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Underground water prospects near Clifton Beach.

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F.C. Hampton requested an investigation into underground water prospects on his property near Clifton Beach. The land of approximately 10 ha extends westward from a frontage on the Clifton Beach Road, rising to an elevation of about 25 m above the road.

With the exception of the extreme north-western corner where superficial Quaternary(?) sand is exposed, the property is underlain entirely by Permian sandstone.

GEOPHYSICAL WORK

Three electrical-resistivity probes were completed: the first near the Clifton Beach Road, and the other two at the western, more elevated part of the property. The results of the former suggest that saline water occurs at shallow depths. The rapidly decreasing resistivity values of probes two and three seem uncharacteristic of Permian sandstone, but may indicate the presence of very saline water, or clay, or possibly both.

RECOMMENDATIONS

Elsewhere in south-east Tasmania Permian rocks have been found to be reliable sources of underground water. Such water is generally of poor quality and unsuitable for domestic supplies.

A bore sited at the eastern end of the property near the Clifton Beach Road will probably be successful. Experience has shown that such rocks generally yield water within 25 m from the surface, and it is recommended that drilling be ceased if the hole remains dry to 30 m. Quantities obtained from Permian sediments are variable, but a yield of 15-30 l/min is likely. Water quality is expected to be poor, in the range of 1500-3000 ppm of total dissolved solids, and unsuitable for domestic or garden usage unless treated. Commercial water softeners are available for such a purpose. Depending on the make and model, and water quality, quantities ranging from 7000 to 45000 l can be treated between regenerations.

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