

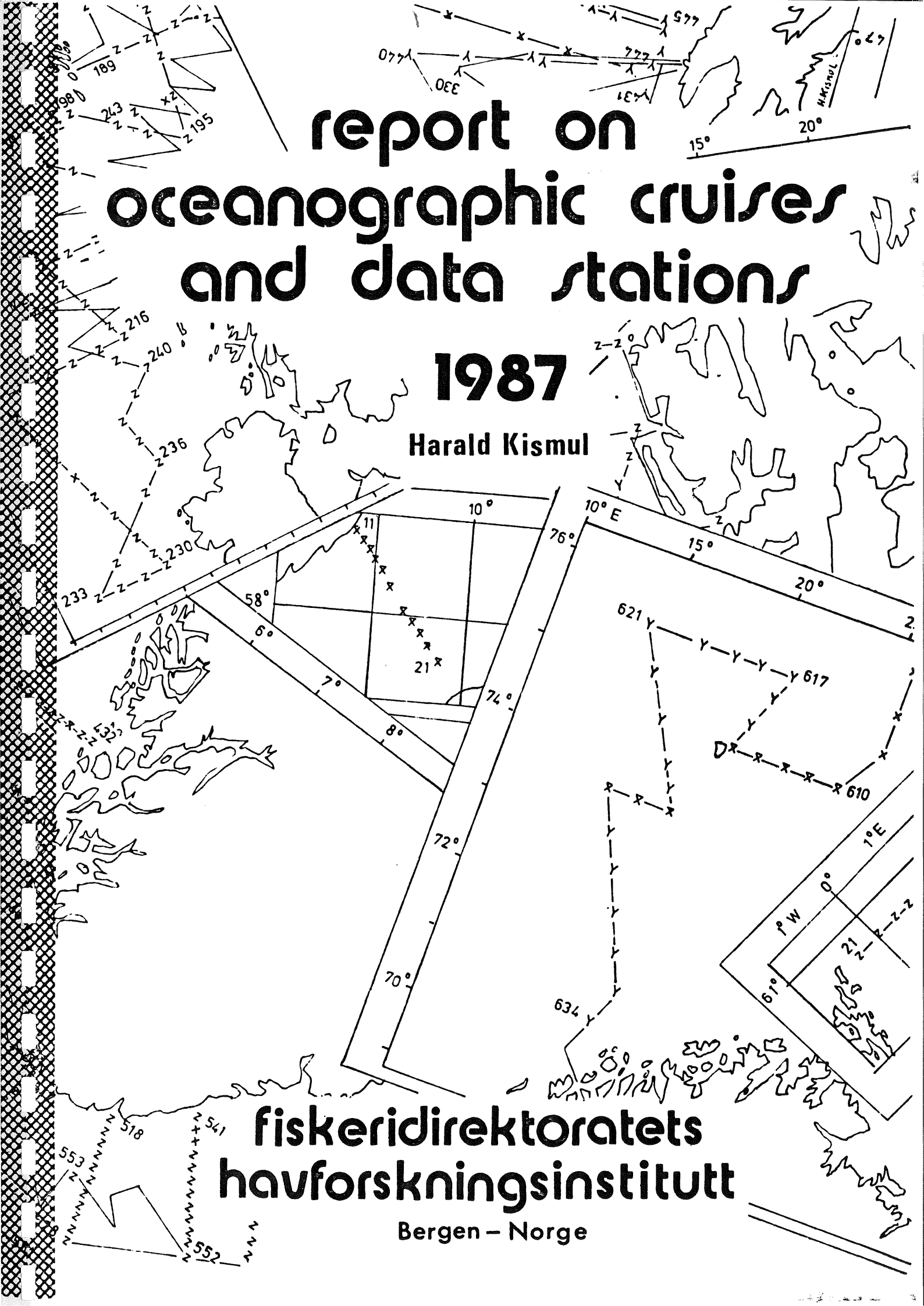
# report on oceanographic cruises and data stations

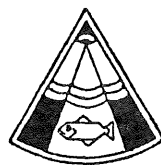
## 1987

Harald Kismul

fiskeridirektoratets  
havforskningsinstitutt

Bergen - Norge





# report on oceanographic cruises and data stations

Harald Kismul

## Guidelines:

- Z Vertical profiles (STD/CTD)
- △ Moored buoy station
- △ Pelagic Trawl station
- Bottom Trawl station
- ◇ Plankton station
- Clarke
- Taggings
- Λ Surface observations t°C S‰

**fiskeridirektoratets  
havforskningsinstitutt**  
Bergen – Norge



ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY

Year: 1987

Ship: G.O. SARS

Ship no: 15

Cruise and ship number	Period of cruises	Number of Stations														Cont. obs.				Page of track chart	
		Classical oceanogr. st.	Vertical profiles (CTD)	ARGOS drifters	Moored Current Meters	ADCP	Seasoars	Oxygen	Nutrients	Chlorophyll	Oil Hydrocarbons	MOLNESS TRAWL	Pelagic Trawl	Bottom Trawl	Pelagic Egg and Larvae	Zooplankton	Phytoplankton	Surface Temperature	Transparency		Echo Sounding
1/15	07.01-25.01		80									6	6				x	x	x	x	13-14-15-16
2/15	26.01-19.02		81									8	71				x	x	x	x	17-18
3/15	24.02-03.03											12	41				x	x	x	x	19
4/15	04.03-20.03		109									12	8				x	x	x	x	20-21
5/15	28.03-20.04		211	8				272		9	6				272	272	x	x	x	x	22-23-24
6/15	21.04-06.05		104								3	19		115	115		x	x	x	x	25-26
6/15	08.05-14.05		181											204	204	204	x	x	x	x	27-28
7/15	15.05-12.06		155	2							6	3		155			x	x	x	x	29-30
8/15	04.07-25.07		77								36	25					x	x	x	x	31
9/15	28.07-16.08		105								45						x	x	x	x	32-33
10/15	17.08-02.09		95								84	3					x	x	x	x	34-35
11/15	05.09-16.10		224								60	64					x	x	x	x	36-37
12/15	17.10-04.11		33								2	38					x	x	x	x	38-39
13/15	10.11-09.12		261								29	17					x	x	x	x	40-41
								261							39	39					
Total			1613	10				533		9	309	295	204	785	630						

ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY

Year: 1987

Ship: MICHAEL SARS

Ship no: 11

Cruise and ship number	Period of cruises	Number of Stations															Cont. obs.				Page of track chart
		Classical oceanogr. st.	Vertical profiles (CTD)	ARGOS drifters	Moored Current Meters	ADCP	Seasoars	Oxygen	Nutrients	Chlorophyll	Oil Hydrocarbons	Primary Org. Prod.	Pelagic Trawl	Bottom Trawl	Island scallop dredging	Zooplankton	Phytoplankton	Surface Temperature	Transparency	Echo Sounding	
1/11	07.01-13.01		8									11	1				x	x	x	x	42
2/11	16.01-24.01		16									19					x	x	x	x	43
3/11	27.01-01.03		86									22	73				x	x	x	x	44-45
4/11	03.03-12.03		7									4	19				x	x	x	x	46
5/11	20.03-12.04		34									16	38				x	x	x	x	47-48
6/11	15.04-12.05		111										102				x	x	x	x	49-50
7/11	10.06-05.07		27									40	21				x	x	x	x	51-52
8/11	06.07-23.07		76									74	4				x	x	x	x	53-54
9/11	25.07-18.08		86									1	85				x	x	x	x	55-56
10/11	23.08-03.09		6									1		284			x	x	x	x	57
11/11	11.09-11.10		68									11	60		4	4	x	x	x	x	58-59
12/11	19.10-09.11		150										120				x	x	x	x	60
13/11	16.11-30.11		64					34	34			58	4				x	x	x	x	61
Total			722					34	34			257	527		4	4					

ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY

Year: 1987

Ship: ELDJARN

Ship no: 14

Cruise and ship number	Period of cruises	Number of Stations														Cont. obs.				Page of track chart	
		Classical oceanogr. st.	Vertical profiles (CTD)	ARGOS drifters	Moored Current Meters	ADCP	Seasoars	Oxygen	Nutrients	Chlorophyll	Oil Hydrocarbons	HAND LINE	Pelagic Trawl	Bottom Trawl	Pelagic Egg and Larvae	Zooplankton	Phytoplankton	Surface Temperature	Transparency		Echo Sounding
1/14	07.01-24.01		55									15	2				x	x	x	x	62-63-64-65
2/14	26.01-22.02		132										44		82	82	x	x	x	x	66-67
3/14	23.02-14.03		127									18	2				x	x	x	x	68
4/14	16.03-11.04		63									23					x	x	x	x	69-70
5/14	07.05-30.05		163									165	8				x	x	x	x	71-72
6/14	30.05-18.06	10	281	8								2	2	13	169		x	x	x	x	73-74-75-76-77
7/14	24.06-11.08		263							104	117	39					x	x	x	x	78-79-80-81
8/14	17.08-03.09		77									63	15				x	x	x	x	82-83
9/14	06.09-10.10		141									17	125				x	x	x	x	84-85
10/14	16.10-17.11		127									50	27				x	x	x	x	86-87
Total		10	1429	8							104	470	264	13	251	82					



ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY

Year: 1987

Ship: HÅKON MOSBY

Ship no: 1

Cruise and ship number	Period of cruises	Number of Stations														Cont. obs.				Page of track chart	
		Classical oceanogr. st.	Vertical profiles (CTD)	ARGOS drifters	Moored buoy	ADCP	Seasoars	Oxygen	Nutrients	Chlorophyll	Oil Hydrocarbons	Primary Org. Prod.	Pelagic Trawl	Bottom Trawl	Pelagic Egg and Larvae	Zooplankton	Phytoplankton	Surface Temperature	Transparency		Echo Sounding
1/1	03.02-22.02		34									3	36				X	X	X	X	91-92
2/1	24.02-18.03		128									3	72				X	X	X	X	93-94
3/1	22.04-06.05	18	144									100			61	61	X	X	X	X	95-96-97
4/1	15.05-27.05		4									3	7				X	X	X	X	98
5/1	20.08-03.09		62									63					X	X	X	X	99
6/1	16.09-30.09		122	9	6	X	X		110								X	X	X	X	100
Total		18	494	9	6				110			172	115		61	61					



ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY

Year: 1987

Ship: JOHAN RUUD

Ship no: 18

Cruise and ship number	Period of cruises	Number of Stations													Cont. obs.				Page of track chart		
		Classical oceanogr. st.	Vertical profiles (CTD)	ARGOS drifters	Moored buoy	ADCP	Seasoars	Oxygen	Nutrients	Chlorophyll	Oil Hydrocarbons	Primary Org. Prod.	Pelagic Trawl	Bottom Trawl	Pelagic Egg and Larvae	Zooplankton	Phytoplankton	Surface Temperature		Transparency	Echo Sounding
/18	12.02-17.02		54					34	22						54	54	X	X	X	X	101-102
/18	17.03-24.03		70		1			30	17								X	X	X	X	103-104
/18	24.03-28.03		78												78	78	X	X	X	X	105-106
/18	30.03-08.04		72														X	X	X		107-108
/18	09.04-13.04		84					31	31			2	1				X	X	X		109-110
/18	14.04-20.04		101					21	21						101	101	X	X	X	X	111-112
/18	20.04-27.04		111					19	19			2			111	111	X	X	X	X	113-114
/18	05.11-04.12		123									48					X	X	X	X	115-116-117-118
<b>Total</b>			693		1			135	110			52	1		344	344					

ARGOS DRIFTERS						
CATALOGUE NO.	I.D. No.	DEPLOYED DATE ○	RECOVERED DATE △	DROGUE DEPTH IN METRES	DROGUE LOST x	PAGE OG TRACK CHART
01	1559	16.04	15.04	60		127
02	1580	08.04	22.07	100		123
03	1580	24.09	06.11	60	x	122
04	1582	08.04	14.04	100		123
05	1583	18.05	31.05	30		128
06	1583	14.06	18.07	30		131
07	1583	22.09	31.10	30	x	124
08	1584	17.06	18.07	30		129
09	1584	22.09	13.11	30		122
10	1585	04.04	29.04	60	x	127
12	1586	12.06	25.07	30		129
13	1586	22.09	08.10	60	x	119
14	1558	05.04	05.06	60		126
15	1558	13.06	25.07	30		130
16	1558	20.09	28.11	30		119
17	1572	12.04	13.04	5		125
18	1572	26.05	06.06	30		132
19	1572	20.09	01.11	60		124
20	1573	06.06	03.07	35		132
21	1575	12.04	01.06	60		126
22	1575	26.09	13.10	30	x	120
23	1576	01.06	05.06	30		128
24	1576	11.06	17.07	30		130
25	1576	24.09	18.11	30		120
27	1579	12.06	12.06	60		125
28	1587	05.06	05.06	60		124
29	1587	13.06	13.06	60		131
30	1587	04.11	04.11	30		121

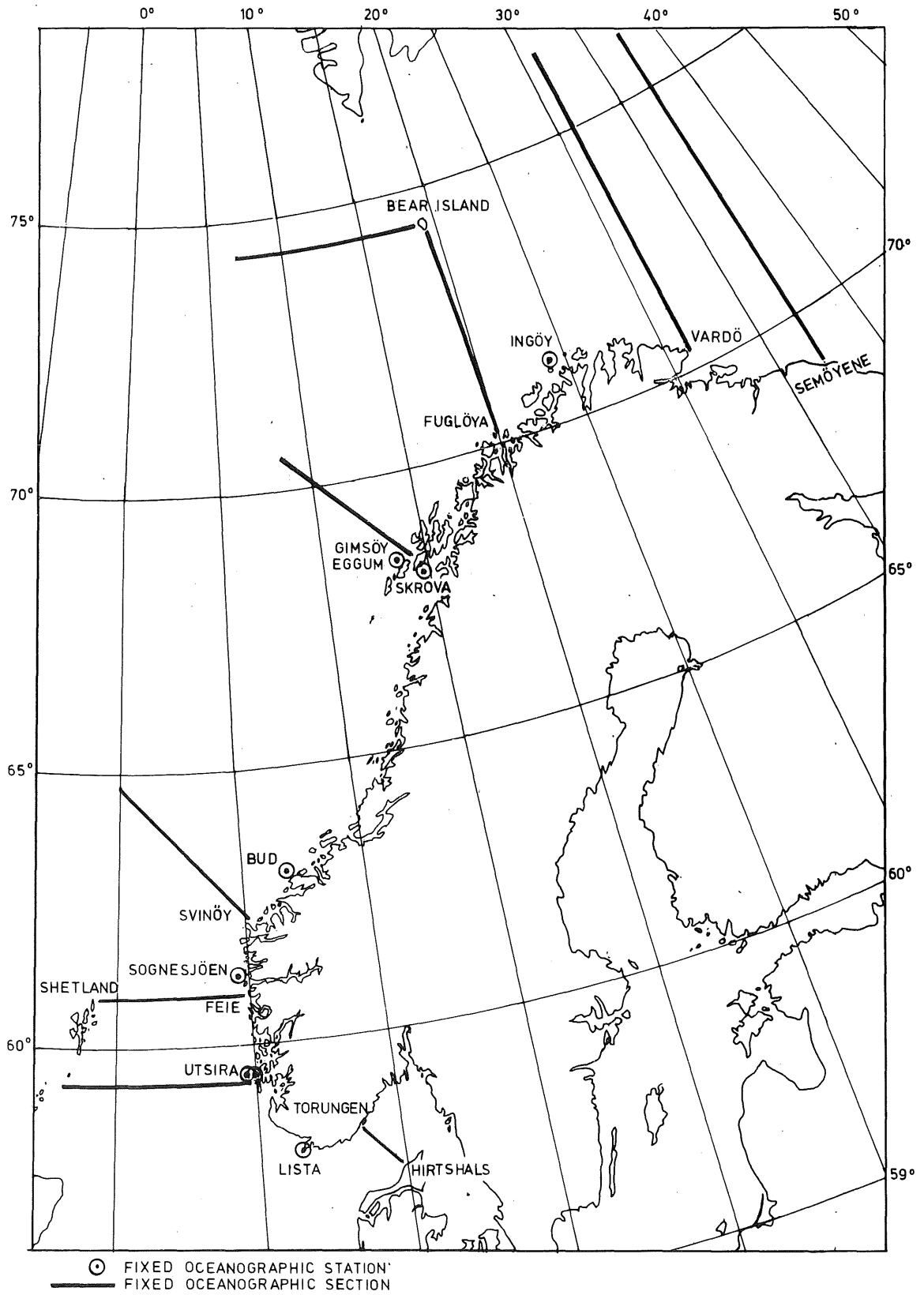
FIXED OCEANOGRAPHIC STATIONS	YEAR: 1987												
	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
LISTA	2	2	3	2	3	3	4	3	3	2	3	3	33
UTSIRA I	2	2	3	3	3	3	2	3	3	1	3	2	30
UTSIRA Y	2	2	3	3	3	3	2	3	3	1	3	2	30
SOGNESJØ	1	3	1	3	2	2	1	4	2	2	2	1	24
BUD	3	3	4	5	4	2	2	3	1	3	2	1	33
SKROVA	4	4	4	5	4	4	5	4	4	4	3	4	49
EGGUM	2	1	2	2	2	1	1	2	2	3	1		19
INGØY	3	3	3	3	3	3	3	4	3	3	1	2	34

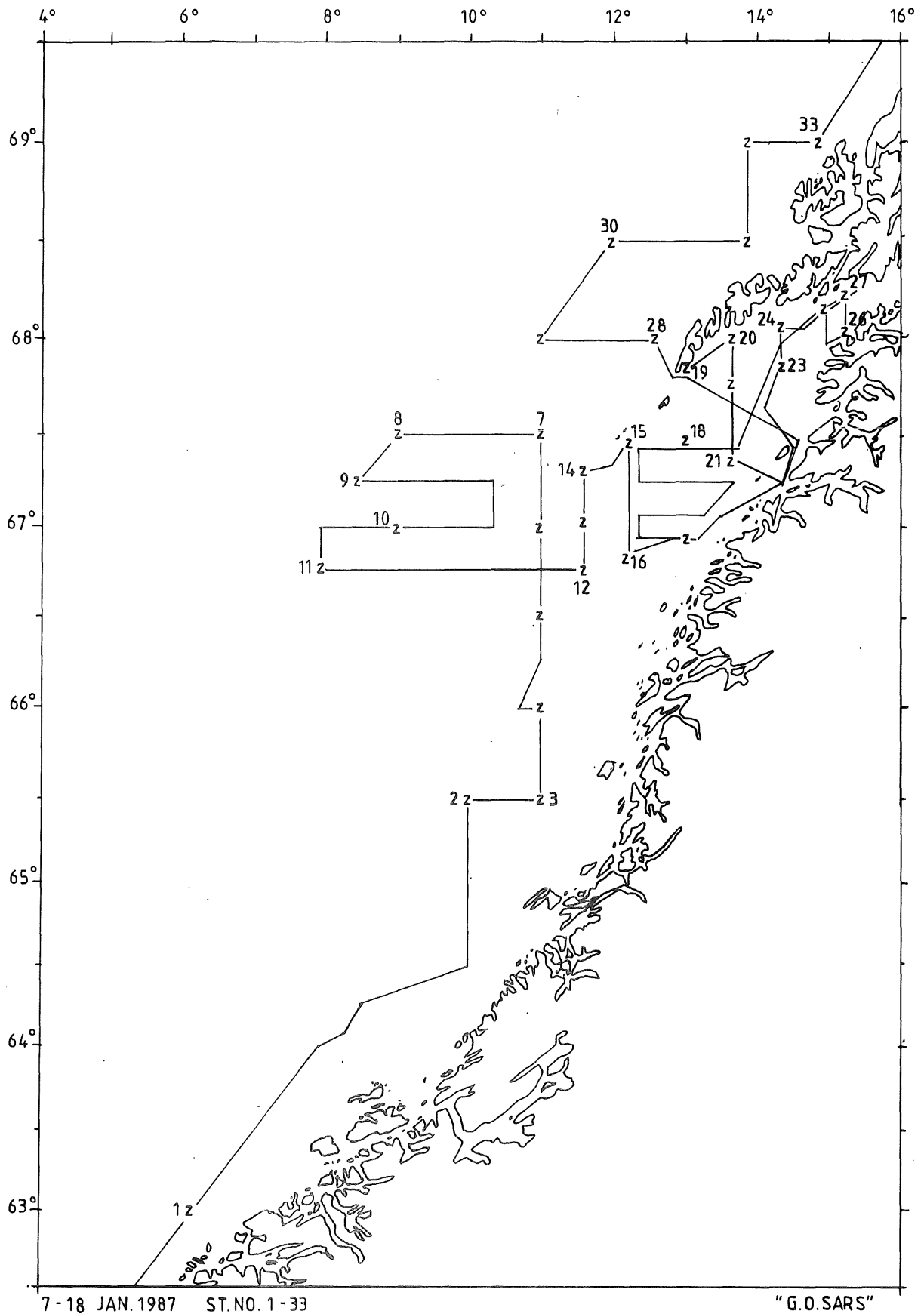
POS:

LISTA N58°01' E06°32'  
 UTSIRA Y N59°19' E04°48'  
 UTSIRA I N59°19' E04°59'  
 SOGNESJØ N61°01,4' E04°50'

BUD N62°56' E06°47'  
 SKROVA N68°07,5' E14°39'  
 EGGUM N68°22,8' E13°38,7'  
 INGØY N71°08' E24°01'

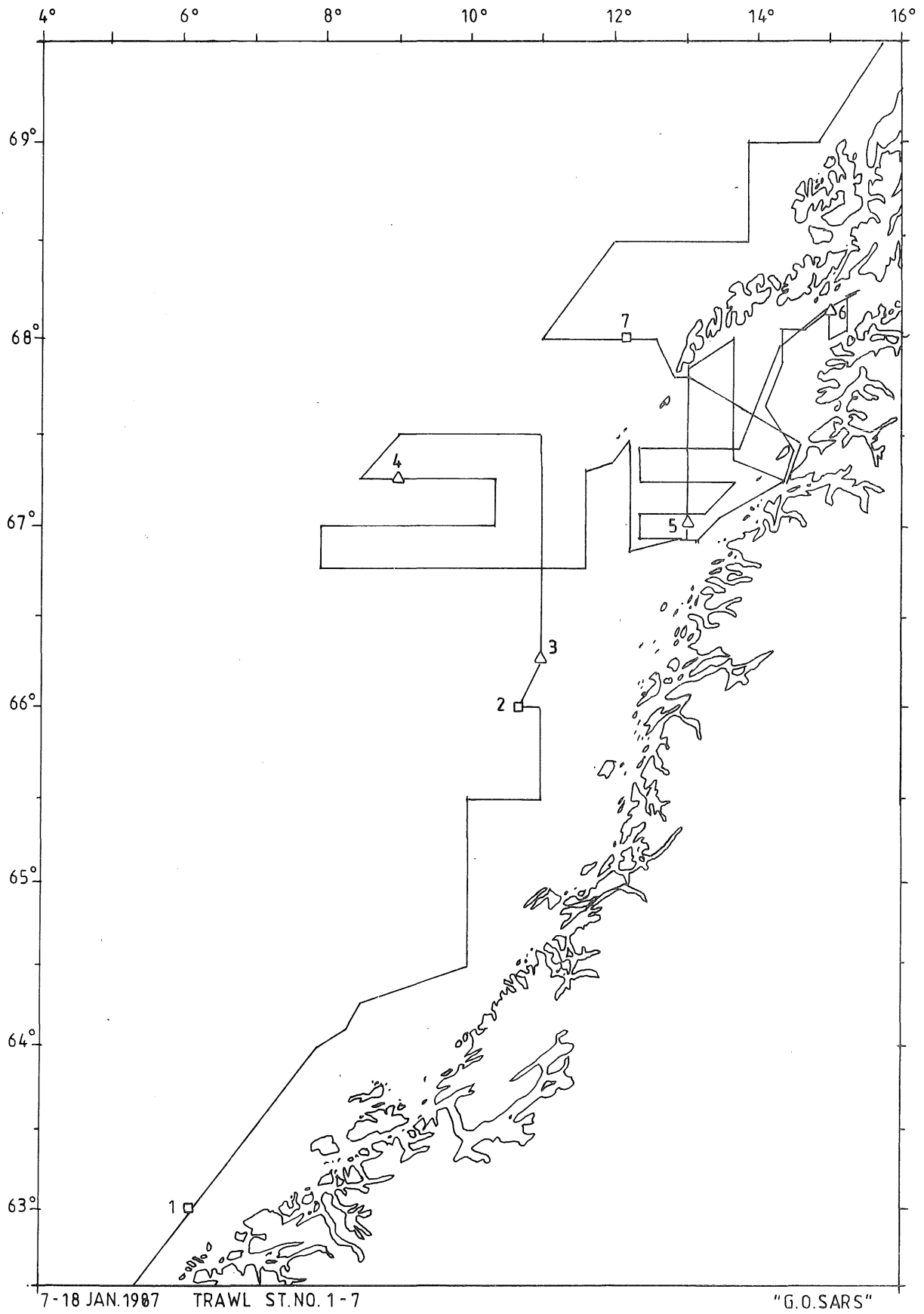
FIXED OCEANOGRAPHIC SECTIONS		YEAR: 1987												
		JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
TORUNGEN-HIRTSHALS			1/1 2/14								1/16		13/15	4
UTSIRA - W			2/14	1/1		3/1		8/15		6/1		13/15		6
FEIE-SHETLAND		2/14				3/1		8/15				13/15		4
SVINØY-NW					4/14			9/15						2
GIMSØY-NW				4/15					9/15					2
FUGLØYA-BJØRNØYA		1/15	3/11			7/15	6/11 6/14			8/14	9/14			7
VARDØ-N		2/11	2/15				7/15		5/1		11/15			5
SEMØYENE-N			2/15							5/1	11/15			3
BJØRNØYA-W											9/14			1
SHIP:		NO.	CRUISE NO./SHIP NO. 1/15											
G.O.SARS		15												
MICHAEL SARS		11												
ELDJARN		14												
G.M.DANNEVIG		16												
JOHAN RUUD		8												
HÅKON MOSBY		1												

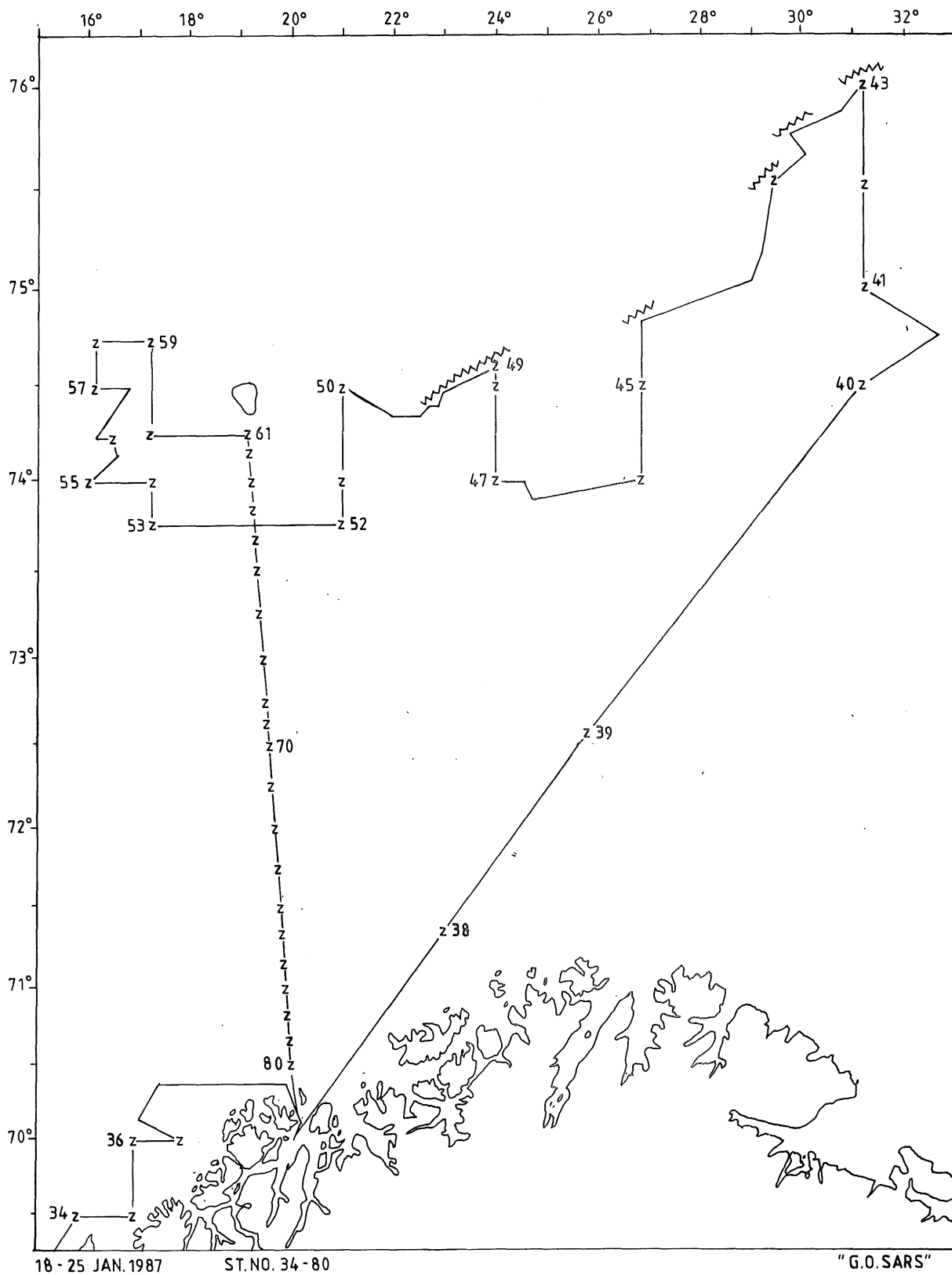




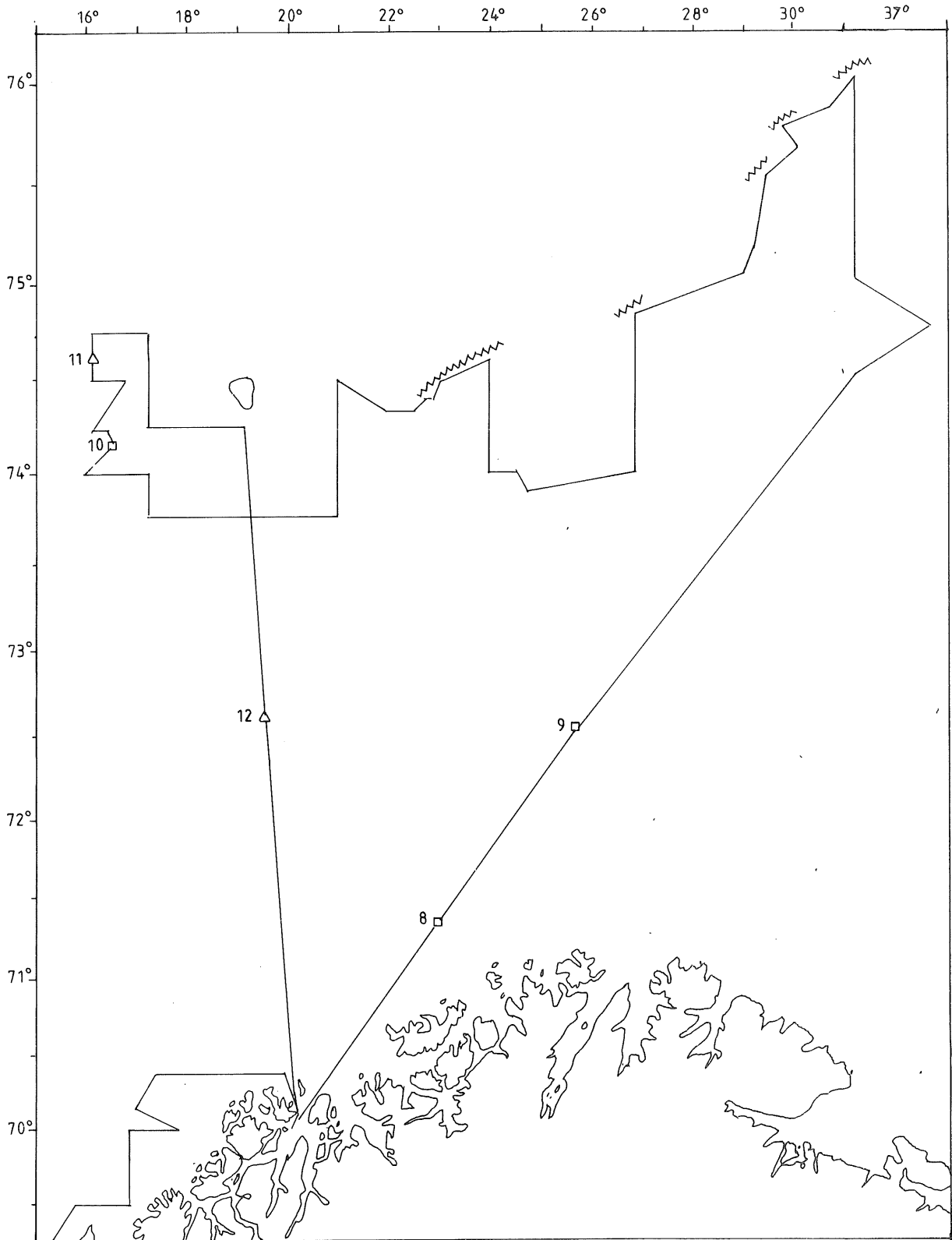
7-18 JAN. 1987 ST.NO. 1-33

"G.O. SARS"



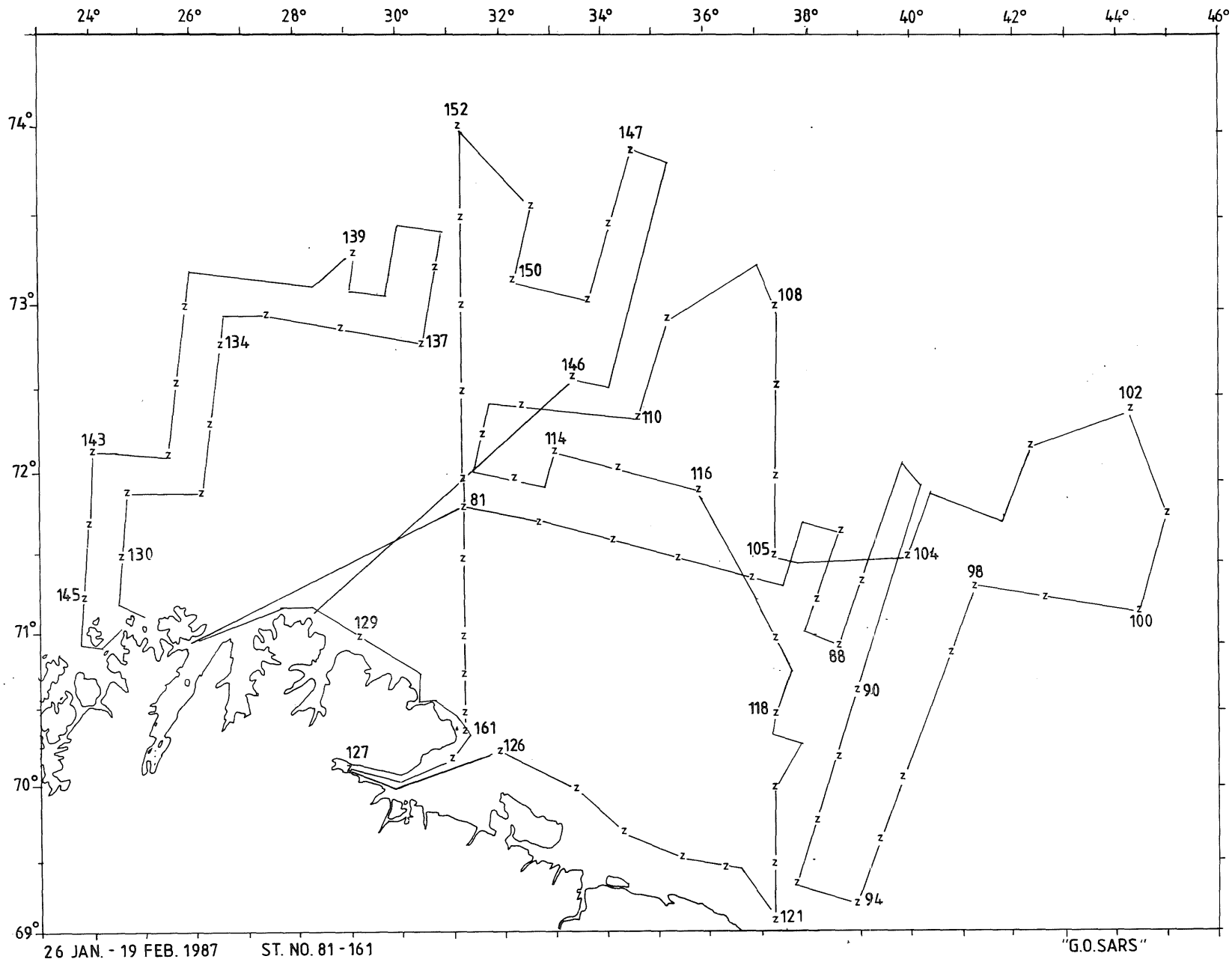


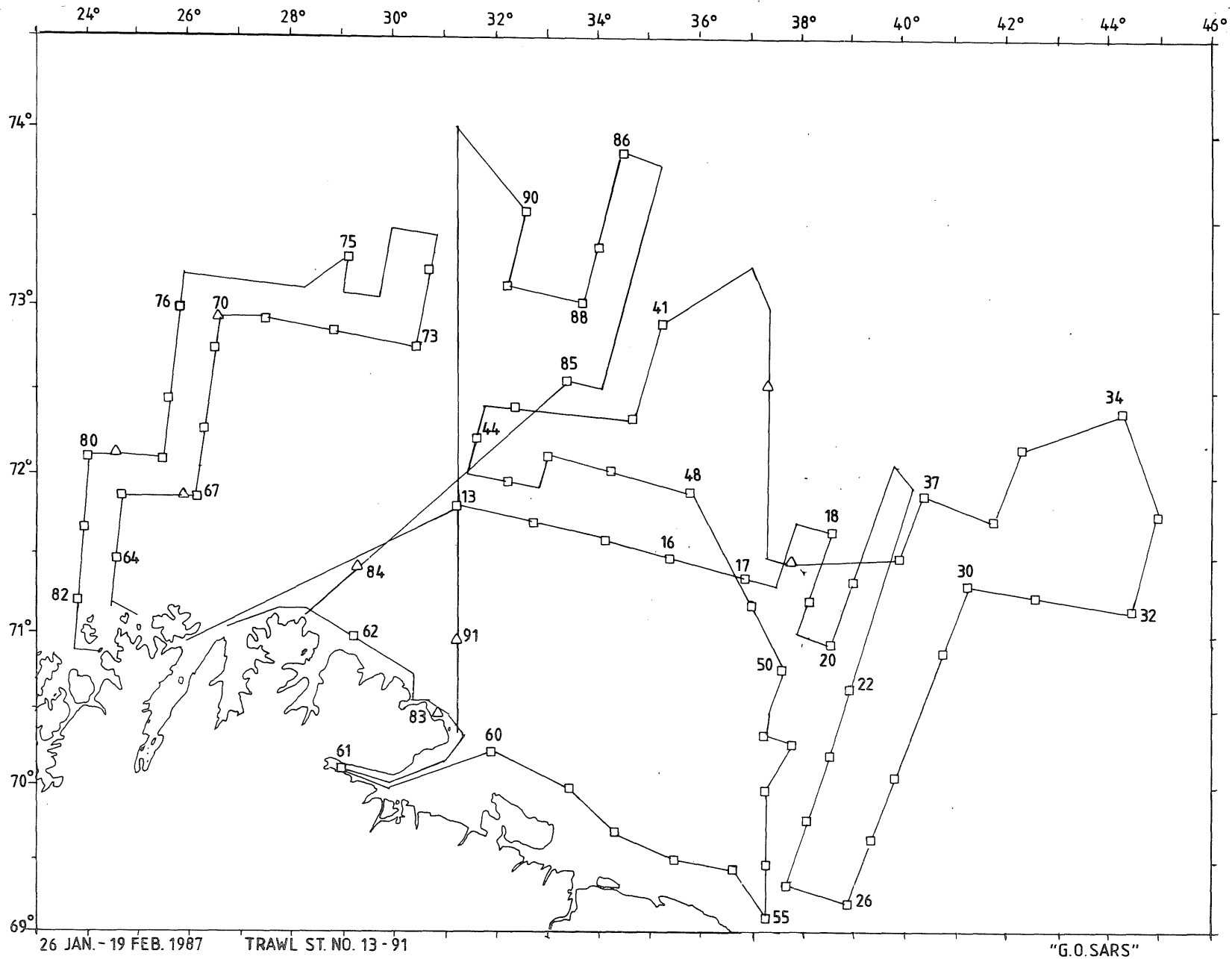




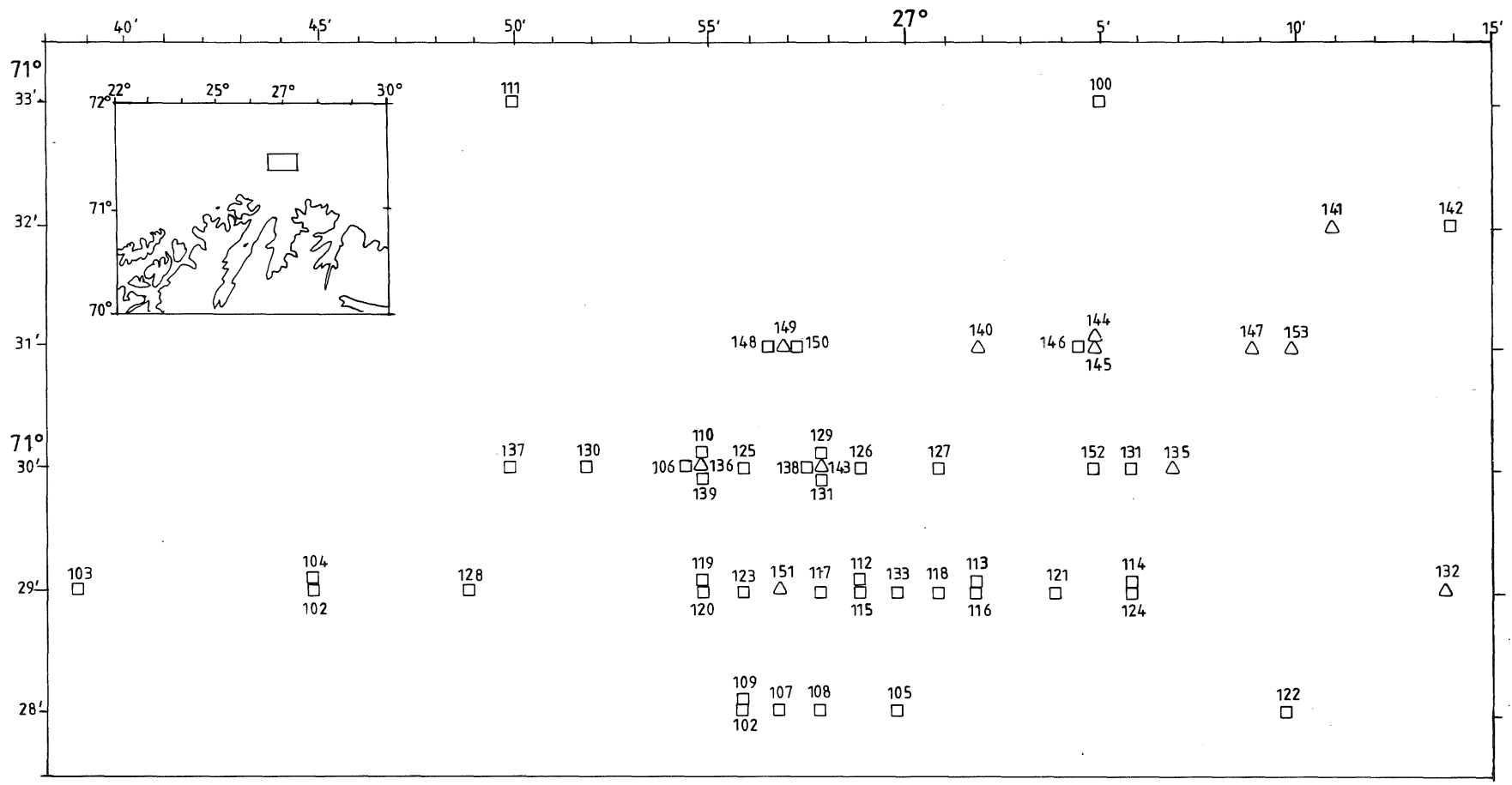
18 -25 JAN.1987 TRAWL ST.NO. 8 -12

"G.O.SARS"



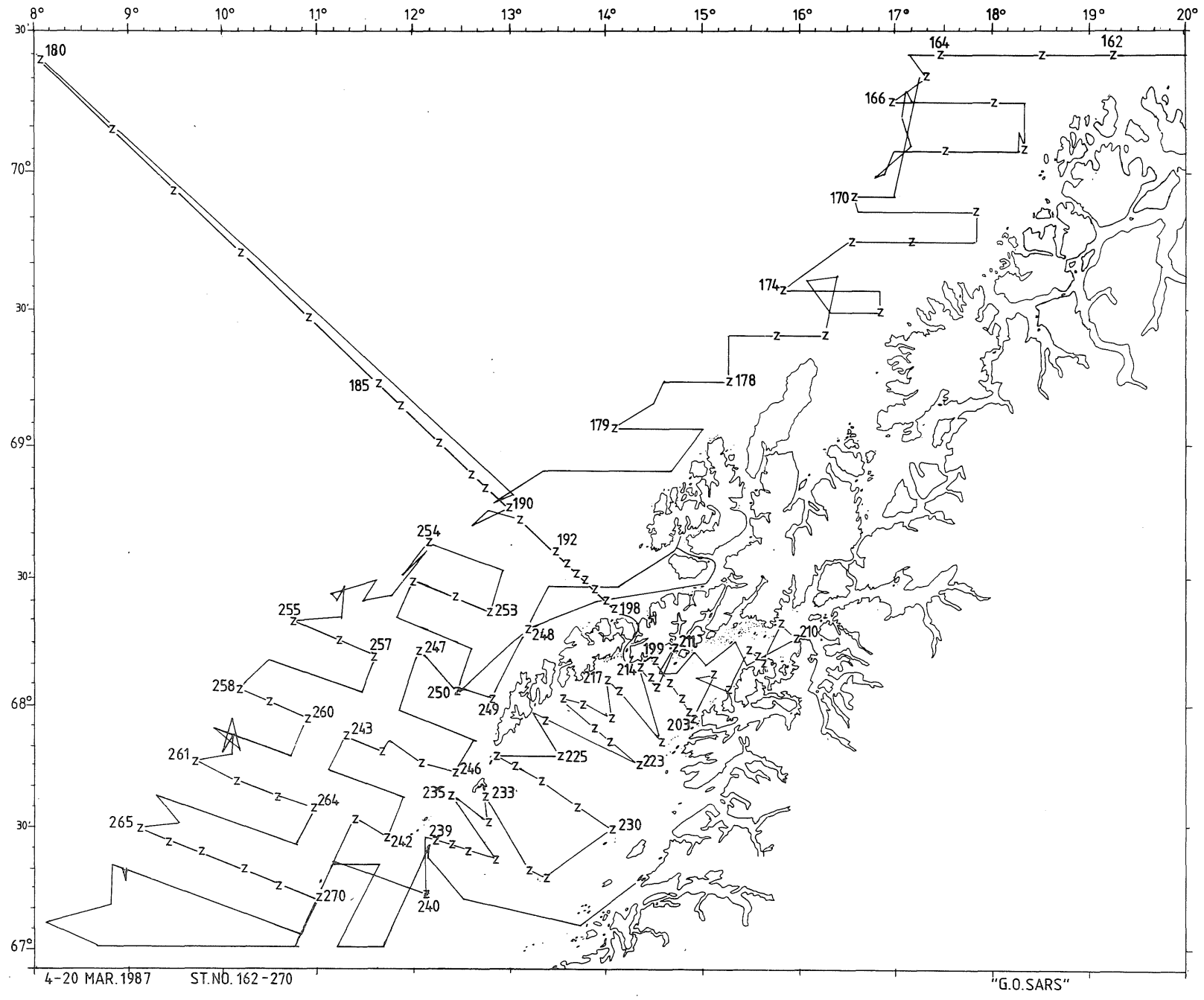


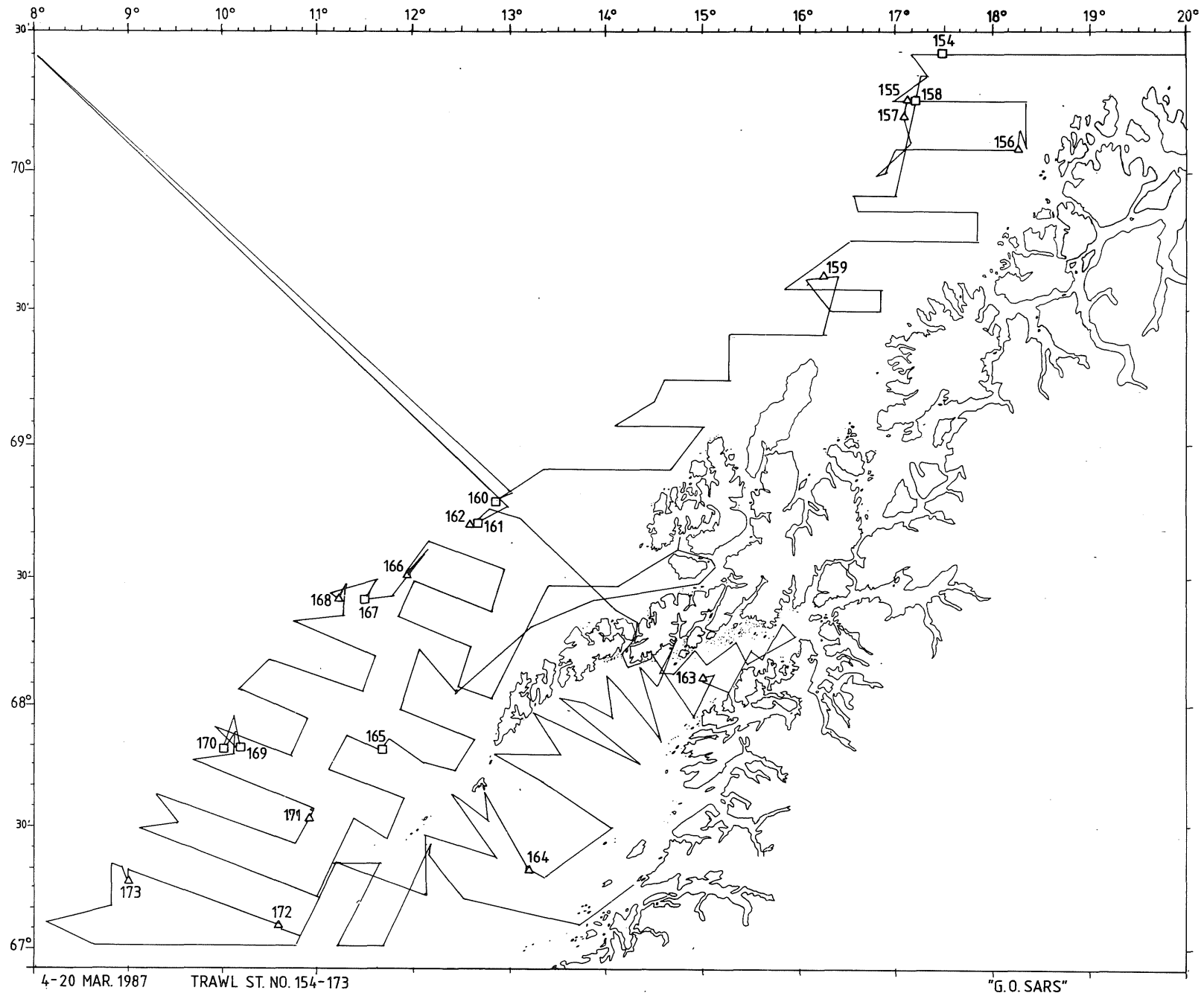
41

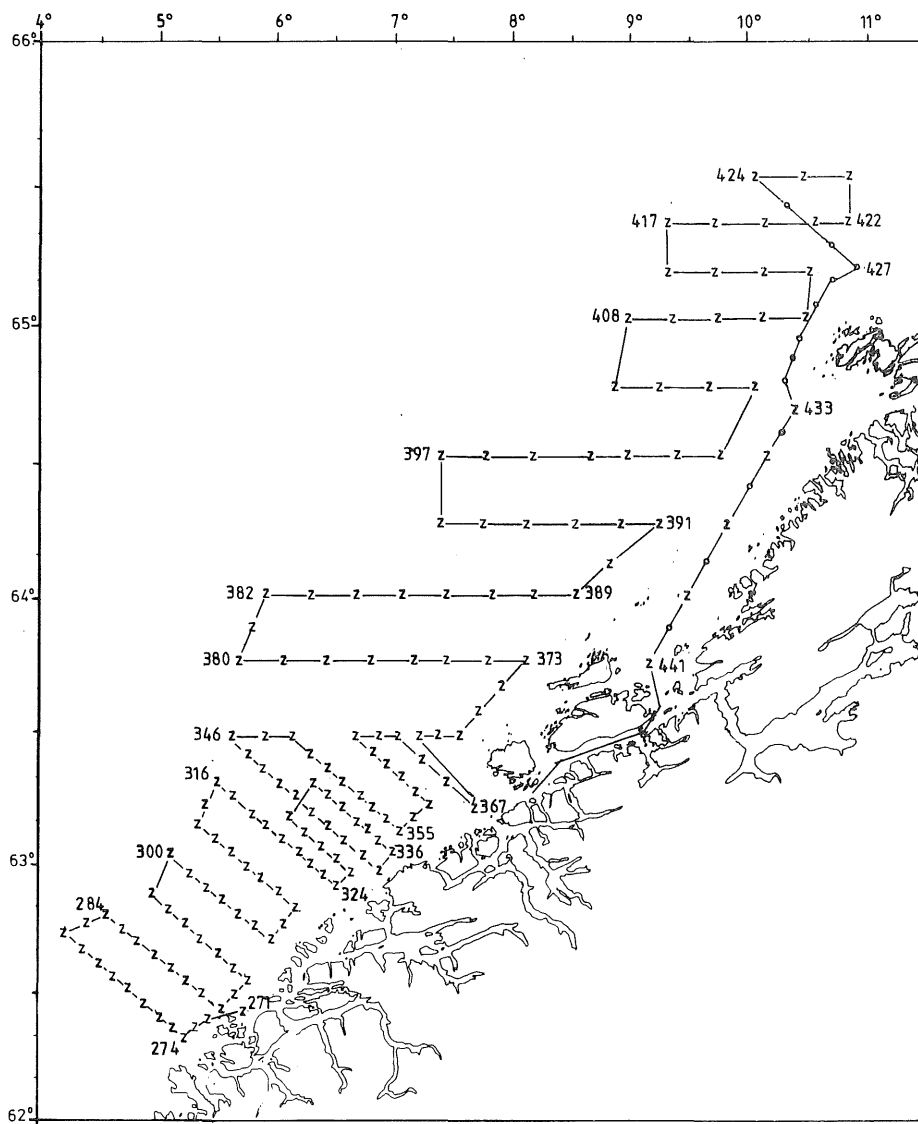


24 FEB. - 3 MAR. 1987 TRAWL ST. NO. 100 - 153

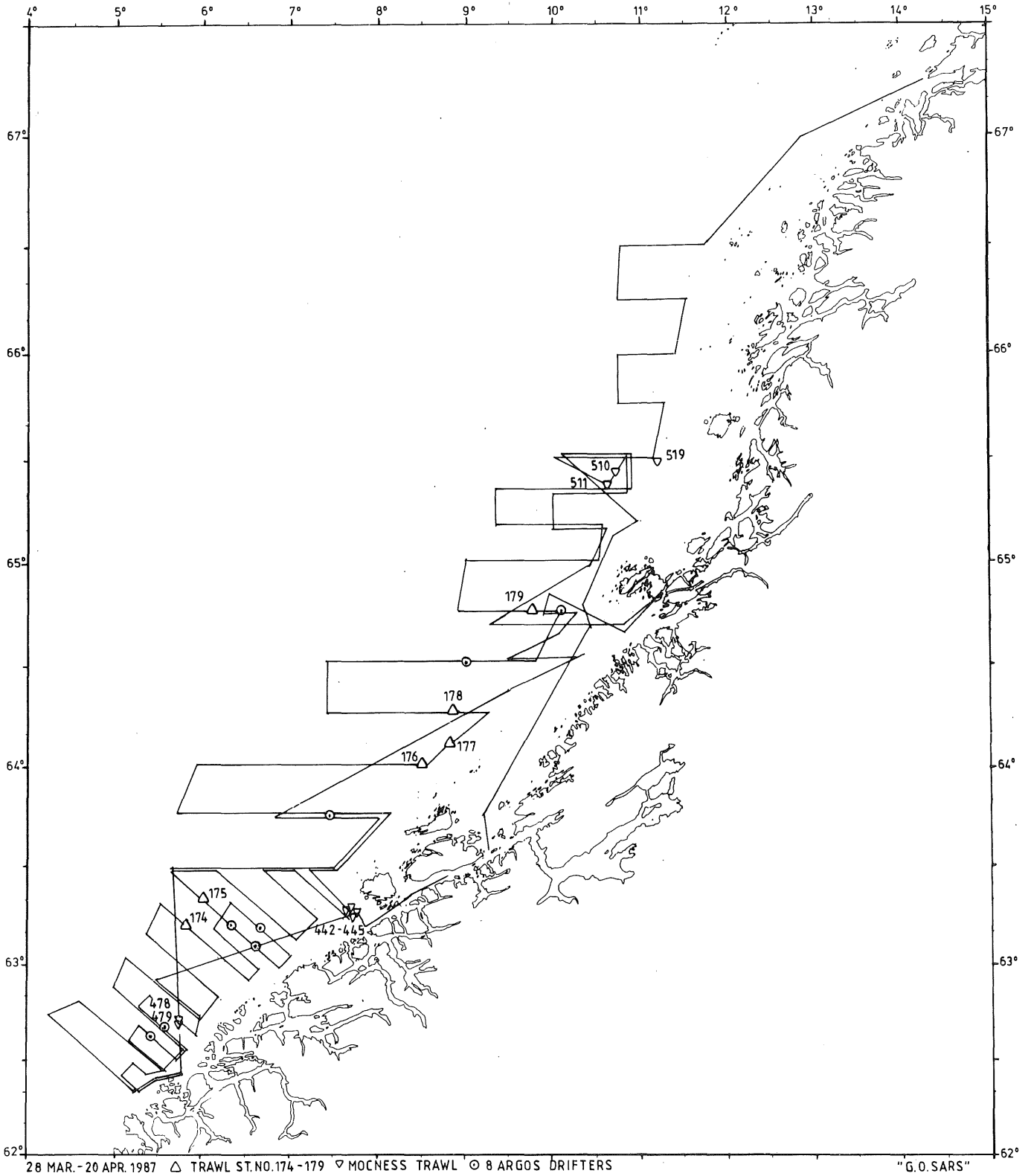
"G.O. SARS"



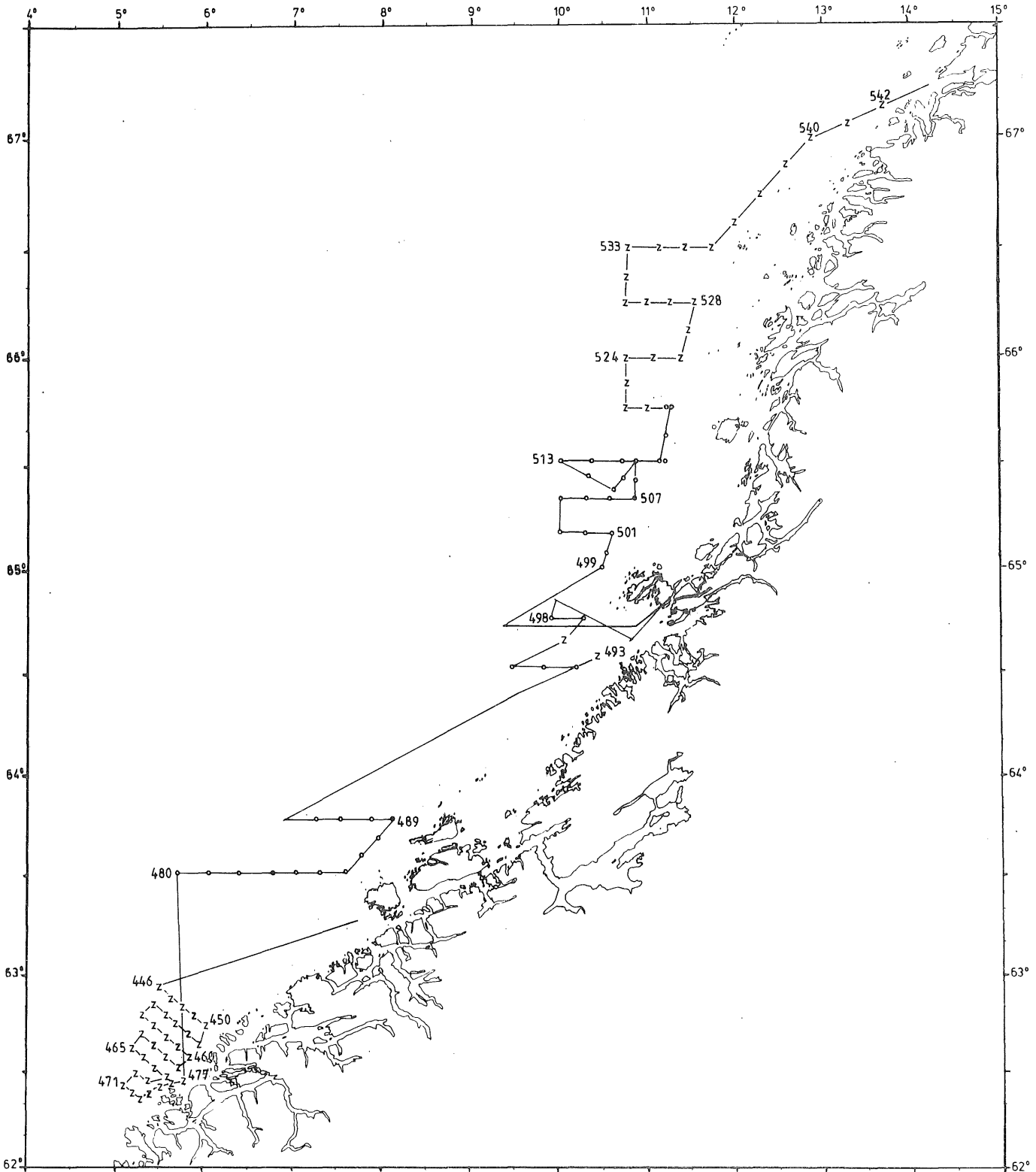




28 MAR. - 9 APR. 1987 z CTD and ZOOPLANKTON ST. • ZOOPLANKTON, LARVAE ST. NO. 271-441 "G.O SARS"

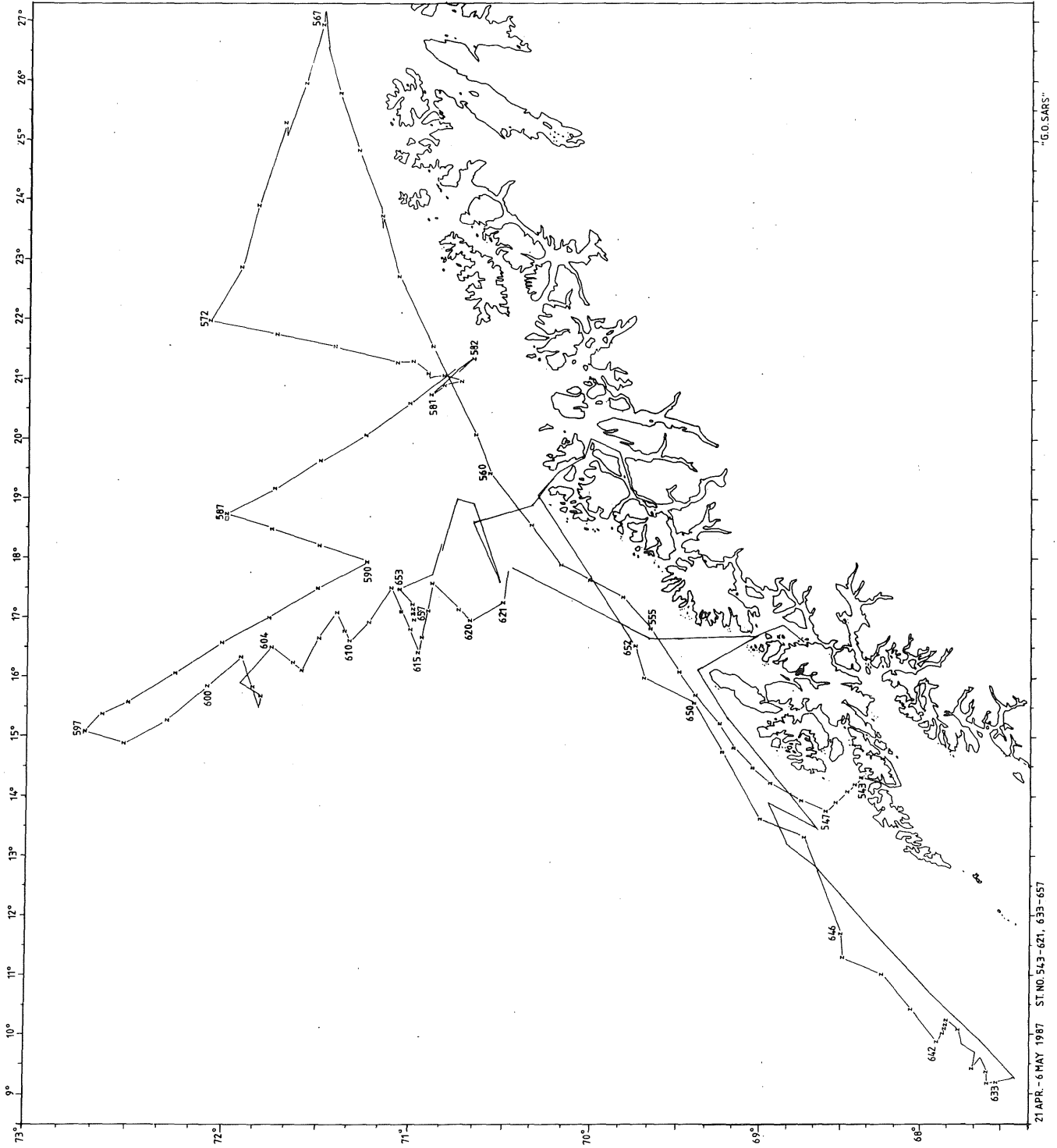


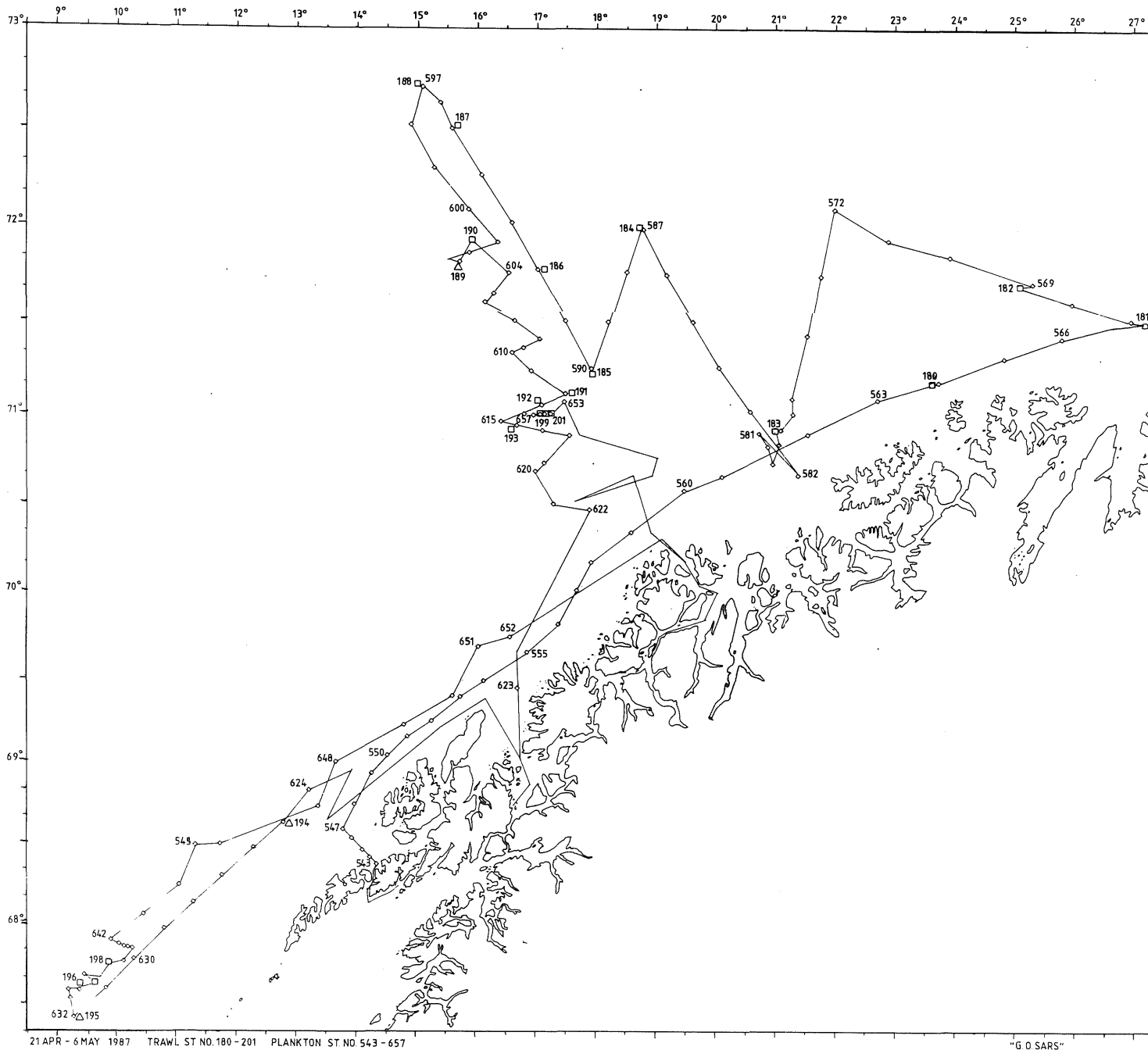




9-20 APR. 1987 z CTD and ZOOPLANKTON ST. ° ZOOPLANKTON, LARVAE ST. NO. 446-542

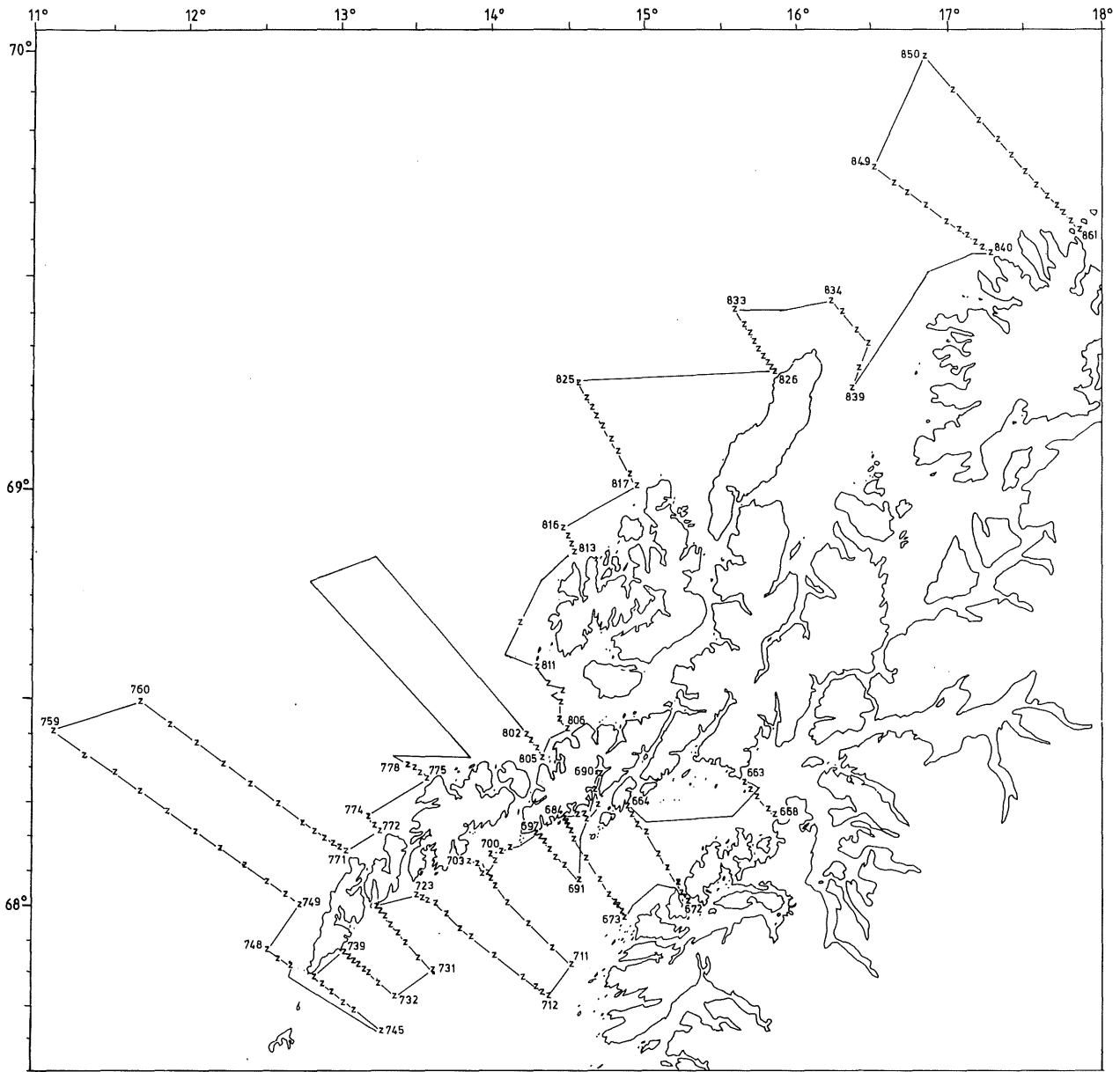
"G.O. S.A.R.S."





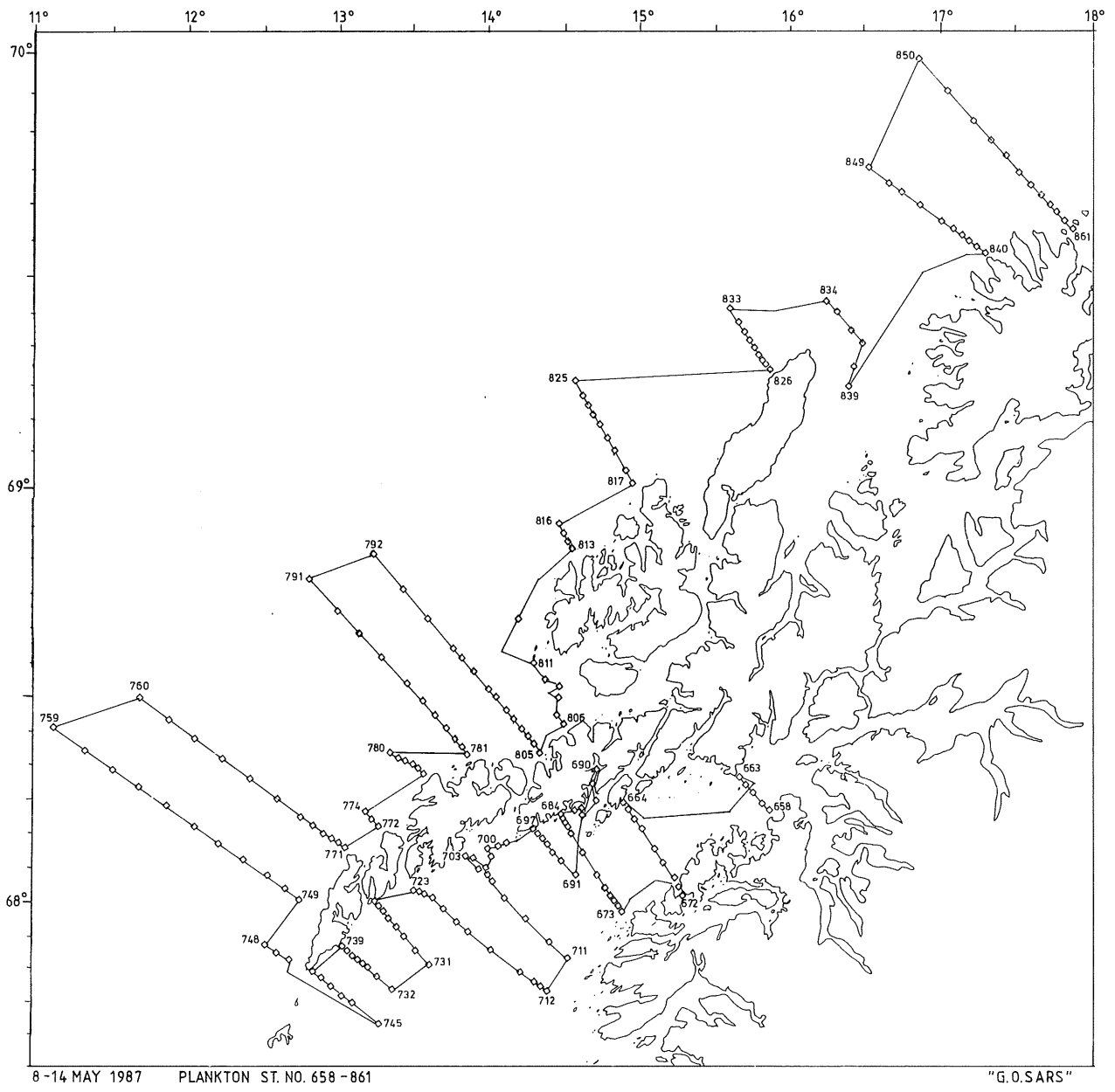
21 APR - 6 MAY 1987 TRAWL ST NO. 180 - 201 PLANKTON ST NO. 543 - 657

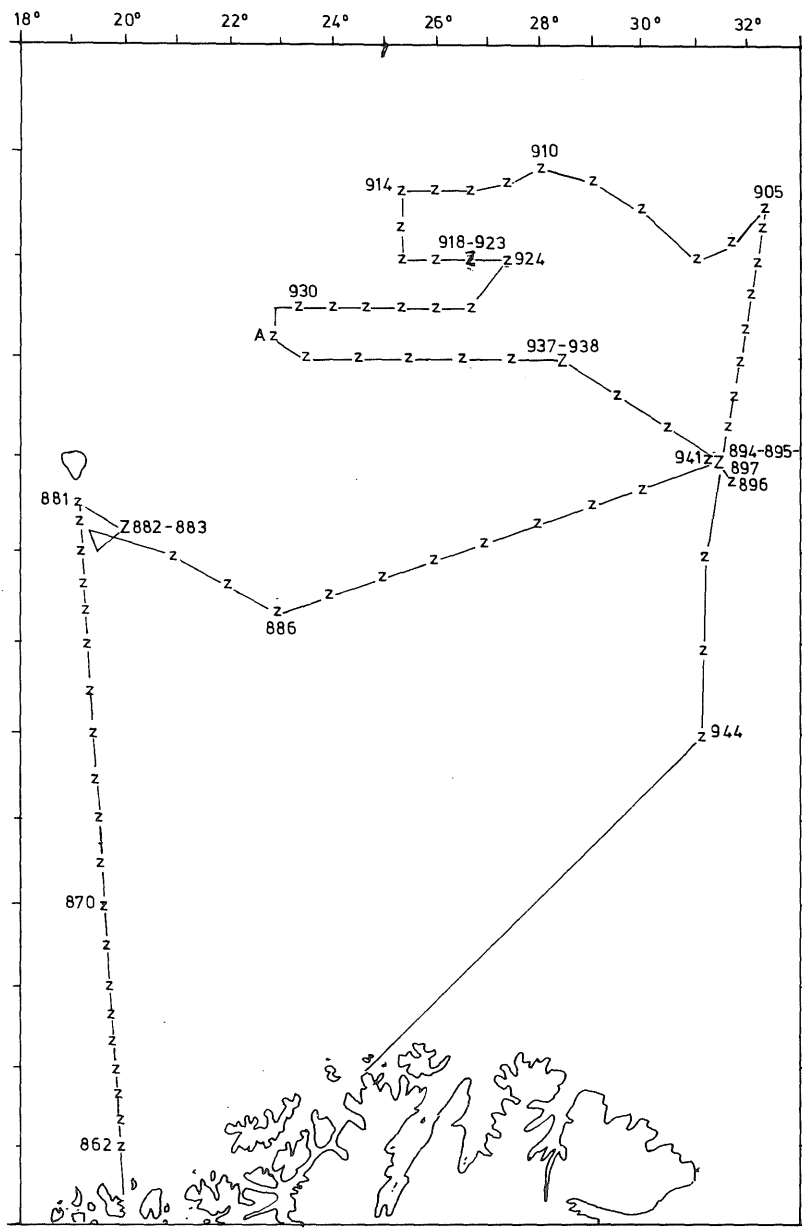
"G O SARS"



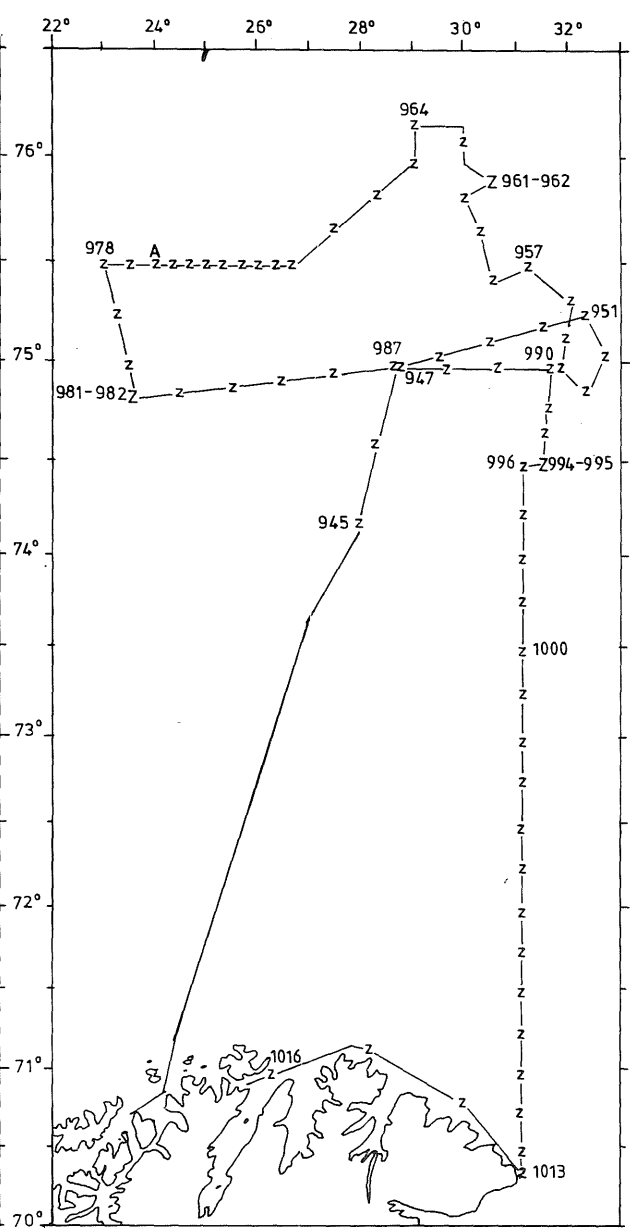
8-14 MAY 1987 ST. NO. 658 - 778, 802 - 861

"G. O. SARS"

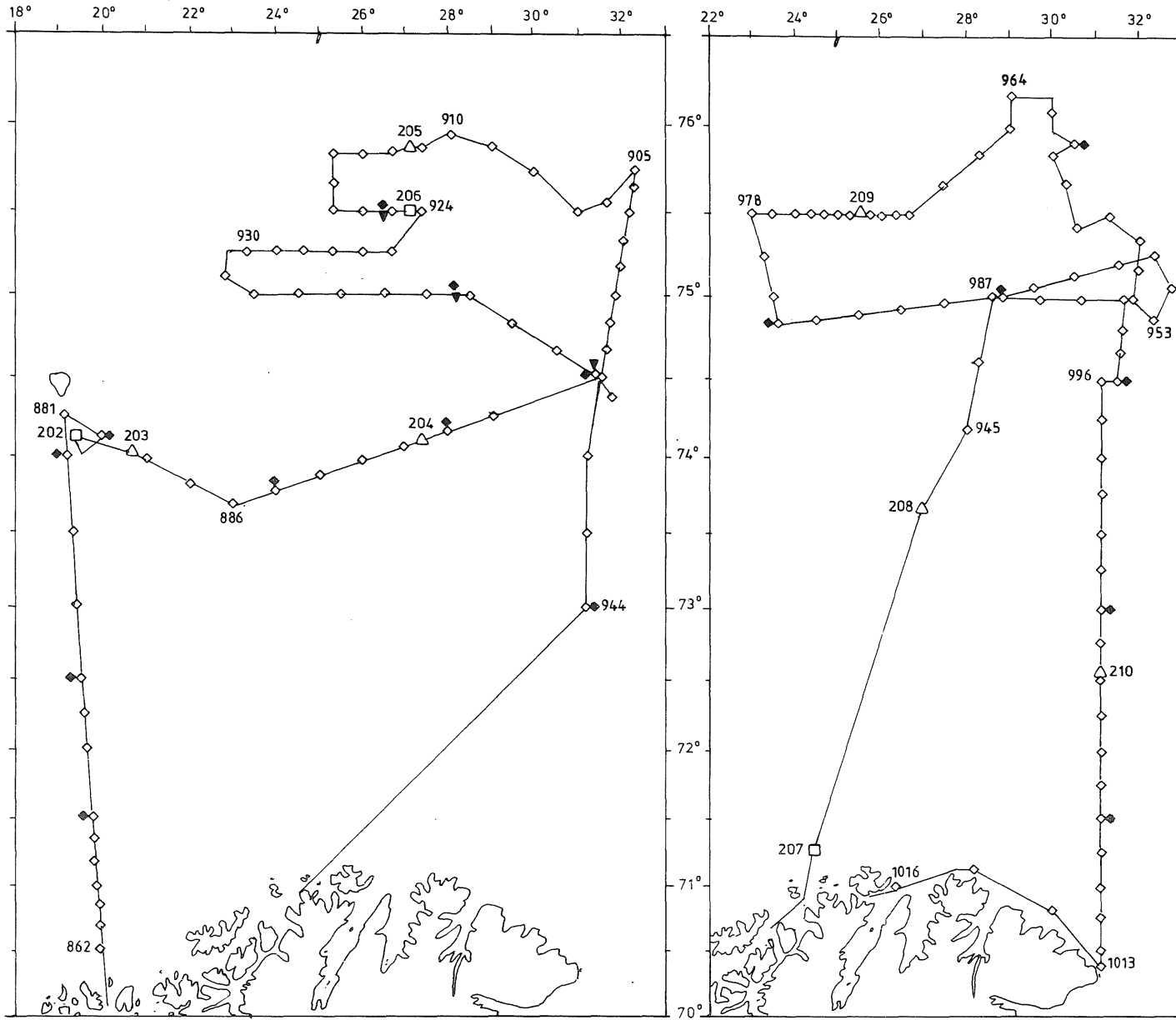




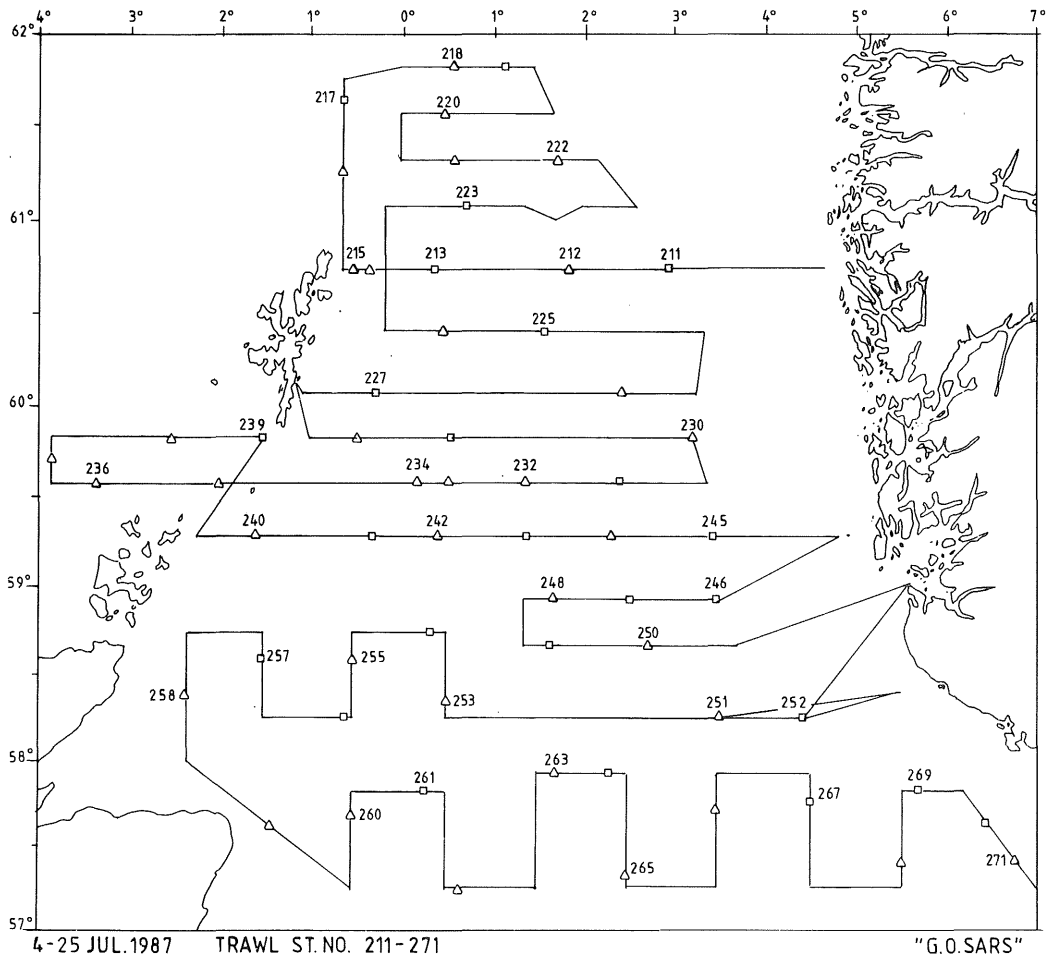
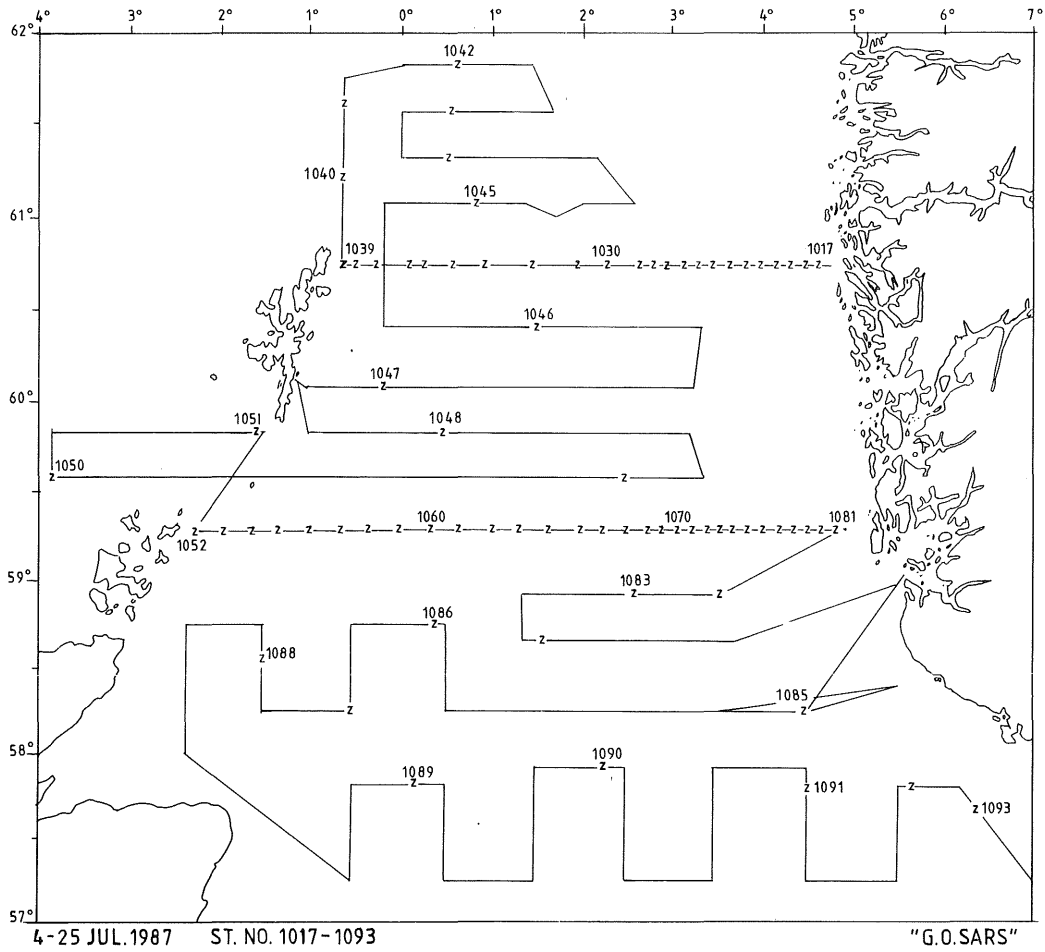
15 MAY - 12 JUN. 1987 ST.NO. 862 - 1016 A ARGOS DRIFTERS



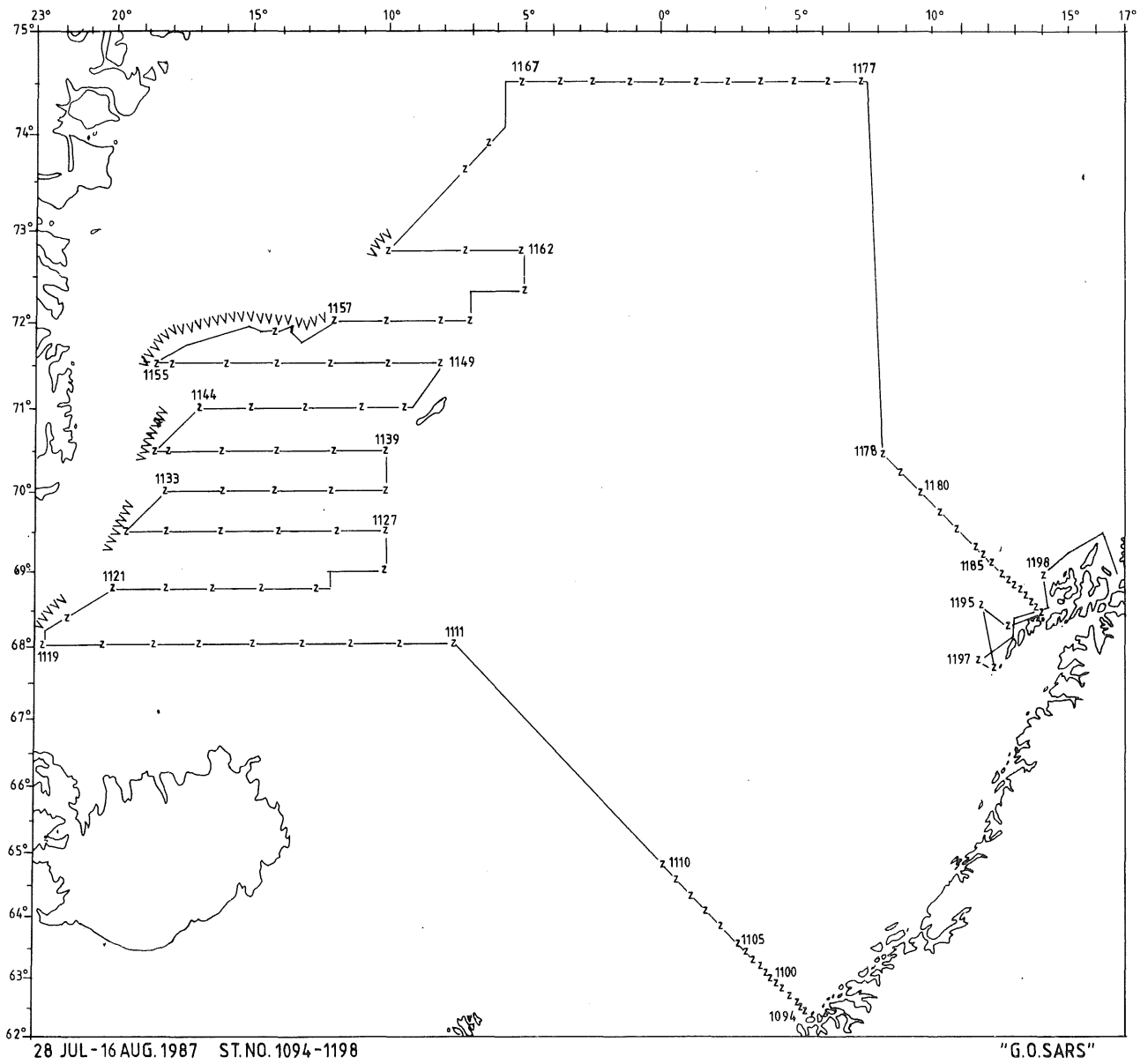
"G.O. SARS"

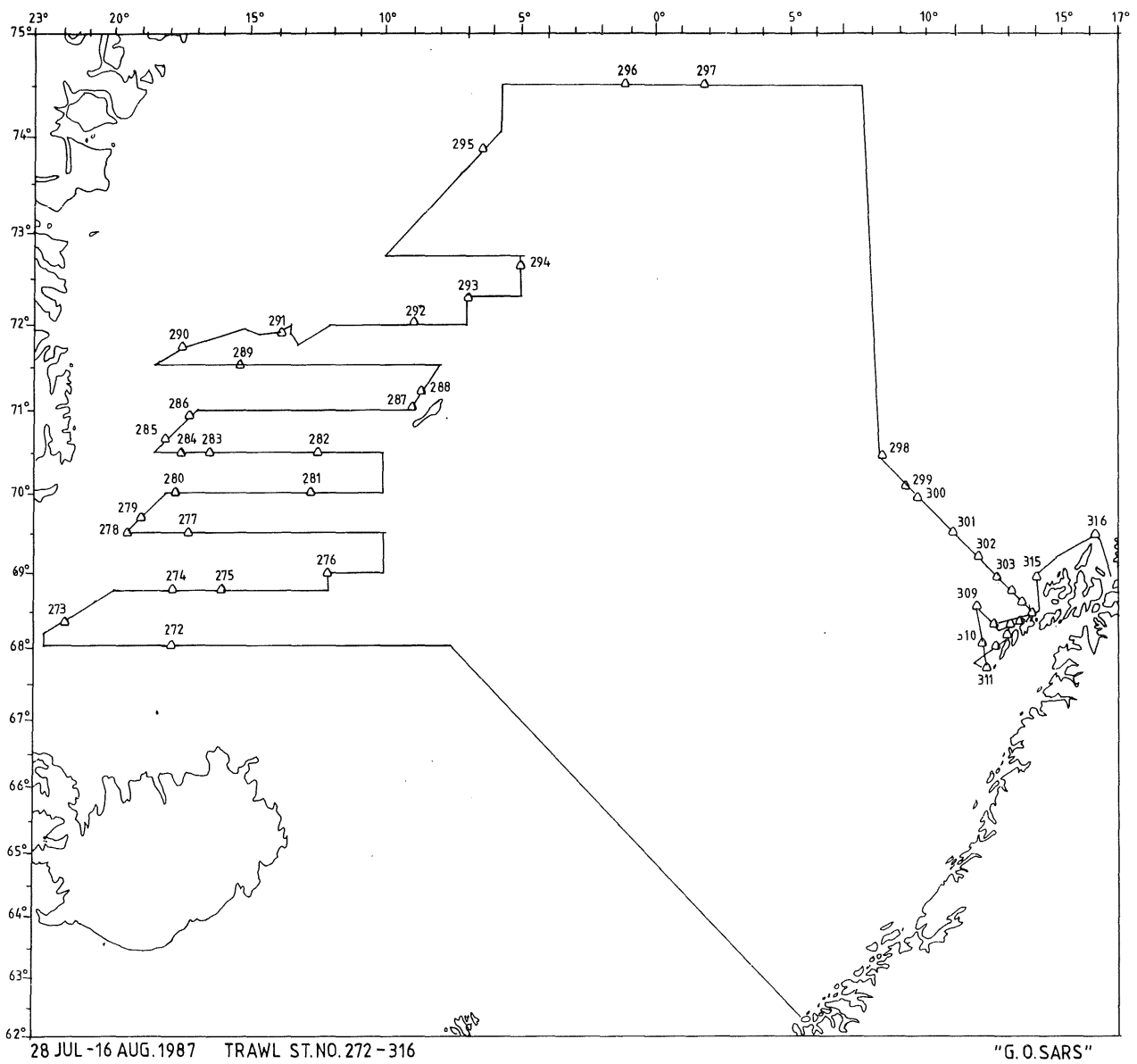


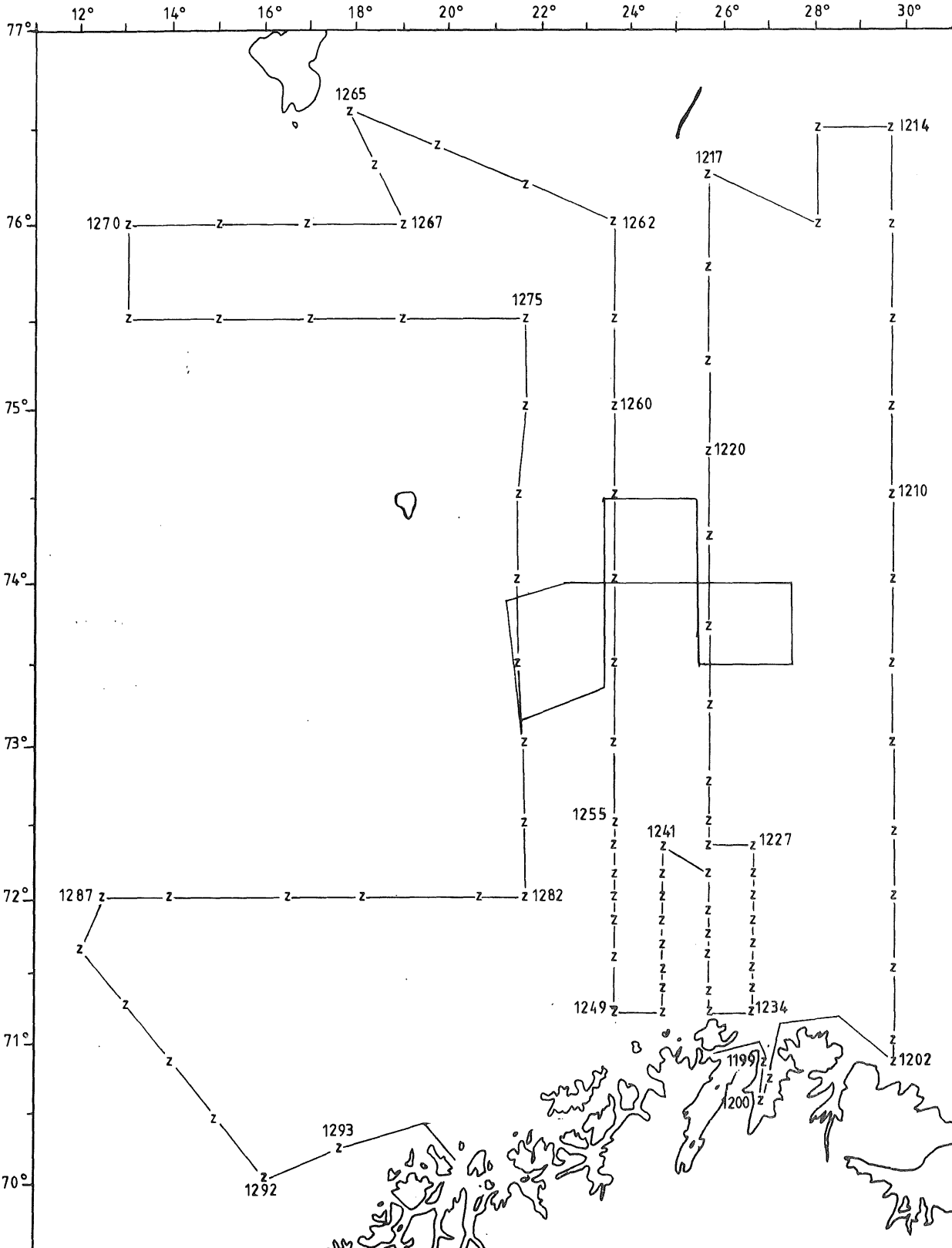
15 MAY - 12 JUN. 1987 TRAWL ST. NO. 202 - 210 ◊ PLANKTON ST. ◆ MOCNESS TRAWL ▼ SEDIMENT TRAP "G.O.SARS"







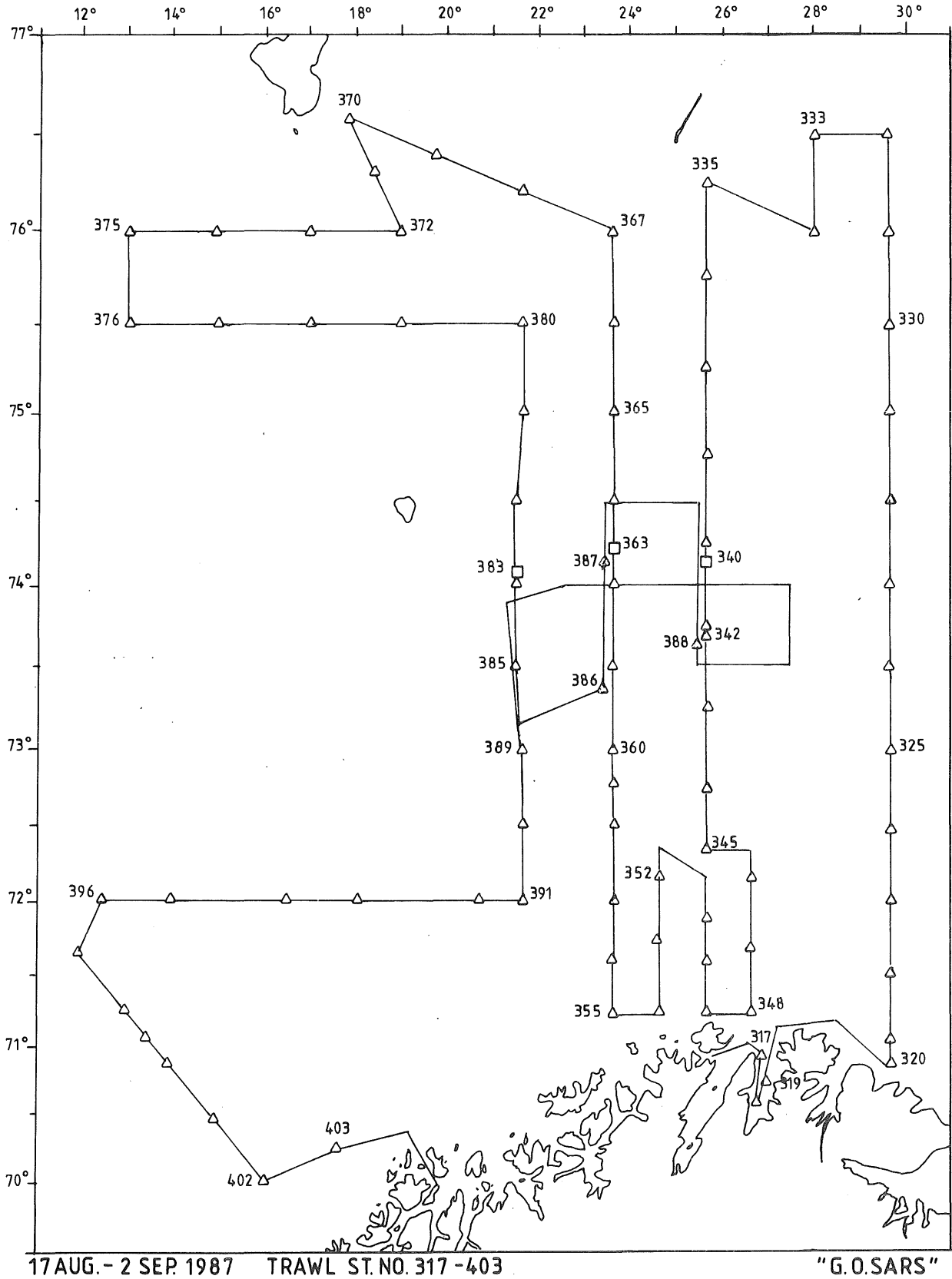


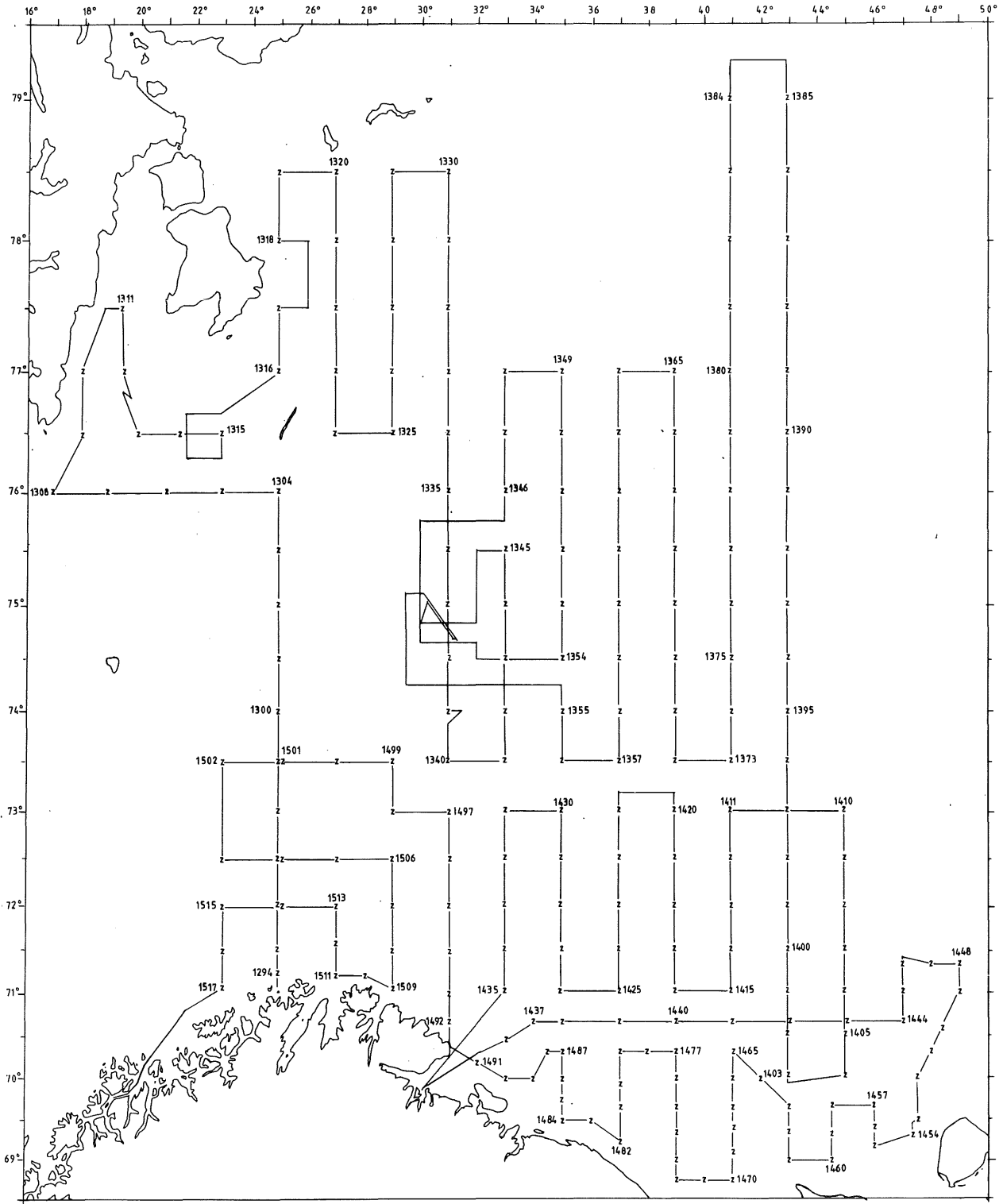


17 AUG. - 2 SEP. 1987

ST. NO. 1199 - 1293

"G.O.SARS"

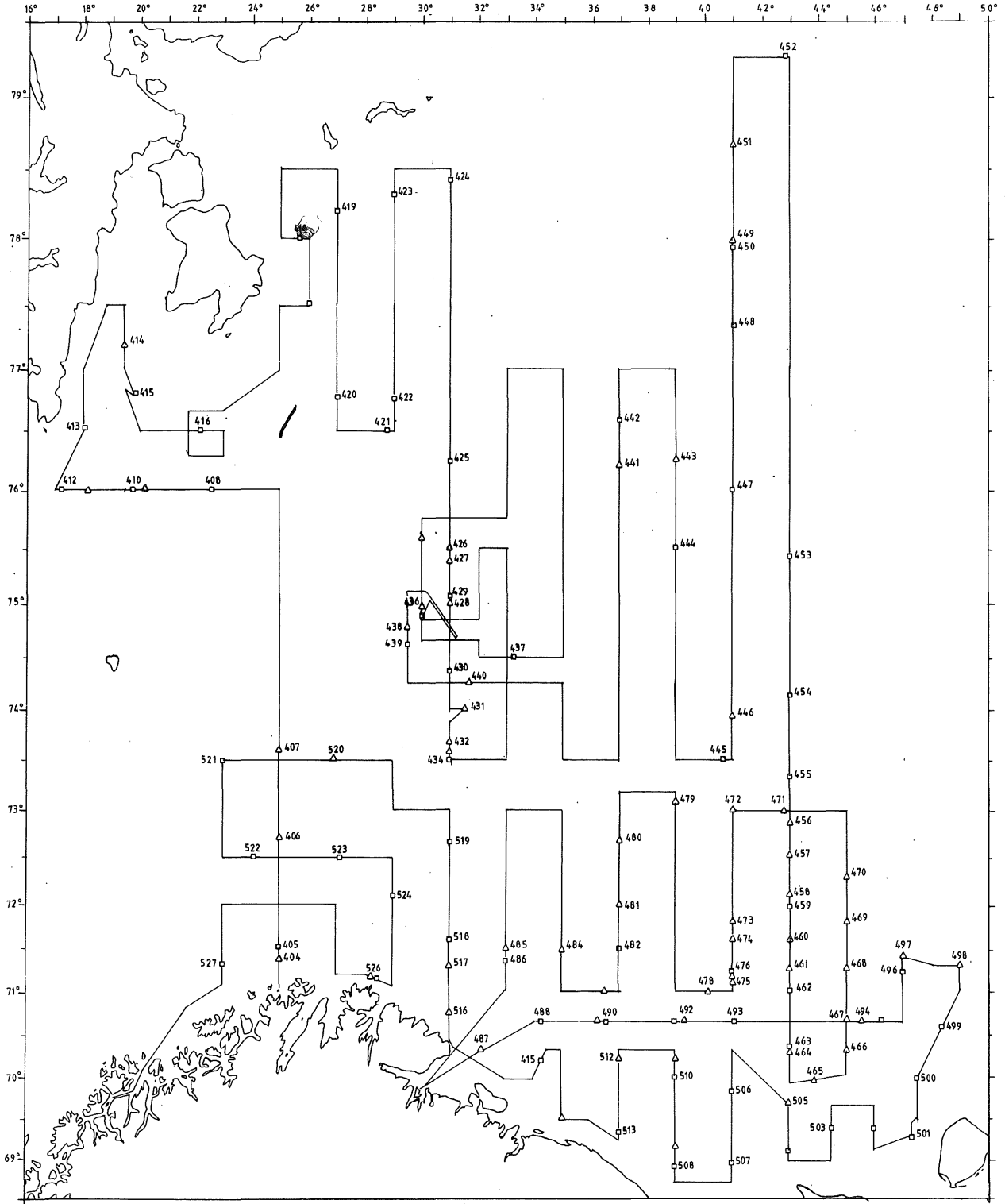




5 SEP - 16 OCT. 1987

ST.NO. 1294 - 1517

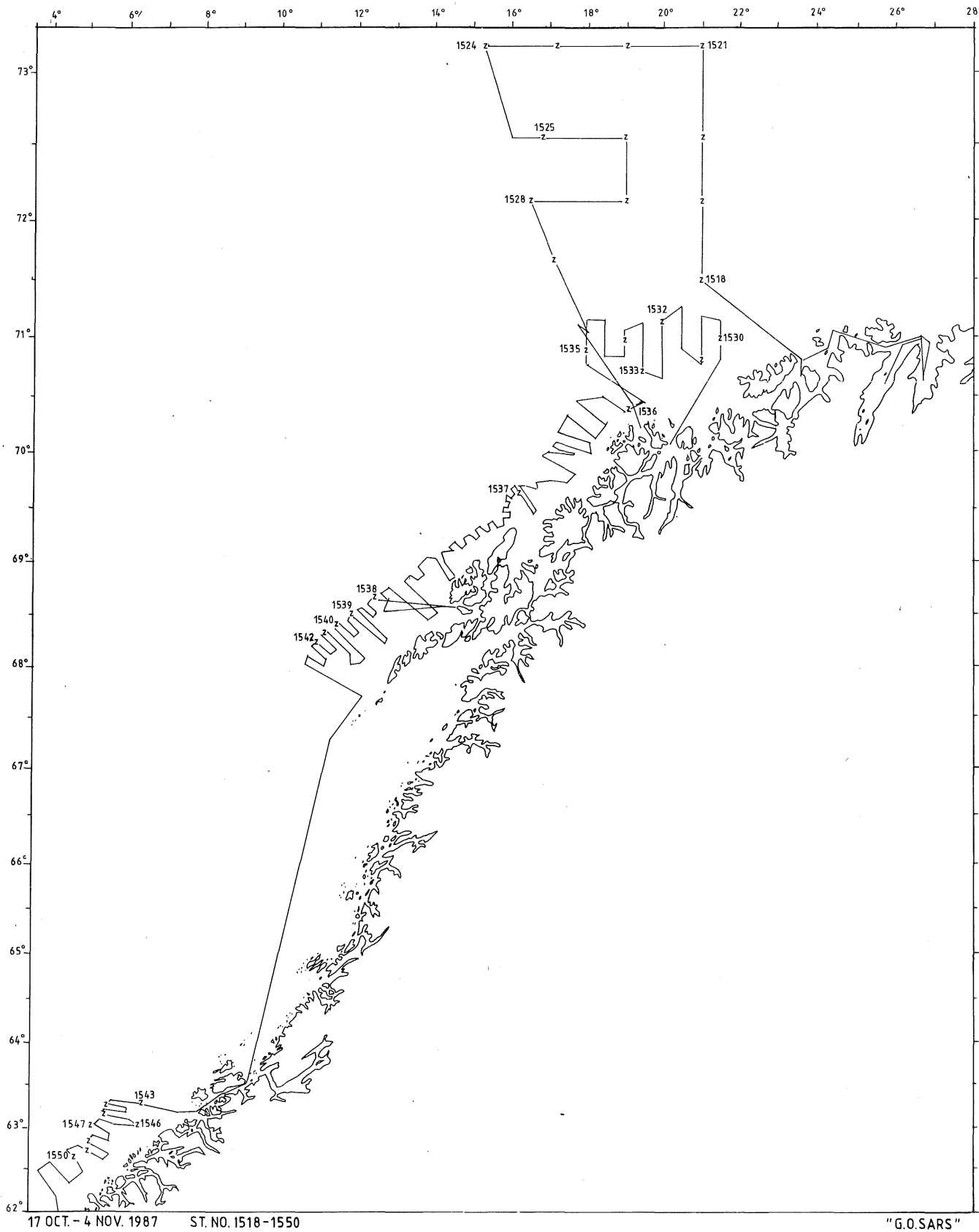
"G.O.SARS"



5 SEP - 16 OCT. 1987

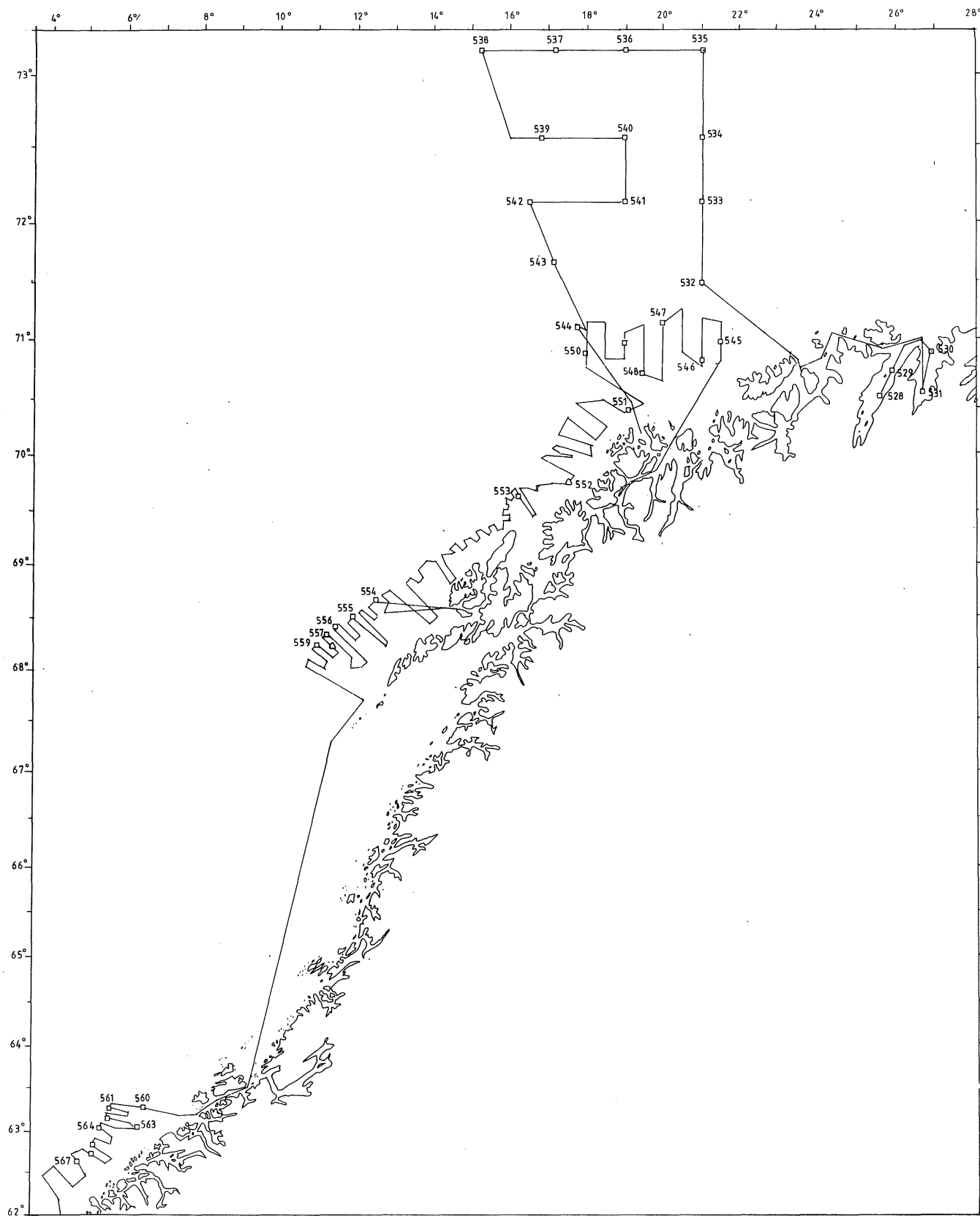
TRAWL ST. NO. 404-527

"G.O.SARS"



17 OCT. - 4 NOV. 1987 ST. NO. 1518-1550

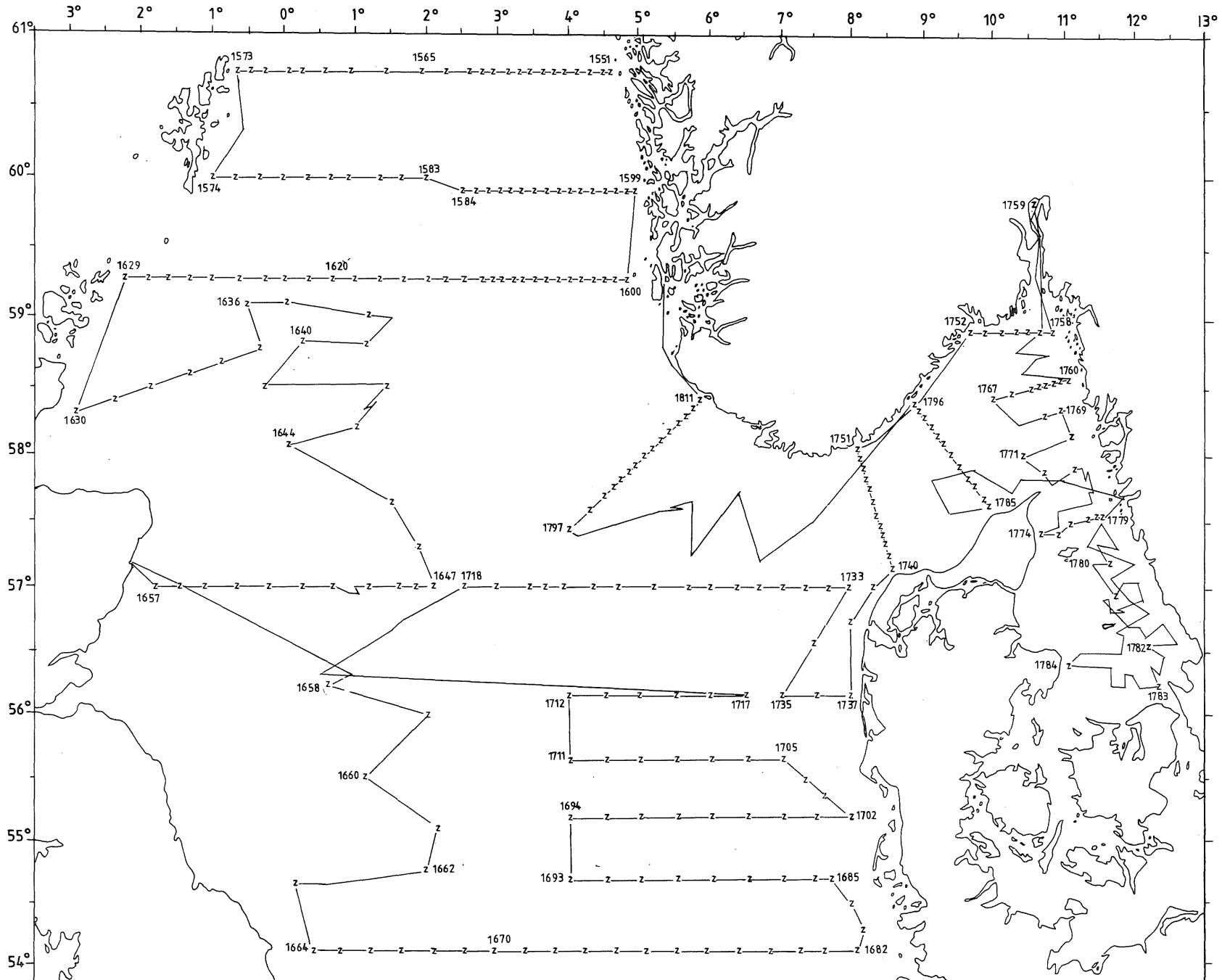
"G.O.SARS"



17 OCT-4 NOV. 1987 TRAWL ST. NO. 528 - 567

"G.O.SARS"

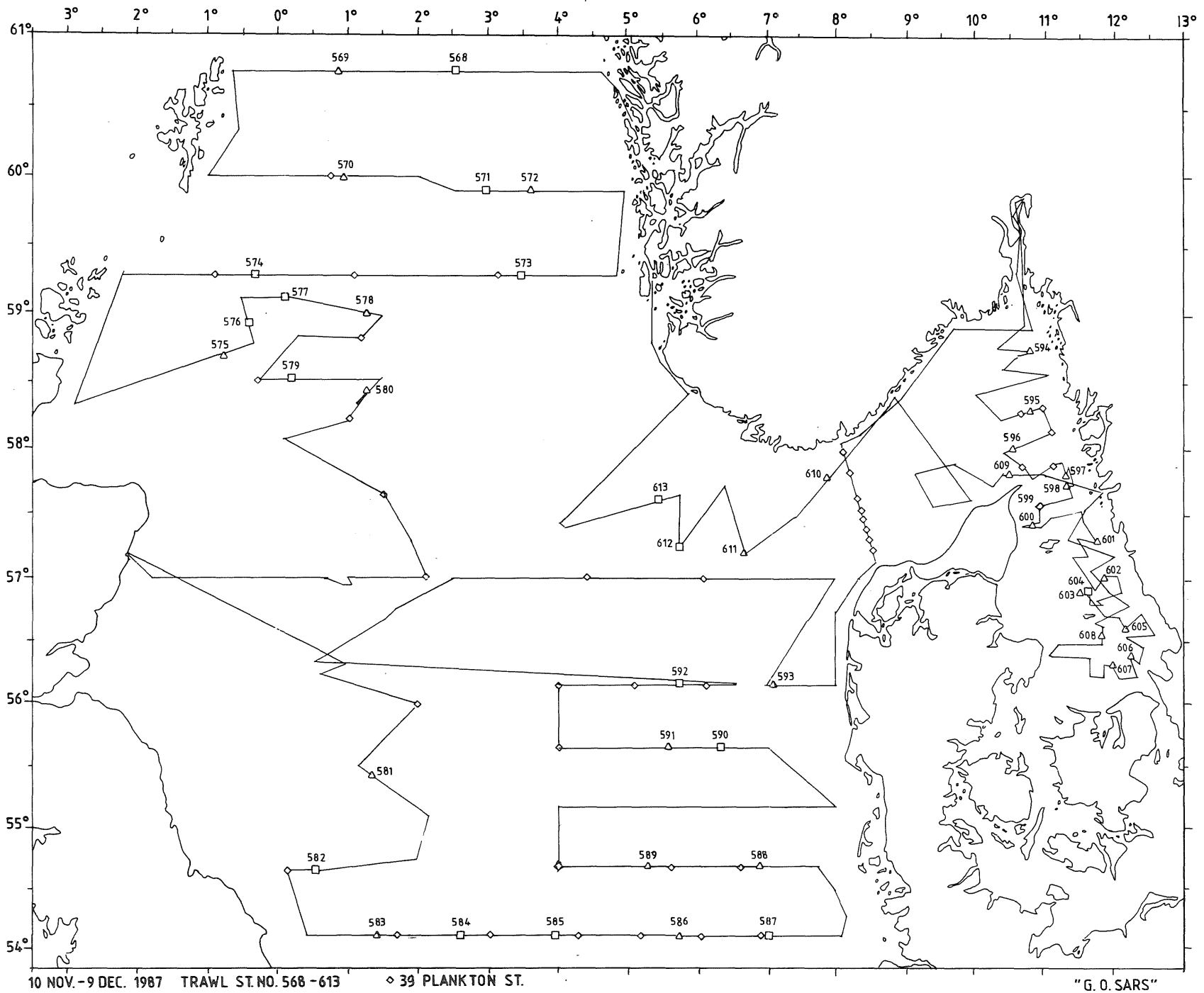


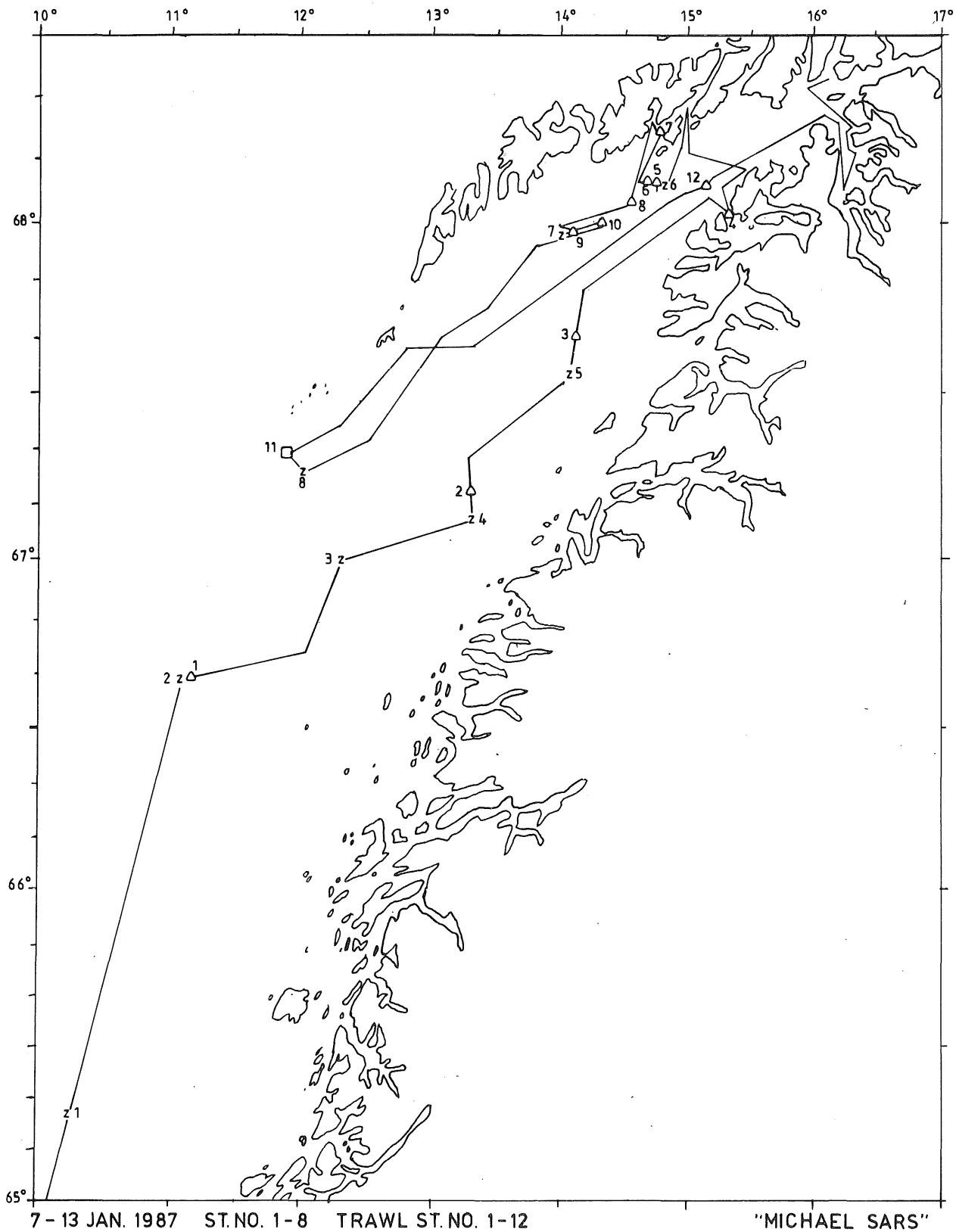


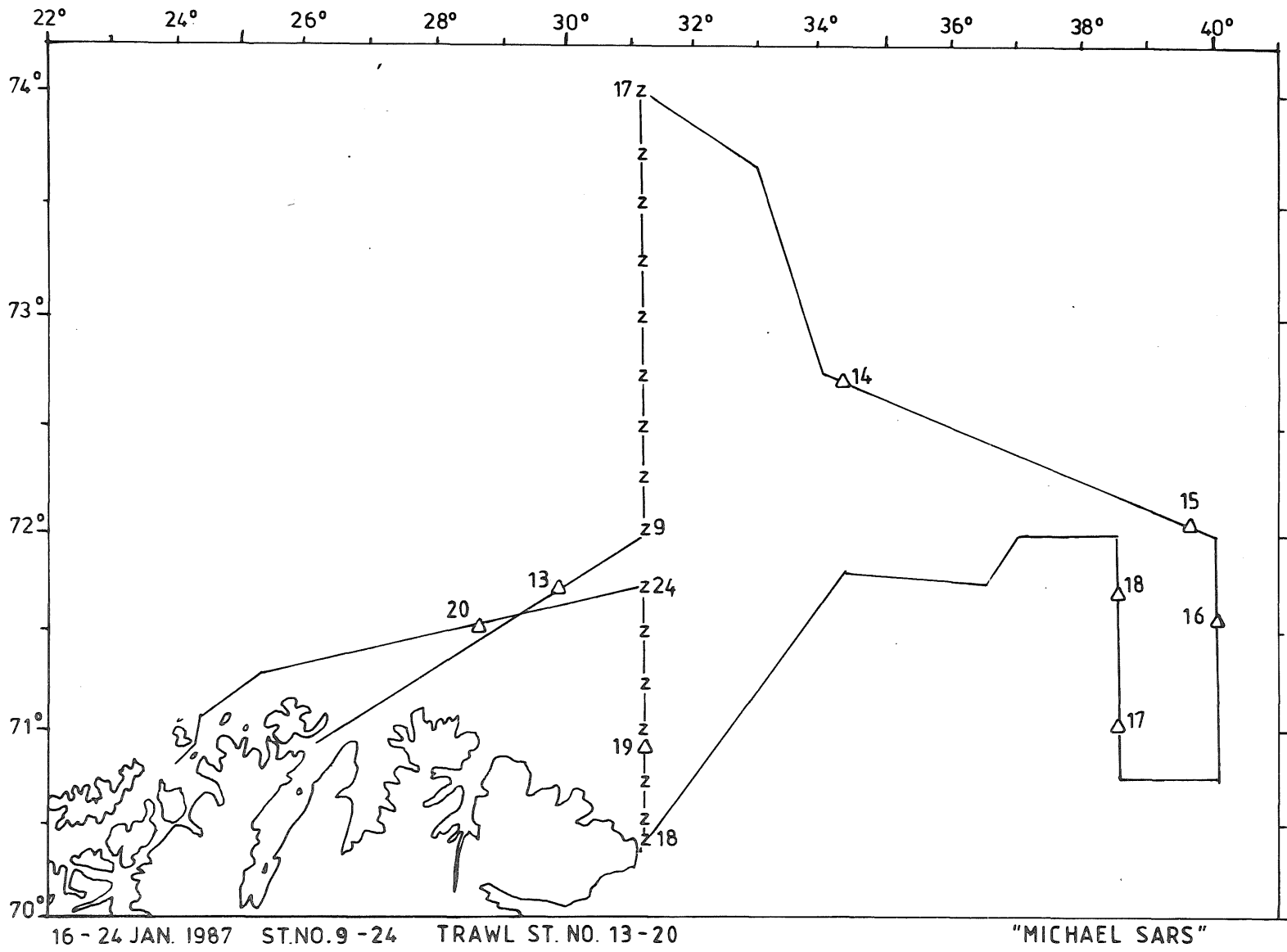
40

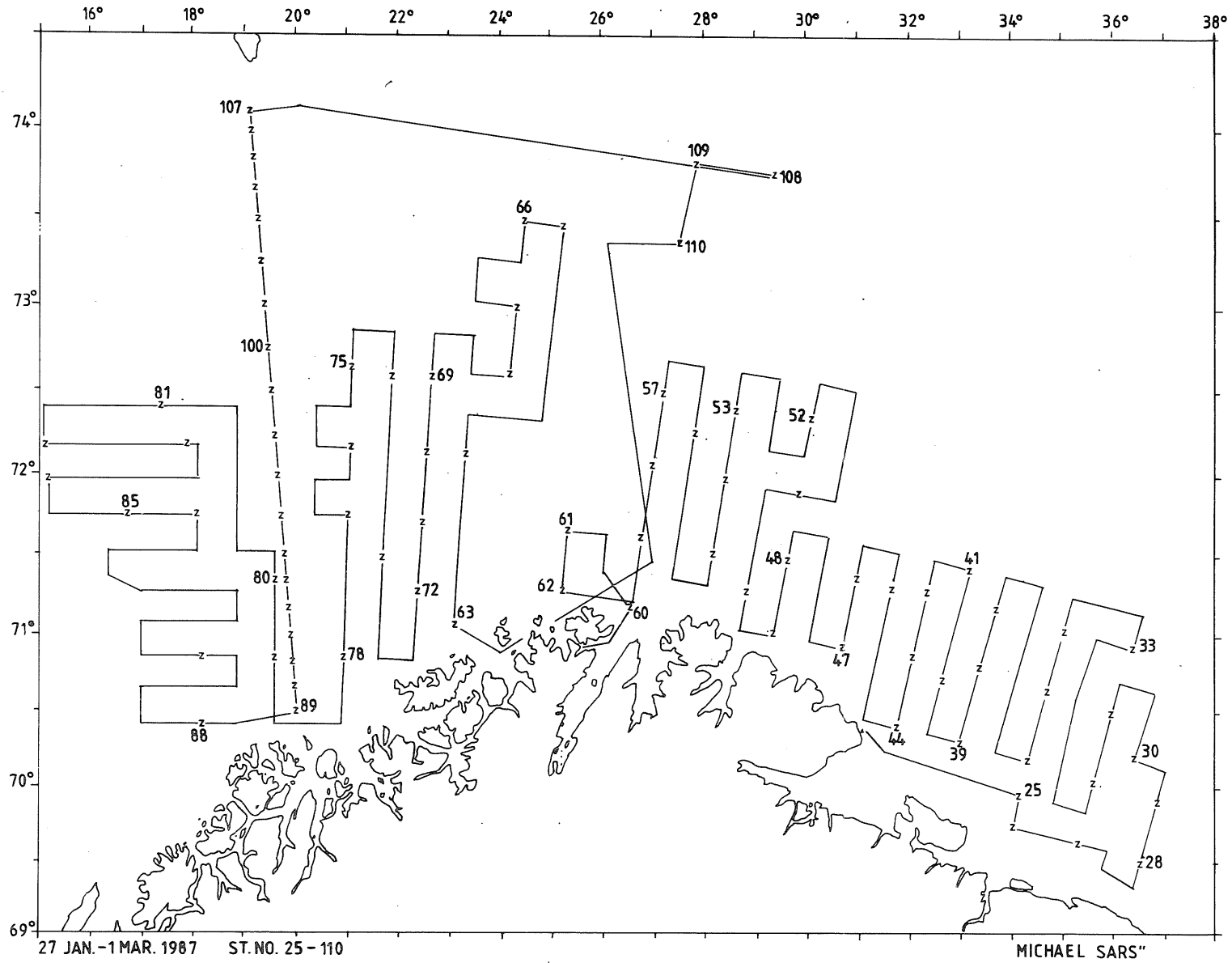
10 NOV. - 9 DEC. 1987 z ST.NO.1551-1811 CTD + NUTRIENTS ST.

"G. O. SARS"

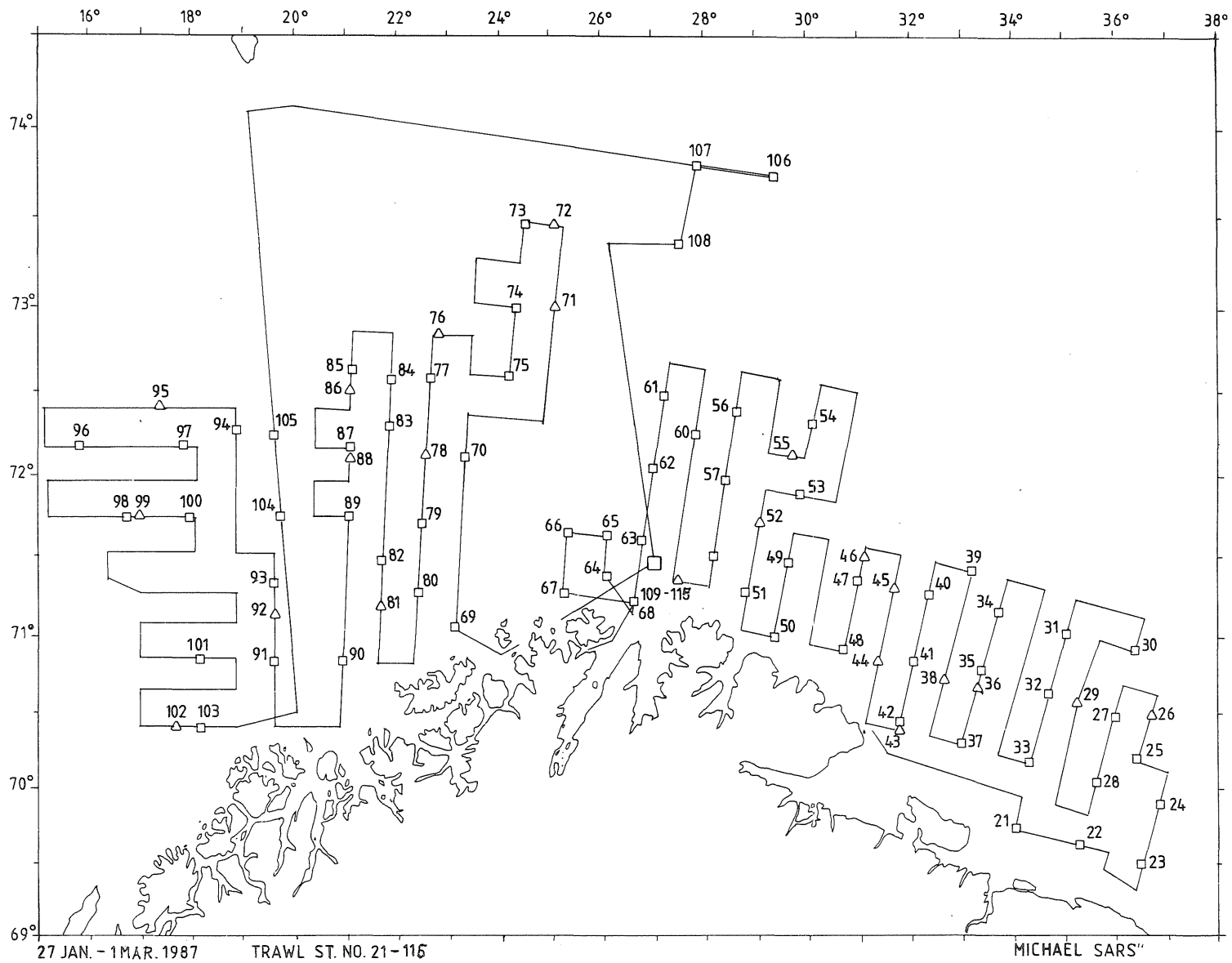


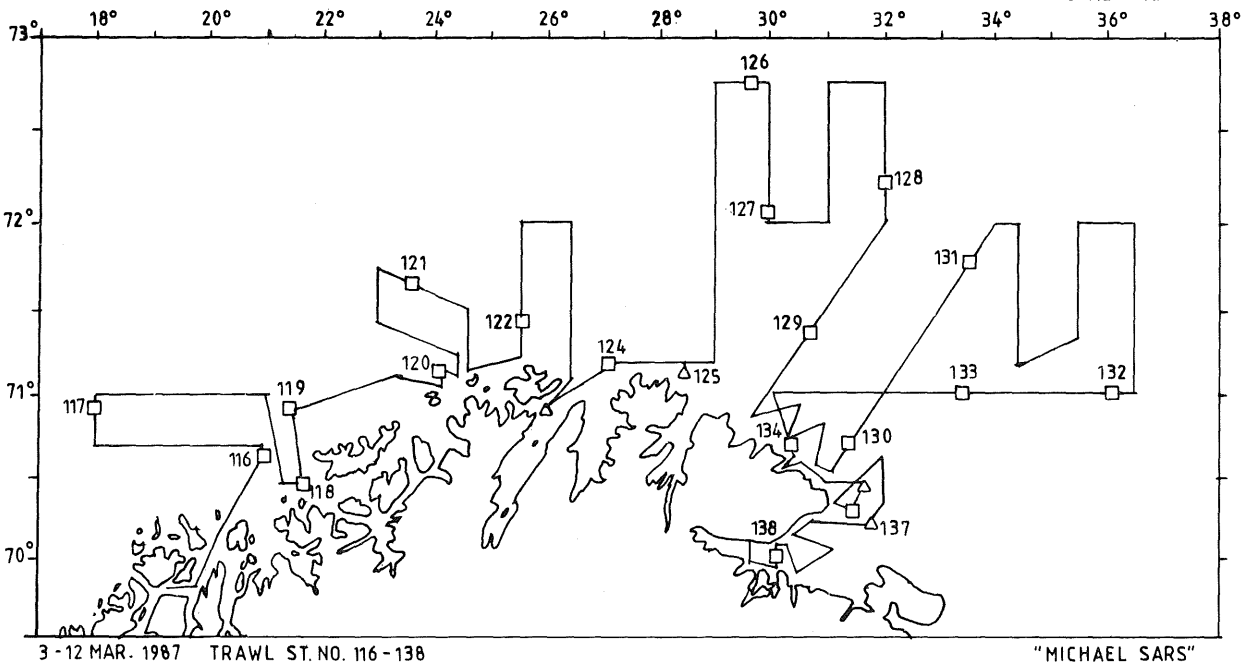
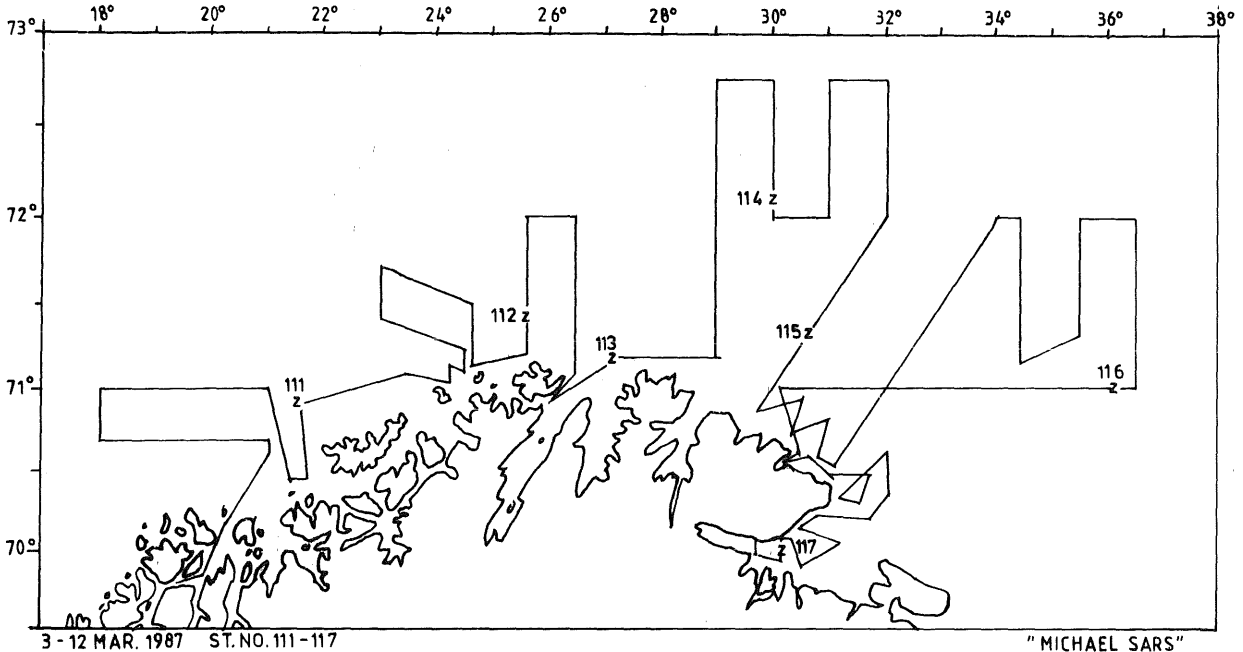


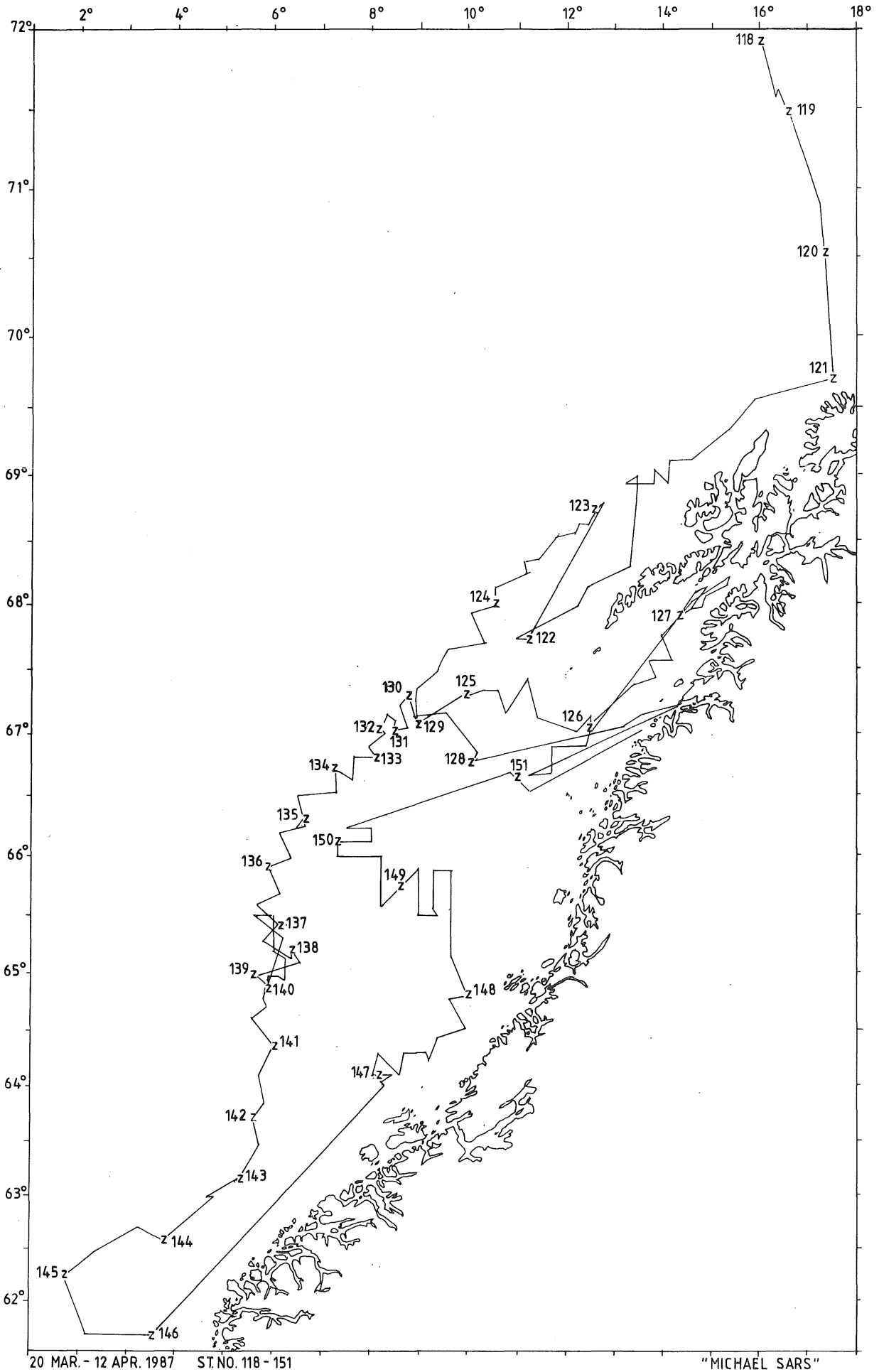




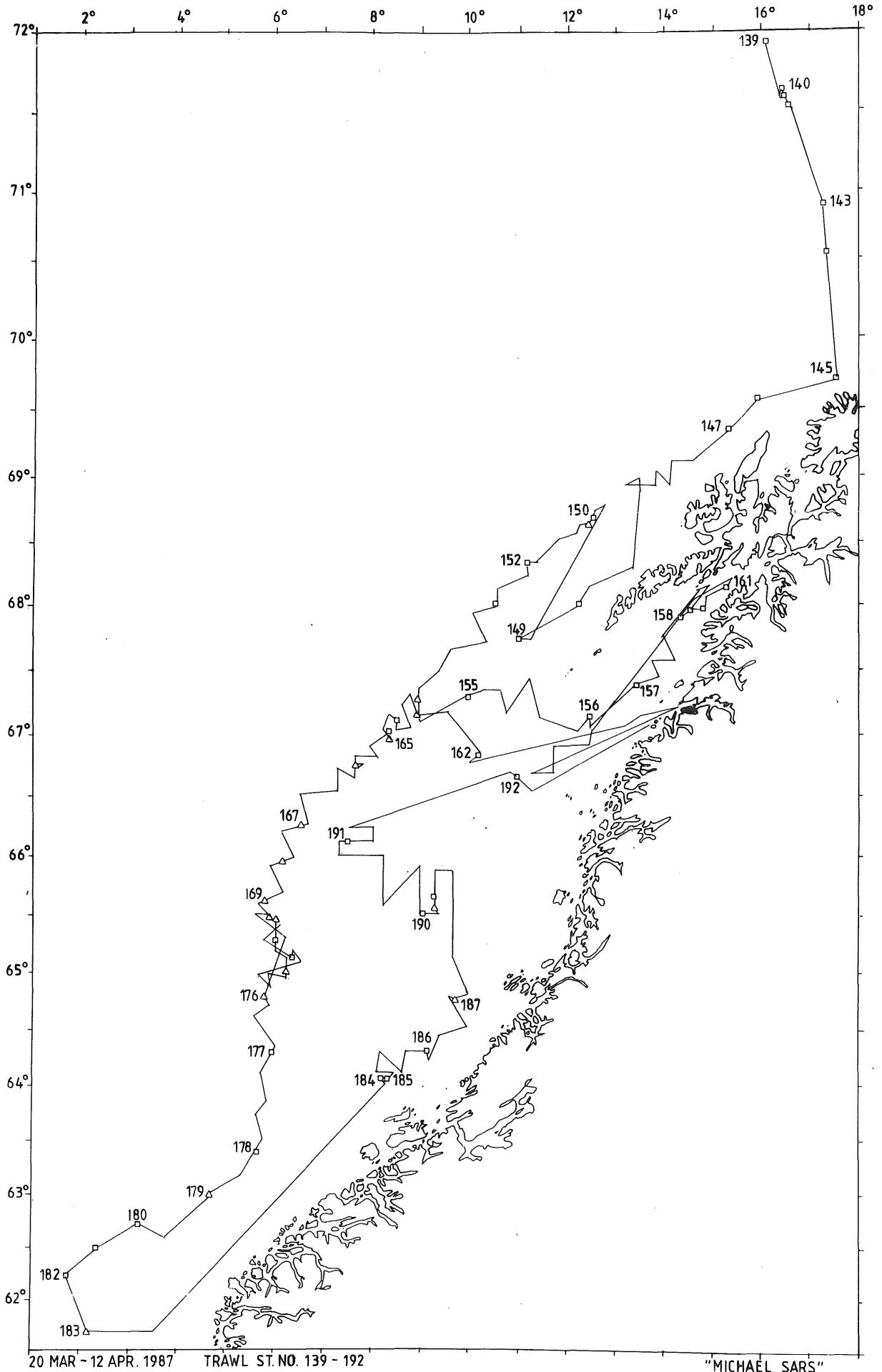
47

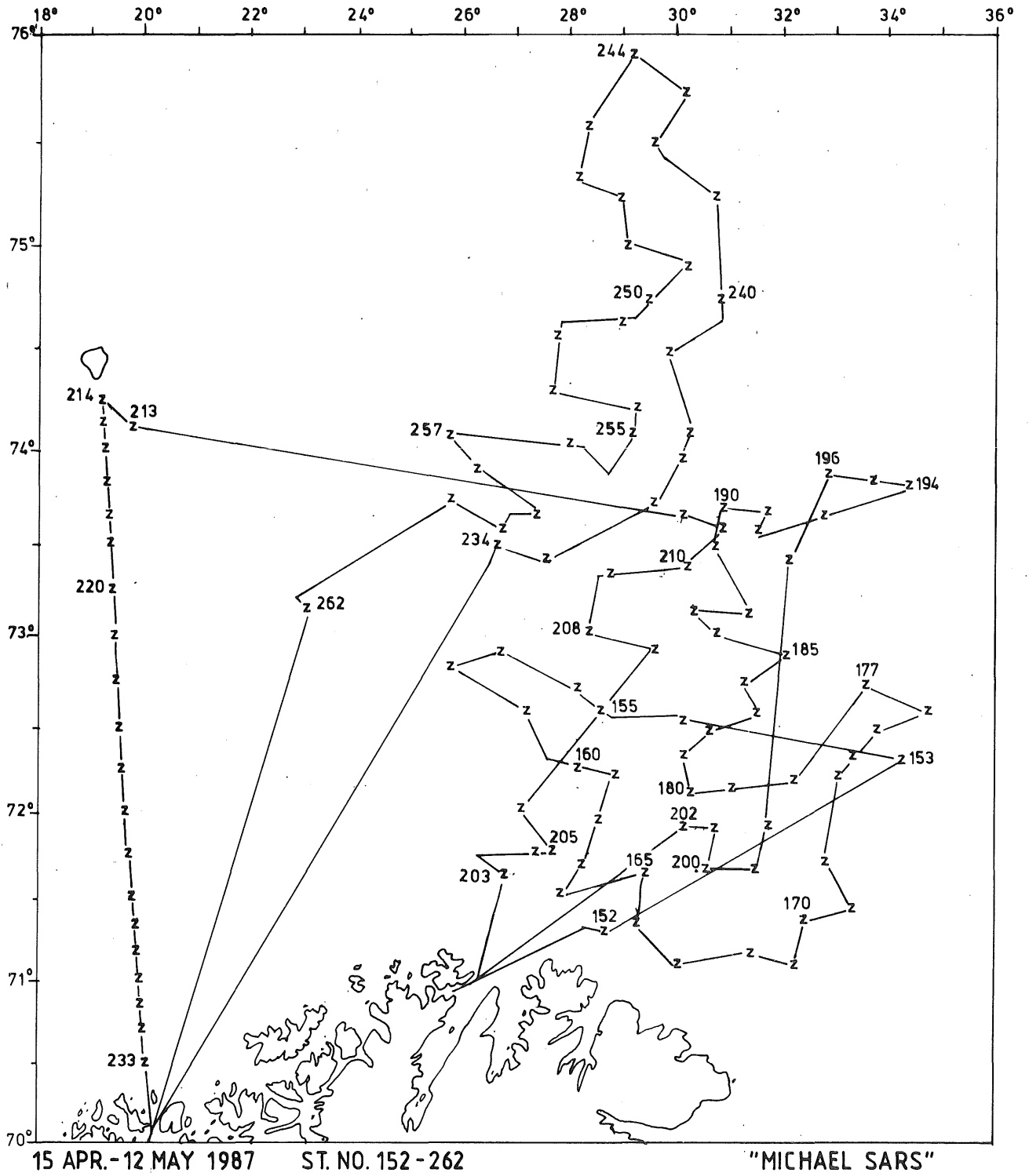


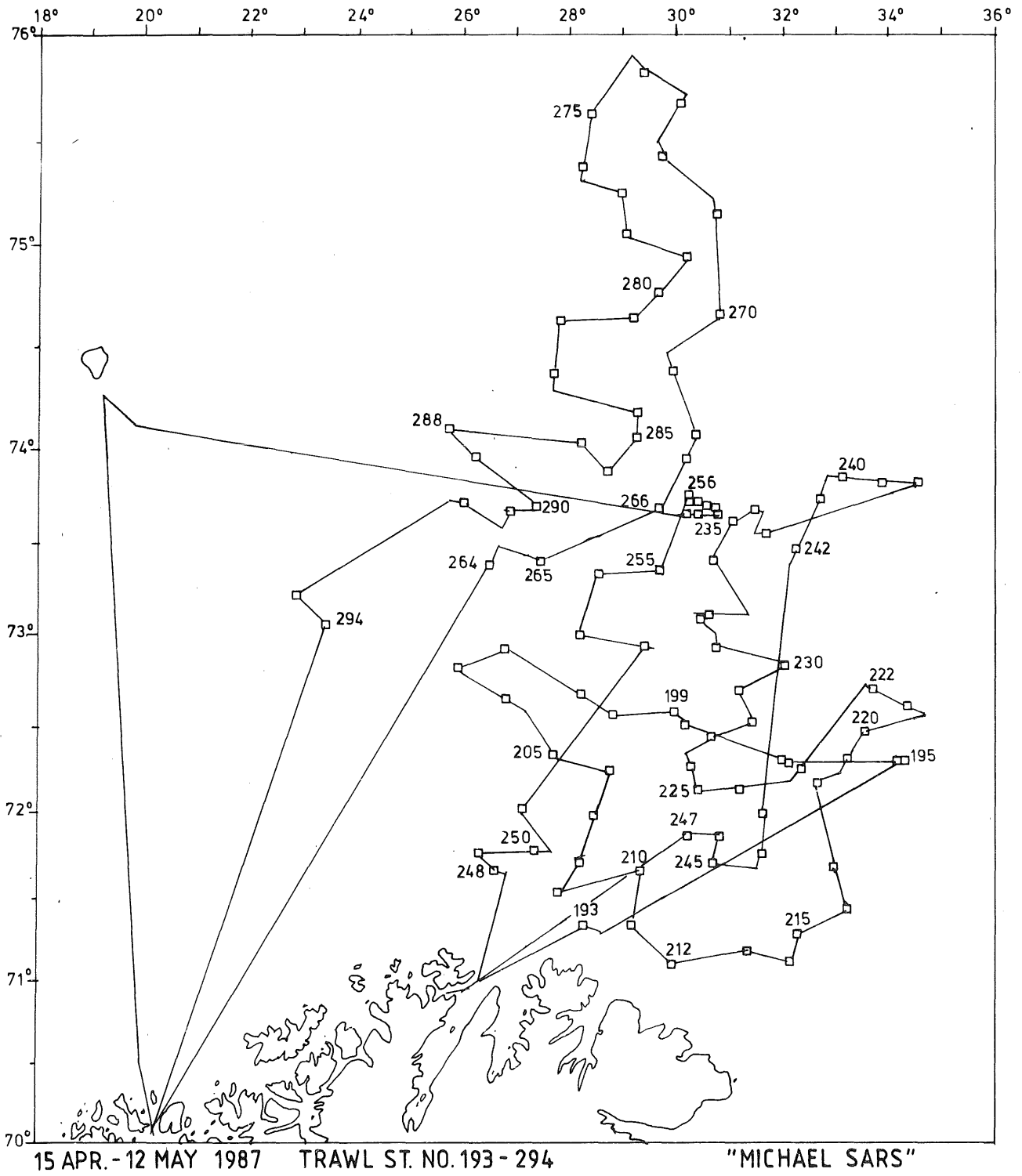


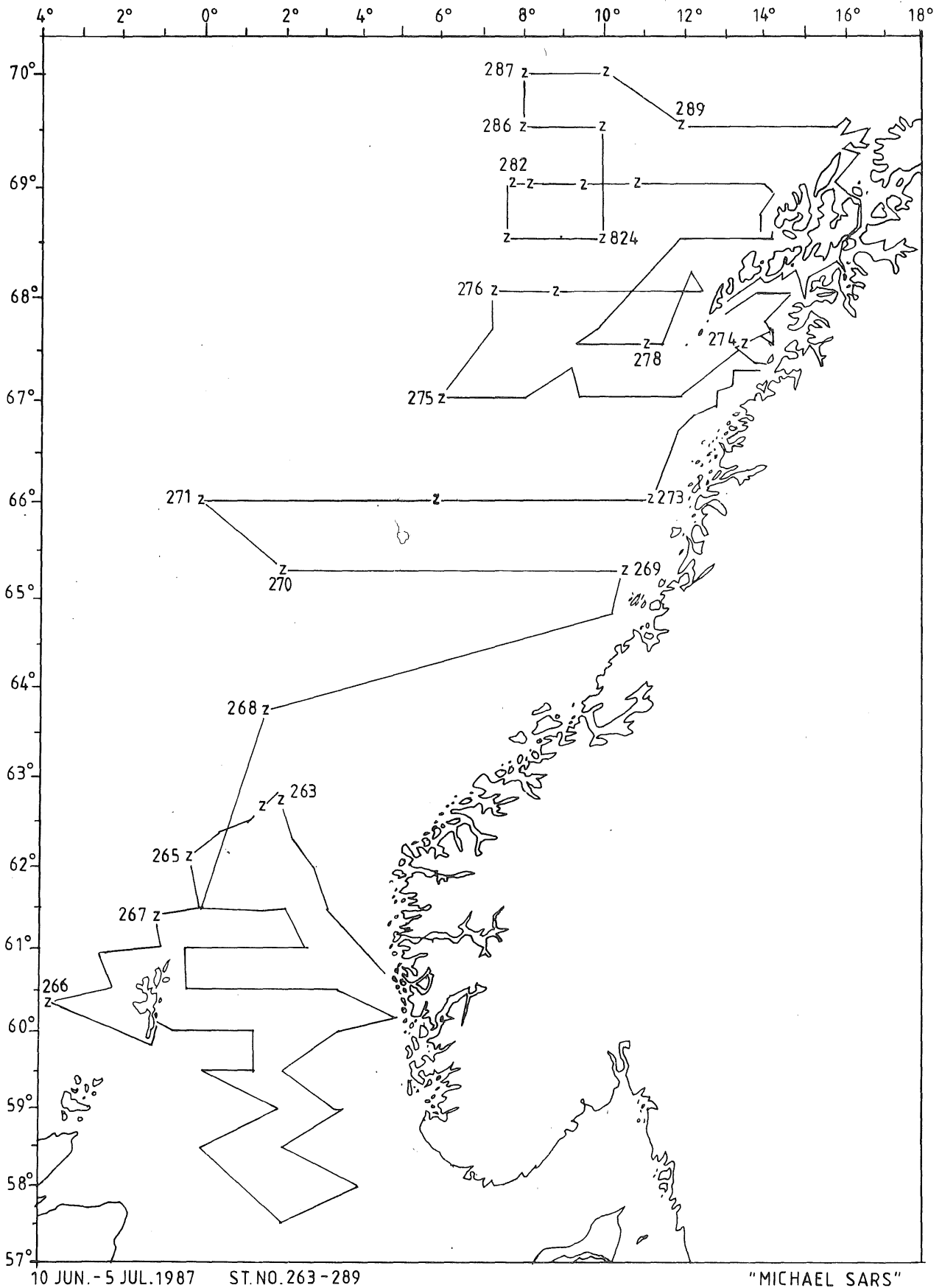


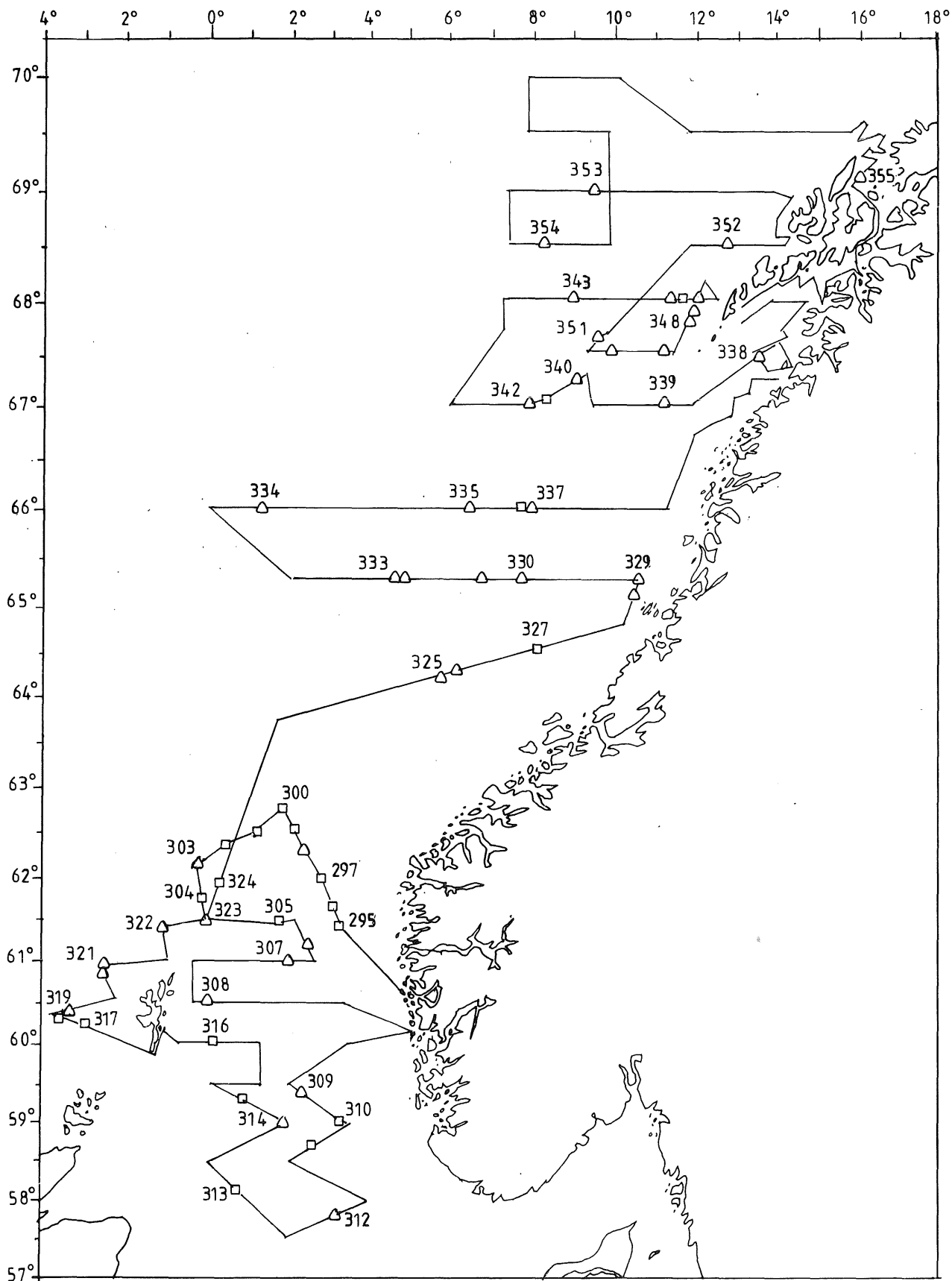






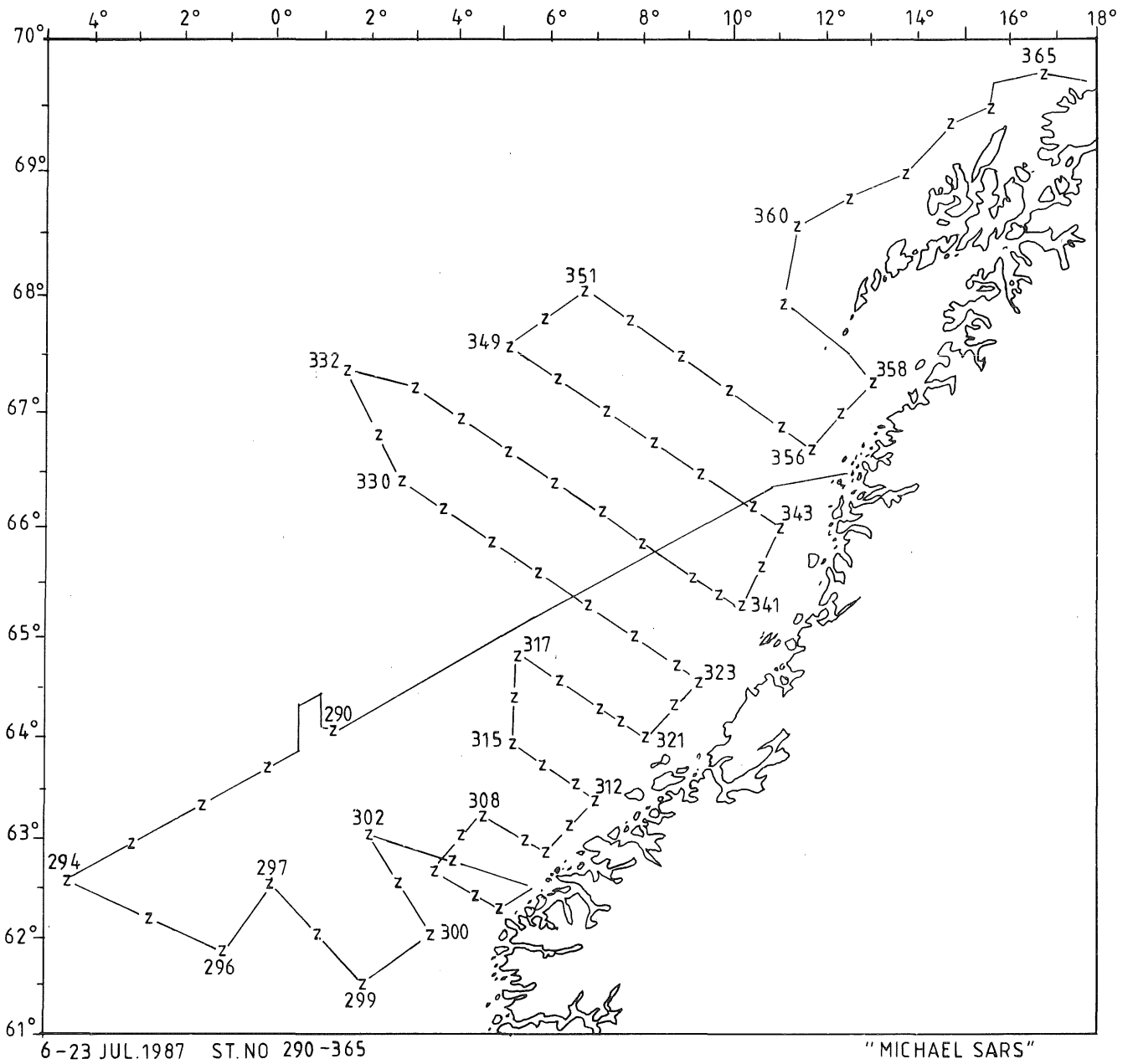


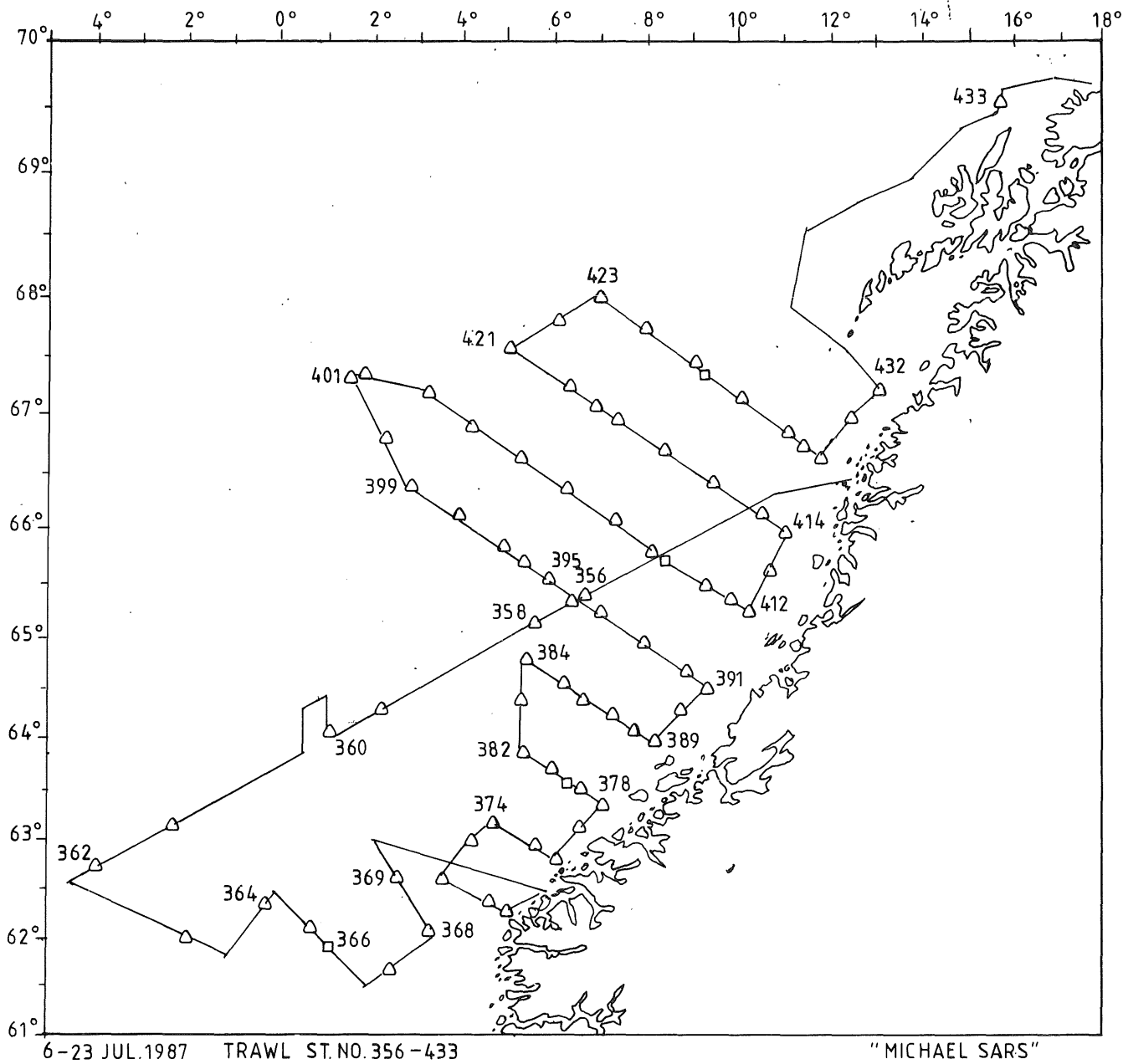


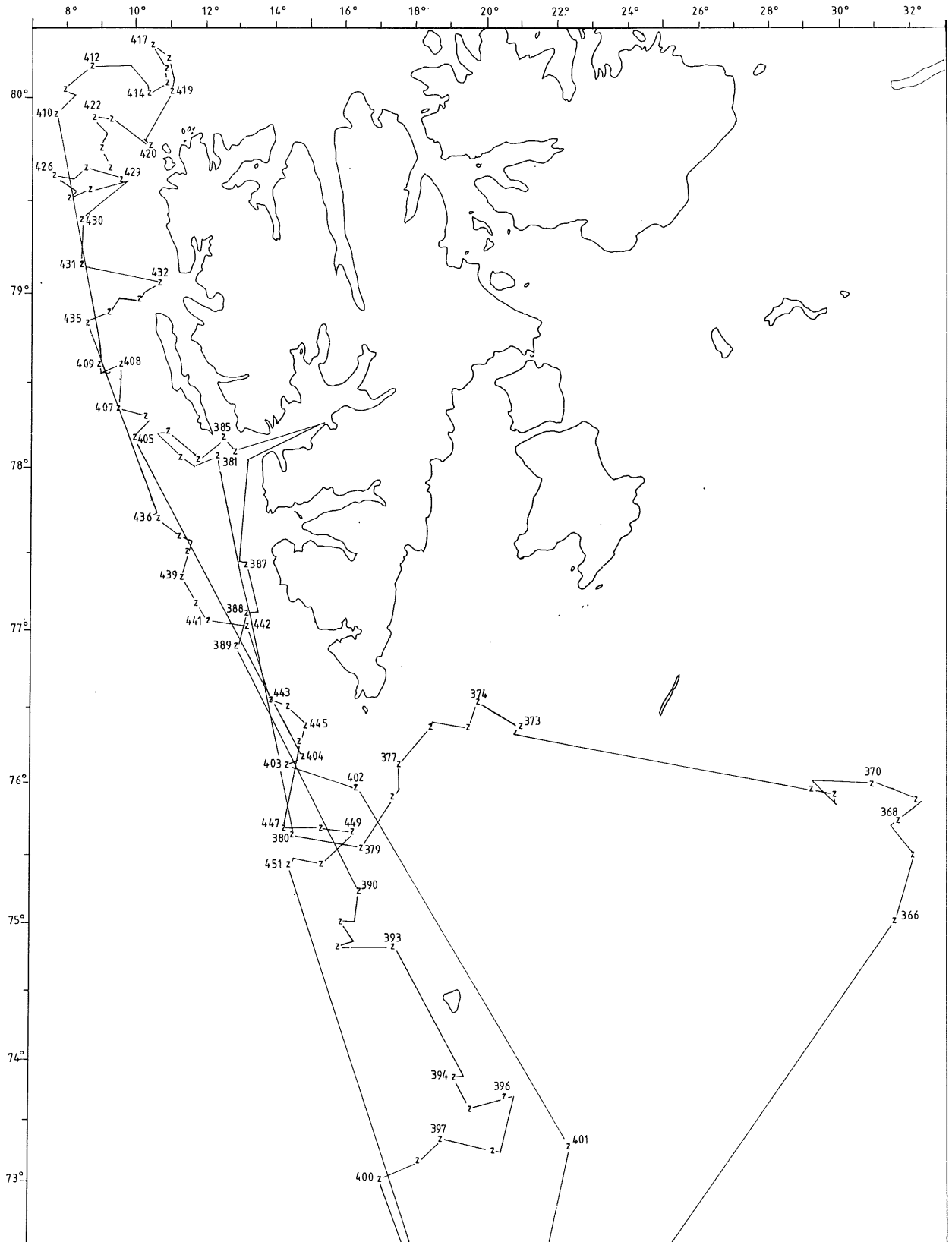


10 JUN. - 5 JUL. 1987 TRAWL ST.NO. 295 - 355

"MICHAEL SARS"



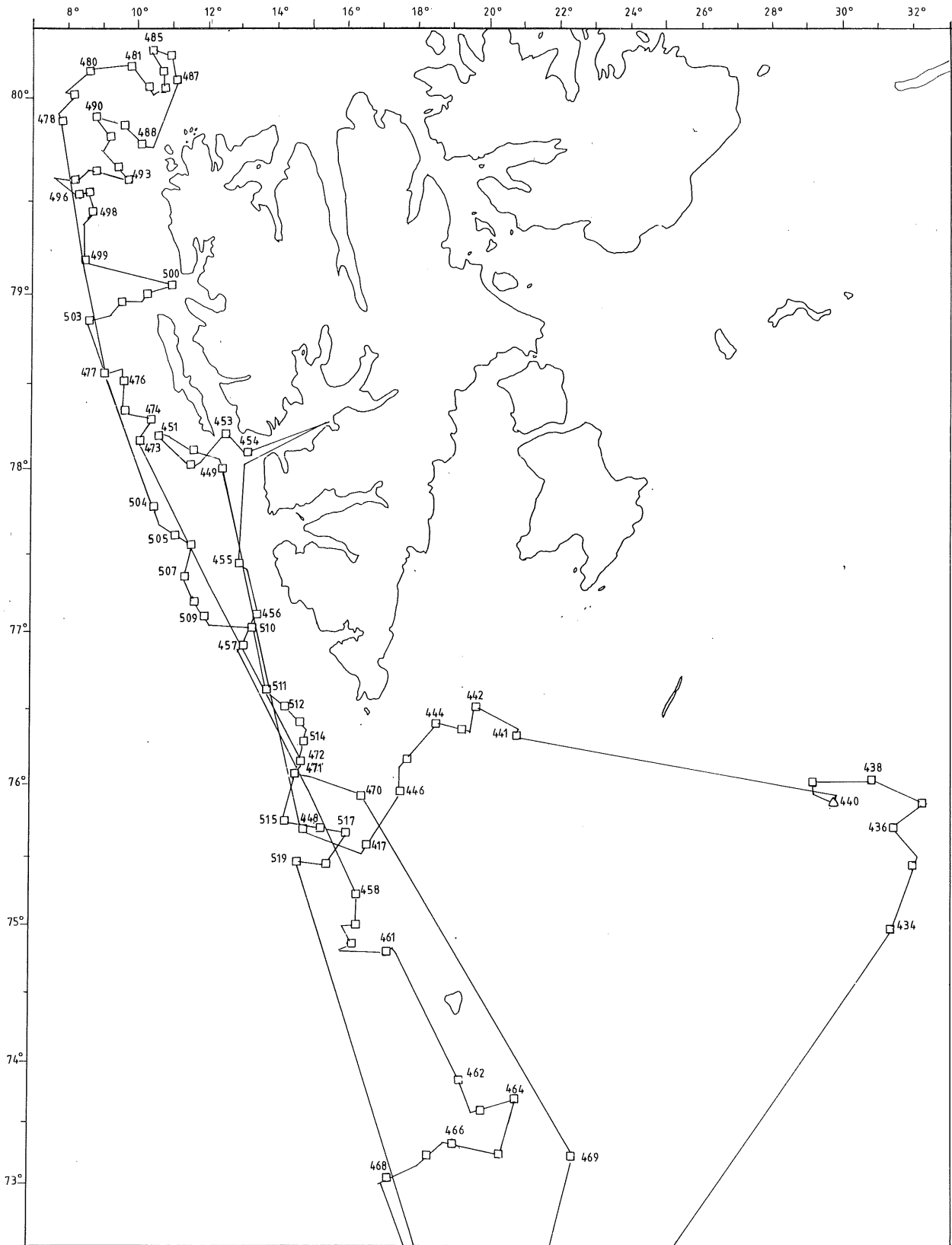




25 JUL. - 18 AUG. 1987 ST. NO. 366 - 451

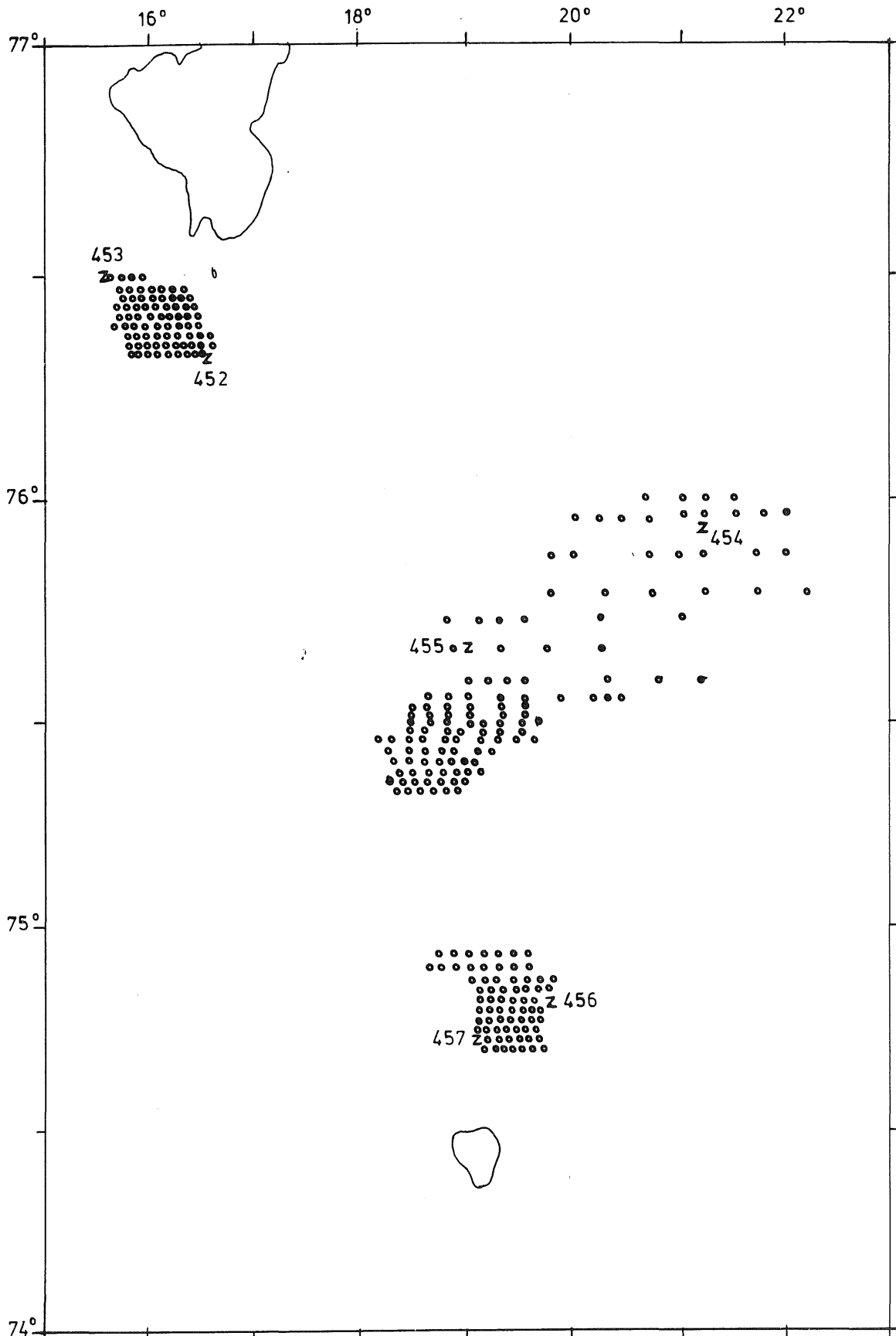
"MICHAL SARS"





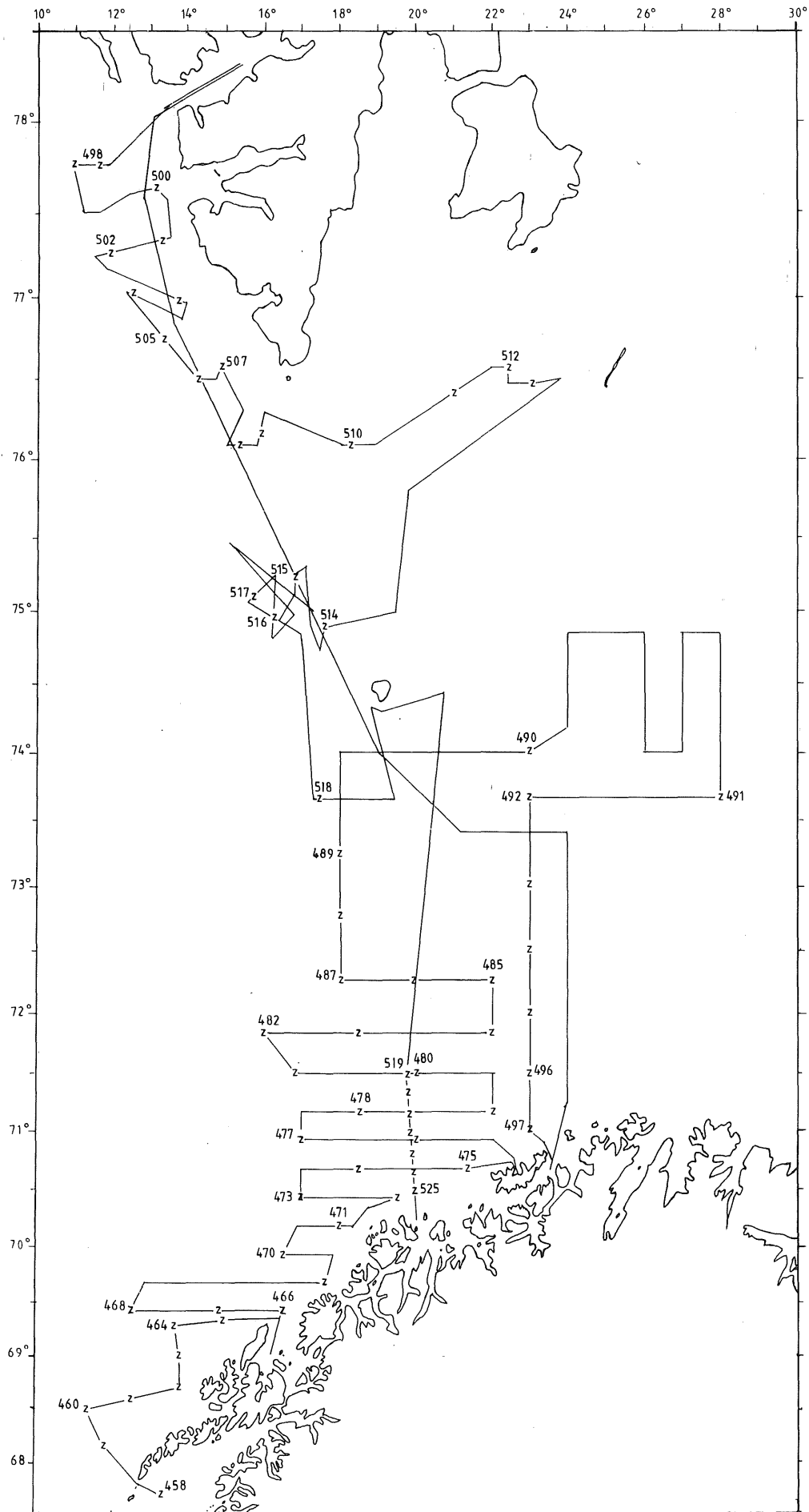
25 JUL. - 18 AUG. 1987 TRAWL ST. NO. 434-519

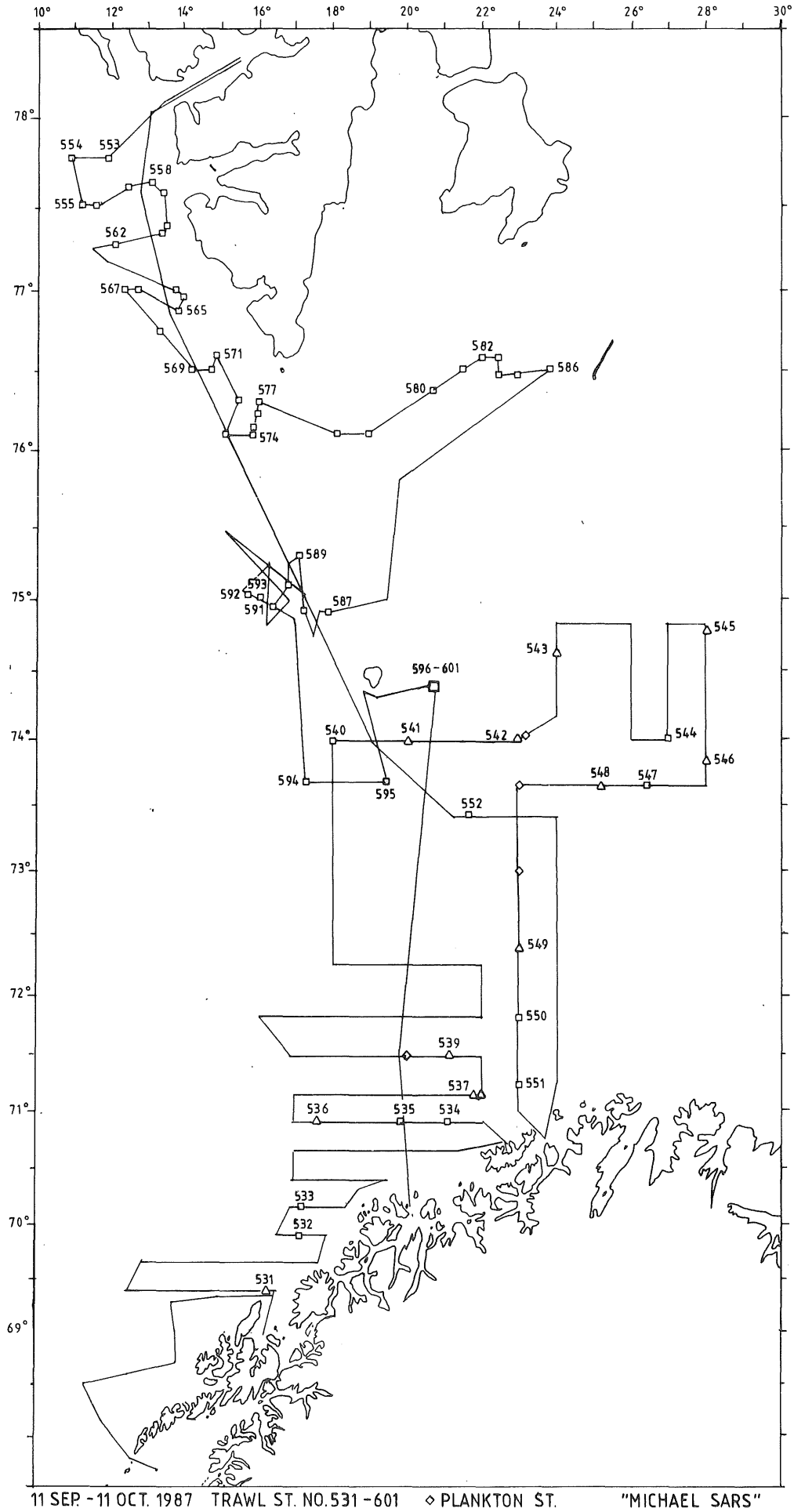
"MICHAL SARS"

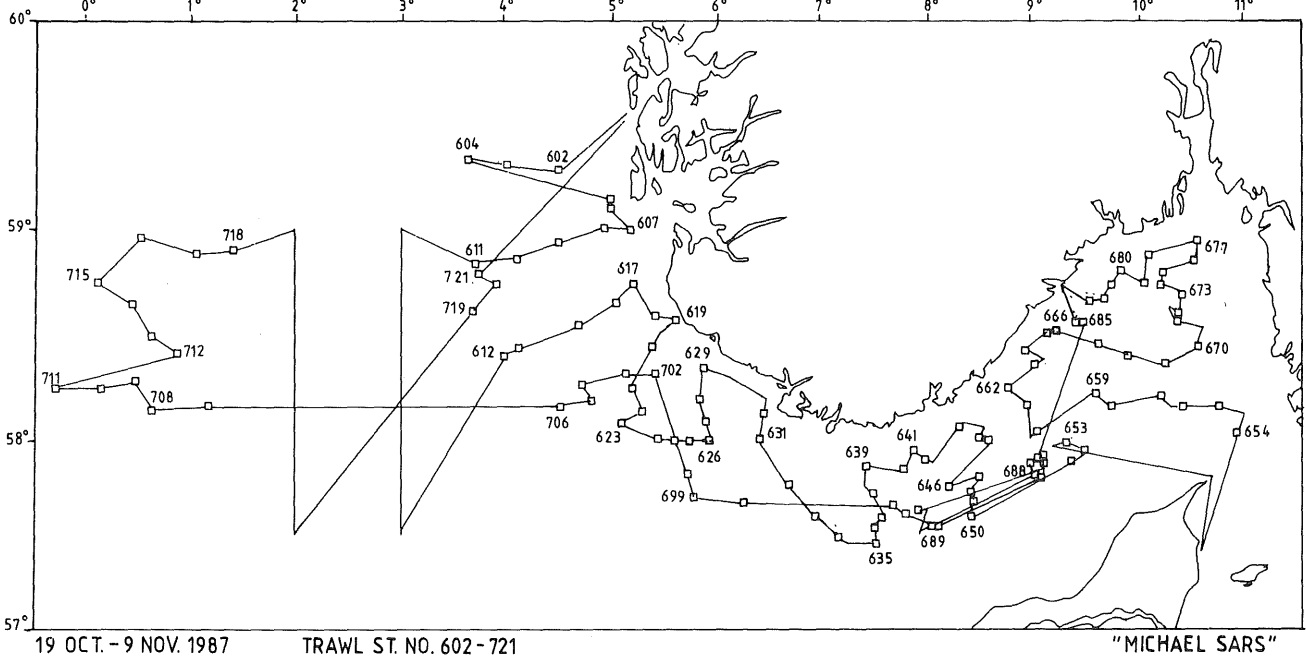
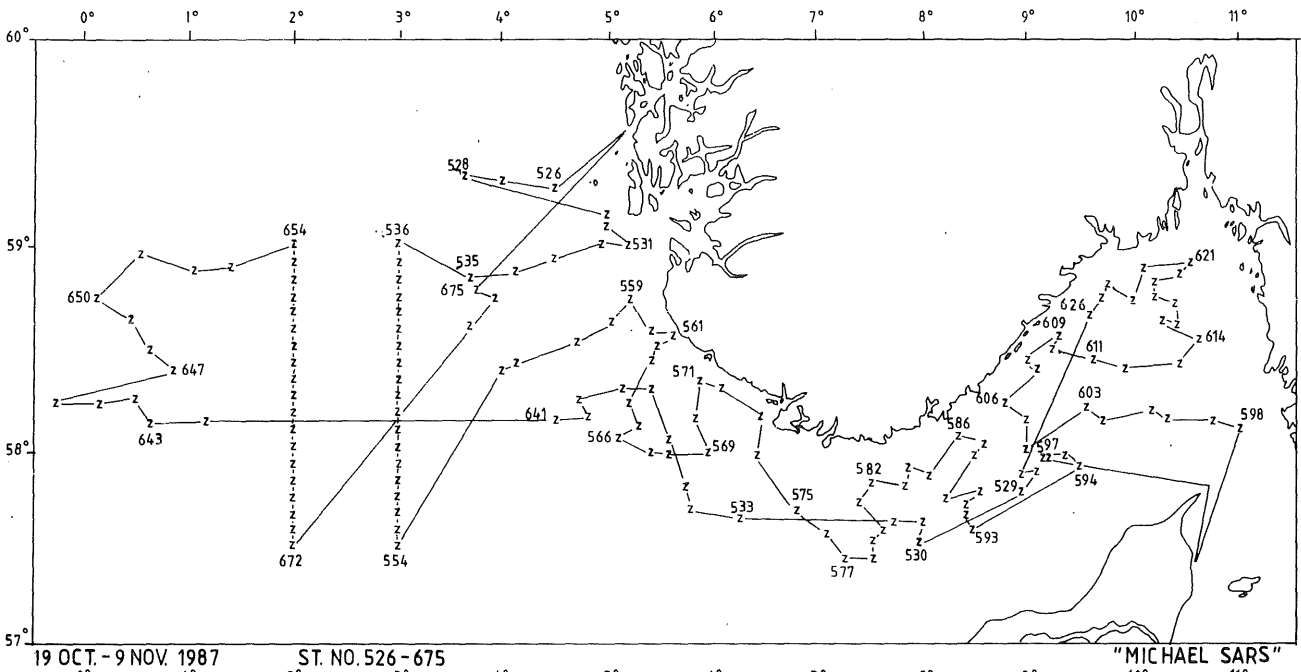


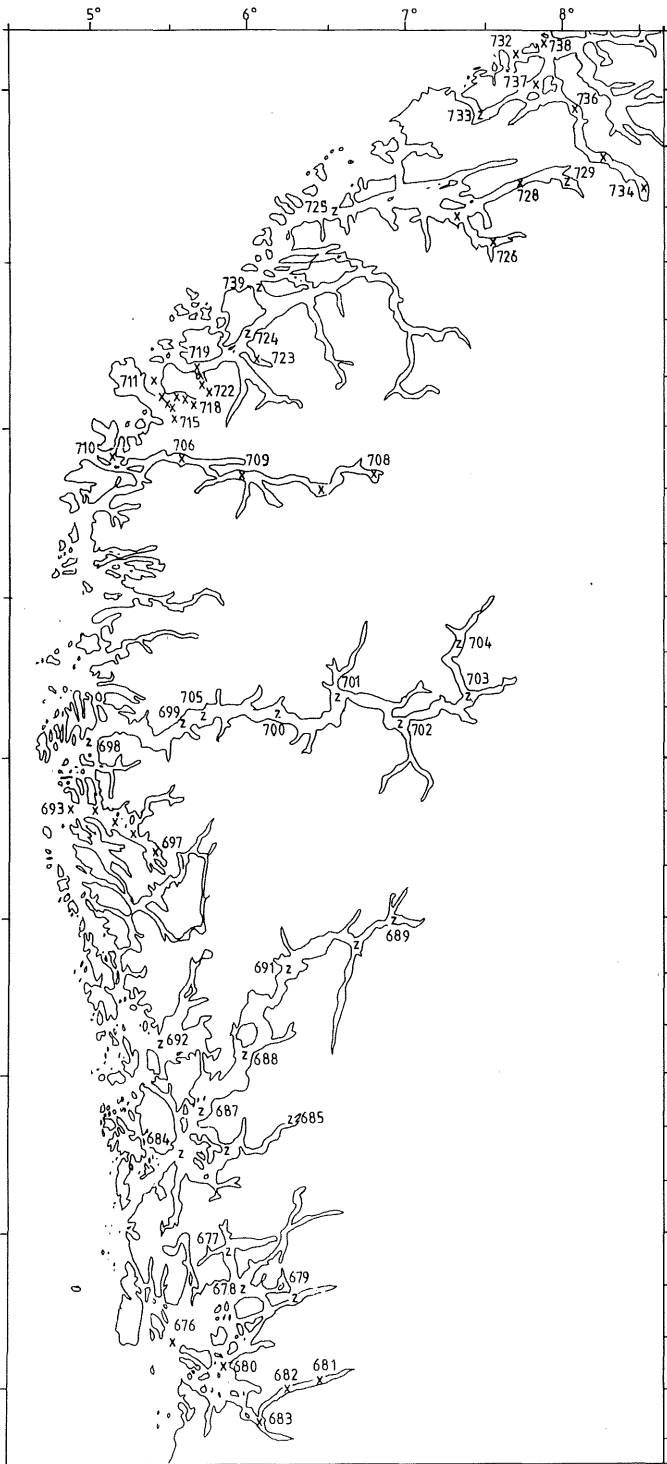
23 AUG - 3 SEP. 1987 ST. NO. 453-457  
• 284 ISLAND SCALLOP DREDGING

"MICHAEL SARS"

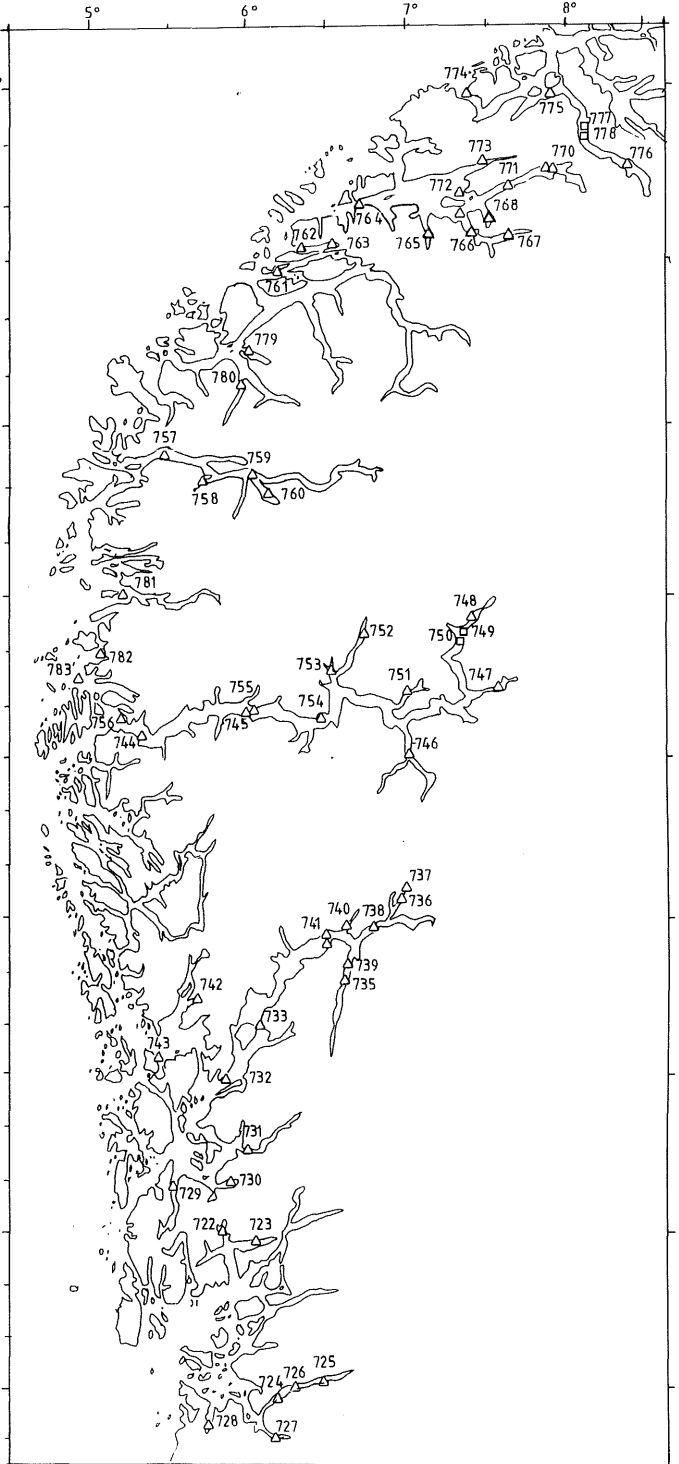






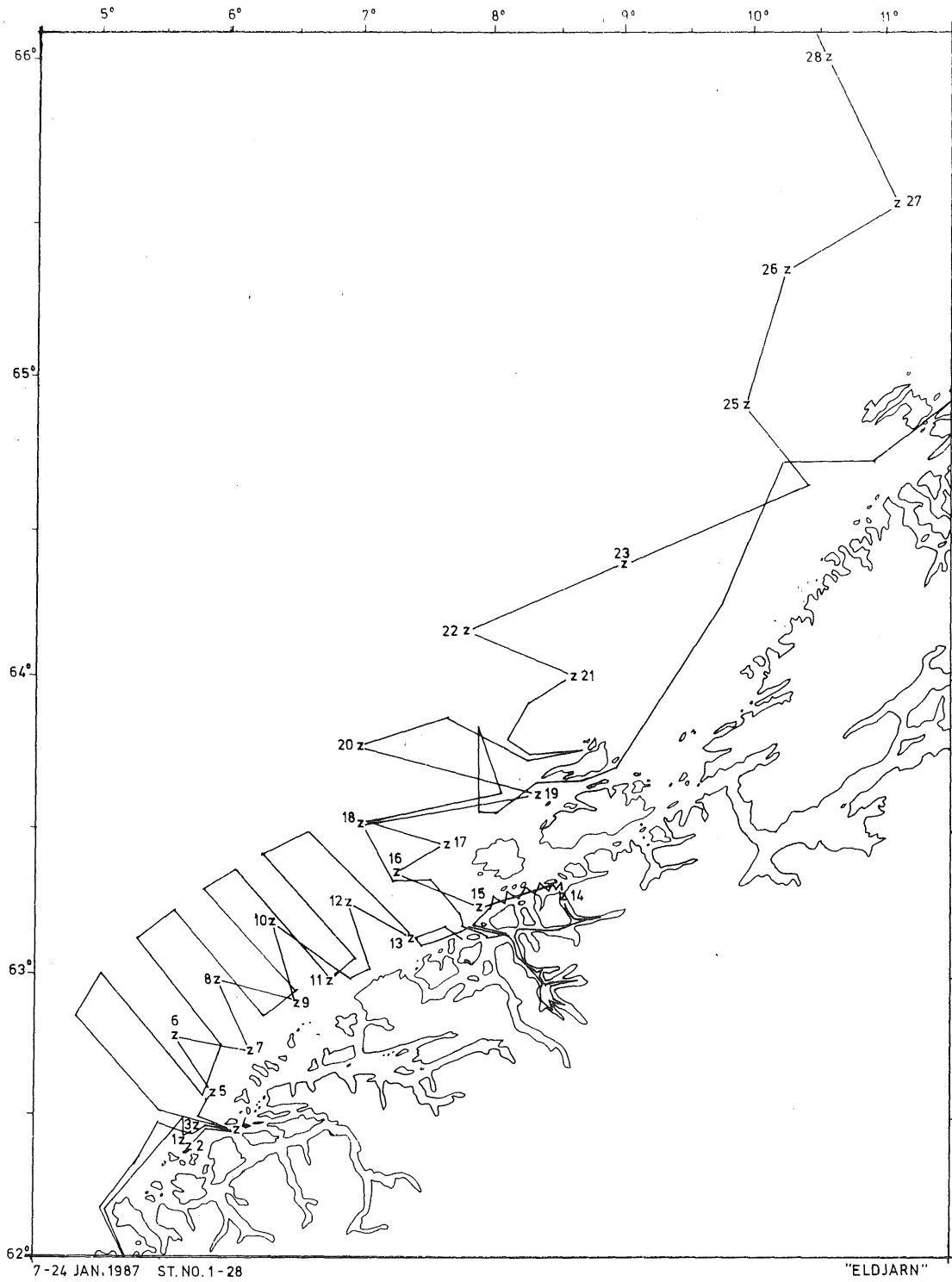


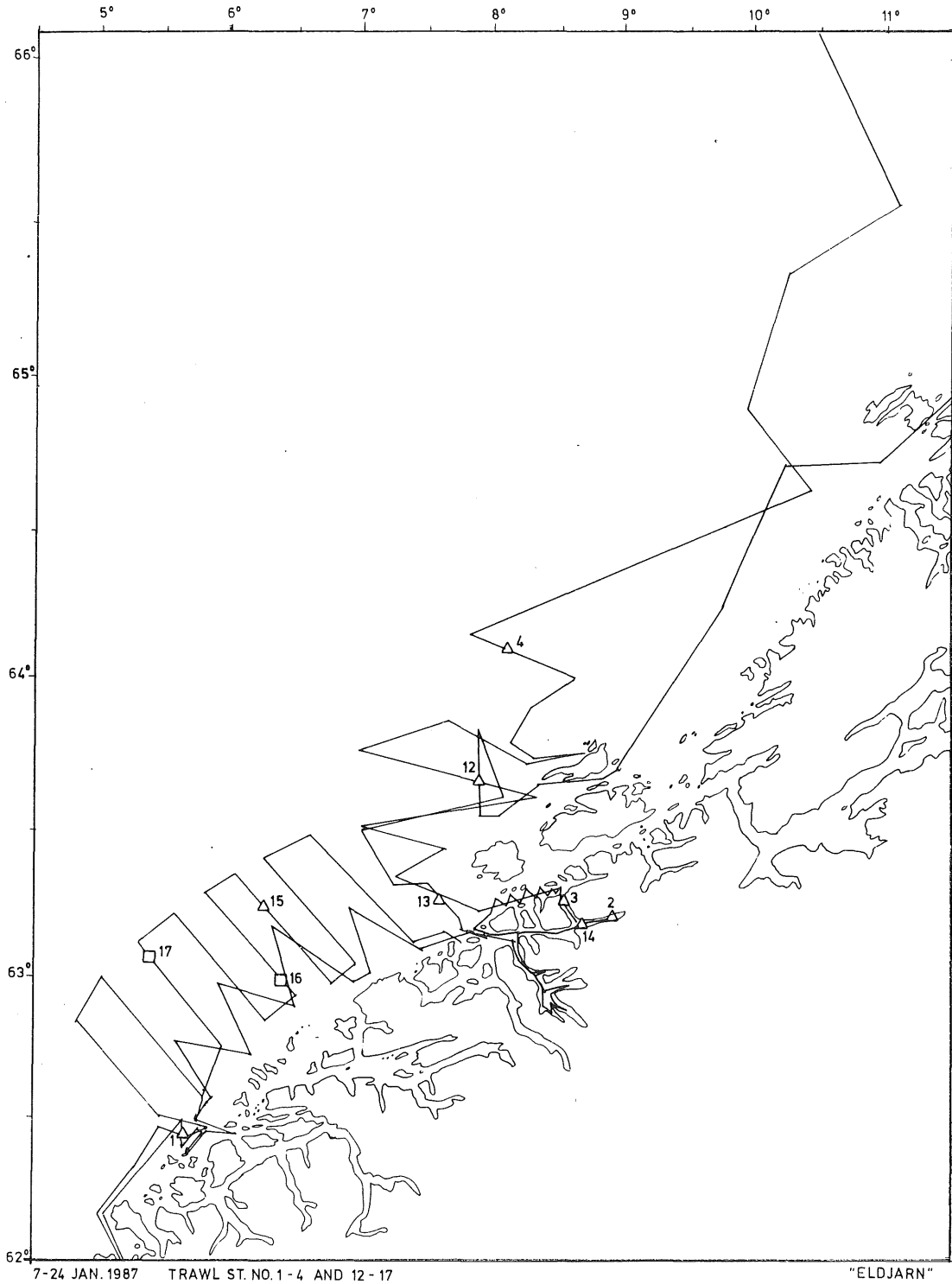
16-30 NOV. 1987 z x CTD ST. NO. 676-739 x OXYGEN+NUTRIENTS ST.



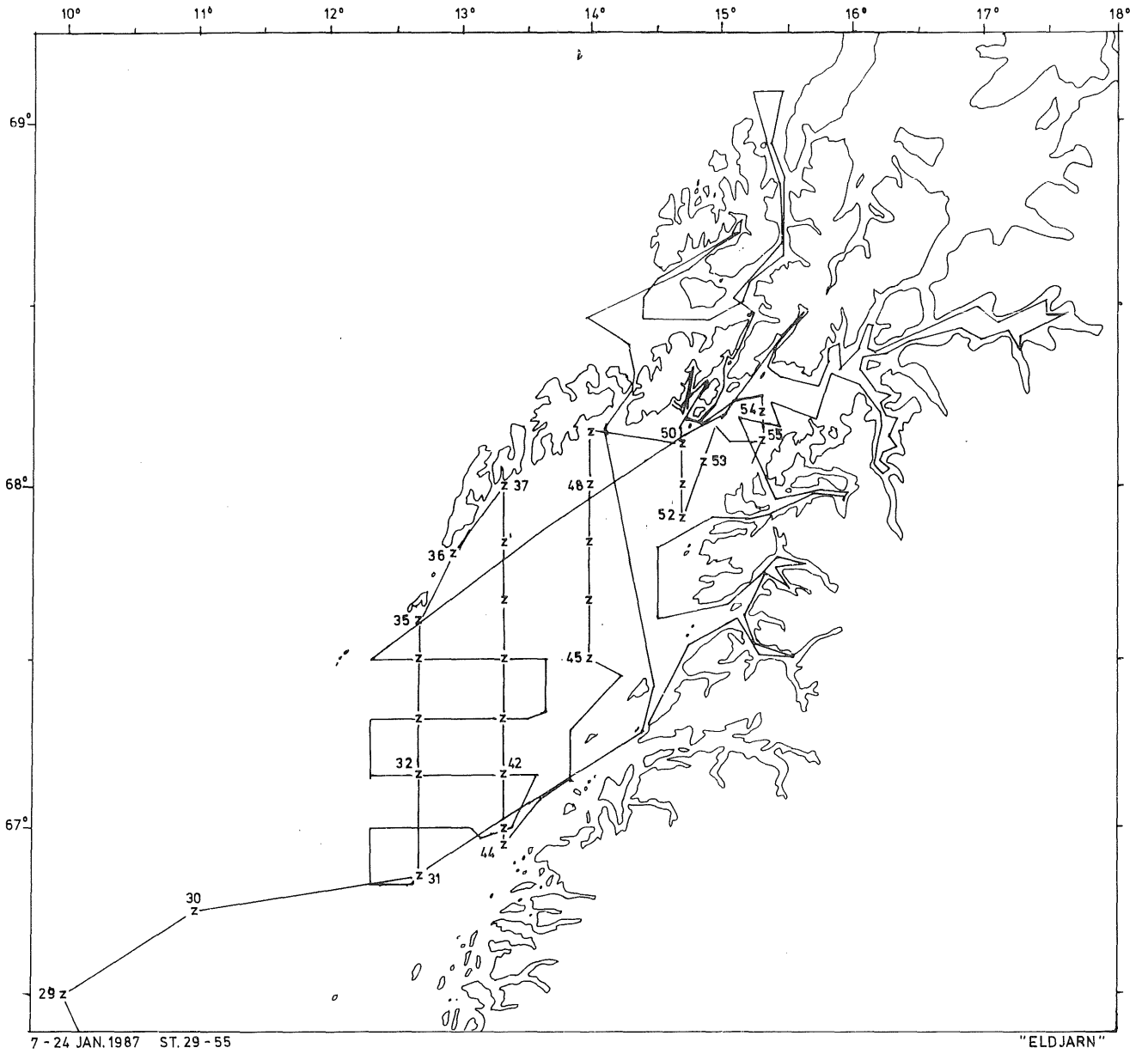
TRAWL ST. NO 722-783

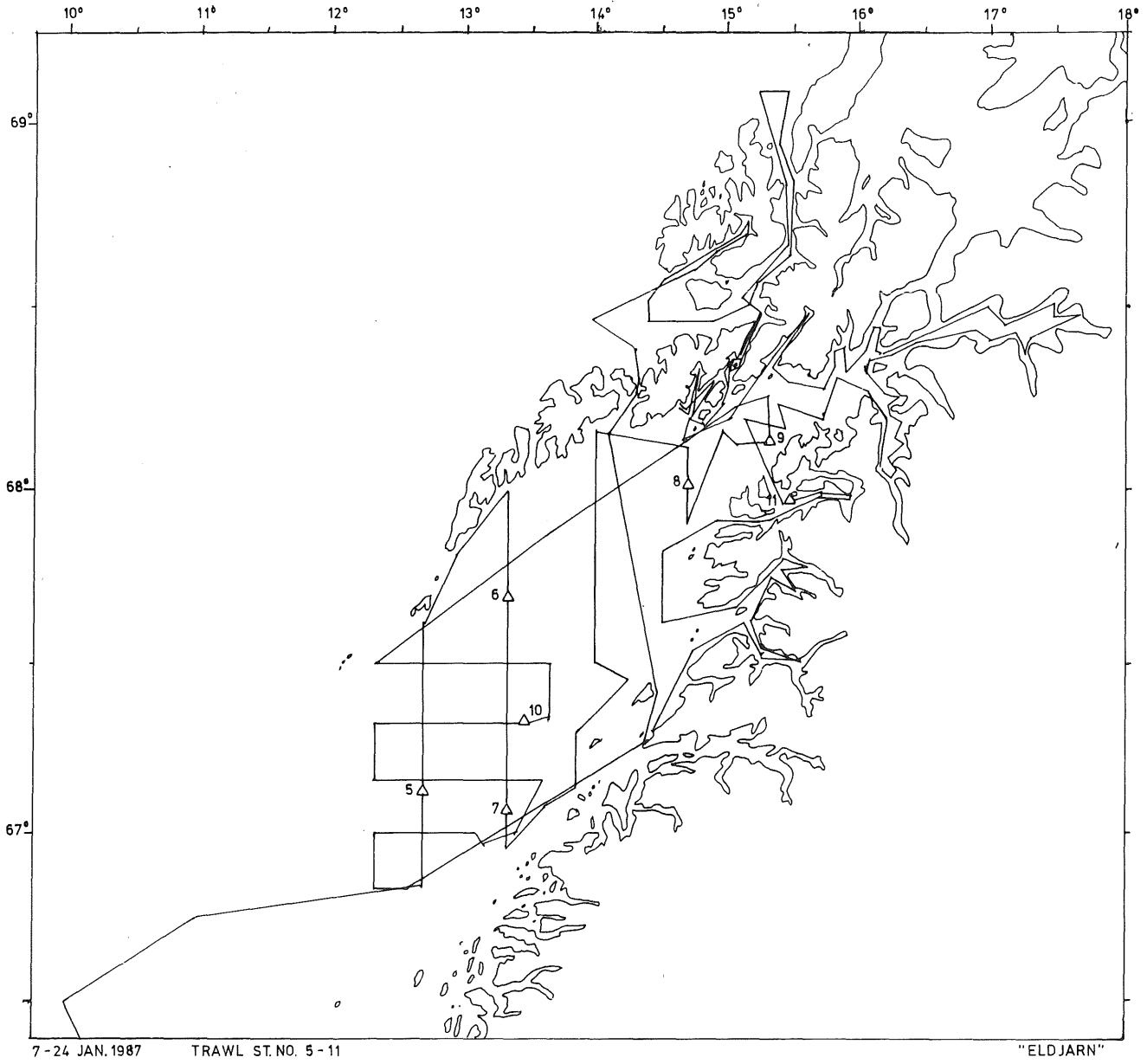
"MICHAEL SARS"





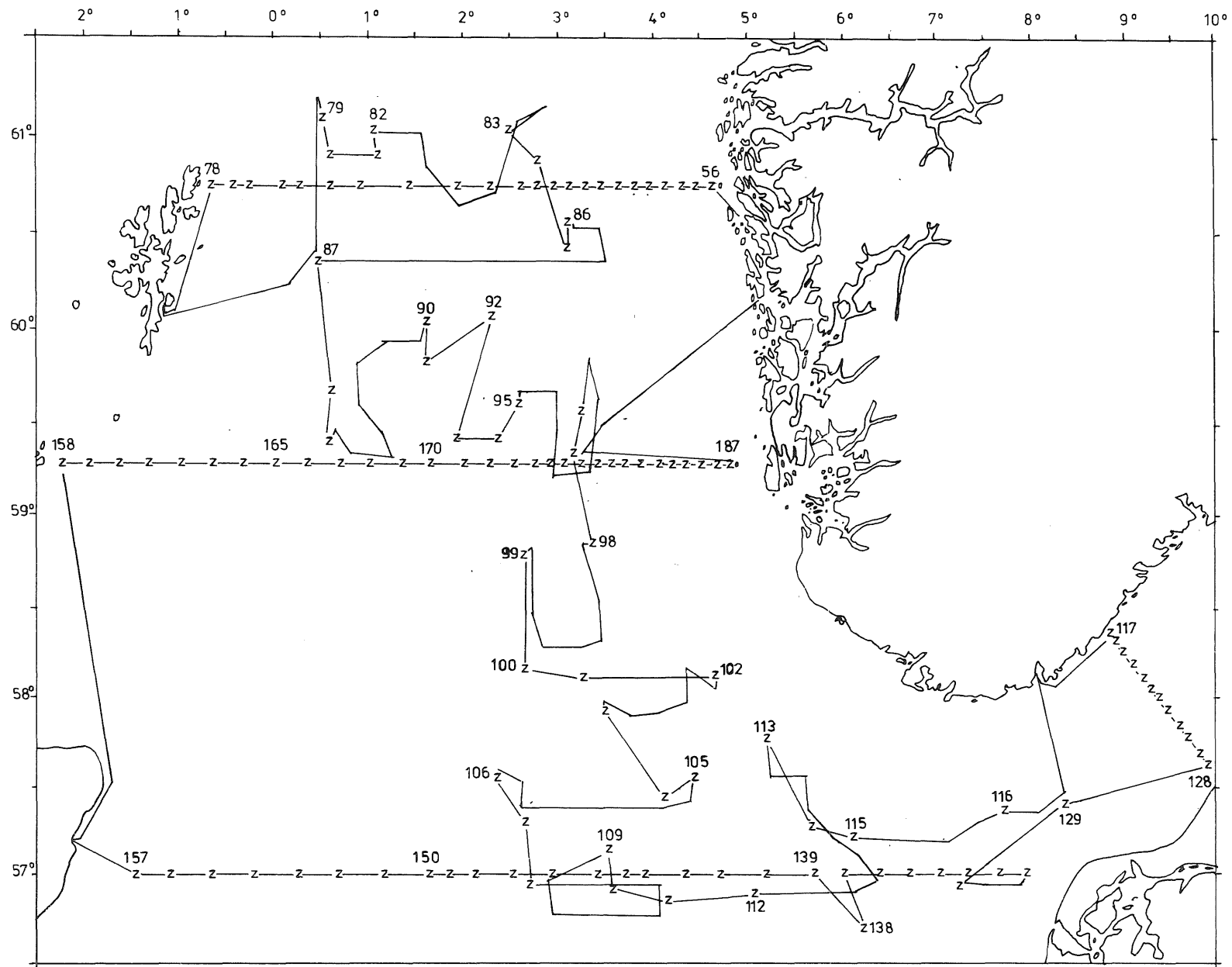






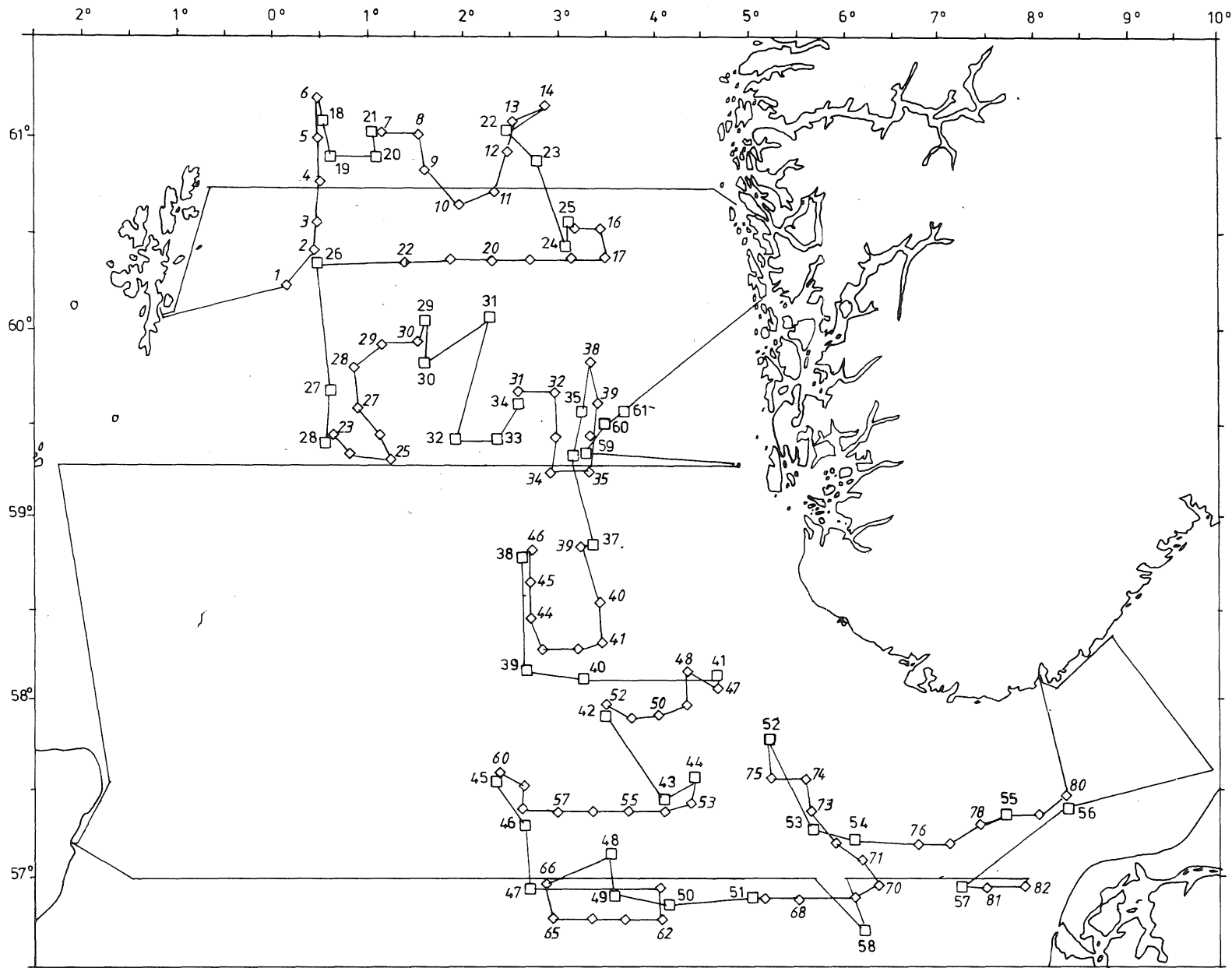
7-24 JAN. 1987 TRAWL ST. NO. 5-11

"ELD JARN"



26 JAN.-22 FEB, 1987 ST.NO. 56-187

"ELDJARN"

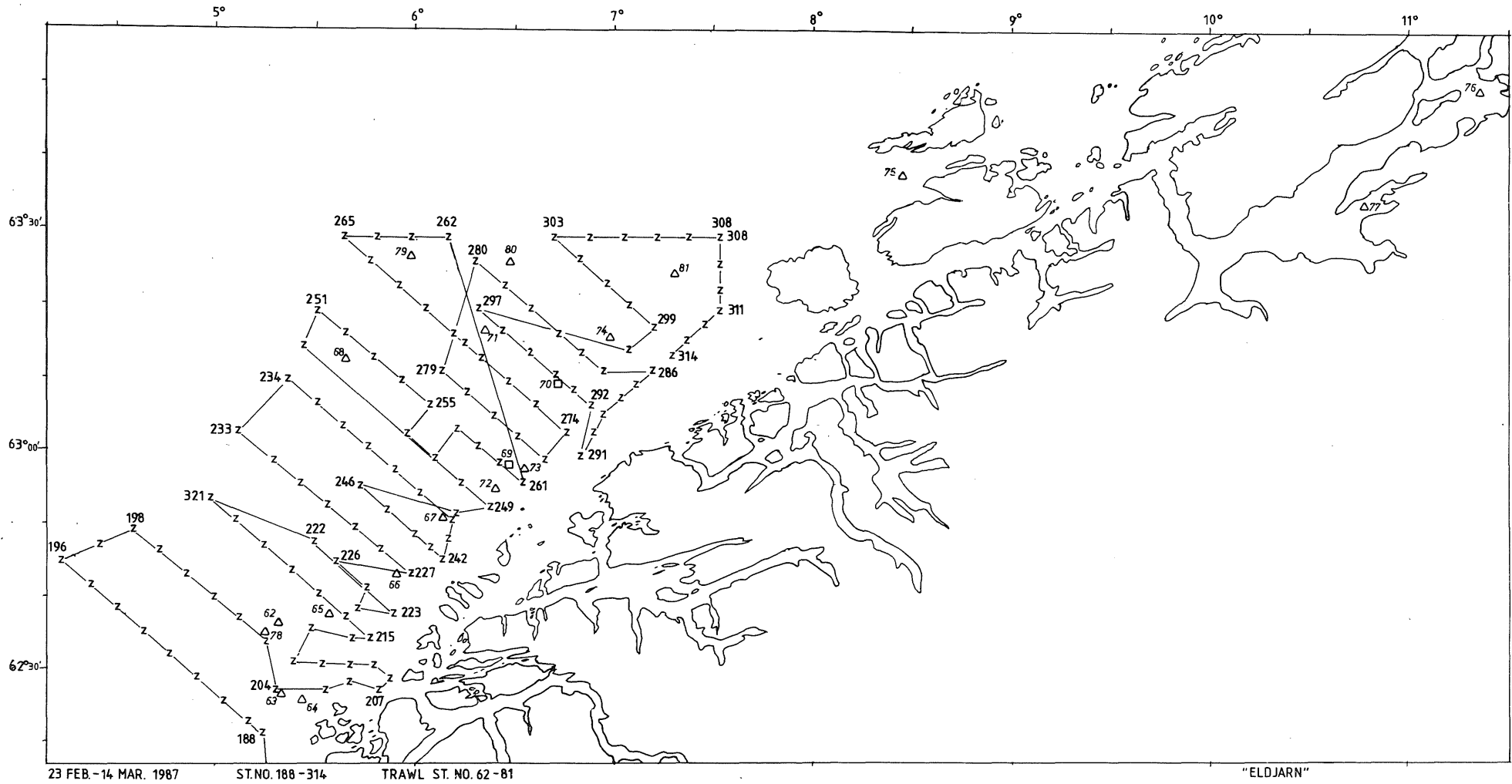


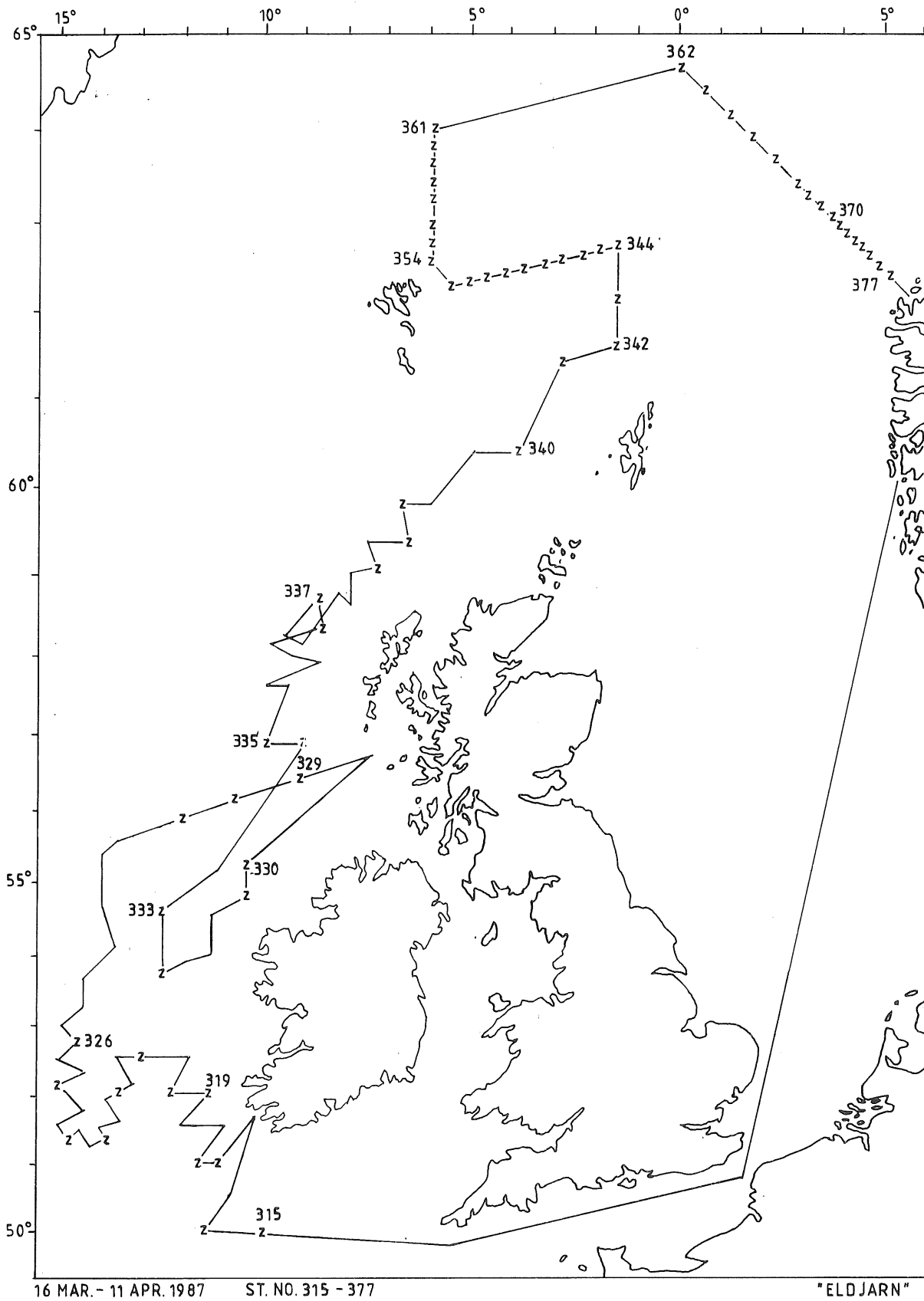
26 JAN. - 22 FEB. 1987

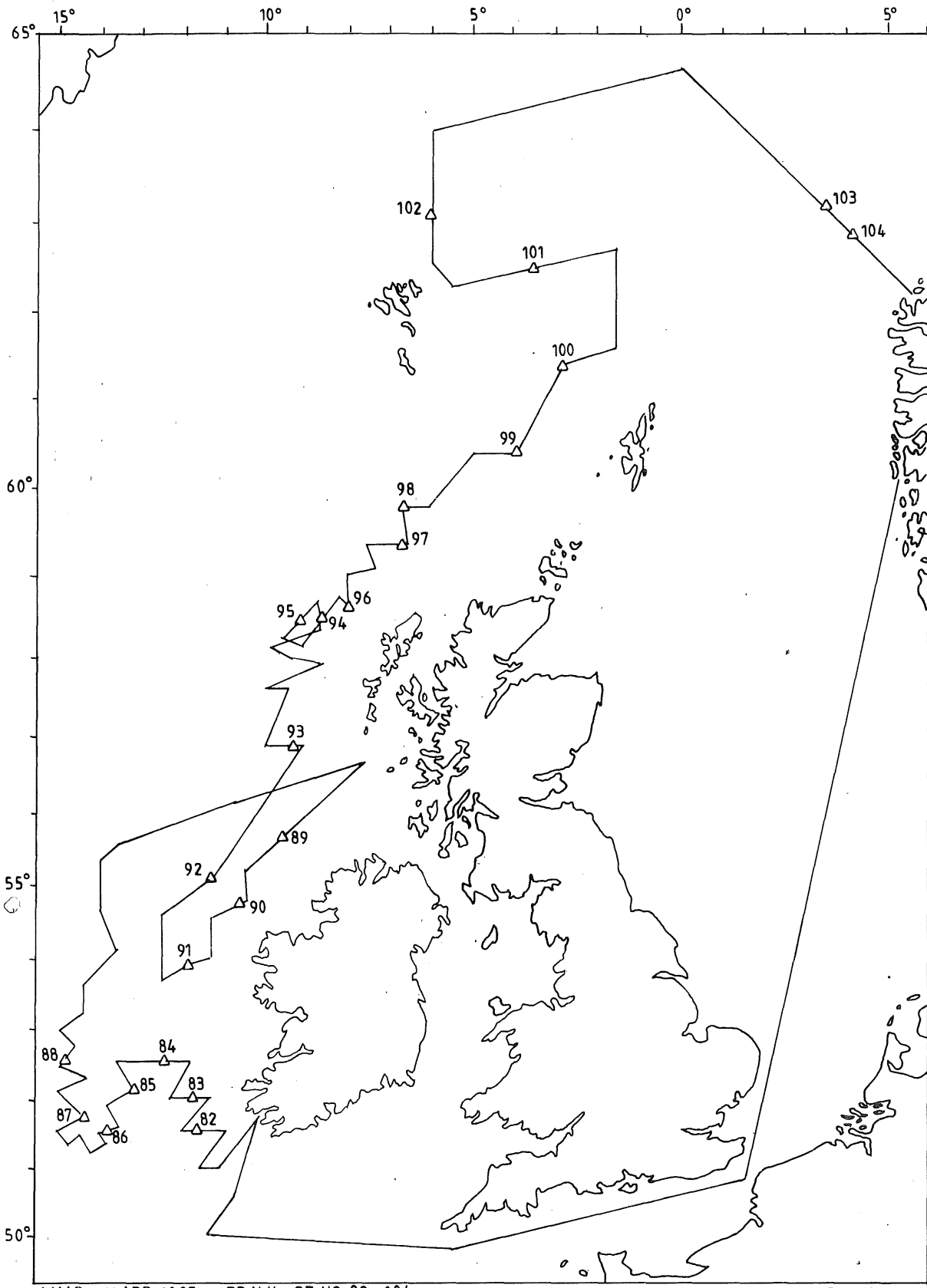
TRAWL ST. NO. 18-61

PLANKTON ST. NO. 1-82

"ELDJARN"

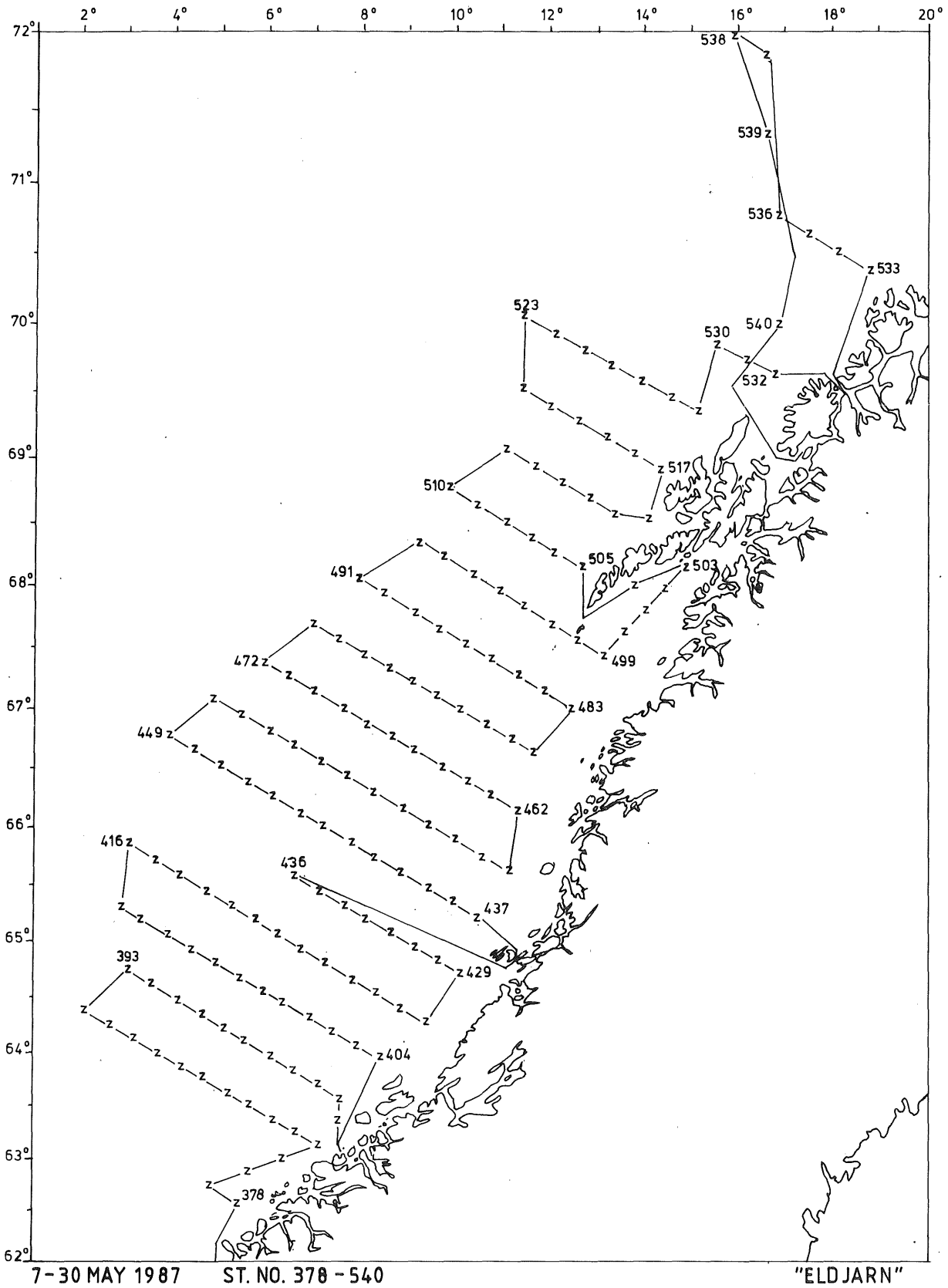




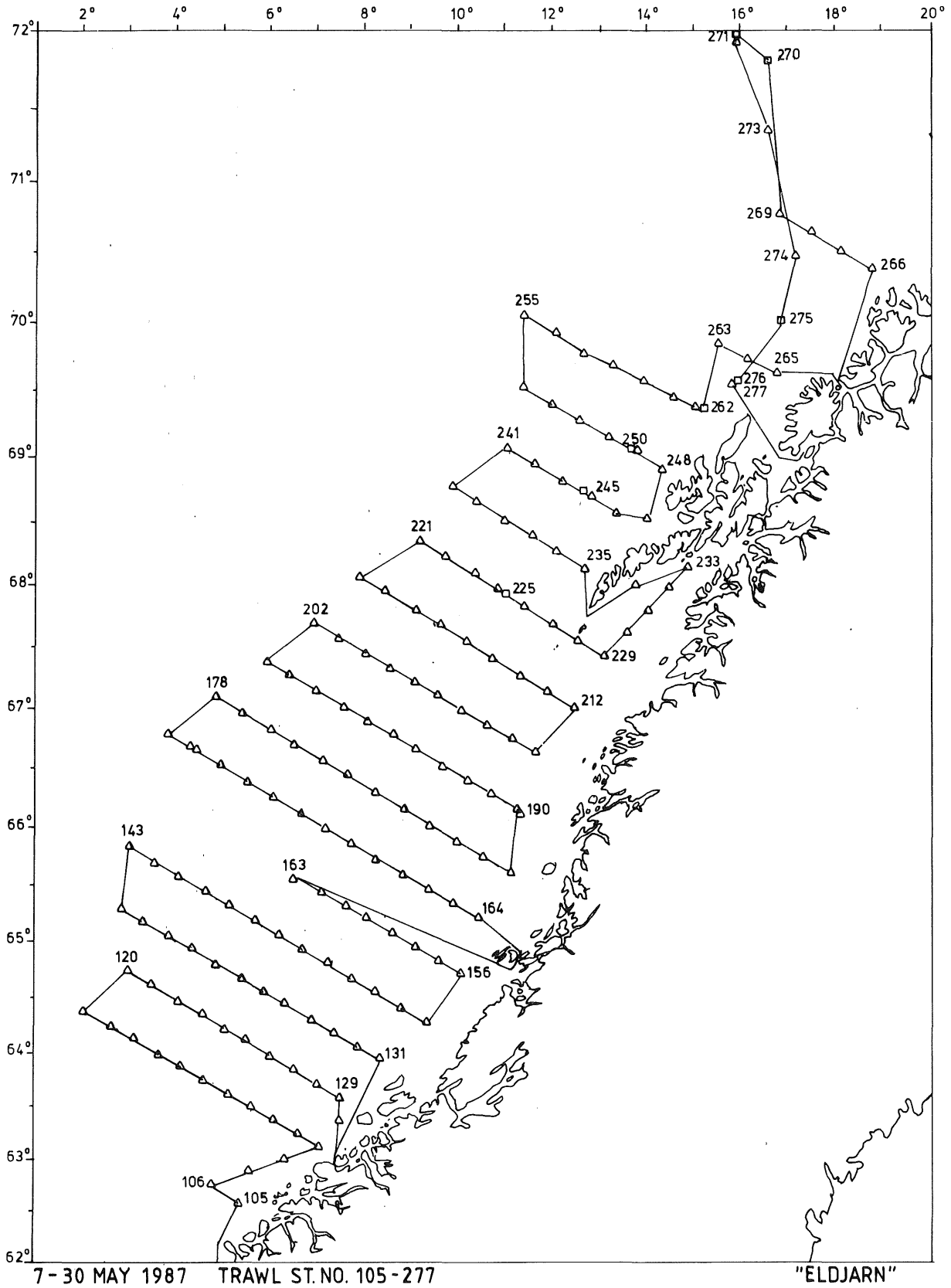


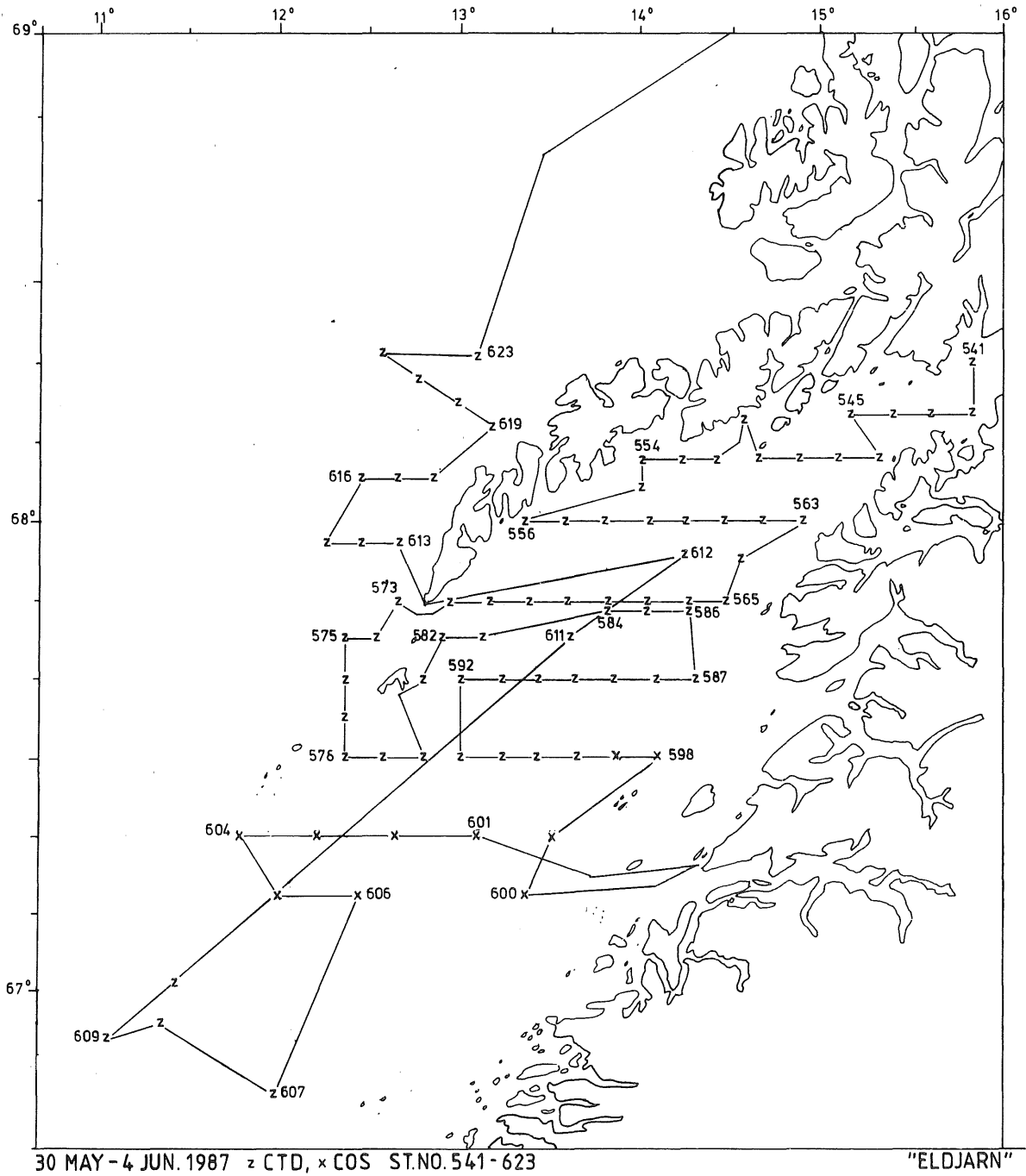
16 MAR. - 11 APR. 1987 TRAWL ST. NO. 82 - 104

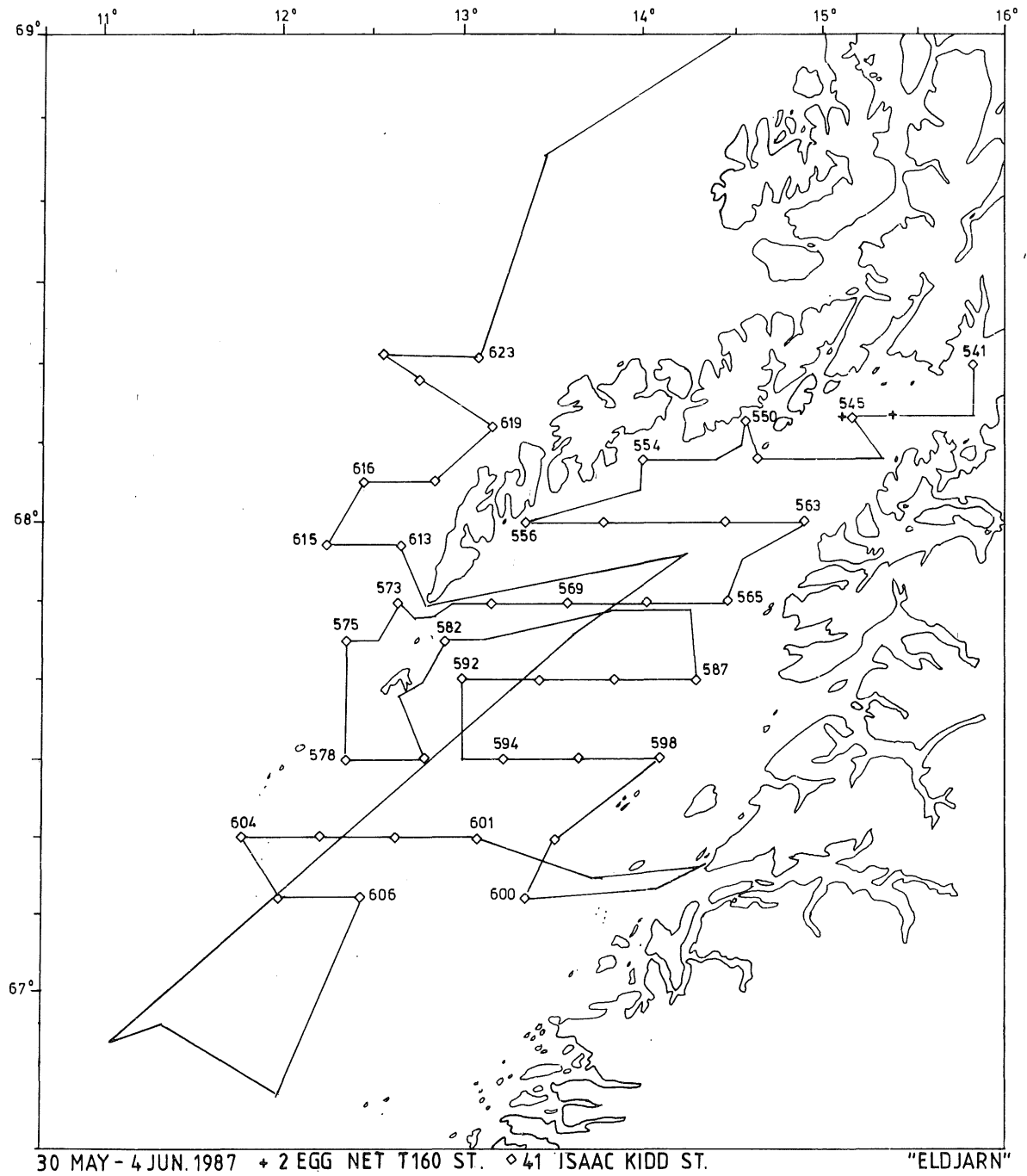
"ELD JARN"

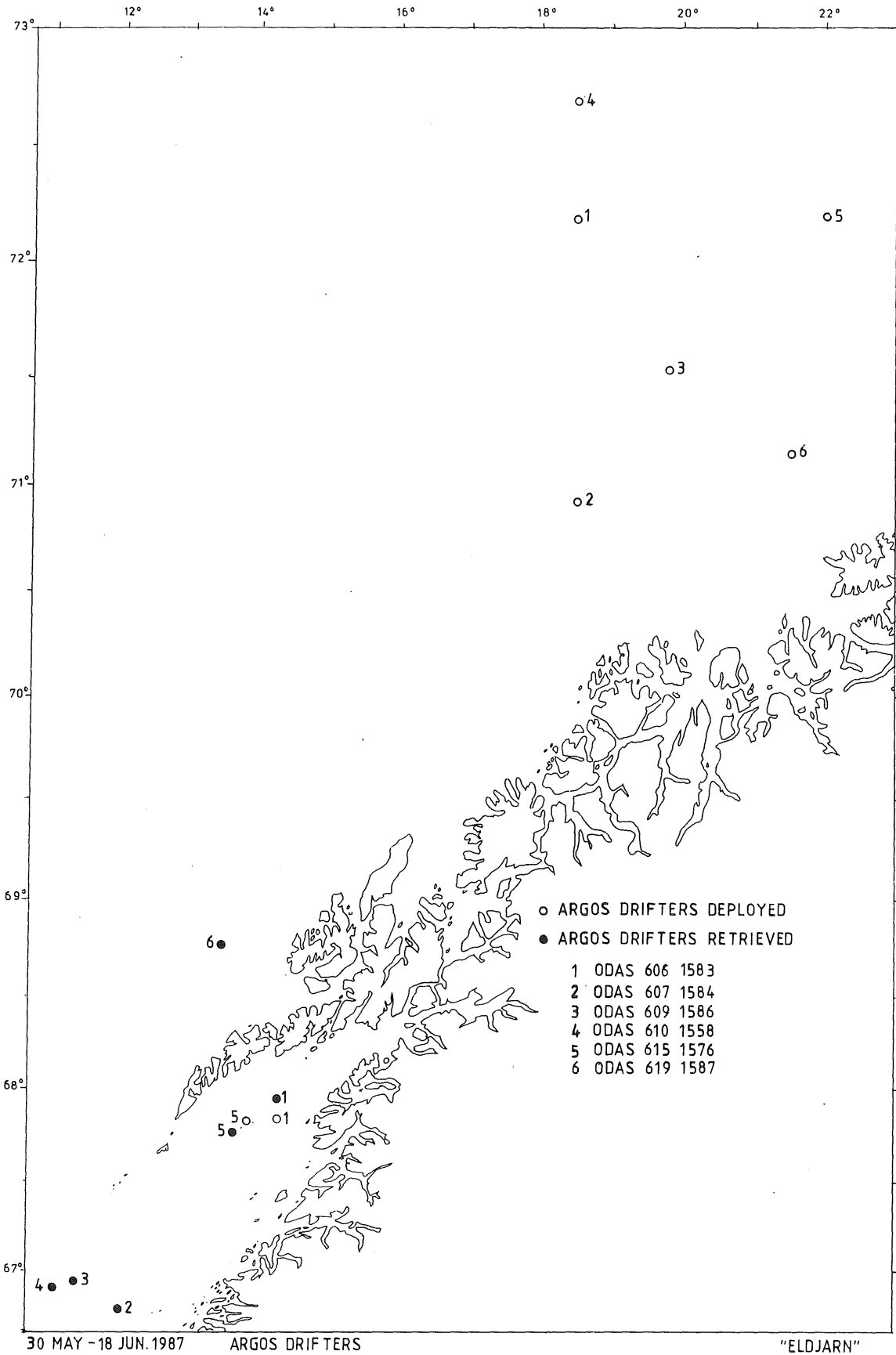


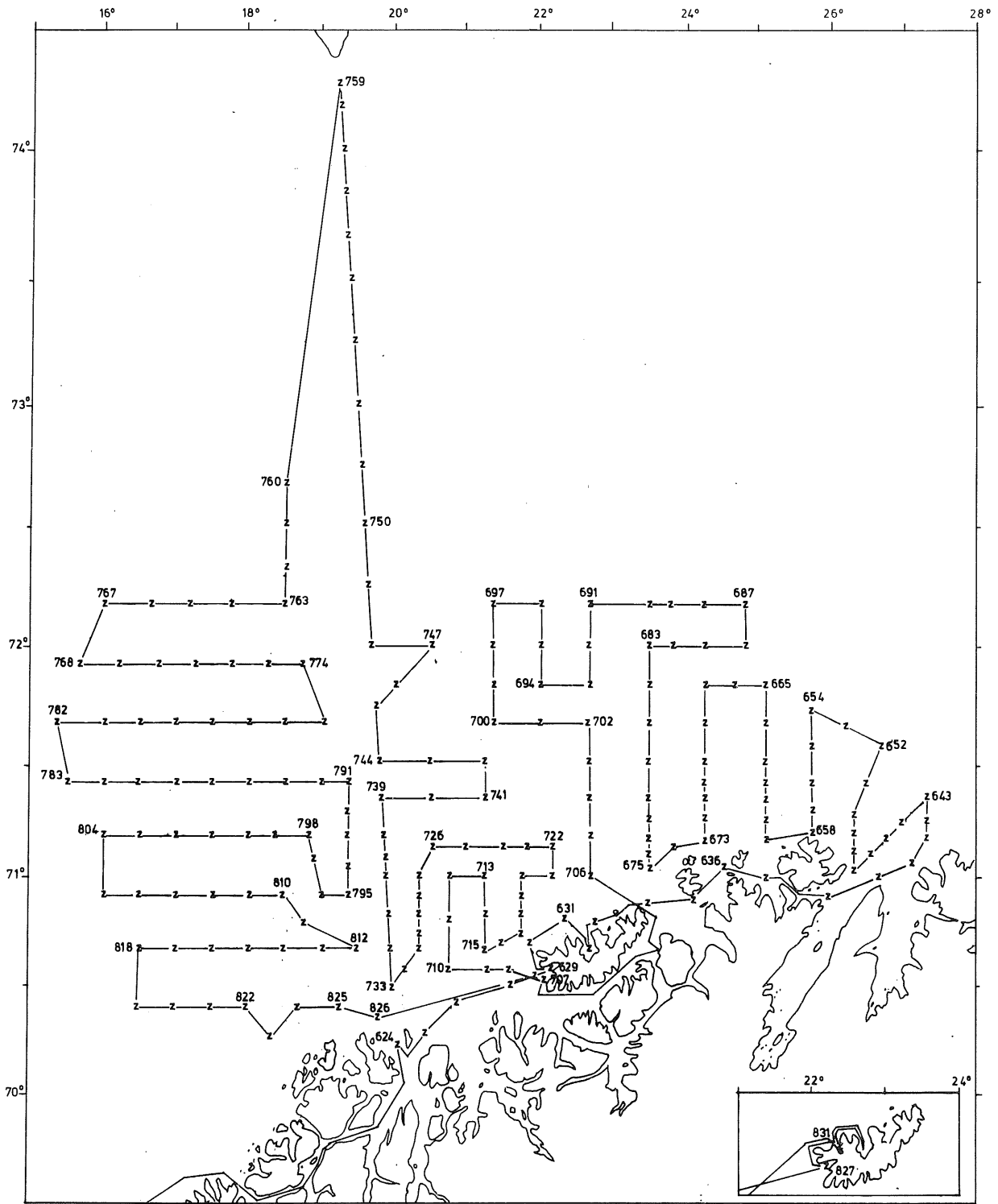






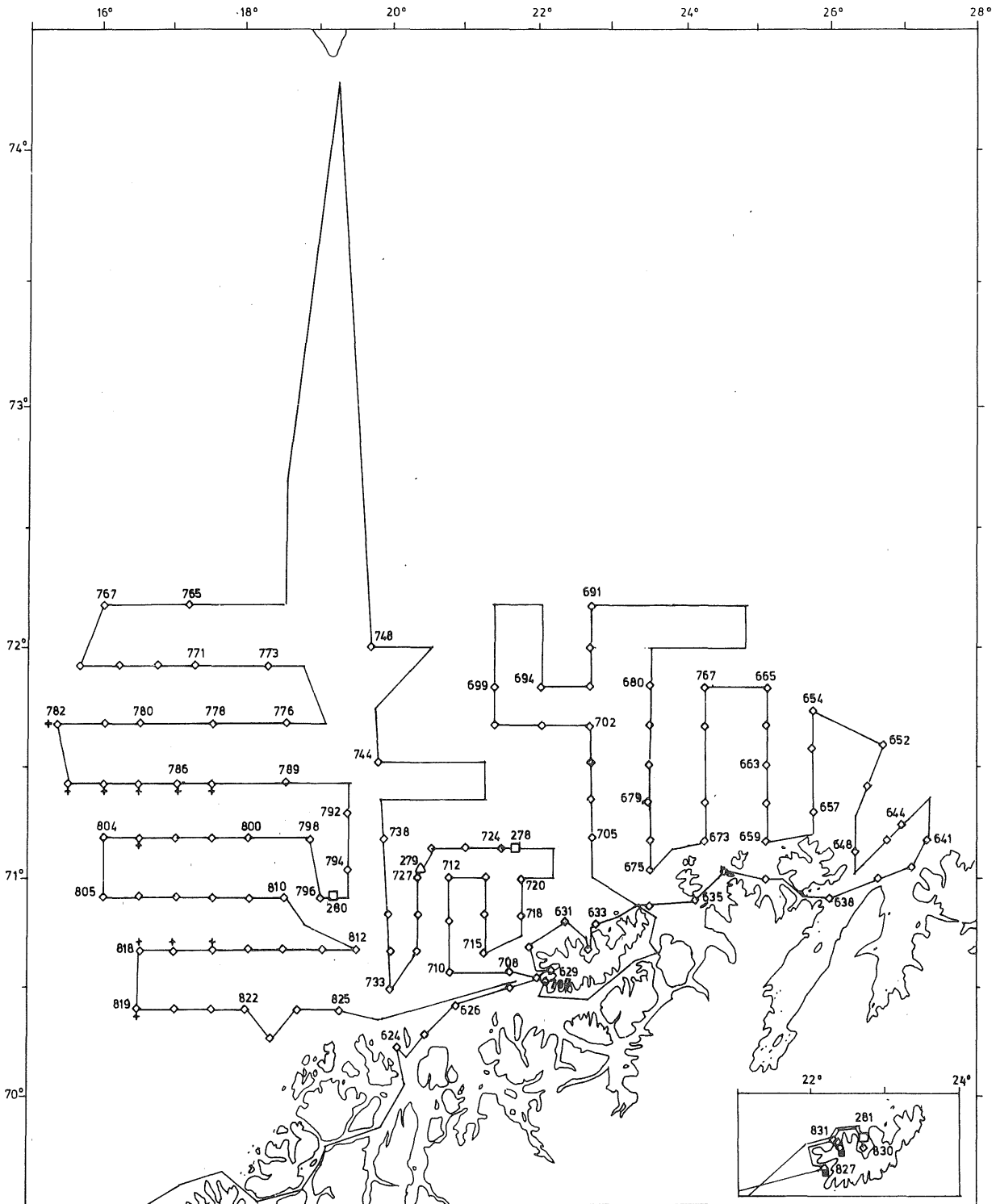




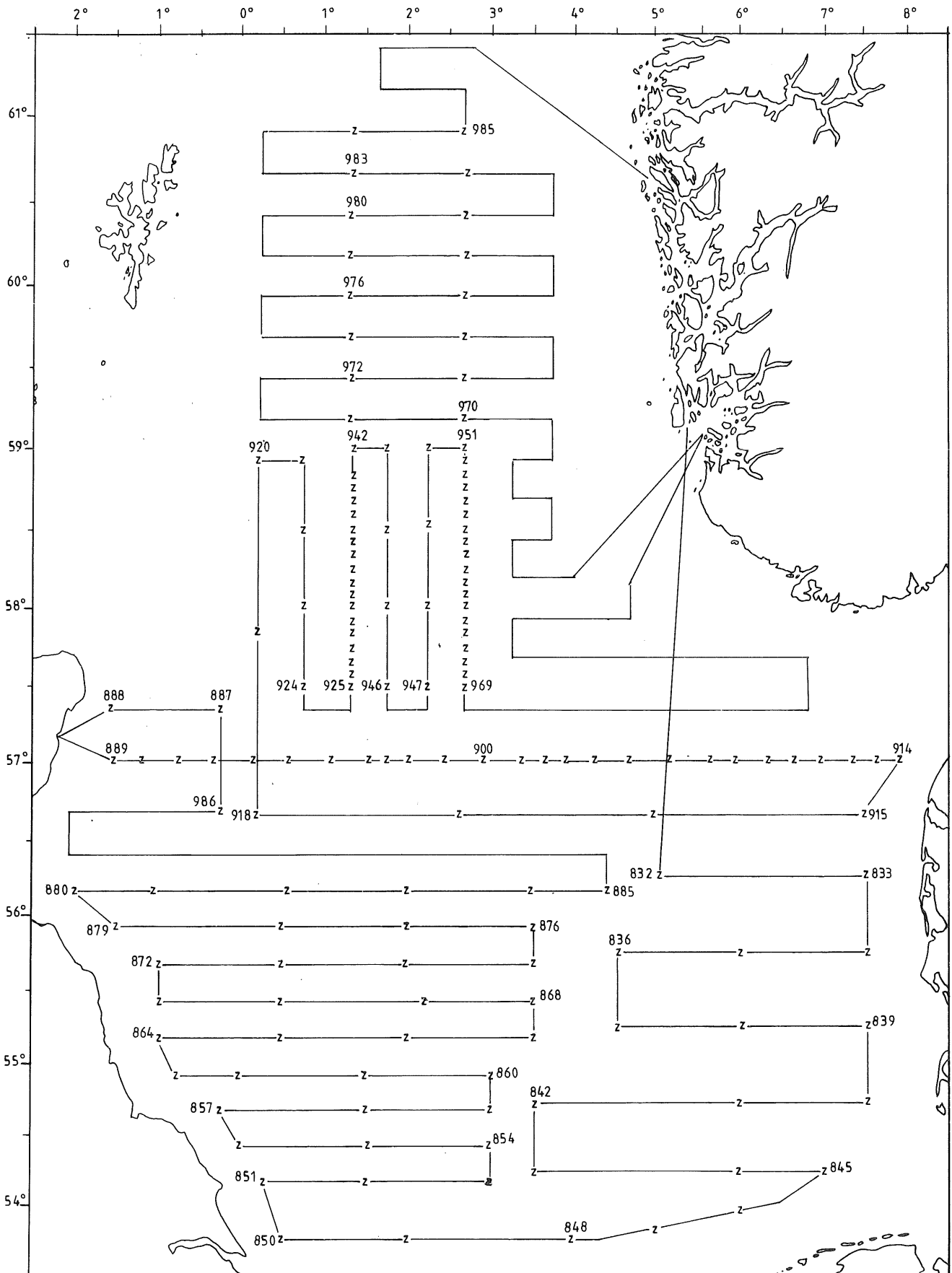


5-18 JUN. 1987 ST. NO. 624-831

"ELD JARN"

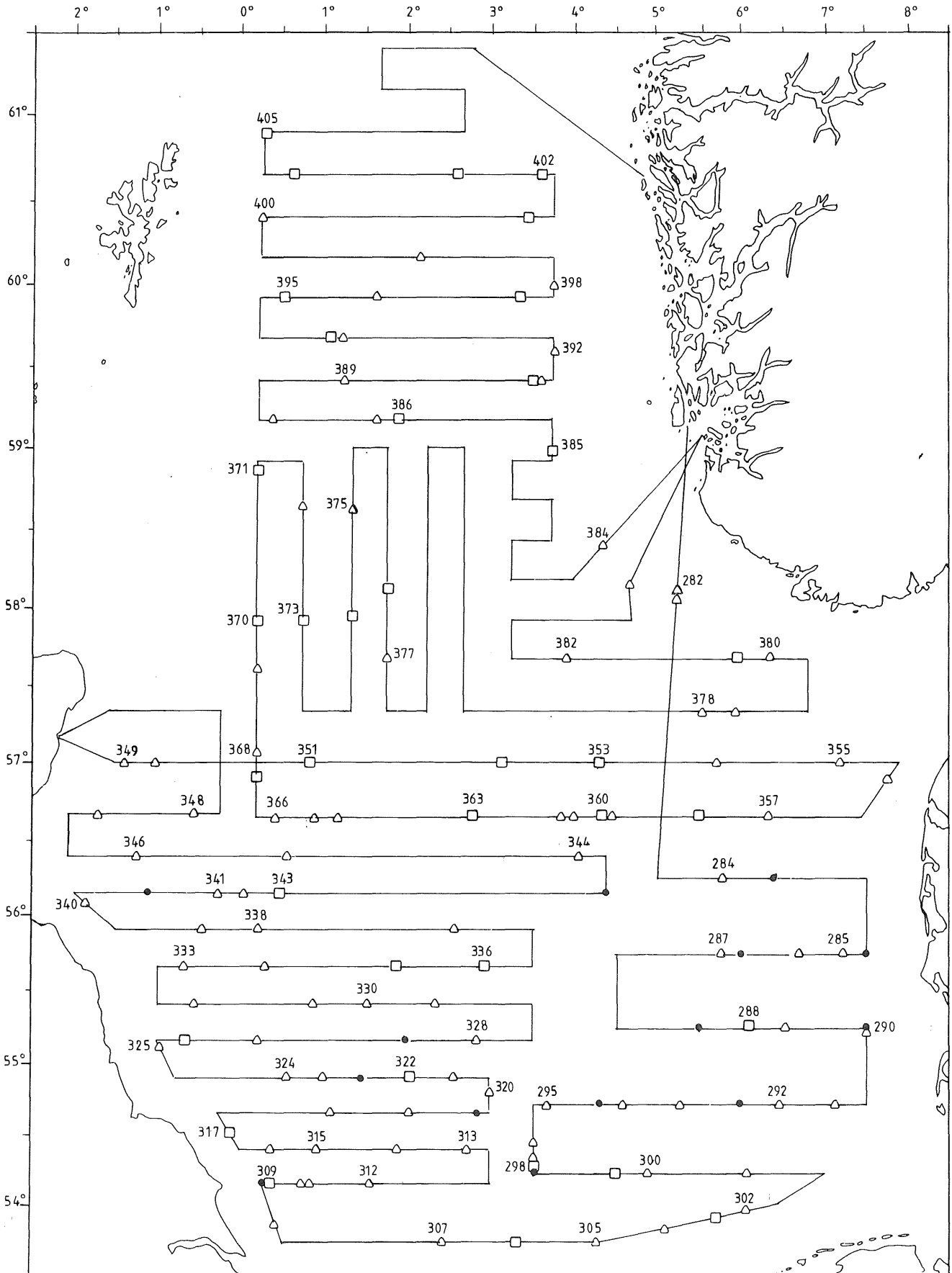


5-18 JUN. 1987 TRAWL. ST. NO. 278 - 281 ◊ 126 ISAAC KIDD ST. + 11 EGG NET T160 ST. ■ 2 MOCNESS TRAWL "ELDJARN"



24 JUN. - 29 JUL. 1987 ST. NO. 832-985

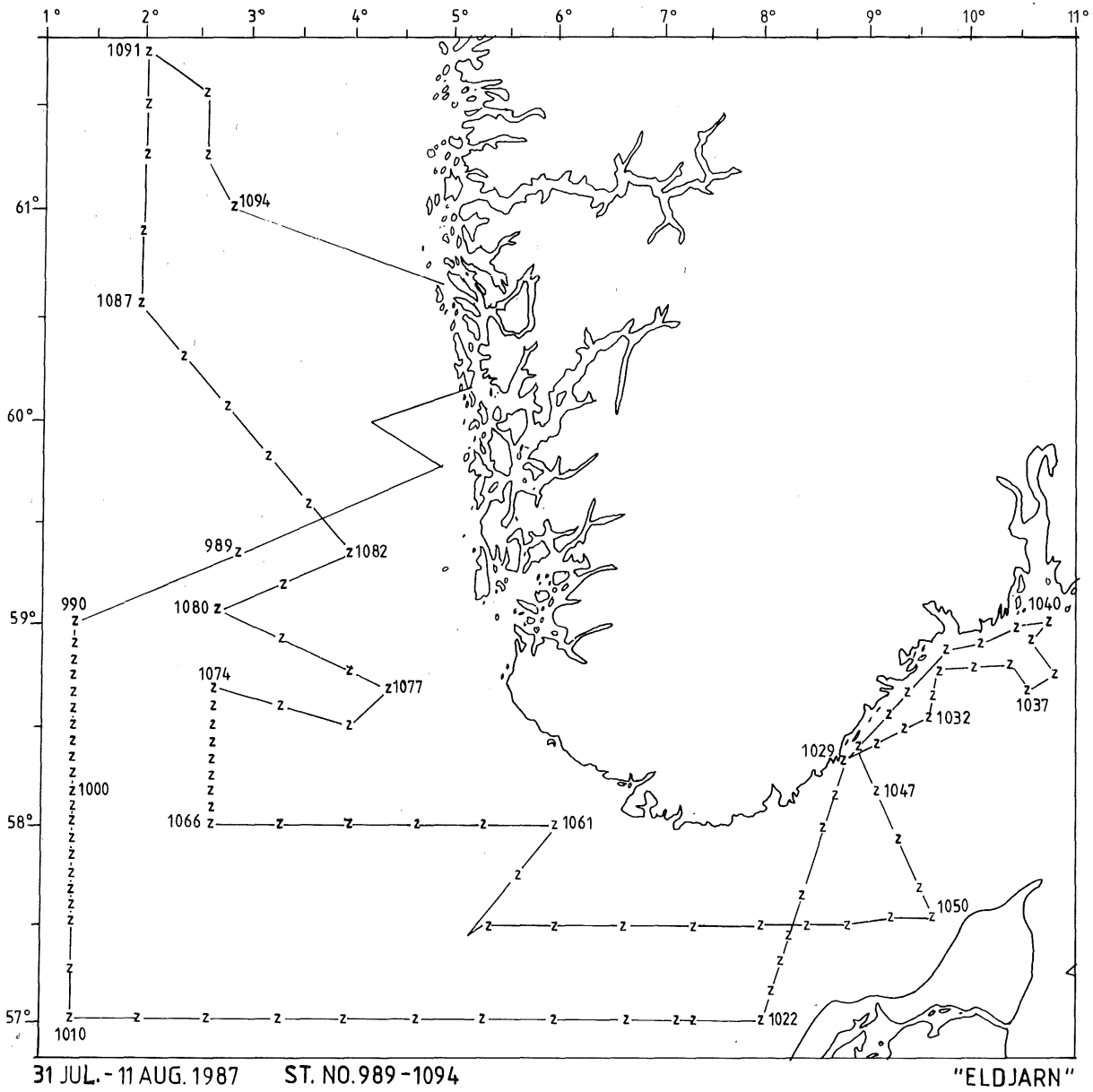
"ELD JARN"

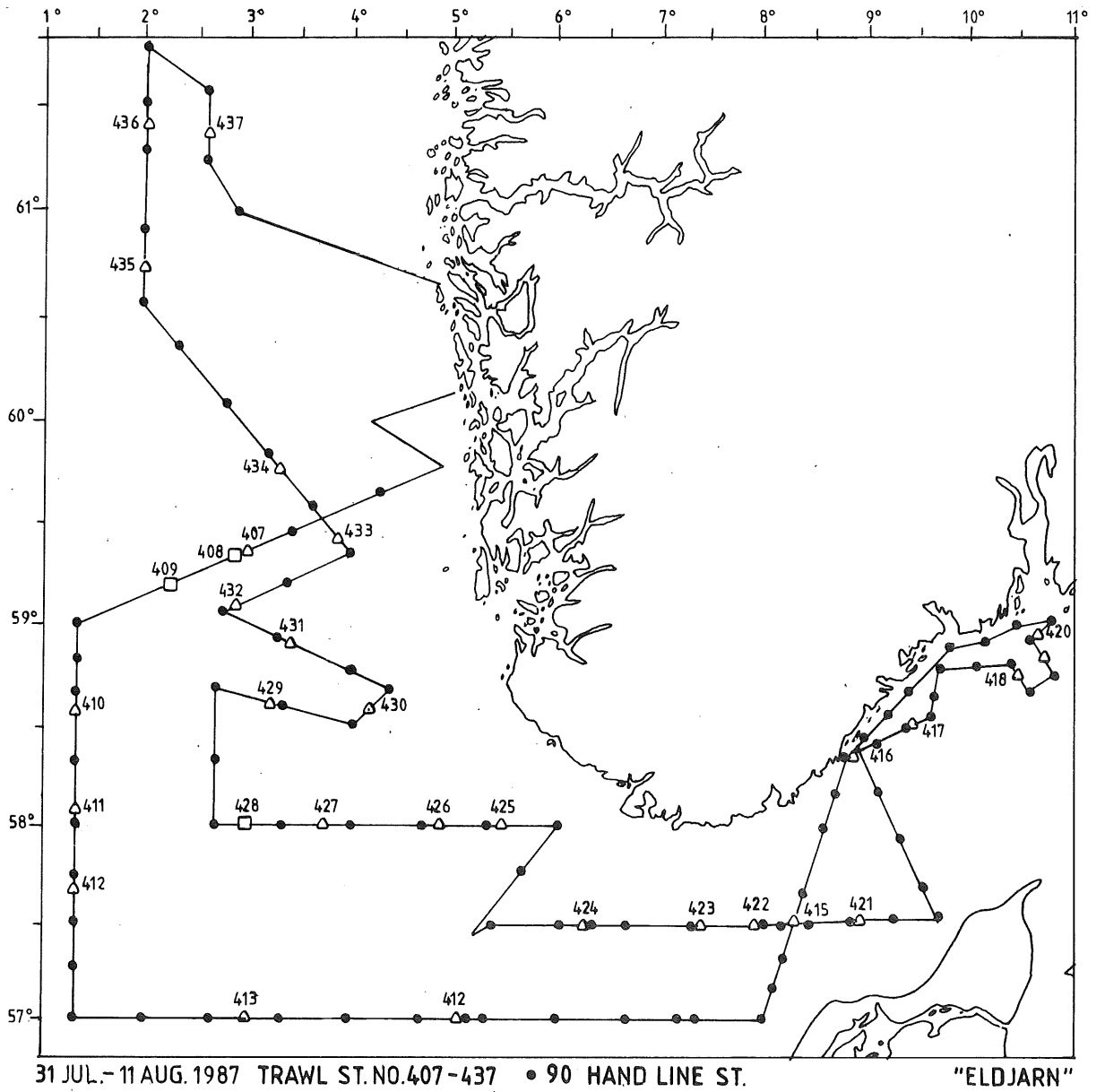


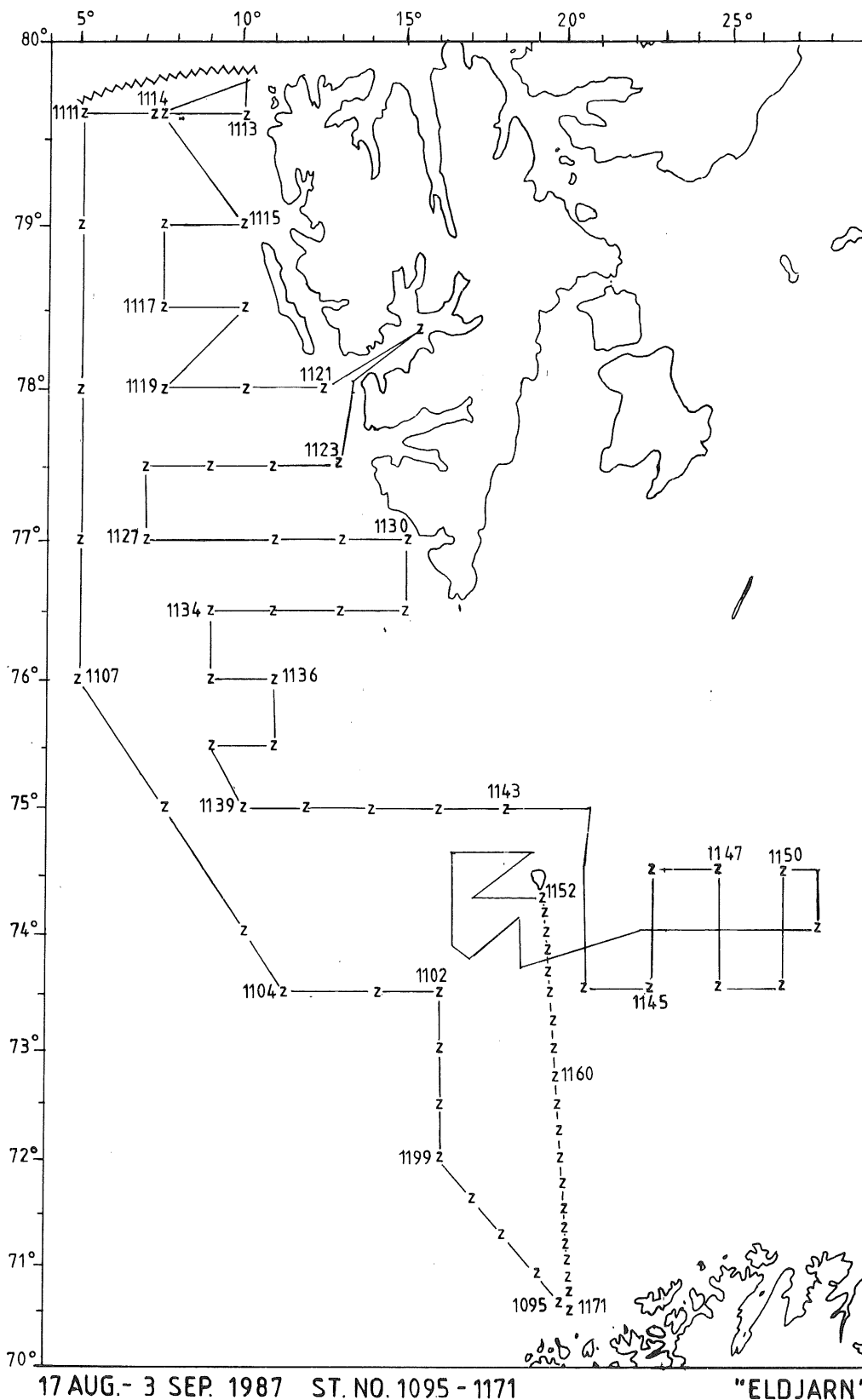
24 JUN.-29 JUL.1987 TRAWL ST.NO. 282-405 • 14 HAND LINE ST.

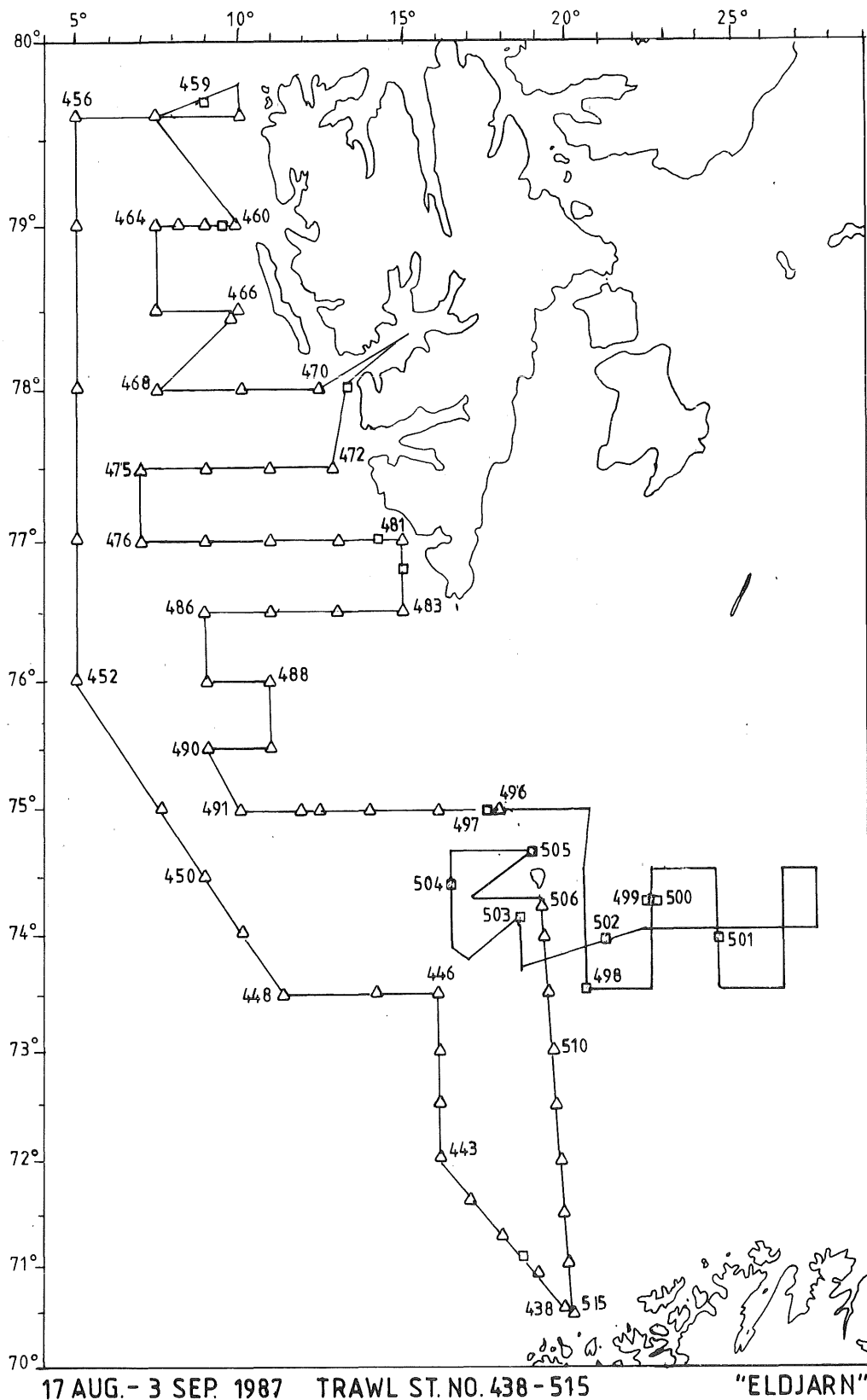
"ELDJARIN"

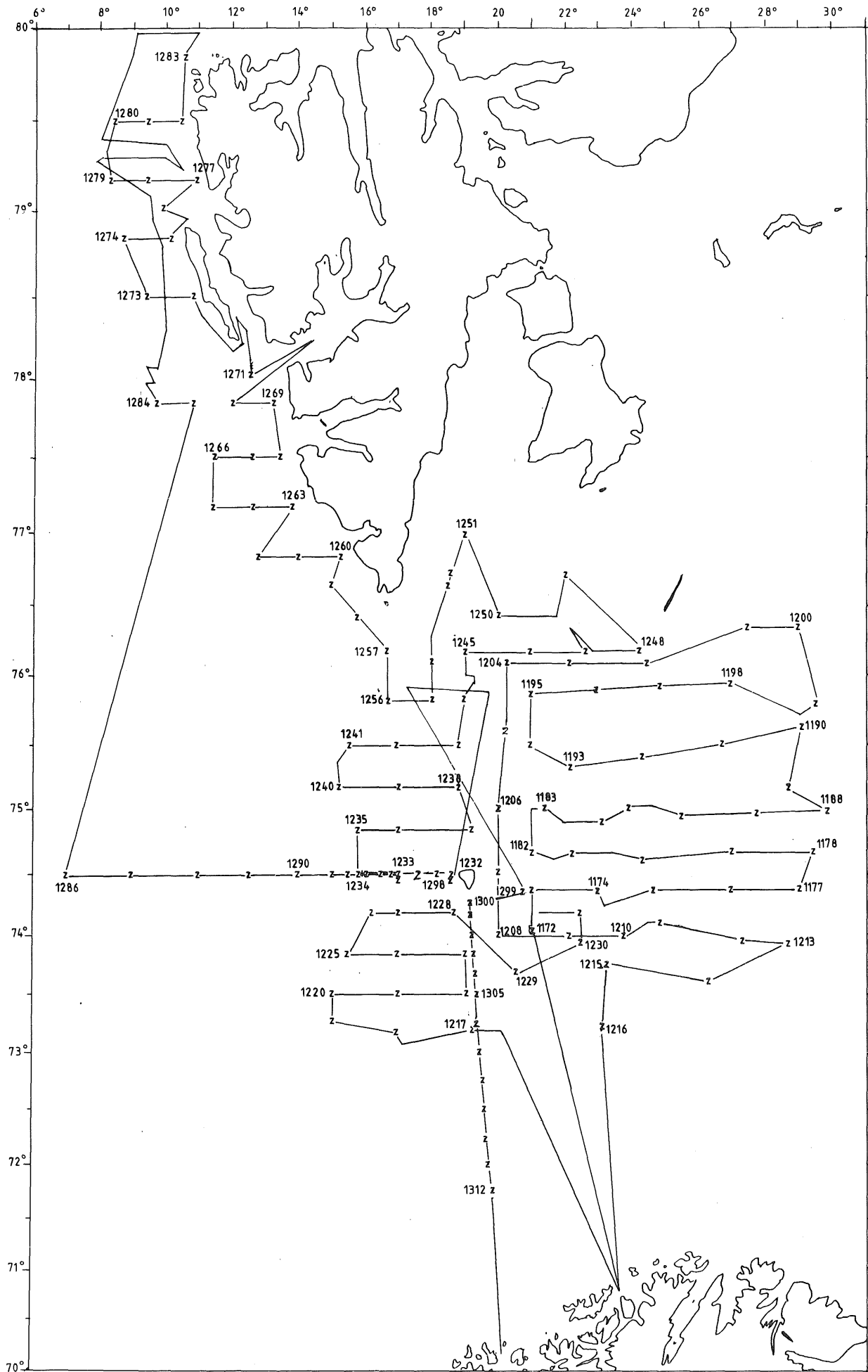


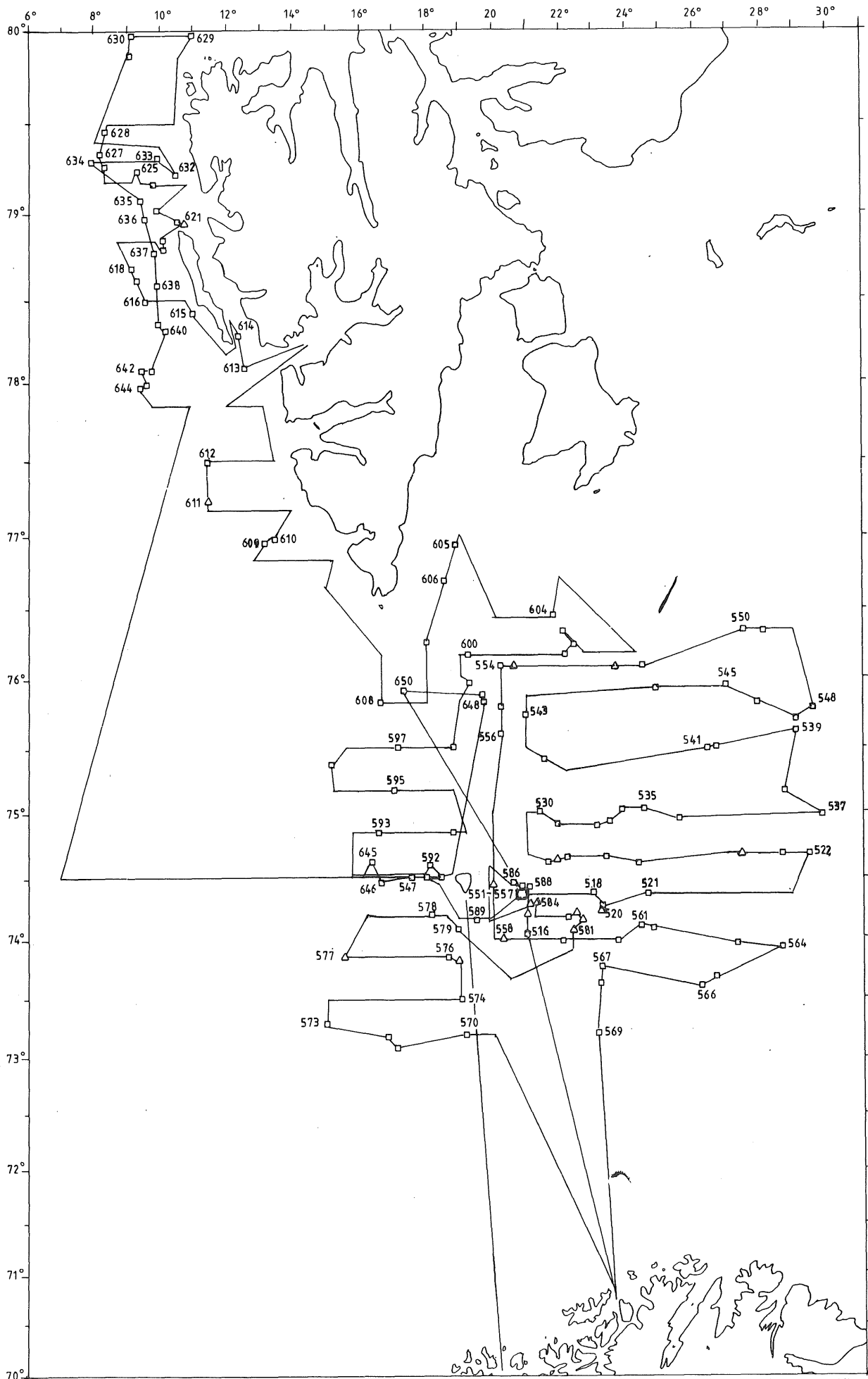


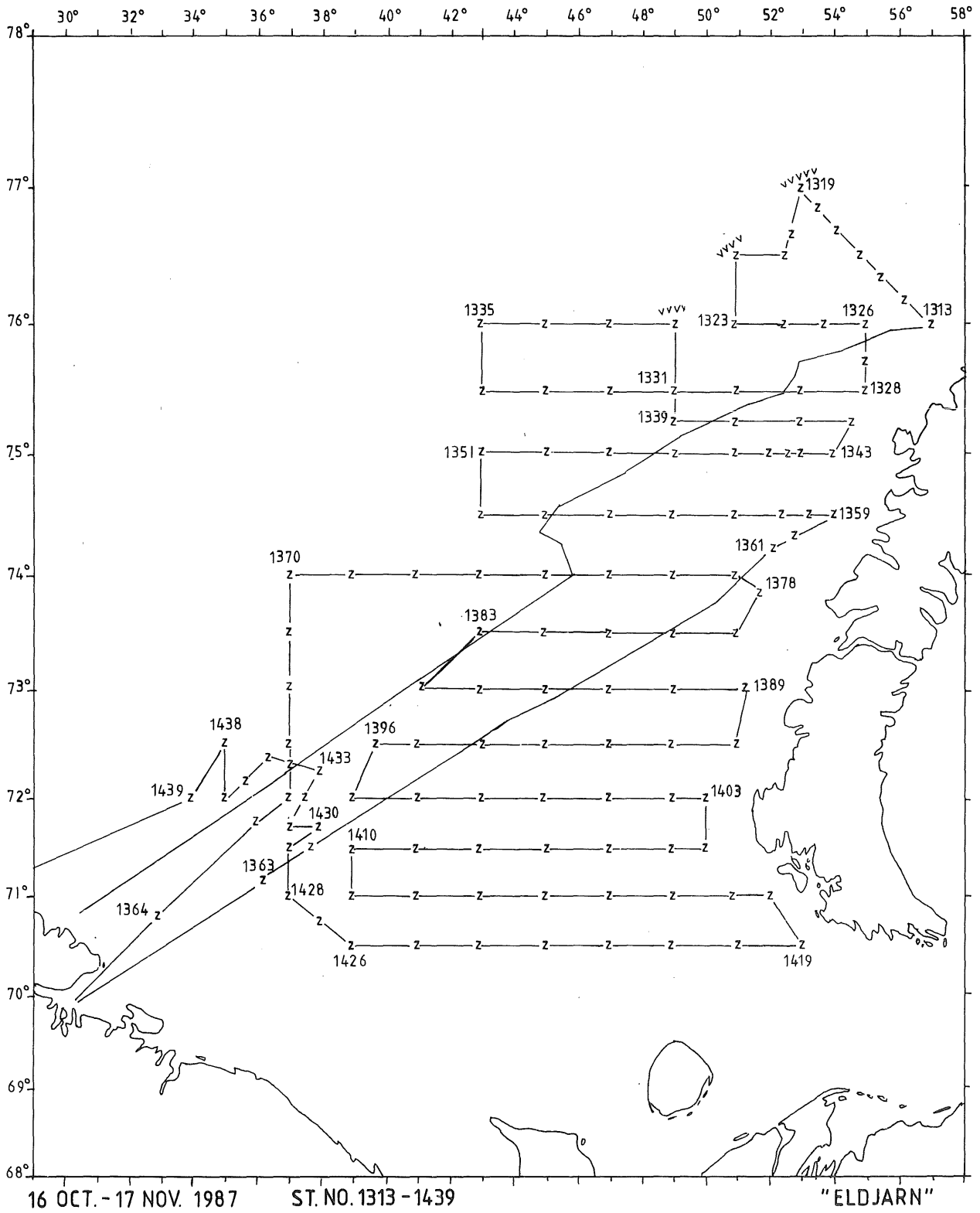


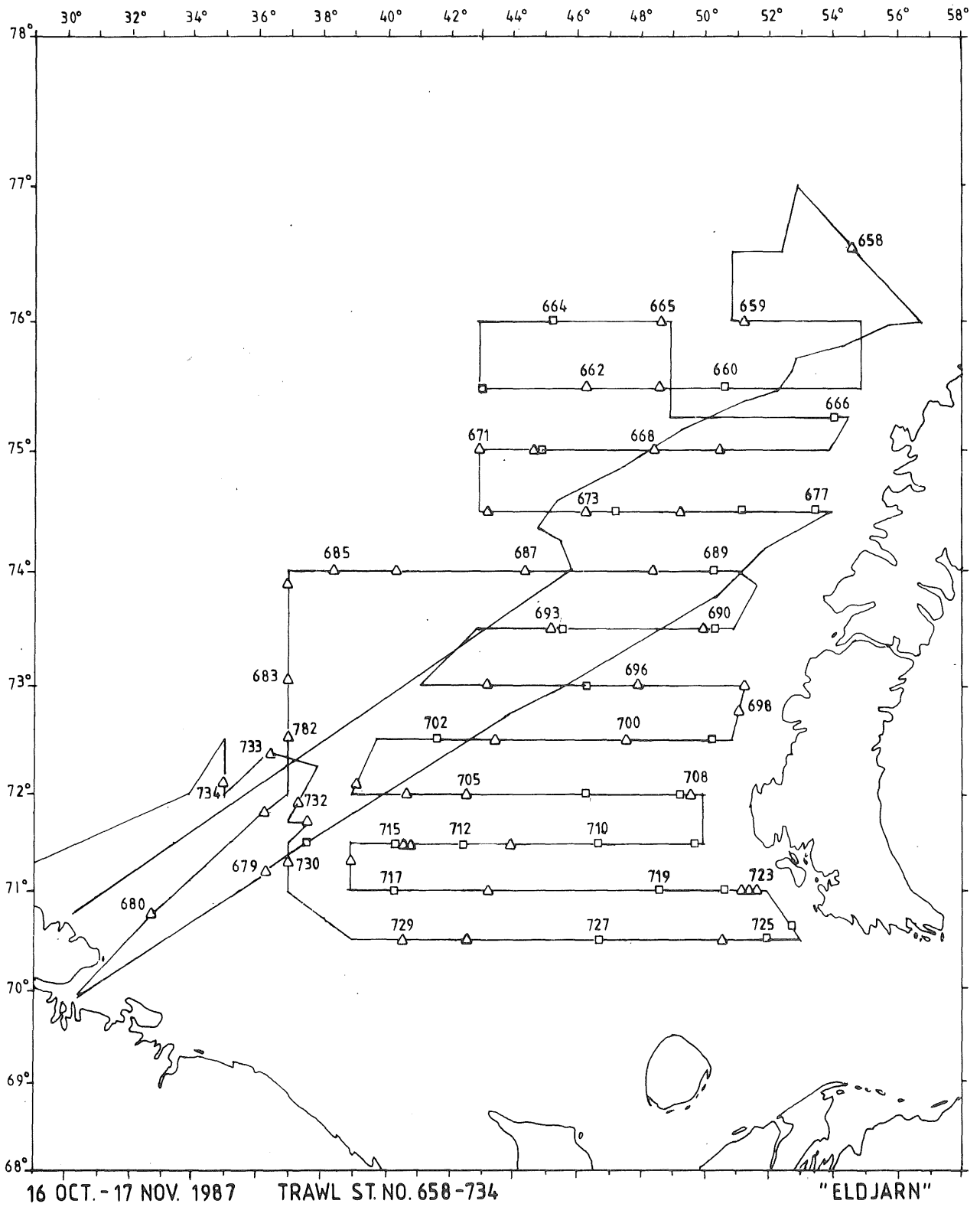




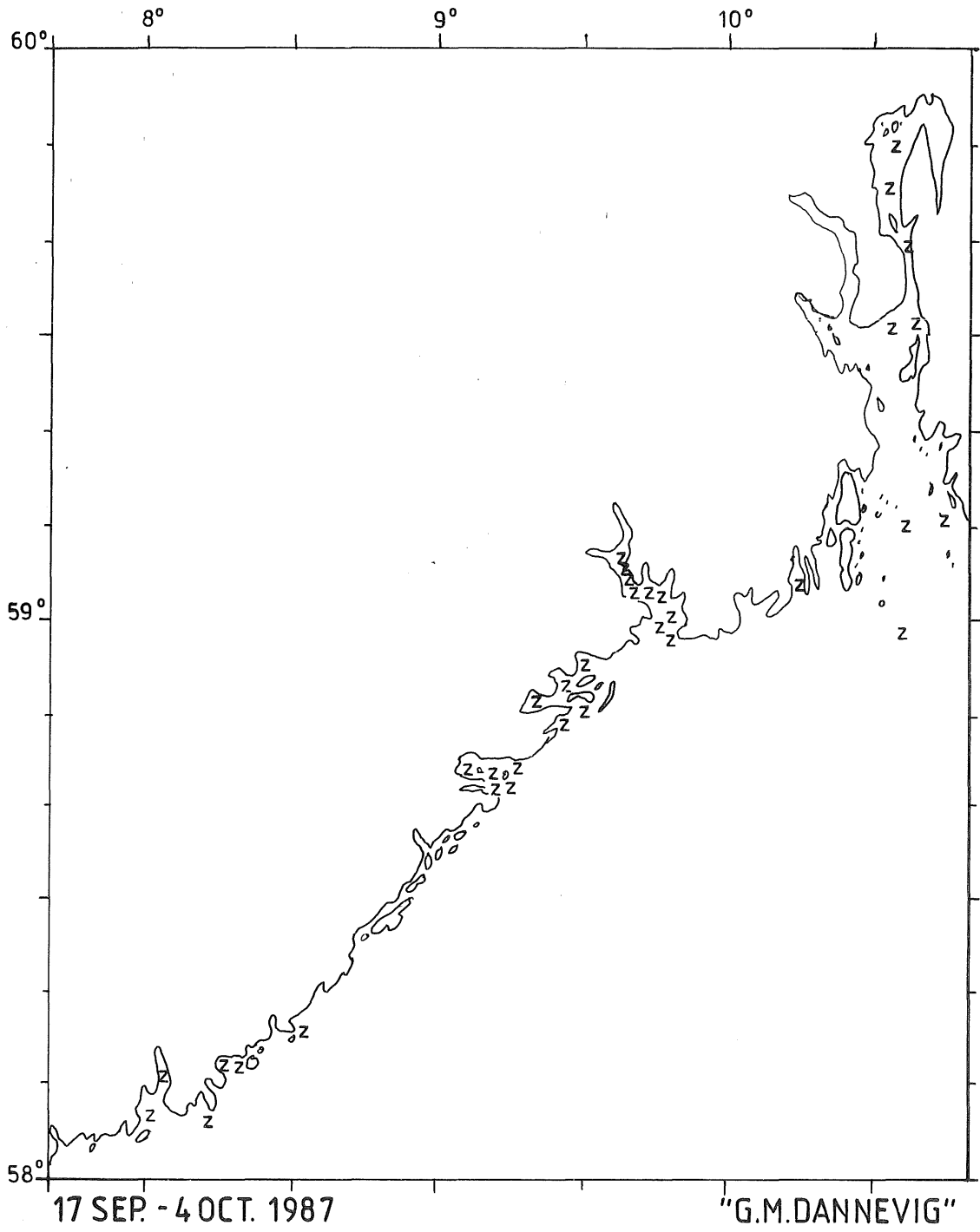


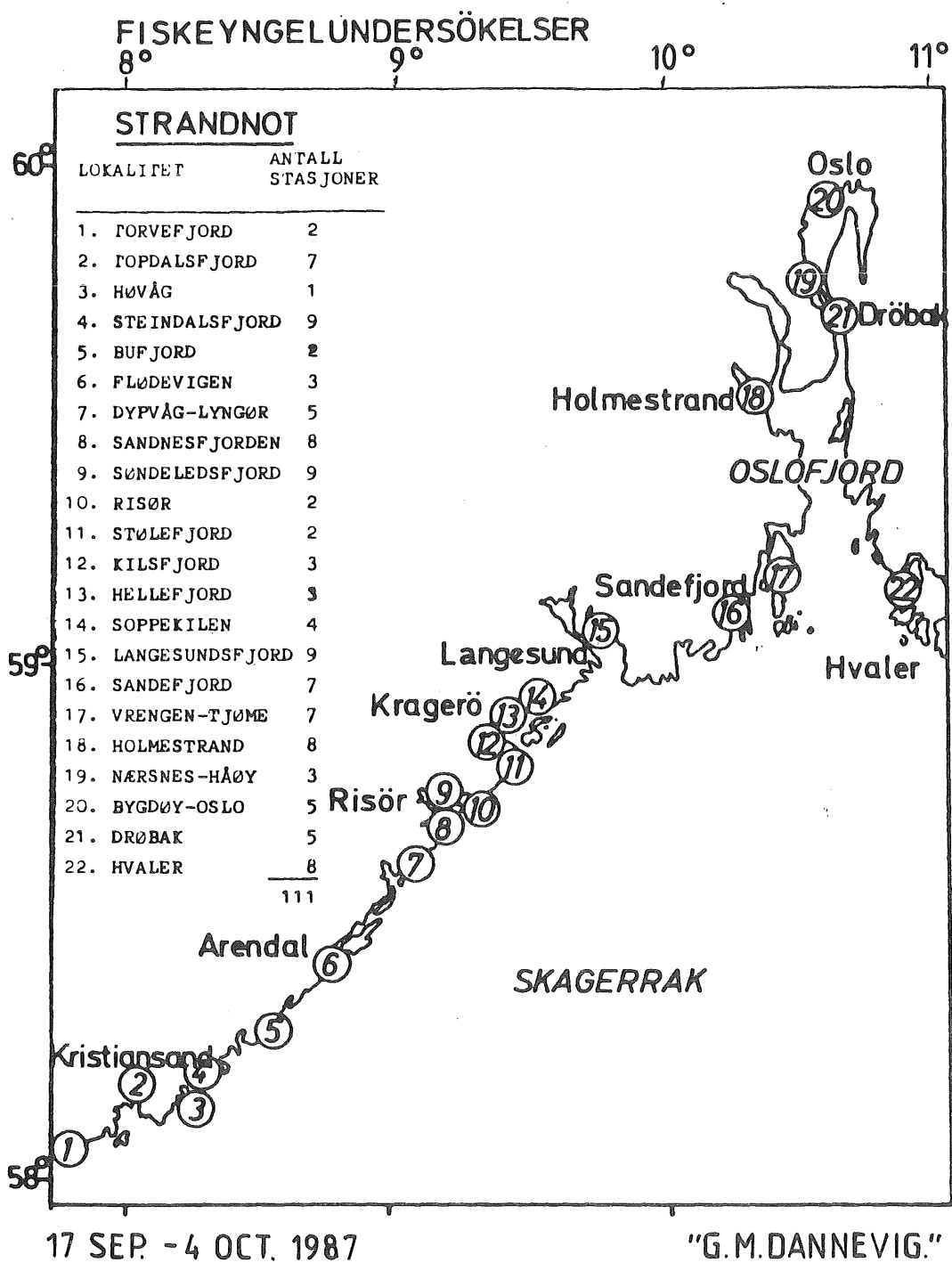


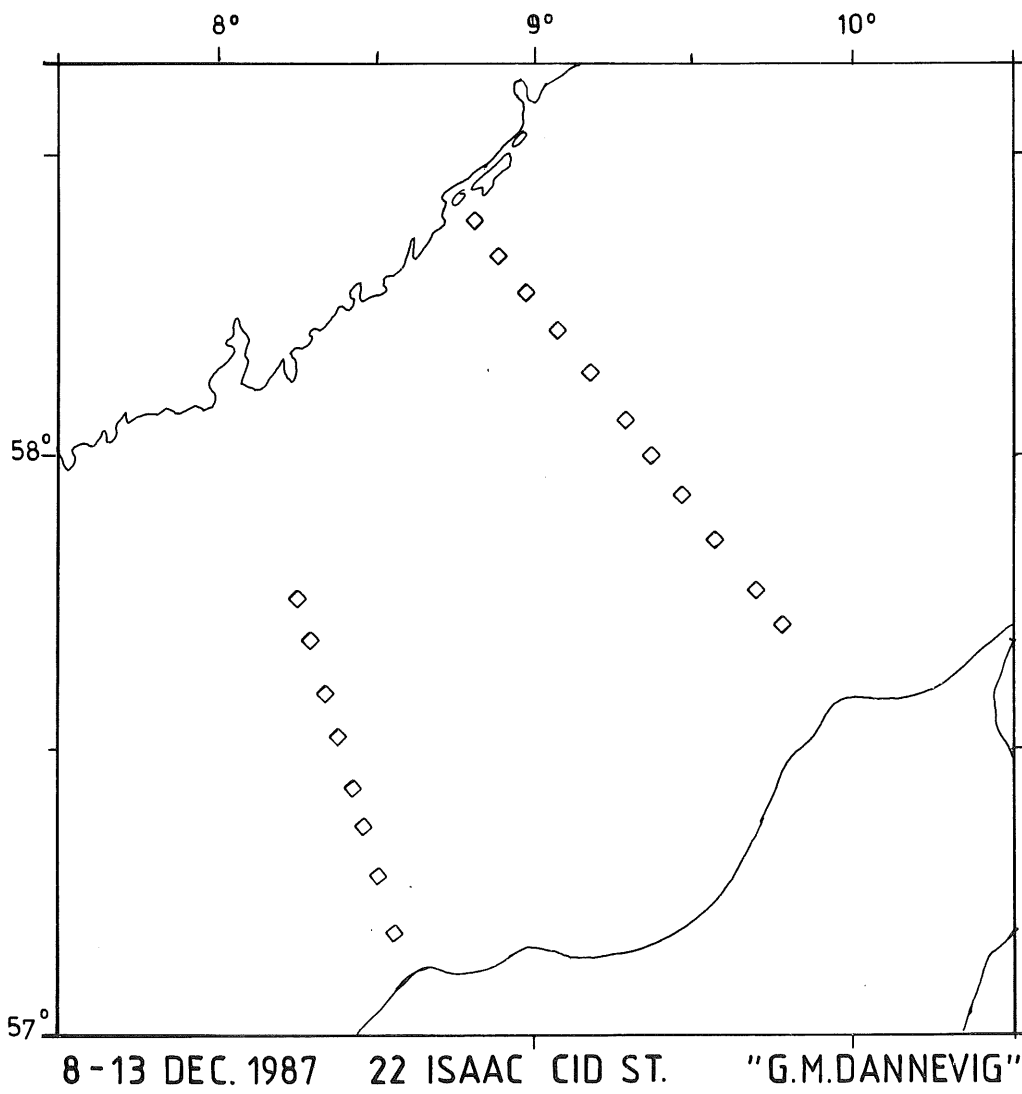
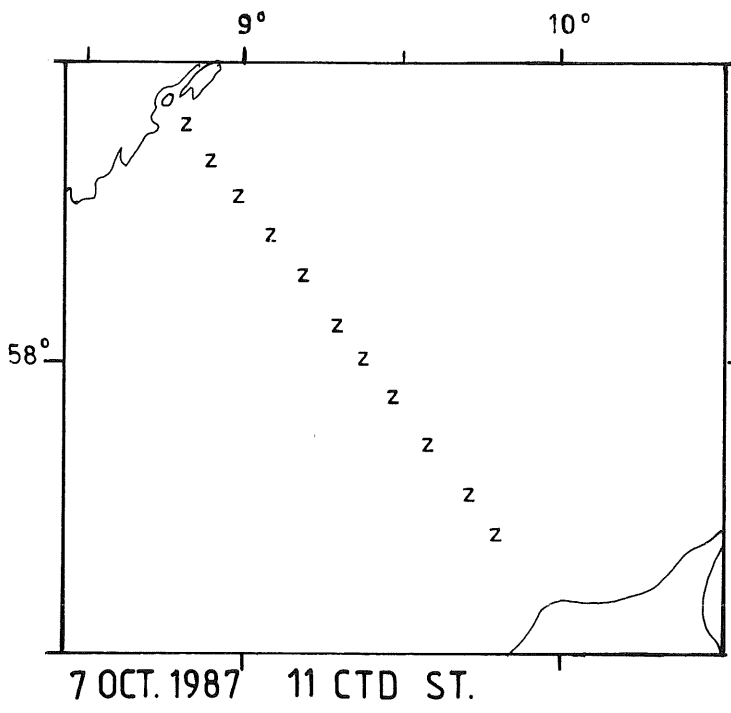


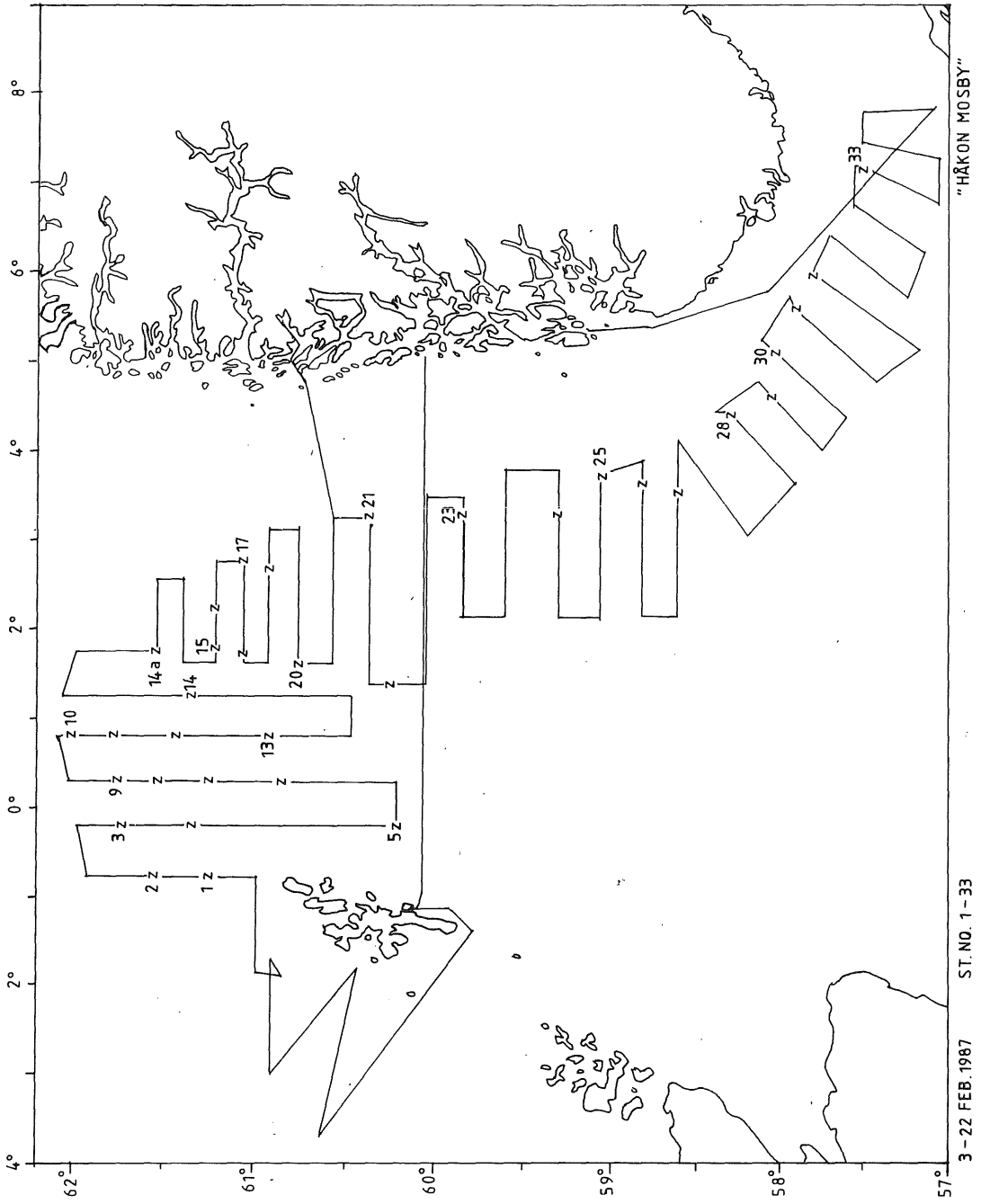


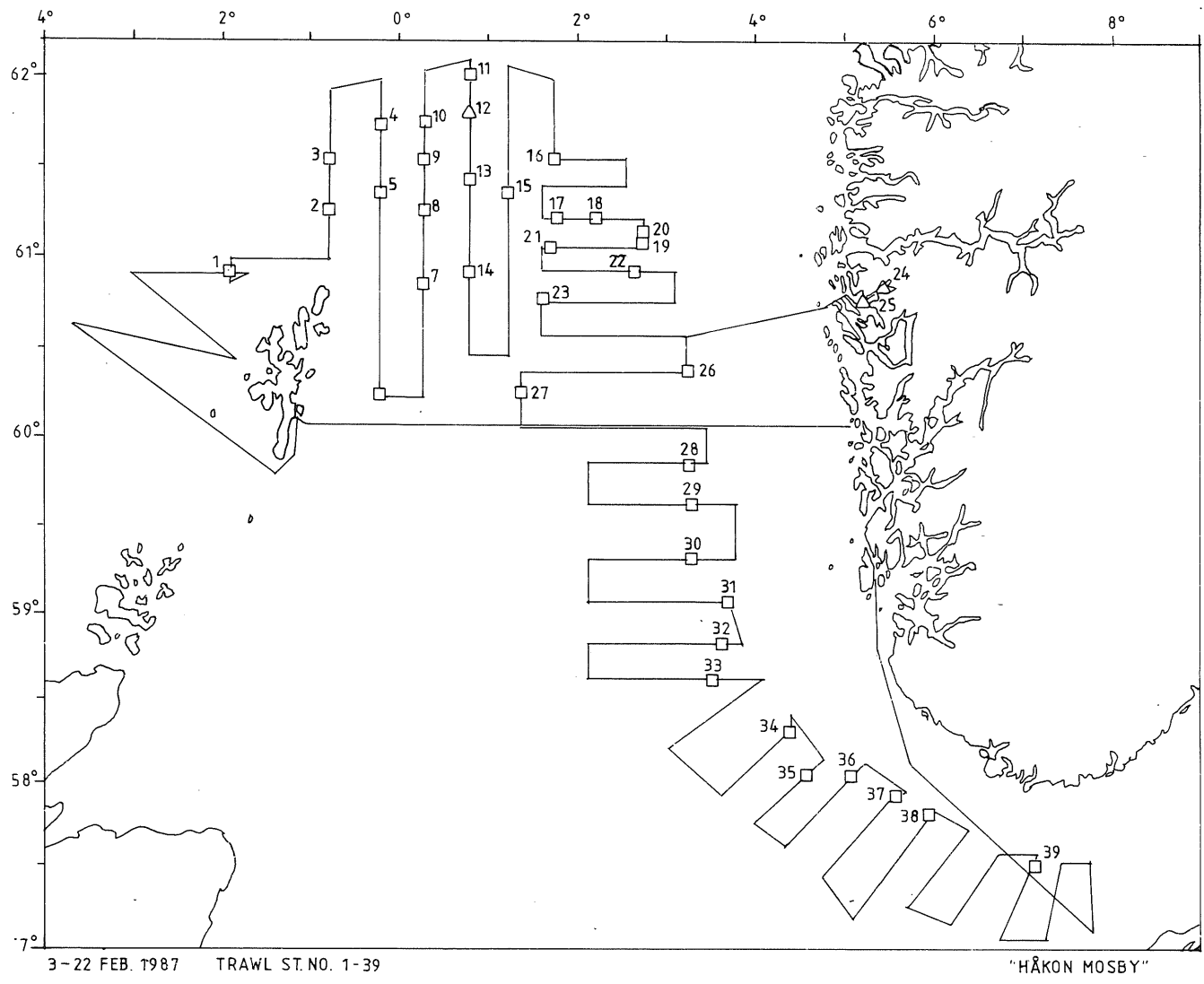






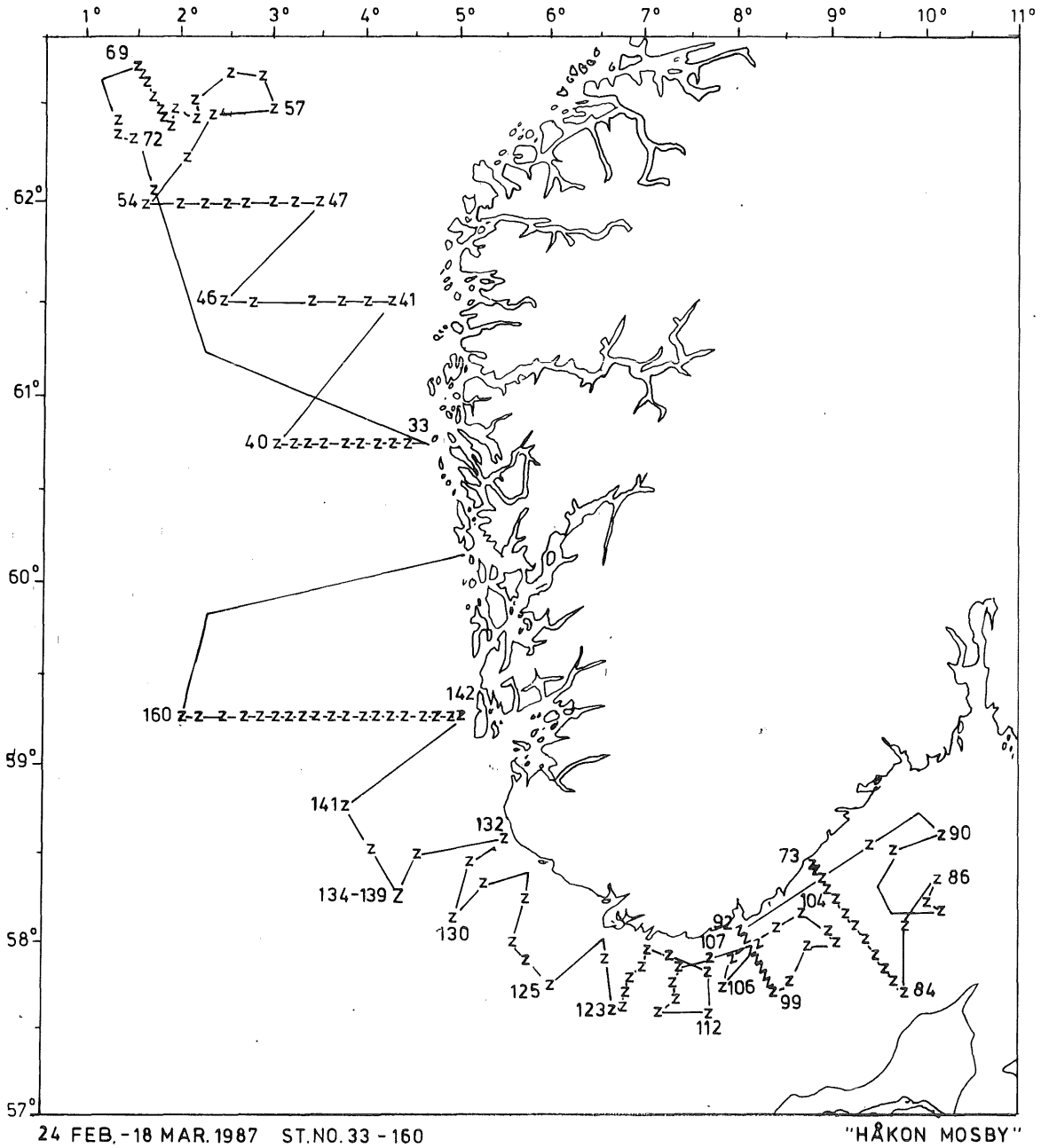


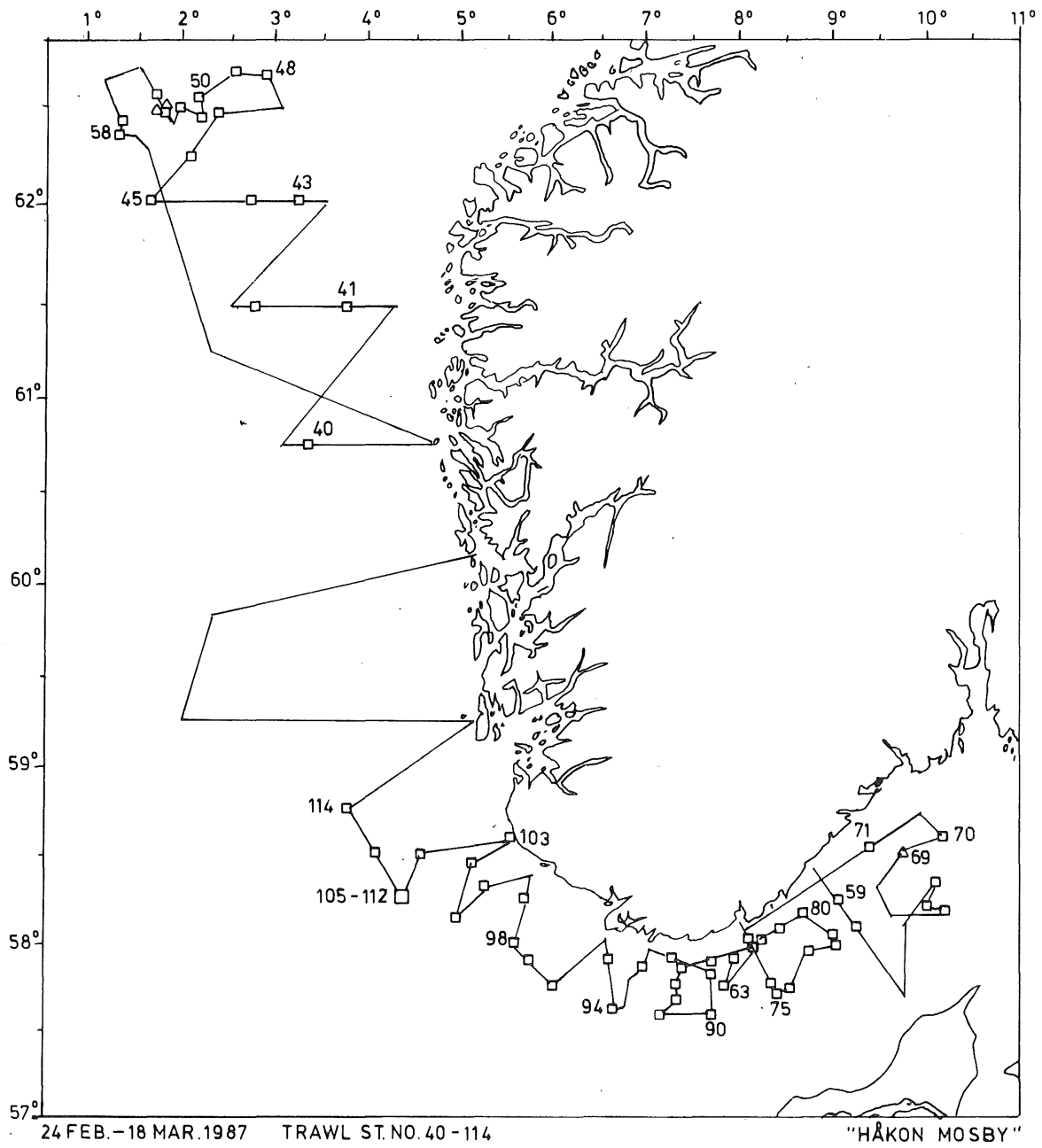


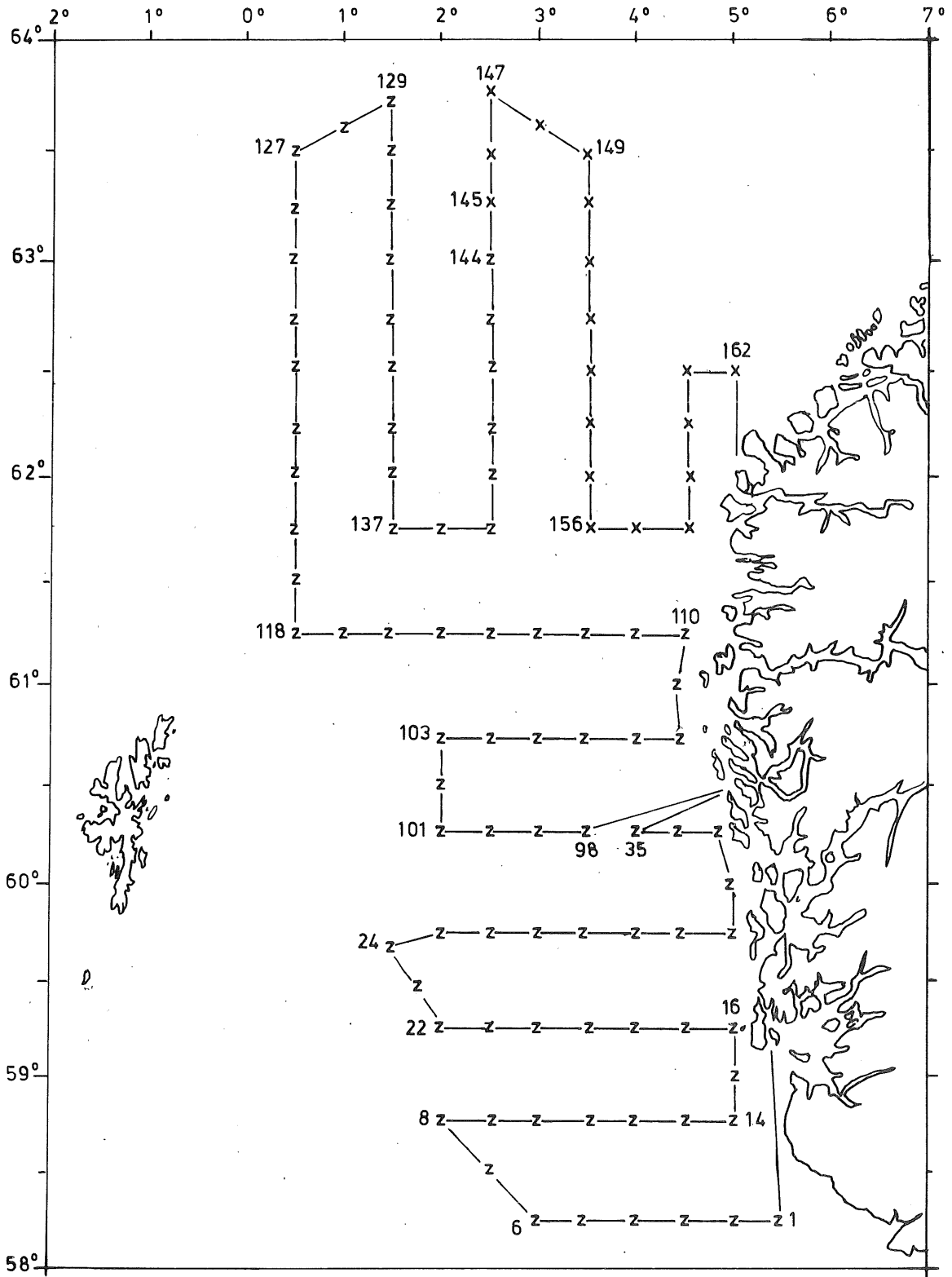


3-22 FEB. 1987 TRAWL ST. NO. 1-39

"HÅKON MOSBY"

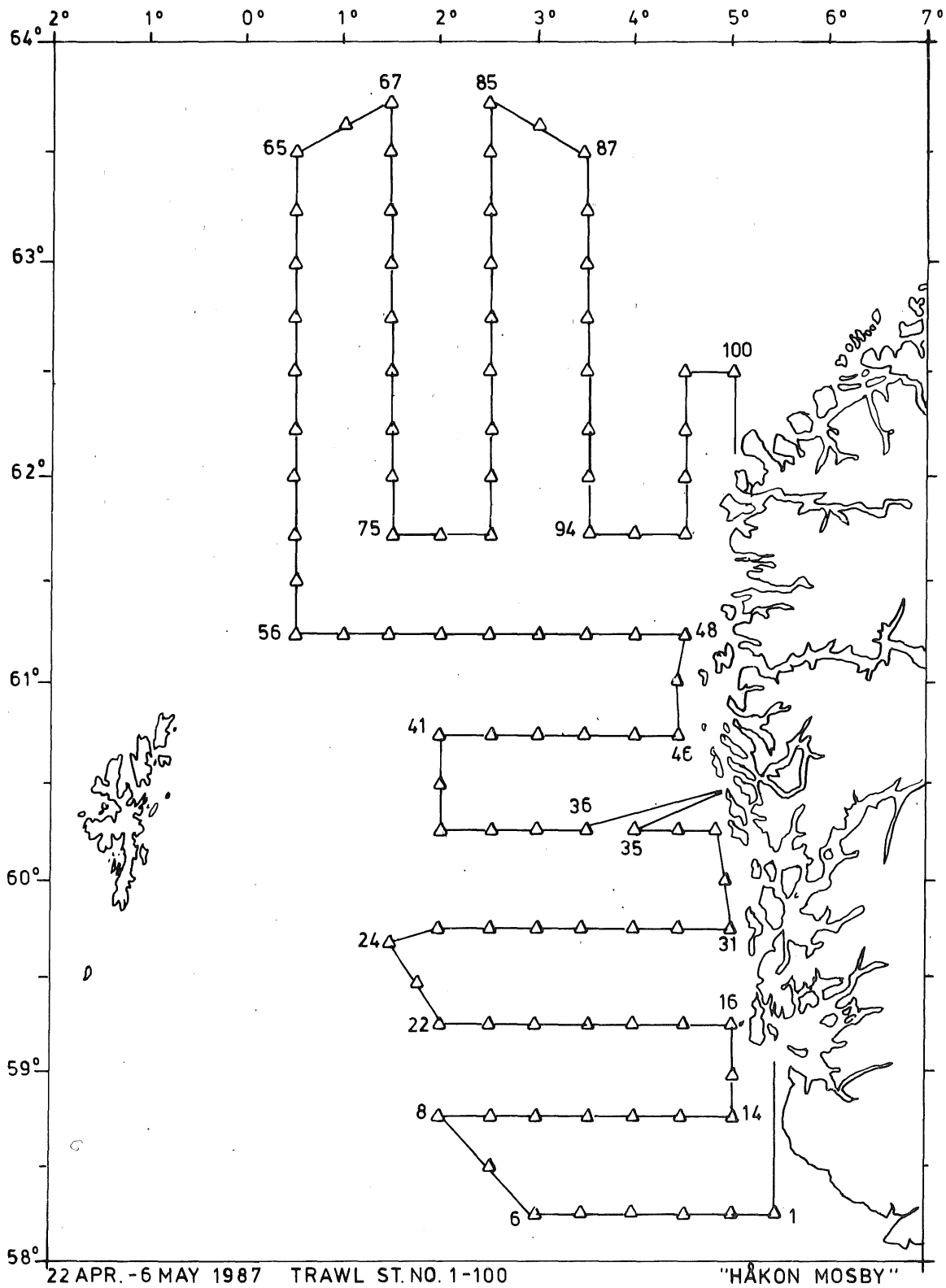






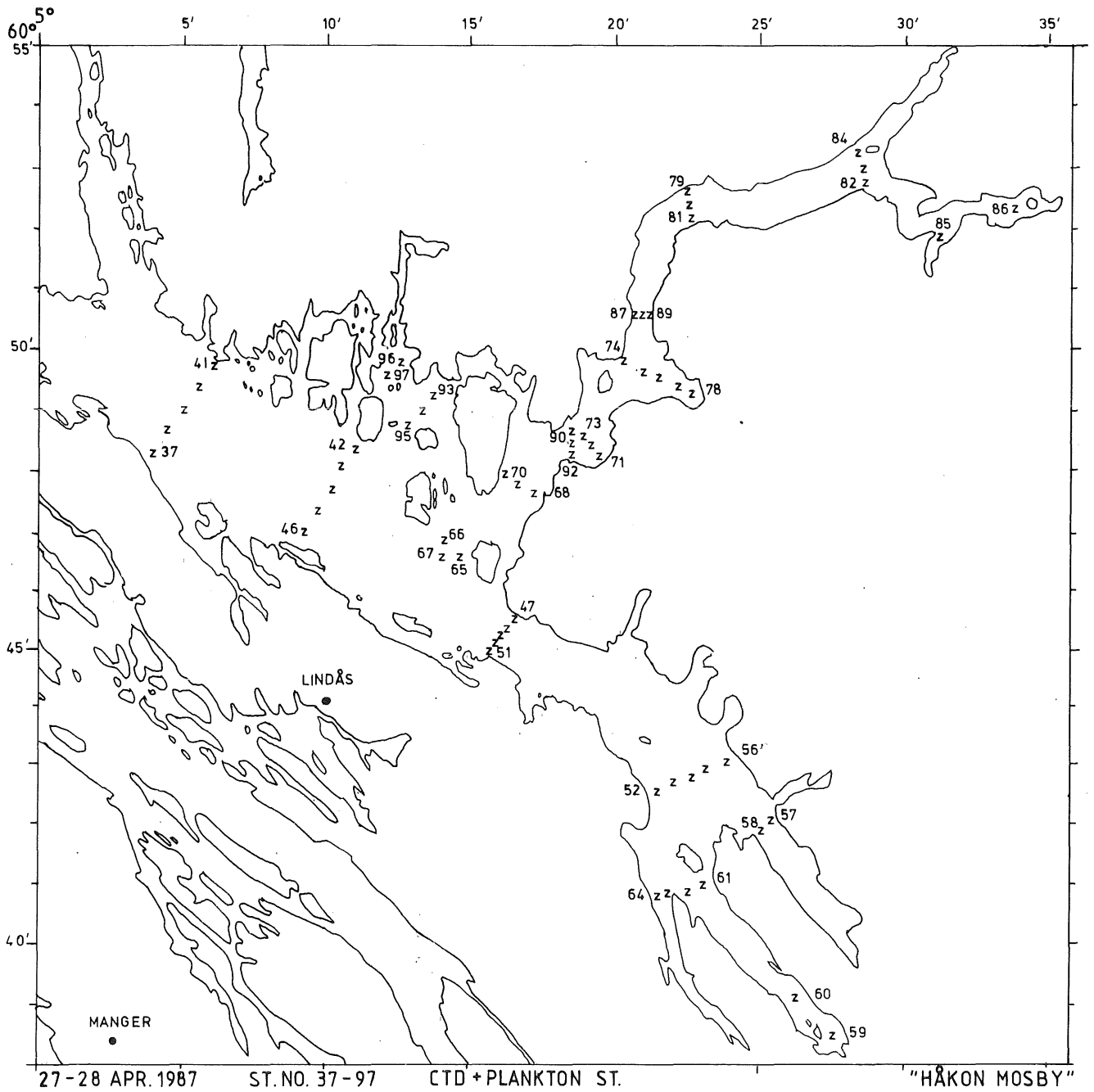
22 APR.-6 MAY 1987 z ST.NO.1-35,98-144, x ST.NO.145-162 t°C 25-50-75 M  
 "HÅKON MOSBY"

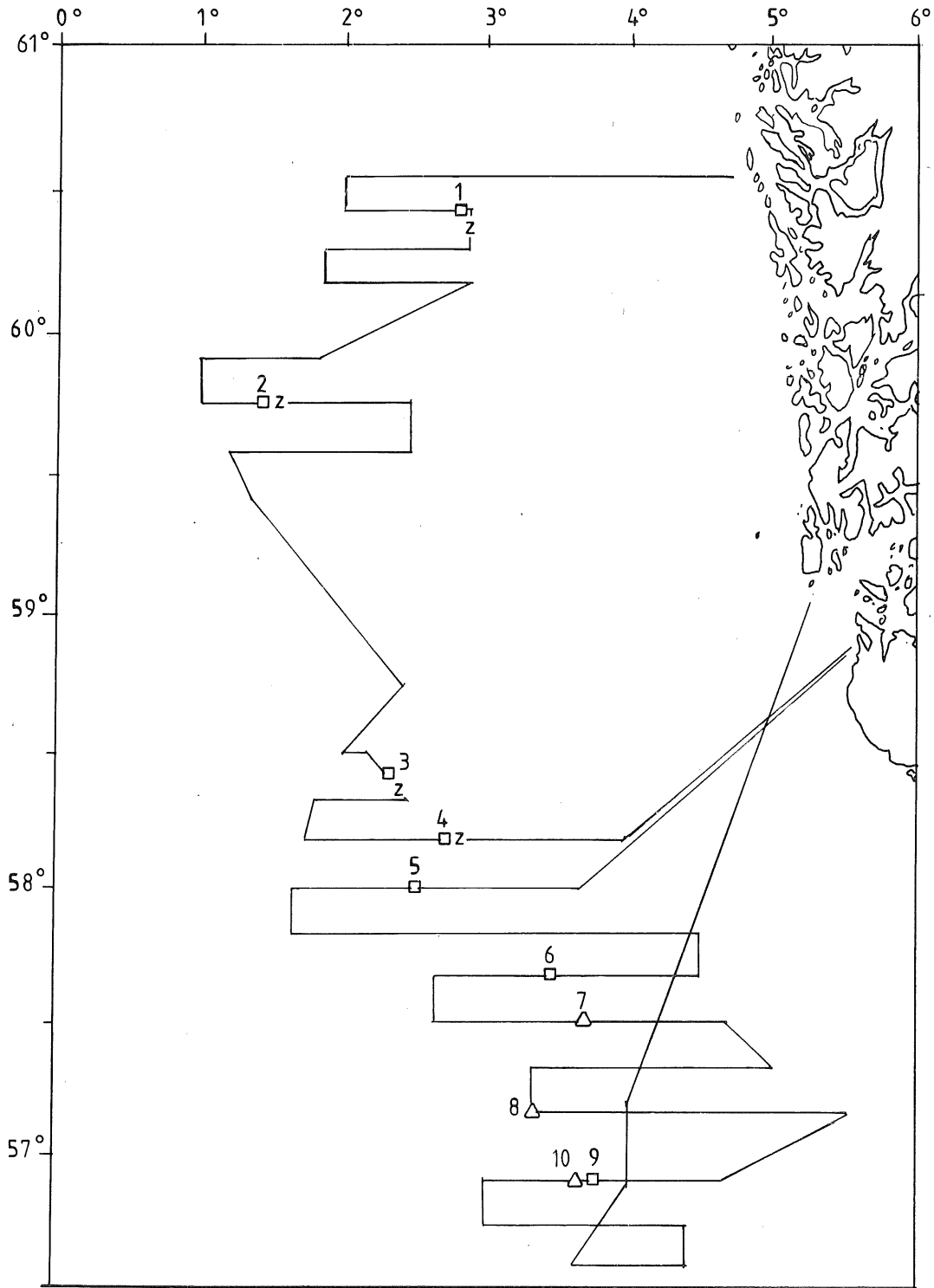




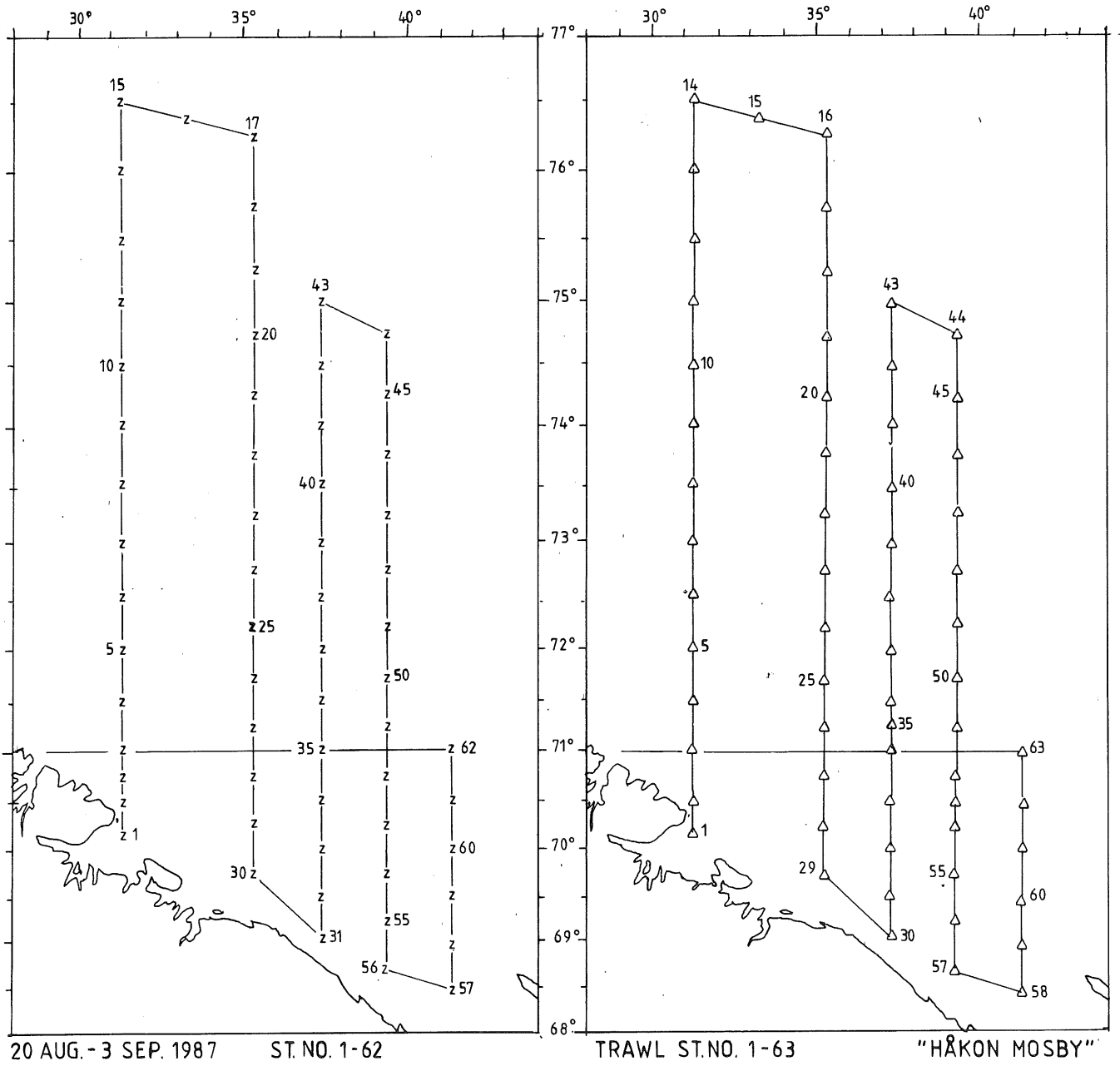
22 APR. - 6 MAY 1987 TRAWL ST. NO. 1-100

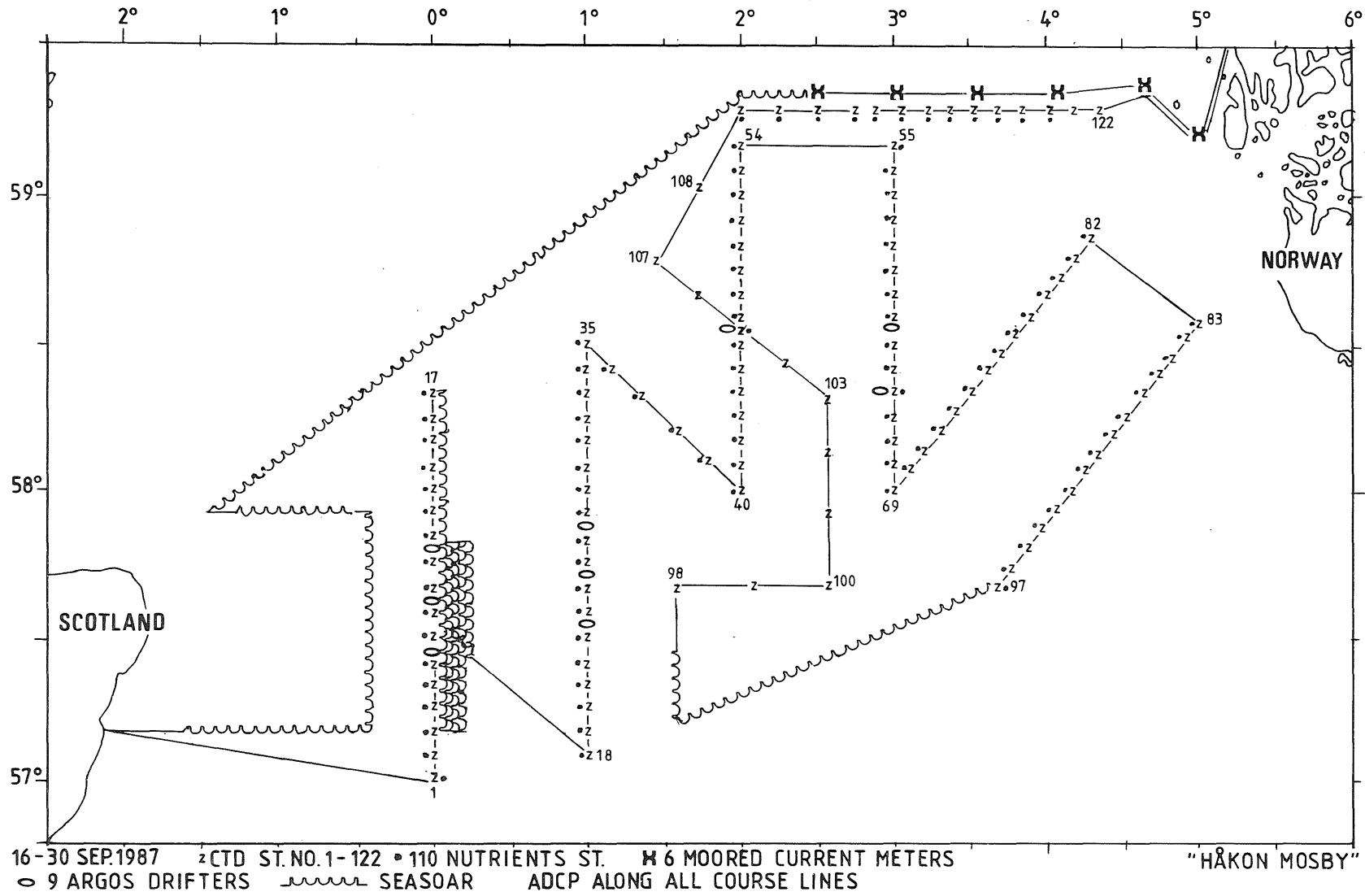
"HÅKON MOSBY"

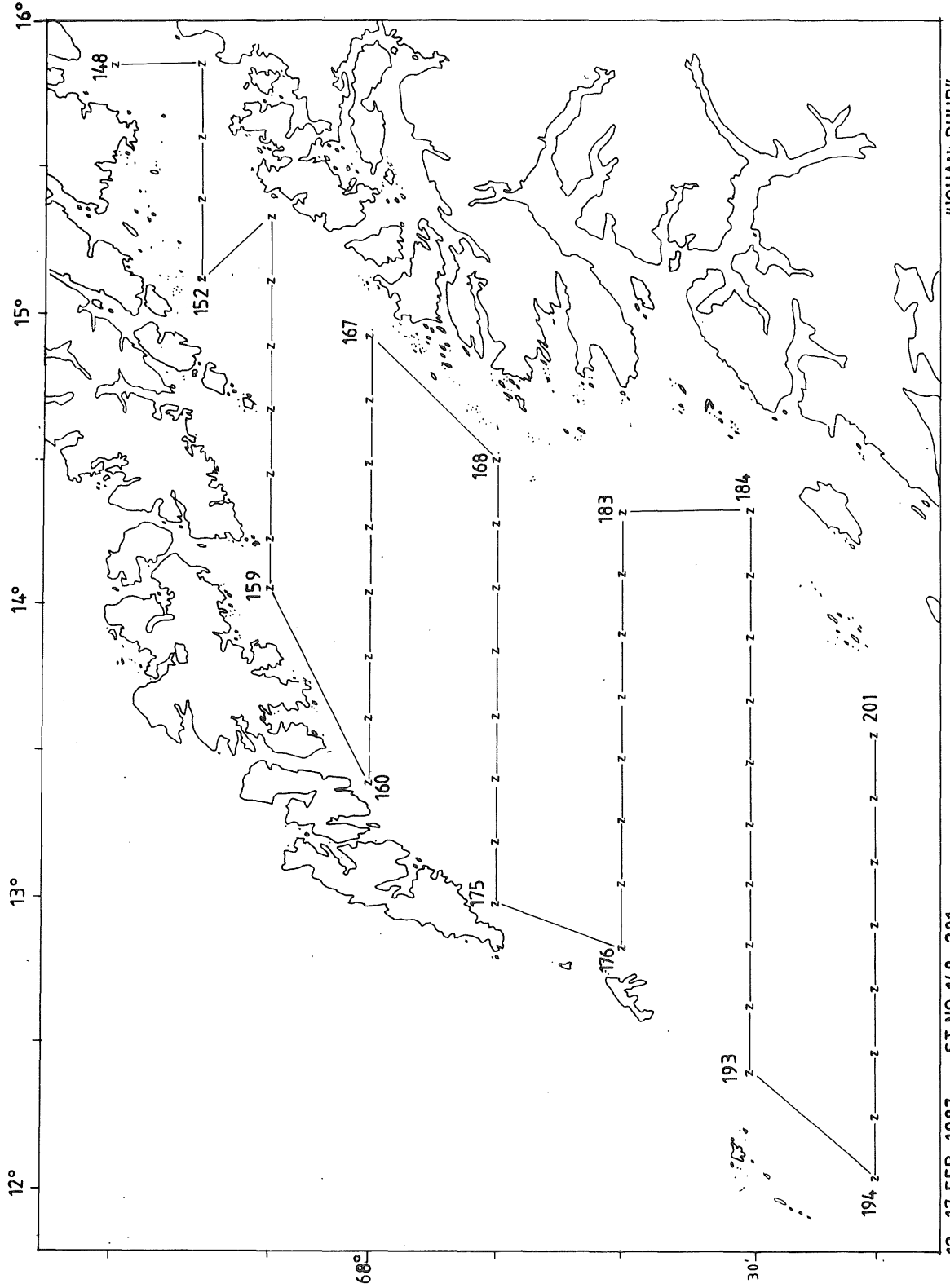




15 -27 MAY 1927 ST.NO.1-4 TRAWL ST.NO.1-10 "HÅKON MOSBY"

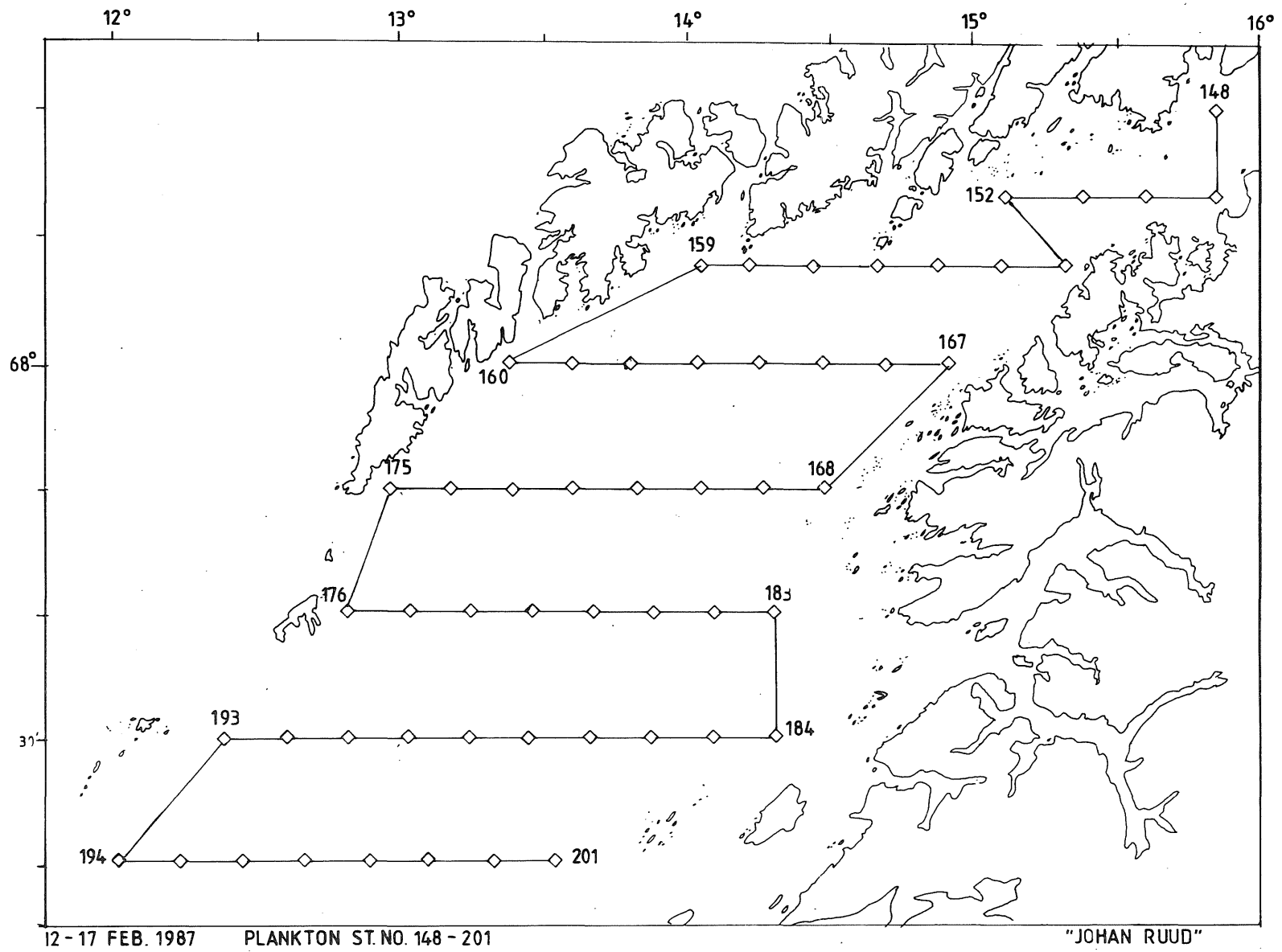


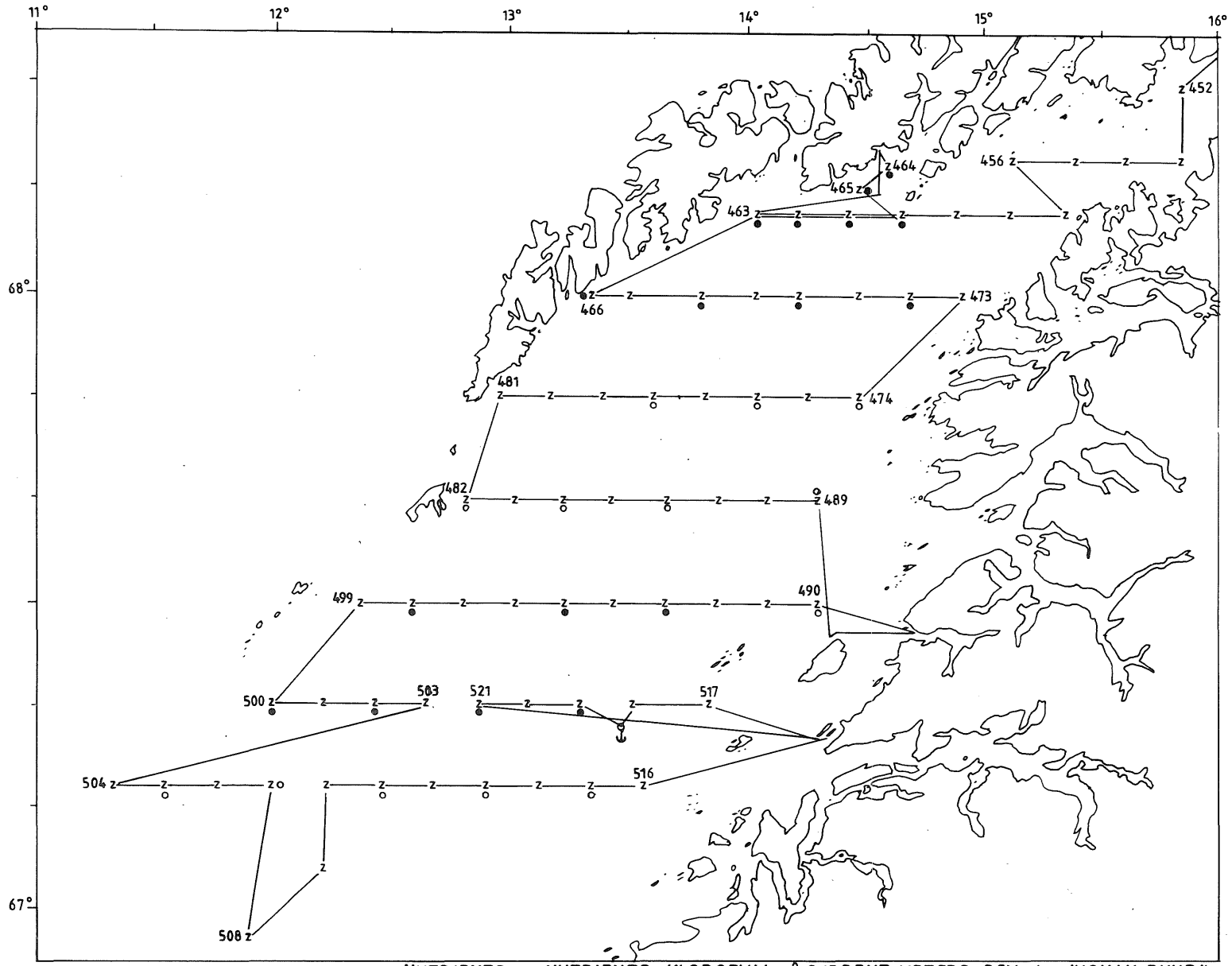




"JOHAN RUUD"

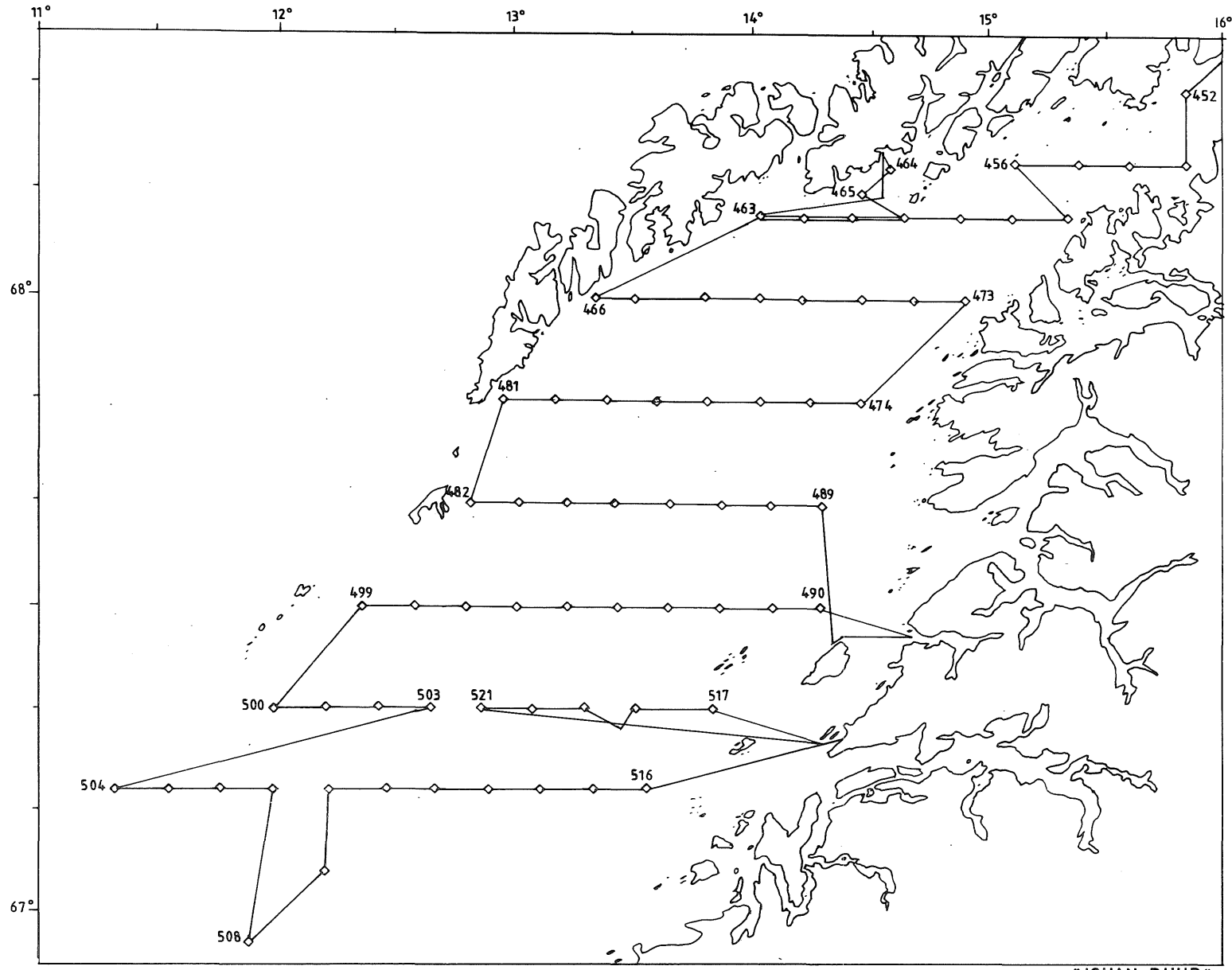
12-17 FEB. 1987 ST. NO. 148-201





17-24 MAR. 1987 ST. NO. 452-521 ○NUTRIENTS ●NUTRIENTS+KLOROFYLL ↓CURRENT METERS RCM-4 "JOHAN RUUD"

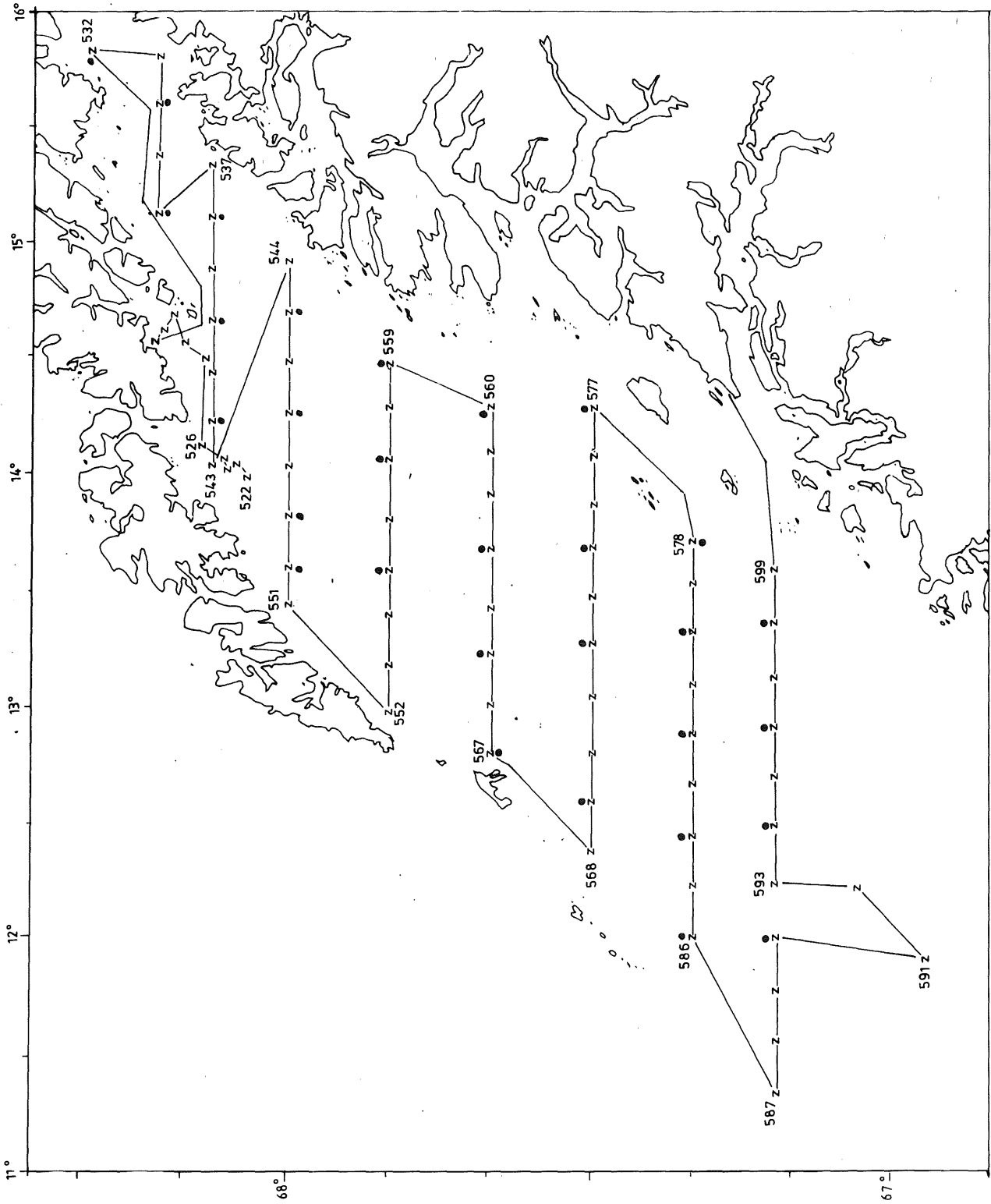




17 - 24 MAR. 1987

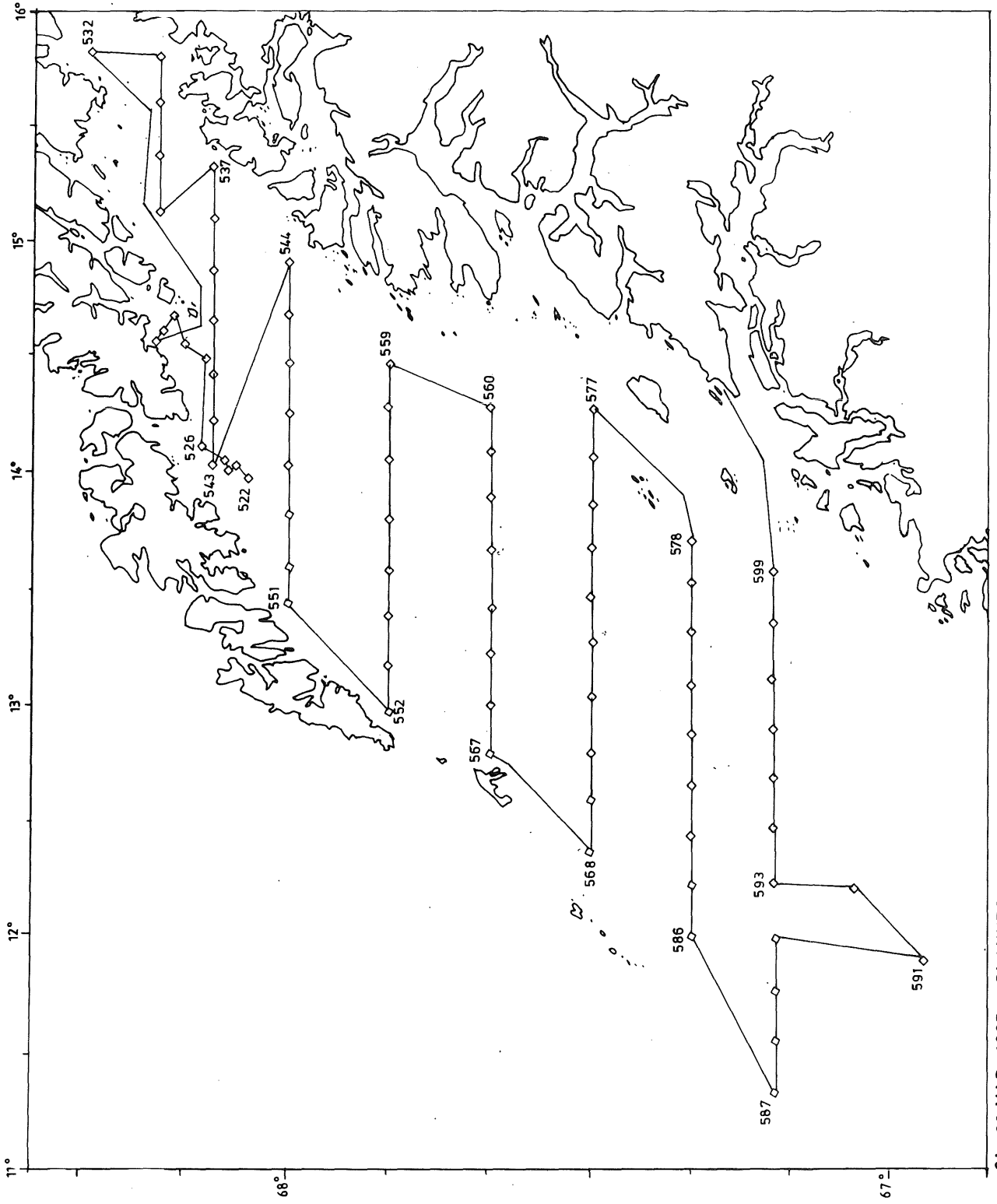
PLANKTON ST. NO. 452 - 521

"JOHAN RUUD"



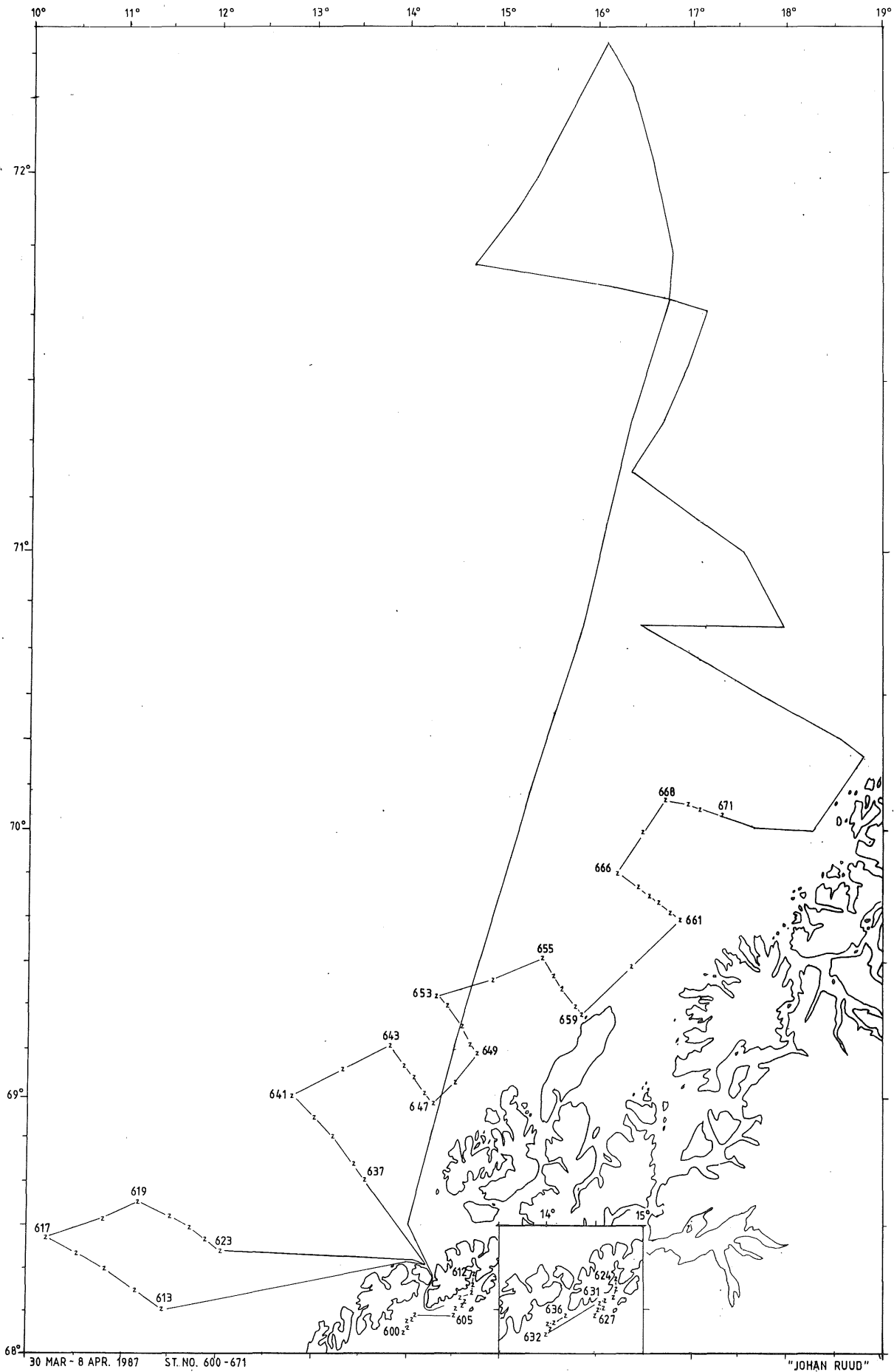
"JOHAN RUUD"

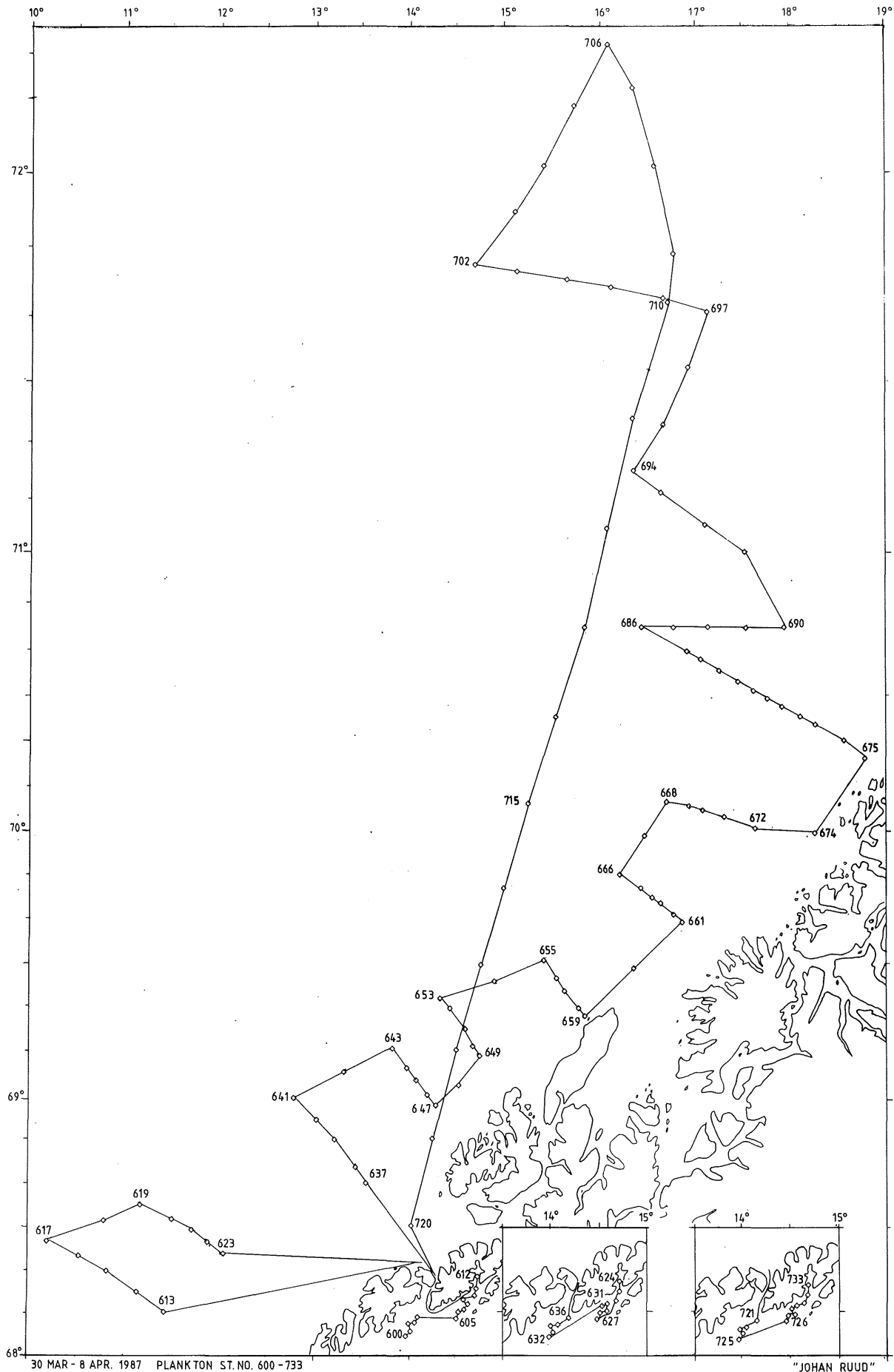
24-28 MAR. 1987 ST. NO. 522 - 599 • NUTRIENTS + KOLORFYLL

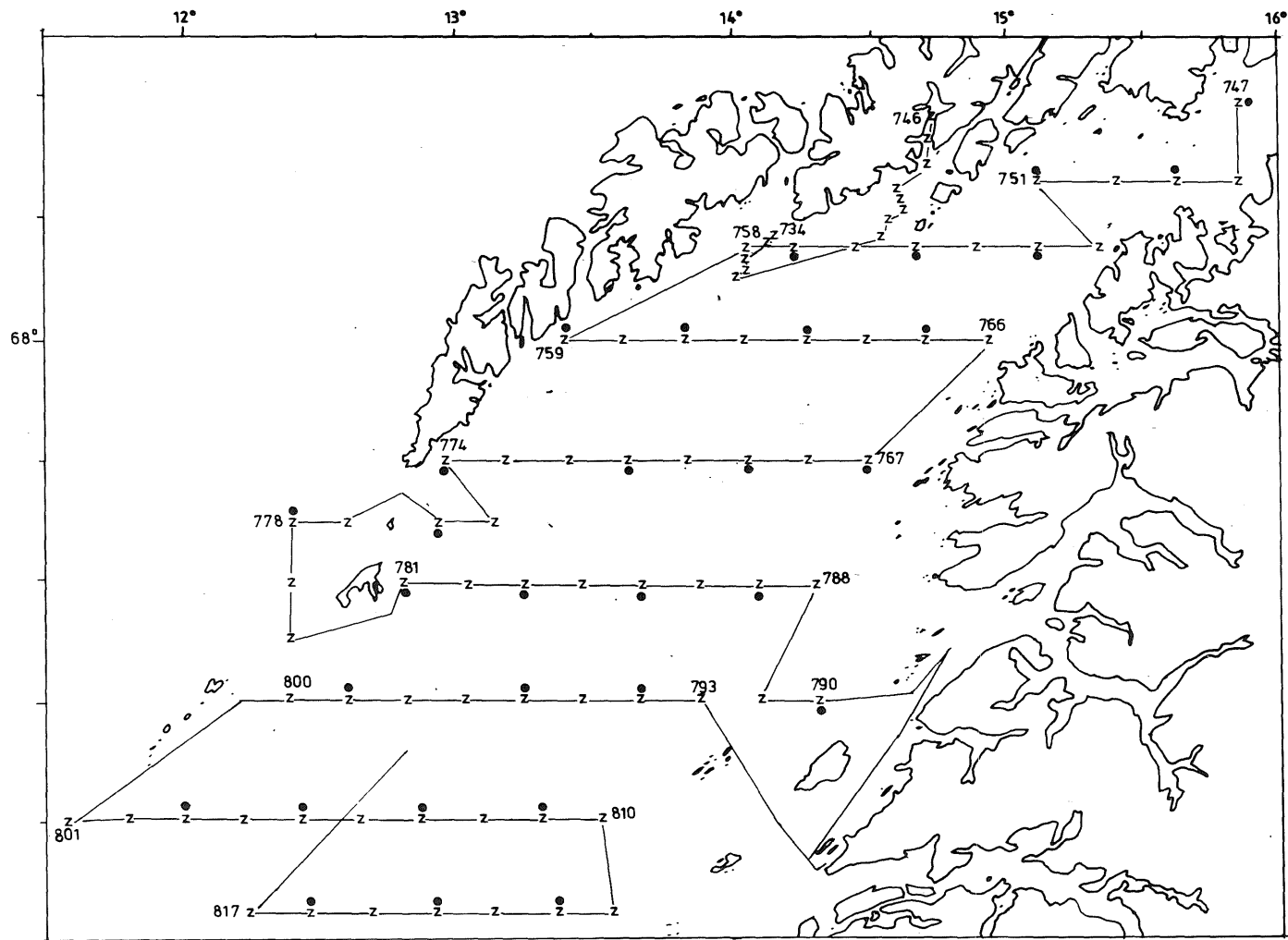


"JOHAN RUUD"

24 -28 MAR. 1987 PLANKTON ST. NO. 522 - 599

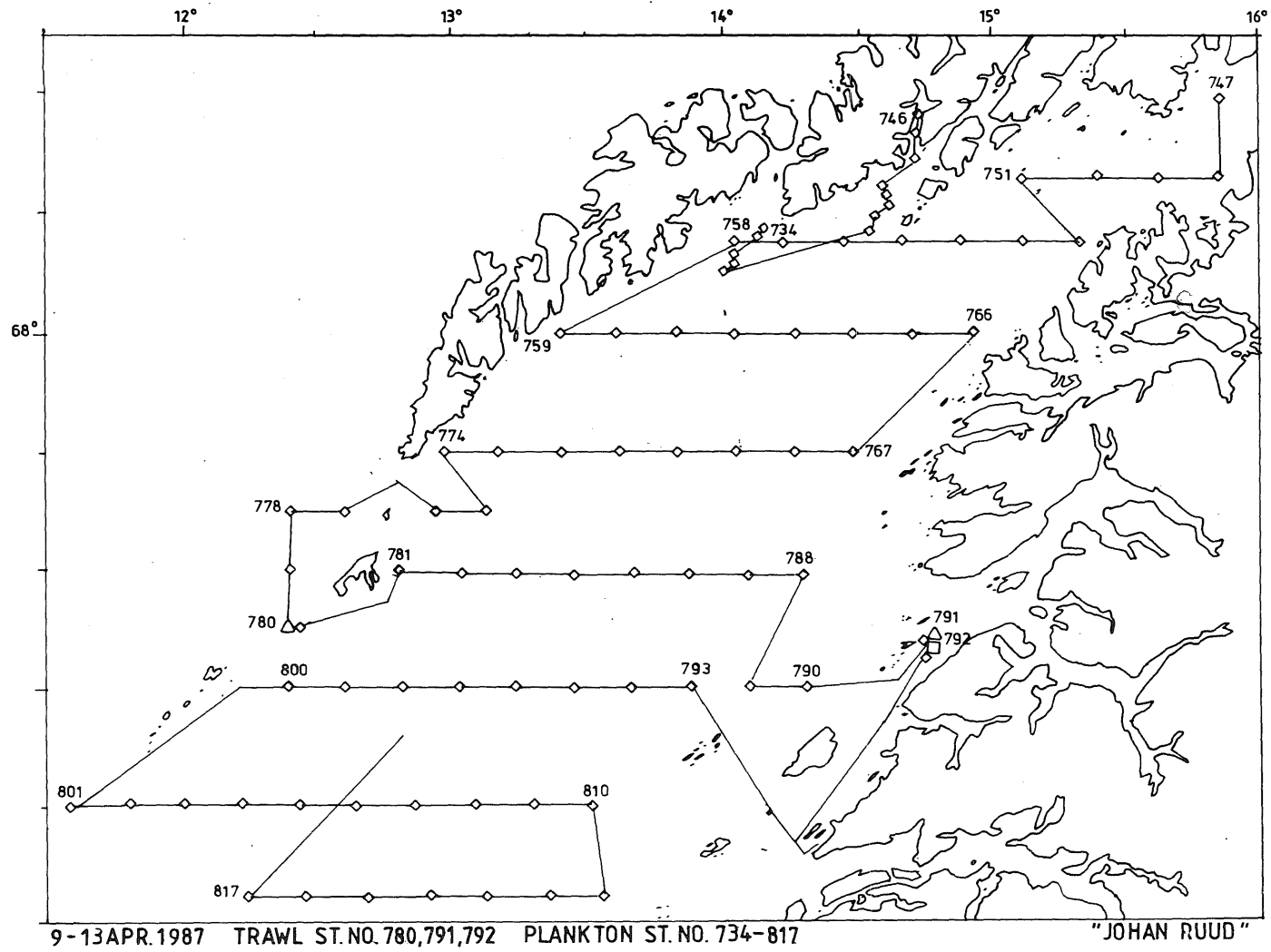






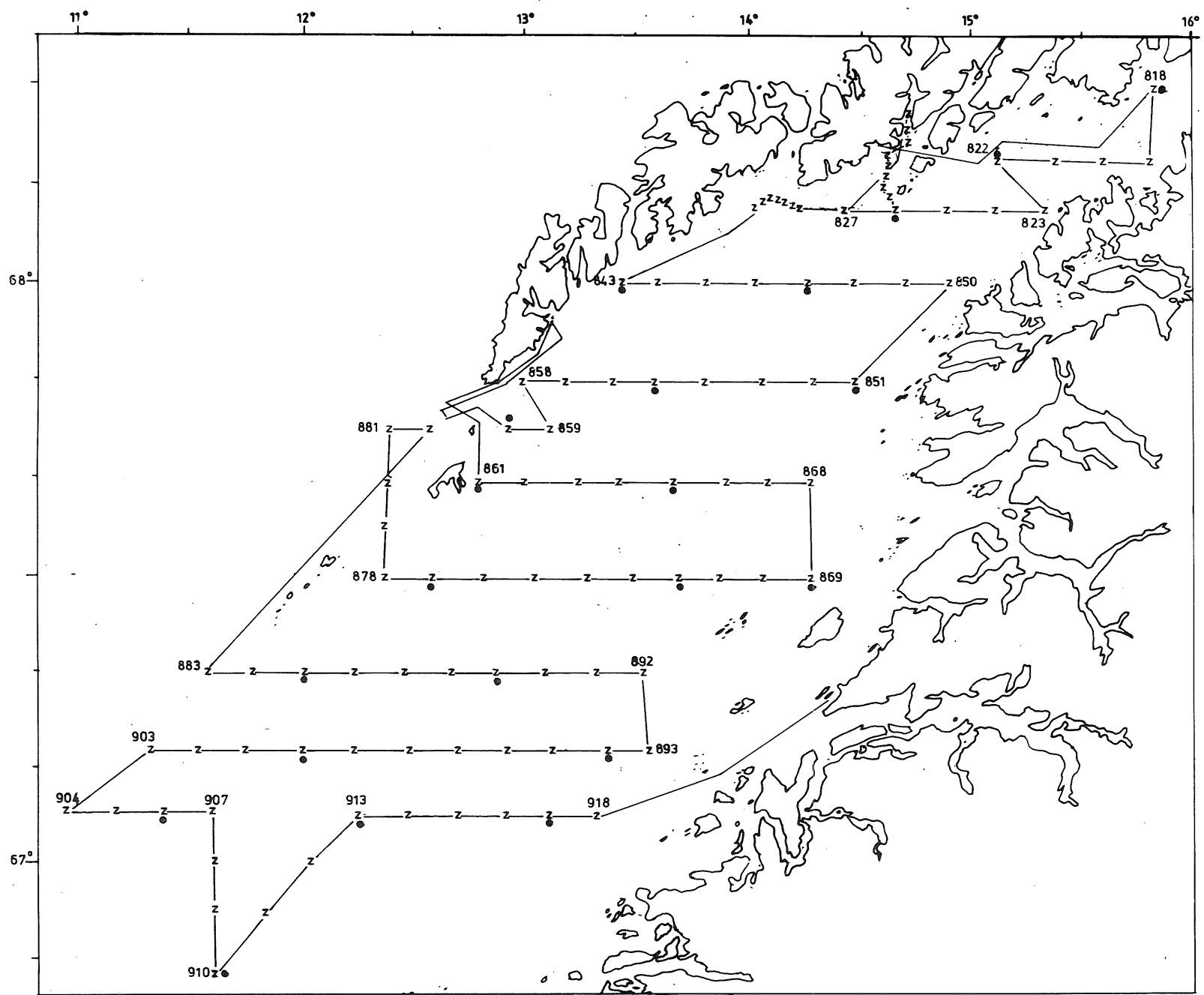
9-13 APR. 1987 ST. NO 734-817 • NUTRIENTS+KLOROFYLL ST.

"JOHAN RUUD"



9-13 APR. 1987 TRAWL ST. NO. 780, 791, 792 PLANKTON ST. NO. 734-817

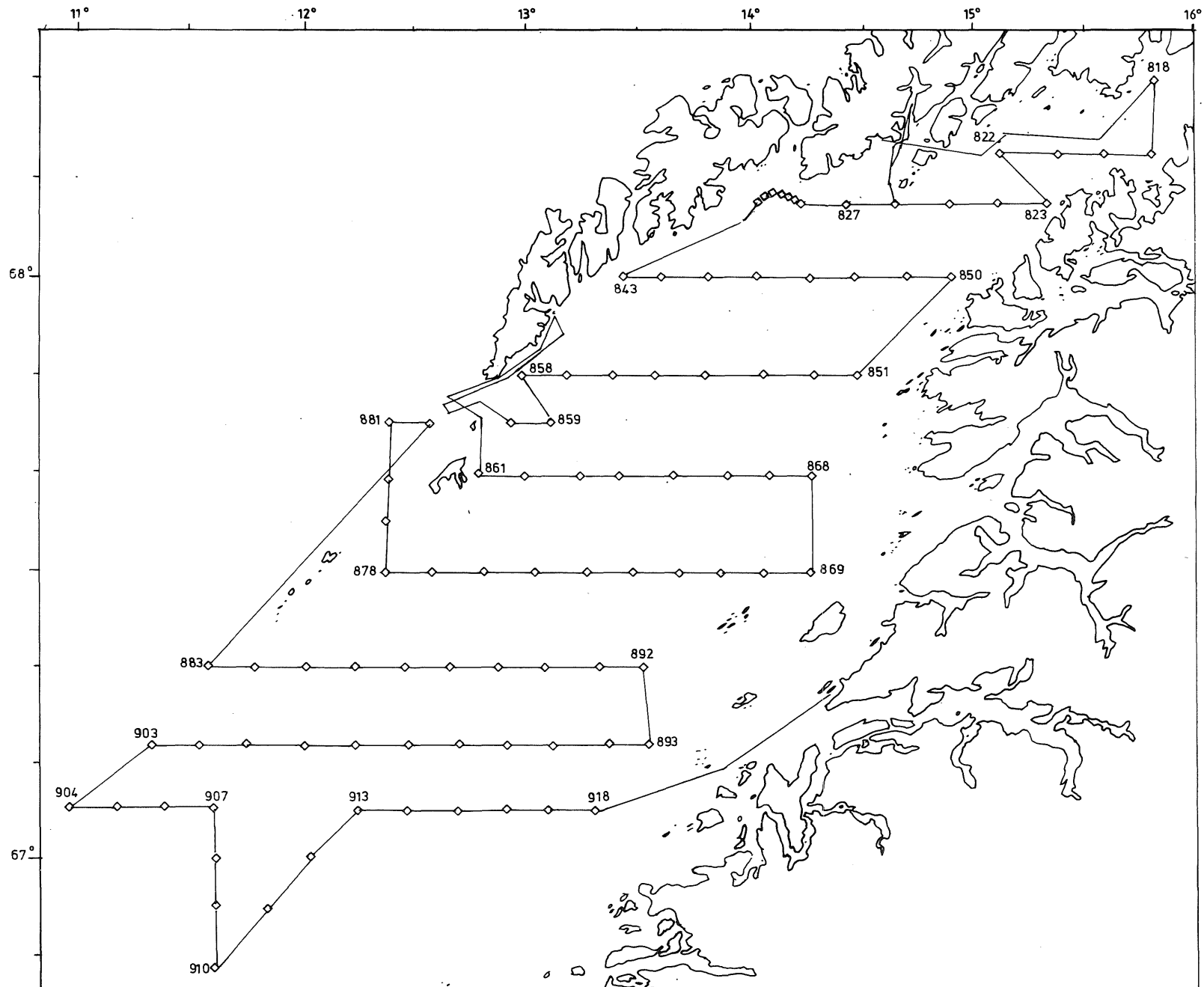
"JOHAN RUUD"



14-20 APR. 1987 ST. NO. 818-918 • NUTRIENTS + KLOROFYLL ST.

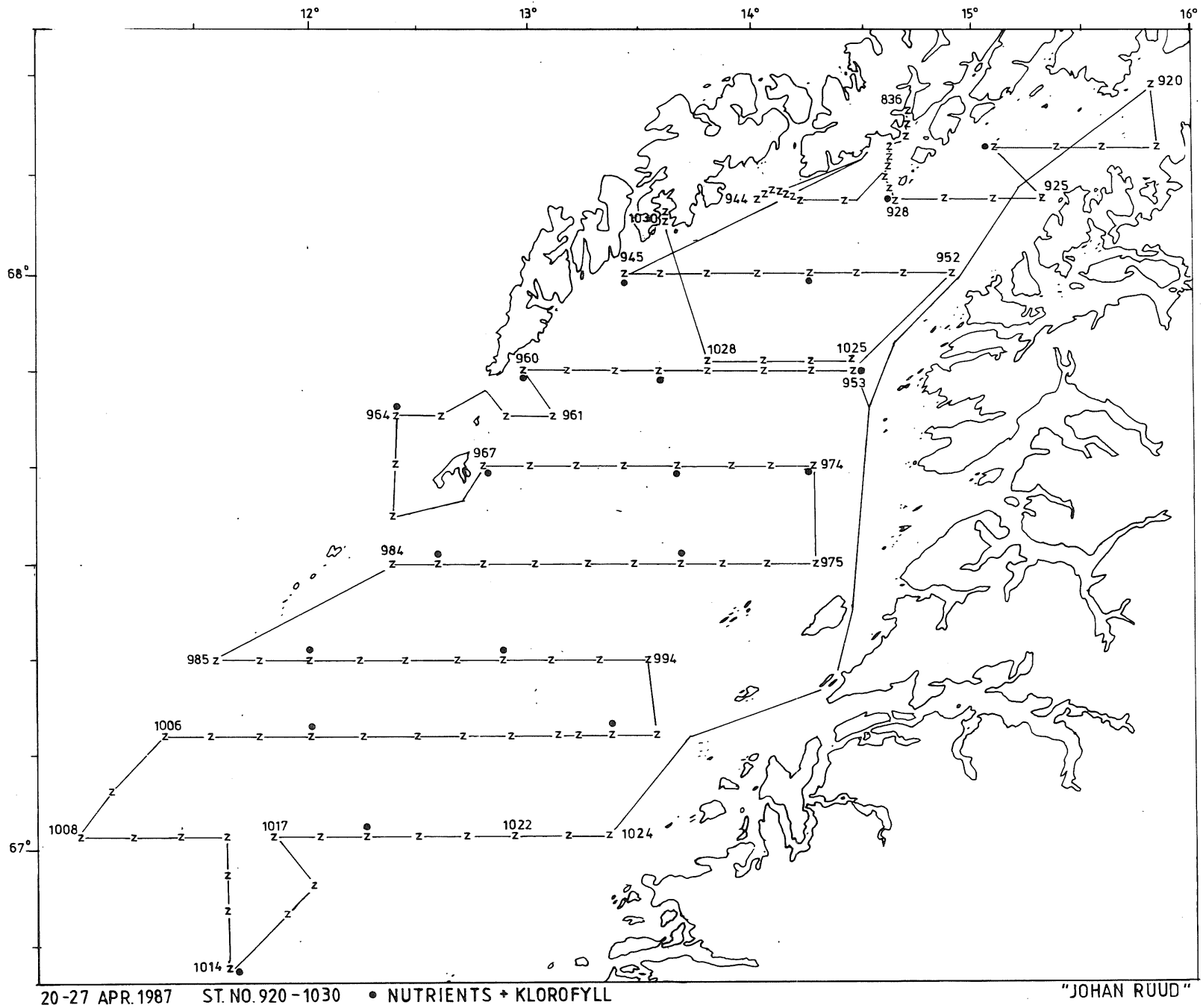
"JOHAN RUUD"

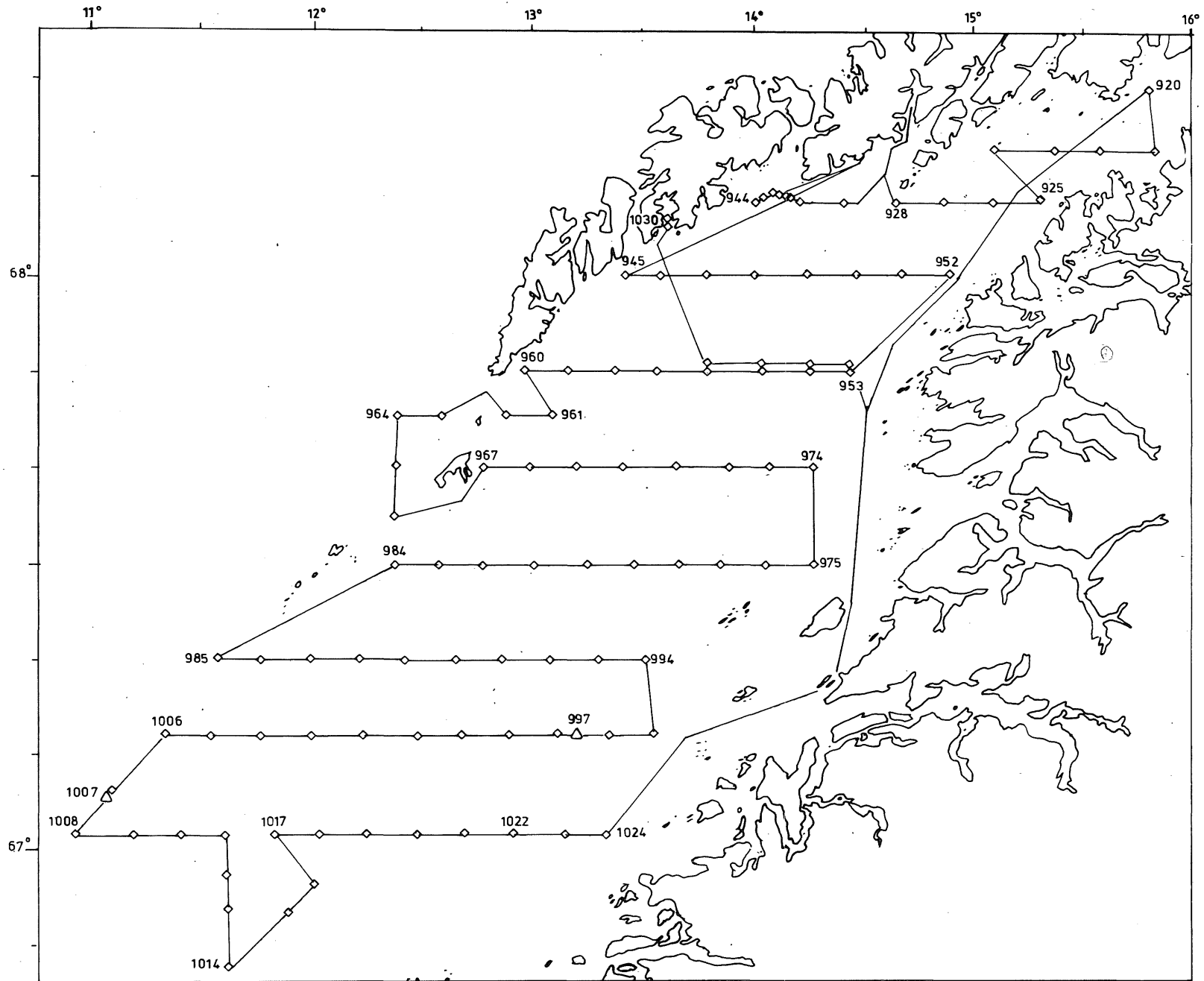




14 - 20 APR. 1987 PLANKTON ST. NO. 818 - 918

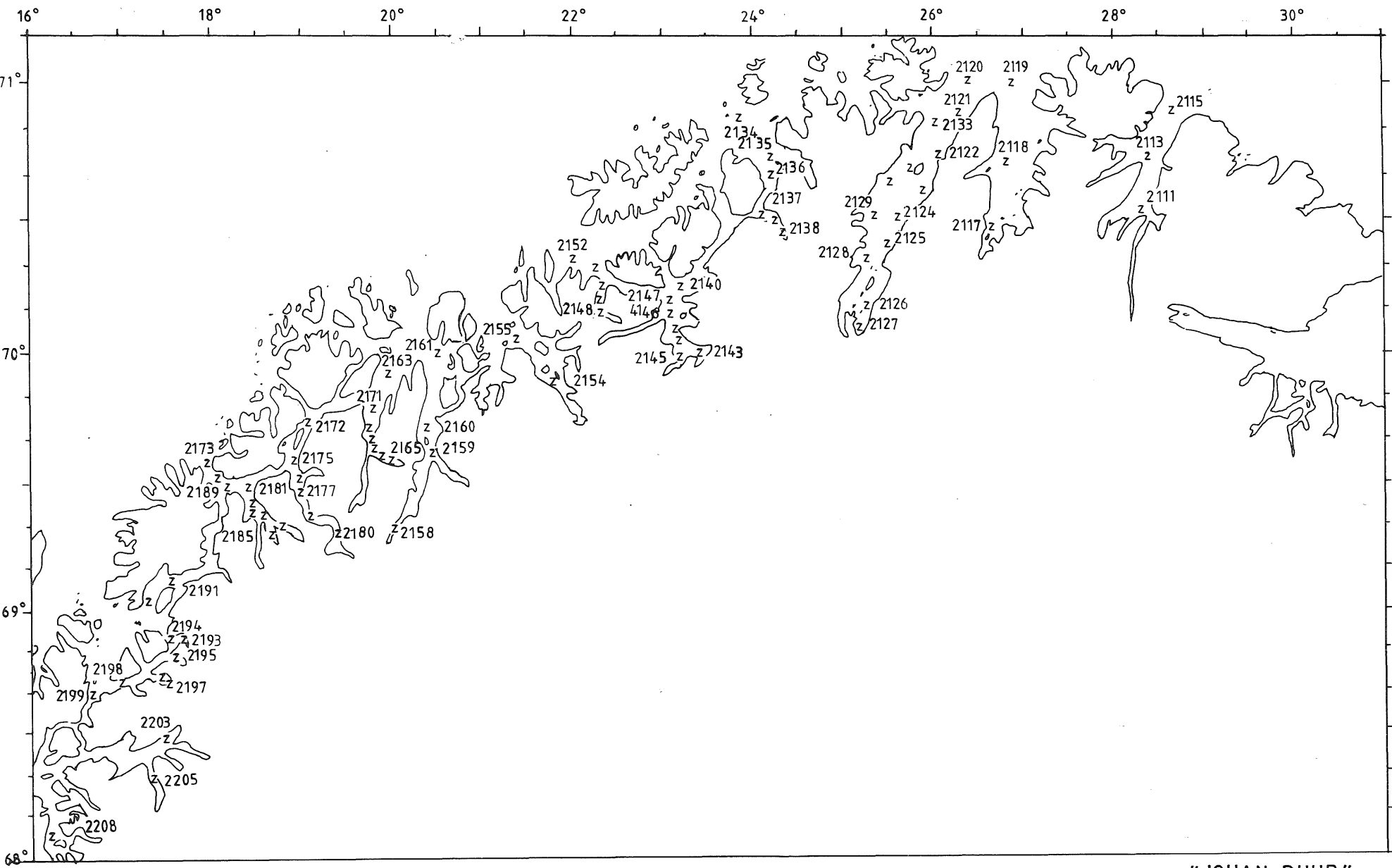
"JOHAN RUUD"





20-27 APR. 1987 TRAWL ST. NO. 997, 1007 PLANKTON ST. NO. 920-1030

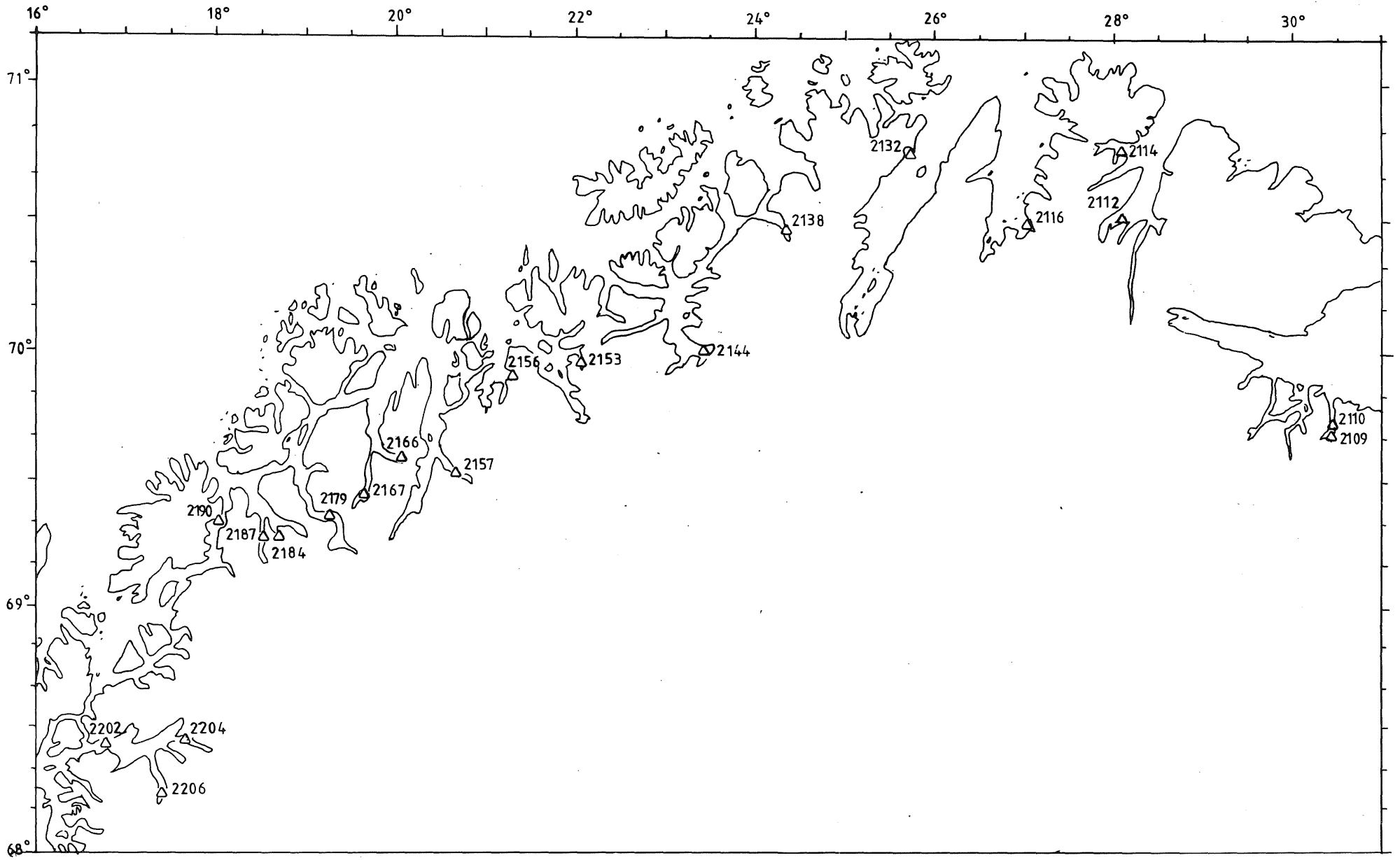
"JOHAN RUUD"



115

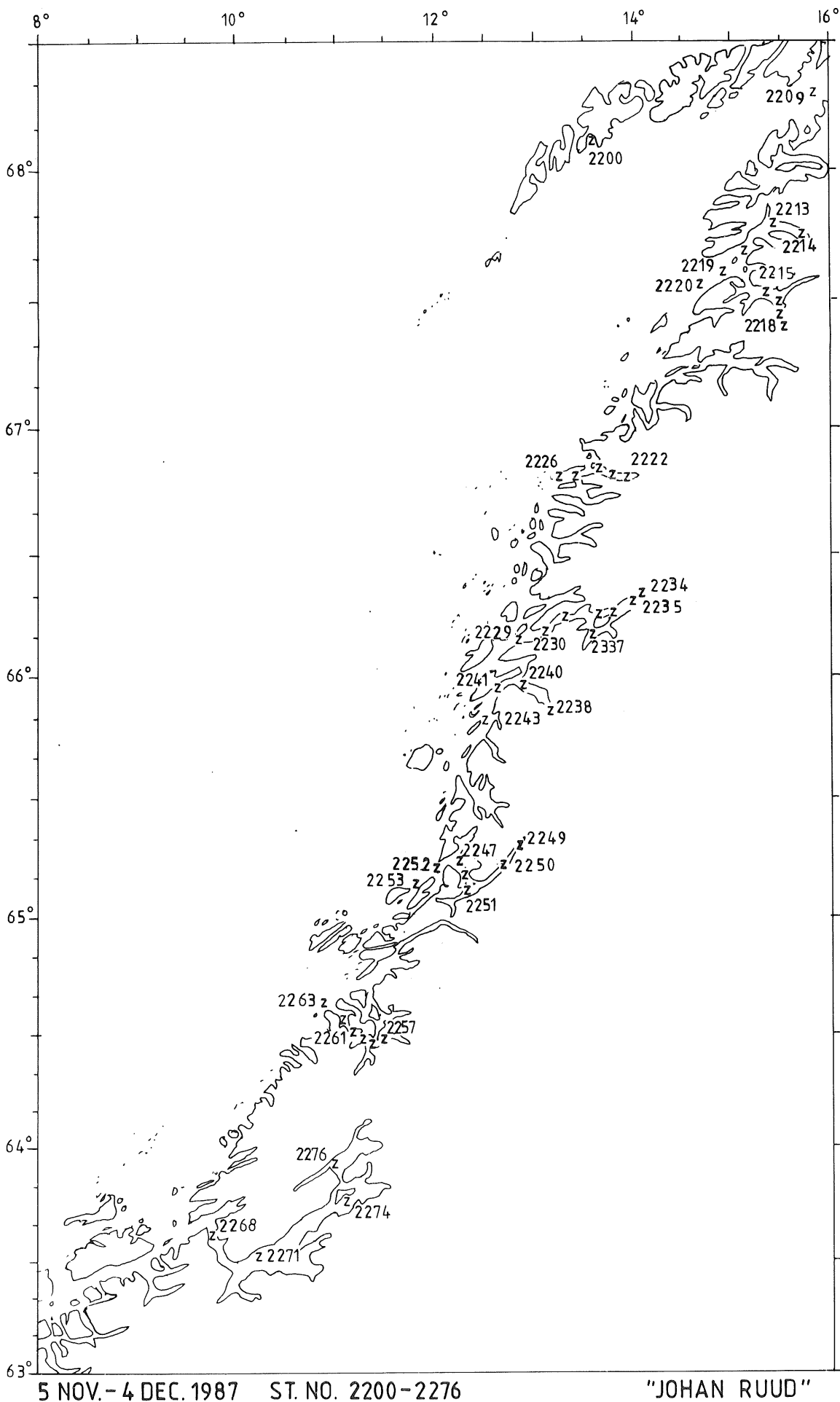
5 NOV. - 4 DEC. 1987 ST. NO. 2111 - 2208

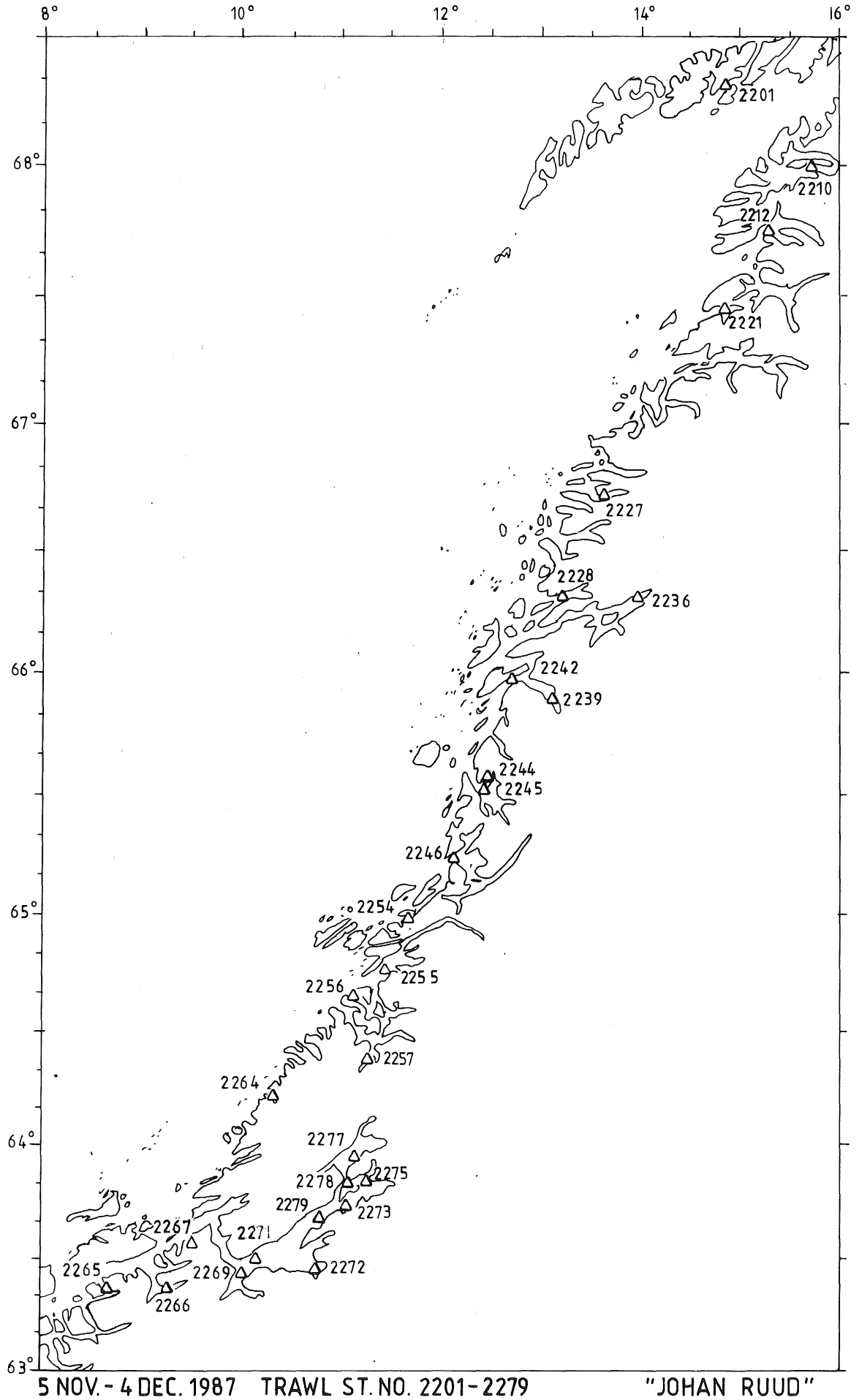
"JOHAN RUUD"



5 NOV. - 4 DEC. 1987 TRAWL ST. NO. 2109 - 2206

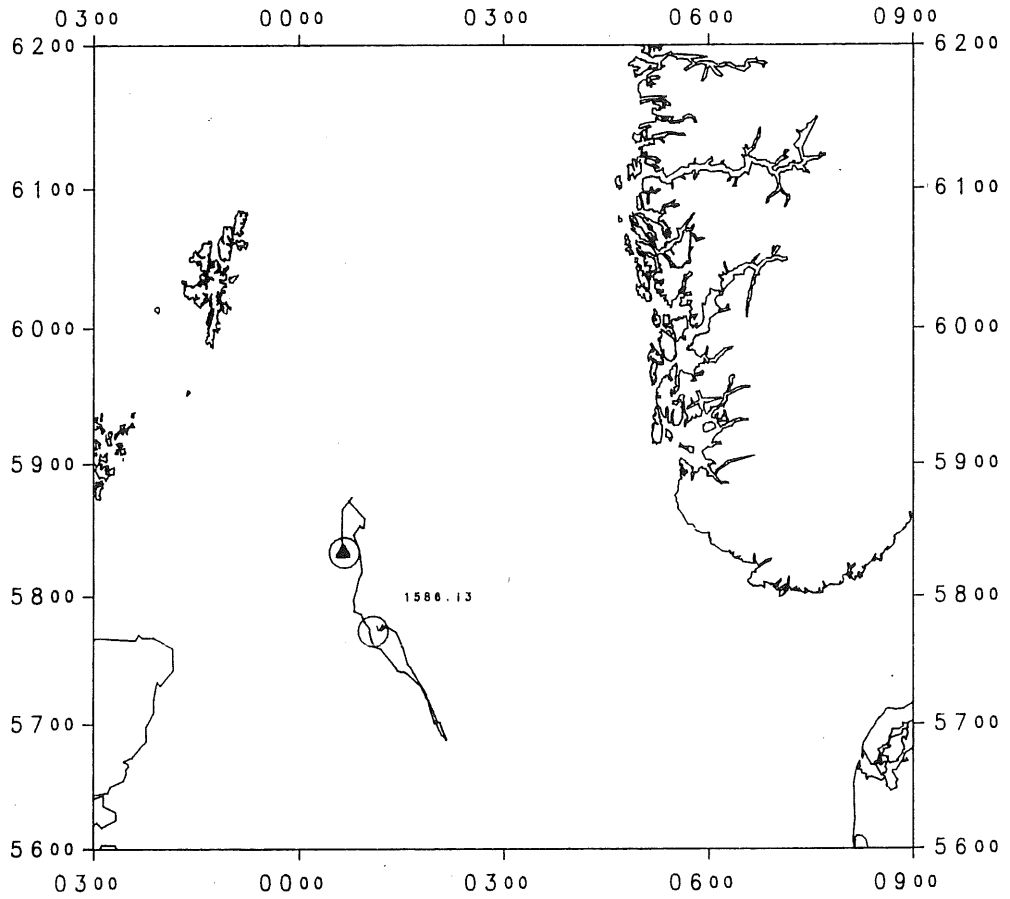
"JOHAN RUUD"



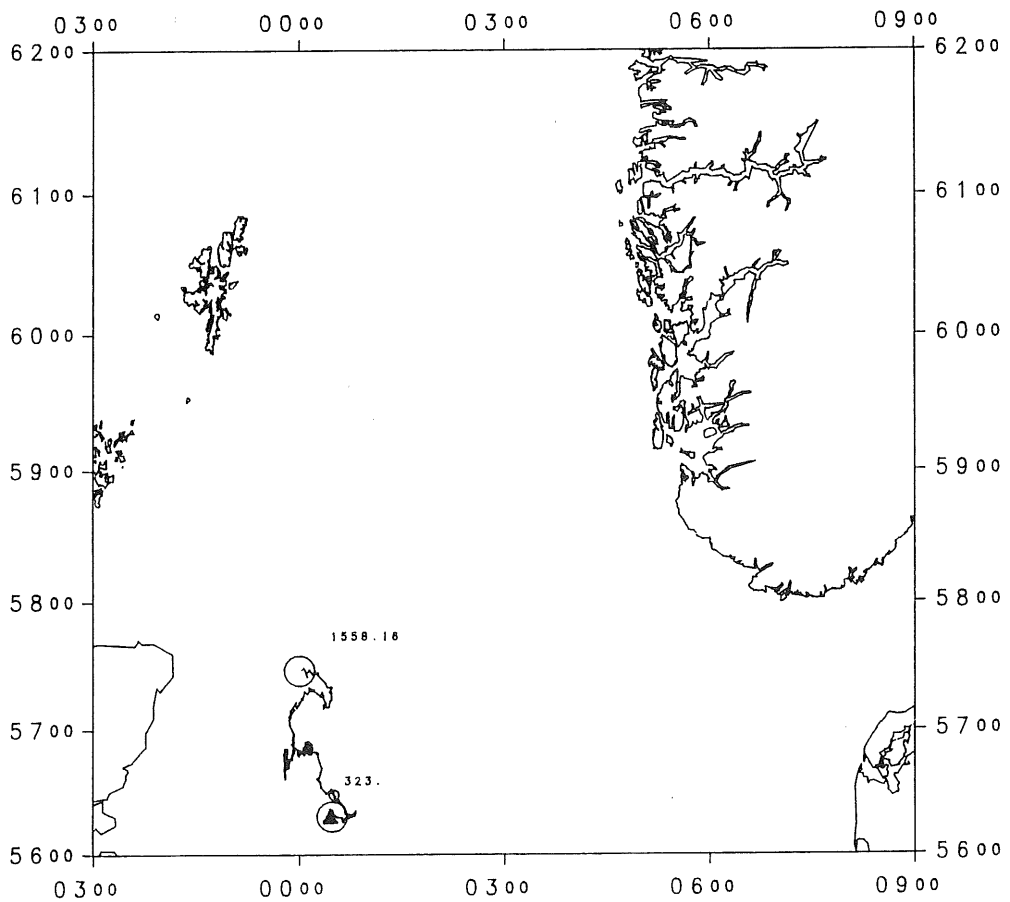


5 NOV. - 4 DEC. 1987 TRAWL ST. NO. 2201-2279

"JOHAN RUUD"

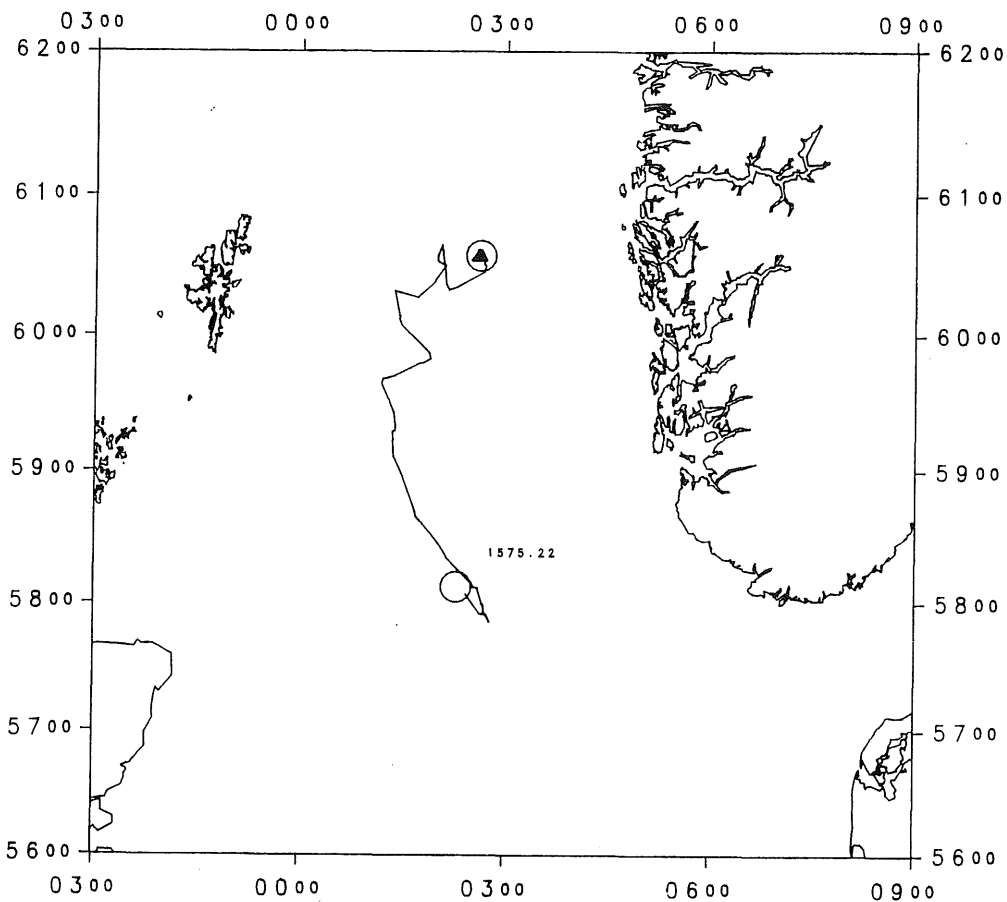


ARGOS DRIVBANE 13  
1987

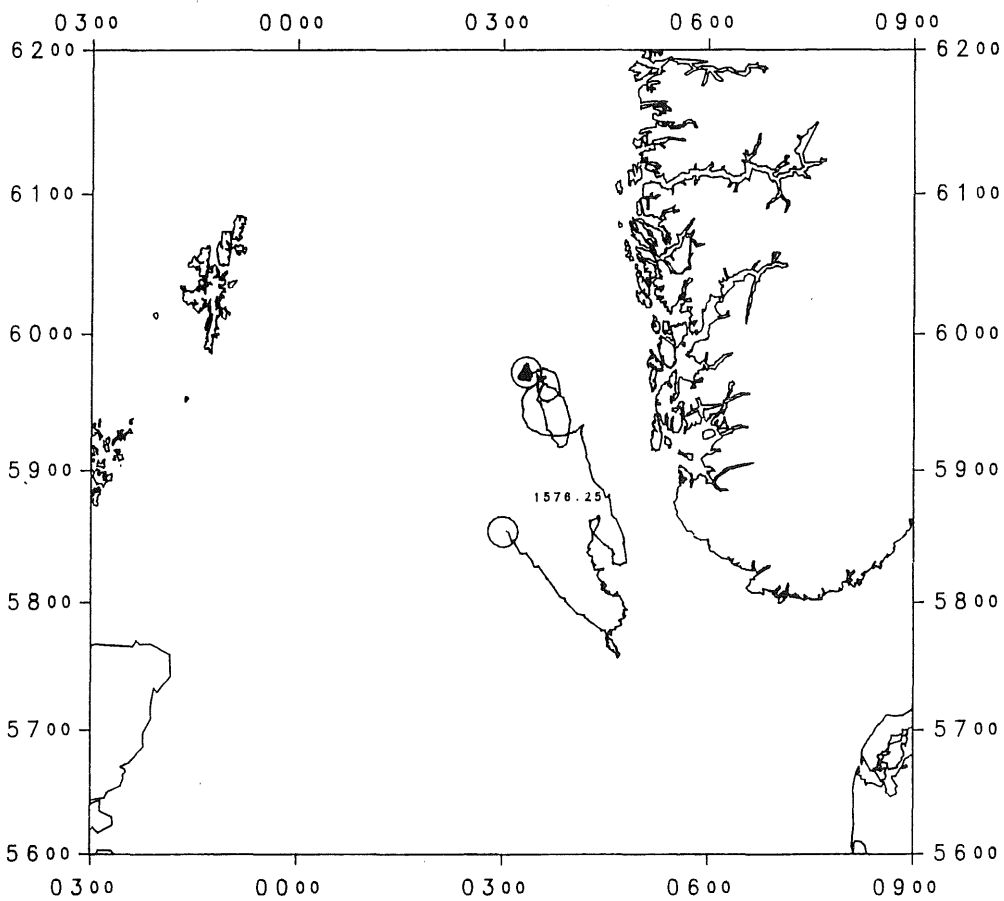


ARGOS DRIVBANE 16 ○ DEPLOYED ◐ RECOVERED  
1987

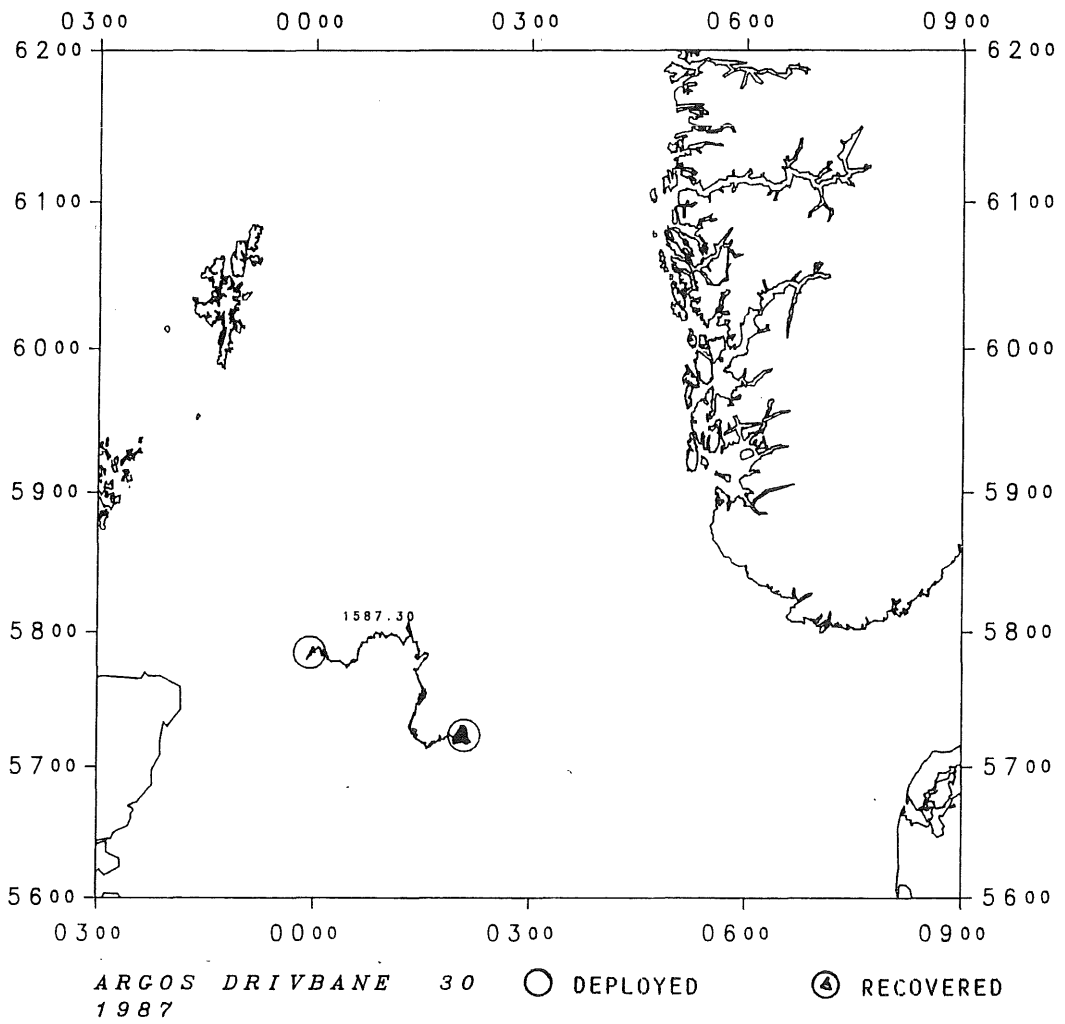


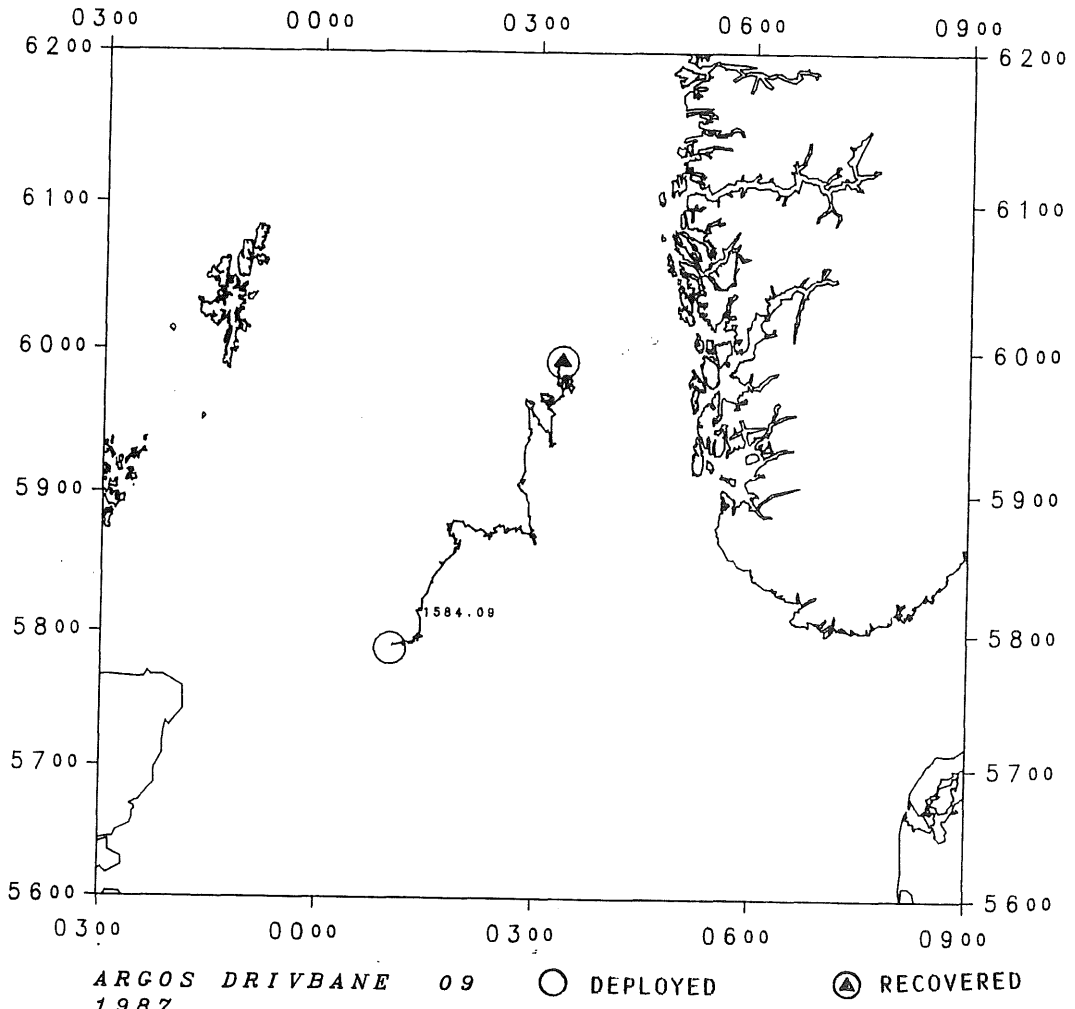
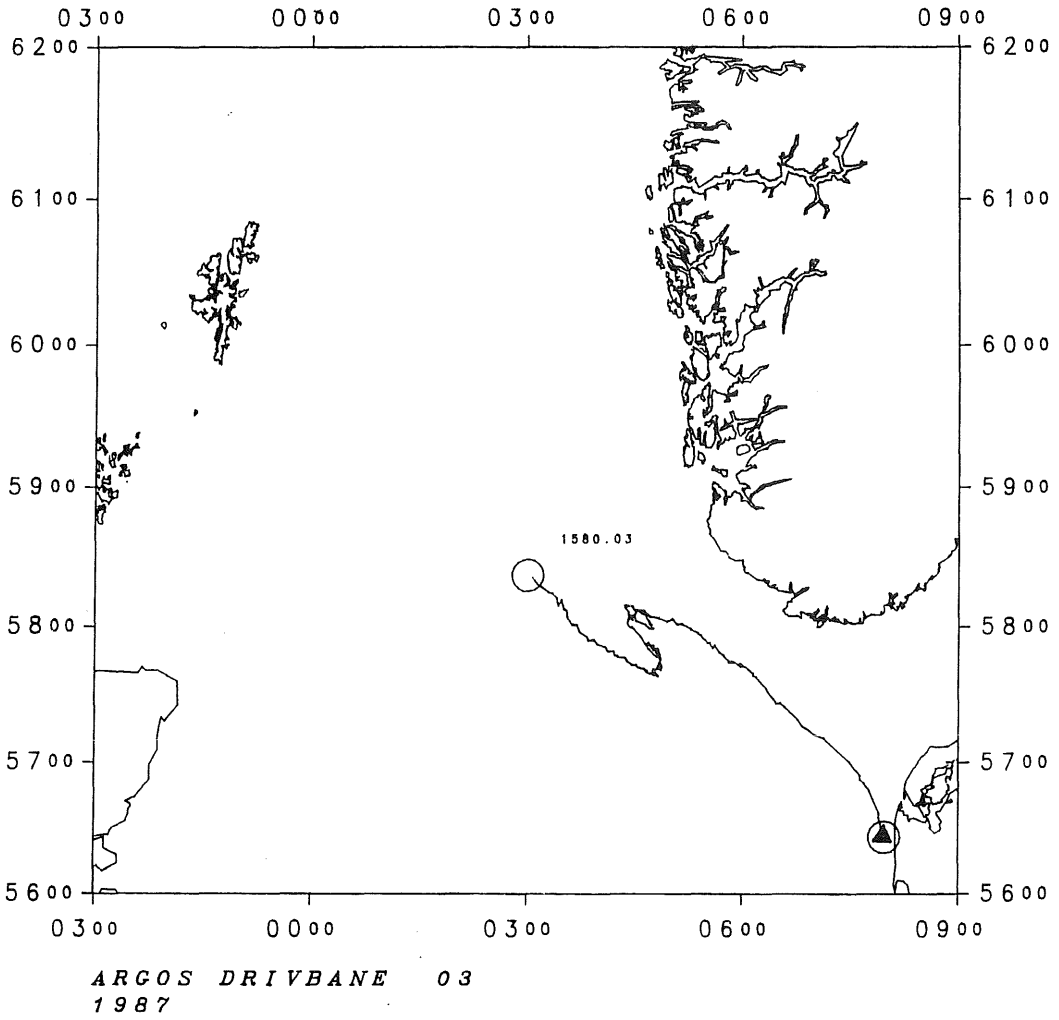


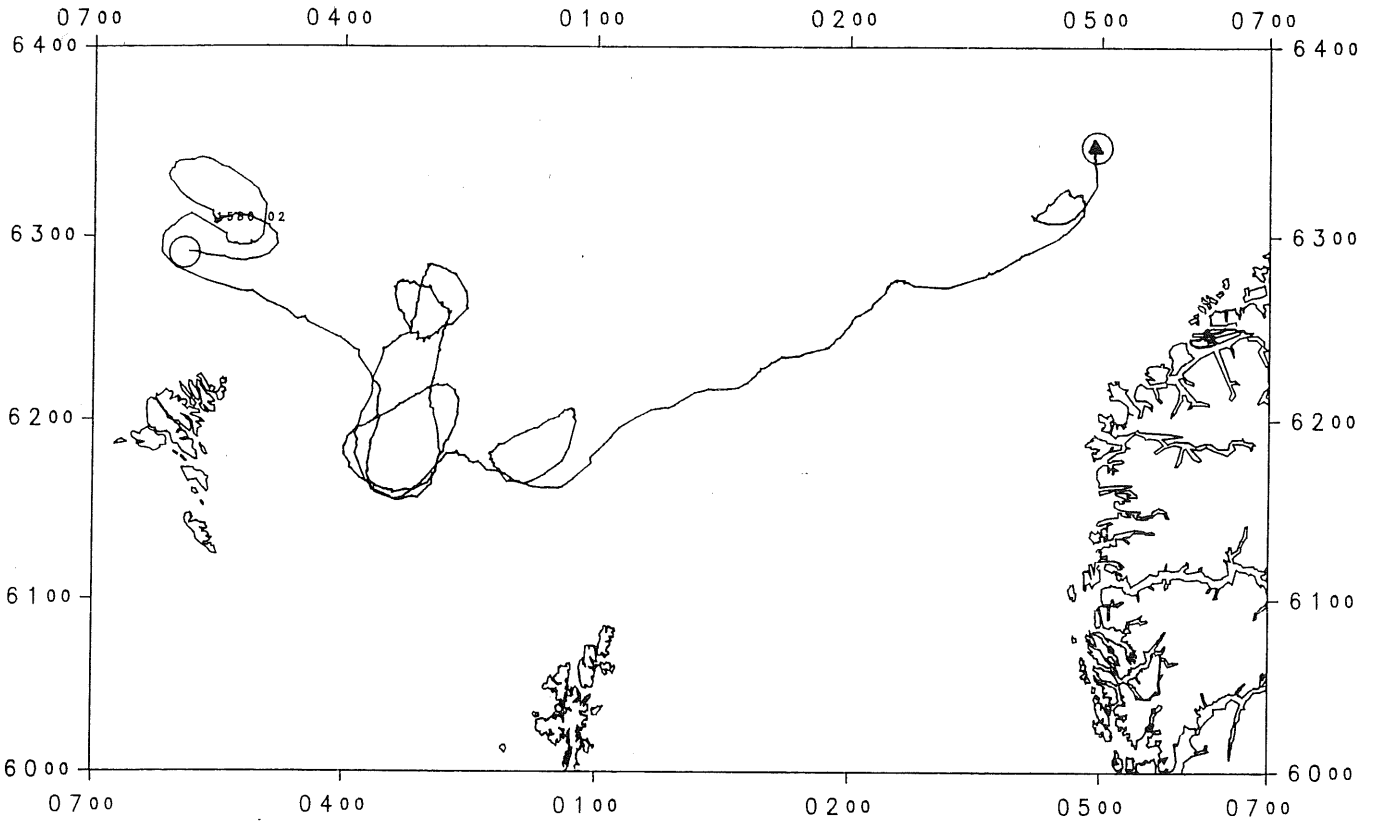
ARGOS DRIVBANE 22  
1987



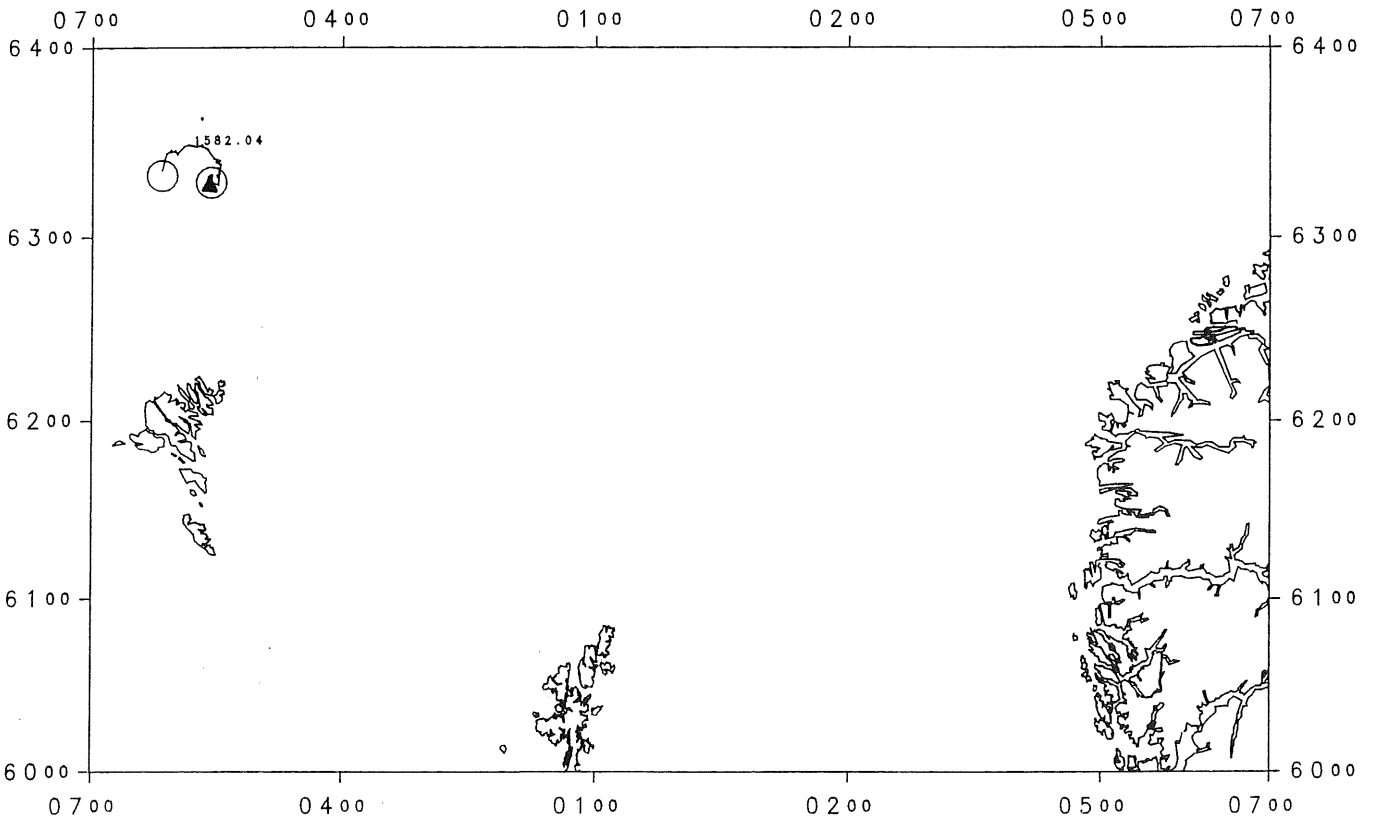
ARGOS DRIVBANE 25 ○ DEPLOYED (◐) RECOVERED







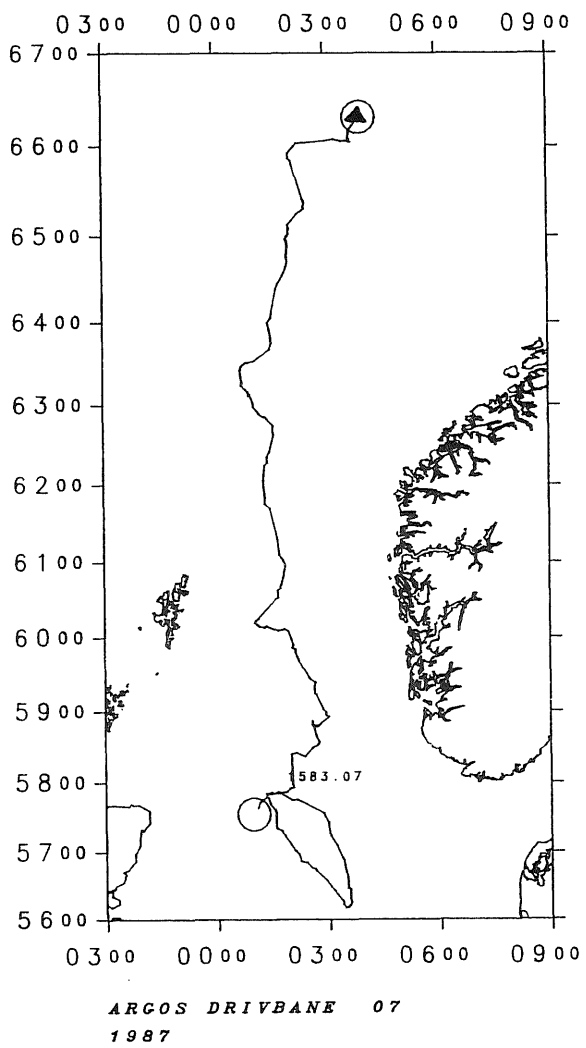
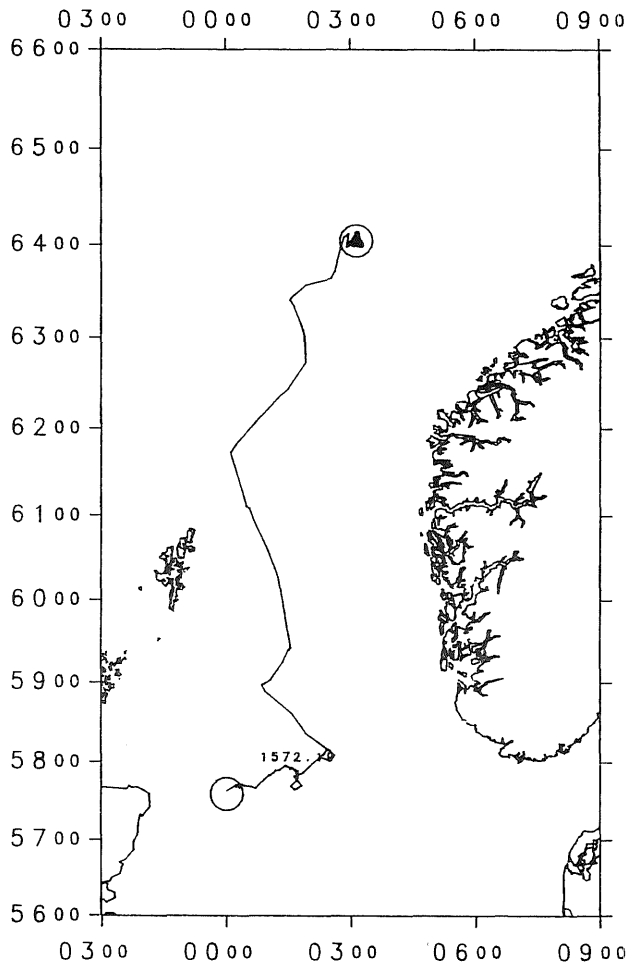
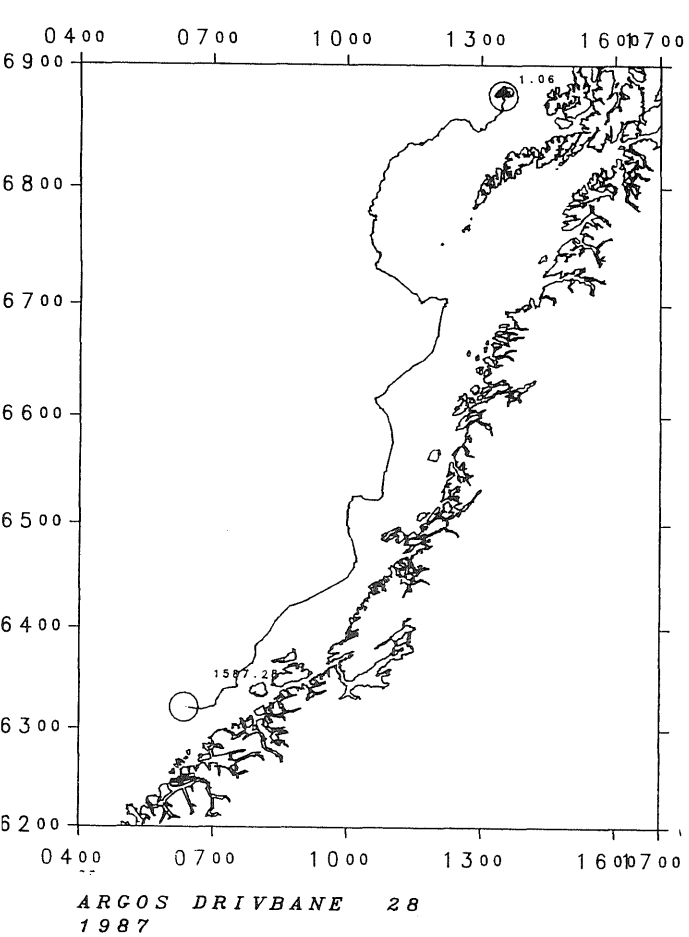
ARGOS DRIVBANE 2  
1987



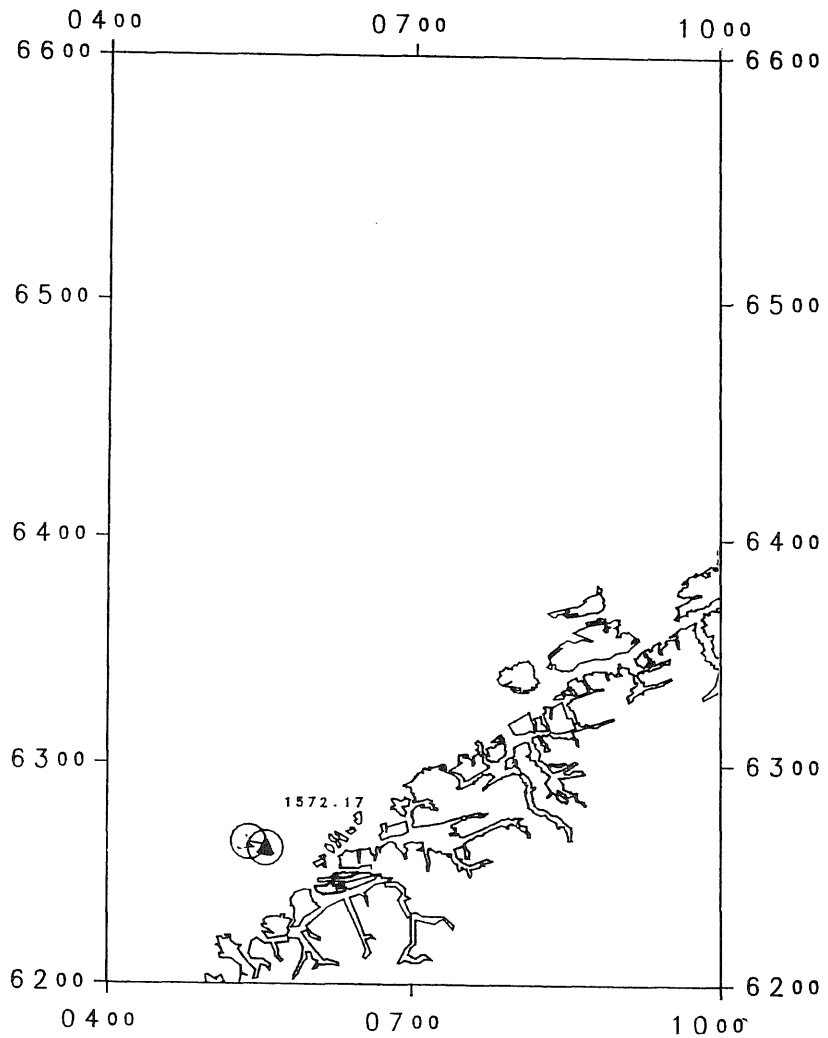
ARGOS DRIVBANE 4  
1987

○ DEPLOYED

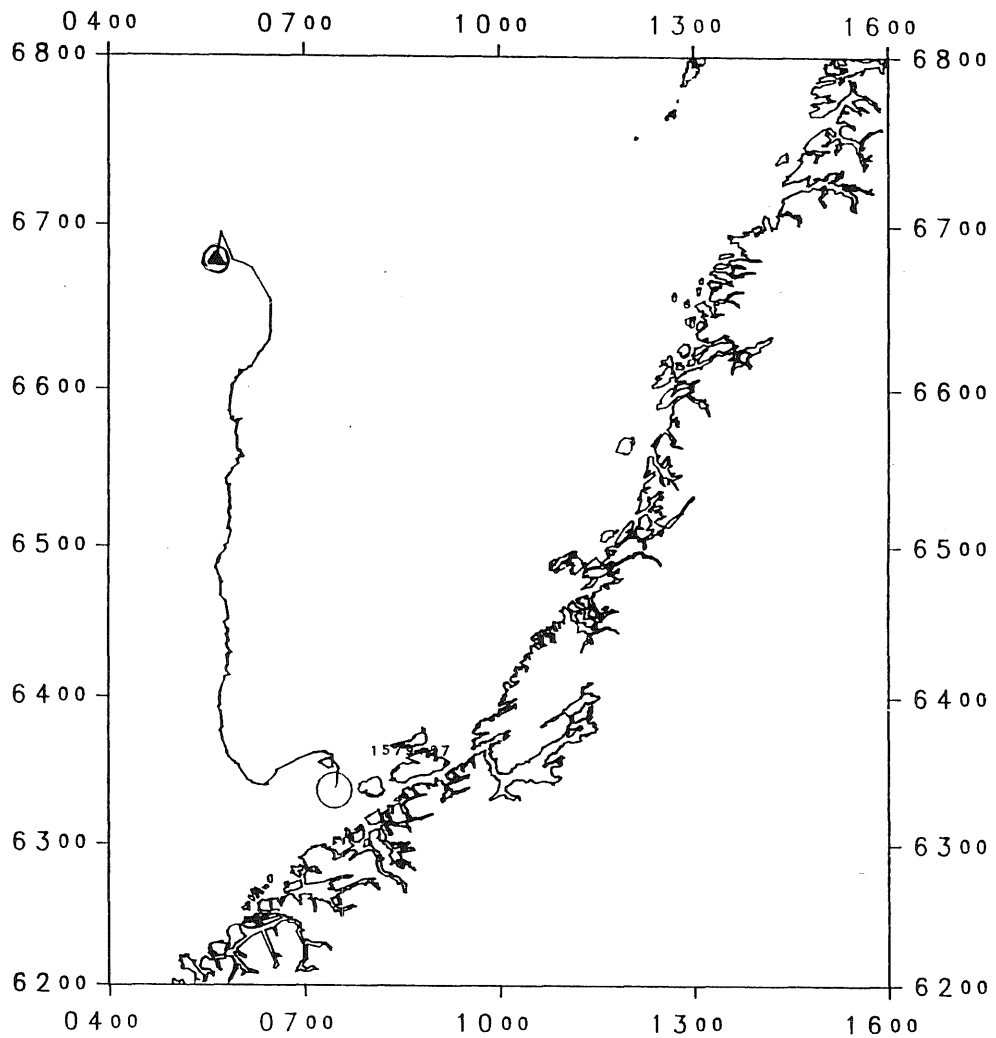
Ⓐ RECOVERED



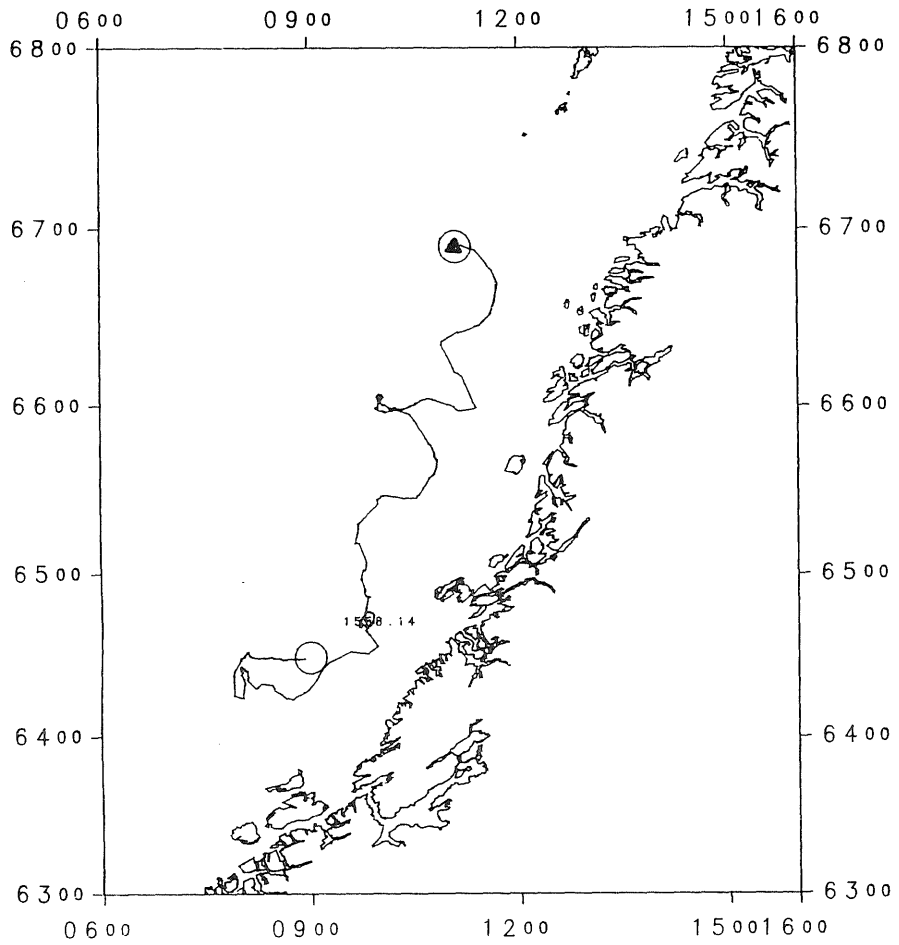
○ DEPLOYED      ▲ RECOVERED



ARGOS DRIVBANE 17  
1987

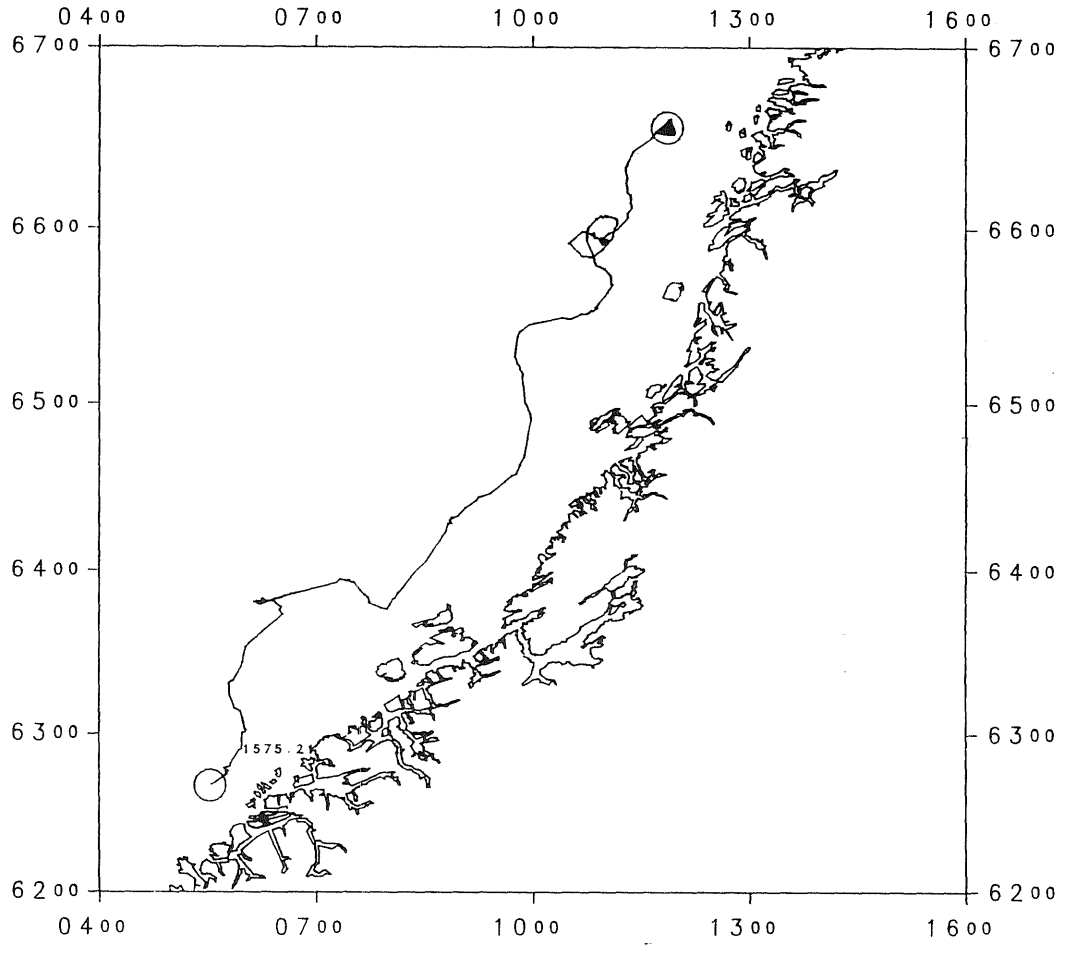


ARGOS DRIVBANE 27    ○ DEPLOYED    ⊙ RECOVERED  
1987

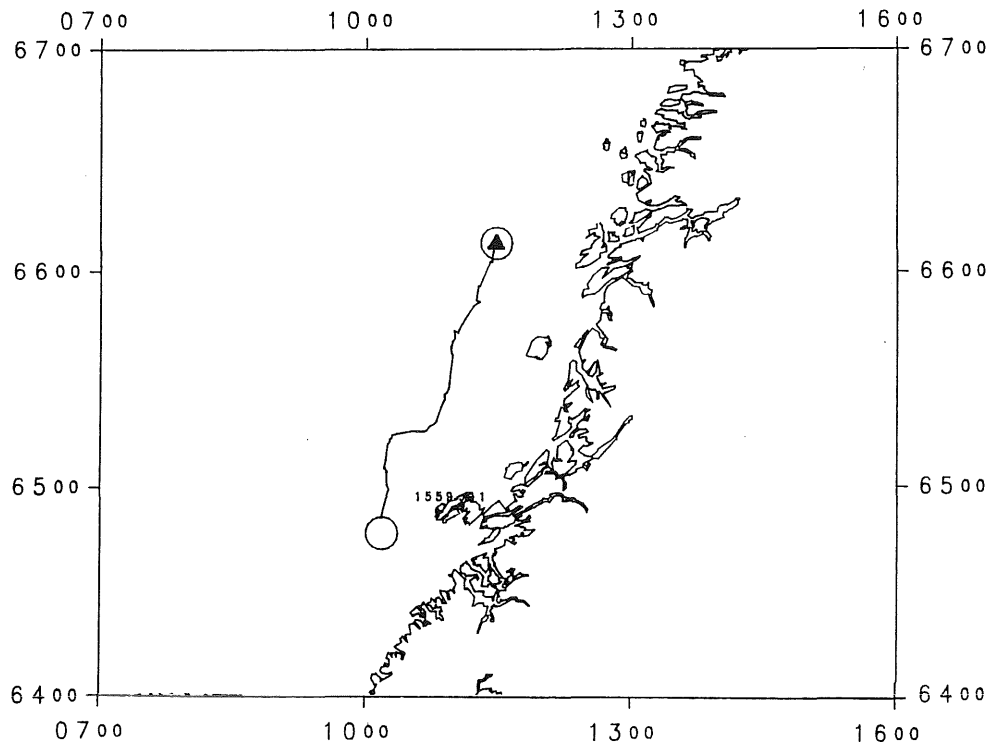


ARGOS DRIVBANE 14  
1987

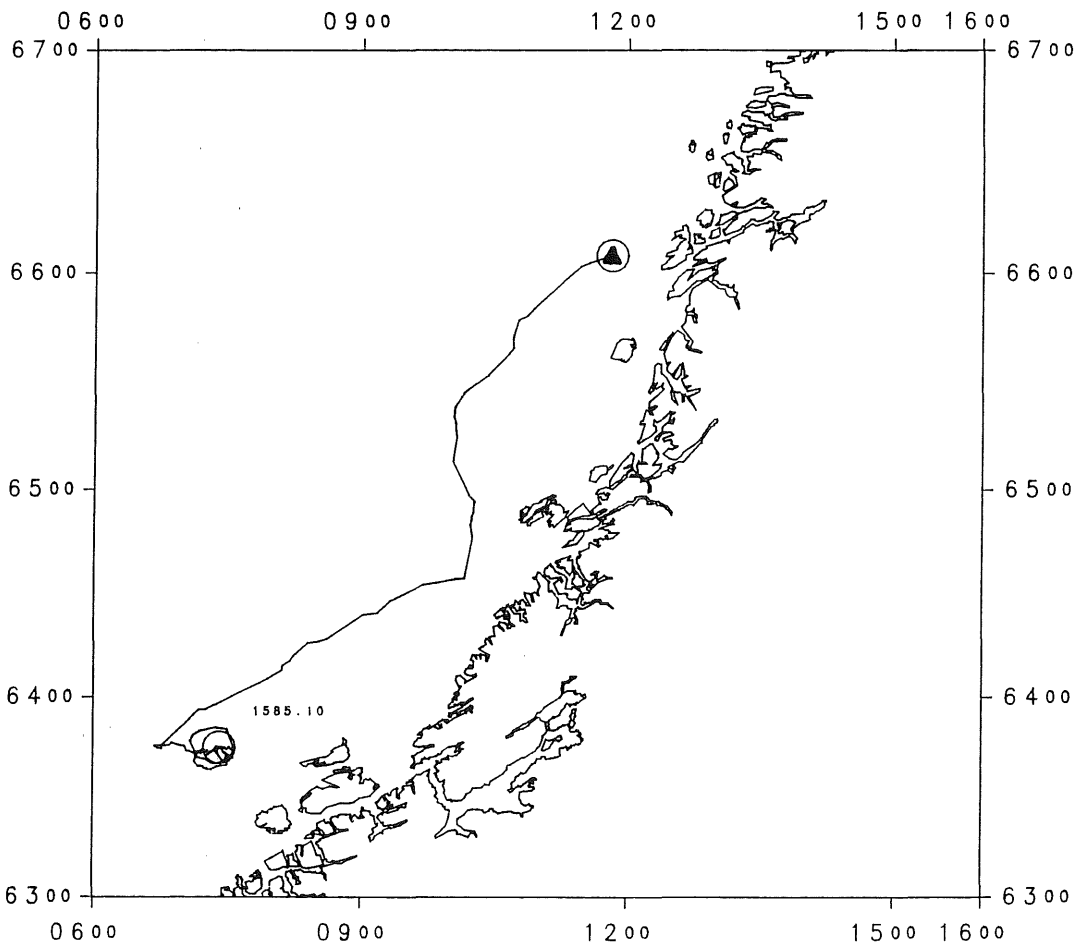
○ DEPLOYED      ⊙ RECOVERED



ARGOS DRIVBANE 21  
1987



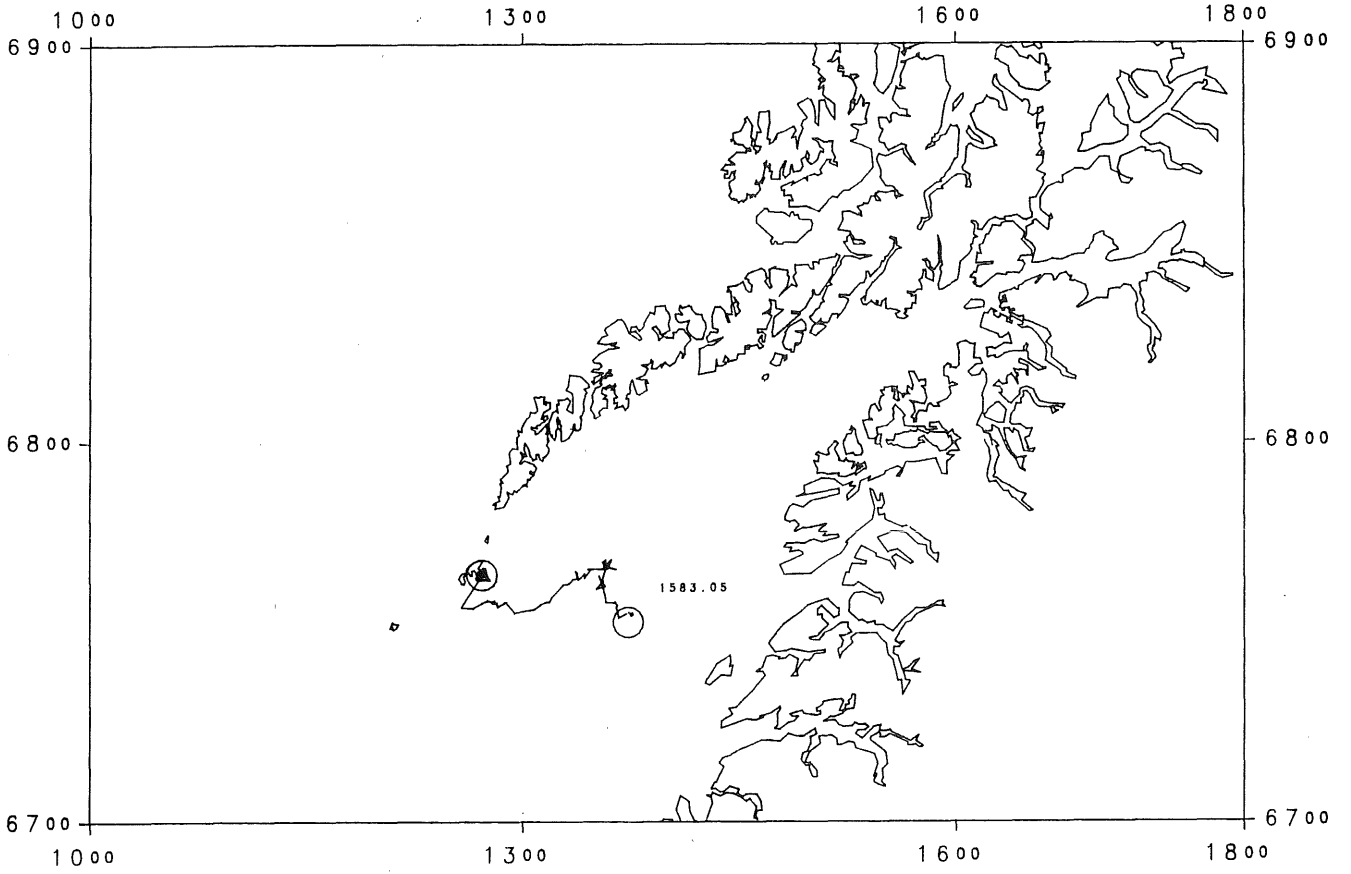
ARGOS DRIVBANE 1  
1987



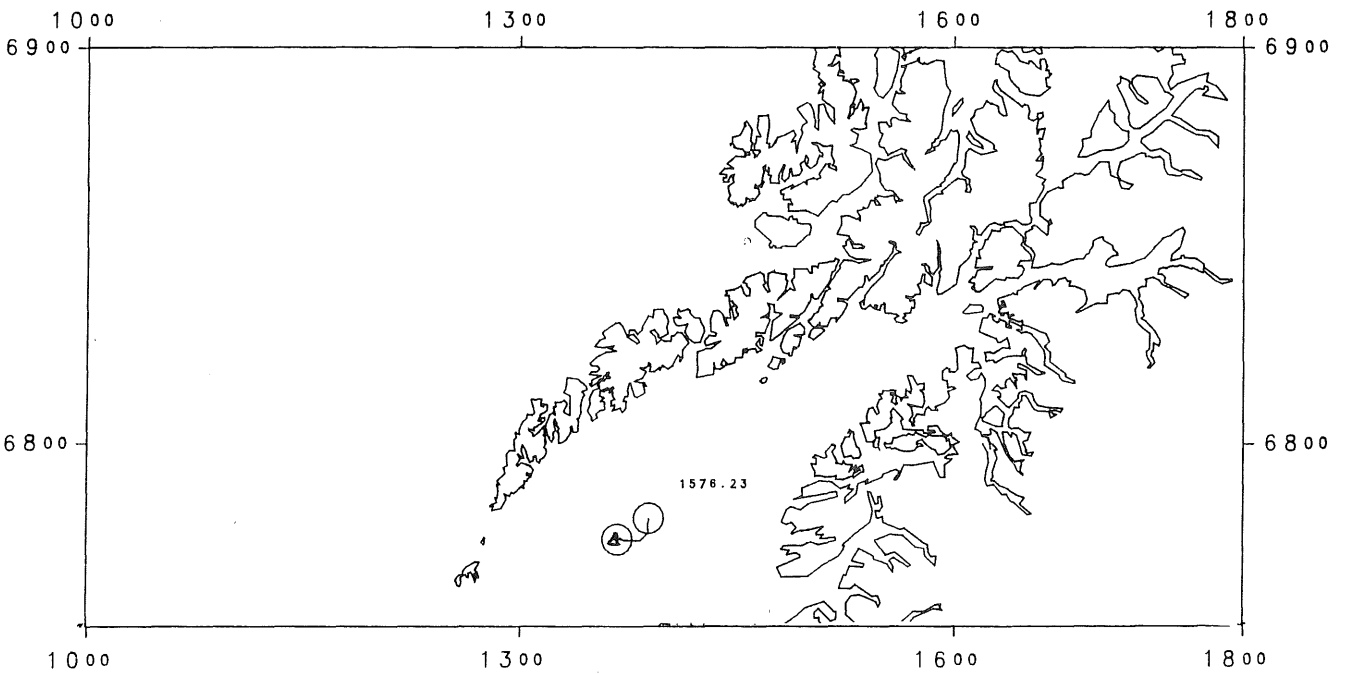
ARGOS DRIVBANE 10  
1987

○ DEPLOYED      △ RECOVERED





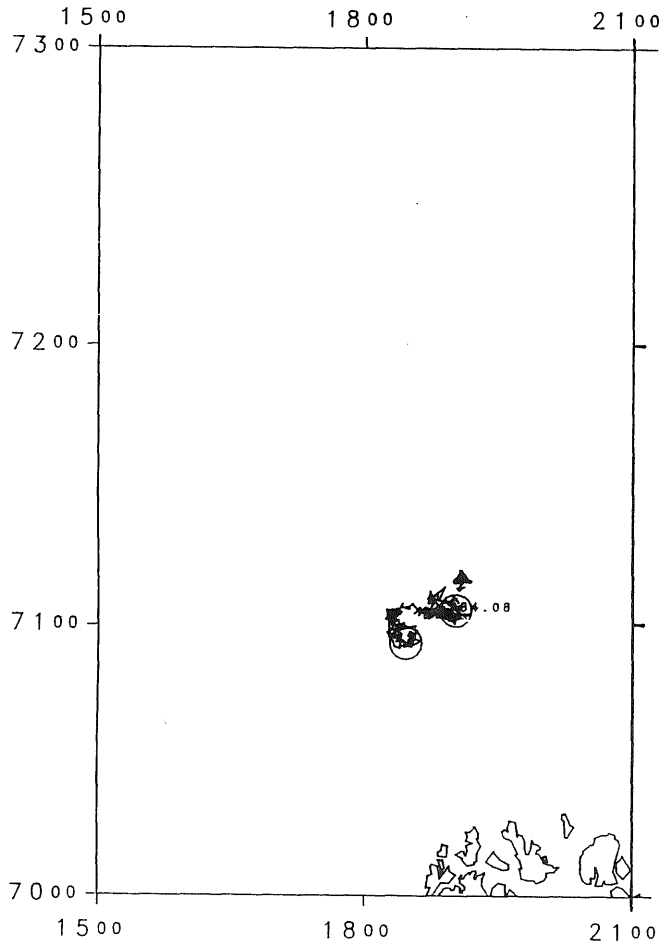
ARGOS DRIVBANE 05  
1987



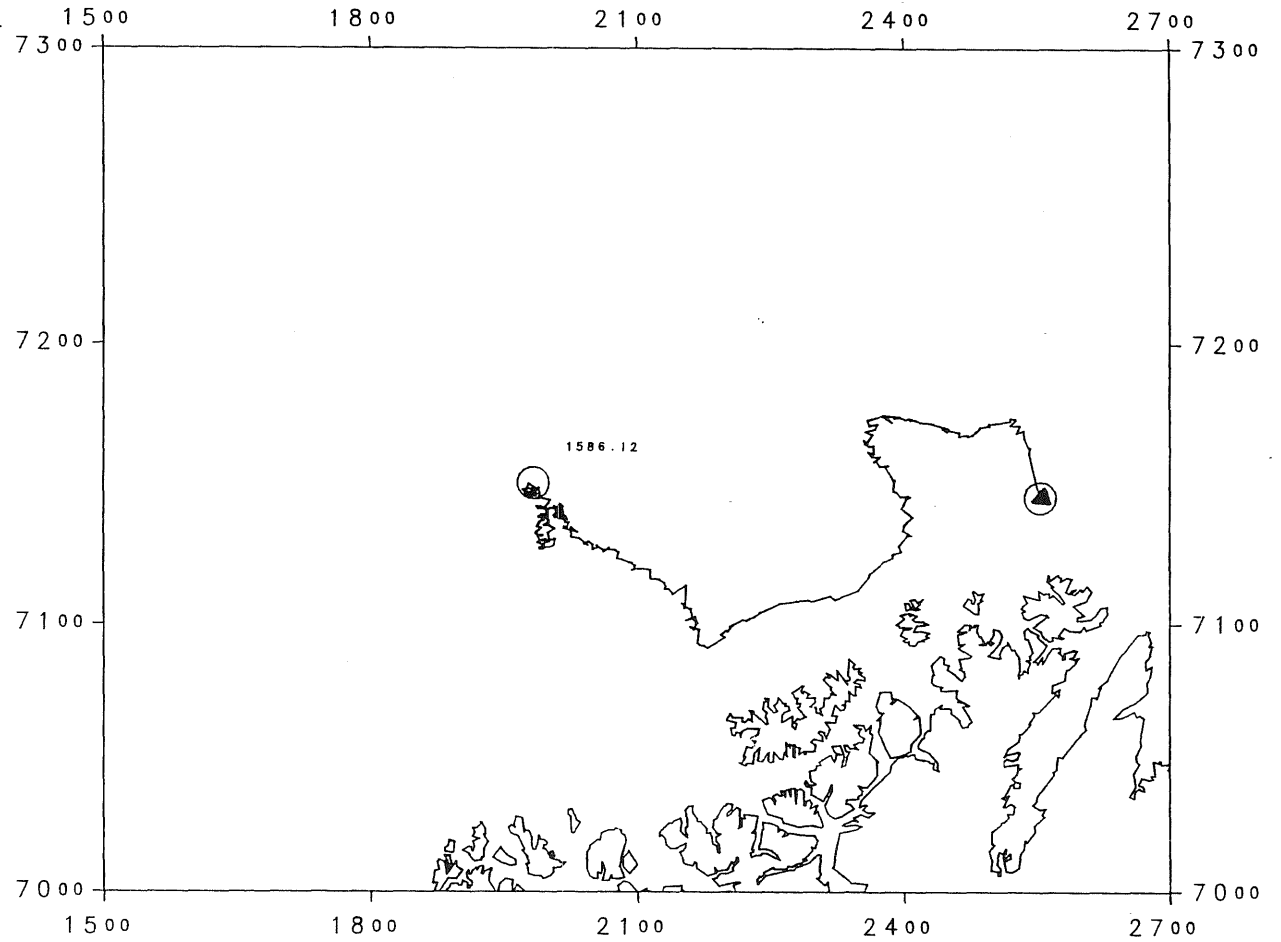
ARGOS DRIVBANE 23  
1987

○ DEPLOYED

⊕ RECOVERED

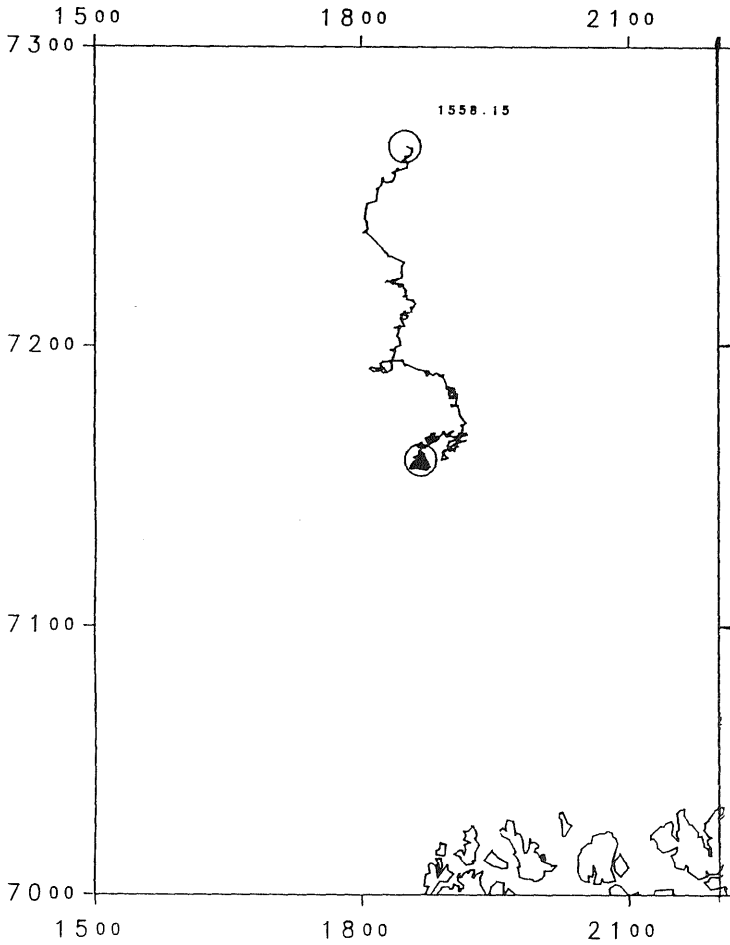


ARGOS DRIVBANE 8  
1987

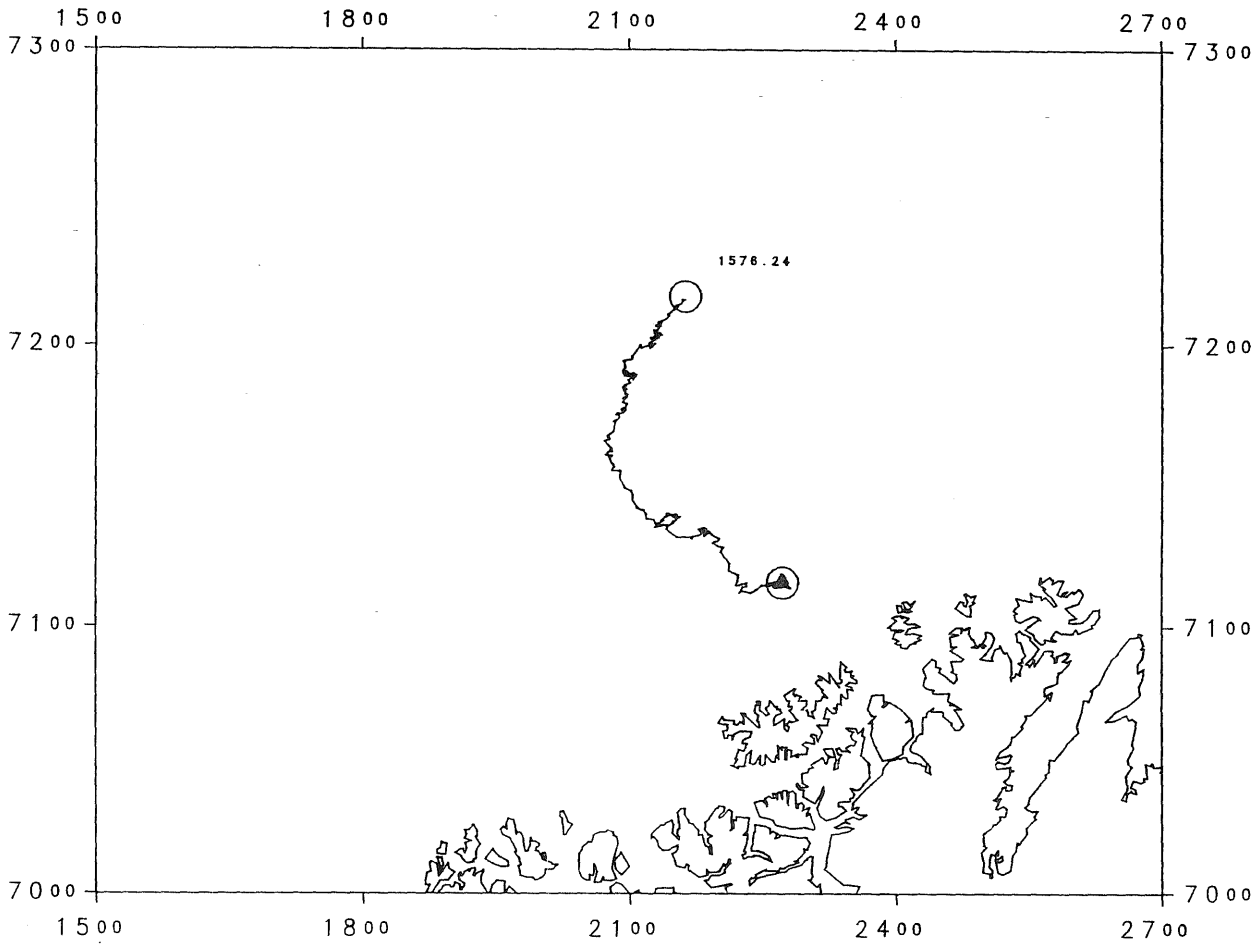


ARGOS DRIVBANE 12  
1987

○ DEPLOYED      ⊙ RECOVERED

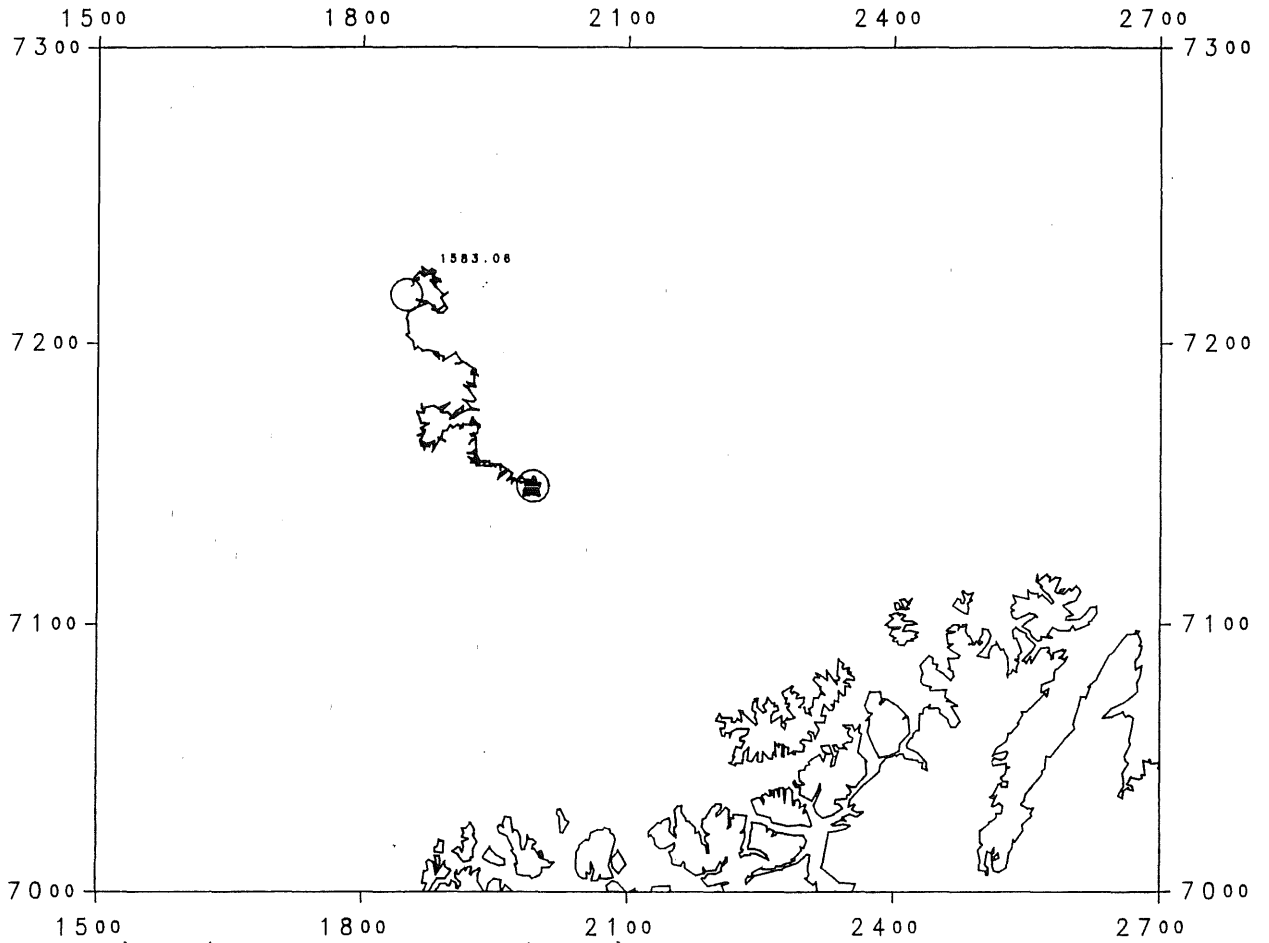


ARGOS DRIVBANE 15  
1987

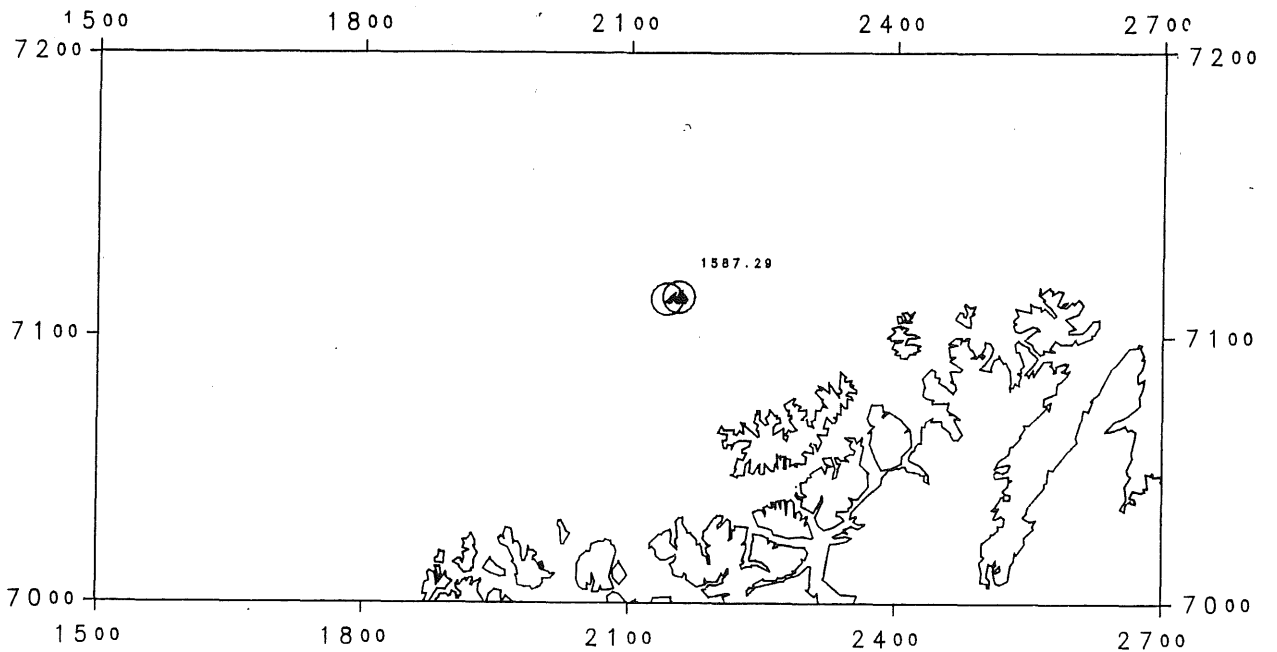


ARGOS DRIVBANE 24  
1987

○ DEPLOYED      ◐ RECOVERED

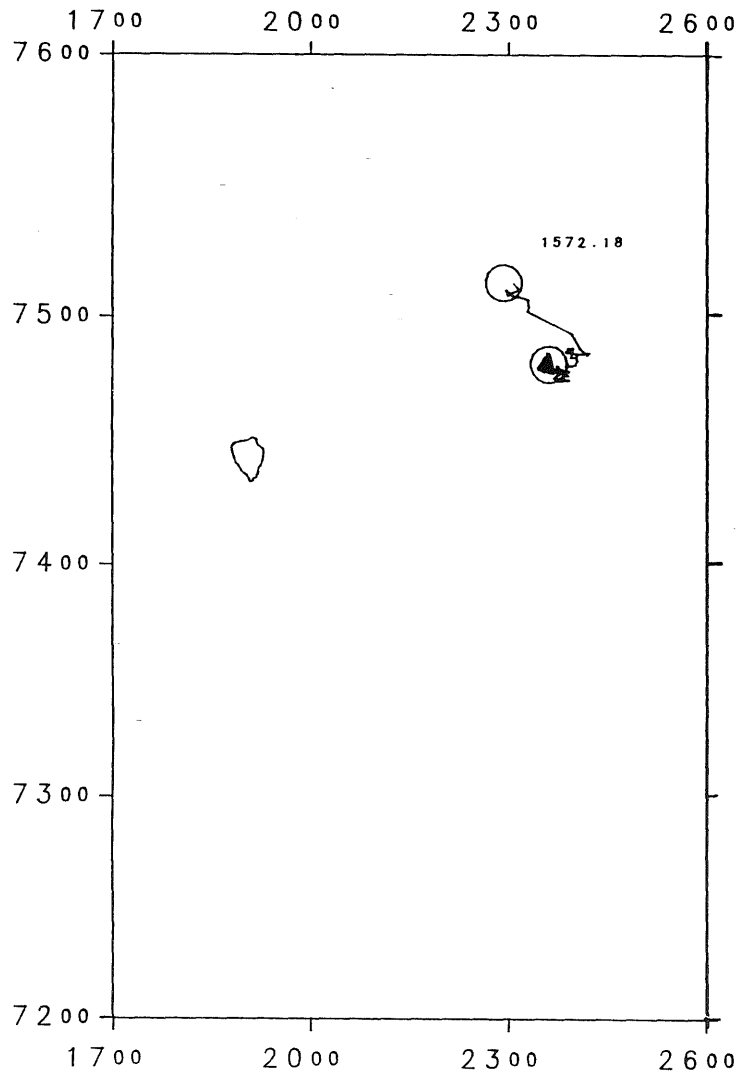


ARGOS DRIVBANE 6  
1987

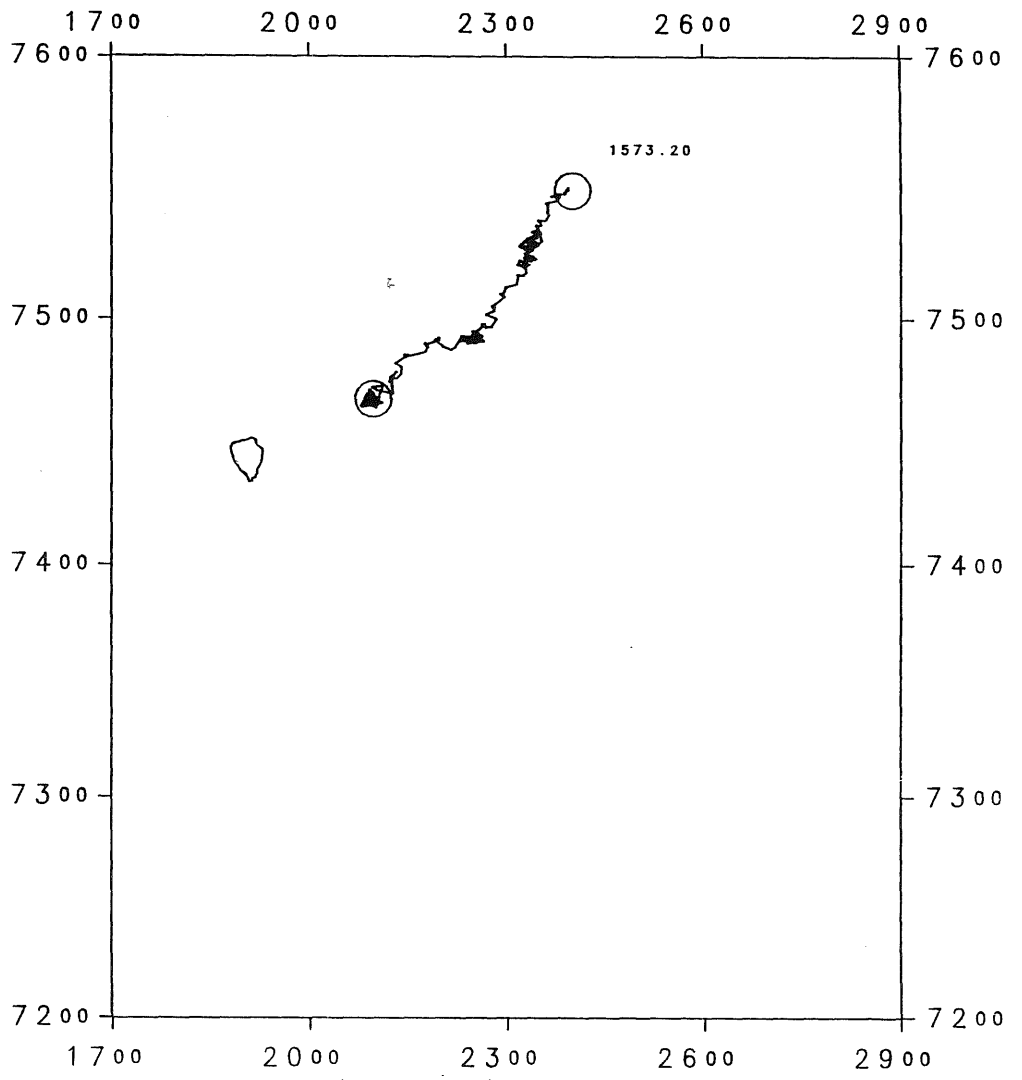


ARGOS DRIVBANE 29  
1987

○ DEPLOYED      ● RECOVERED



ARGOS DRIVBANE 18  
1987



ARGOS DRIVBANE 20  
1987

○ DEPLOYED      ⊙ RECOVERED