

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
DIRECTORATE OF FISHERIES RESEARCH

FISHERIES RESEARCH DATA REPORT
NUMBER 37

**Open sea fish tracks:
cod fitted with transponding acoustic tags**

A.A. Buckley

Lowestoft
1995

The author:

A.A. Buckley is a Scientific Officer in Fish Stock Management Division, Section 3, and is based at the Fisheries Laboratory, Lowestoft.

Data Rep., MAFF Direct. Fish. Res., Lowestoft, (37): 107pp.

© Crown copyright, 1995

Requests for reproduction of material contained in this report should be addressed to MAFF

CONTENTS

Page

<i>Summary</i>	5
1. Introduction	5
2. Materials and methods	5
2.1 The fish	5
2.2 Tracking procedure	5
2.3 Method of release	6
2.4 Astronomical and tidal stream data	6
2.5 The data	6
3. References	7

Tables

1. Summary details of tracked fish	9
2. Astronomical and tidal stream data	11

Figures

1. Positions of each track in the southern North Sea	15
2. Ground track of Fish 1, released at 1213h, 12 June 1971	16
3. Vertical track of Fish 1	18
4. Ground track of Fish 2, released at 1002h, 20 November 1972	20
5. Vertical track of Fish 2	22
6. Ground track of Fish 3, released at 1926h, 27 November 1972	24
7. Vertical track of Fish 3	26
8. Ground track of Fish 4, released at 1800h, 21 April 1974	28
9. Vertical track of Fish 4	29
10. Ground track of Fish 5, released at 0830h, 25 April 1974	30
11. Vertical track of Fish 5	31
12. Ground track of Fish 6, released at 2012h, 26 April 1974	32
13. Vertical track of Fish 6	33
14. Ground track of Fish 7, released at 1110h, 28 April 1974	34
15. Vertical track of Fish 7	35

16.	Ground track of Fish 9, released at 0630h, 21 April 1975	36
17.	Vertical track of Fish 9	37
18.	Ground track of Fish 10, released at 1249h, 24 April 1975	38
19.	Vertical track of Fish 10	39
20.	Ground track of Fish 11, released at 1519h, 27 April 1975	40
21.	Vertical track of Fish 11	41
22.	Ground track of Fish 14, released at 1046h, 29 March 1977	42
23.	Vertical track of Fish 14	43
24.	Ground track of Fish 15, released at 0906h, 31 March 1977	44
25.	Vertical track of Fish 15	45
26.	Ground track of Fish 17, released at 1155h, 3 April 1977	46
27.	Vertical track of Fish 17	47
28.	Ground track of Fish 18, released at 0821h, 27 May 1977	48
29.	Vertical track of Fish 18	49
30.	Ground track of Fish 19, released at 2230h, 28 May 1977	50
31.	Vertical track of Fish 19	51
32.	Ground track of Fish 20, released at 1900h, 30 May 1977	52
33.	Vertical track of Fish 20	53
34.	Ground track of Fish 23, released at 1453h, 21 April 1978	54
35.	Vertical track of Fish 23	55
Annex 1.	Tracking data for individual tagged fish	57

SUMMARY

Since the early 1970s, scientists at the Ministry of Agriculture, Fisheries and Food (MAFF), Directorate of Fisheries Research (DFR), Lowestoft, have been trying to understand the behavioural mechanisms of fish migration by tracking free-ranging fish in the open sea using sector scanning sonar and transponding acoustic tags. Although many representative fish tracks have appeared in scientific journals, much of the basic information has, by virtue of its bulk, remained unpublished. Because of the inherent value of these data, and a continuing need to refer to them, it has now been decided to publish them in full in a series of laboratory Data Reports, of which this is the second. It should be noted that these reports are simply a presentation of the original tracking data. For an analysis of the data, the reader is referred to the relevant publications (see Section 1).

1. INTRODUCTION

The aim of this study was to observe the movement of cod in relation to tidal streams in the southern North Sea using transponding acoustic tags. The data were collected during *RV CLIONE* cruises 7/71, 6/79, (SIC¹: F. R. Harden Jones) and cruises 15/72, 6/74, 6/75, 8/76, 4/77, 7/77, 6/78, (SIC: M. Greer Walker). The data obtained, and the analysis of the results are presented elsewhere (Harden Jones, 1977; Arnold *et al.*, 1990; Arnold and Greer Walker, 1992; Arnold *et al.*, 1994).

2. MATERIALS AND METHODS

2.1 The fish

The fish were caught by rod and line, or long-line, by C. N. Humphreys from Pakefield beach, Lowestoft, in an area of shallow water not exceeding 8 m. They were slowly brought to the surface to prevent damage due to a sudden change in pressure and there was no evidence of any of the fish having their swim bladder inverted through the mouth. The dates of capture of these fish are presented in Table 1. After capture, the cod were held at the laboratory and fed on sprat and lugworm. Prior to each cruise, the fish were placed on board in a deck tank and kept unfed. Before their release, the fish were tagged with two spaghetti tags, (two Petersen tags were used during cruise *CLIONE* 4/77). With the exception of Cod 3, which was treated with a 1:15 000 dilution of MS 222, no anaesthetics were used, further details are given in Arnold *et al.*, (1994).

2.2 Tracking procedure

The fish were fitted with one of the 'standard' 300 kHz transponding acoustic tags developed at the Fisheries Laboratory, Lowestoft (Mitson and Storeton West, 1971). The fish were tracked from *RV CLIONE* using the ARL scanner (Voglis and Cook, 1966) up to 1975; subsequently, the solid state MAFF scanner (Holley *et al.*, 1975) was used. Immediately prior to the release of fish the acoustic tag was tied alongside the dorsal fin between the two spaghetti tags (or Petersen discs) with the transducer pointing towards the tail of the fish. The tag was 0.8 cm in diameter and 5.1 cm in length, weighed 3-4 g in sea water, and was unlikely to have impeded the fish in any significant way (Arnold and Holford, 1978). It returned a powerful 3 ms pulse when insonified by the sonar installed on board the research vessel and produced an unambiguous signal on the sonar screen. This signal was kept under constant surveillance during the track (Greer Walker *et al.*, 1978).

¹SIC : Scientist in Charge

The horizontal and vertical positions of the fish were recorded routinely every 15 minutes (Harden Jones *et al.*, 1973; Greer Walker *et al.*, 1978) and more frequently, when required. The range of the fish from the ship was estimated directly from the sonar screen to the nearest 5 m and bearing to the nearest 1°, using the sonar in horizontal (azimuth) mode. The geographical position of the fish was estimated from these data and the position of the research vessel, which was determined by reference to the Decca Navigator system (Anon, 1973). The depth of the fish was estimated by elevation scanning with the sonar transducer in vertical mode. The tilt of the transducer was increased until the tag signal was on the centre line of the sonar display and the tilt angle measured to the nearest 1°. The depth of the seabed was measured at the same range in the same way. Depth (D) in the water column was calculated from:

$$D = R \sin \theta + d$$

where:

- R* - range of the fish from the ship
- θ - angle of tilt of the transducer from the horizontal
- d* - the depth of the transducer below the keel of the ship (4 m).

For fish in midwater, height above the bottom was calculated from the difference between the depth of the tag and the depth of the seabed. For fish close to the seabed, position was recorded as *just off the bottom* (JOB) when the acoustic tag signal was clearly separated from the echo of the seabed, but by an angle of less than 1°. The errors associated with the estimation of the depth of the fish are discussed by Arnold and Greer Walker (1992).

2.3 Method of release

Cod 1, 2 and 3, which were adapted to atmospheric pressure, were released at the surface. The other 21 fish were released on the seabed after a period of confinement (Table 1) in a small cage, during which they had the opportunity to adapt, or partially adapt, to ambient pressure. The cage and release mechanism have been described briefly in Arnold *et al.*, (1994) and in more detail in Shreeve *et al.* (in press).

2.4 Astronomical and tidal stream data

Predicted tidal stream data were obtained from the nearest tidal station on the appropriate British Admiralty chart. Times of high water at Dover, or at another standard port as indicated, were taken from Volume 2 of the Admiralty Tide Tables for the relevant year. Times of local slack water were estimated by interpolating the corresponding minimum speeds of the tidal stream from the data given for each Admiralty tidal station; an interval of 10 minutes was used for the interpolation. Times of sunrise (SR) and sunset (SS) were taken from the Nautical Almanac for the nearest tabular latitude and corrected for the latitude and longitude of a point approximating to the mid-point of each track.

2.5 The data

Summary data are presented in Tables 1 and 2, the first of which gives, the size of the fish, (where known). This table also includes the dates and localities of capture and release and the research vessel cruise. Localities are given by ICES Division and statistical rectangle. Table 2 gives astronomical and tidal stream data, and times of sunset and sunrise during each track, together with times of local slack water, the direction of the ensuing tidal stream and the Admiralty tidal station from which the data were derived.

Subsequently, two figures show the equivalent horizontal and vertical tracks of each fish; expanded portions of the tracks are shown in additional figures, as appropriate. In each case the vertical track of the fish when off the bottom has been plotted from a 7 point running mean of the fish depths listed in the relevant table; bottom depths were treated in the same way. In six instances, where either the track was very short (<3h) or where the fish did not move, the figures have been omitted. In another instance (Cod 13) the tag failed almost immediately after release and so only release data are presented.

These figures are followed by an annex of data, which gives for each fish:

1. **Geographical position:** sequential positions are given in decimal degrees for elapsed time in decimal hours after release.
2. **Vertical position:** the depth of the fish and the depth of the seabed are given in metres for elapsed time. Occasions where the two depths were the same, but where the gap between the tag and the bottom on the sonar display indicated the fish to be JOB, are denoted by italics.

N.B. The horizontal and the vertical data were recorded separately and usually recording commenced shortly after the fish was released, consequently the time of the first horizontal record and the time of the first vertical record differ slightly. The start time on each ground track figure refers to the time of the first horizontal record.

3. REFERENCES

ANON, 1973. The Decca Navigator System. The Decca Navigator Company Limited.

ARNOLD, G.P. AND HOLFORD, B.H., 1978. The physical effects of an acoustic tag on the swimming performance of plaice and cod. *J. Cons. int. Explor. Mer.*, **38**: 189-200.

ARNOLD, G.P. AND GREER WALKER, M., 1992. Vertical movements of cod (*Gadus morhua* L.) in the open sea and the hydrostatic function of the swim bladder. *ICES. J. Mar. Sci.*, **49**: 357-372.

ARNOLD, G.P., GREER WALKER, M. AND HOLFORD, B.H., 1990. Fish Behaviour: achievements and potential of high-resolution sector-scanning sonar. *Rapp. P.-v. Réun. Cons. int. Explor. Mer.*, **189**: 112-122.

ARNOLD, G.P., GREER WALKER, M., EMERSON L.S. AND HOLFORD, B.H., 1994. Movements of cod (*Gadus morhua* L.) in relation to the tidal streams in the southern North Sea. *ICES J. Mar. Sci.*, **51**: 207-232.

GREER WALKER, M., HARDEN JONES, F.R. AND ARNOLD, G.P., 1978. The movements of plaice (*Pleuronectes platessa* L.) tracked in the open sea. *J. Cons. int. Explor. Mer.*, **38**: 58-86.

HARDEN JONES, F.R., 1977. Performance and Behaviour on Migration. pp.145-170 *In*: Steele, J. H, (Ed). *Fisheries Mathematics*. Academic Press, London, England.

HARDEN JONES, F.R., GREER WALKER, M. AND ARNOLD, G.P., 1973. The movements of a Woodhead seabed drifter tracked by sector scanning sonar. *J. Cons. int. Explor. Mer.*, **35**: 87-92.

HOLLEY, M.L., MITSON, R.B. AND PRATT, A.R., 1975. Developments in sector scanning sonar. *IERE Conf. Proc.*, **32**: 139-153.

MITSON, R.B. AND STORETON WEST, T.J., 1971. A transponding acoustic fish tag. Radio Electron. Eng., *41*: 483-489.

SHREEVE, E.G., MUMFORD, B.C.E. AND HOLFORD, B.H., (In press). Manual and automated release cages for adapting fish to depth in the open sea. ICES J. mar Sci.

VOGLIS, G.M. AND COOK, J.C., 1966. Underwater applications of an advanced acoustic scanning equipment. Ultrasonics, *4*: 1-9.

Previous Data Report in this series:

BUCKLEY, A.A., 1994. Open sea fish tracks: plaice fitted with compass tags. Data Rep., MAFF Direct. Fish. Res., Lowestoft, *35*: 60pp.

Table 1. Summary details of tracked fish

Fish No.	Date and location of capture	Length (cm)	Details of release					Duration of track (decimal hours)	Date, time and location of end of track
			Date, time cage deployed	Adaptation time (hours)	Date, time and release location	Cruise	Tag number		
1	26-Nov-70 IVc 16*	53	-	-	12-Jun-71 1213 IVc 22*	RV Clione Cruise 07/71	EE3658	50.5	14-Jun-71 1500 IVc 22* (Fish lost)
2	15-Nov-72 IVc 16*	50	-	-	20-Nov-72 1002 IVc 16*	RV Clione Cruise 15/72	EE3647	52.0	22-Nov-72 1400 IVc 17* (Fish abandoned)
3	15-Nov-72 IVc 16*	72	-	-	27-Nov-72 1926 IVc 17*	RV Clione Cruise 15/72	EZ7905	38.3	29-Nov-72 1000 IVc 11* (Scanner failure)
4	21-Mar-74 IVc 16*	-	21-Apr-74 1600	2.0	21-Apr-74 1800 IVc 16*	RV Clione Cruise 06/74	EB1023	14.5	22-Apr-74 0830 IVc 17* (Generator failure)
5	21-Mar-74 IVc 16*	50	24-Apr-74 1245	20.3	25-Apr-74 0830 IVc 16*	RV Clione Cruise 06/74	EB1024	16.8	26-Apr-74 0130 IVc 17* (Fish lost)
6	21-Mar-74 IVc 16*	50	26-Apr-74 0830	11.7	26-Apr-74 2012 IVc 16*	RV Clione Cruise 06/74	EB1025	25.3	27-Apr-74 2130 IVc 17* (Fish abandoned)
7	21-Mar-74 IVc 16*	60	27-Apr-74 2312	12.0	28-Apr-74 1110 IVc 16*	RV Clione Cruise 06/74	EB1026	30.1	29-Apr-74 1715 IVc17* (Fish lost)
8	9-Jan-75 IVc 16*	69	18-Apr-75 1018	24.0	19-Apr-75 1015 IVc 16*	RV Clione Cruise 06/75	EB1031	2.2	19-Apr-75 1215 IVc 16* (Tag failure)
9	9-Jan-75 IVc 16*	69	19-Apr-75 1746	36.7	21-Apr-75 0630 IVc 16*	RV Clione Cruise 06/75	EB1032	36.8	22-Apr-75 1930 IVc 17* (Tag failure)
10	9-Jan-75 IVc 16*	63	23-Apr-75 0836	28.2	24-Apr-75 1249 IVc 17*	RV Clione Cruise 06/75	EB1033	43.3	26-Apr-75 0815 IVc 12* (Tag failure)
11	9-Jan-75 IVc 16*	66	26-Apr-75 1713	22.1	27-Apr-75 1519 IVc 17*	RV Clione Cruise 06/75	EB1084	27.0	28-Apr-75 1830 IVc 12* (Fish abandoned)
12	16-Feb-76 IVc 16*	76	11-May-76 1408	49.6	13-May-76 1543 IVc 12*	RV Clione Cruise 08/76	E73-1321	2.8	13-May-76 1845 IVc 12* (Scanner failure)

Table 1. Summary details of tracked fish (continued)

13	21-Dec-76 IVc 16*	68	26-Mar-77 0800	73.1	29-Mar-77 0905 IVc 03*	RV Clione Cruise 04/77	E60-0375	-	29-Mar-77 0915 IVc 03* (Tag failure)
14	21-Dec-76 IVc 16*	68	26-Mar-77 0649	76.0	29-Mar-77 1046 IVc 03*	RV Clione Cruise 04/77	E60-0374	28.7	30-Mar-77 1530 IVc 03* (Tag failure)
15	21-Dec-76 IVc 16*	73	29-Mar-77 1006	47.0	31-Mar-77 0906 IVc 03*	RV Clione Cruise 04/77	E60-0377	6.3	31-Mar-77 1535 IVc 03* (Fish abandoned)
16	21-Dec-76 IVc 16*	59	30-Mar-77 2012	45.3	1-Apr-77 1727 IVc 03*	RV Clione Cruise 04/77	E60-0379	1.6	1-Apr-77 1912 IVc 03* (Fish abandoned)
17	21-Dec-76 IVc 16*	64	30-Mar-77 1932	88.4	3-Apr-77 1155 IVc 03*	RV Clione Cruise 04/77	E60-0378	23.2	4-Apr-77 1115 IVb 84* (Fish lost)
18	7-Jan-77 IVc 16*	62	24-May-77 1904	61.3	27-May-77 0821 IVc 17*	RV Clione Cruise 07/77	EB1096	22.7	28-May-77 0700 IVc 17* (Fish abandoned)
19	7-Jan-77 IVc 16*	71	24-May-77 1824	100.1	28-May-77 2230 IVc 17*	RV Clione Cruise 07/77	EB1353	19.3	29-May-77 1800 IVc 17* (Fish lost)
20	7-Jan-77 IVc 16*	69	28-May-77 1413	53.0	30-May-77 1900 IVc 04*	RV Clione Cruise 07/77	EB1358	50.7	1-Jun-77 2145 IVb 85* (Fish lost)
21	7-Jan-77 IVc 16*	68	28-May-77 1309	149.7	3-Jun-77 1852 IVc 12*	RV Clione Cruise 07/77	EB1356	4.1	3-Jun-77 2300 IVc 12* (Fish abandoned)
22	8-Jan-78 IVc 16*	76	15-Apr-78 0703	76.9	18-Apr-78 1156 IVc 12*	RV Clione Cruise 06/78	EB1090	0.8	18-Apr-78 1245 IVc 12* (Fish lost)
23	8-Jan-78 IVc 16*	76	18-Apr-78 1537	71.3	21-Apr-78 1453 IVb 84*	RV Clione Cruise 06/78	EB1357	38.1	23-Apr-78 0500 IVb 84* (Fish abandoned)
24	9-Apr-79 IVc 16*	63	24-May-79 1700	160.0	31-May-79 0851 IVb 84*	RV Clione Cruise 06/79	EB1390	6.0	31-May-79 1500 IVb 84* (Fish abandoned)

* I.C.E.S Division and Rectangle

Table 2. Astronomical and tidal stream data

Fish No.	Date	Times (GMT)			Direction of ensuing tidal stream	§ Reference number	British Admiralty chart and tidal station
		Sunrise	Sunset	Local slackwater			
1	12-Jun-71	0340	2020	1410	N	1	1975B 1610F
	2010			S	2		
	13-Jun-71	0340		0232	N	3	
	0832			S	4		
	14-Jun-71	0340		1457	N	5	
				2113	S	6	
				0323	N	7	
				0937	S	8	
2	20-Nov-72	0730	1601	1052	N	1	1504H
	1712			S	2	1504G	
	2322			N	3	1504H	
	21-Nov-72	0730		0531	S	4	1504G
				1121	N	5	1504H
				1757	S	6	1504G
	22-Nov-72	0730		2357	N	7	1504H
				0608	S	8	1504I
				1208	N	9	1504H
3	27-Nov-72	0740	1555	2315	S	1	1504I
	28-Nov-72		1555	0525	N	2	1504G
	1154			S	3	1504I	
	1814			N	4	1504H	
	29-Nov-72		0740	0020	S	5	1504G
				0630	N	6	
4	21-Apr-74	0454	1905	2325	N	1	1504H
	0500		S	2	1408V		
5	25-Apr-74	0441	1916	1334	N	1	1504H
	1854			S	2	1504G	
6	27-Apr-74	0441	1916	0240	N	1	1504H
				0816	S	2	1408V
				1456	N	3	
				2044	S	4	
7	28-Apr-74	0435	1921	1554	N	1	1504H
	2150			S	2	1408V	
	29-Apr-74	0435		0430	N	3	3371F
	1027			S	4	1408V	
	1707			N	5		
8	19-Apr-75	0454		1011	S		1536G
9	21-Apr-75	0454	1905	1240	S	1	1504D
	1910			N	2	1504G	
	0137			S	3	1504I	
	22-Apr-75	0454		0747	N	4	1504G
	1412			S	5	1504I	
10	24-Apr-75	0448	1910	1659	S	1	1543M
	2249			N	2	1408V	
	25-Apr-75	0448		0525	S	3	1543M
	1125			N	4		
	1746			S	5	1543C	
	26-Apr-75	0442		2346	N	6	
				0610	S	7	

Table 2. Astronomical and tidal stream data (continued)

11	27-Apr-75	0436	1915	1913	S	1	1543M
	28-Apr-75			0113	N	2	1543C
				0732	S	3	
				1332	N	4	
12	13-May-76	0409		1713	S		1503O
13	No Data						
14	29-Mar-77	0540	1830	1426	S	1	1503P
	30-Mar-77	0540		1956	N	2	1503O
				0302	S	3	1503P
				0902	N	4	
15	31-Mar-77	0540		1005	N	1	1503P
16	1-Apr-77	0533	1835	1519	S		1408C
17	3-Apr-77	0531	1836	1638	S	1	1408C
	4-Apr-77	0524		2318	N	2	
				0458	S	3	
18	27-May-77	0352	2003	1251	S	1	1504Q
	28-May-77	0349		1851	N	2	
0131				S	3		
0731				N			
19	29-May-77	0349		0234	S	1	1504Q
20	30-May-77	0340	2012	2153	N	1	1503P
				0355	S	2	1408D
				1025	N	3	
				1616	S	4	
	1-Jun-77	0340	2015	2216	N	5	
				0444	S	6	
				1044	N	7	
				1636	S	8	
21	3-Jun-77		2019	2014	S		1503P
22	18-Apr-78	0458		0638	S		1187H
23	21-Apr-78	0449	1911	1548	S	1	1187H
	22-Apr-78	0442		2137	N	2	
				0407	S	3	
	23-Apr-78	0442	1916	0954	N	4	1405B
				1554	S	5	
				2212	N	6	
				0412	S	7	
24	31-May-79	0335		1319	N		1187G

§ These reference numbers correspond to the diamonds on the figures of the ground tracks. S South-going tide. N North-going tide.

FIGURES

Figure 1 indicates the locations of the 24 fish tracks in the southern North Sea; subsequent figures show the individual ground tracks and vertical tracks of all but 7 of the fish, which have been omitted (see Section 1).

Scale: 1 minute of latitude = 1853 m (1 nautical mile).

The ground tracks (Figures 2,4,6 *et seq.*) show hourly positions of the fish (where possible) in relation to the direction of tide;

- ▲ north-going tide at night
- △ north-going tide by day
- ▼ south-going tide at night
- ▽ south-going tide by day

Slack waters are indicated with reference to slack water number (Table 2);

- ◆ slack water at night
- ◇ slack water by day

The 30 m isobath is symbolised by ~ 30 ~ , which indicates shallower water above the 30 and deeper water below.

The vertical plots (Figures 3,5,7 *et seq.*) show the depth of the fish (thin line) in relation to the seabed (bold line) the direction of tide and day and night.

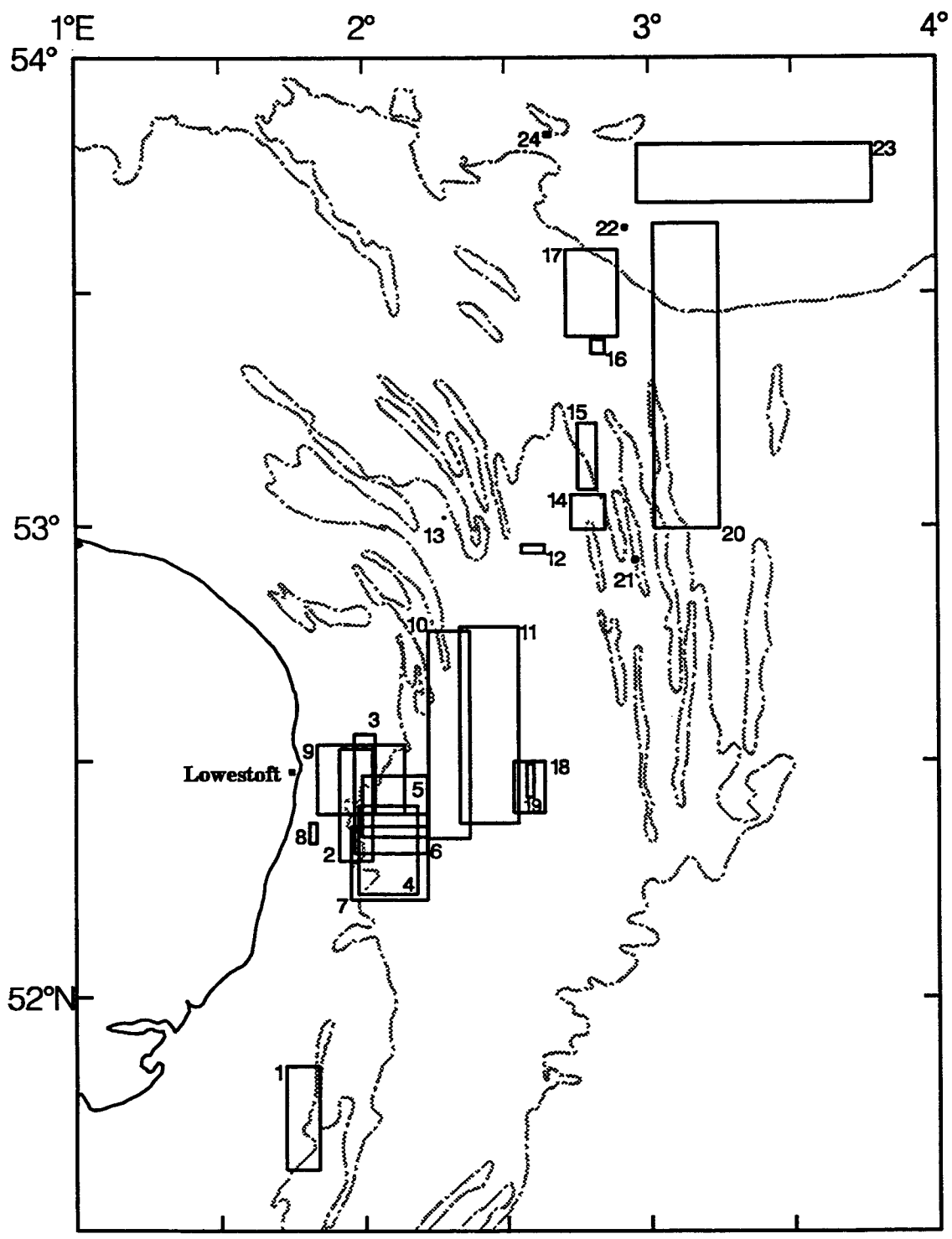


Figure 1. Positions of each track in the southern North Sea. The 30 m isobath is shown

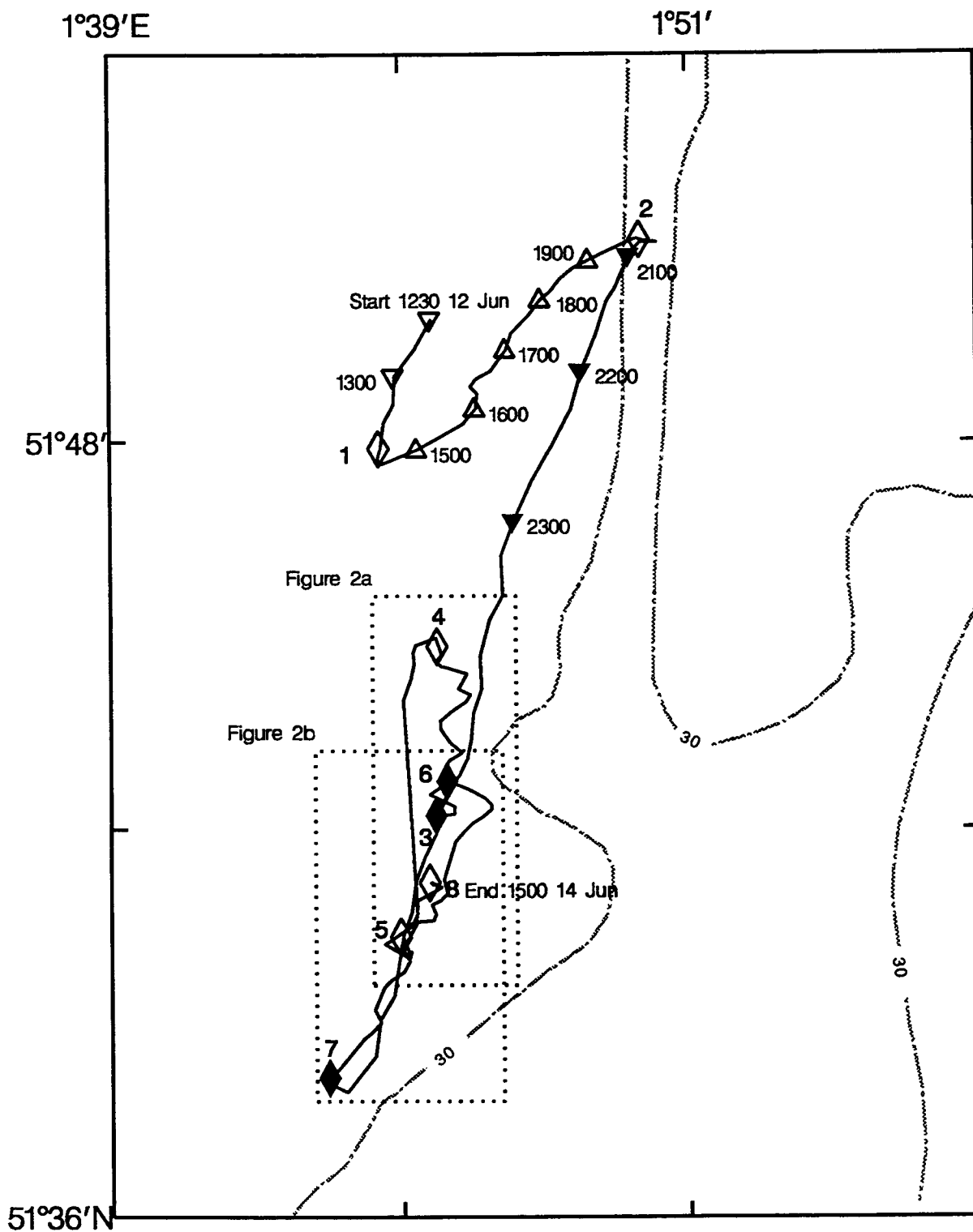


Figure 2. Ground track of Fish 1, released at 1213h, 12 June 1971

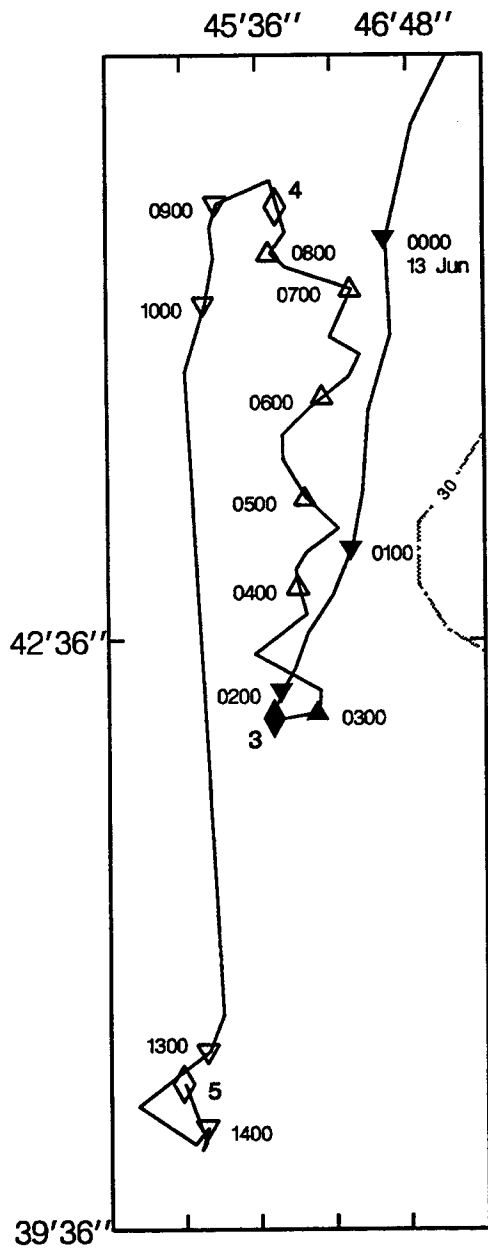


Figure 2(a).

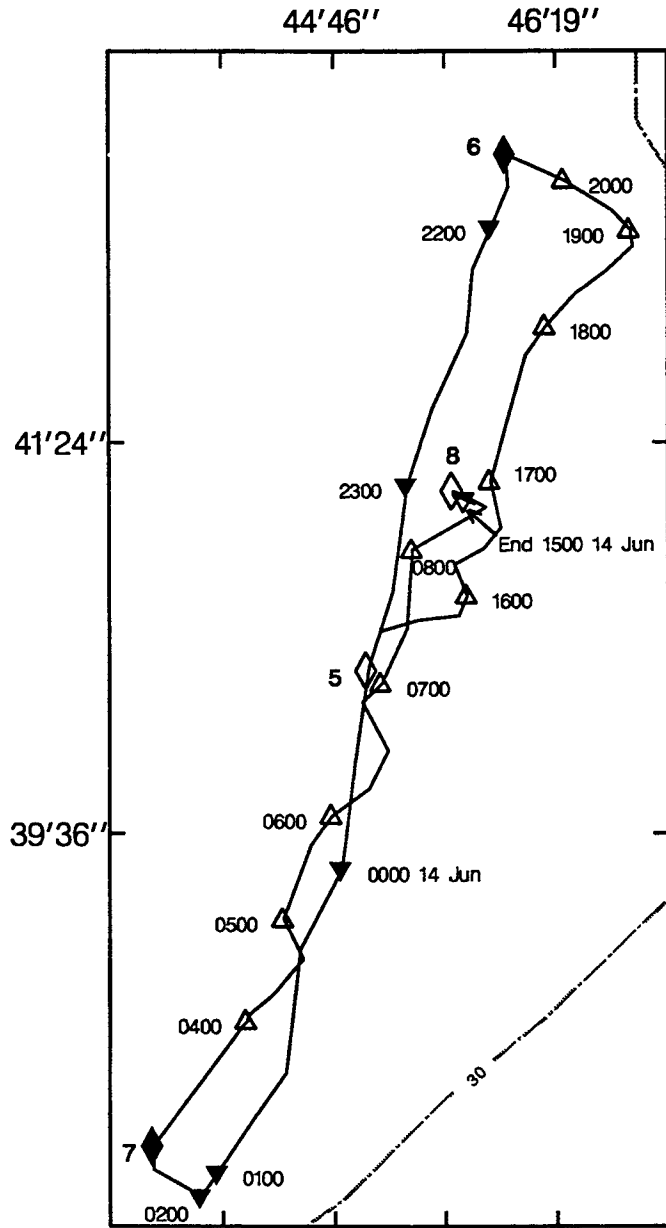


Figure 2(b).

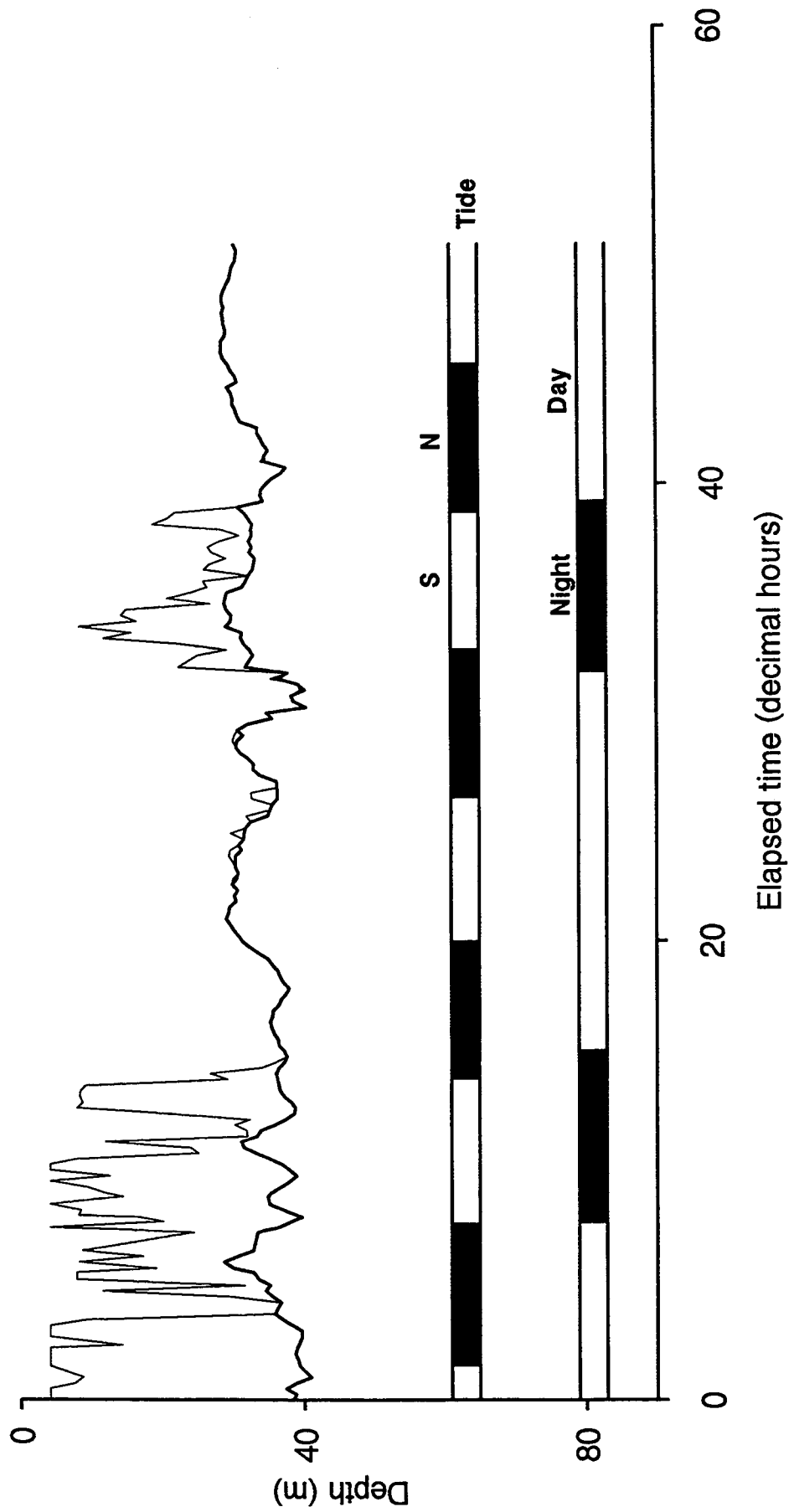


Figure 3. Vertical track of Fish 1

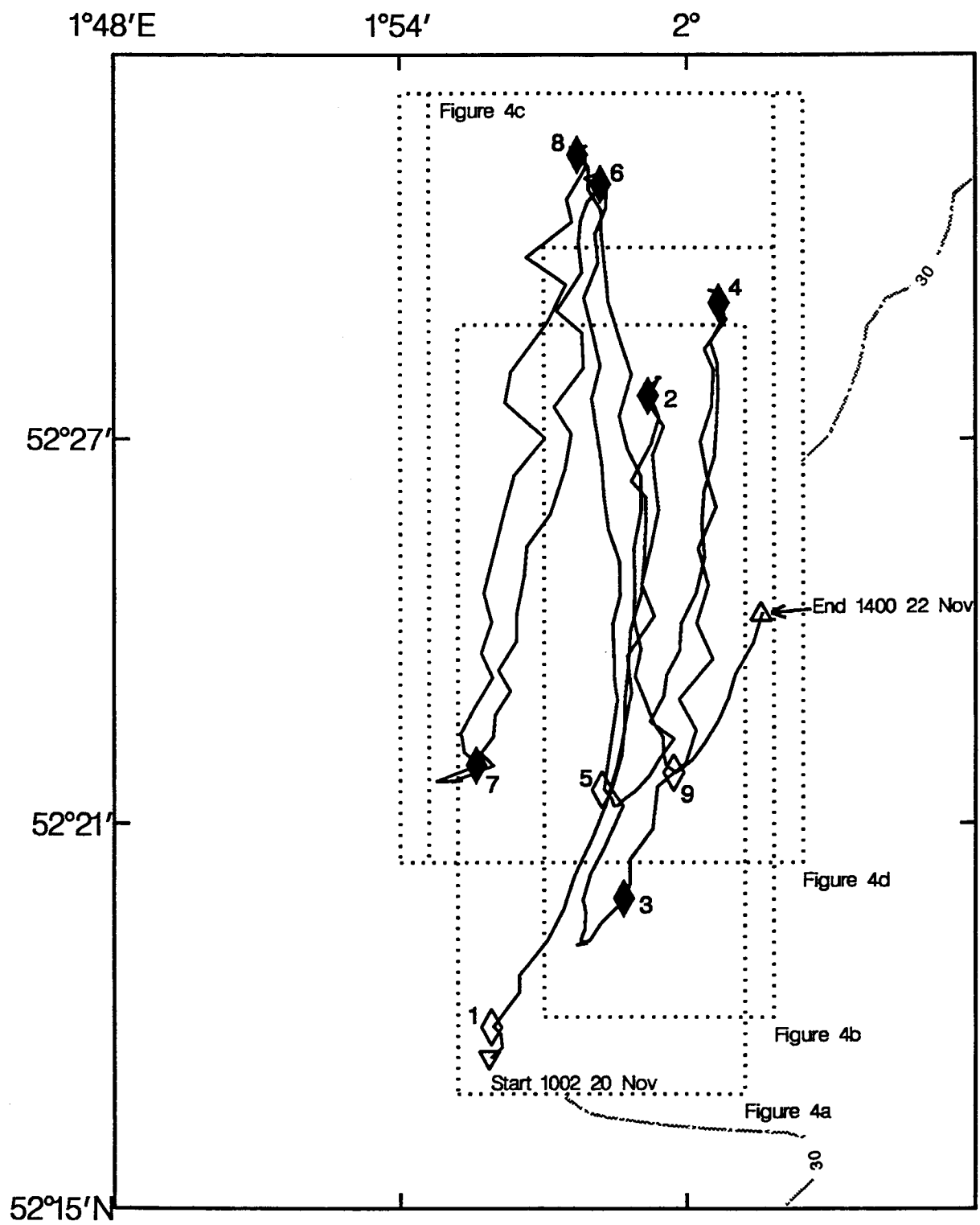


Figure 4. Ground track of Fish 2, released at 1002h, 20 November 1972

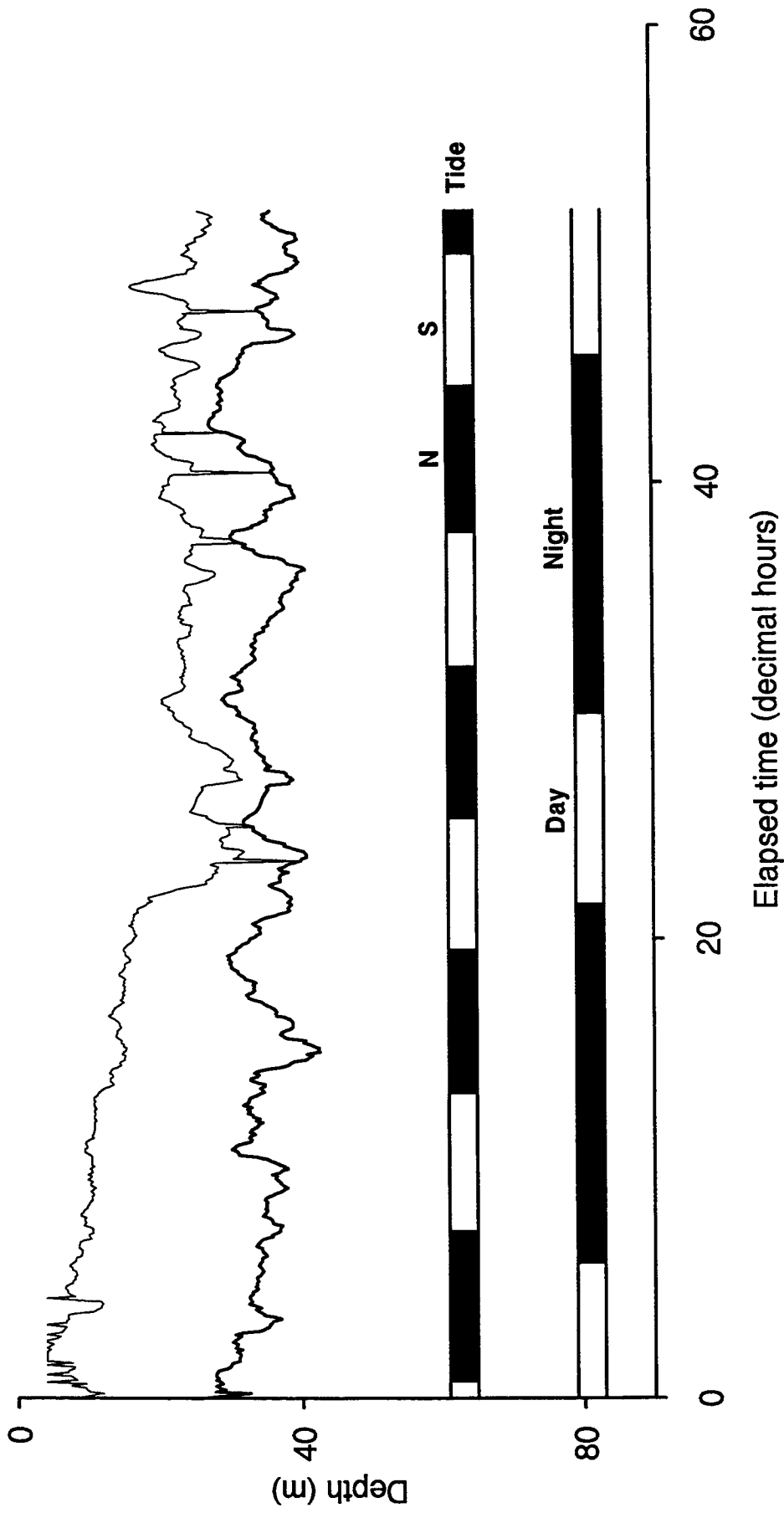


Figure 5. Vertical track of Fish 2

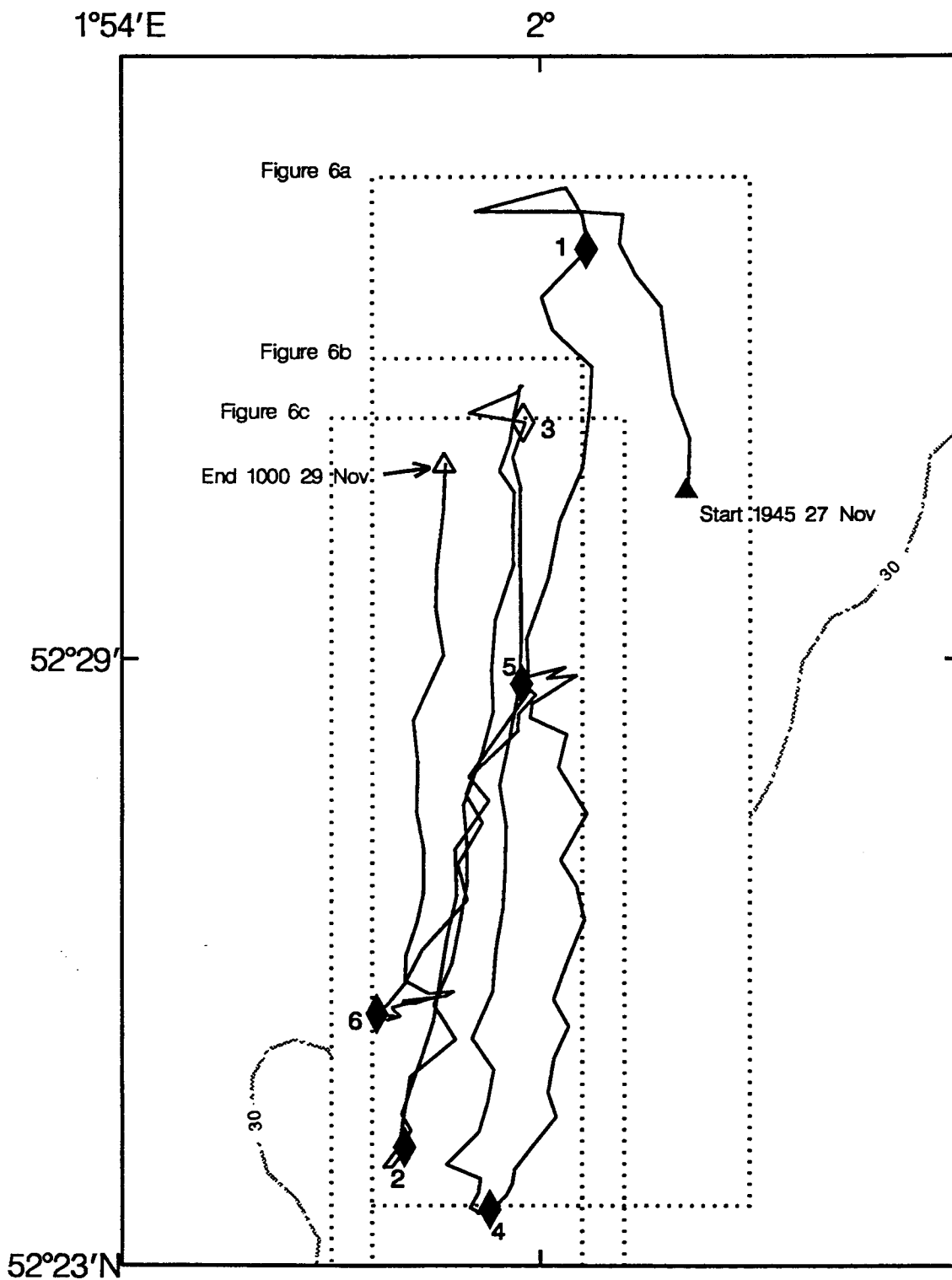


Figure 6. Ground track of Fish 3, released at 1926h, 27 November 1972

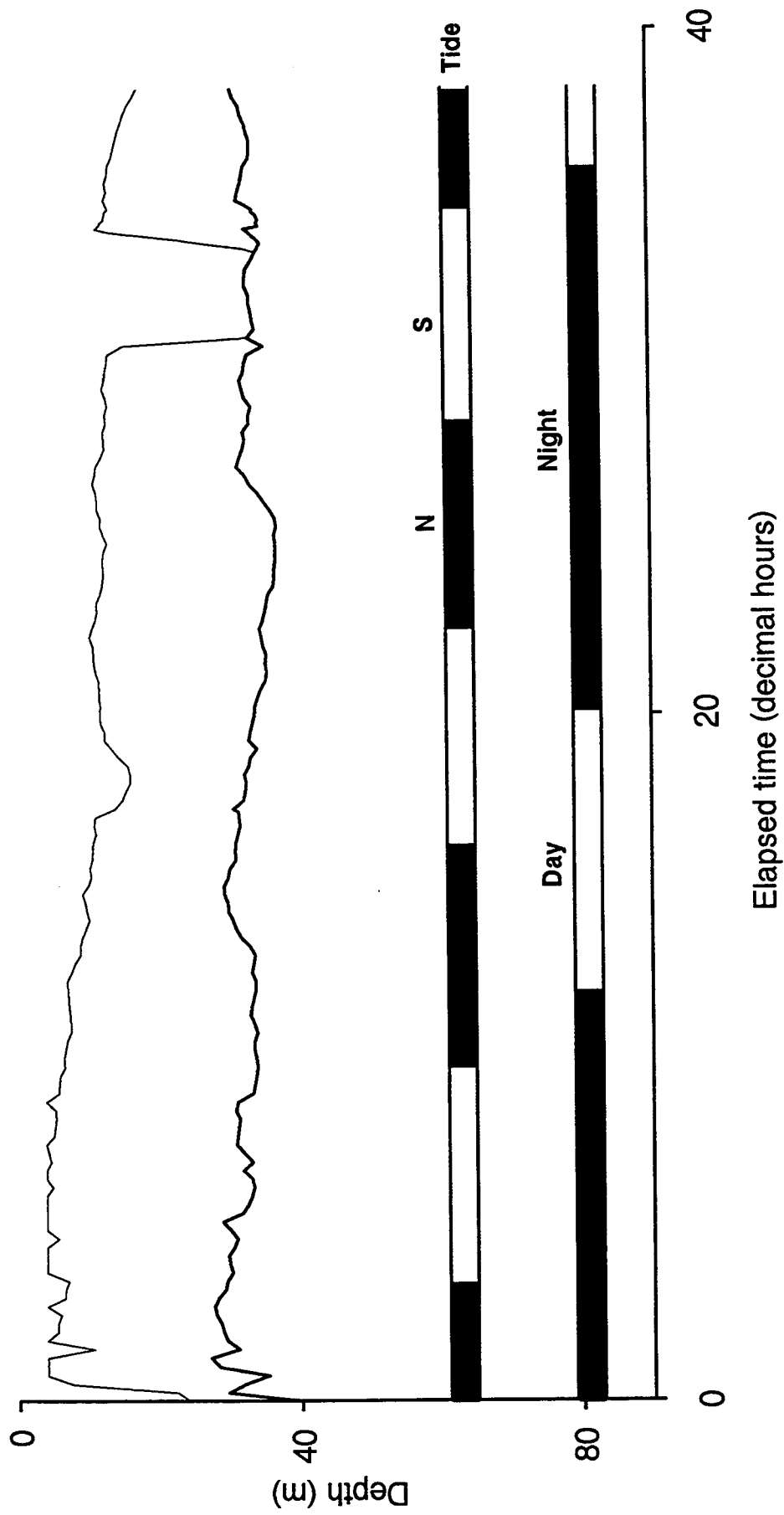


Figure 7. Vertical track of Fish 3

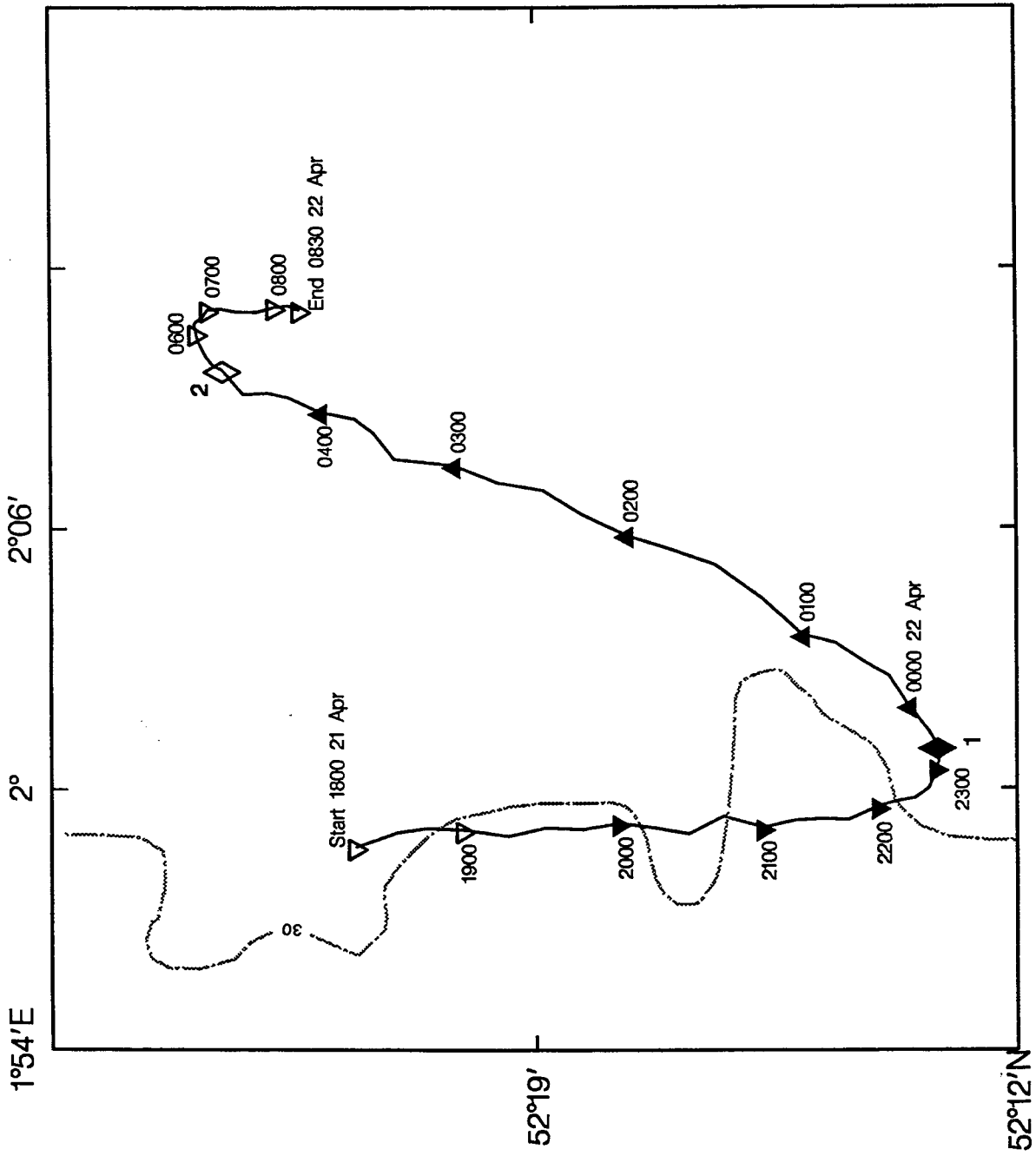
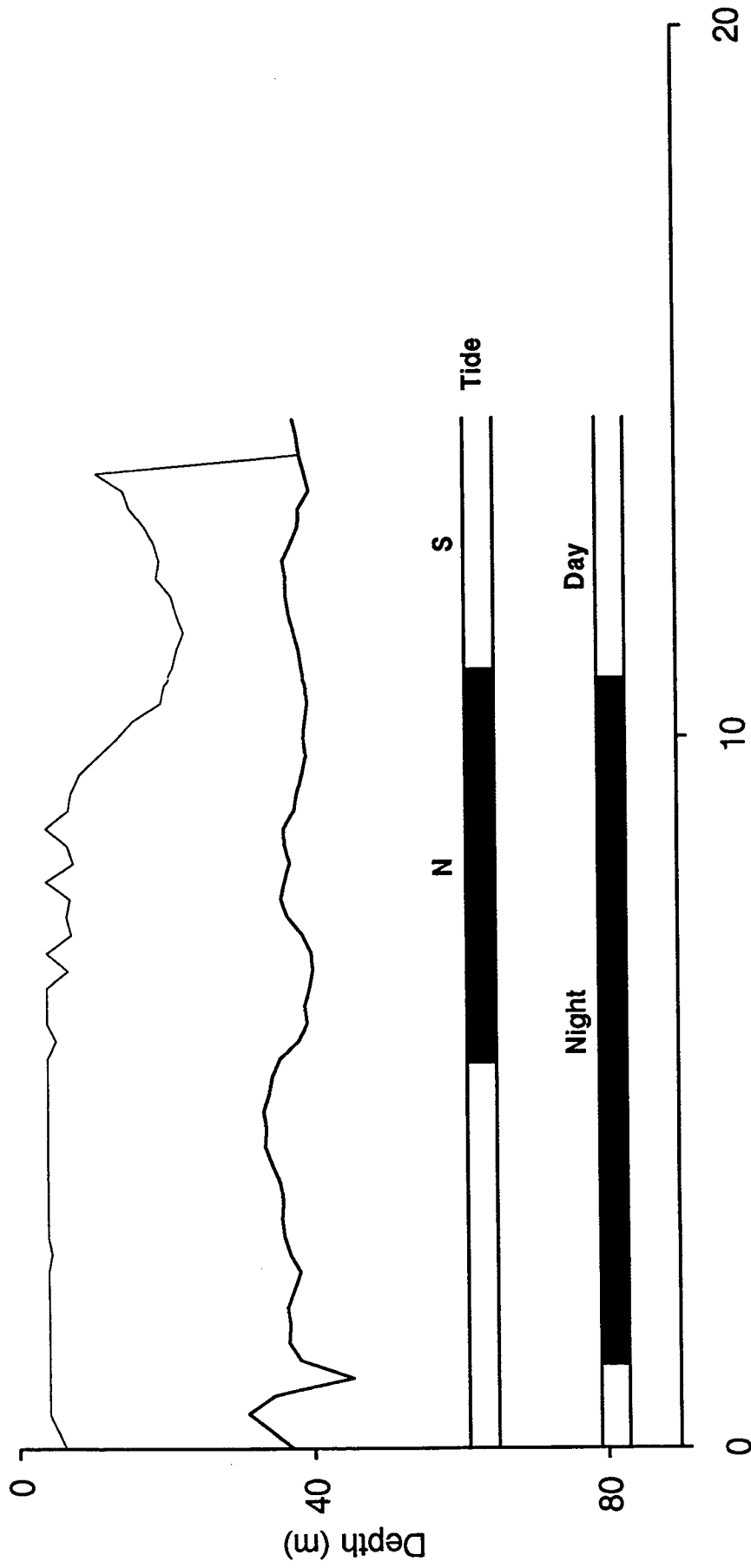


Figure 8. Ground track of Fish 4, released at 1800h, 21 April 1974



Elapsed time (decimal hours)

Figure 9. Vertical track of Fish 4

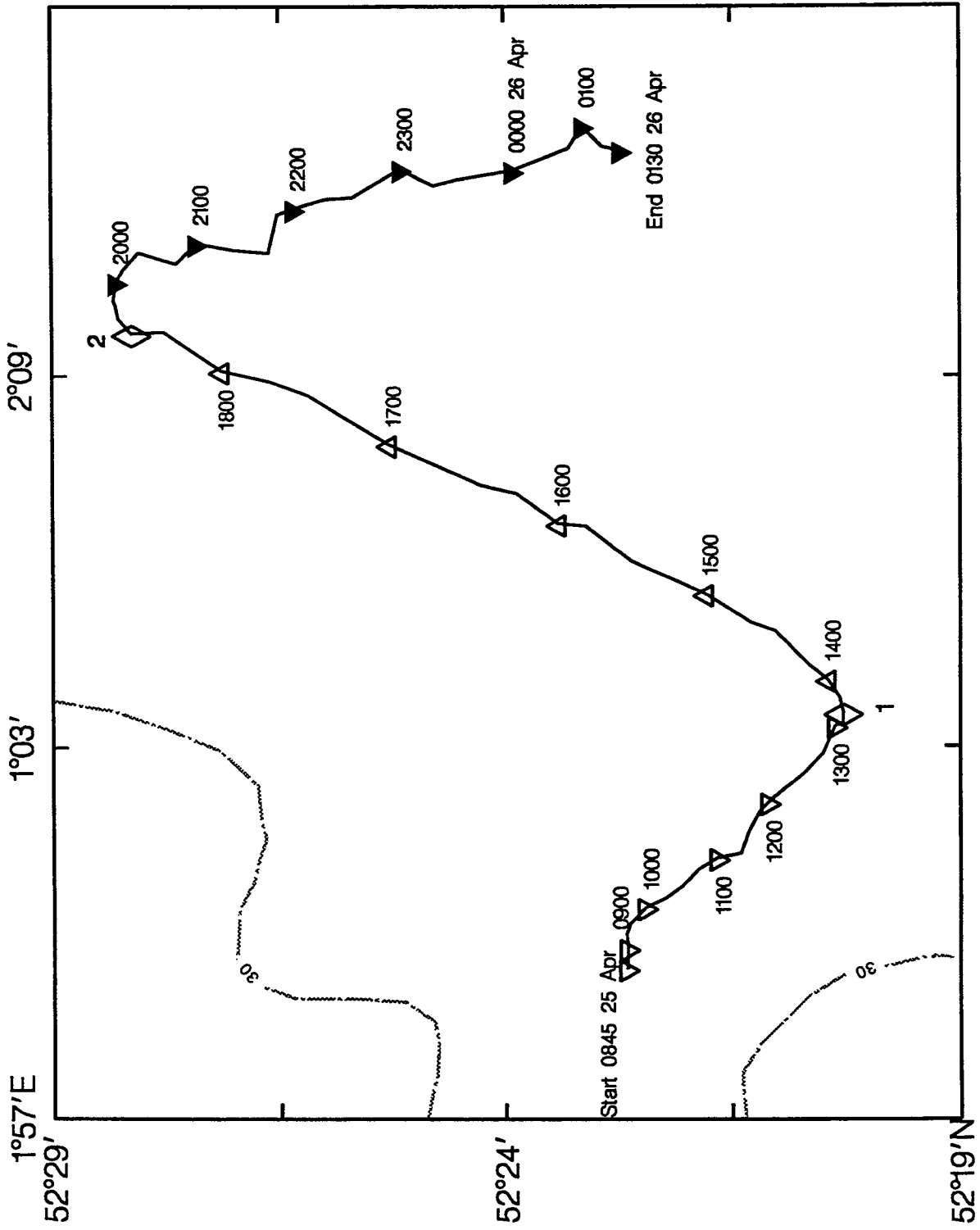


Figure 10. Ground track of Fish 5, released at 0830h, 25 April 1974

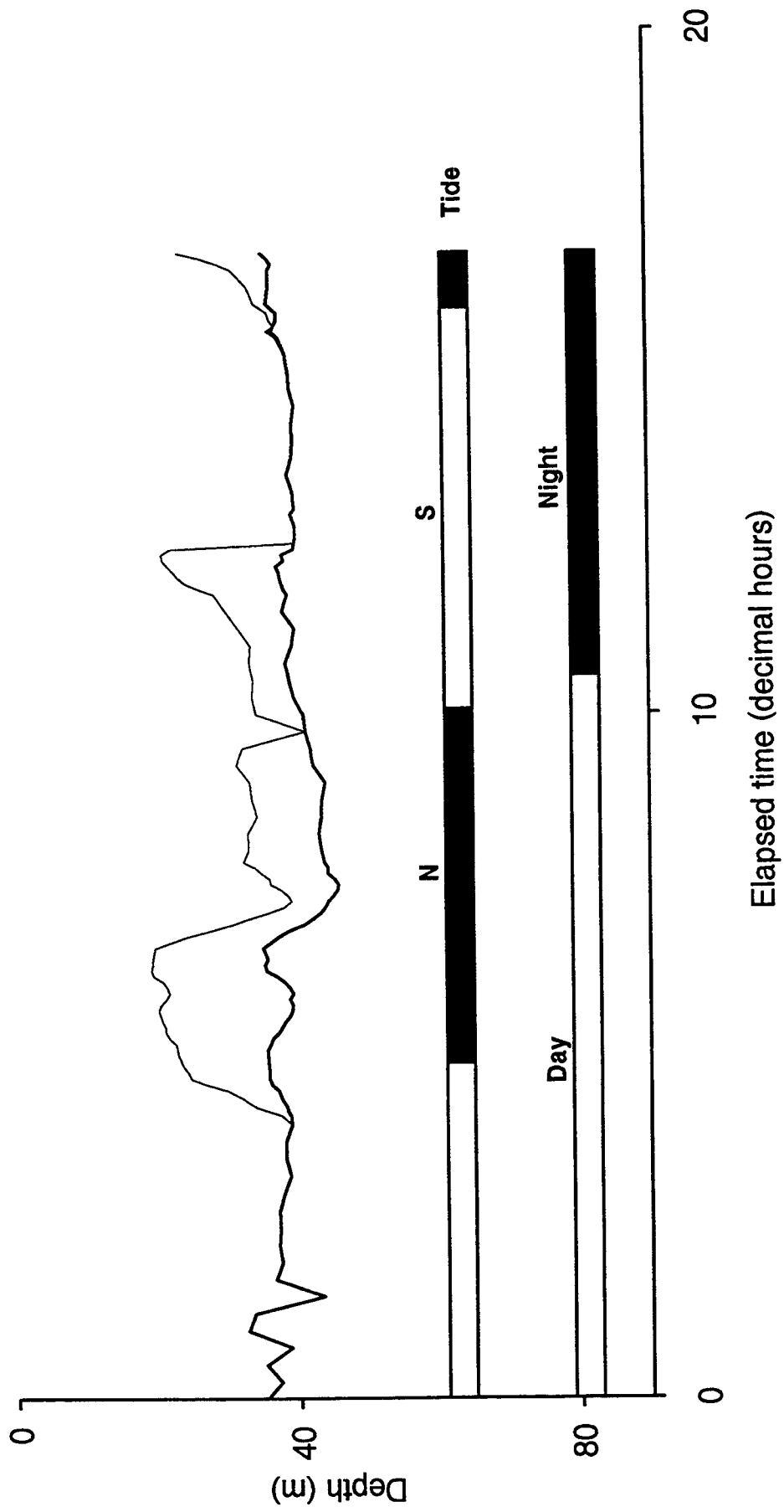


Figure 11. Vertical track of Fish 5

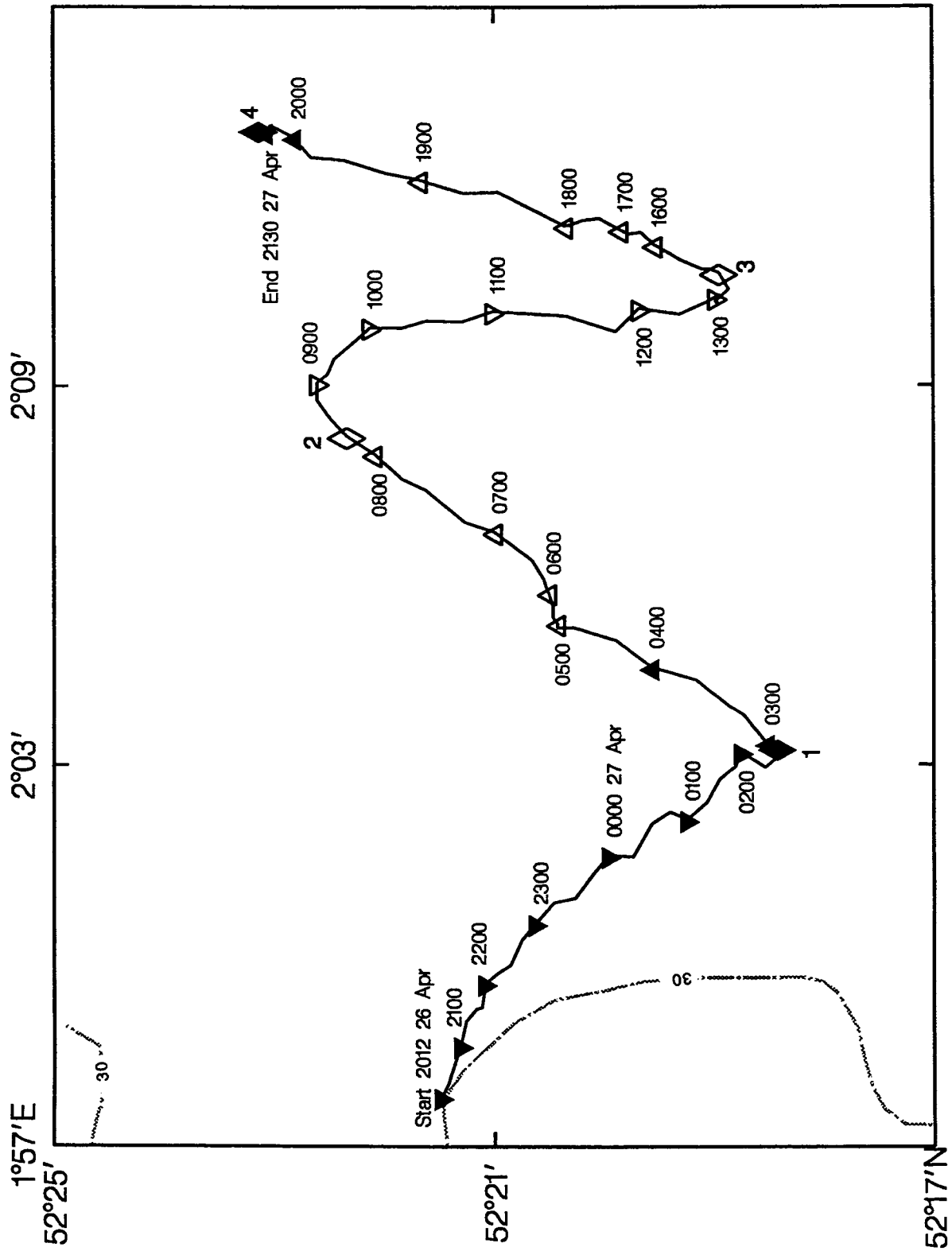


Figure 12. Ground track of Fish 6, released at 2012h, 26 April 1974

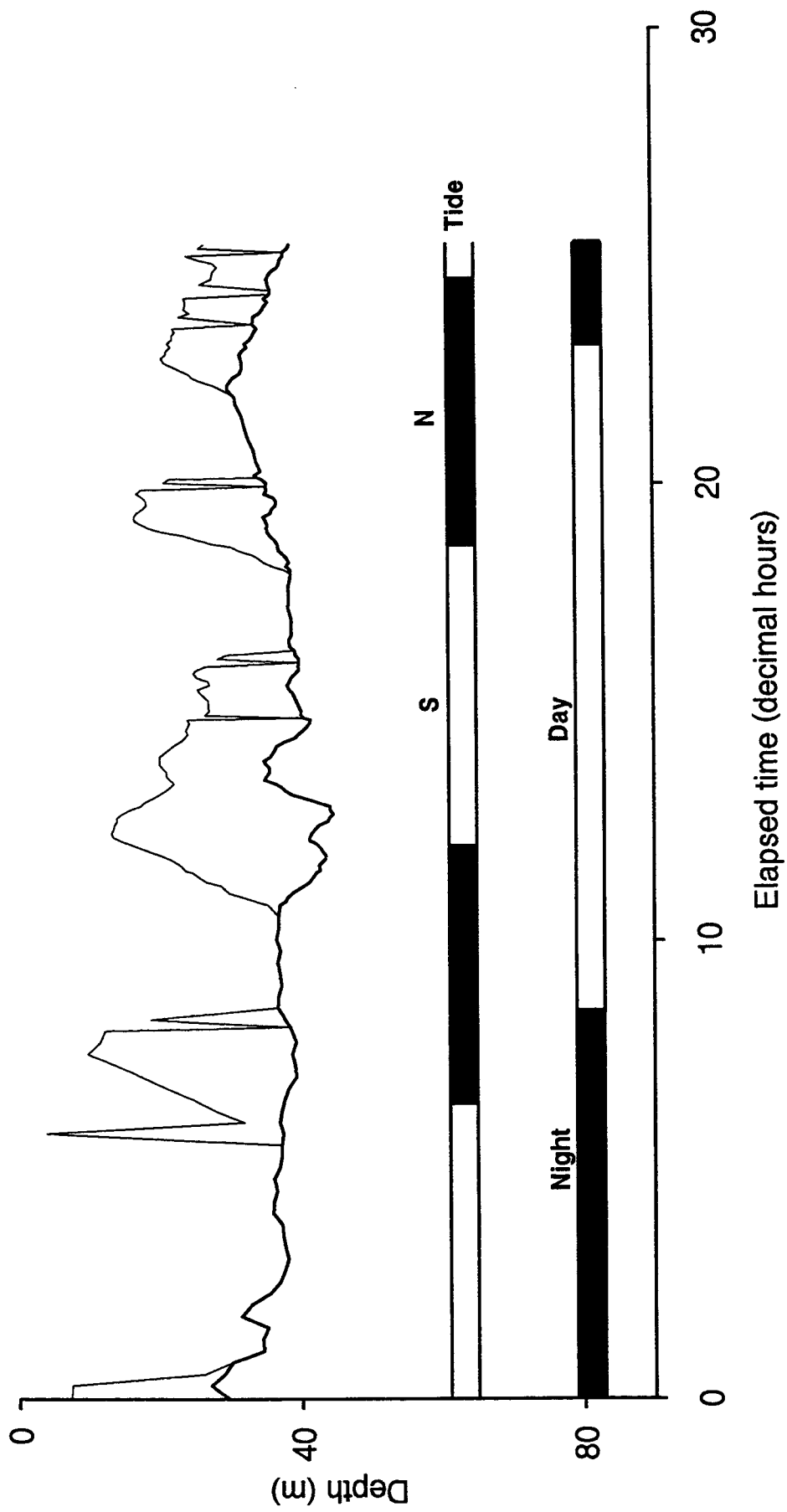


Figure 13. Vertical track of Fish 6

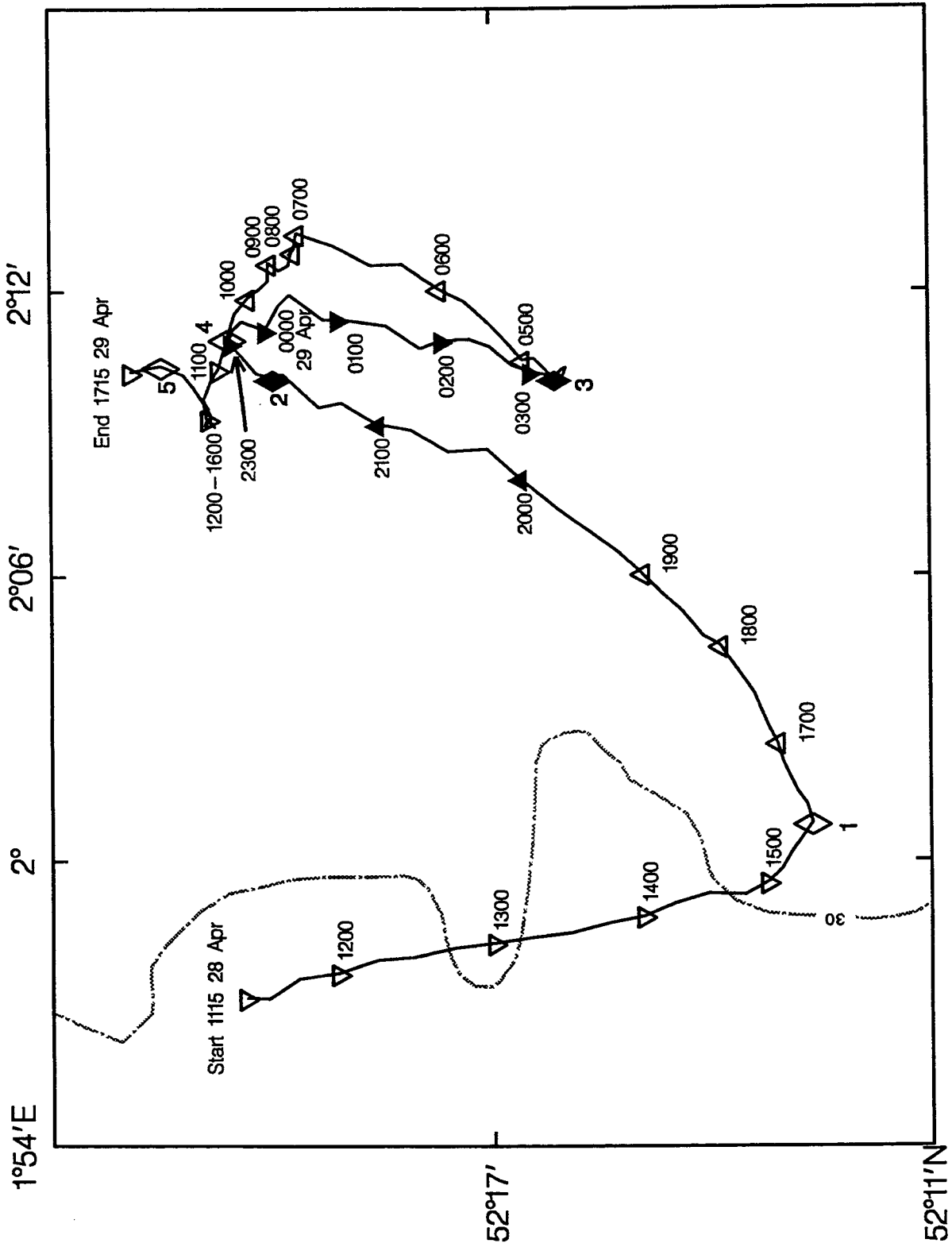
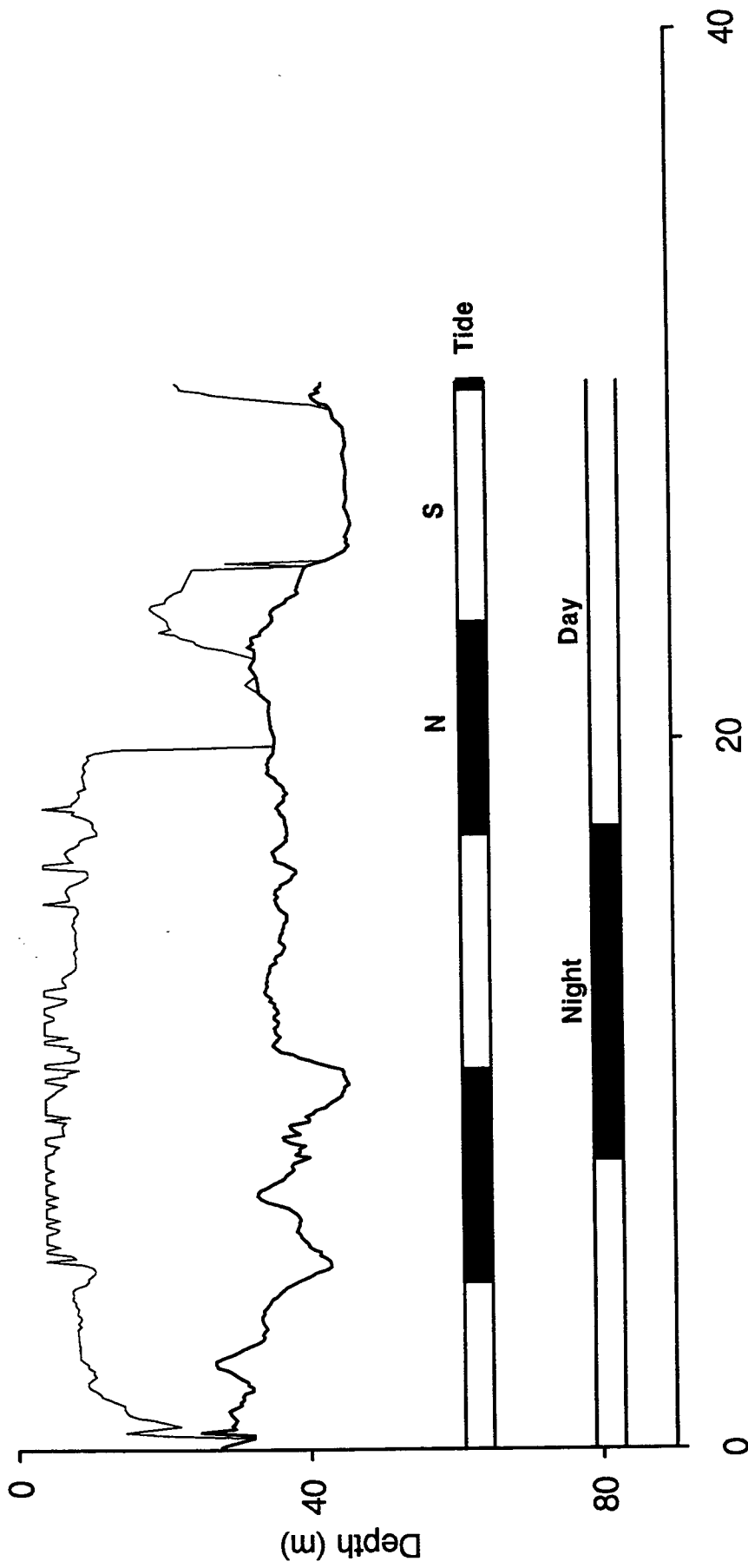


Figure 14. Ground track of Fish 7, released at 1110h, 28 April 1974



Elapsed time (decimal hours)

Figure 15. Vertical track of Fish 7

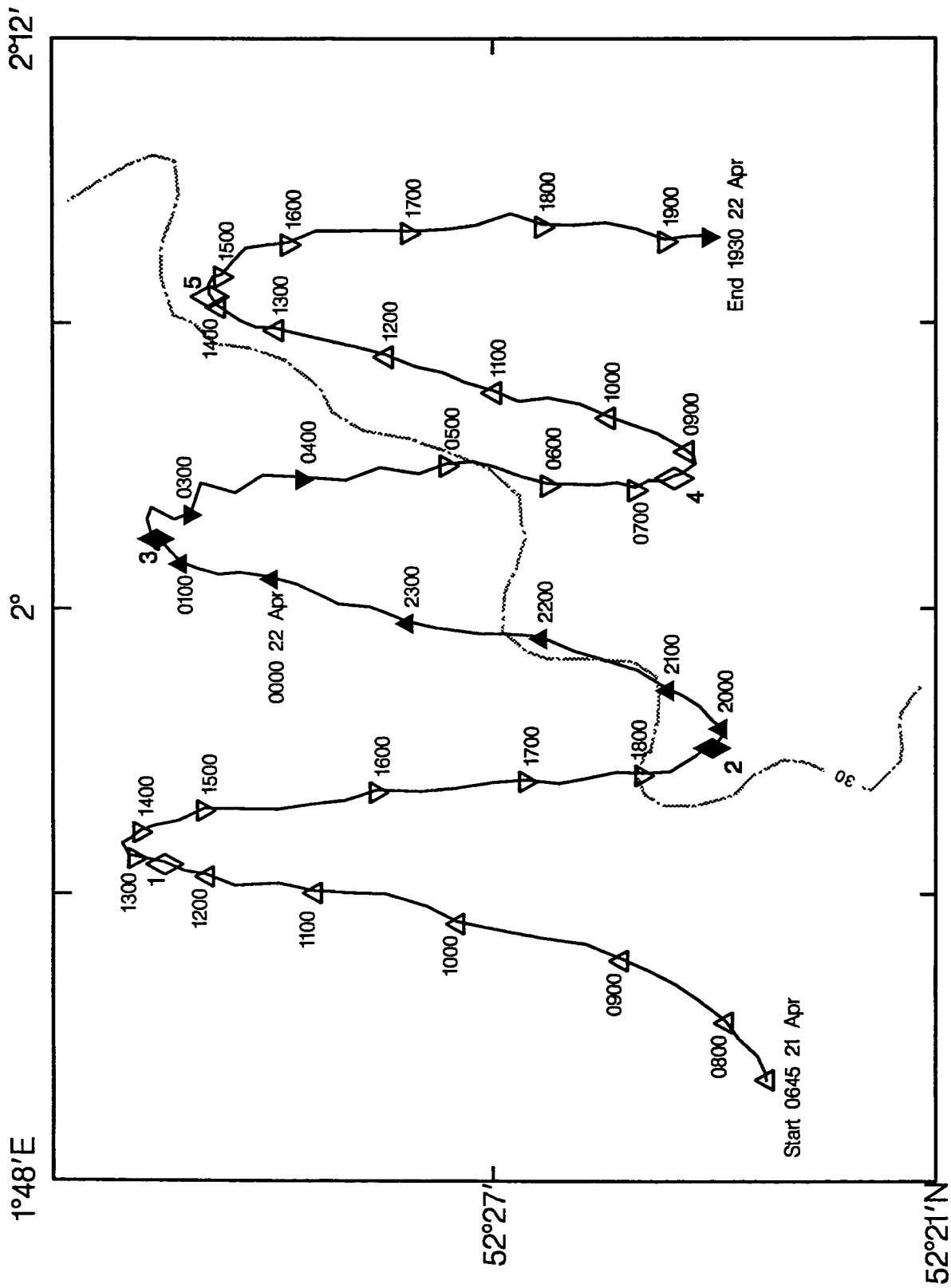


Figure 16. Ground track of Fish 9, released at 0630h, 21 April 1975

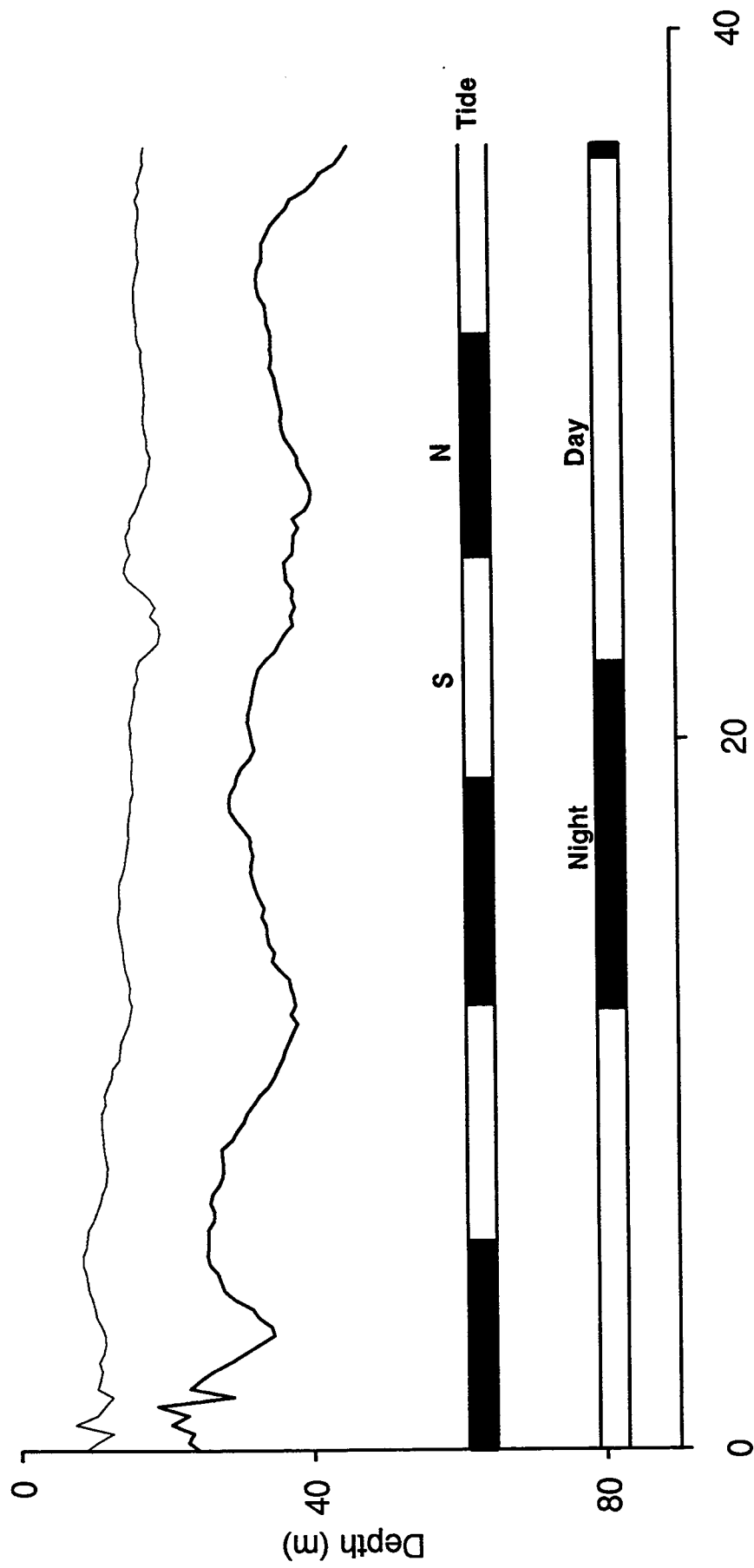


Figure 17. Vertical track of Fish 9

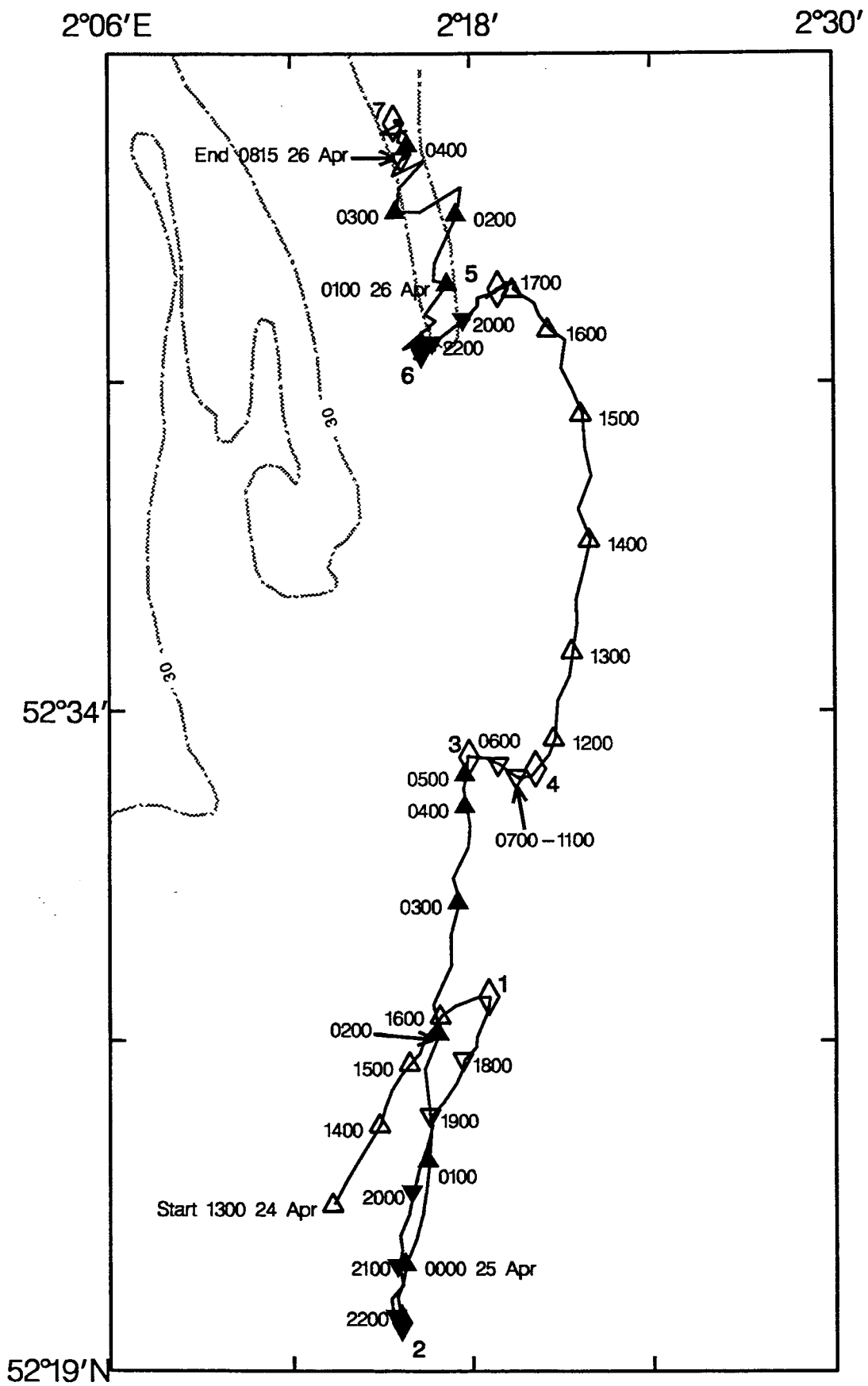


Figure 18. Ground track of Fish 10, released at 1249h, 24 April 1975

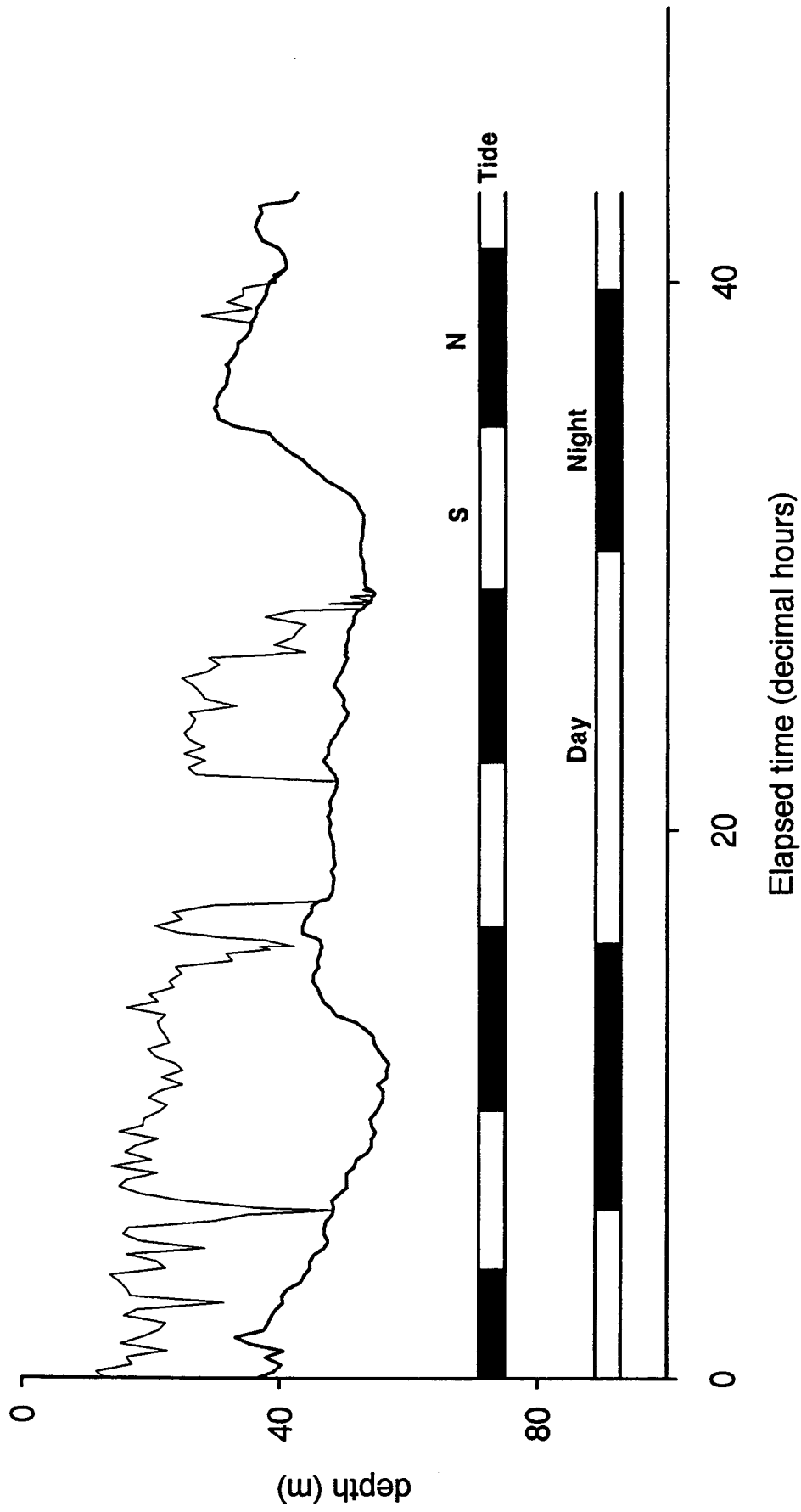


Figure 19. Vertical track of Fish 10

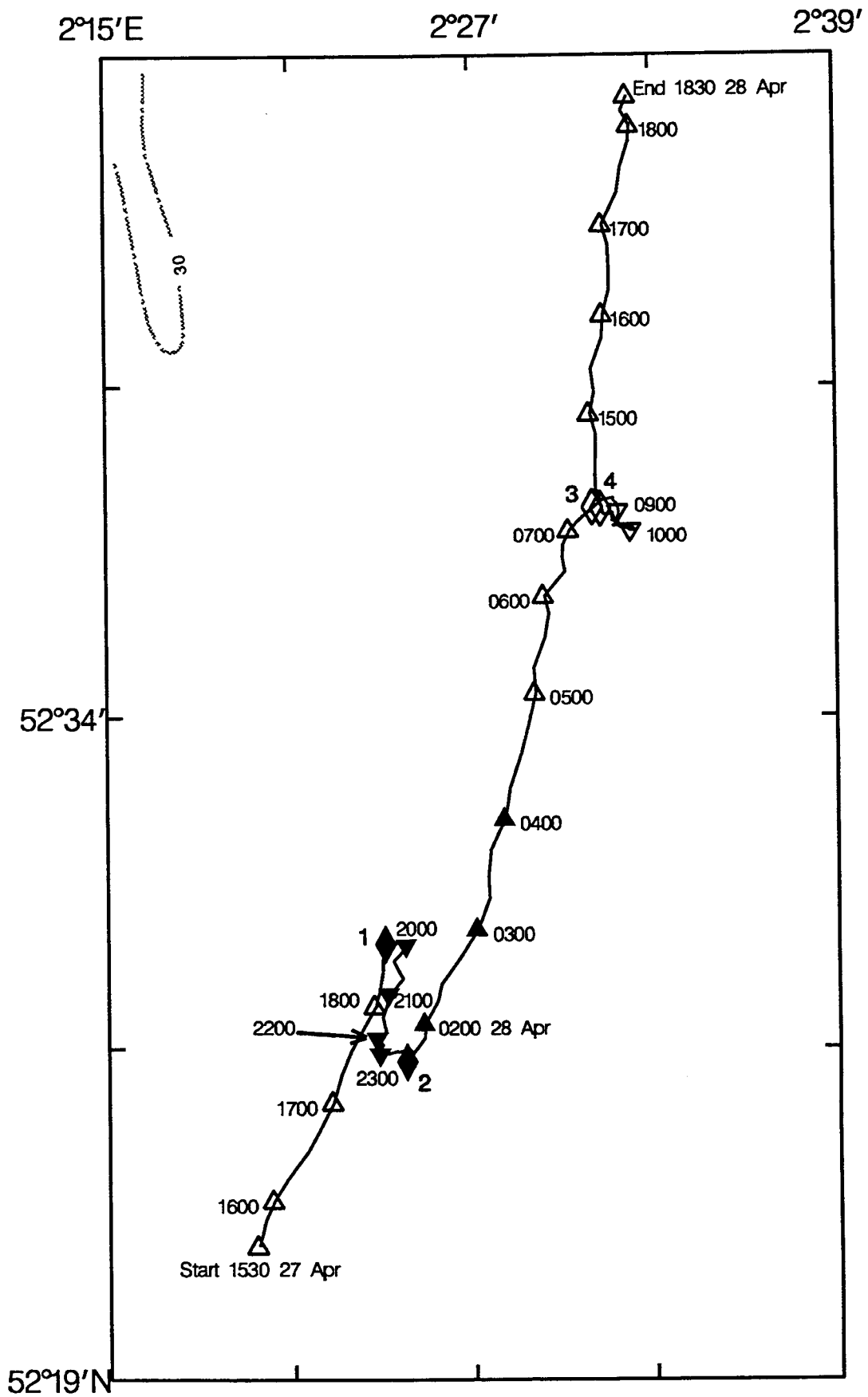


Figure 20. Ground track of Fish 11, released at 1519h, 27 April 1975

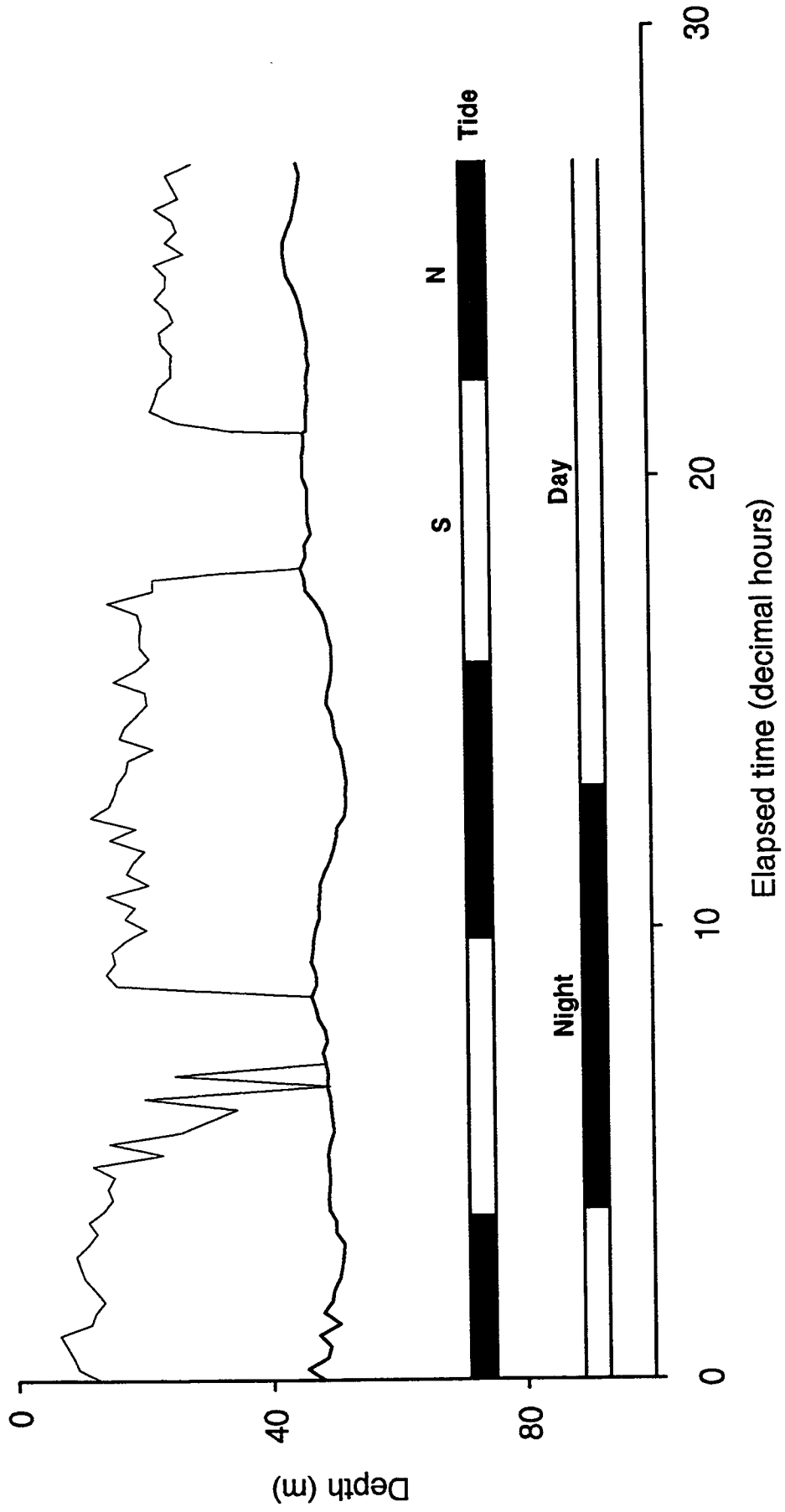


Figure 21. Vertical track of Fish 11

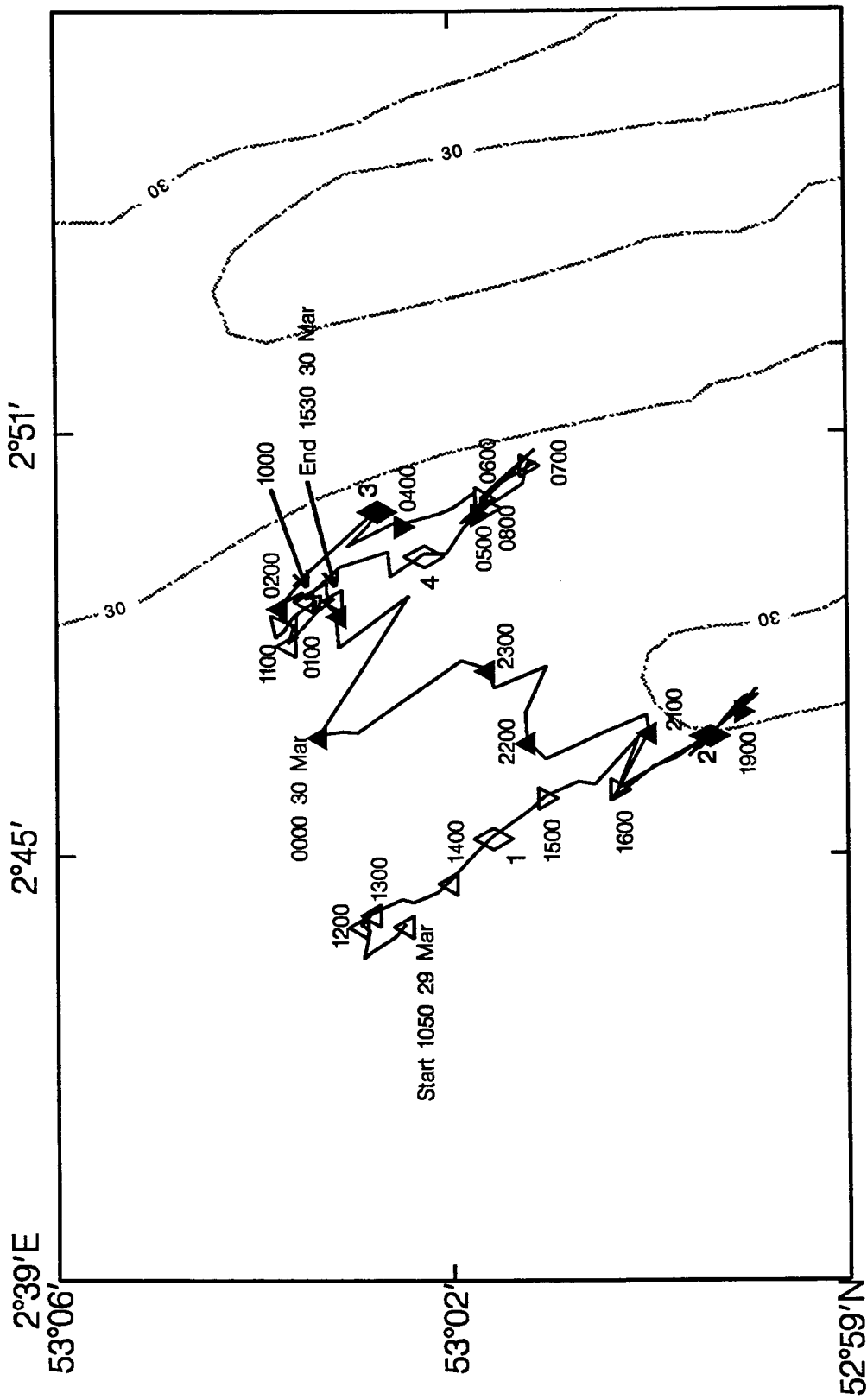
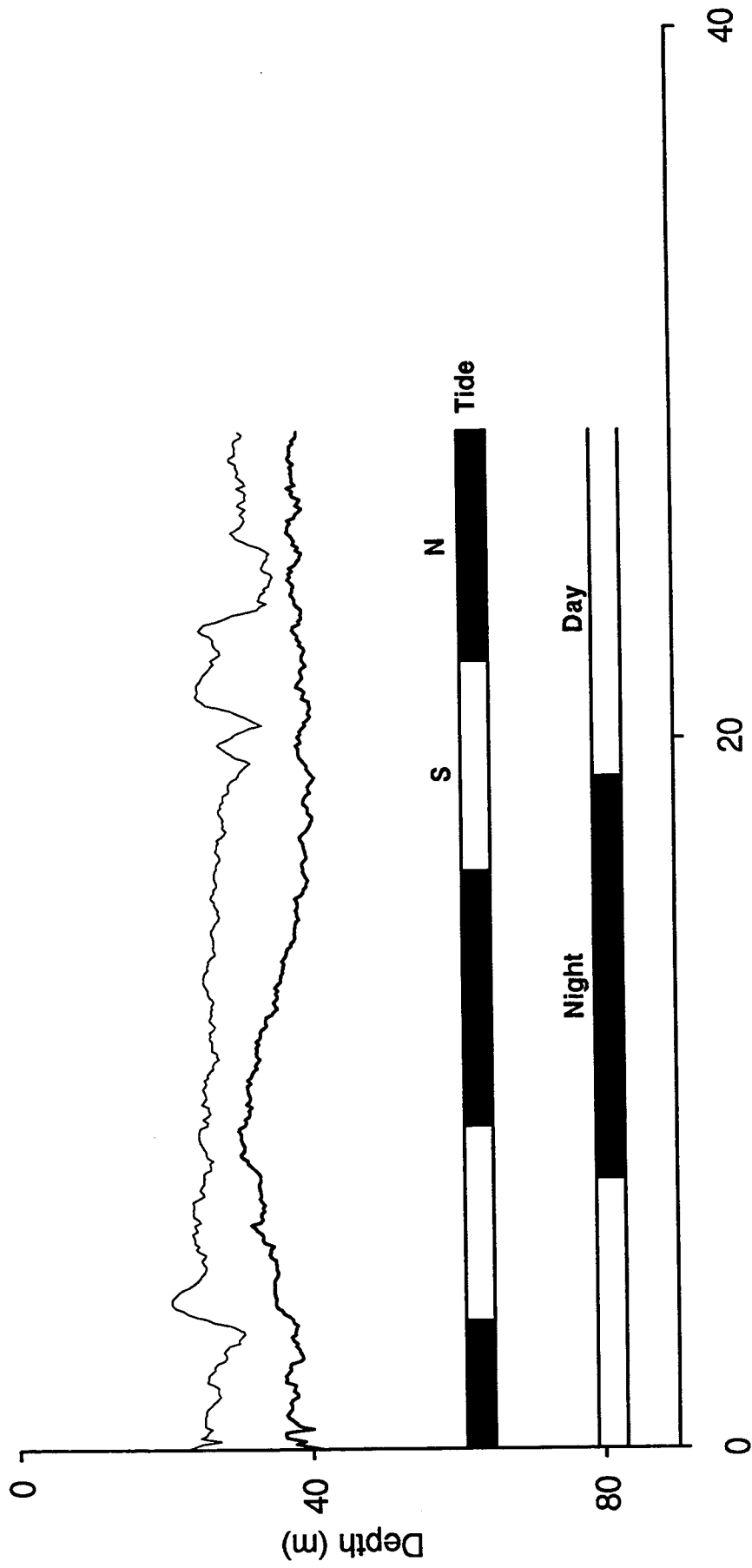


Figure 22. Ground track of Fish 14, released at 1046h, 29 March 1977. (Large Decca errors were experienced at night time during the track)



Elapsed time (decimal hours)

Figure 23. Vertical track of Fish 14

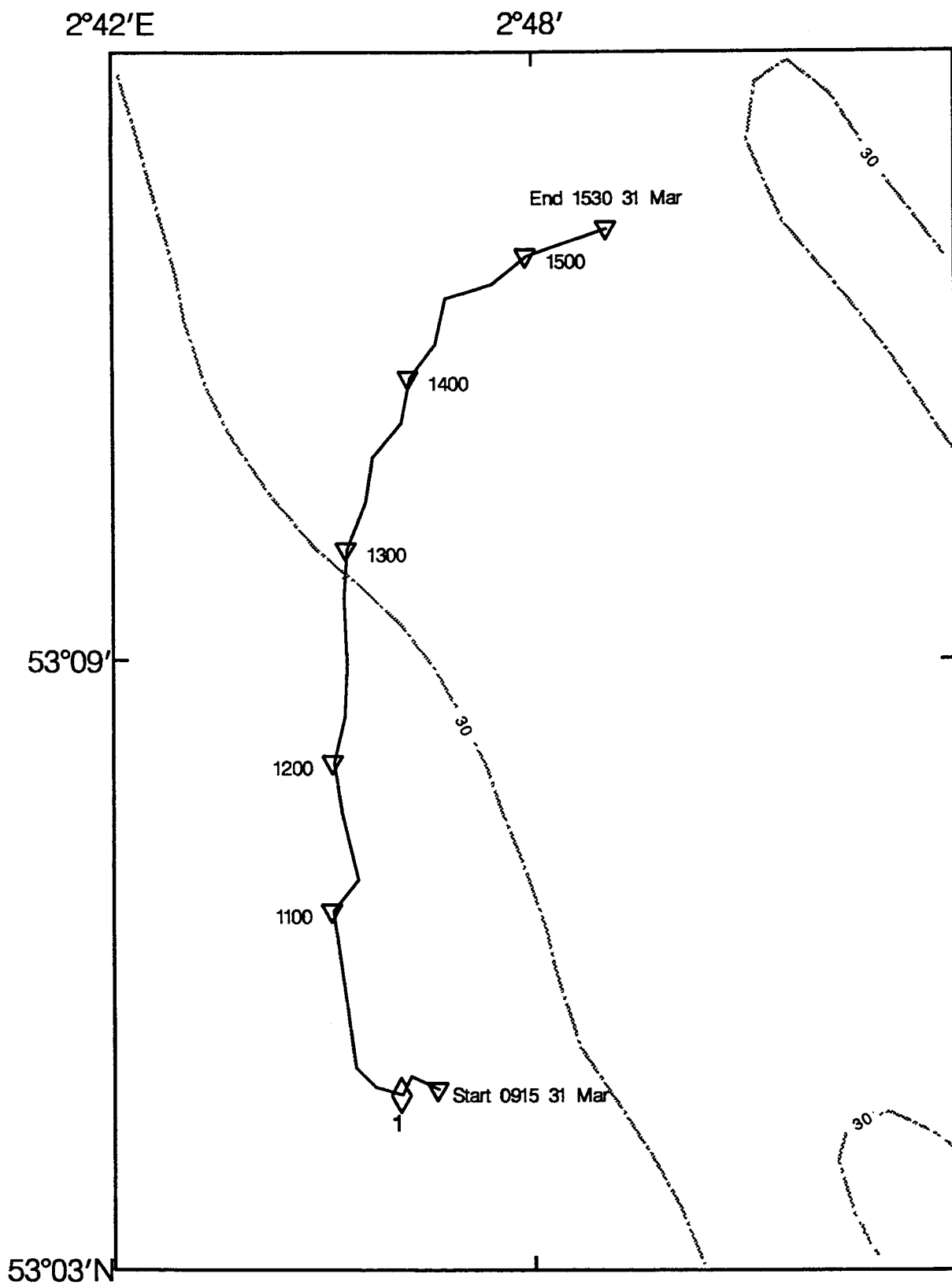


Figure 24. Ground track of Fish 15, released at 0906h, 31 March 1977

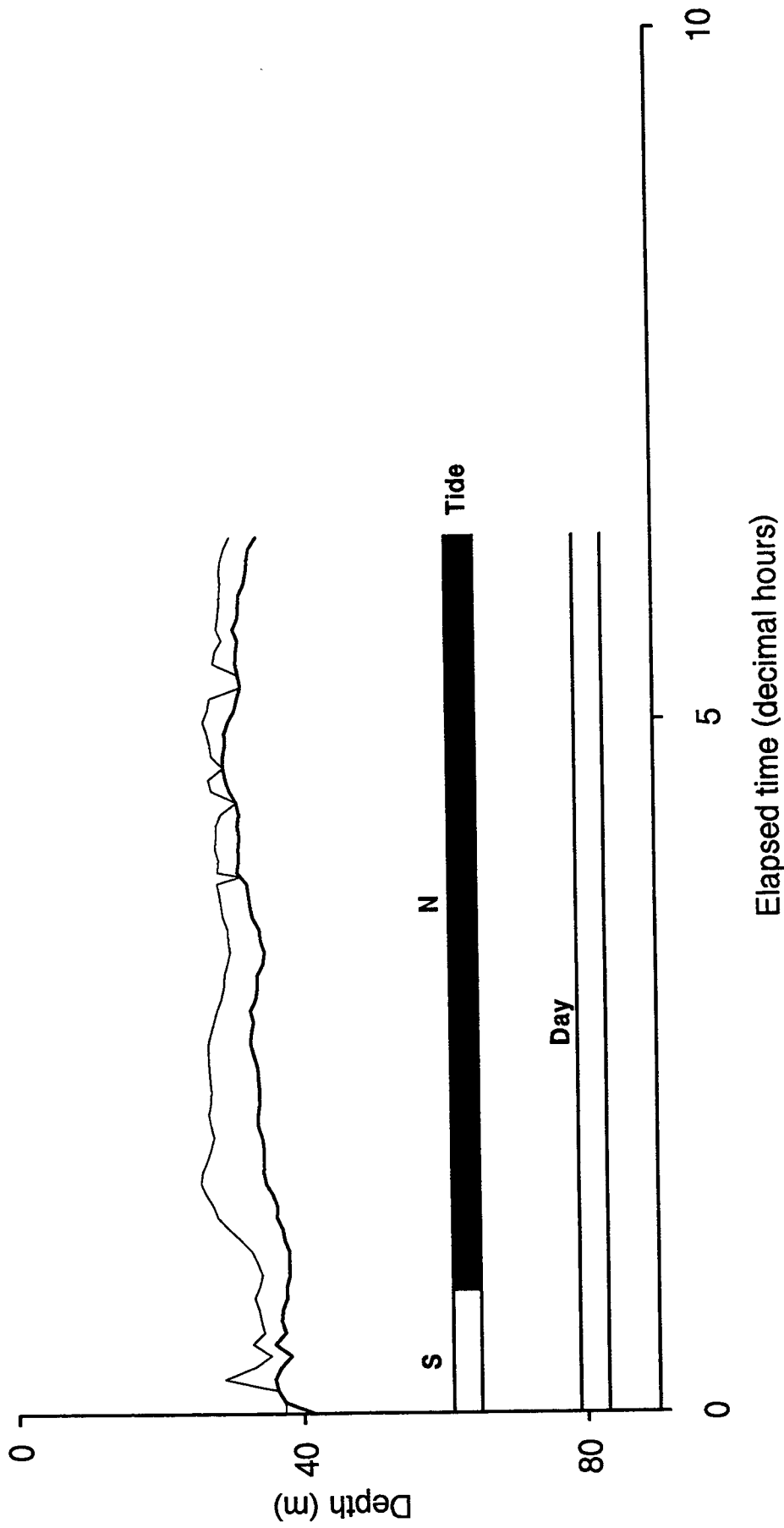


Figure 25. Vertical track of Fish 15

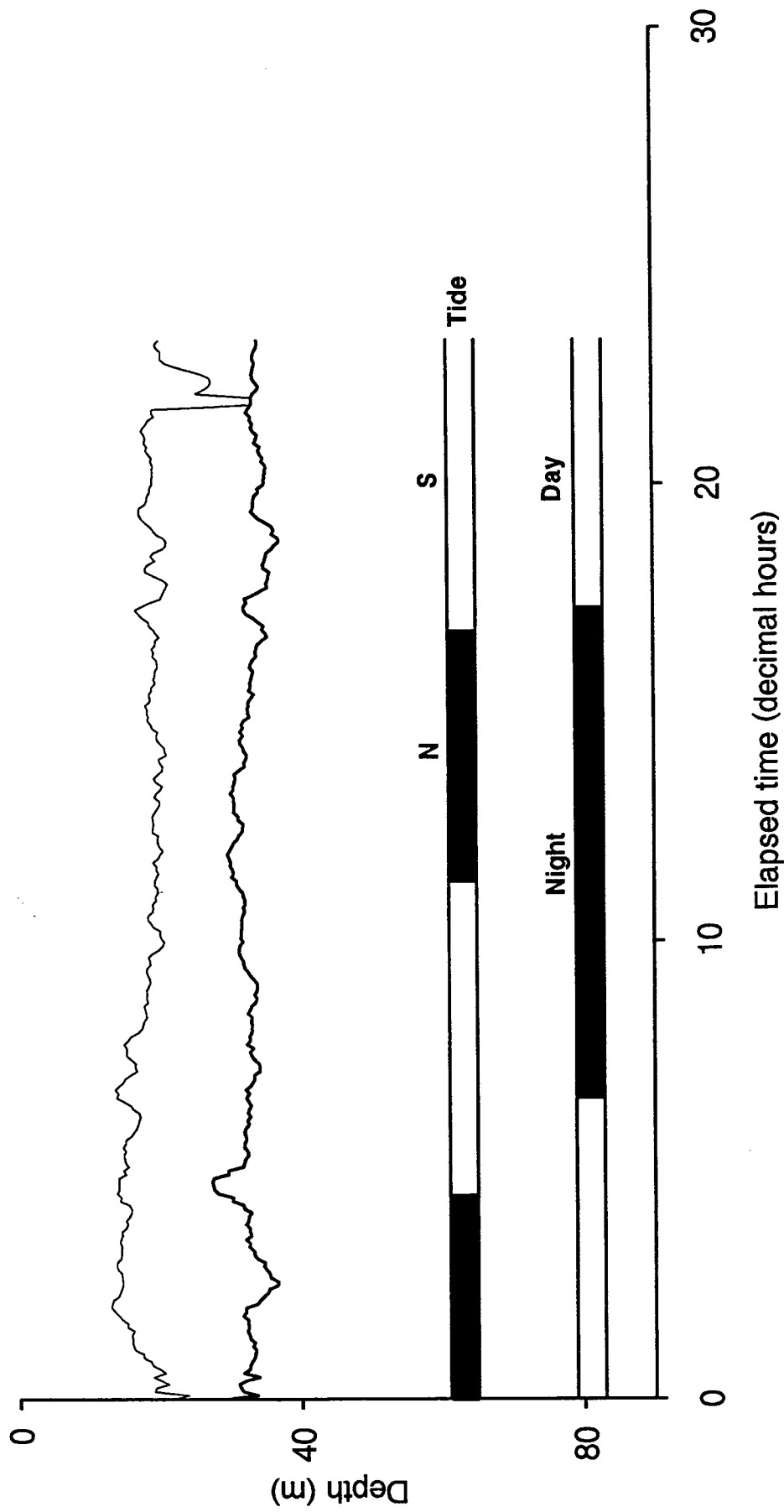


Figure 27. Vertical track of Fish 17

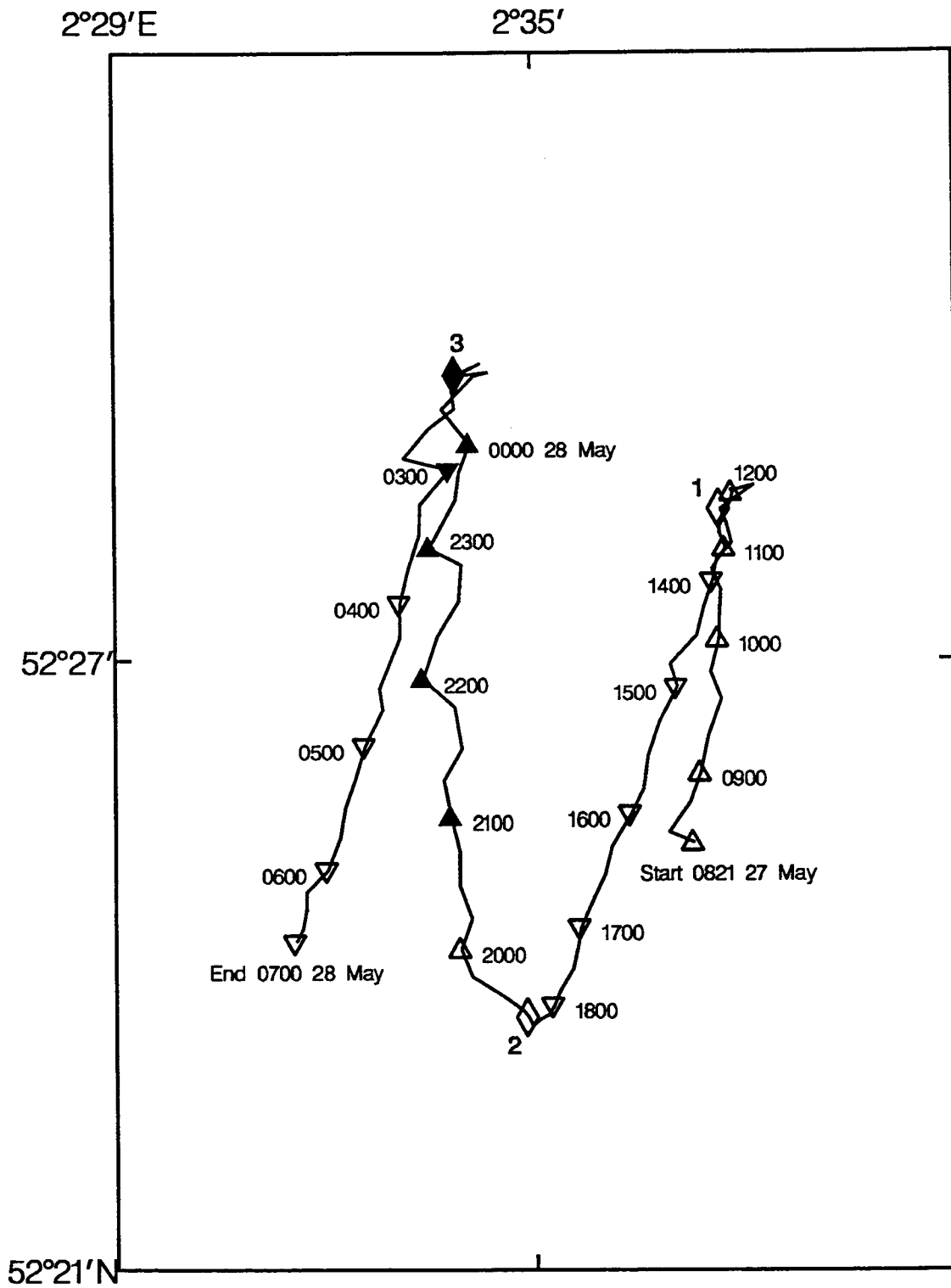


Figure 28. Ground track of Fish 18, released at 0821h, 27 May 1977

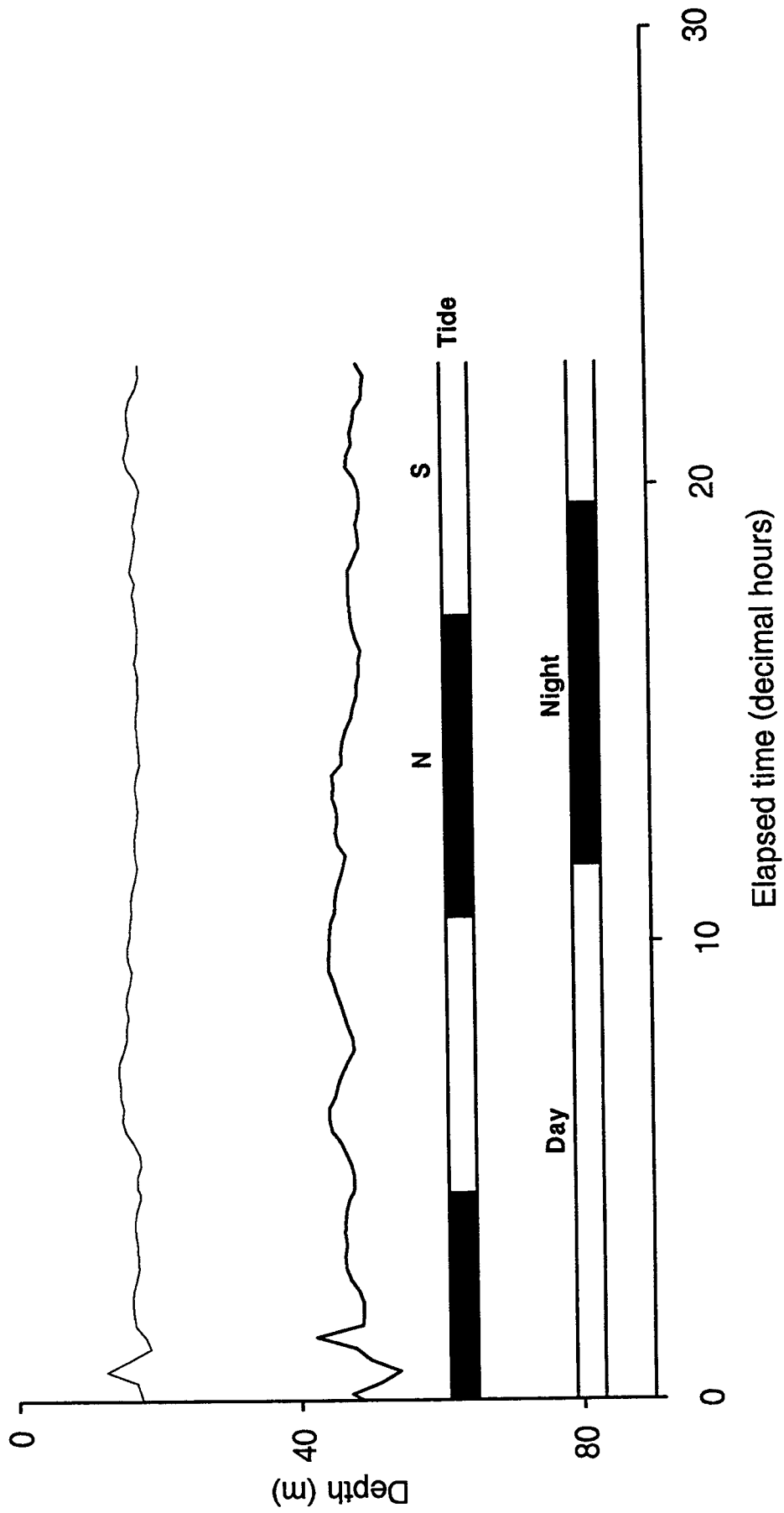


Figure 29. Vertical track of Fish 18

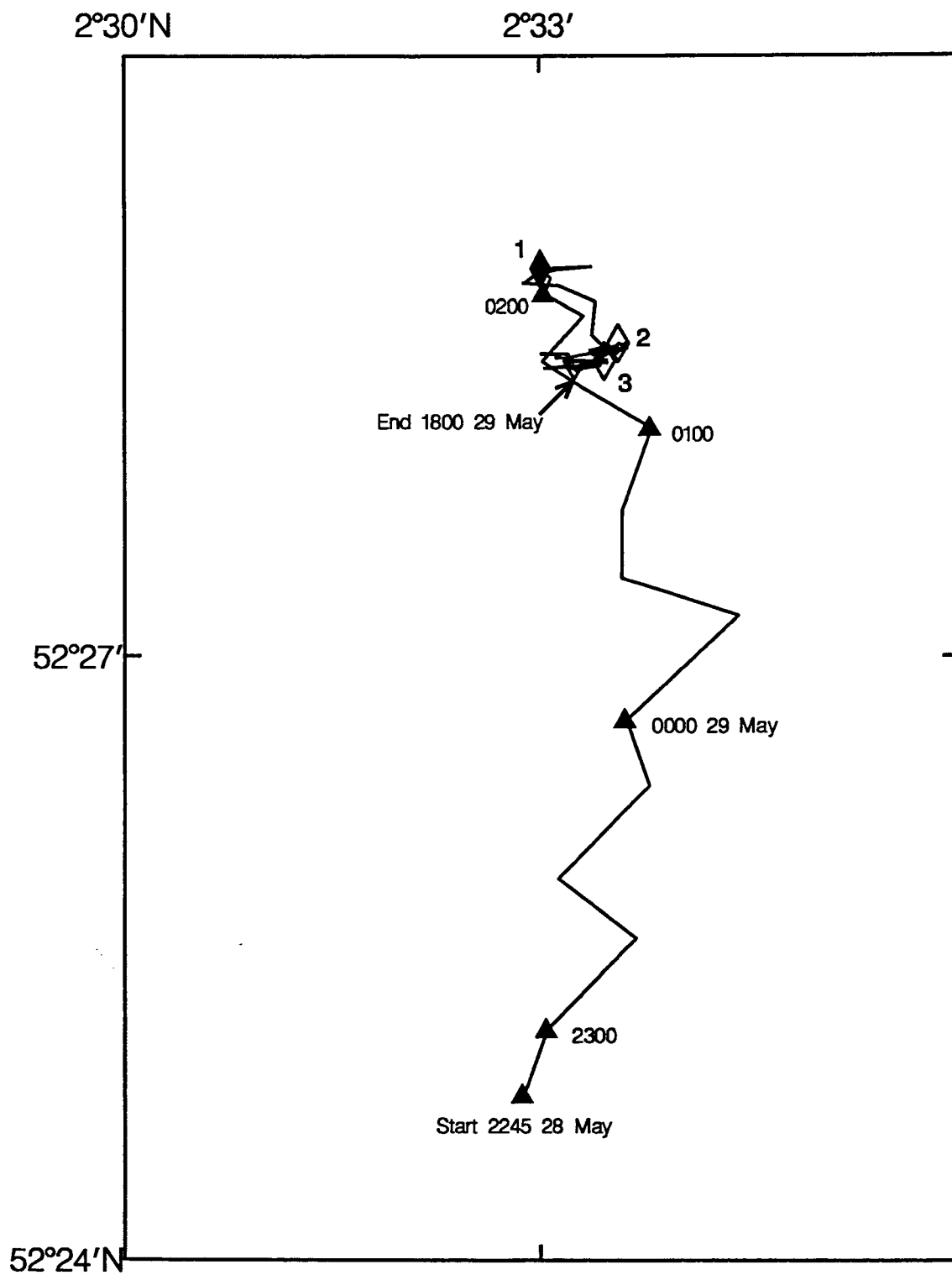
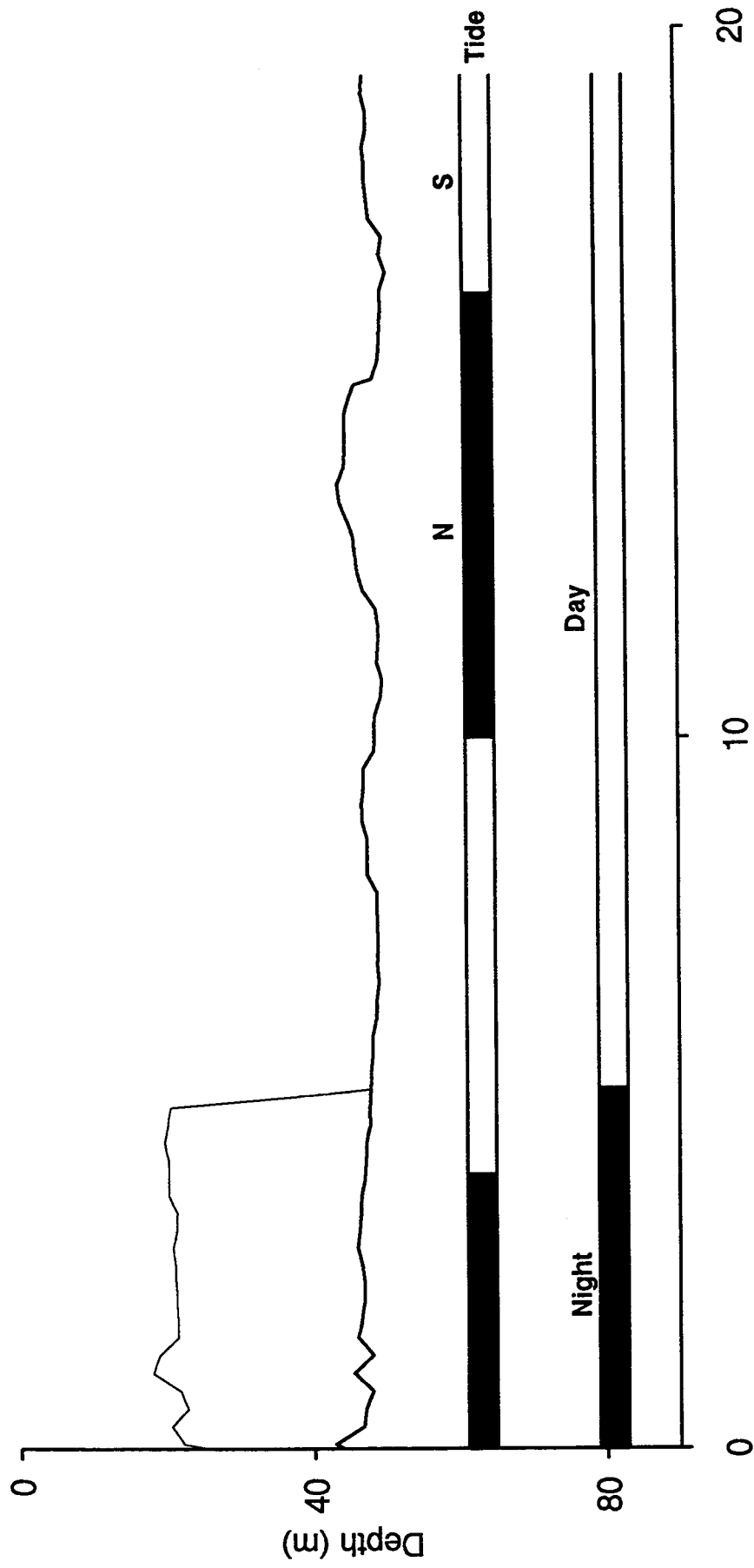


Figure 30. Vertical track of Fish 19, released at 2230h, 28 May 1977. (Large Decca errors were experienced at night time during the track)



Elapsed time (decimal hours)

Figure 31. Vertical track of Fish 19

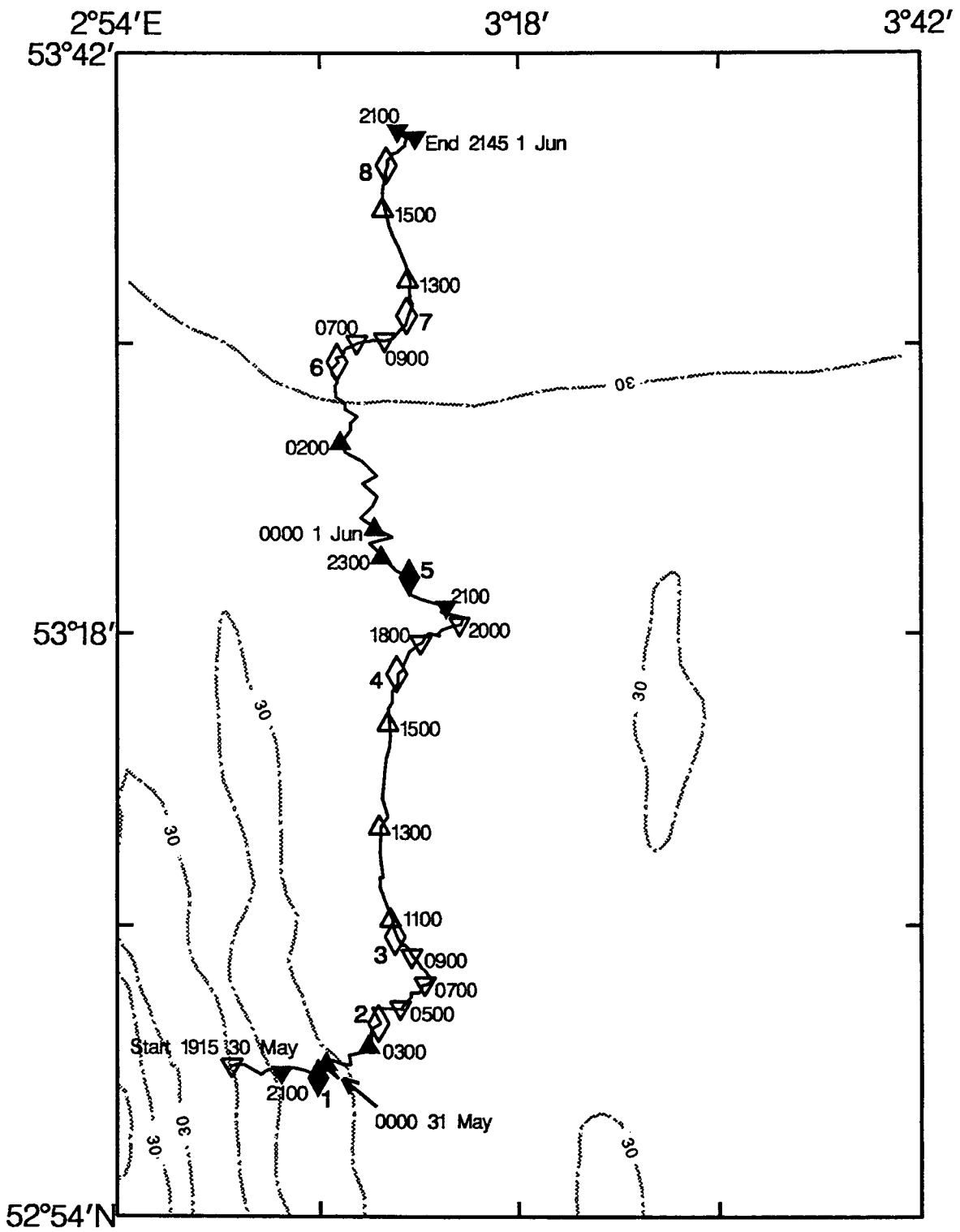
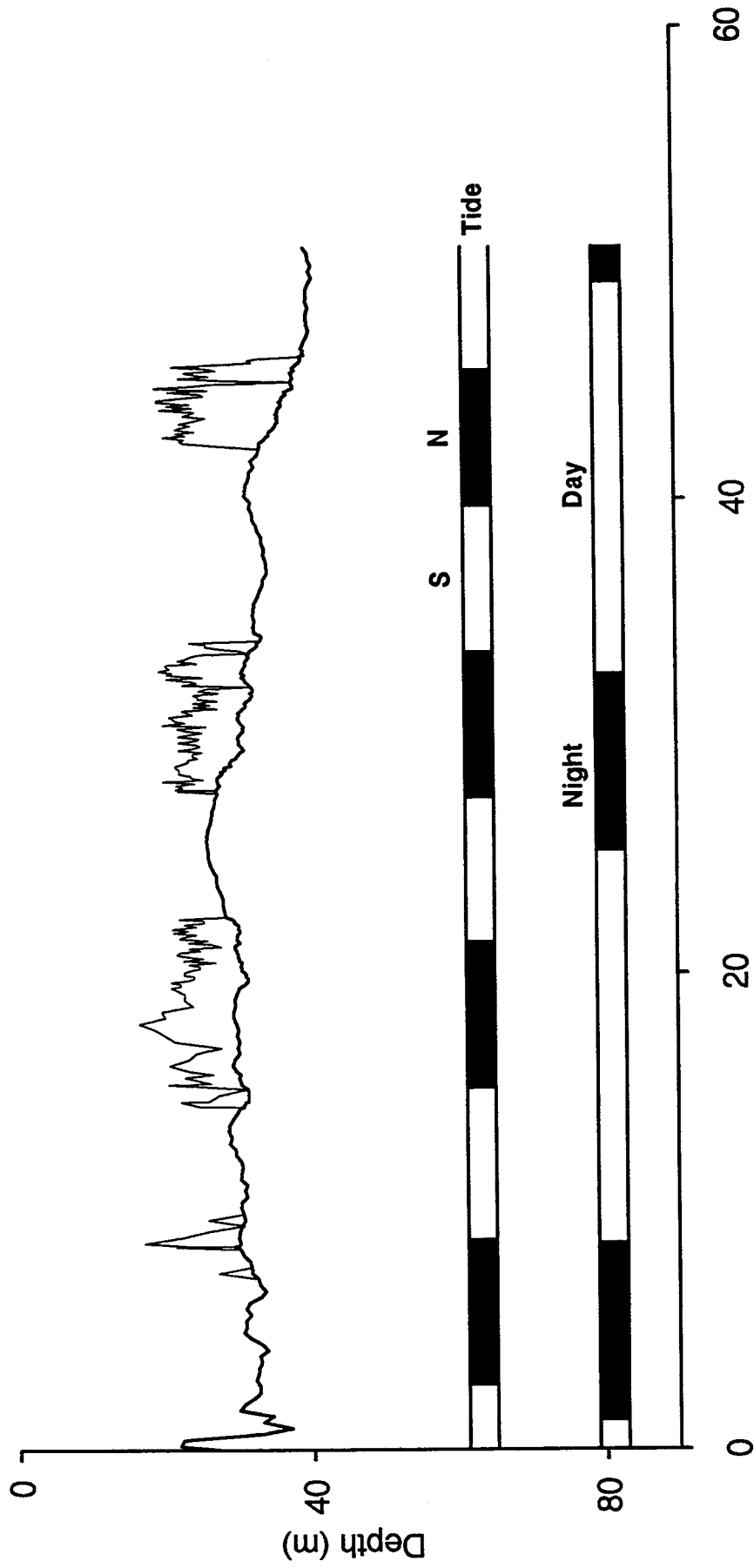


Figure 32. Ground track of Fish 20, released at 1900h, 30 May 1977



Elapsed time (decimal hours)

Figure 33. Vertical track of Fish 20

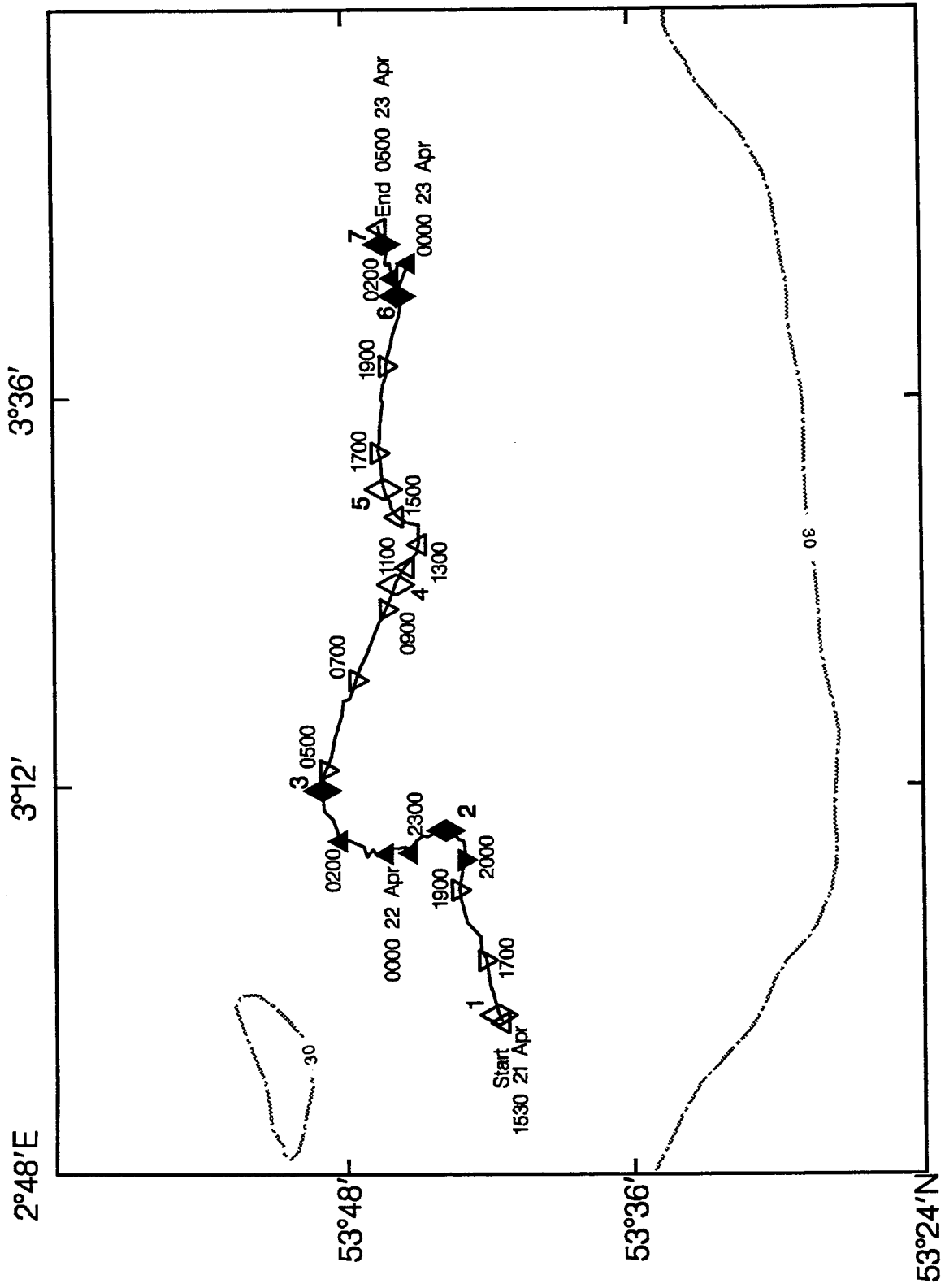
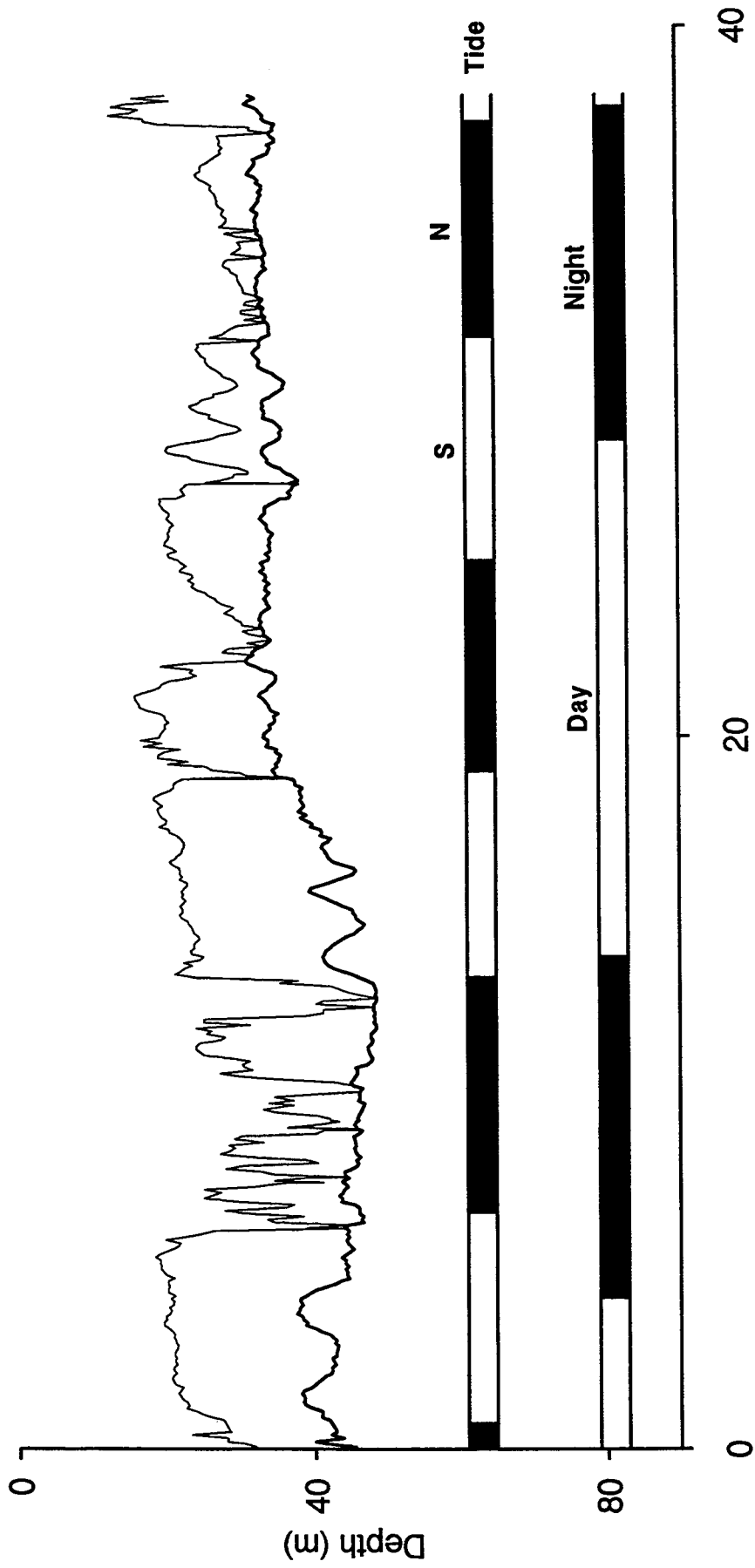


Figure 34. Ground track of Fish 23, released at 1453h, 21 April 1978



Elapsed time (decimal hours)

Figure 35. Vertical track of Fish 23

ANNEX 1. TRACKING DATA FOR INDIVIDUAL TAGGED FISH

Annex 1.1 Sequential geographical positions of Fish 1

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
12-Jun-71				13-Jun-71				14-Jun-71			
12:30	0.00	51.832	1.761	5:15	16.75	51.725	1.763	4:15	39.75	51.646	1.736
12:45	0.25	51.824	1.755	5:30	17.00	51.728	1.763	4:30	40.00	51.648	1.739
13:00	0.50	51.817	1.748	5:48	17.30	51.730	1.767	4:45	40.25	51.650	1.742
13:15	0.75	51.810	1.748	6:00	17.50	51.731	1.769	5:00	40.50	51.654	1.740
13:30	1.00	51.805	1.744	6:15	17.75	51.733	1.772	5:45	41.25	51.659	1.743
14:00	1.50	51.798	1.743	6:30	18.00	51.735	1.774	6:00	41.50	51.661	1.746
14:15	1.75	51.796	1.742	6:45	18.25	51.736	1.770	6:15	41.75	51.663	1.750
14:30	2.00	51.794	1.742	7:15	18.75	51.740	1.773	6:30	42.00	51.666	1.752
14:45	2.25	51.794	1.744	7:35	19.08	51.742	1.765	6:45	42.25	51.670	1.749
15:15	2.75	51.798	1.756	7:45	19.25	51.742	1.764	7:00	42.50	51.671	1.752
15:30	3.00	51.802	1.765	8:00	19.50	51.743	1.762	7:30	43.00	51.676	1.755
15:45	3.25	51.805	1.772	8:15	19.75	51.745	1.764	8:15	43.75	51.682	1.755
16:00	3.50	51.809	1.776	8:45	20.25	51.749	1.762	8:45	44.25	51.685	1.764
16:15	3.75	51.812	1.777	9:15	20.75	51.747	1.755	9:00	44.50	51.686	1.761
16:30	4.00	51.814	1.775	9:30	21.00	51.745	1.754	9:15	44.75	51.686	1.761
16:45	4.25	51.816	1.776	9:45	21.25	51.743	1.754	9:30	45.00	51.686	1.760
17:00	4.50	51.818	1.782	10:00	21.50	51.739	1.753	9:45	45.25	51.686	1.761
17:15	4.75	51.824	1.787	10:15	21.75	51.733	1.750	10:00	45.50	51.686	1.760
17:30	5.00	51.828	1.789	12:45	24.25	51.678	1.755	10:15	45.75	51.686	1.761
17:45	5.25	51.833	1.795	13:00	24.50	51.675	1.753	10:30	46.00	51.686	1.761
18:03	5.55	51.837	1.800	13:15	24.75	51.671	1.744	10:45	46.25	51.686	1.761
18:15	5.75	51.839	1.803	13:45	25.25	51.667	1.751	11:00	46.50	51.686	1.761
18:30	6.00	51.842	1.806	14:00	25.50	51.669	1.753	11:15	46.75	51.686	1.761
18:45	6.25	51.845	1.811	14:15	25.75	51.667	1.752	11:30	47.00	51.686	1.761
19:00	6.50	51.847	1.817	14:30	26.00	51.667	1.753	11:45	47.25	51.686	1.760
20:00	7.50	51.853	1.833	14:45	26.25	51.670	1.751	12:00	47.50	51.686	1.761
20:15	7.75	51.852	1.834	15:00	26.50	51.672	1.750	12:15	47.75	51.686	1.762
20:30	8.00	51.852	1.840	15:15	26.75	51.675	1.751	12:30	48.00	51.685	1.762
20:45	8.25	51.852	1.834	15:30	27.00	51.676	1.756	12:45	48.25	51.686	1.761
21:00	8.50	51.848	1.830	15:45	27.25	51.677	1.761	13:00	48.50	51.686	1.761
21:20	8.83	51.840	1.826	16:00	27.50	51.678	1.762	13:17	48.78	51.686	1.761
21:30	9.00	51.836	1.822	16:15	27.75	51.681	1.760	13:30	49.00	51.686	1.761
21:45	9.25	51.827	1.819	16:30	28.00	51.682	1.764	13:45	49.25	51.686	1.761
22:00	9.50	51.818	1.814	16:45	28.25	51.683	1.766	14:00	49.50	51.686	1.761
22:15	9.75	51.808	1.810	17:00	28.50	51.687	1.764	14:15	49.75	51.686	1.761
22:30	10.00	51.799	1.803	17:45	29.25	51.697	1.769	14:30	50.00	51.686	1.761
22:45	10.25	51.790	1.796	18:00	29.50	51.699	1.771	14:45	50.25	51.686	1.762
23:00	10.50	51.780	1.790	18:15	29.75	51.701	1.774	15:00	50.50	51.686	1.761
23:15	10.75	51.770	1.785	18:30	30.00	51.703	1.778				
23:30	11.00	51.762	1.785	18:45	30.25	51.705	1.781				
23:45	11.25	51.754	1.781	19:00	30.50	51.706	1.781				
13-Jun-71				19:15	30.75	51.708	1.779				
0:00	11.50	51.744	1.777	19:45	31.25	51.710	1.773				
0:15	11.75	51.736	1.778	21:30	33.00	51.712	1.766				
0:30	12.00	51.730	1.775	21:45	33.25	51.710	1.767				
0:45	12.25	51.723	1.774	22:00	33.50	51.707	1.765				
1:00	12.50	51.718	1.773	22:15	33.75	51.703	1.762				
1:15	12.75	51.714	1.770	22:30	34.00	51.698	1.762				
1:30	13.00	51.711	1.767	22:45	34.25	51.693	1.758				
1:45	13.25	51.708	1.765	23:00	34.50	51.687	1.755				
2:00	13.50	51.706	1.763	23:15	34.75	51.679	1.753				
2:15	13.75	51.704	1.762	23:30	35.00	51.673	1.750				
2:30	14.00	51.703	1.762	23:45	35.25	51.665	1.748				
2:45	14.25	51.703	1.764	14-Jun-71							
3:00	14.50	51.704	1.768	0:00	35.50	51.657	1.747				
3:15	14.75	51.706	1.768	0:15	35.75	51.651	1.742				
3:30	15.00	51.709	1.760	0:45	36.25	51.642	1.740				
3:45	15.25	51.712	1.767	1:30	37.00	51.634	1.732				
4:00	15.50	51.715	1.766	1:45	37.25	51.632	1.730				
4:15	15.75	51.716	1.765	2:45	38.25	51.634	1.725				
4:30	16.00	51.717	1.766	3:00	38.50	51.636	1.725				
4:45	16.25	51.720	1.771	3:45	39.25	51.645	1.735				
5:00	16.50	51.722	1.767	4:00	39.50	51.646	1.736				

Annex 1.2 Sequential vertical positions of Fish 1

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
12-Jun-71				13-Jun-71				13-Jun-71			
12:30	0.00	4.0	38.4	5:30	17.00	35.3	35.3	22:45	34.25	14.1	29.3
12:45	0.25	4.0	38.8	5:48	17.30	40.6	40.6	23:00	34.50	14.8	28.2
13:00	0.50	4.0	37.4	6:00	17.50	36.2	36.2	23:15	34.75	26.7	31.2
13:15	0.75	7.5	38.7	6:15	17.75	36.9	36.9	23:30	35.00	20.7	31.8
13:30	1.00	8.6	40.9	6:30	18.00	38.5	38.5	23:45	35.25	24.1	36.0
14:00	1.50	4.0	39.3	6:45	18.25	33.6	33.6	14-Jun-71			
14:15	1.75	4.0	40.2	7:00	<i>18.50</i>	<i>34.6</i>	<i>34.6</i>	0:00	35.50	26.3	31.9
14:30	2.00	4.0	35.7	7:15	18.75	33.3	33.2	0:15	35.75	25.8	34.5
14:45	2.25	4.0	40.2	7:35	19.08	33.7	33.7	0:30	<i>36.00</i>	<i>32.2</i>	<i>32.2</i>
14:54	2.40	14.1	39.3	7:45	19.25	33.8	33.8	0:45	36.25	25.9	32.2
15:15	2.75	4.0	41.6	8:00	19.50	28.3	28.2	1:00	36.50	26.7	32.3
15:30	3.00	4.0	40.9	8:15	19.75	29.6	29.6	1:15	36.75	29.0	32.5
15:45	3.25	4.0	30.7	8:30	20.00	25.8	25.8	1:30	37.00	27.0	30.8
16:00	3.50	9.2	30.1	8:45	20.25	30.8	30.8	1:45	37.25	26.5	33.9
16:15	3.75	27.7	27.7	9:00	<i>20.50</i>	<i>28.4</i>	<i>28.4</i>	2:00	37.50	28.0	32.0
16:30	4.00	43.1	43.1	9:15	20.75	30.1	30.1	2:15	37.75	30.8	34.6
16:45	4.25	42.5	42.5	9:30	21.00	30.2	30.2	2:30	38.00	28.4	31.8
17:00	4.50	29.6	33.2	9:45	21.25	30.1	30.0	2:45	38.25	18.7	33.2
17:15	4.75	11.5	33.9	10:00	21.50	30.8	30.8	3:00	38.50	20.7	29.1
17:30	5.00	31.4	35.3	10:15	21.75	32.0	32.0	3:15	38.75	21.8	26.2
17:45	5.25	7.8	19.0	10:30	<i>22.00</i>	<i>29.1</i>	<i>29.1</i>	3:30	<i>39.00</i>	<i>27.8</i>	<i>27.8</i>
18:03	5.55	7.8	22.7	10:45	<i>22.25</i>	<i>31.7</i>	<i>31.7</i>	3:45	39.25	57.2	57.2
18:15	5.75	19.0	22.7	11:00	<i>22.50</i>	<i>24.9</i>	<i>24.9</i>	4:00	39.50	32.2	32.2
18:30	6.00	8.2	33.0	11:15	<i>22.75</i>	<i>30.8</i>	<i>34.6</i>	4:15	39.75	32.6	32.6
18:45	6.25	17.1	47.4	11:30	<i>23.00</i>	<i>31.4</i>	<i>31.4</i>	4:30	40.00	38.1	38.1
19:00	6.50	8.5	49.1	11:45	<i>23.25</i>	<i>28.4</i>	<i>28.4</i>	4:45	40.25	34.8	34.8
19:47	7.28	24.2	39.3	12:15	23.75	29.0	31.8	5:00	40.50	35.7	35.7
20:00	7.50	4.0	39.3	12:30	24.00	30.2	35.4	5:15	<i>40.75</i>	<i>32.2</i>	<i>32.2</i>
20:15	7.75	20.0	35.9	12:45	<i>24.25</i>	<i>28.8</i>	<i>28.8</i>	5:30	41.00	32.6	36.7
20:26	7.93	16.6	33.2	13:00	24.50	29.6	29.6	5:45	41.25	31.2	31.2
20:30	8.00	8.0	28.0	13:15	24.75	30.1	35.2	6:00	41.50	36.6	36.6
20:45	8.25	8.4	34.5	13:30	<i>25.00</i>	<i>33.3</i>	<i>33.2</i>	6:15	41.75	33.8	33.8
21:00	8.50	4.0	34.8	13:45	25.25	33.2	33.2	6:30	42.00	32.2	32.2
21:20	8.83	14.2	37.9	14:00	25.50	37.5	48.5	6:45	42.25	32.2	32.2
21:30	9.00	11.7	42.2	14:15	25.75	37.4	37.4	7:00	42.50	32.2	32.2
21:45	9.25	9.2	45.8	14:30	26.00	31.0	31.0	7:15	<i>42.75</i>	<i>19.8</i>	<i>19.8</i>
22:00	9.50	4.0	42.2	14:45	26.25	25.9	35.3	7:30	43.00	28.6	28.6
22:15	9.75	12.4	34.5	15:00	26.50	29.1	35.3	7:50	<i>43.33</i>	<i>33.5</i>	<i>33.5</i>
22:30	10.00	4.0	28.4	15:15	26.75	32.5	32.5	8:00	<i>43.50</i>	<i>31.8</i>	<i>31.8</i>
22:45	10.25	4.0	27.0	15:30	27.00	32.8	32.8	8:15	43.75	32.0	32.0
23:00	10.50	7.7	26.0	15:45	27.25	32.2	32.2	8:30	<i>44.00</i>	<i>31.0</i>	<i>31.0</i>
23:15	10.75	24.9	28.4	16:00	27.50	31.2	31.2	8:45	44.25	28.4	28.4
23:30	11.00	23.9	33.7	16:15	27.75	31.0	31.0	9:00	44.50	29.1	29.1
23:45	11.25	11.9	39.2	16:30	28.00	29.3	29.3	9:15	44.75	26.7	26.7
13-Jun-71				16:45	28.25	27.7	27.7	9:30	45.00	29.1	29.1
0:00	11.50	33.2	40.5	17:00	28.50	28.4	28.4	9:45	45.25	29.3	29.3
0:15	11.75	31.8	42.2	17:15	28.75	29.6	33.9	10:00	45.50	28.0	28.0
0:30	12.00	30.2	40.6	17:30	29.00	33.9	38.1	10:15	45.75	28.6	28.6
0:45	12.25	32.2	36.9	17:45	29.25	26.0	26.0	10:30	46.00	28.6	28.6
1:00	12.50	20.6	37.0	18:00	29.50	40.6	40.6	10:45	46.25	29.1	29.1
1:15	12.75	7.8	34.6	18:15	29.75	53.6	53.6	11:00	46.50	30.1	30.1
1:30	13.00	8.5	35.7	18:30	30.00	22.8	22.8	11:15	46.75	29.6	29.6
1:45	13.25	8.2	33.2	18:45	30.25	67.4	67.4	11:30	47.00	27.8	27.8
2:00	13.50	8.3	38.1	19:00	30.50	21.3	21.2	11:45	47.25	27.5	27.5
2:15	13.75	9.1	39.3	19:15	30.75	36.1	36.1	12:00	47.50	27.8	27.8
2:30	14.00	29.1	35.3	19:30	31.00	35.1	39.5	12:15	47.75	30.2	30.2
2:45	14.25	26.7	35.7	19:45	<i>31.25</i>	<i>33.3</i>	<i>33.3</i>	12:30	48.00	27.2	27.2
3:00	14.50	33.9	37.6	20:00	31.50	31.7	34.1	12:45	48.25	30.4	30.4
3:15	14.75	35.9	41.2	20:15	<i>31.75</i>	<i>32.2</i>	<i>32.2</i>	13:00	48.50	30.8	30.8
3:30	15.00	35.9	35.9	20:30	32.00	22.3	26.0	13:17	48.78	31.1	31.1
3:45	15.25	34.6	34.6	21:00	32.50	24.9	28.4	13:30	49.00	30.4	30.4
4:00	15.50	34.5	34.5	21:15	32.75	29.1	33.2	13:45	49.25	28.4	28.4
4:15	15.75	34.3	34.3	21:30	33.00	22.3	33.2	14:00	49.50	31.5	31.5
4:30	16.00	32.2	32.2	21:45	33.25	11.7	30.8	14:15	49.75	30.2	30.2
4:45	16.25	35.3	35.3	22:00	33.50	15.5	34.6	14:30	50.00	31.8	31.8
5:00	16.50	39.3	39.3	22:15	33.75	8.2	16.5	14:45	50.25	31.2	31.2
5:15	16.75	38.1	38.1	22:30	34.00	16.2	30.7	15:00	50.50	28.4	28.4

Annex 1.3 Sequential geographical positions of Fish 2

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
20-Nov-72	0.00	52.289	1.932	21-Nov-72	3:00	52.449	2.005	21-Nov-72	21:15	52.405	1.941
10:15	0.22	52.291	1.933	3:15	17.22	52.458	2.009	21:30	35.47	52.397	1.940
10:29	0.45	52.292	1.935	3:30	17.47	52.468	2.009	21:45	35.72	52.390	1.934
10:45	0.72	52.296	1.935	3:45	17.72	52.474	2.006	22:00	35.97	52.384	1.938
11:00	0.97	52.297	1.932	4:00	17.97	52.482	2.014	22:15	36.22	52.378	1.933
11:15	1.22	52.306	1.941	4:15	18.22	52.485	2.009	22:30	36.47	52.372	1.932
11:30	1.47	52.311	1.942	4:30	18.47	52.488	2.012	22:45	36.72	52.368	1.928
11:45	1.72	52.320	1.951	4:45	18.72	52.489	2.007	23:00	36.97	52.365	1.933
12:00	1.97	52.328	1.957	5:15	19.22	52.488	2.011	23:15	37.22	52.361	1.918
12:15	2.22	52.336	1.961	5:30	19.47	52.486	2.012	23:30	37.47	52.361	1.922
12:30	2.47	52.346	1.967	5:45	19.72	52.483	2.013	23:45	37.72	52.361	1.912
12:45	2.72	52.355	1.972	6:00	19.97	52.476	2.008	22-Nov-72			
13:00	2.97	52.365	1.976	6:15	20.22	52.470	2.011	0:00	37.97	52.365	1.927
13:15	3.22	52.374	1.978	6:30	20.47	52.463	2.011	0:15	38.22	52.368	1.922
13:30	3.47	52.382	1.978	6:45	20.72	52.454	2.010	0:30	38.47	52.373	1.921
13:45	3.72	52.391	1.980	7:00	20.97	52.445	2.010	0:45	38.72	52.380	1.926
14:00	3.97	52.400	1.980	7:15	21.22	52.436	2.006	1:00	38.97	52.388	1.932
14:15	4.22	52.409	1.984	7:30	21.47	52.428	2.005	1:15	39.22	52.394	1.928
14:30	4.47	52.419	1.985	7:45	21.72	52.419	2.006	1:30	39.47	52.402	1.932
14:45	4.72	52.428	1.986	8:00	21.97	52.410	2.003	1:45	39.72	52.410	1.929
15:00	4.97	52.435	1.986	8:15	22.22	52.402	1.998	2:15	40.22	52.430	1.936
15:15	5.22	52.439	1.981	8:30	22.47	52.395	1.997	2:30	40.47	52.440	1.940
15:30	5.47	52.449	1.987	8:45	22.72	52.389	1.993	2:45	40.72	52.450	1.950
15:45	5.72	52.456	1.990	9:00	22.97	52.383	1.992	3:00	40.97	52.459	1.937
16:00	5.97	52.460	1.988	9:15	23.22	52.376	1.987	3:15	41.22	52.468	1.939
16:15	6.22	52.462	1.984	9:30	23.47	52.372	1.995	3:30	41.47	52.481	1.951
16:30	6.47	52.466	1.991	9:45	23.72	52.367	1.990	3:45	41.72	52.490	1.958
16:45	6.72	52.466	1.989	10:00	23.97	52.362	1.987	4:00	41.97	52.497	1.944
17:00	6.97	52.465	1.989	10:15	24.22	52.358	1.982	4:15	42.22	52.507	1.960
17:15	7.22	52.461	1.987	10:30	24.47	52.356	1.978	4:30	42.47	52.512	1.958
17:30	7.47	52.457	1.988	10:45	24.72	52.355	1.976	4:45	42.72	52.520	1.964
17:45	7.72	52.453	1.992	11:00	24.97	52.355	1.975	5:00	42.97	52.524	1.965
18:00	7.97	52.446	1.988	11:15	25.22	52.356	1.974	5:15	43.22	52.526	1.962
18:15	8.22	52.439	1.989	11:30	25.47	52.359	1.971	5:30	43.47	52.526	1.959
18:30	8.47	52.431	1.990	12:30	26.47	52.382	1.976	5:45	43.72	52.526	1.965
18:45	8.72	52.422	1.987	12:45	26.72	52.387	1.975	6:00	43.97	52.524	1.962
19:00	8.97	52.412	1.984	13:00	26.97	52.394	1.974	6:15	44.22	52.521	1.966
19:15	9.22	52.404	1.989	13:15	27.22	52.402	1.974	6:30	44.47	52.515	1.966
19:30	9.47	52.393	1.979	13:30	27.47	52.409	1.977	6:45	44.72	52.510	1.970
19:45	9.72	52.384	1.981	13:45	27.72	52.418	1.977	7:00	44.97	52.503	1.970
20:00	9.97	52.375	1.978	14:00	27.97	52.426	1.973	7:30	45.47	52.486	1.973
20:15	10.22	52.367	1.977	14:15	28.22	52.435	1.971	7:45	45.72	52.477	1.977
20:30	10.47	52.359	1.974	14:30	28.47	52.443	1.970	8:00	45.97	52.467	1.981
20:45	10.72	52.354	1.978	14:45	28.72	52.452	1.969	8:15	46.22	52.456	1.977
21:00	10.97	52.343	1.971	15:00	28.97	52.461	1.967	8:30	46.47	52.447	1.979
21:15	11.22	52.337	1.966	15:15	29.22	52.469	1.970	8:45	46.72	52.440	1.984
21:30	11.47	52.330	1.964	15:30	29.47	52.478	1.967	9:00	46.97	52.431	1.984
21:45	11.72	52.327	1.965	15:45	29.72	52.487	1.964	9:15	47.22	52.421	1.981
22:00	11.97	52.322	1.964	16:00	29.97	52.496	1.969	9:30	47.47	52.412	1.982
22:15	12.22	52.320	1.963	16:15	30.22	52.504	1.968	9:45	47.72	52.403	1.981
22:30	12.47	52.319	1.965	16:30	30.47	52.510	1.972	10:00	47.97	52.395	1.984
22:45	12.72	52.319	1.961	16:45	30.72	52.516	1.972	10:15	48.22	52.388	1.982
23:00	12.97	52.320	1.966	17:00	30.97	52.519	1.971	10:30	48.47	52.382	1.985
23:15	13.22	52.324	1.970	17:15	31.22	52.518	1.966	10:45	48.72	52.376	1.988
23:30	13.47	52.331	1.979	17:30	31.47	52.518	1.964	11:00	48.97	52.372	1.991
23:45	13.72	52.334	1.980	17:45	31.72	52.516	1.971	11:15	49.22	52.368	1.992
21-Nov-72				18:00	31.97	52.512	1.965	11:30	49.47	52.365	1.992
0:00	13.97	52.341	1.980	18:15	32.22	52.507	1.963	11:45	49.72	52.363	1.996
0:15	14.22	52.349	1.988	18:30	32.47	52.501	1.962	12:00	49.97	52.363	1.996
0:35	14.55	52.359	1.990	18:45	32.72	52.494	1.963	12:15	50.22	52.364	1.998
0:45	14.72	52.366	2.000	19:00	32.97	52.484	1.955	12:30	50.47	52.367	2.002
1:00	14.97	52.374	2.003	19:15	33.22	52.478	1.963	12:45	50.72	52.371	2.006
1:15	15.22	52.382	1.997	19:30	33.47	52.469	1.964	13:00	50.97	52.377	2.011
1:30	15.47	52.393	2.009	19:45	33.72	52.458	1.954	13:15	51.22	52.382	2.014
1:45	15.72	52.402	2.003	20:00	33.97	52.451	1.960	13:30	51.47	52.389	2.017
2:00	15.97	52.412	2.007	20:15	34.22	52.442	1.957	13:45	51.72	52.397	2.023
2:15	16.22	52.421	2.004	20:30	34.47	52.430	1.952	14:00	51.97	52.405	2.026
2:30	16.47	52.432	2.010	20:45	34.72	52.422	1.944				
2:45	16.72	52.440	2.007	21:00	34.97	52.414	1.943				

Annex 1.4 Sequential vertical positions of Fish 2

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
20-Nov-72				20-Nov-72				20-Nov-72			
10:02	0.00	8.0	25.9	15:55	5.88	10.1	34.4	21:25	11.38	10.5	29.7
10:15	0.22	11.9	32.6	16:00	5.97	11.2	36.1	21:30	11.47	10.6	30.4
10:20	0.30	9.9	27.7	16:05	6.05	7.2	36.1	21:35	11.55	11.0	35.3
10:25	0.38	9.6	29.0	16:10	6.13	7.7	33.2	21:40	11.63	11.3	32.9
10:29	0.45	9.4	28.2	16:15	6.22	11.2	36.1	21:45	11.72	10.6	37.0
10:35	0.55	7.4	27.8	16:20	6.30	7.3	33.7	21:50	11.80	9.6	34.5
10:40	0.63	9.8	29.8	16:25	6.38	7.4	31.1	21:55	11.88	11.3	36.9
10:45	0.72	4.0	24.1	16:30	6.47	10.6	33.7	22:00	11.97	10.5	29.7
10:50	0.80	7.0	27.9	16:35	6.55	8.0	36.0	22:05	12.05	10.8	34.5
10:55	0.88	7.7	29.8	16:40	6.63	7.3	30.4	22:10	12.13	12.4	29.0
11:00	0.97	5.9	26.9	16:45	6.72	8.4	34.5	22:15	12.22	9.9	36.4
11:05	1.05	4.0	28.0	16:50	6.80	10.8	37.9	22:20	12.30	10.6	30.4
11:10	1.13	9.6	29.0	16:55	6.88	11.0	35.3	22:25	12.38	10.1	34.4
11:15	1.22	10.7	30.7	17:00	6.97	15.3	33.9	22:30	12.47	11.0	31.8
11:20	1.30	9.2	32.6	17:05	7.05	8.8	42.3	22:35	12.55	10.3	32.2
11:25	1.38	7.4	31.1	17:10	7.13	7.5	35.3	22:40	12.63	12.4	31.8
11:30	1.47	4.0	30.4	17:15	7.22	11.7	34.6	22:45	12.72	11.3	33.2
11:35	1.55	7.6	29.0	17:20	7.30	7.8	38.4	22:50	12.80	9.4	28.4
11:40	1.63	4.0	34.6	17:25	7.38	11.5	37.6	22:55	12.88	9.9	33.5
11:45	1.72	4.0	28.7	17:30	7.47	8.0	36.0	23:00	12.97	11.3	36.9
11:50	1.80	4.0	31.1	17:35	7.55	9.2	35.2	23:05	13.05	9.6	31.8
11:55	1.88	4.0	33.5	17:40	7.63	9.9	33.5	23:10	13.13	10.6	33.7
12:00	1.97	4.0	30.4	17:45	7.72	7.4	34.5	23:15	13.22	15.3	37.6
12:05	2.05	4.0	27.2	17:50	7.80	10.8	34.5	23:20	13.30	11.9	35.2
12:10	2.13	6.8	34.5	17:55	7.88	9.6	34.5	23:25	13.38	11.5	33.9
12:15	2.22	4.0	28.2	18:00	7.97	6.9	32.7	23:30	13.47	12.0	32.0
12:25	2.38	7.0	30.9	18:05	8.05	7.8	37.6	23:35	13.55	14.2	34.5
12:30	2.47	4.0	25.9	18:10	8.13	11.3	36.9	23:40	13.63	14.7	36.1
12:35	2.55	4.0	36.0	18:15	8.22	10.8	34.5	23:45	13.72	13.9	33.7
12:40	2.63	7.6	32.7	18:20	8.30	9.8	32.7	23:50	13.80	13.4	29.1
12:45	2.72	7.3	30.4	18:25	8.38	12.0	36.0	23:55	13.88	10.6	30.4
12:50	2.80	4.0	29.7	18:30	8.47	10.6	33.7	21-Nov-72			
12:55	2.88	7.9	35.3	18:35	8.55	7.8	33.9	0:00	13.97	11.5	33.9
13:00	2.97	8.5	48.3	18:40	8.63	9.8	35.5	0:05	14.05	14.5	37.7
13:10	3.13	7.3	33.7	18:45	8.72	11.3	36.9	0:10	14.13	13.7	36.1
13:15	3.22	4.0	37.4	18:50	8.80	10.8	37.9	0:15	14.22	12.4	31.8
13:20	3.30	7.4	34.5	18:55	8.88	11.3	36.9	0:20	14.30	15.3	37.6
13:25	3.38	7.5	31.8	19:00	8.97	11.9	39.2	0:25	14.38	14.7	39.6
13:30	3.47	6.8	37.3	19:05	9.05	8.4	38.8	0:30	14.47	15.5	42.2
13:35	3.55	7.0	33.5	19:10	9.13	10.6	37.0	0:35	14.55	15.3	41.3
13:40	3.63	8.3	33.9	19:15	9.22	11.0	38.7	0:40	14.63	12.9	39.3
13:45	3.72	12.6	32.7	19:20	9.30	7.1	32.2	0:45	14.72	15.0	40.5
13:50	3.80	23.9	33.7	19:25	9.38	11.2	36.1	0:50	14.80	15.8	43.1
13:55	3.88	11.7	30.8	19:30	9.47	12.6	35.5	0:55	14.88	15.5	41.1
14:00	3.97	10.6	37.0	19:35	9.55	7.7	36.9	1:00	14.97	15.8	43.1
14:05	4.05	7.4	31.1	19:40	9.63	10.6	37.0	1:05	15.05	12.1	36.2
14:10	4.13	8.0	28.0	19:45	9.72	11.7	38.4	1:10	15.13	16.8	54.9
14:15	4.22	7.0	36.4	19:50	9.80	7.8	33.9	1:15	15.22	15.3	37.6
14:25	4.38	4.0	30.6	19:55	9.88	11.2	39.6	1:20	15.30	15.3	41.3
14:30	4.47	6.7	33.6	20:00	9.97	11.0	38.7	1:25	15.38	12.6	38.3
14:35	4.55	6.3	33.2	20:05	10.05	10.8	41.2	1:30	15.47	16.0	36.0
14:40	4.63	8.2	37.4	20:10	10.13	11.3	33.2	1:35	15.55	13.2	37.4
14:45	4.72	7.8	33.9	20:15	10.22	8.9	33.1	1:40	15.63	12.6	38.3
14:50	4.80	5.9	30.6	20:20	10.30	11.5	33.9	1:45	15.72	13.7	36.1
14:55	4.88	7.1	34.4	20:25	10.38	7.6	29.0	1:50	15.80	13.2	34.4
15:00	4.97	7.5	31.8	20:30	10.47	11.0	35.3	1:55	15.88	15.5	38.3
15:05	5.05	10.5	32.9	20:35	10.55	11.4	28.7	2:00	15.97	13.4	38.3
15:10	5.13	6.6	35.2	20:40	10.63	9.2	24.9	2:05	16.05	16.0	40.0
15:15	5.22	10.5	36.1	20:45	10.72	8.0	32.0	2:10	16.13	15.2	42.7
15:20	5.30	7.3	33.7	20:50	10.80	6.8	31.8	2:15	16.22	14.2	41.2
15:25	5.38	7.8	33.9	20:55	10.88	11.3	29.6	2:20	16.30	12.1	36.2
15:30	5.47	6.9	35.5	21:00	10.97	9.9	30.6	2:25	16.38	13.2	34.4
15:35	5.55	7.0	33.5	21:05	11.05	10.8	37.9	2:30	16.47	13.4	36.9
15:40	5.63	6.5	31.7	21:10	11.13	10.3	35.3	2:35	16.55	11.3	36.9
15:45	5.72	6.8	34.5	21:15	11.22	9.6	31.8	2:40	16.63	11.7	34.6
15:50	5.80	7.3	33.7	21:20	11.30	11.3	33.2	2:45	16.72	13.2	34.4

Annex 1.4 continued. Sequential vertical positions of Fish 2

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
21-Nov-72				21-Nov-72				21-Nov-72			
2:50	16.80	17.6	40.2	8:35	22.55	24.7	39.3	15:05	29.05	24.9	32.6
2:55	16.88	12.4	37.4	8:40	22.63	27.8	37.9	15:10	29.13	24.9	37.4
3:00	16.97	14.5	32.6	8:45	22.72	33.6	36.2	15:15	29.22	24.7	33.5
3:05	17.05	14.2	34.5	8:50	22.80	26.7	34.1	15:20	29.30	21.0	31.1
3:10	17.13	15.2	31.8	8:55	22.88	26.3	37.3	15:25	29.38	22.3	32.6
3:15	17.22	14.8	30.9	9:00	22.97	30.8	42.2	15:30	29.47	21.4	31.8
3:20	17.30	15.0	33.2	9:05	23.05	24.9	31.8	15:35	29.55	24.9	32.6
3:25	17.38	14.5	31.8	9:10	23.13	27.8	37.9	15:40	29.63	19.3	28.4
3:30	17.47	14.7	32.5	9:15	23.22	28.0	43.9	15:45	29.72	22.8	35.3
3:35	17.55	14.5	31.8	9:20	23.30	25.9	38.3	15:50	29.80	23.6	30.0
3:40	17.63	15.9	33.5	9:25	23.38	31.1	41.2	15:55	29.88	19.3	26.9
3:45	17.72	13.4	36.9	9:30	23.47	44.1	44.1	16:00	29.97	23.6	35.3
3:50	17.80	17.3	33.7	9:35	23.55	31.4	43.1	16:05	30.05	19.7	30.0
3:55	17.88	14.5	31.8	9:40	23.63	29.6	36.9	16:10	30.13	20.6	30.4
4:00	17.97	15.0	33.2	9:45	23.72	27.8	37.9	16:15	30.22	20.7	28.9
4:05	18.05	12.9	30.6	9:50	23.80	31.4	43.1	16:20	30.30	19.2	26.7
4:10	18.13	15.5	34.6	9:55	23.88	28.0	36.0	16:25	30.38	19.7	27.5
4:15	18.22	15.3	30.2	10:00	23.97	27.8	34.5	16:30	30.47	19.8	26.6
4:20	18.30	15.0	29.6	10:05	24.05	26.5	37.6	16:35	30.55	22.8	32.2
4:25	18.38	14.7	32.5	10:10	24.13	30.4	37.0	16:40	30.63	22.8	32.2
4:30	18.47	11.2	29.0	10:15	24.22	30.2	37.6	16:45	30.72	24.9	31.8
4:35	18.55	15.3	30.2	10:20	24.30	27.8	31.1	16:50	30.80	24.4	31.1
4:40	18.63	15.5	30.8	10:25	24.38	29.1	32.2	16:55	30.88	24.1	36.0
4:45	18.72	17.1	30.1	10:30	24.47	29.0	32.5	17:00	30.97	24.5	32.6
4:50	18.80	16.0	28.0	10:35	24.55	32.5	36.1	17:05	31.05	20.7	26.3
4:55	18.88	15.0	29.6	10:40	24.63	30.6	33.5	17:10	31.13	24.4	31.1
5:00	18.97	15.5	30.8	10:45	24.72	29.6	33.9	17:15	31.22	22.7	30.2
5:05	19.05	15.5	30.8	10:50	24.80	30.4	33.7	17:20	31.30	22.8	32.2
5:10	19.13	15.7	27.4	10:55	24.88	27.2	30.4	17:25	31.38	23.6	31.4
5:15	19.22	14.5	31.8	10:58	24.93	26.9	33.0	17:30	31.47	24.9	31.8
5:20	19.30	14.5	28.4	11:00	24.97	31.8	31.8	17:35	31.55	21.9	29.0
5:25	19.38	14.7	32.4	11:05	25.05	26.2	26.2	17:40	31.63	24.4	31.1
5:30	19.47	15.0	33.2	11:10	25.13	25.3	34.4	17:45	31.72	23.3	32.9
5:35	19.55	14.2	31.1	11:15	25.22	24.7	33.5	17:50	31.80	25.4	33.9
5:40	19.63	16.0	32.0	11:20	25.30	27.8	34.5	17:55	31.88	21.4	31.8
5:45	19.72	17.6	31.1	11:25	25.38	23.9	33.7	18:00	31.97	25.8	34.5
5:50	19.80	16.3	32.6	11:30	25.47	27.0	34.6	18:05	32.05	23.9	33.7
5:55	19.88	17.6	34.5	11:35	25.55	21.4	35.3	18:10	32.13	21.9	32.5
6:00	19.97	16.6	33.2	11:40	25.63	20.1	29.7	18:15	32.22	23.9	33.7
6:05	20.05	15.2	34.5	12:30	26.47	32.6	40.8	18:20	32.30	23.6	35.3
6:10	20.13	16.0	36.0	12:40	26.63	30.1	38.8	18:25	32.38	22.3	33.2
6:15	20.22	17.3	33.7	12:45	26.72	26.6	32.9	18:30	32.47	24.4	31.1
6:20	20.30	15.5	34.6	12:50	26.80	29.6	38.1	18:35	32.55	22.8	32.2
6:25	20.38	16.6	32.2	12:55	26.88	42.0	52.8	18:40	32.63	23.6	35.3
6:30	20.47	16.6	33.2	13:00	26.97	31.8	35.3	18:45	32.72	23.9	33.7
6:35	20.55	16.6	35.3	13:05	27.05	29.1	33.2	18:50	32.80	21.0	34.5
6:40	20.63	11.0	28.4	13:10	27.13	28.8	38.7	18:55	32.88	21.4	31.8
6:45	20.72	19.4	34.6	13:15	27.22	29.0	34.5	19:00	32.97	23.3	32.9
6:50	20.80	16.6	38.3	13:20	27.30	26.6	32.9	19:05	33.05	22.3	34.4
6:55	20.88	17.3	37.0	13:25	27.38	28.4	35.3	19:10	33.13	23.9	33.7
7:00	20.97	16.2	37.4	13:30	27.47	30.8	34.6	19:15	33.22	23.9	33.7
7:05	21.05	18.0	42.2	13:35	27.55	31.2	35.7	19:20	33.30	31.4	34.4
7:10	21.13	15.7	39.0	13:40	27.63	34.6	38.4	19:25	33.38	25.3	34.4
7:15	21.22	15.2	37.3	13:45	27.72	30.1	34.5	19:30	33.47	20.1	36.1
7:20	21.30	18.7	36.9	13:50	27.80	29.6	33.2	19:35	33.55	25.3	37.4
7:25	21.38	17.3	37.0	13:55	27.88	28.4	31.4	19:40	33.63	22.3	34.4
7:30	21.47	21.1	38.1	14:00	27.97	28.0	36.0	19:45	33.72	23.3	32.9
7:35	21.55	20.6	40.3	14:05	28.05	27.0	34.6	19:50	33.80	25.8	38.8
7:40	21.63	19.7	38.3	14:10	28.13	29.8	32.1	19:55	33.88	22.7	33.9
7:45	21.72	19.7	40.3	14:15	28.22	31.7	36.3	20:00	33.97	22.3	34.4
7:50	21.80	11.9	39.2	14:20	28.30	27.3	31.8	20:05	34.05	23.2	38.4
7:55	21.88	18.7	36.9	14:25	28.38	26.3	34.5	20:10	34.13	20.6	37.0
8:00	21.97	24.9	32.6	14:30	28.47	22.8	32.2	20:15	34.22	22.8	38.3
8:05	22.05	27.2	37.0	14:35	28.55	25.1	34.4	20:20	34.30	24.9	35.3
8:10	22.13	28.4	37.4	14:40	28.63	24.2	34.1	20:25	34.38	24.1	40.0
8:15	22.22	25.6	33.6	14:45	28.72	22.7	33.3	20:30	34.47	24.4	37.9
8:20	22.30	27.0	35.5	14:50	28.80	26.7	31.2	20:35	34.55	23.5	37.3
8:25	22.38	25.9	35.3	14:55	28.88	23.6	32.1	20:40	34.63	23.9	37.0
8:30	22.47	27.2	40.3	15:00	28.97	24.9	35.3	20:45	34.72	29.6	36.9

Annex 1.4 continued. Sequential vertical positions of Fish 2

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
21-Nov-72				22-Nov-72				22-Nov-72			
20:50	34.80	21.3	35.5	2:40	40.63	22.8	38.3	8:25	46.38	25.1	36.7
20:55	34.88	23.9	37.0	2:45	40.72	21.7	34.1	8:30	46.47	24.7	36.4
21:00	34.97	24.9	38.7	2:50	40.80	23.5	34.5	8:35	46.55	24.1	35.5
21:05	35.05	23.5	40.0	2:55	40.88	22.1	34.9	8:40	46.63	22.8	34.4
21:10	35.13	22.3	37.4	3:00	40.97	20.2	33.6	8:45	46.72	20.7	34.5
21:15	35.22	23.2	38.4	3:07	41.08	19.8	28.8	8:50	46.80	22.3	35.2
21:20	35.30	25.8	43.1	3:12	41.17	23.3	32.9	8:55	46.88	26.3	37.3
21:25	35.38	22.3	37.4	3:15	41.22	17.3	30.4	9:00	46.97	21.8	36.4
21:30	35.47	24.4	37.9	3:20	41.30	18.8	30.6	9:05	47.05	23.5	37.3
21:35	35.55	26.0	36.9	3:25	41.38	21.1	33.1	9:10	47.13	24.3	35.4
21:40	35.63	33.2	40.5	3:30	41.47	18.3	32.5	9:15	47.22	26.3	31.8
21:45	35.72	29.0	39.6	3:35	41.55	19.7	31.4	9:20	47.30	22.8	32.1
21:50	35.80	29.0	42.7	3:40	41.63	18.0	31.8	9:25	47.38	24.1	35.5
21:55	35.88	28.6	40.8	3:45	41.72	21.3	32.7	9:30	47.47	23.1	36.2
22:00	35.97	25.8	38.8	3:50	41.80	21.7	34.1	9:35	47.55	32.6	32.6
22:05	36.05	24.9	37.4	3:55	41.88	18.9	30.2	9:40	47.63	21.1	35.5
22:10	36.13	24.1	40.0	4:00	41.97	19.2	30.0	9:45	47.72	21.8	36.4
22:15	36.22	22.5	45.5	4:05	42.05	18.6	26.8	9:50	47.80	24.9	37.7
22:20	36.30	24.4	37.9	4:10	42.13	20.5	27.4	9:55	47.88	24.1	38.3
22:25	36.38	26.0	36.9	4:14	42.20	27.7	27.7	10:00	47.97	22.3	37.4
22:30	36.47	23.2	30.8	4:15	42.22	18.8	27.7	10:05	48.05	21.1	35.5
22:35	36.55	22.3	37.4	4:20	42.30	21.4	27.9	10:10	48.13	21.8	39.3
22:40	36.63	24.1	35.5	4:25	42.38	19.7	25.9	10:15	48.22	17.5	33.6
22:45	36.72	25.3	34.4	4:30	42.47	21.1	28.3	10:20	48.30	15.8	36.7
22:50	36.80	24.7	30.6	4:35	42.55	16.6	25.9	10:25	48.38	11.3	33.1
22:55	36.88	28.0	32.0	4:40	42.63	19.2	27.9	10:30	48.47	12.1	33.6
23:00	36.97	25.3	34.4	4:45	42.72	19.3	28.4	10:35	48.55	16.2	34.4
23:05	37.05	21.8	30.6	4:51	42.82	22.3	28.4	10:40	48.63	18.7	33.2
23:10	37.13	24.9	31.8	4:55	42.88	22.3	30.0	10:45	48.72	23.6	31.4
23:15	37.22	24.0	29.9	5:00	42.97	22.9	28.2	10:50	48.80	25.9	41.4
23:20	37.30	24.9	37.4	5:05	43.05	22.3	27.5	10:55	48.88	20.5	34.4
23:25	37.38	24.9	24.9	5:10	43.13	24.9	30.0	11:00	48.97	23.5	37.3
23:30	37.47	26.0	26.0	5:15	43.22	24.7	30.6	11:05	49.05	22.8	37.1
23:35	37.55	32.2	32.2	5:20	43.30	22.9	28.2	11:10	49.13	23.5	37.3
23:40	37.63	24.9	29.1	5:25	43.38	22.8	27.4	11:15	49.22	29.8	42.5
23:45	37.72	25.9	32.2	5:30	43.47	21.1	28.3	11:20	49.30	25.0	39.8
23:50	37.80	24.9	32.6	5:35	43.55	23.5	29.0	11:25	49.38	25.9	40.2
23:55	37.88	24.9	37.4	5:40	43.63	23.5	30.7	11:30	49.47	27.2	40.3
22-Nov-72				5:45	43.72	22.3	28.4	11:35	49.55	23.6	38.5
0:00	37.97	26.3	34.5	5:50	43.80	22.3	30.0	11:40	49.63	24.7	40.3
0:05	38.05	23.2	34.6	5:55	43.88	22.3	27.5	11:45	49.72	24.2	39.1
0:10	38.13	22.8	32.2	6:00	43.97	23.5	30.7	11:50	49.80	24.7	39.3
0:15	38.22	24.1	36.0	6:05	44.05	21.8	27.7	11:55	49.88	25.1	41.2
0:20	38.30	21.8	33.5	6:10	44.13	20.6	27.2	12:00	49.97	22.2	38.2
0:25	38.38	23.2	38.4	6:15	44.22	21.4	28.4	12:05	50.05	21.1	33.1
0:30	38.47	24.4	37.9	6:20	44.30	25.9	28.3	12:10	50.13	26.3	37.3
0:35	38.55	24.9	35.3	6:25	44.38	22.9	30.9	12:15	50.22	27.5	40.3
0:40	38.63	21.4	31.8	6:30	44.47	20.7	29.0	12:20	50.30	26.3	40.0
0:45	38.72	27.4	34.4	6:35	44.55	22.9	30.9	12:25	50.38	23.6	36.4
0:50	38.80	23.2	34.6	6:40	44.63	23.5	30.7	12:30	50.47	23.3	42.5
0:55	38.88	20.7	40.0	6:45	44.72	25.6	30.9	12:35	50.55	26.6	39.8
1:00	38.97	19.8	37.6	6:50	44.80	26.7	31.7	12:40	50.63	25.8	39.9
1:05	39.05	21.1	37.9	6:55	44.88	29.2	31.7	12:45	50.72	25.9	40.2
1:10	39.13	20.5	38.9	7:00	44.97	26.7	31.7	12:50	50.80	27.7	39.3
1:15	39.22	19.8	39.8	7:05	45.05	27.9	32.1	12:55	50.88	31.8	40.0
1:20	39.30	21.8	36.4	7:10	45.13	23.1	30.6	13:00	50.97	27.4	35.3
1:25	39.38	17.6	44.7	7:15	45.22	21.7	31.7	13:05	51.05	25.0	34.3
1:30	39.47	21.8	39.3	7:20	45.30	22.8	32.2	13:10	51.13	22.3	32.6
1:35	39.55	21.2	36.2	7:25	45.38	18.6	30.7	13:15	51.22	28.3	37.9
1:40	39.63	20.6	37.0	7:30	45.47	19.3	31.4	13:20	51.30	28.7	36.2
1:45	39.72	22.9	38.9	7:35	45.55	21.7	34.1	13:25	51.38	31.1	37.9
1:50	39.80	19.7	37.7	7:40	45.63	21.4	32.1	13:30	51.47	30.1	35.2
1:55	39.88	20.7	37.3	7:45	45.72	22.9	33.6	13:35	51.55	26.6	33.2
2:00	39.97	24.1	35.5	7:50	45.80	16.2	30.7	13:40	51.63	24.1	32.0
2:05	40.05	21.1	35.5	7:55	45.88	22.3	32.6	13:45	51.72	26.9	35.1
2:15	40.22	22.0	35.7	8:00	45.97	23.5	33.1	13:50	51.80	24.3	35.4
2:20	40.30	21.4	34.9	8:05	46.05	23.5	37.3	13:55	51.88	24.4	41.2
2:25	40.38	25.9	38.3	8:10	46.13	25.9	35.3	14:00	51.97	24.9	40.3
2:30	40.47	35.2	35.2	8:15	46.22	36.7	56.9				
2:35	40.55	24.5	36.7	8:20	46.30	24.1	38.3				

Annex 1.5 Sequential geographical positions of Fish 3

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
27-Nov-72				28-Nov-72				29-Nov-72			
19:45	0.00	52.508	2.035	12:00	16.25	52.519	1.996	3:30	31.75	52.424	1.977
20:00	0.25	52.517	2.036	12:15	16.50	52.514	1.993	3:45	32.00	52.424	1.967
20:15	0.50	52.524	2.032	12:30	16.75	52.509	1.995	4:00	32.25	52.423	1.967
20:30	0.75	52.531	2.030	12:45	17.00	52.501	1.995	4:15	32.50	52.424	1.974
20:45	1.00	52.539	2.029	13:00	17.25	52.496	1.995	4:30	32.75	52.424	1.975
21:00	1.25	52.544	2.023	13:15	17.50	52.491	1.995	4:45	33.00	52.423	1.971
21:15	1.50	52.549	2.019	13:30	17.75	52.483	1.995	5:00	33.25	52.423	1.968
21:30	1.75	52.554	2.020	13:45	18.00	52.476	1.995	5:15	33.50	52.423	1.965
21:45	2.00	52.554	2.009	14:00	18.25	52.467	1.993	5:30	33.75	52.422	1.965
22:00	2.25	52.554	1.984	14:15	18.50	52.459	1.990	5:45	34.00	52.421	1.967
22:15	2.50	52.558	2.004	14:30	18.75	52.453	1.992	6:00	34.25	52.420	1.963
22:30	2.75	52.558	2.006	14:45	19.00	52.445	1.991	6:15	34.50	52.421	1.965
22:45	3.00	52.556	2.008	15:00	19.25	52.439	1.991	6:30	34.75	52.422	1.961
23:00	3.25	52.554	2.010	15:15	19.50	52.432	1.989	6:45	35.00	52.424	1.964
23:15	3.50	52.548	2.011	15:30	19.75	52.425	1.988	7:00	35.25	52.427	1.968
23:30	3.75	52.540	2.000	15:45	20.00	52.417	1.984	7:15	35.50	52.431	1.968
23:45	4.00	52.535	2.003	16:00	20.25	52.412	1.989	7:30	35.75	52.437	1.971
28-Nov-72				16:15	20.50	52.407	1.987	7:45	36.00	52.441	1.972
0:00	4.25	52.529	2.012	16:30	20.75	52.402	1.985	8:00	36.25	52.449	1.972
0:15	4.50	52.522	2.012	16:45	21.00	52.397	1.978	8:15	36.50	52.455	1.971
0:30	4.75	52.512	2.010	17:00	21.25	52.394	1.986	8:30	36.75	52.463	1.971
0:45	5.00	52.503	2.004	17:15	21.50	52.392	1.985	8:45	37.00	52.470	1.970
1:00	5.25	52.493	2.002	17:30	21.75	52.390	1.983	9:00	37.25	52.481	1.977
1:15	5.50	52.483	1.997	17:45	22.00	52.389	1.985	9:15	37.50	52.489	1.975
1:30	5.75	52.475	1.997	18:00	22.25	52.389	1.985	9:30	37.75	52.495	1.975
1:45	6.00	52.461	1.983	18:15	22.50	52.389	1.988	9:45	38.00	52.505	1.977
2:00	6.25	52.457	1.988	18:30	22.75	52.392	1.992	10:00	38.25	52.512	1.977
2:15	6.50	52.449	1.980	18:45	23.00	52.394	1.993				
2:30	6.75	52.441	1.980	19:00	23.25	52.396	1.994				
2:45	7.00	52.434	1.978	19:15	23.50	52.399	1.998				
3:15	7.50	52.420	1.974	19:30	23.75	52.404	2.004				
3:30	7.75	52.415	1.972	19:45	24.00	52.409	2.002				
4:00	8.25	52.405	1.967	20:00	24.25	52.414	2.003				
4:15	8.50	52.402	1.969	20:15	24.50	52.419	2.007				
4:30	8.75	52.398	1.964	20:30	24.75	52.424	2.003				
4:45	9.00	52.396	1.963	20:45	25.00	52.430	2.006				
5:15	9.50	52.396	1.965	21:00	25.25	52.437	2.011				
5:30	9.75	52.400	1.968	21:15	25.50	52.443	2.009				
5:45	10.00	52.401	1.967	21:30	25.75	52.447	2.005				
6:00	10.25	52.406	1.968	21:45	26.00	52.455	2.011				
6:15	10.50	52.411	1.969	22:00	26.25	52.458	2.008				
6:30	10.75	52.417	1.980	22:15	26.50	52.462	2.004				
6:45	11.00	52.423	1.975	22:30	26.75	52.468	2.006				
7:00	11.25	52.430	1.979	22:45	27.00	52.470	1.997				
7:15	11.50	52.436	1.981	23:00	27.25	52.473	1.998				
7:30	11.75	52.443	1.982	23:15	27.50	52.477	2.009				
7:45	12.00	52.450	1.982	23:30	27.75	52.477	2.002				
8:00	12.25	52.456	1.981	23:45	28.00	52.479	2.006				
8:15	12.50	52.464	1.986	29-Nov-72							
8:30	12.75	52.471	1.989	0:00	28.25	52.477	1.996				
8:45	13.00	52.478	1.988	0:15	28.50	52.476	1.996				
9:00	13.25	52.487	1.989	0:30	28.75	52.474	1.999				
9:15	13.50	52.495	1.993	0:45	29.00	52.471	1.995				
9:30	13.75	52.502	1.993	1:00	29.25	52.468	1.995				
9:45	14.00	52.508	1.994	1:15	29.50	52.461	1.984				
10:00	14.25	52.511	1.990	1:30	29.75	52.458	1.982				
10:15	14.50	52.516	1.993	1:45	30.00	52.453	1.986				
10:30	14.75	52.521	1.994	2:00	30.25	52.446	1.980				
10:45	15.00	52.524	1.995	2:15	30.50	52.440	1.982				
11:00	15.25	52.525	1.995	2:30	30.75	52.432	1.972				
11:15	15.50	52.525	1.996	2:45	31.00	52.427	1.968				
11:30	15.75	52.524	1.994	3:00	31.25	52.425	1.973				
11:45	16.00	52.521	1.983	3:15	31.50	52.425	1.979				

Annex 1.6 Sequential vertical positions of Fish 3

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
27-Nov-72				28-Nov-72				29-Nov-72			
19:45	0.00	24.1	40.0	12:30	16.75	11.6	34.1	4:15	32.50	31.8	31.8
20:00	0.25	22.3	29.6	12:45	17.00	12.6	29.8	4:30	32.75	33.0	33.0
20:15	0.50	7.5	31.8	12:55	17.17	22.8	31.0	4:45	33.00	36.1	36.1
20:30	0.75	4.0	35.3	13:00	17.25	18.1	28.8	5:00	33.25	36.4	36.4
20:45	1.00	4.0	28.4	13:15	17.50	18.0	38.7	5:15	33.50	37.4	37.4
21:00	1.25	4.0	27.2	13:30	17.75	13.8	33.1	5:20	33.58	20.7	34.5
21:15	1.50	7.6	25.4	13:45	18.00	15.5	32.7	5:25	33.67	14.5	35.3
21:30	1.75	4.0	28.4	14:00	18.25	11.9	32.6	5:30	33.75	10.6	33.7
21:45	2.00	7.1	25.9	14:15	18.50	10.6	33.7	5:35	33.83	11.5	30.2
22:00	2.25	7.2	29.7	14:30	18.75	13.7	32.9	5:40	33.92	11.3	33.2
22:15	2.50	7.3	30.4	14:45	19.00	11.0	35.3	5:45	34.00	12.9	33.5
22:30	2.75	4.0	26.5	15:00	19.25	10.6	30.4	5:50	34.08	11.5	33.9
22:45	3.00	7.8	30.8	15:15	19.50	14.2	34.5	5:55	34.17	10.8	31.1
23:00	3.25	8.1	32.6	15:30	19.75	11.9	35.2	6:00	34.25	17.6	49.1
23:15	3.50	7.2	29.7	15:45	20.00	11.1	34.4	6:05	34.33	12.4	31.8
23:30	3.75	4.0	31.4	16:00	20.25	11.1	34.4	6:10	34.42	14.5	31.8
23:45	4.00	4.0	27.2	16:15	20.50	12.6	35.5	6:15	34.50	12.0	32.0
28-Nov-72				16:30	20.75	11.0	38.7	6:20	34.58	13.4	32.2
0:00	4.25	4.0	29.6	16:45	21.00	10.3	35.3	6:25	34.67	12.1	30.9
0:15	4.50	4.0	31.8	17:00	21.25	11.2	36.1	6:30	34.75	13.1	31.0
0:30	4.75	7.8	33.9	17:15	21.50	10.6	33.7	6:45	35.00	13.9	33.7
0:45	5.00	4.0	26.3	17:30	21.75	10.3	35.3	7:00	35.25	15.0	33.2
1:00	5.25	4.0	22.1	17:45	22.00	10.8	31.1	7:15	35.50	13.2	34.4
1:15	5.50	4.0	50.7	18:00	22.25	9.1	34.1	7:30	35.75	14.8	33.6
1:30	5.75	4.0	32.5	18:15	22.50	13.9	37.0	7:45	36.00	13.9	33.7
1:45	6.00	4.0	33.3	18:30	22.75	13.4	38.3	8:00	36.25	15.9	36.4
2:00	6.25	5.9	34.3	18:45	23.00	12.6	38.3	8:15	36.50	15.2	31.8
2:15	6.50	4.0	32.0	19:00	23.25	10.3	35.3	8:30	36.75	15.9	33.5
2:30	6.75	4.0	17.9	19:15	23.50	13.9	37.0	8:45	37.00	17.3	30.4
2:45	7.00	6.1	31.0	19:30	23.75	12.9	36.4	9:00	37.25	16.6	32.2
3:15	7.50	4.0	35.3	19:45	24.00	10.3	35.3	9:15	37.50	17.1	30.0
3:30	7.75	7.3	33.7	20:00	24.25	13.9	37.0	9:30	37.75	18.0	31.8
4:00	8.25	6.1	35.1	20:15	24.50	12.9	39.3	9:45	38.00	21.0	31.1
4:15	8.50	5.7	30.5	20:30	24.75	13.4	38.3	10:00	38.25	19.7	29.1
4:30	8.75	4.0	34.5	20:45	25.00	13.4	35.3				
4:45	9.00	6.9	32.7	21:00	25.25	10.5	36.1				
5:15	9.50	7.8	34.6	21:15	25.50	10.3	38.3				
5:30	9.75	8.0	36.0	21:30	25.75	9.9	33.5				
5:45	10.00	7.2	32.9	21:45	26.00	11.2	32.5				
6:00	10.25	7.7	33.2	22:00	26.25	12.6	32.7				
6:15	10.50	7.3	30.4	22:15	26.50	12.6	32.7				
6:30	10.75	7.3	37.0	22:30	26.75	10.6	27.2				
6:45	11.00	7.3	30.4	22:45	27.00	12.4	31.8				
7:00	11.25	7.0	30.6	23:00	27.25	11.7	30.8				
7:15	11.50	7.3	37.0	23:15	27.50	14.7	36.1				
7:30	11.75	6.6	35.2	23:30	27.75	14.7	36.1				
7:45	12.00	6.9	35.5	23:45	28.00	12.4	34.5				
8:00	12.25	7.0	30.6	29-Nov-72							
8:15	12.50	11.3	33.2	0:00	28.25	12.1	30.9				
8:30	12.75	11.0	31.8	0:15	28.50	12.9	33.5				
8:45	13.00	12.0	32.0	0:30	28.75	11.9	31.4				
9:00	13.25	7.6	32.5	0:45	29.00	13.7	32.9				
9:15	13.50	8.5	26.6	1:00	29.25	13.7	29.7				
9:30	13.75	10.6	30.4	1:15	29.50	11.5	33.9				
9:45	14.00	9.9	27.7	1:30	29.75	14.5	32.6				
10:00	14.25	9.6	29.0	1:45	30.00	13.2	34.4				
10:15	14.50	9.4	30.9	2:00	30.25	14.2	34.5				
10:30	14.75	9.1	29.2	2:15	30.50	13.2	34.4				
10:45	15.00	13.4	32.2	2:30	30.75	15.5	35.5				
11:00	15.25	11.3	30.7	2:45	31.00	33.3	33.3				
11:15	15.50	9.6	31.8	3:00	31.25	35.2	35.2				
11:30	15.75	12.1	33.6	3:15	31.50	30.7	30.7				
11:45	16.00	10.1	28.4	3:30	31.75	33.0	33.0				
12:00	16.25	10.1	31.4	3:45	32.00	32.6	32.6				
12:15	16.50	11.6	31.7	4:00	32.25	34.4	34.4				

Annex 1.7 Sequential vertical positions of Fish 4

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
21-Apr-74			
18:00	0.00	52.365	1.978
18:30	0.50	52.355	1.983
18:45	0.75	52.348	1.985
19:00	1.00	52.338	1.984
19:15	1.25	52.327	1.982
19:30	1.50	52.318	1.985
19:45	1.75	52.308	1.984
20:00	2.00	52.299	1.987
20:15	2.25	52.290	1.985
20:30	2.50	52.282	1.983
20:45	2.75	52.273	1.990
21:00	3.00	52.263	1.985
21:15	3.25	52.255	1.988
21:30	3.50	52.248	1.988
21:45	3.75	52.242	1.988
22:00	4.00	52.234	1.993
22:15	4.25	52.230	1.995
22:30	4.50	52.225	1.996
22:45	4.75	52.222	2.000
23:00	5.00	52.220	2.008
23:15	5.25	52.219	2.012
23:30	5.50	52.220	2.016
23:45	5.75	52.222	2.022
22-Apr-74			
0:00	6.00	52.227	2.031
0:15	6.25	52.232	2.043
0:30	6.50	52.237	2.048
0:45	6.75	52.245	2.056
1:00	7.00	52.253	2.059
1:15	7.25	52.263	2.073
1:30	7.50	52.275	2.086
1:45	7.75	52.287	2.092
2:00	8.00	52.297	2.098
2:15	8.25	52.308	2.105
2:30	8.50	52.318	2.114
2:45	8.75	52.329	2.117
3:00	9.00	52.341	2.124
3:15	9.25	52.355	2.126
3:30	9.50	52.361	2.137
3:45	9.75	52.365	2.142
4:00	10.00	52.374	2.145
4:15	10.25	52.382	2.150
4:30	10.50	52.387	2.152
4:45	10.75	52.393	2.151
5:00	11.00	52.398	2.161
5:15	11.25	52.400	2.162
5:29	11.48	52.402	2.165
5:45	11.75	52.404	2.172
6:00	12.00	52.404	2.175
6:15	12.25	52.405	2.178
6:30	12.50	52.404	2.179
6:45	12.75	52.403	2.181
7:00	13.00	52.401	2.184
7:15	13.25	52.398	2.184
7:30	13.50	52.394	2.183
7:45	13.75	52.389	2.183
8:00	14.00	52.385	2.185
8:15	14.25	52.382	2.185
8:30	14.50	52.379	2.184

Annex 1.8 Sequential vertical positions of Fish 4

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
21-Apr-74			
18:00	0.00	6.1	37.1
18:30	0.50	4.0	31.0
18:45	0.75	4.0	34.5
19:00	1.00	4.0	45.2
19:15	1.25	4.0	38.2
19:30	1.50	4.0	36.6
19:45	1.75	4.0	34.4
20:00	2.00	4.0	35.3
20:15	2.25	4.0	37.3
20:30	2.50	4.0	40.3
20:45	2.75	6.9	35.5
21:00	3.00	4.0	33.2
21:15	3.25	4.0	34.2
21:30	3.50	4.0	35.5
21:45	3.75	4.0	32.7
22:00	4.00	4.0	29.8
22:15	4.25	4.0	33.5
22:30	4.50	4.0	36.6
22:45	4.75	4.0	30.6
23:00	5.00	4.0	39.3
23:15	5.25	4.0	39.1
23:30	5.50	4.0	40.2
23:45	5.75	12.0	47.9
22-Apr-74			
0:00	6.00	4.0	41.5
0:15	6.25	4.0	34.5
0:30	6.50	4.0	35.5
0:45	6.75	15.5	42.2
1:00	7.00	4.0	37.4
1:15	7.25	7.5	31.8
1:30	7.50	7.8	33.9
1:45	7.75	7.2	35.6
2:00	8.00	4.0	38.4
2:15	8.25	7.3	40.3
2:30	8.50	10.1	37.4
2:45	8.75	4.0	36.9
3:00	9.00	8.2	41.9
3:15	9.25	10.6	37.0
3:30	9.50	15.2	40.0
3:45	9.75	21.4	42.2
4:00	10.00	25.9	38.3
4:15	10.25	24.9	38.7
4:30	10.50	30.6	39.3
4:45	10.75	12.0	40.0
5:00	11.00	18.7	33.3
5:15	11.25	19.8	37.6
5:29	11.48	27.8	37.9
5:45	11.75	18.7	33.2
6:00	12.00	20.0	36.0
6:15	12.25	16.9	39.3
6:30	12.50	14.5	37.7
6:45	12.75	14.2	41.2
7:00	13.00	10.8	44.5
7:15	13.25	13.4	38.3
7:30	13.50	13.2	43.4
7:45	13.75	11.1	32.1
8:00	14.00	34.4	34.4
8:15	14.25	35.3	35.3
8:30	14.50	37.4	37.4

Annex 1.9 Sequential geographical positions of Fish 5

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
25-Apr-74			
8:45	0.00	52.378	1.990
9:00	0.25	52.378	1.993
9:15	0.50	52.378	1.997
9:30	0.75	52.379	2.000
9:45	1.00	52.378	2.003
10:00	1.25	52.375	2.007
10:15	1.50	52.372	2.009
10:30	1.75	52.369	2.013
10:45	2.00	52.366	2.017
11:00	2.25	52.363	2.020
11:15	2.50	52.358	2.021
11:30	2.75	52.357	2.027
11:45	3.00	52.355	2.033
12:00	3.25	52.354	2.035
12:15	3.50	52.351	2.039
12:30	3.75	52.347	2.043
12:45	4.00	52.344	2.048
13:00	4.25	52.342	2.056
13:15	4.50	52.341	2.056
13:30	4.75	52.340	2.059
13:45	5.00	52.341	2.063
14:00	5.25	52.343	2.068
14:15	5.50	52.347	2.073
14:30	5.75	52.352	2.081
14:45	6.00	52.357	2.084
15:00	6.25	52.365	2.091
15:30	6.75	52.378	2.100
15:45	7.00	52.386	2.110
16:00	7.25	52.391	2.110
16:15	7.50	52.398	2.118
16:30	7.75	52.404	2.121
17:00	8.25	52.421	2.131
17:15	8.50	52.428	2.138
17:30	8.75	52.435	2.145
17:45	9.00	52.442	2.148
18:00	9.25	52.450	2.151
18:30	9.75	52.460	2.162
19:00	10.25	52.466	2.161
19:15	10.50	52.468	2.165
19:30	10.75	52.469	2.169
19:45	11.00	52.469	2.170
20:00	11.25	52.469	2.175
20:15	11.50	52.467	2.178
20:30	11.75	52.465	2.183
20:45	12.00	52.458	2.180
21:00	12.25	52.455	2.186
21:15	12.50	52.448	2.184
21:30	12.75	52.442	2.183
21:45	13.00	52.440	2.194
22:00	13.25	52.438	2.195
22:15	13.50	52.432	2.198
22:30	13.75	52.427	2.198
23:00	14.25	52.419	2.206
23:15	14.50	52.413	2.201
23:30	14.75	52.408	2.203
26-Apr-74			
0:00	15.25	52.399	2.205
0:45	16.00	52.389	2.212
1:00	16.25	52.386	2.218
1:15	16.50	52.382	2.212
1:30	16.75	52.379	2.211

Annex 1.10 Sequential vertical positions of Fish 5

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
25-Apr-74				25-Apr-74			
8:45	0.00	35.3	35.3	17:45	9.00	22.3	33.2
9:00	0.25	37.3	37.3	18:00	9.25	36.1	39.3
9:15	0.50	35.2	35.2	18:15	9.50	37.3	40.0
9:30	0.75	38.7	38.7	18:30	9.75	40.2	40.2
9:45	1.00	32.7	32.7	18:45	10.00	34.5	37.3
10:00	1.25	33.6	33.6	19:00	10.25	34.6	38.4
10:15	1.50	43.4	43.4	19:15	10.50	29.0	41.1
10:30	1.75	41.1	41.1	19:30	10.75	23.3	39.3
10:45	2.00	34.4	34.4	19:45	11.00	24.3	42.0
11:00	2.25	36.7	36.7	20:00	11.25	24.8	28.2
11:15	2.50	37.9	37.9	20:15	11.50	28.7	45.2
11:30	2.75	37.7	37.7	20:30	11.75	19.2	34.1
11:45	3.00	40.0	40.0	20:35	11.83	21.2	36.3
12:00	3.25	38.9	38.9	20:40	11.92	21.8	39.3
12:15	3.50	41.1	41.1	20:45	12.00	18.4	38.3
12:30	3.75	40.4	40.4	20:50	12.08	19.3	39.8
12:45	4.00	26.6	35.4	20:55	12.17	19.7	35.3
12:53	4.13	24.9	35.2	21:00	12.25	27.9	43.3
12:57	4.20	26.3	37.3	21:05	12.33	27.5	45.3
13:00	4.25	26.3	34.5	21:10	12.42	22.3	37.4
13:08	4.38	23.5	35.5	21:15	12.50	40.3	40.3
13:15	4.50	22.3	35.2	21:20	12.58	38.7	38.7
13:20	4.58	23.5	37.9	21:30	12.75	35.3	35.3
13:25	4.67	23.5	35.5	21:40	12.92	39.2	39.2
13:30	4.75	20.7	34.5	21:45	13.00	41.4	41.4
13:35	4.83	23.9	37.0	22:00	13.25	40.2	40.2
13:40	4.92	23.6	34.2	22:15	13.50	42.2	42.2
13:45	5.00	22.3	35.2	22:30	13.75	41.2	41.2
13:50	5.08	21.1	37.9	22:45	14.00	38.4	38.3
13:55	5.17	17.3	40.3	23:00	14.25	37.1	37.1
14:00	5.25	19.7	41.4	23:15	14.50	35.5	35.4
14:05	5.33	20.0	37.6	23:30	14.75	40.0	40.0
14:10	5.42	21.1	40.2	23:45	15.00	35.2	37.7
14:15	5.50	21.7	39.1	26-Apr-74			
14:20	5.58	20.7	37.3	0:00	15.25	35.5	35.5
14:25	5.67	22.8	38.3	0:15	15.50	33.0	35.1
14:30	5.75	22.7	37.6	0:20	15.58	37.9	40.2
14:35	5.83	22.8	44.5	0:25	15.67	40.2	40.2
14:40	5.92	17.9	34.5	0:30	15.75	33.0	35.1
14:45	6.00	17.6	35.4	0:37	15.87	27.3	30.3
14:50	6.08	11.7	30.8	0:45	16.00	28.3	40.2
14:55	6.17	18.8	27.7	1:00	16.25	19.7	35.3
15:00	6.25	23.9	37.0	1:15	16.50	19.7	37.7
15:05	6.33	23.5	40.0	1:20	16.58	20.5	36.7
15:10	6.42	24.9	40.3	1:25	16.67	17.9	34.5
15:20	6.58	34.5	42.7	1:30	16.75	21.4	38.7
15:25	6.67	33.1	42.6				
15:30	6.75	35.1	41.1				
15:35	6.83	40.3	42.8				
15:40	6.92	39.1	45.0				
15:45	7.00	43.1	47.8				
15:50	7.08	41.1	45.0				
15:55	7.17	42.0	46.3				
16:00	7.25	30.3	47.2				
16:05	7.33	28.9	45.2				
16:10	7.42	29.2	44.0				
16:15	7.50	38.2	41.5				
16:20	7.58	34.9	41.5				
16:25	7.67	35.1	45.0				
16:30	7.75	30.6	42.2				
16:35	7.83	35.3	44.5				
16:45	8.00	28.3	42.6				
17:00	8.25	38.1	46.5				
17:15	8.50	33.5	42.2				
17:30	8.75	32.6	44.8				

Annex 1.11 Sequential geographical positions of Fish 6

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
26-Apr-74				27-Apr-74			
20:12	0.00	52.358	1.963	12:15	16.05	52.320	2.169
20:30	0.30	52.357	1.967	12:30	16.30	52.316	2.172
21:00	0.80	52.355	1.977	12:45	16.55	52.314	2.174
21:15	1.05	52.355	1.983	13:00	16.80	52.314	2.173
21:30	1.30	52.353	1.986	13:15	17.05	52.314	2.172
21:45	1.55	52.352	1.987	13:30	17.30	52.315	2.173
22:00	1.80	52.352	1.993	13:45	17.55	52.314	2.172
22:15	2.05	52.349	1.996	14:15	18.05	52.314	2.173
22:30	2.30	52.348	1.998	14:45	18.55	52.312	2.175
22:45	2.55	52.346	2.004	15:00	18.80	52.314	2.180
23:00	2.80	52.343	2.009	15:15	19.05	52.315	2.181
23:15	3.05	52.340	2.014	15:30	19.30	52.317	2.181
23:30	3.30	52.337	2.015	15:45	19.55	52.320	2.183
23:45	3.55	52.334	2.022	16:00	19.80	52.324	2.187
27-Apr-74				16:15	20.05	52.326	2.191
0:00	3.80	52.332	2.026	16:30	20.30	52.328	2.190
0:15	4.05	52.328	2.026	16:45	20.55	52.328	2.190
0:30	4.30	52.325	2.035	17:00	20.80	52.330	2.191
0:45	4.55	52.322	2.038	17:15	21.05	52.333	2.194
1:00	4.80	52.319	2.036	17:30	21.30	52.336	2.194
1:15	5.05	52.316	2.040	17:45	21.55	52.337	2.193
1:30	5.30	52.314	2.046	18:00	21.80	52.339	2.192
1:45	5.55	52.311	2.050	18:30	22.30	52.349	2.201
2:00	5.80	52.311	2.053	18:45	22.55	52.355	2.201
2:15	6.05	52.307	2.049	19:00	22.80	52.362	2.204
2:30	6.30	52.305	2.052	19:15	23.05	52.367	2.206
2:45	6.55	52.305	2.055	19:30	23.30	52.374	2.210
3:00	6.80	52.306	2.056	19:45	23.55	52.379	2.210
3:15	7.05	52.310	2.064	20:00	23.80	52.382	2.216
3:30	7.30	52.312	2.066	20:15	24.05	52.386	2.219
3:45	7.55	52.318	2.073	20:30	24.30	52.386	2.217
4:00	7.80	52.325	2.076	20:45	24.55	52.388	2.218
4:15	8.05	52.330	2.083	21:00	24.80	52.388	2.216
4:30	8.30	52.337	2.087	21:15	25.05	52.387	2.216
4:45	8.55	52.340	2.086	21:30	25.30	52.387	2.217
5:00	8.80	52.340	2.088				
5:15	9.05	52.340	2.088				
5:30	9.30	52.341	2.089				
5:45	9.55	52.341	2.092				
6:00	9.80	52.341	2.096				
6:15	10.05	52.342	2.098				
6:30	10.30	52.342	2.099				
6:45	10.55	52.344	2.104				
7:00	10.80	52.350	2.112				
7:15	11.05	52.355	2.114				
7:30	11.30	52.361	2.123				
7:45	11.55	52.365	2.126				
8:00	11.80	52.369	2.132				
8:15	12.05	52.374	2.137				
8:30	12.30	52.376	2.141				
8:45	12.55	52.378	2.146				
9:00	12.80	52.378	2.151				
9:15	13.05	52.377	2.153				
9:30	13.30	52.376	2.157				
9:45	13.55	52.373	2.161				
10:00	13.80	52.370	2.165				
10:15	14.05	52.365	2.165				
10:30	14.30	52.361	2.167				
10:45	14.55	52.355	2.167				
11:00	14.80	52.350	2.170				
11:30	15.30	52.338	2.169				
11:45	15.55	52.330	2.164				
12:00	15.80	52.327	2.171				

Annex 1.12 Sequential vertical positions of Fish 6

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
26-Apr-74				27-Apr-74				27-Apr-74			
20:12	0.00	7.2	29.7	8:55	12.72	16.6	41.4	15:15	19.05	20.2	36.2
20:30	0.30	7.3	27.2	9:00	12.80	19.7	38.3	15:20	19.13	20.2	36.2
20:45	0.55	26.3	29.0	9:05	12.88	23.5	44.9	15:25	19.22	15.3	35.4
21:00	0.80	30.2	30.2	9:10	12.97	21.8	33.5	15:30	19.30	17.5	38.9
21:15	1.05	34.6	34.6	9:15	13.05	20.7	34.5	15:35	19.38	19.2	36.4
21:30	1.30	34.5	34.5	9:20	13.13	23.5	37.9	15:40	19.47	16.6	38.3
21:45	1.55	35.3	35.3	9:25	13.22	21.1	35.5	15:45	19.55	19.6	36.6
22:00	1.80	40.0	40.0	9:30	13.30	21.1	37.9	15:50	19.63	17.1	34.2
22:15	2.05	45.4	45.4	9:35	13.38	23.5	31.8	15:55	19.72	13.9	27.2
22:30	2.30	38.4	38.4	9:40	13.47	19.6	34.9	16:00	19.80	20.0	37.6
22:45	2.55	35.3	35.3	9:45	13.55	18.6	35.5	16:05	19.88	22.3	37.7
23:00	2.80	37.6	37.6	9:50	13.63	20.7	37.3	16:10	19.97	37.4	37.4
23:15	3.05	31.8	31.8	9:55	13.72	19.7	37.7	16:15	20.05	22.0	33.8
23:30	3.30	33.5	33.5	10:00	13.80	17.4	32.5	16:20	20.13	24.9	32.6
23:45	3.55	38.7	38.7	10:05	13.88	21.4	35.3	16:22	20.17	30.7	30.7
27-Apr-74				10:10	13.97	23.5	37.9	16:25	20.22	33.1	33.1
0:00	3.80	37.0	37.0	10:15	14.05	24.3	37.6	16:30	20.30	33.5	33.5
0:15	4.05	38.7	38.7	10:20	14.13	23.5	37.9	16:45	20.55	35.2	35.2
0:30	4.30	38.7	38.7	10:25	14.22	25.1	38.9	17:00	20.80	31.8	31.8
0:45	4.55	34.5	34.5	10:30	14.30	26.3	45.4	17:15	21.05	30.6	30.6
1:00	4.80	37.4	37.4	10:35	14.38	22.1	42.0	17:30	21.30	29.9	29.9
1:15	5.05	35.5	35.5	10:40	14.47	24.7	39.3	17:45	21.55	24.9	24.9
1:30	5.30	38.7	38.7	10:45	14.55	21.8	42.2	18:00	21.80	31.8	31.8
1:45	5.55	38.7	38.7	10:50	14.63	25.9	41.4	18:10	21.97	27.9	29.9
2:00	5.80	4.0	35.3	10:55	14.72	24.9	40.3	18:15	22.05	28.4	31.8
2:15	6.05	11.3	40.5	11:00	14.80	23.5	40.0	18:20	22.13	22.8	32.2
2:30	6.30	10.8	37.9	11:05	14.88	26.6	39.3	18:25	22.22	18.6	33.1
2:45	6.55	10.8	41.2	11:07	14.92	39.3	39.3	18:30	22.30	21.1	33.1
3:00	6.80	11.2	43.1	11:10	14.97	29.0	39.1	18:35	22.38	21.2	30.6
3:15	7.05	13.2	37.4	11:15	15.05	20.7	37.3	18:40	22.47	23.1	34.3
3:30	7.30	11.2	36.1	11:30	15.30	18.4	38.3	18:45	22.55	20.6	30.4
3:45	7.55	12.7	38.8	11:40	15.47	21.8	36.4	18:50	22.63	20.7	31.8
4:00	7.80	15.9	36.4	11:45	15.55	35.3	38.3	18:55	22.72	19.8	31.0
4:15	8.05	30.6	36.4	11:50	15.63	25.9	41.4	19:00	22.80	22.8	32.2
4:20	8.13	36.4	36.4	11:55	15.72	27.8	41.2	19:05	22.88	22.1	35.4
4:30	8.30	22.9	36.2	12:00	15.80	25.3	43.4	19:10	22.97	24.8	34.9
4:45	8.55	37.9	37.9	12:06	15.90	23.9	40.3	19:15	23.05	20.7	33.0
5:00	8.80	39.2	39.2	12:10	15.97	27.8	37.9	19:20	23.13	24.9	35.3
5:15	9.05	36.9	36.9	12:15	16.05	30.4	37.0	19:25	23.22	20.7	34.5
5:30	9.30	34.4	34.4	12:20	16.13	38.4	38.3	19:30	23.30	22.3	32.6
5:45	9.55	39.1	39.1	12:25	16.22	35.3	38.3	19:35	23.38	21.2	34.3
6:00	9.80	32.6	32.6	12:30	16.30	31.4	40.4	19:40	23.47	17.9	31.8
6:15	10.05	38.3	38.3	12:35	16.38	38.7	38.7	19:45	23.55	35.5	35.5
6:30	10.30	37.9	37.9	12:40	16.47	40.0	40.0	19:55	23.72	31.0	39.1
6:45	10.55	29.1	41.4	12:45	16.55	37.9	37.9	20:00	23.80	19.7	38.3
7:00	10.80	24.7	42.2	12:50	16.63	38.7	38.7	20:05	23.88	21.9	36.1
7:05	10.88	23.6	36.4	12:55	16.72	38.7	38.7	20:10	23.97	21.9	36.1
7:10	10.97	23.9	43.5	13:00	16.80	38.4	38.3	20:15	24.05	20.2	30.9
7:15	11.05	24.4	44.5	13:15	17.05	36.9	36.9	20:20	24.13	27.2	37.0
7:25	11.22	24.2	44.0	13:30	17.30	39.3	39.3	20:25	24.22	36.1	36.1
7:30	11.30	24.1	43.9	13:45	17.55	40.3	40.3	20:30	24.30	37.3	37.3
7:42	11.50	21.8	45.1	14:00	17.80	39.3	39.3	20:38	24.43	31.8	37.3
7:45	11.55	19.7	41.4	14:10	17.97	32.9	39.3	20:45	24.55	22.3	37.7
7:52	11.67	13.8	42.6	14:15	18.05	38.3	38.3	20:50	24.63	22.9	38.9
8:00	11.80	14.8	44.1	14:20	18.13	27.8	34.5	20:55	24.72	24.2	36.6
8:05	11.88	12.6	41.1	14:25	18.22	27.7	39.3	21:00	24.80	22.9	38.9
8:10	11.97	14.5	42.2	14:30	18.30	34.5	37.3	21:05	24.88	20.6	37.0
8:15	12.05	14.5	40.3	14:35	18.38	33.2	36.9	21:10	24.97	26.0	40.5
8:20	12.13	11.9	37.7	14:40	18.47	27.5	35.2	21:15	25.05	24.8	37.1
8:25	12.22	12.1	41.5	14:45	18.55	25.9	38.3	21:20	25.13	42.2	42.2
8:30	12.30	12.9	45.1	14:50	18.63	16.2	37.4	21:25	25.22	27.2	40.3
8:35	12.38	16.6	47.5	14:55	18.72	14.5	31.8	21:30	25.30	17.1	34.5
8:40	12.47	13.8	44.9	15:00	18.80	13.4	35.3				
8:45	12.55	16.6	50.6	15:05	18.88	12.7	34.5				
8:50	12.63	14.5	42.2	15:10	18.97	20.2	36.2				

Annex 1.13 Sequential geographical positions of Fish 7

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
28-Apr-74				29-Apr-74			
11:15	0.00	52.336	1.952	3:00	15.75	52.271	2.172
11:30	0.25	52.331	1.952	3:15	16.00	52.267	2.171
11:45	0.50	52.324	1.959	3:30	16.25	52.264	2.167
12:00	0.75	52.315	1.961	3:45	16.50	52.262	2.173
12:15	1.00	52.307	1.965	4:00	16.75	52.263	2.173
12:30	1.25	52.298	1.966	4:15	17.00	52.264	2.172
12:45	1.50	52.289	1.969	4:30	17.25	52.265	2.170
13:00	1.75	52.280	1.971	4:45	17.50	52.270	2.177
13:15	2.00	52.271	1.973	5:00	17.75	52.273	2.176
13:30	2.25	52.262	1.975	5:15	18.00	52.276	2.182
13:45	2.50	52.253	1.978	5:29	18.23	52.281	2.189
14:00	2.75	52.245	1.981	5:45	18.50	52.286	2.196
14:15	3.00	52.238	1.985	6:00	18.75	52.292	2.201
14:30	3.25	52.230	1.988	6:15	19.00	52.301	2.210
14:45	3.50	52.222	1.988	6:30	19.25	52.307	2.209
15:00	3.75	52.217	1.992	6:45	19.50	52.316	2.216
15:15	4.00	52.214	1.997	7:00	19.75	52.324	2.221
15:30	4.25	52.211	2.003	7:15	20.00	52.325	2.215
15:45	4.50	52.209	2.008	7:30	20.25	52.326	2.213
16:00	4.75	52.207	2.013	8:00	20.75	52.325	2.214
16:15	5.00	52.208	2.020	8:15	21.00	52.326	2.210
16:30	5.25	52.210	2.024	8:30	21.25	52.326	2.209
16:45	5.50	52.213	2.034	8:45	21.50	52.328	2.207
17:00	5.75	52.215	2.041	9:00	21.75	52.331	2.210
17:15	6.00	52.217	2.047	9:15	22.00	52.331	2.207
17:30	6.25	52.220	2.059	9:30	22.25	52.331	2.204
17:45	6.50	52.223	2.065	9:45	22.50	52.333	2.201
18:00	6.75	52.228	2.076	10:00	22.75	52.336	2.198
18:15	7.00	52.231	2.079	10:15	23.00	52.338	2.192
18:30	7.25	52.236	2.088	10:30	23.25	52.340	2.184
18:45	7.50	52.241	2.094	10:45	23.50	52.341	2.178
19:00	7.75	52.246	2.101	11:00	23.75	52.342	2.173
19:15	8.00	52.251	2.109	11:15	24.00	52.344	2.169
19:30	8.25	52.257	2.116	12:00	24.75	52.346	2.162
19:45	8.50	52.265	2.124	12:15	25.00	52.344	2.156
20:00	8.75	52.273	2.135	12:30	25.25	52.344	2.155
20:15	9.00	52.281	2.145	12:45	25.50	52.344	2.155
20:30	9.25	52.290	2.144	13:00	25.75	52.345	2.156
20:45	9.50	52.299	2.151	13:15	26.00	52.343	2.152
21:00	9.75	52.306	2.154	13:30	26.25	52.345	2.155
21:15	10.00	52.314	2.161	13:45	26.50	52.345	2.155
21:30	10.25	52.319	2.160	14:00	26.75	52.345	2.154
21:45	10.50	52.328	2.171	14:15	27.00	52.345	2.153
22:00	10.75	52.330	2.170	14:30	27.25	52.345	2.153
22:15	11.00	52.334	2.171	14:45	27.50	52.345	2.159
22:30	11.25	52.337	2.178	15:00	27.75	52.345	2.159
22:45	11.50	52.339	2.181	15:15	28.00	52.344	2.159
23:00	11.75	52.339	2.182	15:30	28.25	52.345	2.158
23:15	12.00	52.340	2.184	15:45	28.50	52.345	2.159
23:30	12.25	52.339	2.186	16:00	28.75	52.346	2.161
23:45	12.50	52.337	2.189	16:15	29.00	52.348	2.166
29-Apr-74				16:30	29.25	52.350	2.171
0:00	12.75	52.332	2.186	16:45	29.50	52.352	2.172
0:15	13.00	52.329	2.195	17:00	29.75	52.355	2.174
0:30	13.25	52.326	2.199	17:15	30.00	52.362	2.172
0:45	13.50	52.318	2.190				
1:00	13.75	52.315	2.190				
1:30	14.25	52.304	2.188				
1:45	14.50	52.296	2.180				
2:00	14.75	52.291	2.183				
2:15	15.00	52.285	2.183				
2:30	15.25	52.280	2.181				
2:45	15.50	52.275	2.174				

Annex 1.14 Sequential vertical positions of Fish 7

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
28-Apr-74				28-Apr-74				28-Apr-74			
11:10	0.00	28.4	28.4	16:45	5.58	4.0	42.8	22:15	11.08	8.2	33.2
11:15	0.08	27.7	27.7	16:50	5.67	4.0	40.3	22:20	11.17	8.0	36.0
11:30	0.33	32.2	32.2	16:55	5.75	6.4	38.9	22:25	11.25	8.5	35.7
11:35	0.42	19.7	32.2	17:00	5.83	4.0	37.9	22:30	11.33	8.2	37.4
11:40	0.50	14.5	24.9	17:05	5.92	4.0	36.9	22:35	11.42	7.8	30.8
11:45	0.58	18.7	29.6	17:10	6.00	4.0	37.0	22:40	11.50	4.0	38.8
11:50	0.67	13.4	29.1	17:15	6.08	4.0	37.3	22:45	11.58	4.0	38.8
11:55	0.75	17.6	31.1	17:20	6.17	10.6	39.6	22:50	11.67	8.5	35.7
12:00	0.83	13.4	29.1	17:25	6.25	6.9	41.1	22:55	11.75	4.0	32.2
12:05	0.92	15.0	29.6	17:30	6.33	4.0	40.5	23:00	11.83	4.0	34.5
12:10	1.00	11.3	29.6	17:35	6.42	4.0	38.3	23:05	11.92	4.0	36.9
12:15	1.08	11.7	23.2	17:40	6.50	6.4	37.9	23:10	12.00	4.0	34.5
12:20	1.17	17.1	35.2	17:45	6.58	4.0	35.3	23:15	12.08	4.0	39.3
12:25	1.25	13.4	35.3	17:50	6.67	4.0	34.5	23:20	12.17	7.8	34.6
12:30	1.33	10.6	30.4	18:00	6.83	4.0	31.8	23:25	12.25	8.5	35.7
12:35	1.42	7.5	31.8	18:05	6.92	11.0	31.8	23:30	12.33	4.0	36.0
12:40	1.50	7.1	29.1	18:10	7.00	4.0	30.4	23:35	12.42	4.0	33.7
12:45	1.58	9.9	30.6	18:15	7.08	4.0	31.2	23:40	12.50	4.0	33.9
12:50	1.67	7.5	31.8	18:20	7.17	7.5	35.3	23:45	12.58	7.9	35.3
12:55	1.75	11.3	35.5	18:25	7.25	4.0	36.0	23:50	12.67	11.7	34.6
13:00	1.83	11.9	30.0	18:30	7.33	4.0	36.7	23:55	12.75	8.5	35.7
13:05	1.92	10.6	30.4	18:35	7.42	4.0	38.3	29-Apr-74			
13:10	2.00	11.3	26.0	18:40	7.50	4.0	37.4	0:00	12.83	4.0	31.2
13:15	2.08	11.0	24.9	18:45	7.58	8.0	36.0	0:05	12.92	4.0	34.5
13:20	2.17	7.3	27.2	18:50	7.67	4.0	36.1	0:10	13.00	4.0	34.5
13:25	2.25	7.7	26.0	18:55	7.75	4.0	37.4	0:15	13.08	8.0	36.0
13:30	2.33	6.8	26.3	19:00	7.83	4.0	40.3	0:20	13.17	8.3	33.9
13:35	2.42	11.0	28.4	19:05	7.92	7.0	39.3	0:25	13.25	8.5	35.7
13:40	2.50	7.3	30.4	19:10	8.00	4.0	36.7	0:30	13.33	8.0	36.0
13:45	2.58	7.5	31.8	19:15	8.08	4.0	38.4	0:35	13.42	8.6	31.7
13:50	2.67	10.8	34.5	19:20	8.17	4.0	44.5	0:40	13.50	8.1	36.7
13:55	2.75	7.6	32.5	19:25	8.25	4.0	43.9	0:45	13.58	8.4	34.5
14:00	2.83	7.0	30.6	19:30	8.33	4.0	24.0	0:50	13.67	8.6	36.3
14:05	2.92	7.0	33.5	19:35	8.42	8.5	44.7	0:55	13.75	7.9	39.2
14:10	3.00	10.3	35.3	19:40	8.50	7.5	38.7	1:00	13.83	8.4	34.5
14:15	3.08	7.1	35.3	19:45	8.58	8.3	42.3	1:05	13.92	8.2	37.4
14:20	3.17	7.3	33.7	19:50	8.67	4.0	24.0	1:10	14.00	7.7	36.9
14:25	3.25	10.5	32.9	19:55	8.75	4.0	38.1	1:15	14.08	7.8	38.4
14:30	3.33	7.1	34.4	20:00	8.83	4.0	43.5	1:20	14.17	11.2	36.1
14:35	3.42	7.2	32.9	20:05	8.92	8.5	40.2	1:25	14.25	7.9	35.3
14:40	3.50	10.1	31.4	20:10	9.00	7.5	38.7	1:30	14.33	7.4	34.5
14:45	3.58	7.3	33.7	20:15	9.08	7.5	35.3	1:35	14.42	7.5	35.3
14:50	3.67	10.1	34.4	20:20	9.17	7.8	42.2	1:40	14.50	8.3	38.1
14:55	3.75	7.0	33.5	20:25	9.25	7.8	42.2	1:45	14.58	8.4	38.8
15:00	3.83	7.5	35.3	20:30	9.33	4.0	38.4	1:50	14.67	7.8	38.4
15:05	3.92	7.8	33.9	20:35	9.42	7.7	40.5	1:55	14.75	8.8	37.5
15:10	4.00	7.5	35.3	20:40	9.50	4.0	47.4	2:00	14.83	7.1	35.3
15:15	4.08	7.3	33.7	20:45	9.58	4.0	40.0	2:05	14.92	9.6	37.3
15:20	4.17	7.6	36.1	20:50	9.67	4.0	46.0	2:10	15.00	6.9	35.5
15:25	4.25	7.6	36.1	20:55	9.75	4.0	44.8	2:15	15.08	10.8	37.9
15:30	4.33	7.4	37.9	21:00	9.83	4.0	46.0	2:20	15.17	10.3	35.3
15:35	4.42	7.1	38.3	21:05	9.92	4.0	44.1	2:25	15.25	6.8	34.5
15:40	4.50	7.3	37.0	21:10	10.00	7.7	44.1	2:30	15.33	7.0	36.4
15:45	4.58	10.3	38.3	21:15	10.08	8.0	47.9	2:35	15.42	4.0	33.7
15:50	4.67	17.1	40.3	21:20	10.17	7.5	42.2	2:40	15.50	6.7	36.2
15:55	4.75	10.3	41.1	21:25	10.25	8.2	45.7	2:45	15.58	6.9	38.3
16:00	4.83	7.3	43.5	21:30	10.33	8.5	49.1	2:50	15.67	9.2	35.2
16:05	4.92	10.6	43.5	21:35	10.42	4.0	44.1	2:55	15.75	8.9	35.5
16:10	5.00	10.5	42.5	21:40	10.50	4.0	43.1	3:00	15.83	7.5	38.7
16:15	5.08	7.4	47.9	21:45	10.58	7.8	42.2	3:05	15.92	9.6	37.3
16:20	5.17	7.8	42.2	21:50	10.67	8.0	47.9	3:10	16.00	12.4	40.0
16:25	5.25	8.0	40.0	21:55	10.75	18.7	40.5	3:15	16.08	12.0	40.0
16:30	5.33	4.0	40.0	22:00	10.83	4.0	34.5	3:20	16.17	10.5	39.3
16:35	5.42	7.0	39.3	22:05	10.92	4.0	37.6	3:25	16.25	9.4	38.9
16:40	5.50	7.1	38.3	22:10	11.00	8.5	35.7	3:30	16.33	7.9	35.3

Annex 1.14 continued. Sequential vertical positions of Fish 7

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
29-Apr-74				29-Apr-74			
3:35	16.42	4.0	33.2	11:10	24.00	20.0	36.0
3:40	16.50	4.0	31.7	11:15	24.08	20.0	40.0
3:45	16.58	8.6	31.7	11:20	24.17	24.5	40.8
3:50	16.67	8.0	40.0	11:25	24.25	24.1	36.0
3:55	16.75	8.2	37.4	12:00	24.83	34.2	46.8
4:00	16.83	8.3	38.1	12:05	24.92	44.5	44.5
4:05	16.92	11.0	38.7	12:10	25.00	38.4	47.5
4:10	17.00	9.6	37.3	12:15	25.08	45.6	45.6
4:15	17.08	8.5	35.1	12:20	25.17	48.0	48.0
4:20	17.17	9.2	34.8	12:25	25.25	45.1	45.1
4:25	17.25	12.7	38.8	12:30	25.33	42.5	42.5
4:30	17.33	19.7	39.2	12:35	25.42	47.9	47.9
4:35	17.42	8.2	37.4	12:40	25.50	47.6	47.5
4:40	17.50	8.4	38.8	12:45	25.58	44.5	44.5
4:45	17.58	8.6	36.3	12:50	25.67	46.7	46.7
4:50	17.67	8.4	34.5	12:55	25.75	46.7	46.7
4:55	17.75	6.8	34.5	13:00	25.83	46.7	46.7
5:00	17.83	6.4	37.9	13:15	26.08	45.4	45.3
5:05	17.92	8.9	35.5	13:30	26.33	46.3	46.3
5:10	18.00	10.6	37.0	13:45	26.58	43.9	43.9
5:15	18.08	4.0	36.1	14:00	26.83	46.6	46.6
5:20	18.17	10.3	38.3	14:15	27.08	45.6	45.6
5:25	18.25	9.2	37.7	14:30	27.33	46.7	46.7
5:29	18.32	9.9	36.4	14:45	27.58	47.7	47.7
5:35	18.42	9.6	37.3	15:00	27.83	43.9	43.9
5:40	18.50	9.1	39.1	15:15	28.08	44.9	44.9
5:45	18.58	9.8	34.3	15:30	28.33	46.2	46.2
5:50	18.67	11.3	35.5	15:45	28.58	45.6	45.6
5:55	18.75	8.9	35.5	16:00	28.83	44.5	44.5
6:00	18.83	9.1	34.1	16:15	29.08	37.9	37.9
6:05	18.92	9.2	35.2	16:30	29.33	45.6	45.6
6:10	19.00	8.5	33.2	16:38	29.47	24.7	39.3
6:15	19.08	10.3	35.1	16:40	29.50	28.4	38.7
6:20	19.17	11.3	35.5	16:45	29.58	22.1	42.0
6:25	19.25	9.8	35.5	16:50	29.67	18.0	42.2
6:30	19.33	9.6	34.5	16:55	29.75	17.3	43.5
6:35	19.42	11.3	35.5	17:00	29.83	28.4	45.6
6:40	19.50	11.3	35.5	17:05	29.92	25.4	42.6
6:45	19.58	7.0	36.4	17:10	30.00	22.9	44.1
6:50	19.67	18.7	36.9	17:15	30.08	24.9	38.7
6:55	19.75	28.8	35.4				
7:00	19.83	36.0	36.0				
7:15	20.08	34.6	34.6				
7:30	20.33	32.6	32.6				
8:00	20.83	33.3	33.3				
8:15	21.08	37.6	37.6				
8:30	21.33	26.7	26.7				
8:45	21.58	22.3	34.4				
9:00	21.83	34.5	34.5				
9:15	22.08	28.4	28.4				
9:30	22.33	37.4	37.4				
9:45	22.58	15.5	32.7				
9:50	22.67	20.7	31.8				
9:55	22.75	18.0	31.8				
10:00	22.83	20.4	32.6				
10:05	22.92	21.4	34.5				
10:10	23.00	24.5	36.7				
10:15	23.08	20.7	37.4				
10:20	23.17	27.1	36.3				
10:25	23.25	18.3	36.1				
10:30	23.33	17.3	33.7				
10:35	23.42	19.4	34.6				
10:40	23.50	17.1	34.5				
10:45	23.58	19.7	35.3				
10:50	23.67	16.8	38.1				
10:55	23.75	23.6	39.2				
11:00	23.83	20.7	41.5				
11:05	23.92	30.1	38.8				

Annex 1.15 Sequential geographical positions of Fish 8

Note: Time, Latitude and Longitude are given as decimal measurements.
(The ground track figure of this data has been omitted).

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
19-Apr-75			
10:30	0.00	52.369	1.833
10:45	0.25	52.367	1.829
11:00	0.50	52.363	1.823
11:15	0.75	52.358	1.816
11:30	1.00	52.351	1.813
11:45	1.25	52.343	1.811
12:00	1.50	52.335	1.807
12:15	1.75	52.327	1.810

Annex 1.16 Sequential vertical positions of Fish 8

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.
(The vertical plot figure of this data has been omitted).

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
19-Apr-75			
10:22	0.00	7.1	25.3
10:30	0.13	7.8	23.2
10:45	0.38	16.3	28.6
11:00	0.63	18.7	26.0
11:15	0.88	12.0	24.0
11:30	1.13	11.7	21.2
11:45	1.38	10.3	14.5
12:00	1.63	8.5	21.7
12:15	1.88	12.4	26.3

Annex 1.17 Sequential geographical positions of Fish 9

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
21-Apr-75			
6:45	0.00	52.388	1.836
7:00	0.25	52.388	1.835
7:15	0.50	52.389	1.838
7:30	0.75	52.390	1.844
7:45	1.00	52.394	1.849
8:00	1.25	52.397	1.856
8:15	1.50	52.403	1.862
8:30	1.75	52.409	1.868
8:45	2.00	52.415	1.873
9:00	2.25	52.421	1.878
9:15	2.50	52.429	1.883
9:30	2.75	52.437	1.884
9:45	3.00	52.447	1.887
10:00	3.25	52.458	1.890
10:15	3.50	52.465	1.896
10:30	3.75	52.475	1.900
10:45	4.00	52.482	1.900
11:00	4.25	52.491	1.901
11:15	4.50	52.499	1.904
11:45	5.00	52.509	1.903
12:00	5.25	52.515	1.907
12:15	5.50	52.520	1.908
12:30	5.75	52.525	1.911
13:00	6.25	52.531	1.913
13:15	6.50	52.533	1.913
13:30	6.75	52.534	1.918
13:45	7.00	52.532	1.920
14:00	7.25	52.530	1.923
14:15	7.50	52.527	1.924
14:30	7.75	52.522	1.926
14:45	8.00	52.516	1.930
15:15	8.50	52.499	1.930
15:30	8.75	52.492	1.931
15:45	9.00	52.484	1.933
16:00	9.25	52.477	1.937
16:15	9.50	52.467	1.936
16:30	9.75	52.458	1.937
16:45	10.00	52.450	1.939
17:00	10.25	52.442	1.940
17:15	10.50	52.435	1.939
17:30	10.75	52.429	1.941
17:45	11.00	52.422	1.943
18:00	11.25	52.416	1.943
18:15	11.50	52.410	1.943
18:30	11.75	52.406	1.947
18:45	12.00	52.404	1.949
19:00	12.25	52.402	1.951
19:15	12.50	52.400	1.952
19:30	12.75	52.399	1.953
19:45	13.00	52.398	1.956
20:00	13.25	52.399	1.959
20:15	13.50	52.400	1.961
20:30	13.75	52.403	1.966
20:45	14.00	52.407	1.969
21:00	14.25	52.411	1.972
21:15	14.50	52.417	1.978
21:30	14.75	52.424	1.982
21:45	15.00	52.431	1.985
22:00	15.25	52.439	1.990
22:15	15.50	52.446	1.991
22:30	15.75	52.453	1.991
22:45	16.00	52.463	1.993
23:00	16.25	52.470	1.996

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
21-Apr-75			
23:15	16.50	52.478	2.001
23:30	16.75	52.485	2.002
23:45	17.00	52.495	2.009
22-Apr-75			
0:00	17.25	52.501	2.011
0:15	17.50	52.508	2.013
0:30	17.75	52.513	2.012
0:45	18.00	52.518	2.015
1:00	18.25	52.521	2.017
1:15	18.50	52.525	2.023
1:30	18.75	52.527	2.025
1:45	19.00	52.526	2.021
2:00	19.25	52.527	2.021
2:15	19.50	52.529	2.031
2:30	19.75	52.528	2.036
2:45	20.00	52.523	2.031
3:00	20.25	52.519	2.034
3:15	20.50	52.517	2.044
3:30	20.75	52.509	2.041
3:45	21.00	52.502	2.047
4:00	21.25	52.493	2.046
4:15	21.50	52.484	2.045
4:30	21.75	52.476	2.050
4:45	22.00	52.467	2.047
5:00	22.25	52.461	2.051
5:15	22.50	52.455	2.052
5:30	22.75	52.450	2.050
5:45	23.00	52.443	2.046
6:00	23.25	52.437	2.044
6:15	23.50	52.431	2.044
6:30	23.75	52.427	2.044
6:45	24.00	52.422	2.044
7:00	24.25	52.418	2.043
7:15	24.50	52.415	2.045
7:30	24.75	52.411	2.045
7:45	25.00	52.409	2.047
8:00	25.25	52.407	2.047
8:30	25.75	52.404	2.051
8:45	26.00	52.405	2.054
9:00	26.25	52.406	2.056
9:15	26.50	52.409	2.059
9:30	26.75	52.413	2.062
9:45	27.00	52.418	2.065
10:00	27.25	52.424	2.068
10:15	27.50	52.430	2.072
10:30	27.75	52.437	2.074
10:45	28.00	52.444	2.073
11:00	28.25	52.450	2.077
11:15	28.50	52.457	2.079
11:30	28.75	52.462	2.083
11:45	29.00	52.468	2.085
12:00	29.25	52.475	2.089
12:15	29.50	52.482	2.092
12:30	29.75	52.489	2.094
12:45	30.00	52.495	2.096
13:00	30.25	52.500	2.098
13:15	30.50	52.504	2.098
13:30	30.75	52.508	2.101
13:45	31.00	52.510	2.104
14:00	31.25	52.513	2.106
14:15	31.50	52.515	2.110
14:30	31.75	52.515	2.113
14:45	32.00	52.514	2.116

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
22-Apr-75			
15:00	32.25	52.512	2.117
15:15	32.50	52.510	2.121
15:30	32.75	52.506	2.126
15:45	33.00	52.502	2.127
16:00	33.25	52.497	2.128
16:15	33.50	52.491	2.132
16:30	33.75	52.484	2.132
16:45	34.00	52.477	2.133
17:00	34.25	52.469	2.132
17:15	34.50	52.461	2.133
17:30	34.75	52.454	2.134
17:45	35.00	52.446	2.139
18:00	35.25	52.439	2.135
18:15	35.50	52.432	2.134
18:30	35.75	52.424	2.135
18:45	36.00	52.417	2.133
19:00	36.25	52.411	2.130
19:15	36.50	52.406	2.130
19:30	36.75	52.401	2.131

Annex 1.18 Sequential vertical positions of Fish 9

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
21-Apr-75				21-Apr-75				22-Apr-75			
6:45	0.00	8.5	24.3	23:45	17.00	15.6	28.6	16:00	33.25	19.3	37.4
7:00	0.25	10.3	22.8	22-Apr-75	0:00	17.25	26.9	16:15	33.50	13.9	33.7
7:15	0.50	12.4	23.5	0:15	17.50	14.5	22.8	16:30	33.75	17.5	33.6
7:30	0.75	7.3	20.6	0:30	17.75	17.1	27.5	16:45	34.00	15.2	37.3
7:45	1.00	10.3	22.8	0:45	18.00	16.2	33.1	17:00	34.25	17.9	36.6
8:00	1.25	11.3	18.6	1:00	18.25	16.2	34.4	17:15	34.50	19.7	41.4
8:15	1.50	12.4	29.0	1:15	18.50	16.2	35.5	17:30	34.75	17.9	42.7
8:30	1.75	11.3	34.7	1:30	18.75	14.5	31.0	17:45	35.00	16.6	41.4
8:45	2.00	11.9	35.2	1:45	19.00	15.3	31.0	18:00	35.25	17.9	48.1
9:00	2.25	9.6	40.0	2:00	19.25	14.8	30.9	18:15	35.50	15.9	42.2
9:15	2.50	11.7	34.6	2:15	19.50	16.2	31.6	18:30	35.75	17.9	42.7
9:30	2.75	12.1	36.2	2:30	19.75	15.0	31.2	18:45	36.00	20.7	50.8
9:45	3.00	10.8	32.7	2:45	20.00	17.1	32.6	19:00	36.25	18.8	48.0
10:00	3.25	9.1	26.7	3:00	20.25	15.0	33.3	19:15	36.50	19.6	47.8
10:15	3.50	6.6	22.3	3:15	20.50	16.2	31.6	19:30	36.75	20.7	45.0
10:30	3.75	10.3	28.9	3:30	20.75	16.5	33.0				
10:45	4.00	7.3	23.9	3:45	21.00	17.1	32.6				
11:00	4.25	8.7	24.2	4:00	21.25	16.2	33.1				
11:15	4.50	9.2	29.9	4:15	21.50	18.8	33.5				
11:45	5.00	8.2	24.8	4:30	21.75	15.5	35.5				
12:00	5.25	9.2	24.8	4:45	22.00	17.9	40.0				
12:15	5.50	9.6	23.5	5:00	22.25	26.0	40.5				
12:30	5.75	12.4	29.0	5:15	22.50	25.3	37.4				
13:00	6.25	12.4	28.9	5:30	22.75	18.4	38.3				
13:15	6.50	11.7	25.0	5:45	23.00	15.2	40.0				
13:30	6.75	12.7	25.7	6:00	23.25	11.0	31.8				
13:45	7.00	10.3	27.3	6:15	23.50	20.1	39.3				
14:00	7.25	13.2	31.2	6:30	23.75	12.4	37.3				
14:15	7.50	10.3	27.3	6:45	24.00	16.6	41.4				
14:30	7.75	13.2	29.4	7:00	24.25	14.5	31.0				
14:45	8.00	9.2	27.5	7:15	24.50	14.5	37.7				
15:15	8.50	11.0	35.3	7:30	24.75	16.6	39.1				
15:30	8.75	11.7	30.6	7:45	25.00	15.2	40.0				
15:45	9.00	9.9	33.5	8:00	25.25	16.2	40.2				
16:00	9.25	13.2	34.4	8:30	25.75	16.6	41.4				
16:15	9.50	13.9	33.7	8:45	26.00	16.6	36.6				
16:30	9.75	11.9	35.2	9:00	26.25	20.7	42.7				
16:45	10.00	12.7	36.4	9:15	26.50	17.6	42.0				
17:00	10.25	14.5	40.3	9:30	26.75	19.7	40.3				
17:15	10.50	13.1	34.5	9:45	27.00	19.7	37.7				
17:30	10.75	16.2	37.9	10:00	27.25	16.5	35.3				
17:45	11.00	13.9	37.0	10:15	27.50	19.2	36.6				
18:00	11.25	15.2	37.3	10:30	27.75	17.3	35.8				
18:15	11.50	15.9	39.3	10:45	28.00	17.6	37.6				
18:30	11.75	16.2	40.4	11:00	28.25	17.4	36.2				
18:45	12.00	16.2	34.4	11:15	28.50	17.6	37.9				
19:00	12.25	14.5	38.7	11:30	28.75	18.9	36.5				
19:15	12.50	13.6	36.2	11:45	29.00	17.1	36.4				
19:30	12.75	15.2	34.5	12:00	29.25	19.7	35.2				
19:45	13.00	13.8	35.5	12:15	29.50	17.5	33.5				
20:00	13.25	13.1	31.0	12:30	29.75	17.1	36.4				
20:15	13.50	14.5	33.2	12:45	30.00	17.1	34.2				
20:30	13.75	15.8	36.7	13:00	30.25	16.6	34.1				
20:45	14.00	13.1	33.2	13:15	30.50	17.4	38.0				
21:00	14.25	12.4	34.5	13:30	30.75	17.6	35.4				
21:15	14.50	13.6	34.3	13:45	31.00	16.2	35.5				
21:30	14.75	13.1	31.0	14:00	31.25	16.2	33.1				
21:45	15.00	14.5	33.0	14:15	31.50	17.6	33.2				
22:00	15.25	14.5	28.9	14:30	31.75	15.6	33.4				
22:15	15.50	15.3	33.2	14:45	32.00	16.2	33.2				
22:30	15.75	13.9	30.2	15:00	32.25	16.8	32.9				
22:45	16.00	15.1	32.7	15:15	32.50	17.6	33.2				
23:00	16.25	16.2	34.4	15:30	32.75	18.1	34.8				
23:15	16.50	13.8	33.1	15:45	33.00	18.1	34.4				
23:30	16.75	16.2	30.7								

Annex 1.19 Sequential geographical positions of Fish 10

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
24-Apr-75				25-Apr-75				25-Apr-75			
13:00	0.00	52.381	2.223	4:30	15.50	52.537	2.297	21:00	32.00	52.701	2.293
13:15	0.25	52.390	2.230	5:15	16.25	52.544	2.298	21:15	32.25	52.703	2.300
13:30	0.50	52.397	2.237	5:30	16.50	52.543	2.299	21:30	32.50	52.702	2.297
13:45	0.75	52.403	2.243	5:45	16.75	52.543	2.309	21:45	32.75	52.700	2.291
14:00	1.00	52.410	2.249	6:00	17.00	52.540	2.316	22:00	33.00	52.694	2.280
14:15	1.25	52.416	2.251	6:15	17.25	52.537	2.323	22:15	33.25	52.693	2.280
14:30	1.50	52.422	2.255	6:30	17.50	52.535	2.326	22:30	33.50	52.691	2.280
14:45	1.75	52.428	2.260	6:45	17.75	52.536	2.326	22:45	33.75	52.694	2.281
15:00	2.00	52.432	2.266	7:00	18.00	52.536	2.326	23:00	34.00	52.694	2.282
15:15	2.25	52.436	2.270	7:15	18.25	52.536	2.325	23:15	34.25	52.688	2.268
15:30	2.50	52.441	2.273	7:30	18.50	52.536	2.326	23:45	34.75	52.692	2.274
15:45	2.75	52.446	2.280	7:45	18.75	52.535	2.327	26-Apr-75			
16:00	3.00	52.449	2.283	8:00	19.00	52.536	2.327	0:00	35.00	52.695	2.274
16:15	3.25	52.453	2.291	8:15	19.25	52.536	2.327	0:15	35.25	52.692	2.262
16:30	3.50	52.454	2.298	8:30	19.50	52.535	2.327	0:30	35.50	52.702	2.281
16:45	3.75	52.456	2.303	8:45	19.75	52.535	2.326	0:45	35.75	52.705	2.275
17:00	4.00	52.456	2.310	9:00	20.00	52.535	2.327	1:00	36.00	52.716	2.288
17:15	4.25	52.451	2.309	9:15	20.25	52.535	2.328	1:15	36.25	52.717	2.280
17:30	4.50	52.442	2.303	9:30	20.50	52.535	2.327	1:30	36.50	52.723	2.280
17:45	4.75	52.438	2.302	9:45	20.75	52.536	2.328	2:00	37.00	52.741	2.293
18:00	5.00	52.433	2.296	10:00	21.00	52.535	2.327	2:30	37.50	52.751	2.295
18:15	5.25	52.429	2.295	10:15	21.25	52.535	2.328	2:45	37.75	52.742	2.272
18:30	5.50	52.425	2.291	10:30	21.50	52.535	2.327	3:00	38.00	52.742	2.259
18:45	5.75	52.418	2.284	10:45	21.75	52.535	2.327	3:15	38.25	52.751	2.260
19:00	6.00	52.413	2.277	11:00	22.00	52.536	2.330	3:30	38.50	52.761	2.275
19:15	6.25	52.409	2.277	11:15	22.25	52.536	2.333	3:45	38.75	52.755	2.257
19:30	6.50	52.402	2.275	11:30	22.50	52.539	2.336	4:00	39.00	52.767	2.266
19:45	6.75	52.393	2.270	11:45	22.75	52.544	2.343	4:15	39.25	52.768	2.260
20:00	7.00	52.385	2.267	12:00	23.00	52.550	2.346	4:30	39.50	52.773	2.262
20:15	7.25	52.376	2.264	12:15	23.25	52.556	2.347	4:45	39.75	52.776	2.260
20:30	7.50	52.369	2.259	12:30	23.50	52.564	2.348	5:45	40.75	52.776	2.258
20:45	7.75	52.364	2.260	12:45	23.75	52.573	2.354	6:00	41.00	52.775	2.258
21:00	8.00	52.358	2.259	13:00	24.00	52.582	2.356	6:15	41.25	52.774	2.260
21:15	8.25	52.351	2.261	13:15	24.25	52.592	2.359	6:30	41.50	52.771	2.250
21:30	8.50	52.346	2.254	13:30	24.50	52.600	2.358	6:45	41.75	52.771	2.259
21:45	8.75	52.341	2.255	13:45	24.75	52.611	2.362	7:00	42.00	52.772	2.265
22:00	9.00	52.340	2.257	14:00	25.00	52.622	2.366	7:15	42.25	52.771	2.263
22:15	9.25	52.337	2.255	14:15	25.25	52.634	2.359	7:30	42.50	52.771	2.264
22:30	9.50	52.337	2.260	14:30	25.50	52.646	2.366	7:45	42.75	52.765	2.264
22:45	9.75	52.338	2.261	14:45	25.75	52.656	2.363	8:00	43.00	52.764	2.266
23:00	10.00	52.339	2.259	15:00	26.00	52.668	2.362	8:15	43.25	52.761	2.262
23:15	10.25	52.342	2.259	15:15	26.25	52.678	2.356				
23:30	10.50	52.347	2.258	15:30	26.50	52.685	2.350				
23:45	10.75	52.353	2.261	15:45	26.75	52.695	2.353				
25-Apr-75				16:00	27.00	52.699	2.344				
0:00	11.00	52.359	2.263	16:15	27.25	52.704	2.339				
0:15	11.25	52.368	2.268	16:30	27.50	52.709	2.336				
0:30	11.50	52.377	2.272	16:45	27.75	52.712	2.329				
0:45	11.75	52.387	2.274	17:00	28.00	52.714	2.324				
1:00	12.00	52.397	2.276	17:15	28.25	52.716	2.325				
1:15	12.25	52.408	2.277	17:45	28.75	52.714	2.317				
1:30	12.50	52.419	2.275	18:00	29.00	52.714	2.315				
1:45	12.75	52.430	2.273	18:15	29.25	52.714	2.316				
2:00	13.00	52.443	2.282	18:30	29.50	52.711	2.309				
2:15	13.25	52.453	2.278	18:45	29.75	52.716	2.321				
2:30	13.50	52.468	2.288	19:00	30.00	52.715	2.317				
2:45	13.75	52.478	2.288	19:15	30.25	52.713	2.314				
3:00	14.00	52.490	2.293	19:30	30.50	52.711	2.304				
3:15	14.25	52.499	2.289	19:45	30.75	52.708	2.304				
3:30	14.50	52.510	2.298	20:00	31.00	52.703	2.297				
3:45	14.75	52.518	2.299	20:15	31.25	52.701	2.293				
4:00	15.00	52.525	2.297	20:30	31.50	52.704	2.299				
4:15	15.25	52.531	2.295	20:45	31.75	52.701	2.293				

Annex 1.20 Sequential vertical positions of Fish 10

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
24-Apr-75				25-Apr-75				25-Apr-75			
13:00	0.00	12.7	36.6	4:46	15.77	42.2	46.0	18:30	29.50	53.4	53.4
13:15	0.25	11.6	39.1	5:00	16.00	37.7	40.3	18:45	29.75	50.9	50.9
13:30	0.50	17.1	40.3	5:05	16.08	30.8	38.4	19:00	30.00	53.4	53.4
13:45	0.75	16.2	37.9	5:10	16.17	28.4	42.2	19:15	30.25	52.2	52.2
14:00	1.00	22.5	40.7	5:15	16.25	24.3	48.5	19:30	30.50	53.6	53.6
14:15	1.25	15.3	35.4	5:30	16.50	20.7	48.1	19:45	30.75	53.6	53.6
14:30	1.50	18.7	33.2	5:45	16.75	24.9	50.4	20:00	31.00	53.2	53.2
14:45	1.75	21.3	41.1	6:00	17.00	23.5	47.3	20:15	31.25	53.5	53.5
15:00	2.00	22.3	42.8	6:15	17.25	29.6	47.7	20:30	31.50	46.6	46.6
15:15	2.25	15.9	45.1	6:25	17.42	48.8	48.8	20:45	31.75	50.0	50.0
15:30	2.50	18.0	45.6	6:30	17.50	46.7	46.7	21:00	32.00	45.7	45.7
15:45	2.75	31.4	39.1	6:45	17.75	49.0	49.0	21:15	32.25	42.2	42.2
16:00	3.00	16.8	41.6	7:00	18.00	49.0	49.0	21:30	32.50	38.7	38.7
16:15	3.25	16.2	47.3	7:15	18.25	47.9	47.9	21:45	32.75	45.7	45.7
16:30	3.50	15.2	45.4	7:30	18.50	51.2	51.2	22:00	33.00	43.5	43.5
16:45	3.75	13.7	48.8	7:45	18.75	45.6	45.6	22:15	33.25	39.3	39.3
17:00	4.00	22.3	45.3	8:00	19.00	48.8	48.8	22:30	33.50	37.7	37.7
17:15	4.25	21.1	49.6	8:15	19.25	46.3	46.3	22:45	33.75	35.5	35.4
17:30	4.50	16.2	49.6	8:30	19.50	46.7	46.7	23:00	34.00	32.9	32.9
17:45	4.75	28.4	46.3	8:45	19.75	46.6	46.6	23:15	34.25	33.1	33.1
18:00	5.00	18.3	43.1	9:00	20.00	49.3	49.3	23:30	34.50	31.8	31.8
18:15	5.25	15.8	45.7	9:15	20.25	48.7	48.7	23:35	34.58	30.9	30.9
18:30	5.50	16.6	50.6	9:30	20.50	49.0	49.0	23:40	34.67	28.3	28.3
18:45	5.75	29.8	52.2	9:45	20.75	47.0	47.0	23:45	34.75	32.1	32.1
19:00	6.00	35.2	50.4	10:00	21.00	49.7	49.7	23:50	34.83	31.0	31.0
19:10	6.17	50.4	50.4	10:15	21.25	50.6	50.6	23:55	34.92	26.6	26.6
19:15	6.25	36.9	44.1	10:30	21.50	47.9	47.9	26-Apr-75			
19:30	6.50	24.7	50.9	10:45	21.75	47.0	47.0	0:00	35.00	31.4	31.4
19:45	6.75	18.7	54.8	11:00	22.00	27.0	42.2	0:15	35.25	29.9	29.9
20:00	7.00	15.2	50.8	11:15	22.25	25.7	42.6	0:20	35.33	29.9	29.9
20:15	7.25	16.2	52.2	11:30	22.50	28.4	52.2	0:25	35.42	30.9	30.9
20:30	7.50	21.0	57.7	11:45	22.75	25.1	50.2	0:30	35.50	32.5	32.5
20:45	7.75	13.9	53.2	12:00	23.00	28.3	54.2	0:45	35.75	34.7	34.7
21:00	8.00	20.0	55.7	12:15	23.25	25.9	53.6	1:00	36.00	30.2	32.5
21:15	8.25	16.0	55.7	12:30	23.50	25.1	50.2	1:15	36.25	32.9	32.9
21:30	8.50	17.6	54.5	12:45	23.75	26.3	48.1	1:30	36.50	31.4	31.4
21:45	8.75	21.1	54.9	13:00	24.00	26.9	45.2	1:45	36.75	28.3	28.3
22:00	9.00	15.2	48.5	13:15	24.25	25.9	47.3	2:00	37.00	31.8	37.3
22:15	9.25	18.8	56.5	13:30	24.50	33.2	51.2	2:15	37.25	37.0	37.0
22:30	9.50	19.0	59.6	13:45	24.75	28.4	49.3	2:30	37.50	35.3	35.3
22:45	9.75	21.4	59.1	14:00	25.00	27.7	48.0	2:45	37.75	41.3	41.3
23:00	10.00	22.5	59.1	14:15	25.25	26.6	52.7	3:00	38.00	37.7	37.6
23:15	10.25	19.7	54.6	14:30	25.50	24.8	52.8	3:15	38.25	32.1	32.1
23:30	10.50	21.4	49.0	14:45	25.75	28.7	48.7	3:30	38.50	33.5	33.5
23:45	10.75	24.9	58.0	15:00	26.00	30.6	50.9	3:45	38.75	27.9	37.6
25-Apr-75				15:15	26.25	29.0	48.1	4:00	39.00	35.5	42.6
0:00	11.00	21.8	56.5	15:22	26.37	38.9	50.2	4:15	39.25	31.8	40.0
0:15	11.25	24.9	62.1	15:26	26.43	40.4	49.3	4:30	39.50	34.2	42.6
0:30	11.50	23.9	53.2	15:29	26.48	43.9	51.8	4:45	39.75	34.2	40.5
0:45	11.75	20.7	53.4	15:30	26.50	43.5	53.2	5:00	40.00	39.3	42.2
1:00	12.00	19.7	50.4	15:45	26.75	39.1	50.9	5:15	40.25	38.9	41.2
1:15	12.25	22.8	47.5	16:00	27.00	42.0	50.6	5:30	40.50	37.0	37.0
1:30	12.50	22.3	49.3	16:15	27.25	42.7	53.4	5:45	40.75	40.3	40.3
1:45	12.75	21.4	46.8	16:30	27.50	44.0	51.2	6:00	41.00	33.7	33.7
2:00	13.00	21.1	40.2	16:45	27.75	37.7	52.8	6:15	41.25	26.3	26.3
2:15	13.25	22.3	47.9	17:00	28.00	42.2	57.2	6:30	41.50	36.2	36.2
2:30	13.50	16.2	44.9	17:03	28.05	57.2	57.2	6:45	41.75	38.7	38.7
2:45	13.75	21.1	47.3	17:12	28.20	53.6	53.6	7:00	42.00	43.5	43.5
3:00	14.00	19.8	44.2	17:15	28.25	47.6	53.6	7:15	42.25	41.1	41.1
3:15	14.25	23.6	44.7	17:20	28.33	53.6	53.6	7:30	42.50	38.9	38.9
3:30	14.50	22.8	47.5	17:30	28.50	50.9	53.7	7:45	42.75	39.9	42.6
3:45	14.75	24.7	45.1	17:30	28.50	53.7	53.7	7:50	42.83	44.1	44.1
4:00	15.00	23.9	46.7	17:38	28.63	53.7	53.7	7:55	42.92	44.8	44.8
4:15	15.25	32.6	47.9	17:45	28.75	44.9	51.9	8:00	43.00	43.5	43.5
4:30	15.50	31.8	48.1	17:48	28.80	51.9	51.9	8:15	43.25	38.3	38.3
4:40	15.67	38.4	46.0	18:00	29.00	53.7	53.7				
4:45	15.75	36.9	44.1	18:15	29.25	52.2	52.2				

Annex 1.21 Sequential geographical positions of Fish 11

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
27-Apr-75				28-Apr-75			
15:30	0.00	52.369	2.331	7:15	15.75	52.632	2.511
15:45	0.25	52.378	2.334	7:30	16.00	52.636	2.518
16:00	0.50	52.385	2.339	7:45	16.25	52.638	2.522
16:15	0.75	52.393	2.346	8:00	16.50	52.639	2.525
16:30	1.00	52.403	2.358	8:15	16.75	52.639	2.528
16:45	1.25	52.411	2.364	8:30	17.00	52.638	2.529
17:00	1.50	52.421	2.372	8:45	17.25	52.637	2.531
17:15	1.75	52.430	2.376	9:00	17.50	52.634	2.532
17:30	2.00	52.439	2.381	9:15	17.75	52.631	2.531
17:45	2.25	52.448	2.389	9:30	18.00	52.628	2.532
18:00	2.50	52.455	2.395	9:45	18.25	52.628	2.536
18:15	2.75	52.462	2.398	10:00	18.50	52.627	2.539
18:30	3.00	52.468	2.400	10:15	18.75	52.628	2.540
18:45	3.25	52.472	2.400	10:30	19.00	52.628	2.539
19:00	3.50	52.476	2.402	10:45	19.25	52.628	2.537
19:15	3.75	52.477	2.402	11:00	19.50	52.629	2.535
19:30	4.00	52.478	2.403	11:15	19.75	52.629	2.532
19:45	4.25	52.478	2.408	11:30	20.00	52.629	2.528
20:00	4.50	52.477	2.413	11:45	20.25	52.630	2.531
20:15	4.75	52.472	2.406	12:00	20.50	52.631	2.528
20:30	5.00	52.468	2.408	12:15	20.75	52.632	2.529
20:45	5.25	52.465	2.411	12:30	21.00	52.632	2.528
21:00	5.50	52.459	2.403	12:45	21.25	52.634	2.529
21:30	6.00	52.451	2.399	13:00	21.50	52.633	2.525
21:45	6.25	52.446	2.401	13:15	21.75	52.633	2.523
22:00	6.50	52.444	2.397	13:30	22.00	52.635	2.522
22:15	6.75	52.441	2.399	13:45	22.25	52.639	2.521
22:30	7.00	52.439	2.398	14:00	22.50	52.642	2.519
22:45	7.25	52.439	2.401	14:15	22.75	52.647	2.519
23:00	7.50	52.438	2.399	14:30	23.00	52.654	2.519
23:15	7.75	52.438	2.399	14:45	23.25	52.663	2.519
23:30	8.00	52.439	2.407	15:00	23.50	52.670	2.516
23:45	8.25	52.439	2.408	15:15	23.75	52.677	2.519
28-Apr-75				15:30	24.00	52.686	2.517
0:00	8.50	52.440	2.414	15:45	24.25	52.697	2.523
0:15	8.75	52.437	2.416	16:00	24.50	52.705	2.524
0:30	9.00	52.434	2.413	16:15	24.75	52.714	2.527
0:45	9.25	52.433	2.415	16:30	25.00	52.723	2.527
1:00	9.50	52.434	2.417	16:45	25.25	52.731	2.527
1:15	9.75	52.435	2.414	17:00	25.50	52.738	2.524
1:30	10.00	52.438	2.416	17:15	25.75	52.750	2.532
1:45	10.25	52.444	2.422	17:30	26.00	52.759	2.534
2:00	10.50	52.449	2.423	17:45	26.25	52.769	2.539
2:15	10.75	52.457	2.430	18:00	26.50	52.775	2.539
2:30	11.00	52.463	2.432	18:15	26.75	52.780	2.535
2:45	11.25	52.472	2.442	18:30	27.00	52.785	2.538
3:00	11.50	52.483	2.453				
3:15	11.75	52.494	2.459				
3:30	12.00	52.502	2.459				
3:45	12.25	52.512	2.460				
4:00	12.50	52.523	2.468				
4:15	12.75	52.534	2.471				
4:30	13.00	52.547	2.477				
4:45	13.25	52.558	2.482				
5:00	13.50	52.569	2.486				
5:15	13.75	52.577	2.485				
5:30	14.00	52.588	2.491				
5:45	14.25	52.597	2.493				
6:00	14.50	52.604	2.491				
6:15	14.75	52.612	2.502				
6:30	15.00	52.618	2.501				
6:45	15.25	52.622	2.501				
7:00	15.50	52.627	2.505				

Annex 1.22 Sequential vertical positions of Fish 11

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
27-Apr-75				28-Apr-75			
15:30	0.00	12.9	48.0	7:45	16.25	20.0	45.2
15:45	0.25	9.2	45.3	8:00	16.50	20.0	45.2
16:00	0.50	8.5	48.5	8:15	16.75	20.2	46.7
16:15	0.75	7.5	49.0	8:30	17.00	19.6	46.3
16:30	1.00	6.4	47.3	8:45	17.25	15.0	40.5
16:45	1.25	11.3	58.4	9:00	17.50	22.1	48.5
17:00	1.50	12.0	47.9	9:15	17.75	22.1	46.3
17:15	1.75	13.4	50.6	9:24	17.90	33.2	44.2
17:30	2.00	12.0	51.8	9:28	17.97	42.8	45.3
17:45	2.25	10.3	50.6	9:30	18.00	51.7	51.7
18:00	2.50	9.6	50.8	9:45	18.25	45.6	45.6
18:15	2.75	9.1	48.8	10:00	18.50	47.6	47.5
18:30	3.00	11.0	49.0	10:15	18.75	45.0	45.0
18:45	3.25	12.4	48.1	10:30	19.00	46.0	46.0
19:00	3.50	11.1	43.5	10:45	19.25	44.1	44.1
19:15	3.75	13.4	50.6	11:00	19.50	45.6	45.6
19:30	4.00	14.8	51.9	11:15	19.75	47.0	47.0
19:45	4.25	14.1	51.2	11:30	20.00	45.6	45.6
20:00	4.50	15.2	48.1	11:45	20.25	47.6	47.5
20:15	4.75	11.9	47.9	12:00	20.50	46.7	46.7
20:30	5.00	22.8	50.6	12:15	20.75	45.1	45.1
20:45	5.25	14.5	47.9	12:30	21.00	47.9	47.9
21:00	5.50	25.9	47.5	12:33	21.05	34.5	45.4
21:30	6.00	34.5	51.2	12:45	21.25	25.9	47.3
21:45	6.25	20.0	47.9	13:00	21.50	22.1	47.1
22:00	6.50	49.2	49.1	13:15	21.75	22.9	46.7
22:15	6.75	24.9	45.6	13:30	22.00	23.5	47.3
22:30	7.00	47.8	47.8	13:45	22.25	25.4	47.1
22:45	7.25	52.4	52.4	14:00	22.50	25.4	45.6
23:00	7.50	45.1	45.1	14:15	22.75	25.6	46.7
23:15	7.75	44.1	44.1	14:30	23.00	24.0	45.2
23:30	8.00	44.5	44.5	14:45	23.25	23.8	44.1
23:45	8.25	45.6	45.6	15:00	23.50	25.9	45.2
28-Apr-75				15:15	23.75	25.1	43.5
0:00	8.50	50.9	50.9	15:30	24.00	23.1	41.6
0:15	8.75	15.8	46.9	15:45	24.25	24.7	39.3
0:30	9.00	14.2	47.9	16:00	24.50	24.8	45.0
0:45	9.25	15.5	46.7	16:15	24.75	23.1	43.1
1:00	9.50	15.2	45.4	16:30	25.00	27.7	45.1
1:15	9.75	17.3	46.7	16:45	25.25	24.8	49.4
1:30	10.00	20.6	50.0	17:00	25.50	26.6	48.5
1:45	10.25	17.3	50.0	17:15	25.75	25.9	44.5
2:00	10.50	18.8	48.0	17:30	26.00	23.2	42.2
2:15	10.75	14.5	49.0	17:45	26.25	27.0	46.7
2:30	11.00	21.0	51.2	18:00	26.50	25.9	44.9
2:45	11.25	17.6	51.2	18:15	26.75	25.0	41.6
3:00	11.50	18.7	51.2	18:30	27.00	29.0	45.4
3:15	11.75	20.4	52.9				
3:30	12.00	15.0	51.2				
3:45	12.25	19.0	56.0				
4:00	12.50	12.0	50.8				
4:15	12.75	14.9	50.8				
4:30	13.00	15.8	52.4				
4:45	13.25	16.2	49.3				
5:00	13.50	17.6	51.2				
5:15	13.75	18.0	49.0				
5:30	14.00	21.9	50.1				
5:45	14.25	16.6	48.8				
6:00	14.50	17.4	48.7				
6:15	14.75	19.3	47.0				
6:30	15.00	21.0	51.2				
6:45	15.25	20.7	53.9				
7:00	15.50	15.9	50.9				
7:15	15.75	19.4	49.7				
7:30	16.00	21.4	49.0				

Annex 1.23 Sequential geographical positions of Fish 12

Note: Time, Latitude and Longitude are given as decimal measurements.
(The ground track figure of this data has been omitted).

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
13-May-76			
16:30	0.00	52.962	2.551
17:00	0.50	52.961	2.570
17:30	1.00	52.956	2.595
17:45	1.25	52.954	2.600
18:00	1.50	52.953	2.612
18:15	1.75	52.948	2.624
18:30	2.00	52.944	2.632

Annex 1.24 Sequential vertical positions of Fish 12

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.
(The vertical plot figure of this data has been omitted).

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
13-May-76			
15:43	0.00	13.6	34.3
16:30	0.78	21.4	42.2
16:45	1.03	20.6	37.0
17:00	1.28	13.8	35.5
17:30	1.78	11.3	33.1
17:45	2.03	8.4	30.1
18:00	2.28	22.8	41.4
18:15	2.53	19.7	37.7
18:30	2.78	17.3	33.7

Annex 1.25 Sequential geographical positions of Fish 14

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
29-Mar-77				30-Mar-77			
10:50	0.00	53.047	2.734	2:15	15.42	53.065	2.811
11:00	0.17	53.049	2.731	2:30	15.67	53.063	2.815
11:15	0.42	53.052	2.728	2:45	15.92	53.064	2.814
11:30	0.67	53.054	2.726	3:00	16.17	53.051	2.832
11:45	0.92	53.053	2.733	3:15	16.42	53.053	2.828
12:00	1.17	53.054	2.734	3:30	16.67	53.056	2.823
12:15	1.42	53.053	2.735	3:45	16.92	53.049	2.829
12:30	1.67	53.052	2.737	4:00	17.17	53.047	2.829
12:45	1.92	53.053	2.735	4:15	17.42	53.042	2.831
13:00	2.17	53.052	2.737	4:30	17.67	53.040	2.832
13:15	2.42	53.048	2.740	4:45	17.92	53.036	2.836
13:30	2.67	53.046	2.739	5:00	18.17	53.036	2.831
13:45	2.92	53.042	2.741	5:15	18.42	53.038	2.829
14:00	3.17	53.040	2.744	5:30	18.67	53.037	2.831
14:15	3.42	53.037	2.750	5:45	18.92	53.029	2.844
14:30	3.67	53.034	2.754	6:00	19.17	53.035	2.835
14:45	3.92	53.028	2.761	6:15	19.42	53.027	2.846
15:00	4.17	53.026	2.764	6:30	19.67	53.033	2.837
15:15	4.42	53.021	2.767	6:45	19.92	53.027	2.843
15:30	4.67	53.018	2.767	7:00	20.17	53.028	2.843
15:45	4.92	53.012	2.778	7:15	20.42	53.029	2.838
16:00	5.17	53.015	2.766	7:30	20.67	53.032	2.835
16:15	5.42	53.009	2.771	7:45	20.92	53.035	2.833
16:30	5.67	53.004	2.776	8:00	21.17	53.034	2.833
16:45	5.92	53.002	2.775	8:15	21.42	53.038	2.828
17:00	6.17	53.000	2.779	8:30	21.67	53.040	2.824
17:15	6.42	52.999	2.782	8:45	21.92	53.041	2.822
17:30	6.67	52.996	2.787	9:00	22.17	53.044	2.822
17:45	6.92	52.995	2.788	9:15	22.42	53.049	2.816
18:00	7.17	52.996	2.784	9:30	22.67	53.050	2.822
18:15	7.42	52.994	2.789	9:45	22.92	53.057	2.819
18:30	7.67	52.996	2.784	10:00	23.17	53.062	2.811
18:45	7.92	52.997	2.784	10:15	23.42	53.060	2.812
19:00	8.17	52.996	2.785	10:45	23.92	53.060	2.808
19:15	8.42	52.993	2.788	11:30	24.67	53.065	2.801
19:30	8.67	52.999	2.781	11:45	24.92	53.064	2.804
19:45	8.92	53.004	2.773	12:00	25.17	53.065	2.806
20:00	9.17	53.001	2.779	12:15	25.42	53.064	2.807
20:15	9.42	53.006	2.773	12:30	25.67	53.064	2.805
20:30	9.67	53.009	2.771	12:45	25.92	53.064	2.802
20:45	9.92	53.015	2.763	13:00	26.17	53.064	2.805
21:00	10.17	53.010	2.779	13:15	26.42	53.068	2.807
21:15	10.42	53.010	2.783	13:30	26.67	53.067	2.802
21:30	10.67	53.016	2.779	13:45	26.92	53.065	2.804
21:45	10.92	53.026	2.773	14:00	27.17	53.066	2.803
22:00	11.17	53.028	2.777	14:15	27.42	53.065	2.806
22:15	11.42	53.029	2.784	14:30	27.67	53.064	2.807
22:30	11.67	53.025	2.795	14:45	27.92	53.061	2.811
22:45	11.92	53.033	2.790	15:15	28.42	53.061	2.808
23:00	12.17	53.035	2.795	15:30	28.67	53.058	2.811
23:15	12.42	53.039	2.796				
23:30	12.67	53.054	2.779				
23:45	12.92	53.057	2.779				
30-Mar-77							
0:00	13.17	53.060	2.779				
0:15	13.42	53.046	2.812				
0:30	13.67	53.057	2.800				
0:45	13.92	53.058	2.808				
1:00	14.17	53.059	2.810				
1:15	14.42	53.059	2.815				
1:30	14.67	53.064	2.810				
1:45	14.92	53.063	2.813				
2:00	15.17	53.066	2.809				

Annex 1.26 Sequential vertical positions of Fish 14

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
29-Mar-77				29-Mar-77				29-Mar-77			
10:50	0.00	22.8	41.4	16:25	5.58	24.1	35.5	21:50	11.00	25.9	31.8
11:00	0.17	24.9	37.7	16:30	5.67	26.6	36.1	21:55	11.08	25.9	32.2
11:05	0.25	27.4	38.9	16:35	5.75	20.0	25.9	22:00	11.17	24.0	32.9
11:10	0.33	24.7	36.4	16:40	5.83	23.9	33.7	22:05	11.25	25.7	32.1
11:15	0.42	25.6	36.2	16:45	5.92	26.6	32.9	22:10	11.33	28.3	35.5
11:20	0.50	25.7	36.4	16:50	6.00	24.7	33.5	22:15	11.42	28.3	33.1
11:25	0.58	26.3	40.0	16:55	6.08	25.3	31.4	22:20	11.50	27.0	35.5
11:30	0.67	22.8	35.3	17:00	6.17	23.9	33.7	22:25	11.58	26.9	32.5
11:40	0.83	24.8	33.2	17:05	6.25	25.1	32.1	22:30	11.67	25.1	32.1
11:45	0.92	28.3	37.9	17:10	6.33	25.3	34.4	22:35	11.75	27.4	34.4
11:50	1.00	24.8	39.1	17:15	6.42	21.9	36.1	22:40	11.83	27.7	36.4
11:55	1.08	27.5	37.7	17:20	6.50	21.7	31.7	22:45	11.92	25.4	34.9
12:00	1.17	29.2	36.6	17:25	6.58	24.7	33.5	22:50	12.00	25.8	32.9
12:05	1.25	28.3	38.9	17:30	6.67	25.3	34.4	22:55	12.08	28.3	36.2
12:10	1.33	26.7	36.6	17:35	6.75	24.9	32.6	23:00	12.17	27.5	37.7
12:15	1.42	27.4	38.9	17:40	6.83	24.7	33.5	23:05	12.25	25.0	34.3
12:20	1.50	26.6	37.6	17:45	6.92	24.2	31.7	23:10	12.33	28.4	37.4
12:25	1.58	24.3	35.4	17:50	7.00	27.8	34.5	23:15	12.42	26.9	34.3
12:30	1.67	28.3	38.9	17:55	7.08	27.0	32.7	23:20	12.50	27.7	33.5
12:35	1.75	24.8	37.1	18:00	7.17	23.5	33.1	23:25	12.58	24.9	35.2
12:40	1.83	22.0	29.9	18:05	7.25	22.7	33.9	23:30	12.67	25.3	37.4
12:45	1.92	27.5	37.7	18:10	7.33	26.3	31.8	23:35	12.75	25.8	36.4
12:50	2.00	27.5	37.7	18:15	7.42	27.2	33.7	23:40	12.83	25.0	36.2
12:55	2.08	28.8	39.8	18:20	7.50	24.1	32.7	23:45	12.92	26.9	35.1
13:00	2.17	28.3	37.9	18:25	7.58	28.4	34.4	23:50	13.00	24.8	36.6
13:05	2.25	27.9	38.5	18:30	7.67	25.9	32.2	23:55	13.08	27.4	36.7
13:10	2.33	27.5	37.7	18:35	7.75	25.6	30.9	30-Mar-77			
13:15	2.42	29.2	39.1	18:40	7.83	27.8	31.1	0:00	13.17	24.8	34.9
13:20	2.50	29.0	40.0	18:45	7.92	26.6	28.8	0:05	13.25	25.9	37.9
13:25	2.58	27.4	36.7	18:50	8.00	25.9	30.7	0:10	13.33	26.9	38.0
13:30	2.67	26.5	38.2	18:55	8.08	27.5	32.6	0:15	13.42	27.7	36.4
13:35	2.75	31.0	37.1	19:00	8.17	23.1	28.7	0:20	13.50	25.9	35.5
13:40	2.83	30.7	35.5	19:05	8.25	24.4	31.1	0:25	13.58	26.3	37.3
13:45	2.92	37.1	39.1	19:10	8.33	25.6	33.6	0:30	13.67	27.6	34.7
13:50	3.00	28.4	35.3	19:15	8.42	25.7	32.1	0:35	13.75	27.5	37.7
13:55	3.08	32.2	38.3	19:20	8.50	25.0	28.7	0:40	13.83	29.2	39.1
14:00	3.17	30.1	40.3	19:25	8.58	24.3	28.8	0:45	13.92	27.0	38.3
14:05	3.25	25.9	38.3	19:30	8.67	26.2	31.5	0:50	14.00	25.9	37.9
14:10	3.33	25.3	37.4	19:35	8.75	22.8	28.9	0:55	14.08	27.0	38.3
14:15	3.42	23.5	37.3	19:40	8.83	24.4	31.1	1:00	14.17	25.9	37.6
14:20	3.50	22.8	35.3	19:45	8.92	26.1	31.4	1:05	14.25	27.5	37.7
14:25	3.58	20.7	34.5	19:50	9.00	26.9	32.5	1:10	14.33	27.0	38.3
14:30	3.67	21.1	35.5	19:55	9.08	31.4	34.4	1:15	14.42	27.9	38.5
14:35	3.75	22.3	35.2	20:00	9.17	25.1	29.8	1:20	14.50	26.7	39.1
14:40	3.83	21.8	36.4	20:05	9.25	21.8	30.6	1:25	14.58	27.9	37.6
14:45	3.92	17.6	33.2	20:10	9.33	26.9	32.5	1:30	14.67	28.3	38.9
14:50	4.00	21.1	35.5	20:15	9.42	27.0	31.8	1:35	14.75	27.9	38.5
14:55	4.08	22.3	35.2	20:20	9.50	24.7	30.6	1:40	14.83	30.1	40.3
15:00	4.17	21.4	35.3	20:25	9.58	26.9	35.1	1:45	14.92	27.4	36.7
15:05	4.25	23.5	34.5	20:30	9.67	25.1	29.8	1:50	15.00	25.9	38.3
15:10	4.33	25.1	34.4	20:35	9.75	27.0	32.7	1:55	15.08	27.6	38.2
15:15	4.42	25.1	36.7	20:40	9.83	24.0	31.2	2:00	15.17	25.6	38.9
15:20	4.50	24.3	33.2	20:45	9.92	26.3	31.8	2:05	15.25	26.9	39.1
15:25	4.58	25.9	35.3	20:50	10.00	25.9	30.7	2:10	15.33	27.5	37.7
15:30	4.67	25.9	35.3	20:55	10.08	23.1	29.9	2:15	15.42	26.9	39.1
15:35	4.75	23.9	37.0	21:00	10.17	29.0	34.5	2:20	15.50	28.3	41.5
15:40	4.83	25.4	36.1	21:05	10.25	26.5	33.2	2:25	15.58	27.9	40.5
15:45	4.92	27.8	34.5	21:10	10.33	24.9	30.0	2:30	15.67	27.4	38.9
15:50	5.00	25.9	35.3	21:15	10.42	27.4	34.4	2:35	15.75	28.3	41.5
15:55	5.08	24.7	33.5	21:20	10.50	25.8	32.9	2:40	15.83	26.9	39.1
16:00	5.17	23.5	34.5	21:25	10.58	29.1	32.2	2:45	15.92	26.7	39.1
16:05	5.25	24.1	35.5	21:30	10.67	25.8	32.9	2:50	16.00	25.9	37.6
16:10	5.33	27.0	32.7	21:35	10.75	28.3	33.1	2:55	16.08	28.3	40.2
16:15	5.42	26.3	34.5	21:40	10.83	28.3	35.5	3:00	16.17	28.3	38.9
16:20	5.50	21.3	35.5	21:45	10.92	29.0	31.8	3:05	16.25	29.0	39.1

Annex 1.26 continued. Sequential vertical positions of Fish 14

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
30-Mar-77				30-Mar-77				30-Mar-77			
3:10	16.33	28.4	40.4	8:35	21.75	26.6	39.3	14:00	27.17	31.8	38.7
3:15	16.42	27.7	39.3	8:40	21.83	27.9	38.5	14:05	27.25	28.4	38.7
3:20	16.50	29.0	41.1	8:45	21.92	30.1	40.3	14:15	27.42	30.4	37.0
3:25	16.58	26.6	39.8	8:50	22.00	26.7	39.1	14:20	27.50	31.8	38.7
3:30	16.67	26.7	39.1	8:55	22.08	28.3	38.9	14:25	27.58	30.4	37.0
3:35	16.75	25.7	38.5	9:00	22.17	27.2	40.3	14:30	27.67	30.6	39.3
3:40	16.83	29.8	38.3	9:05	22.25	28.8	39.8	14:35	27.75	27.2	37.0
3:45	16.92	28.6	39.6	9:10	22.33	30.4	40.3	14:40	27.83	31.1	37.9
3:50	17.00	29.0	39.1	9:15	22.42	27.2	40.3	14:45	27.92	33.7	40.3
3:55	17.08	28.3	38.9	9:20	22.50	26.6	39.3	14:50	28.00	30.4	37.0
4:00	17.17	30.6	39.3	9:25	22.58	24.9	35.2	14:55	28.08	31.8	38.7
4:05	17.25	29.2	41.5	9:30	22.67	27.5	40.3	15:05	28.25	29.0	40.0
4:10	17.33	27.7	42.2	9:35	22.75	26.7	36.6	15:10	28.33	31.8	38.7
4:15	17.42	26.6	39.8	9:40	22.83	26.0	40.5	15:15	28.42	33.2	40.5
4:20	17.50	29.1	41.4	9:45	22.92	23.1	38.0	15:20	28.50	32.2	38.3
4:25	17.58	28.3	40.2	9:50	23.00	24.3	37.6	15:25	28.58	30.4	40.3
4:30	17.67	28.8	39.8	9:55	23.08	29.0	40.0	15:30	28.67	31.8	38.7
4:35	17.75	29.2	39.1	10:00	23.17	28.3	41.5				
4:40	17.83	26.6	37.6	10:05	23.25	39.6	39.6				
4:45	17.92	27.7	42.2	10:10	23.33	33.6	38.9				
4:50	18.00	28.8	39.8	10:15	23.42	33.7	40.3				
4:55	18.08	28.4	37.4	10:20	23.50	35.5	38.3				
5:00	18.17	31.4	40.4	10:25	23.58	35.5	37.9				
5:05	18.25	28.3	40.2	10:30	23.67	31.8	35.3				
5:10	18.33	29.1	41.4	10:35	23.75	33.7	40.3				
5:15	18.42	32.2	41.4	10:40	23.83	32.5	39.6				
5:20	18.50	27.9	40.5	10:45	23.92	34.5	37.3				
5:25	18.58	28.3	38.9	10:50	24.00	34.5	37.9				
5:30	18.67	29.0	40.0	10:55	24.08	40.0	40.0				
5:35	18.75	33.5	42.2	11:00	24.17	34.5	37.9				
5:40	18.83	33.5	42.2	11:05	24.25	36.4	36.4				
5:45	18.92	30.9	38.9	11:10	24.33	34.5	37.9				
5:50	19.00	32.9	39.3	11:15	24.42	33.2	36.9				
5:55	19.08	30.7	37.9	11:20	24.50	36.1	39.3				
6:00	19.17	31.8	39.5	11:25	24.58	33.2	36.9				
6:05	19.25	33.3	37.4	11:30	24.67	33.3	43.0				
6:10	19.33	28.3	40.2	11:35	24.75	32.7	35.5				
6:15	19.42	24.6	39.9	11:40	24.83	38.1	42.3				
6:20	19.50	27.5	37.7	11:45	24.92	35.3	38.7				
6:25	19.58	27.7	39.3	11:50	25.00	36.1	39.6				
6:30	19.67	27.9	37.6	11:55	25.08	36.1	39.6				
6:35	19.75	26.6	37.6	12:00	25.17	35.3	38.7				
6:40	19.83	35.3	41.4	12:05	25.25	29.1	37.4				
6:45	19.92	34.5	39.9	12:10	25.33	27.8	37.9				
6:50	20.00	30.7	37.9	12:15	25.42	29.1	37.4				
6:55	20.08	30.1	40.3	12:20	25.50	29.0	39.6				
7:00	20.17	34.2	39.1	12:25	25.58	29.6	38.1				
7:05	20.25	35.5	40.2	12:30	25.67	34.5	37.9				
7:10	20.33	37.9	40.2	12:35	25.75	31.8	35.3				
7:15	20.42	30.4	40.3	12:40	25.83	33.9	38.1				
7:20	20.50	27.2	43.5	12:45	25.92	32.2	38.3				
7:25	20.58	26.3	40.0	12:50	26.00	31.4	39.2				
7:30	20.67	23.6	38.5	12:55	26.08	30.2	37.6				
7:35	20.75	27.2	40.3	13:00	26.17	29.3	44.4				
7:40	20.83	25.1	41.2	13:05	26.25	31.4	39.2				
7:45	20.92	25.1	38.9	13:10	26.33	33.9	38.1				
7:50	21.00	27.2	40.3	13:15	26.42	36.7	40.8				
7:55	21.08	22.3	37.4	13:20	26.50	24.9	33.2				
8:00	21.17	24.9	40.3	13:25	26.58	33.3	41.5				
8:05	21.25	25.0	39.8	13:30	26.67	35.3	39.2				
8:10	21.33	26.9	39.1	13:35	26.75	29.0	37.3				
8:15	21.42	24.9	35.2	13:40	26.83	32.2	38.3				
8:20	21.50	25.8	39.9	13:45	26.92	31.8	38.7				
8:25	21.58	29.8	42.5	13:50	27.00	30.9	36.2				
8:30	21.67	23.5	40.2	13:55	27.08	32.6	40.8				

Annex 1.27 Sequential geographical positions of Fish 15

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
31-Mar-77			
9:15	0.00	53.080	2.777
9:30	0.25	53.082	2.770
10:00	0.75	53.079	2.768
10:15	1.00	53.080	2.762
10:30	1.25	53.083	2.757
10:45	1.50	53.092	2.755
11:15	2.00	53.109	2.752
11:30	2.25	53.114	2.758
11:45	2.50	53.125	2.754
12:00	2.75	53.133	2.752
12:15	3.00	53.141	2.755
12:30	3.25	53.149	2.755
12:45	3.50	53.160	2.754
13:00	3.75	53.168	2.755
13:15	4.00	53.176	2.760
13:30	4.25	53.183	2.761
13:45	4.50	53.189	2.768
14:00	4.75	53.196	2.770
14:15	5.00	53.202	2.777
14:30	5.25	53.210	2.779
14:45	5.50	53.212	2.790
15:00	5.75	53.216	2.799
15:30	6.25	53.221	2.818

Annex 1.28 Sequential vertical positions of Fish 15

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
31-Mar-77				31-Mar-77			
9:15	0.00	37.4	41.5	14:50	5.58	26.3	29.0
9:20	0.08	37.4	37.4	14:55	5.67	30.9	36.2
9:25	0.17	36.4	36.4	15:00	5.75	30.7	33.1
9:30	0.25	29.0	36.1	15:10	5.92	31.0	35.4
9:35	0.33	33.2	36.9	15:15	6.00	30.4	33.7
9:40	0.42	35.5	38.3	15:20	6.08	31.6	33.2
9:45	0.50	32.9	36.1	15:25	6.17	30.0	34.2
9:50	0.58	34.5	37.9	15:30	6.25	31.7	36.6
9:55	0.67	35.3	38.7	15:35	6.33	33.2	37.6
10:00	0.75	32.6	40.3				
10:05	0.83	33.5	36.4				
10:10	0.92	36.1	39.6				
10:15	1.00	31.1	37.9				
10:20	1.08	27.7	36.4				
10:25	1.17	24.0	33.8				
10:30	1.25	22.9	36.2				
10:35	1.33	22.3	35.2				
10:40	1.42	29.6	36.9				
10:45	1.50	28.8	35.4				
10:50	1.58	26.6	31.0				
10:55	1.67	29.0	34.5				
11:00	1.75	29.0	34.5				
11:05	1.83	26.6	36.1				
11:10	1.92	25.6	33.6				
11:15	2.00	26.6	32.9				
11:20	2.08	27.0	35.5				
11:25	2.17	28.7	32.5				
11:30	2.25	29.4	34.7				
11:35	2.33	26.9	33.0				
11:45	2.50	25.8	29.4				
11:55	2.67	28.4	34.4				
12:00	2.75	30.1	35.2				
12:05	2.83	29.8	32.7				
12:10	2.92	33.2	37.6				
12:15	3.00	32.1	36.7				
12:20	3.08	27.5	32.6				
12:25	3.17	28.8	35.4				
12:30	3.25	30.9	36.2				
12:35	3.33	28.8	31.0				
12:40	3.42	29.0	31.8				
12:45	3.50	28.8	31.0				
12:50	3.58	29.0	33.0				
13:00	3.75	25.6	30.9				
13:05	3.83	27.0	29.8				
13:08	3.88	33.1	33.1				
13:10	3.92	30.1	32.6				
13:15	4.00	25.6	30.9				
13:20	4.08	30.0	32.1				
13:25	4.17	29.2	31.7				
13:30	4.25	30.1	32.6				
13:35	4.33	24.8	26.9				
13:40	4.42	26.6	26.6				
13:45	4.50	26.9	28.9				
13:50	4.58	26.9	28.9				
13:55	4.67	32.2	32.2				
14:00	4.75	27.7	33.5				
14:05	4.83	27.4	32.1				
14:10	4.92	21.1	30.7				
14:15	5.00	31.0	33.2				
14:20	5.08	29.0	31.8				
14:25	5.17	29.0	31.8				
14:30	5.25	30.1	30.0				
14:35	5.33	31.4	31.4				
14:40	5.42	30.1	32.6				
14:45	5.50	26.9	32.5				

Annex 1.29 Sequential geographical positions of Fish 16

Note: Time, Latitude and Longitude are given as decimal measurements.
(The ground track figure of this data has been omitted).

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
1-Apr-77			
17:45	0.00	53.400	2.801
18:00	0.25	53.396	2.808
18:15	0.50	53.390	2.800
18:30	0.75	53.383	2.832
18:45	1.00	53.378	2.836
19:00	1.25	53.373	2.845
19:12	1.45	53.370	2.847

Annex 1.30 Sequential vertical positions of Fish 16

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.
(The vertical plot figure of this data has been omitted).

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
1-Apr-77			
17:35	0.00	14.1	34.1
17:40	0.08	13.9	37.0
17:45	0.17	9.2	35.2
17:50	0.25	9.6	34.5
17:55	0.33	12.4	37.3
18:00	0.42	11.9	35.2
18:05	0.50	7.7	30.2
18:10	0.58	8.5	31.0
18:15	0.67	9.8	32.5
18:20	0.75	8.5	35.4
18:30	0.92	13.6	37.5
18:35	1.00	7.5	31.8
18:45	1.17	11.0	35.3
18:50	1.25	7.6	36.1
18:55	1.33	7.7	36.9
19:00	1.42	7.5	31.8
19:05	1.50	10.6	37.0
19:12	1.62	10.5	36.1

Annex 1.31 Sequential geographical positions of Fish 17

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
3-Apr-77				4-Apr-77			
12:15	0.00	53.406	2.749	3:45	15.50	53.589	2.744
12:30	0.25	53.410	2.743	4:00	15.75	53.585	2.780
12:45	0.50	53.415	2.734	4:15	16.00	53.590	2.756
13:00	0.75	53.422	2.732	4:30	16.25	53.592	2.767
13:15	1.00	53.431	2.725	4:45	16.50	53.592	2.789
13:30	1.25	53.439	2.721	5:00	16.75	53.590	2.803
13:45	1.50	53.446	2.722	5:15	17.00	53.592	2.801
14:00	1.75	53.454	2.714	5:30	17.25	53.592	2.802
14:15	2.00	53.462	2.715	5:45	17.50	53.590	2.824
14:30	2.25	53.469	2.713	6:00	17.75	53.591	2.822
14:45	2.50	53.475	2.712	6:15	18.00	53.590	2.825
15:00	2.75	53.480	2.721	6:30	18.25	53.587	2.824
15:15	3.00	53.482	2.718	6:45	18.50	53.585	2.830
15:30	3.25	53.491	2.724	7:00	18.75	53.582	2.853
15:45	3.50	53.496	2.721	7:15	19.00	53.580	2.859
16:00	3.75	53.500	2.726	7:30	19.25	53.577	2.860
16:15	4.00	53.504	2.727	7:45	19.50	53.574	2.865
16:30	4.25	53.506	2.738	8:00	19.75	53.573	2.872
16:45	4.50	53.508	2.743	8:30	20.25	53.566	2.882
17:00	4.75	53.510	2.738	8:45	20.50	53.563	2.883
17:15	5.00	53.511	2.761	9:00	20.75	53.561	2.885
17:30	5.25	53.514	2.763	9:15	21.00	53.558	2.888
17:45	5.50	53.515	2.767	9:30	21.25	53.557	2.890
18:00	5.75	53.514	2.772	9:45	21.50	53.556	2.892
18:15	6.00	53.514	2.782	10:00	21.75	53.557	2.892
18:30	6.25	53.513	2.784	10:15	22.00	53.559	2.888
18:45	6.50	53.509	2.814	10:30	22.25	53.561	2.889
19:00	6.75	53.508	2.811	10:45	22.50	53.562	2.888
19:15	7.00	53.508	2.812	11:00	22.75	53.563	2.884
19:30	7.25	53.507	2.795	11:15	23.00	53.564	2.886
19:45	7.50	53.505	2.798				
20:00	7.75	53.505	2.816				
20:15	8.00	53.502	2.808				
20:30	8.25	53.500	2.822				
20:45	8.50	53.501	2.822				
21:00	8.75	53.499	2.819				
21:15	9.00	53.498	2.827				
21:30	9.25	53.499	2.833				
21:45	9.50	53.500	2.828				
22:00	9.75	53.501	2.831				
22:15	10.00	53.500	2.816				
22:30	10.25	53.502	2.806				
22:45	10.50	53.505	2.780				
23:00	10.75	53.506	2.790				
23:15	11.00	53.508	2.788				
23:30	11.25	53.511	2.816				
23:45	11.50	53.513	2.808				
4-Apr-77							
0:00	11.75	53.517	2.804				
0:15	12.00	53.517	2.794				
0:30	12.25	53.523	2.770				
0:45	12.50	53.527	2.772				
1:00	12.75	53.532	2.765				
1:15	13.00	53.537	2.777				
1:30	13.25	53.544	2.787				
1:45	13.50	53.549	2.773				
2:00	13.75	53.551	2.783				
2:15	14.00	53.561	2.761				
2:30	14.25	53.568	2.753				
2:45	14.50	53.570	2.766				
3:00	14.75	53.573	2.779				
3:15	15.00	53.579	2.775				
3:30	15.25	53.584	2.735				

Annex 1.32 Sequential vertical positions of Fish 17

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
3-Apr-77				3-Apr-77				3-Apr-77			
12:05	0.00	21.7	29.2	17:30	5.42	13.4	32.2	22:55	10.83	20.6	30.4
12:10	0.08	23.9	33.7	17:35	5.50	16.9	32.9	23:00	10.92	21.4	31.8
12:15	0.17	19.2	31.7	17:40	5.58	15.0	33.2	23:05	11.00	19.3	31.4
12:20	0.25	19.3	31.4	17:45	5.67	19.4	30.8	23:10	11.08	20.1	29.7
12:25	0.33	21.0	31.1	17:50	5.75	17.6	31.2	23:15	11.17	19.0	30.2
12:30	0.42	20.0	32.0	17:55	5.83	17.6	34.5	23:20	11.25	19.3	31.4
12:35	0.50	19.0	33.9	18:00	5.92	18.9	33.8	23:25	11.33	18.4	28.0
12:40	0.58	17.1	34.5	18:05	6.00	14.8	30.9	23:30	11.42	22.8	32.2
12:45	0.67	16.8	33.9	18:10	6.08	17.6	35.7	23:35	11.50	19.4	30.8
12:50	0.75	16.8	33.9	18:15	6.17	14.2	31.1	23:40	11.58	19.2	29.3
12:55	0.83	12.6	33.9	18:20	6.25	13.4	32.2	23:45	11.67	17.1	30.1
13:00	0.92	20.0	32.0	18:25	6.33	14.7	32.5	23:50	11.75	23.5	28.4
13:05	1.00	12.2	32.6	18:30	6.42	11.2	32.5	23:55	11.83	21.4	30.1
13:10	1.08	17.6	31.2	18:35	6.50	11.6	31.7	4-Apr-77			
13:15	1.17	16.0	36.0	18:40	6.58	16.6	33.2	0:00	11.92	21.4	30.1
13:20	1.25	16.8	29.6	18:45	6.67	14.5	32.6	0:05	12.00	19.2	34.3
13:25	1.33	16.3	32.6	18:50	6.75	17.6	35.7	0:10	12.08	18.1	32.2
13:30	1.42	14.7	32.5	18:55	6.83	17.6	34.5	0:15	12.17	18.7	33.3
13:35	1.50	13.6	32.7	19:00	6.92	17.1	34.5	0:20	12.25	17.9	31.7
13:40	1.58	12.0	32.0	19:05	7.00	16.6	32.2	0:25	12.33	17.9	31.7
13:45	1.67	13.1	31.2	19:10	7.08	18.1	36.9	0:30	12.42	21.8	30.7
13:50	1.75	11.9	31.4	19:15	7.17	15.0	33.2	0:35	12.50	21.8	30.7
13:55	1.83	13.4	32.2	19:20	7.25	14.5	31.8	0:40	12.58	18.7	29.6
14:00	1.92	12.3	33.0	19:25	7.33	13.1	31.0	0:45	12.67	18.0	31.8
14:05	2.00	15.3	43.6	19:30	7.42	13.4	32.1	0:50	12.75	20.7	29.1
14:10	2.08	14.5	35.6	19:35	7.50	16.9	32.9	0:55	12.83	22.8	32.2
14:15	2.17	17.6	35.7	19:40	7.58	16.6	35.3	1:05	13.00	17.6	31.2
14:20	2.25	14.5	35.4	19:45	7.67	15.5	30.6	1:10	13.08	17.1	30.1
14:25	2.33	13.6	32.7	19:50	7.75	18.8	36.4	1:15	13.17	23.2	28.0
14:30	2.42	14.4	40.3	19:55	7.83	17.6	31.1	1:20	13.25	22.8	32.2
14:35	2.50	12.6	33.9	20:00	7.92	20.7	33.2	1:25	13.33	20.0	32.0
14:40	2.58	14.6	35.9	20:05	8.00	16.9	32.9	1:30	13.42	14.5	30.1
14:45	2.67	14.1	34.3	20:10	8.08	18.3	32.5	1:35	13.50	20.7	33.2
14:50	2.75	13.6	32.7	20:15	8.17	17.6	34.5	1:40	13.58	21.4	30.1
14:55	2.83	13.8	33.3	20:20	8.25	17.9	31.8	1:45	13.67	21.4	34.5
15:00	2.92	13.8	33.3	20:25	8.33	18.3	32.5	1:50	13.75	23.9	33.8
15:05	3.00	18.4	32.7	20:30	8.42	16.9	32.9	1:55	13.83	19.7	31.4
15:10	3.08	13.1	31.2	20:35	8.50	19.4	34.6	2:00	13.92	19.2	34.3
15:15	3.17	14.5	35.4	20:40	8.58	20.6	37.0	2:05	14.00	21.8	30.7
15:20	3.25	14.5	30.1	20:45	8.67	17.3	33.7	2:10	14.08	19.4	30.8
15:25	3.33	12.4	33.2	20:50	8.75	18.3	32.5	2:15	14.17	20.7	29.1
15:30	3.42	14.1	29.3	20:55	8.83	17.3	33.7	2:20	14.25	17.9	31.7
15:35	3.50	15.5	38.5	21:00	8.92	20.1	32.9	2:25	14.33	20.7	33.2
15:40	3.58	17.6	31.2	21:05	9.00	18.7	33.2	2:30	14.42	19.2	34.3
15:45	3.67	17.6	31.2	21:10	9.08	19.3	31.4	2:35	14.50	20.0	32.0
15:50	3.75	16.0	32.0	21:15	9.17	18.7	33.2	2:40	14.58	16.6	33.2
15:55	3.83	13.4	32.2	21:20	9.25	15.8	31.4	2:45	14.67	18.4	29.8
16:00	3.92	15.3	33.9	21:25	9.33	18.7	29.6	2:50	14.75	17.6	31.1
16:05	4.00	15.8	32.1	21:30	9.42	20.4	32.6	2:55	14.83	18.1	36.9
16:10	4.08	15.8	31.4	21:35	9.50	19.7	32.2	3:00	14.92	19.7	32.2
16:15	4.17	15.5	29.8	21:40	9.58	17.6	31.1	3:05	15.00	19.0	33.9
16:20	4.25	8.9	21.1	21:45	9.67	23.3	29.7	3:10	15.08	18.7	33.2
16:25	4.33	16.6	32.2	21:50	9.75	24.9	33.2	3:15	15.17	20.7	33.2
16:30	4.42	9.8	17.4	21:55	9.83	19.7	32.2	3:20	15.25	18.3	32.5
16:35	4.50	17.1	30.1	22:00	9.92	20.1	32.9	3:25	15.33	17.3	33.7
16:40	4.58	15.8	31.4	22:05	10.00	17.3	30.4	3:30	15.42	20.0	32.0
16:45	4.67	15.3	30.2	22:10	10.08	18.3	32.5	3:35	15.50	20.6	33.7
16:50	4.75	15.8	31.4	22:15	10.17	17.6	31.1	3:40	15.58	22.3	33.2
16:55	4.83	15.8	35.3	22:20	10.25	17.3	30.4	3:45	15.67	17.6	34.5
17:00	4.92	14.7	32.5	22:25	10.33	22.3	33.2	3:50	15.75	21.4	34.5
17:05	5.00	14.5	31.8	22:30	10.42	16.6	32.2	3:55	15.83	18.7	33.2
17:10	5.08	14.2	31.1	22:35	10.50	20.6	33.7	4:00	15.92	19.4	30.8
17:15	5.17	14.7	32.5	22:40	10.58	21.6	32.1	4:05	16.00	19.7	32.2
17:20	5.25	15.0	33.2	22:45	10.67	19.3	31.4	4:10	16.08	20.2	36.2
17:25	5.33	17.4	30.7	22:50	10.75	16.9	32.9	4:15	16.17	18.7	36.9

Annex 1.32 continued. Sequential vertical positions of Fish 17

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
4-Apr-77				4-Apr-77			
4:20	16.25	18.8	33.5	10:05	22.00	28.4	35.3
4:25	16.33	19.7	35.3	10:10	22.08	24.4	34.5
4:30	16.42	21.4	34.5	10:15	22.17	20.6	33.7
4:35	16.50	19.7	35.3	10:20	22.25	20.4	32.6
4:40	16.58	23.2	37.5	10:25	22.33	26.0	33.2
4:45	16.67	17.1	34.5	10:30	22.42	20.6	33.7
4:50	16.75	16.8	33.9	10:35	22.50	19.2	34.1
4:55	16.83	14.3	34.8	10:40	22.58	18.3	36.1
5:00	16.92	19.4	29.7	10:45	22.67	20.1	32.9
5:05	17.00	15.0	29.6	10:50	22.75	20.6	33.7
5:10	17.08	16.0	28.0	10:55	22.83	20.6	33.7
5:15	17.17	19.8	35.4	11:00	22.92	21.4	35.3
5:20	17.25	23.5	34.5	11:05	23.00	19.7	35.3
5:25	17.33	24.7	36.4	11:10	23.08	22.3	33.2
5:30	17.42	24.7	33.5	11:15	23.17	17.6	34.5
5:35	17.50	21.1	38.1				
5:40	17.58	16.9	36.1				
5:45	17.67	18.0	35.3				
5:50	17.75	21.4	34.5				
5:55	17.83	18.3	36.1				
6:00	17.92	16.3	36.7				
6:05	18.00	17.4	35.1				
6:10	18.08	20.0	32.0				
6:15	18.17	19.7	35.3				
6:20	18.25	24.9	37.4				
6:25	18.33	18.0	35.3				
6:30	18.42	20.6	37.0				
6:35	18.50	24.9	41.5				
6:40	18.58	20.9	37.7				
6:45	18.67	20.4	36.7				
6:50	18.75	17.1	34.5				
6:55	18.83	17.9	31.7				
7:00	18.92	15.0	36.9				
7:05	19.00	18.0	35.3				
7:10	19.08	20.0	35.9				
7:15	19.17	17.3	30.4				
7:20	19.25	18.1	32.2				
7:25	19.33	16.2	31.4				
7:30	19.42	18.7	33.2				
7:35	19.50	21.0	37.9				
7:40	19.58	19.7	35.3				
7:45	19.67	20.4	36.7				
7:50	19.75	19.3	34.4				
7:55	19.83	18.0	31.8				
8:00	19.92	18.7	36.9				
8:05	20.00	19.7	35.3				
8:30	20.42	19.3	34.4				
8:35	20.50	20.1	36.1				
8:40	20.58	17.6	34.5				
8:45	20.67	17.1	32.6				
8:50	20.75	18.7	33.2				
8:55	20.83	16.2	31.4				
9:00	20.92	20.7	37.1				
9:05	21.00	18.0	35.3				
9:10	21.08	18.0	31.8				
9:15	21.17	18.7	33.2				
9:20	21.25	20.6	33.7				
9:25	21.33	21.0	31.1				
9:30	21.42	21.4	31.8				
9:35	21.50	18.3	32.5				
9:40	21.58	18.7	36.9				
9:45	21.67	21.4	35.3				
9:50	21.75	33.7	33.7				
9:55	21.83	33.2	33.2				
10:00	21.92	33.2	33.2				

Annex 1.33 Sequential geographical positions of Fish 18

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
27-May-77				28-May-77			
8:21	0.00	52.420	2.618	0:15	15.90	52.491	2.558
8:30	0.15	52.422	2.612	0:30	16.15	52.497	2.566
8:45	0.40	52.427	2.617	0:45	16.40	52.498	2.569
9:00	0.65	52.431	2.620	1:00	16.65	52.497	2.562
9:15	0.90	52.437	2.621	1:15	16.90	52.499	2.567
9:30	1.15	52.444	2.624	1:30	17.15	52.497	2.561
9:45	1.40	52.448	2.622	1:45	17.40	52.497	2.562
10:00	1.65	52.453	2.624	2:00	17.65	52.496	2.560
10:15	1.90	52.457	2.624	2:15	17.90	52.491	2.561
10:30	2.15	52.462	2.624	2:30	18.15	52.488	2.555
10:45	2.40	52.465	2.622	2:45	18.40	52.483	2.549
11:00	2.65	52.469	2.626	3:00	18.65	52.481	2.560
11:15	2.90	52.471	2.624	3:15	18.90	52.476	2.553
11:30	3.15	52.473	2.624	3:30	19.15	52.471	2.552
11:45	3.40	52.476	2.627	3:45	19.40	52.465	2.550
12:00	3.65	52.478	2.627	4:00	19.65	52.459	2.548
12:15	3.90	52.478	2.627	4:15	19.90	52.454	2.548
12:30	4.15	52.478	2.627	4:30	20.15	52.445	2.543
12:45	4.40	52.479	2.633	4:45	20.40	52.442	2.543
13:00	4.65	52.475	2.624	5:00	20.65	52.436	2.539
13:15	4.90	52.473	2.626	5:15	20.90	52.430	2.537
13:30	5.15	52.469	2.627	5:30	21.15	52.426	2.534
13:45	5.40	52.467	2.624	5:45	21.40	52.421	2.533
14:00	5.65	52.463	2.623	6:00	21.65	52.416	2.530
14:15	5.90	52.459	2.620	6:15	21.90	52.412	2.525
14:30	6.15	52.454	2.619	6:30	22.15	52.409	2.525
14:45	6.40	52.449	2.612	6:45	22.40	52.406	2.524
15:00	6.65	52.446	2.614	7:00	22.65	52.404	2.523
15:15	6.90	52.440	2.610				
15:30	7.15	52.434	2.607				
15:45	7.40	52.429	2.606				
16:00	7.65	52.425	2.603				
16:15	7.90	52.419	2.598				
16:30	8.15	52.415	2.597				
16:45	8.40	52.411	2.594				
17:00	8.65	52.406	2.591				
17:15	8.90	52.403	2.590				
17:30	9.15	52.399	2.589				
17:45	9.40	52.396	2.586				
18:00	9.65	52.394	2.584				
18:15	9.90	52.392	2.583				
18:30	10.15	52.391	2.582				
18:45	10.40	52.390	2.579				
19:00	10.65	52.392	2.578				
19:15	10.90	52.393	2.577				
19:30	11.15	52.395	2.572				
19:45	11.40	52.398	2.565				
20:00	11.65	52.403	2.562				
20:15	11.90	52.408	2.565				
20:30	12.15	52.413	2.562				
20:45	12.40	52.419	2.562				
21:00	12.65	52.424	2.560				
21:15	12.90	52.430	2.558				
21:30	13.15	52.435	2.562				
21:45	13.40	52.442	2.561				
22:00	13.65	52.447	2.553				
22:15	13.90	52.454	2.557				
22:30	14.15	52.460	2.562				
22:45	14.40	52.466	2.562				
23:00	14.65	52.469	2.555				
23:15	14.90	52.476	2.561				
23:30	15.15	52.481	2.562				
23:45	15.40	52.486	2.565				

Annex 1.34 Sequential vertical positions of Fish 18

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
<i>27-May-77</i>				<i>28-May-77</i>			
8:21	0.00	17.4	48.7	0:00	15.65	15.9	48.0
8:30	0.15	17.2	47.1	0:15	15.90	15.0	47.7
8:45	0.40	16.6	51.2	0:30	16.15	20.6	50.0
9:00	0.65	12.4	53.9	0:45	16.40	16.9	45.6
9:15	0.90	15.5	49.7	1:00	16.65	18.7	47.7
9:30	1.15	18.7	47.7	1:15	16.90	18.0	49.0
9:45	1.40	18.0	42.2	1:30	17.15	17.5	46.7
10:00	1.65	15.5	49.5	1:45	17.40	13.8	47.3
10:15	1.90	16.6	47.5	2:00	17.65	17.9	48.1
10:30	2.15	17.1	46.8	2:15	17.90	15.5	49.5
10:45	2.40	15.5	46.0	2:30	18.15	19.2	51.2
11:00	2.65	18.0	45.6	2:45	18.40	20.6	53.2
11:15	2.90	18.3	46.6	3:00	18.65	19.7	47.5
11:30	3.15	17.3	43.5	3:15	18.90	15.2	45.4
11:45	3.40	14.2	47.9	3:30	19.15	16.6	50.6
12:00	3.65	15.9	48.0	3:45	19.40	19.8	48.5
12:15	3.90	18.7	47.7	4:00	19.65	17.9	48.1
12:30	4.15	19.4	49.7	4:15	19.90	15.8	48.0
12:45	4.40	18.0	49.0	4:30	20.15	12.2	44.8
12:54	4.55	15.8	48.0	4:45	20.40	16.3	48.8
13:00	4.65	17.1	43.1	5:00	20.65	18.1	50.4
13:15	4.90	17.9	45.4	5:15	20.90	19.2	48.8
13:30	5.15	14.7	43.1	5:30	21.15	18.6	51.9
13:45	5.40	12.9	42.2	5:45	21.40	16.9	48.8
14:00	5.65	11.6	41.5	6:00	21.65	18.9	55.7
14:15	5.90	14.8	46.7	6:15	21.90	18.6	45.0
14:30	6.15	17.6	47.9	6:30	22.15	19.3	50.5
14:45	6.40	13.7	48.8	6:45	22.40	17.4	43.4
15:00	6.65	17.9	48.1	7:00	22.65	17.4	43.4
15:15	6.90	13.4	47.5				
15:30	7.15	13.4	47.5				
15:45	7.40	15.9	48.0				
16:00	7.65	18.0	45.6				
16:15	7.90	17.3	43.5				
16:30	8.15	15.9	45.1				
16:45	8.40	15.9	45.1				
17:00	8.65	14.7	43.1				
17:15	8.90	16.6	44.5				
17:30	9.15	17.3	43.5				
17:45	9.40	14.5	45.6				
18:00	9.65	16.6	44.5				
18:15	9.90	18.8	45.1				
18:30	10.15	16.2	46.3				
18:45	10.40	16.6	47.5				
19:00	10.65	15.9	45.1				
19:15	10.90	18.8	45.1				
19:30	11.15	18.0	49.0				
19:45	11.40	18.7	47.7				
20:00	11.65	16.6	47.5				
20:15	11.90	15.5	38.4				
20:30	12.15	16.9	45.6				
20:45	12.40	18.4	46.7				
21:00	12.65	19.7	44.5				
21:15	12.90	17.1	45.3				
21:30	13.15	16.9	48.8				
21:45	13.40	18.3	46.6				
22:00	13.65	18.8	48.0				
22:15	13.90	15.9	45.1				
22:30	14.15	17.6	48.5				
22:45	14.40	18.7	47.7				
23:00	14.65	16.6	50.6				
23:15	14.90	17.9	50.8				
23:30	15.15	19.7	50.6				
23:45	15.40	18.7	47.7				

Annex 1.35 Sequential geographical positions of Fish 19

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
28-May-77				29-May-77			
22:45	0.00	52.424	2.568	15:00	16.25	52.485	2.578
23:00	0.25	52.429	2.571	15:15	16.50	52.485	2.577
23:15	0.50	52.437	2.581	15:30	16.75	52.484	2.576
23:30	0.75	52.442	2.572	15:45	17.00	52.484	2.575
23:45	1.00	52.449	2.583	16:00	17.25	52.485	2.576
29-May-77				16:15	17.50	52.484	2.574
0:00	1.25	52.455	2.580	16:30	17.75	52.484	2.576
0:15	1.50	52.463	2.594	16:45	18.00	52.484	2.574
0:30	1.75	52.467	2.580	17:00	18.25	52.484	2.575
0:45	2.00	52.472	2.580	17:15	18.50	52.485	2.577
1:00	2.25	52.479	2.583	17:30	18.75	52.484	2.577
1:15	2.50	52.482	2.575	17:45	19.00	52.484	2.574
1:30	2.75	52.485	2.570	18:00	19.25	52.484	2.574
1:45	3.00	52.488	2.575				
2:00	3.25	52.490	2.571				
2:15	3.50	52.491	2.571				
2:30	3.75	52.492	2.570				
2:45	4.00	52.492	2.576				
3:00	4.25	52.492	2.572				
3:15	4.50	52.492	2.570				
3:30	4.75	52.492	2.569				
3:45	5.00	52.491	2.568				
4:00	5.25	52.491	2.568				
4:15	5.50	52.491	2.572				
4:30	5.75	52.490	2.577				
4:45	6.00	52.487	2.576				
5:00	6.25	52.485	2.578				
5:15	6.50	52.484	2.575				
5:30	6.75	52.484	2.574				
5:45	7.00	52.484	2.571				
6:00	7.25	52.484	2.575				
6:15	7.50	52.484	2.574				
6:30	7.75	52.484	2.575				
6:45	8.00	52.486	2.579				
7:00	8.25	52.485	2.578				
7:15	8.50	52.486	2.576				
7:30	8.75	52.486	2.578				
7:45	9.00	52.485	2.576				
8:00	9.25	52.486	2.579				
8:15	9.50	52.486	2.579				
8:30	9.75	52.486	2.580				
8:45	10.00	52.486	2.579				
9:00	10.25	52.486	2.580				
9:15	10.50	52.486	2.580				
9:30	10.75	52.485	2.579				
9:45	11.00	52.486	2.577				
10:00	11.25	52.486	2.579				
10:15	11.50	52.485	2.577				
10:45	12.00	52.485	2.579				
11:00	12.25	52.486	2.581				
11:15	12.50	52.485	2.575				
11:30	12.75	52.485	2.573				
11:45	13.00	52.485	2.572				
12:00	13.25	52.485	2.573				
12:15	13.50	52.485	2.570				
12:30	13.75	52.485	2.573				
12:45	14.00	52.484	2.574				
13:00	14.25	52.485	2.573				
13:15	14.50	52.485	2.578				
13:30	14.75	52.485	2.577				
13:45	15.00	52.484	2.575				
14:00	15.25	52.485	2.577				
14:45	16.00	52.484	2.578				

Annex 1.36 Sequential vertical positions of Fish 19

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
<i>28-May-77</i>				<i>29-May-77</i>			
22:41	0.00	26.0	44.1	14:45	16.07	48.1	48.1
22:45	0.07	22.3	42.8	15:00	16.32	49.0	49.0
23:00	0.32	20.6	46.7	15:15	16.57	42.7	42.7
23:15	0.57	22.8	47.0	15:30	16.82	49.5	49.5
23:30	0.82	21.8	48.0	15:45	17.07	49.0	49.0
23:45	1.07	17.9	45.4	16:00	17.32	48.8	48.8
<i>29-May-77</i>				16:15	17.57	47.9	47.9
0:00	1.32	18.8	48.0	16:30	17.82	47.7	47.7
0:15	1.57	25.8	47.4	16:45	18.07	47.6	47.5
0:30	1.82	21.4	45.6	17:00	18.32	45.6	45.6
0:45	2.07	19.7	46.9	17:15	18.57	49.7	49.7
1:00	2.32	22.1	44.7	17:30	18.82	44.9	44.9
1:15	2.57	20.0	43.9	17:45	19.07	49.5	49.5
1:30	2.82	21.4	47.4	18:00	19.32	50.0	50.0
1:45	3.07	19.3	49.3				
2:00	3.32	17.7	48.3				
2:15	3.57	21.4	49.0				
2:30	3.82	19.7	47.9				
2:45	4.07	18.8	45.1				
3:00	4.32	22.8	47.5				
3:15	4.57	24.1	46.7				
3:30	4.82	25.9	50.6				
3:45	5.07	48.8	48.8				
4:00	5.32	50.6	50.6				
4:15	5.57	47.9	47.9				
4:30	5.82	49.0	49.0				
4:45	6.07	47.9	47.9				
5:00	6.32	49.0	49.0				
5:15	6.57	49.0	49.0				
5:30	6.82	50.1	50.1				
5:45	7.07	49.7	49.7				
6:00	7.32	47.6	47.5				
6:15	7.57	49.0	49.0				
6:30	7.82	38.7	38.7				
6:45	8.07	48.8	48.8				
7:00	8.32	49.0	49.0				
7:15	8.57	45.4	45.3				
7:30	8.82	49.3	49.3				
7:45	9.07	49.7	49.7				
8:00	9.32	49.0	49.0				
8:15	9.57	49.0	49.0				
8:30	9.82	49.0	49.0				
8:45	10.07	49.7	49.7				
9:00	10.32	50.9	50.9				
9:15	10.57	50.9	50.9				
9:30	10.82	44.7	44.7				
9:45	11.07	50.4	50.4				
10:00	11.32	49.5	49.5				
10:15	11.57	46.0	46.0				
10:30	11.82	38.4	38.3				
10:45	12.07	45.1	45.1				
11:00	12.32	48.7	48.7				
11:15	12.57	43.5	43.5				
11:30	12.82	44.1	44.1				
11:45	13.07	42.5	42.5				
12:00	13.32	44.1	44.1				
12:15	13.57	44.5	44.5				
12:30	13.82	46.4	46.4				
12:45	14.07	48.7	48.7				
13:00	14.32	43.5	43.5				
13:15	14.57	48.8	48.8				
13:30	14.82	46.8	46.8				
13:40	14.98	61.3	61.3				
13:45	15.07	50.4	50.4				
14:00	15.32	49.6	49.6				

Annex 1.37 Sequential geographical positions of Fish 20

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)	Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
30-May-77				31-May-77				1-Jun-77			
19:15	0.00	53.004	3.014	11:45	16.50	53.126	3.160	5:15	34.00	53.490	3.116
19:30	0.25	53.005	3.018	12:00	16.75	53.133	3.159	5:30	34.25	53.492	3.123
19:45	0.50	53.004	3.026	12:15	17.00	53.133	3.163	5:45	34.50	53.494	3.124
20:00	0.75	52.997	3.042	12:30	17.25	53.149	3.159	6:00	34.75	53.496	3.124
20:15	1.00	53.000	3.045	12:45	17.50	53.159	3.160	6:15	35.00	53.497	3.127
20:30	1.25	53.001	3.050	13:00	17.75	53.168	3.160	6:30	35.25	53.499	3.132
20:45	1.50	53.002	3.056	13:15	18.00	53.174	3.167	6:45	35.50	53.500	3.136
21:00	1.75	52.999	3.064	13:30	18.25	53.187	3.162	7:00	35.75	53.501	3.139
21:15	2.00	53.002	3.068	13:45	18.50	53.196	3.163	7:15	36.00	53.501	3.144
21:30	2.25	53.003	3.074	14:00	18.75	53.205	3.165	7:30	36.25	53.502	3.150
21:45	2.50	53.001	3.086	14:15	19.00	53.215	3.166	7:45	36.50	53.502	3.152
22:00	2.75	52.995	3.100	14:30	19.25	53.221	3.169	8:00	36.75	53.502	3.153
22:15	3.00	52.999	3.100	14:45	19.50	53.230	3.170	8:15	37.00	53.502	3.159
22:30	3.25	53.001	3.106	15:00	19.75	53.239	3.169	8:30	37.25	53.503	3.162
22:45	3.50	53.008	3.103	15:15	20.00	53.248	3.168	8:45	37.50	53.502	3.163
23:00	3.75	53.004	3.112	15:30	20.25	53.252	3.171	9:00	37.75	53.503	3.166
23:15	4.00	53.006	3.106	15:45	20.50	53.260	3.172	9:15	38.00	53.504	3.173
23:30	4.25	53.006	3.109	16:00	20.75	53.265	3.177	10:00	38.75	53.511	3.182
23:45	4.50	53.003	3.113	16:15	21.00	53.272	3.178	10:15	39.00	53.513	3.186
31-May-77				16:30	21.25	53.275	3.183	10:30	39.25	53.516	3.187
0:00	4.75	53.006	3.108	16:45	21.50	53.279	3.184	10:45	39.50	53.520	3.189
0:15	5.00	53.007	3.108	17:00	21.75	53.284	3.187	11:15	40.00	53.527	3.193
0:30	5.25	53.005	3.107	17:15	22.00	53.287	3.189	11:30	40.25	53.531	3.191
0:45	5.50	52.995	3.118	17:30	22.25	53.290	3.194	11:45	40.50	53.532	3.190
1:00	5.75	53.004	3.102	17:45	22.50	53.292	3.198	12:00	40.75	53.534	3.190
1:15	6.00	53.005	3.108	18:00	22.75	53.294	3.202	12:15	41.00	53.537	3.190
1:30	6.25	53.008	3.111	18:15	23.00	53.298	3.205	12:30	41.25	53.540	3.190
1:45	6.50	53.005	3.124	18:30	23.25	53.300	3.209	12:45	41.50	53.542	3.191
2:00	6.75	53.005	3.130	19:00	23.75	53.298	3.219	13:00	41.75	53.545	3.190
2:15	7.00	53.011	3.129	19:15	24.00	53.300	3.218	13:15	42.00	53.549	3.187
2:45	7.50	53.013	3.146	19:30	24.25	53.302	3.221	13:30	42.25	53.554	3.187
3:00	7.75	53.017	3.150	19:45	24.50	53.305	3.230	13:45	42.50	53.561	3.183
3:15	8.00	53.022	3.151	20:00	24.75	53.306	3.240	14:00	42.75	53.568	3.178
3:30	8.25	53.027	3.151	20:15	25.00	53.311	3.243	14:15	43.00	53.575	3.173
3:45	8.50	53.029	3.151	20:30	25.25	53.315	3.220	14:30	43.25	53.581	3.169
4:00	8.75	53.033	3.160	20:45	25.50	53.316	3.222	14:45	43.50	53.587	3.168
4:15	9.00	53.044	3.152	21:00	25.75	53.318	3.227	15:00	43.75	53.593	3.165
4:30	9.25	53.043	3.171	21:15	26.00	53.324	3.200	15:15	44.00	53.599	3.163
4:45	9.50	53.043	3.182	21:30	26.25	53.327	3.190	15:30	44.25	53.604	3.163
5:00	9.75	53.043	3.182	21:45	26.50	53.331	3.192	15:45	44.50	53.609	3.164
5:15	10.00	53.045	3.183	22:00	26.75	53.335	3.189	16:00	44.75	53.614	3.166
5:30	10.25	53.047	3.186	22:15	27.00	53.339	3.190	16:15	45.00	53.619	3.166
5:45	10.50	53.051	3.191	22:30	27.25	53.344	3.175	16:30	45.25	53.623	3.168
6:00	10.75	53.054	3.191	23:30	28.25	53.363	3.149	16:45	45.50	53.627	3.168
6:15	11.00	53.054	3.199	23:45	28.50	53.367	3.172	17:00	45.75	53.629	3.172
6:30	11.25	53.056	3.202	1-Jun-77				17:15	46.00	53.631	3.172
6:45	11.50	53.059	3.202	0:00	28.75	53.373	3.156	17:30	46.25	53.632	3.178
7:00	11.75	53.060	3.206	0:15	29.00	53.380	3.140	17:45	46.50	53.636	3.183
7:15	12.00	53.061	3.210	0:30	29.25	53.388	3.152	18:00	46.75	53.637	3.185
7:30	12.25	53.064	3.211	0:45	29.50	53.395	3.157	18:15	47.00	53.639	3.186
7:45	12.50	53.066	3.208	1:00	29.75	53.404	3.142	18:30	47.25	53.641	3.187
8:00	12.75	53.068	3.205	1:15	30.00	53.409	3.157	18:45	47.50	53.644	3.184
8:15	13.00	53.070	3.203	1:30	30.25	53.419	3.142	19:00	47.75	53.648	3.174
8:30	13.25	53.071	3.201	1:45	30.50	53.425	3.125	19:15	48.00	53.647	3.179
8:45	13.50	53.076	3.197	2:00	30.75	53.432	3.122	19:30	48.25	53.646	3.188
9:00	13.75	53.079	3.193	2:15	31.00	53.440	3.130	19:45	48.50	53.645	3.190
9:15	14.00	53.082	3.190	2:30	31.25	53.446	3.131	20:00	48.75	53.646	3.186
9:30	14.25	53.085	3.187	2:45	31.50	53.450	3.137	20:15	49.00	53.648	3.176
9:45	14.50	53.087	3.183	3:00	31.75	53.455	3.125	20:30	49.25	53.648	3.174
10:00	14.75	53.086	3.183	3:15	32.00	53.460	3.125	20:45	49.50	53.648	3.175
10:15	15.00	53.088	3.180	3:30	32.25	53.464	3.116	21:00	49.75	53.647	3.180
10:30	15.25	53.093	3.177	3:45	32.50	53.471	3.115	21:15	50.00	53.648	3.177
10:45	15.50	53.099	3.173	4:00	32.75	53.474	3.117	21:30	50.25	53.646	3.183
11:00	15.75	53.105	3.172	4:15	33.00	53.479	3.112	21:45	50.50	53.642	3.198
11:15	16.00	53.110	3.168	4:30	33.25	53.483	3.111				
11:30	16.25	53.118	3.164	5:00	33.75	53.488	3.119				

Annex 1.38 Sequential vertical positions of Fish 20

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
30-May-77				31-May-77				31-May-77			
19:04	0.00	27.7	27.7	9:32	14.47	24.7	30.6	19:00	23.93	26.3	26.3
19:15	0.18	21.8	21.8	9:43	14.65	22.3	33.2	19:15	24.18	24.9	24.9
19:30	0.43	22.3	22.3	9:45	14.68	25.9	33.1	19:30	24.43	26.3	26.3
19:45	0.68	32.9	32.9	10:00	14.93	27.4	30.0	19:45	24.68	26.6	26.5
20:00	0.93	37.0	37.0	10:15	15.18	24.6	24.6	20:00	24.93	25.6	25.6
20:15	1.18	33.2	33.2	10:26	15.37	20.6	30.4	20:15	25.18	25.3	25.3
20:30	1.43	34.5	34.5	10:30	15.43	26.3	29.0	20:30	25.43	26.7	26.7
20:45	1.68	32.5	32.5	10:45	15.68	22.8	32.2	20:45	25.68	26.6	26.6
21:00	1.93	31.1	31.1	10:52	15.80	26.6	28.8	21:00	25.93	26.3	26.3
21:15	2.18	28.0	28.0	11:00	15.93	23.3	29.7	21:15	26.18	28.3	28.3
21:30	2.43	32.5	32.5	11:15	16.18	20.7	31.8	21:30	26.43	27.7	27.7
21:45	2.68	33.3	33.2	11:30	16.43	23.3	29.7	21:45	26.68	25.9	25.9
22:00	2.93	35.5	35.4	11:45	16.68	24.3	28.8	22:00	26.93	27.5	27.5
22:15	3.18	35.3	35.3	12:00	16.93	27.7	30.6	22:15	27.18	27.5	27.5
22:30	3.43	35.3	35.3	12:15	17.18	21.4	30.0	22:30	27.43	29.0	29.0
22:45	3.68	29.1	29.1	12:30	17.43	20.1	29.7	22:45	27.68	24.4	24.4
23:00	3.93	36.0	36.0	12:45	17.68	18.6	28.3	22:50	27.77	22.1	28.8
23:15	4.18	27.7	27.7	13:00	17.93	16.6	29.1	22:53	27.82	28.3	28.2
23:30	4.43	22.1	22.1	13:15	18.18	20.1	29.7	22:55	27.85	21.8	27.7
23:45	4.68	28.8	28.8	13:30	18.43	19.7	30.0	23:00	27.93	22.8	29.1
31-May-77				13:45	18.68	23.9	30.4	23:05	28.02	21.9	25.4
0:00	4.93	37.3	37.3	14:00	18.93	22.8	32.1	23:10	28.10	24.3	28.8
0:15	5.18	35.1	35.1	14:15	19.18	22.8	32.2	23:15	28.18	20.0	24.0
0:30	5.43	33.9	33.9	14:30	19.43	21.1	30.7	23:20	28.27	25.4	29.0
0:45	5.68	31.4	31.4	14:35	19.52	22.3	32.6	23:25	28.35	23.9	30.4
1:00	5.93	30.7	30.7	14:40	19.60	22.3	31.4	23:30	28.43	23.9	30.4
1:15	6.18	33.8	33.8	14:45	19.68	21.0	31.1	23:35	28.52	22.3	27.5
1:30	6.43	33.1	33.1	14:50	19.77	23.5	30.7	23:40	28.60	22.3	30.0
1:45	6.68	31.8	31.8	14:55	19.85	24.1	29.8	23:45	28.68	22.3	27.5
2:00	6.93	33.3	33.2	15:00	19.93	24.1	32.7	23:50	28.77	21.8	30.6
2:15	7.18	28.3	28.2	15:05	20.02	22.8	29.1	23:55	28.85	21.8	27.7
2:30	7.43	27.2	30.4	15:10	20.10	22.8	29.8	1-Jun-77			
2:45	7.68	29.6	29.6	15:15	20.18	23.5	31.8	0:00	28.93	22.9	30.9
3:00	7.93	27.5	27.5	15:20	20.27	24.9	30.0	0:05	29.02	23.5	31.8
3:15	8.18	30.1	30.1	15:25	20.35	24.8	31.0	0:10	29.10	23.5	31.8
3:30	8.43	28.0	28.0	15:30	20.43	23.5	30.7	0:15	29.18	24.7	30.6
3:36	8.53	21.4	31.8	15:35	20.52	27.0	29.8	0:20	29.27	24.1	29.8
3:38	8.57	31.8	31.8	15:40	20.60	22.8	29.1	0:25	29.35	24.2	31.7
3:39	8.58	23.2	30.8	15:45	20.68	25.3	28.4	0:30	29.43	25.3	31.4
3:43	8.65	19.4	30.8	15:50	20.77	23.5	31.8	0:35	29.52	22.3	30.0
3:45	8.68	17.1	25.8	15:55	20.85	21.9	29.0	0:40	29.60	24.1	29.8
4:00	8.93	22.1	31.2	16:00	20.93	22.3	31.4	0:45	29.68	25.1	29.8
4:15	9.18	25.8	30.1	16:05	21.02	24.9	29.1	0:50	29.77	24.7	30.6
4:30	9.43	30.7	35.1	16:10	21.10	23.5	29.0	0:55	29.85	22.3	30.0
4:45	9.68	25.8	30.1	16:15	21.18	27.8	31.1	1:00	29.93	24.7	30.6
5:00	9.93	29.1	29.1	16:20	21.27	26.7	31.7	1:05	30.02	24.9	31.8
5:15	10.18	31.2	31.2	16:25	21.35	23.5	29.0	1:10	30.10	22.3	31.4
5:30	10.43	31.2	31.2	16:30	21.43	25.9	29.1	1:15	30.18	23.5	31.8
5:45	10.68	29.1	29.1	16:35	21.52	22.3	31.4	1:20	30.27	25.3	31.4
6:00	10.93	32.0	32.0	16:40	21.60	22.8	29.1	1:25	30.35	23.3	29.7
6:15	11.18	29.1	29.1	16:45	21.68	24.4	31.1	1:30	30.43	22.1	31.0
6:30	11.43	30.8	30.8	16:50	21.77	21.4	31.8	1:35	30.52	25.9	29.1
6:45	11.68	30.1	30.1	16:55	21.85	23.3	29.7	1:40	30.60	20.1	29.7
7:00	11.93	30.2	30.2	17:00	21.93	21.3	29.8	1:45	30.68	23.1	30.6
7:15	12.18	26.5	26.5	17:05	22.02	24.4	27.8	1:50	30.77	21.8	30.6
7:30	12.43	28.4	28.4	17:10	22.10	22.9	28.2	1:55	30.85	21.4	31.8
7:45	12.68	27.0	27.0	17:15	22.18	25.4	29.0	2:00	30.93	21.1	30.7
8:00	12.93	30.4	30.4	17:20	22.27	25.4	29.0	2:05	31.02	24.1	29.8
8:15	13.18	28.4	28.4	17:25	22.35	22.3	26.0	2:10	31.10	23.5	31.8
8:30	13.43	30.6	30.6	17:30	22.43	28.3	28.3	2:15	31.18	22.8	32.1
8:45	13.68	33.2	33.2	17:45	22.68	29.1	29.1	2:20	31.27	27.5	32.6
9:00	13.93	30.8	30.8	18:00	22.93	27.8	27.8	2:25	31.35	24.3	31.0
9:15	14.18	30.8	30.8	18:15	23.18	25.9	25.9	2:30	31.43	26.6	31.0
9:28	14.40	27.0	30.8	18:30	23.43	26.3	26.3	2:35	31.52	24.3	33.2
9:30	14.43	30.8	30.8	18:45	23.68	27.2	27.2	2:40	31.60	27.5	32.6

Annex 1.38 continued. Sequential vertical positions of Fish 20

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
1-Jun-77				1-Jun-77			
2:45	31.68	24.8	33.0	13:45	42.68	20.6	33.7
2:50	31.77	24.9	32.6	13:50	42.77	23.5	35.5
2:55	31.85	24.3	31.0	13:55	42.85	22.3	35.2
3:00	31.93	27.7	33.5	14:00	42.93	24.7	36.4
3:05	32.02	25.0	30.6	14:05	43.02	22.3	37.4
3:10	32.10	25.9	32.2	14:10	43.10	22.8	36.7
3:15	32.18	30.7	30.7	14:15	43.18	24.2	36.6
3:20	32.27	22.9	30.9	14:20	43.27	22.8	35.3
3:25	32.35	24.7	30.6	14:25	43.35	24.1	35.5
3:30	32.43	23.9	30.4	14:30	43.43	25.3	34.4
3:35	32.52	20.7	31.0	14:35	43.52	26.3	37.3
3:40	32.60	25.5	33.1	14:40	43.60	23.3	36.1
3:45	32.68	20.7	28.9	14:45	43.68	24.1	38.3
3:50	32.77	21.4	31.8	14:50	43.77	24.7	36.4
3:55	32.85	19.7	32.2	14:55	43.85	20.1	36.1
4:00	32.93	21.0	31.1	15:00	43.93	24.4	37.9
4:05	33.02	20.7	31.8	15:05	44.02	21.0	34.5
4:10	33.10	20.6	30.4	15:10	44.10	24.1	35.5
4:15	33.18	24.7	33.5	15:15	44.18	19.7	38.3
4:20	33.27	22.3	31.4	15:20	44.27	19.7	38.3
4:25	33.35	23.3	32.9	15:25	44.35	22.8	38.3
4:30	33.43	23.9	30.4	15:30	44.43	25.9	38.3
4:35	33.52	24.9	33.2	15:35	44.52	25.6	36.2
4:40	33.60	32.6	32.6	15:40	44.60	21.3	38.3
4:45	33.68	30.6	33.5	15:45	44.68	26.6	39.3
4:50	33.77	28.0	36.0	15:50	44.77	19.4	38.4
4:55	33.85	26.0	33.2	15:55	44.85	23.9	37.0
5:00	33.93	25.9	32.2	16:00	44.93	27.0	38.3
5:05	34.02	23.9	33.7	16:05	45.02	38.4	38.4
5:10	34.10	33.7	33.7	16:10	45.10	28.4	37.4
5:15	34.18	33.7	33.7	16:15	45.18	22.7	37.6
5:20	34.27	31.8	31.8	16:20	45.27	26.7	39.1
5:25	34.35	30.6	30.6	16:25	45.35	24.4	37.9
5:30	34.43	32.2	32.2	16:30	45.43	23.5	40.2
5:45	34.68	33.5	33.5	16:35	45.52	27.7	36.4
6:00	34.93	32.2	32.2	16:40	45.60	25.9	40.2
6:15	35.18	34.5	34.5	16:45	45.68	21.8	39.3
6:30	35.43	34.4	34.4	16:50	45.77	28.4	40.4
6:45	35.68	35.2	35.2	16:55	45.85	32.6	40.3
7:00	35.93	32.6	32.6	17:00	45.93	32.2	38.3
7:15	36.18	34.5	34.5	17:05	46.02	33.2	38.2
7:30	36.43	34.5	34.5	17:10	46.10	41.2	41.2
7:45	36.68	35.5	35.5	17:15	46.18	38.9	38.9
8:00	36.93	34.2	34.1	17:20	46.27	40.0	40.0
8:15	37.18	34.2	34.1	17:25	46.35	39.1	39.1
8:30	37.43	32.7	32.7	17:30	46.43	42.2	42.2
8:45	37.68	28.3	33.1	17:45	46.68	41.2	41.2
9:00	37.93	32.6	32.6	18:00	46.93	40.3	40.3
9:15	38.18	34.4	34.4	18:15	47.18	39.3	39.3
9:30	38.43	31.8	31.8	18:30	47.43	38.4	38.4
9:45	38.68	32.6	32.6	18:45	47.68	40.3	40.3
10:00	38.93	30.8	30.8	19:00	47.93	40.3	40.3
10:15	39.18	32.1	32.1	19:15	48.18	40.0	40.0
10:30	39.43	30.7	30.7	19:30	48.43	42.0	42.0
10:45	39.68	33.5	33.5	19:45	48.68	40.5	40.5
11:00	39.93	29.0	29.0	20:00	48.93	41.5	41.5
11:15	40.18	32.7	32.7	20:15	49.18	41.5	41.5
11:30	40.43	33.2	33.2	20:30	49.43	37.4	37.4
11:45	40.68	33.5	33.5	20:45	49.68	42.2	42.2
12:00	40.93	33.0	33.0	21:00	49.93	37.4	37.4
12:15	41.18	34.5	34.5	21:15	50.18	41.5	41.5
12:30	41.43	31.0	31.0	21:30	50.43	37.0	37.0
12:45	41.68	35.3	35.3	21:45	50.68	38.7	38.7
13:00	41.93	34.5	34.5				
13:15	42.18	33.5	33.5				
13:30	42.43	23.3	36.1				
13:35	42.52	22.8	35.3				
13:40	42.60	23.3	36.1				

Annex 1.39 Sequential geographical positions of Fish 21

Note: Time, Latitude and Longitude are given as decimal measurements.
 (The ground track figure of this data has been omitted).

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
3-Jun-77			
19:00	0.00	52.941	2.947
19:15	0.25	52.942	2.950
19:30	0.50	52.937	2.954
19:45	0.75	52.944	2.944
20:00	1.00	52.939	2.951
20:15	1.25	52.940	2.949
20:30	1.50	52.939	2.951
20:45	1.75	52.940	2.949
21:00	2.00	52.944	2.942
21:15	2.25	52.943	2.944
21:30	2.50	52.939	2.951
21:45	2.75	52.941	2.950
22:00	3.00	52.937	2.954
22:15	3.25	52.938	2.951
22:30	3.50	52.944	2.940
22:45	3.75	52.936	2.954
23:00	4.00	52.943	2.945

Annex 1.40 Sequential vertical positions of Fish 21

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.
 (The vertical plot figure of this data has been omitted).

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
3-Jun-77			
18:52	0.00	29.0	28.9
19:00	0.13	27.9	27.9
19:15	0.38	28.4	28.4
19:30	0.63	29.1	29.1
19:45	0.88	30.9	30.9
20:00	1.13	29.8	29.8
20:15	1.38	27.7	27.7
20:30	1.63	27.8	27.8
20:45	1.88	27.8	27.8
21:00	2.13	26.6	26.5
21:15	2.38	28.4	28.4
21:30	2.63	28.4	28.4
21:45	2.88	25.9	25.9
22:00	3.13	28.0	28.0
22:15	3.38	27.7	27.7
22:30	3.63	29.0	29.0
22:45	3.88	26.3	26.3
23:00	4.13	26.3	26.3

Annex 1.41 Sequential geographical positions of Fish 22

Note: Time, Latitude and Longitude are given as decimal measurements.
(The ground track figure of this data has been omitted).

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
18-Apr-78			
12:00	0.00	53.655	2.922
12:15	0.25	53.655	2.921
12:30	0.50	53.655	2.921
12:45	0.75	53.657	2.921

Annex 1.42 Sequential vertical positions of Fish 22

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.
(The vertical plot figure of this data has been omitted).

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
18-Apr-78			
12:00	0.00	38.7	38.7
12:15	0.25	40.6	40.6
12:30	0.50	43.1	43.1
12:45	0.75	35.3	44.5

Annex 1.43 Sequential geographical positions of Fish 23

Note: Time, Latitude and Longitude are given as decimal measurements.

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
21-Apr-78			
15:30	0.00	53.692	2.959
15:45	0.25	53.695	2.967
16:00	0.50	53.697	2.978
16:15	0.75	53.699	2.989
16:30	1.00	53.701	2.997
16:45	1.25	53.702	3.011
17:00	1.50	53.703	3.024
17:15	1.75	53.706	3.031
17:30	2.00	53.708	3.046
17:45	2.25	53.711	3.052
18:00	2.50	53.714	3.057
18:15	2.75	53.717	3.061
18:30	3.00	53.719	3.074
18:45	3.25	53.721	3.084
19:00	3.50	53.722	3.096
19:15	3.75	53.722	3.093
19:30	4.00	53.721	3.101
19:45	4.25	53.718	3.126
20:00	4.50	53.717	3.128
20:15	4.75	53.718	3.140
20:30	5.00	53.719	3.145
20:45	5.25	53.722	3.146
21:00	5.50	53.724	3.151
21:15	5.75	53.727	3.155
21:30	6.00	53.731	3.157
21:45	6.25	53.737	3.152
22:00	6.50	53.740	3.151
22:15	6.75	53.744	3.148
22:30	7.00	53.746	3.150
22:45	7.25	53.751	3.145
23:00	7.50	53.756	3.135
23:15	7.75	53.759	3.138
23:30	8.00	53.764	3.137
23:45	8.25	53.768	3.137
22-Apr-78			
0:00	8.50	53.773	3.134
0:15	8.75	53.778	3.129
0:30	9.00	53.782	3.135
0:45	9.25	53.786	3.128
1:00	9.50	53.788	3.138
1:30	10.00	53.796	3.143
1:45	10.25	53.801	3.147
2:00	10.50	53.805	3.147
2:15	10.75	53.807	3.158
2:30	11.00	53.809	3.166
2:45	11.25	53.812	3.170
3:00	11.50	53.815	3.174
3:15	11.75	53.815	3.176
3:30	12.00	53.816	3.186
4:00	12.50	53.817	3.198
4:15	12.75	53.815	3.208
4:30	13.00	53.816	3.207
4:45	13.25	53.815	3.214
5:00	13.50	53.813	3.220
5:15	13.75	53.810	3.231
5:30	14.00	53.808	3.249
5:45	14.25	53.805	3.262
6:00	14.50	53.803	3.274
6:15	14.75	53.801	3.288
6:30	15.00	53.798	3.290
6:45	15.25	53.795	3.299
7:00	15.50	53.792	3.312
7:15	15.75	53.789	3.324

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
22-Apr-78			
7:30	16.00	53.786	3.334
7:45	16.25	53.783	3.344
8:00	16.50	53.781	3.351
8:15	16.75	53.779	3.360
8:30	17.00	53.777	3.368
8:45	17.25	53.774	3.376
9:00	17.50	53.771	3.385
9:15	17.75	53.769	3.391
9:30	18.00	53.767	3.398
9:45	18.25	53.765	3.407
10:00	18.50	53.765	3.410
10:15	18.75	53.762	3.416
10:30	19.00	53.761	3.421
10:45	19.25	53.759	3.425
11:00	19.50	53.757	3.428
11:15	19.75	53.755	3.431
11:30	20.00	53.753	3.433
11:45	20.25	53.752	3.437
12:00	20.50	53.750	3.439
12:15	20.75	53.749	3.442
12:30	21.00	53.750	3.443
13:00	21.50	53.748	3.452
13:15	21.75	53.749	3.456
13:30	22.00	53.748	3.460
14:00	22.50	53.748	3.469
14:30	23.00	53.757	3.472
14:45	23.25	53.761	3.475
15:00	23.50	53.764	3.480
15:15	23.75	53.767	3.487
15:30	24.00	53.768	3.495
15:45	24.25	53.771	3.500
16:00	24.50	53.773	3.509
16:15	24.75	53.774	3.521
16:30	25.00	53.774	3.528
16:45	25.25	53.775	3.537
17:00	25.50	53.776	3.546
17:15	25.75	53.775	3.558
17:30	26.00	53.775	3.567
17:45	26.25	53.774	3.586
18:00	26.50	53.773	3.595
18:15	26.75	53.774	3.599
18:30	27.00	53.773	3.613
18:45	27.25	53.771	3.622
19:00	27.50	53.770	3.636
19:15	27.75	53.769	3.649
19:30	28.00	53.769	3.645
19:45	28.25	53.767	3.657
20:00	28.50	53.765	3.666
20:30	29.00	53.761	3.685
20:45	29.25	53.760	3.694
21:00	29.50	53.759	3.701
21:15	29.75	53.761	3.698
21:30	30.00	53.763	3.694
21:45	30.25	53.762	3.698
22:00	30.50	53.762	3.709
23:45	32.25	53.753	3.743
23-Apr-78			
0:00	32.50	53.755	3.742
0:45	33.25	53.758	3.740
1:00	33.50	53.760	3.739
1:15	33.75	53.760	3.741
1:30	34.00	53.762	3.736
1:45	34.25	53.763	3.725

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
23-Apr-78			
2:00	34.50	53.766	3.727
2:15	34.75	53.765	3.730
2:30	35.00	53.766	3.731
3:00	35.50	53.767	3.741
3:15	35.75	53.769	3.737
3:30	36.00	53.771	3.739
3:45	36.25	53.769	3.755
4:00	36.50	53.770	3.753
4:15	36.75	53.773	3.757
4:30	37.00	53.772	3.768
4:45	37.25	53.774	3.766
5:00	37.50	53.775	3.779

Annex 1.44 Sequential vertical positions of Fish 23

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
21-Apr-78				21-Apr-78				22-Apr-78			
14:56	0.00	26.5	43.1	20:25	5.48	39.3	39.3	1:15	10.32	43.1	46.6
14:58	0.03	31.0	44.2	20:30	5.57	38.1	38.1	1:20	10.40	34.5	48.1
15:00	0.07	31.8	45.6	20:35	5.65	35.3	35.3	1:25	10.48	29.6	47.7
15:06	0.17	30.2	41.3	20:40	5.73	40.6	40.6	1:30	10.57	27.2	46.7
15:09	0.22	28.0	40.0	20:45	5.82	36.2	36.2	1:35	10.65	31.4	46.9
15:15	0.32	28.0	43.9	20:50	5.90	36.9	36.9	1:40	10.73	30.4	46.7
15:21	0.42	23.2	42.2	20:55	5.98	38.5	38.5	1:45	10.82	30.1	51.7
15:25	0.49	24.9	42.2	21:00	6.07	33.6	33.6	1:50	10.90	31.1	47.9
15:30	0.57	25.9	38.3	21:05	6.15	34.6	34.6	1:55	10.98	28.4	46.3
15:45	0.82	21.4	38.7	21:10	6.23	33.3	33.2	2:00	11.07	24.9	45.7
15:50	0.90	21.3	41.1	21:11	6.25	33.7	33.7	2:10	11.23	23.9	46.7
15:55	0.98	22.0	39.9	21:15	6.32	33.8	33.8	2:15	11.32	23.9	50.0
16:00	1.07	18.4	35.5	21:20	6.40	28.3	28.2	2:20	11.40	24.4	47.9
16:05	1.15	24.9	35.3	21:25	6.48	29.6	29.6	2:25	11.48	27.2	50.0
16:10	1.23	23.3	39.3	21:30	6.57	25.8	25.8	2:30	11.57	27.8	47.9
16:15	1.32	21.8	39.3	21:35	6.65	30.8	30.8	2:35	11.65	25.3	49.3
16:20	1.40	19.7	38.3	21:40	6.73	28.4	28.4	2:40	11.73	25.9	47.5
16:25	1.48	19.2	39.1	21:45	6.82	30.1	30.1	2:45	11.82	23.9	46.7
16:30	1.57	24.4	41.2	21:50	6.90	30.2	30.2	2:50	11.90	31.1	47.9
16:35	1.65	20.5	43.5	21:55	6.98	30.1	30.0	2:55	11.98	24.9	49.0
16:40	1.73	18.0	38.7	22:00	7.07	30.8	30.8	3:00	12.07	24.9	49.0
16:45	1.82	21.1	42.6	22:05	7.15	32.0	32.0	3:05	12.15	38.7	49.0
16:50	1.90	20.6	43.5	22:10	7.23	29.1	29.1	3:10	12.23	41.2	47.9
16:55	1.98	21.3	41.1	22:15	7.32	31.7	31.7	3:15	12.32	41.2	47.9
17:00	2.07	21.8	45.1	22:20	7.40	24.9	24.9	3:20	12.40	46.7	46.7
17:05	2.15	21.8	42.2	22:25	7.48	30.8	34.6	3:25	12.48	40.3	50.0
17:10	2.23	20.7	42.7	22:27	7.52	31.4	31.4	3:30	12.57	41.1	49.5
17:15	2.32	20.7	42.7	22:30	7.57	28.4	28.4	3:35	12.65	47.6	47.5
17:20	2.40	19.3	40.4	22:35	7.65	29.0	31.8	3:40	12.73	46.7	50.0
17:25	2.48	21.8	42.2	22:37	7.68	30.2	35.4	3:45	12.82	44.5	47.5
17:30	2.57	19.7	45.3	22:40	7.73	28.8	28.8	3:50	12.90	43.5	46.7
17:35	2.65	22.3	45.3	22:45	7.82	29.6	29.6	3:55	12.98	42.5	45.6
17:40	2.73	23.5	42.7	22:50	7.90	30.1	35.2	4:00	13.07	35.3	44.5
17:45	2.82	21.7	44.0	22:55	7.98	33.3	33.2	4:05	13.15	37.7	42.8
17:51	2.92	19.2	39.1	23:00	8.07	33.2	33.2	4:10	13.23	23.9	40.3
17:55	2.98	18.8	42.2	23:05	8.15	37.5	48.5	4:15	13.32	21.0	41.2
18:00	3.07	20.2	38.9	23:10	8.23	37.4	37.4	4:20	13.40	21.8	39.3
18:05	3.15	20.2	41.5	23:15	8.32	31.0	31.0	4:25	13.48	22.3	40.5
18:10	3.23	19.7	37.7	23:20	8.40	25.9	35.3	4:30	13.57	23.3	42.5
18:15	3.32	20.7	37.3	23:25	8.48	29.1	35.3	4:35	13.65	22.3	43.4
18:20	3.40	16.6	34.1	23:30	8.57	32.5	32.5	4:40	13.73	24.4	41.2
18:25	3.48	19.3	40.4	23:35	8.65	32.8	32.8	4:45	13.82	24.9	42.2
18:30	3.57	21.3	38.3	23:40	8.73	32.2	32.2	4:50	13.90	23.3	42.5
18:35	3.65	19.8	37.6	23:45	8.82	31.2	31.2	4:55	13.98	25.3	43.4
18:40	3.73	23.9	37.0	23:50	8.90	31.0	31.0	5:00	14.07	21.9	43.1
18:45	3.82	20.7	40.0	23:55	8.98	29.3	29.3	5:05	14.15	24.8	47.0
18:50	3.90	19.3	37.4	23:56	9.00	27.7	27.7	5:10	14.23	26.3	48.1
18:55	3.98	20.6	37.0	23:58	9.03	28.4	28.4	5:15	14.32	23.2	46.0
19:00	4.07	19.7	38.3	22-Apr-78				5:20	14.40	21.4	49.0
19:05	4.15	18.4	38.3	0:00	9.07	36.2	44.1	5:25	14.48	21.4	45.6
19:10	4.23	23.5	42.7	0:05	9.15	40.4	49.3	5:30	14.57	24.4	47.9
19:15	4.32	18.0	42.2	0:10	9.23	46.3	49.3	5:35	14.65	19.0	45.0
19:20	4.40	20.7	45.4	0:12	9.27	42.2	45.6	5:40	14.73	23.9	43.5
19:25	4.48	20.1	45.6	0:15	9.32	42.2	45.6	5:45	14.82	21.0	44.5
19:30	4.57	19.7	47.5	0:20	9.40	40.4	46.3	5:50	14.90	21.0	44.5
19:35	4.65	19.7	42.8	0:25	9.48	34.6	46.0	5:55	14.98	23.9	46.7
19:40	4.73	24.1	46.7	0:30	9.57	32.9	45.6	6:00	15.07	21.8	45.1
19:45	4.82	15.5	41.1	0:37	9.68	37.0	50.0	6:05	15.15	21.9	39.6
19:50	4.90	16.2	42.6	0:40	9.73	33.7	43.5	6:10	15.23	21.8	39.3
19:55	4.98	17.3	43.5	0:45	9.82	37.0	46.7	6:15	15.32	26.0	36.9
20:00	5.07	20.7	48.1	0:50	9.90	34.5	45.4	6:20	15.40	17.9	37.3
20:05	5.15	18.8	45.1	0:55	9.98	40.3	46.7	6:25	15.48	22.3	36.9
20:10	5.23	19.7	42.8	1:00	10.07	48.8	48.8	6:30	15.57	22.3	40.3
20:15	5.32	19.7	42.8	1:05	10.15	36.5	36.4	6:35	15.65	24.1	46.7
20:20	5.40	18.6	44.9	1:10	10.23	47.6	47.5	6:40	15.73	24.7	48.0

Annex 1.44 continued. Sequential vertical positions of Fish 23

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
22-Apr-78			
6:45	15.82	21.8	48.0
6:50	15.90	18.8	45.1
6:55	15.98	20.1	45.6
7:00	16.07	20.2	44.1
7:05	16.15	22.3	43.4
7:10	16.23	23.5	44.9
7:15	16.32	19.2	39.1
7:20	16.40	18.7	36.9
7:25	16.48	23.1	41.6
7:30	16.57	22.3	43.4
7:35	16.65	24.9	42.8
7:40	16.73	22.9	41.5
7:45	16.82	24.7	42.2
7:50	16.90	19.7	40.3
7:55	16.98	18.0	42.2
8:00	17.07	20.2	44.1
8:05	17.15	18.8	33.5
8:10	17.23	18.4	43.9
8:15	17.32	22.3	40.3
8:20	17.40	15.5	32.7
8:25	17.48	25.6	41.5
8:30	17.57	19.2	36.6
8:35	17.65	15.5	38.4
8:40	17.73	16.9	39.3
8:45	17.82	16.9	36.1
8:50	17.90	21.9	43.1
8:55	17.98	19.7	35.3
9:00	18.07	17.6	37.9
9:10	18.23	19.7	38.3
9:15	18.32	21.8	36.4
9:20	18.40	24.9	38.7
9:25	18.48	20.5	38.9
9:30	18.57	21.8	36.4
9:35	18.65	22.8	35.3
9:40	18.73	23.3	36.1
9:45	18.82	31.4	34.4
9:46	18.83	34.5	34.5
9:46	18.84	30.9	33.6
9:47	18.86	30.1	35.2
9:48	18.88	26.3	34.5
9:50	18.90	25.3	34.4
9:55	18.98	20.2	33.6
10:00	19.07	22.9	38.9
10:06	19.17	18.8	33.5
10:10	19.23	18.8	36.4
10:15	19.32	19.7	35.3
10:20	19.40	21.8	36.4
10:25	19.48	16.9	29.7
10:30	19.57	19.3	34.4
10:35	19.65	16.6	29.1
10:40	19.73	23.5	35.5
10:45	19.82	18.8	36.4
10:50	19.90	15.9	30.6
10:55	19.98	23.5	37.3
11:00	20.07	21.3	35.5
11:10	20.23	18.8	33.5
11:15	20.32	20.2	33.6
11:20	20.40	20.1	36.1
11:25	20.48	18.4	35.5
11:30	20.57	11.7	34.6
11:35	20.65	11.7	30.8
11:40	20.73	13.9	33.7
11:45	20.82	18.3	32.5
11:50	20.90	17.6	31.1
11:55	20.98	18.7	33.2
12:00	21.07	18.0	31.8
12:05	21.15	18.3	36.1
12:10	21.23	23.5	37.3

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
22-Apr-78			
12:15	21.32	19.4	34.6
12:20	21.40	20.0	36.0
12:25	21.48	25.3	34.4
12:30	21.57	23.9	33.7
12:35	21.65	22.8	32.2
12:40	21.73	24.1	32.7
12:45	21.82	23.2	28.0
12:50	21.90	23.5	28.4
12:55	21.98	19.3	28.4
13:00	22.07	22.8	32.2
13:05	22.15	36.1	36.1
13:10	22.23	37.0	37.0
13:15	22.32	31.8	31.8
13:20	22.40	28.4	31.8
13:25	22.48	29.1	35.3
13:30	22.57	32.2	32.2
13:35	22.65	32.2	35.3
13:40	22.73	32.5	32.5
13:45	22.82	33.9	33.9
13:50	22.90	24.9	31.8
13:55	22.98	23.9	30.4
14:00	23.07	33.2	33.2
14:05	23.15	30.9	33.6
14:10	23.23	26.0	33.2
14:15	23.32	30.4	33.7
14:20	23.40	26.3	34.5
14:25	23.48	29.8	35.5
14:30	23.57	27.5	35.2
14:35	23.65	22.7	30.2
14:40	23.73	26.0	33.2
14:45	23.82	24.4	31.1
14:50	23.90	23.3	36.1
14:55	23.98	23.9	37.0
15:00	24.07	21.4	31.8
15:05	24.15	22.8	35.3
15:10	24.23	24.7	33.5
15:15	24.32	20.4	28.6
15:20	24.40	29.0	32.5
15:25	24.48	22.8	35.3
15:30	24.57	12.2	32.6
15:35	24.65	22.8	35.3
15:40	24.73	27.0	34.6
15:45	24.82	19.7	31.4
15:50	24.90	18.0	35.3
15:55	24.98	20.6	33.7
16:00	25.07	21.4	31.8
16:05	25.15	20.6	37.0
16:10	25.23	19.7	35.3
16:15	25.32	18.7	33.2
16:20	25.40	20.1	32.9
16:25	25.48	21.0	34.5
16:30	25.57	21.4	35.3
16:35	25.65	20.6	33.7
16:40	25.73	21.9	32.5
16:45	25.82	20.6	33.7
16:50	25.90	21.8	33.5
16:55	25.98	16.8	29.6
17:00	26.07	17.6	31.1
17:05	26.15	23.9	37.0
17:10	26.23	20.4	36.7
17:15	26.32	17.1	32.6
17:20	26.40	19.0	33.9
17:25	26.48	19.7	38.3
17:30	26.57	17.5	36.2
17:35	26.65	16.8	33.9
17:39	26.72	40.0	45.4
17:40	26.73	27.6	38.2
17:45	26.82	15.9	30.6

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
22-Apr-78			
17:50	26.90	17.3	37.0
17:55	26.98	23.5	40.0
18:00	27.07	19.0	37.6
18:03	27.13	29.0	37.3
18:04	27.13	34.5	37.3
18:05	27.15	39.8	39.8
18:06	27.17	29.0	37.1
18:10	27.23	29.6	33.2
18:15	27.32	24.7	36.4
18:20	27.40	31.8	34.5
18:21	27.42	29.0	34.5
18:25	27.48	27.2	33.7
18:30	27.57	21.3	32.7
18:35	27.65	14.5	31.8
18:40	27.73	17.3	33.7
18:45	27.82	20.6	33.7
18:50	27.90	13.4	32.2
18:55	27.98	26.3	34.5
19:00	28.07	29.1	35.3
19:06	28.17	33.3	37.4
19:10	28.23	32.6	37.7
19:15	28.32	30.1	37.7
19:20	28.40	27.8	34.5
19:25	28.48	27.8	31.1
19:30	28.57	31.7	36.6
19:35	28.65	25.6	33.6
19:40	28.73	22.3	34.4
19:45	28.82	25.0	34.3
19:50	28.90	21.9	29.0
19:55	28.98	29.0	35.1
20:00	29.07	16.6	31.7
20:05	29.15	24.4	34.5
20:11	29.25	24.4	34.5
20:15	29.32	30.6	33.5
20:20	29.40	29.1	35.3
20:25	29.48	32.2	35.3
20:30	29.57	29.1	38.3
20:35	29.65	30.4	37.0
20:40	29.73	29.8	38.3
20:45	29.82	28.4	34.4
20:50	29.90	29.1	35.3
20:55	29.98	24.9	31.8
21:00	30.07	24.4	31.1
21:05	30.15	26.3	34.5
21:10	30.23	27.0	30.8
21:15	30.32	23.5	31.8
21:20	30.40	26.0	33.2
21:25	30.48	26.9	37.1
21:30	30.57	24.9	30.0
21:35	30.65	20.0	28.0
21:40	30.73	24.9	32.6
21:45	30.82	23.9	33.7
21:50	30.90	25.9	35.3
21:55	30.98	24.7	33.5
22:00	31.07	30.6	36.4
22:05	31.15	33.7	33.7
22:10	31.23	31.1	34.5
22:15	31.32	29.1	32.2
22:20	31.40	28.3	33.6
22:25	31.48	32.2	35.3
22:30	31.57	29.0	31.8
22:35	31.65	33.7	33.7
22:40	31.73	30.1	35.2
22:45	31.82	31.4	31.4
22:50	31.90	28.4	31.8
22:55	31.98	33.2	35.4
23:00	32.07	30.6	30.6
23:05	32.15	30.4	33.7

Annex 1.44 continued. Sequential vertical positions of Fish 23

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
22-Apr-78				23-Apr-78			
23:10	32.23	32.2	35.3	4:45	37.82	14.7	32.5
23:15	32.32	29.0	29.0	4:50	37.90	20.7	37.3
23:20	32.40	32.2	32.2	4:55	37.98	15.8	27.5
23:25	32.48	27.8	31.1	5:00	38.07	20.1	36.1
23:30	32.57	32.2	35.3				
23:35	32.65	29.0	31.8				
23:40	32.73	28.4	34.4				
23:45	32.82	31.4	34.4				
23:50	32.90	28.4	31.4				
23:55	32.98	26.3	34.5				
23-Apr-78							
0:00	33.07	27.0	35.5				
0:05	33.15	25.9	32.2				
0:10	33.23	29.8	32.7				
0:15	33.32	30.4	33.7				
0:20	33.40	30.6	33.5				
0:25	33.48	34.5	34.5				
0:30	33.57	30.6	33.5				
0:35	33.65	31.4	34.4				
0:40	33.73	25.3	31.4				
0:45	33.82	27.0	32.7				
0:50	33.90	27.2	33.7				
0:55	33.98	31.8	31.8				
1:00	34.07	24.7	30.6				
1:05	34.15	25.9	35.3				
1:10	34.23	31.4	31.4				
1:15	34.32	29.1	32.2				
1:20	34.40	29.1	32.2				
1:25	34.48	27.7	33.5				
1:30	34.57	28.3	33.6				
1:35	34.65	24.4	31.1				
1:40	34.73	27.0	29.8				
1:45	34.82	27.7	33.5				
1:50	34.90	26.7	34.1				
1:55	34.98	29.0	34.5				
2:00	35.07	27.2	33.7				
2:05	35.15	27.0	35.5				
2:10	35.23	21.9	29.0				
2:15	35.32	24.9	32.6				
2:20	35.40	28.8	33.2				
2:25	35.48	22.3	29.6				
2:30	35.57	23.3	36.1				
2:35	35.65	23.9	30.4				
2:40	35.73	24.9	28.4				
2:45	35.82	27.0	30.8				
2:50	35.90	24.9	35.2				
2:55	35.98	29.8	35.5				
3:00	36.07	27.7	30.6				
3:05	36.15	27.8	34.5				
3:10	36.23	27.4	36.7				
3:15	36.32	29.8	35.5				
3:20	36.40	25.9	32.2				
3:25	36.48	27.4	36.7				
3:30	36.57	26.9	33.0				
3:35	36.65	28.4	37.4				
3:40	36.73	26.7	34.1				
3:45	36.82	26.6	32.9				
3:50	36.90	24.9	33.2				
3:55	36.98	36.7	36.7				
4:00	37.07	31.6	36.6				
4:05	37.15	31.8	34.5				
4:10	37.23	19.2	29.3				
4:15	37.32	17.4	30.7				
4:20	37.40	17.3	33.7				
4:25	37.48	12.7	30.1				
4:30	37.57	15.5	34.6				
4:35	37.65	16.6	32.2				
4:40	37.74	13.1	26.7				

Annex 1.45 Sequential geographical positions of Fish 24

Note: Time, Latitude and Longitude are given as decimal measurements.
 (The ground track figure of this data has been omitted).

Date and time (GMT)	Elapsed time (h)	Latitude (°N)	Longitude (°E)
31-May-79			
9:00	0.00	53.833	2.660
9:15	0.25	53.833	2.660
9:30	0.50	53.833	2.659
9:45	0.75	53.833	2.658
10:00	1.00	53.833	2.659
10:15	1.25	53.833	2.660
10:30	1.50	53.833	2.659
10:45	1.75	53.833	2.659
11:00	2.00	53.833	2.659
11:15	2.25	53.833	2.659
11:30	2.50	53.833	2.659
11:45	2.75	53.833	2.658
12:00	3.00	53.833	2.658
12:15	3.25	53.833	2.659
12:30	3.50	53.833	2.659
12:45	3.75	53.833	2.659
13:30	4.50	53.838	2.652
13:45	4.75	53.838	2.651
14:00	5.00	53.838	2.650
14:15	5.25	53.839	2.651
14:30	5.50	53.840	2.648
14:45	5.75	53.840	2.644
15:00	6.00	53.842	2.639

Annex 1.46 Sequential vertical positions of Fish 24

Note: Time is measured in decimal hours. Figures in italics denote periods when the fish was JOB.
 (The vertical plot figure of this data has been omitted).

Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)	Date and time (GMT)	Elapsed time (h)	Depth of fish from surface (m)	Depth of bottom from surface (m)
31-May-79				31-May-79			
9:00	0.00	68.9	68.9	14:25	5.42	54.9	54.9
9:05	0.08	74.4	74.4	14:30	5.50	51.2	51.2
9:10	0.17	70.7	70.7	14:35	5.58	55.2	55.2
9:15	0.25	74.0	74.0	14:40	5.67	61.9	61.9
9:20	0.33	69.1	69.1	14:45	5.75	59.6	59.6
9:25	0.42	72.1	72.1	14:50	5.83	56.5	56.5
9:30	0.50	74.1	74.1	14:55	5.92	56.0	56.0
9:35	0.58	73.9	73.9	15:00	6.00	46.6	50.1
9:40	0.67	69.1	69.1				
9:45	0.75	71.4	71.4				
9:50	0.83	72.2	72.2				
9:55	0.92	74.8	74.8				
10:00	1.00	74.2	74.2				
10:05	1.08	68.5	68.5				
10:10	1.17	72.7	72.7				
10:15	1.25	68.9	68.9				
10:20	1.33	72.0	71.9				
10:25	1.42	64.3	64.3				
10:30	1.50	69.8	69.8				
10:35	1.58	75.2	75.2				
10:40	1.67	69.5	69.4				
10:45	1.75	71.4	71.4				
10:50	1.83	70.4	70.4				
10:55	1.92	69.8	69.8				
11:00	2.00	68.7	68.7				
11:05	2.08	65.4	65.4				
11:10	2.17	71.7	71.7				
11:15	2.25	67.4	67.4				
11:20	2.33	64.9	64.9				
11:25	2.42	65.8	65.8				
11:30	2.50	70.7	70.7				
11:35	2.58	62.5	62.5				
11:40	2.67	65.9	65.9				
11:45	2.75	67.5	67.5				
11:50	2.83	69.1	69.1				
11:55	2.92	62.5	62.5				
12:00	3.00	65.9	65.9				
12:05	3.08	65.8	65.8				
12:10	3.17	65.6	65.6				
12:15	3.25	71.1	71.1				
12:20	3.33	68.5	68.5				
12:25	3.42	68.3	68.3				
12:30	3.50	64.9	64.9				
12:35	3.58	69.8	69.8				
12:40	3.67	71.3	71.2				
12:45	3.75	68.5	68.5				
12:50	3.83	59.6	65.6				
12:55	3.92	62.5	66.9				
13:00	4.00	67.6	67.6				
13:05	4.08	70.4	70.4				
13:10	4.17	69.0	69.0				
13:15	4.25	69.0	69.0				
13:20	4.33	63.5	63.5				
13:25	4.42	63.1	63.1				
13:30	4.50	60.9	60.9				
13:35	4.58	58.4	58.4				
13:40	4.67	61.3	61.3				
13:45	4.75	64.7	64.7				
13:50	4.83	65.9	65.9				
13:55	4.92	65.4	65.4				
14:00	5.00	63.3	63.3				
14:05	5.08	62.5	62.5				
14:10	5.17	65.9	65.9				
14:15	5.25	61.2	61.2				
14:20	5.33	58.7	58.7				