MM

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD,
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1978 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 13
(PROVISIONAL: not to be quoted without prior reference to the author)

STAFF

G. C. Baxter
A. R. Folkard
D. Hughes
S. R. Jones
R. Chapman
C. R. Hood (21-24 October)
P. McHugh, Northumbrian Water Authority (NWA) (24-30 October)

DURATION

Left Lowestoft 1250 h 21 October
Arrived Lowestoft 0845 h 1 November
All times are Greenwich Mean Time

LOCALITY

Tyne-Tees

AIMS

1. To moor 6 current meter rigs to supplement the 2 long-term stations already established in the area.
2. To carry out the fourth of the 1978 water quality surveys of the Tyne area sponsored by the Department of the Environment.
3. To carry out the fourth of a series of water quality surveys of the Tees area requested by AEP 2.
4. To test the Miniscanner system for location of current meter rigs.
5. To recover the current meter rig on the Spurn station laid at the request of AEP 2.

NARRATIVE

After a 2-day delay in sailing caused by engine trouble, CLIONE arrived at the Spurn station at 2130 h 21 October, and the rig there was recovered by 2210 h. Station J of the Tyne-Tees current meter network was reached at 0700 h 22 October, and work on the deployment of the 6 stations started at 0730 h. This was completed by 1735 h 22 October, after which CLIONE anchored to permit more work to be done in the engine room. The Miniscanner tests started at 0730 h 23 October, and continued until 1740 h, after which the ship went to anchor off Marsden Point to allow the exchange of staff to take place. Mr Hood left the ship at 0730 h 24 October and was replaced by Mr McHugh of NWA. CLIONE then anchored on the Tyne Inshore Station, where hourly DRCM profiles and continuous measurements of salinity, temperature, and nutrient parameters over a tidal cycle were obtained. A similar station was worked on 25 October at the Tyne Offshore Station. After a delay caused by malfunctioning equipment, sampling on the network of stations of the Tyne water quality survey began at 1130 h 26 October, and finished at 2000 h 27 October.

After information had been received from the Dove Marine Laboratory to the effect that a plankton sampler being towed by their research vessel BERNICIA had become entangled in the sub-surface buoy of the current meter rig on the Tyne Station, the rig was lifted at 0650 h 28 October. The top A frame was bent, but there was no other damage, and no sign of the plankton sampler. The current meters were changed and the rig replaced by 0900 h. CLIONE then moved on to the third anchor station, off Souter Point. Sampling started there at 0930 h 28 October, and continued over a tidal cycle. The Tees water quality survey began at 0858 h 29 October and finished at 1730 h, after which a Nansen bottle cast was made near to the Tees current meter station to obtain a depth profile of chemical parameters. The ship then anchored on the Tyne Inshore Station, and a further series of DRCM profiles and continuous surface records of chemical parameters were taken. Mr McHugh left the ship at 1410 h 30 October, being ferried ashore by BERNICIA, and the anchor station was completed by 2145 h. CLIONE then steamed around the current meter network so that the surface buoys could be checked. The rigs at Stations F and J, which were located in places considered to be rather congested for recovery by CIROLANA, were lifted by 1040 h 31 October. CLIONE then left the area for Lowestoft, docking there at 0845 h 1 November.

RESULTS

1. 6 current meter rigs were laid on 22 October to complement the 2 permanent stations, Tees and Tyne. This network, with the exception of Stations F and J, which were removed on 31 October, was left to be recovered by CIROLANA on 10 November.

2. A full water quality survey of the Tyne area was made, with continuous underway surface recording of ammonia, nitrate, nitrite and temperature, surface samples for salinity, and bottom samples for all the above at each station. Depth profiling DRCM stations were worked at the Tyne Inshore, Tyne Offshore, and the Souter Point Stations.

3. A water quality survey of the Tees area was carried out. This consisted of continuous underway surface recording of the chemical nutrient parameters and temperatures, with salinity samples at each station, plus one depth profiling station.

4. The Miniscanner was tested on the current meter rigs at Stations D, F and E, and on acoustic tags suspended from anchored floats. The results of the tests will be the subject of a special report, but it was found that, with the equipment in its present state of development, it was possible for an operator with some training to observe a single acoustic tag on the top A frame, and be able to state its position in the water column.

5. The current meter rig on the Spurn Station was recovered and Humber Radio informed.

G. C. Baxter
14 November 1978

SEEN IN DRAFT: JRF
R. Graham

INITIALLED: AJL

DISTRIBUTION

Basic list
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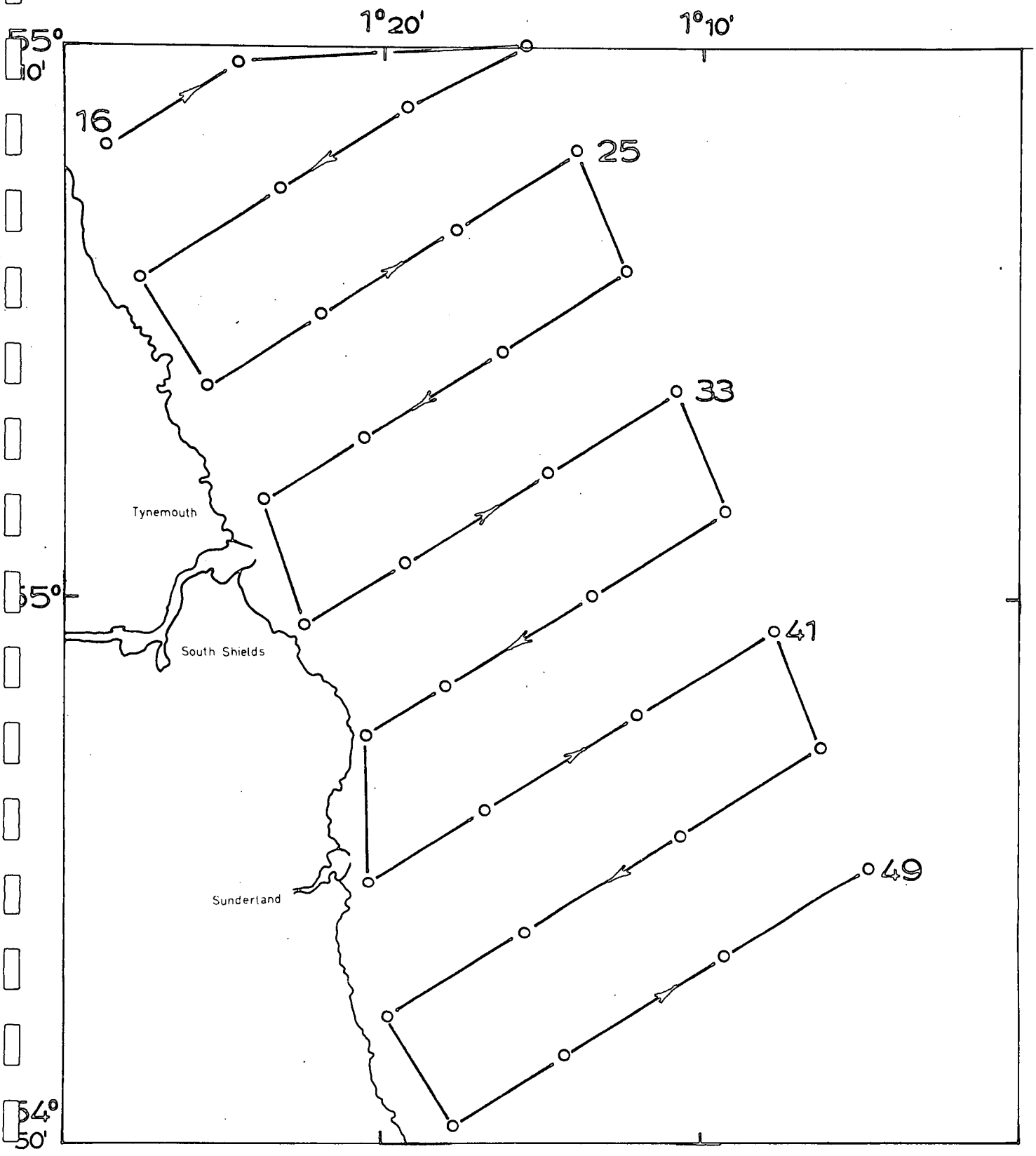
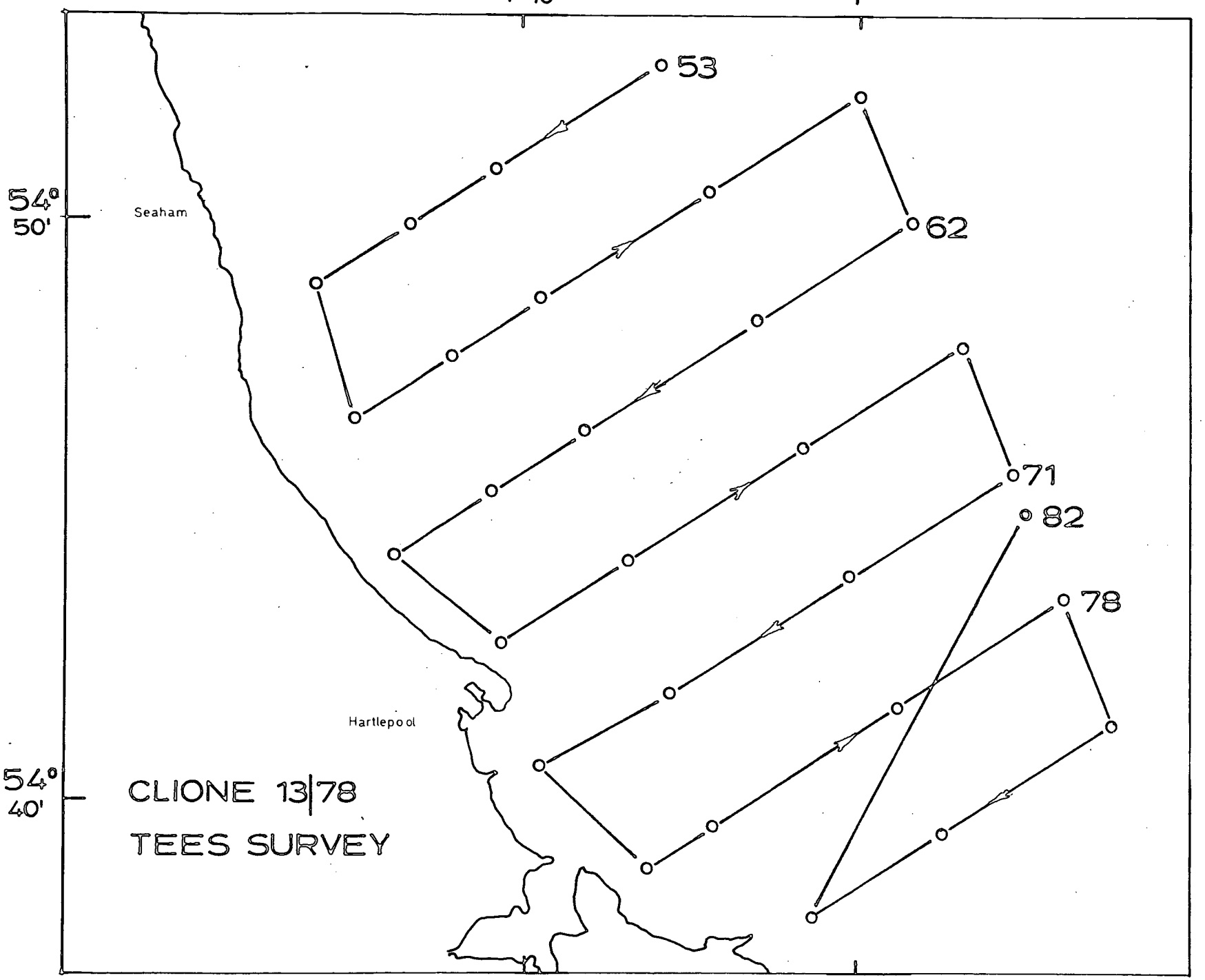


CLIONE 13|78 : TYNE SURVEY


1°10'
1°
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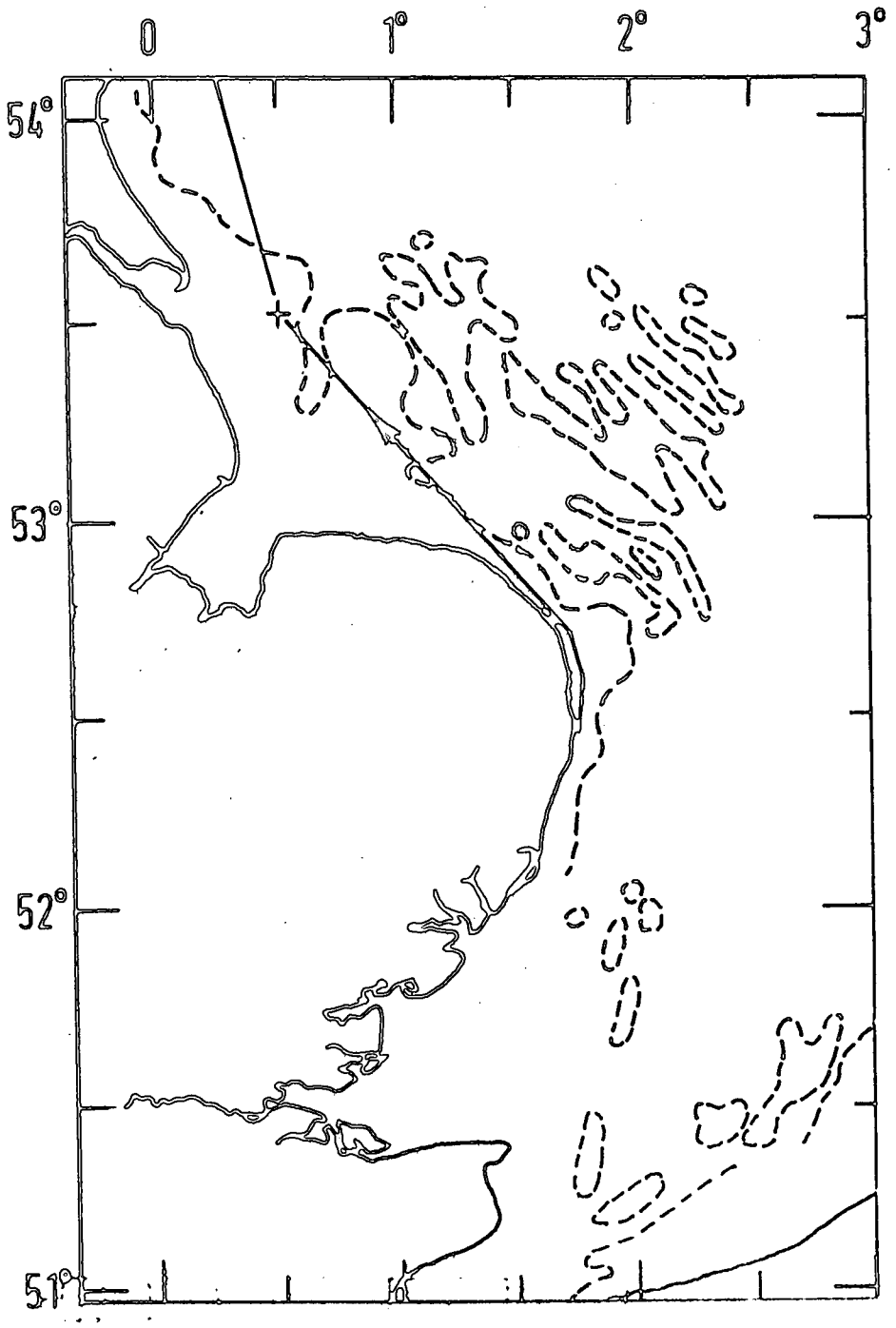
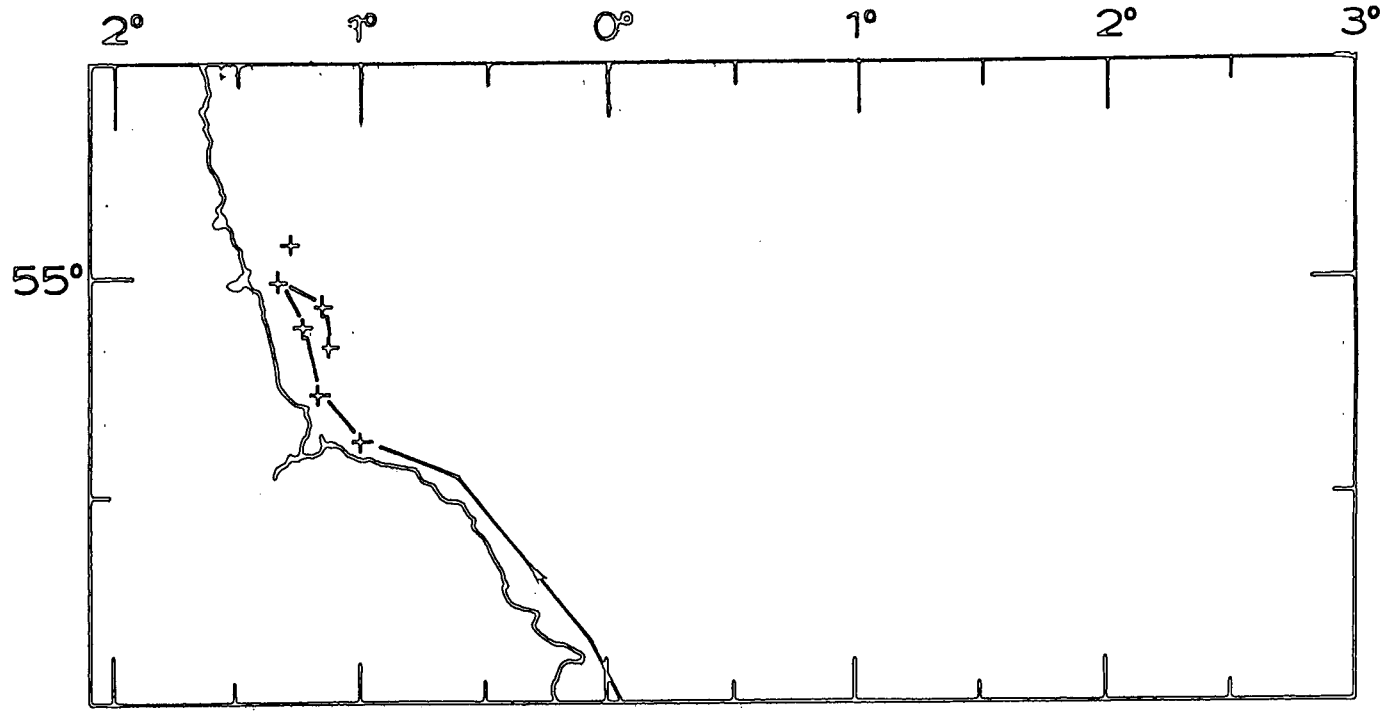
Seaham
Hartlepool
53
62
71
82
78
CLIONE 13|78
TEES SURVEY





CLIONE 13|78 Current meter stations