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TH/2 7th December, 1950

MEMORANDUM:

PROPOSED DAMSITE FOR RED MUD, BELL BAY.

This damsite is situated half a mile north of "Lauriston" Homestead. The dam wall, if built to the 120ft. contour, i.e. 70 ft. above creek level, will be about 1,070 feet in length and on a bearing of 37° 30'.

The rock occurring to the east of the Creek is dolerite and in places outcrops right to the surface. Joint planes in this are not widely separated and strike in many different directions. However, at this point, the strike of the major planes is mainly 20 -40°, or parallel to the dam wall, with subsidiary jointing at right angles to this.

To the east of the creek is cleared land which on the surface shows basalt boulders and cemented iron oxides. These surface indications would suggest that basalt occurred at no great depth below the surface. However boring has shown that there is a considerable depth of clay and the field engineer's bore logs are quoted as follows:-

No. 1 Bore.

Surface - 1' Soil

1'-6'	Decomposed Basalt Boulders mixed with Sedimentary sands.
6'-12'	Fragments of Weathered and Slightly Bauxitised Basalt.
12'-18'	Sedimentary sands mixed with decomposed basalt and Tertiary Clays.
18'-34'	Soft Tertiary Clays mixed with sands and decomposed basalt.
34'-50'	Dense Hard pug.

No.2 Bore:

Surface - 1' Soil

1'-11'	Sedimentary deposits of sand and small pieces of weathered basalt mixed with decomposed basalt.
11-15'	Decomposed basalt boulders.
15'-19'	Tough dense basaltic clay.
19'-22'	Decomposed basalt mixed with clay-small pebbles.
22'-25'	Small decomposed water worn fragments of basalt.
25'-29'	Tough dense pug.

No. 3. Bore:

Surface - 2'	Soil
2'-9'	Sedimentary deposits mixed with basaltic clay.
9'-10'	Band of Weathered flakes of Basalt.
10'-14'	Decomposed basalt slightly bauxitised.
14'-26'	Basalt boulders finishing apparently solid at 26'.

(Note in Bore No.3 for "Basalt" read "Dolerite")

Thus the present creek in this locality runs in about the position of the Eastern Bank of the Tertiary Tamar and West of the Creek are deposits of Tertiary Clays with some Basalt flows.

The area occupied by the dam itself, as far as the main road, is underlain by solid dolerite or clays, both of which should be impervious to water.

Sgd. T.D. Hughes.
GEOLOGIST.

The Director of Mines,