SUPPLEMENTARY REPORT ON THE BORE AT THE BRAES

Mr. J. O. Hudson, Chief Inspector of Mines, visited the bore-hole on Wednesday and brought back a sample of the core from the bottom of the hole and further information as to the water supply. The core consists of bluish-grey felspathic sandstone with a thin layer of black carbonaceous mudstones at the bottom.

The complete section of strata exposed in the bore-hole is:-

Depth	Thickness	Strata
0		
10	10	Friable buff mudstones
110	100	Bluish-grey felspathic sandstones
113	3	Very poor coal
128	15	Friable black mudstone
142	14	Bluish grey felspathic sandstones
150	8	Dark grey to black friable mudstones
250	100	Bluish-grey felspathic sandstones with very thin mudstone bands and coal markings.
250		Black carbonaceous mudstone with pyrite.

The section is generally similar to that in the Glenmorey bore, half a mile distant, but the sandstone bed from which the water was obtained in the latter appears to be missing.

There are thus 250 feet of the felspathic sandstone series exposed in this hole. The hill which rises above the Glenmorey homestead half a mile distant consists of strata belonging to the same series. On this hill there is 250 to 300 feet of these strata exposed, the summit being marked by a diabase sill. The bottom of the bore-hole is therefore in strata 500 to 550 feet below the summit of this series and must be very close to the actual base of the series. Underlying the felspathic sandstone series the Ross sandstones occur.

Pumping tests proved the well to be making water at the rate of 1500 gallons per day, the water separately entering the well at a depth of 100 to 113 feet. This yield is somewhat disappointing as the adjacent well at Glenmorey yields 6000 gallons per day.

The hole having been sunk to 250 feet by Mr. Hood, the proposal is that the State should sink it to further depths, in fact 500 feet, the capacity of the plant is mentioned. The advantages to be gained by this can be considered from two standpoints:-

(1) State:-

(a) Geological Information - By sinking further valuable information as to the strata of the felspathic sandstone series down to their base would be obtained.

(b) Coal seams - The felspathic sandstone series contains the important coal seams of Tasmania.

In the adjacent York Plains coalfields two seams occur near the base of the series. These or their equivalents have not been cut in the Braes bore, but should be at a short distance if they exist. The proving of the existence or otherwise of these seams is an important matter to the State, and of invaluable assistance to the Geological Survey.

(c) Fresh Water supply - Approaching the base of the felspathic sandstone series the seams of coal and beds of quartz sandstones should be intersected. Further supplies of water are likely to be encountered in these strata providing that the surface water has access to these beds. From the geological structure I conclude that it is possible for water to enter beds which would be cut in the bore at depths of 200 to 350 feet, but that the deeper the bed the less likely is this to happen. Further supplies might possibly be obtained, therefore, at these depths in the well and the only way to prove this would be to extend the bore to these depths. Any extension beyond 350 feet would not, I think, be justified. The proving of such supplies would assist in further drilling for the State Plant being obtained.

(2) Owner of the Property:-

The only advantage to the owner would be the possession of any further water supplies developed by the deeper boring. Such supplies would increase the flow to near that desired by the owner, and in search of which he has already had the hole sunk to 250 feet.

Conclusions - For reasons already given in the first report I do not favour the suggestion that the bore be considered a test bore for the Midlands. Further, I consider that it would be practically useless to extend the bore beyond 300 to 350 feet unless the base of the felspathic sandstone series had not been reached in that depth.

For the reasons given above there would, however, be certain advantages to be gained if the bore-hole were deepened by the State a further 50 or 100 feet to penetrate the upper members of the Ross Sandstone series.

P.B. Nye,

GOVERNMENT GEOLOGIST

Hobart,
2/4/35