

CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE SCIENCES,
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK

1997 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES: CRUISE 13

STAFF:

J M Rees (SIC)	CEFAS
N Pearson	CEFAS
B Meadows	CEFAS
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M Mason	UC
N Feates	HR
H Mitchener	HR

DURATION: 17 - 23 December 1997

LOCALITY: Harwich and North Norfolk

AIMS (all under contract A0227):

1. To obtain NIOZ sediment cores from the Berths within Harwich Harbour.
2. To recover Minipods from around the approaches to Harwich (Rough's Tower Disposal Ground west, Threshold and Sledway)
3. To undertake a sidescan survey and Chirps II Sub bottom profiles of the Rough's Tower dredge disposal grounds and to obtain NIOZ cores if suitable sites are located.
4. To undertake sidescan and Chirps II sub bottom profile surveys of the Cross Sand Flats area and also the test extraction area off north Norfolk.
5. To undertake 12 hr anchor station(s) at the Rough's Tower disposal grounds and possible other sites within the approaches to Harwich.

NARRATIVE: [note all times in GMT]

RV Corystes sailed on the 1100 tide of the 18th, 24 hour late, as storm force easterly winds would not allow any working. On reaching the Sledway Minipod at Harwich conditions were still to bad to recover the Minipod so Corystes laid overnight.

At first light on the 19th Corystes proceeded up to the Trinity Births in Harwich Harbour. A series of NIOZ cores were taken in the channel, on Trinity 7 Quay (marker 118) and near Languard Fort. During the afternoon, the Minipod at Sledway and the Guard Buoy were recovered along with a sediment grab sample.

Next day the Minipod at Harwich Threshold and Guard buoy were recovered. A sidescan survey of Threshold and the Rough's Disposal ground were completed before recovery of the Rough's West Minipod in the late afternoon. A series of CHIRPS sub bottom profiler lines were completed over the Roughs Sidescan lines.

On the morning of the 21st a series of NIOZ cores were taken at sites identified as possible disposals from analysis of the sidescan survey lines and recent known deposits sites. A CHIRPS line was completed as Corystes headed north to the Treatment site at North Norfolk. A series of Sidescan and CHIRPS surveys lines were completed on the Reference and Treatment site at North Norfolk before heading south to Cross Sands off Yarmouth. A long easterly Sidescan survey from Cross Sands identified areas of dredging activity which were surveyed with CHIRPS on the return westerly leg.

RV Corystes docked at 0300 in Lowestoft on the 23rd.

RESULTS:

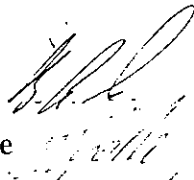
Aim 1. NIOZ cores were obtained from the Felixstowe Channel, Trinity 7 berth and near Laanguard Fort. Sediment resuspension analysis on the cores was completed either by SedErode or ISIS.

Aim 2. The Minipods from Sledway, Threshold and Rough's West were recovered successfully. The new 500 Mbytes hard disc worked satisfactory recording over 350 Mbytes of data on each deployment. Similarly the new "AutoMobs Gain" where the gain of the Mobs sensor is reduced during high suspended load events worked (Fig 1). The ABS recorded examples of bursts of sediment propagating up into the water column (Fig 2a). Exception variations in the elevation of the seabed were recorded by the ABS on the Threshold Minipod where a change of approximately 18 cm was recorded within 10 minutes (Fig 2b)

Aim 3 and 4. Sidescan surveys are completed at Rough's Tower, Threshold, the "Threatment site" off North Norfolk and Cross Sands. CHIRPS sub bottom surveys were completed at Roughs Tower, the Threatment site and Cross Sands. There were very few dredge disposal marks identified at Rough's Tower as the recent strong easterly storm had obliterated all recent evidence. The Chirps sub bottom profiler enabled penetration of the seabed upto approximately 5m in some areas and showed various structures. Fig 3a shows a mound of material at Harwich with a present day surface armoured overlying an old armoured seabed. Conversely, recent infill of dredge tracks at Cross Sands can be observed in Fig 3b.

Aim 5. Not completed due to lost time.

SEEN IN DRAFT: Master
Senior Fishing Mate



Jon Rees SIC
23/12/97

DISTRIBUTION:

Basic list + Crew List
S J Malcolm

J.M.S.
23/12/97

Peter Gay (ESFC)
S Rowlatt (BOC)
L Murray (BOC)
H Rees (BOC)
S Boyd (BOC)
D Limpenny (BOC)

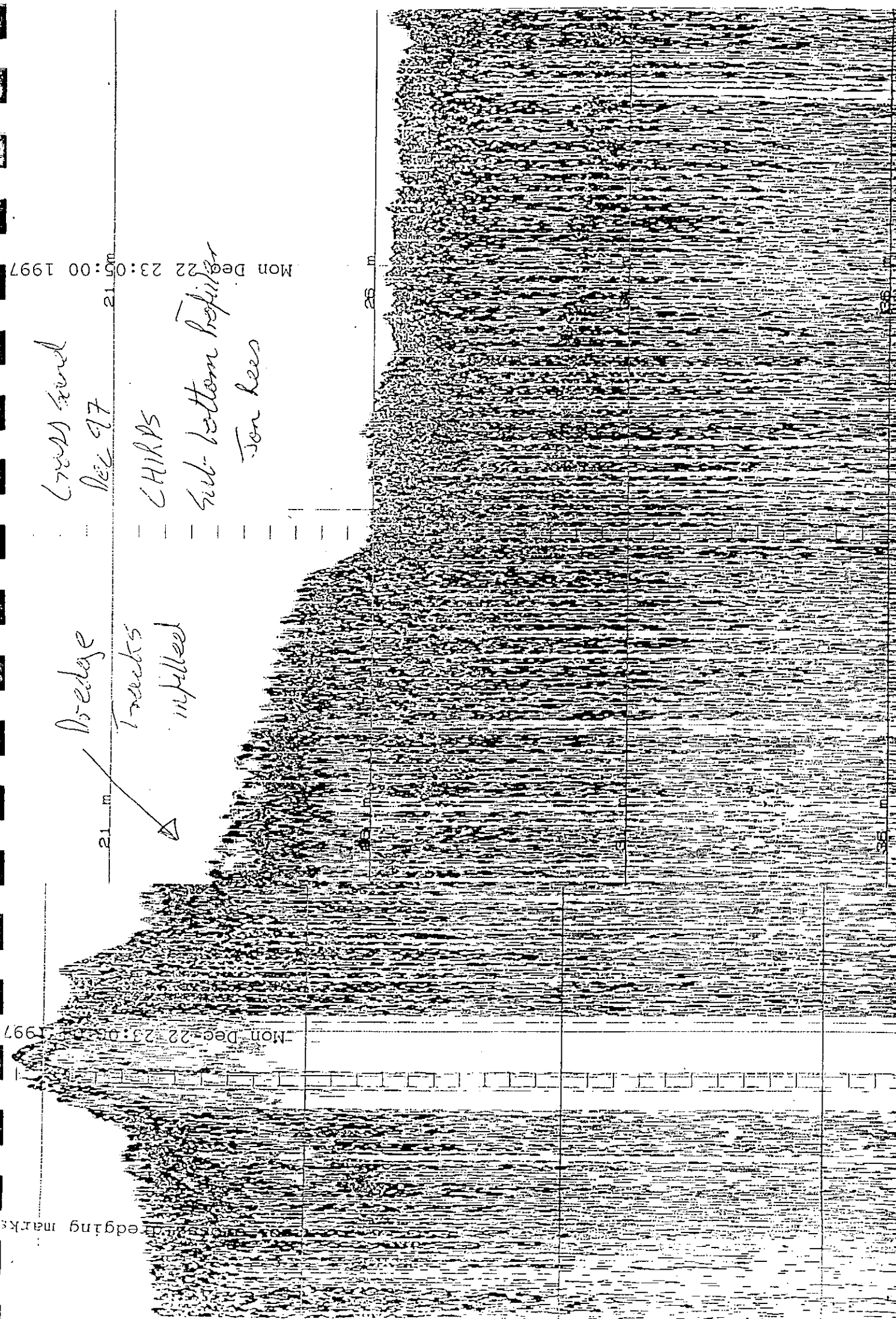
... edging marks

Mon Dec 22 23:05:00 1997

Mon Dec 22 23:05:00 1997

21 m
Bridge
Tracks
in filled

cross road
Dec 97
CHIRPS
sub-bottom profiler
Sonars



Old surface
"Armoured"

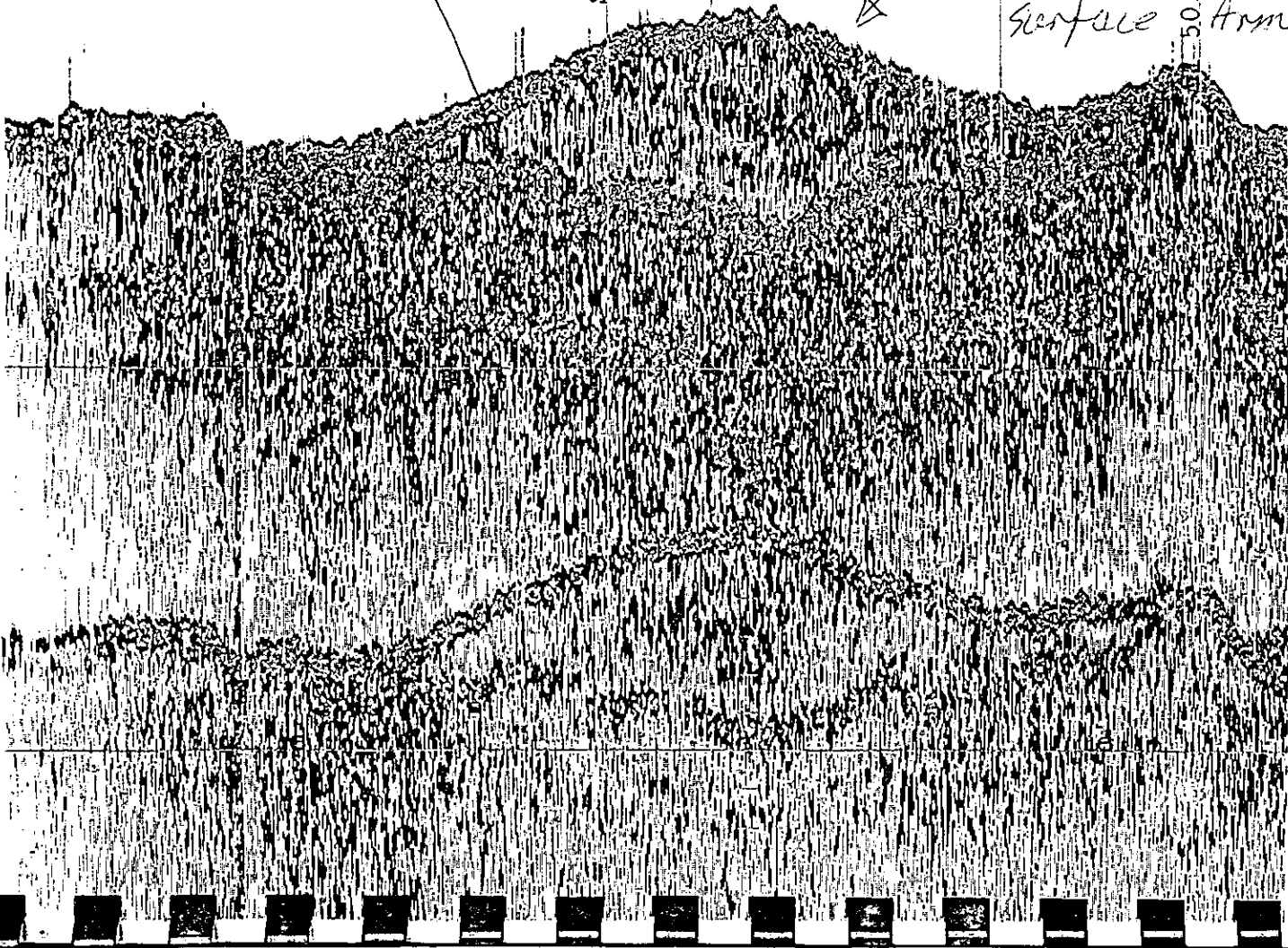
Sat Dec 20 22:05:01 1997

present
Sea
surface
"Armoured"

50.21N 001.29.07E hdg 207T

Harwich
Dec 97
CHIRPS
sub bottom
Profiler.

Tom Rees



Minipod Deployment 159 - Burst 1631 - Threshold at Harwich



Minipod Deployment 159 - Burst 1684 - Threshold at Harwich

