PLAINTIFF'S EXHIBIT

ATI-155

ADDRESS BY A.L. PEMIALE
TO THE
ASBESTOS TEXTILE INSTITUTE

OCTOBER 10th, 1952

Mr. President, Gentlemen, first may I thank you for inviting me here today - I can't for the life of me think why you did - unless it was because you wanted me to tell you that there is now a big surplus of spinning fibre and that we have drastically reduced the price of all grades accordingly. I'm sure that if I could say this it would be the most acceptable speech I could make -and I could then sit down without bothering you any further, Unfortunately as you are all too aware that is not the case.

Consequently it is with some trepidation that I address you today - In the first place I consider it a bit presumptuous for me to come and talk to you about asbestos at all - for I am sure you all know considerably more about the subject than I do. Secondly, as one of the suppliers of your main raw material who, it seems, consistently fails to provide you with all you require, any encouraging remarks I might make about the future improvement in supplies are apt to be met with some derision.

I don't intend to take up your time with the familiar recital of why we can't provide you with all the fibre you need. Our Sales Manager, Mr. Marcotte, who is here today has had considerably more experience in this field of endeavour than I have. Sometimes, I think Denis Marcotte thinks of asbestos mining not as a business but as a disease, and he wonders how (or why) he ever got into it. Its like the story of the yound man who was pretty fed up with life and decided to have himself a good time,--etc., etc.

Nevertheless perhaps a few words about asbestos mining would not be amiss.

Chrysotile asbestos, as you know, normally occurs in serpentine rock and is usually seen in the form of irregular veins in the rock, varying in thickness from as much as 2 or 3 inches, down to microscopic threads. The fibre runs across the vein at right angles to it from wall to wall and generally, therefore, the length of the fibre is governed by the width of the vein.

The comparatively low yield of asbestos, which in Canada averages about 6% of the rock mined, means that enormous tonnages of ore must be treated in large plants with much equipment before a reasonable output of finished fibre can be attained. Some asbestos milling plants, for instance, are required to handle upwards of 500 tons an hour which is more than the average gold mine would treat in 24 hours. The capital investment of the average asbestos mine is consequently considerably higher than in other mining operations with a comparable sales volume.

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The fact that the asbestos content of a deposit varies considerably in value and quality of fibre, not only from one ore body to another, but also within any given ore body itself, makes it difficult for a mine to provide consistent quantities of fibre of a given grade. The miner has to take what he can get - the poor ore with the good, and do the best he can with it.

Chrysotile asbestos fibre, as you know, is only a fibrous form of the host rock serpentine, and the concentration process is unique in that it involves the separation of a fibrous mineral from a massive form of the same mineral. Chemical processes of separation are thus not possible, and we must use mechanical crushing methods with the attendant difficulty of separating the fibre from the rock with a minimum of fibre breakage.

To avoid this fibre breakage, mills are designed to remove the separated fibre immediately after each crushing operation, for if fibre already freed from the rock enters the next crushing unit along with the crushed rock, it is likely to be cut into shorter grades and its value sadly lowered by attrition.

This is all very well in theory, but in practice the removal of the free fibre between crushing operations by air aspiration is imperfect, and the development of improved processes whereby fiberization may be accomplished with the minimum breakage of fibre is a problem which is constantly being studied by the mine operators.

In this connection some advance has been made by the employment of machinery for fiberizing which has less of this effect.

You are probably aware of another approach to this problem which involved a wet process commonly known as the Dolbear Process. Unfortunately this idea did not seem to be capable of successful development beyond the experimental stage. Generally speaking, it is felt that the wet method is undesirable for the longer grades of fibre for several reasons, among which are the difficulties encountered in drying the fibre after it is collected on the filters, and then in restoring the fibre to its desired condition from the matted state in which it is recovered.

For many years tests have been made on the application of equipment commonly used in the milling of other ores such as ball mills, pebble mills and rod mills.

These machines have been adopted for dry milling, and in some instances were equipped with forced air supply to remove the fibre immediately it was sufficiently released to be entrained and swept from the mill.

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None of these tube mills was found to be successful in the treatment of ore containing long or medium length fibre, and only moderately successful in the case of the shorter grades. All of them proved to have too high a degree of attrition.

Recently, however, a machine of the revolving drum type has been developed which, in its application to the treatment of asbestos ores, shows possibilities - it is called the Acrofall Mill.

Following a series of tests with several types of asbestos ore through a pilot plant, our Company had a large Aerofall Mill unit installed at one of its mines. Large scale tests, run to compare the Acrofall principle with that of conventional mill flow sheets, have so far confirmed that a higher recovery is obtained from a given ore with the Acrofall mill, and that there is less damage to the fibre, resulting in a greater proportion of the longer and more valuable grades being recovered. These results have prompted us to use the Acrofall principle as the basis for the flow sheet of a new 5,000 ton per day plant which is being planned for our new Normandie Mine.

This Normandie Mine of ours is another development about which you might like to hear something.

A couple of years ago a new ore body near our Vimy Ridge Mine was proven, and in order to maintain and possibly increase our overall output, it was considered advisable to bring this potential mine into production as soon as possible.

This will take about three years - one of which has already been spent in preliminary work such as stripping and engineering - and we hope that we will be producing fibre late in 1954. The mill will have a capacity of 5,000 tons of rock a day.

To some of you the time taken to increase productive capacity may seem inordinately long. It points up one of the important problems any asbestos mining company must consider before deciding to expand its milling capacity in response to the market demand for its products. It is quite possible that by the time the expansion is completed, the market situation for the majority of the grades of asbestos fibre may have changed completely and they may be left with idle plant capacity. Perhaps this would not be so bad if the capital investment involved were not so large.

For example the initial capital cost for bringing the Normandie into production is estimated to be about 7½ million dollars, and a further 2 million will have to be spent later on when underground mining is commenced. That's a lot of money -

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Speaking of a lot of money reminds me of a story which you may not have heard.

> It concerns a Sunday morning after church; the parson was at the door greeting his parishioners one and all - when he was accosted by one of them who declared in ringing tones:
> "That was a damn good sermon this morning"
> "Well - thank you very much indeed Mr. Cobb - but could - uh - you perhaps find other words to describe it - uh"
> "I tell you it was such a God damn good sermon that I put $100 on the collection plate"
> "Well, well, Mr. Cobb, thank you very much indeed - it is most welcome - you know it takes a hell of lot of money to run a Church"

Now, of course, I do not wish to imply that increasing the milling capacity of an existing mine would cost as much as would the construction of an entirely new plant, but expansion at our British Canadian Mine a few years ago whereby we increased our milling capacity by 100 tons an hour cost us more than 2 million dollars. Nearly all the major Canadian companies have increased their capacity in the past few years and last year alone plans for capital expenditures for improvement and expansion totalling 30 million dollars were announced, including our own Normandie project.

Besides our Normandie Mine, Johnson's Company are bringing a new mine into production adjacent to their present Black Lake property - called the Megantic Mine, this plant will handle 4,000 tons a day and is expected to be in production in late 1953.

Beyond doubt, the combined production of these two mines will help alleviate the shortage of fiber by 1954.

At the same time the Canadian Johns-Manville Company have commenced a long term project at their Jeffrey Mine at Asbestos, Que., whereby their present plant is eventually to be replaced by a modern one. We can take this as another indication, I think, that the supply will improve. Johns-Manville have also developed their new Munro Mine in Northern Ontario, though this does not contribute much additional spinning fibre.

Nor should we forget other Canadian developments which augur well for the future. Prominent amongst these is the Cassiar asbestos property in Northern British Columbia, almost entirely a long fibre proposition which is in the hands of responsible and reputable mining men and the production from which may soon have are effect on the supply of Canadian spinning fibre.

Moreover with the heightened interest in asbestos on the

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part of mining men throughout Canada, other companies have been formed and it is possible that some new mines may be brought into production. It is of course difficult to assess what effect these operations may have on the situation but undoubtedly they will mean some improvement however small. Two of these developments are the Dominion Asbestos and Newfoundland Asbestos both of which it seems will be in production within a year or two.

I understand too that there is some question of exploiting iron-free asbestos deposits in Arizona, possibly under government sponsorship. I'm sure there are some of you here who know more about this than I do.

Not only is there all this activity on the North American scene but in South Africa too there has been considerable exploration on the part of the producers there and also on the part of Canadian mining companies.

I hope I am not speaking out of turn when I mention that Johns-Manville are planning on developing mining properties in South Africa. My confreres from that company who are here today can tell you more about this.

So all in all I don't think I am being too optimistic when I say that the chances are that supply and demand for long fibres are likely to be in balance by the end of 1954.

Meanwhile all the Canadian mining companies are active in their efforts to discover and develop new deposits of asbestos wherever they may be found. We ourselves have a subsidiary exploration company and have in the past few years undertaken examination of asbestos occurrences in many places in Canada as well as in other countries.

Such perseverance seems to be seldom rewarded so far as we ourselves are concerned for to date we have yet to find what we consider to be a commercially exploitable ore body outside our own area - but we have not given up, nor have our confreres in the business.

Who knows but one of us may find an outcrop of asbestos bearing ro our next fishing trip into Northern Quebec or Ontario. ng of fishing reminds me of a yarn concerning Johnny Sch nd an Indian guide, a typical taciturn prototype of his rac ey say Elephants and Indians never forget. This India e had conducted a party into the wilds on a very successful fishing trip; (I think Ank Scanlan & George Fabel were there too). Beyond a monosyllabic grunt he had not participated in any conversation throughout the expedition. Finally the day came for departure and the fishing party were at the whistle stop station awaiting the train. Johnny Schoepf tried again to engage the guide in conversation without any

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signal success when just as the train pulled in he asked the Indian if he liked fish? The Indian hesitated some moments, finally just as Johnny had given up and was boarding the already moving train the Indian said "Yes".

About a year later Johnny returned to this same place for a renewed assault on the trout and as he stepped off the train who should he see but his former Indian guide; so Johnny, going native, shouted: "How!" And the Indian replied "Fried!"

Present known reserves of ore in Canada are thought to be adequate for a good many years at the present or even somewhat increased rates of production, and with this intense interest in exploration it seems probable that such reserves will be increased.

There is another perhaps fruitful field of endeavour in which considerable effort has already been expended and in which this Institute, I know, has taken a direct part. I refer to the field of research in the utilization of asbestos fibres.

Any process whereby the medium or shorter grades of fibre can be used in applications now requiring long fibre would be a great boon - both to us as producers and to the industry as a whole.

Now if only some one would find a feasible process where we could make long fibres out of short ones with the ease that we miners can do the reverse, our worries would be over. As producers of short fibre in the ratio of approximately 11 to 1 of long fibre, you can understand why we consider this a more practical - or should I say <u>profitable</u> - approach to the problem than any amount of research in synthetic asbestos or on substitutes.

In the meantime I think it is obvious that everyone concerned is doing everything possible to improve the situation and I look forward to maintaining for many years to come, the pleasant relations that have pertained in the past with your Institute and its member companies, even if Mr. Marcotte has to go on saying: "No I can't let you have that car of 3R until next month".

Now, if you think it has been a long time since I started talking, I can tell you that like Lady Godiva, I am drawing near my close. Sometimes a man gets started talking and thinking he knows everything under the sun. He won't stop. Reminds me of the banquet where there were seven or eight Cabinet Ministers as guests of honour. etc., etc...

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