

REPORT NO. 2

on the

GEOLOGICAL CONDITIONS AFFECTING DAM CONSTRUCTION AT THE
UPPER RESERVOIR SITE - GLENORCHY WATER SUPPLY

In accordance with the recommendations contained in my Report dated 4th April, 1921, trial holes were sunk at the proposed reservoir site. Although my recommendation was that they should be 15 to 20 feet in length, the actual length excavated parallel to the stream is much less than this. However, it is sufficient to show that the limestones, mudstones and shales of the sedimentary series, described in my previous report are to all intents and purposes horizontal. There are occasionally thin inter-bedded puggy layers which, however, are horizontal, but which make it essential to carefully follow the principles indicated in the second paragraph on page 2 of my first Report, which states as follows:-

"If the beds at the dam site are horizontal an earthen or masonry dam is feasible provided that in its design, the calculation for the width of the base is founded on the figure of 0.3 as the co-efficient of friction. This figure is the result of the fact that owing to the penetration of the mudstone and shaly beds by the stored water the latter will ultimately in places at least assume the character of soft clay."

I therefore finally beg to advise in regard to this dam site that the foundations are suitable for the construction of an earthen or masonry dam provided that in calculating the width of the base 0.3 is taken as the co-efficient of friction, and the usual precautions of penetrating to solid bed-rock be taken.

(Sgd.) Loftus Hills
M.B.E., M.Sc.

DIRECTOR

GEOLOGICAL SURVEY OF
TASMANIA.

Launceston

21st April, 1922.