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Vermiculite in Australia

by

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MINERAL RESOURCES SURVEY

- VERMICULITE IN AUSTRALIA -

(Report No. 1945/10).

I. INTRODUCTION.

Western Australia is the only State from which vermiculite is produced. Occurrences are known in some of the other States and in the Northern Territory, but the information is not sufficiently detailed to enable their importance to be assessed.

II. DEPOSITS.

Queensland: Vermiculite has been noted as small flakes in granite and pegmatite at Moonmura and Moongan near Mount Morgan.

New South Wales and Victoria: Vermiculite has not been reported.

Tasmania: Vermiculite resulting from the weathering of phlogopite has been observed near Zeehan. Nothing further is known about the occurrence except that there has not been any production and the deposit is not likely to have any commercial importance.

South Australia: Vermiculite was discovered in association with amphibole asbestos near Lyndoch, 30 miles northeast from Adelaide, in 1938. The occurrence is reported to be small and the vermiculite mixed with unaltered mica and quartz. There has been no production.

Western Australia:

(a) Bulong, 20 miles east of Kalgoorlie. Little information is available on the deposit, and reports about the quality of the product differ. It is thought this is possibly due to poor selection in the field. Total production recorded amounts to 95 tons mined during 1939 and 1940.

(b) Mount Palmer, 7 miles south of Yellowdine, Yilgarn Goldfield. There was a small production of vermiculite from this locality during 1943. There is no information available relating to mode of occurrence or reserves.

(c) Young River, Eucla Division. Vermiculite was discovered toward the end of 1939 on the Young River, 64 miles east from Ravensthorpe. (A report on these deposits by H.A. Ellis is published in the Annual Report, Department of Mines, W.A. for 1943, pp. 60-63).

There are about twenty deposits in the locality and they are considered the best in Western Australia.

The vermiculite occurs in a highly sheared basic igneous rock and appears to have been formed under deep-seated hydrothermal conditions.

Total production from Western Australia is given in the following table. There has been no production from elsewhere in Australia.

(d) Other Deposits. Vermiculite is known to occur in many widely scattered localities in Western Australia, including the Fitzgerald River near Ravensthorpe. These deposits are not of any commercial significance but increased demand for vermiculite would encourage the

development of some of the poor surface prospects and might result in the discovery of further payable deposits.

<u>YEAR</u>	<u>BULONG</u>		<u>MOUNT PALMER</u>		<u>YOUNG RIVER</u>		<u>TOTAL</u>	
	Tons	£A	Tons	£A	Tons	£A	Tons	£A
1939	30	250	-	-	-	-	30	250
1940	65	427	-	-	44	330	109	757
1941	-	-	-	-	160	962	160	962
1942	-	-	-	-	178.4	1,070	178.4	1,070
1943	-	-	20	60	342.8	2,057 ^(a)	362.8	2,117
1944	-	-	(b)	-	94(c)	-	-	-

(a) Estimated. (b) Data not available. (c) To end of August only.

Northern Territory: A mineral tentatively identified as vermiculite occurs near Barrow Creek, 180 miles north of Alice Springs. Preliminary tests showed that the mineral did not exfoliate very well.

III. PROCESSING IN AUSTRALIA.

Two companies have installed plant for treatment of vermiculite.

(1) Perth Modelling Works Ltd. Vermiculite from Young River is dressed to two sizes, namely -

(a) - 3 + 8 mesh.

(b) - 8 + 40 mesh.

and exfoliated. The exfoliated product is marketed under the name "Gold Flake".

(2) Nonporite Ltd., Melbourne, have installed suitable processing equipment, but because of demands for other materials more urgently required they have not attempted to develop a market for vermiculite. Orders are supplied as required.

CANBERRA.
30th Jan., 1945.

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