

Appendix

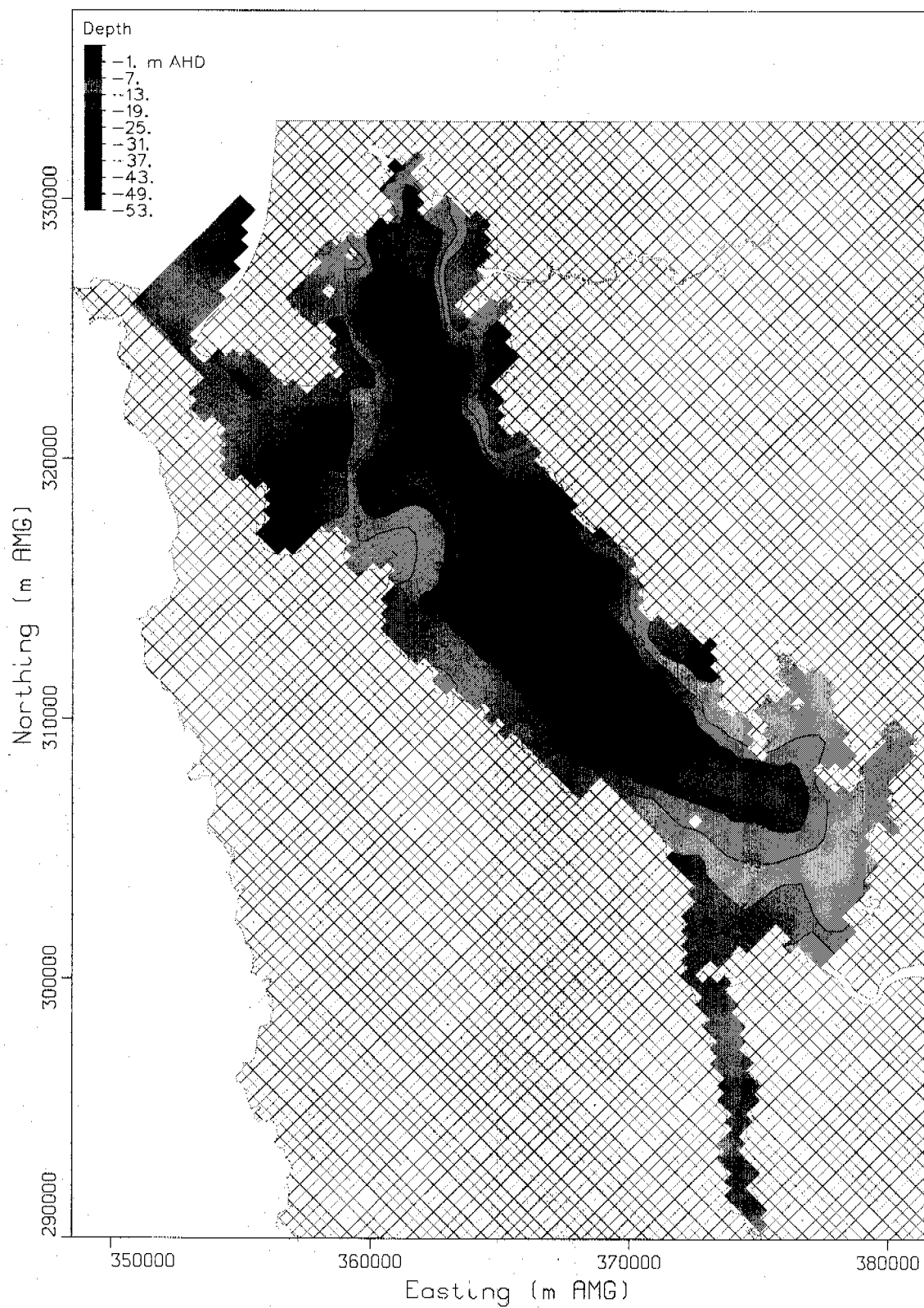
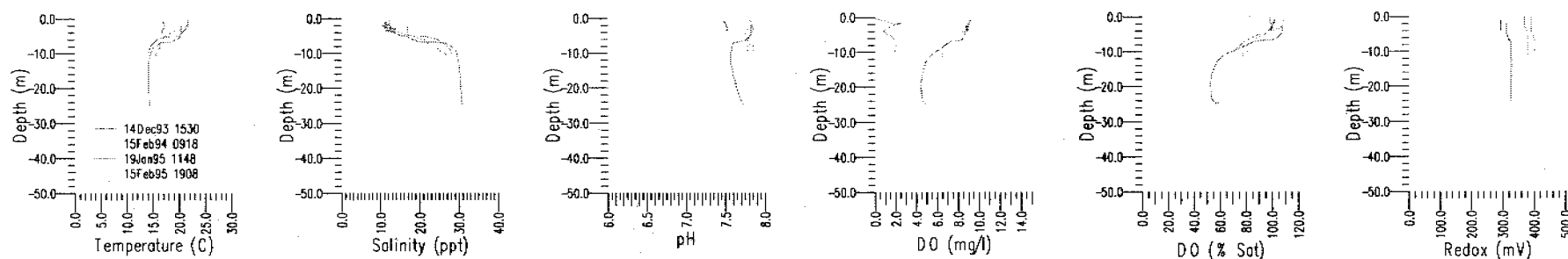
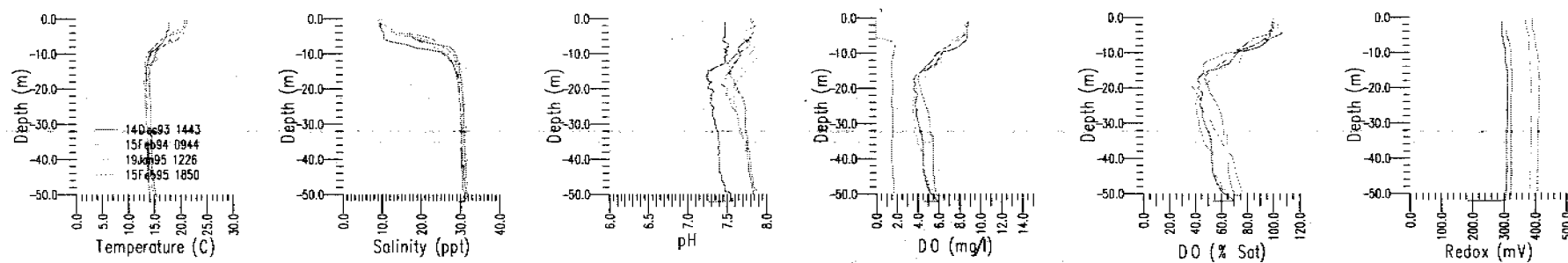


Fig 2.1 Macquarie Harbour location and bathymetry

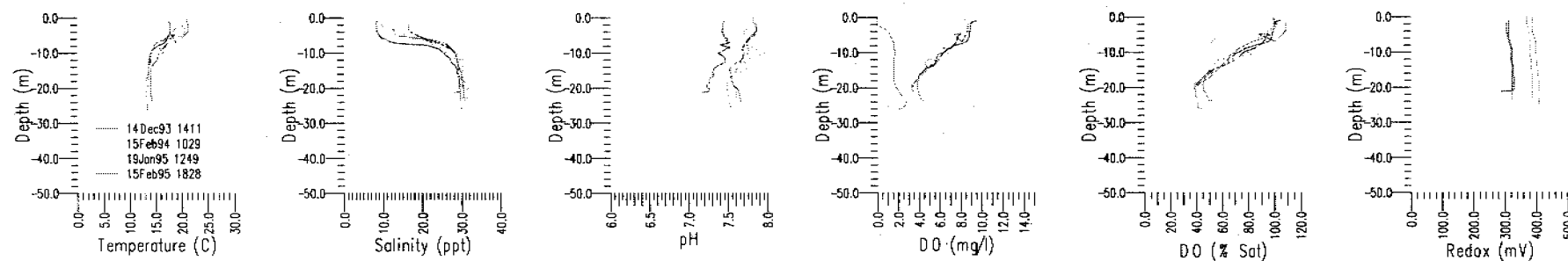
Stn 11



Stn 12



Stn 13



Stn 14

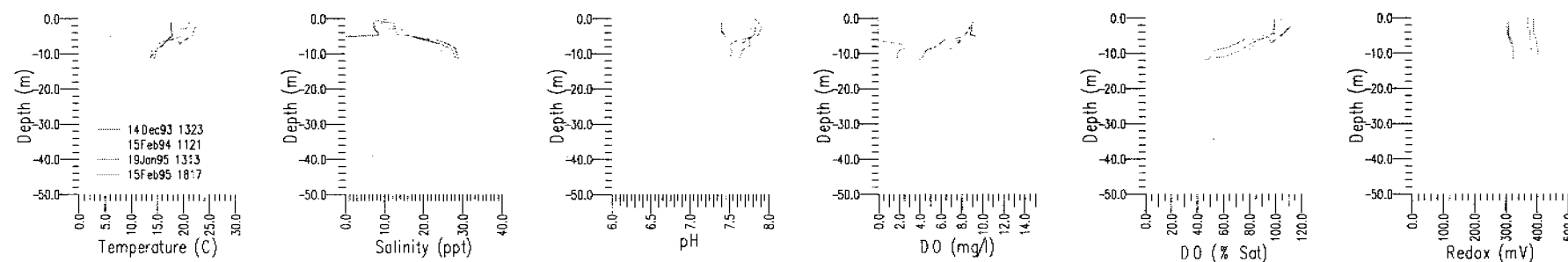
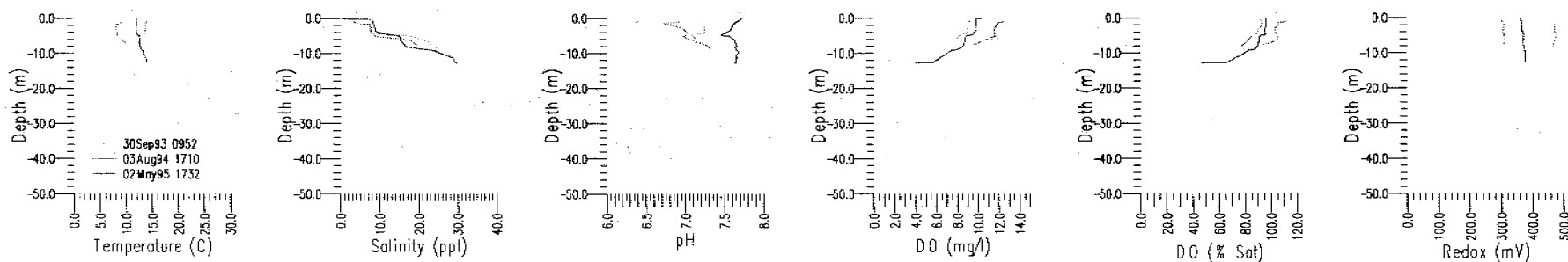
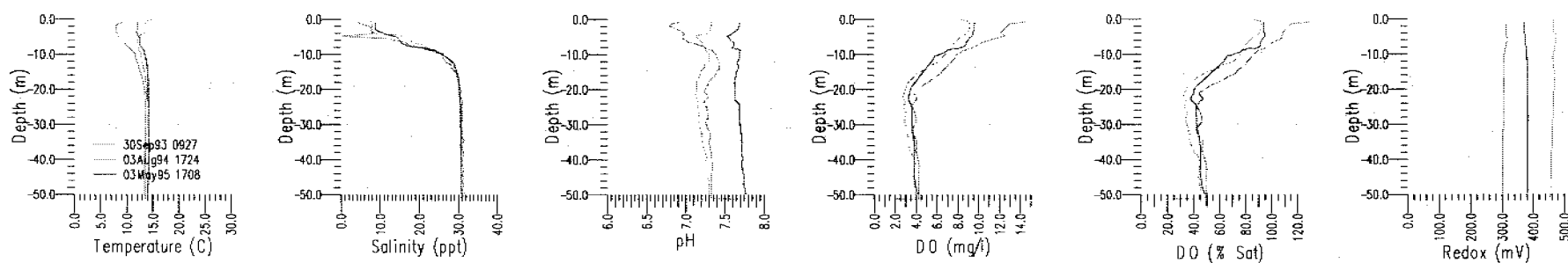


Fig 2.2 Macquarie Harbour monthly profile data (Summer, Liberty Pt- Sophia Pt)

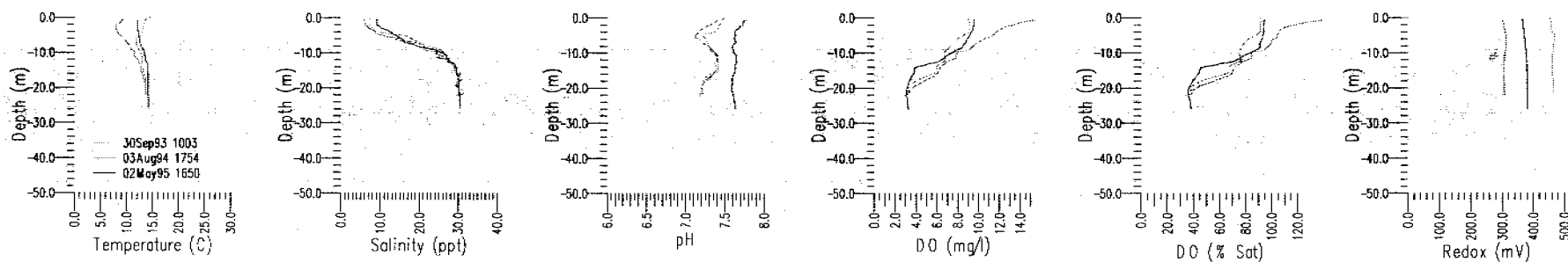
Stn 11



Stn 12



Stn 13



Stn 14

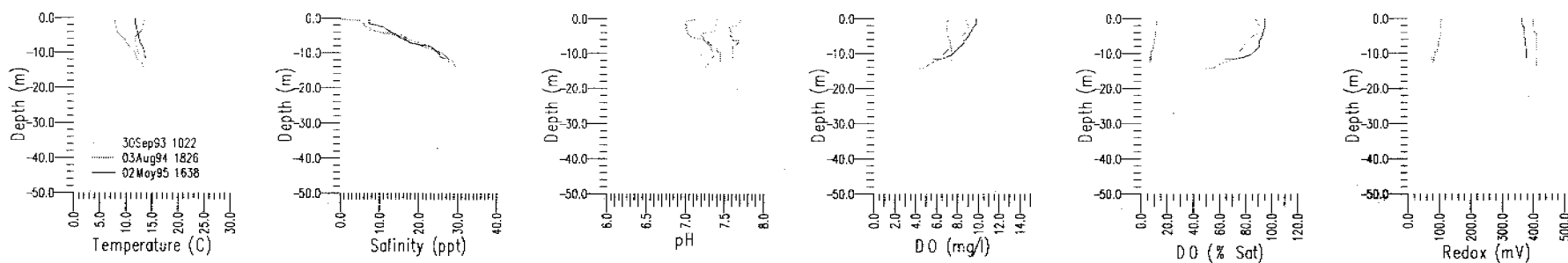


Fig 2.3 Macquarie Harbour monthly profile data (Winter, Liberty Pt- Sophia Pt)

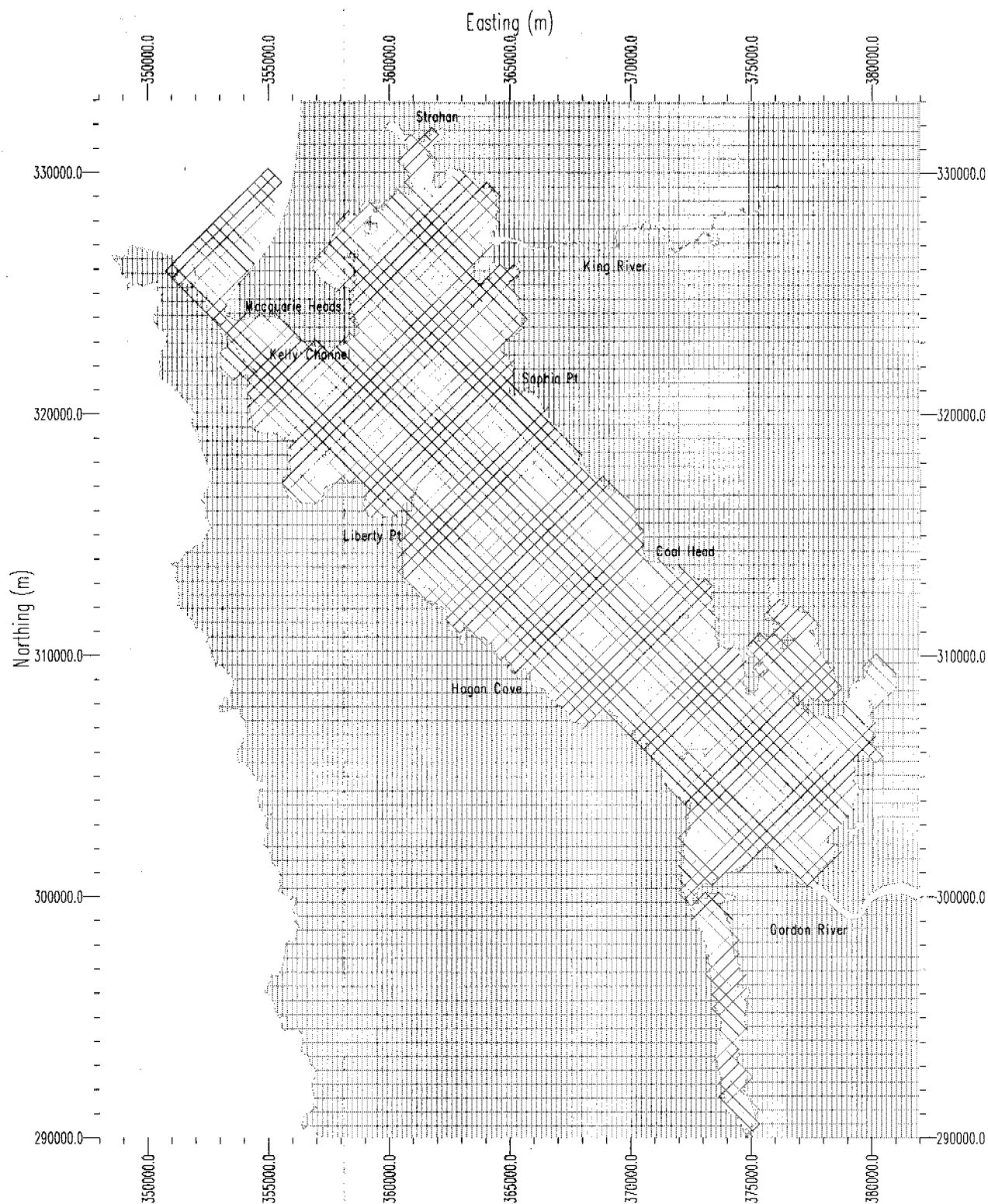


Fig 2.4 Grid for hydrodynamic model of Macquarie Harbour (400m x 400m cells)

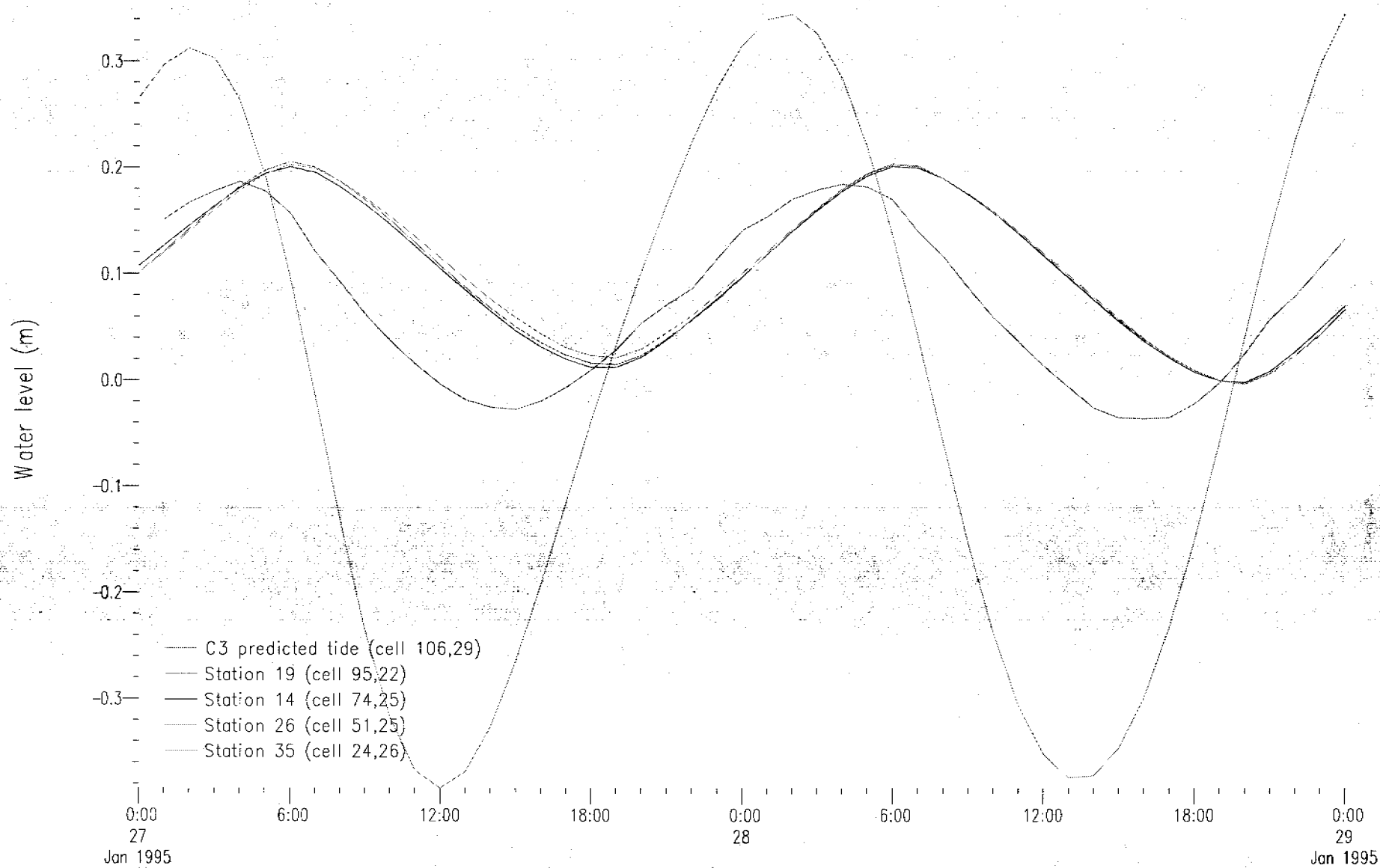
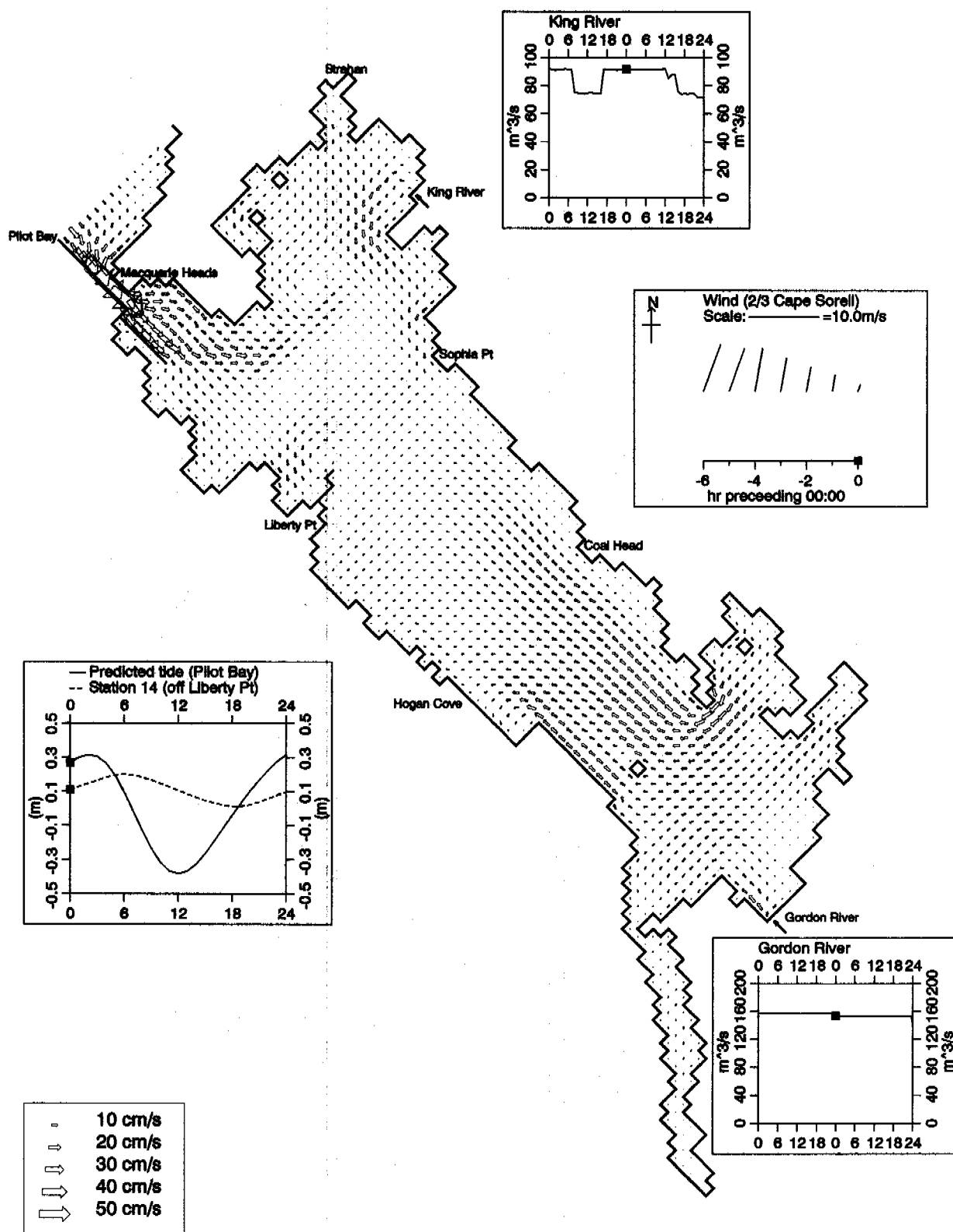


Fig 3.0 Phasing of water levels in Macquarie Harbour over the 27th and 28th January 1995

Fig 3.1 Currents in surface layer
00:00 27-Jan-1995



00:00 27-Jan-1995, harbour centre-line ($x=30$)

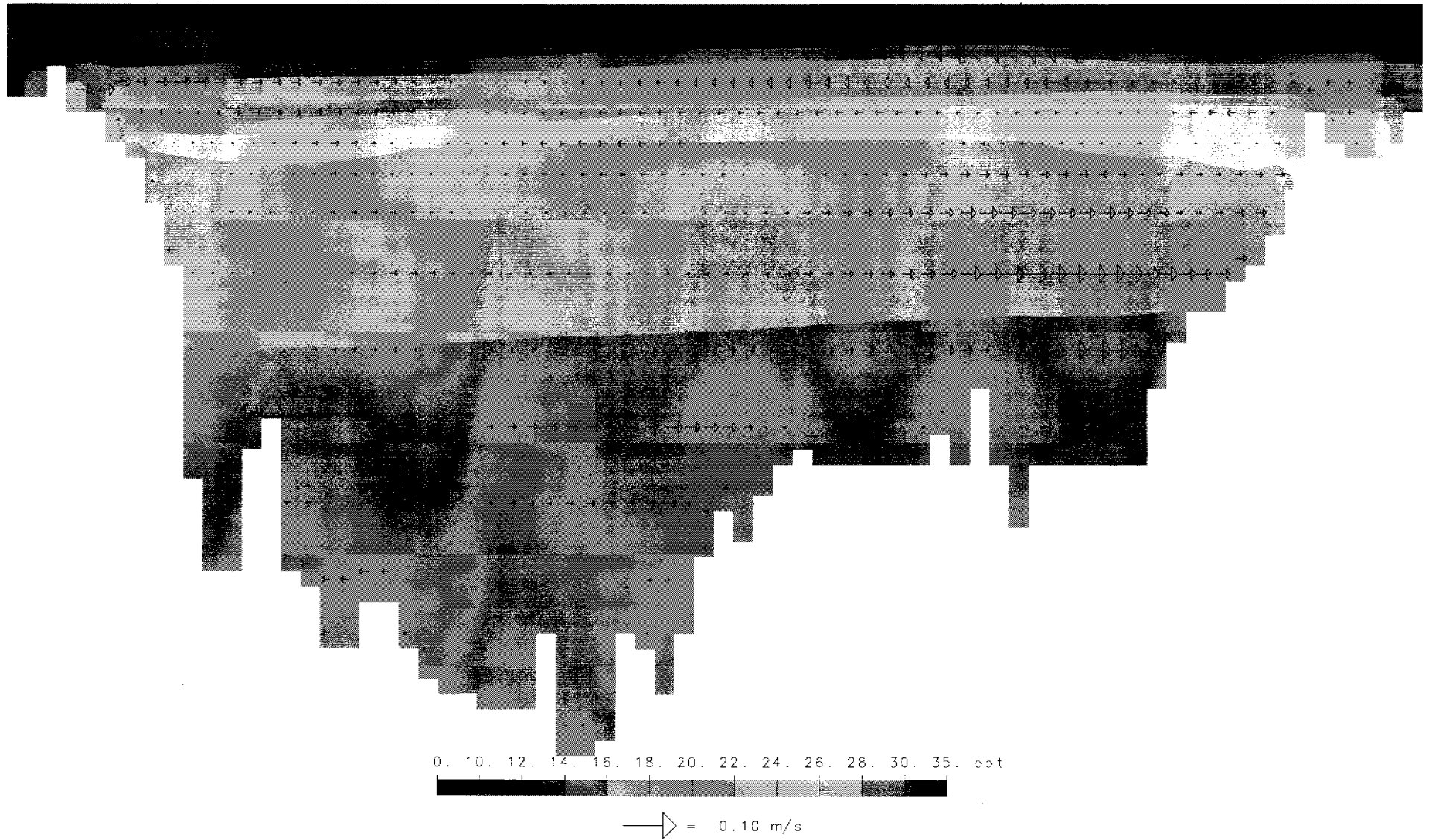


Fig 3.2 Longitudinal section of horizontal velocity and salinity

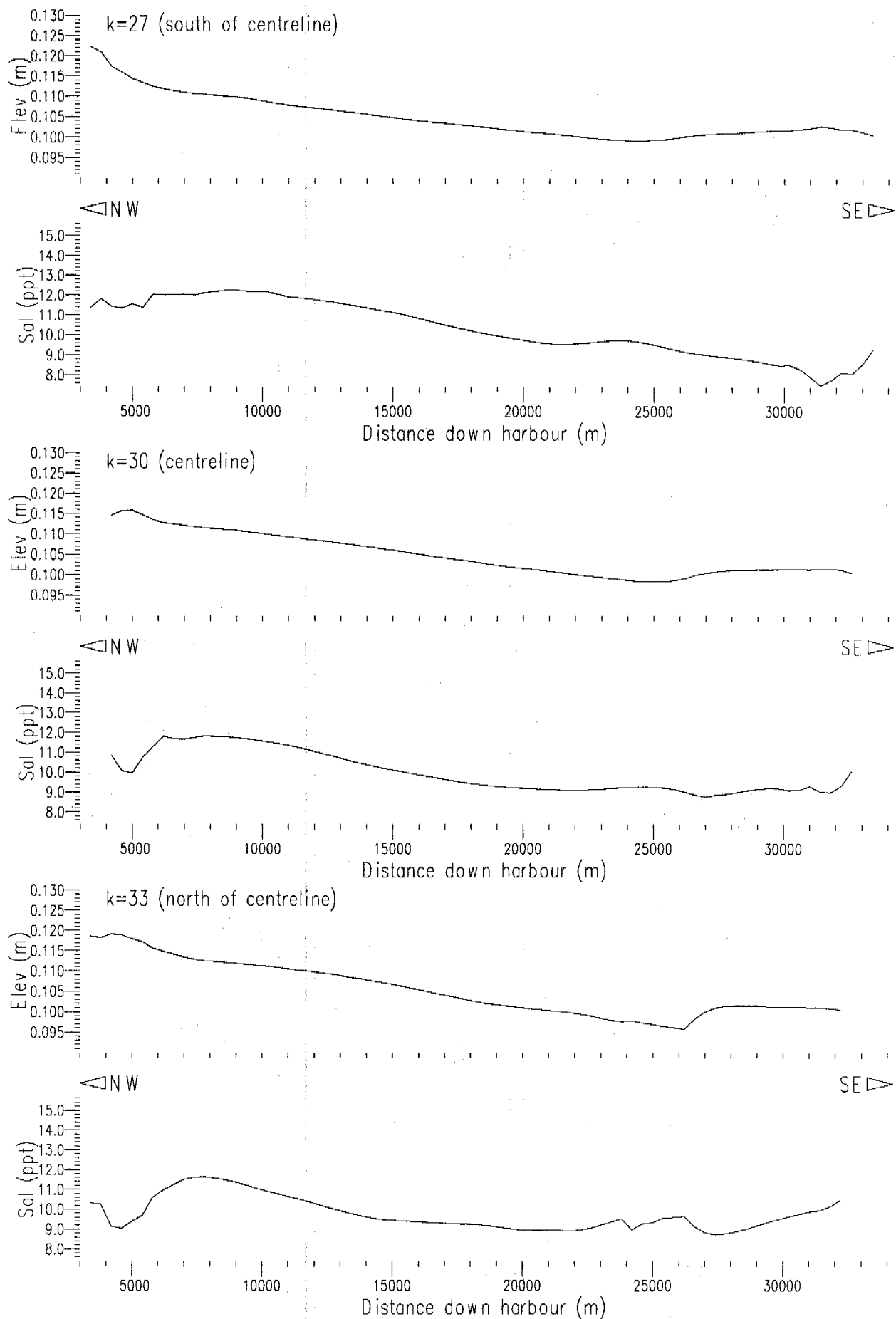


Fig 3.3 Longitudinal surface elevations and salinities 00:00 27-Jan-1995

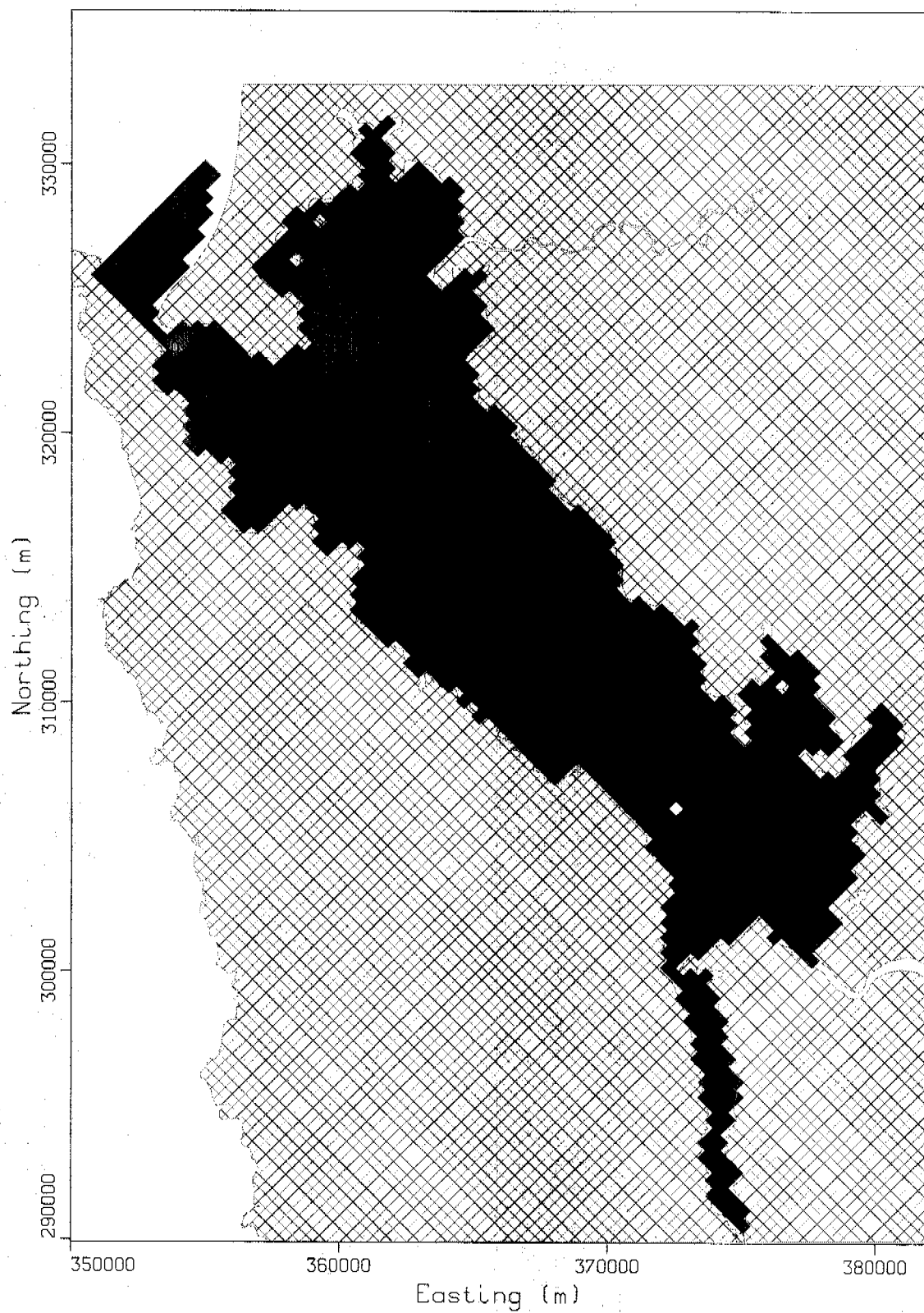


Fig 3.4 Surface level (m) at 00:00 27-Jan-1995

Fig 3.5 Currents in surface layer
01:00 27-Jan-1995

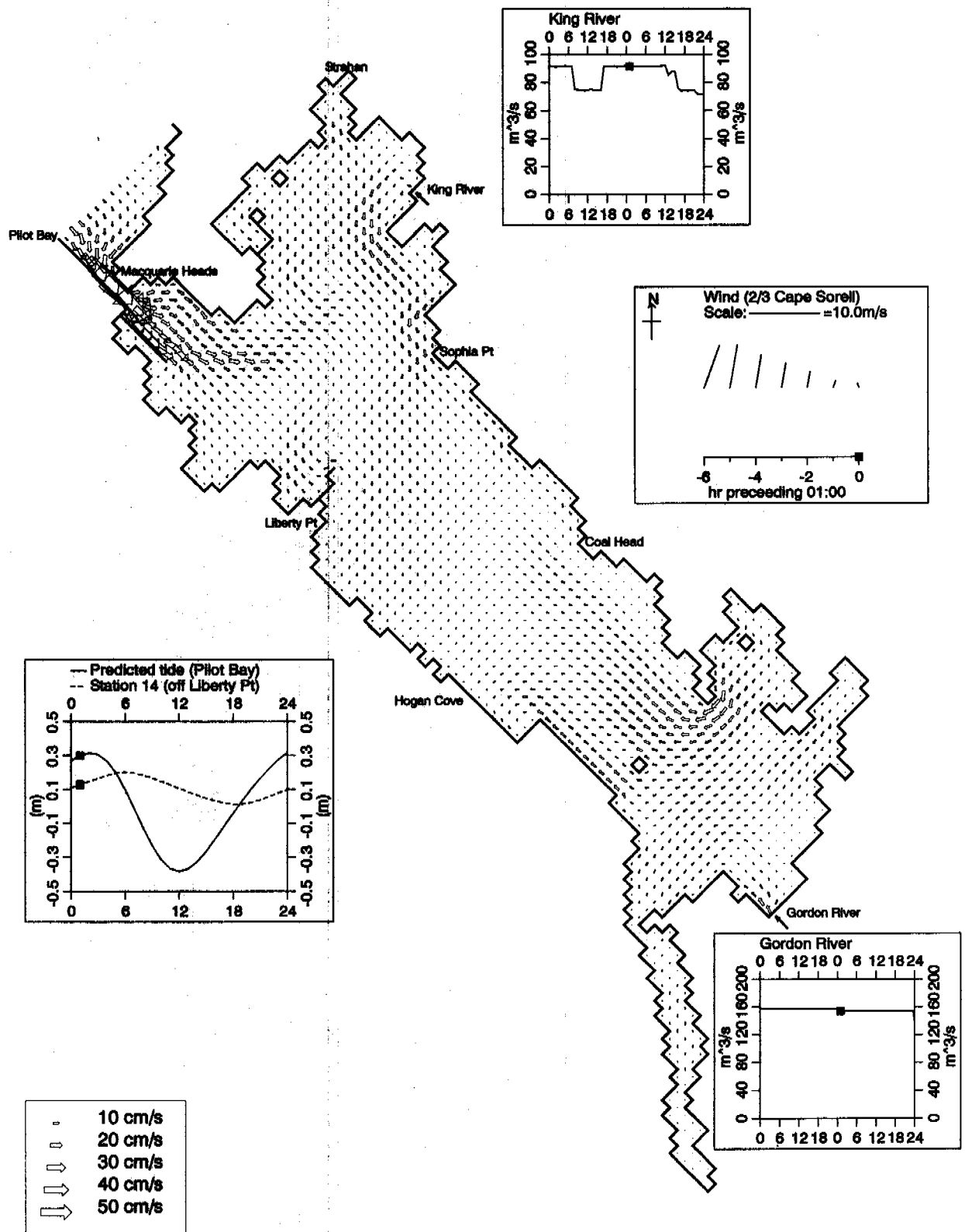


Fig 3.6 Currents in surface layer
02:00 27-Jan-1995

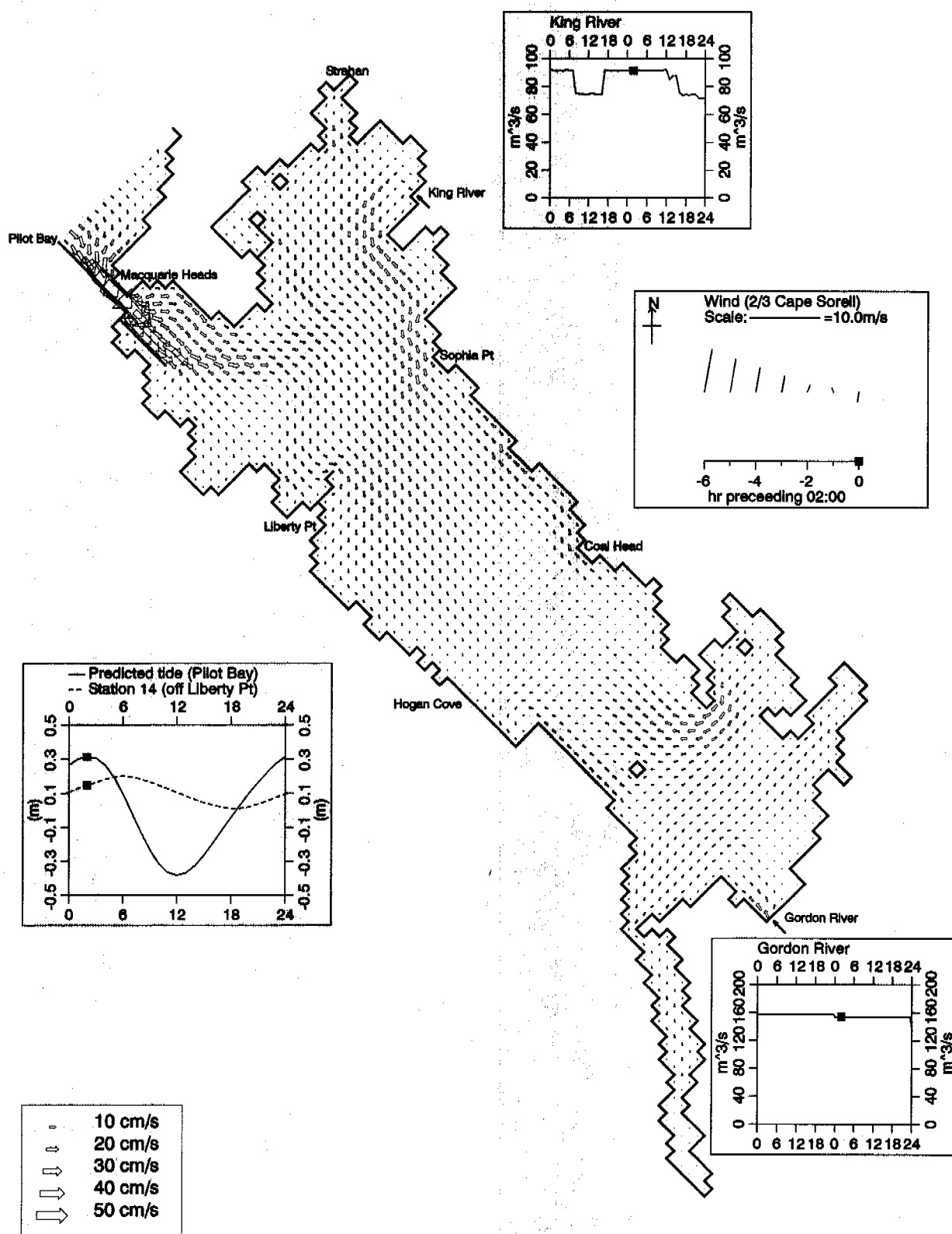


Fig 3.7 Currents in surface layer
03:00 27-Jan-1995

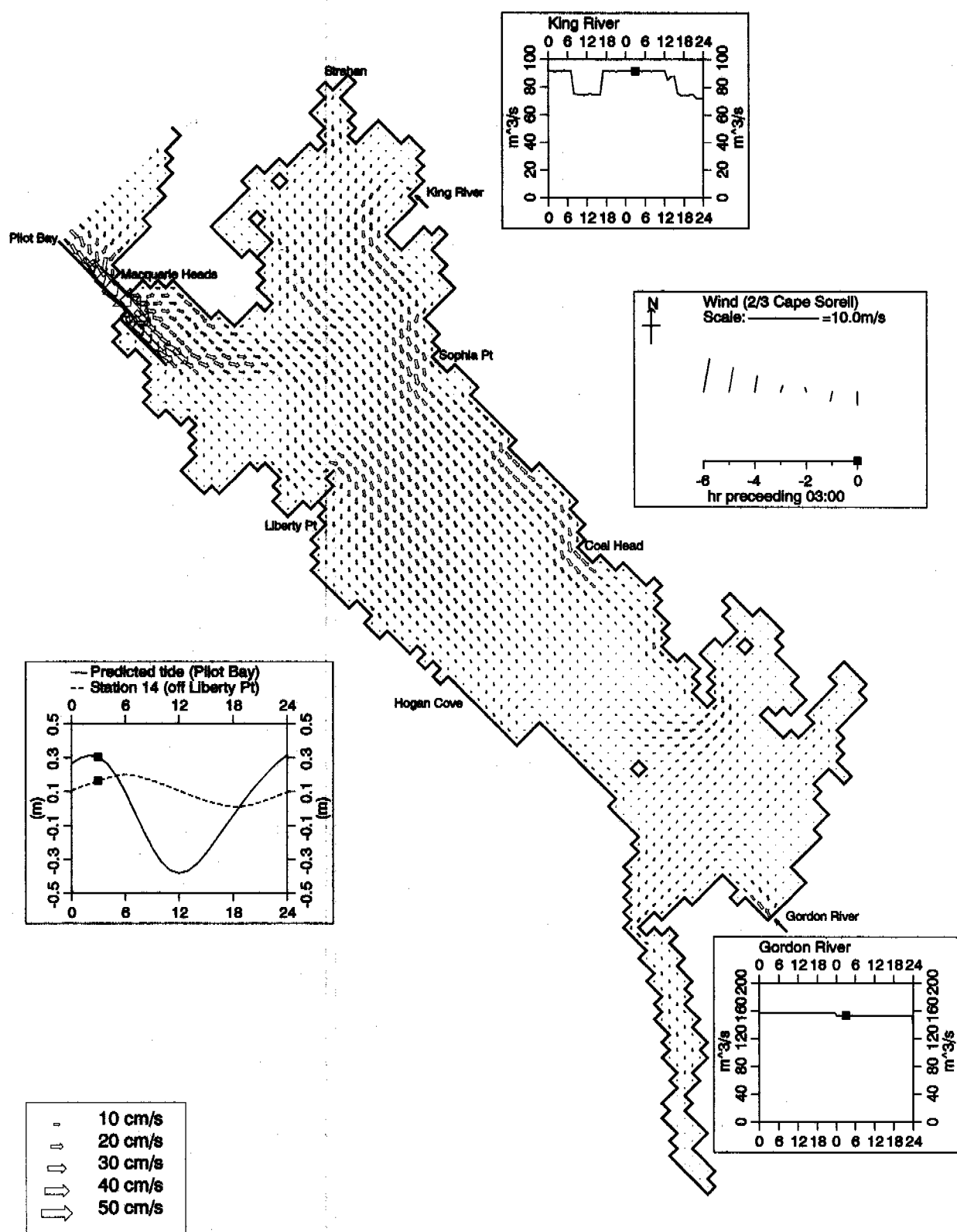


Fig 3.8 Currents in surface layer
04:00 27-Jan-1995

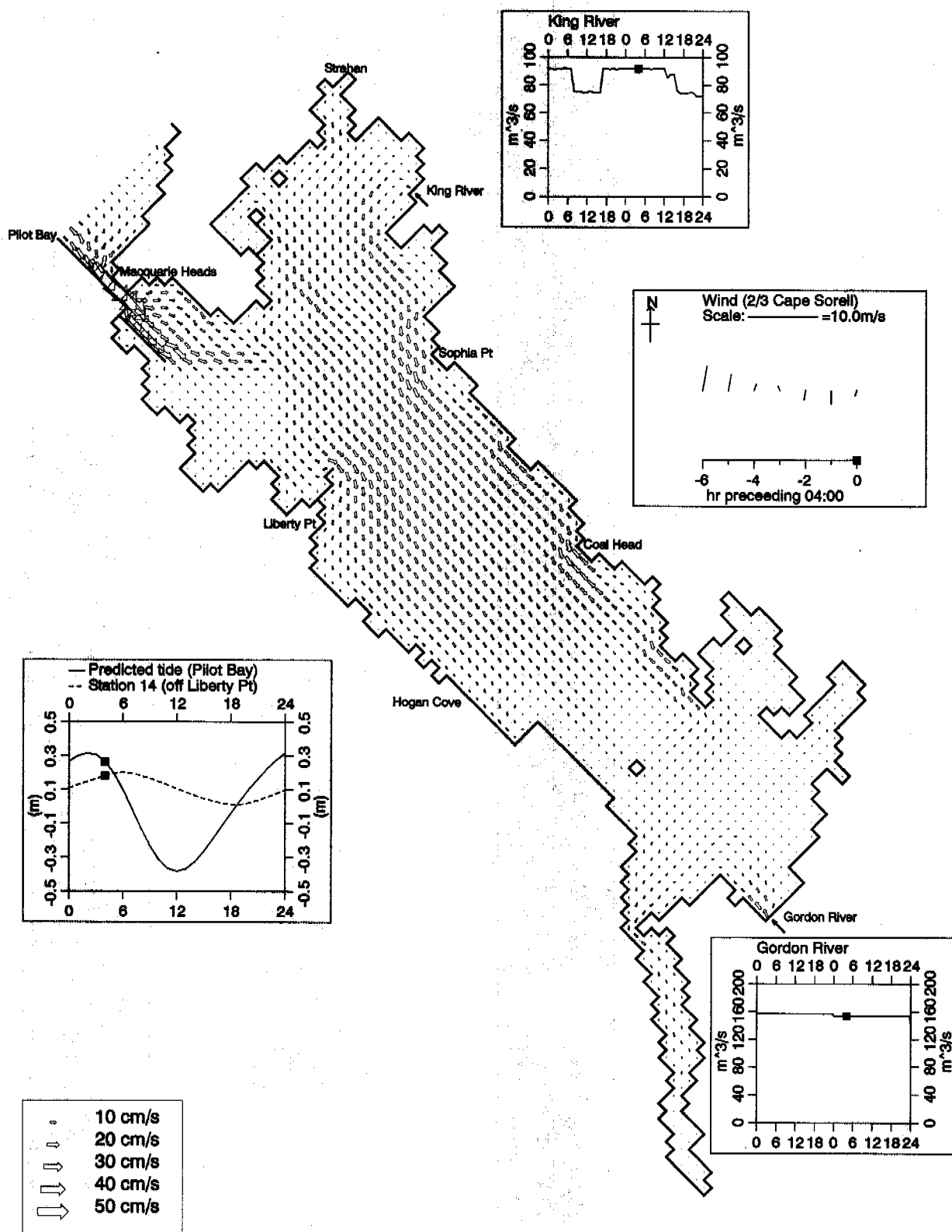
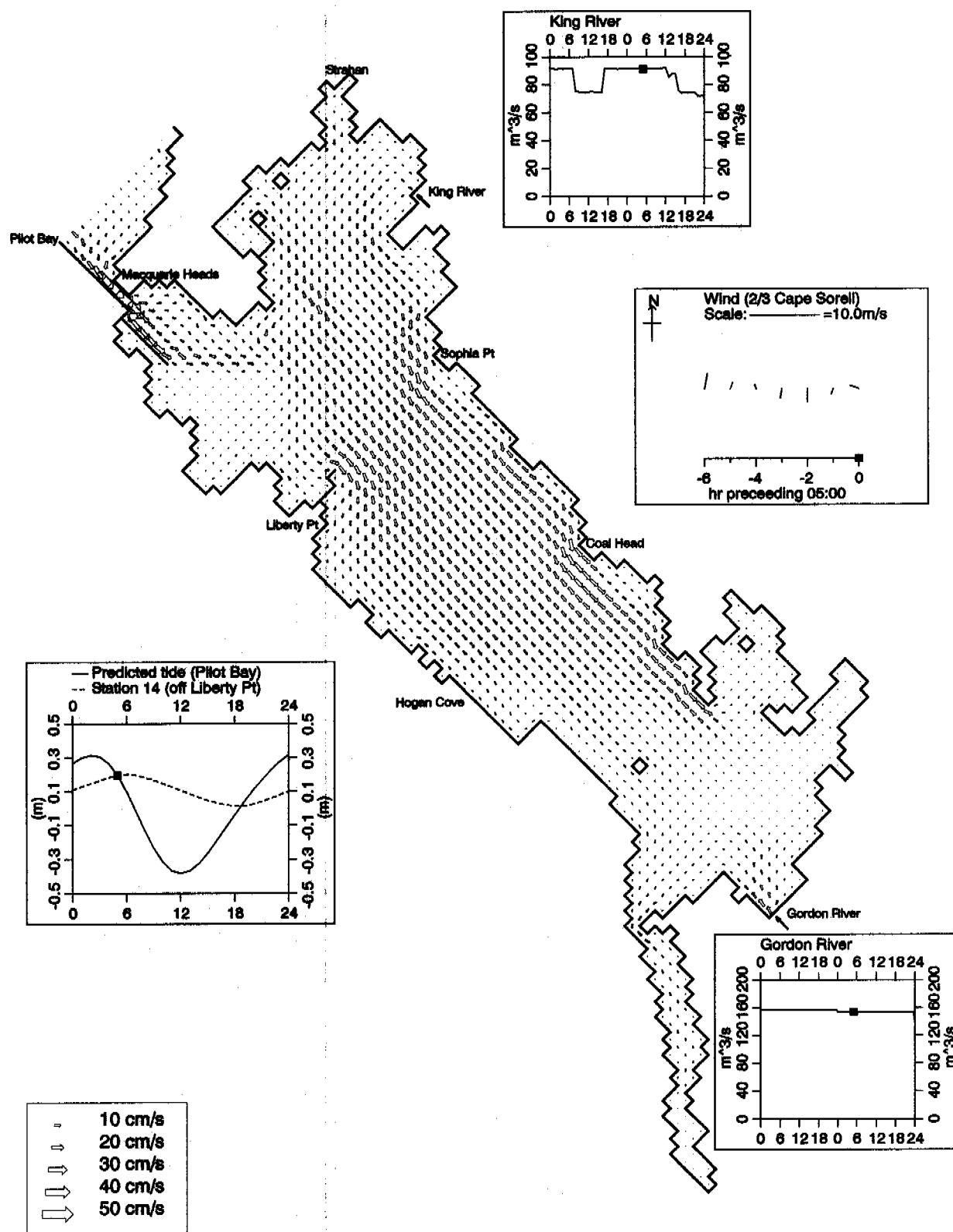
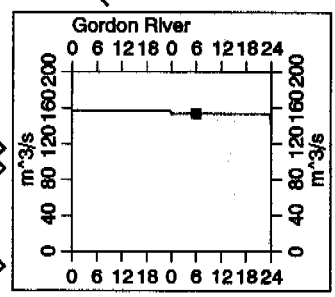
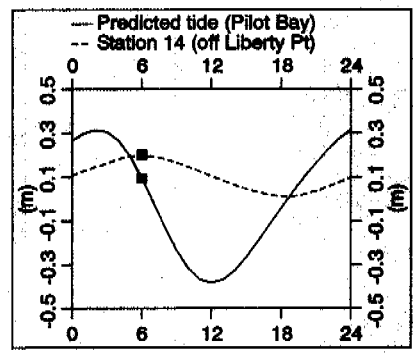
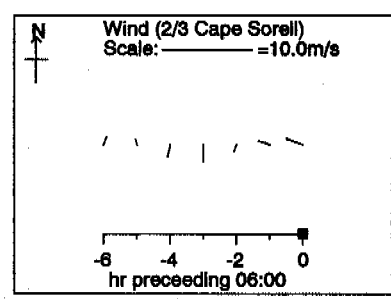
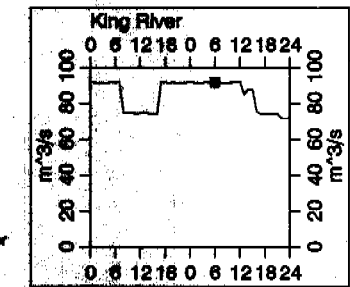


Fig 3.9 Currents in surface layer
05:00 27-Jan-1995



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06:00 27-Jan-'95, harbour centre-line (k=30)

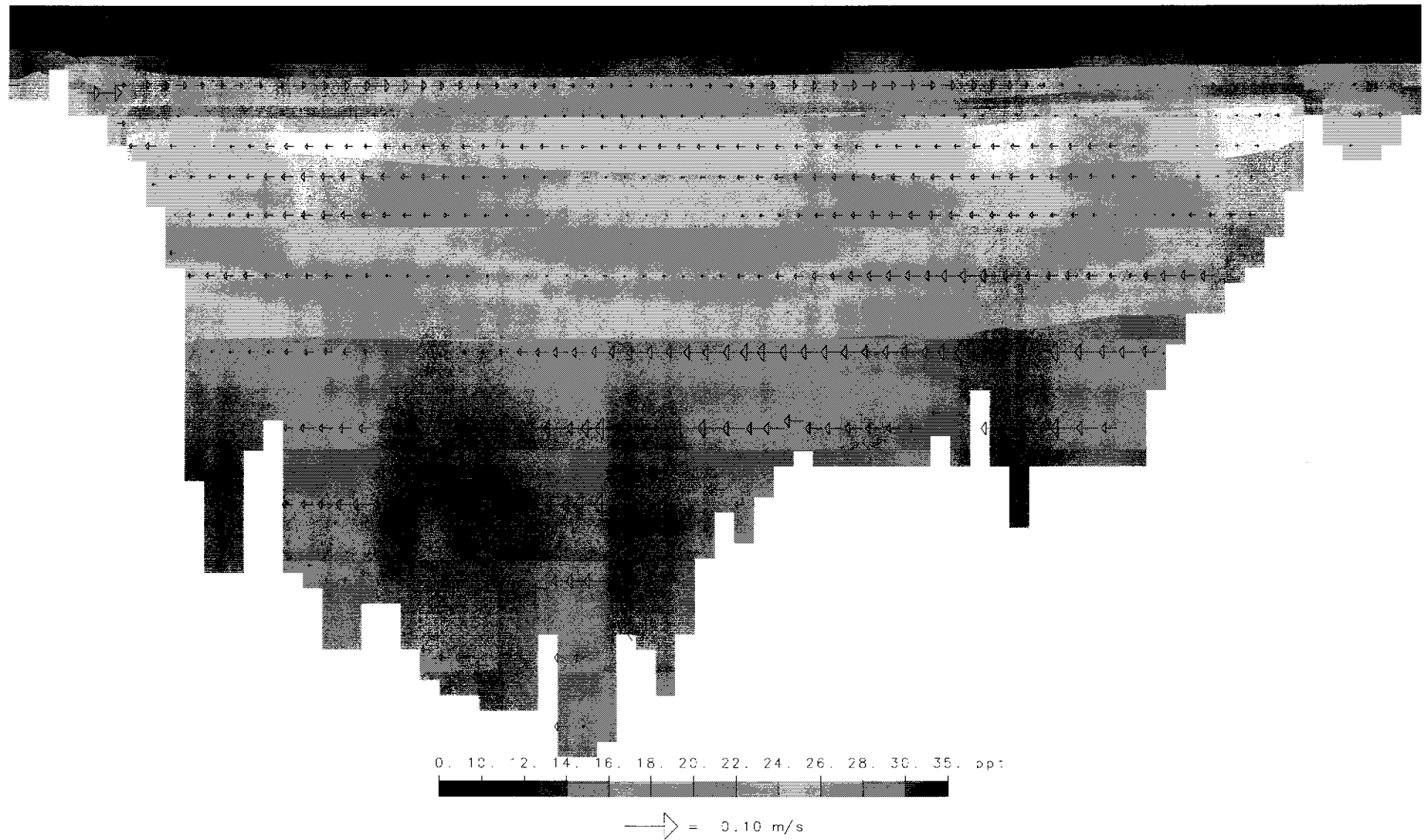


Fig 3.11 Longitudinal section of horizontal velocity and salinity

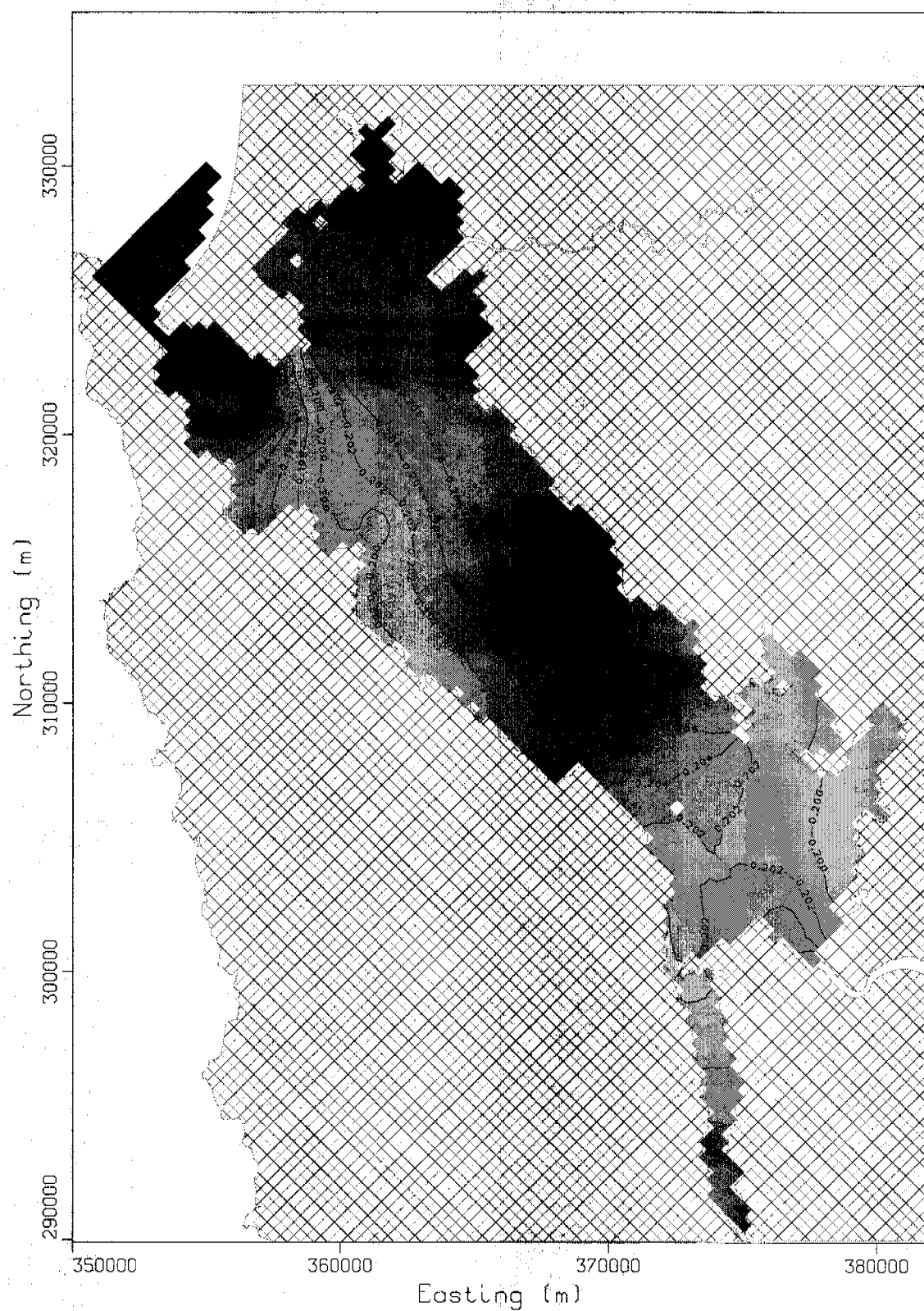


Fig 3.12 Surface Level (m) at 06:00 27-Jan-1995

Fig 3.13 Currents in surface layer
07:00 27-Jan-1995

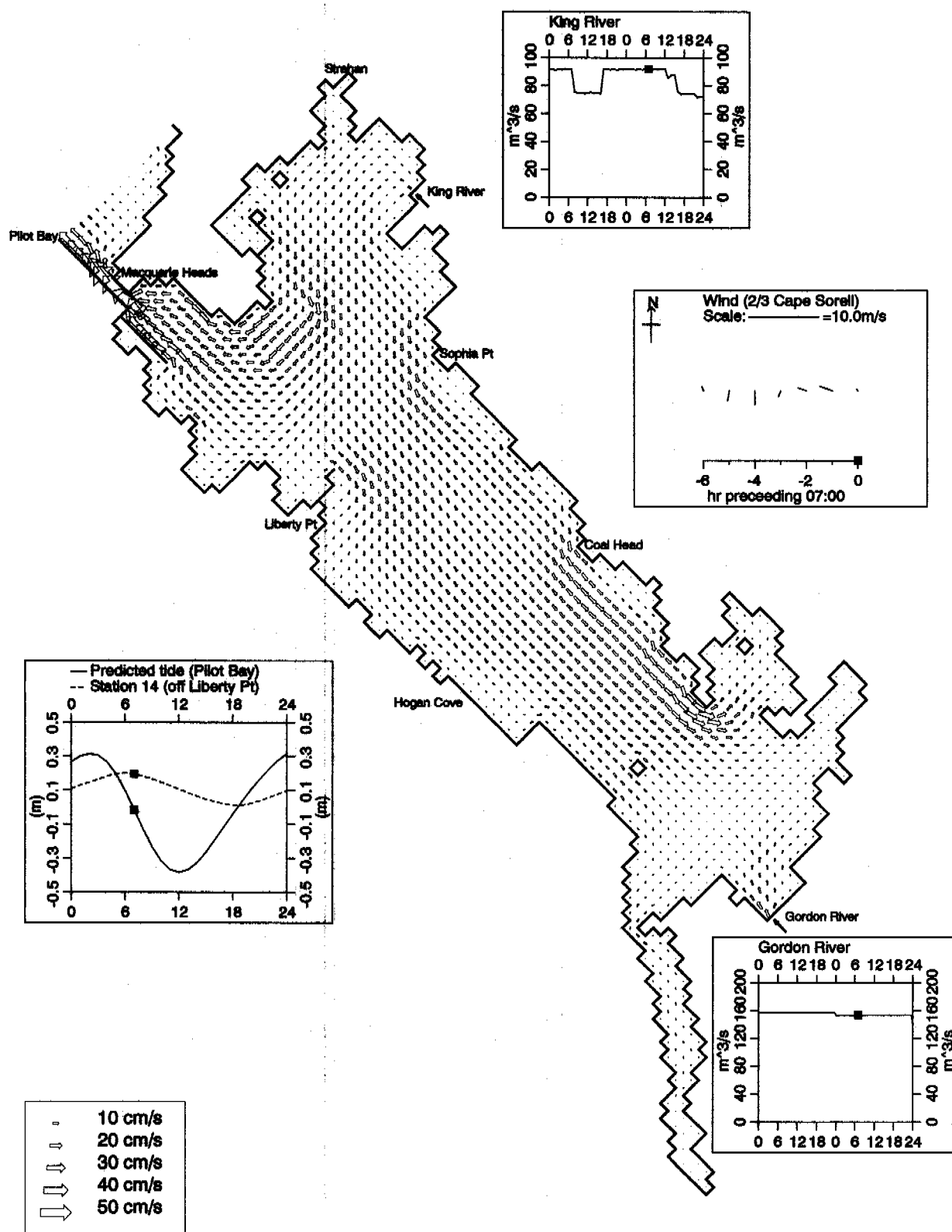


Fig 3.14 Currents in surface layer
08:00 27-Jan-1995

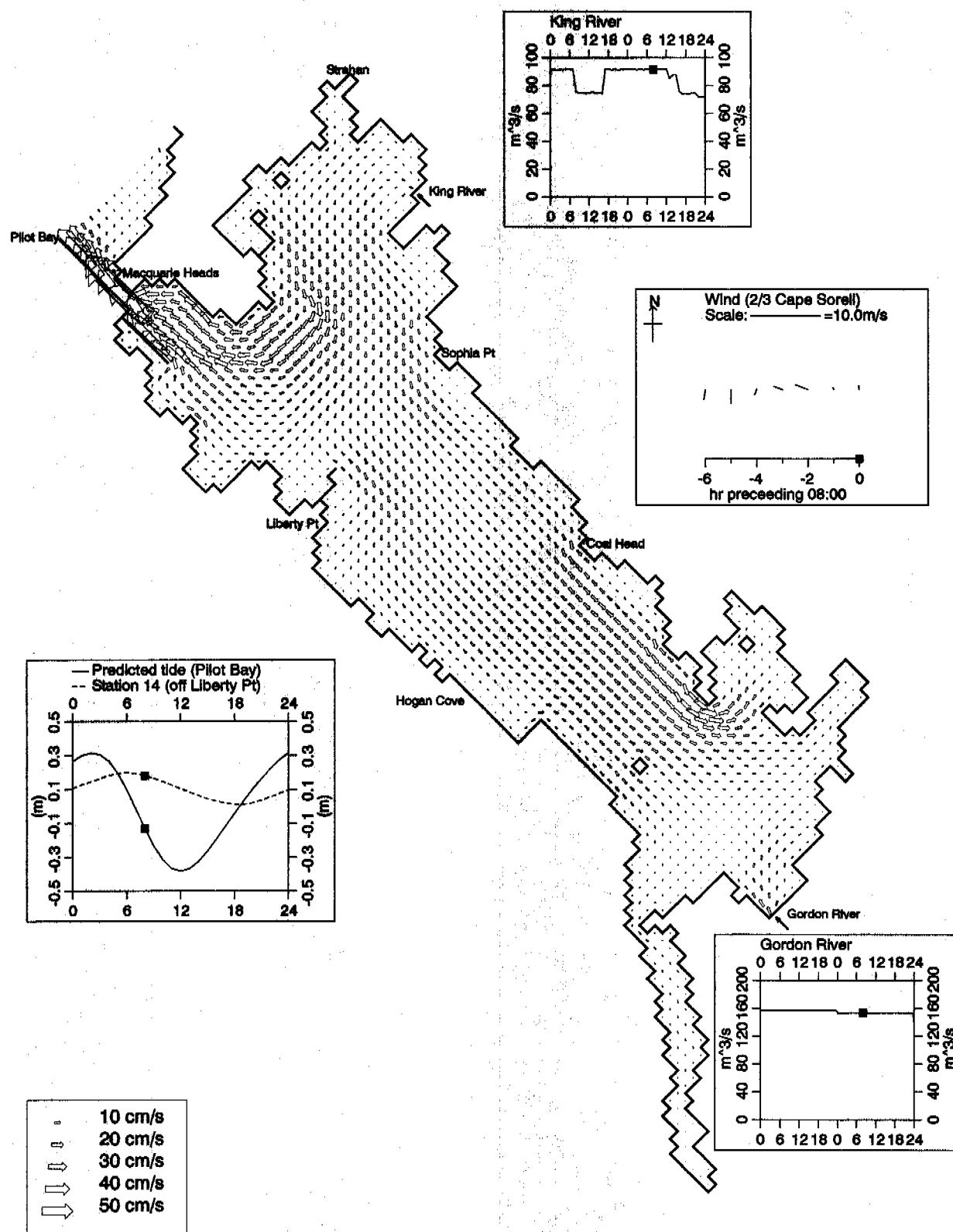


Fig 3.15 Currents in surface layer
09:00 27-Jan-1995

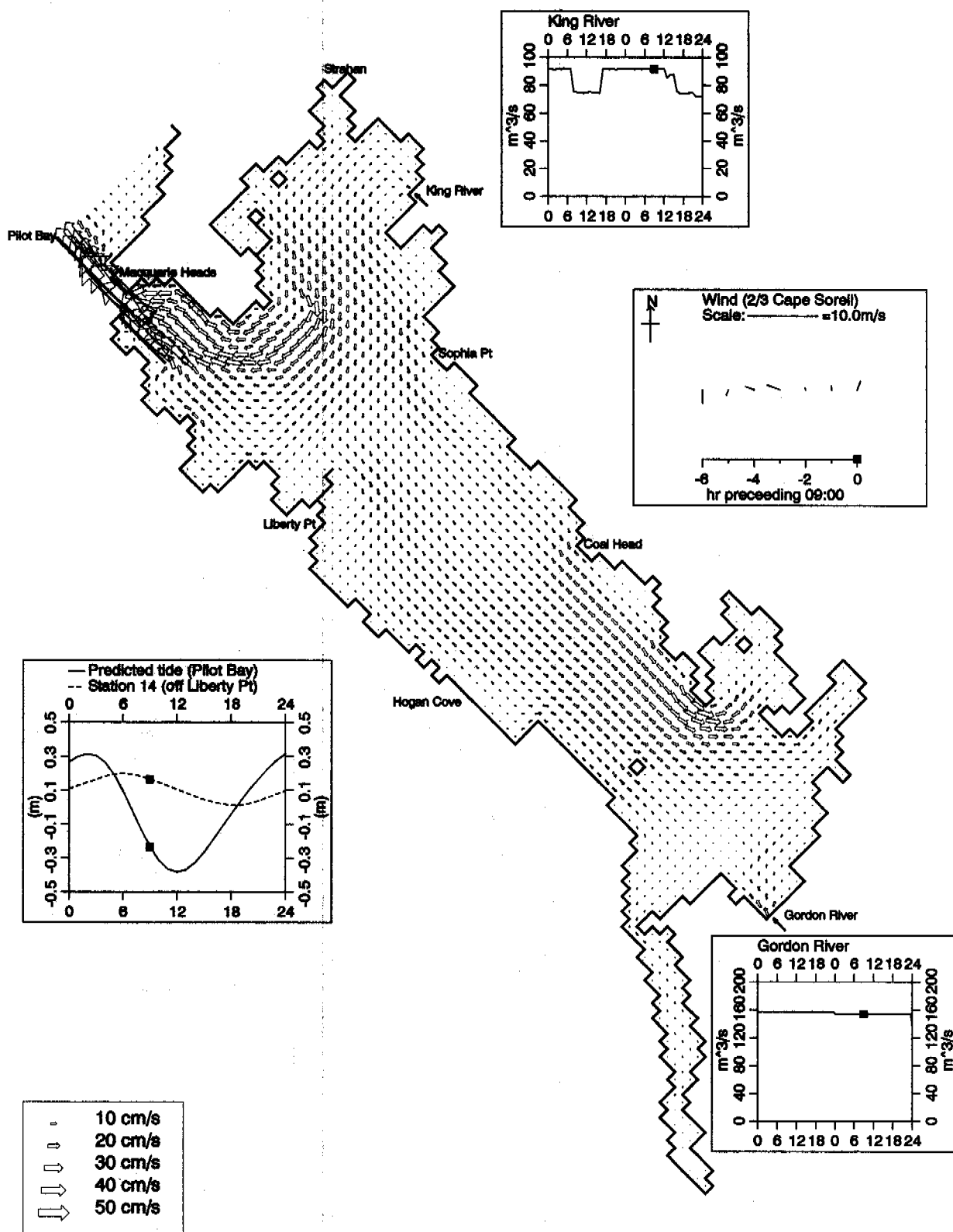


Fig 3.16 Currents in surface layer
10:00 27-Jan-1995

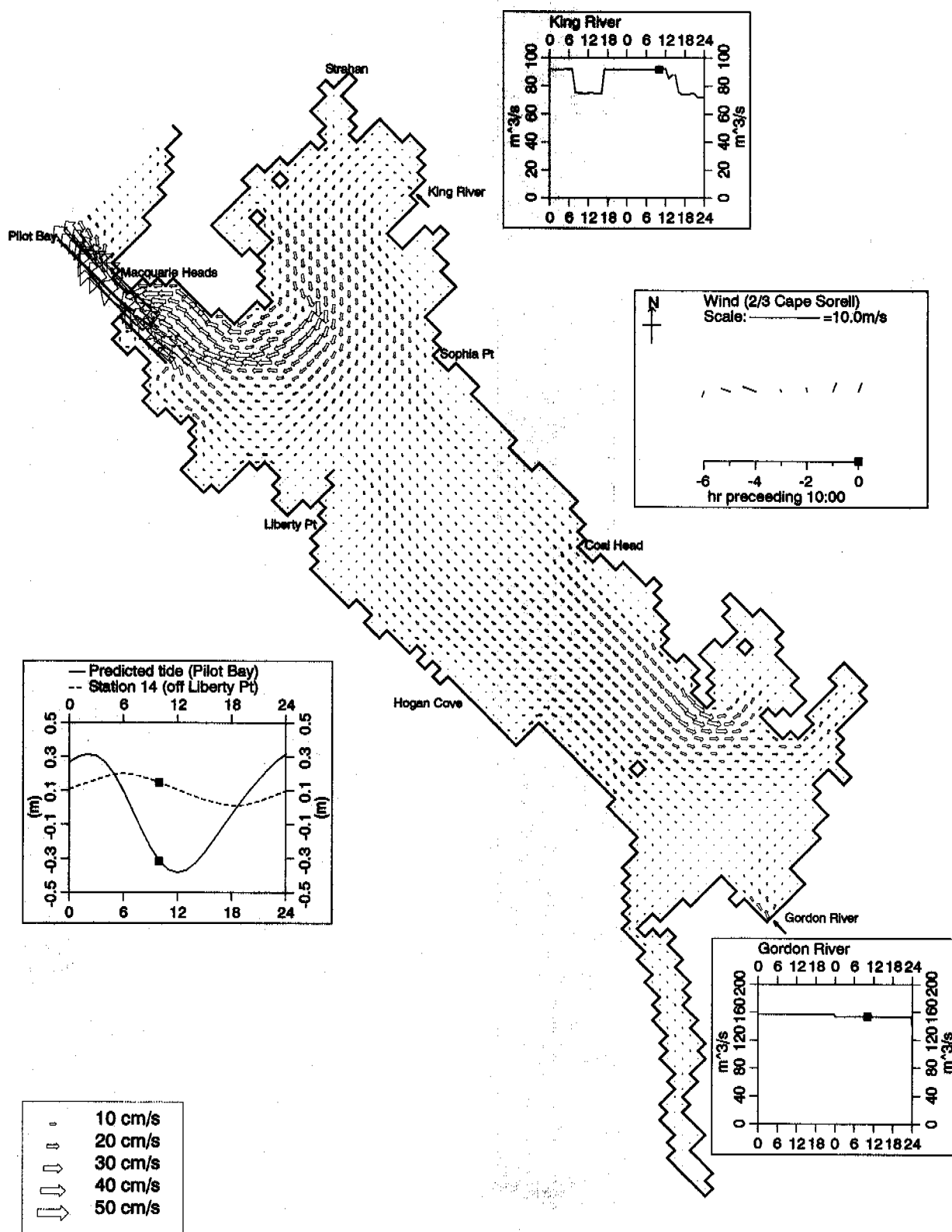


Fig 3.17 Currents in surface layer
11:00 27-Jan-1995

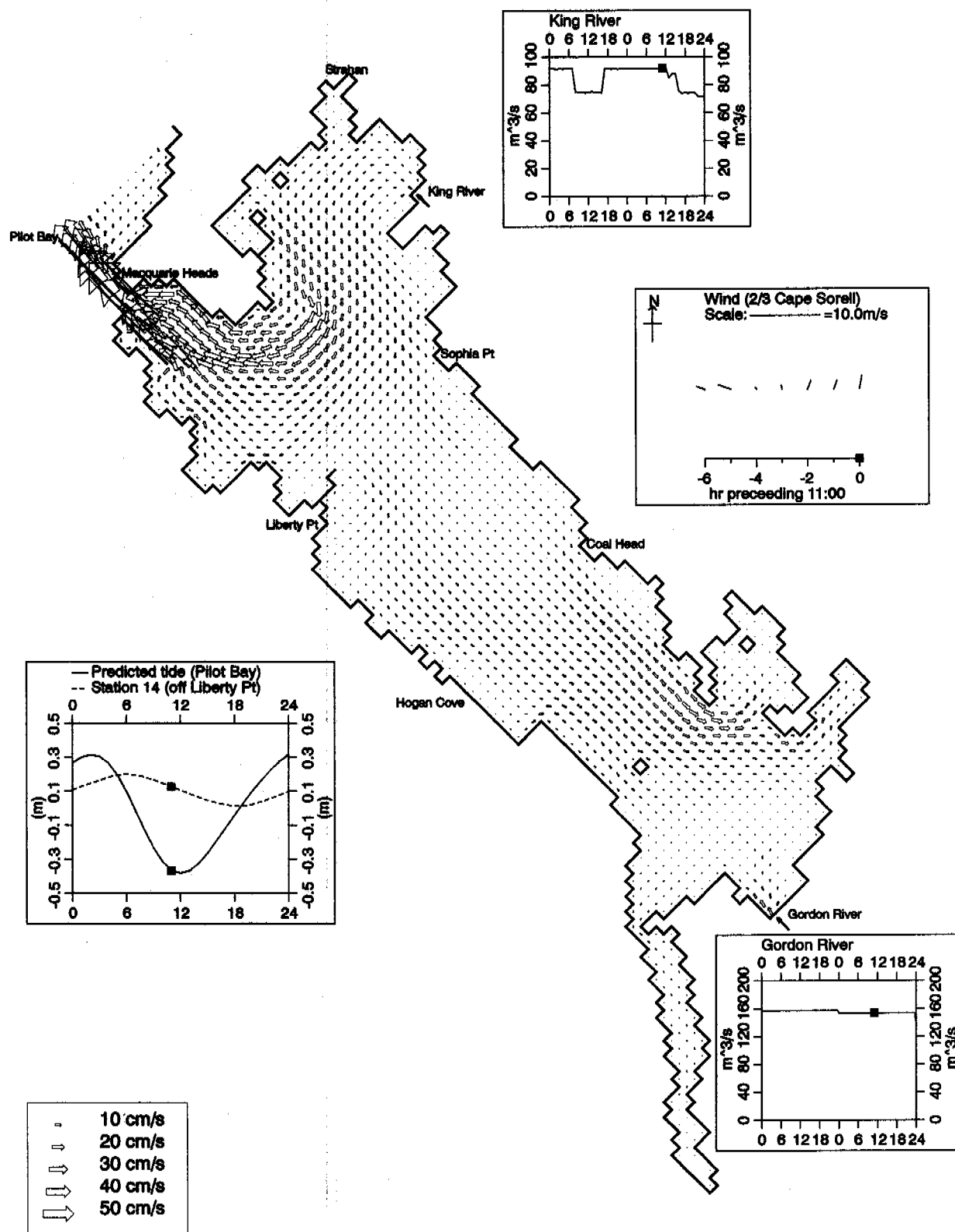


Fig 3.18 Currents in surface layer
12:00 27-Jan-1995

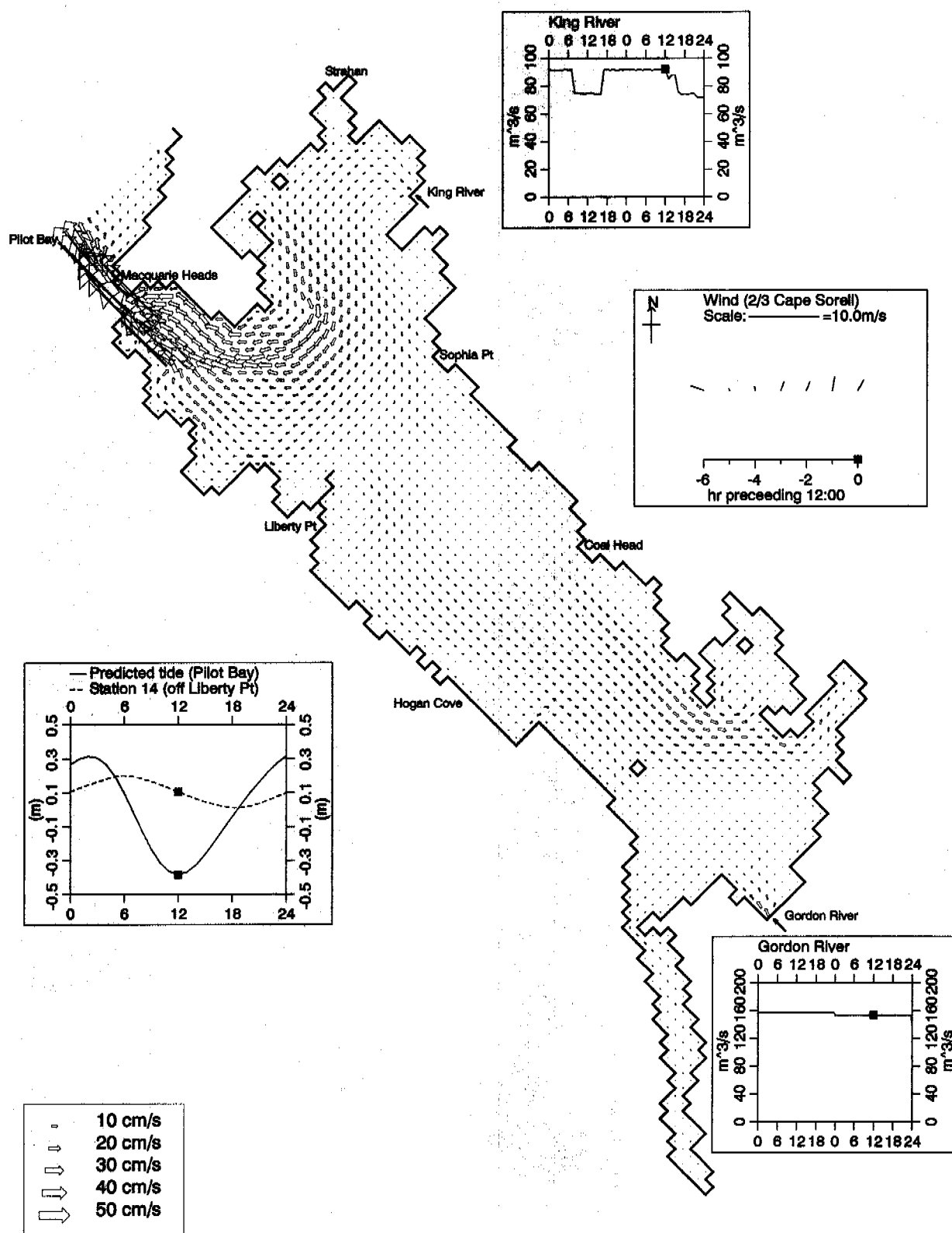


Fig 3.19 Currents in surface layer
13:00 27-Jan-1995

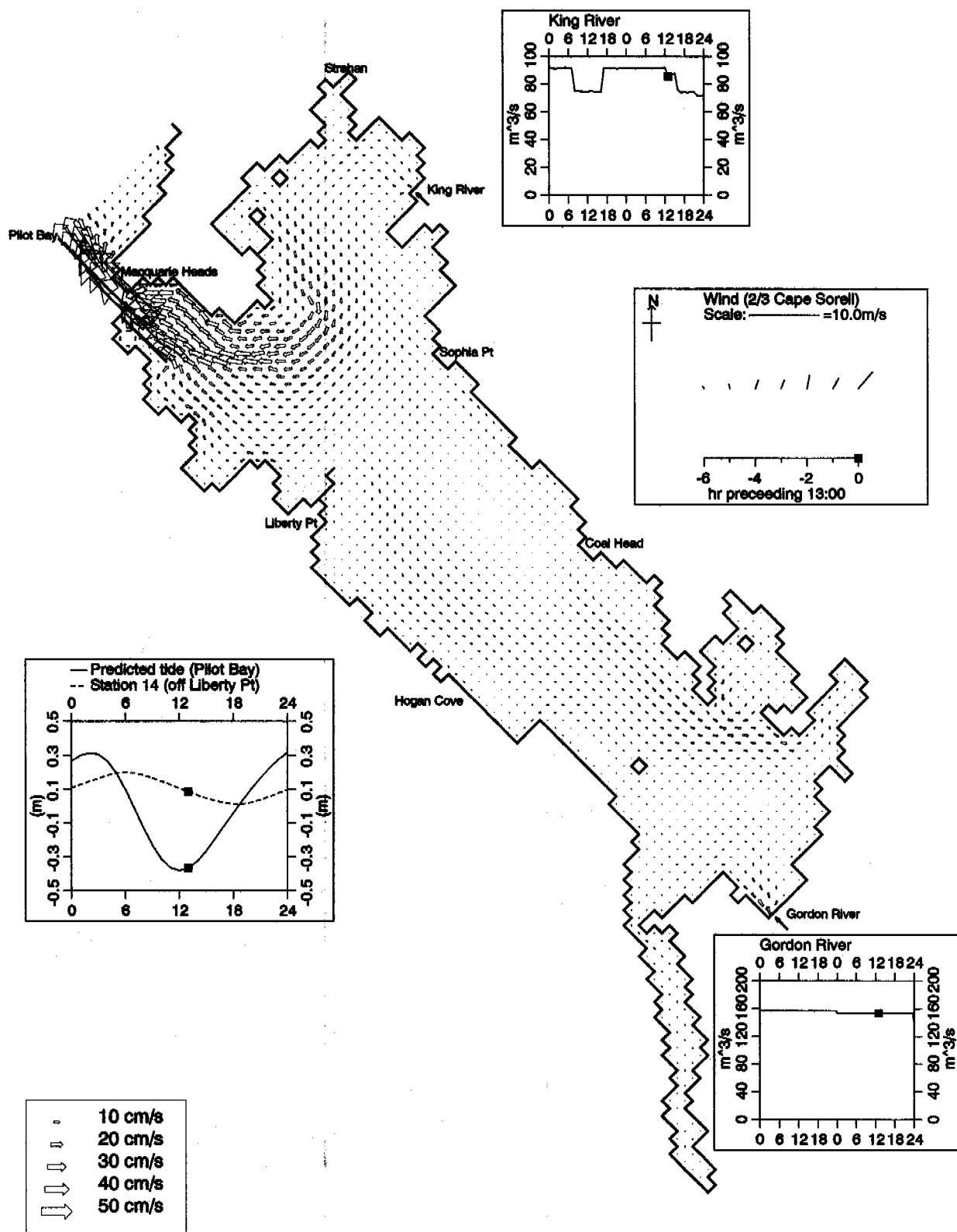


Fig 3.20 Currents in surface layer
14:00 27-Jan-1995

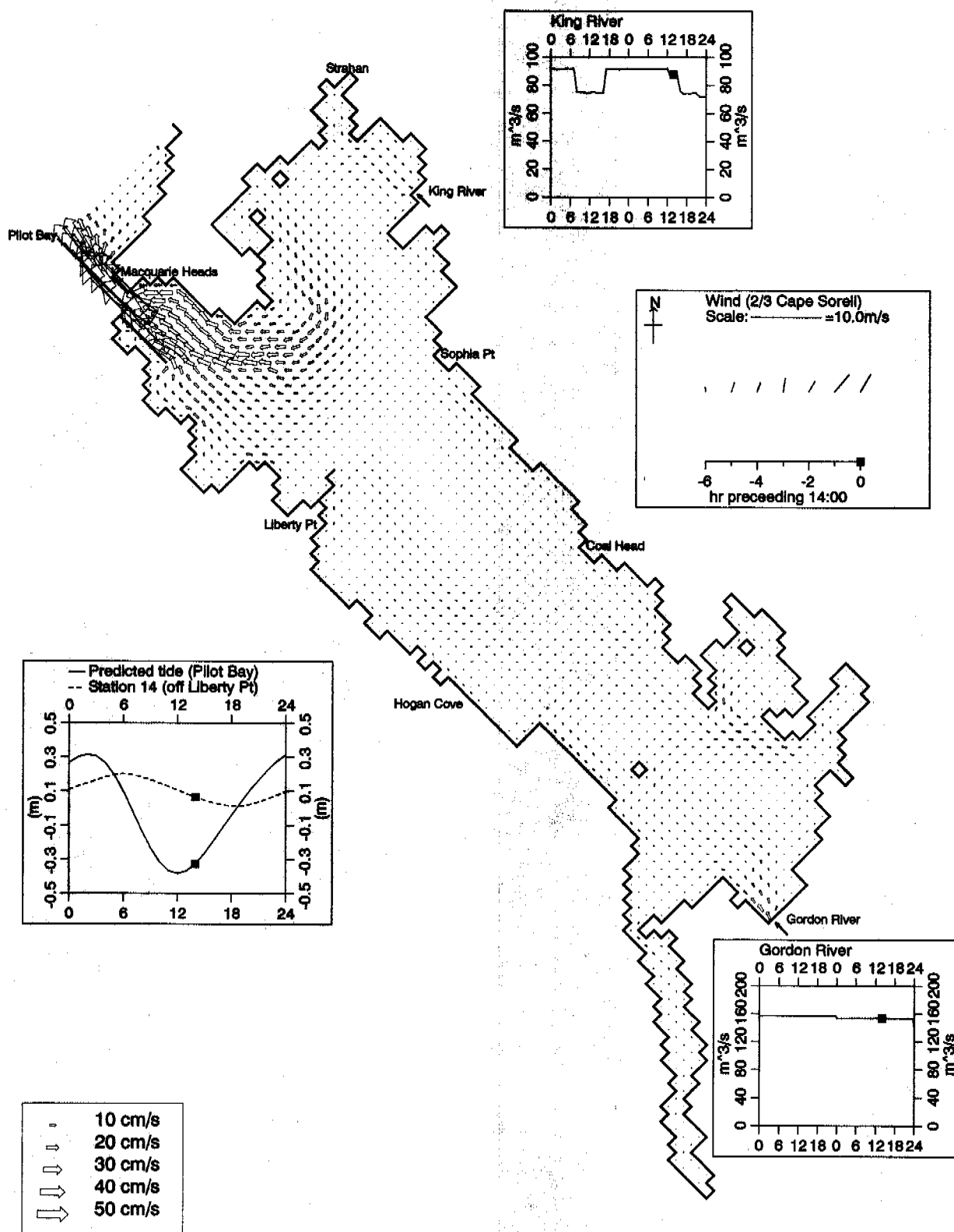


Fig 3.21 Currents in surface layer
15:00 27-Jan-1995

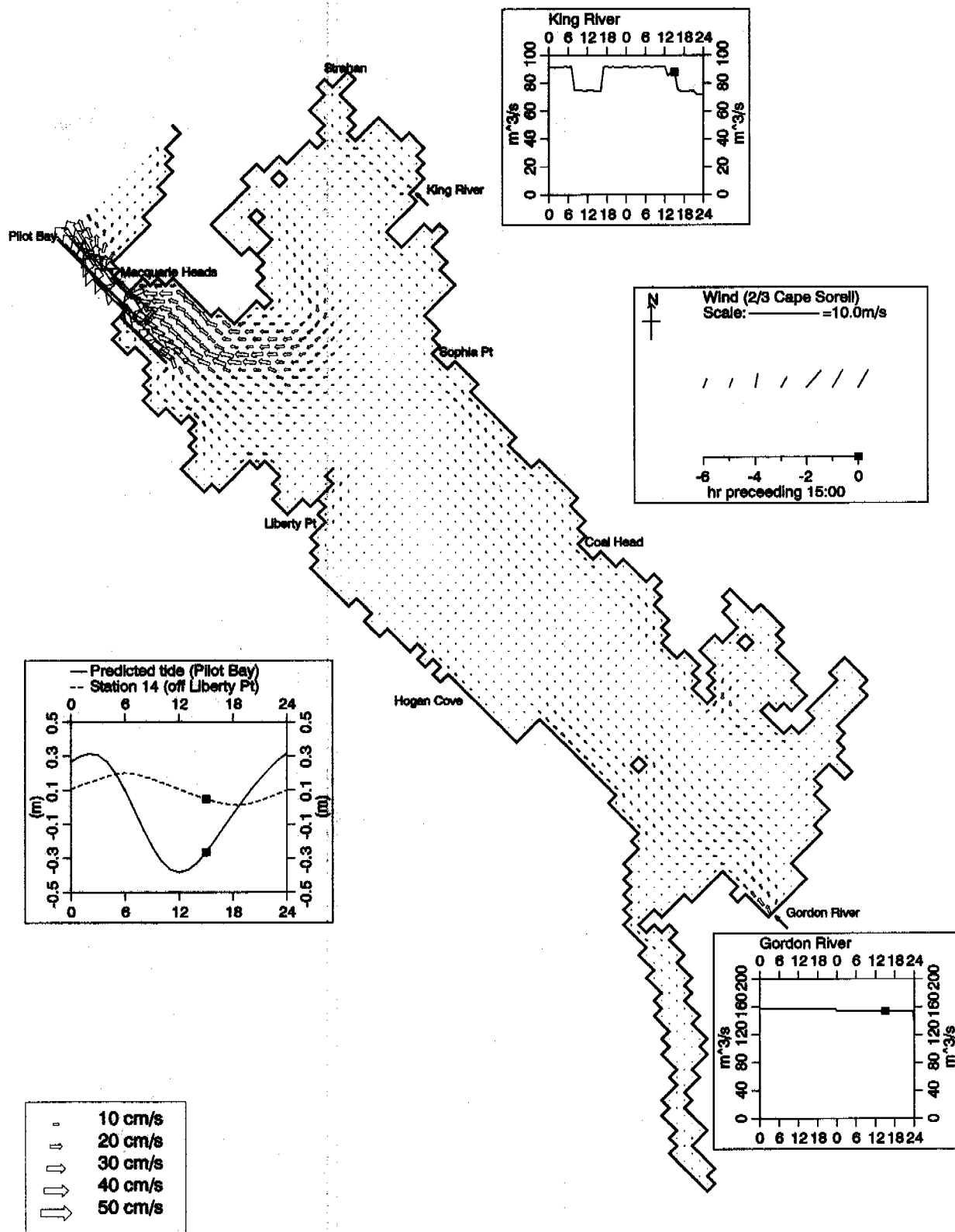
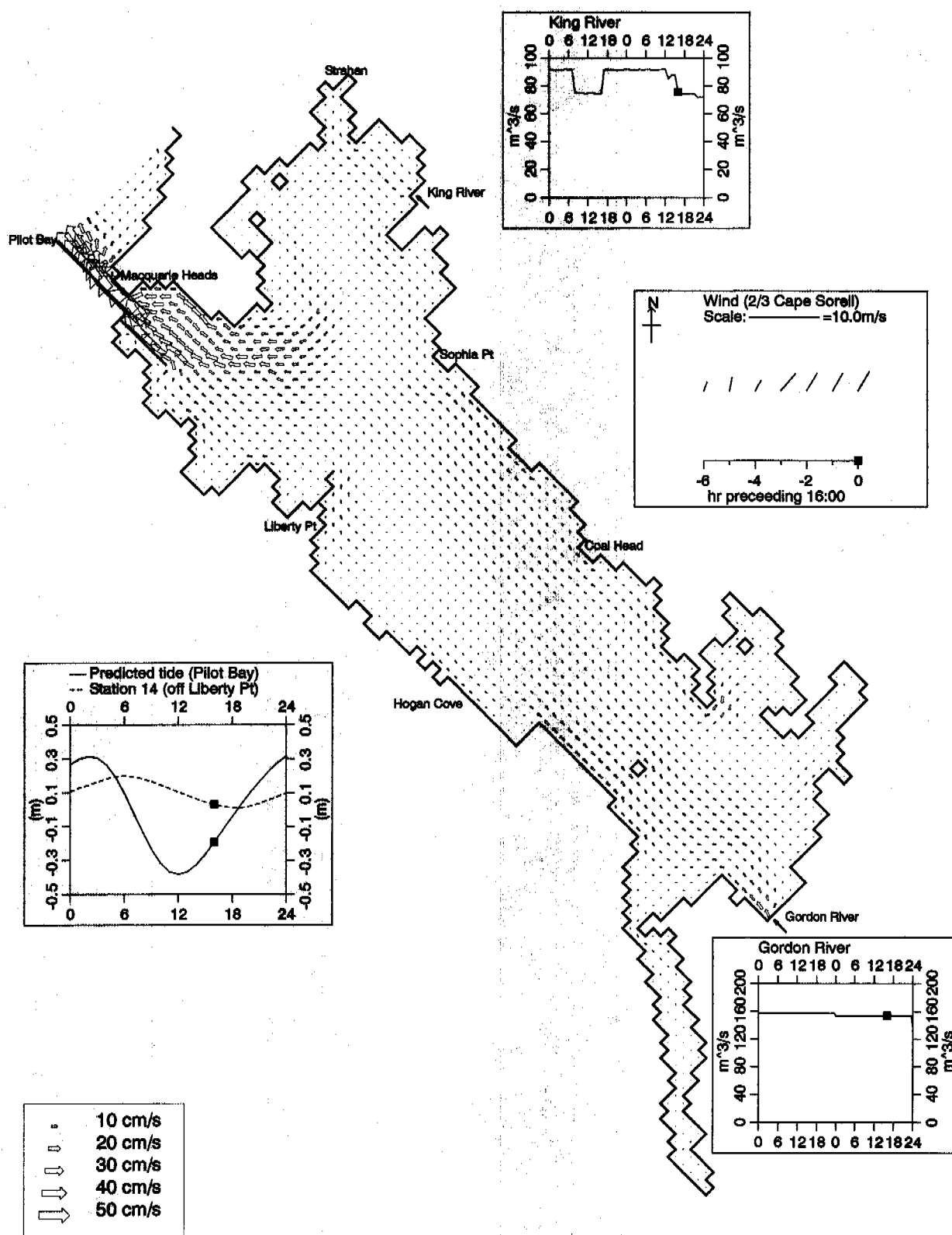


Fig 3.22 Currents in surface layer
16:00 27-Jan-1995



16:00 27-Jan-1995, harbour centre-line (k=30)

89

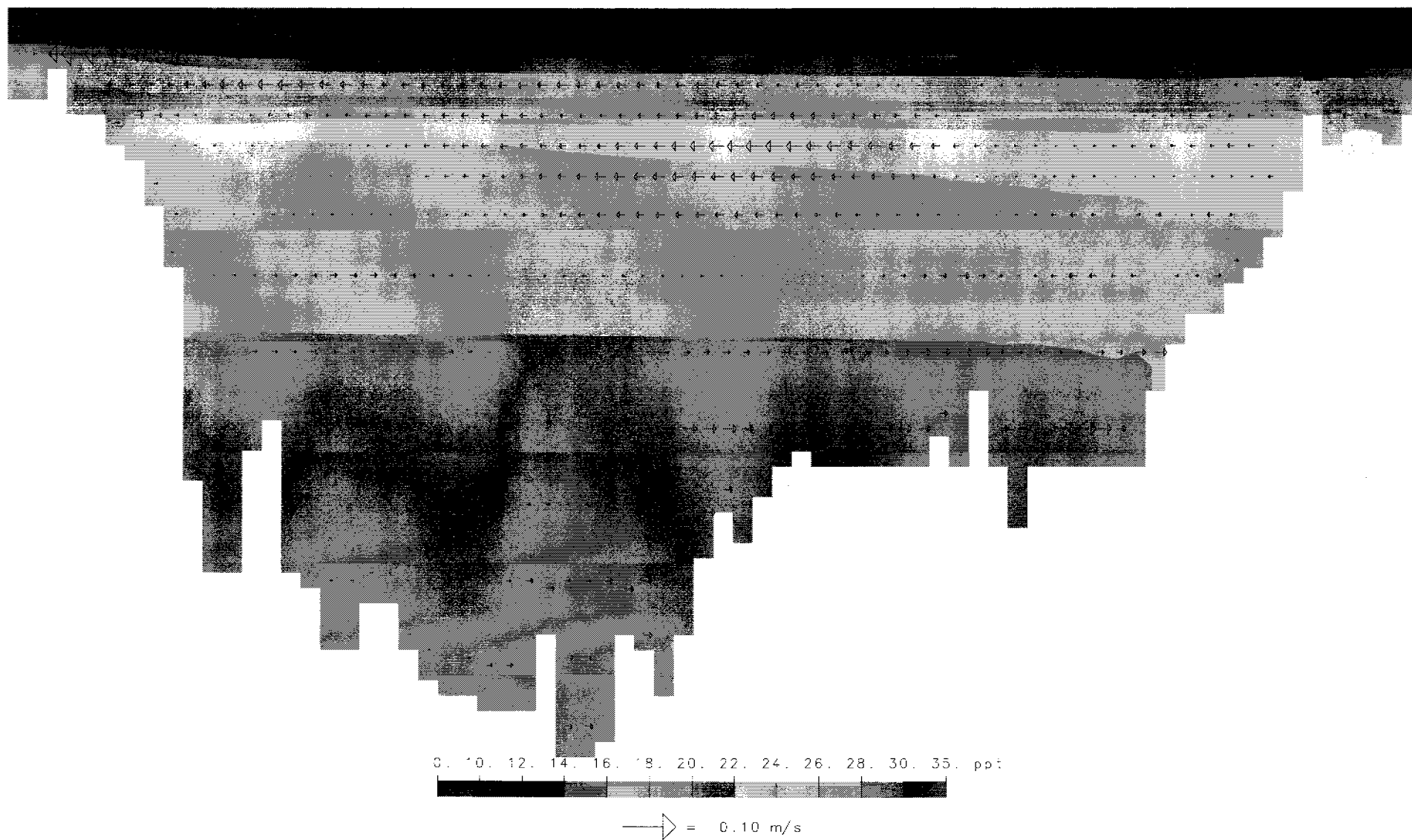


Fig 3.23 Longitudinal section of horizontal velocity and salinity

Fig 3.25 Currents in surface layer
17:00 27-Jan-1995

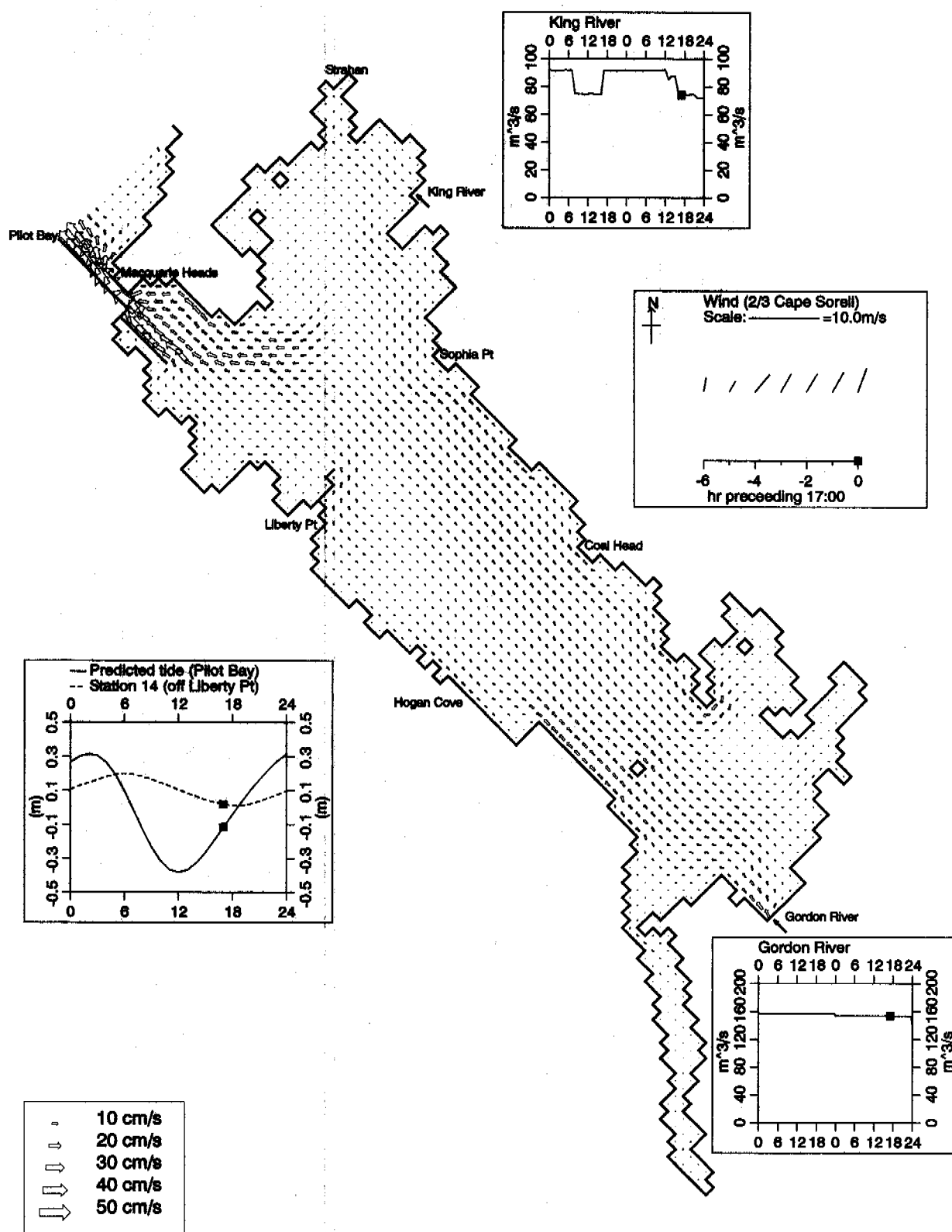


Fig 3.26 Currents in surface layer
18:00 27-Jan-1995

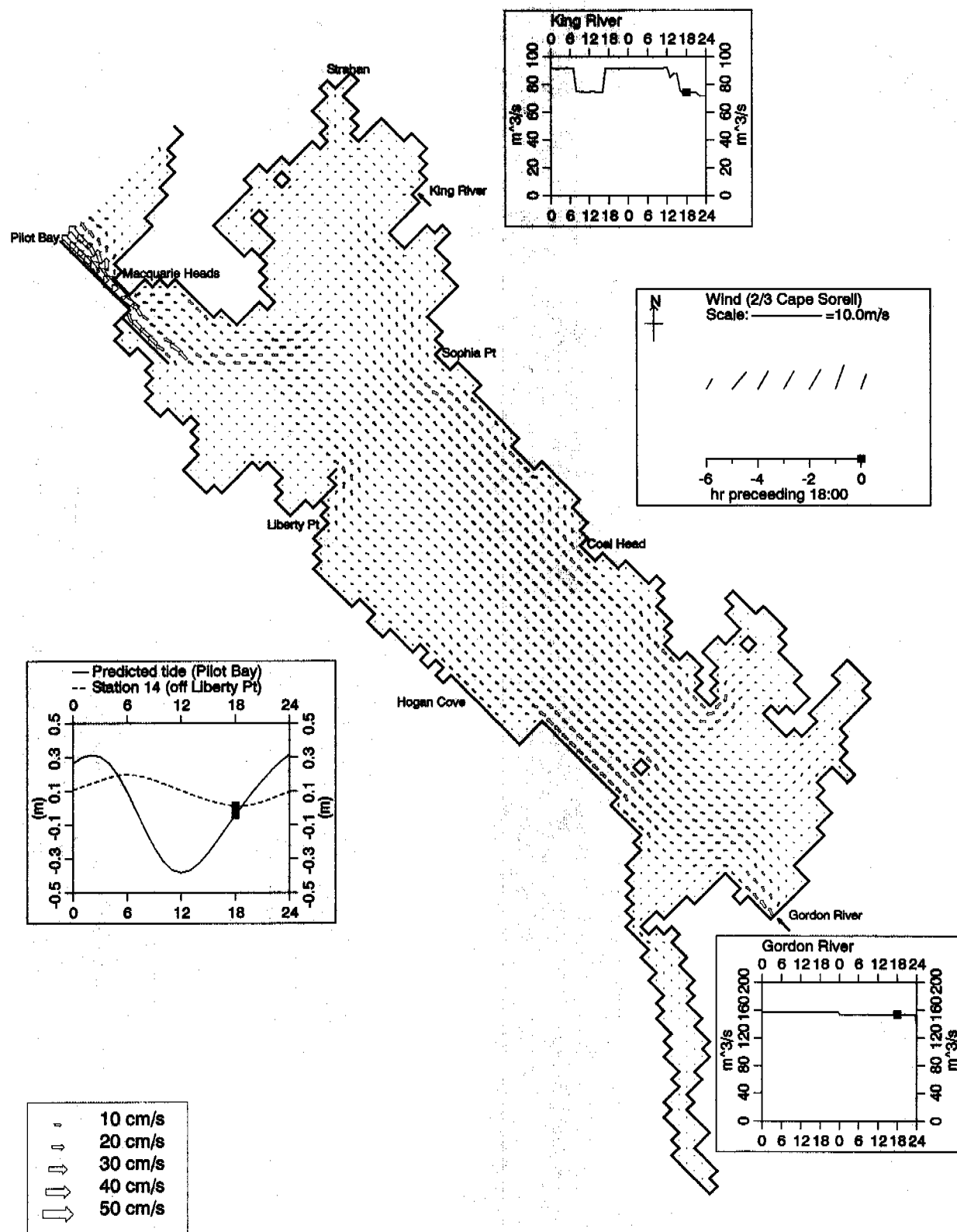


Fig 3.27 Currents in surface layer
19:00 27-Jan-1995

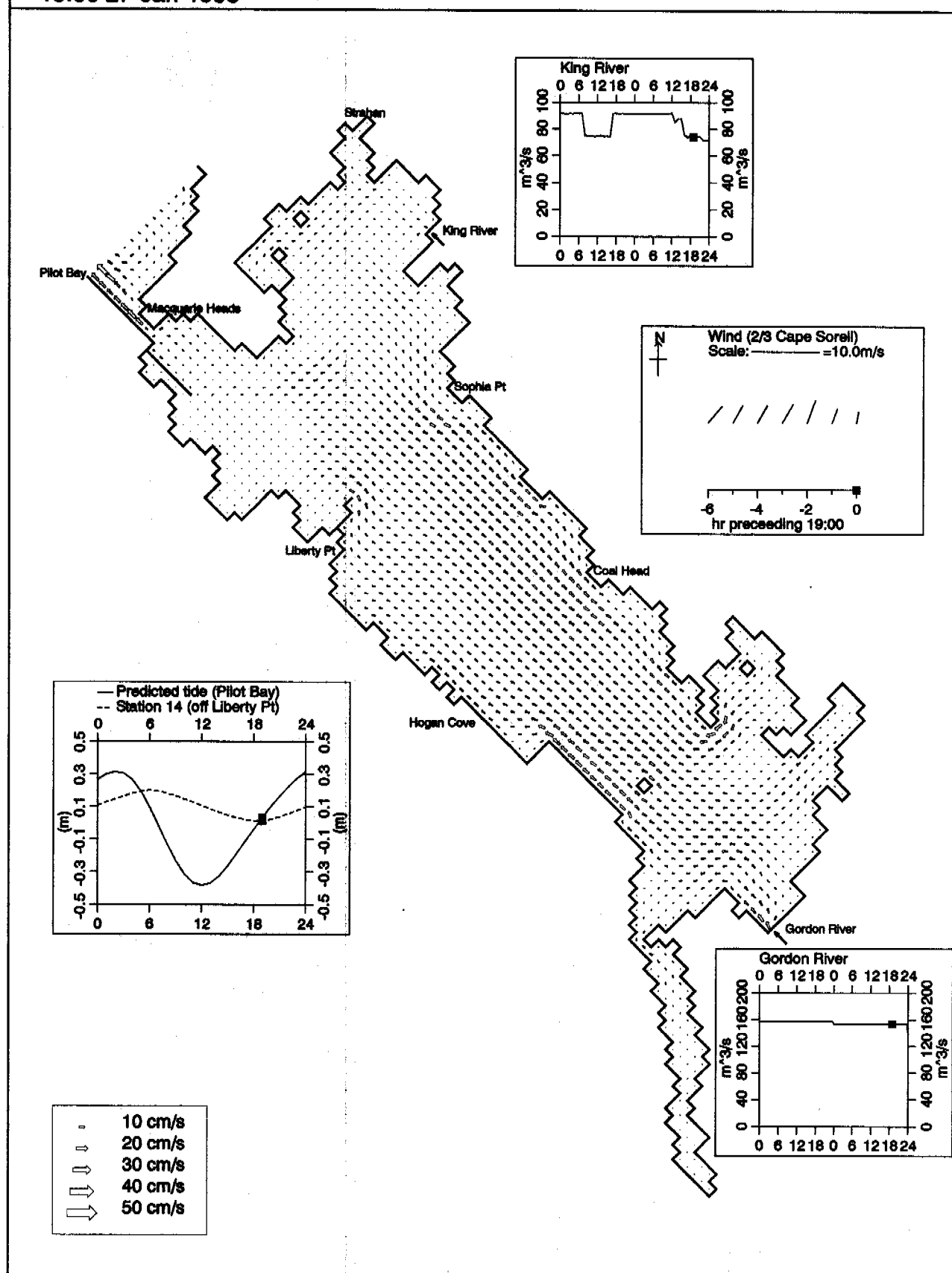


Fig 3.28 Currents in surface layer
20:00 27-Jan-1995

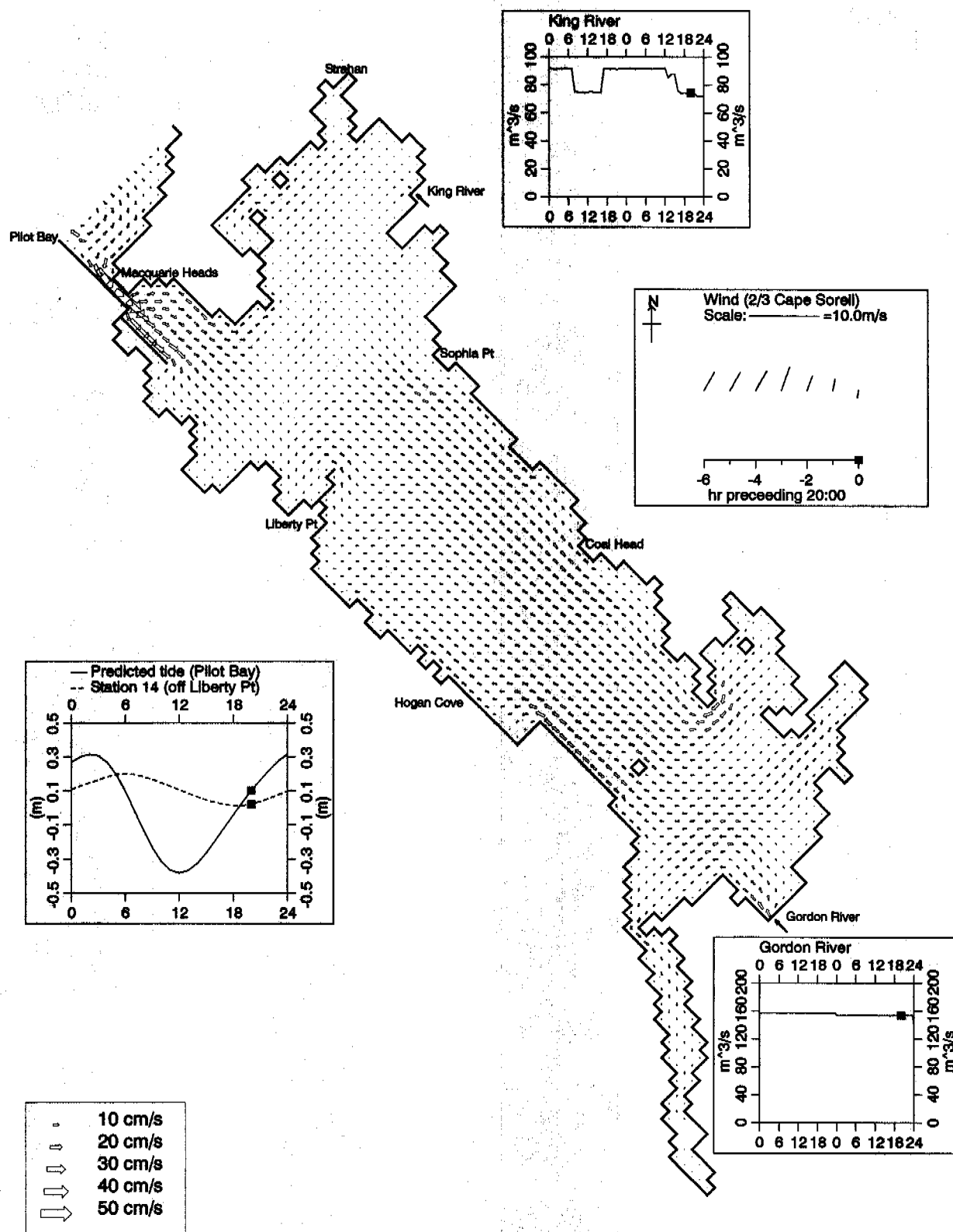


Fig 3.29 Currents in surface layer
21:00 27-Jan-1995

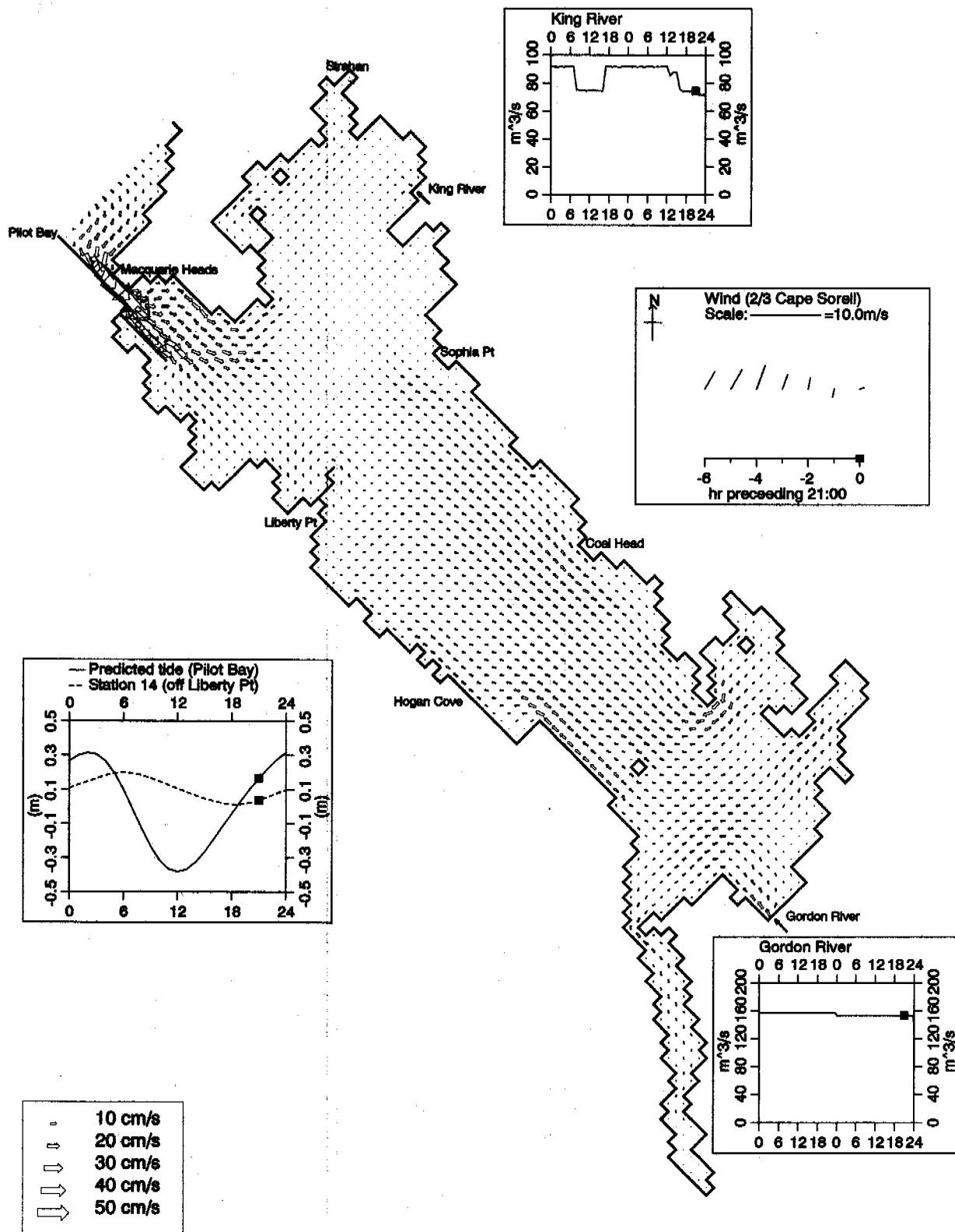


Fig 3.30 Currents in surface layer
22:00 27-Jan-1995

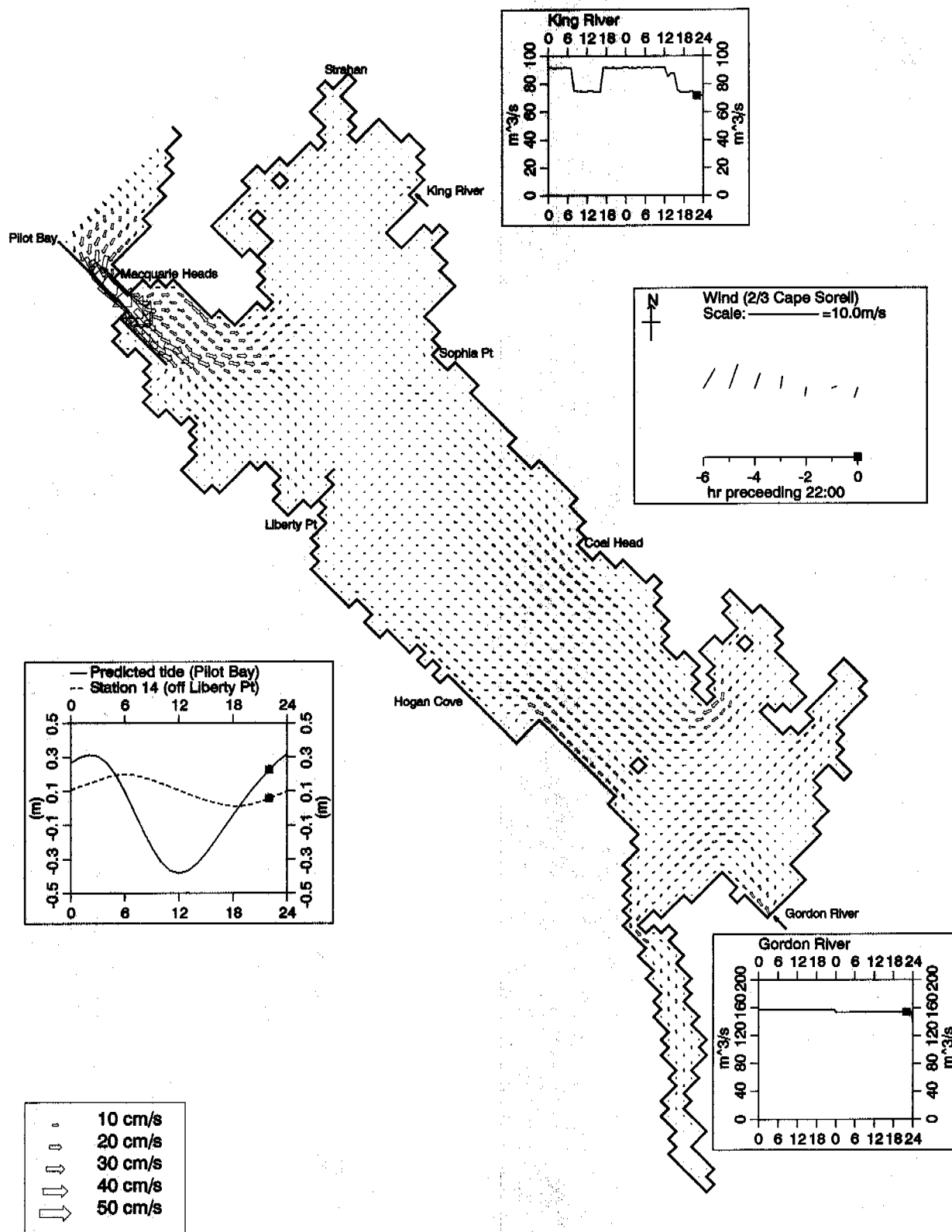


Fig 3.31 Currents in surface layer
23:00 27-Jan-1995

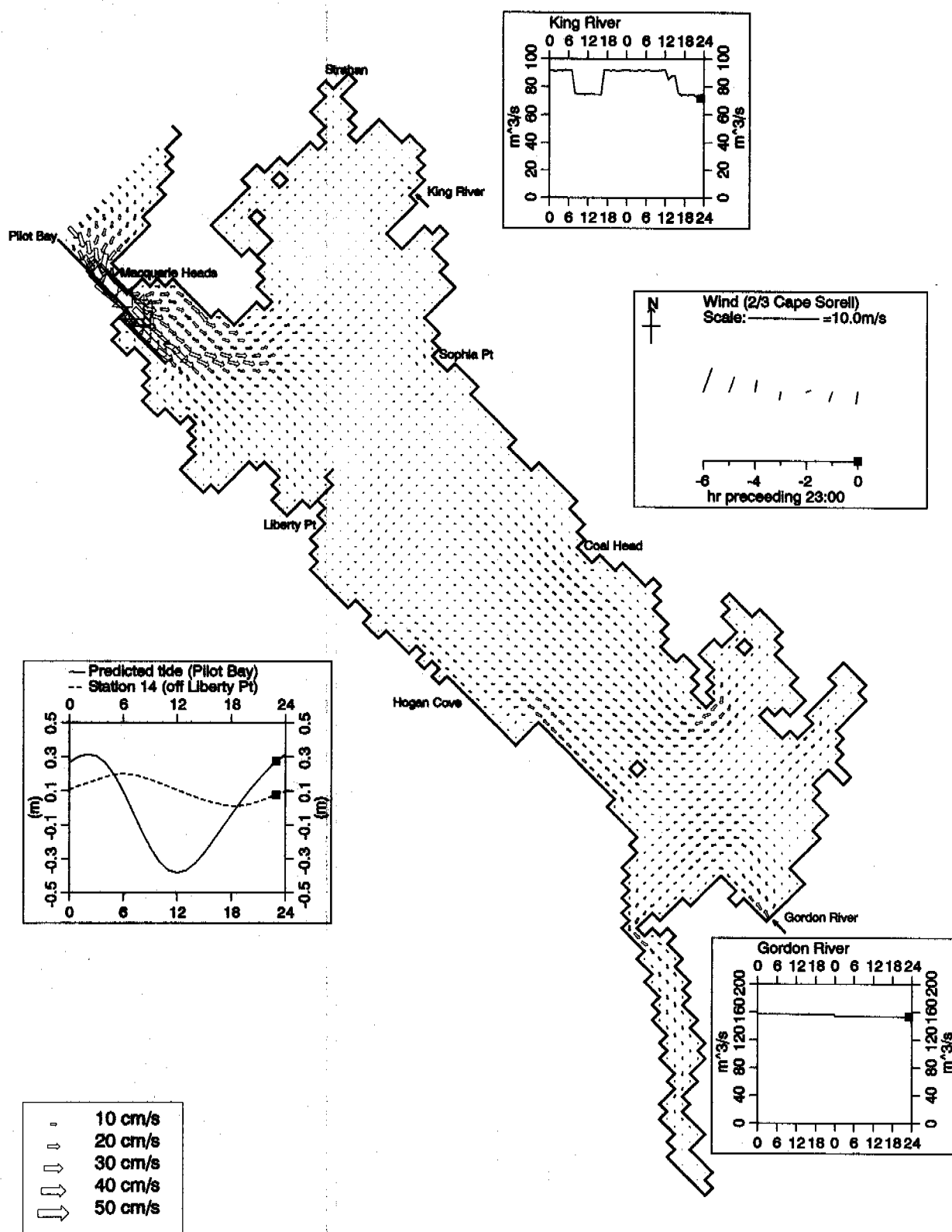
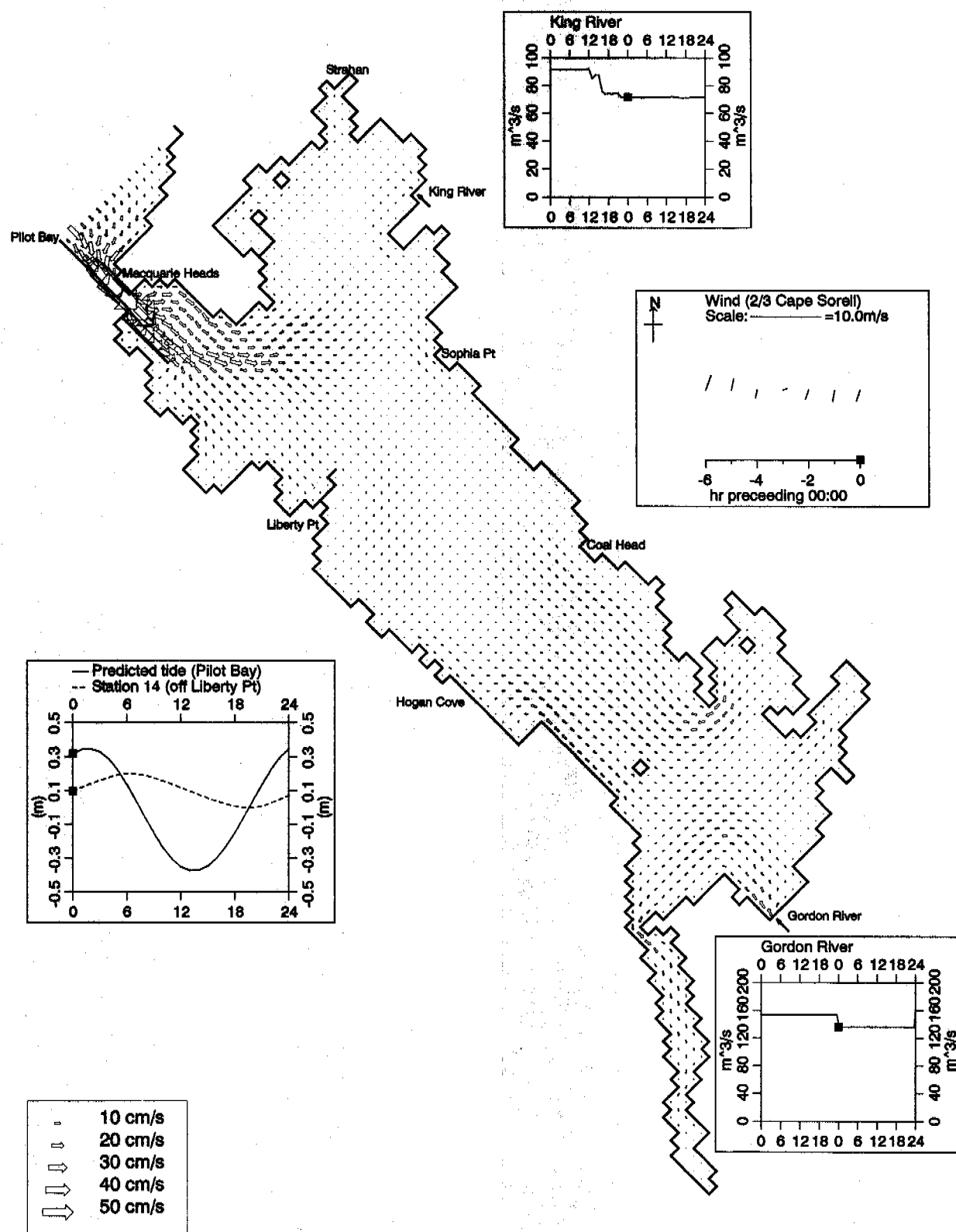


Fig 3.32 Currents in surface layer
00:00 28-Jan-1995



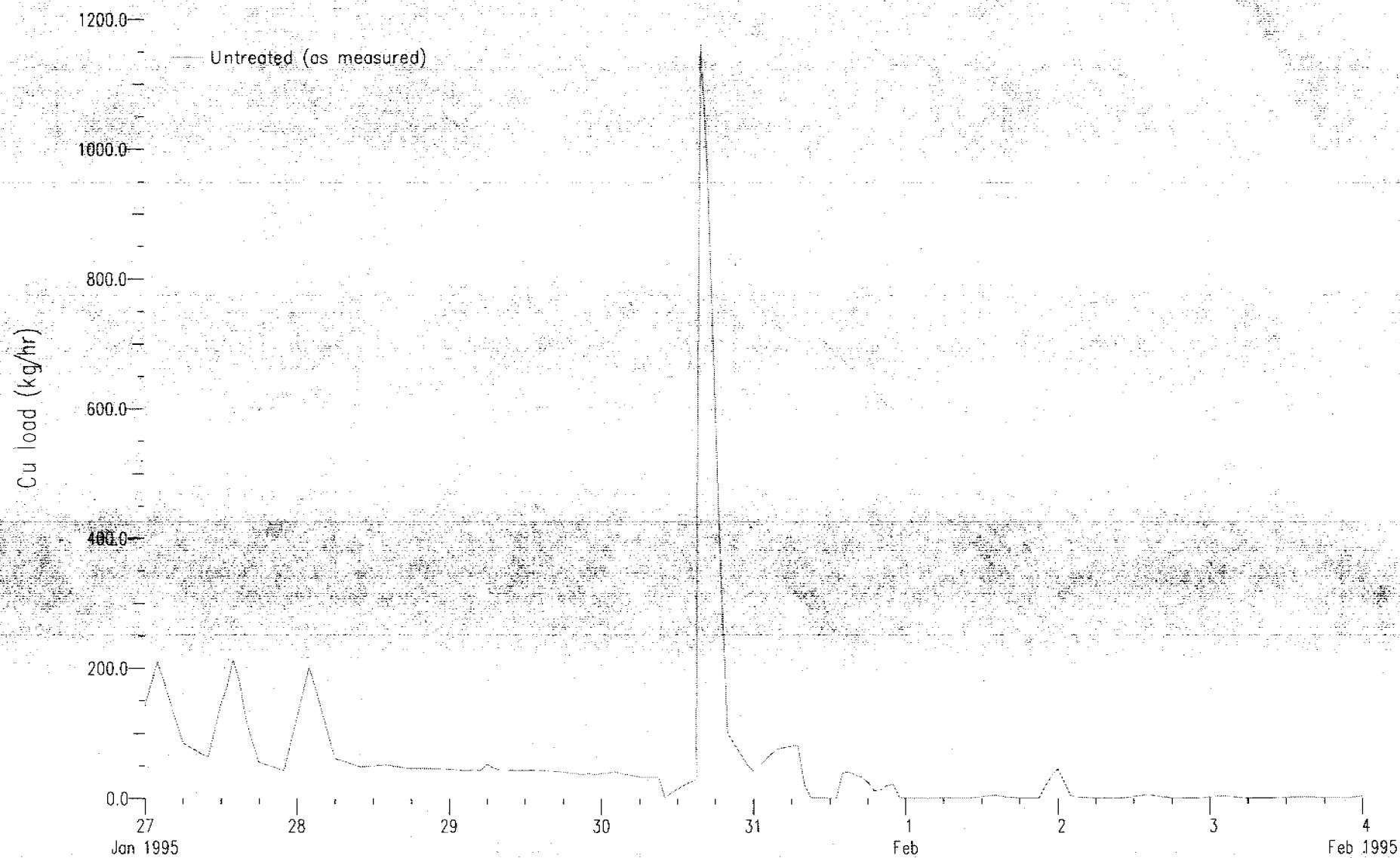


Fig 3.33 Copper loadings to Macquarie Harbour 00:00 27-Jan-1995 to 24:00 3-Feb-1995

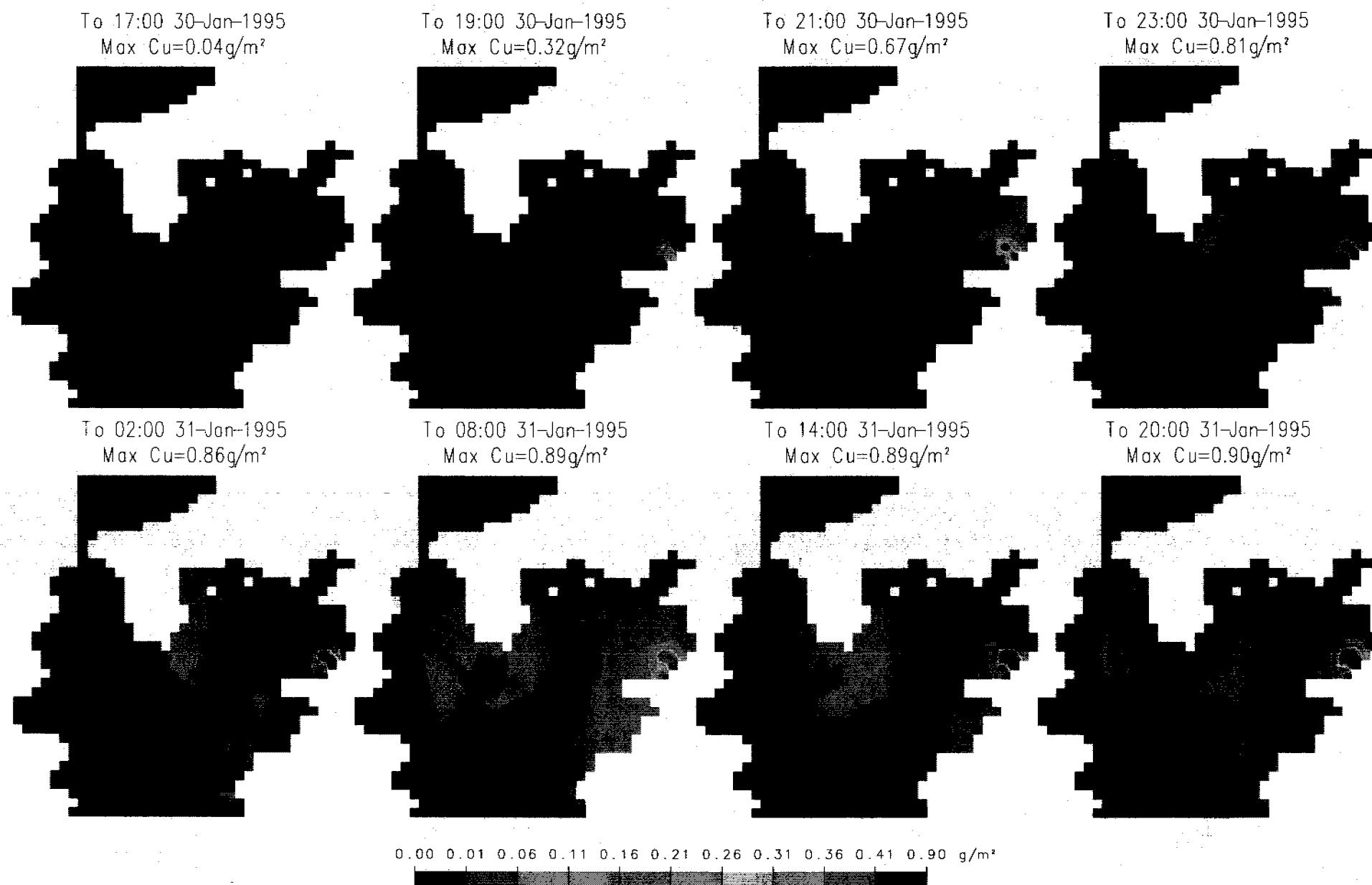


Fig 3.34 Sequence of copper deposition after 12:00 30-Jan-1995 (untreated loading)

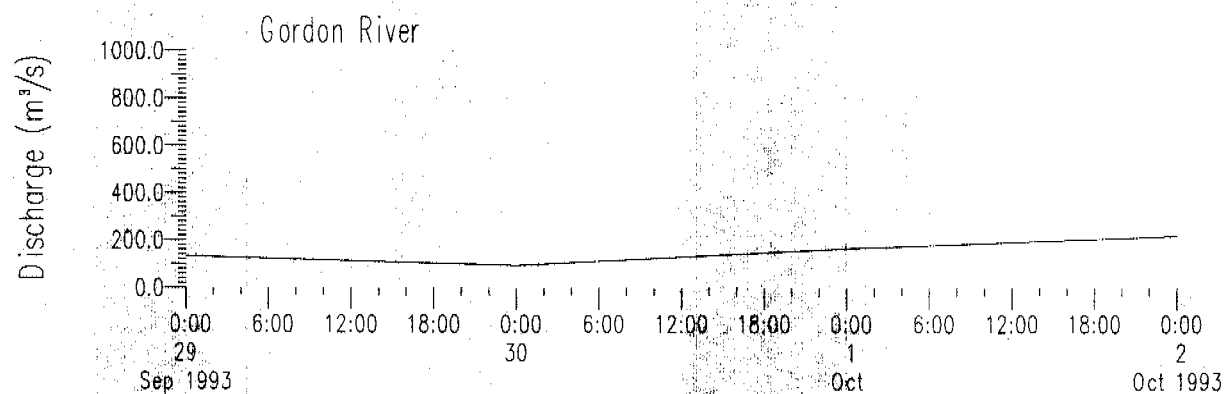
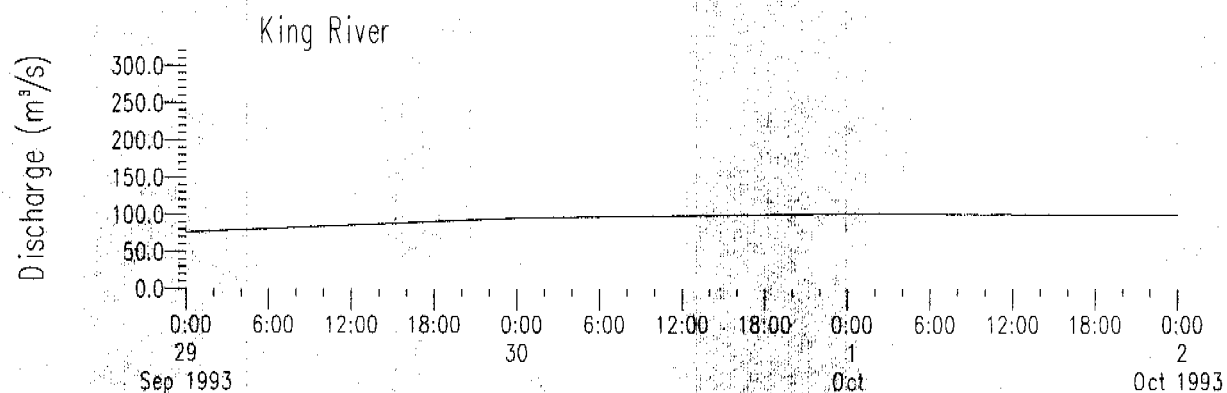
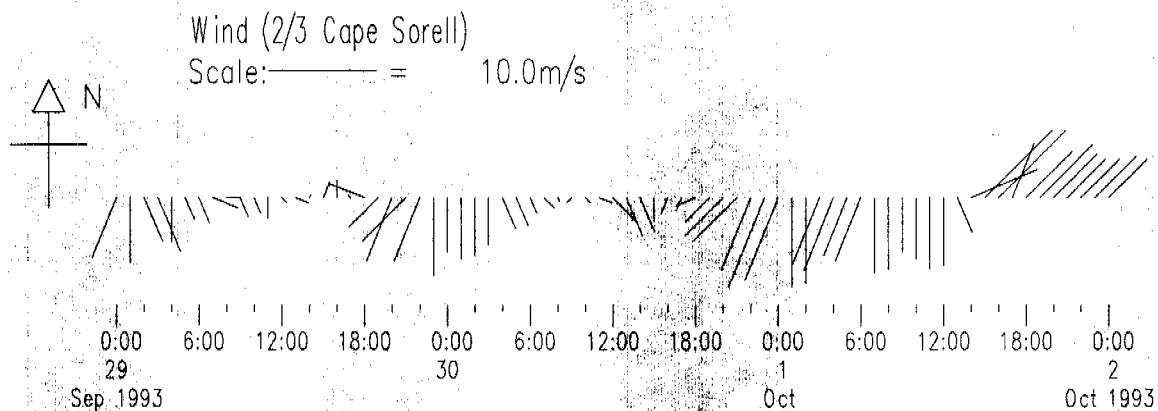
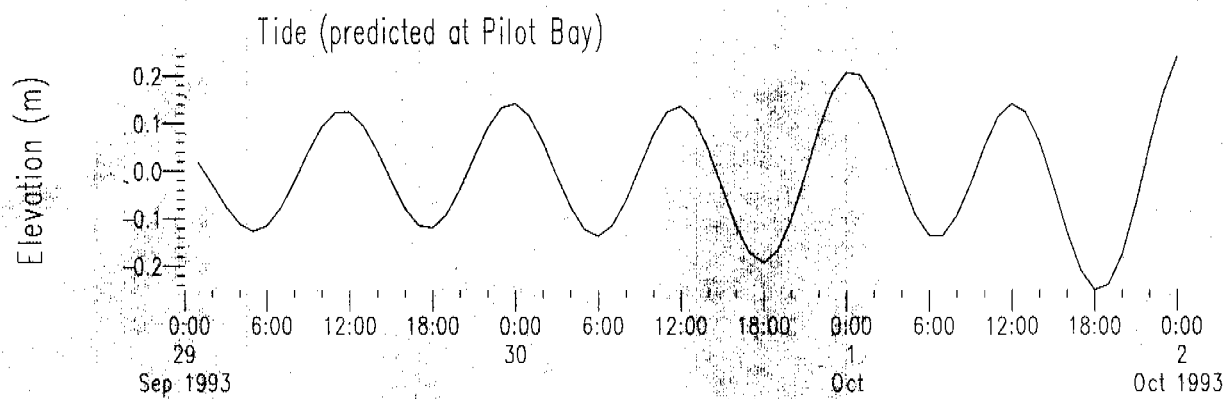


Fig 3.35 Forcing functions for C3 run over ADCP measurement period

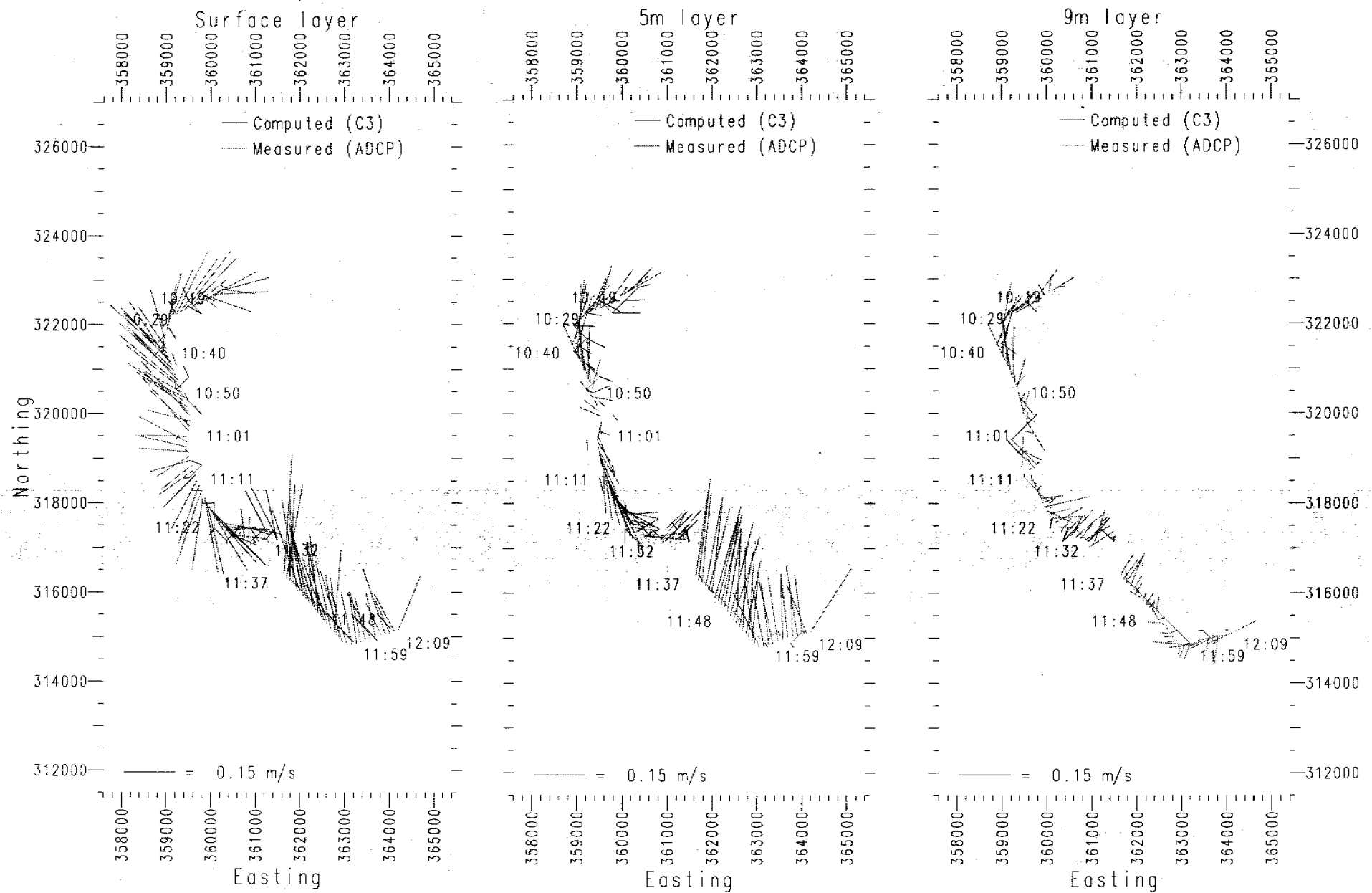


Fig 3.36 Comparison of measured and modelled currents along ship-tracks 9b and 10 on 30-Sep-1993

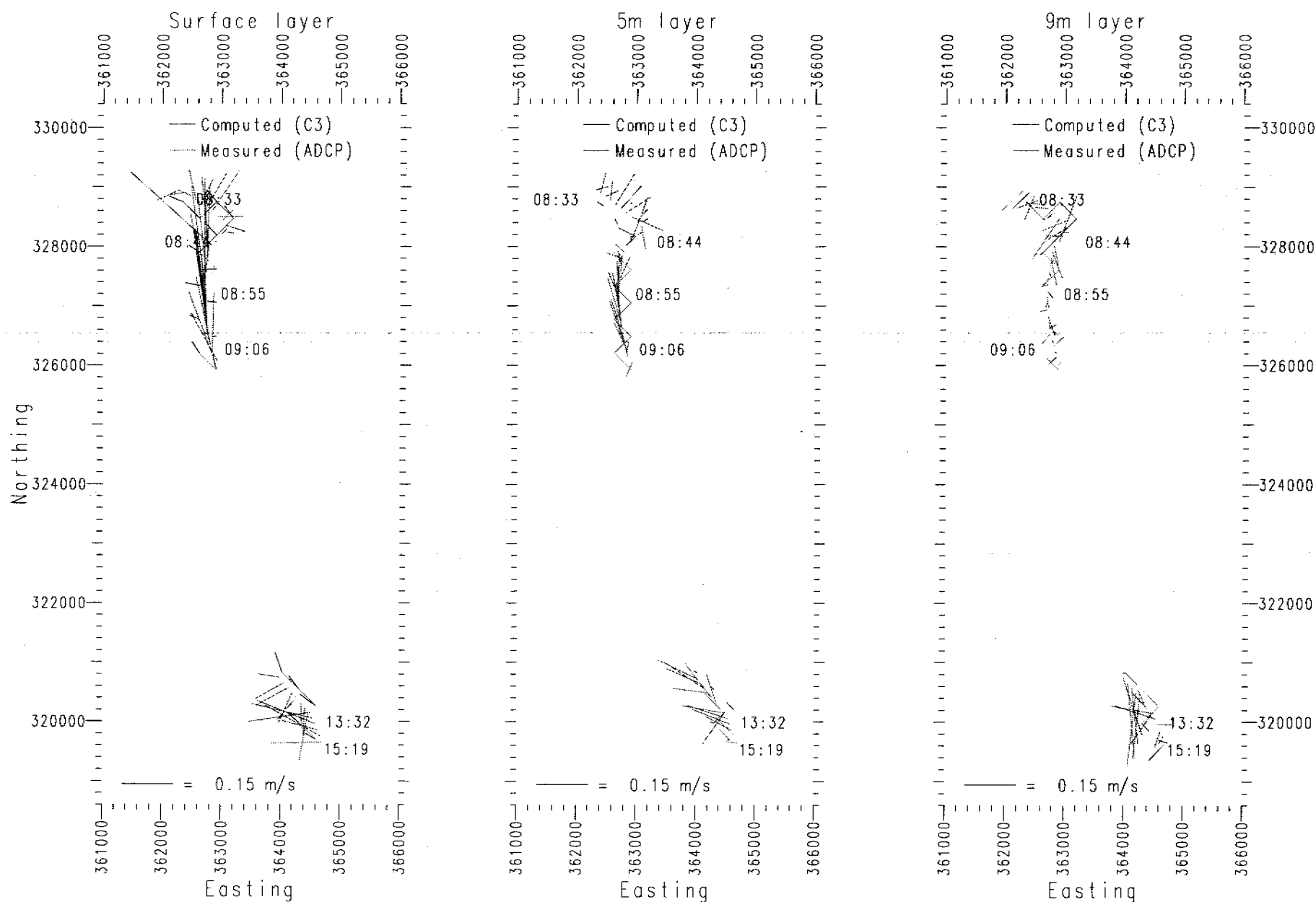


Fig 3.37 Comparison of measured and modelled currents along ship-tracks 7, 12 and 13a on 30-Sep-1993

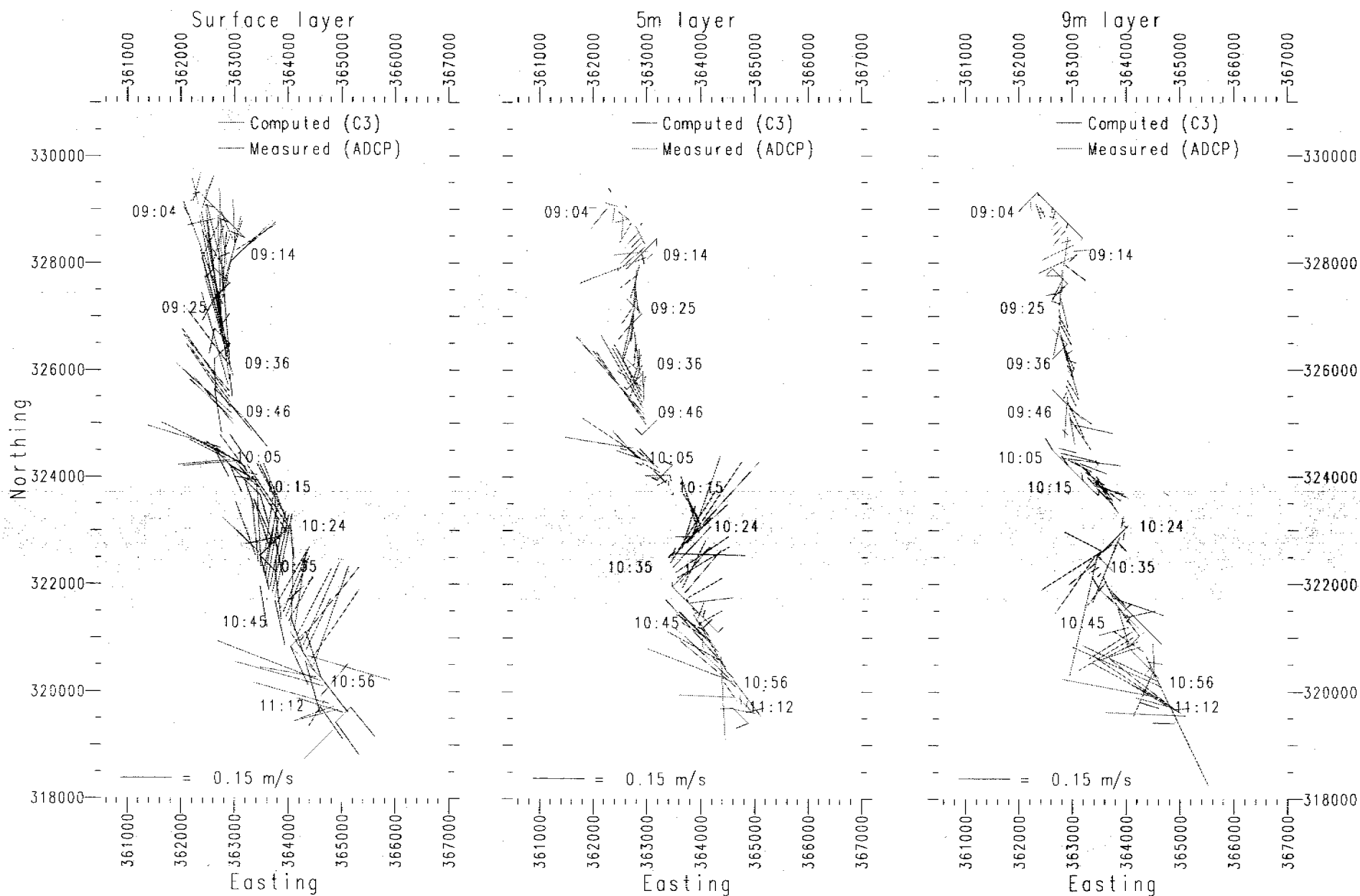


Fig 3.38 Comparison of measured and modelled currents along ship-tracks 14, 15, 16 and 17 on 1-Oct-1993

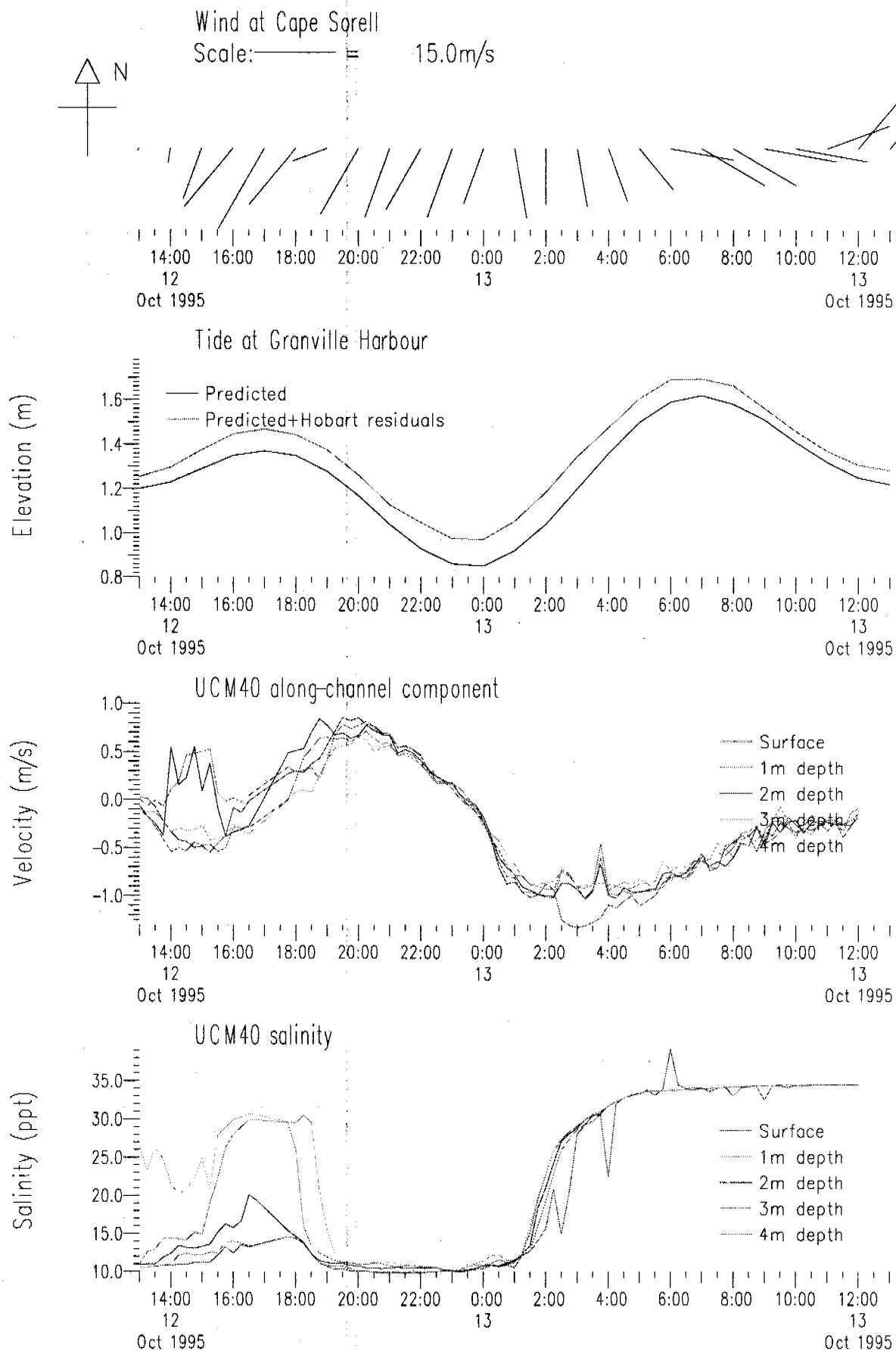


Fig 3.39 Forcing & flux measurements in Kelly channel, October 1995

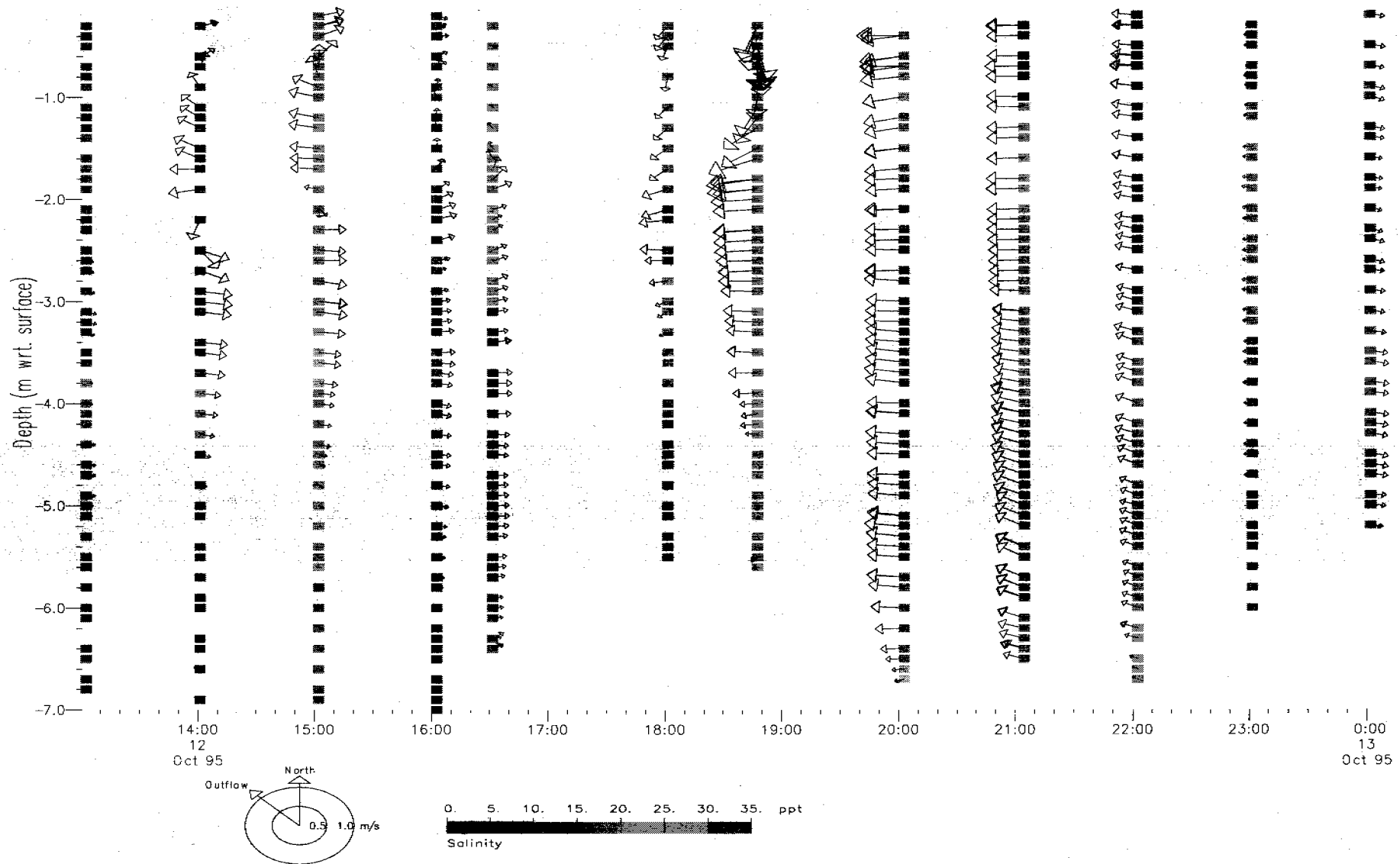


Fig 3.40a UCM40 current and salinity profiles in Kelly Channel, October 1995 field exercise

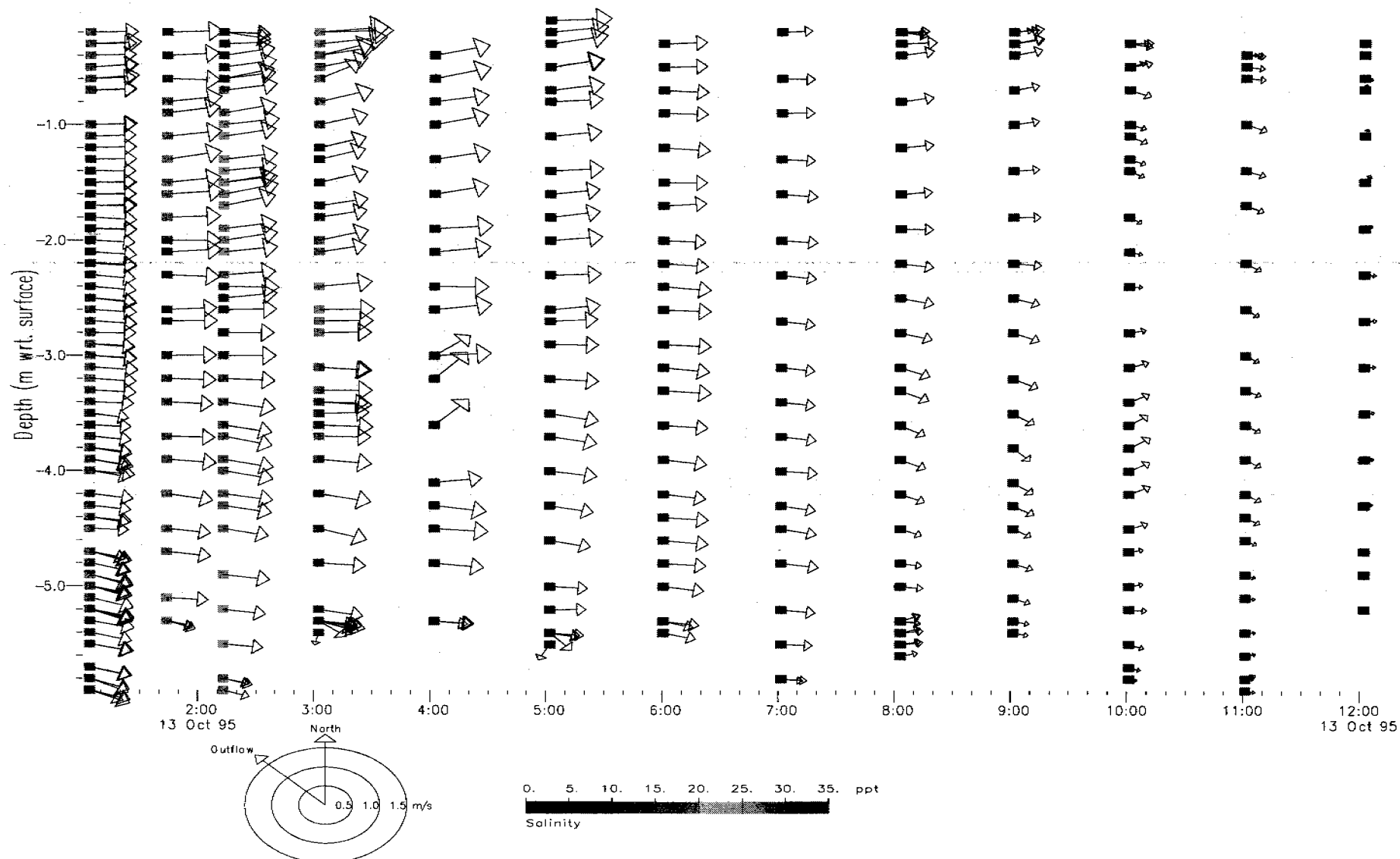
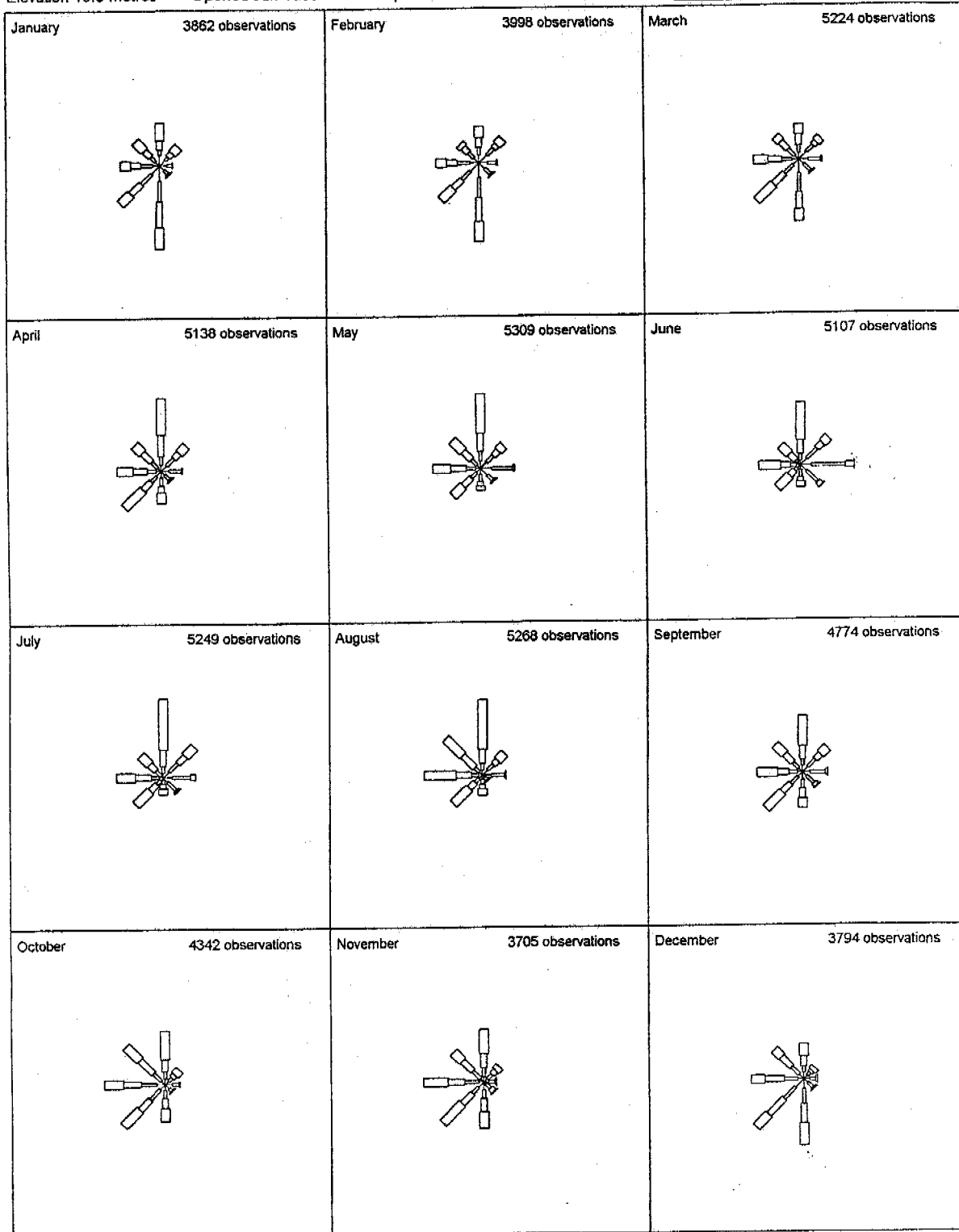
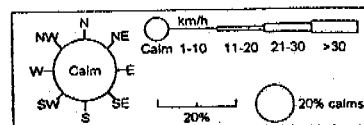


Fig 3.40b UCM40 current and salinity profiles in Kelly Channel, October 1995 field exercise

Figure 3.41a

Wind Roses using available data between 1957 and 1997 for CAPE SORELL (CAPE SORELL AWS)

Site Number 097000 Latitude 42°11'59"S Longitude 145°10'11"E
Elevation 19.3 metres Opened Jan 1899 Still Open



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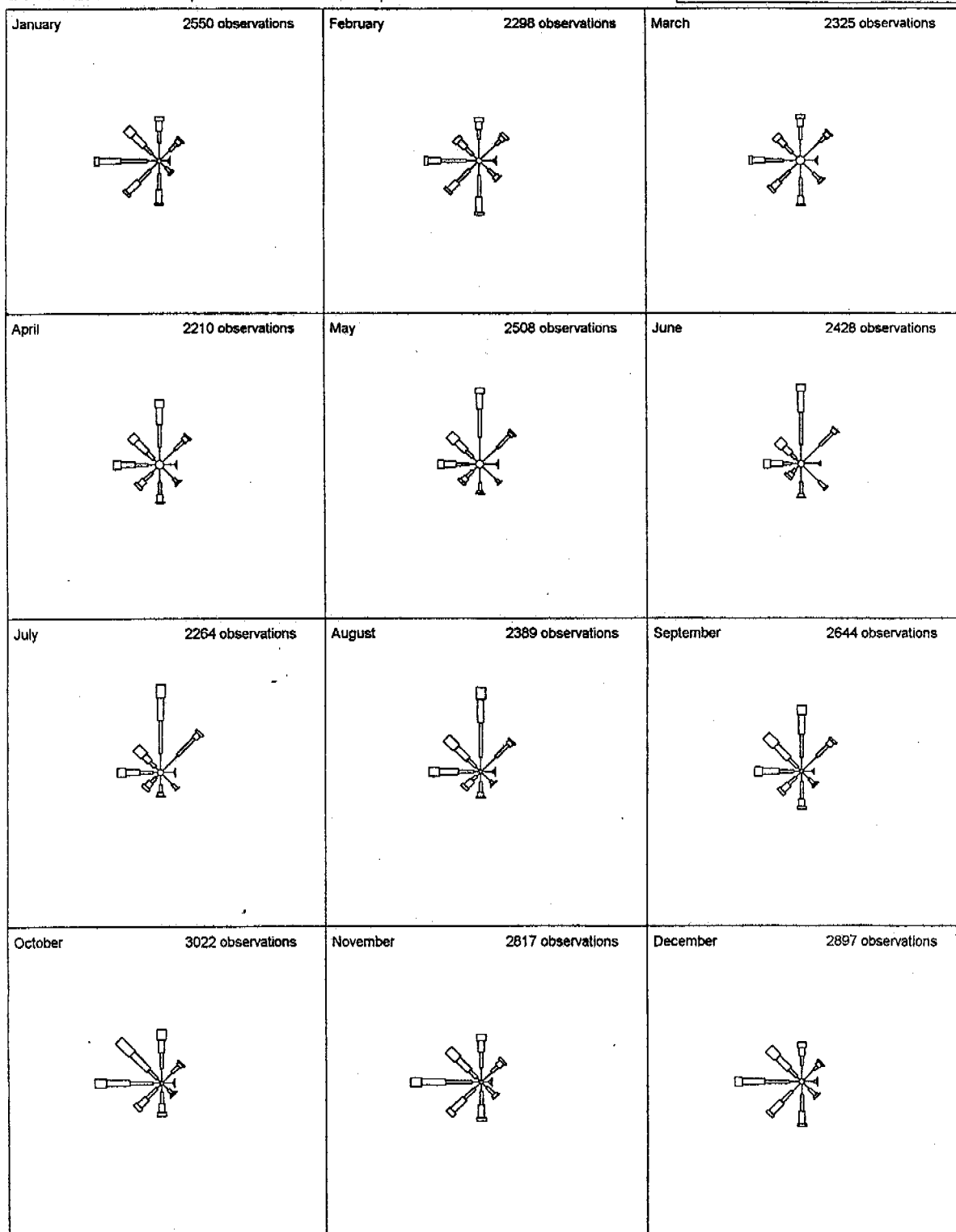
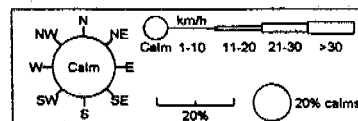
Prepared by Climate and Consultancy Section in the Tasmania and Antarctica Regional Office of the Bureau of Meteorology
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Figure 3.41b

Wind Roses using available data between 1976 and 1997 for **STRAHAN (STRAHAN AIRPORT)**

Site Number 097072 Latitude 42°09'18"S Longitude 145°17'27"E
Elevation 20 metres Opened Jan 1976 Still Open



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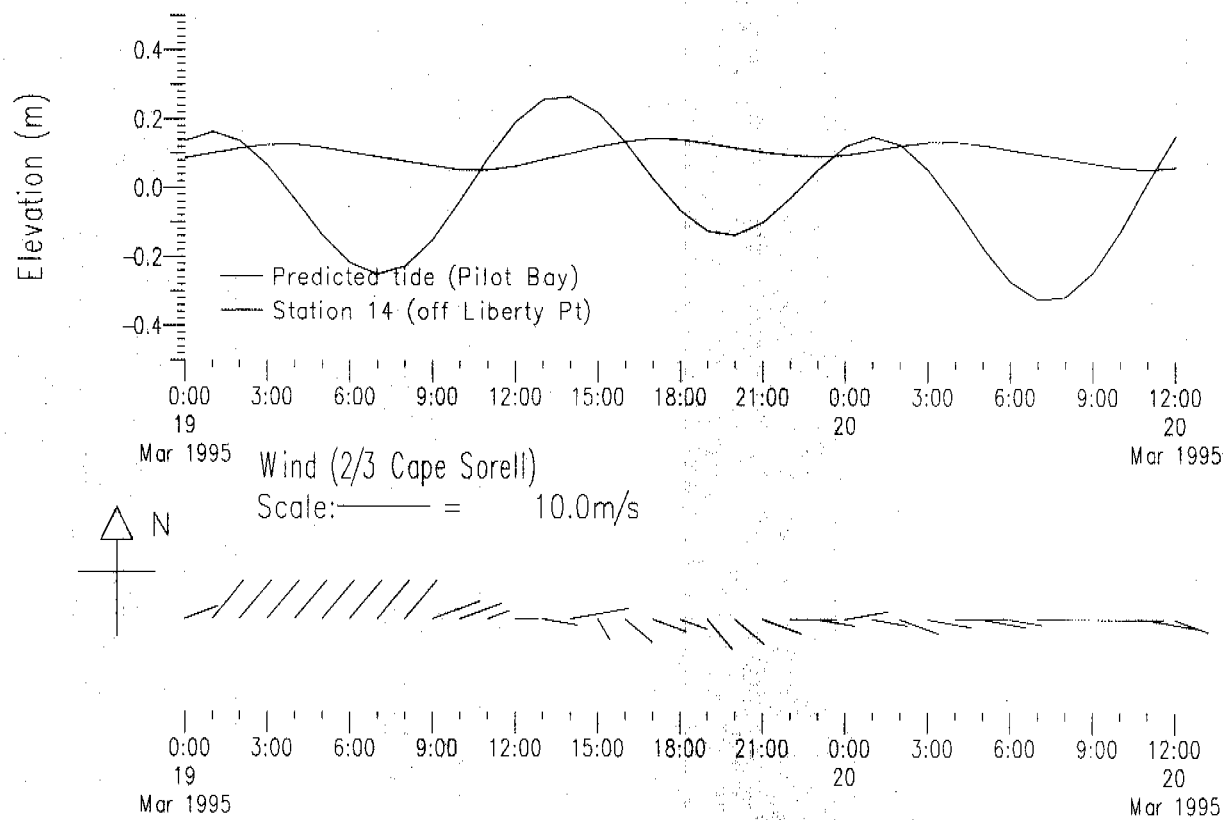
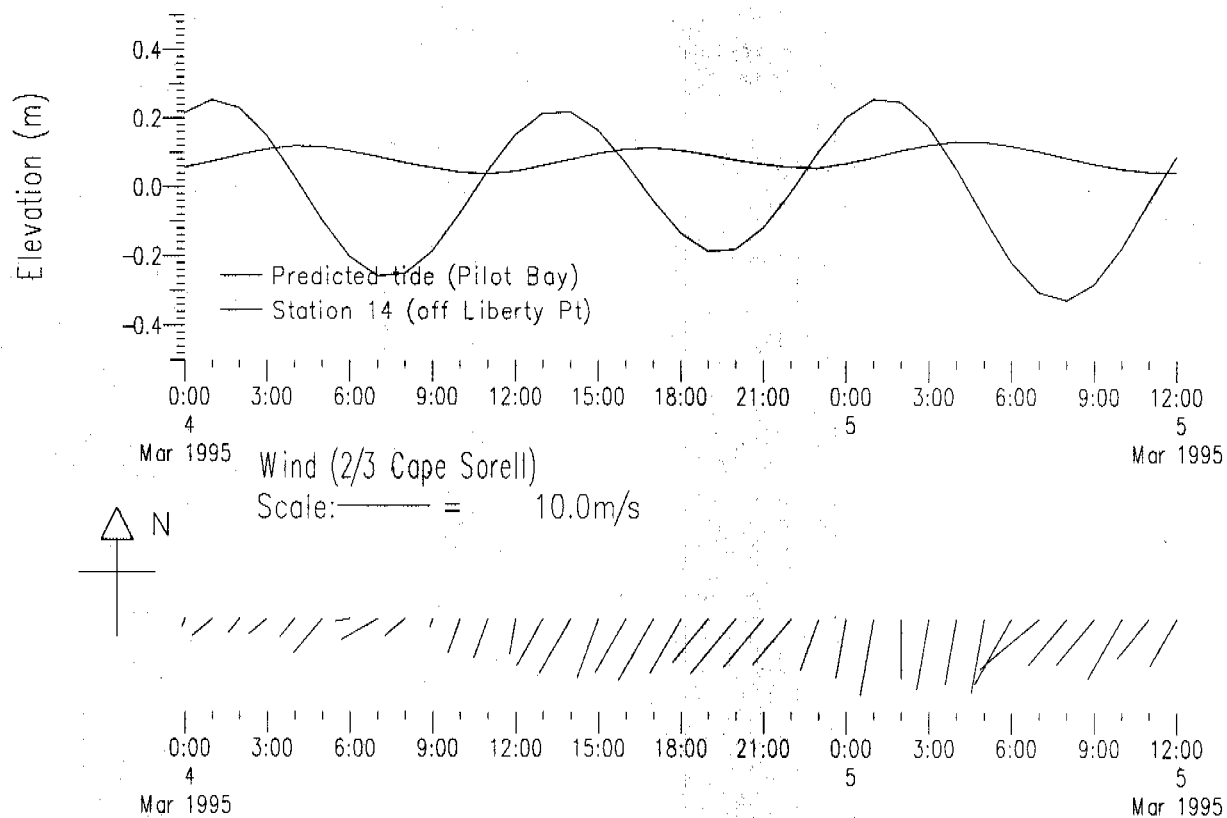


Fig 3.42 Forcing functions over 4/5 and 19/20 of March 1995

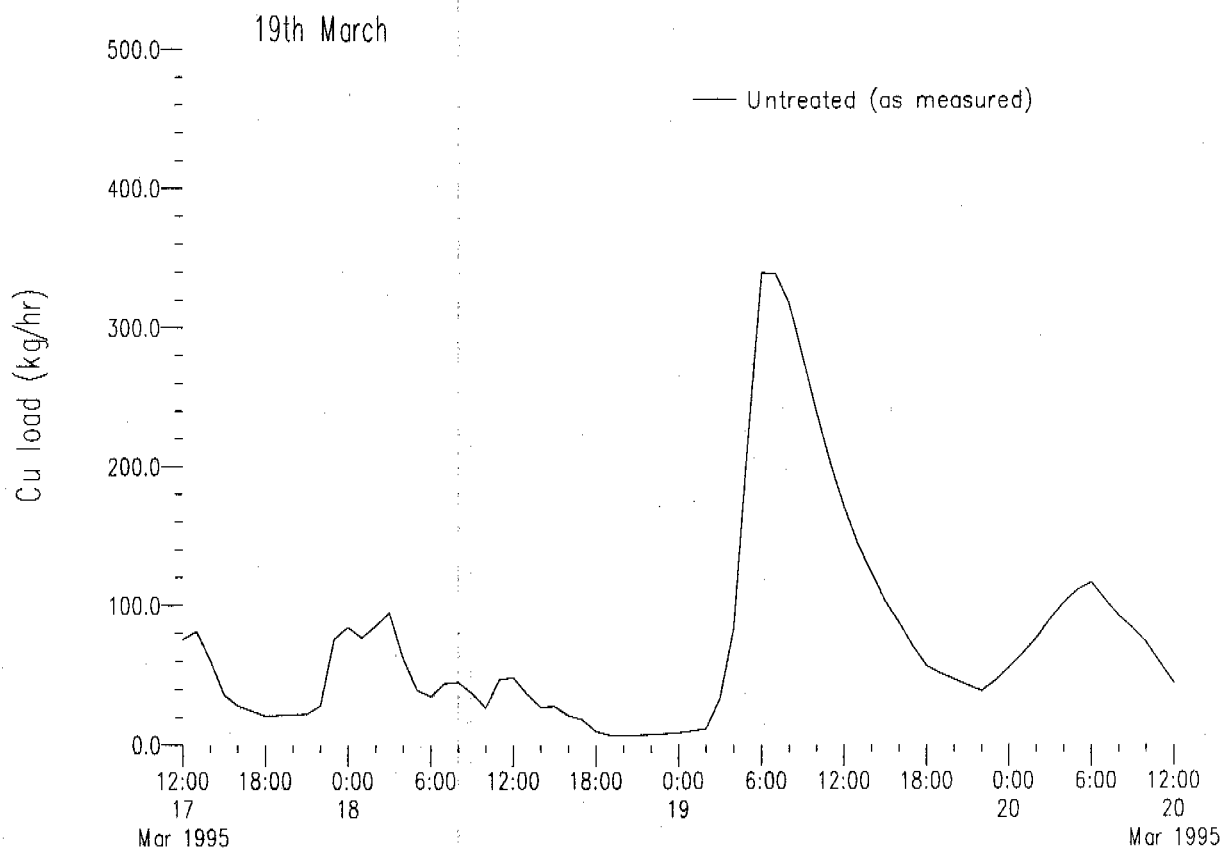
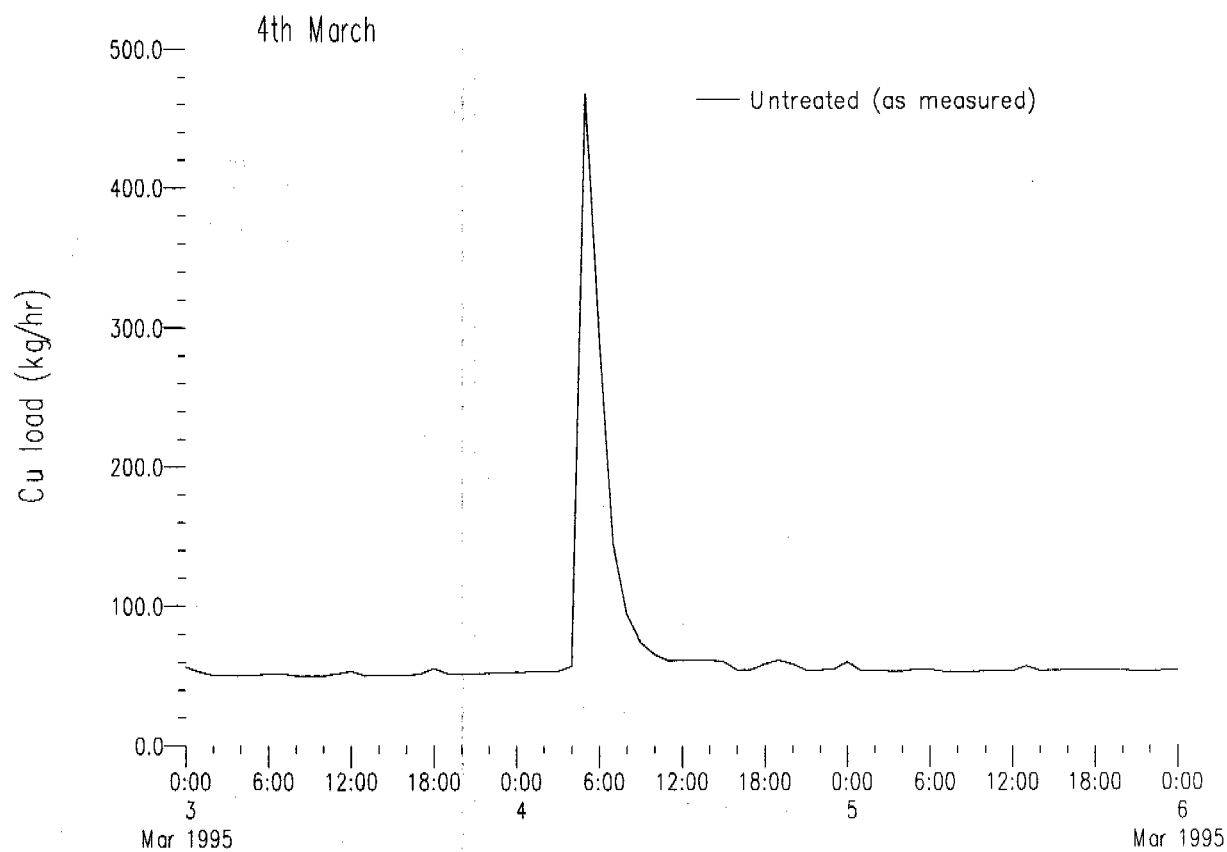


Fig 3.42a Event loadings to Macquarie Harbour, March 1995

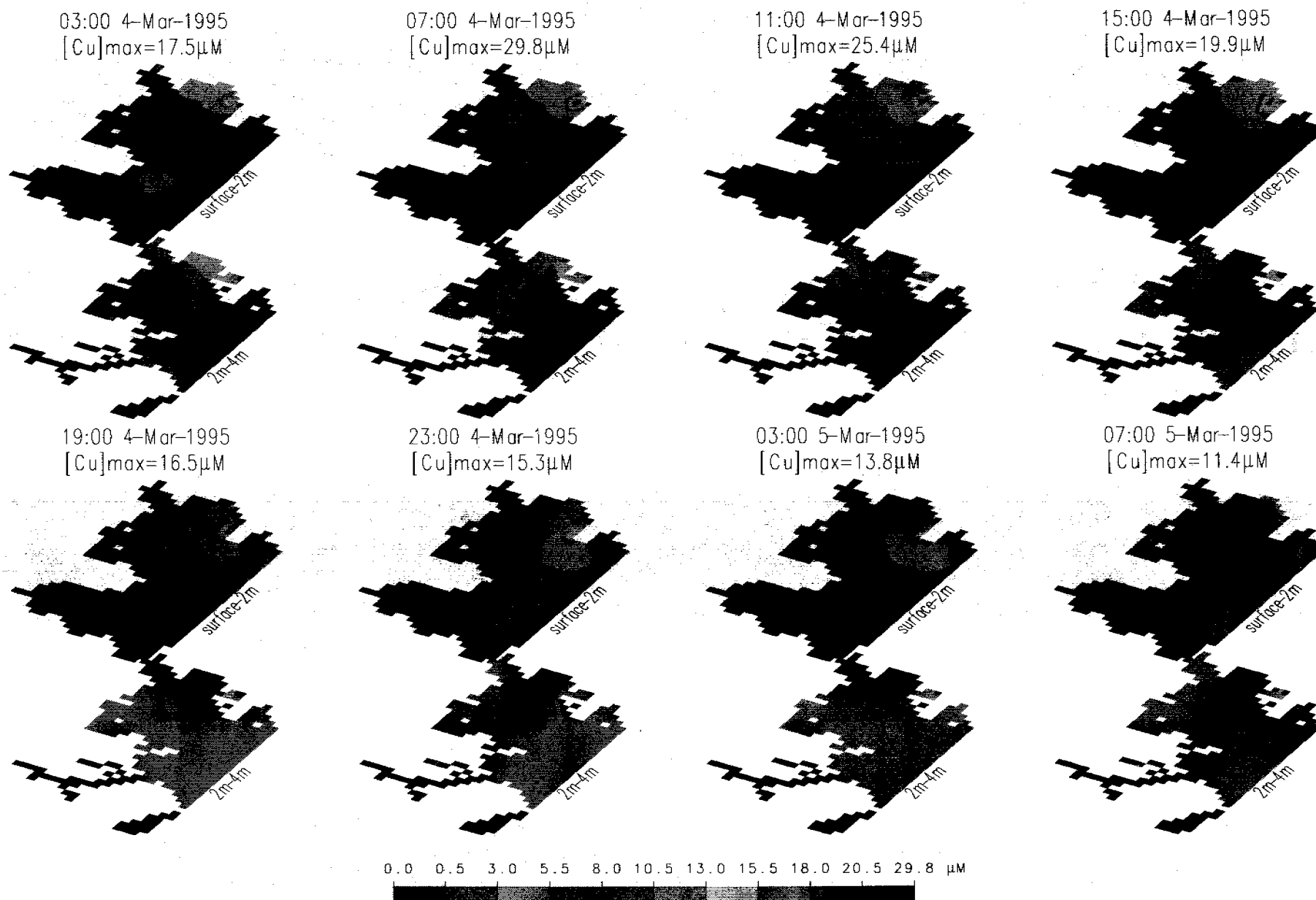


Fig 3.43 Resulting plume concentrations in top two layers for copper loading of 4th March 1995

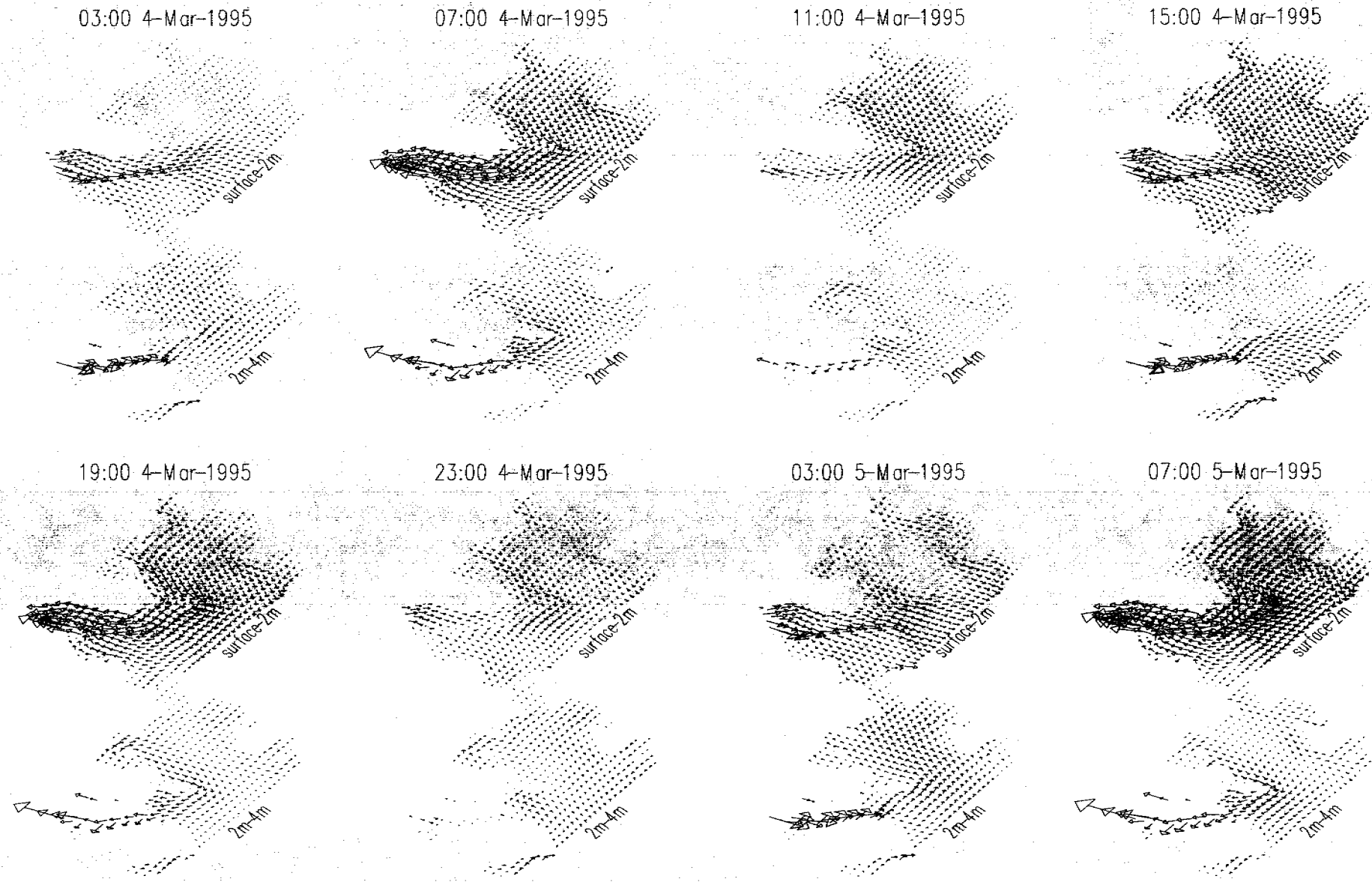


Fig 3.43a Corresponding velocities in top two layers for loading event of 4th March 1995

→ = 0.50 m/s

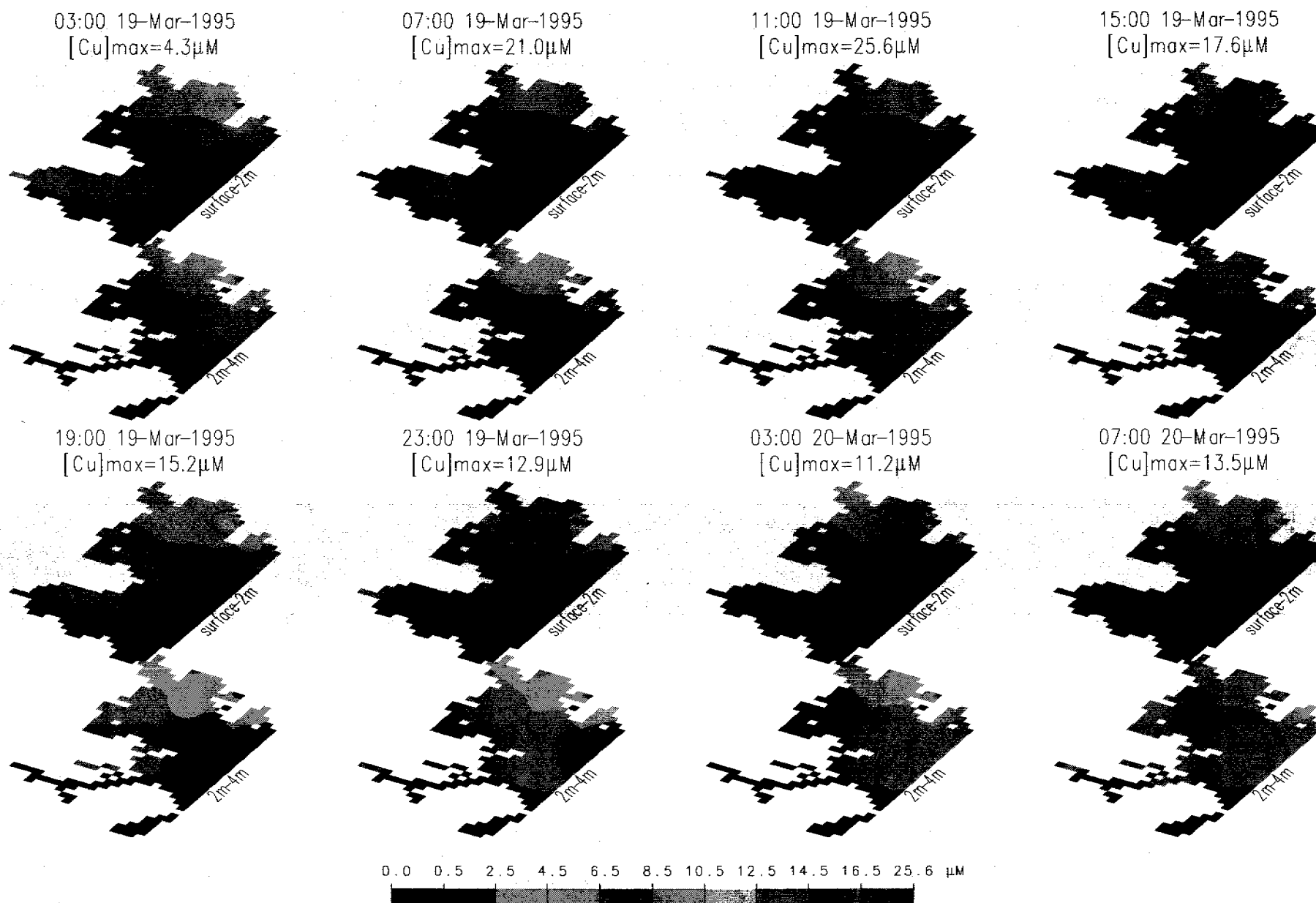


Fig 3.44 Resulting plume concentrations in top two layers for copper loading of 19th March 1995

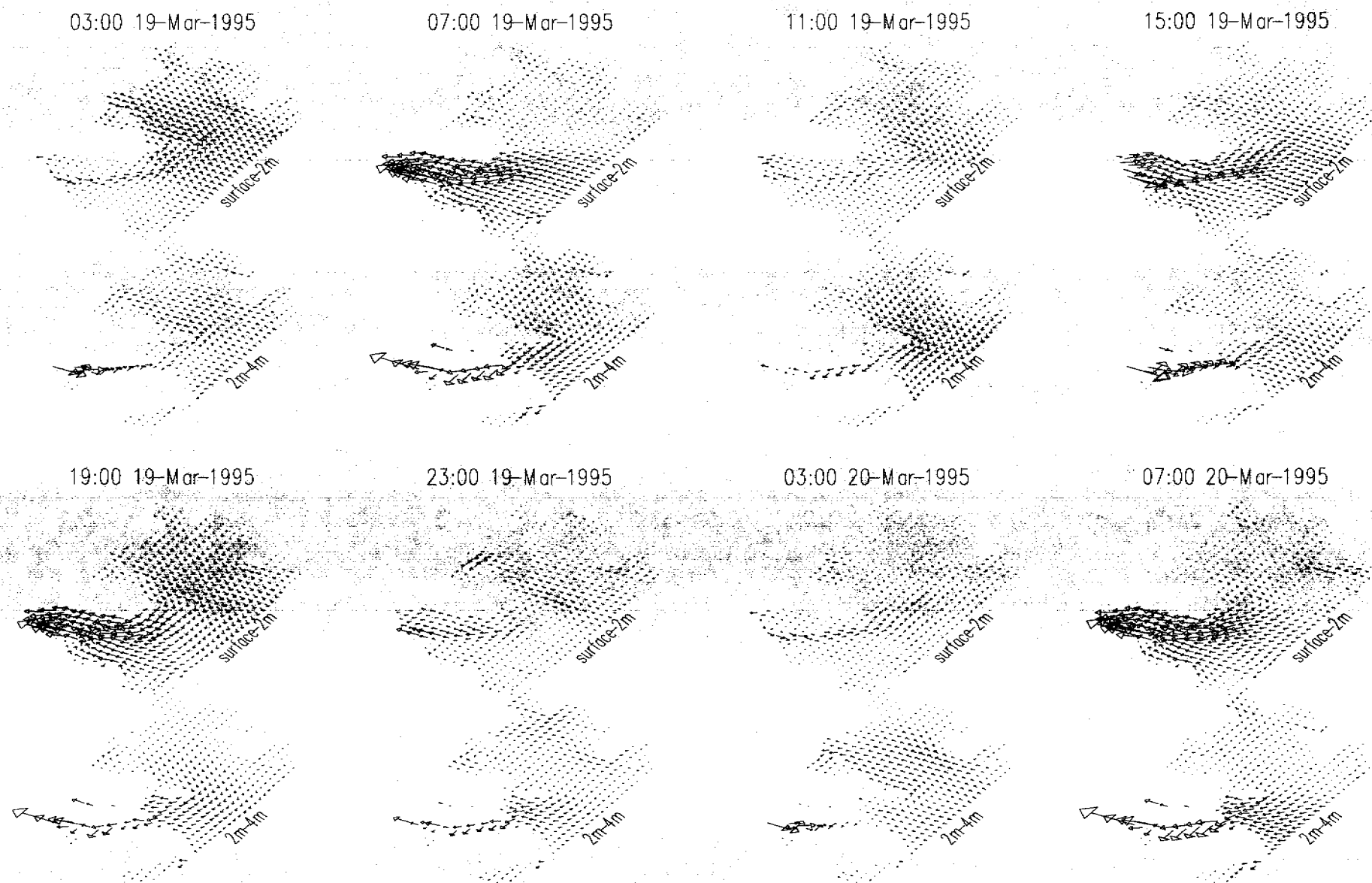


Fig 3.44a Corresponding velocities in top two layers for loading event of 19th March 1995

—> = 0.50 m/s



Fig 3.45

Total copper concentrations in surface layer for conservatively-traced point sources; 4th March 1995

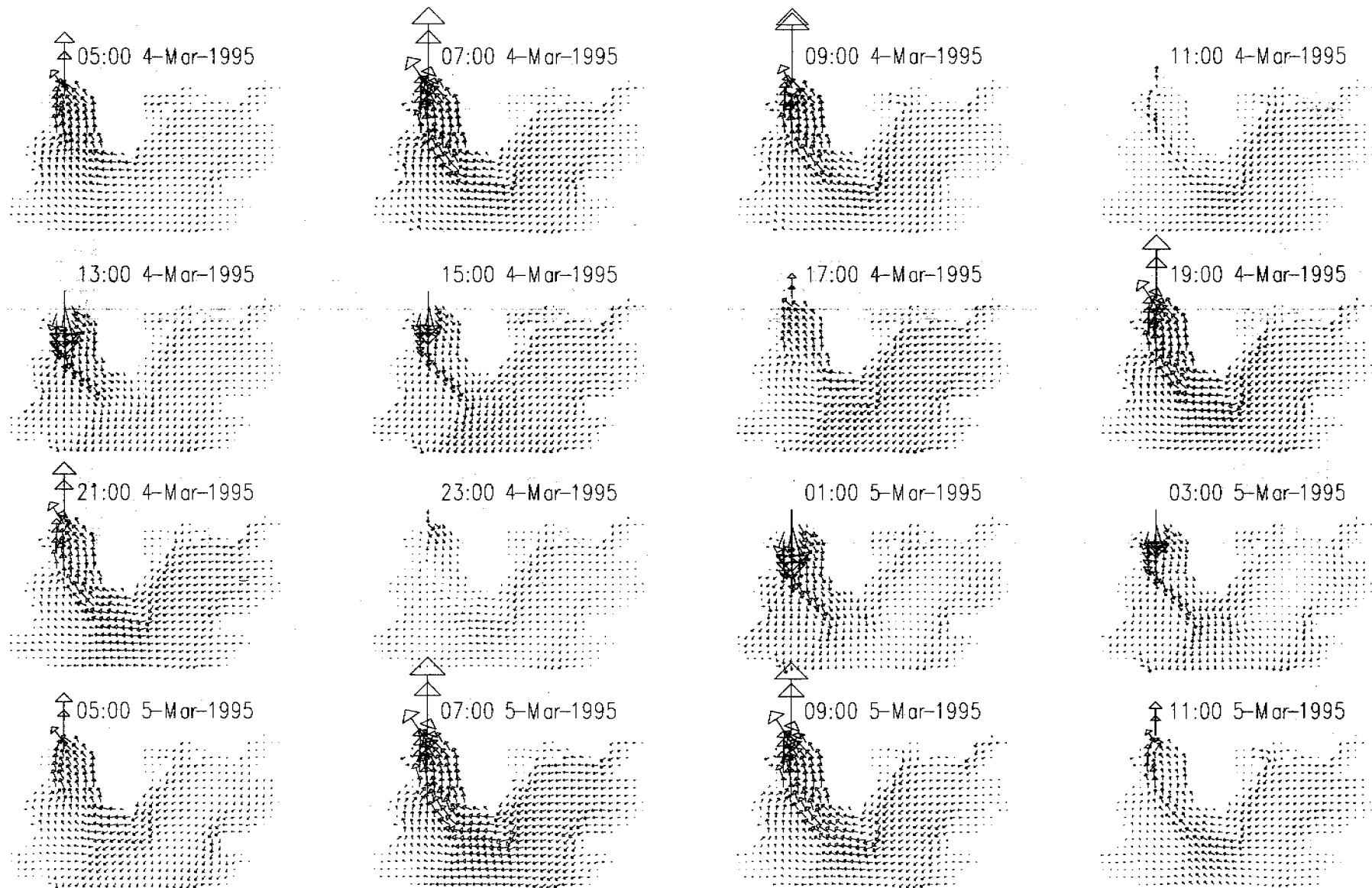


Fig 3.45a Velocities in surface layer every 2 hours commencing 05:00 4-Mar-1995

—▶ = 1.00 m/s

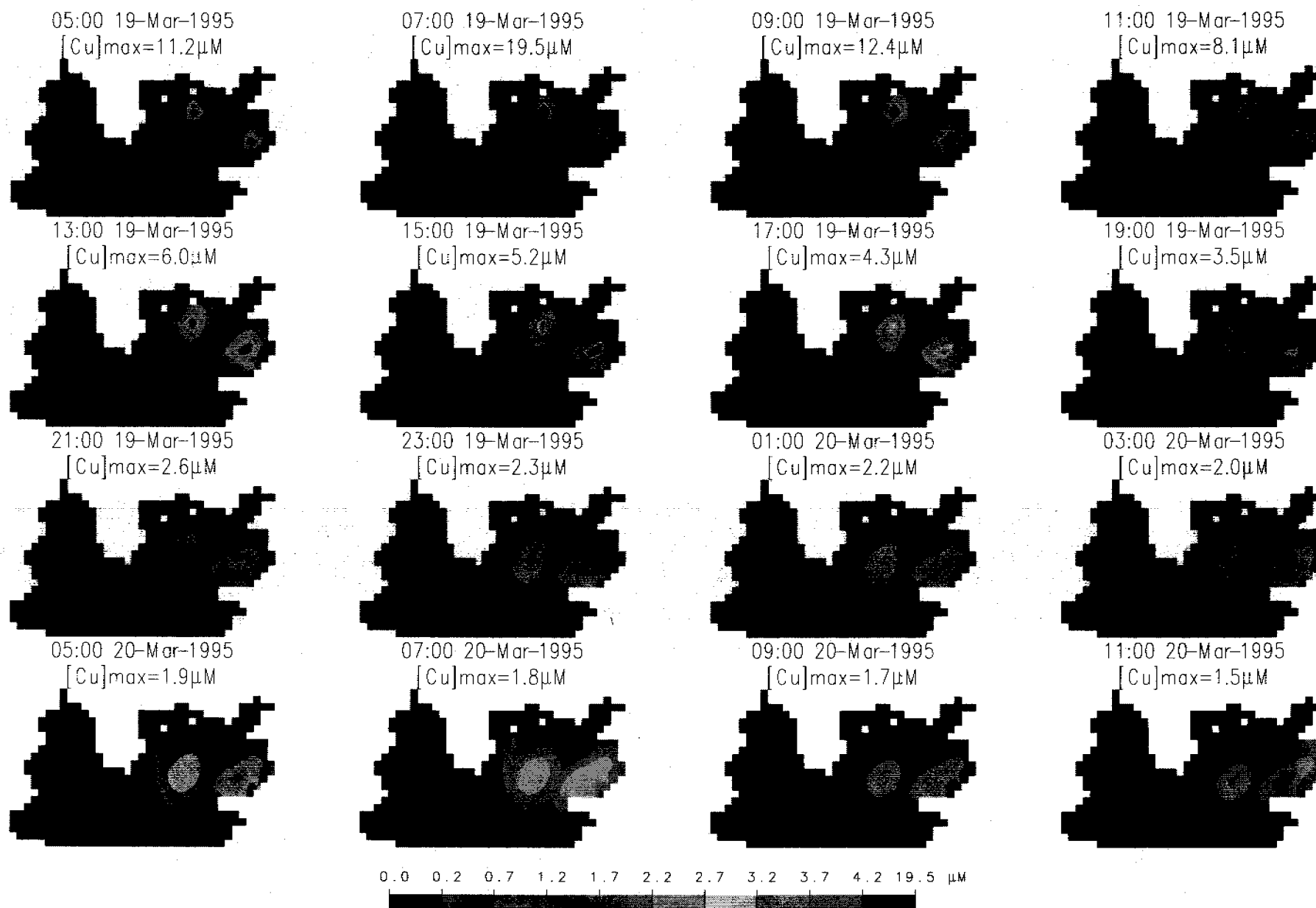


Fig 3.46 Total copper concentrations in surface layer for conservatively-traced point sources; 19th March 1995

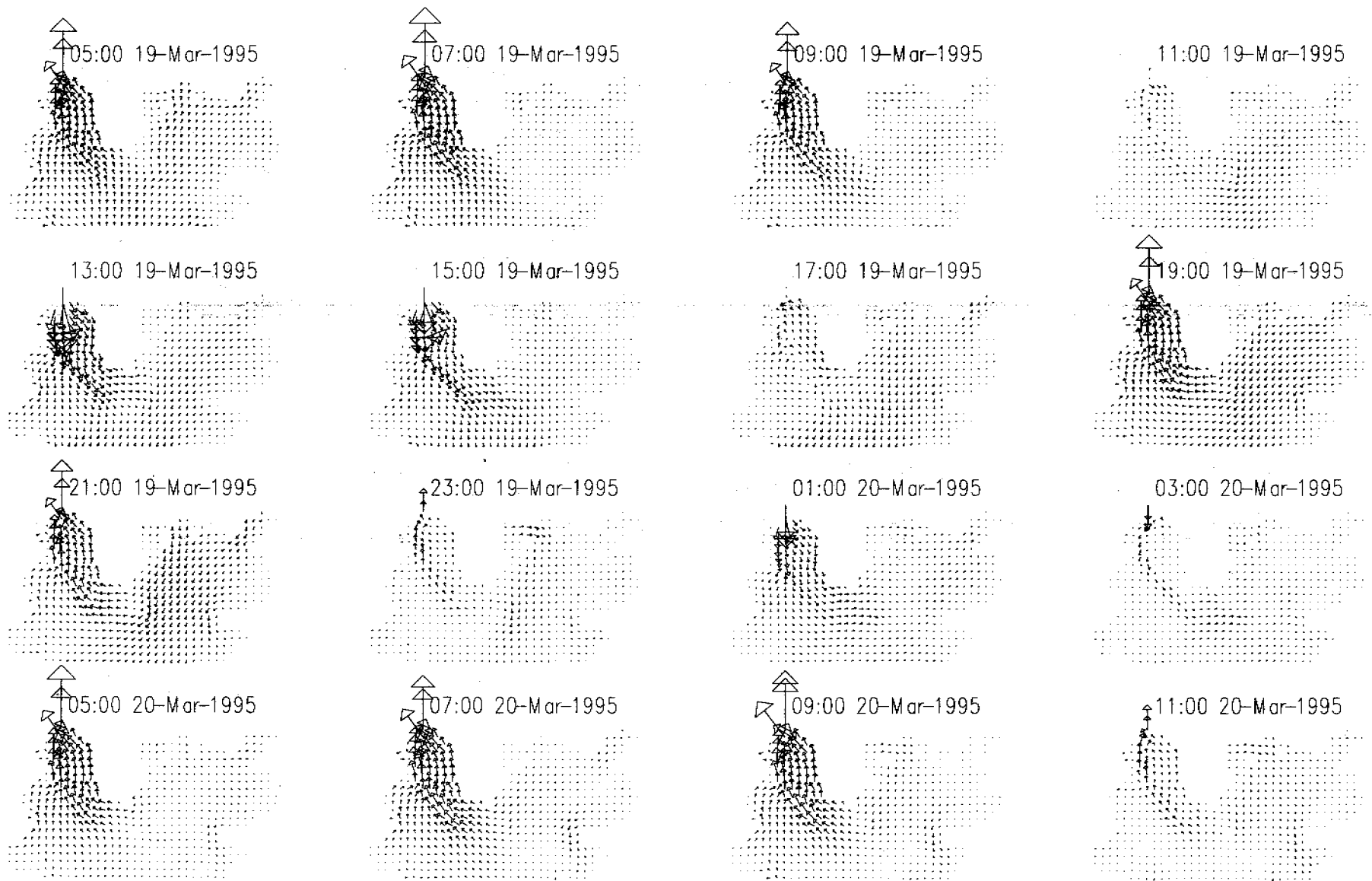


Fig 3.46a Velocities in surface layer every 2 hours commencing 05:00 19-Mar-1995

—▶ = 1.00 m/s