UR1975_12

Groundwater prospects near Lauderdale.

W.C. Cromer

Mr R.M. Young requested that a groundwater investigation be made of his property 'Romalea', at Lot 19, Roches Beach Road [EN396512]. The block of about 0.5 ha in area, slopes gently east. The topography becomes steeper to the west of Acton Road, culminating in Acton Hill (240 m).

The property occupies a small rise underlain by Triassic sandstone. A few hundred metres to the south these sediments are faulted against Permian (Cascades Group) siltstone and mudstone. To the east, below the property boundary, these rocks are overlain by Quaternary sand and clay covering most of the Lauderdale area. The higher flanks of Acton Hill are underlain by Jurassic dolerite.

Triassic sediments are generally considered to be reliable sources of groundwater. The water is confined within fractures in the rock, and the success of a bore depends on the number, size and orientation of such fissures intersected during drilling. The topographic situation at 'Romalea' is favourable in that a large catchment area of Triassic and Permian sediments exist to the west, above the property.

A bore sited near the owner's residence should be successful. Yields from Triassic sandstone elsewhere in Tasmania are of the order of 15-40 *l*/min, and the quality is usually suitable for general gardening and agricultural use. However, if specialised irrigation is contemplated, samples should be analysed to determine the suitability of the water.

If during drilling the bore remains dry for the first 30-40 m, it should be abandoned. Prospects of success diminish rapidly below this depth as water bearing fractures are unlikely to be encountered.

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