UR 1944/46-48

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22nd December, 1944.

ASBESTOS AT RENISON BELL

MEMORANDUM :

With reference to memorandum 39T/1 of 29/11/44 from the Director of the Commonwealth Mineral Resources Survey, to you, relative to asbestos resources of Tasmania, I have made a brief field examination of the Tasmanian Asbestos Company's property at Renison Bell as directed by you.

As a result, I find the statement of values for this deposit to be higher than warranted by the mill yields, and that additions may be made to detail.

I, therefore, suggest that the attached statement be substituted for the one given by the Mineral Resources Survey.

GOVERNMENT GEOLOGIST

Director of Mines,
HOBART

ZEEHAN - RENISON BELL :

Chrysotile asbestos has been known for a number of years in the Zeehan district. A northerly trending belt of asbestos-bearing serpentine lies 5 miles west of Zeehan, Since 1941, Tasmanian Asbestos Pty. Ltd., a subsidiary of Colonial Sugar Refining Co. Ltd., has been developing and working a deposit 5 miles north-east of Zeehan, adjacent to the Emu Bay Railway at the southern end of the Renison Bell Tunnel. The same Company has also been prospecting another deposit two miles further south on a northerly spur of Mt. Razorback.

The Renison Bell deposit occurs in an extensive body of ultrabasic rock, consisting partly of schistose serpentine and partly of massive serpentine and massive peridotite. Kernals and horses of the massive rock occur within the schistose serpentine. Along the peripheries of these massive kernels a six to twelve inch zone of cracks, parallel to the periphery, is usually developed, and these cracks are filled with chrysotile cross fibres. Where the cracks are closely spaced, they are narrow and the fibre short ($\frac{1}{8}$" to $\frac{1}{2}$"). Where the spacing of the cracks is wider, the cracks are wider also, with fibre up to $1\frac{1}{2}$". There are other chrysotile-bearing zones not obviously related to the massive bodies.

So far, the deposit has been worked by open cut, but, since the fibre is not uniformly developed through the serpentine, selective mining is being considered.

A pilot mill was installed in 1943 and about 20 tons of fibre were produced before the end of the year and a further 80 tons early in 1944. Production has since declined, owing to diversion to developmental work. To date, approximately 10 tons of serpentine are quarried for each ton of millable rock, and about 4% recovery has been made in the mill. Taking the whole hill by open cut would probably yield less than 0.5% fibre. Existing mill recoveries could be improved by screening the flue dust from the crusher, for a considerable amount of fibre is, at present, being lost there. Returns would be improved by finding a market for fines which , at present, go to waste. The possibility of recovering chromite from the mill tailings is being investigated.

9th March, 1945.

MEMORANDUM:

REPORT ON TAILINGS FROM
TASMANIAN ASBESTOS COMPANY'S MINE.

A sample was collected from the tail race of this plant in my presence by Mr. Jack Hodge, mine manager, on 17th December, 1944, for investigation of its chromite content, stated to be about 10%.

I separated the material with a hand magnet into a magnetic fraction approximately 78% of the whole which consist almost entirely of magnetite, and a non magnetic fraction abou 22% consisting mainly of serpentine with some other visible constituents. Samples of the whole tailing, and of the magnet and non magnetic fractions were sent to the Chief Chemist for analysis.

The assay report, dated 22nd January, 1945, states that the whole tailing contains 1.3% Cr_2O_3 (which corresponds to nearly 2% chromite), the magnetite fraction contains 0.9% Cr_2O_3 (corresponding to 1.3% chromite) and the non magnet fraction contains 2.7% Cr_2O_3 (corresponding to approximately 4% chromite).

These values are considerable lower than those believed to be present according to an earlier private analysis. However, it is quite probable that the distribution of chromite is not constant in the milled rock, so that the percentage of chromite in the tail race may vary between fairly wide limits from time to time.

GOVERNMENT GEOLOGIST

The Director of Mines,
H O B A R T.