

P17/8

In Confidence - Not to be quoted without reference to the Laboratory

Chartered Vessel 'Prosperity' UL 74

REPORT

16 - 20 April 1984

Objectives

- 1 To obtain ripe herring eggs
- 2 To investigate the distribution of herring off Melvaig and collect biological samples.

Narrative

'Prosperity' was based at Gairloch and returned there at the end of each days work.

On the first two days of the charter, 'Prosperity' sailed at 0900 and completed an acoustic Survey of the area between Longa Island and Greenstone Point, (Figures 1, 2). Six trawl hauls were carried out during this period.

'Prosperity' again sailed at 0900 on 18th April but made for sheltered waters in the lee of Skye due to deteriorating weather conditions. Three more trawls were carried out in this area.

In order to undertake night-time fishing 'Prosperity' next sailed during the afternoon of 19th April. Whilst steaming north towards Rubha Reidh, nine hydrographic and plankton sampling stations were completed, and 'Prosperity' then carried out two trawls, arriving back at Gairloch at 0200 on 20th April.

Weather conditions further deteriorated during the morning of Friday 20th April but 'Prosperity' sailed at 1200 in order to attempt fishing. One more trawl was accomplished before strong westerly winds forced an early return to Gairloch at 1500.

Results

A total of 12 trawls were completed during the charter, using the vessels Nephrops trawl, fitted with a codend cover, but significant numbers of herring were caught in only four of these. The majority of herring caught were immature two year old fish (18-23 cm) but some older spent fish were also found. Only two ripe herring were caught (one male, one female) in separate hauls on 17th and 19th April. Norway pout, flatfish and juvenile haddock and whiting formed the major part of most catches.

Otoliths were collected from commercial-sized haddock, whiting and cod, and from herring. In addition, pyloric caecae were collected from herring for parasitological examination. Ripe eggs were collected from specimens of Poor-Cod (T. Minutus) for egg size analysis.

Very few fish shoals were seen on the echo sounder during the acoustic surveys on 16-17th April, and it was not possible to positively identify these shoals that were encountered.

Surface and bottom temperature and salinity were measured at each of the Hydrographic/Plankton Stations on 19th April, using a T/S bridge. The results are shown in figure 3. At each of these stations plankton samples were collected, using a metre net attached to one of the vessels trawl warps. The samples contained large numbers of fish larvae, particularly Sandeels (Ammodytes marinus) but no herring larvae, suggesting that there had not been any significant spawning of herring in the area during the previous few weeks.

M R Heath

P M MacLachlan

J Dunn

11 May 1984

Figure 1

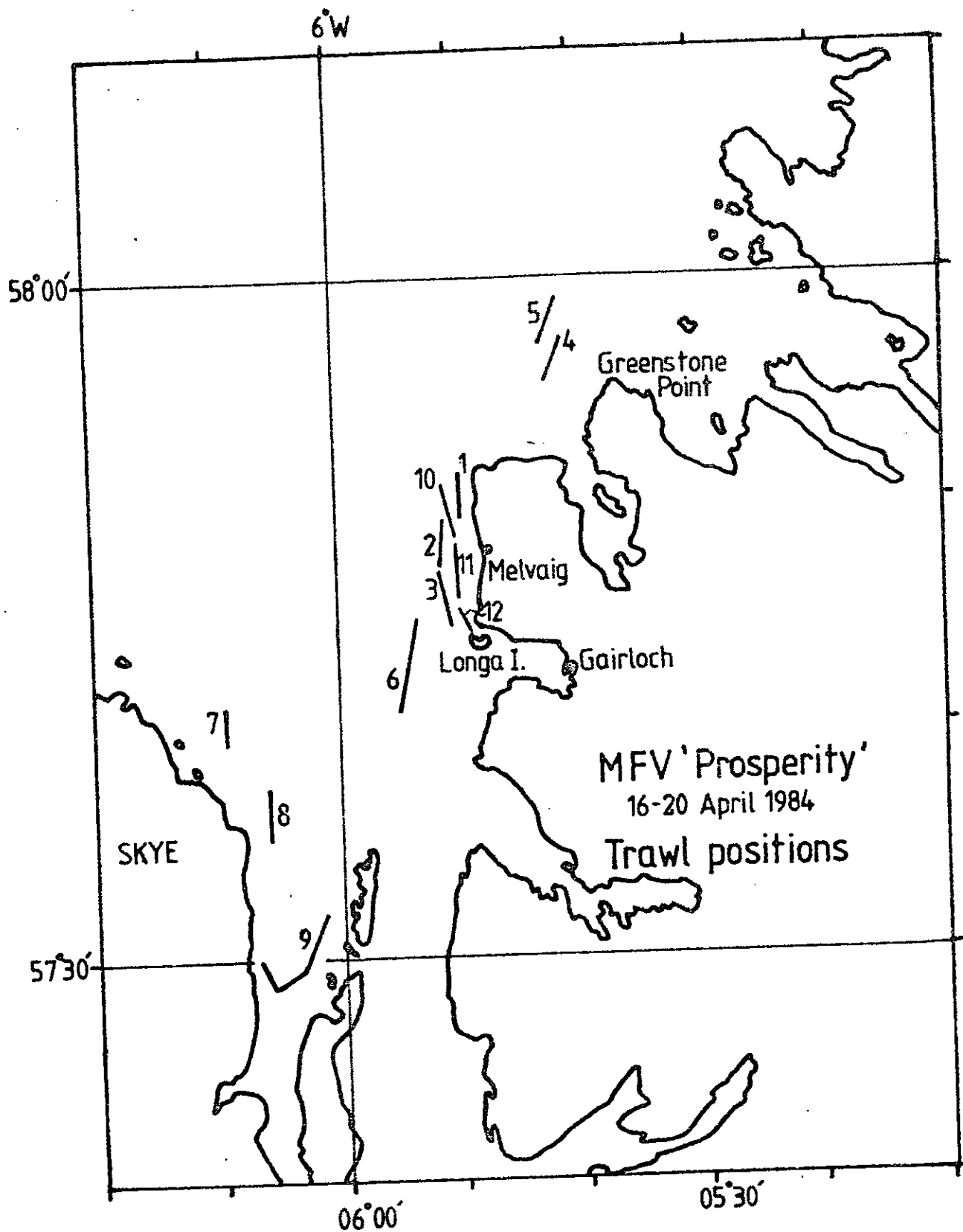


Figure 2

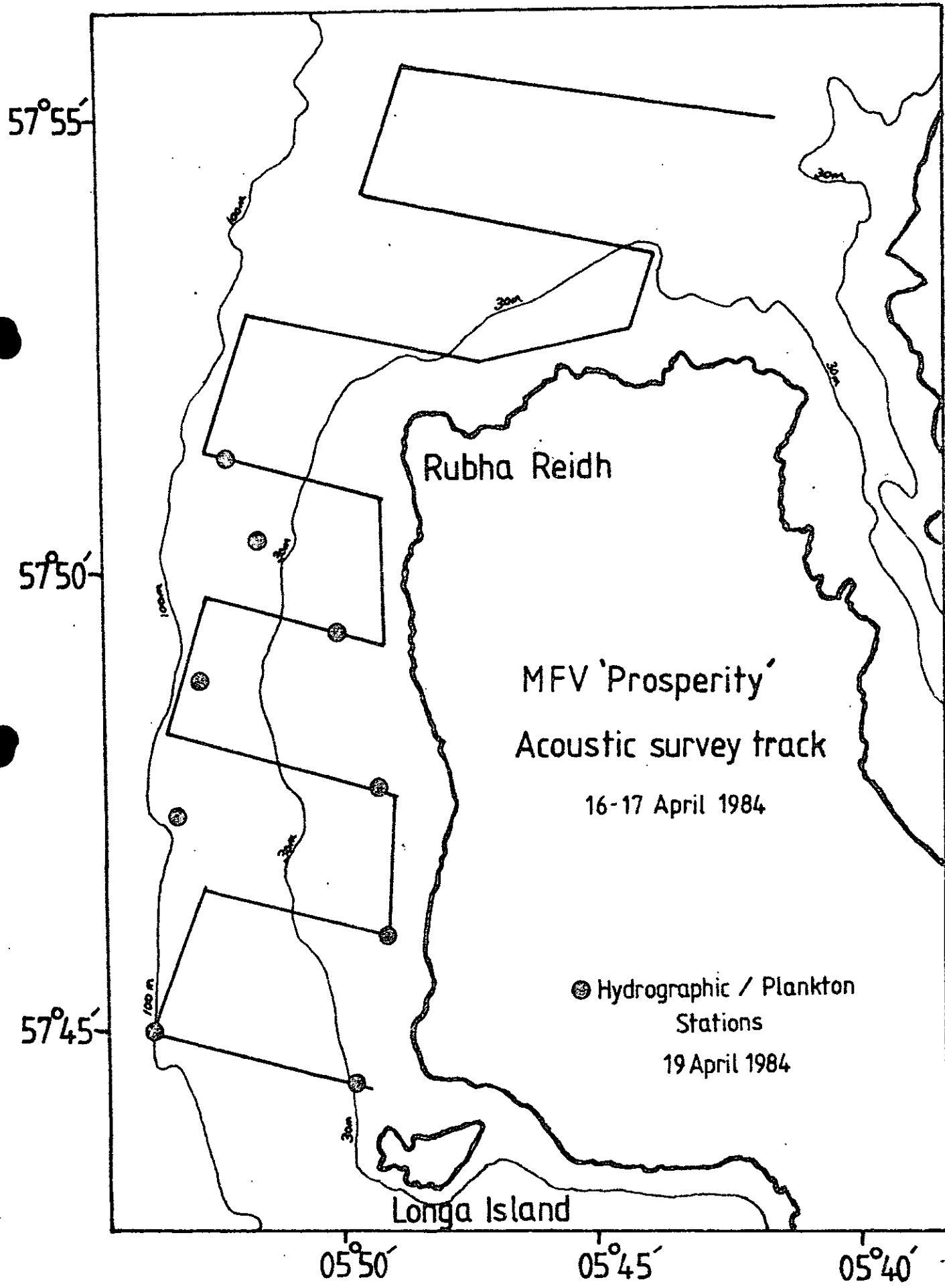
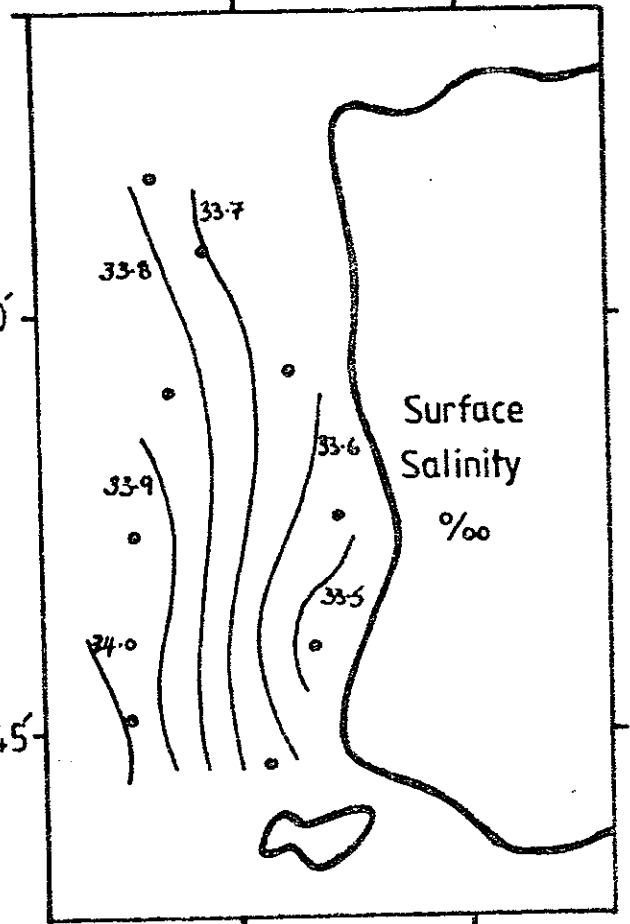
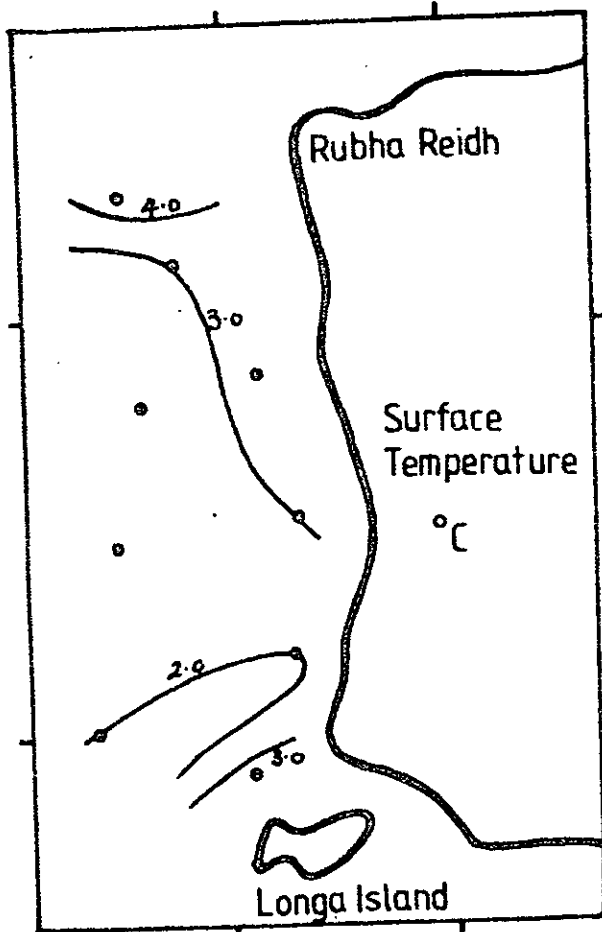


Figure 3



05°50'

05°45'

19th April 1984

05°50'

05°45'

