

PLAINTIFFS
EXHIBIT

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ASBESTOS PRODUCTION IN SOUTHERN RHODESIA

This is the second installment of the article by W. E. Sinclair, M.I.M.M. (Consulting Mining Engineer). The first installment appeared in our August 1953 issue.

It was very many years later, however, before the industry was operating smoothly. Mining and hand-cobbing of the asbestos ore created a number of initial problems and these were to be followed by even greater difficulties in the matter of mechanically treating the ore to recover satisfactory grades of asbestos. Despite the example of Canadian milling practice, it took nearly ten years of experimenting before an efficient plant was evolved to produce classified grades which were acceptable to the manufacturers. The reason for the initial difficulties experienced is accounted for by the greater quality of long fibres in the ore and the fact that the Rhodesian asbestos is more tender than most others.

During these early years several large mines were opened up and Turner & Newall Ltd. assumed control of the Rhodesian & General Asbestos Corporation, Ltd., followed by other strong combines, all of which gradually put the industry on a more stable basis.

The steady and ever-increasing output has naturally been encouraged by the persistent demand and better prices; indeed in the last few years the consistently upward trend in price values has given an added impetus to the intensive development of the mineral. Many large and important new mining Companies have entered the field, and in some cases their efforts are already contributing to the growing output.

Some of the older mines in the Mashaba and Shabani areas are mining by underground methods, because the ore-bodies tend to dip at a flat angle, which limits the depth at which they can be worked economically by open-cast methods. In many other cases, methods of exploitation most favorably suited to geological and topographical conditions are usually adopted. This often consists of quarrying or benching hillside deposits or by open-cut

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rhods or wide orebodies below the surface of the ground. In such workings, the ore is usually hoisted to the surface in the mill by means of an open incline or by means of inclined shafts placed below the orebodies.

About ten mines in the Shabani area produce more than half of the total of the whole country. The bulk of this recovery is accounted for by the Rhodesian & General Asbestos Corporation from their mines and mainly the Nil Desperandum (49,000 tons). Other well known mines in the district are the Biltong and Sabi Hill, each producing about 380 and 210 tons per annum respectively. Whites Asbestos and other smaller producers add their quotas to the total of nearly 50,000 tons from this area.

In the Mashaba district 23,000 tons were recovered last year by some twenty different mines, the most important of which are Gaths and Kings controlled by the Rhodesia & General Asbestos Corp. Other well-known producers are the D.S.O. and Muriel Mines (Mashaba Rhodesian Asbestos Ltd.) and the Temeraire Mines. The Kilmarnock group are represented by the Princess, Parallel, Alpha and Shashi Mines. The Blue Bird, Boss, Fibre Coy, and Rex Mines are among many other smaller concerns.

In the western extension of the Shabani formation, in the Belingwe area, the main producers consist of the Vanguard and the Gurumba Tumba Mines. There are other smaller propositions.

The next good producing area is that at Filabusi near Bulawayo. The principal producers here are The Croft (African Asbestos), Wynnes (Dominion Base Metals) and the Norma Mines, besides a few smaller concerns. About six other companies are operating in the Bulawayo district on the Gwanda and Shangani serpentine bodies, but these as yet are only small producers.

The main mine in the Lomagundi area is the Ethel Mine which has been in existence for some time.

Milling operations at all these mines vary considerably despite the application of the general basic idea of mill design. Originally, milling procedure followed Canadian practice, where the first milled asbestos was

roduced in 1878. As the Canadian plant design was not suitable for Rhodesian fibre, most of the mines planned their own methods to suit the ore from their mines. The Turner & Newall groups designed and built the most efficient plants for their mines and many of the older mines attempted to follow their plans.

In recent years newly developed mines built mills which have been hurriedly assembled to meet the urgent need for asbestos. In some of these little regard was given to the classification and standard grading of the fibre. Shipments from these mills was frowned upon by manufacturers, with the result that today more attention is being paid to efficient milling processes to produce good clean fibre suitably graded for export.

The excellent quality of the Rhodesian chrysotile is so well known that its reputation is sufficient assurance of a regular and steady demand, especially for good quality spinning and shingle grades. Most of the spinning fibre possesses high tensile strength, albeit it is soft and silky in texture.

The potential reserve of the Rhodesian fields is unknown, but to judge by the interest being shown by many large mining companies established in South Africa, it would appear to be assured. The General Asbestos Corporation under the technical control of the Anglo-Rand Mining & Finance Corp., have opened up the Biltong Extension and Shabani Kloof Mines in the Vukwe Hills south of Shabani. Also the African & European Investment Corporation whose Company Rhodesia Monteleo Asbestos have opened up mines in the "slip" serpentine formation (Biltong Mine). Another interesting feature is the fact that the American Economic Cooperation Administration is financing the operation of three of the Mines of the Associated Asbestos group.

One of the big foreign newcomers in the Rhodesian field is the Jolus-Manville Company who, in association with British Metals Corporation, Angol-Huronian, Southern Minerals and other interests, have formed Rhodesian Asbestos to develop and exploit asbestos orebodies in the Mashaba area.

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