

REPORT ON THE POSSIBILITY OF OBTAINING
UNDERGROUND WATER SUPPLIES ON THE PROPERTY
OF MR. E.A. CLIVE, OLD BEACH.

This property is situated about half a mile east of the jetty at Old Beach. Supplies of underground water are required, if possible, in the vicinity of the residence of Mr. Clive and only that portion of the property was examined.

The house is situated on a hill, some 50 feet above river level, which forms a slight headland at this point of the river. To the east of this hill, there is a small inlet or bay and to the east of this the shore trends southerly towards Risdon. A very small indentation occurs to the west of the hill.

Good exposures of the rocks occur around the shore. The shore on the east side of the bay is occupied by sandstones and mudstones apparently belonging to the Ross series of the Triassic System. Generally these rocks are horizontally bedded or dipping at low angles, but towards the head of the bay, there is a dip of 20°-40° to the west. The sudden change of dip indicates the presence of a fault.

On the west side of the bay, feldspathic sandstones and mudstones of the Feldspathic sandstone series of the same system outcrop. These are horizontally bedded or dip at slight angles to the west. These rocks continue round the headland and into the indentation to the west.

On the western side of the indentation, normal sandstones again appear, dipping westerly at angles of 50 to 15°.

Two possible explanations of the structure suggest themselves.

1. The sandstones to the east and west of the feldspathic sandstones belong to the Ross series and the feldspathic sandstones represent a narrow block faulted or let down into them. The sudden changes and the abnormal amount of the dip to the east and west of the feldspathic sandstones would be in general agreement with the effects produced by such faulting.

2. The sandstones represent thick beds in the Feldspathic Sandstone series. Similar block faulting to that outlined in (1) could still be considered to exist, the only possible alternative being that the sandstones on the west might possibly overlie the feldspathic sandstone beds.

Whatever the structure it does not however, in this case greatly affect the question of underground water.

In addition to the above rocks, river gravels occur around the shore at some places almost down to water level. It is possible that the gravels extend to the summit of the hill in which case they would have a maximum of 40 to 50 feet. It is probable, however, that the thickness diminishes away from the shore.

More recent gravels occur in the valley of the small stream to the west of the hill.

While small supplies of water might be obtained from the gravels, the better supplies are likely to be obtained from the sandstones, especially the felspathic sandstones. As the supply is required near the house, the bore-hole would penetrate these rocks. Numerous bore-holes have been sunk in these rocks in the Midlands and water supplies obtained, somewhat similar chances would exist at Old Beach.

Any convenient site would be suitable for the borehole, but one to the west of the house would be preferable to one to the east.

It is impossible to state the quantity and quality of the water that would be obtained. From experience, it is probable that the supply would be at least 150 gallons per hour. The quality varies considerably but generally speaking it would probably be suitable for watering stock; fair to bad for household purposes (i.e. without treatment) and its value for watering gardens would depend entirely on its quality.

As to the depth, supplies are generally met with between 75 and 150 feet, but if not boring should be continued to 200 ft.

Signed P.B. Nye
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Mines Department,
HOBART.

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