

## A.8.6

Underground Water - a discussion

Eight of the holes drilled in the Rosevale-Westwood area were flowing. Confined aquifers are generally situated stratigraphically below ligneous facies.

Aquifers have been identified in the following stratigraphic horizons:-

- 1) Sandy strata below the ligneous facies;
- ii) Brown coal seams confined by impermeable clay horizons;
- iii) The weathered horizon of Jurassic dolerite underlying the Tertiary strata;
- iv) The Tertiary clay and Tertiary basalt interface;
- v) Tertiary basalt.

Aquifers in sandy horizons have been intersected in rotary holes R079, R081 and R085. The water bearing horizons in these drill holes was logged as a clayey quartzose sand. However the lithology may have been mis-identified. An alternative lithology could be a quartzo-feldspathic sand in which the feldspar sand is weathered, and which disaggregates during rotary drilling.

Sandy aquifers are readily identified using downhole geophysical logs. Characteristic responses of the sondes is summarised in Table 16.

TABLE 16

EL 20/80 LAUNCESTONCharacteristic Responses of Downhole Geophysical Sondes in Sandy Aquifers.

SONDE	RESPONSE (cps)
Gamma	Moderate
Caliper	Hole wall cavity
Density	High
Resistivity	High
Neutron	High