

Seismic survey at Scamander River

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Introduction

A limited resistivity survey at Scamander (Leaman, 1973) revealed a deep lead adjacent to the present alignment of the Scamander River. This has been examined by a seismic refraction survey in the region of the ridge between the Scamander River and Henderson Lagoon (fig. 1) in order to confirm the resistivity survey as recommended in the previous report

Survey details

A single 180 m spread was fired across the centre of the ridge area (approximately between resistivity probes 63 and 64). Geophone spacing was 15 metres. The velocities recorded were:

First layer:	1,200 m/sec (Tertiary sand and gravel)
Second layer:	1,980 m/sec (weathered slate etc.)
Third layer:	6,000 m/sec (unweathered slate etc.)

The thickness of the first layer material decreased from more than 70 metres near depth probe 63 to only 50 metres at depth probe 64.

Conclusion

The seismic spread has confirmed not only the presence of the filled valley but also its depth as determined by resistivity depth probes. It may be noted that while there is a very marked resistivity increase at the Tertiary sand/weathered slate interface the velocity change is very slight. Resistivity methods are very useful under such conditions.

The velocity observed for the filling material is quite low and it is probably a water-bearing sand with limited clay fraction, as it is not unusual for Tertiary clays to have velocities in excess of 1,600 m/sec.

Reference

LEAMAN, D. E. 1973. Geophysical surveys, Scamander River. *Technical Report Department of Mines Tasmania* 16:106–107.

[15 November 1971].

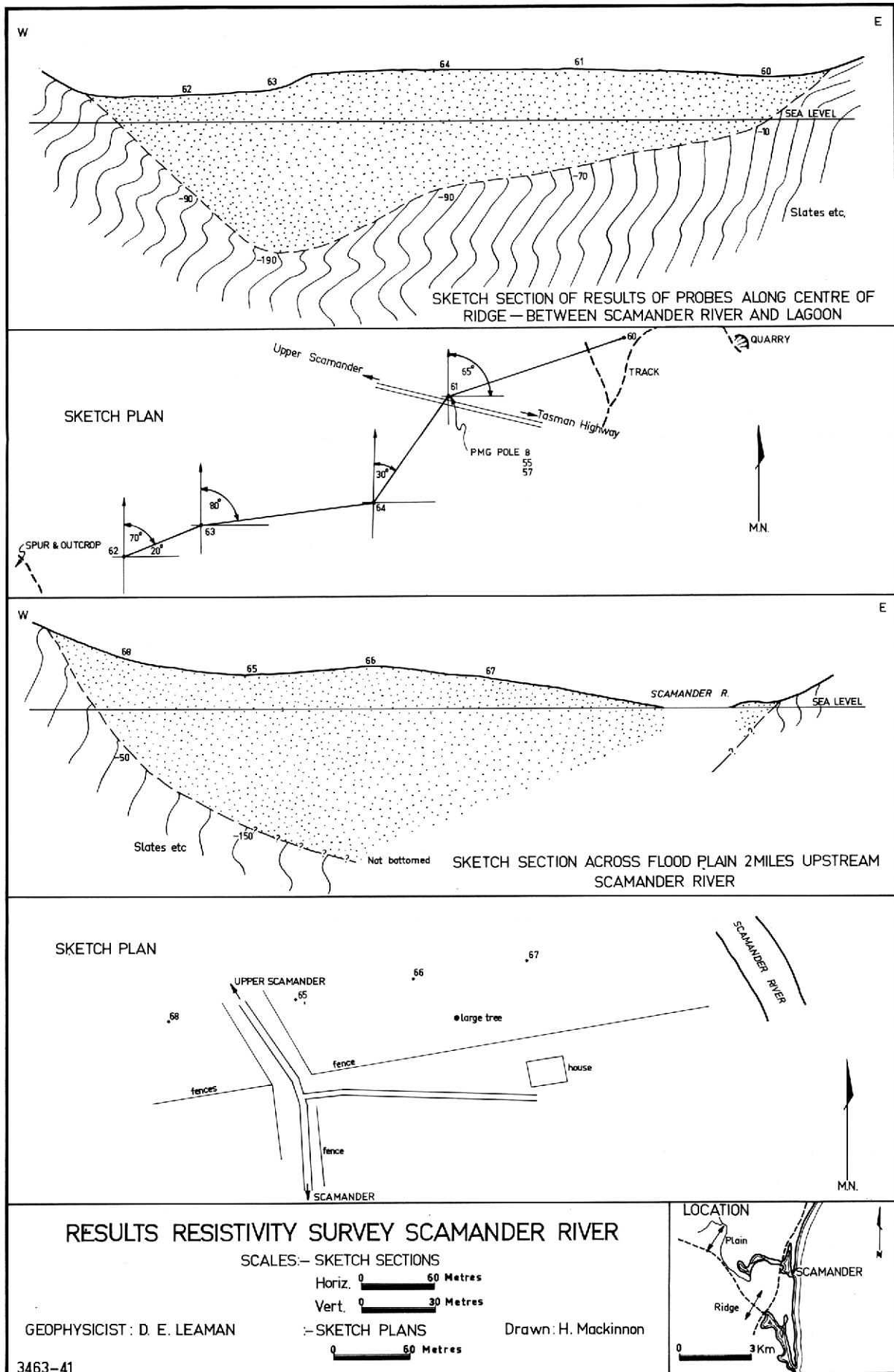


Figure 1