

TR2-119-120

## PROPOSED WATER STORAGE AREA FOR A.P.P.M. AT BURNIE, TASMANIA

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This area is situated immediately south from the main A.P.P.M. works and across the E.B. Railway line at Burnie. It consists of slip material (basalt, weathered basalt, basaltic soil and clay) from the hill that rises steeply to the south of the works.

Several pits, up to 20 feet in depth, have been sunk in various parts of the area and they show all stages of basaltic weathering from rock weathered in place, showing hard rounded cores of fresh basalt in a matrix of clay-like weathered basalt to red basalt soil. The whole area is slip material, although the slip probably occurred in several stages and is liable to move again, especially if there is an increase of the load or an increase in lubrication due to excess water.

Two proposals are under consideration for increasing the water storage for A.P.P.M. These are:—

- (1) Construction of an earth dam.
- (2) Construction of two 2½ million-gallon concrete tanks.

There should be no question of considering (1) at all. The weathered basalt is a semi-permeable material which would absorb water from the dam. The increased lubrication caused by a mixture of clay and water plus the increase in weight of the water would

soon cause a further slip and the whole lot would probably come down over the railway line and possibly the mill itself.

As far as (2) is concerned it might be possible by excavation to retain the status quo as far as load is concerned and if the water is enclosed in concrete it won't have any effect on the clay. However, the instability of this hillside should be thoroughly recognised and if it is considered absolutely essential to erect tanks here, then adequate precautions should be taken in their foundations to guard against the effects of further minor slips.