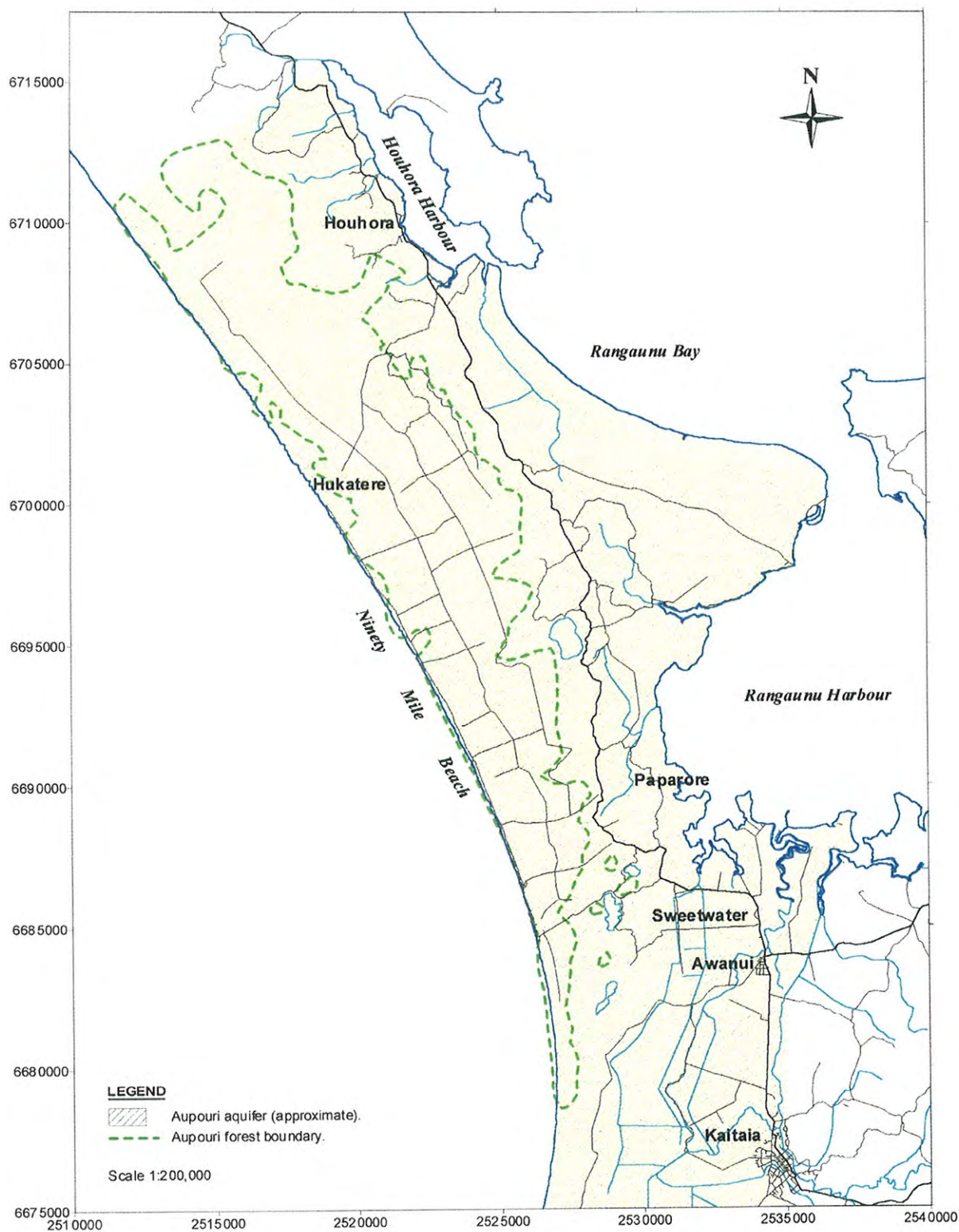
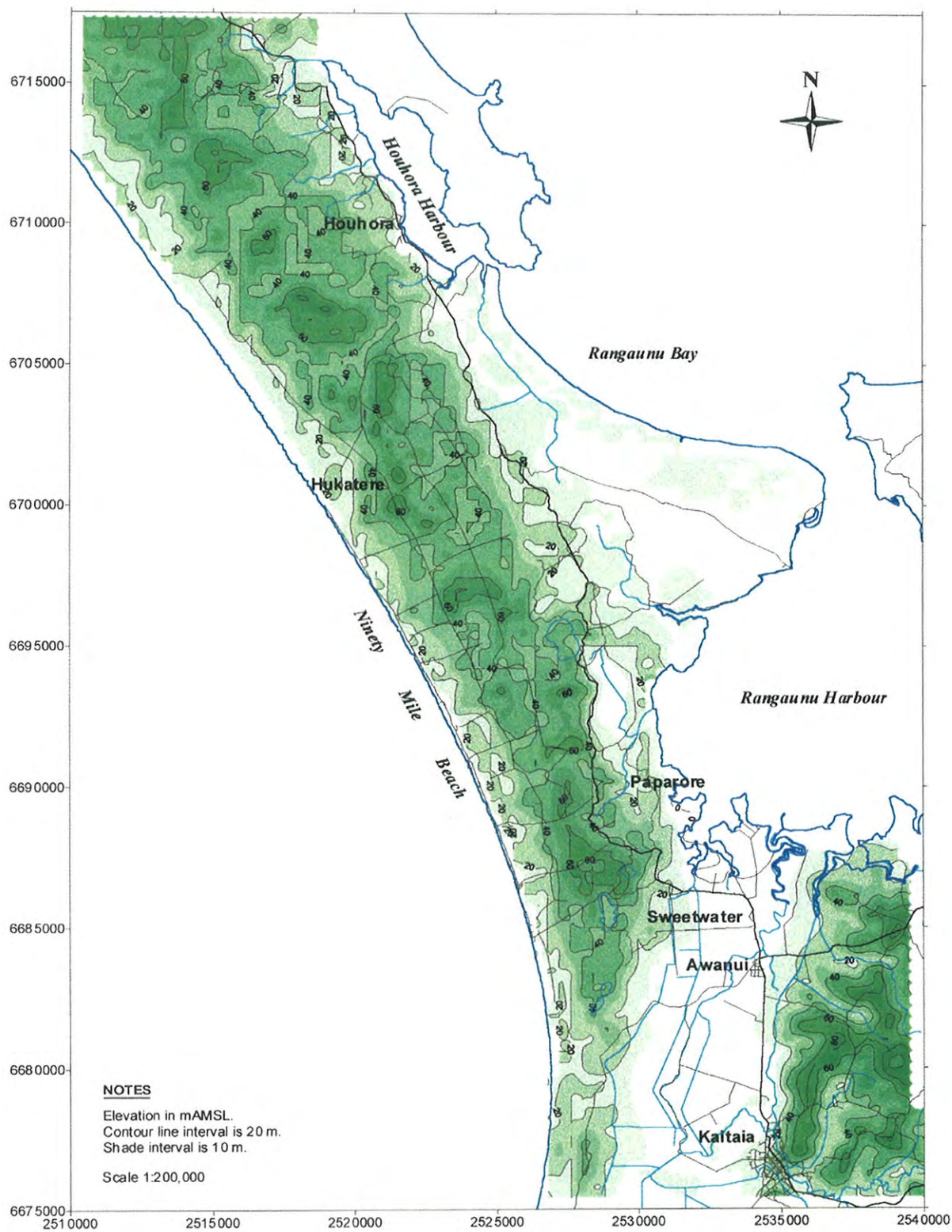




Locality plan of the Aupouri aquifer region
Figure 1

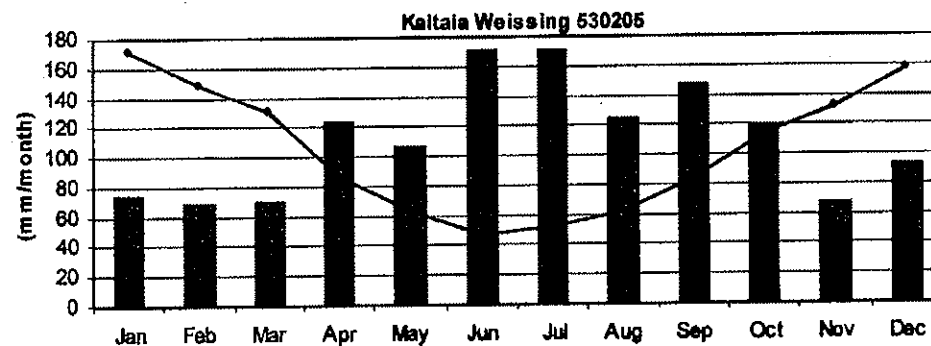
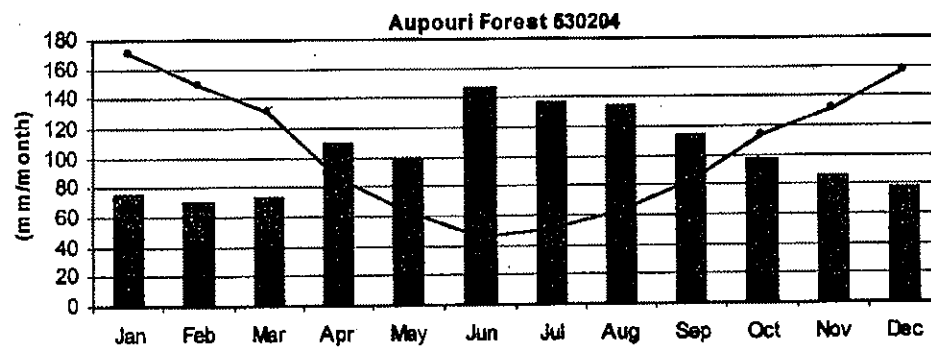
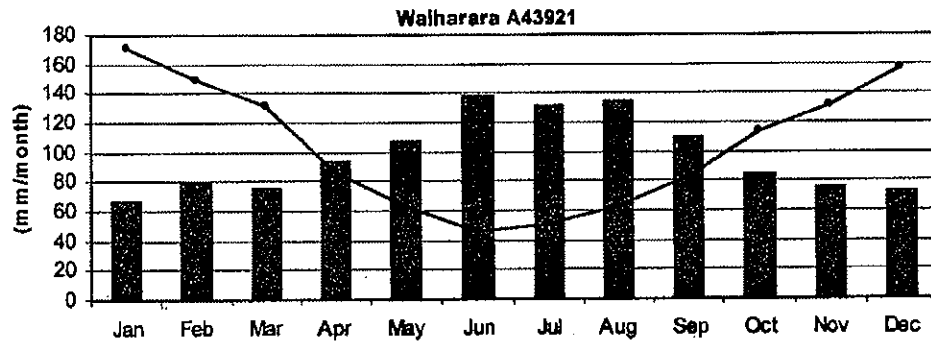
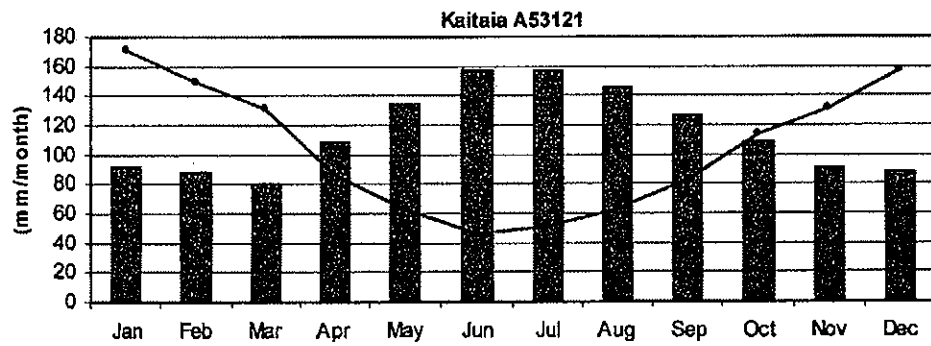


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Interpolated regional topography
 Figure 2





Notes:
Bars represent rainfall, lines
represent evaporation.

Mean monthly rainfall for various stations
and pan evaporation for Kaitaia
Figure 3



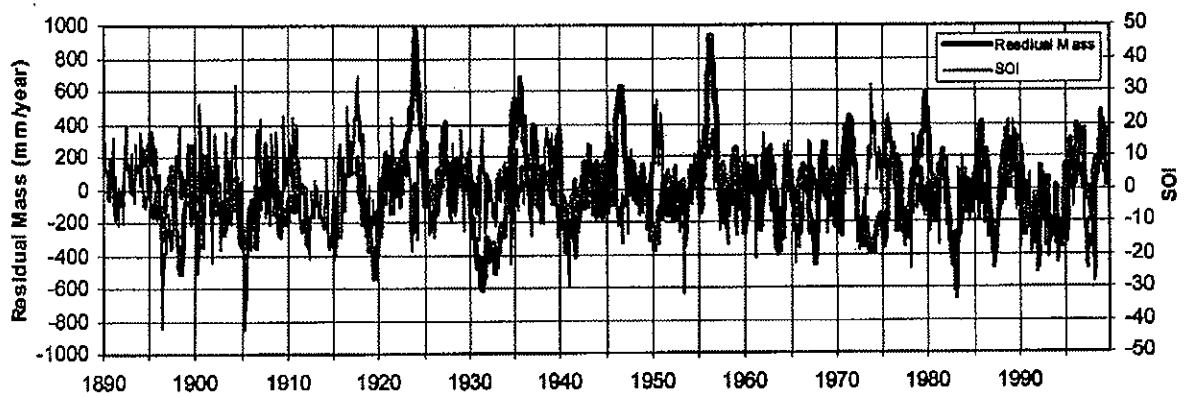


Figure 4a

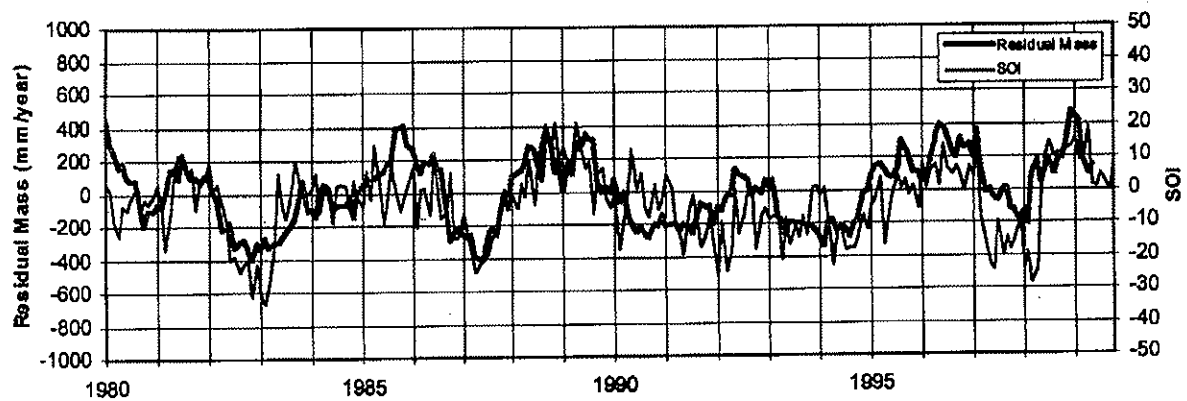


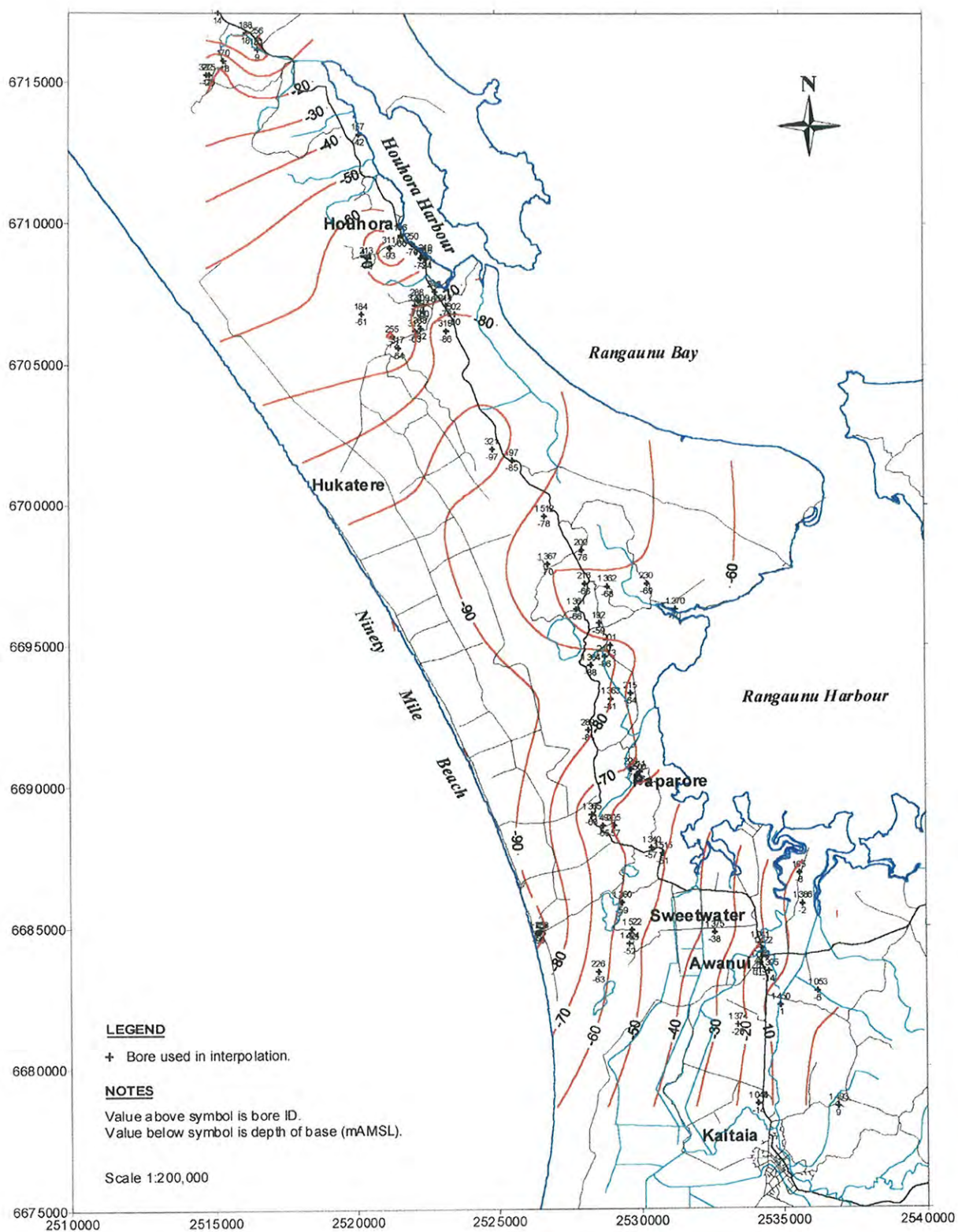
Figure 4b

Notes:
Rainfall residual mass calculated from the
amended long term rainfall record for
Kaitia.

Rainfall residual mass versus monthly
Southern Oscillation Index
Figure 4



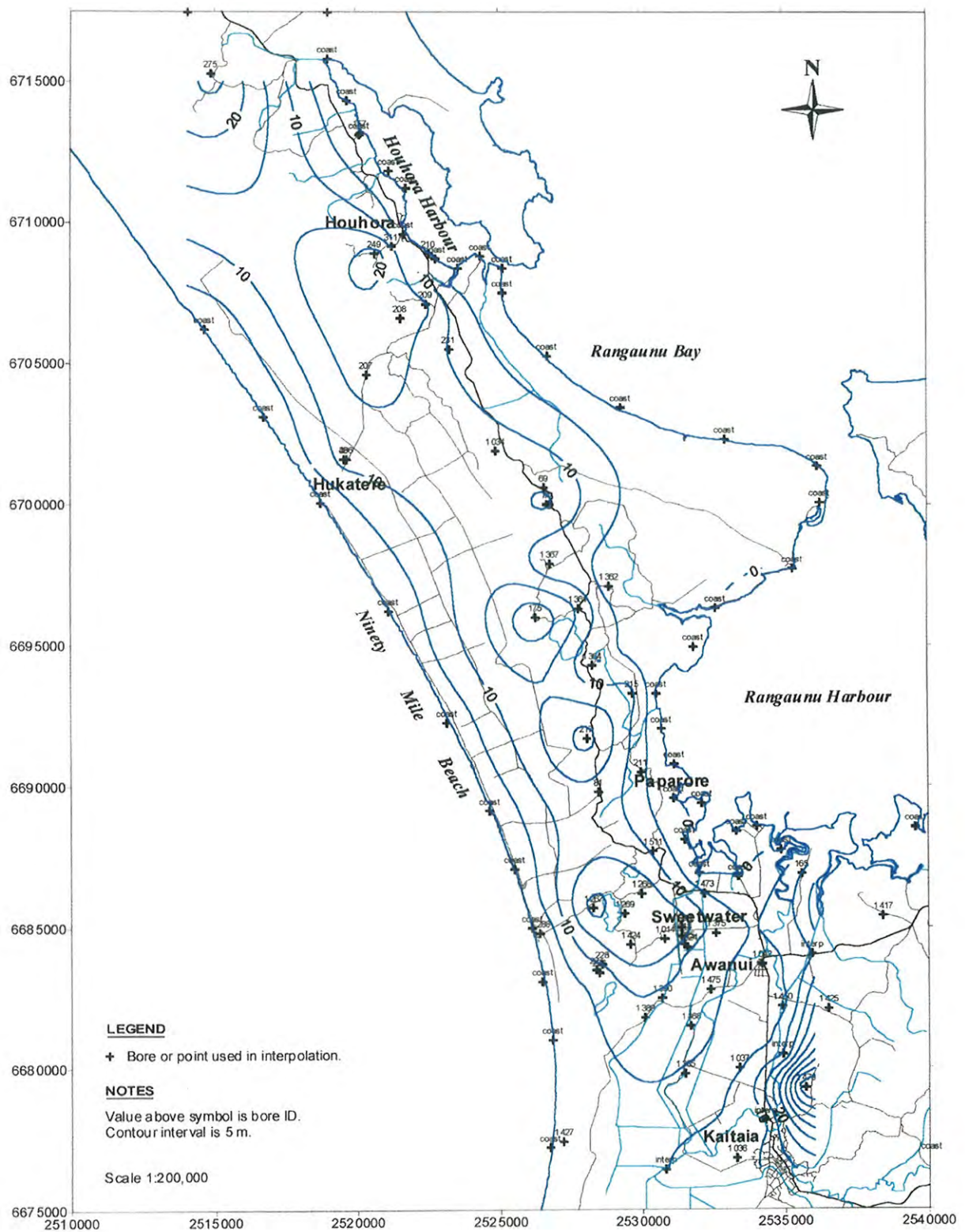
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Interpolated base of Aupouri aquifer
Figure 5

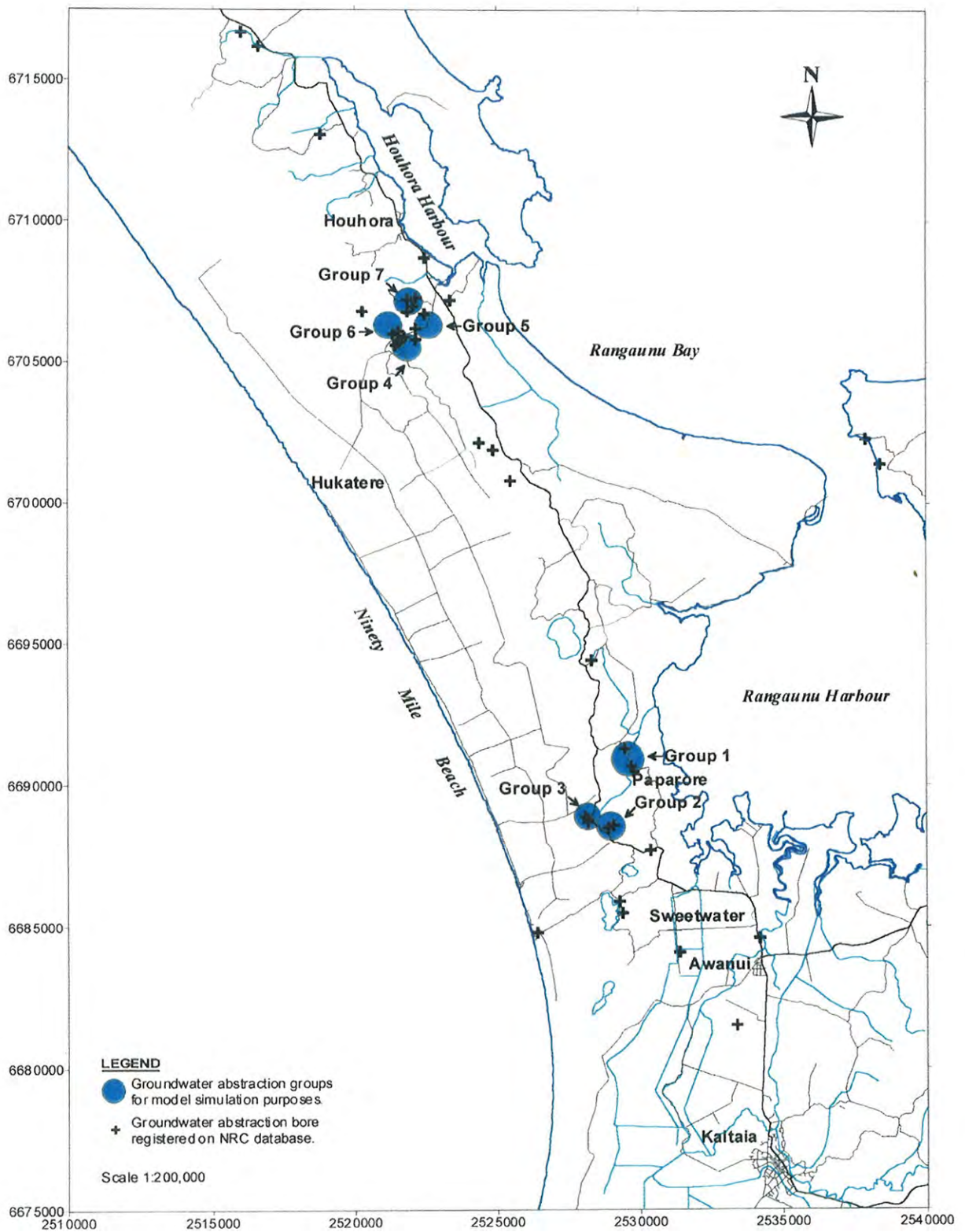


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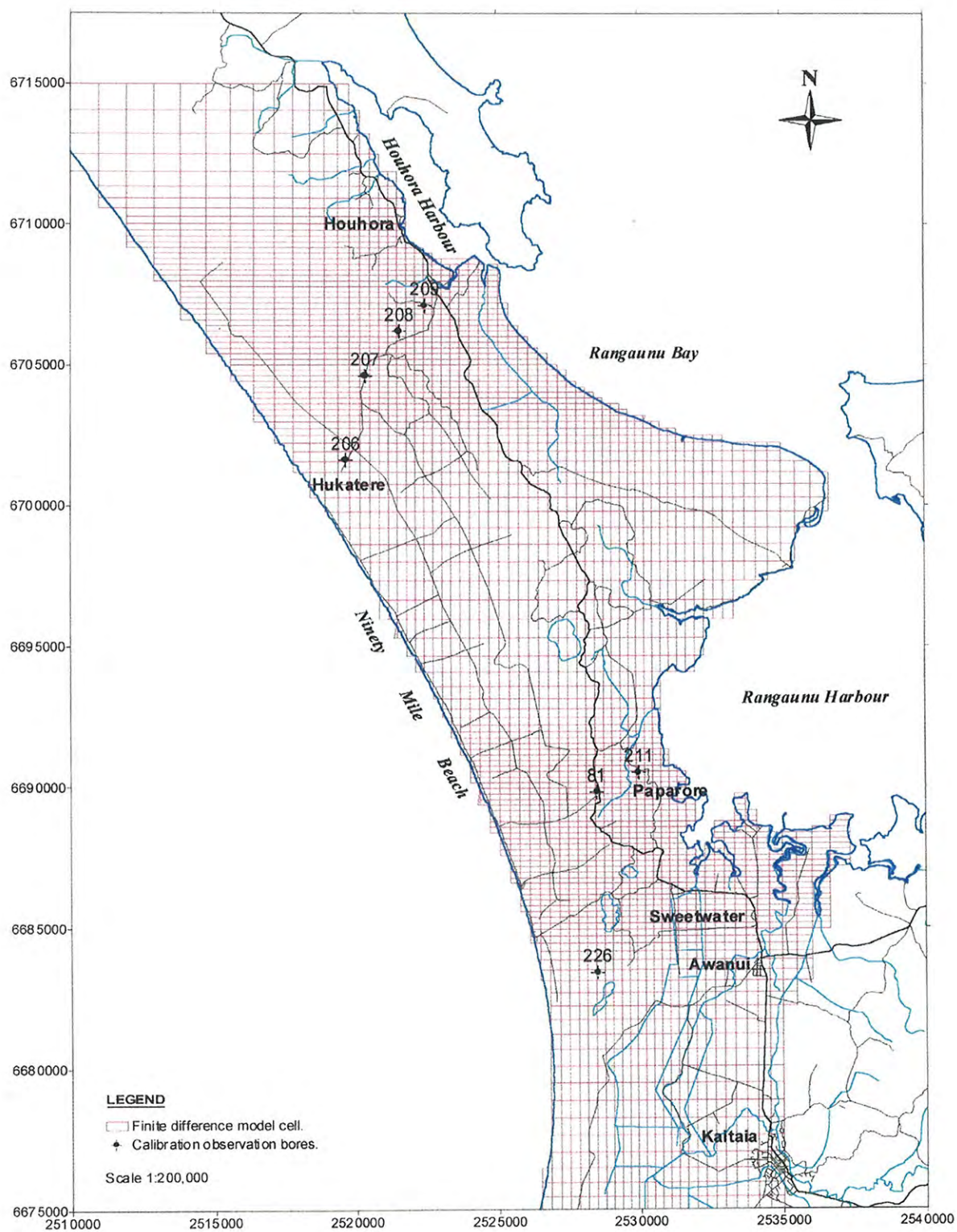
Indicative regional piezometric surface
Figure 6





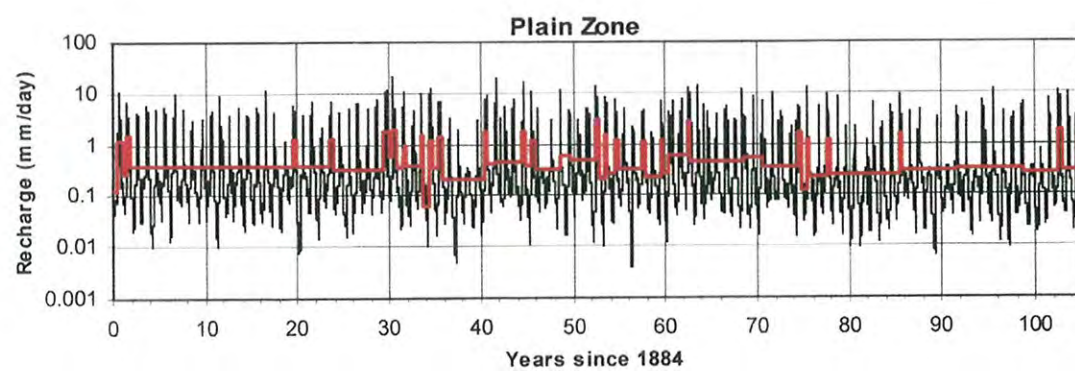
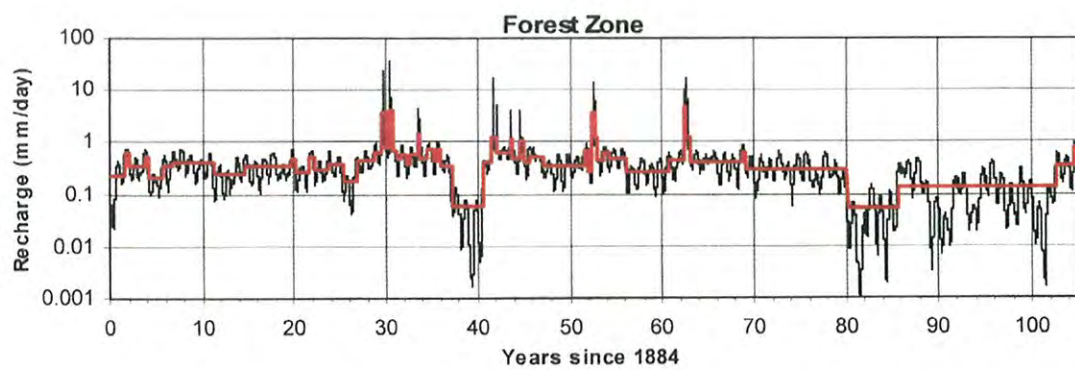
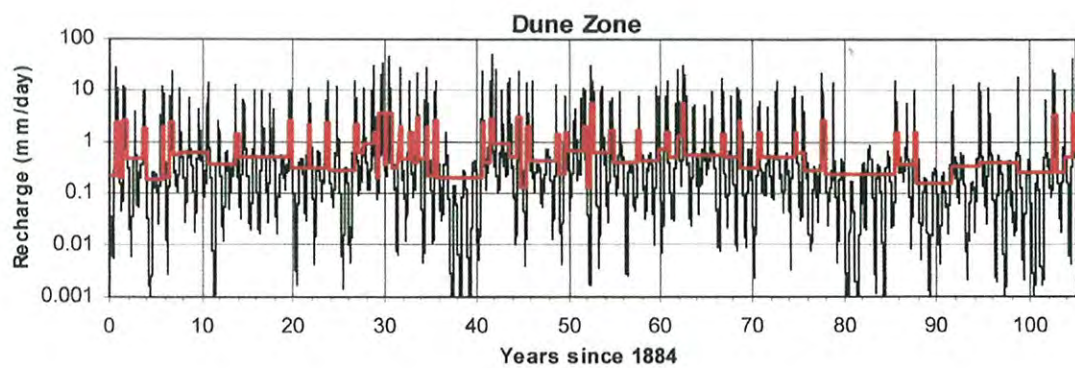
Location of licensed groundwater bores and pumping groups
Figure 7





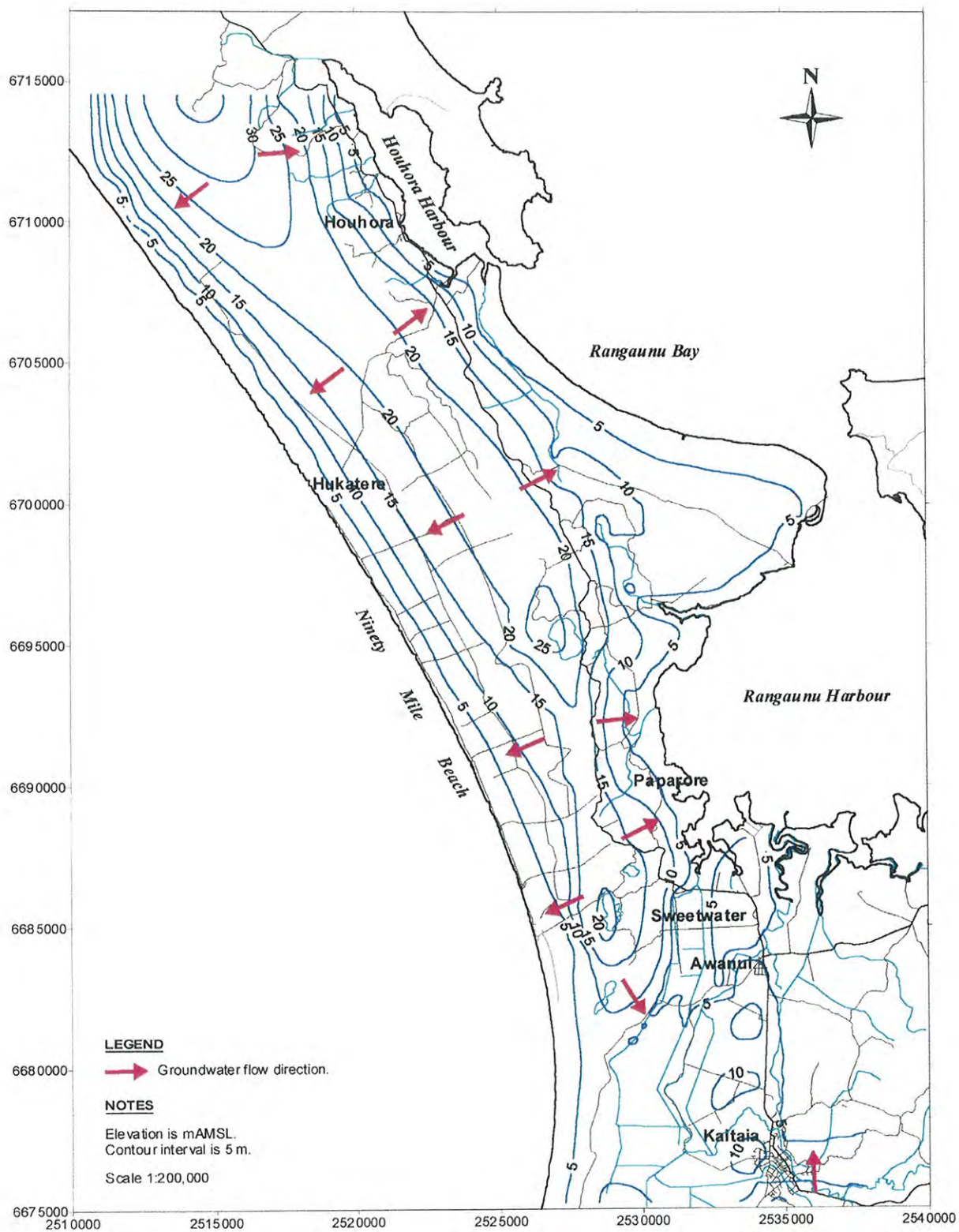
Finite difference model grid and
calibration observation bores
Figure 8





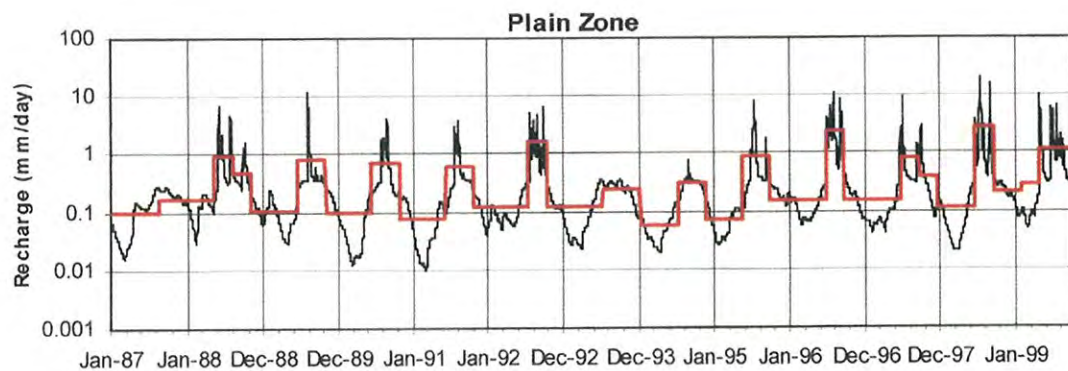
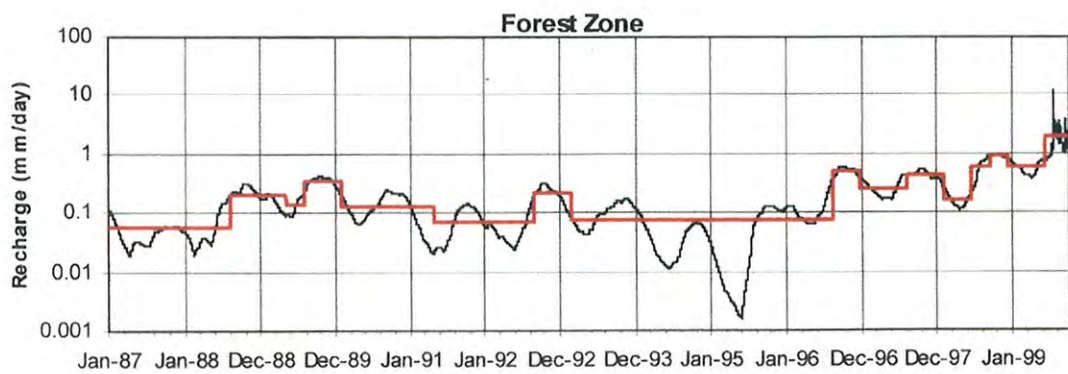
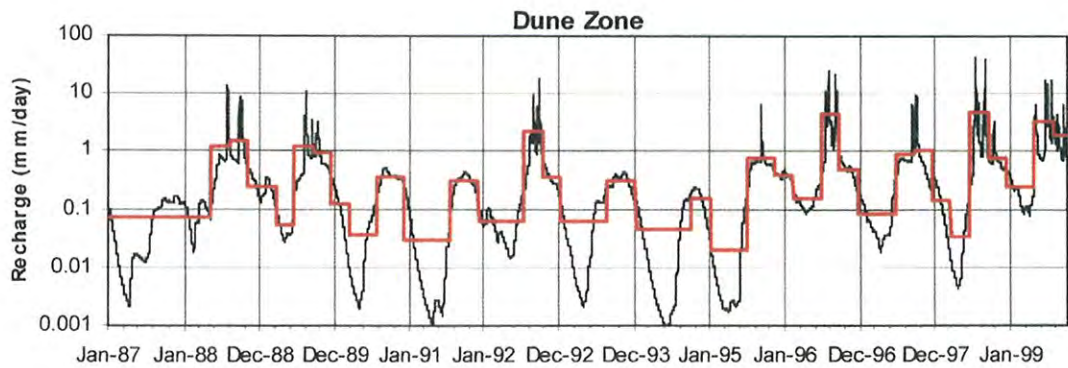
Simulated groundwater recharge hydrographs
1884 to 1999 and block-averaged periods
Figure 9





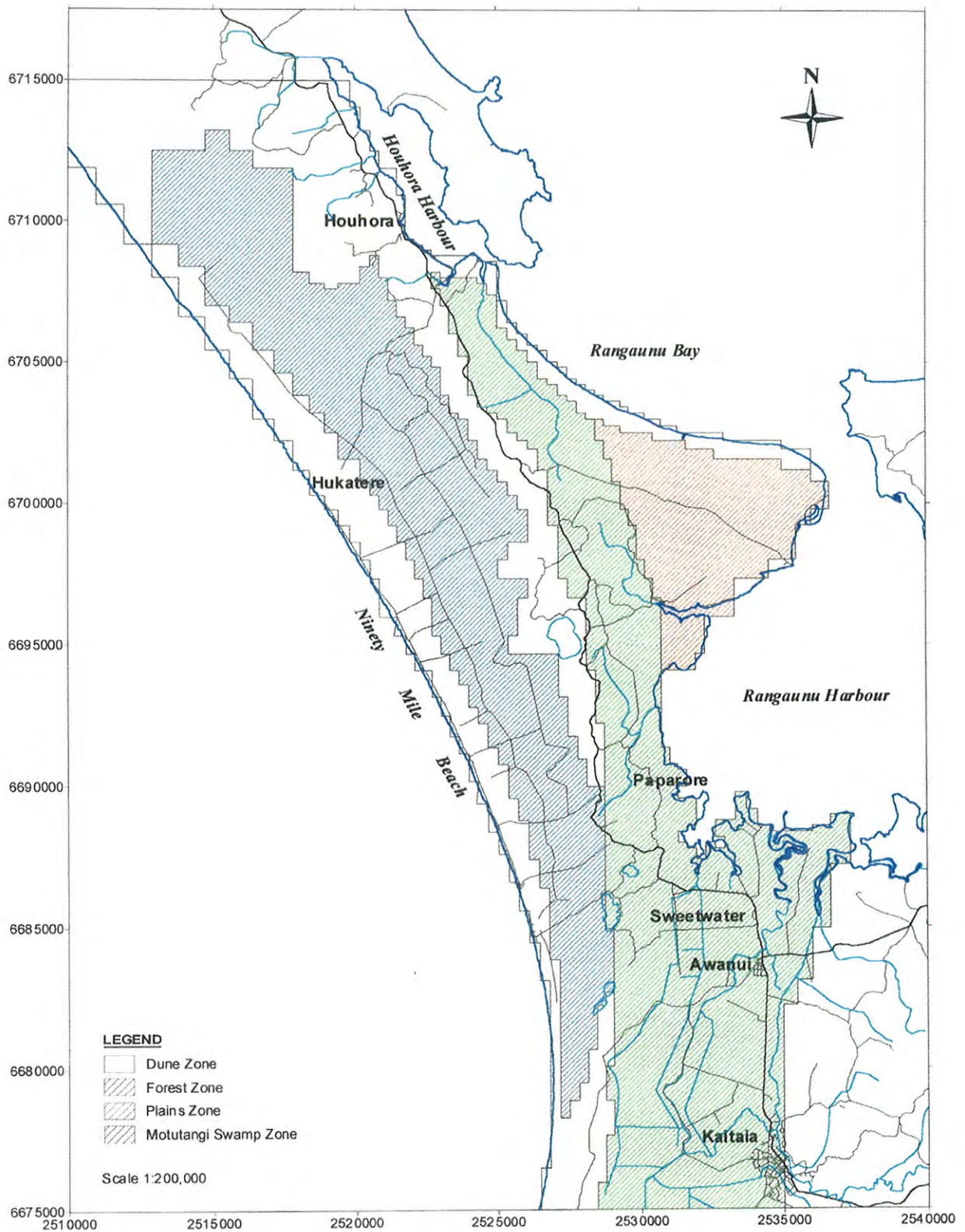
Steady state model piezometric surface
Figure 10





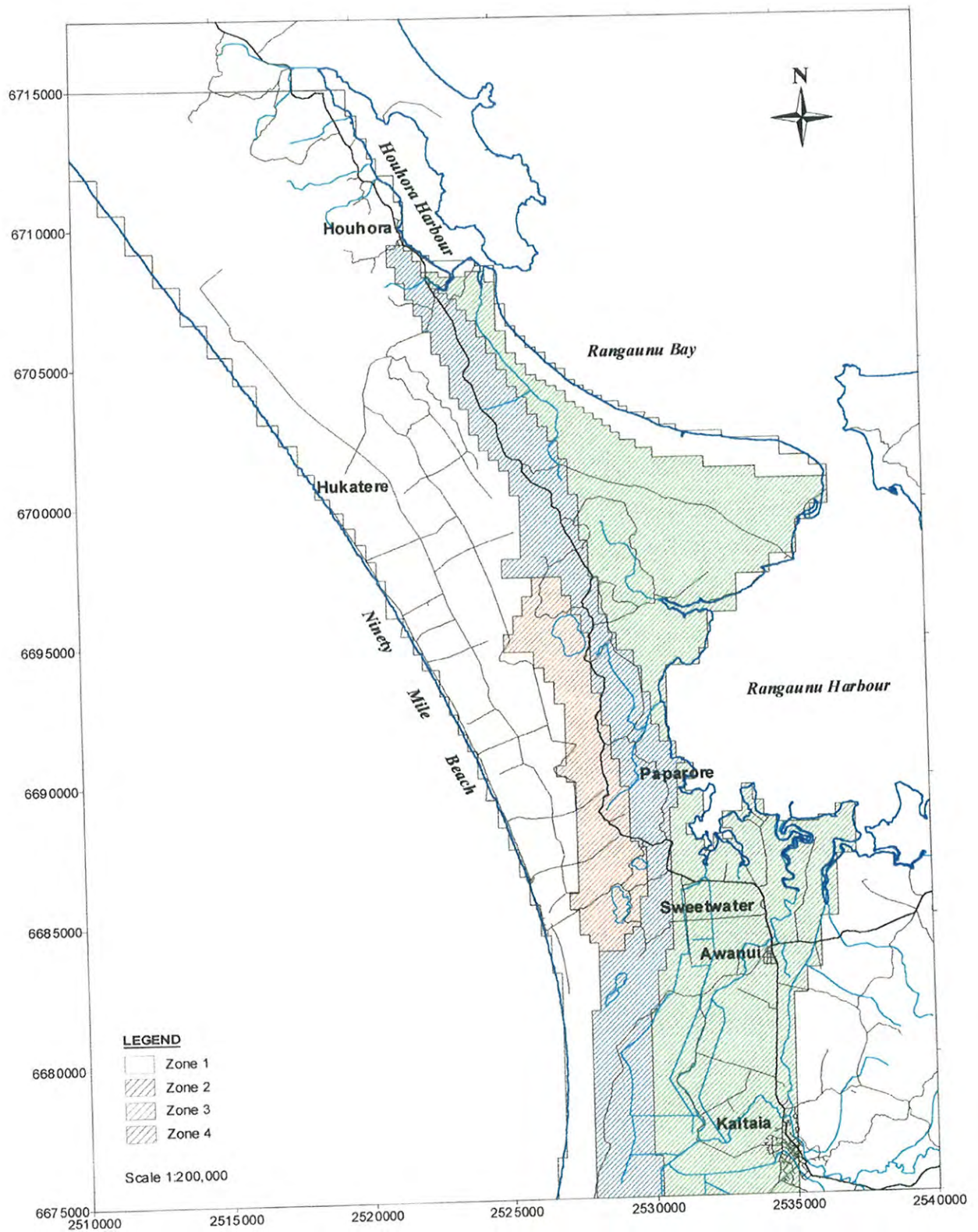
Preconditioned recharge hydrographs
for transient calibration
Figure 11





Calibrated model recharge zones
Figure 12

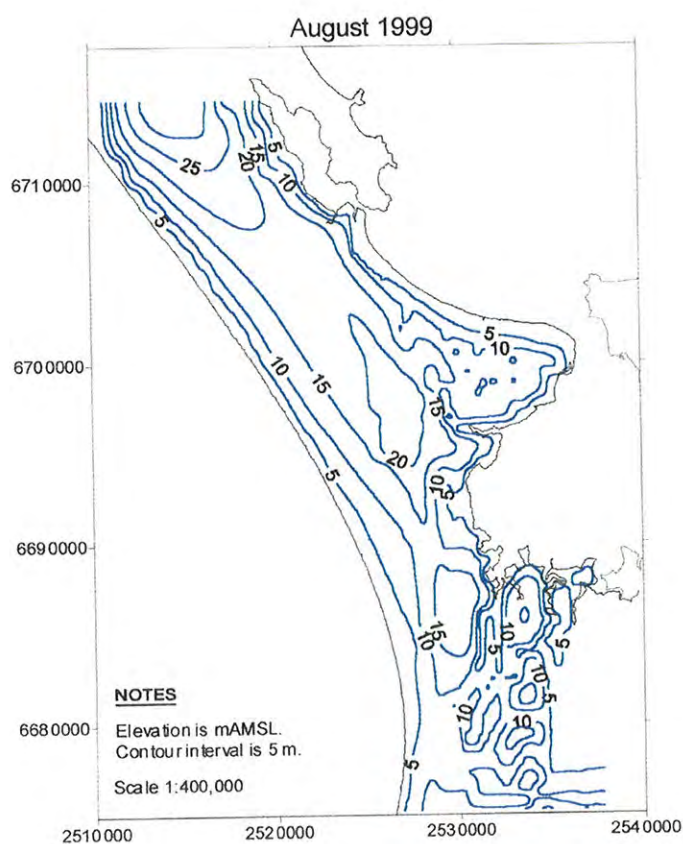
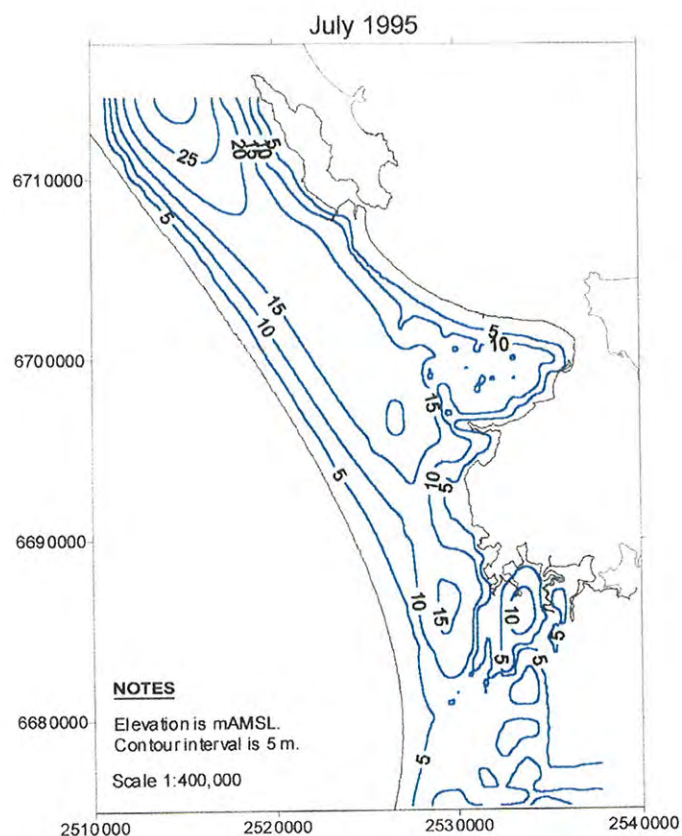




Calibrated model hydraulic property zones
Figure 13

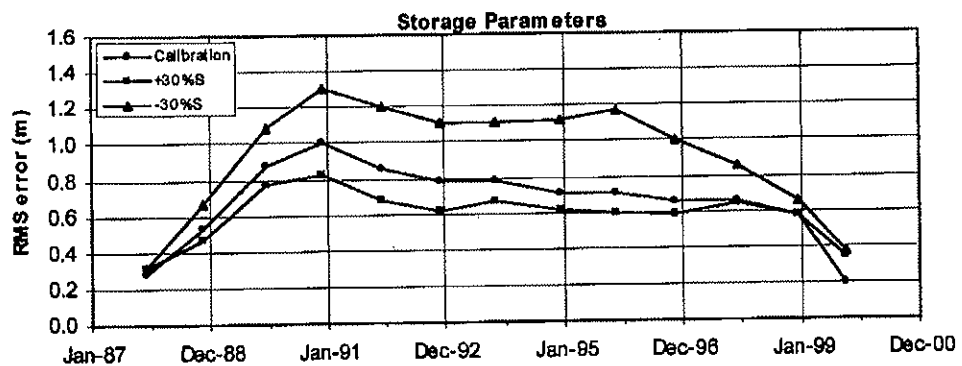
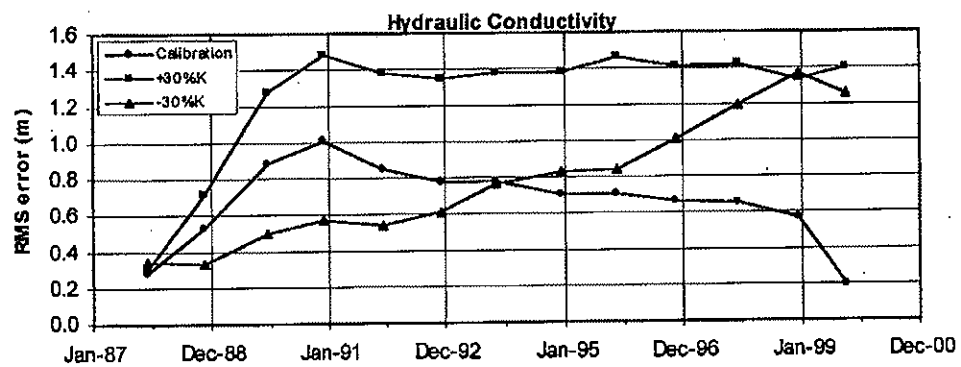
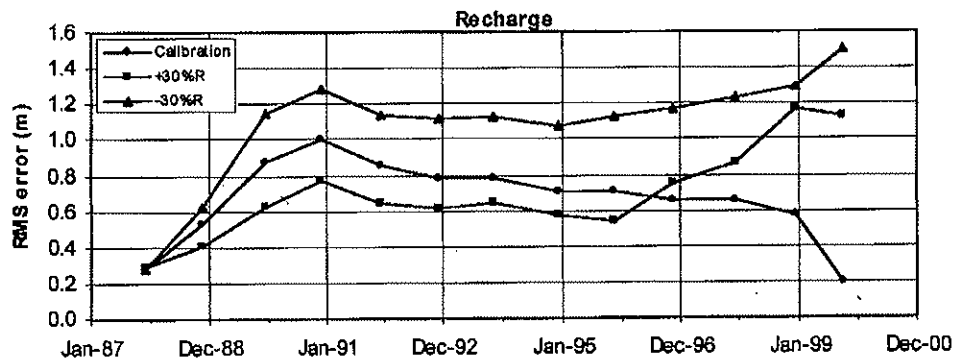


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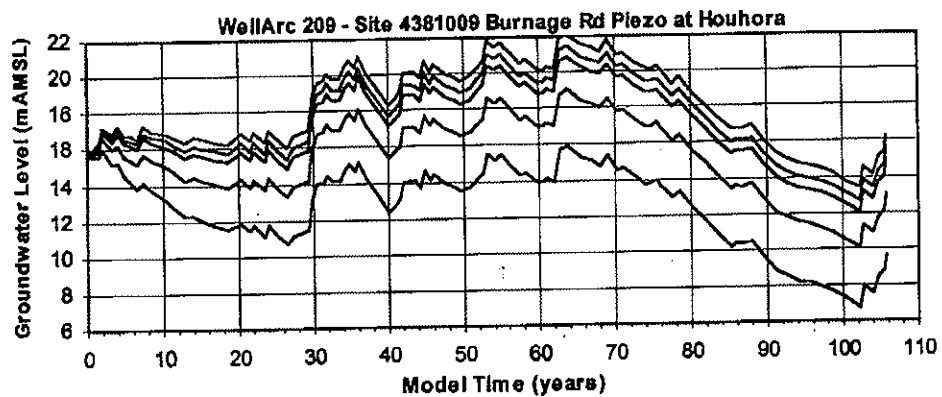
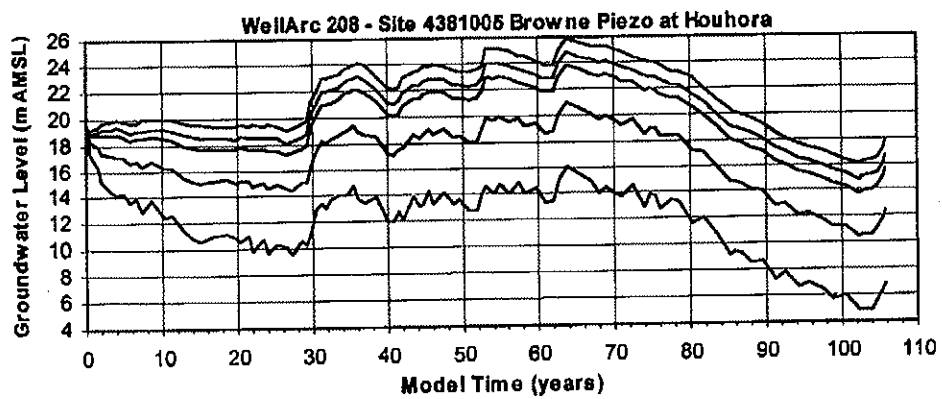
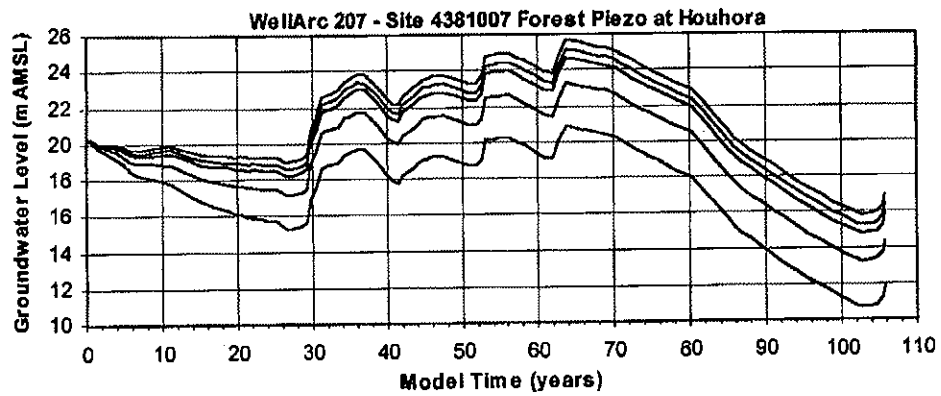
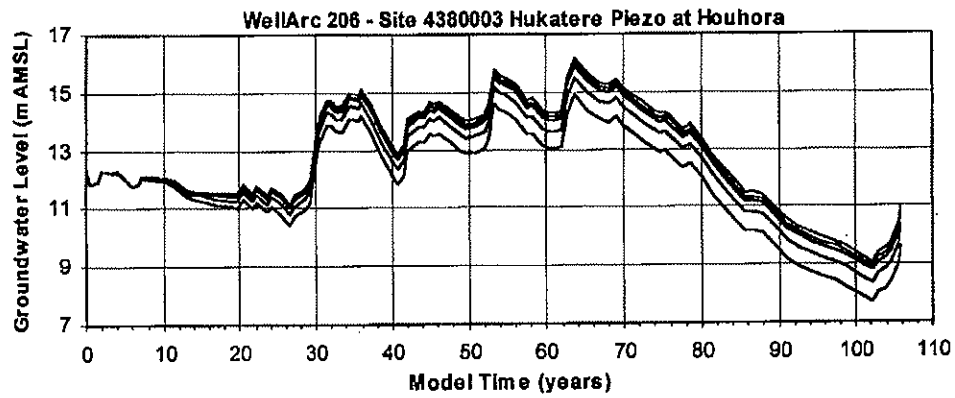
Modelled piezometric surfaces for
 dry (July 1995) and wet (August 1999) periods
Figure 14





Sensitivity analysis
(root mean square error)
Figure 15





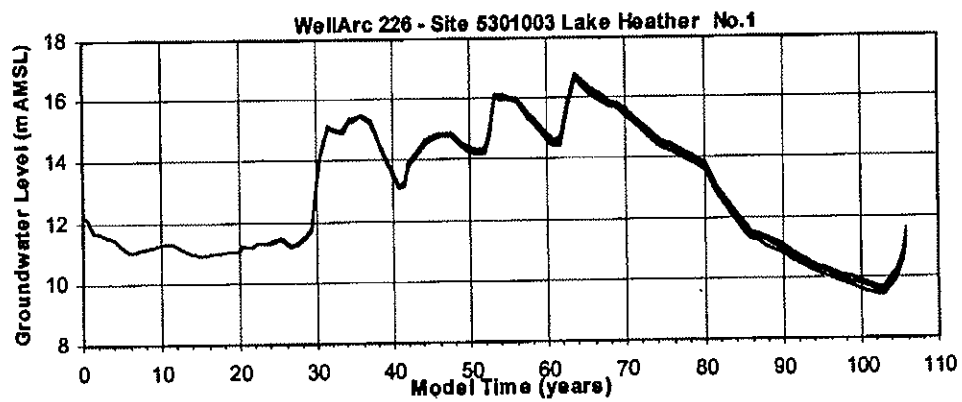
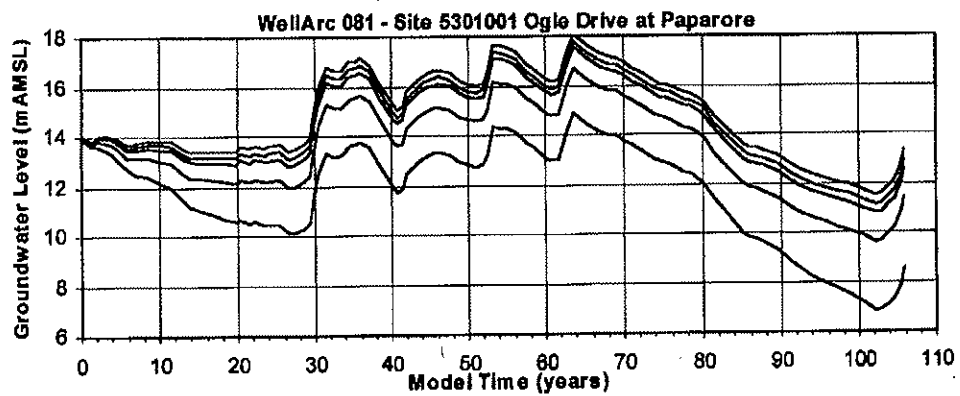
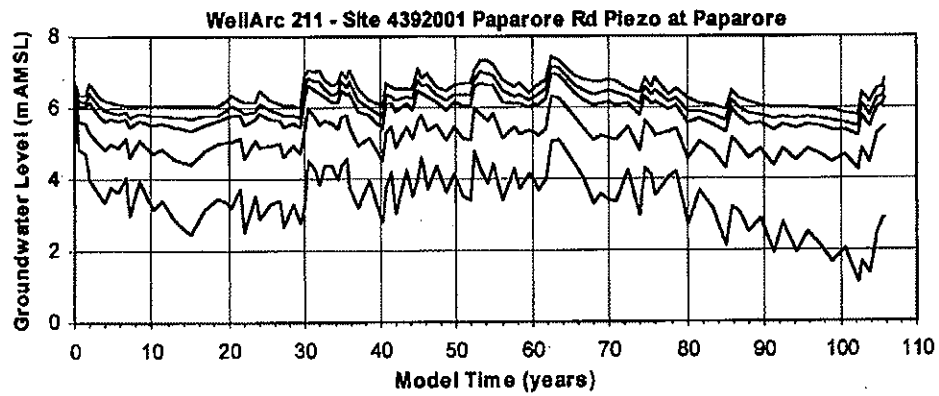
Graph lines in order from top to bottom represent:

- No abstraction scenario
- 50% abstraction scenario
- 100% abstraction scenario
- 250% abstraction scenario
- 500% abstraction scenario

Predictive simulation bore hydrographs
Hukatere to Houhora bores
Figure 16



HydroGeo Solutions



Graph lines in order from top to bottom represent:

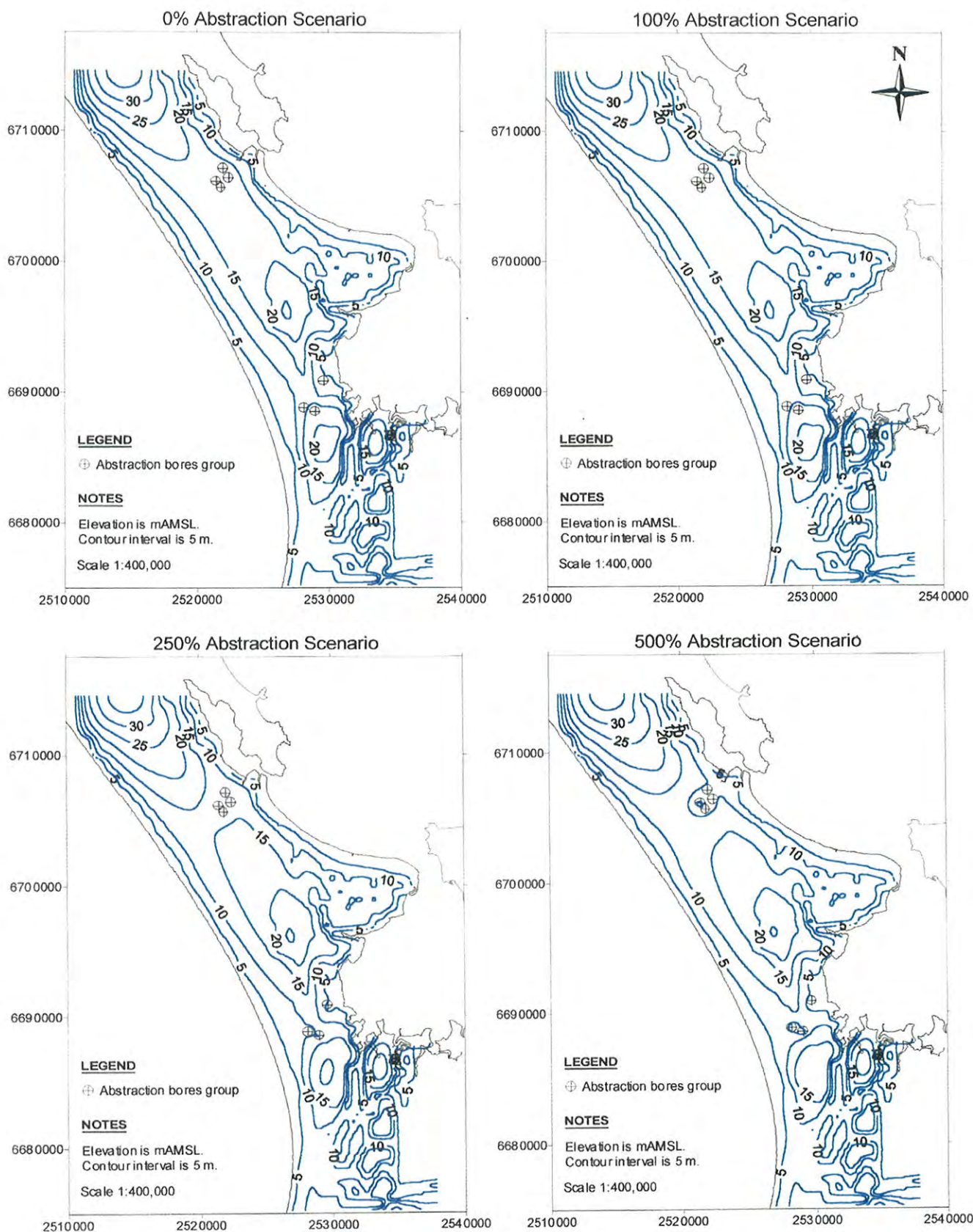
- No abstraction scenario
- 50% abstraction scenario
- 100% abstraction scenario
- 250% abstraction scenario
- 500% abstraction scenario

Predictive simulation bore hydrographs
Paparore and Lake Heather bores

Figure 17

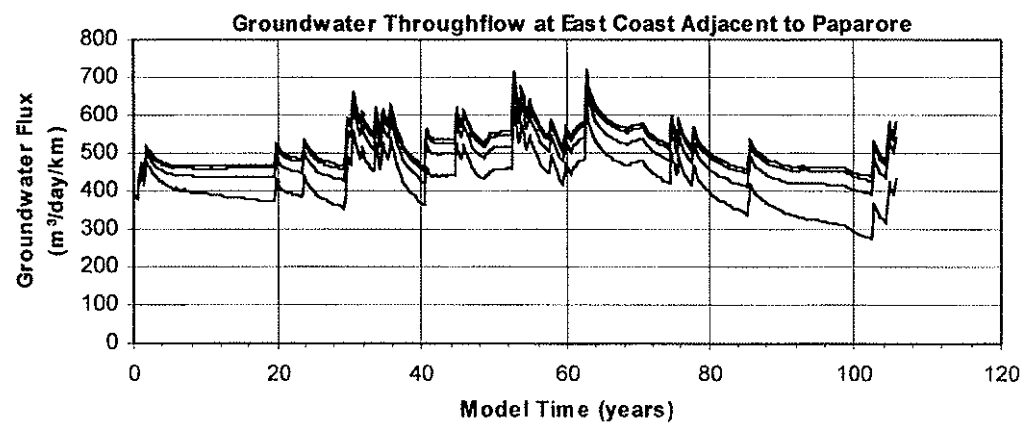
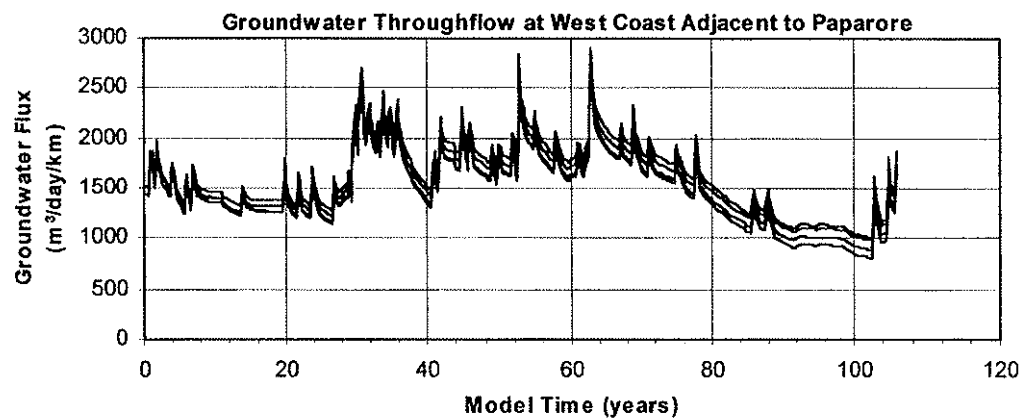
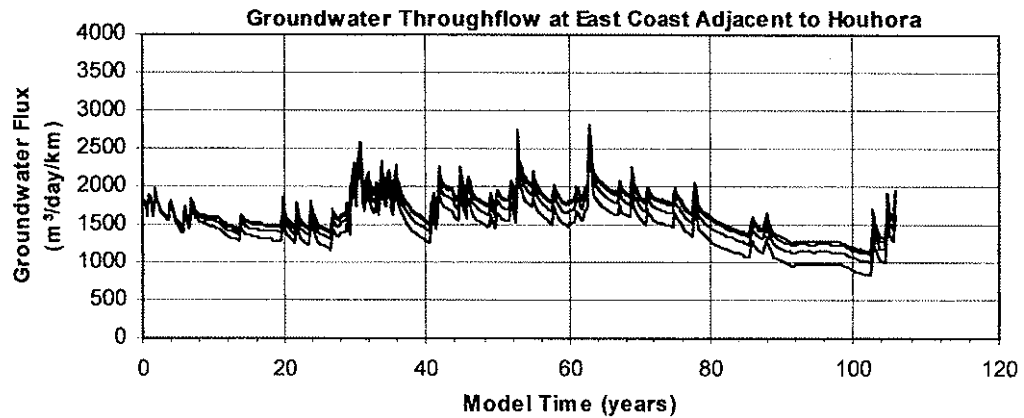
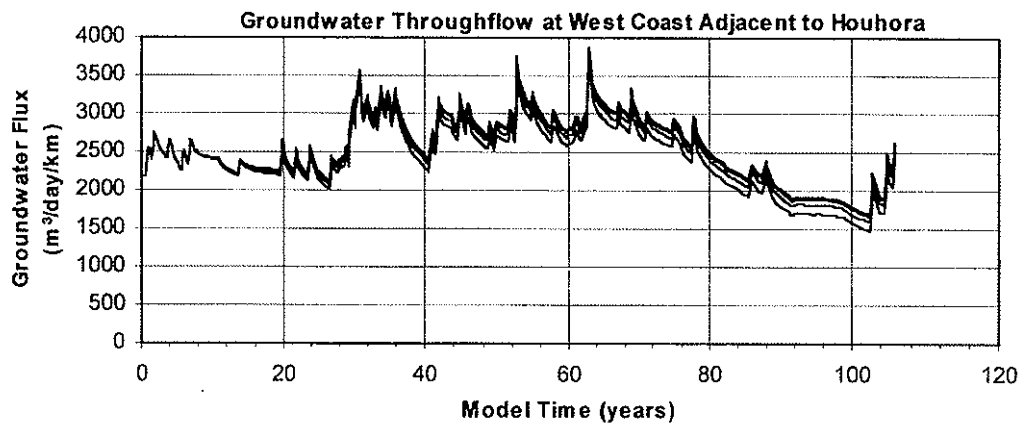


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Piezometric surface plots for end time of
predictive simulation scenarios
Figure 18





Graph lines in order from top to bottom represent:

- No abstraction scenario
- 50% abstraction scenario
- 100% abstraction scenario
- 250% abstraction scenario
- 500% abstraction scenario

Groundwater throughflow hydrographs
for predictive simulations
Figure 19

