: KN9/51-52

REPORT ON SITE FOR PROPOSED BORE AT CONARA.

It is proposed by the Railway Department to sink a bore-hole at Conara for the purpose of obtaining a supply of underground water. It is assumed that this will be carried out in the property of the Department at Conara Station.

The surface in the vicinity of the station is occupied by buckshot gravel and ironstone, This will occur as a superficial layer and will be succeeded in depth by Upper Tertiary sands, clays, etc. These will extend to depths ranging from 20 to 50 feet and will be succeeded by Tertiary basalt with a thickness of 50 to 100 feet (probably nearer 50 feet). Lower Tertiary sands, clays, gravels, etc. occur under the basalt but their thickness cannot be stated with any degree of accuracy. It is probable, however, that they extend to depths of 250 to 400 feet below the surface.

The bedrock is probably Mesozoic diabase. A low hill of it occurs 30 to 40 chains west of the station and rather suggests that it will be encountered at the above depths.

The possibilities of obtaining underground water depends upon the rocks passed through. The Upper Tertiary sands are more or less favourable rocks, but the absence of springs at their junction with the basalt rather suggests that the supplies, if they, exist are small.

Supplies can often be obtained from basalt, but much depends upon the nature and amount of jointing, vesicles, etc.

It is probable that some supplies will be obtained from this rock.

Any sands, gravels and other porous beds in the Lower Tertiary rocks will probably yield the greatest supplies. It is probable also that the best results would be obtained in porous beds near the diabase bedrock.

This would especially apply if the "gutter" or deepest part of the filled valley of the ancient Macquarie were encountered. It is almost certain, however, that this occurs to the east of Conara.

It is quite impossible to state the quantity and quality of the water likely to be obtained, especially as this is the first bore-hole to be sunk in the district.

These factors can only be determined by the bore-hole.

With regard to the depth of the hole, I would not generally recommend sinking deeper than 200 feet, but at Conara I would suggest that, if suitable supplies are not obtained down to this depth, the bore-hole be continued to the diabase bedrock.

There is little to choose between any sites in the immediate vicinity of Conara Station and I would suggest that it be sunk at the most convenient place for the Railway Department, having in view the purpose for which it is to be used.

(If only a trial bore was required, I would recommend that the site should be near where the Hunting Ground Water Course crosses the Main Road. This would necessitate drilling through only a small thickness of basalt and would test the Lower Tertiary sediments more cheaply. If successful, it would mean half a mile of piping to the station and would have the disadvantage of the pumping plant being remote from the station. The greater cost of piping would more than offset the saving in drilling.)

The water would probably be under sub-artesian conditions (there is only a very slight possibility of it being under artesian conditions) and so a deep well cylinder pump and pumping plant would have to be installed.

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