ADOPTED.

Approval of minutes of Meeting of January 28th was then carried.

TECHNICAL COMMITTEE

The technical committee met on March 19th, and because of the absence of two sub-committee chairmen, only a partial report can be given at this time.

1. Filtration of asbestos-cement-silica mixes - The sub-committee visited the Pulp & Paper Institute, and after conferring with knowledgeable research members the committee found that no procedure or work of the institute was of assistance to them. At the next meeting of the sub-committee it is planned to review Mr. Nemeth's report along with the comments from member-companies.

2. Editorial Sub-Committee - The translation of the summary of the tests in the Manual of Testing Procedures for Chrysotile Asbestos has been completed. It is planned to circulate copies to the member-companies to obtain comments on how laboratory technicians interpret the summary.

3.

3. Magnetic Rating - The round robin involving twelve laboratories showed the apparatus to be reliable and that most of the difficulty lies in sampling or other operator variances from the procedure. The Asbestos Textile Institute is planning to propose the use of the Turner Newall Magnetic Rating Apparatus for an A.S.T.M. test.

4. A.S.T.M. Meeting - Mr. Cossette reported on the meeting of Committee D-30 which took place in New Orleans. The G.A.M.A. Rotap Procedure will shortly be submitted for A.S.T.M. approval once it has been rewritten in the proper format.

5. Miscellaneous - Report on the activities of the F.S.U., Color Test, and Wet Classification sub-committees to be submitted at the next meeting.

The Chairman also tabled a letter from the Indian Standards Institution requesting authorization to incorporate certain procedures appearing in the manual of Testing Procedures in developing tests for amphibole asbestos. The matter to be referred to the Committee for recommendation to the Directors.

UNIFORM CLASSIFICATION AND GRADING COMMITTEE

The Chairman reported as follows:

1. Sherbrooke Laboratory - Work is progressing favourably on the Zeiss Particle Size Analyzer and on the Image Shearing. Most technical problems have been solved and clarity of photos has improved. It appears to have real promise for most fibres except some that are very open and which will not align for measuring.

2. Fibre Inspector - The Fibre Inspector has taken on the task of standardizing Colour Reflection meters for those Companies who request the service.

3. "Random Production Q.S." Testing - A series of tests have been performed, by the Sherbrooke Laboratory, on a comparison of banging the Q.S. 10 mesh screen (which is not too consistent) vs using a rubber stopper on the screen during the test cycle. The latter approach holds promise and will probably be adopted for future "Random Production Q.S." testing.

The first "Comparison Report - Shipping Tests and Random Production Q.S. Tests", for the 3 month period Oct.-Dec./68, was issued on Feb. 20; such will be issued every 3 months in future.

4. Research Assistance - A copy of Appendix 1. of the U.C. & C. Committee Minutes of Jan. 22/69 was given to each Director. Subject to some further checking it is proposed to press for official recognition, in Ottawa, for the need for this research and the need for a planned program with these objectives. Eventually the assistance of some C.A.M.A. Directors may be necessary to get the program to the Ministerial level.

As to the "National Committee on Mining and Metallurgical Research" the only industry representative on this Committee is the President of the Mining Association of Canada. No doubt, additional representatives will be offered on sub-committees that will eventually be appointed.

Further to the report of the Chairman, a proposal was placed before the Meeting that all groups of fibres be reported by grades for each company on the monthly Fibre Inspector's report. The U.C. & C.C. to study this proposal as to possible difficulties involved.

5.

The Chairman tabled a letter from Nicolet Industries requesting that minutes of the meetings of the U.C. & C.C. be forwarded to the Director of their technical service; such a request was unanimously refused and the General Manager directed to advise accordingly.

INDUSTRIAL RELATIONS COMMITTEE

Reporting on present labour negotiations, the Chairman pointed out that negotiations had been hampered by arbitration procedures taking place at the same time and also because of sickness suffered by certain negotiators. So far no particular problem has been detected and it is not known what sort of settlement would satisfy the Union.

The question of hearing tests conducted at the time of pre-employment and annual physical exams was discussed at length. It was emphasized that such should be required, if companies wished to avoid future compensation claims.

In the case of the employees of Nicolet Asbestos Mines, who have been laid off as a result of the closing down of the Mine, Counsel stated that so far no claims had been submitted to the Workmen's Compensation Board. However, because of presumed exposure to asbestos and possible future asbestotic lung neoplasia, the Board would very likely grant a 10% incapacity, even if no incapacitating condition were detected at this time. Counsel has been asked to make an investigation as to any liability to the Industry as a result of future claims.

Since the last meeting the President and Counsel visited with the President and Commissioner Bellemare of the Workmen's Compensation Board. It was agreed to organize a meeting of our company doctors and those of the Workmen's Compensation Board to discuss points of view on various matters. This would take the form of a limited informal session, possibly at the Seignior Club.

Mine Rescue Resolution - Counsel was directed to settle the matter on behalf of Asbestos Corporation Limited and the Association with the Department of Natural Resources.

TRAFFIC COMMITTEE

The Chairman reported that several meetings of the Traffic Committee had been held since the last meeting of the Association in January, and that arrangements had been made with the Wallenius Line to carry asbestos to Continental ports, excluding French ports, at a rate of \$20. (groups 1,2,3,4 and 5) and \$18. (groups 6 and 7), which represents a 75 cent increase per ton over the rates prevailing last year.

Other negotiated rates were as follows:

United Kingdom	- + \$1.25
Australia/New Zealand	- + \$1.50
Far East	- + 5%
West Coast/South America	- + 10%
Mediterranean	- + \$3.00 (temporary)

Several of the Conferences have introduced allowances for palletized or unit loads. It would appear that a longshoremen strike at St. Lawrence ports is inevitable and will likely commence on April 5th unless there is government intervention. In anticipation of this emergency, inland rates have been negotiated to East Coast ports effective April 1st.

The Agreed Charge railroad rate to St. Lawrence River ports has been renewed for another year with no change in the rates.

Railroad container rates to Montreal on a truck competitive basis have been established, and it is anticipated that similar rates will be negotiated to other St. Lawrence River ports.

Domestic inland rates within Canada have been increased between 4% and 6%.

LEGISLATION AND TAXATION COMMITTEE

A sub-committee on taxation has been formed under the chairmanship of Mr. G. McCammon to study the position of the Industry with regards to federal, provincial, municipal taxes and mining duties. Taxation, reported the Chairman, is presently in a state of flux upwards; at the local level for instance, school taxes are increasing substantially from year to year.

The sub-committee plans to continue to act on a joint basis with the C.M.M.A. and the Mining Association of Canada. The latter is actively preparing representations for any general tax reform which the Federal Government may decide to propose in the near future. In this connection, the Chairman stressed the importance of having industry tax figures available for discussions with government people and hoped that the companies would file the questionnaire on tax data with Riddell, Stead, Graham & Hutchinson as soon as possible.

PUBLIC RELATIONS COMMITTEE

Pursuant to decision taken at the last meeting of the Association, Mr. J. Cossip has been hired as of April 1st, 1969. The change over should be quite smooth with no hard feelings expressed. A job description has been approved by the Committee for Mr. Cossip's guidance.

Nomination for the "Mining Man of the Year" for 1969 are requested for submission to the Joint C.M.M.A. - C.A.M.A. Committee.

INSTITUTE OF OCCUPATIONAL AND ENVIRONMENTAL HEALTH COMMITTEE

The Chairman explained that he would not make a report at this time, since he expected to submit a complete review at the coming meeting in Florida. He advised the meeting, however, that Dr. McDonald hoped to complete his survey in August or September next, but he could not say how long it would take to prepare his report.

A Conference on Pneumoconiosis will be held in Johannesburg, S.A., from April 23rd to May 3rd. First three days are devoted to the discussion on asbestosis, which has thus been given top priority. Most of the doctors who have attended previous conferences on the biological effects of asbestos will take part.

J.-M. has decided to print a cautionary label on all bags of fibre shipped in U.S.A. and Canada, as per letter of February 24th to its customers. The company is presently investigating responsibility in this regard in foreign countries.

ENVIRONMENTAL CONTROL COMMITTEE

The Chairman is presently attending a Copant Meeting in Santiago, Chili. He has asked to report as follows:

1. Dryer Dust Projects - The fibre glass bags under test at Lake Asbestos are not proving up to initial expectation. More information will follow at the next meeting.

2. Tailings Dumps - A very good film on INCO practice was shown to the members at the last meeting of the Committee. M. Cossette is presently conducting an information search on all methods of control that can be found in the literature.

NEW BUSINESS

Brief on the position of the French language in Quebec - As per letter of March 11th from the General Manager it was explained that our Association should submit its views and comments in a brief of its own to the Commission of Inquiry appointed by the Provincial Government. It was moved and seconded that the P.R. Committee prepare such a brief for approval of the Directors, prior to its submission to the Commission very likely to take place in the latter part of June.

Treasurer - As a result of discussions he had on the occasion of the hiring of Mr. U. Gossip, the Treasurer suggested that a study be made of the present pension plan benefits to the permanent employees of the Association. It was moved that his report be tabled at the Florida meeting.

DATE OF NEXT MEETING

The next meeting will be held on June the 9th, at the Mount Royal Hotel.

ADJOURNMENT

There being no further business, the meeting was formally adjourned.

Paul-A. Filteau,
General Manager

Secretary.

6. TECHNICAL COMMITTEE REPORT

QUEBEC ASBESTOS MINING ASSOCIATION
SPECIAL SPRING MEETING - BELLEVIEW-BILTMORE, CLEARWATER, FLORIDA

TECHNICAL COMMITTEE REPORT

The technical committee met on March 19 and, because of the absence of two sub-committee chairmen, our review of the work in progress is not so detailed as we would have wished.

FILTRATION OF ASBESTOS, CEMENT AND SILICA MIXES

The sub-committee that is working toward a test to measure the rate of filtration of a mixture of fibre, cement and silica visited the Pulp & Paper Institute. After conferring with knowledgeable research members the committee found that no procedure or work of the Institute was of assistance to them.

At this sub-committee's next meeting it is planned to review Mr. Nemeth's report of the Department of Mines along with the comments from member companies.

FRENCH TRANSLATION

The translation of the summary of the tests in the Manual of Testing Procedures for Chrysotile Asbestos has been completed. It is planned to circulate copies to the member companies to have comments on how laboratory technicians interpret the summary. Some editorial changes may be needed before the translation is released for wider circulation.

THE MAGNETIC RATING SUB-COMMITTEE

The Magnetic Rating round robin involving twelve laboratories showed the T & N apparatus to be reliable and that most of the difficulty lies in sampling or other operator variances from the procedure. The Asbestos Textile Institute is planning to propose the use of the Turner Newall Magnetic Rating Apparatus in an A.S.T.M. test procedure.

THE A.S.T.M. MEETING

A resume of the last meeting of the A.S.T.M. Committee D-30 which took place in New Orleans was given by Mr. Cossette.

The G.A.M.A. Rotap Procedure is now to be tabled for A.S.T.M. approval once it has been rewritten in the proper format.

WET CLASSIFICATION SUB-COMMITTEE

A program of comparative testing on both the Bauer McHatt Classifier and the T & N Classifier was conducted at two laboratories subsequent to a statistical analysis. These results will be reviewed by the sub-committee at their next meeting.

COLOR TEST SUB-COMMITTEE

The procedure for this test has been reviewed and is being rewritten to suit an improved apparatus from the same manufacturer which is found to be more accurate than the model in use at the present time.

3.

PACKAGING SUB-COMMITTEE

This committee is presently studying the methods of producing unitized loads namely strapping of piles of bagged fibre, gluing paper bag loads and the use of a shrunk polyethylene film as the containing material. Several requests for unit packages have been received from customers and freight carriers. A meeting is planned in the near future to compare the approaches taken to this and by the various companies.

R. Dodds-Hebron,
Chairman.

7. UNIFORM CLASSIFICATION AND GRADING COMMITTEE REPORT

QUEBEC ASBESTOS MINING ASSOCIATION
SPECIAL SPRING MEETING - BELLEVUE-BILTMORE, CLEARWATER, FLORIDA

UNIFORM CLASSIFICATION AND GRADING COMMITTEE REPORT

1. SHERBROOKE LABORATORY

The Zeiss Particle Analyser work (fibre length) combined with image shearing (fibre diameter) is being pushed. Two technicians are working full time on the project. Probably sometime in May, the initial program will be far enough advanced to call for two girls on full time counting of photographs (this has been so budgeted).

2. MONTHLY SHIPPING TEST REPORT

As per instructions the U.C.&G. Committee discussed, at a meeting on April 10, Mr. Kessel's proposal. A decision was not possible, but has been requested for the next U.C.&G. Committee meeting. It was pointed out, however, that this proposal would reveal the exact tonnage shipped of most members' sub-grades, as in a lot of cases there is only one sub-grade under the name grade testing. However, this is exactly the same situation now for all sub-grades of group 7 fibres, due to the detailed manner in which these are now reported.

3. BASIC RESEARCH

On April 10, the U.C.&G. Committee agreed that the Basic Research needs are those listed on the appendix I sheet given to Directors on March 25th. These needs are,

2.

Length - Diameter
Openness - Crudiness
Harshness - Softness
Amount of true fibre (or converse)

The Committee also agreed on the "methods of measuring with the most promise".

The Chairman of the Technical and U.C.&C. Committees will visit Ottawa (with the Sherbrooke Laboratory Director) early in May and will discuss our needs with Mr. Woodroffe as a preliminary move to a later meeting with Dr. Convey or Mr. Drolet. This latter meeting would include perhaps the Q.A.M.A. President and General Manager?

W.H. Foster,
Chairman.

6. INDUSTRIAL RELATIONS COMMITTEE REPORT

QUEBEC ASBESTOS MINING ASSOCIATION
SPECIAL SPRING MEETING - BELLEVIEW-BILTMORE, CLEARWATER, FLORIDA

INDUSTRIAL RELATIONS COMMITTEE REPORT

The regular reports of the Association's Dust and Sound Control Engineer have been circulated as issued periodically. Copies of the dust counting method description as used by our engineer were distributed for the perusal of the directors and members of subject committees. Correlation tests are presently being made between the membrane filter type of counter and the Midget Impinger unit.

A study was also conducted in the open air with Sno-Jets to evaluate noise levels and exposure of those who use these machines. It was found that such units are very noisy and that prolonged exposure could result in hearing losses for those who practice this sport.

Labour negotiations meetings held so far have touched on non-monetary clauses only. The meeting schedule with various companies has been disrupted by arbitration proceedings conducted simultaneously and also because of sickness suffered by certain union negotiators. It is not known at this time what sort of settlement would satisfy the Union.

As to arbitration of grievances, the recent sentences rendered suggest that the employer must have an extra strong case in order to expect a favorable decision. The third arbitration always seems to lean toward the employee's position.

A meeting of the "Conseil du Patronat du Québec" (Quebec Employers Council) was held recently to discuss the general thinking and most urgent action to undertake in the field of labour relations. A policy statement and operating mechanisms were defined for the purpose of properly approaching problems and consultations with the Governments to which the Council might be exposed at this stage and in the immediate future.

A visit with the Treasurer and President of the Workmen's Compensation Board was made jointly by the U.M.W.A. and Q.A.M.A. managers recently to discuss, assessment rates for 1969 as well as charges for hospitalization and medical assistance. It was explained that, in the first case, compensation for accident and industrial disease claims had increased by some \$3,000,000. in 1969 and, in the second case, industrial accidentees are not covered under the Canadian Provincial Hospitalization Plan; consequently such expenses are charged to the employer.

J.O. Eby,
Chairman.

9. TRAFFIC COMMITTEE REPORT

QUEBEC ASBESTOS MINING ASSOCIATION
SPECIAL MEETING - BELLEVIEW-BILTMORE, CLEARWATER, FLORIDA

TRAFFIC COMMITTEE REPORT

1. At the time of writing a St. Lawrence River waterfront strike seems likely and no estimate as to its duration is presently possible. Arrangements have been made to establish emergency rail rates to Halifax and St. John in the event that the strike drags on for any length of time, and it may be possible to negotiate reductions in ocean freight rates to match the reduction made by the Railways provided that the shippers and the customers would agree to accord a like amount of the overall increase in the inland freight brought about by using these ports. At the moment both Halifax and St. John are experiencing congested conditions as an aftermath of the New York dock strike, and depending upon the solidarity of the I.L.A., shipment through these ports may not be possible.

2. As a result of the anticipated strike and the uncertainty created concerning stavedoring rates in the St. Lawrence, we have been unable to negotiate firmly to the Baltic or the Mediterranean, both of which Conferences prefer to wait until after the strike, if any, has been settled.

3. The first vessels of the Wallenius Line, with whom member companies have contracted for carriage of asbestos to the Continent, have already taken place and the experience gained in using the roll-on type of vessel has been

valuable. It would appear that this sort of arrangement may well be a better answer in the long run for shipment of asbestos than containers. The Wallenius Line has indicated that they would seriously consider absorbing part of the increased inland freight to Halifax and St. John in the event that there was a strike so that shipment for Continental Europe could conceivably continue provided that the customer and the shipper are willing to each absorb 25% of this additional cost, which would come to approximately \$2.20 per ton.

I.C. Campbell,
Chairman.

Subsequently, last minute negotiations resulted in a settlement between the ship owners and longshoremen, which agreement was ratified by the working force on April 9 last. The contract provides for an increase of 85 cents/hour over a period of 3 years (\$4.60 per hour for third year), a guaranteed annual work season of 37-39 weeks, no restriction on the use of containers and a technological displacement fund. The latter will be established through contributions of ship owners based on a certain amount for each ton of cargo handled at the ports of Montreal, Trois-Rivières and Quebec.

10. LEGISLATION AND TAXATION COMMITTEE REPORT

QUEBEC ASBESTOS MINING ASSOCIATION
SPECIAL SPRING MEETING - BELLEVIEW-BILTMORE, CLEARWATER, FLORIDA

LEGISLATION AND TAXATION COMMITTEE REPORT

Future trends in government taxation policies are at this moment in a pretty nebulous state.

The Honorable E.J. Benson, in the House of Commons, declared that the government had not made up its mind whether to impose a capital gains tax, and that if such a tax were decided, it could not be made retroactive. A tax on capital gains was recommended by the Carter Commission and has been predicted for 1970 by several financial analysts.

As for corporation taxes, the future treatment of capital cost allowances, depletion and the three year tax exempt period are still of major concern to the whole mining industry in Canada, and the Mining Association of Canada is actively studying these problems. Mr. Benson promised a white paper before enacting any reformed tax system, so that interested groups and provincial governments may submit their views in public debates and consultations.

A similar approach should be adopted at the Provincial level. The provincial budget recently tabled makes one wonder how the government will finance its expected deficit of \$350,000,000. Some of the provincial mining tax problems that have not as yet been clearly solved have to do with the definition of processing assets, the tax treatment of

2.

development and exploration expenses and the treatment of losses carried forward with respect to mining duties.

With regards to the general economy of the country, unless there is a prompt cooling-out on the prices front, we may be faced with an extremely unpleasant dose of anti-inflation medicine. This could well take the form of new or higher taxes rather than an increasingly severe squeeze on credit.

The Committee plans to continue, to the fullest extent practicable, to act on a joint basis with the O.M.M.A. and the Mining Association of Canada on all matters of mutual interest in the field of taxation and fiscal policies.

Michael J. Messel,
Chairman.

11. PUBLIC RELATIONS COMMITTEE REPORT

QUEBEC ASBESTOS MINING ASSOCIATION
SPECIAL SPRING MEETING - BELLEVUE-BILTMORE, CLEARWATER, FLORIDA

PUBLIC RELATIONS ACTIVITIES

Since the taking over of the P.R. and Information services by April 1, there has been no discussion with the Committee as to concrete proposals for a continuing public relations programme. Until a continuing programme is developed with the help and approval of the Committee, it is proposed to concentrate activities in the following areas:

1. Asbestos Producer

Editorial emphasis will be placed in coming months on the following subjects:

- (a) The essential function of management in the operation of an asbestos mine: how a mine's ability to generate employment and prosperity depends on the efforts of management, and, in this context, the interdependent functions and interests of all salaried and hourly-paid personnel.
- (b) To stress the interdependent socio-economic interests of all regions of this country and to convey the concept that the whole of Canada is greater than the sum of its parts. This will be undertaken by highlighting where feasible Canadian themes affecting both industry operations and the private activities of employees and residents of the asbestos-mining communities.

2.

- (c) The critical importance of the contribution by the Canadian mining industry, including asbestos mining, to provincial and national GNP's and the relevance of this contribution to the well-being and security not only of the industry's employees but of all citizens of this country: how, in terms of asbestos mining, this contribution can only be achieved by continued unrestricted access to overseas markets.
- (d) The inevitability of increased automation in face of steadily rising costs and the resultant demand for increased efficiency: the present and projected consequences of this process on the working conditions and job requirements of all employees, hourly-paid and salaried.

2. Press Relations

The series of feature articles on the state of the industry prepared by Canadian Press staff reporter Dave McDonald and currently appearing in daily newspapers across Canada points up the need for all Canadian writers on business and mining matters to be provided with a "kit" of basic background information, accurate, up-to-date and concise, on the current organization and situation of the industry, its value to the country, present problems and development projects and the future outlook for the industry. These "press kits" should include a selection of recent photographs and comparative statistics.

Distribution of the kits should be supplemented by a continuing flow of positive news and statistical material regarding the industry's performance.

3. Public Information

Production of the inexpensive folder containing basic facts about the industry and suitable for economical mass distribution should be proceeded with.

4. Information for Schools

Attention should be directed to developing a programme by which more primary and secondary school pupils in Quebec may be economically and effectively informed, through their school teaching staffs, about the existence of the industry and its direct and indirect values to the Province.

5. Public Relations Committee

To guide these and other projects through to implementation and completion, it is suggested that the Public Relations Committee meet more frequently than hitherto, ideally on a monthly basis.

John Gossip,
Director of Information Services.

12. ENVIRONMENTAL CONTROL COMMITTEE REPORT

QUESEC ASBESTOS MINING ASSOCIATION
SPECIAL SPRING MEETING - BELLEVUE-BILTMORE, CLEARWATER, FLORIDA

ENVIRONMENTAL CONTROL COMMITTEE REPORT

A. DRYER STACK CONTROL

1. Bag Collectors

C.J.M. unit operating with virtually 100% efficiency. Lake Asbestos unit, efficiency continues at more than 99%.

The attainment of a solution to the continuing problem of having to by-pass the filters during the periods of high gas temperatures now looks much closer with the fibre-glass filter bag. The test installation at Lake Asbestos has run four months and results now look more encouraging. The cost is only slightly more and temperatures can go to 600cf rather than present limitation of 250cf. Expect to be able to make a firm recommendation by mid-Summer.

2. Wet Collector

Rotoclone testing continues at C.J.M. with the unit running well under Winter conditions. Efficiency still to be improved with the current level running at about 83%. This represents a reduction from 124 to 20 lbs. per hour emission.

B. TAILINGS STABILIZATION

A literature search has been made of all known methods of stabilizing the surface with chemical additives and with various types of plant growth.

2.

We are now ready to embark on a modest laboratory program as follows:

1. Install a control growth chamber at the Sherbrooke Laboratory at a cost of \$1,500.00. Test grow some 24 types of grasses, 3 types of grains, 5 legumes, 5 bushes and 6 trees, all to be done on flower pot scale.
2. Bench top experiments on consolidating characteristics of some 14 chemical binders.

A modest field program could go as follows:

1. Test plots of plant growth, presuming a likely candidate is found in the laboratory.
2. Test applications of a chemical binder, should and economically feasible candidate be developed.

Both of these tests could be done at one or more of the member companies. A firm program will be proposed and volunteers solicited.

3. Field examination of old dumps will be made this Summer to determine what, if any, natural vegetation has been able to establish itself.

The Committee recommends for your approval the installation of a control growth chamber with its associated plant growing equipment at the Association laboratory at a cost not to exceed \$1,500.

J.R.M. Hutcherson,
Chairman.

13. OCCUPATIONAL AND ENVIRONMENTAL HEALTH COMMITTEE REPORT

QUEBEC ASBESTOS MINING ASSOCIATION
SPECIAL SPRING MEETING - BELLEVUE-BILTMORE, CLEARWATER, FLORIDA

OCCUPATIONAL AND ENVIRONMENTAL HEALTH COMMITTEE REPORT

GENERAL

This is meant to be an overall report as to the Health Problem status as of April 1969 but will not cover the various pending studies being conducted by the Scientific Committee as such reporting falls rather within the immediate purview of Dr. Wright and as the latter has recently communicated a very comprehensive report and study with appropriate recommendations (a report for which Dr. Wright and the members of his committee should be highly commended).

It can be stated that whilst the "Asbestos Health Problem" as such is now spreading over a territory greater than ever, said problem however is gradually tending under relative control and this visibly so. Such "relative control" of the health problem as a whole is chiefly due to the formidable task being accomplished by Dr. Wright's committee but it is only fair to signal that there are nevertheless also at work certain other factors in this respect. One important factor is that resulting from the combined endeavours of Johns-Manville Corporation and of the undersigned as officers of your I.O.E.H. executive committee. At times results are achieved mainly because of the combined team-work of Dr. Wright's committee, on the one hand, and of J.-M. on the other hand working with a somewhat "third wing" formed by K.V. Lindell and I. Saocurin.

2.

This combination has been existing throughout 1967, 1968 and 1969 (up to this date) and has made possible an advance on the whole health front. Flanking the orbit of responsibilities of the Scientific Committee as such Johns-Manville has subsidized several undertakings of importance, setting up special committees, to such ends, headed by J.M. key officers and formed of skilled technicians in various fields of activities, such as for example Research and Public Relations, such committees meeting regularly and, in between meetings, devoting much time and energy to the study of the tasks entrusted to them, such work and study paving the way for a constructive implementation of a General Program of Action. Such programming was and is destined to circumscribe and curb the damaging effects of the accusations incriminating the asbestos fiber generally (whether in mining, milling, manufacturing, processing or the mere uses of the asbestos fiber).

Whilst J.M. in so doing is promoted by the extent of its interest in the asbestos industry it is proposed that nevertheless its participation is contributing significantly to a question which in fact is vital to the industry as a whole and to every member thereof. For instance, it is with that orientation that J.-M. did retain Dr. Wright as a constant special consultant at Headquarters.

For instance it was due to the above factors that a joinder was successfully effected with the "Dr. Selikoff - and - Heet & Frost asbestos insulating forces", said joinder functioning now regularly under an important committee comprising amongst its members Dr. Wright, Dr. Selikoff, Dr. Pundseck and Dr. Hammond. One result is that the views of Dr. Selikoff have now a definite tendency to harmonize themselves with those of Dr. Wright.

U.S. PUBLIC HEALTH SERVICES AND BODIES

These bodies are undoubtedly the most influential and powerful body on the Continent on account of the impact it has, via regulatory measures on production procedures and on uses of materials. A noticeable and rather uniform sympathetic attitude is now detectable in the respective jurisdictions of U.S.P.H. across the Nation. In this respect the presence on our Scientific Committee of such a prominent scientist as Dr. Kotin has been of great help (Dr. Kotin is one of the very highest officers of U.S. in the field of Etiology and control of cancer in U.S.A. and he has become familiar with the multiple angles of our health situation). - - Incidentally, Dr. Murray Brown who was heading an important U.S.P.H. service at Washington (and who attended our last Antigua meeting) has now retired. - -

MESOTHELIOMA

In Europe, last fall, the undersigned met with Dr. Wright and discussed there the asbestos health problem with outstanding scientists and laboratory heads, this in France and Western Germany (laboratories and institutions which Dr. Wright had not hitherto visited). It is the impression of the undersigned that neither in France nor Western Germany can it be said that mesothelioma is the mounting "ogre" of the proportions given some in South Africa, England or U.S.A. Although scientific investigation is of course needed, it does not seem however that the climate in France or Germany is bad.

In South Africa mesothelioma figures seem to be on the wane, as a substantial portion of tumors hitherto labelled as mesothelioma are being counted out, this because of verification in depth of said tumors (mesothelioma as we all know must not be secondary to other tumors but by all means primary).

The point is that the very diagnosis of mesothelioma is still a matter, often enough, of mere conjectures as no uniform norms, standards have been agreed upon as yet.

In Canada, at least in our asbestos mining industry populations, mesothelioma would not be as yet much of a threat if we consider that no mesothelioma has appeared and withstood verification since 1960 on the books of our Clinics (either at Thetford Mines or at Asbestos). And only four mesotheliomae have been raised in the period anterior to 1960, two of which might well vanish after proper verification (which verification has not as yet taken place). These statements concur with the opinion expressed by Dr. Sartier and Dr. Guy who heads the Canadian committee for the diagnosis of mesothelioma and who is our top pathologist in the field of malignancies related to asbestos exposure.

PROPOSED MEETING

At Montebello (Seignory Club), next June likely, it has been agreed that our Quebec Workmen's Compensation members and advising medical staff (Dr. Grégoire et al., - Dr. Grégoire sits also on our Scientific committee --) are to meet in a friendly colloquial fashion for a few days

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with the members of our Scientific committees and their guests so that the results of studies and observations can be exchanged and discussed. This move was arranged by the undersigned and the Quebec Government representatives in view of the considerably mounting number of claims being filed lately by persons who would have been exposed in our mining industry. A meeting of the kind is according to our usual procedure, such meetings being in order at about every ten years (former meetings have taken place since 1935 in Carolina, New York, Thetford Mines, Saranac, Cartierville and Montreal).

COMMENTS AND CONCLUSIONS

We are now entering the most serious and active phase of the investigation field recommended by our Scientific committee. We are to reach into the depths of our problems. A few years ago we were not equipped as we are today to face the struggle. Today we have and the personnel and enough accumulated data to go into the battle field and paint what might well be an image vindicating at least chrysotile asbestos as such. The prongs of attack are getting to be more and more numerous and it might necessitate some two years before enough of the smoke arising from unwarranted fires has been cleared: a scientific problem cannot be solved until the smoke of ignorance has disappeared.

The report of Dr. Wright's committee speaks for itself and if the recommendations are not carried into effect the industry might well suffocate to death in some of its important sectors. There are symptoms to that effect.

But if the programming proposed is implemented the industry as a whole will have come out intact in most of its now strong positions.

At Ottawa your undersigned were represented at the second meeting of the committee organized across Canada to search for the bio-physical properties of asbestos. Dr. McDonald and Dr. Cartier also attended.

We should now be (on account of the final report of Dr. Wright's committee study) in a position to effectively seek from Quebec and Ottawa Governments respectively subsidies to support the implementation of said programme. The members of the association are earnestly enjoined to give adequate financial support for the further implementation of Dr. Wright's programme. The money contribution (of the respective members) it seems should come out of the "sales figures" irrespective of profits arising out of said sales.

It might be also opportune to plan a further Antigua meeting for the Winter 1970-1971 so as to keep alive our feeding line of information across the world.

I.C.E.W. Executive Committee.

Karl V. Lindell,
Chairman.

Ivan Sabourin,
Secretary.

14. THE ASBESTOS MINING INDUSTRY IN 1962

THE ASBESTOS MINING INDUSTRY IN 1968

As Asbestos goes, so goes the economy of the country. As a corollary, it could be stated that among mining products asbestos is a good bellwether or a reliable indicator of the trend of the economy of the North American continent, because of its close relationship with the construction and automotive industries. With the renewed growth of these two industries in 1968, the demand was such that both production and exports of Canadian asbestos for the first time exceeded the 1,500,000-ton mark, with total asbestos shipments from the mines reaching a record figure of more than 1,530,000 tons.

Unlike gold, copper, zinc or lead, asbestos is not an element; the term embraces a number of fibrous mineral silicates which differ in chemical composition. Mined in Russia, Rhodesia, South Africa, Cyprus, Italy, the U.S.A., Japan, China and several other countries, asbestos ranks among the leading minerals produced in Canada. The most abundant variety, chrysotile, and also the most valuable form of asbestos produced, makes up 90 per cent of the world's supply. In Canada, chrysotile is found in the provinces of British Columbia, Ontario, Newfoundland as well as in Quebec, the latter accounting for almost 87 per cent of all the fibre produced in this country.

A number of developments have made 1968 a record production and export year for Canada's asbestos mining industry. Asbestos fibre consumption has been increasing in the U.S., Canada - up 10 per cent last year - Japan and in Latin America. Demand in

Western Europe was again on the up-swing, following a cut-back in 1967. As a result, shipments from Canadian mines during 1968 reached some 1,580,026 tons or an unprecedented high of \$180,000,000. versus 1,444,285 worth some \$163,000,000. In 1967, an increase of 135,141 tons or 9.3 per cent which compares favorably with the 1968 national average increase in value of mineral production of 7.7 per cent. Forecast are that Canadian asbestos production is expected to maintain a similar growth pattern in 1969. It should be noted here that in spite of the fact that Canada's share of world asbestos production has declined from 50% to some 35% over the last ten years, the output of the Canadian asbestos industry has increased by 50% during the same period, from 1,046,086 tons in 1957 to 1,580,026 tons in 1968. (1968 figures are preliminary).

Russia, which reported shipments of some 2,015,000 tons in 1967, has given no indication of any sizeable increase in production in 1968, judging from an analysis of their export figures. It would seem that either the new plants at Asbest and Aktovsk are not yet fully operational, or that the additional production capacity thus provided has been absorbed by the expansion of the Soviet economy, leaving little for increased exports. Unlike Canada, the Soviets use most of their own asbestos to supply building materials for the vast construction programs in their own country and in other Soviet bloc nations.

South Africa, which is pretty well self-sufficient, is expected to produce some 280,000 tons again in 1968. Southern Rhodesia's output has not been reported since 1965, but is placed at approximately 170,000 tons.

In the U.S. total asbestos fibre production in 1968 amounted to some 121,000 tons slightly less than in 1967. Over 50% of this production comes from California which has become the largest asbestos producing state in the U.S.

As to production of asbestos in other producing countries, no significant increase had been forecast for 1968 nor has there been any actual expansion reported at the time of writing. Total tonnage for these countries should fall in the neighbourhood of 350,000 tons in 1968.

MARKET PATTERN AND EXPORTS

Asbestos has a variety of uses - some 3,000 applications - making it practically ubiquitous in modern society. It goes to virtually every industrialized nation on earth. Major uses include asbestos textiles, asbestos paper, floor tile, friction materials (brake linings, clutch facings, etc.), plastics, paints, sealers, sound-dampeners, and roofing compounds. The most significant outlet, however, is the asbestos cement industry. It is estimated that 50 per cent of all types of asbestos including chrysotile, amosite and crocidolite, is consumed in the production of asbestos cement building materials and asbestos cement pipe.

In practically all countries of the world, asbestos cement products are ideally suitable for construction of buildings and houses. In countries not well endowed with timber resources, usually cement is readily available and asbestos consequently is the only raw material to be imported. Moreover, asbestos cement plants can be set up relatively inexpensively. This is why in recent months new plants have been built throughout Europe, the Middle East, Africa, South and Central America and Asia, as well as many additions to existing plants.

Transportation of water is assuming more and more importance in most countries and it can be anticipated that growth of this line of product will develop at an interesting rate in future.

years. It is in the latter area that U.S. production is growing at a faster rate than for other asbestos products. Obviously, the characteristics of asbestos cement pipe - corrosion resistance, excellent strength properties, ease of installation - assist in market development and in increased application of asbestos cement conduit.

The very qualities of asbestos cement products, in particular their resistance to heat, humidity and termites as well as low maintenance, make them most adaptable to the urgent needs of the developing countries. Thus asbestos is a "natural" when considered as a trade commodity with the developing nations, especially in its basic use in irrigation, sewage and drainage projects and as a comparatively low cost building material. In brief, for the long term future, the growth potential of the demand on the part of these countries is enormous.

But the asbestos industry is not only concerned with the developing countries, it has an equal role to play in the more sophisticated world markets. At present, Canada is exporting asbestos fibre to some 64 countries. Despite competition from materials with no mineral content, from newly developed synthetic materials and from new techniques that could reduce the need for asbestos, these markets are expected to continue to grow.

One of the peculiarities of selling asbestos on worldwide markets is that what you lose in one part of the world, you often make up in another. A construction industry slump in the U.S.A. can occur at the same time as a building boom in Japan. In 1967, for instance, there was a minor slowdown in Canada and the U.S., as well as in Germany and Britain. This resulted in reduced purchases of fibre from Canada. At the same time, however, the economies of Japan, India and several European countries perked right up. These countries ordered relatively more asbestos fibre than usual.

5.

Leaders in the industry have a great deal of confidence in the long term performance of the construction and automotive industries in the U.S. and other industrialized nations. For 1968 alone, analysts had predicted that the activity in their construction would increase by some eight (8) per cent - 1,4 million houses and that car and truck production would climb from the unit level of 1967 to 8,5 million units this year. Indeed, the U.S. - biggest single customer of Canadian asbestos - has been strong throughout the year.

Shipments to Latin America in 1968 exceeded 100,000 tons on that more asbestos product manufacturing capacity is available. Elsewhere, the demand for Canadian fibre is good. Japan, the largest asbestos-cement producing country in Asia, has increased its asbestos imports from Canada during the last few years. Japan provides a classic case of a market short on resources, long on cement production and with amazingly high demand in construction for industry and homes.

In Europe, West Germany, France, Belgium and Holland increased their asbestos imports in 1968. United Kingdom, showed no improvement in demand for asbestos. Shipments of asbestos to the socialist countries of Eastern Europe are somewhat from year to year. Exports of Russian asbestos countries do not adequately fulfill the demand resulting from increased capacity for asbestos-cement production. Russia exported 100 tons of asbestos in 1967 and approximately half of these to non-communist countries, of which 43,500 tons to West Germany. In general, a 5 per cent growth in the production of cement building materials was forecast for Europe in 1968.

In the developing countries of Asia, Latin America and Africa, demand is there, but imports are relatively small, because of economic problems; however, more asbestos product manufacturing capacity is gradually added. Obviously, Rhodesia, South Africa and other countries supply asbestos to many parts of Africa.

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CANADIAN INDUSTRY EXPANDS

Although new materials and techniques are competing for the same markets with asbestos fibre, the demand for the latter to meet world needs is expected to grow for the next several years. To cope with projected requirements, Canadian producers are taking steps to expand existing capacities as well as to bring in new mines. Canadian Johns-Manville should complete its program to increase productive capacity at its Jeffrey Mine, Asbestos, Que. by some 100,000 tons of fibre per year by the end of 1969 or early 1970. In addition, its Reeves Mine in Ontario which went into operation last year has now reached its rated capacity of some 35,000 tons of fibre per year. The Company is also carrying out underground exploration at a Garrison Township property in Ontario, some 16 miles east of its former Munro Mine.

Asbestos Corporation Limited plans to develop to production a new asbestos property -The Penhale orebody- near Thetford Mines; if current exploration work is successful, this new underground operation is expected to reach by late 1971 an ore output rate of 8,200 tons daily.

In Thetford Mines also, Bell Asbestos Mines Limited is planning to erect a new surface plant beside a new shaft being sunk to the 1450 level.

Lake Asbestos of Quebec Limited is nearing completion of the open pit enlargement program commenced two years ago.

Clinton Creek Mine, in the Yukon, of Cassiar Asbestos Corporation which had started commercial production in December 1967 reached its annual objective of 60,000 tons (actually 64,279 tons) in 1968. As planned the parent Cassiar Mine, however, reduced its production to some 75,000 tons from the 92,000 ton rate achieved in 1967.

Another asbestos producer which may make its debut in 1969 is the Hadman Mine, near Matheson, Ont. The capacity of the mill is rated at 600 tons of ore per day.

Several other asbestos discoveries in various parts of Canada are presently being explored and assessed as to their economic possibilities.

OUTLOOK

The massive needs of housing and industry in practically all countries of the world point up to an encouraging trend line for the future consumption of asbestos in its major outlets. The year 1969 seems headed indeed for a continued growth in usage of Canadian asbestos fibre of approximately 5%. And this pattern is forecast to carry over in the early 70's. For the Canadian asbestos industry, this means more planning, more exploration and development efforts, in order to meet successfully the challenge of supplying an expanding market for asbestos in the years immediately ahead. This is a stimulating situation, because it benefits everyone closely or remotely connected with the industry.

Paul A. Filteau,
General Manager,
Quebec Asbestos Mining Association.

Quebec, January 27, 1969.

15. 1968 ASBESTOS SHIPMENTS BY CANADIAN PRODUCERS

1968 ASBESTOS SHIPMENTS

by

CANADIAN PRODUCERS

Asbestos Corporation Limited	272,461	tons
Bell Asbestos Mines Limited	52,232	tons
Canadian Johns-Manville Co. Ltd.	593,933	tons
Carey-Canadian Mines Limited	198,854	tons
Flintkote Mines Limited	34,423	tons
Lake Asbestos of Quebec Limited	139,468	tons
National Asbestos Mines Limited	57,290	tons
Nicolet Asbestos Mines Limited	23,105	tons

CAMA SHIPMENTS = 1,371,836 tons

Advocate Mines Limited	69,134	tons
Cassiar Asbestos Corporation Ltd.	124,770	tons
Reeves Mine (J.-M.)	14,235	tons

TOTAL (Prel.) 1,520,025 tons

1966 Total Canadian Production	=	<u>1,489,055</u>	tons
1967 " " "	=	<u>1,444,885</u>	tons

Quebec, February 12, 1969.