

REPORT ON MR. HOOD'S PROPOSAL TO EXTEND THE BORE

at

THE BRAES TO GREATER DEPTHSIntroduction

This proposal is to the effect that the hole having been put down to 250 feet by Mr. Hood in the Tunbridge Basin for the purpose of obtaining a water supply for watering his stock, it should be sunk a further distance at the Government's expense in order to prove whether a larger supply exists and which would enable small areas of land to be irrigated. It is further stated that numerous property owners are awaiting the results of the bore and that, if a quantity sufficient for irrigation could be proved to exist, the said owners would have bores sunk on their properties for this purpose.

Proposed Test Bore

The main point in this proposal is that this proposed deep bore should be a test as to the underground water supply of the Midlands. The whole question of water supply depends upon the rocks in any district and the geological structure of same. These factors vary from place to place, and especially within the sub-artesian basins of the Midlands. It is evident therefore that a bore-hole in one basin cannot be accepted as a test for other basins. Further, a bore hole in one part of any particular basin need not necessarily be representative of conditions likely to be met with in the whole of that basin. This applies particularly to the Tunbridge Basin in which numerous rock types and geological structures are present. The present bore hole is situated at the southern end of this basin, and is passing through the rocks belonging to the Felspathic Sandstone series of the Trias-Jura System. These rocks are found only in this portion of the basin and on parts of the properties known as Lowes Park, The Braes, Glenmorey and the Salt Pan (eastern part of former Ballochmyle). It is only on these properties therefore that the bore-hole could be considered as a test bore and then only in a general sense. Small differences would exist even in this area as illustrated by the differences between the present hole and that sunk on Glenmarey ( $\frac{1}{2}$  to  $\frac{3}{4}$  mile distance) in 1922.

There are several other aspects of the proposal which require comment:-

Quantity of water for irrigation

No figures are given in the proposal as to the amount of water considered necessary to irrigate small areas (2 or 3 acres). If this figure were given it could be seen whether it exceeds the quantity which could be obtained from several wells yielding water at the rate of the Glenmarey bore. Such an arrangement is largely adopted in America for irrigation with underground water.

Quality of the water

The use of underground water for irrigation purposes depends upon its quality as determined by the nature and amount of dissolved solids. The quality varies greatly from place to place even in the one basin and this is another reason why the Braes bore could not be accepted as a test bore for the Midlands.

Question of deepening the Bore

The question of the hole being sunk deeper can be discussed without it being considered a test one. Consideration of this is, however, premature and would be more appropriate after the bore is completed to the 250 feet depth (which will take place on Wednesday 1st April). The final cores will then have been obtained and the amount of water making in the well determined.

Mr. J. O. Hudson, Chief Inspector of Mines, will be visiting the bore on Wednesday next and will obtain this information. It will probably be at my disposal on Thursday, and a short supplementary report could then be prepared. In the meantime, however, it may be stated that it may be advantageous to the State to sink the hole to a further short distance of 50 to 100 feet, without the bore hole in any way being considered a test one.

P.B. Nye.  
GOVERNMENT GEOLOGIST.

Hobart,  
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