

## 47. Water prospects at Eaglehawk Neck

D.E. Leaman

The property, owned by I.H. Robinson, is situated about 370 m from the Arthur Highway, with frontages on Blowhole Road and Lynne Street.

Water is required for the purpose of supplying proposed holiday units.

No rock outcrops occur on the gently sloping property and the whole area is covered by an unknown and probably variable thickness of wind-blown sand. Comparison with adjacent properties would suggest more than 2-3 m of sand. The underlying rock is probably dolerite.

## HYDROLOGY

The western side of the property is bounded by a small perennial stream. Small springs also occur, at least one of which is perennial and produces a boggy, wet patch near the Lynne Street frontage. The springs appear to be related to a near surface hard pan in the sands which results in some perching of the water table.

Water could be obtained from:

- (1) The dolerite, by casing off the sand and drilling to 18-21 m. The water yield would be quite small, probably less than 2,100 l/h in this location, but the quality should be suitable for domestic purposes other than for drinking water. Drilling would be expensive.
- (2) The sand, providing that it is of sufficient thickness to have a reasonable groundwater storage. Spear bores or wells would enable sufficient water to be obtained cheaply for the required purposes.

## RECOMMENDATIONS

- (1) Dig small test holes on the lower western side of the property to determine the depth to the water table, to sample the water and gain some indication of the thickness of sand.
- (2) Test the quality of water for total salt content and check for organic content (there is a nearby septic tank).
- (3) If the water is of adequate quality (it may be a little saline due to wind-blown salt from the sea) and the sand of sufficient thickness a well, lined with timber, bricks or concrete or a spear would be suitable for this site. The yield would probably be 700 l/h or more for a spear, and a small storage tank would be required. A well would be capable of greater yields by virtue of its larger storage and transmission characteristics.

## CONCLUSION

No drilling can be recommended on account of lack of suitable water-bearing rocks, the drilling difficulties to be expected and the probable poor quality of the water.