

Vol. 6 用 5 3 4 Vol 6
3.5-2

PHOTOGRAPH

FOR

BOTTOM MATERIAL SAMPLING

(GENERAL SURVEY 3rd STAGE)

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Survey Date: 16th, 17th, 18th and 19th April 1989



Data for Natural Condition Survey Report
for
The Study
on
Maintenance Dredging
in Access Channel of Banjarmasin Port
in
The Republic of Indonesia

[Vol. 6/9 3. General Survey]

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- 3.3 Current 2
- 3.4 Current Velocity and Suspended Solid
- 3.5 Bottom Material, Salinity and Suspended Solid

March 1990

Japan International Cooperation Agency

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(N-COMP)

(E-COMP)

(DIRECTION)

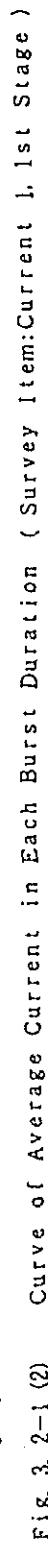
(VELOCITY)

TIDE (Pilot Station)

WIND (Pilot Station)

Fig. 3. 2-1 (1) Curve of Average Current in Each Burst Duration (Survey Item: Current 1. 1st Stage).

2



13000

10/10/54

0000 0300 0600 0900 1200 1500 1800 2100 2400

(cm/s) (cm/s) (DEG.) (cm/s) (cm) (cm/s) (m/s)

[N-COMP] [E-COMP] [DIRECTION] [VELOCITY] [TIDE (Pilot Station)] [WIND (Pilot Station)]

N
4
E
5
10

Fig. 3. 2-1 (3) Curve of Average Current in Each Burst Duration (Survey Item: Current 1, 1st Stage)

Period : 3rd Sep. - 7th Oct. 1988

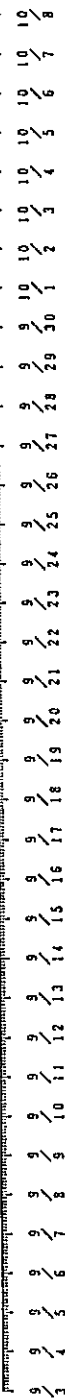
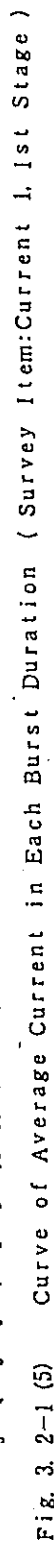
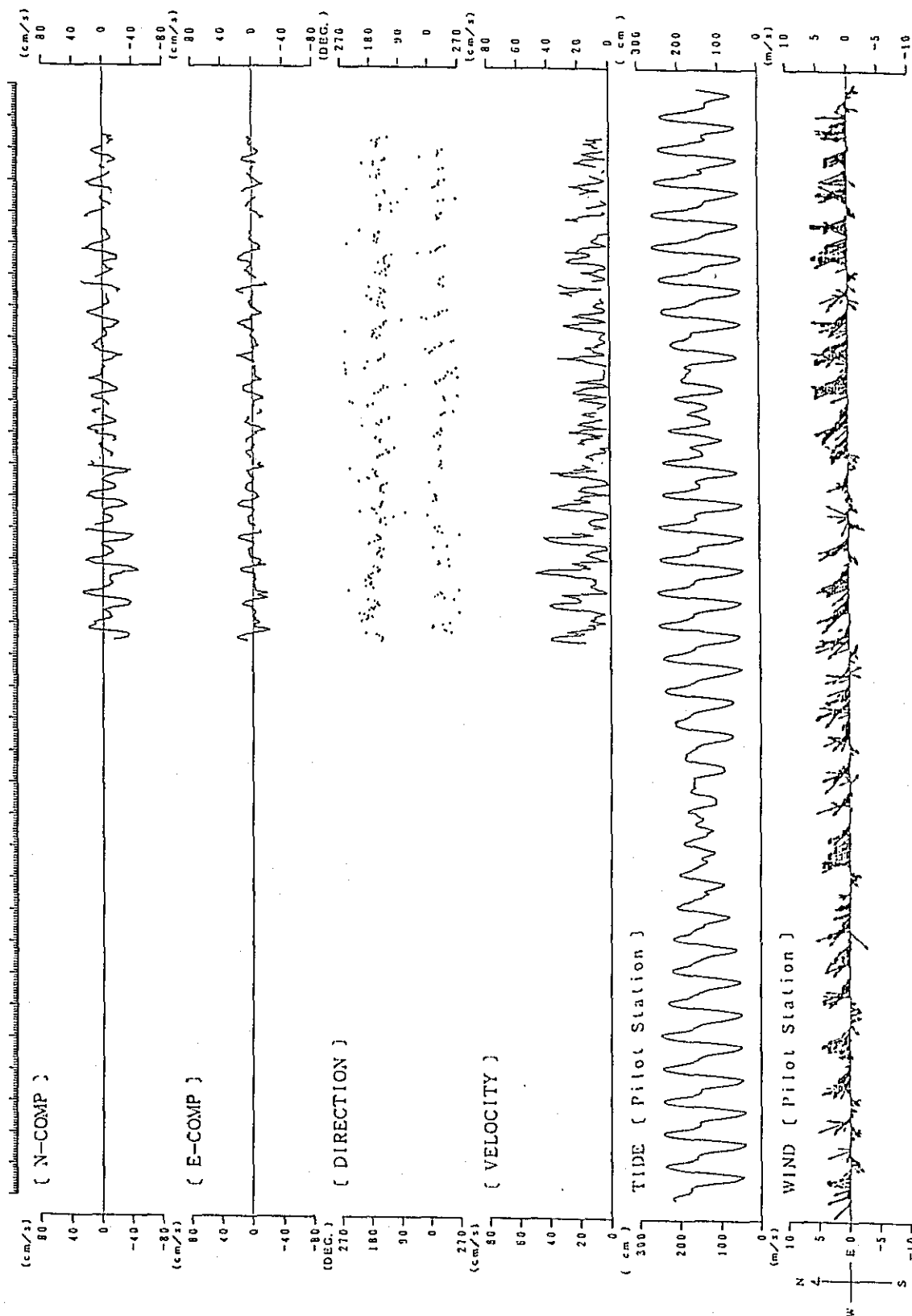


Fig. 3. 2-1 (4) Curve of Average Current in Each Burst Duration (Survey Item: Current 1. 1st Stage.)

5



St :S
 Layer :+0.5m (Depth:1.7m)
 Interval:Every 1 hours
 Period : 3rd Sep. - 7th Oct, 1988



3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	---	---	---	---	---	---	---	---

Fig. 3. 2-1 (6) Curve of Average Current in Each Burst Duration (Survey Item: Current 1. 1st Stage)

Fig. 3. 2-1 (7) Curve of Average Current in Each Burst Duration (Survey Item: Current 1, 1st Stage)

St. :8
 Layer :+0.5m(Depth:0.8m)
 Interval:Every 1 hours
 Period : 3rd Sep. - 7th Oct, 1988

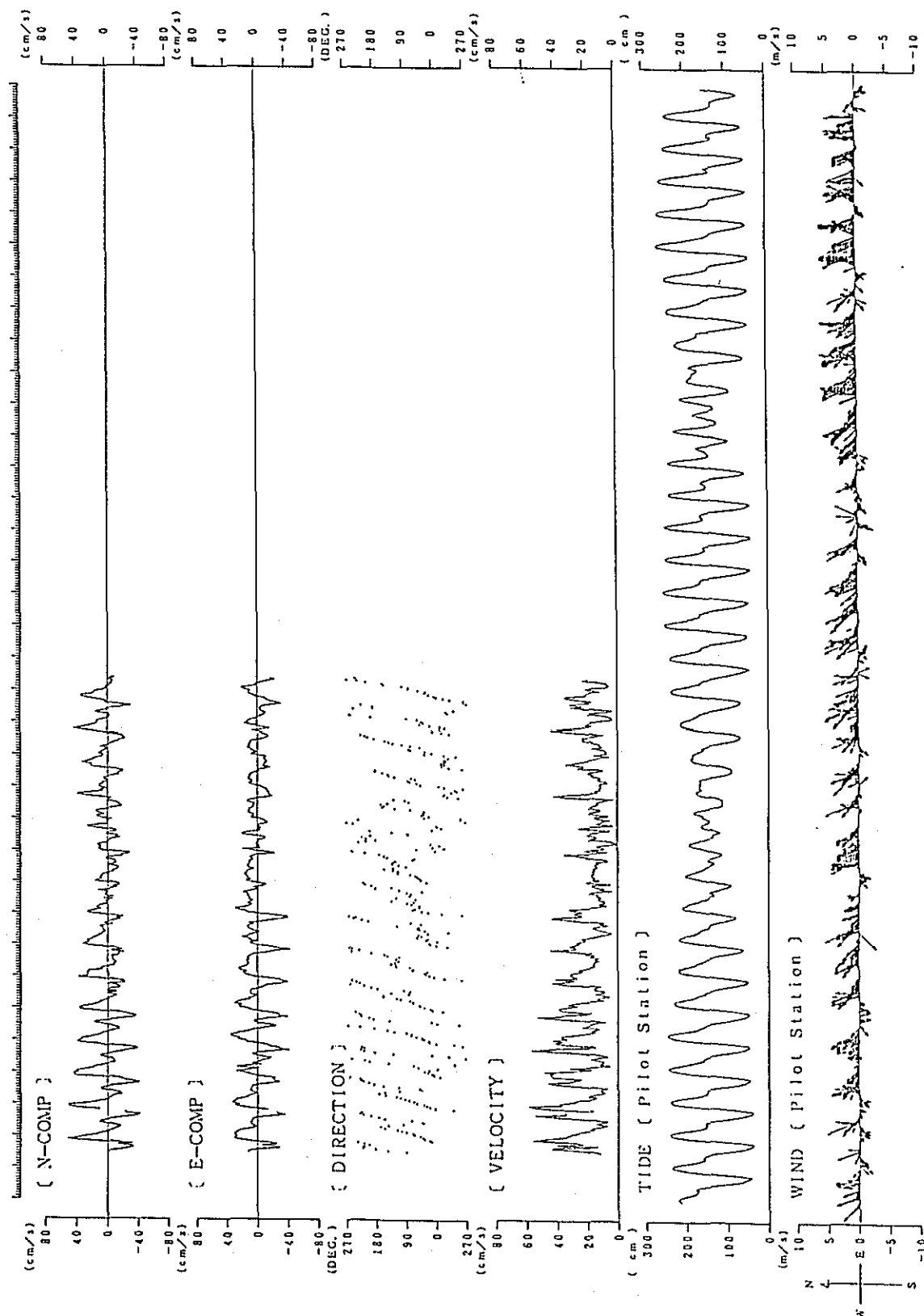


Fig. 3. 2-1 (8) Curve of Average Current in Each Burst Duration (Survey Item:Current 1. 1st Stage)

(cm/s)
 80
40
0
-40
-80
 (cm/s)
 80
40
0
-40
-80
 (DEG.)
 270
180
90
0
 (cm/s)
 270
180
90
0
 (cm/s)
 80
60
40
20
0
 (cm)
 300
200
100
0
 (m/s)
 10
5
0
-5
-10
 N
W
E
S

(N-COMP)
 (E-COMP)
 (DIRECTION)
 (VELOCITY)
 TIDE (Pilot Station)
 WIND (Pilot Station)

0000 0100 0200 0300 0400 0500 0600

Fig. 3. 2-1 (9) Curve of Average Current in Each Burst Duration (Survey Item:Current 1. 1st Stage)

(N-COMP)

(E-COMP)

(DIRECTION)

(VELOCITY)

TIDE (Pilot Station)

WIND (Pilot Station)

N
E
S
W

Fig. 3. 2-1 (10) Curve of Average Current in Each Burst Duration (Survey Item: Current 1, 1st Stage)

St. : 11
 Layer : 40.5m (Depth: 1.2m)
 Interval: Every 1 hour
 Period : 3rd Sep. - 7th Oct. 1988

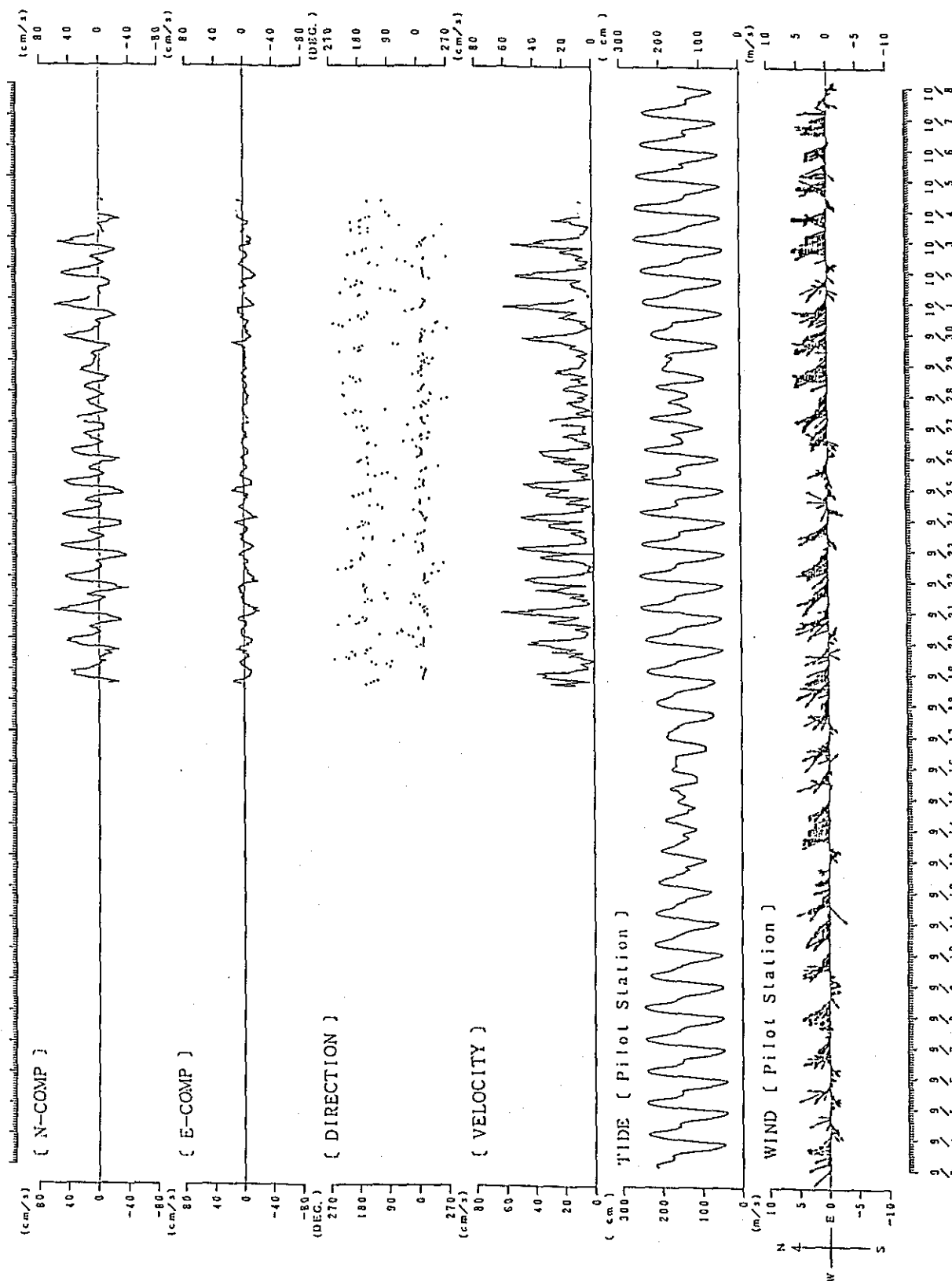


Fig. 3. 2-1 (II) Curve of Average Current in Each Burst Duration (Survey Item: Current 1. 1st Stage)

St. : 1
 Layer : ±0.5m (Depth: 3.1m)
 Interval: Every 2 hours
 Period : 17th Jan. - 20th Feb. 1989

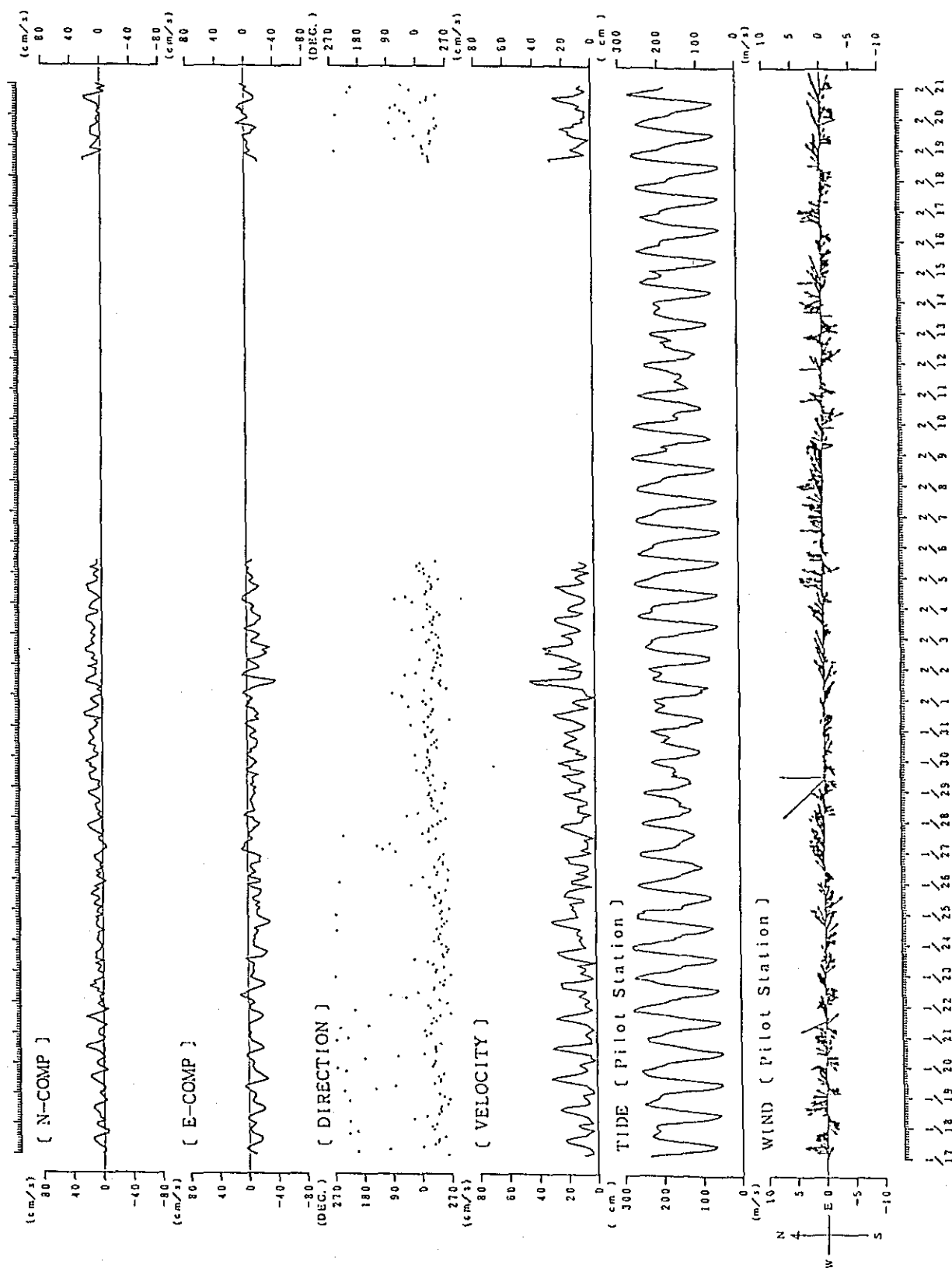


Fig. 3. 2-1 (12) Curve of Average Current in Each Burst Duration (Survey Item: Current 1. 2nd Stage)

St. :2
 Layer :+0.5m(Depth:1.6m)
 Interval:Every 1 hours
 Period :17th Jan. -20th Feb. 1989

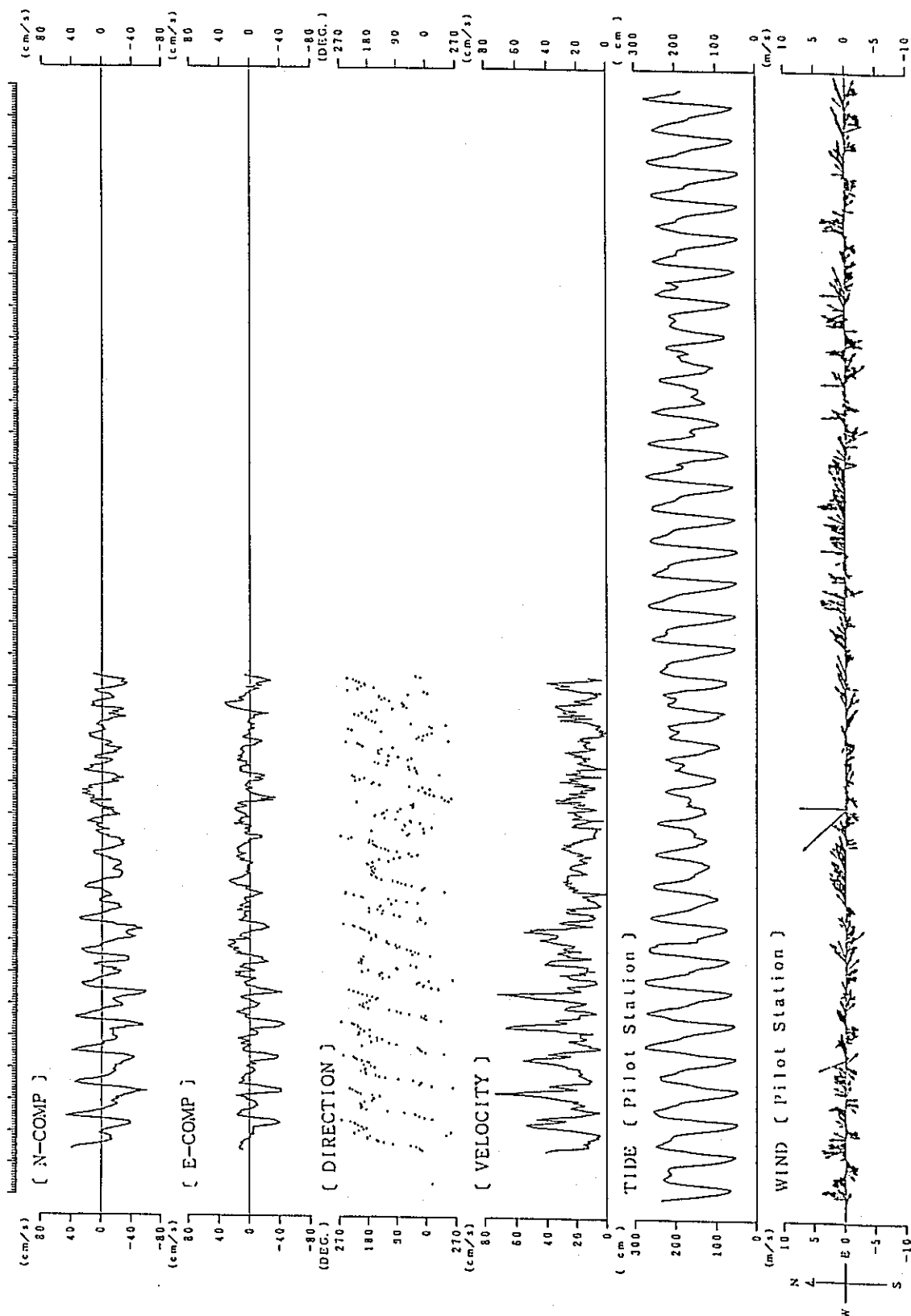


Fig. 3.2-1 (13) Curve of Average Current in Each Burst Duration (Survey Item: Current 1, 2nd Stage)

St. :3
 Layer :+0.5m (Depth:0.7m)
 Interval:Every 1-hours
 Period :17th Jan.-20th Feb. 1989

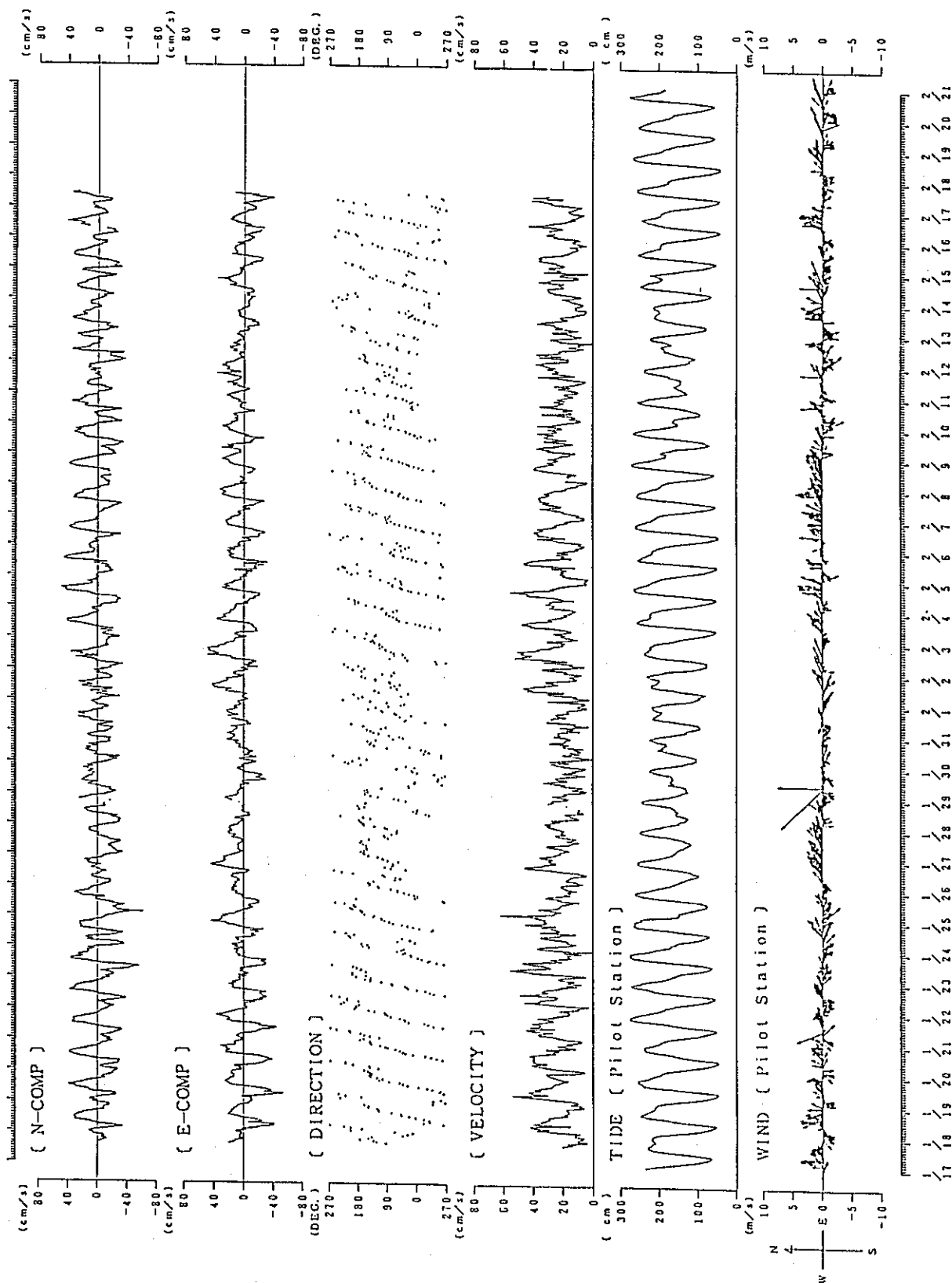
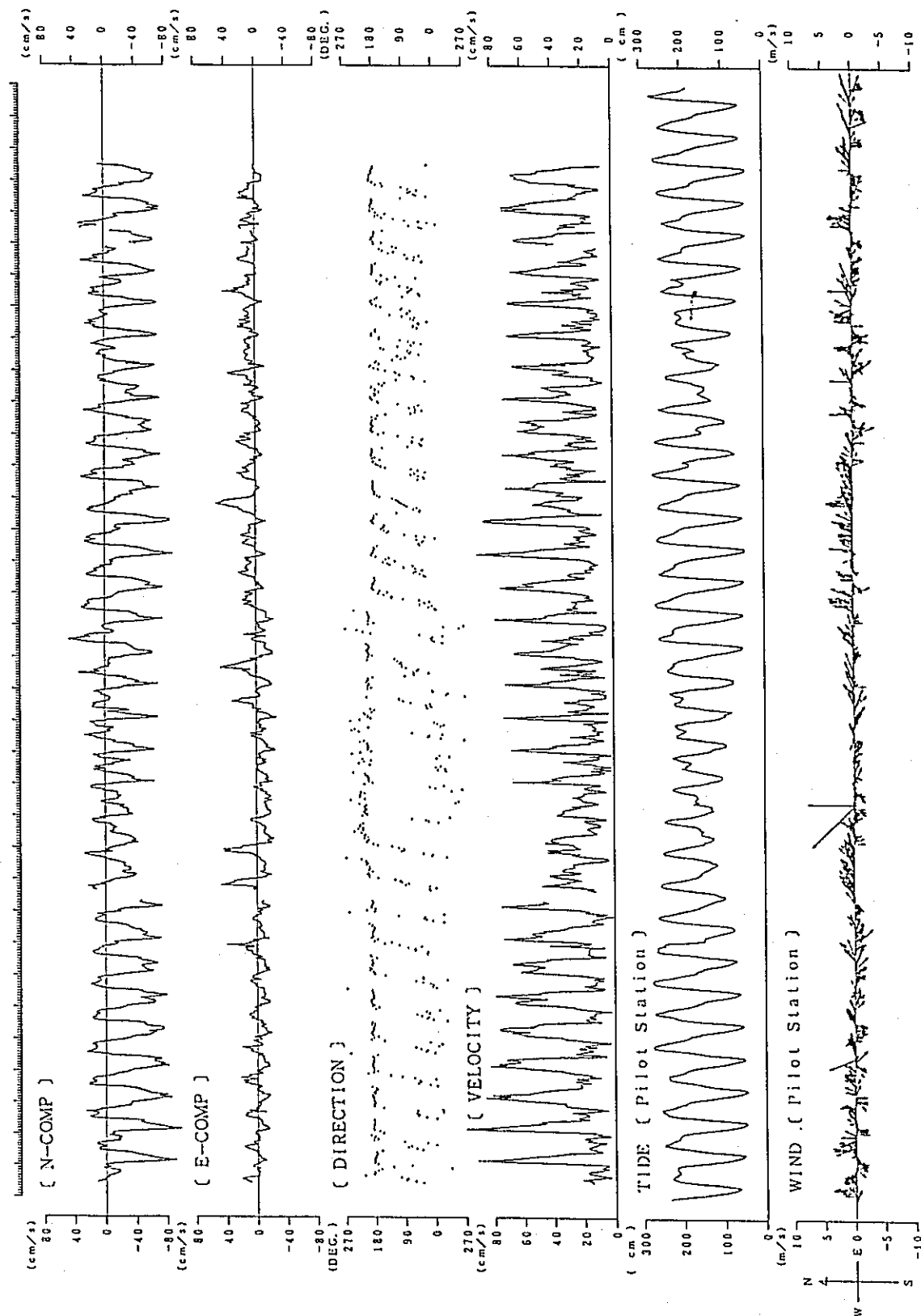


Fig. 3.2-1 (M) Curve of Average Current in Each Burst Duration (Survey Item: Current I. 2nd Stage)

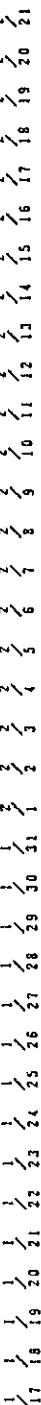
St. :4
 Layer :+0.5m (Depth:0.8m)
 Interval :Every 1 hours
 Period :17th Jan. -20th Feb. 1989



1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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Fig. 3. 2-1 (15) Curve of Average Current in Each Burst Duration (Survey Item: Current 1, 2nd Stage)

Period : 17th Jan. - 20th Feb. 1989.



Current in Each Burst Duration { Survey Item:Current 1, 2nd Stage }

St. :5
 Layer :+0.5m (Depth:1.7m)
 Interval:Every 1 hours
 Period :17th Jan. -20th Feb, 1989

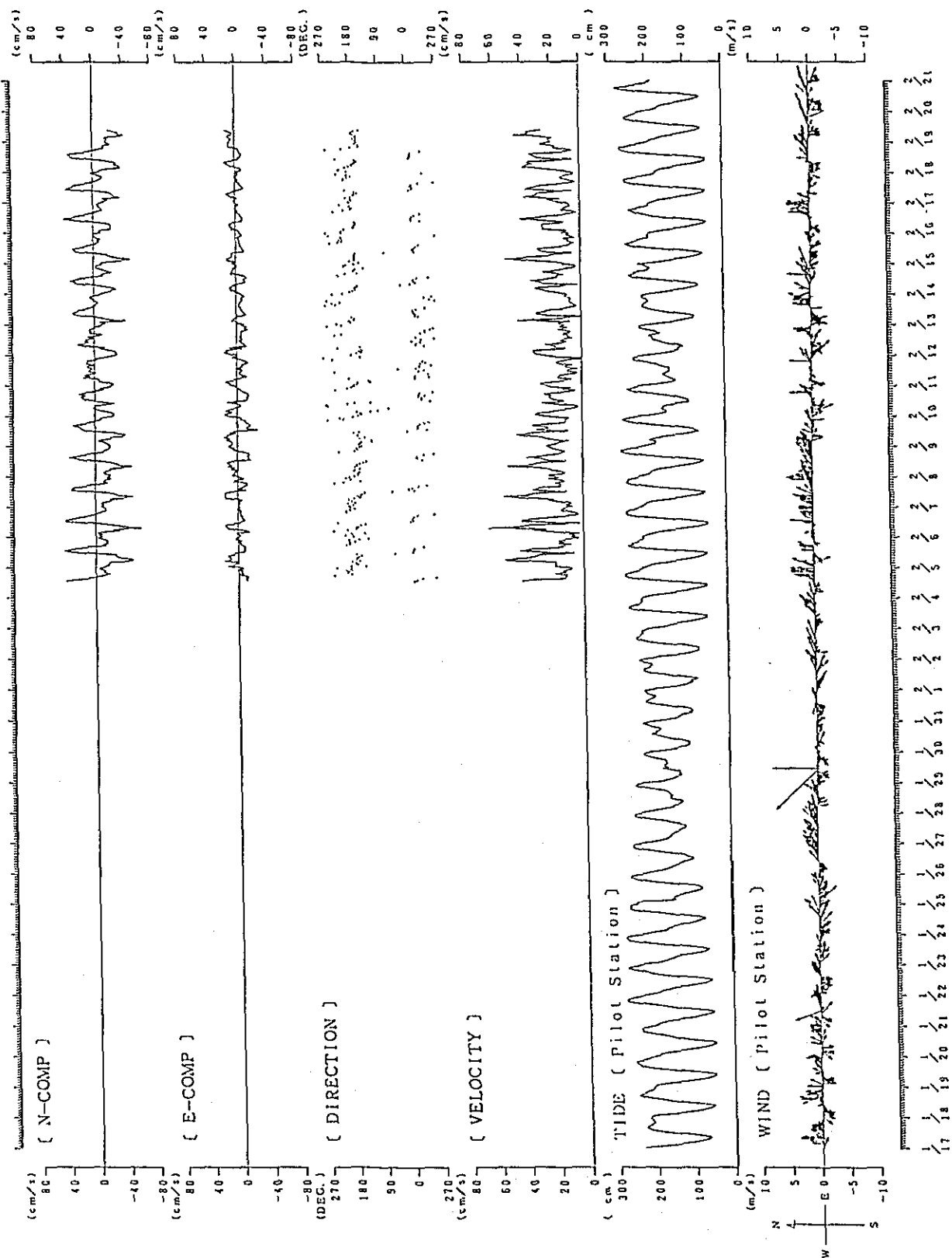


Fig. 3. 2-1 (17) Curve of Average Current in Each Burst Duration (Survey Item:Current 1.2nd Stage)

St. : 7
 Layer : +0.5m (Depth: 1.7m)
 Interval: Every 1 hours
 Period : 17th Jan. - 20th Feb. 1989

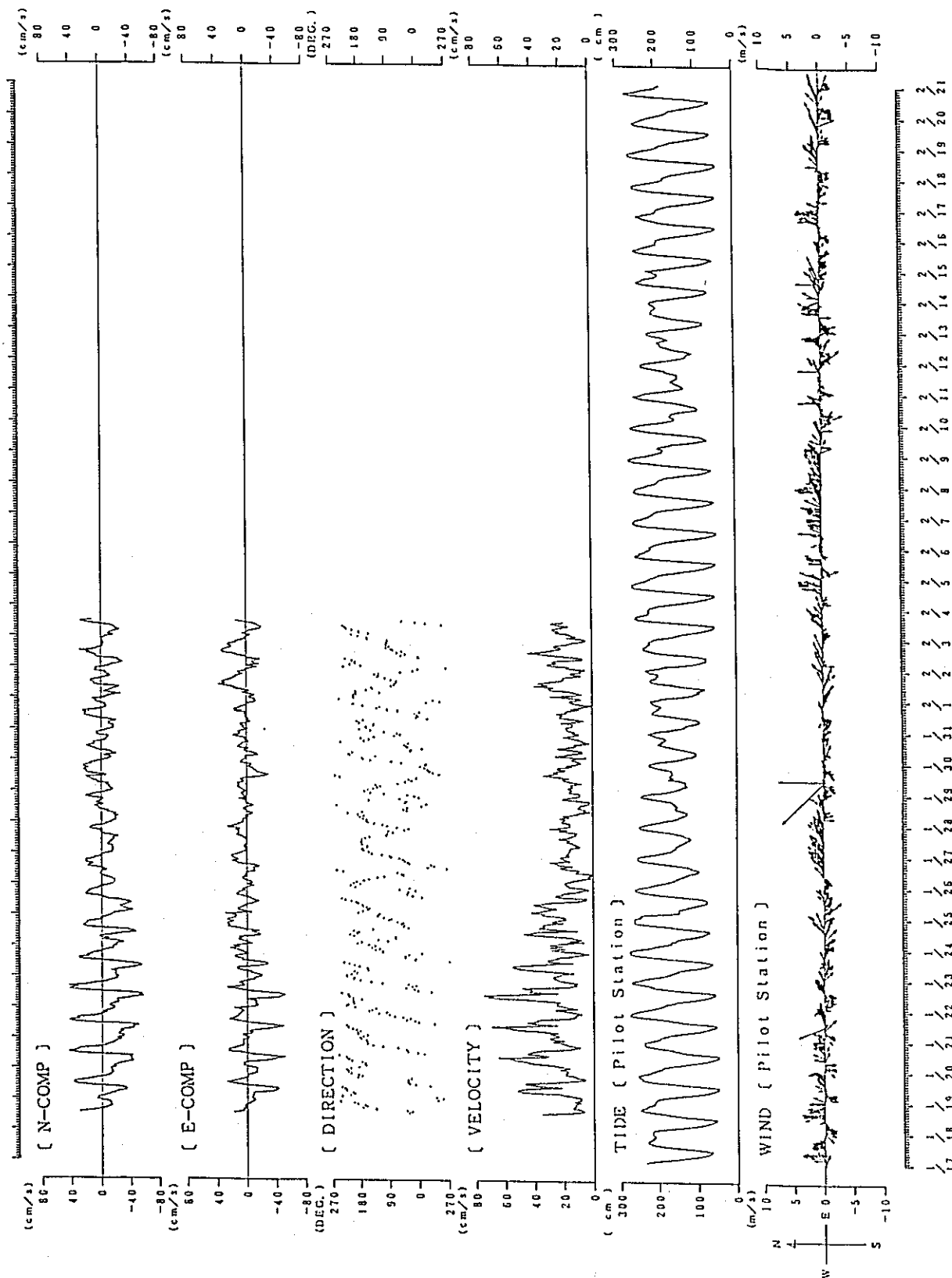
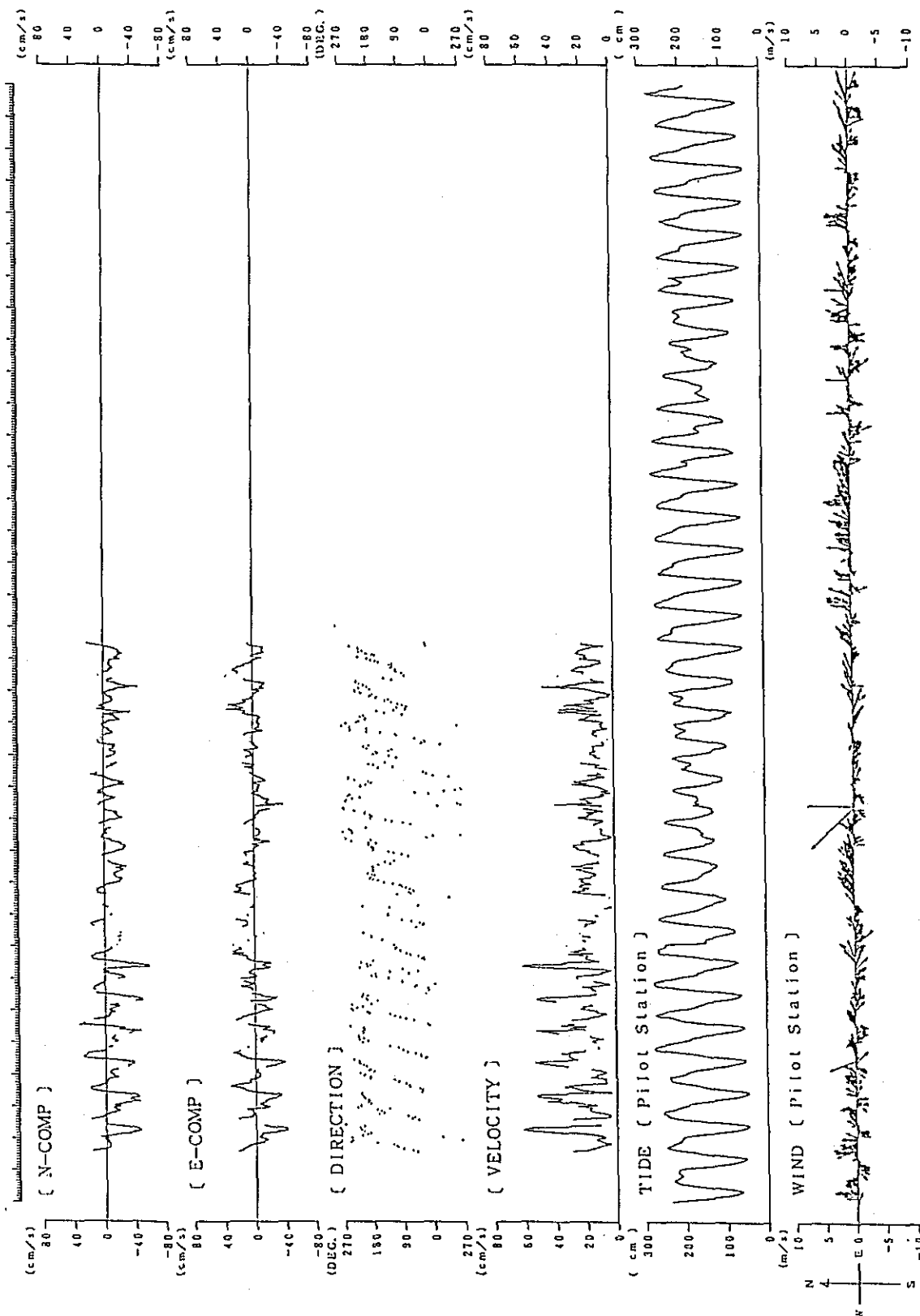


Fig. 3. 2-1 (B) Curve of Average Current in Each Burst Duration (Survey Item: Current 1. 2nd Stage)

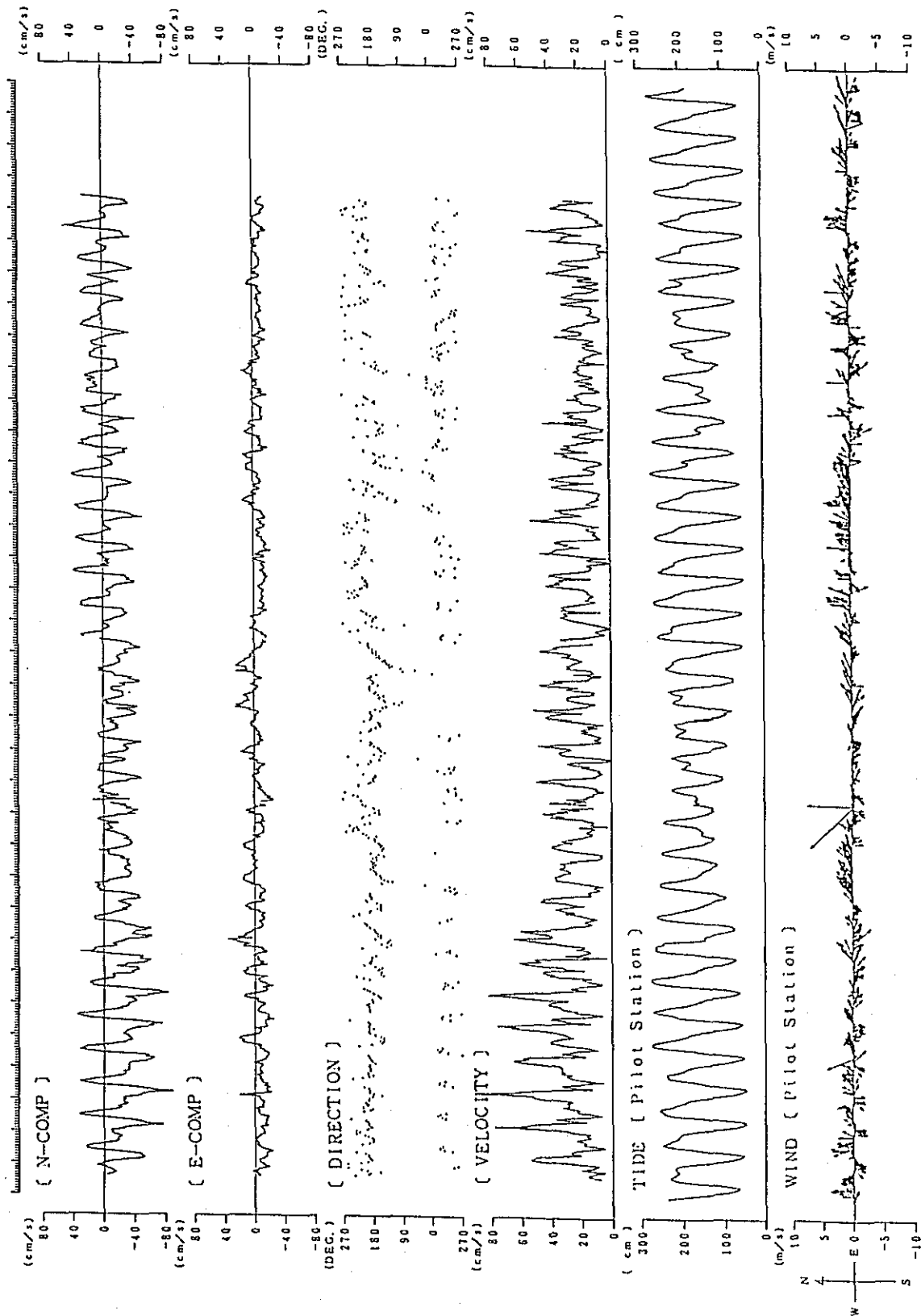
St. :8
 Layer :+0.5m(Depth:0.8m)
 Interval:Every 1 hours
 Period :17th Jan. -20th Feb. 1989



17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Fig. 3. 2-1 (19) Curve of Average Current in Each Burst Duration (Survey Item:Current 1. 2nd Stage)

St. :9
 Layer :+0.5m (Depth:1.0m)
 Interval:Every 1 hours
 Period :17th Jan, -20th Feb, 1989



17 18 19 20 21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Fig. 3. 2-1 (20) Curve of Average Current in Each Burst Duration (Survey Item: Current 1, 2nd Stage)

(cm/s)
 80
40
0
-40
-80
 (cm/s)
 80
40
0
-40
-80
 (DEG.)
 270
180
90
0
-90
-180
 (cm/s)
 270
180
90
0
-90
-180
 (cm/s)
 80
60
40
20
0
 (cm)
 300
200
100
0
 (m/s)
 10
5
0
-5
-10
 N
E
S
W

(N-COMP)
 (E-COMP)
 (DIRECTION)
 (VELOCITY)
 TIDE (Pilot Station)
 WIND (Pilot Station)

Fig. 3. 2-1 (2) Curve of Average Current in Each Burst Duration (Survey Item:Current 1. 2nd Stage:)

The chart displays six data series over a period of time, with the following scales and units:

- N-COMP**: North Component, scale from -80 to 80 cm/s.
- E-COMP**: East Component, scale from -80 to 80 cm/s.
- DIRECTION**: Direction in degrees, scale from 0 to 270 degrees.
- VELOCITY**: Velocity in cm/s, scale from 0 to 270 cm/s.
- TIDE (Pilot Station)**: Tide in cm, scale from 0 to 300 cm.
- WIND (Pilot Station)**: Wind in m/s, scale from 0 to 10 m/s.

A compass rose is located at the bottom right, indicating the cardinal directions: North (N), East (E), South (S), and West (W).

Fig. 3. 2-1 (2) Curve of Average Current in Each Burst Duration (Survey Item: Current 1. 2nd Stage)

Fig. 3. 2-1 (2) Curve of Average Current in Each Burst Duration (Survey Item: Current 1, 3rd Stage)

St. :2
 Layer :+0.5m (Depth:1.6m)
 Interval:Every 1 hours
 Period :10th Apr. ~13th May 1989

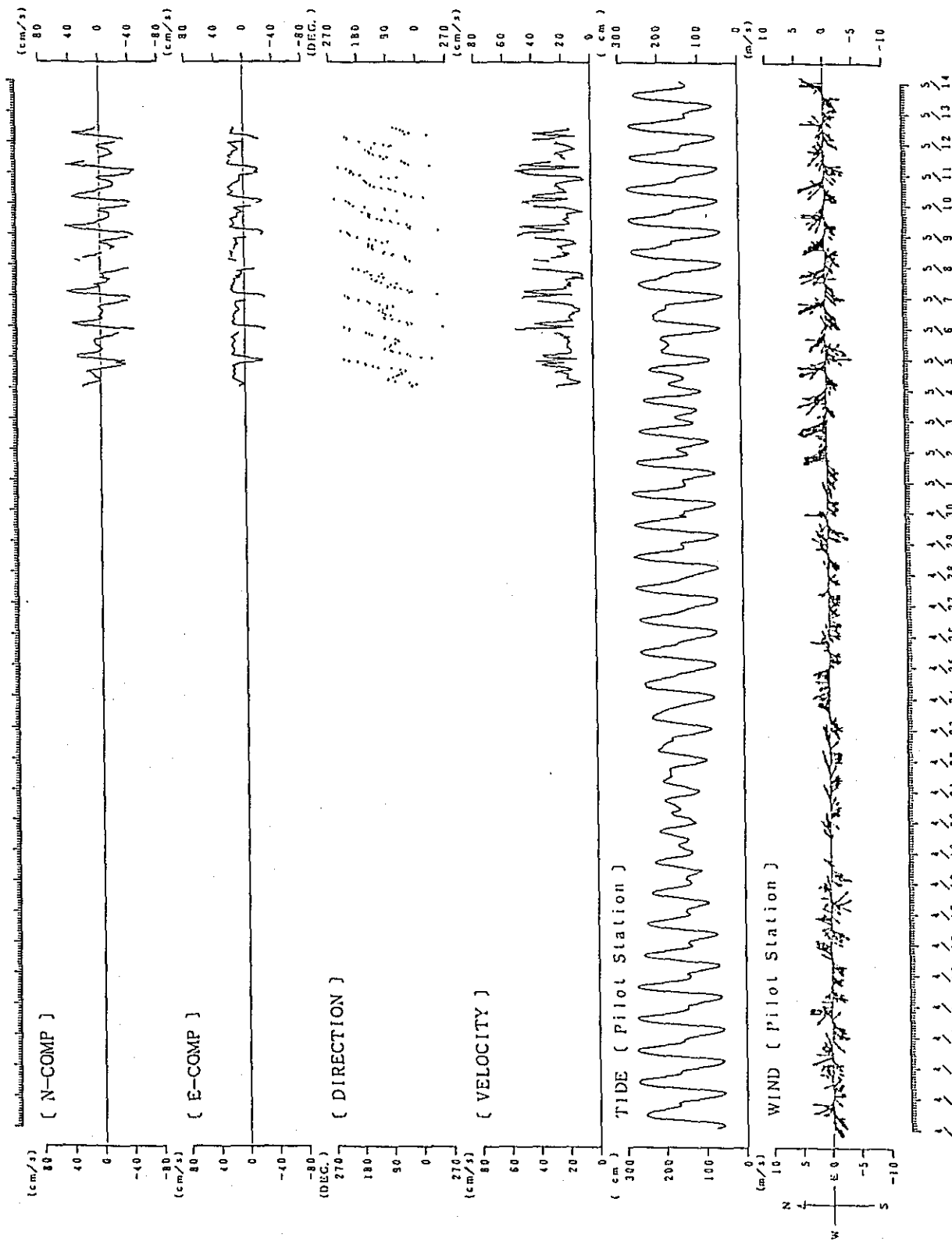


Fig. 3. 2-1 (2A) Curve of Average Current in Each Burst Duration (Survey Item: Current I. 3rd Stage)

Fig. 3. 2-1 (25) Curve of Average Current in Each Burst Duration (Survey Item: Current 1, 3rd Stage)

Fig. 3. 2-1 (26) Curve of Average Current in Each Burst Duration (Survey Item:Current 1. 3rd Stage)

St. :5
 Layer :+0.5m(Depth:0.8m)
 Interval:Every 1 hours
 Period :10th Apr.-13th May 1989

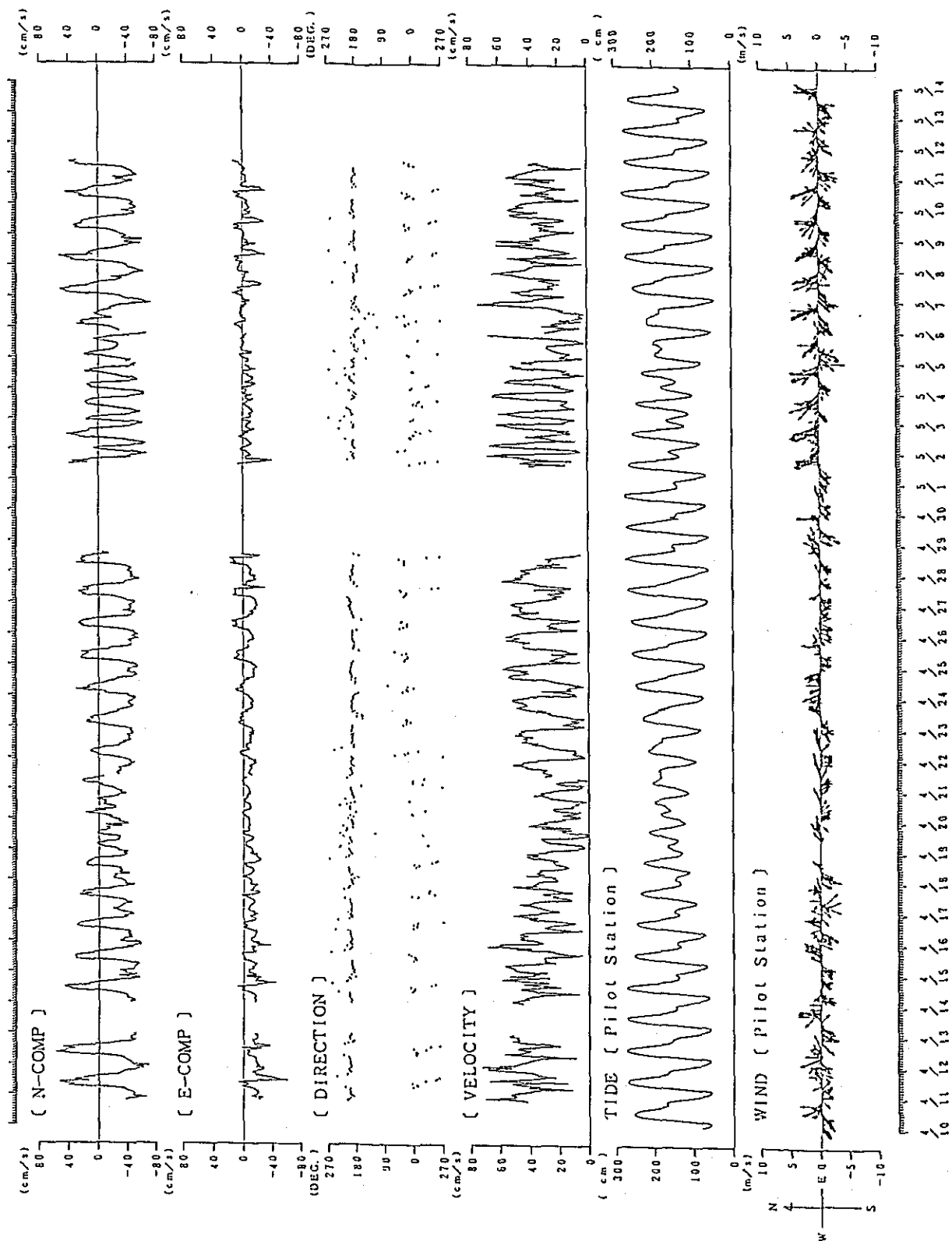


Fig. 3. 2-1 (7) Curve of Average Current in Each Burst Duration (Survey Item: Current 1. 3rd Stage)

St. : 6
 Layer : +0.5m (Depth: 1.7m)
 Interval : Every 1 hours
 Period : 10th Apr. - 13th May 1989

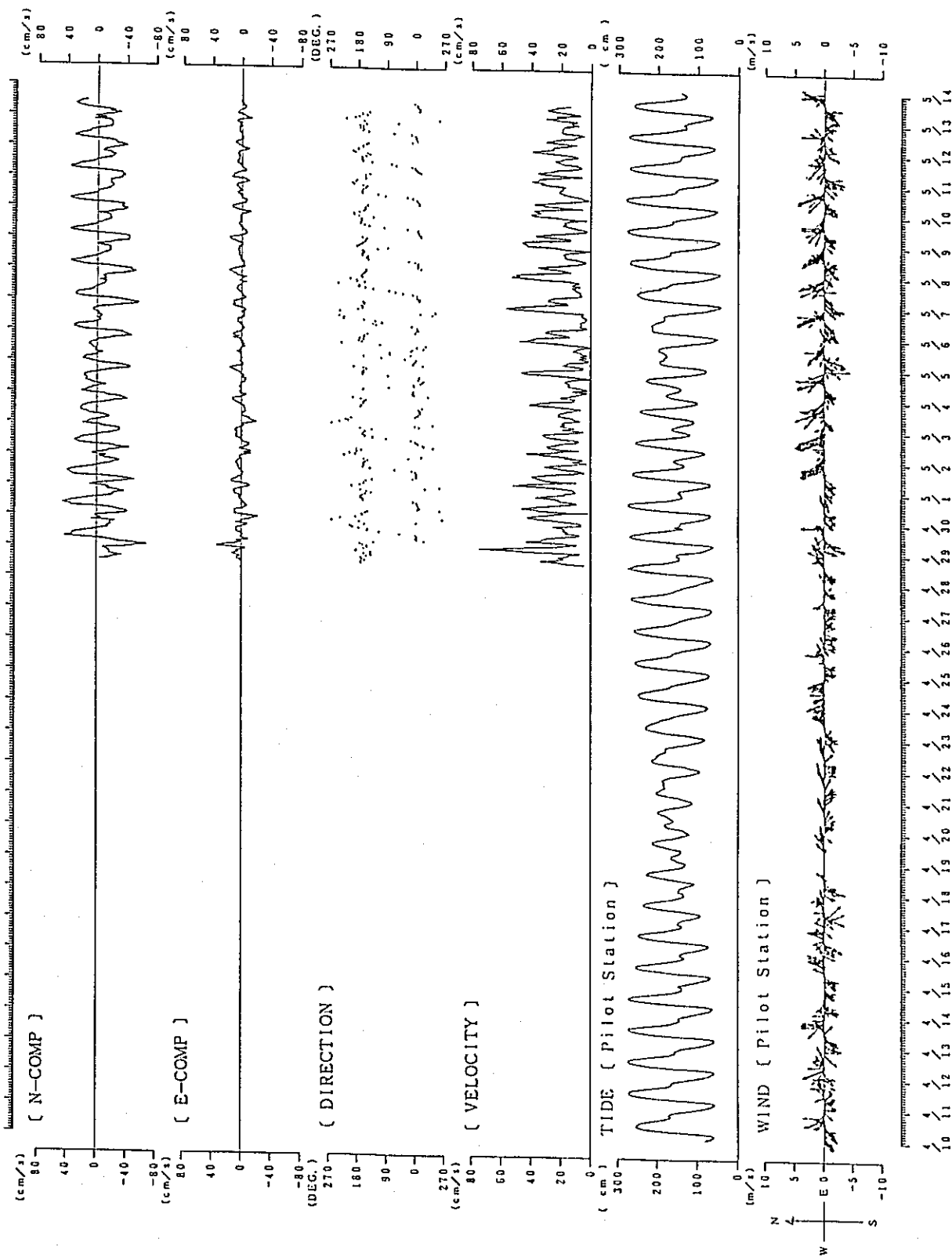
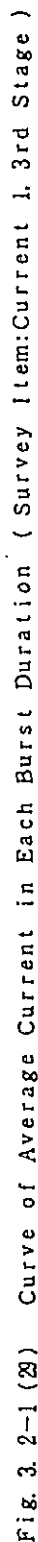


Fig. 3.2-1 (28) Curve of Average Current in Each Burst Duration (Survey Item: Current 1. 3rd Stage)

23



(cm/s)

(N-COMP)

(cm/s)

(E-COMP)

(DEG.)

(DIRECTION)

(cm/s)

(VELOCITY)

(cm)

(TIDE (Pilot Station))

(m/s)

(WIND (Pilot Station))

N
W E S

Fig. 3. 2-1 (30) Curve of Average Current in Each Burst Duration (Survey Item: Current 1. 3rd Stage)

3i

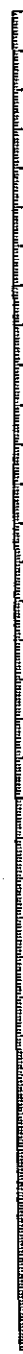
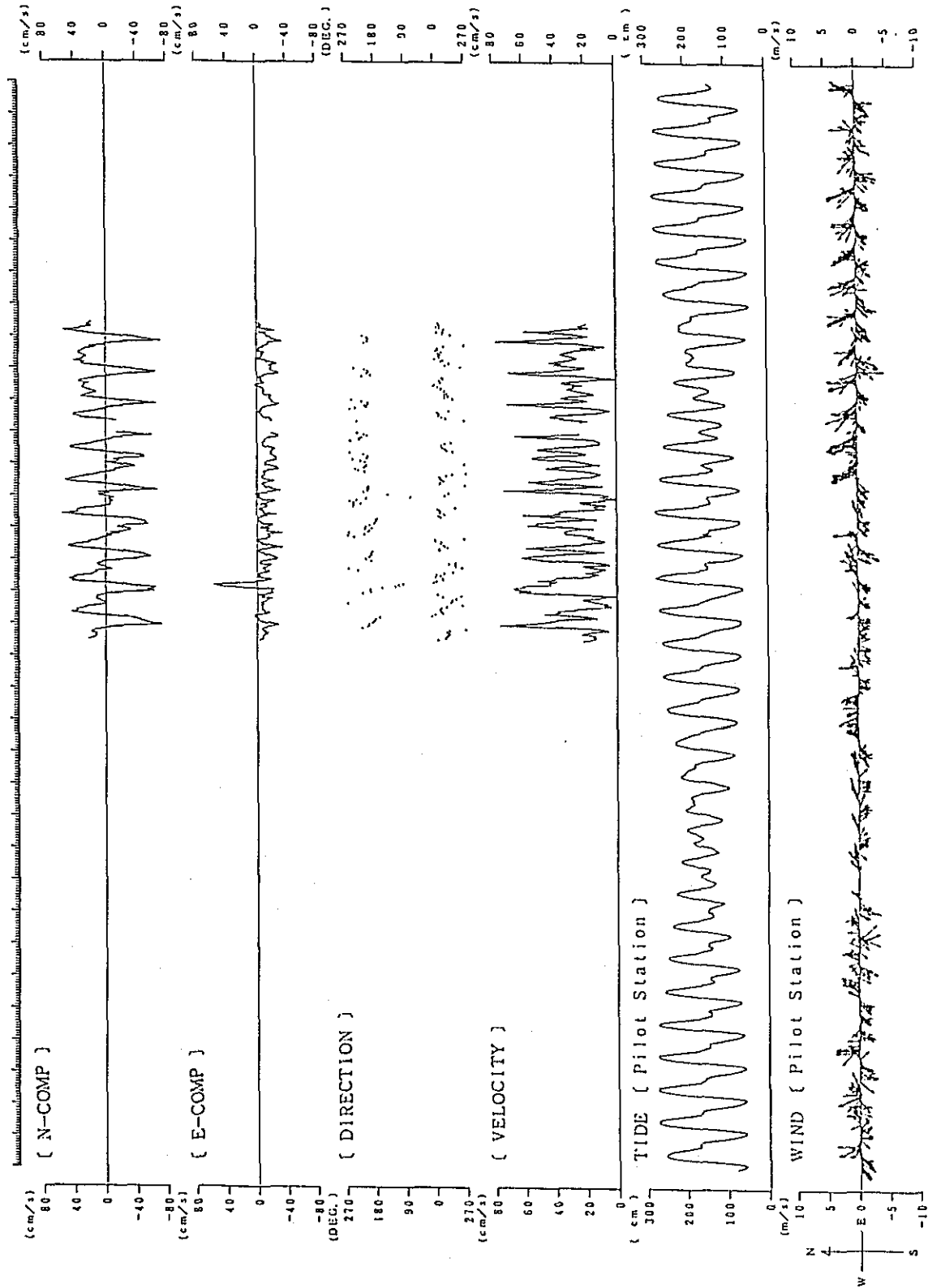


Fig. 3. 2-1 (3I) Curve of Average Current in Each Burst Duration (Survey Item:Current 1. 3rd Stage)

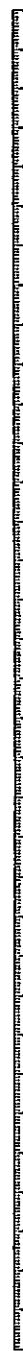
St. :10
 Layer :+0.5m (Depth:2.5m)
 Interval:Every 1 hours
 Period :10th Apr. -13th May 1989



10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Fig. 3. 2-1 (2) Curve of Average Current in Each Burst Duration (Survey Item:Current 1. 3rd Stage)

Period : 10th Apr. - 13th May 1989

[illegible]

Three vertically stacked time-series plots for "Pilot Station".

- Top Plot: CURRENT VECTOR**
 - Y-axis: (cm/s), scale from -80 to 80.
 - Signal: A small, irregular oscillating signal near the zero line.
- Middle Plot: TIDE (Pilot Station)**
 - Y-axis: (cm), scale from 0 to 300.
 - Signal: A regular, periodic sinusoidal wave oscillating between approximately 0 and 300 cm.
- Bottom Plot: WIND (Pilot Station)**
 - Y-axis: (m/s), scale from -10 to 10.
 - Signal: A highly variable, irregular signal with frequent peaks and troughs, ranging from approximately -5 to 10 m/s.

All three plots share a common x-axis with time markers: 2, 4, 6, 8, 10.

Fig. 3. 2-2 (1) Average Current Vector in Each Burst Duration (Survey Item:Current 1. 1st Stage)

Figure 1 consists of three vertically stacked panels sharing a common horizontal time axis. The time axis is located at the bottom right and is labeled with values 3, 4, 5, 6, 7, 8, 9, 10, 10, 10, 10, 10, 10, 10. The top panel is titled 'CURRENT VECTOR' and has a vertical axis on the left labeled '(cm/s)' with values 80, 40, 0, -40, -80. The middle panel is titled 'TIDE (Pilot Station)' and has a vertical axis on the left labeled '(cm)' with values 300, 200, 100, 0, -100, -200, -300. The bottom panel is titled 'WIND (Pilot Station)' and has a vertical axis on the left labeled '(m/s)' with values 10, 5, 0, -5, -10. Each panel shows a time series plot of the respective variable. The current vectors are represented by arrows pointing in various directions. The tide is represented by a wavy line. The wind is represented by a line with arrows indicating direction and magnitude.

Fig. 3. 2-2 (2) Average Current Vector in Each Burst Duration (Survey Item: Current 1, 1st Stage)

Figure 1 displays three time series plots (Current Vector, Tide, and Wind) recorded at the Pilot Station, showing their correlation over a period of 10 days. The x-axis for all plots represents time in days, ranging from 0 to 10. The y-axes represent the magnitude of each variable in different units.

- Current Vector (cm/s):** The top plot shows the current vector, ranging from -80 to 80 cm/s. The data exhibits strong oscillatory behavior, with peaks and troughs corresponding to the tidal cycle.
- Tide (cm):** The middle plot shows the tide level, ranging from -300 to 300 cm. The tide follows a regular, periodic pattern, characteristic of a tidal cycle.
- Wind (m/s):** The bottom plot shows the wind speed, ranging from -10 to 10 m/s. The wind data also shows oscillatory behavior, which is highly correlated with the tidal cycle.

The plots demonstrate a strong correlation between the current vector, tide, and wind, suggesting that the wind is a significant factor influencing the tidal currents at the Pilot Station. A compass rose is included in the bottom left corner, and a scale bar is provided in the bottom right corner.

Fig. 3. 2-2 (3) Average Current Vector in Each Burst Duration (Survey Item: Current 1. 1st Stage)

Three vertically stacked charts for Pilot Station, sharing a common x-axis representing time from 3 to 10.

- Top Chart: CURRENT VECTOR**
 - Y-axis: (cm/s) with scale 0, 40, 80.
 - Compass rose: N (North), S (South), W (West), E (East).
 - Plot: A series of vector arrows representing current direction and magnitude over time.
- Middle Chart: TIDE (Pilot Station)**
 - Y-axis: (cm) with scale 0, 100, 200, 300.
 - Plot: A continuous line graph showing the tidal elevation over time.
- Bottom Chart: WIND (Pilot Station)**
 - Y-axis: (m/s) with scale 0, 5, 10.
 - Compass rose: N (North), S (South), W (West), E (East).
 - Plot: A series of vector arrows representing wind direction and speed over time.

Fig. 3. 2-2 (4) Average Current Vector in Each Burst Duration (Survey Item: Current 1, 1st Stage)

St. :5
 Layer :40.5m (Depth:0.8m)
 Interval: Every 1 hours
 Period : 3rd Sep. - 7th Oct. 1988

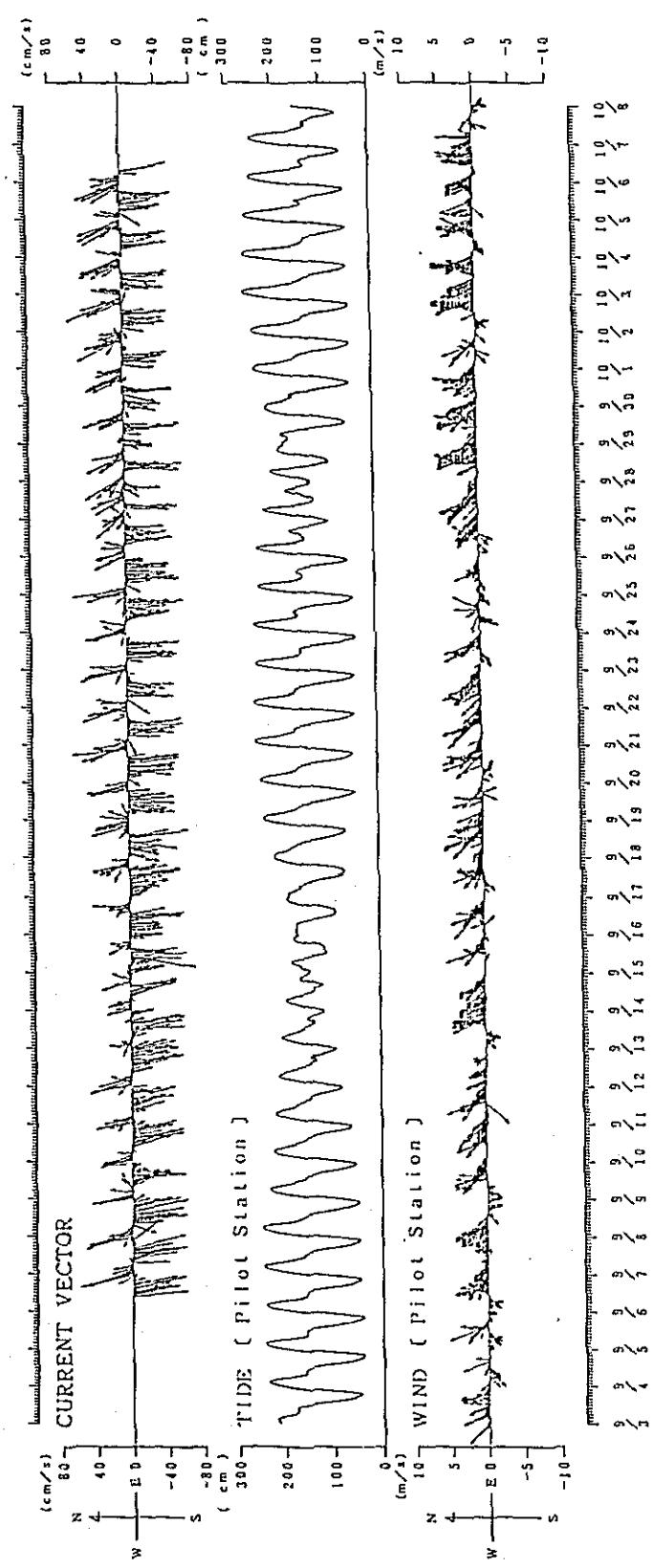


Fig. 3. 2-2 (5) Average Current Vector in Each Burst Duration (Survey Item: Current 1. 1st Stage)

St. : 6
 Layer : +0.5m (Depth: 1.7m)
 Interval : Every 1 hour
 Period : 3rd Sep. - 7th Oct. 1988

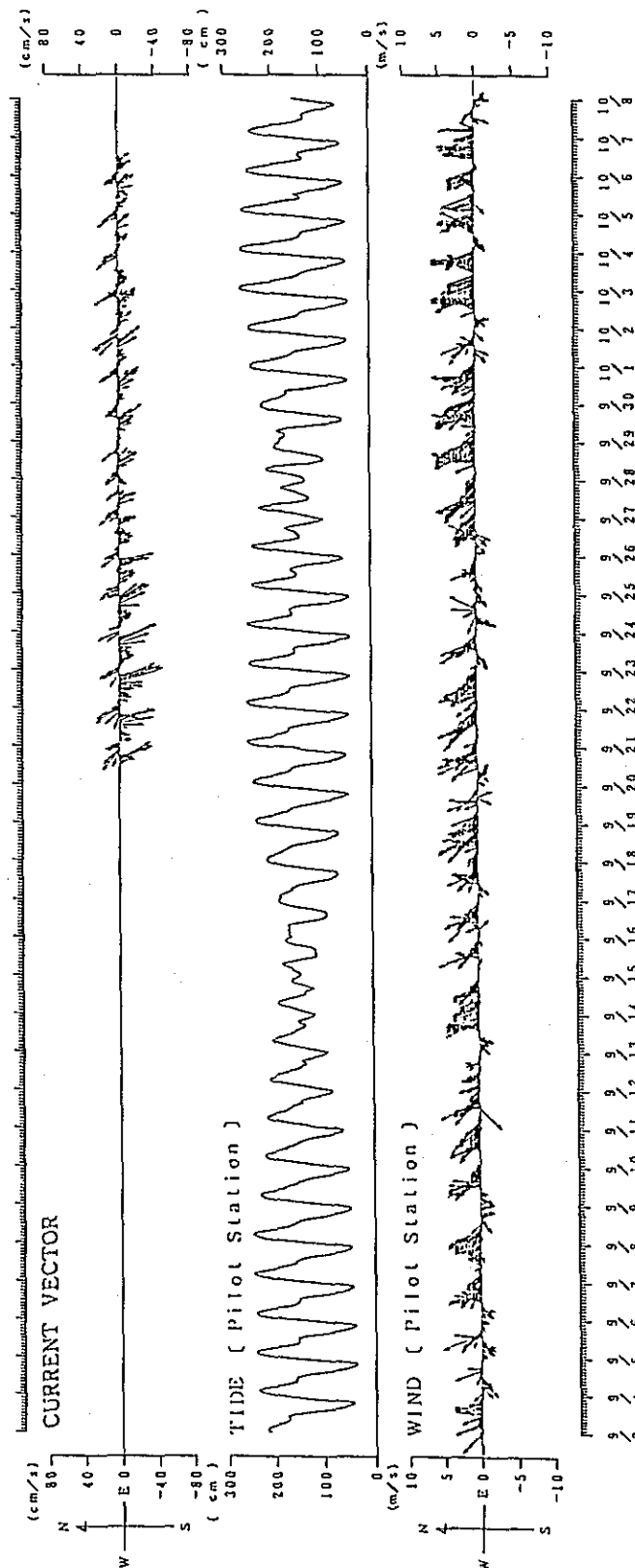


Fig. 3. 2-2 (6) Average Current Vector in Each Burst Duration (Survey Item: Current 1. 1st Stage)

St. : 7
 Layer : +0.5m (Depth: 1.7m)
 Interval: Every 1 hours
 Period : 3rd Sep. - 7th Oct. 1988

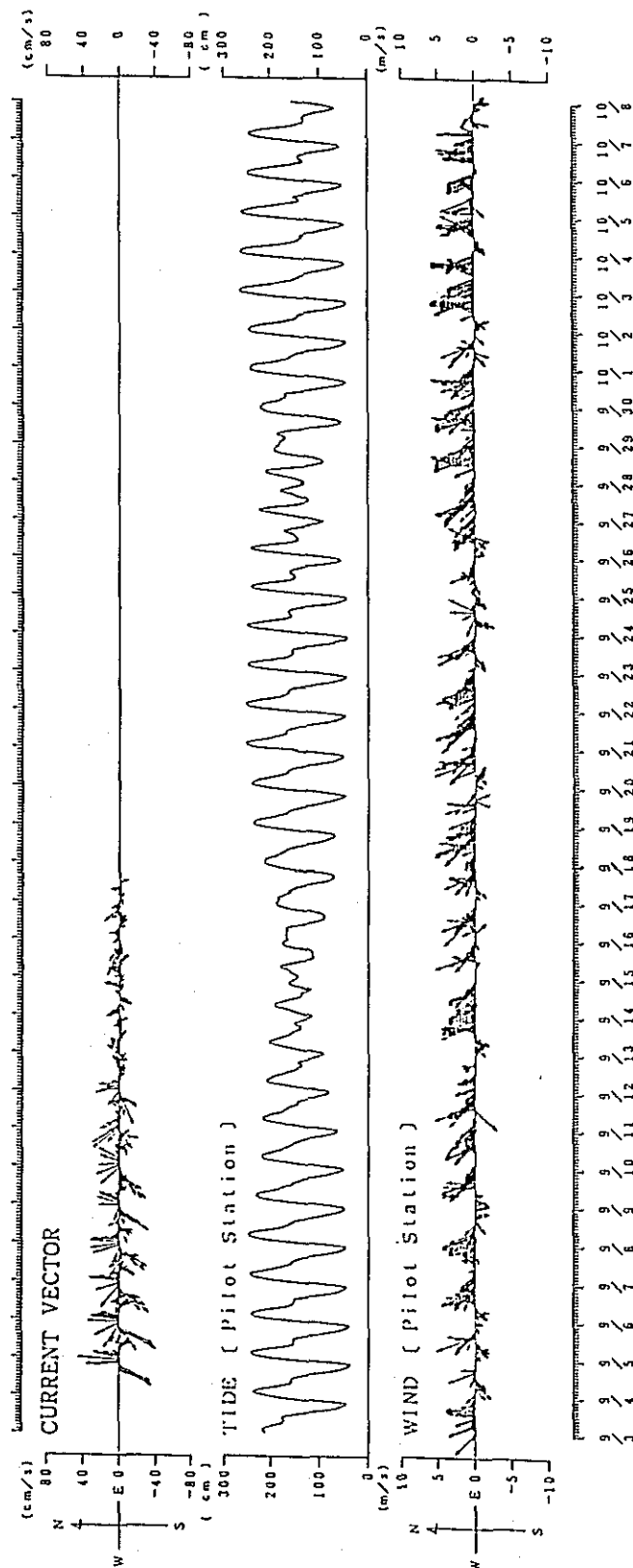


Fig. 3. 2-2 (7) Average Current Vector in Each Burst Duration (Survey Item: Current 1. 1st Stage)

Fig. 3. 2-2 (8) Average Current Vector in Each Burst Duration (Survey Item:Current 1, 1st Stage)

St. : 9
 Layer : 40.5m (Depth: 1.0m)
 Interval : Every 1 hours
 Period : 3rd Sep. - 7th Oct. 1988

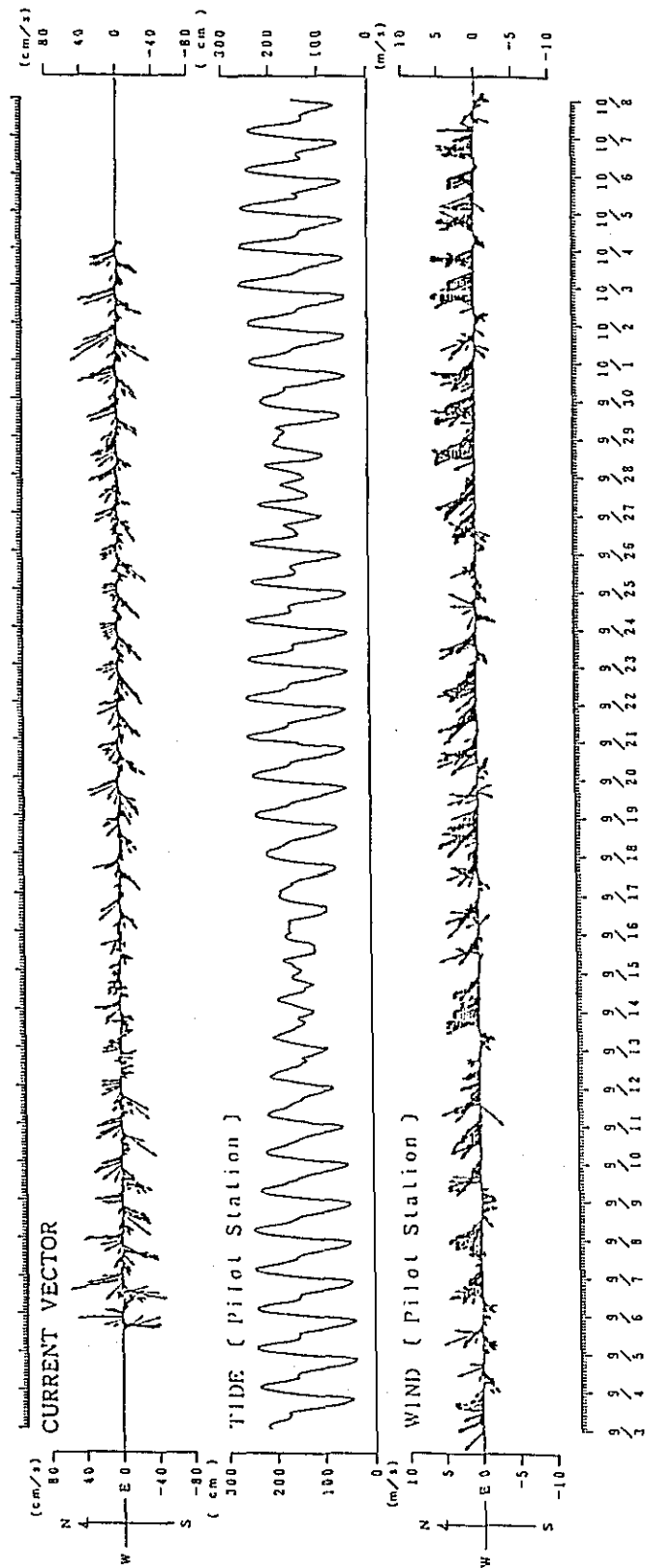


Fig. 3. 2-2 (9) Average Current Vector in Each Burst Duration (Survey Item: Current 1. 1st Stage)

Figure 1 consists of three vertically stacked panels sharing a common time axis at the bottom. The time axis is labeled with dates from 9/2 to 9/19. The top panel, titled 'CURRENT VECTOR', has a vertical axis labeled '(cm/s)' ranging from -80 to 80. It shows a series of vector arrows pointing in various directions. The middle panel, titled 'TIDE (Pilot Station)', has a vertical axis labeled '(cm)' ranging from 0 to 300. It shows a regular, periodic oscillation. The bottom panel, titled 'WIND (Pilot Station)', has a vertical axis labeled '(m/s)' ranging from -10 to 10. It shows a series of vector arrows, with some areas shaded to indicate specific wind conditions. A compass rose is present in the bottom left of the wind panel, showing North (N), South (S), East (E), and West (W).

Fig. 3. 2-2(10) Average Current Vector in Each Burst Duration (Survey Item:Current 1. 1st Stage)

Fig. 3. 2-2(II) Average Current Vector in Each Burst Duration (Survey Item:Current 1. 1st Stage.)

St. :
 Layer : +0.5m (Depth: 9.1m)
 Interval: Every 2 hours
 Period : 17th Jan. - 20th Feb. 1989

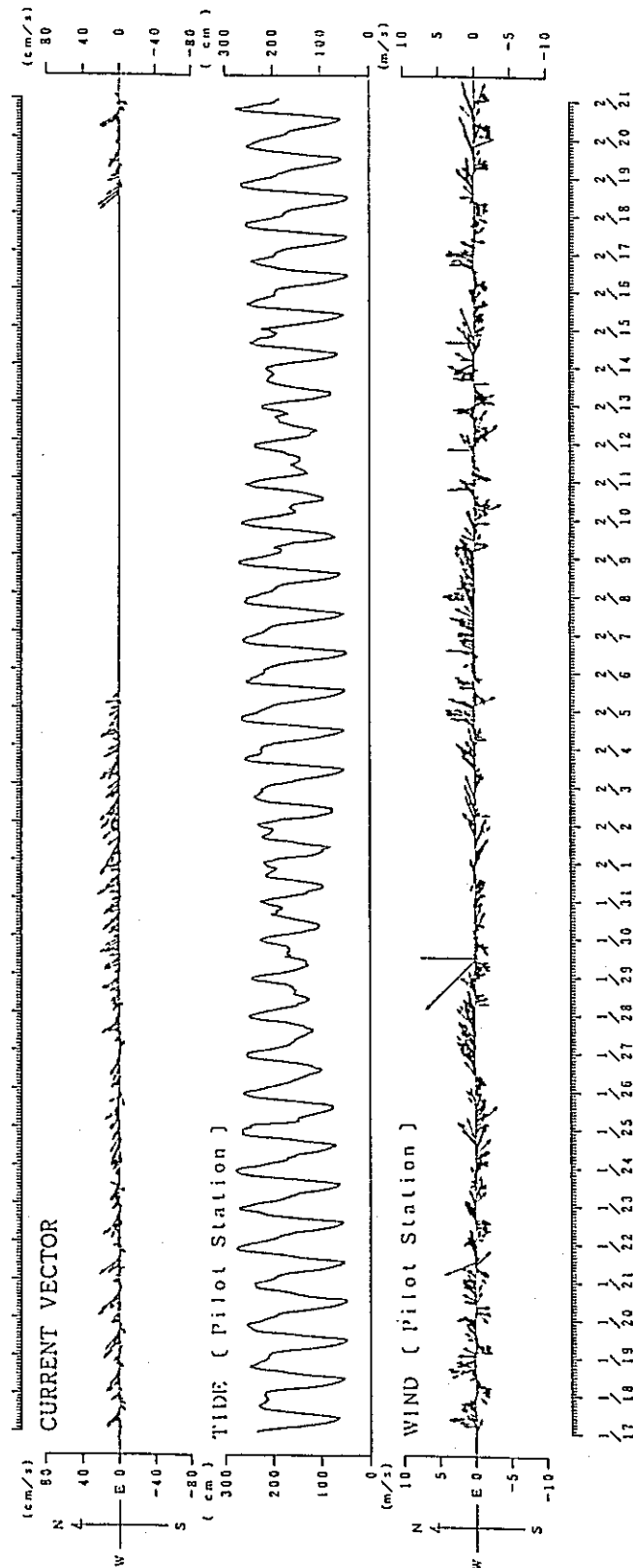


Fig. 3. 2-2 (12) Average Current Vector in Each Burst Duration (Survey Item: Current 1, 2nd Stage)

St. :2
 Layer :+0.5m (Depth:1.6m)
 Interval:Every 1 hours
 Period :17th Jan.-20th Feb, 1983

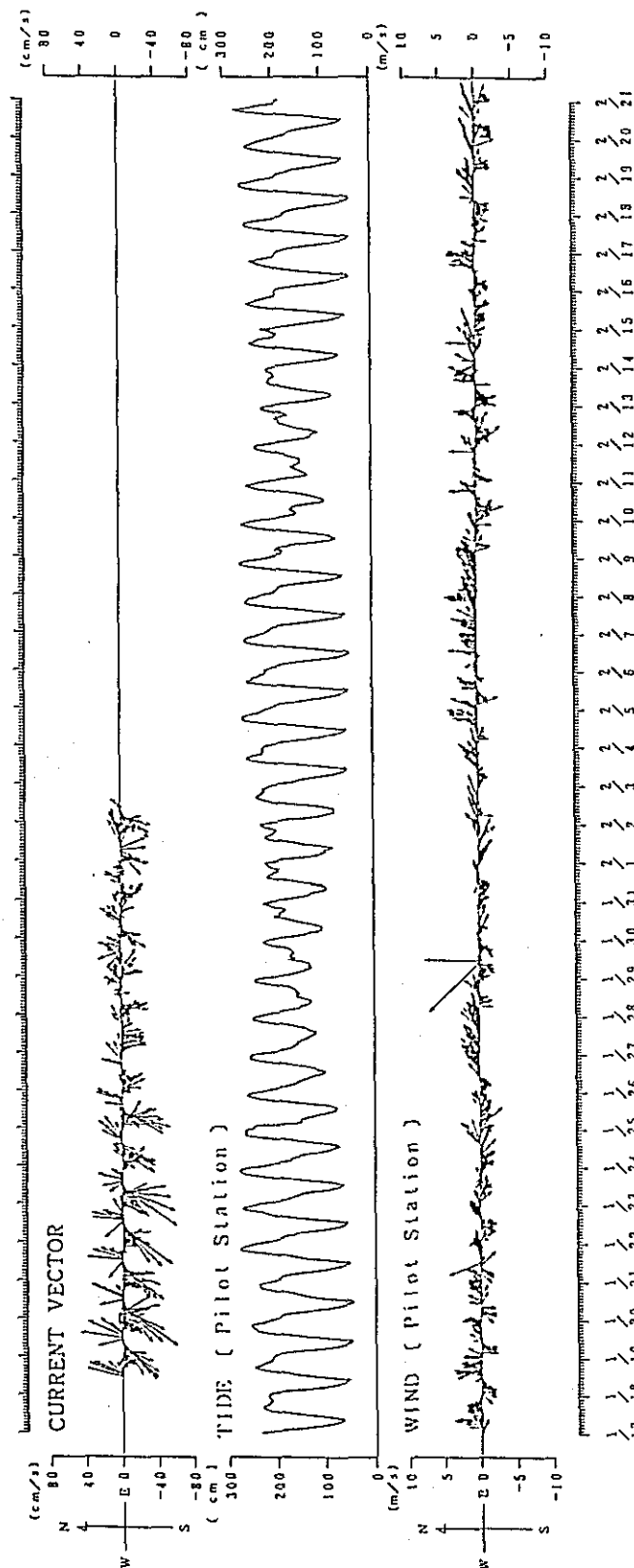


Fig. 3. 2-2 (13) Average Current Vector in Each Burst Duration (Survey Item:Current 1, 2nd Stage)

St. :3
 Layer :+0.5m (Depth:0.7m)
 Interval: Every 1 hours
 Period :17th Jan. ~20th Feb. 1983

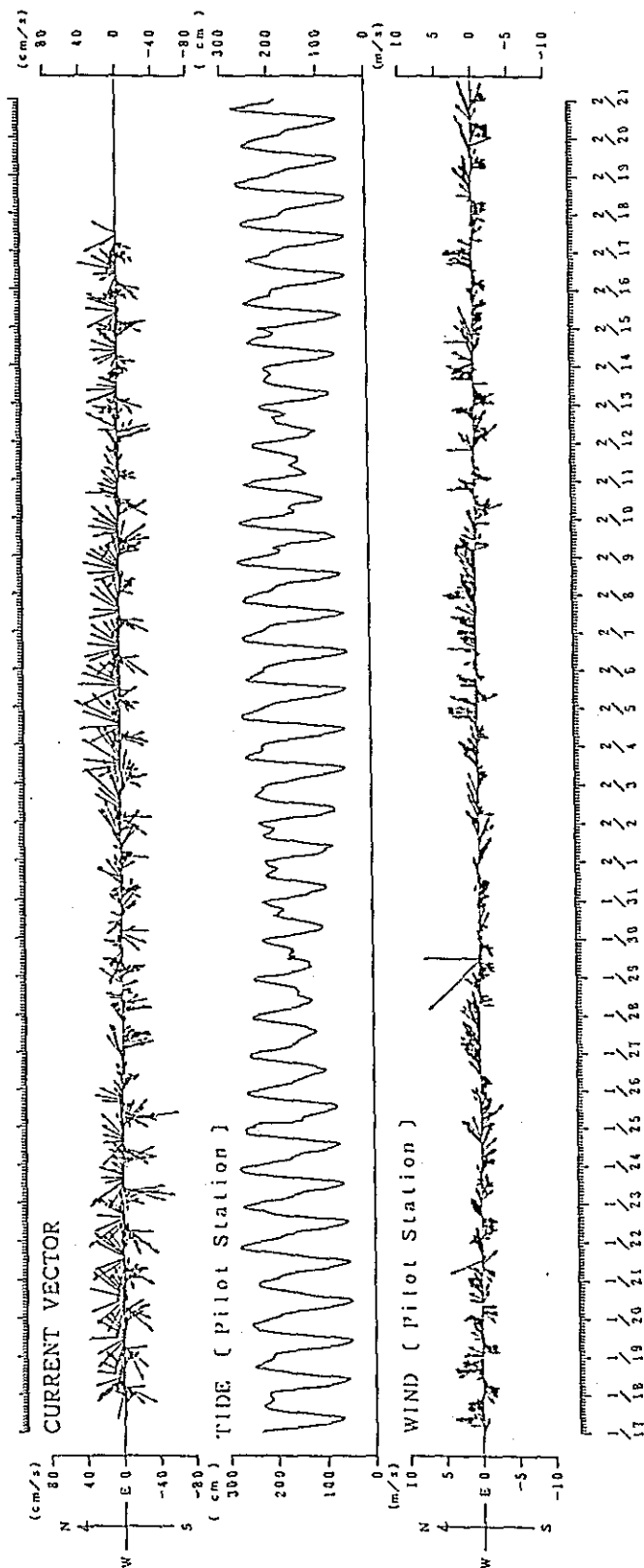


Fig. 3. 2-2 (M) Average Current Vector in Each Burst Duration (Survey Item:Current 1. 2nd Stage)

St. :A
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :17th Jan. -20th Feb. 1983

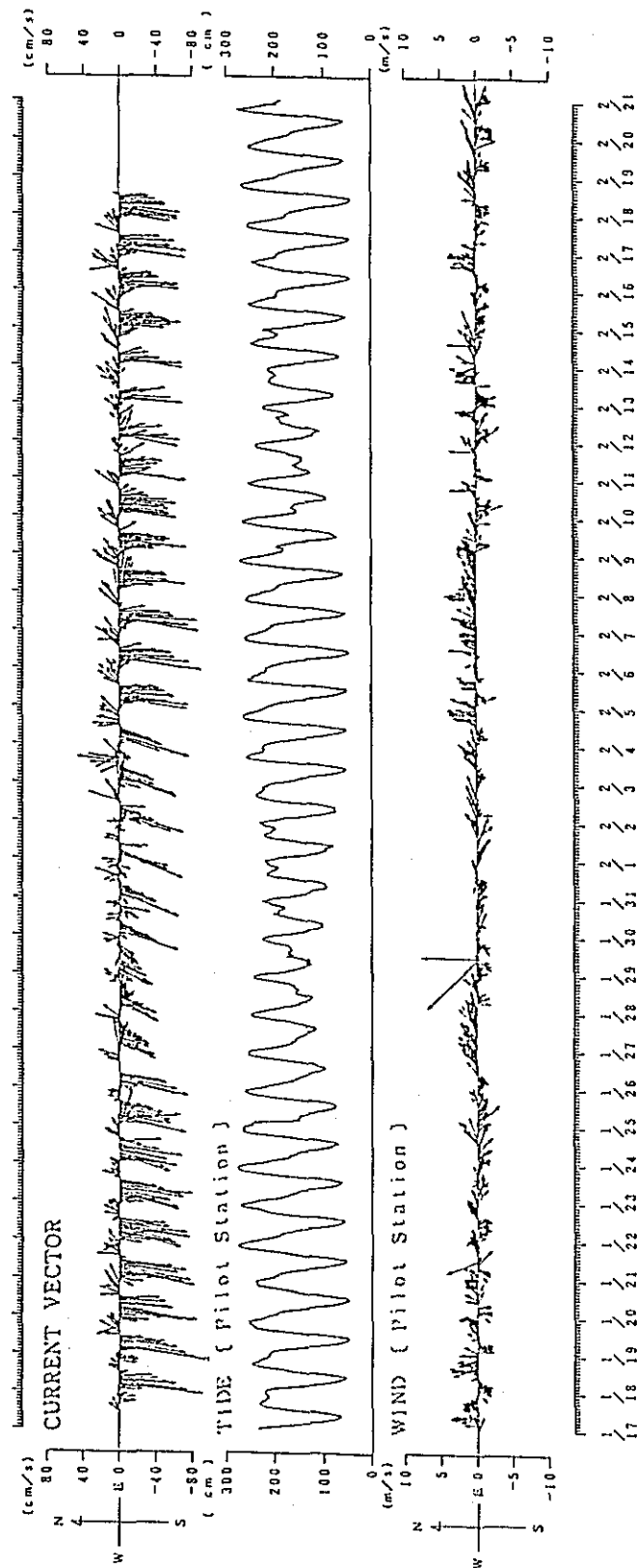


Fig. 3.2-2 (15) Average Current Vector in Each Burst Duration (Survey Item:Current 1, 2nd Stage)

St. :5
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :17th Jan.-28th Feb. 1989

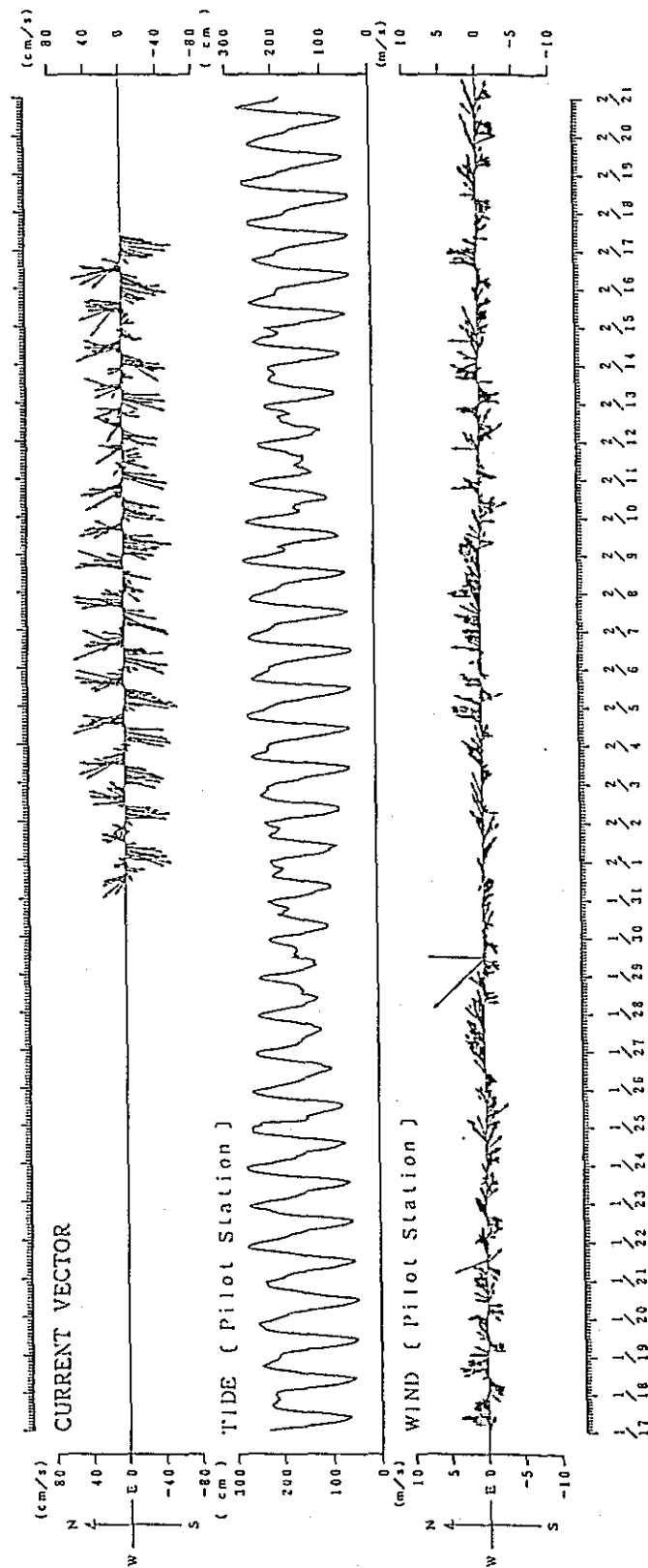


Fig. 3. 2-2 (16) Average Current Vector in Each Burst Duration (Survey Item:Current 1, 2nd Stage)

St. :S
 Layer :+0.5m (Depth:1.7m)
 Interval:Every 1 hours
 Period :17th Jan.-20th Feb, 1983

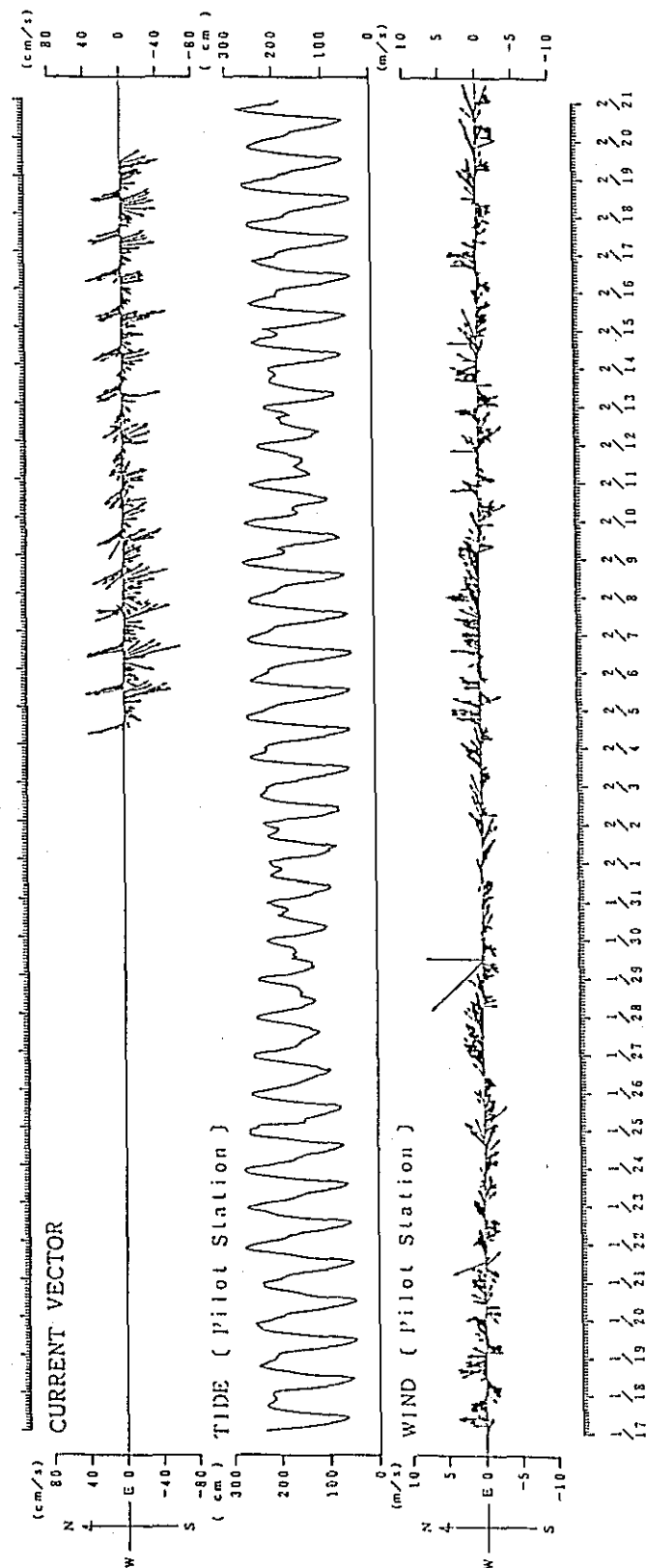


Fig. 3.2-2(17) Average Current Vector in Each Burst Duration (Survey Item:Current 1.2nd Stage)

St. : 7
 Layer : +0.5m (Depth: 1.7m)
 Interval: Every 1 hour
 Period : 17th Jan. - 20th Feb, 1989

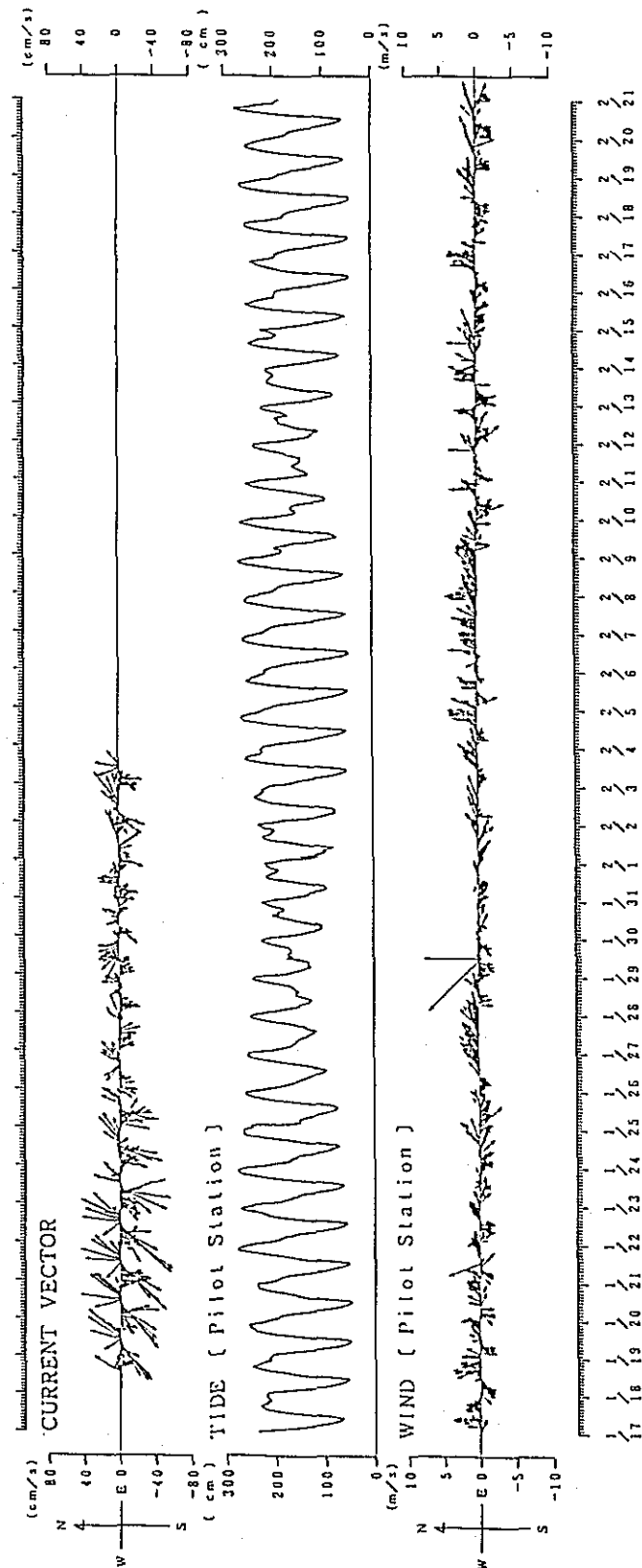


Fig. 3. 2-2 (18) Average Current Vector in Each Burst Duration (Survey Item: Current 1. 2nd Stage)

St. : 8
 Layer : +0.5a (Depth: 0.8a)
 Interval: Every 1 hour
 Period : 17th Jan. - 20th Feb. 1983

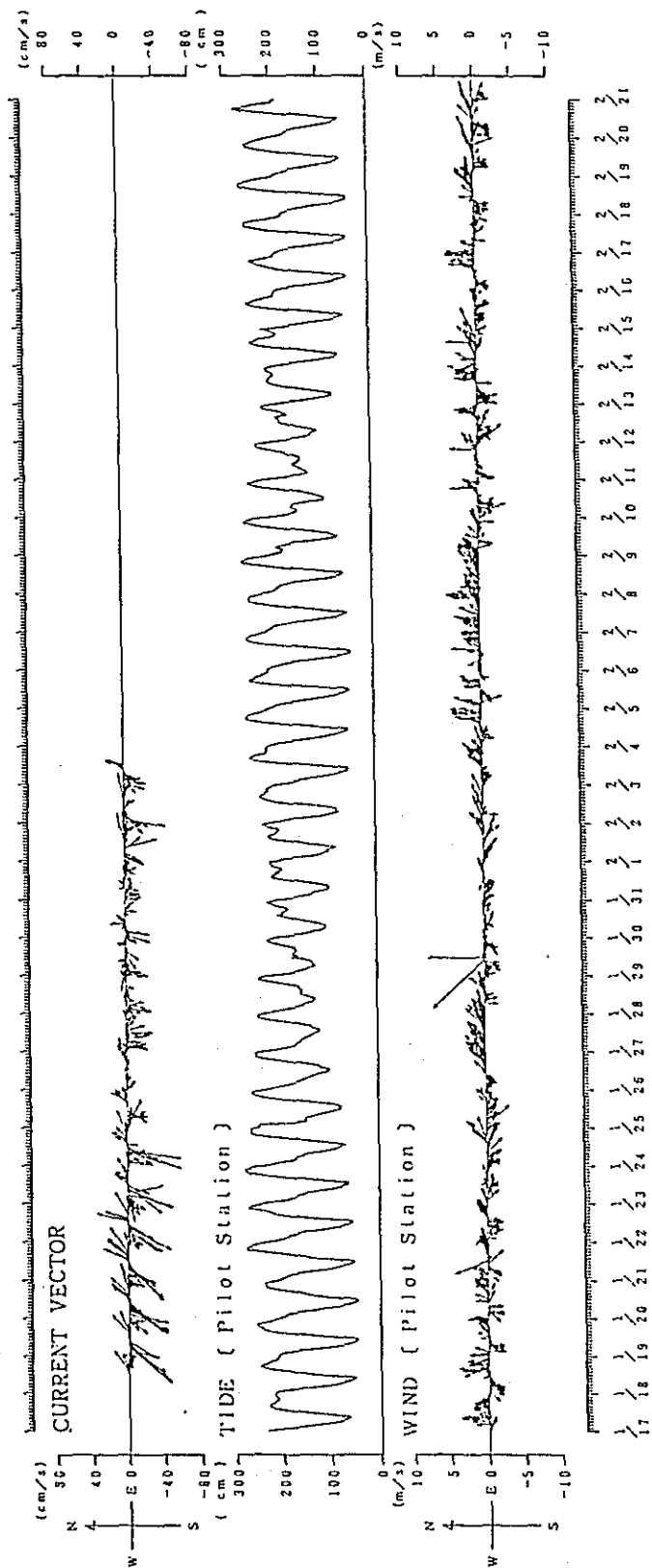


Fig. 3.2-2 (19) Average Current Vector in Each Burst Duration (Survey Item: Current 1, 2nd Stage)

St. -9
 Layer :+0.5m (Depth:1.0m)
 Interval:Every 1 hours
 Period :17th Jan.-20th Feb, 1989

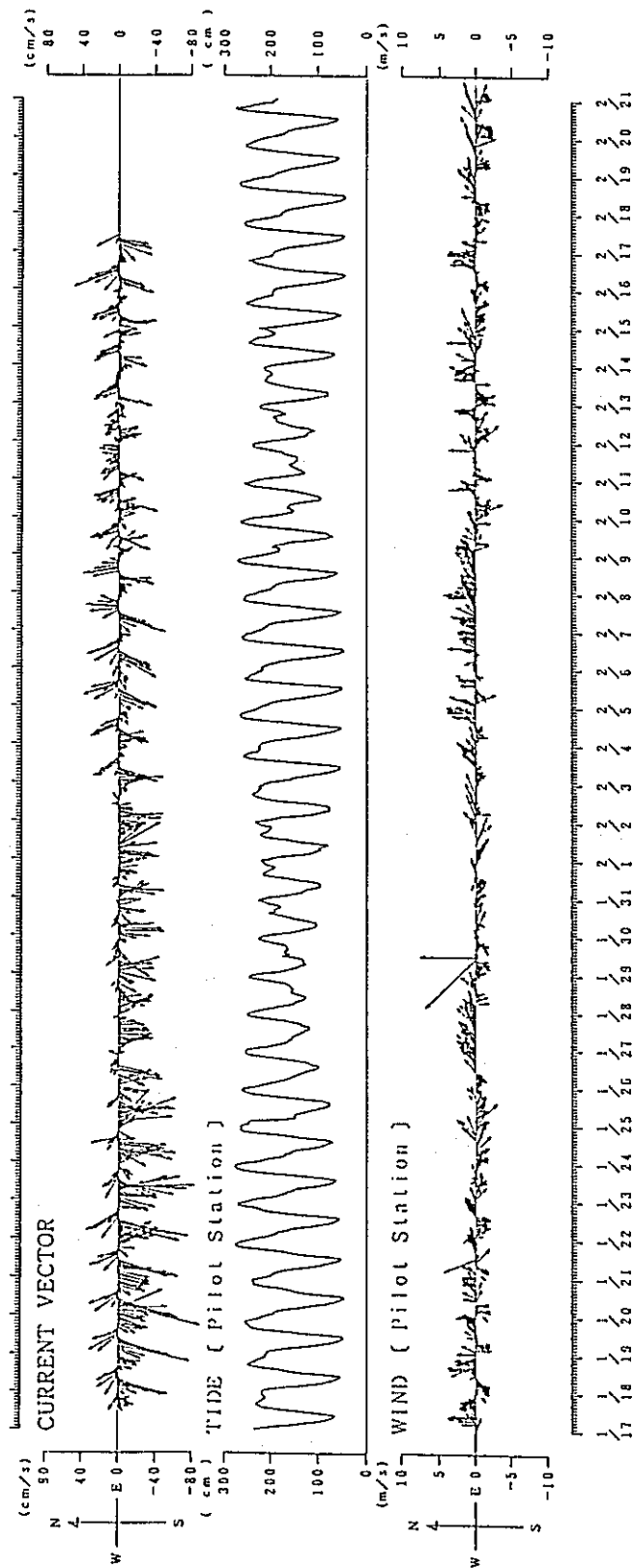


Fig. 3. 2-2 (20) Average Current Vector in Each Burst Duration. (Survey Item:Current 1. 2nd Stage)

St. :10
 Layer :+0.5m (Depth:2.5m)
 Interval:Every 1 hours
 Period :17th Jan. -20th Feb. 1983

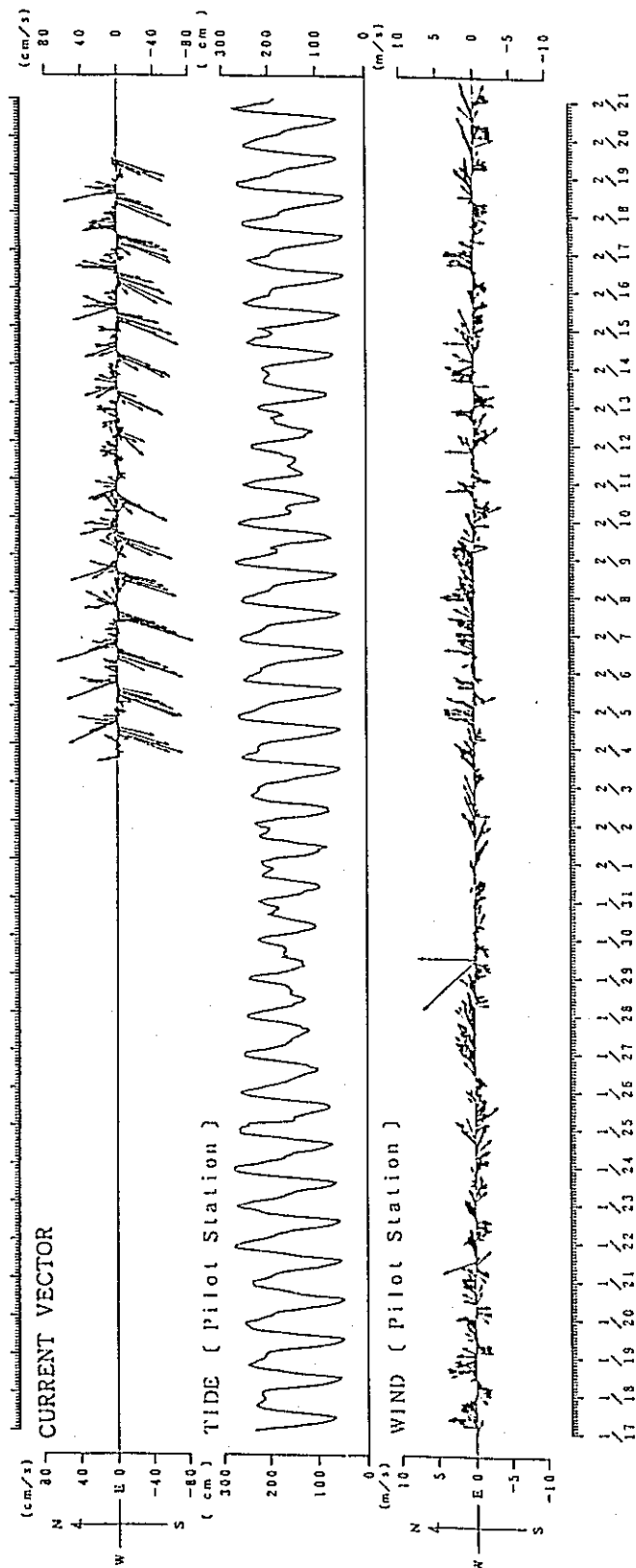


Fig. 3. 2-2 (21) Average Current Vector in Each Burst Duration (Survey Item:Current 1. 2nd. Stage)

St. :11
 Layer :+0.5m (Depth:1.2m)
 Interval:Every 1 hours
 period :17th Jan.-20th Feb. 1989

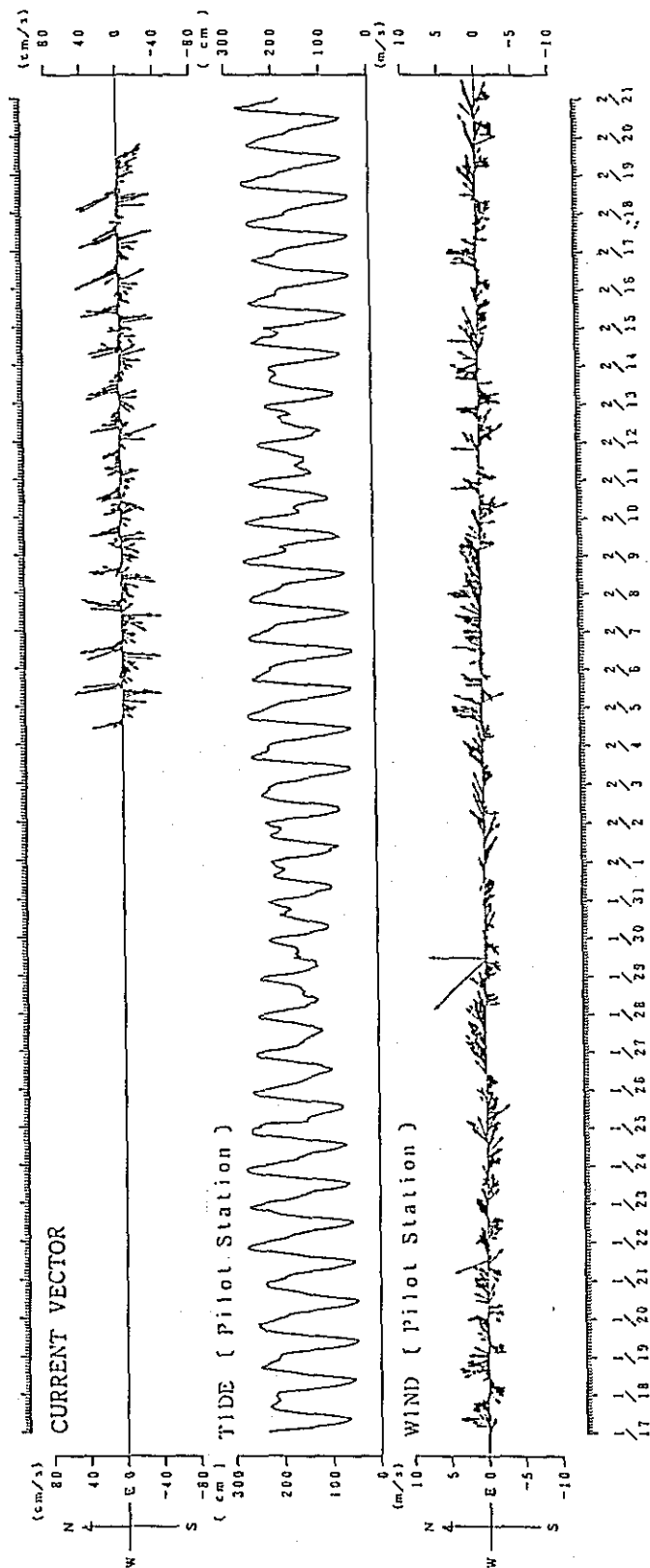


Fig. 3.2-2 (2) Average Current Vector in Each Burst Duration (Survey Item:Current 1, 2nd Stage)

[illegible]

Fig. 3. 2-2(2) Average Current Vector in Each Burst Duration (Survey Item:Current 1, 3rd Stage)

St. :2
 Layer :+0.5m (Depth:1.5m)
 Interval:Every 1 hours
 Period :10th Apr.-13th May 1989

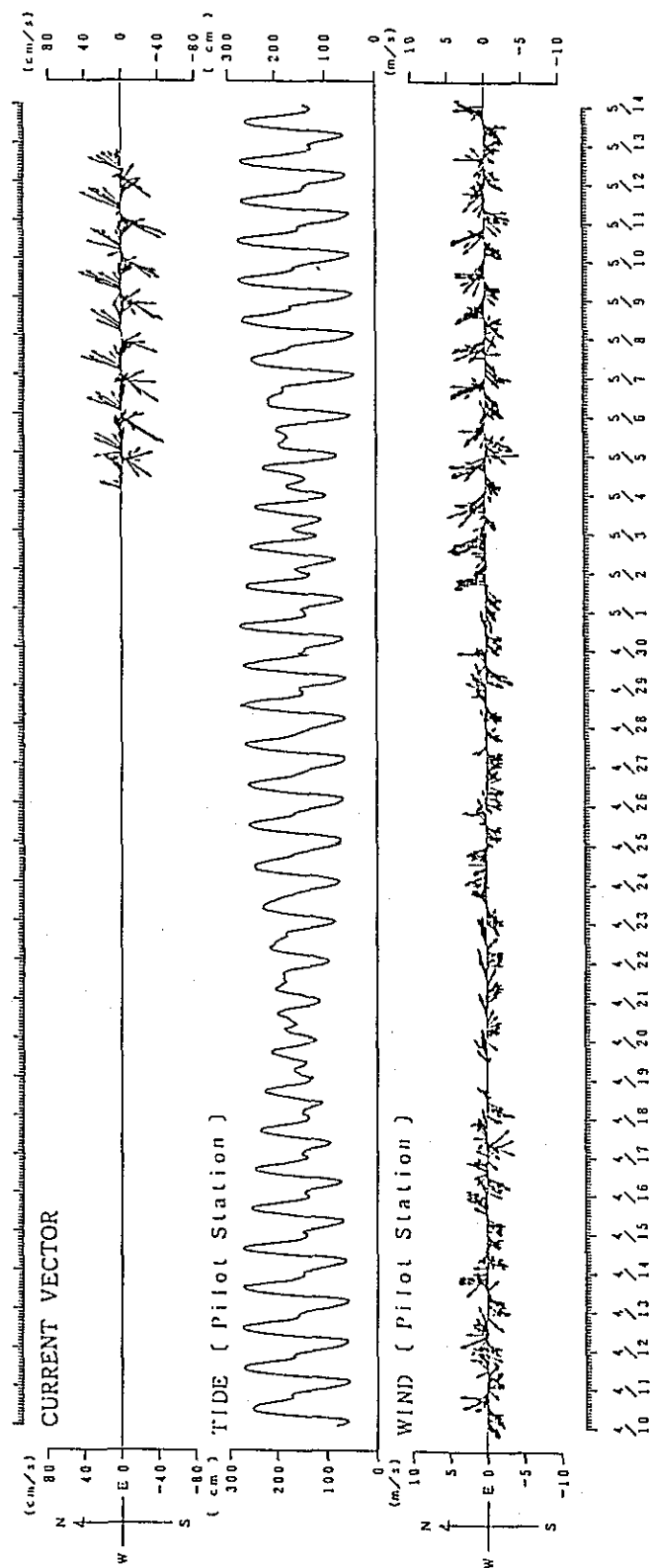


Fig. 3. 2-2 (24) Average Current Vector in Each Burst Duration (Survey Item:Current 1. 3rd Stage)

St. :3
 Layer :+0.5m (Depth:0.7m)
 Interval:Every 1 hours
 Period :10th Apr. -13th May 1989

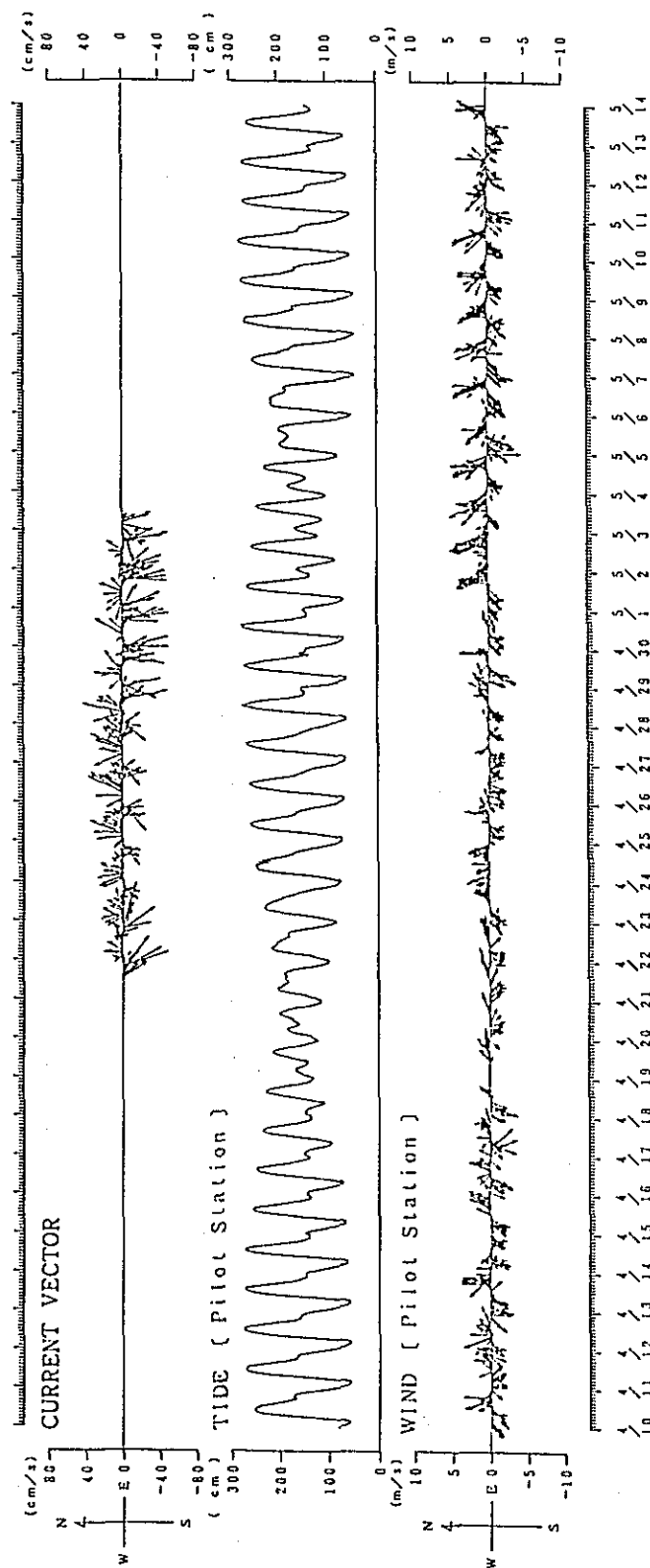


Fig. 3. 2-2 (25) Average Current Vector in Each Burst Duration (Survey Item:Current 1. 3rd Stage)

St. : 4
 Layer : +0.5m (Depth: 0.8m)
 Interval : Every 1 hours
 Period : 10th Apr. - 13th May 1983

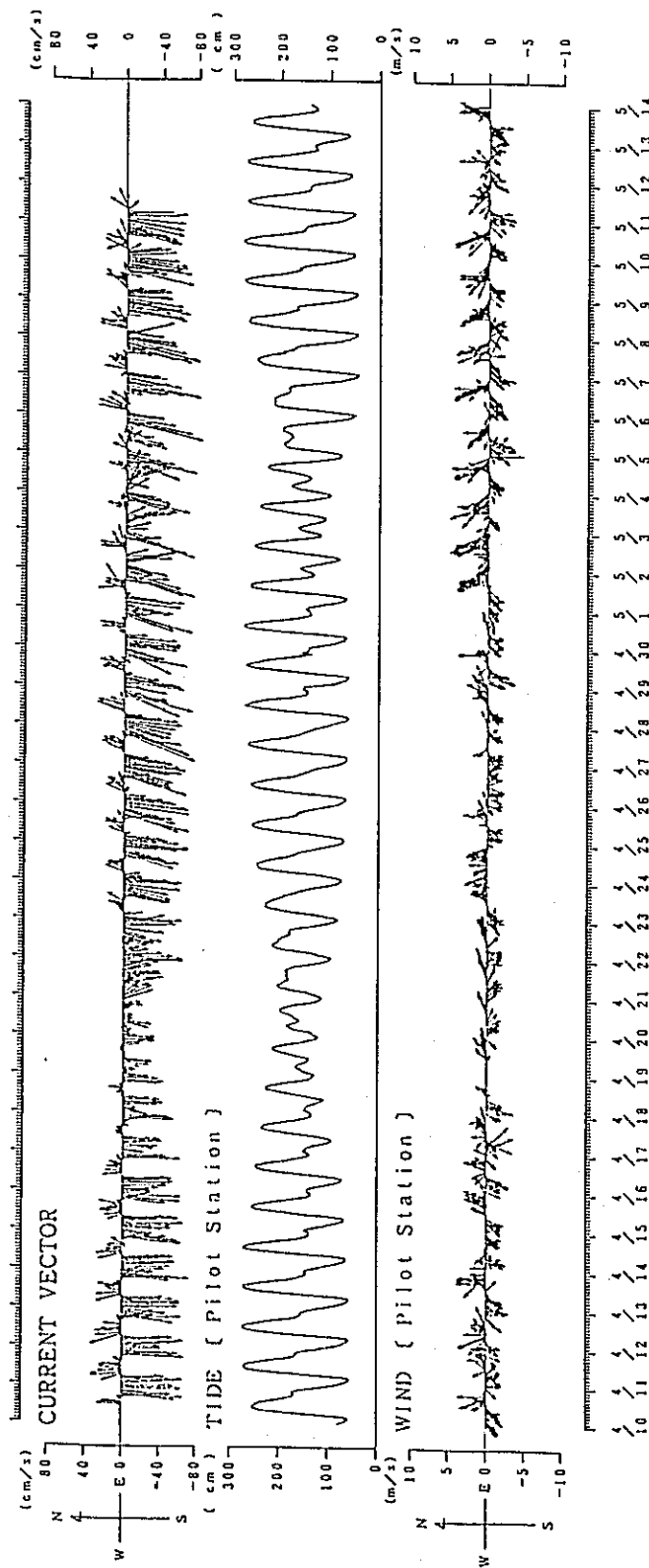


Fig. 3. 2-2 (26) Average Current Vector in Each Burst Duration (Survey Item: Current 1. 3rd Stage)

St. :5
 Layer :+0.5m (Depth-0.8m)
 Interval: Every 1 hour
 Period :10th Apr. -13th May 1989

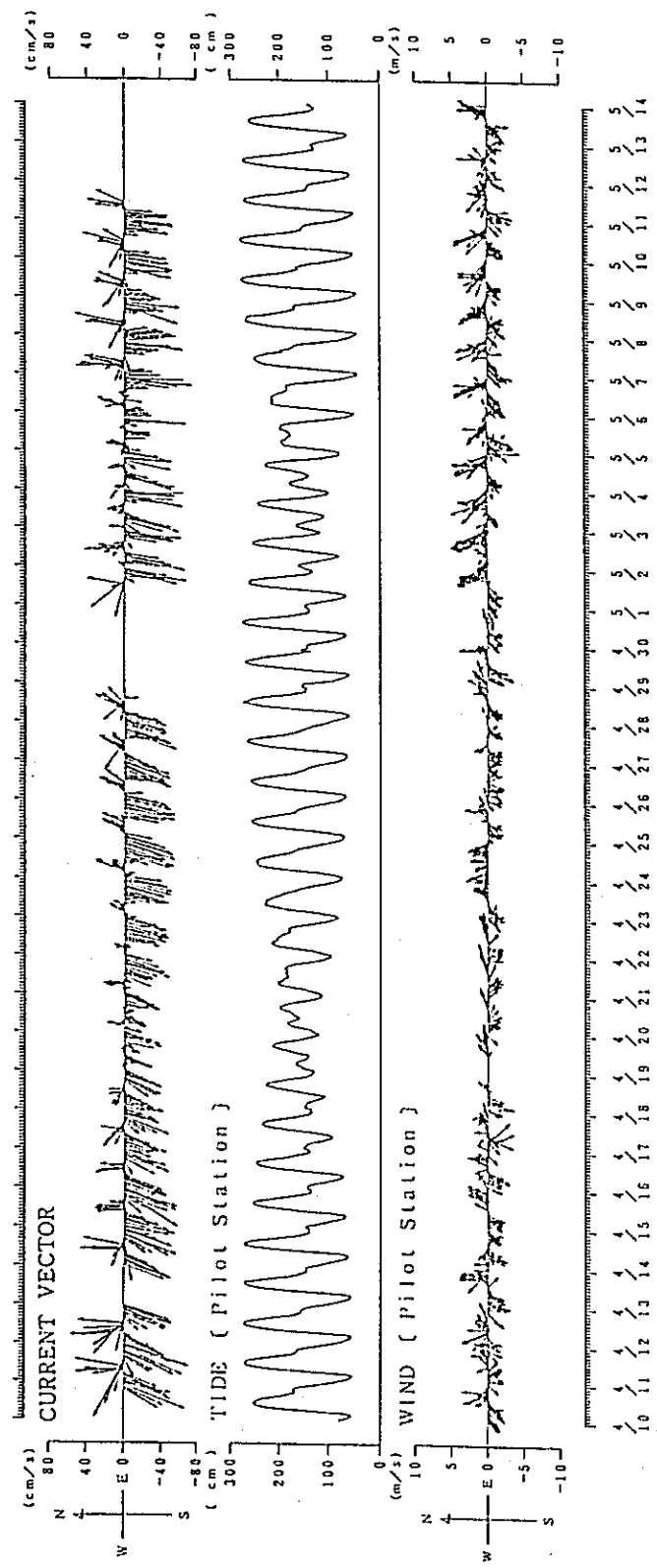


Fig. 3. 2-2 (Z) Average Current Vector in Each Burst Duration (Survey Item:Current 1, 3rd Stage)

St. :6
 Layer :+0.5m(Depth:1.7m)
 Interval:Every 1 hours
 Period :10th Apr. -13th May 1985

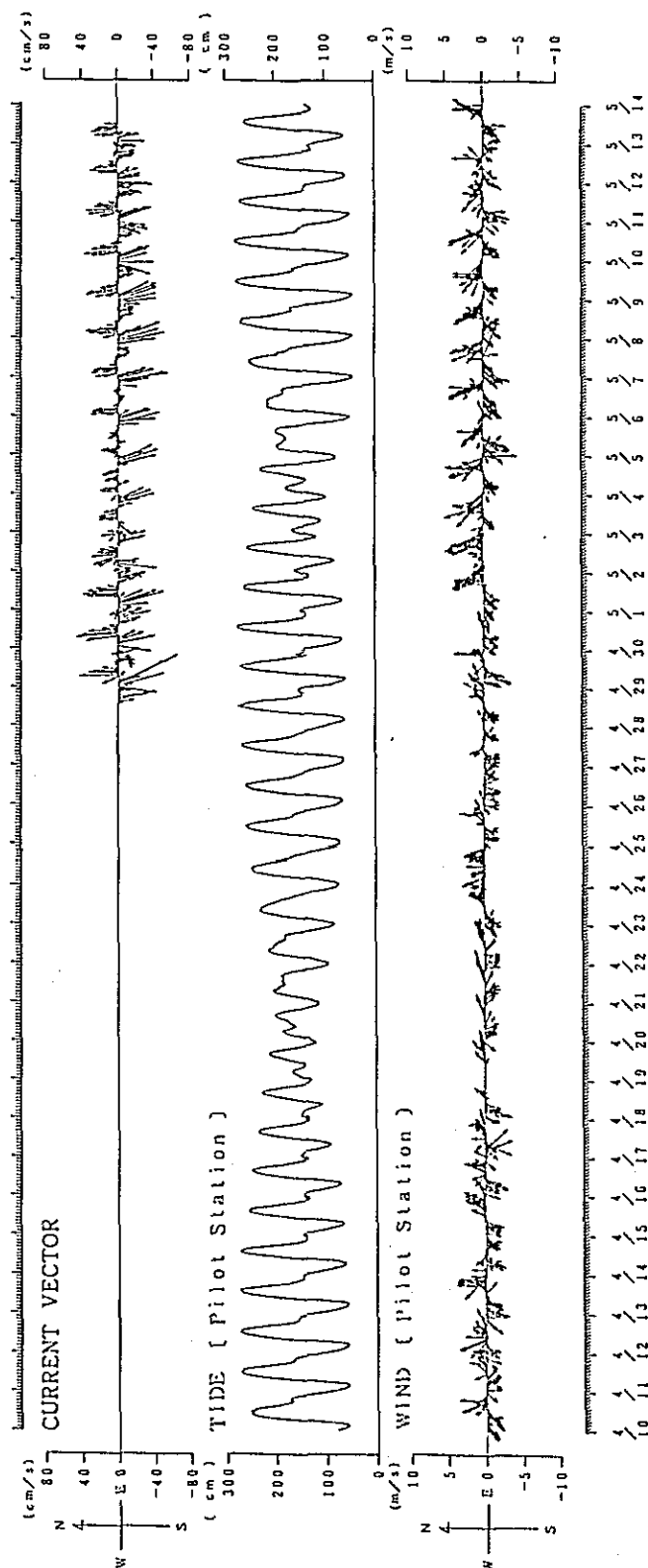


Fig. 3.2-2 (23) Average Current Vector in Each Burst Duration (Survey Item:Current 1. 3rd Stage)

St. :7
 Layer :40.5m (Depth:1.7m)
 Interval: Every 1 hours
 Period :10th Apr. -13th May 1989

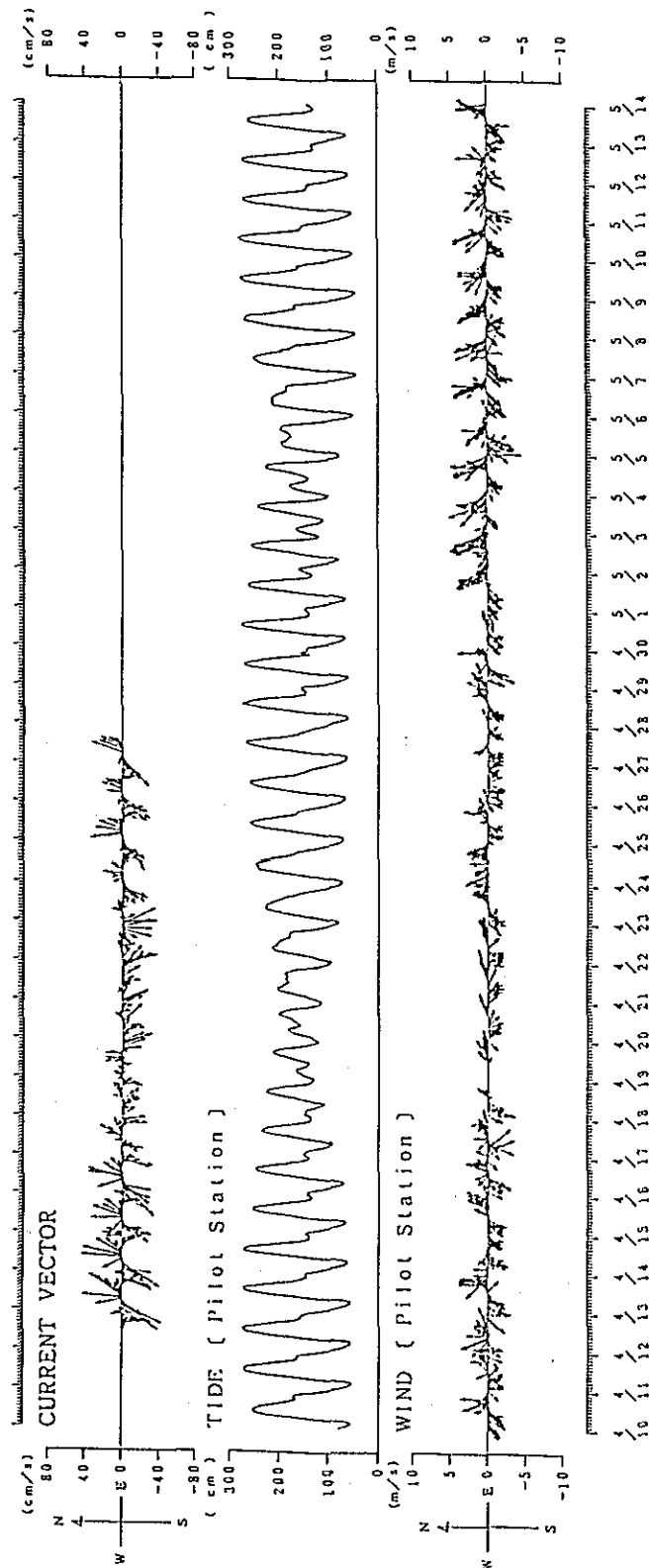


Fig. 3. 2-2 (29) Average Current Vector in Each Burst Duration (Survey Item: Current 1. 3rd Stage)

St. :8
 Layer :40.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :10th Apr. -13th May 1989

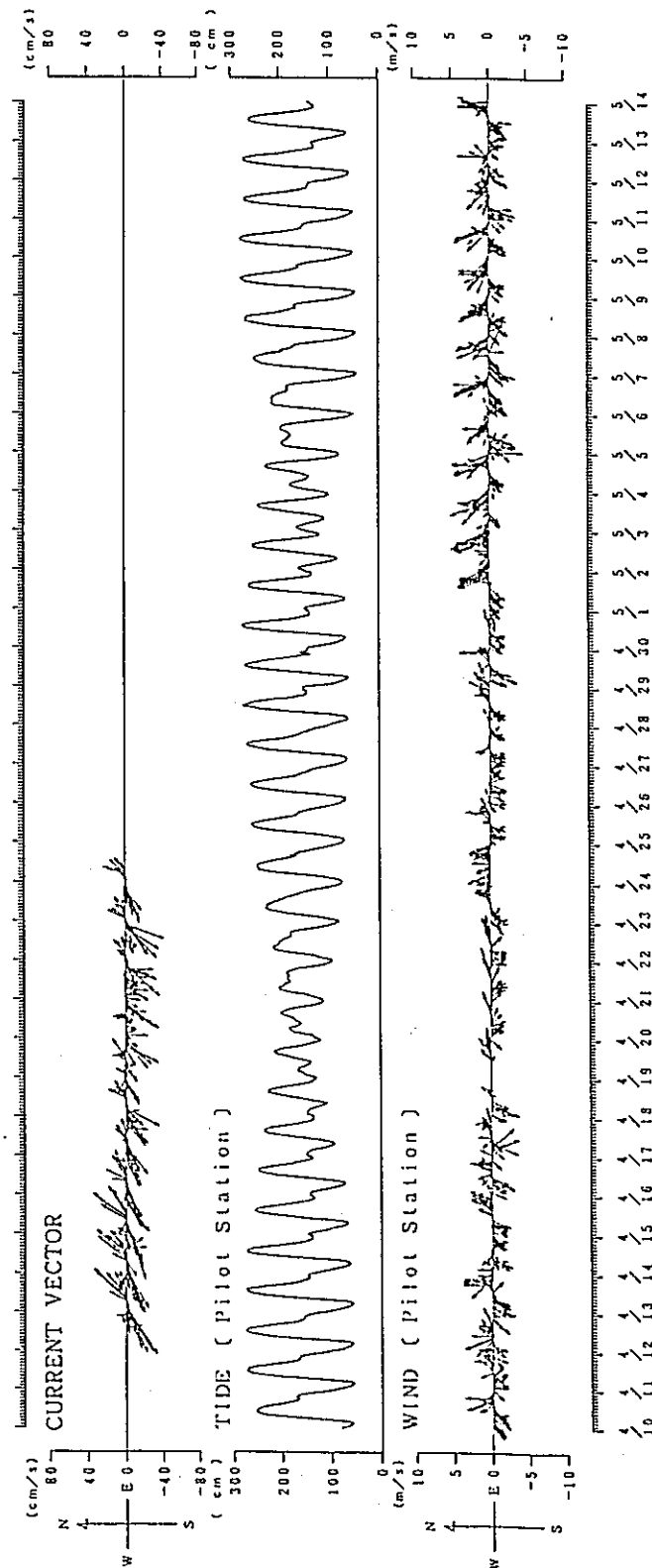


Fig. 3. 2-2 (30) Average Current Vector in Each Burst Duration (Survey Item:Current 1. 3rd Stage)

Fig. 3. 2-2 (3l) Average Current Vector in Each Burst Duration (Survey Item:Current 1, 3rd Stage)

St. :10
 Layer :+0.5m (Depth:2.5m)
 Interval:Every 1 hours
 Period :10th Apr.-13th May 1983

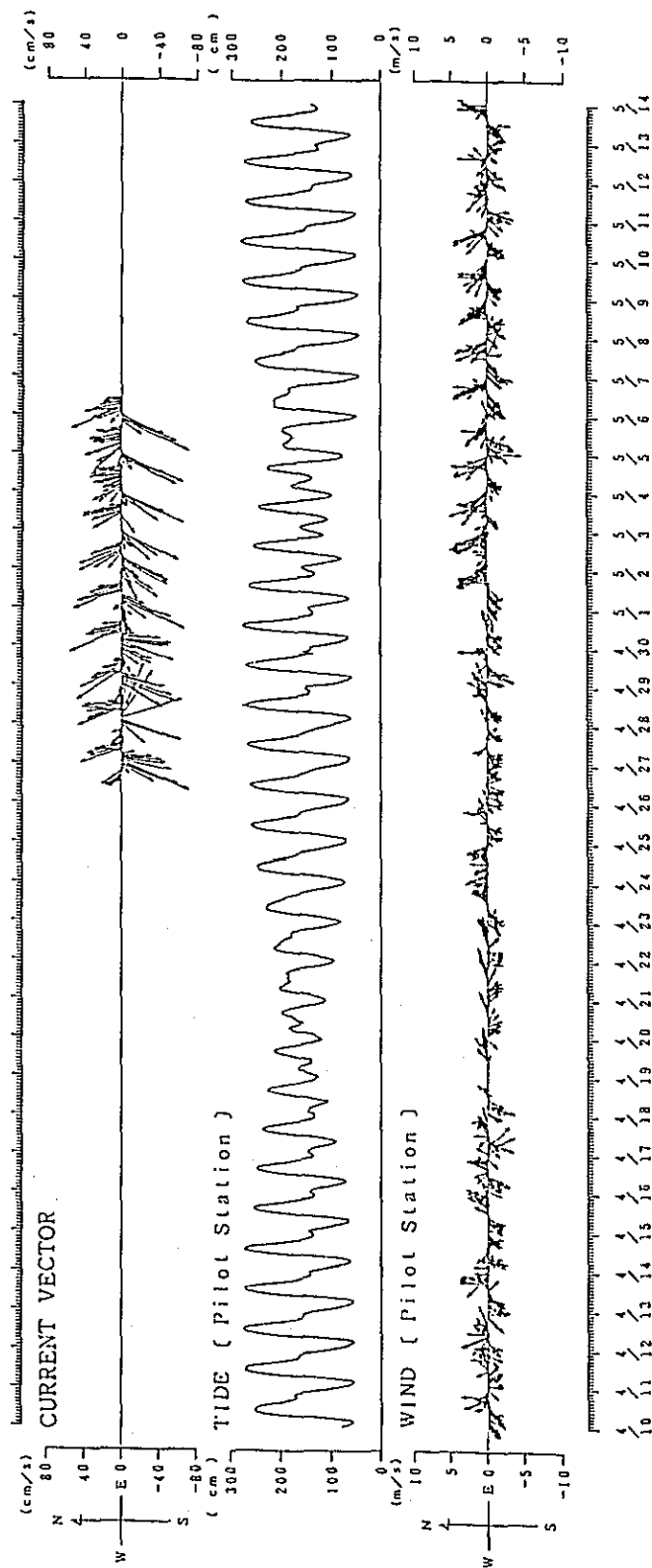


Fig. 3. 2-2 (㉔) Average Current Vector in Each Burst Duration (Survey Item:Current 1. 3rd Stage)

St. :11
 Layer :+0.5m (Depth:1.2m)
 Interval:Every 1 hours
 Period :10th Apr. -13th May 1989

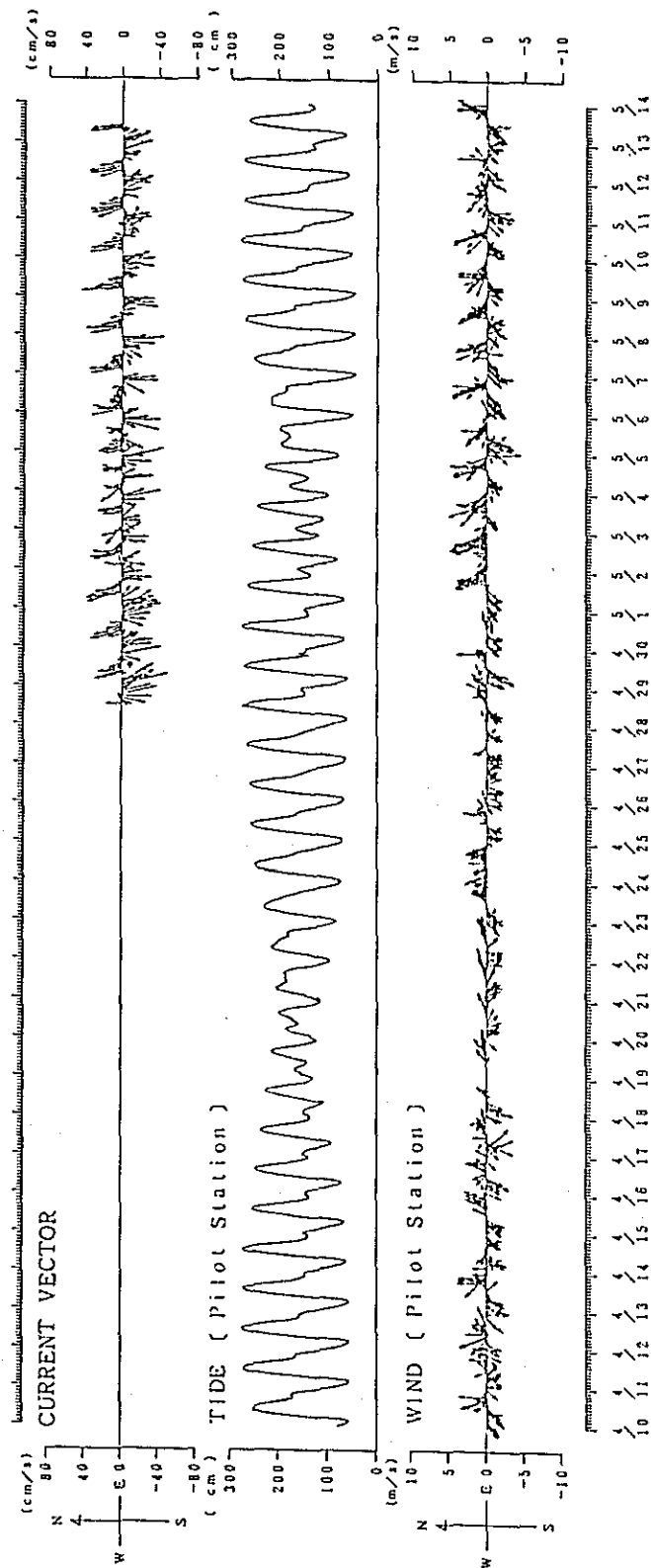


Fig. 3. 2-2 (33) Average Current Vector in Each Burst Duration (Survey Item:Current 1. 3rd Stage)

St. :1
 Layer :+0.5m (Depth-9.1m)
 Interval: Every 2 hours
 Period :27th Sep. -30th Sep. 1988

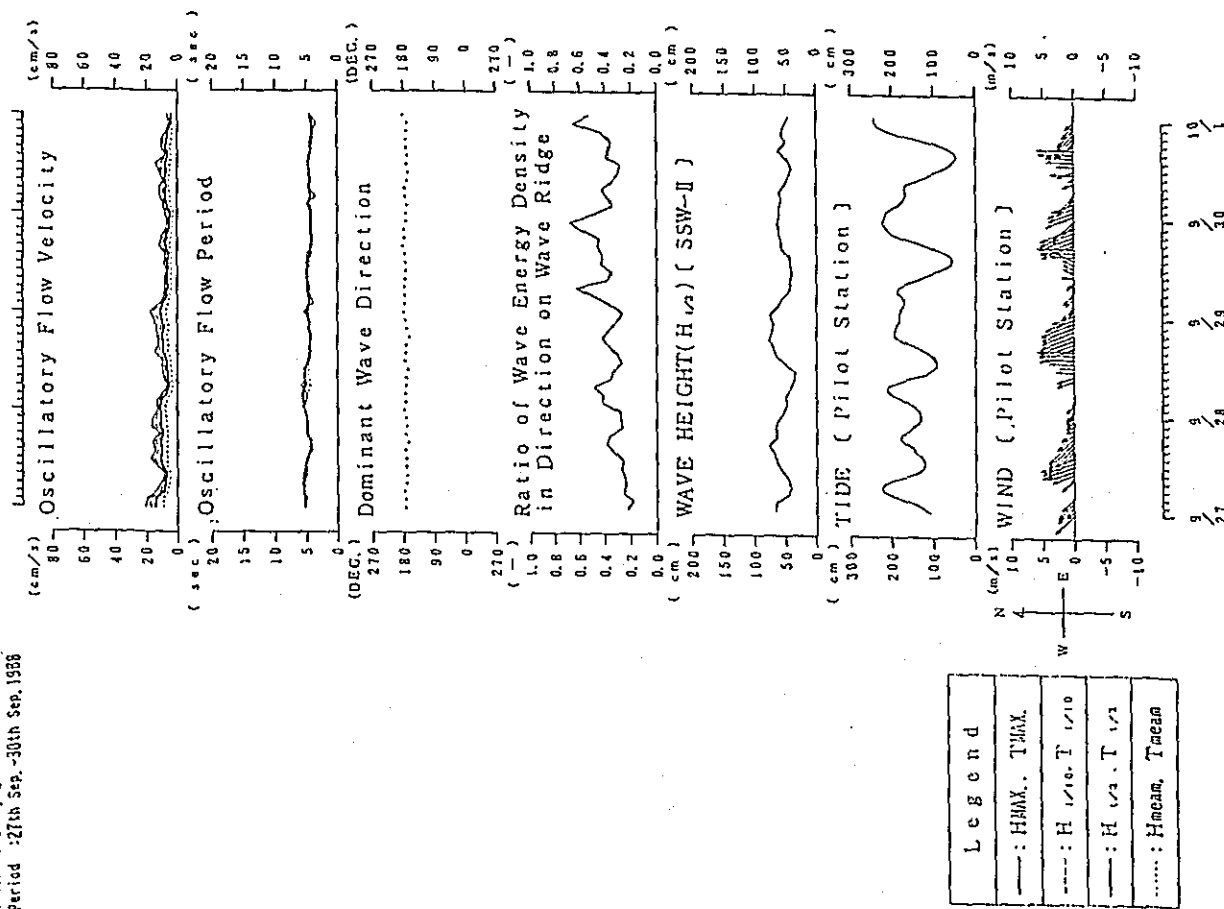


Fig. 3. 2-3 (1) Time Serial Variation of Oscillatory Flow (Survey Item:Current 1. 1st Stage)

St. : 2
 Layer : +0.5m (Depth: 1.6m)
 Interval: Every 1 hour
 Period : 27th Sep. - 30th Sep. 1988

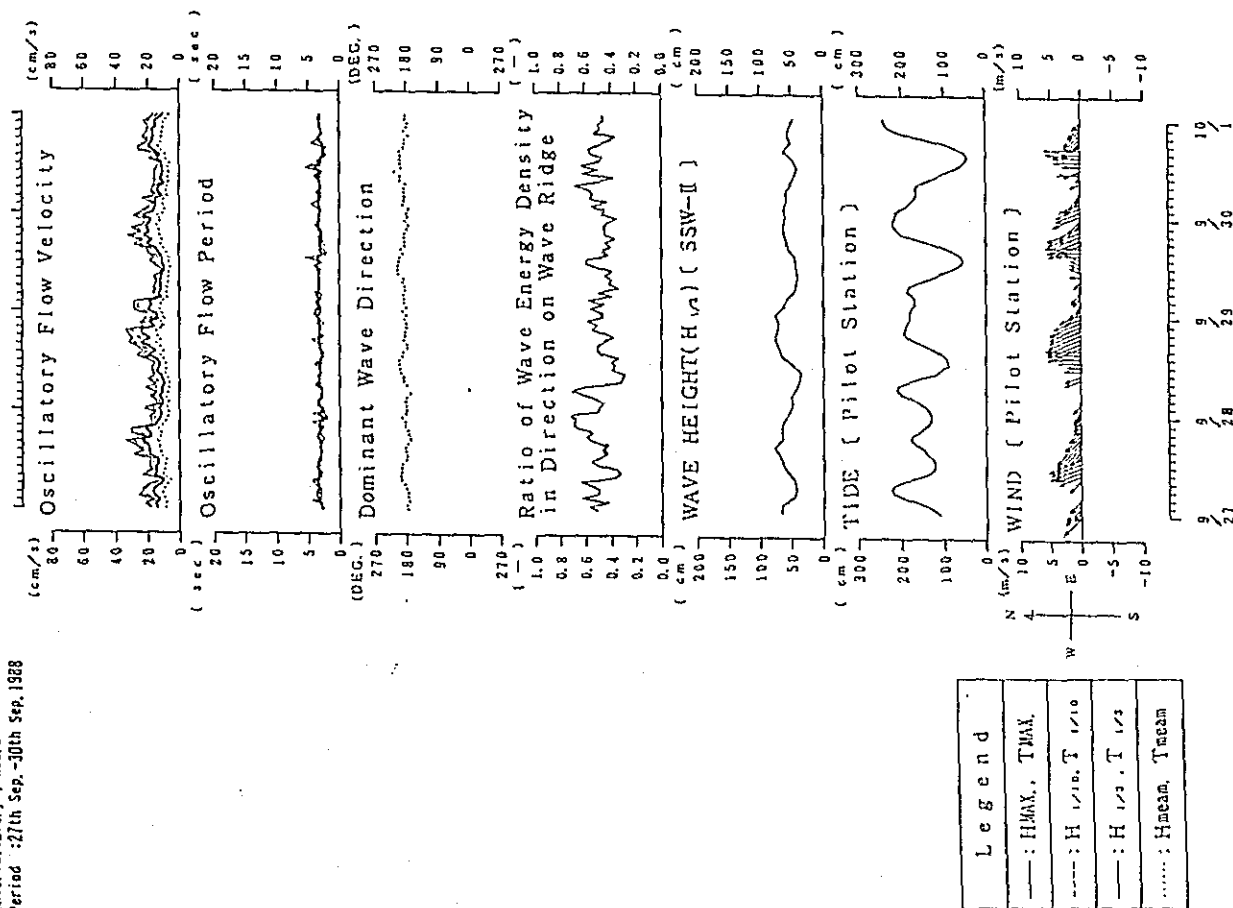


Fig. 3. 2-3 (2) Time Serial Variation of Oscillatory Flow (Survey Item: Current L. 1st Stage)

St. : 3
 Layer : 40.5m (Depth: 0.7m)
 Interval : Every 1 hour
 Period : 27th Sep. - 30th Sep. 1988

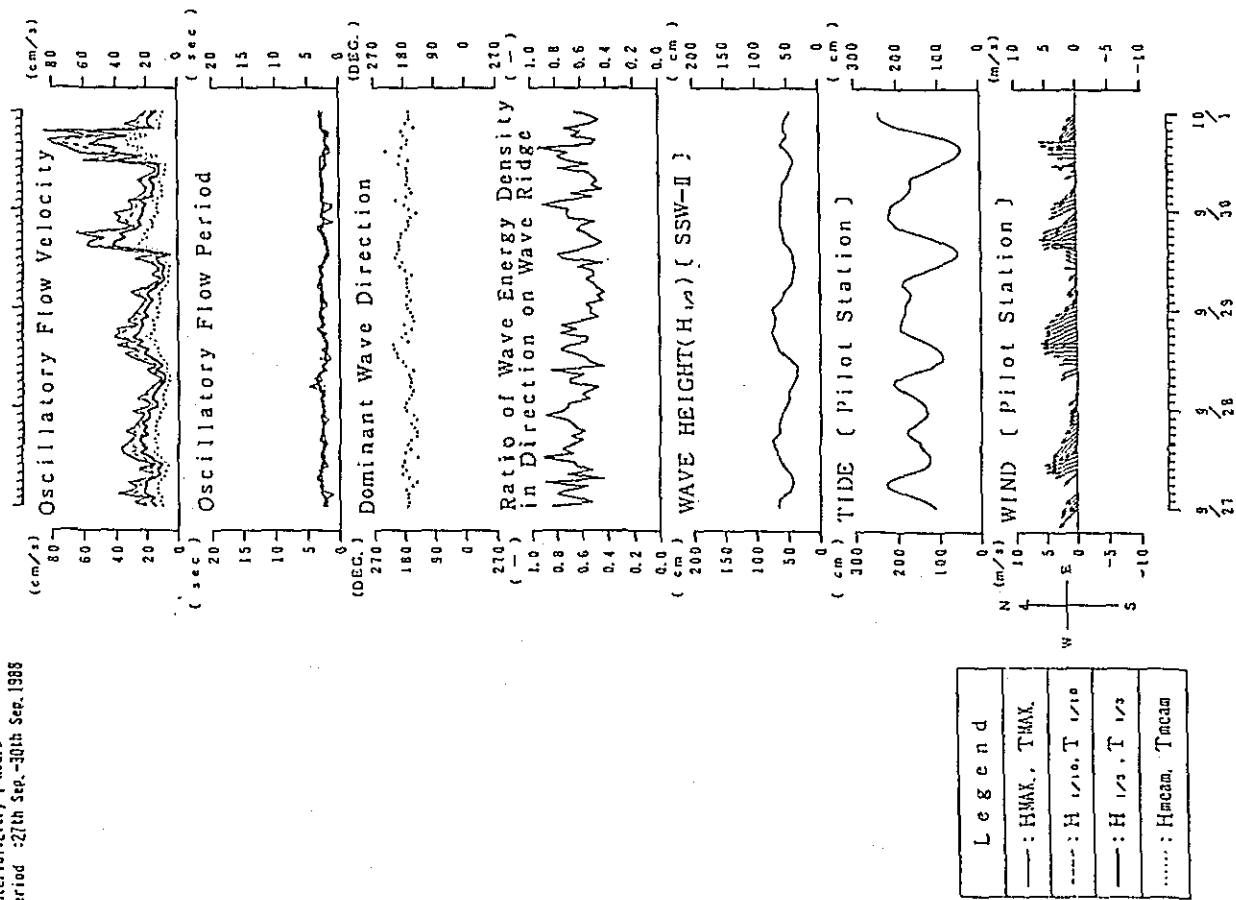


Fig. 3. 2-3 (3) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1. 1st Stage)

St. :4
 Layer :40.5m(Depth:0.8m)
 Interval:Every 1 hours
 Period :27th Sep.-30th Sep. 1988

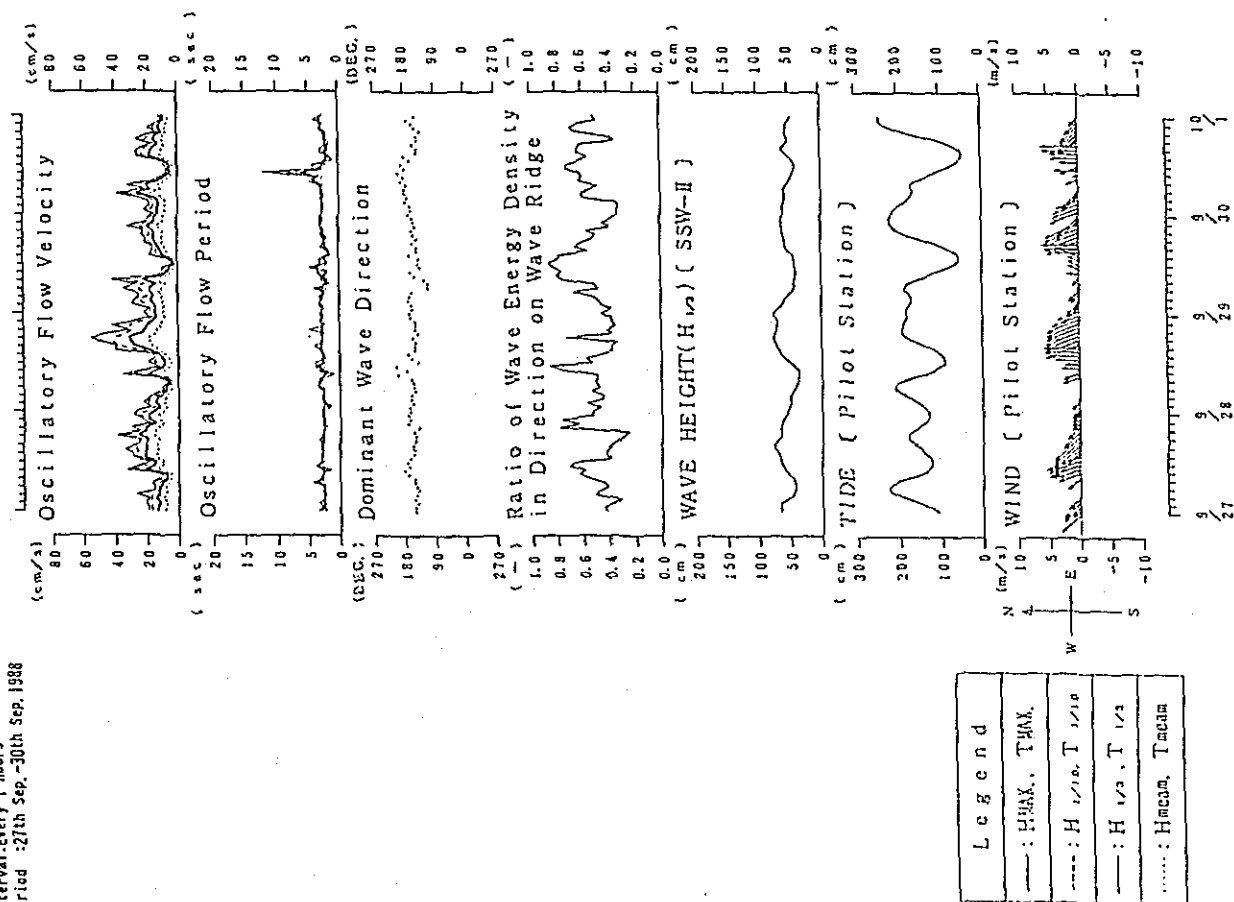


Fig. 3. 2-3 (4) Time Serial Variation of Oscillatory Flow (Survey Item:Current 1. 1st Stage)

St. 25
 Layer : +0.5m (Depth: 0.8m)
 Interval : Every 1 hour
 Period : 27th Sep. - 30th Sep. 1988

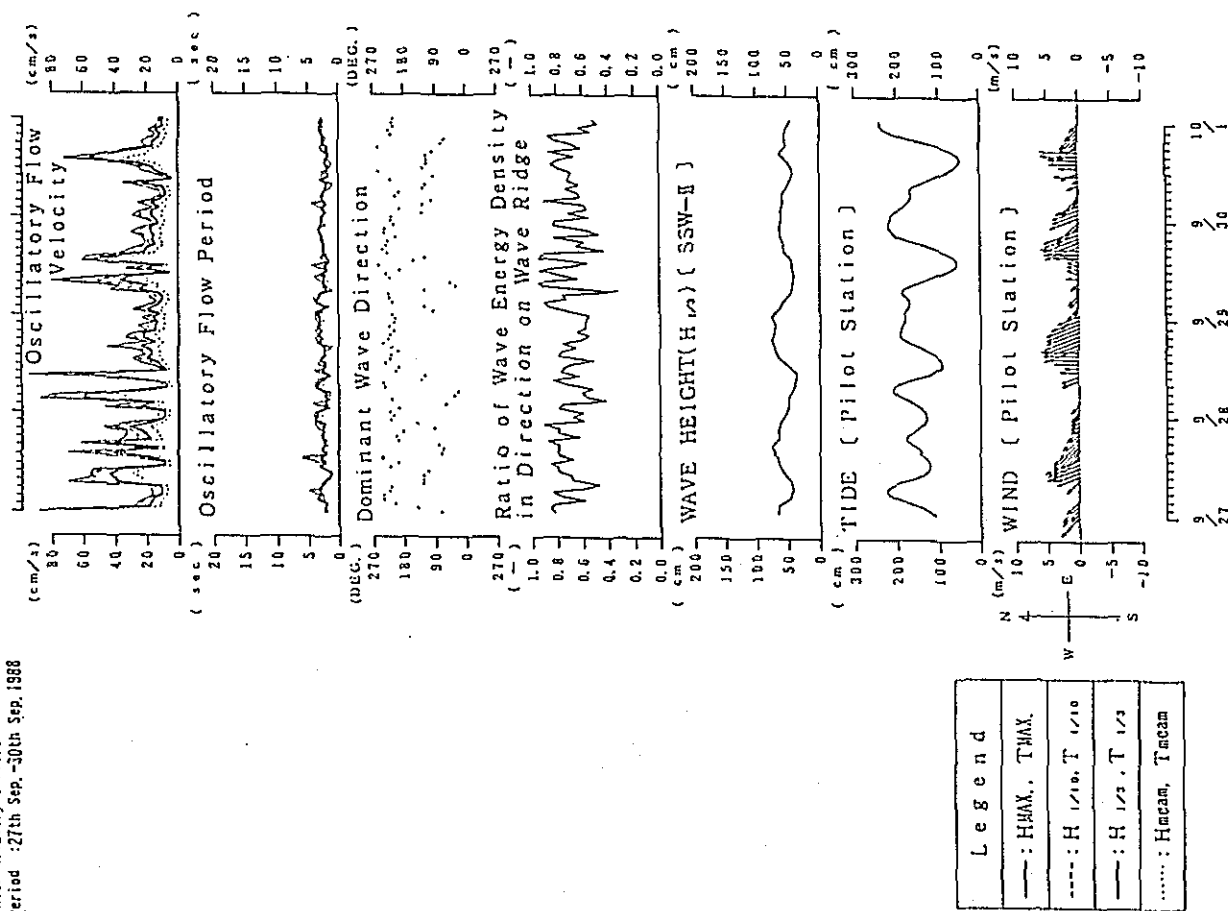


Fig. 3. 2-3 (5) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1, 1st Stage)

St. 56
 Layer : +0.5m (Depth: 1.7m)
 Interval: Every 1 hour
 Period : 27th Sep. - 30th Sep. 1988

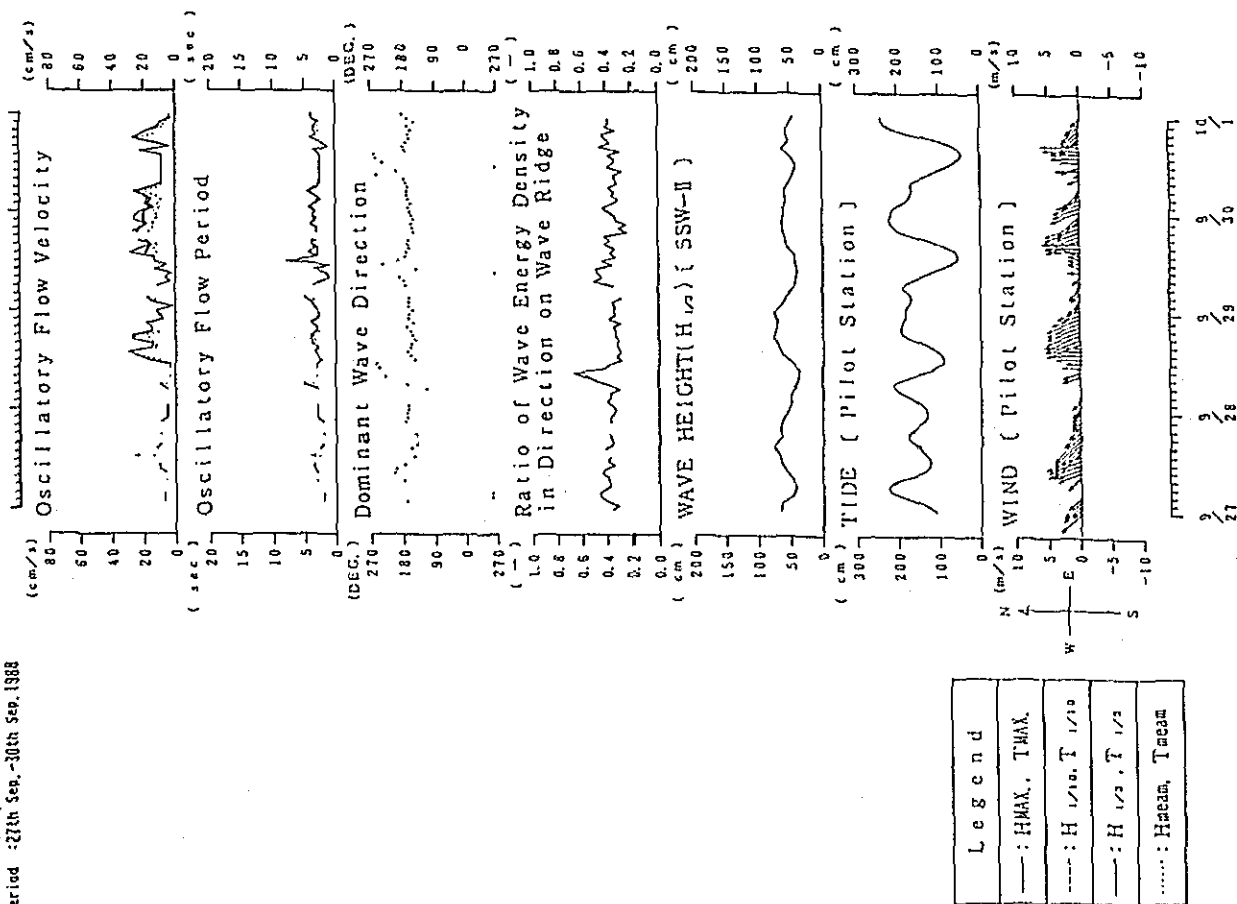


Fig. 3. 2-3 (6) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1, 1st Stage)

St. : 5
 Layer : ±0.5m (Depth: 1.0m)
 Interval : Every 1 hour
 Period : 27th Sep. - 30th Sep. 1988

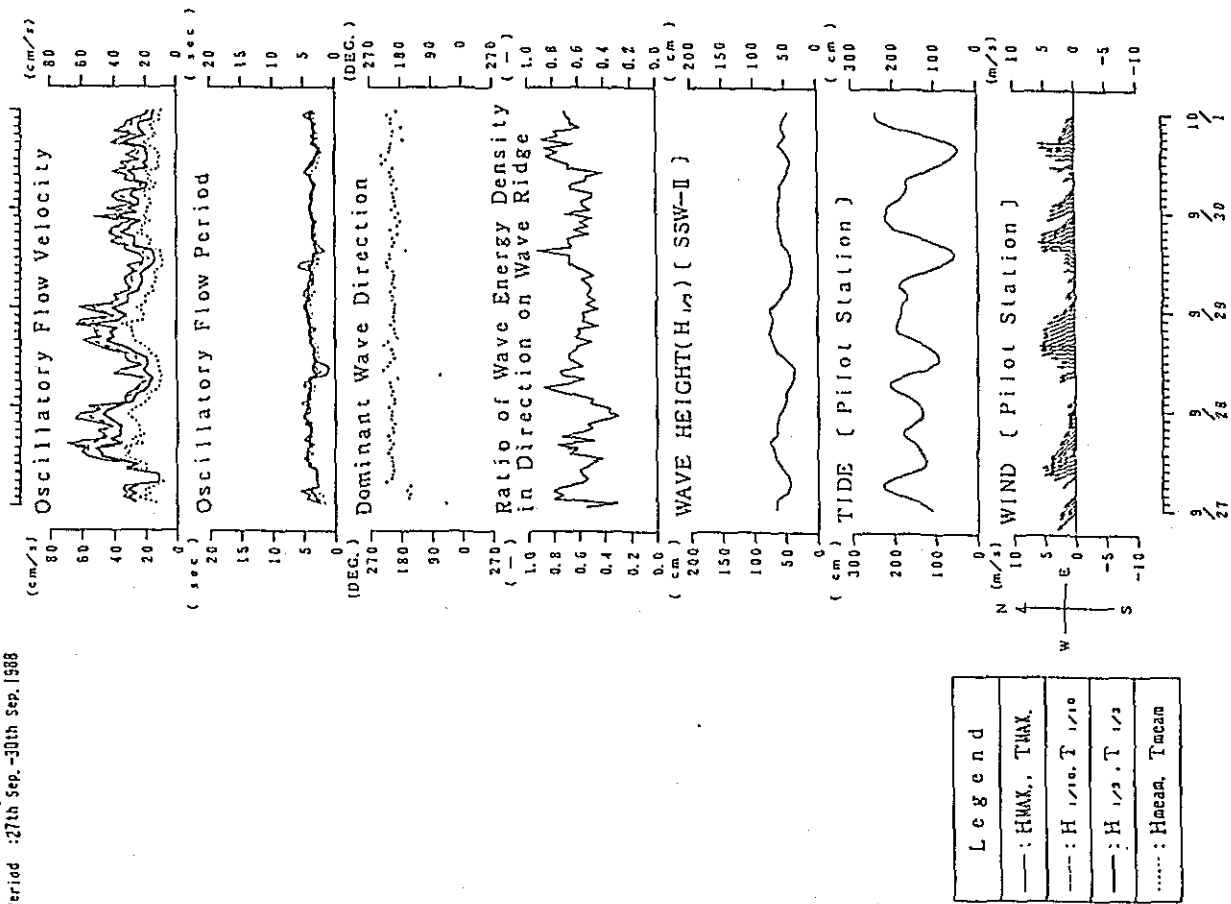


Fig. 3. 2-3 (7) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1, 1st Stage)

St. : (0)
 Layer : +0.5m (Depth: 2.5m)
 Interval : Every 1 hour
 Period : 21st Sep. - 30th Sep. 1988

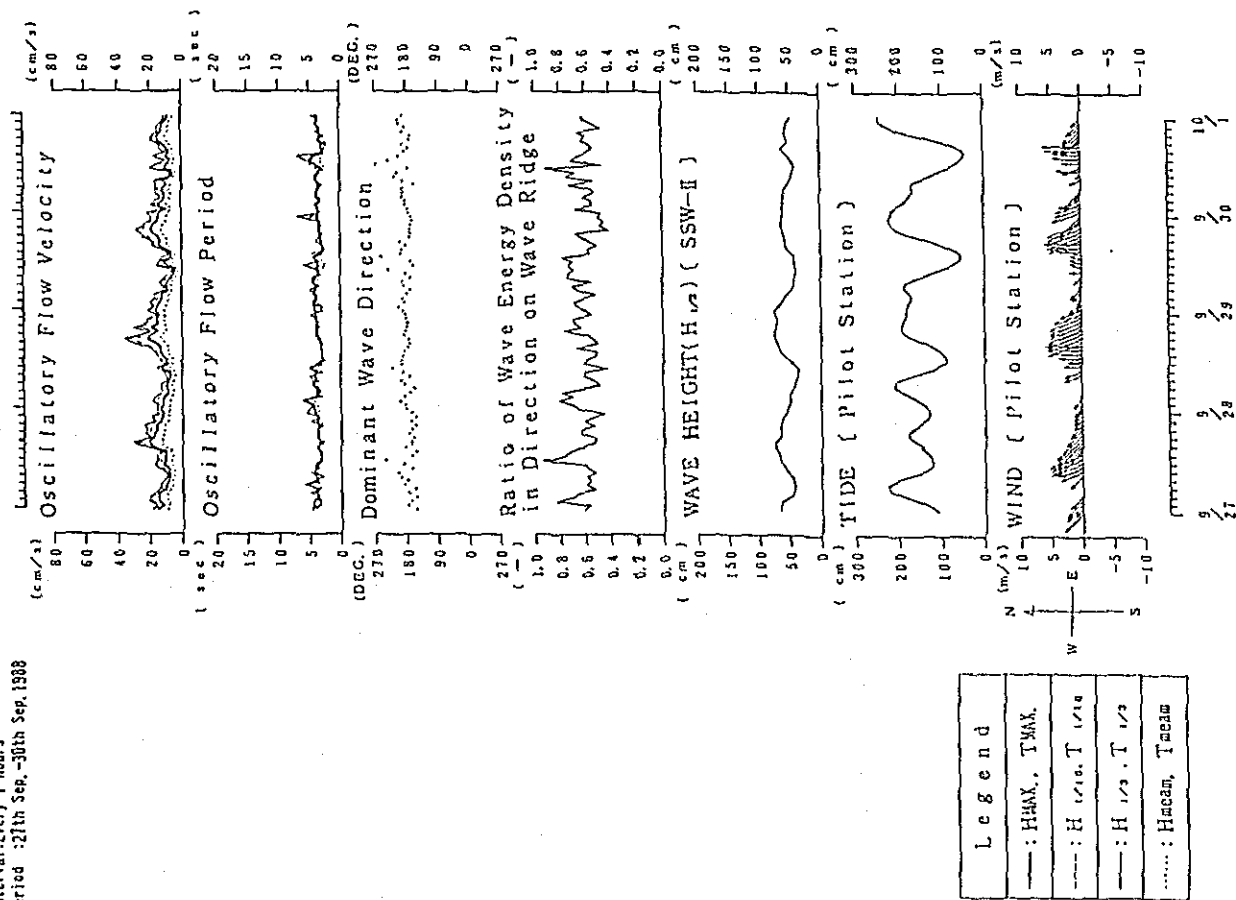
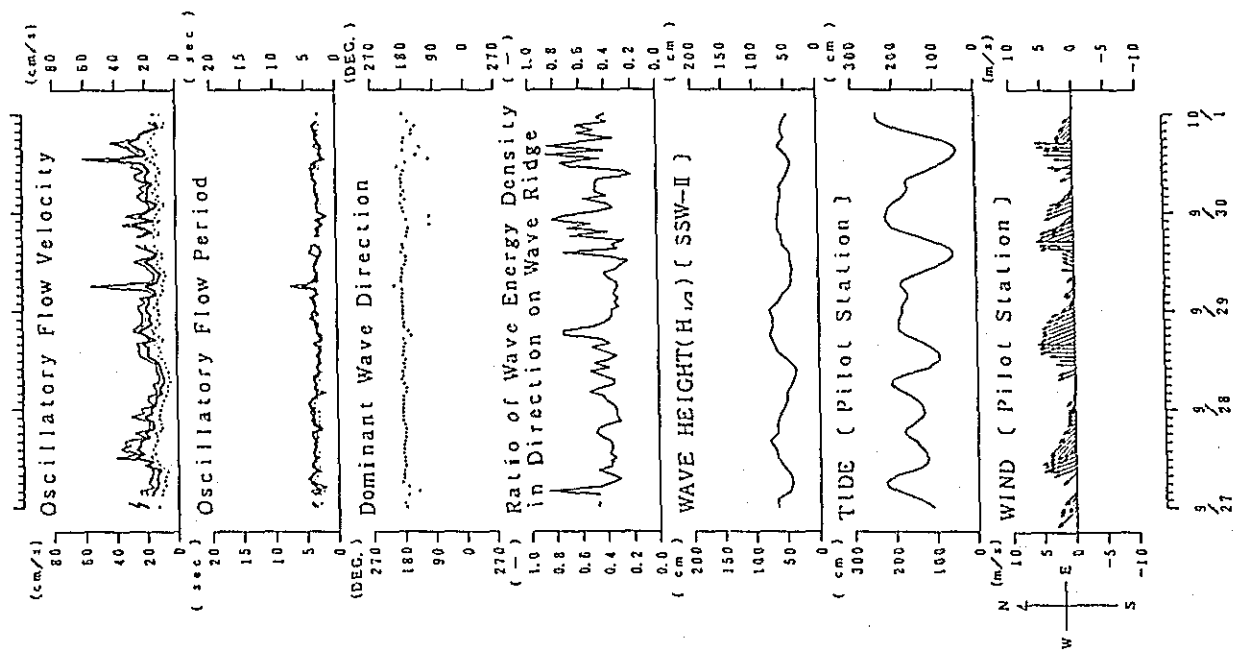


Fig. 3. 2-3 (8) Time Serial Variation of Oscillatory Flow (Survey Item: Current L 1st Stage)

St. 31
 Layer :+0.5a(Depth:1.2a)
 Interval:Every 1 hours
 Period :27th Sep.-30th Sep. 1988



Legend	
—	HMAX, TMAX
---	H 1/10, T 1/10
---	H 1/3, T 1/3
.....	Hmean, Tmean

Fig. 3. 2-3 (9) Time Serial Variation of Oscillatory Flow (Survey Item:Current 1.1st Stage)

St. :
 Layer :+0.5m (Depth:3 m)
 Interval:Every 2 hours
 Period :17th Jan. ~20th Feb. 1989

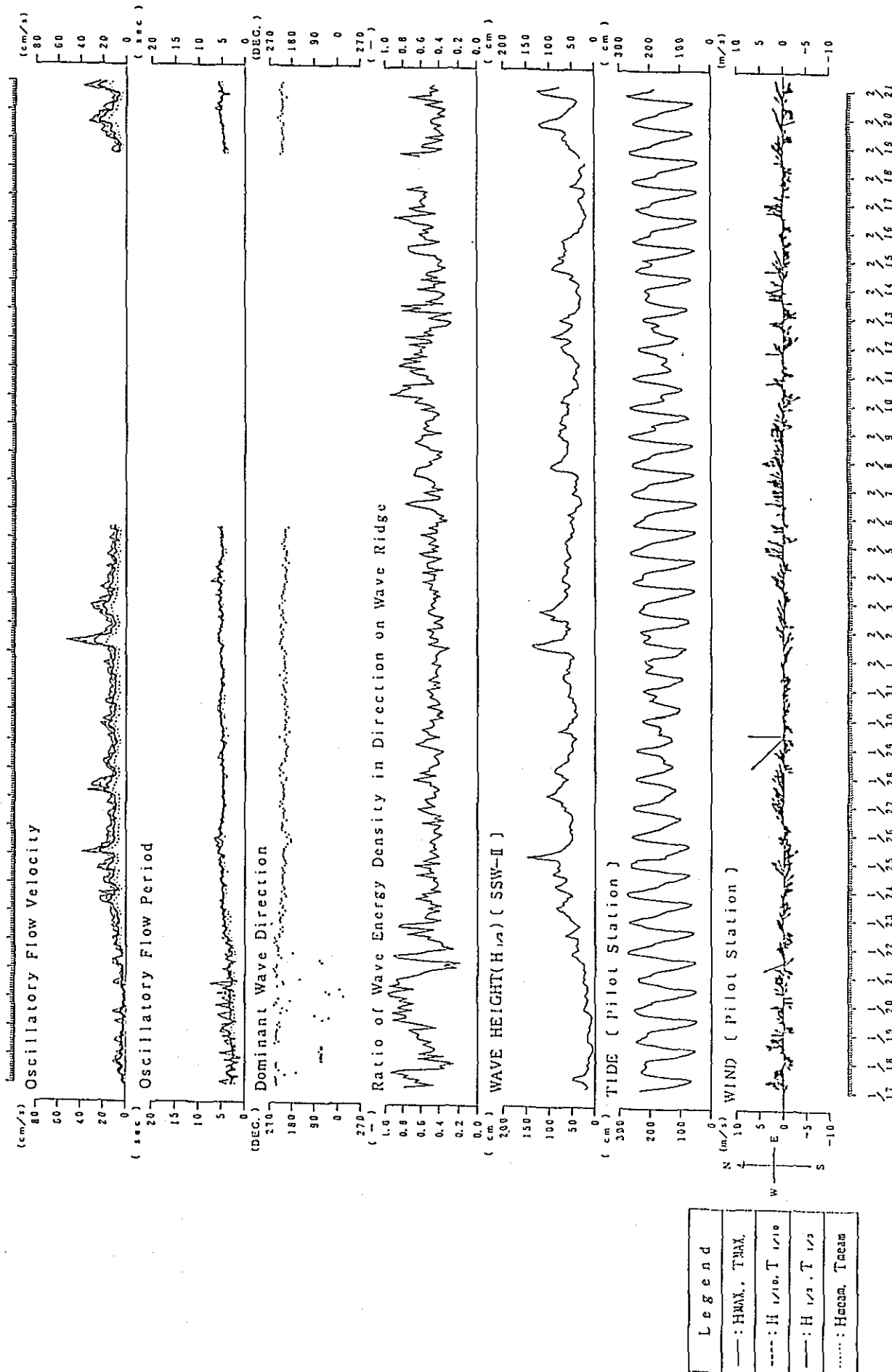
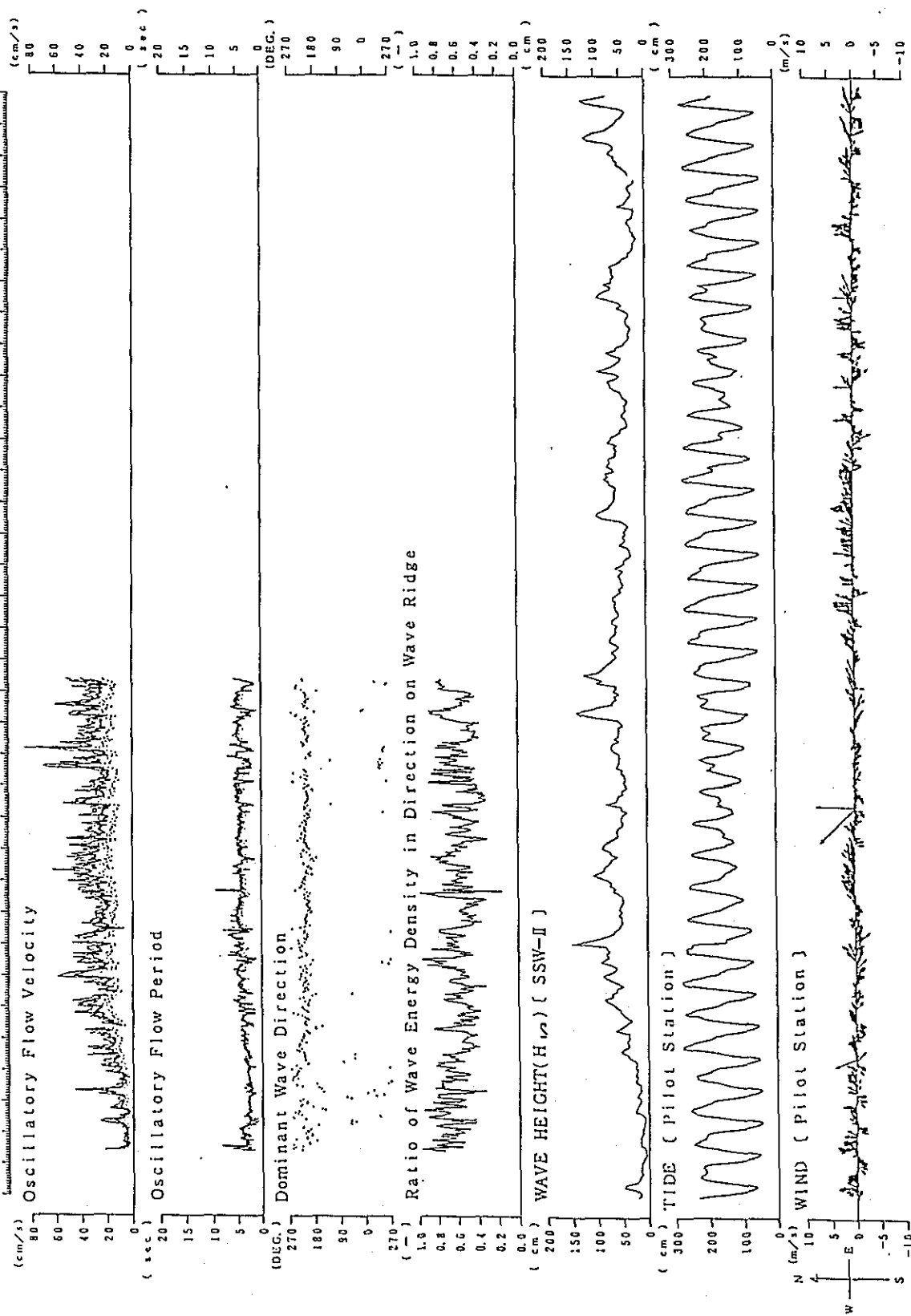


Fig. 3. 2-3 (10) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1, 2nd Stage)

St. :2
 Layer :+0.5m(Depth:1.5m)
 Interval:Every 1 hours
 Period :17th Jan. -20th Feb. 1989

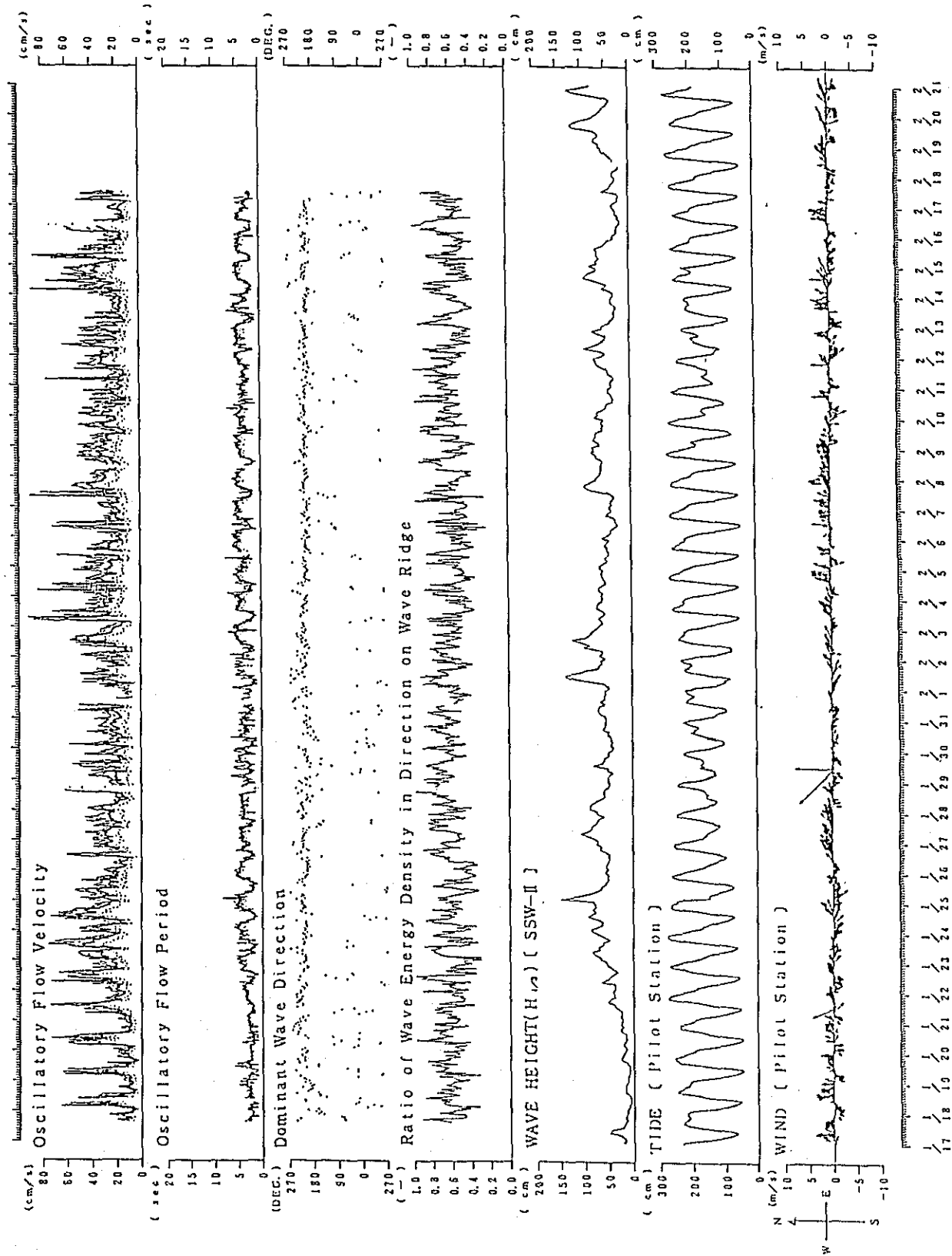


Legend	
—	HMAL, TMAX
---	H 1/10, T 1/10
---	H 1/2, T 1/2
.....	Hmax, Tmax

17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Fig. 3. 2-3 (11) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1. 2nd Stage)

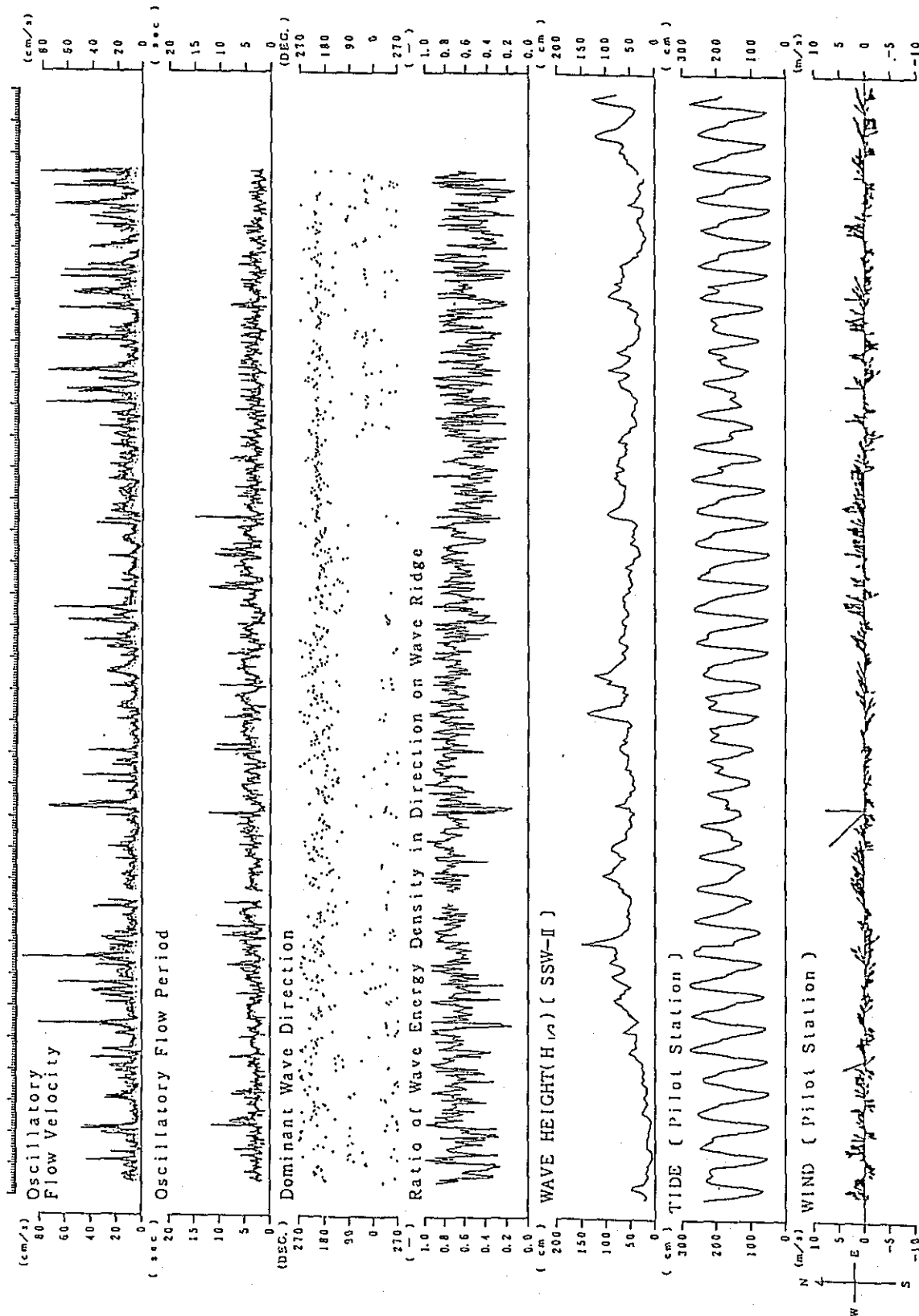
St. :3
 Layer :+0.5m (Depth:0.7m)
 Interval: Every 1 hours
 Period :17th Jan.-20th Feb. 1983



Legend	
—	: HMAX, THAX
---	: H 1/10, T 1/10
—	: H 1/2, T 1/2
.....	: Hmax, Tmax

Fig. 3. 2-3 (12) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1, 2nd Stage)

St. :4
 Layer :+0.5m (Depth:0.2m)
 Interval:Every 1 hours
 Period :17th Jan. -20th Feb. 1989



Legend	
—	HWAX, TMAX
---	H 1/10, T 1/10
---	H 1/2, T 1/2
.....	Hmax, Tmax

17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Fig. 3. 2-3 (13) Time Serial Variation of Oscillatory Flow (Survey Item:Current 1. 2nd Stage)

St. :5
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :17th Jan.-20th Feb. 1989

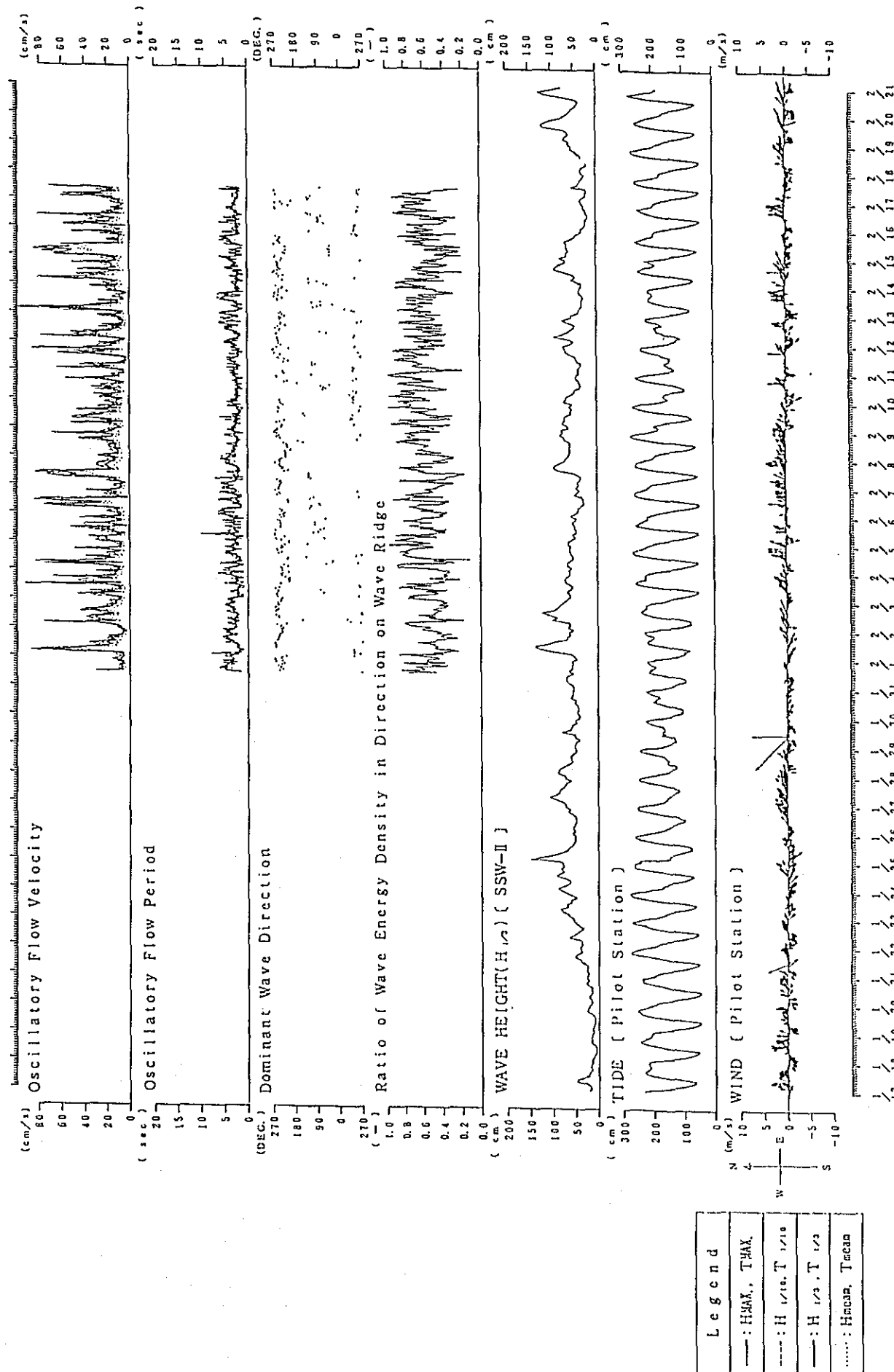
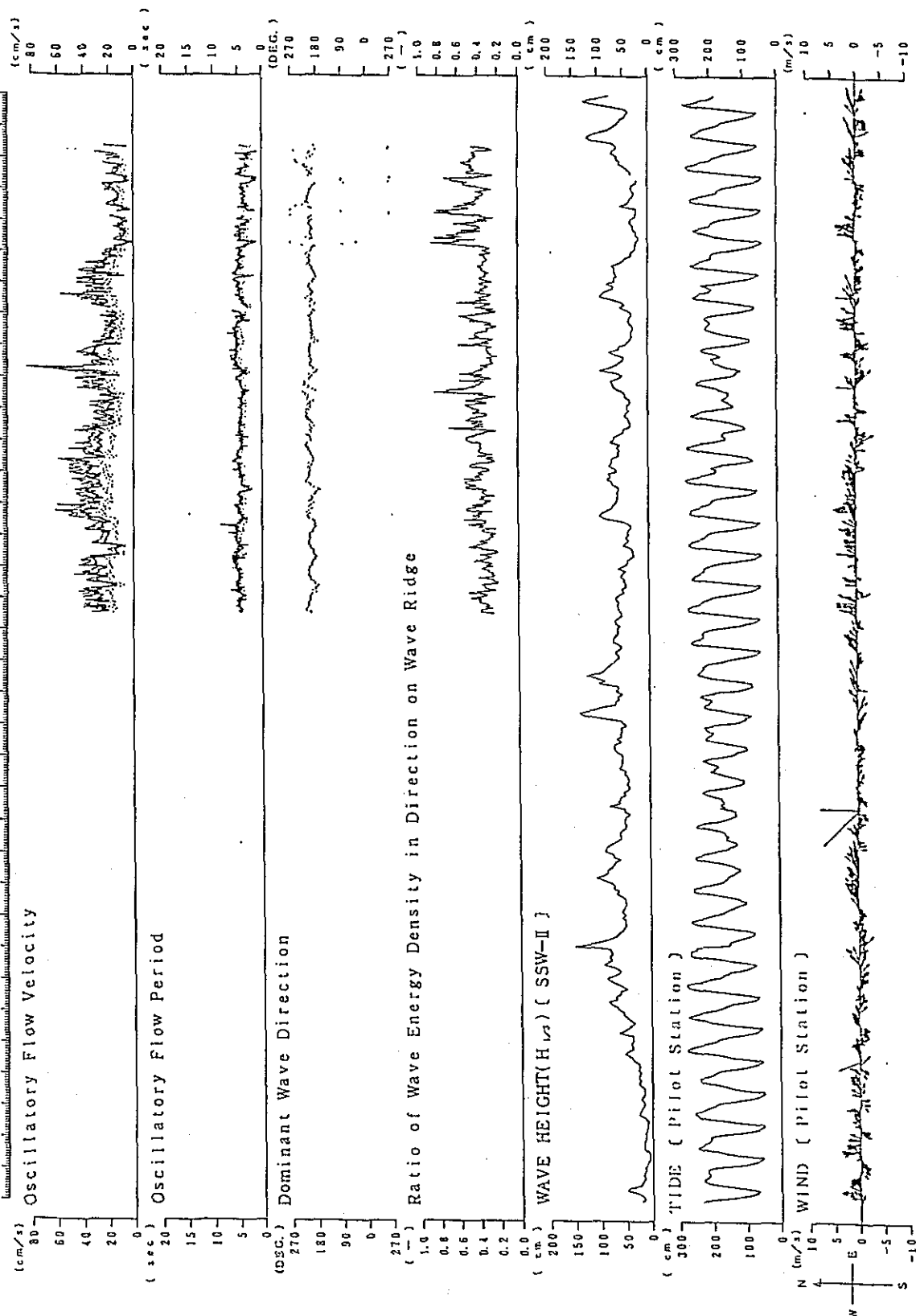


Fig. 3. 2-3 (14) Time Serial Variation of Oscillatory Flow (Survey Item:Current 1. 2nd Stage)

St. 26
 Layer : +0.5m (Depth: 1.7m)
 Interval: Every 1 hour
 Period : 17th Jan. - 20th Feb. 1939

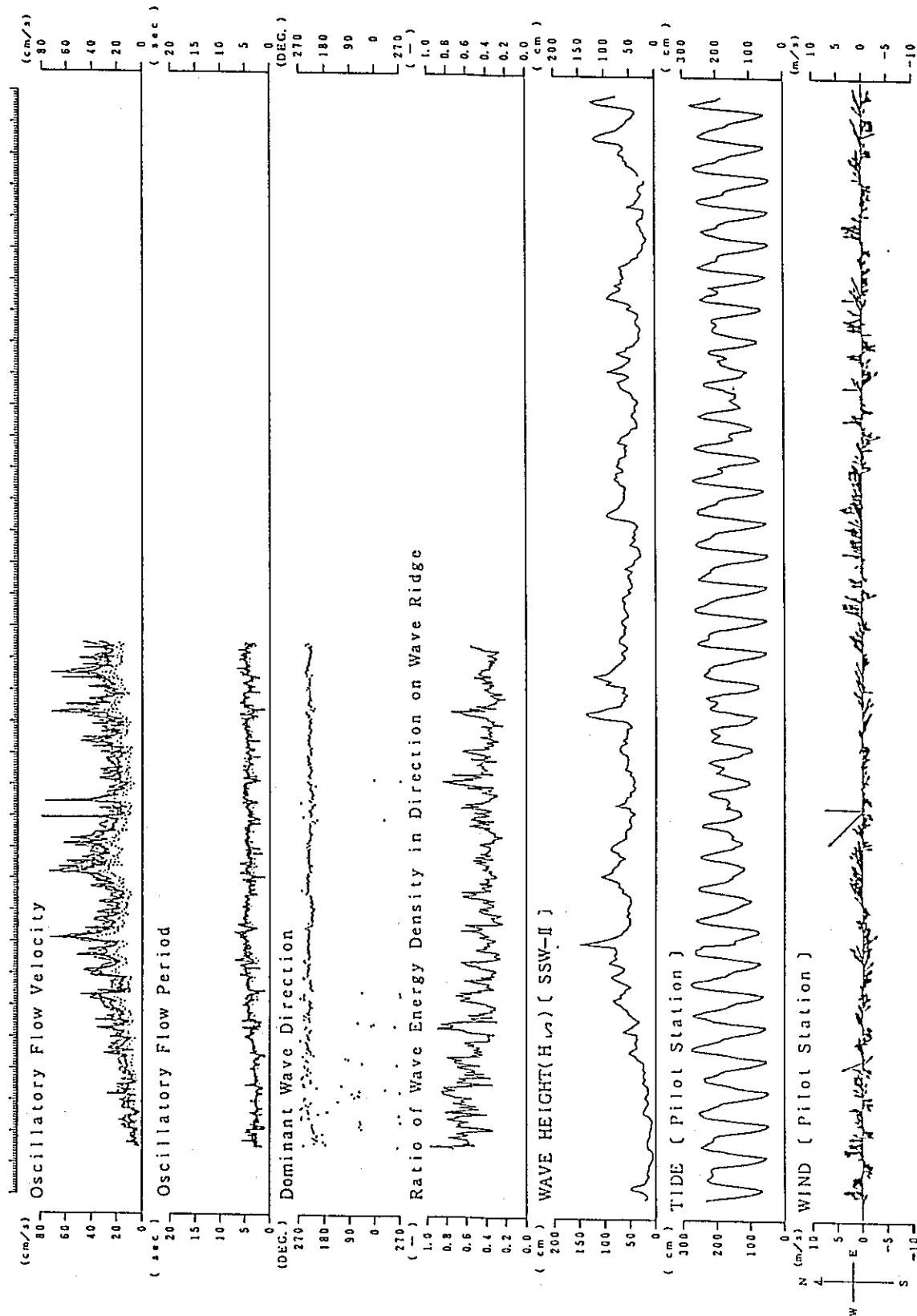


Legend	
—	MAX. TMAX.
----	H 1/10. T 1/10
—	H 1/2. T 1/2
.....	Hmax. Tmax

17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Fig. 3. 2-3 (15) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1, 2nd Stage)

St. : 7
 Layer : +0.5m (Depth: 1.7m)
 Interval: Every 1 hour
 Period : 17th Jan. - 20th Feb. 1983

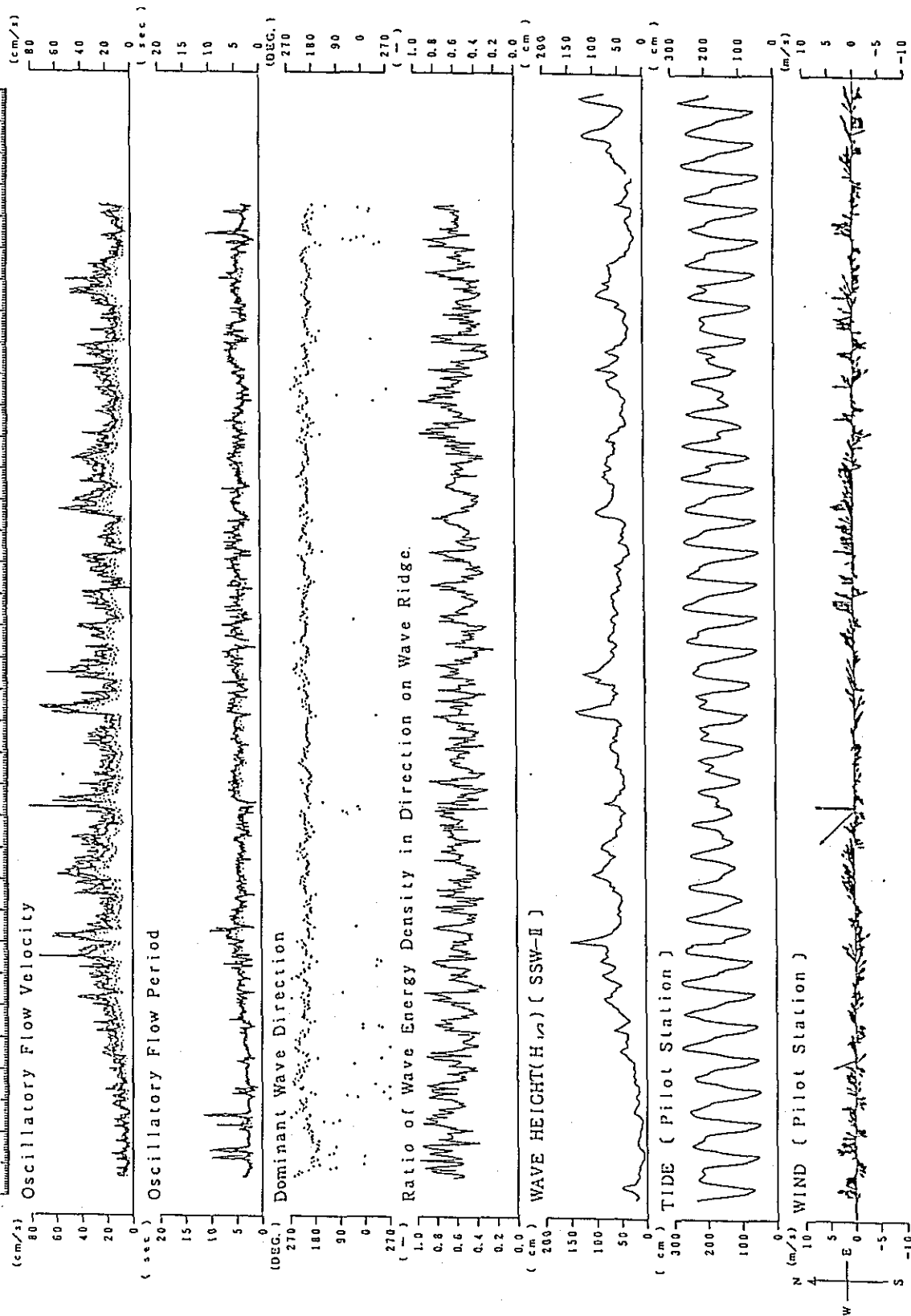


Legend	
—	HMAX, TMAX
----	H 1/10, T 1/10
—	H 1/2, T 1/2
.....	Hmax, Tmax

17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Fig. 3. 2-3 (16) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1. 2nd Stage)

St. :3
 Layer :+0.5m (Depth:1.0m)
 Interval:Every 1 hours
 Period :17th Jan. -20th Feb, 1983

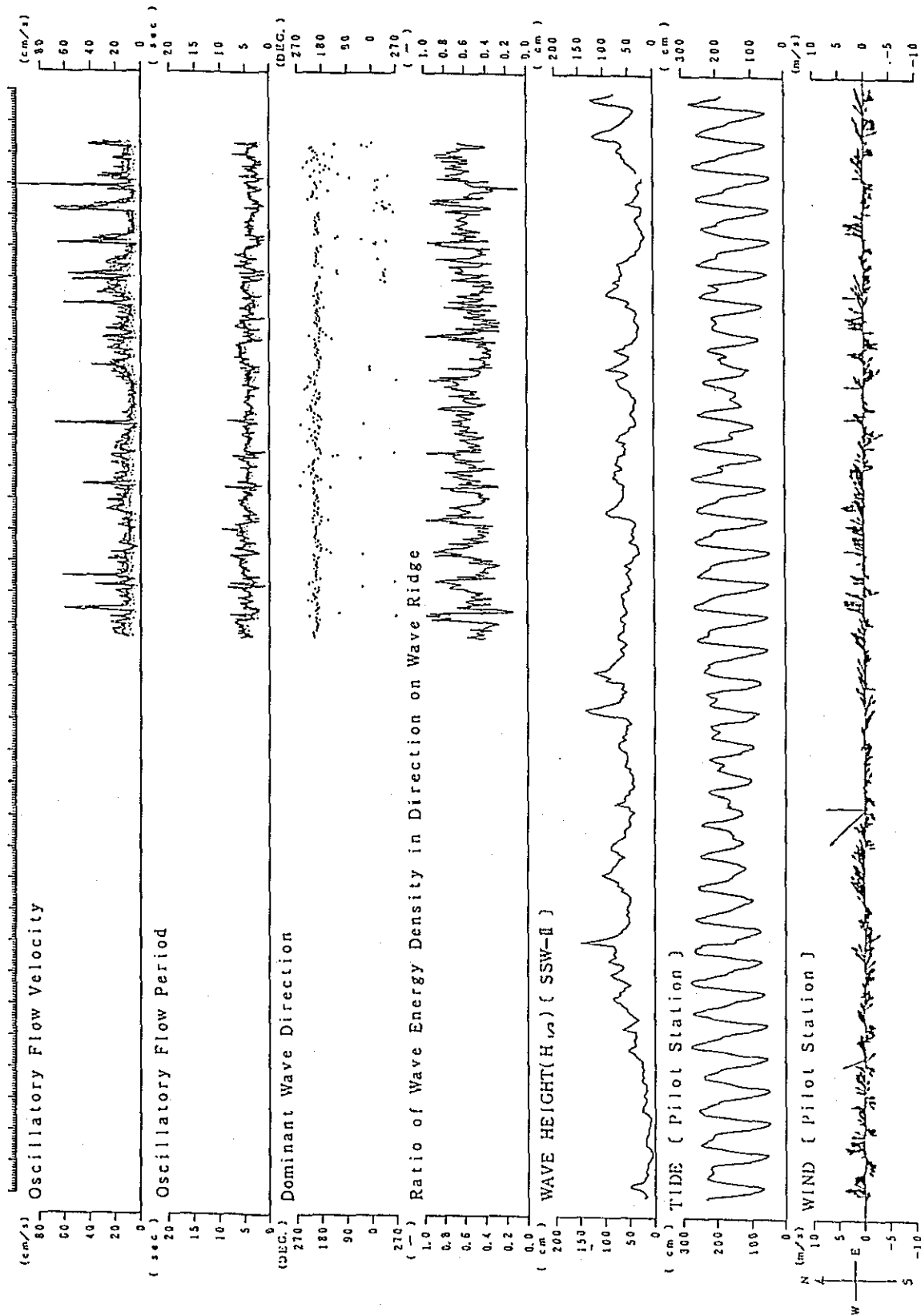


Legend	
—	HMAX, THAX
----	H 1/10, T 1/10
—	H 1/2, T 1/2
.....	Hmean, Tmean

17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Fig. 3. 2-3 (17) Time Serial Variation of Oscillatory Flow (Survey Item:Current 1, 2nd Stage)

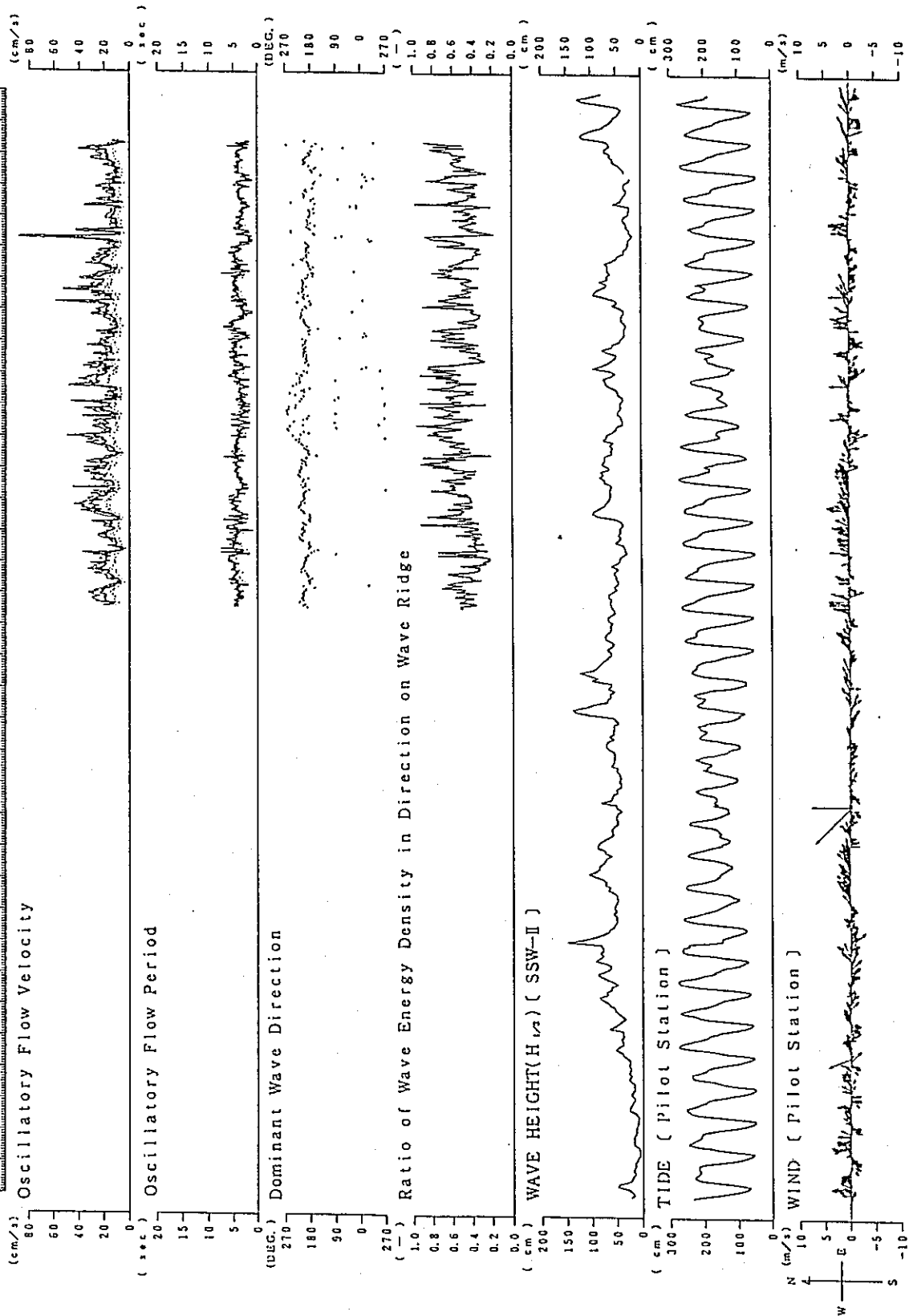
St. :10
 Layer :+0.5m (Depth:2.5m)
 Interval: Every 1 hours
 Period :17th Jan. -20th Feb 1989



17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Fig. 3. 2-3 (18) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1, 2nd Stage)

St. :11
 Layer :+0.5m (Depth:1.2m)
 Interval:Every 1 hours
 Period :17th Jan. ~20th Feb. 1989

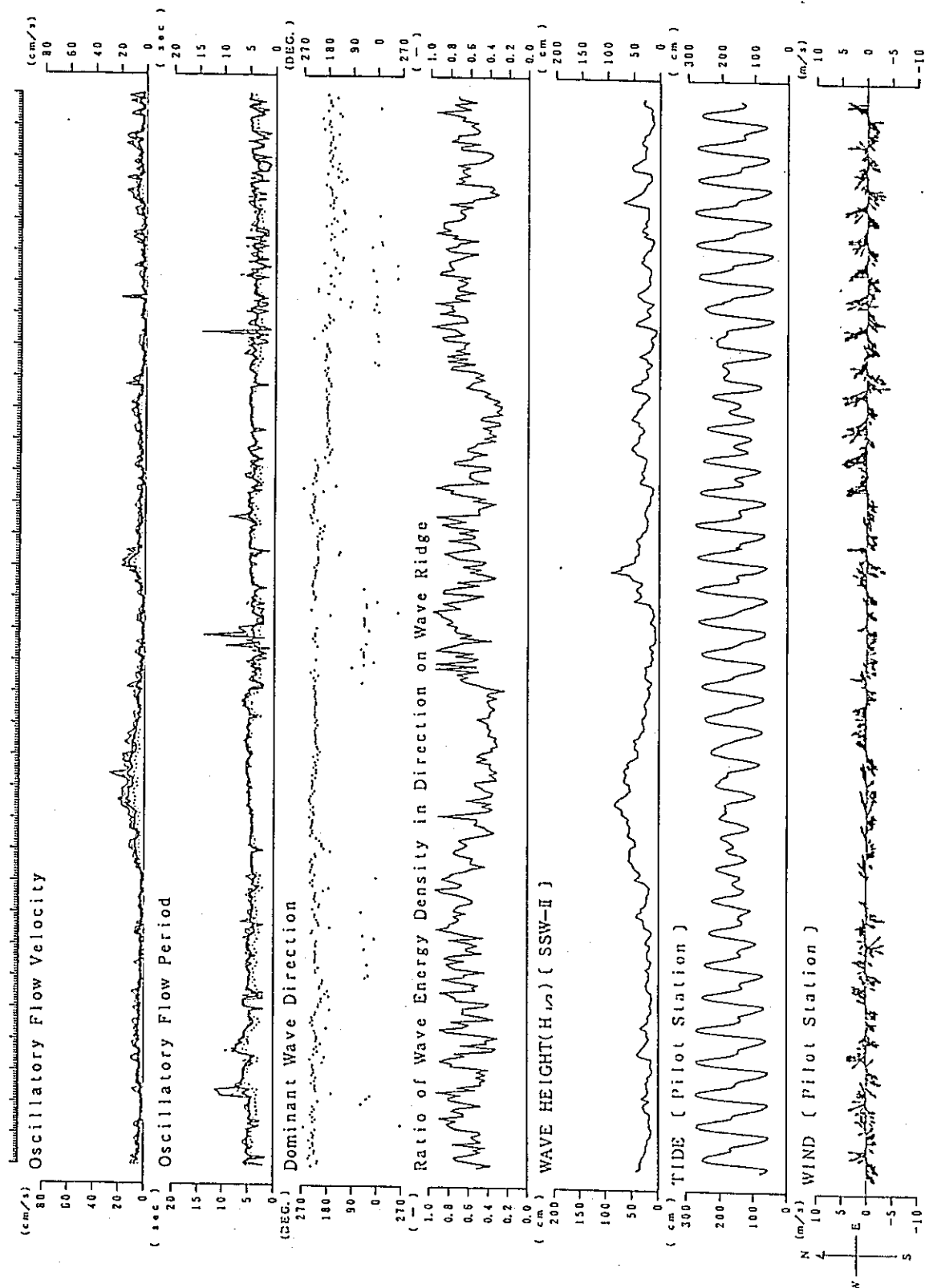


Legend	
—	HMAX, THAX.
---	H 1/10, T 1/10
---	H 1/2, T 1/2
.....	Hmax, Tcam

17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Fig. 3. 2-3 (19) Time Serial Variation of Oscillatory Flow (Survey Item:Current 1, 2nd Stage)

St. :1
 Layer :+0.5m (Depth:9.1m)
 Interval:Every 2 hours
 Period :10th Apr. -13th May 1989



Legend	
—	H _{MAX} , T _{MAX}
----	H _{1/10} , T _{1/10}
—	H _{1/2} , T _{1/2}
.....	H _{MIN} , T _{MIN}

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Fig. 3. 2-3 (20) Time Serial Variation of Oscillatory Flow (Survey Item:Current 1. 3rd Stage)

St. :2
 Layer :+0.5m (Depth:1.5m)
 Interval:Every 1 hours
 Period :10th Apr. -13th May 1983

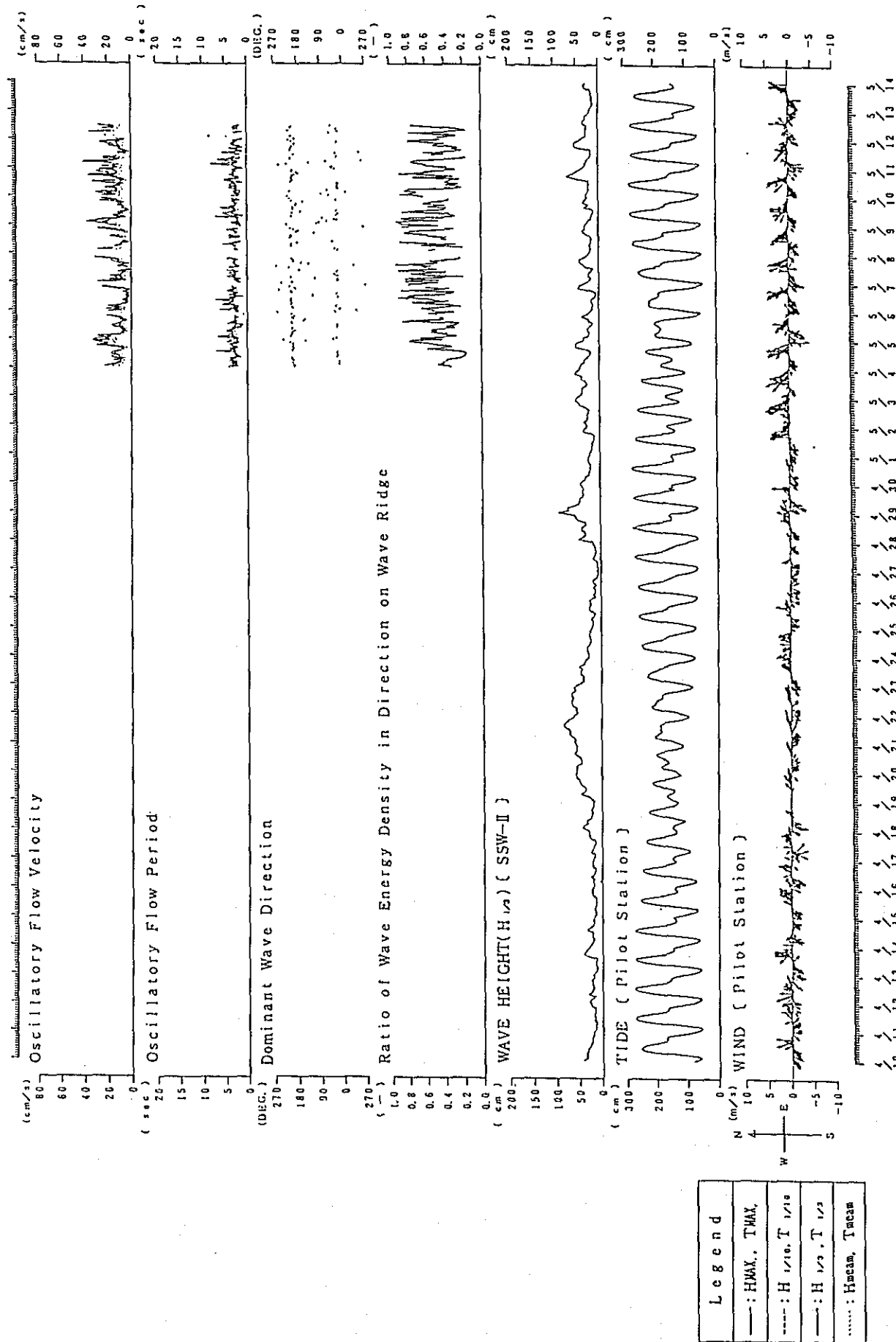
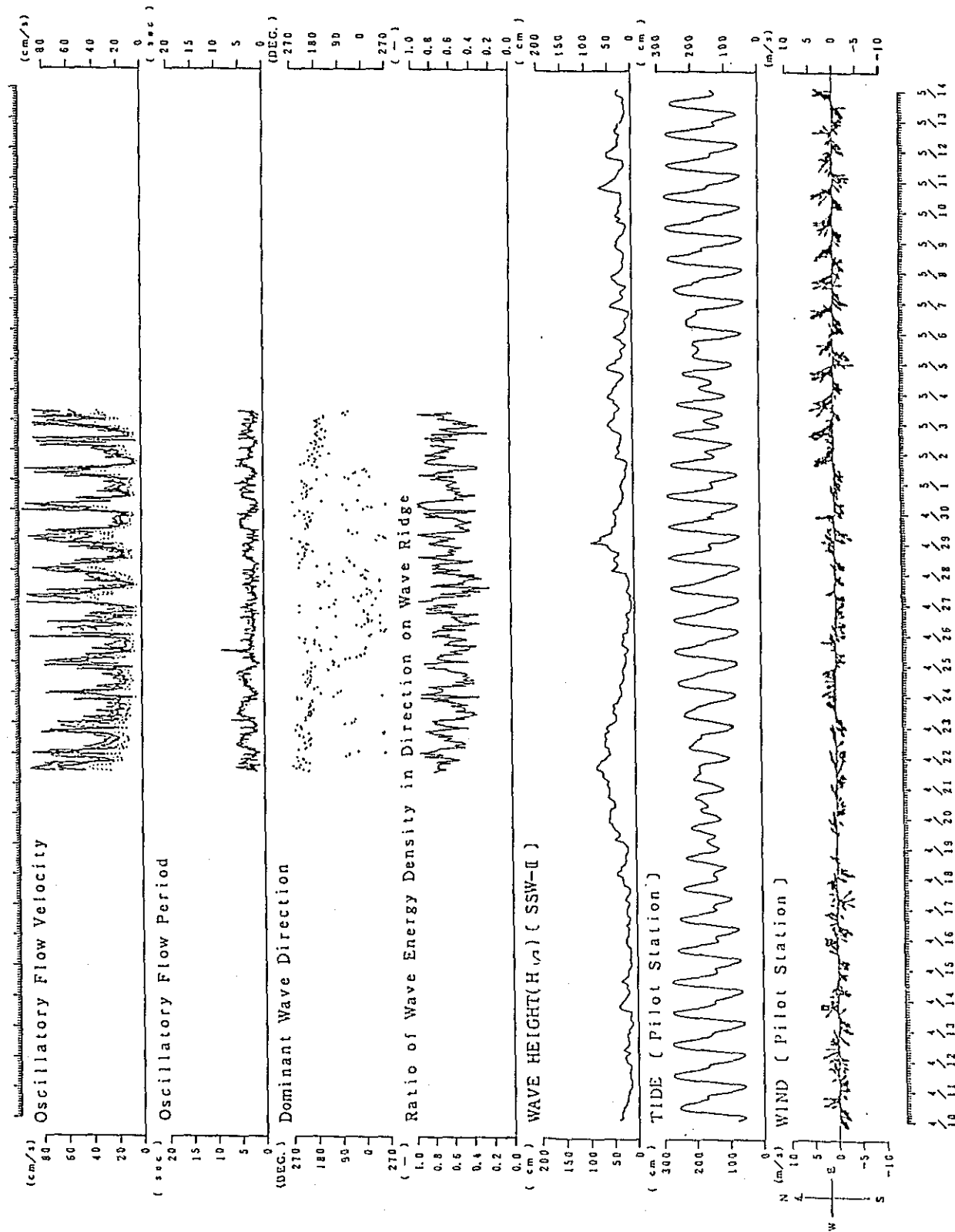


Fig. 3. 2-3 (21) Time Serial Variation of Oscillatory Flow (Survey Item:Current 1, 3rd Stage)

St. : 3
 Layer : 0.5m (Depth: 0.7m)
 Interval: Every 1 hour
 Period : 10th Apr. - 13th May 1993



Legend	
—	HMAX, TMAX
---	H 1/10, T 1/10
—	H 1/2, T 1/2
.....	Hmax, Tmax

Fig. 3. 2-3 (22) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1. 3rd Stage)

Legend
—: HMAX, TMAX
---: H 1/10, T 1/10
—: H 1/2, T 1/2
.....: Hmax, Tmax

[illegible]

Fig. 3. 2-3 (23) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1, 3rd Stage)

St. :5
 Layer :+0.5m (Depth:0.3m)
 Interval:Every 1 hours
 Period :10th Apr. -13th May 1989

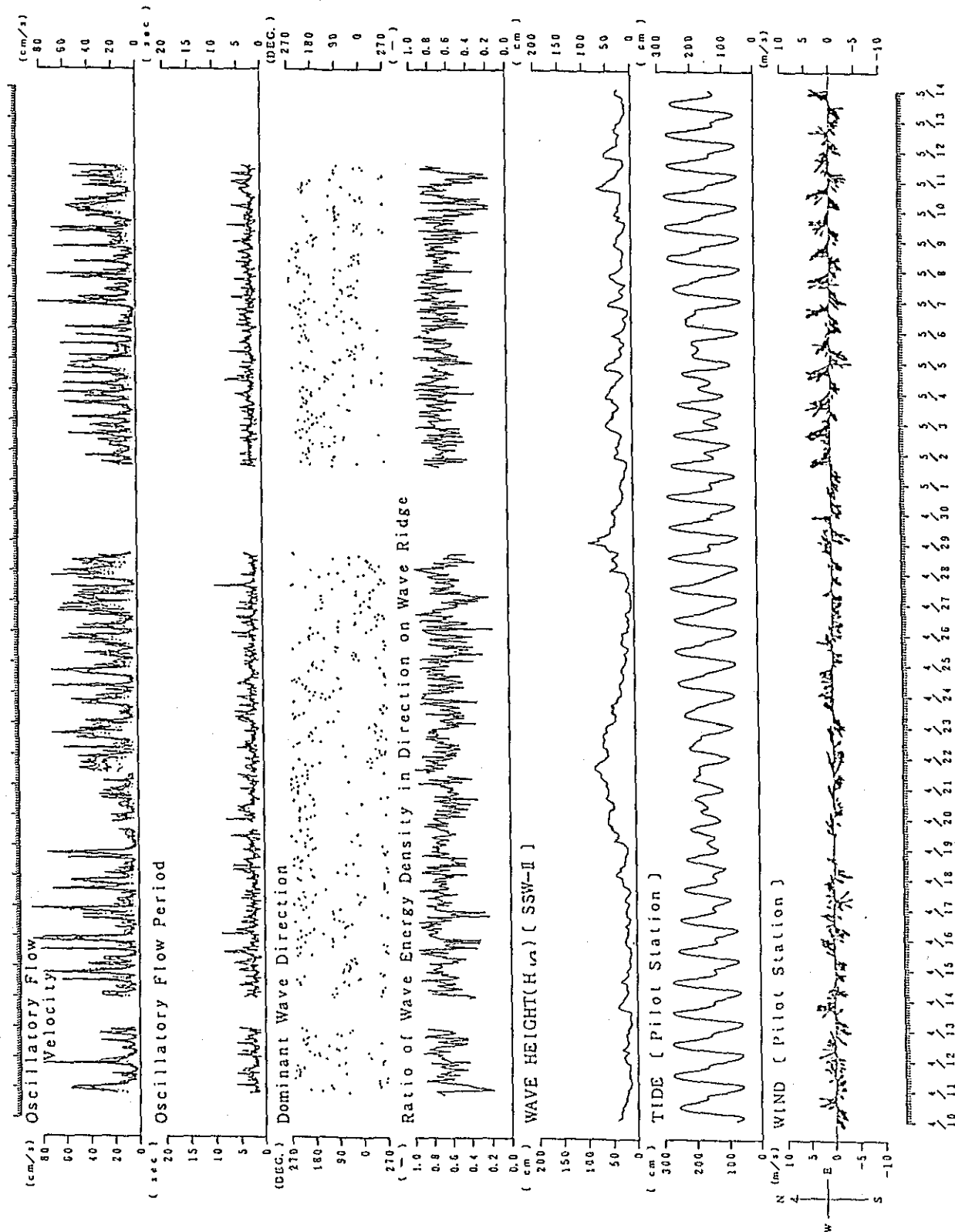
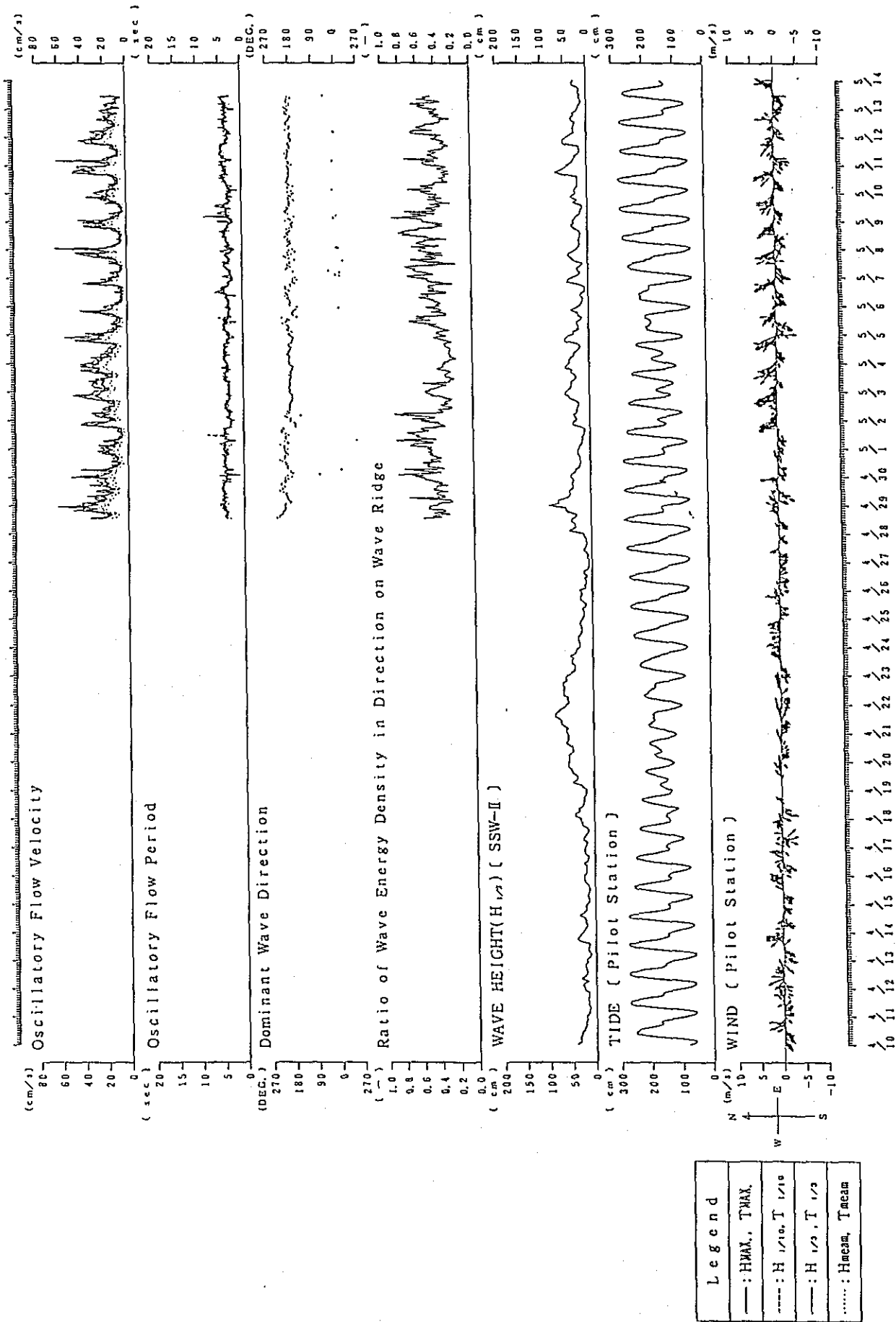


Fig. 3. 2-3 (24) Time Serial Variation of Oscillatory Flow (Survey Item:Current L 3rd Stage)

St. 10
 Layer : 0.5m (Depth: 1.7m)
 Interval: Every 1 hour
 Period : 10th Apr. - 13th May 1989



St. : 7
 Layer : +0.5m (Depth: 1.7m)
 Interval: Every 1 hour
 Period : 10th Apr. - 13th May 1989

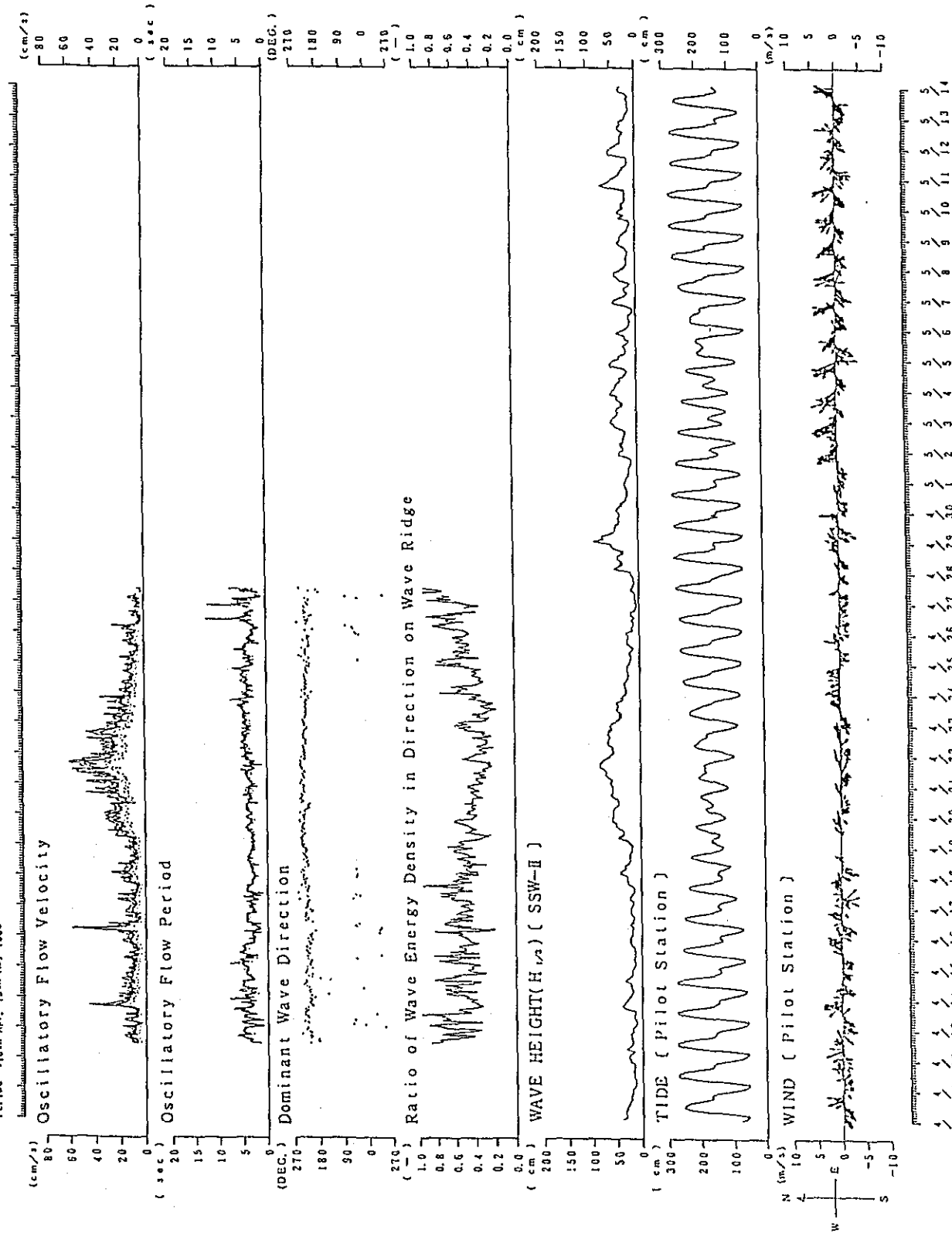
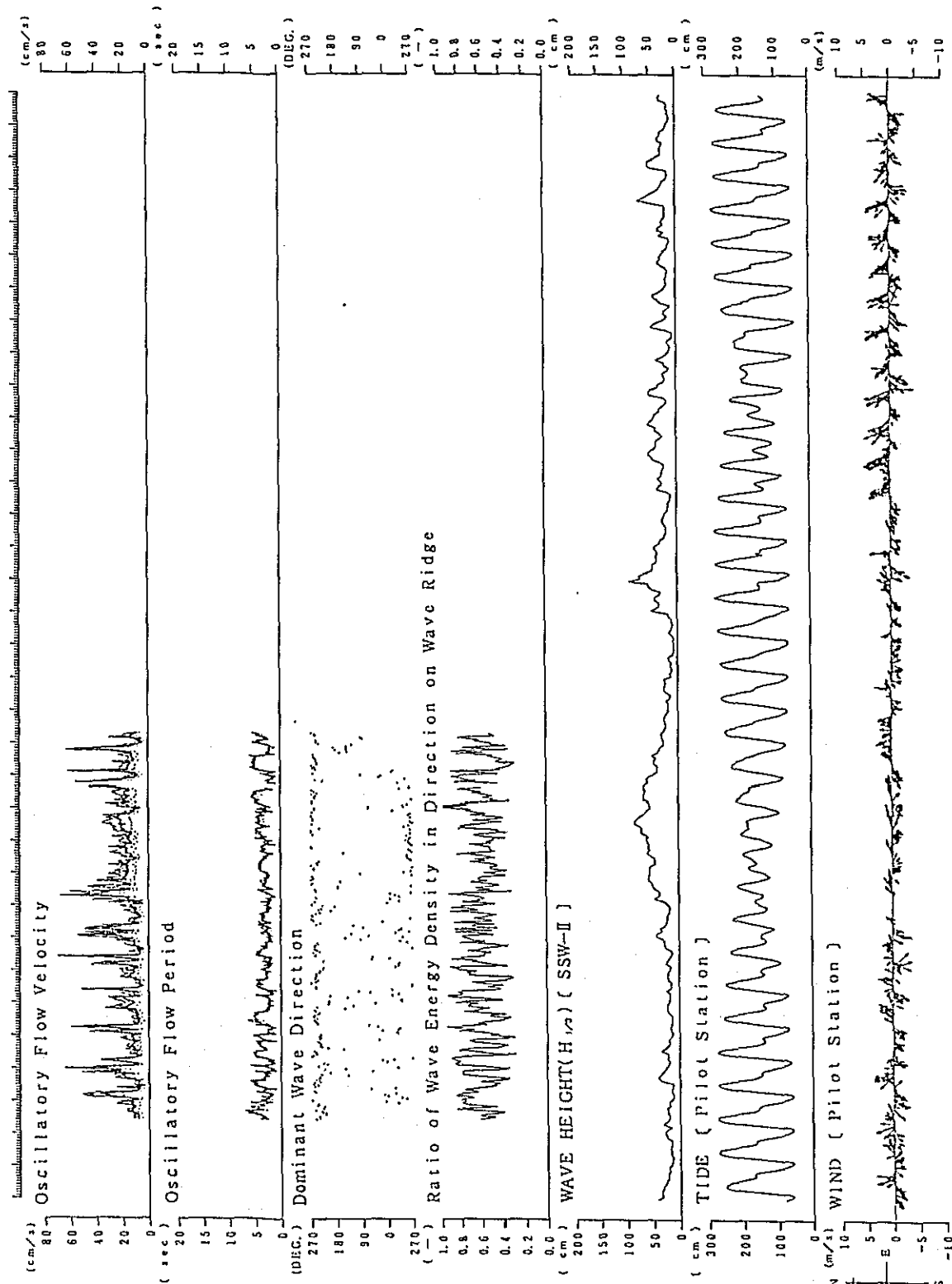


Fig. 3. 2-3 (26) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1, 3rd Stage)

St. : 8
 Layer : ±0.5m (Depth: 0.8m)
 Interval: Every 1 hour
 Period : 10th Apr. - 13th May 1983



Legend	
—	: HMAX, THAX
---	: H 1/10, T 1/10
---	: H 1/2, T 1/2
.....	: Hmean, Tmean

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Fig. 3. 2-3 (27) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1. 3rd Stage)

St. : 3
 Layer : +0.5m (Depth: 1.0m)
 Interval: Every 1 hour
 Period : 10th Apr. - 13th May 1983

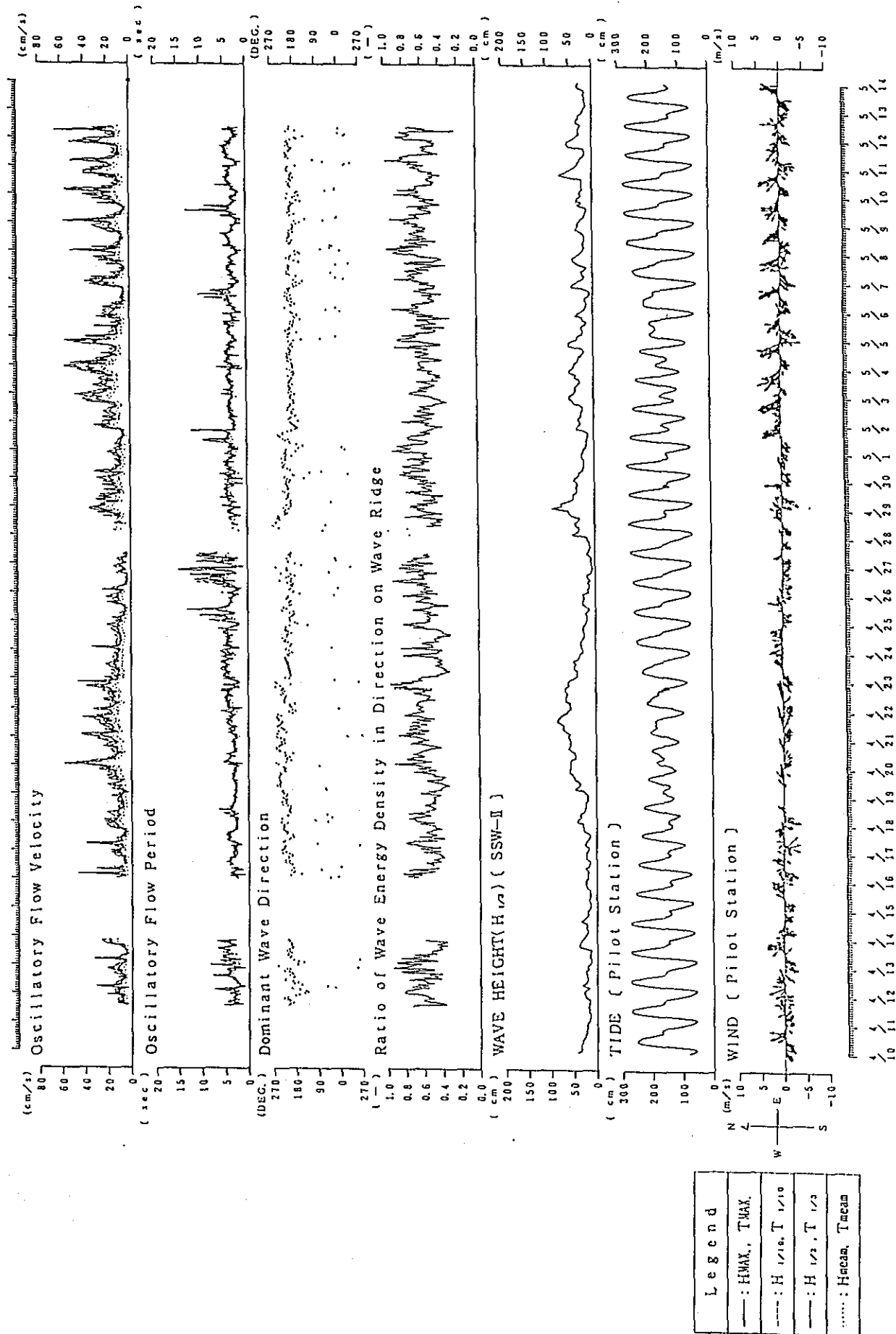


Fig. 3. 2-3 (28) Time Serial Variation of Oscillatory Flow (Survey Item: Current 1. 3rd Stage)

St. :10
 Layer :40.5m (Depth:2.5m)
 Interval:Every 1 hours
 Period :10th Apr. -13th May 1989

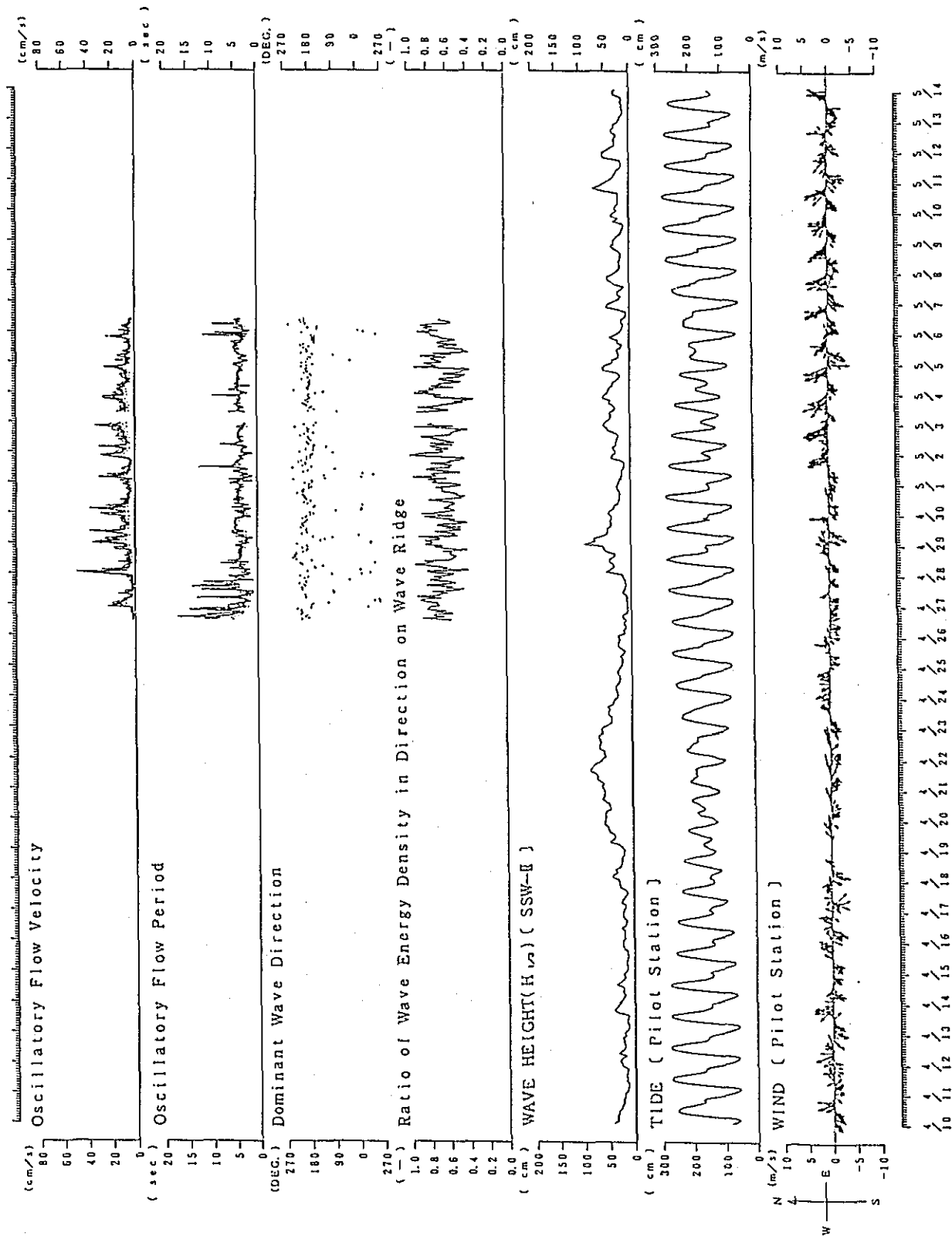


Fig. 3. 2-3 (29) Time Serial Variation of Oscillatory Flow (Survey Item:Current 1, 3rd Stage)

St. :1)
 Layer :+0.5m (Depth:1.2m)
 Interval:Every 1 hours
 Period :10th Apr. -13th May 1989

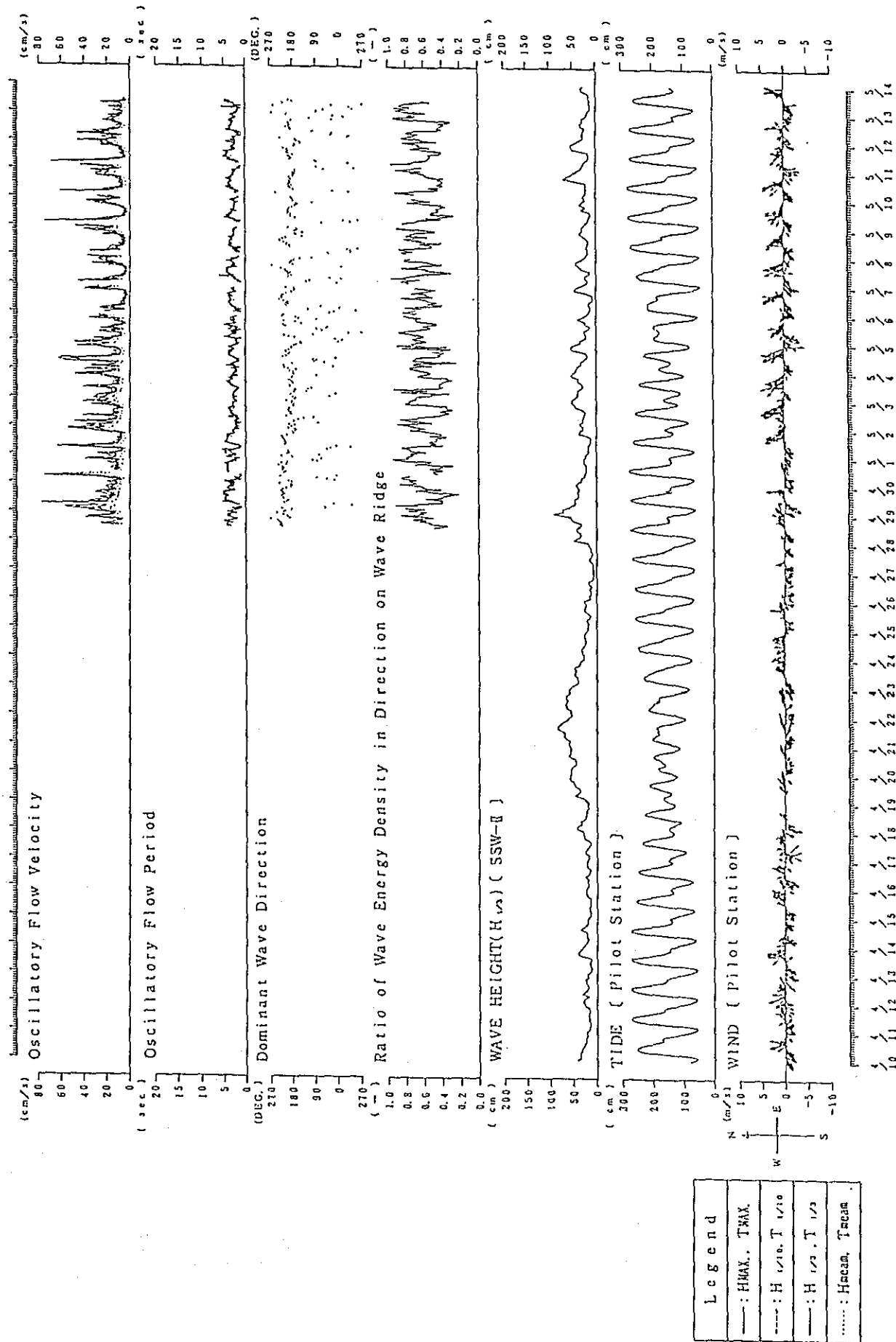


Fig. 3. 2-3 (30) Time Serial Variation of Oscillatory Flow (Survey Item:Current 1. 3rd Stage)

St. : J
 Layer : +0.5m (Depth: 9.1m)
 Interval: Every 2 hours
 Period : 11th Sep. - 10th Oct. 1988

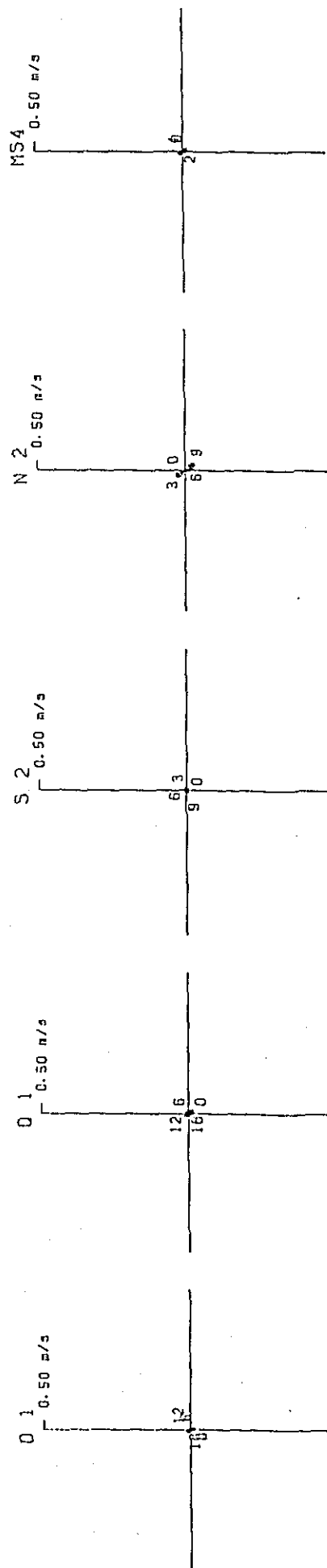
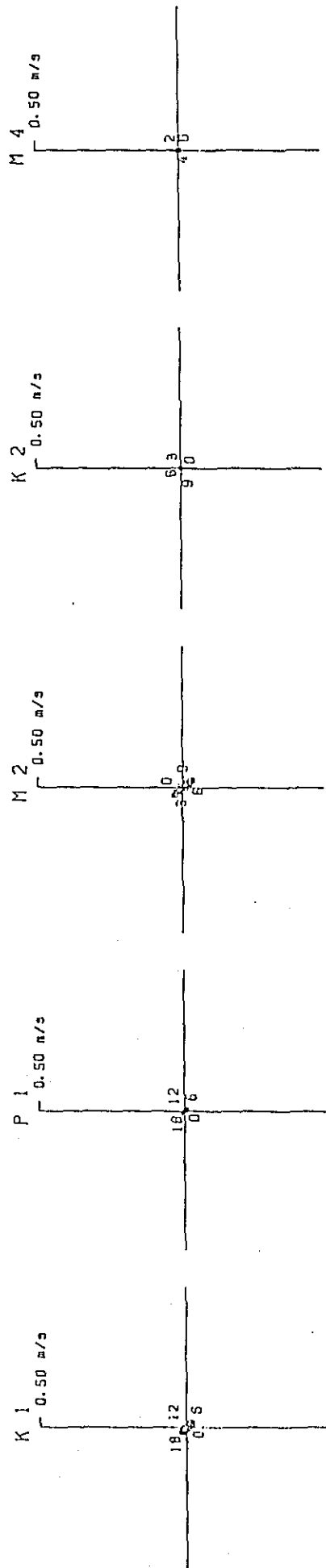


Fig. 3.2-4 (1) Currents Ellipses (Survey Item: Current 1, 1st Stage)
 (30 Days)

St. :2
 Layer :+0.5m(Depth:1.6m)
 Interval:Every 1 hours
 Period : 4th Sep. - 3th Oct. 1988

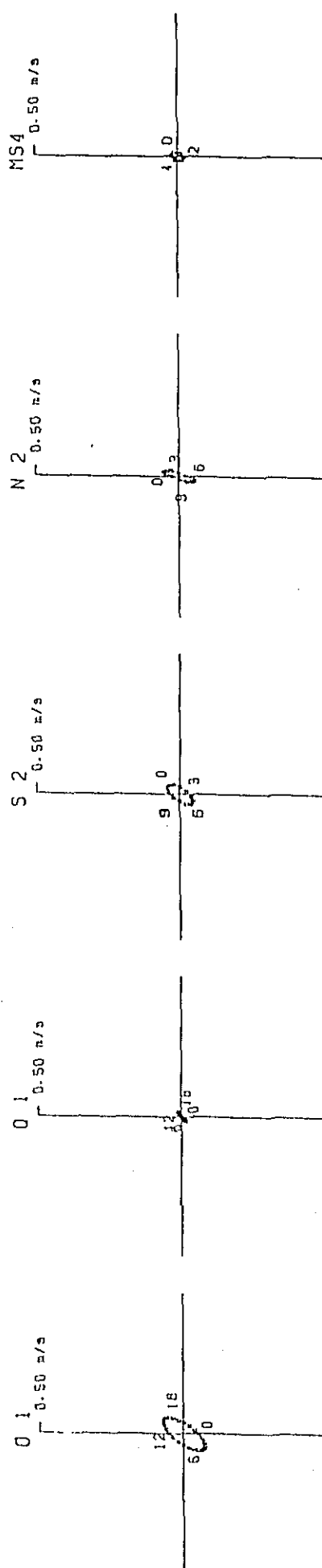
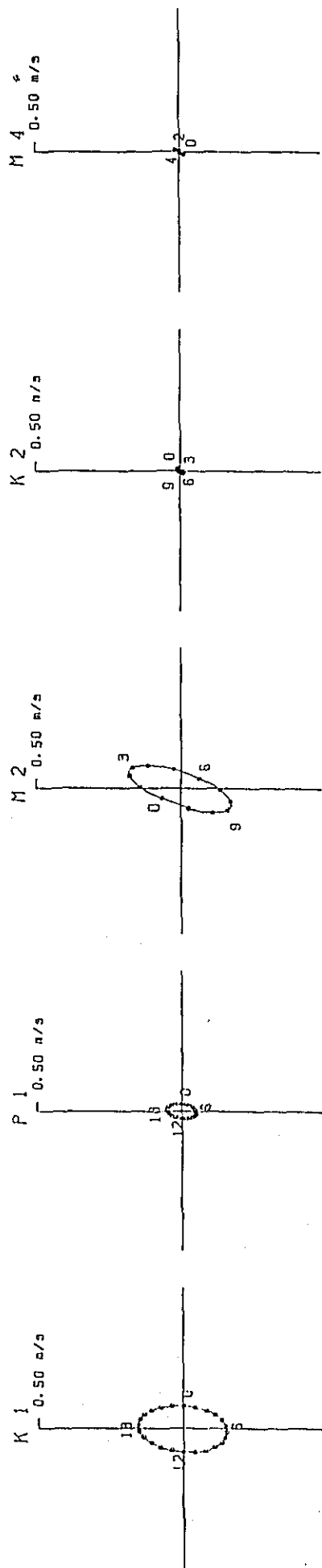


Fig. 3. 2-4 (2) Currents Ellipses (Survey Item:Current 1, 1st Stage)
 (30 Days)

St. :3
 Layer :+0.5m (Depth:0.7m)
 Interval:Every 1 hours
 Period : 5th Sep. - 4th Oct. 1988

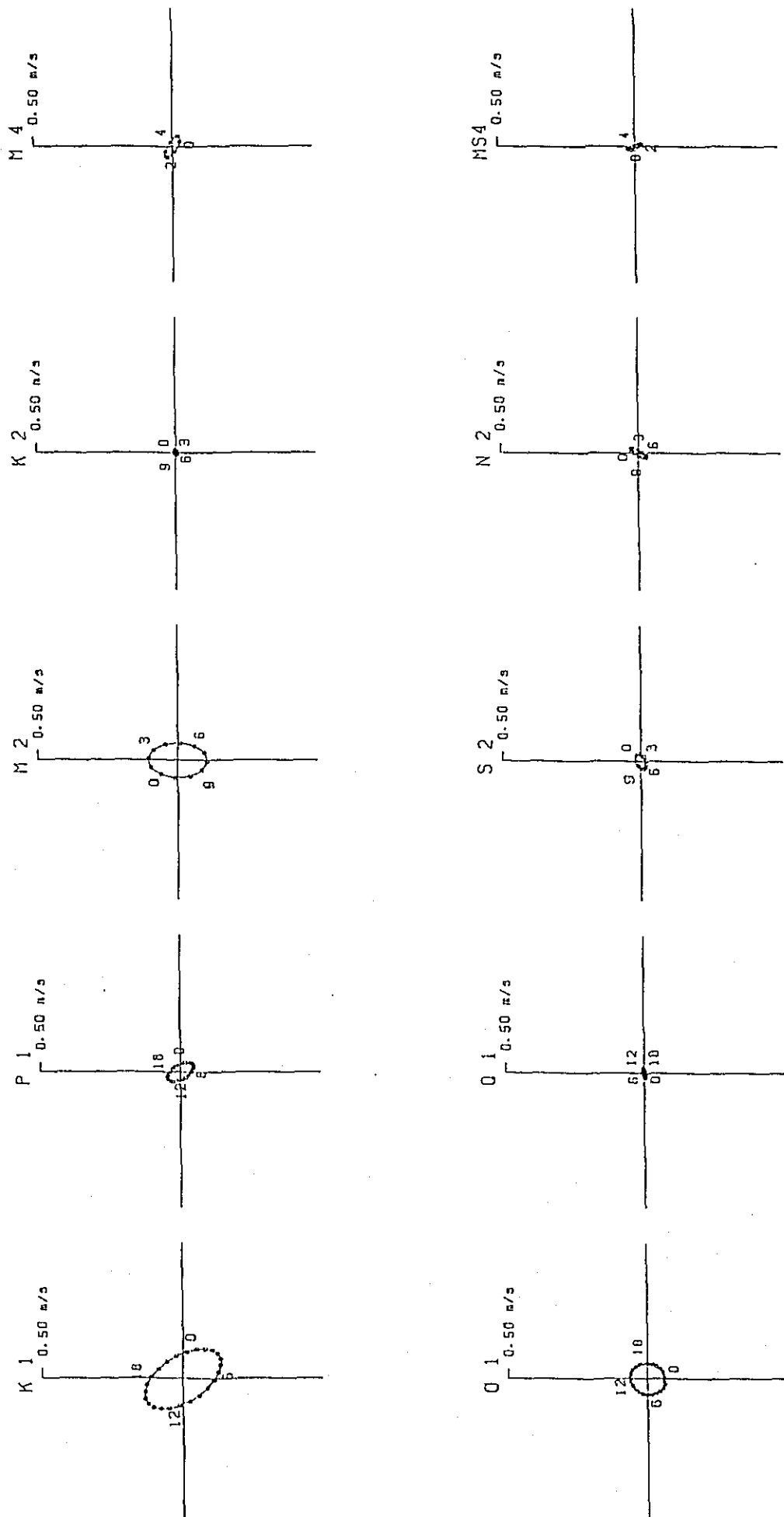


Fig. 3. 2-4 (3) Currents Ellipses (Survey Item:Current 1. 1st Stage)
 (30 Days)

St. :4
 Layer :+0.5m(Depth:0.8m)
 Interval:Every 1 hours
 Period : 8th Sep. - 7th Oct, 1988

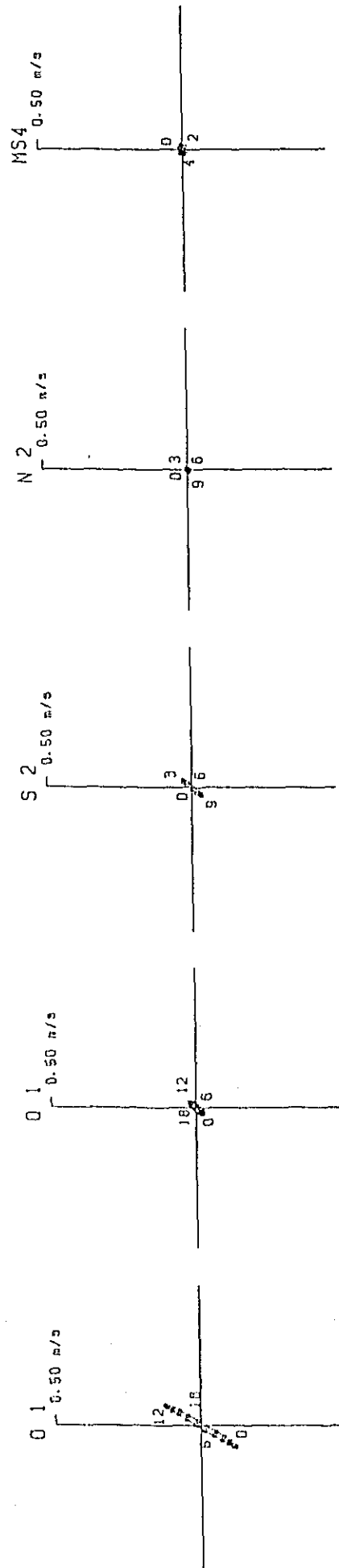
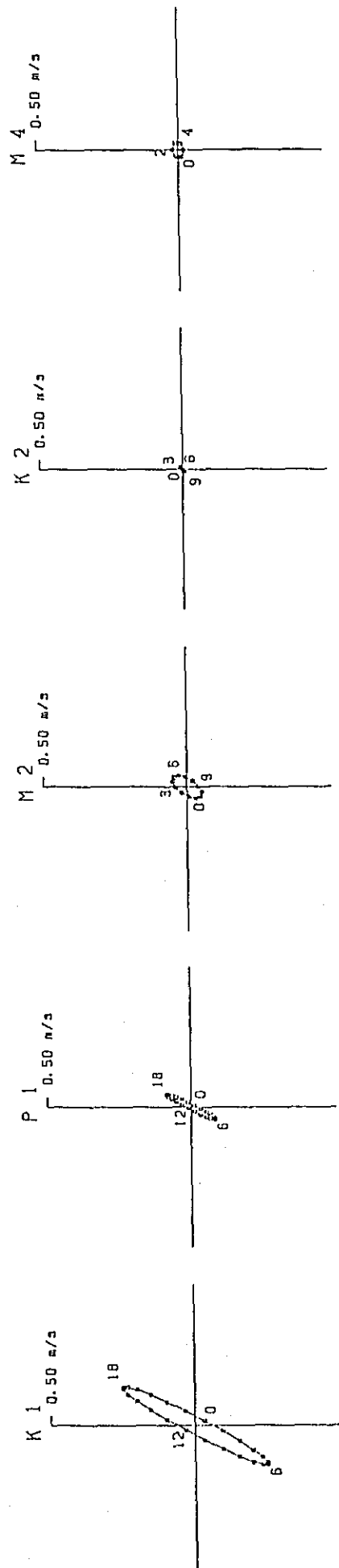


Fig. 3. 2-4 (4) Currents Ellipses (Survey Item:Current 1.1st Stage)
 (30 Days)

St. :5
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period : 7th Sep. - 6th Oct, 1988

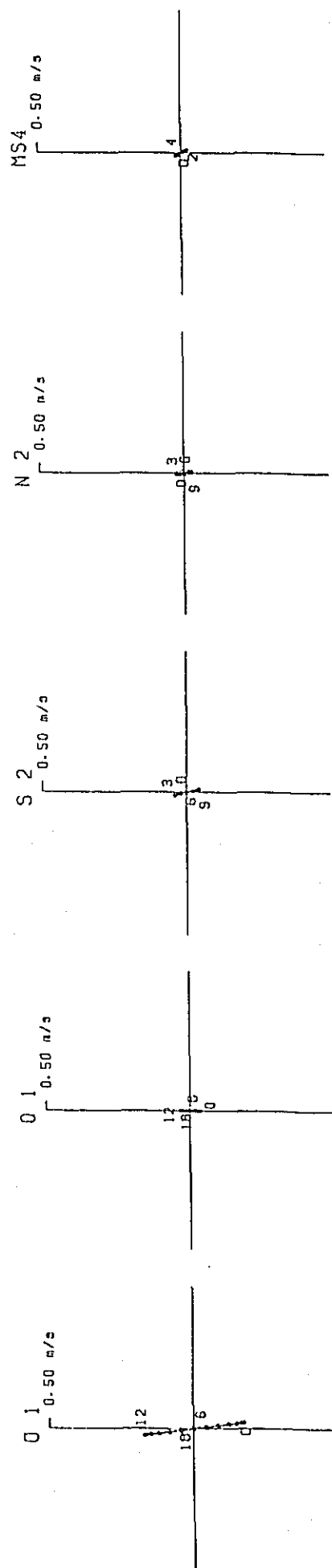
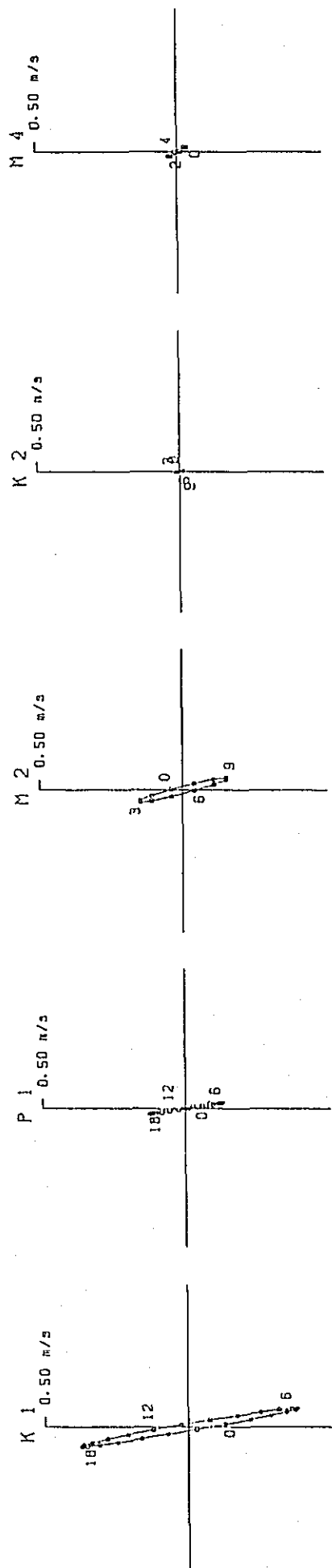


Fig. 3. 2-4 (5) Currents Ellipses (Survey Item:Current 1. 1st Stage)
 (30 Days)

St. :9
 Layer :+0.5m(Depth:1.0m)
 Interval:Every 1 hours
 Period : 6th Sep. ~ 5th Oct, 1988

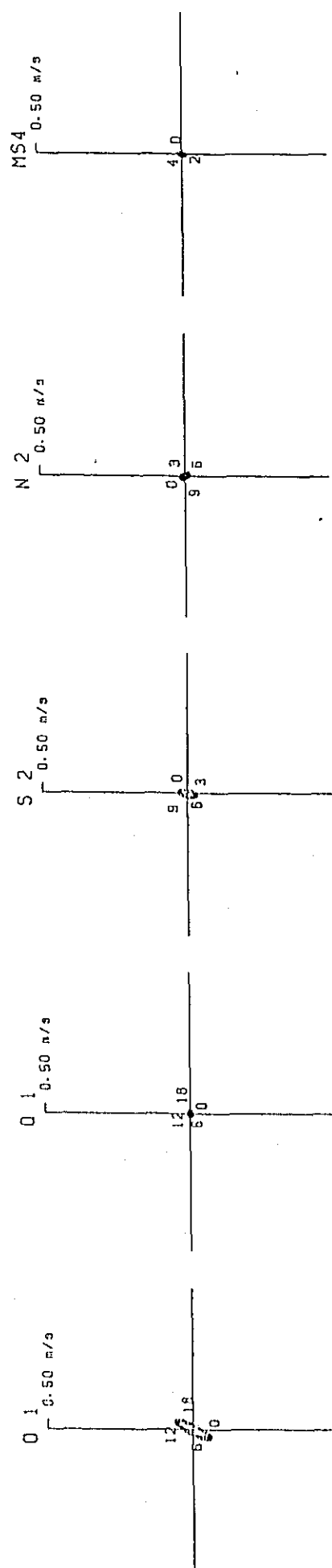
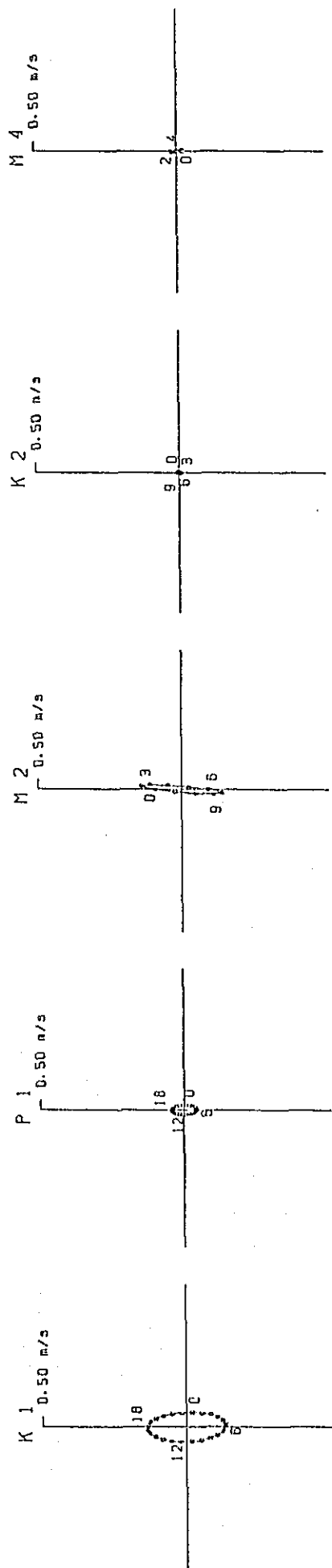


Fig. 3. 2-4 (6) Currents Ellipses (Survey Item:Current 1. 1st Stage)
 (30 Days)

St. :6
 Layer :+0.5m (Depth:1.7m)
 Interval:Every 1 hours
 Period :21th Sep. - 5th Oct. 1988 (2 nd half)

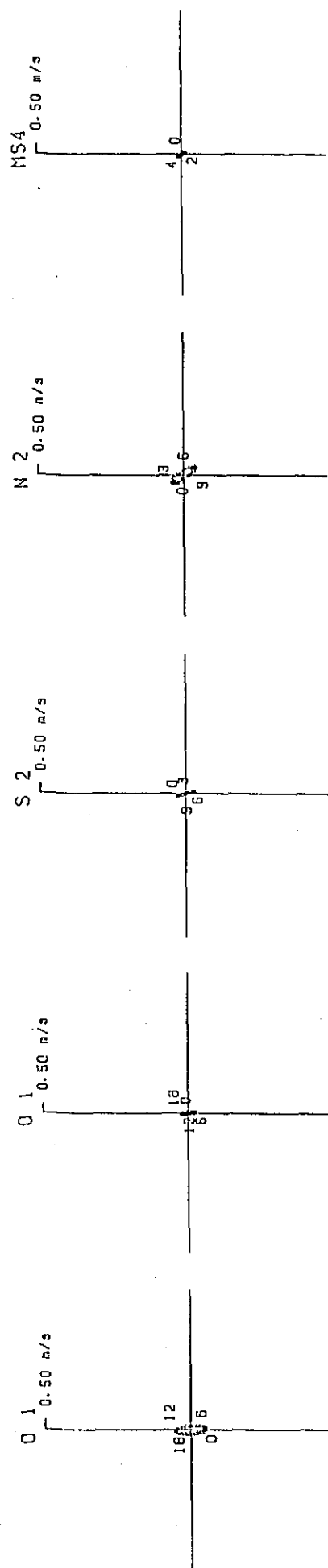
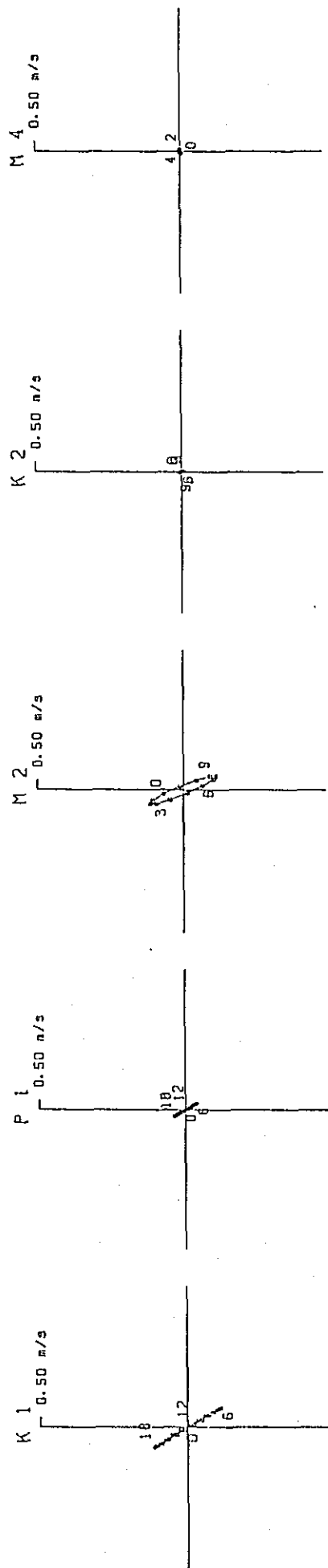


Fig. 3. 2-4 (7) Currents Ellipses (Survey Item:Current 1. 1st Stage)
 (15 Days)

St. : 7
 Layer : +0.5m (Depth: 1.7m)
 Interval: Every 1 hours
 Period : 5th Sep. - 19th Sep. 1988 (1 st half)

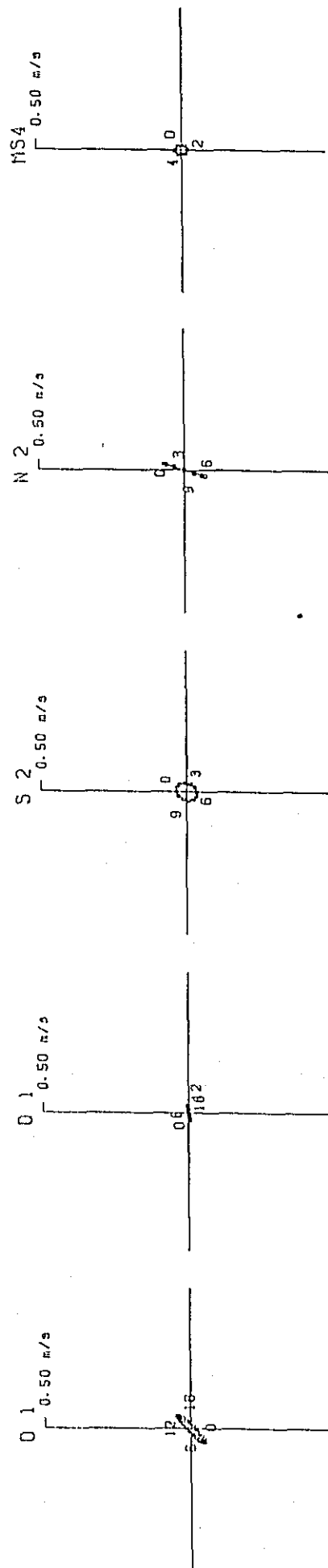
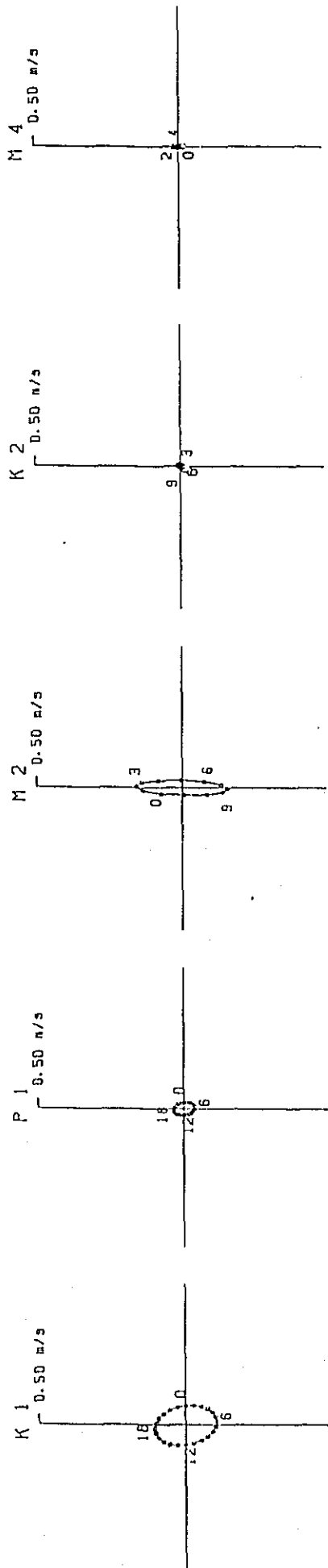


Fig. 3. 2-4 (8) Currents Ellipses (Survey Item: Current 1. 1st Stage)
 (15 Days)

St. : 8
 Layer : $\pm 0.5\text{m}$ (Depth: 0.8m)
 Interval: Every 1 hours
 Period : 5th Sep. - 19th Sep. 1988 (1 st half)

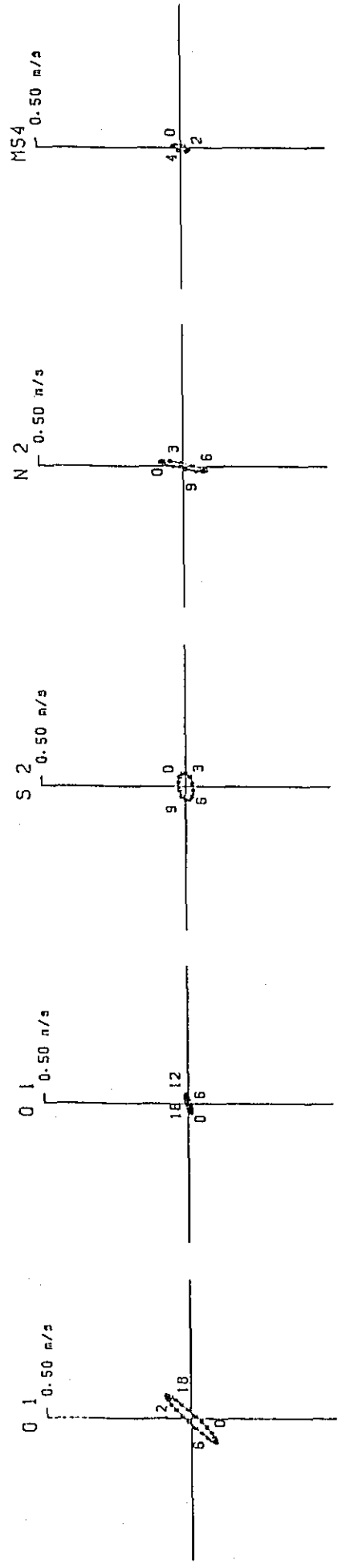
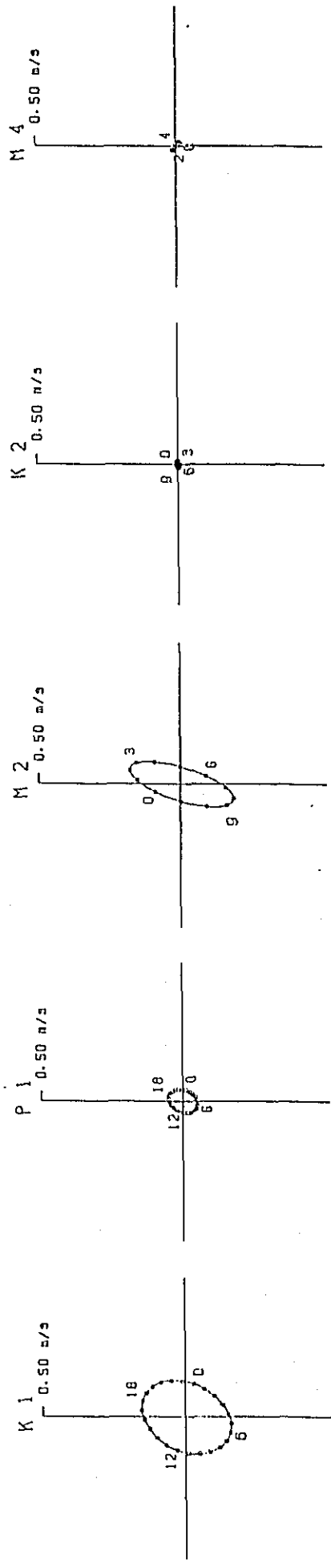


Fig. 3. 2-4 (9) Currents Ellipses (Survey Item: Current 1. 1st Stage)
 (15 Days)

St. :10
 Layer :+0.5m (Depth:2.5m)
 Interval:Every 1 hours
 Period :19th Sep. - 3th Oct. 1988 (2 nd half)

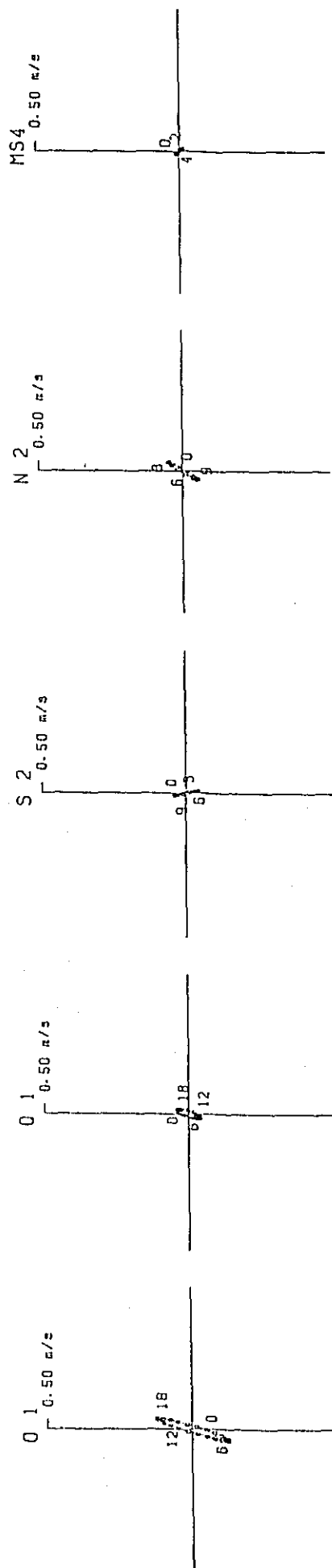
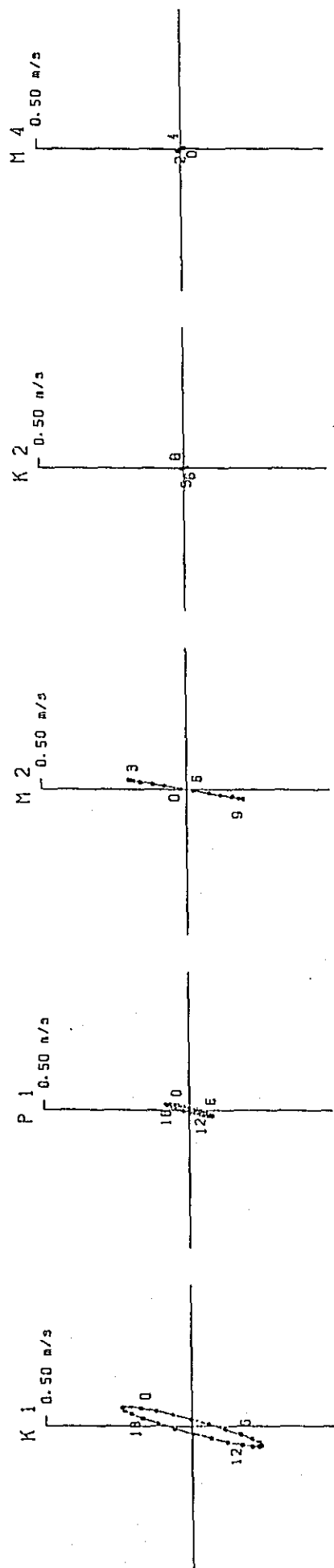


Fig. 3. 2-4 (10) Currents Ellipses (Survey Item:Current 1. 1st Stage)
(15 Days)

St. :11
 Layer :+0.5m (Depth:1.2m)
 Interval:Every 1 hours
 Period :19th Sep. - 3th Oct, 1988 (2 nd half)

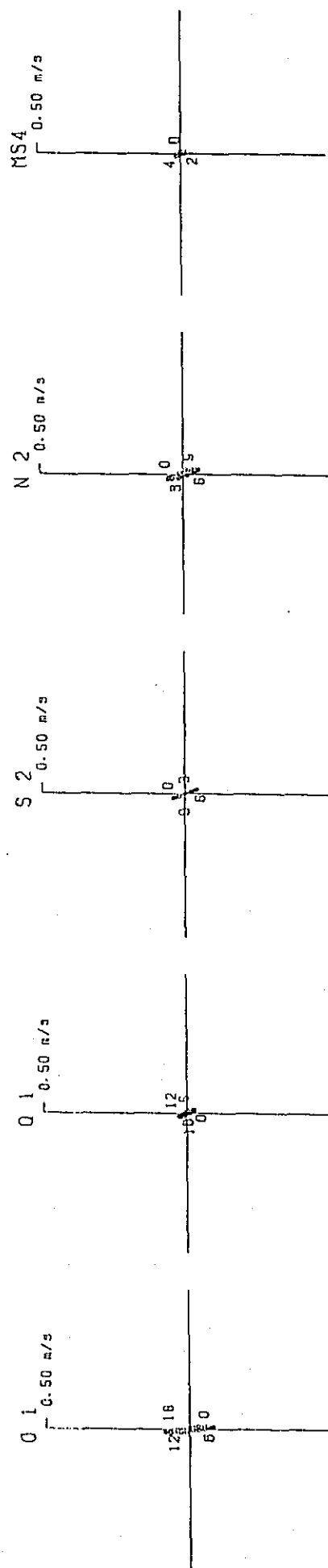
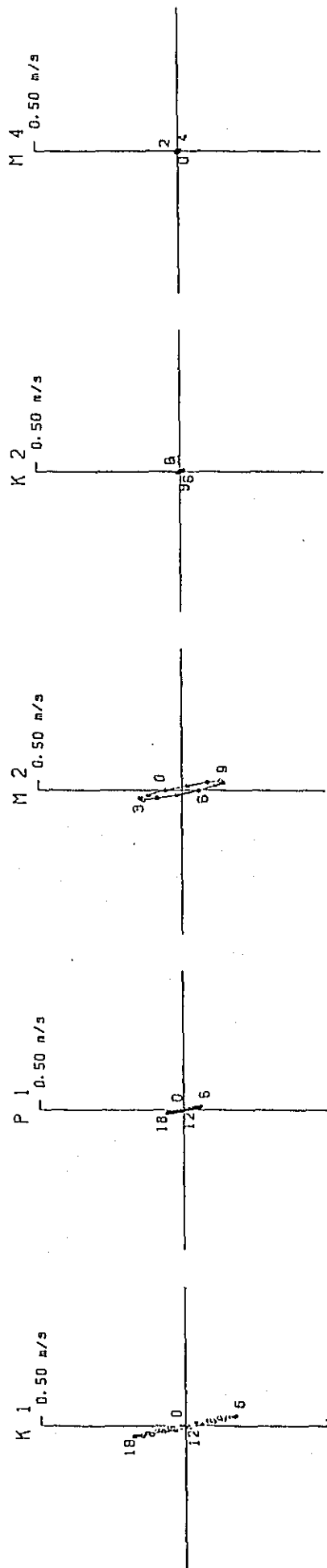


Fig. 3. 2-4 (11) Currents Ellipses (Survey Item:Current 1. 1st Stage)
 (15 Days)

St. :1
 Layer :+0.5m (Depth:9.1m)
 Interval:Every 2 hours
 Period :18th Jan. - 2th Feb. 1989 (2 nd half)

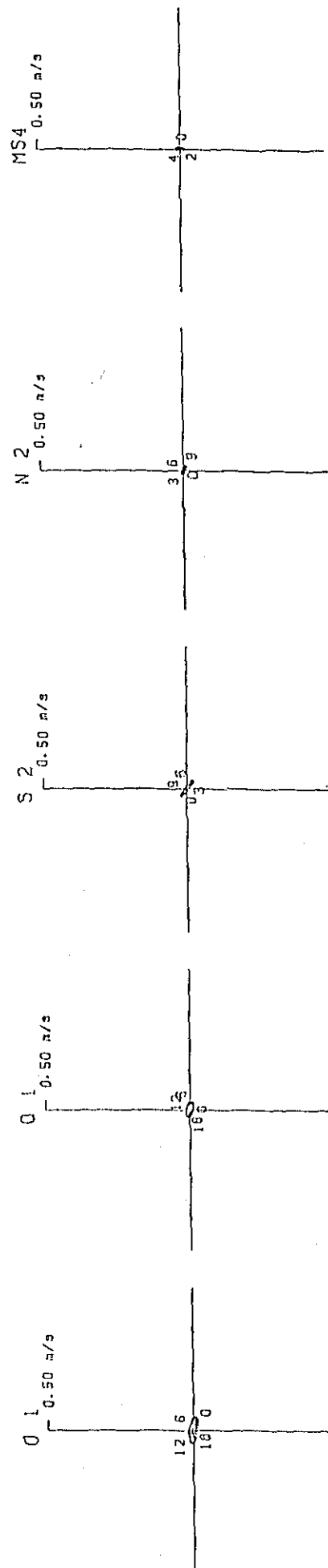
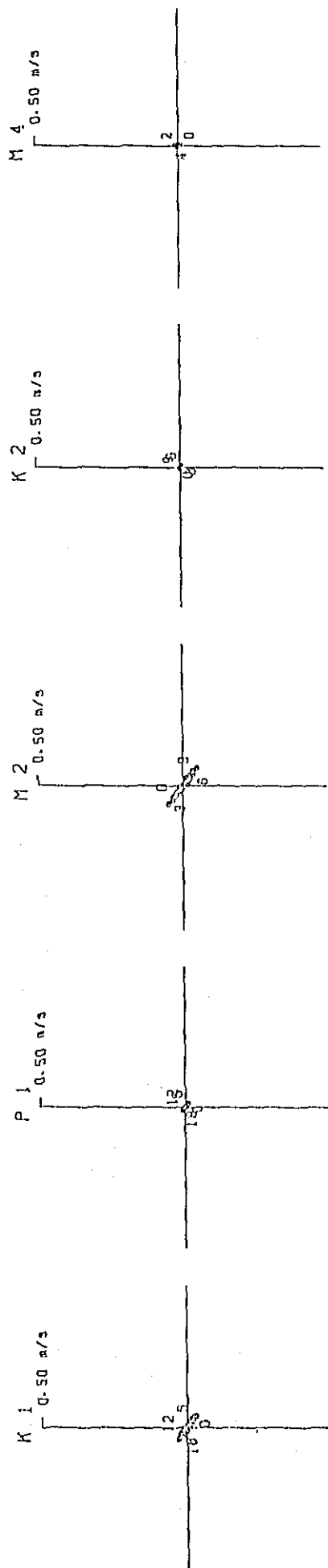


Fig. 3. 2-4 (12) Currents Ellipses (Survey Item:Current 1. 2nd Stage)
 (15 Days)

St. :2
 Layer :±0.5m (Depth:1.5m)
 Interval:Every 1 hours
 Period :18th Jan. - 2th Feb. 1989 (1 st half)

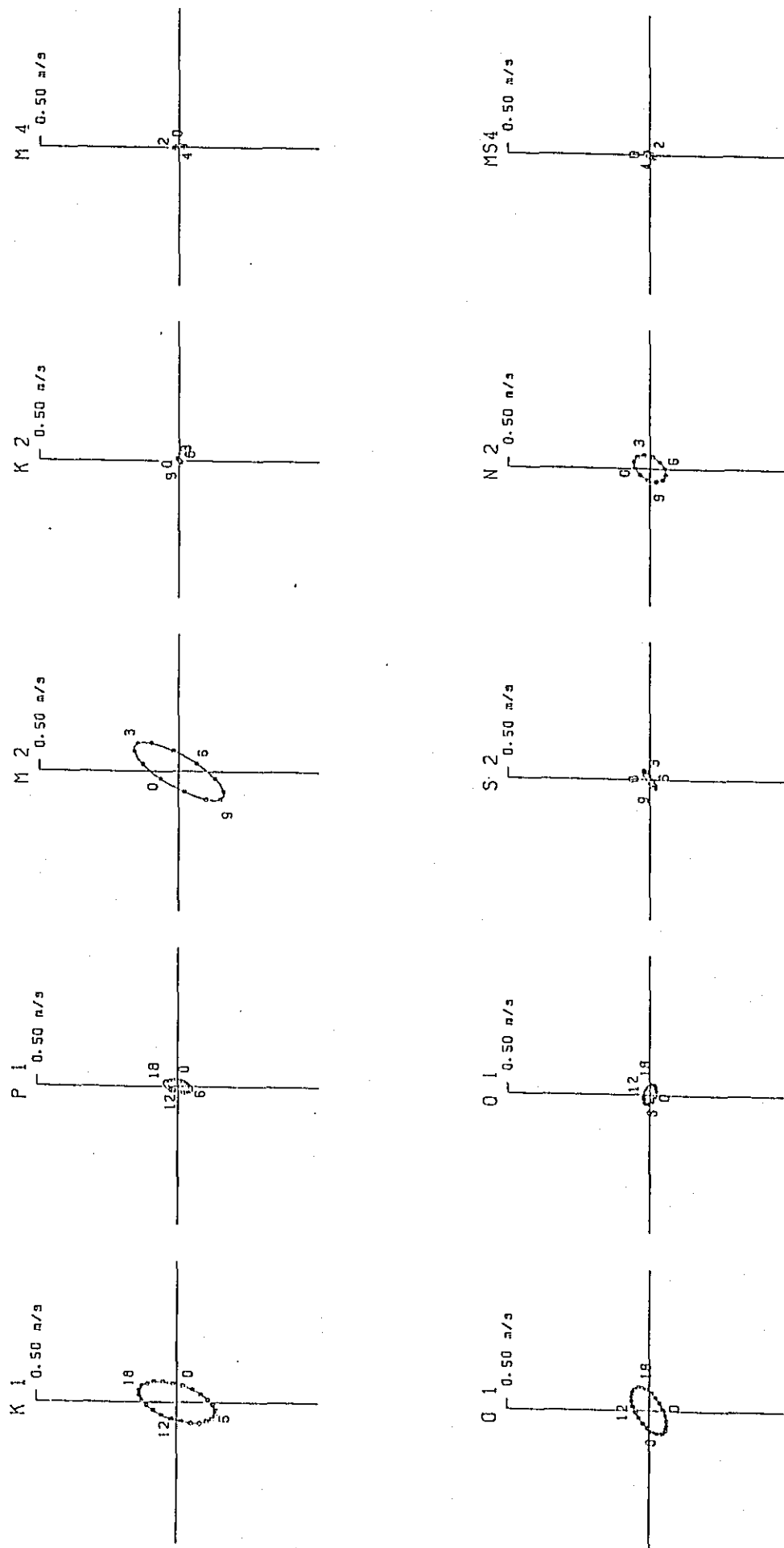


Fig. 3. 2-4 (B) Currents Ellipses (Survey Item:Current 1, 2nd Stage)
 (15 Days)

St. :3
 Layer :+0.5m (Depth:0.7m)
 Interval:Every 1 hours
 Period :18th Jan. - 2th Feb. 1989 (1 st half)

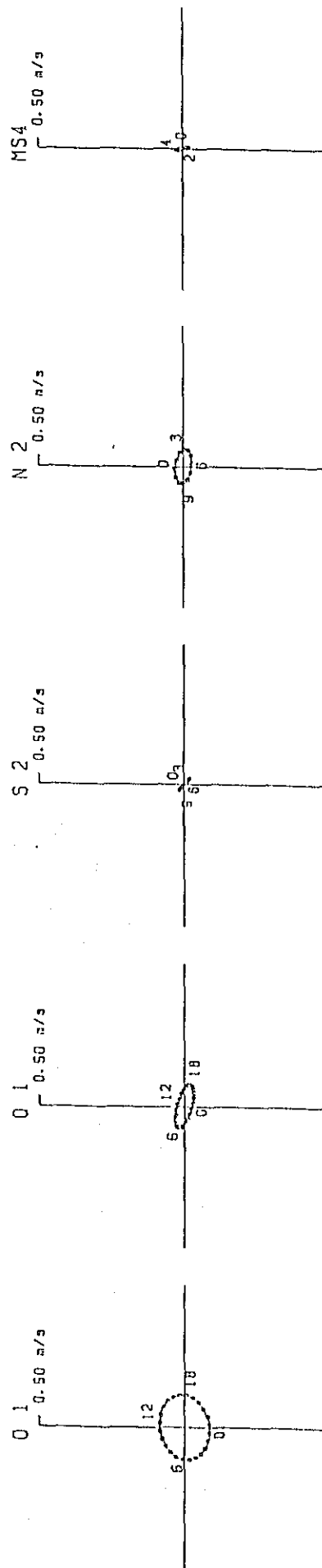
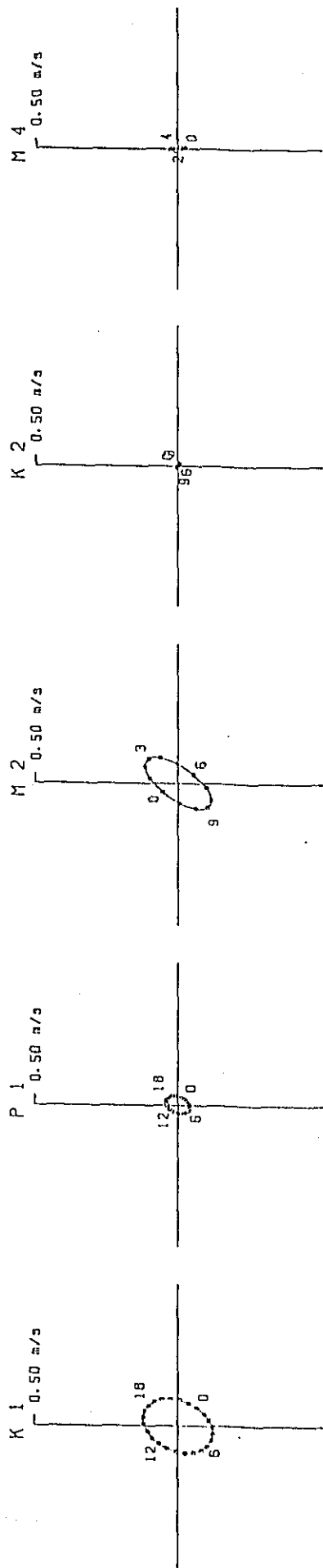


Fig. 3. 2-4 (14) Currents Ellipses (Survey Item:Current 1. 2nd Stage)
 (15 Days)

St. :4
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :18th Jan. - 2th Feb. 1989 (1 st half)

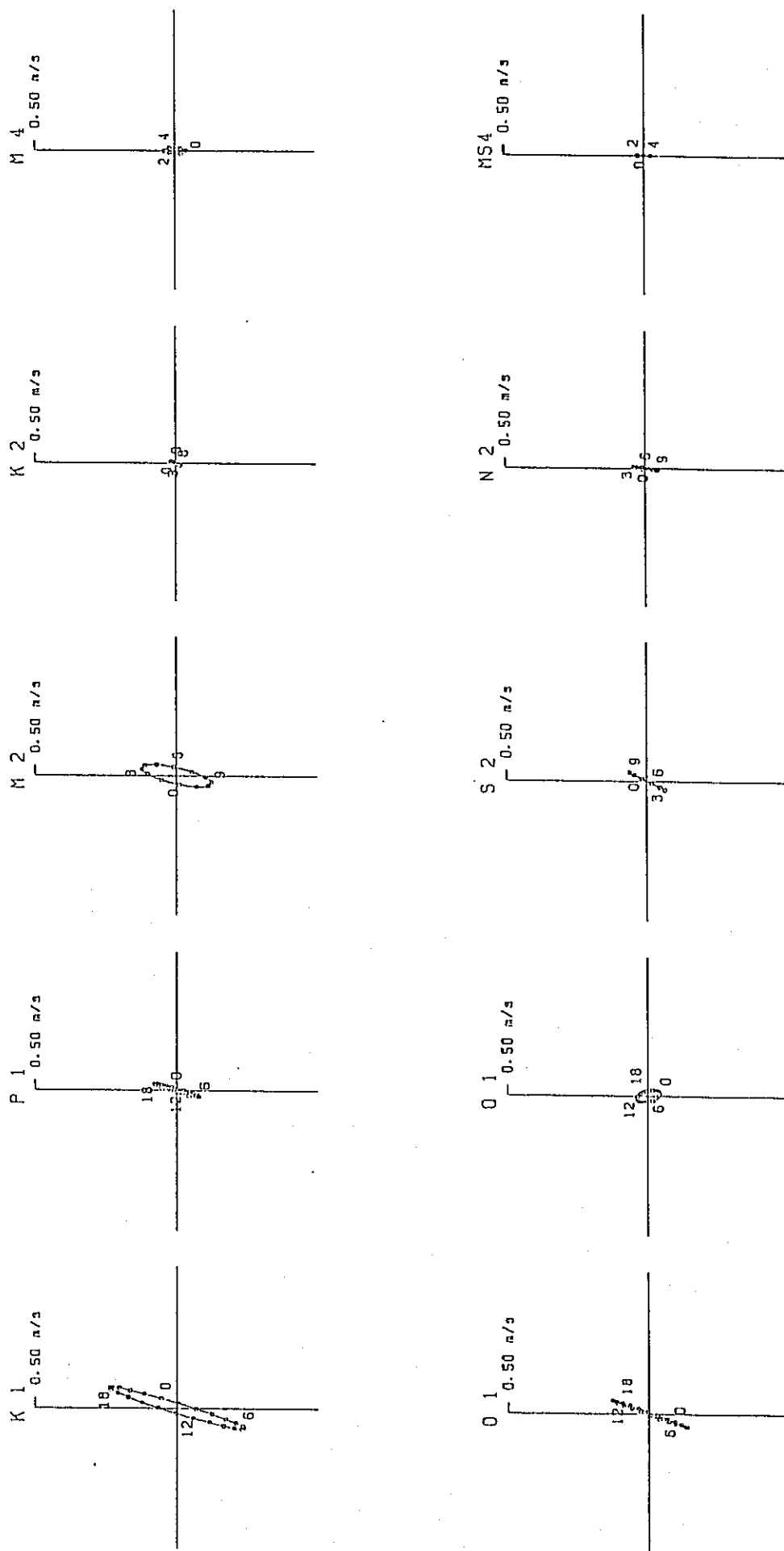


Fig. 3. 2-4 (15) Currents Ellipses (Survey Item:Current 1. 2nd Stage)
 (15 Days)

St. :7
 Layer :±0.5m(Depth:1.7m)
 Interval:Every 1 hours
 Period :18th Jan. ~ 2th Feb. 1989 (1 st half)

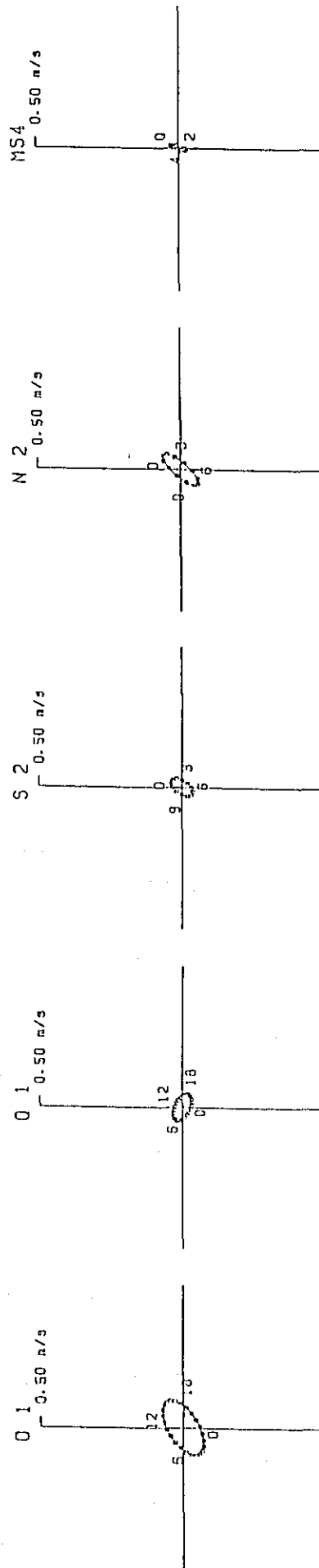
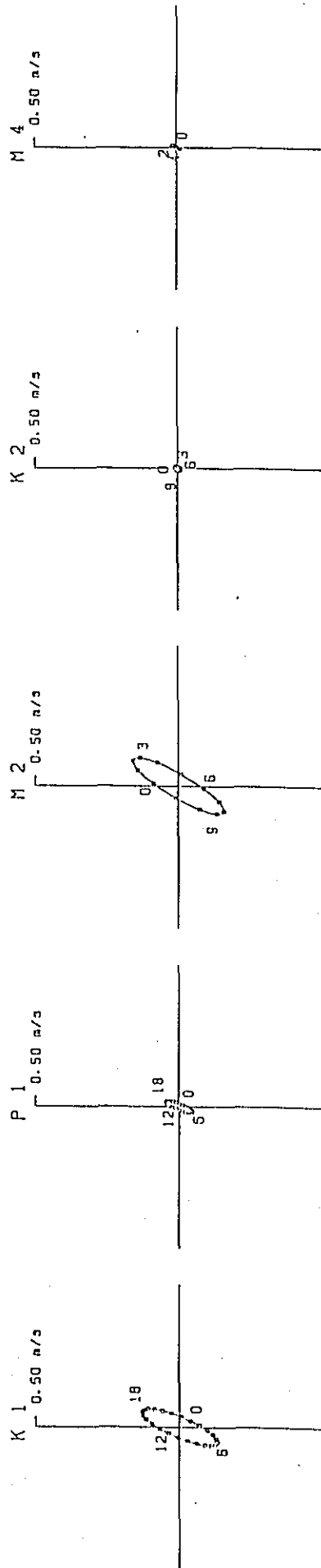


Fig. 3. 2-4 (16) Currents Ellipses (Survey Item:Current 1. 2nd Stage)
 (15 Days)

St. : 8
 Layer : +0.5m (Depth: 0.8m)
 Interval: Every 1 hours
 Period : 18th Jan. - 2th Feb. 1989 (1 st half)

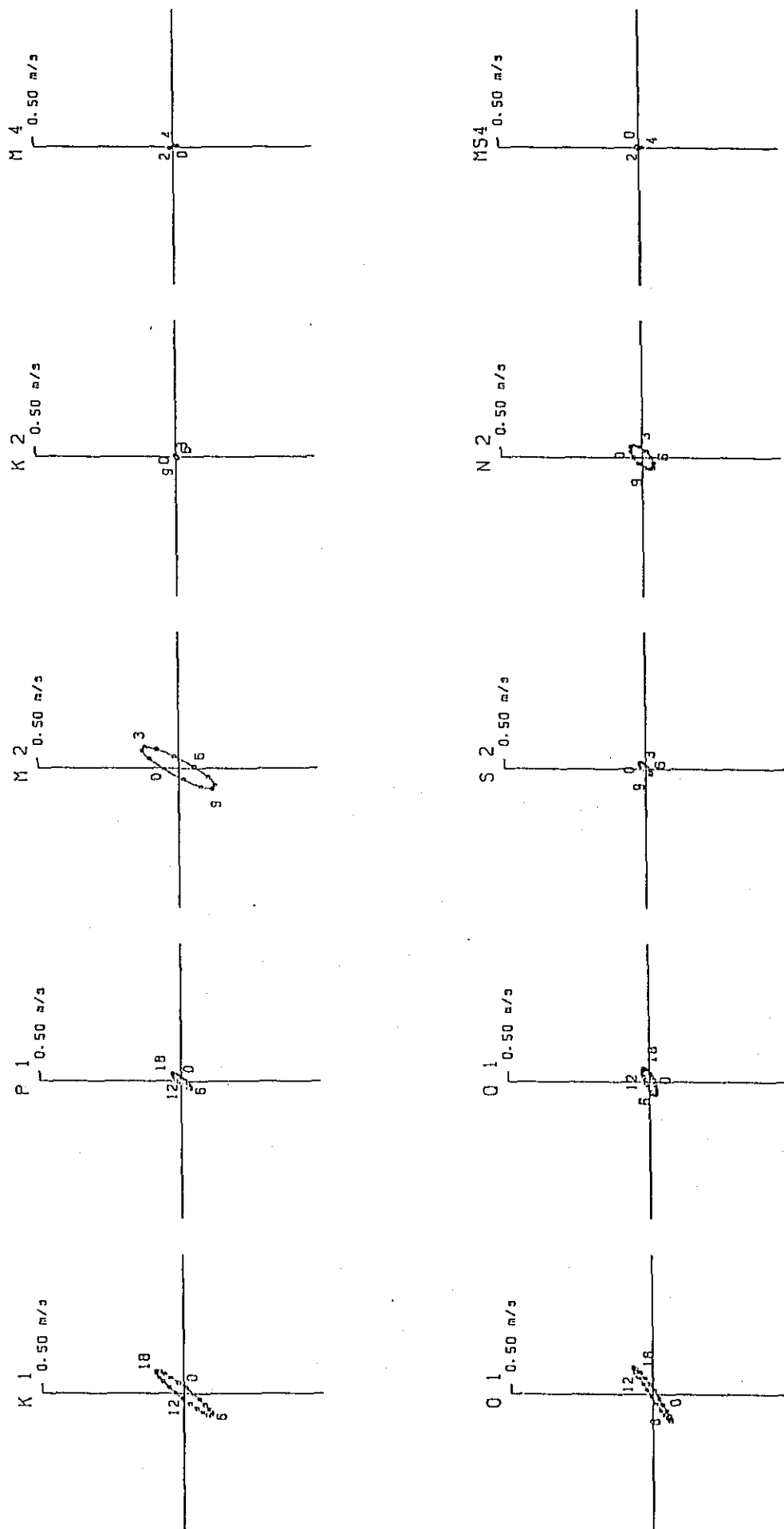
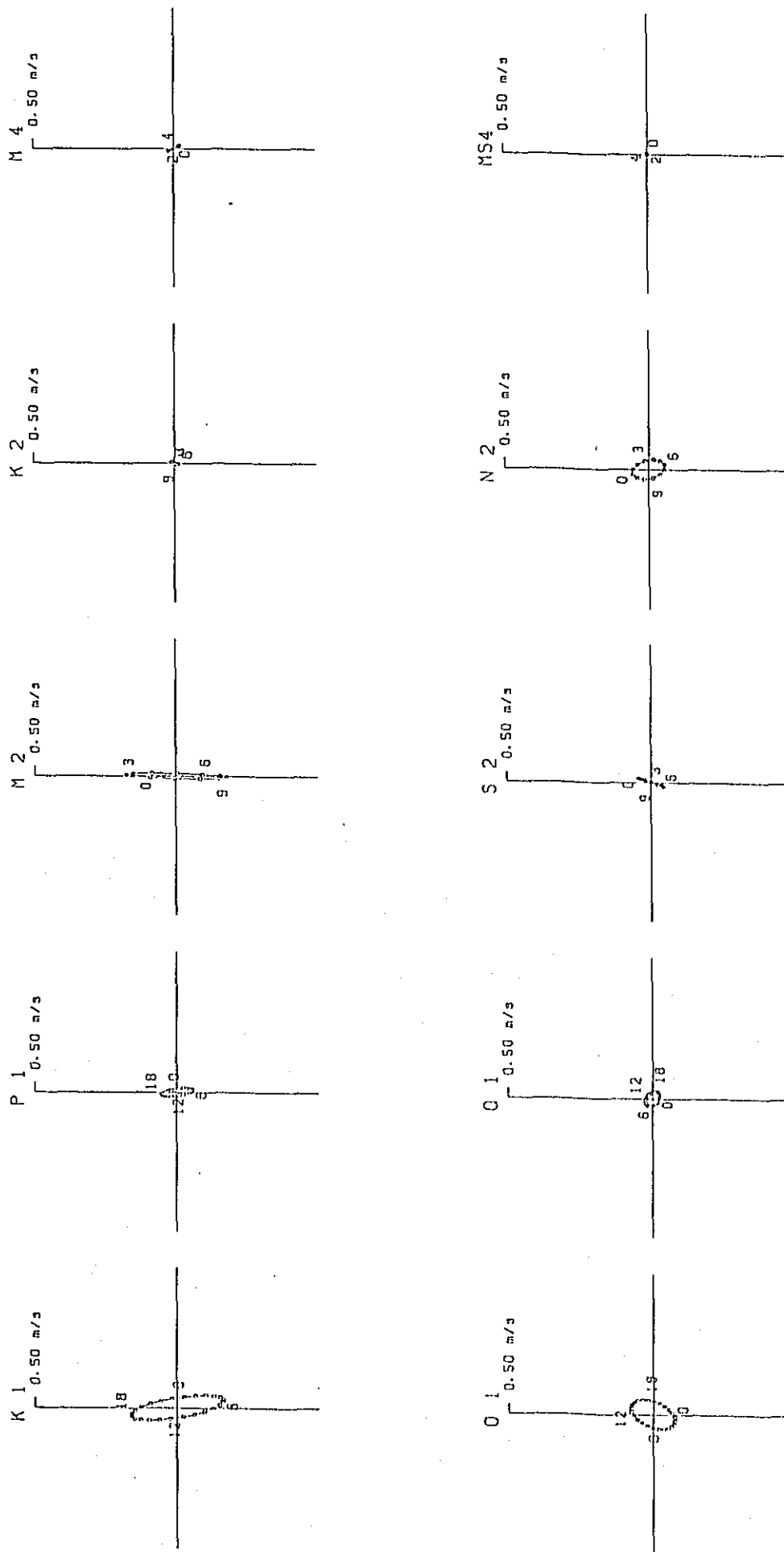


Fig. 3. 2-4 (17) Currents Ellipses (Survey Item: Current 1. 2nd Stage)
 (15 Days)

St. :9
 Layer :+0.5m(Depth:1.0m)
 Interval:Every 1 hours
 Period :18th Jan. - 2th Feb. 1988(1 st half)



St. : 3
 Layer : +0.5m (Depth: 0.7m)
 Interval: Every 1 hours
 Period : 4th Feb. - 19th Feb. 1989 (2 nd half)

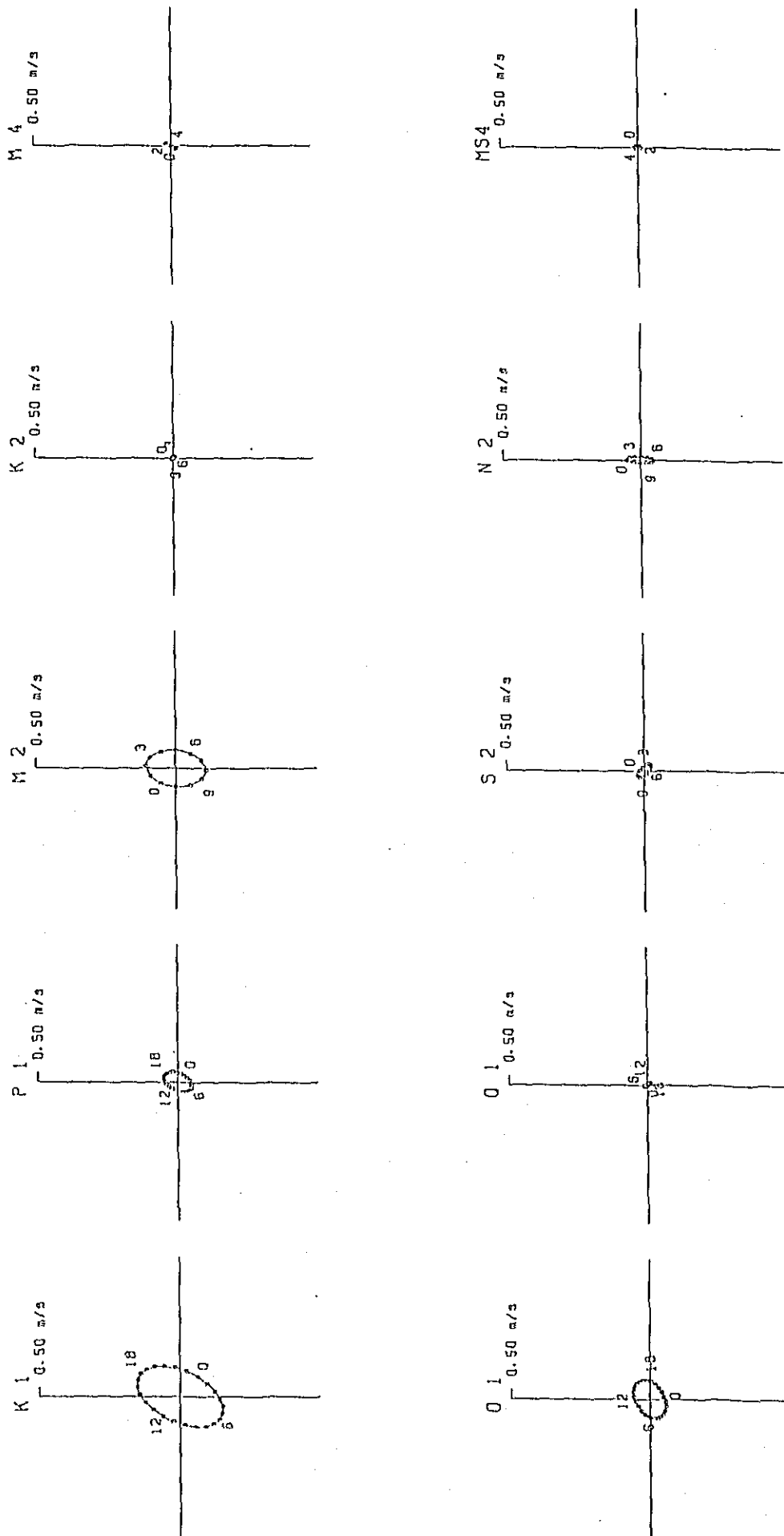


Fig. 3. 2-4 (19) Currents Ellipses (Survey Item: Current 1, 2nd Stage)
 (15 Days)

St. : 4
 Layer : +0.5m (Depth: 0.8m)
 Interval: Every 1 hours
 Period : 4th Feb. - 19th Feb. 1989 (2 nd half)

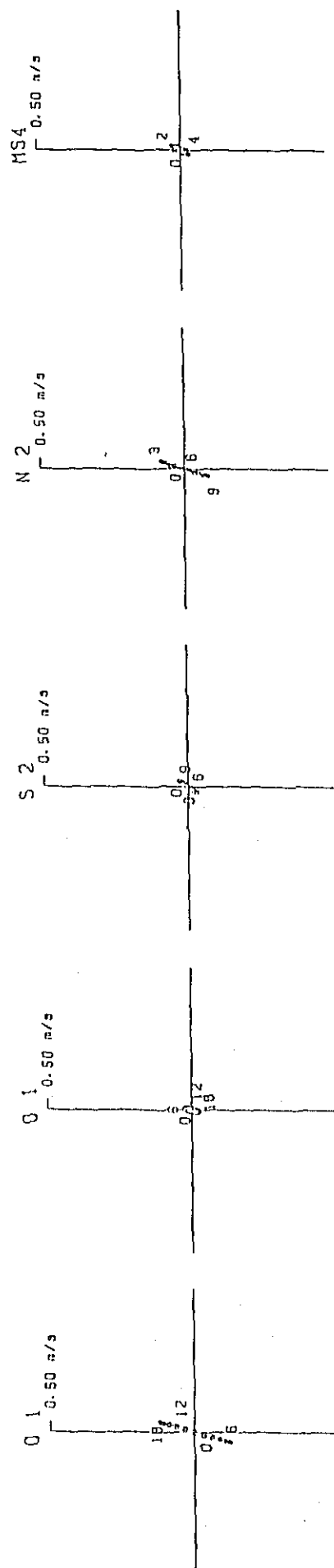
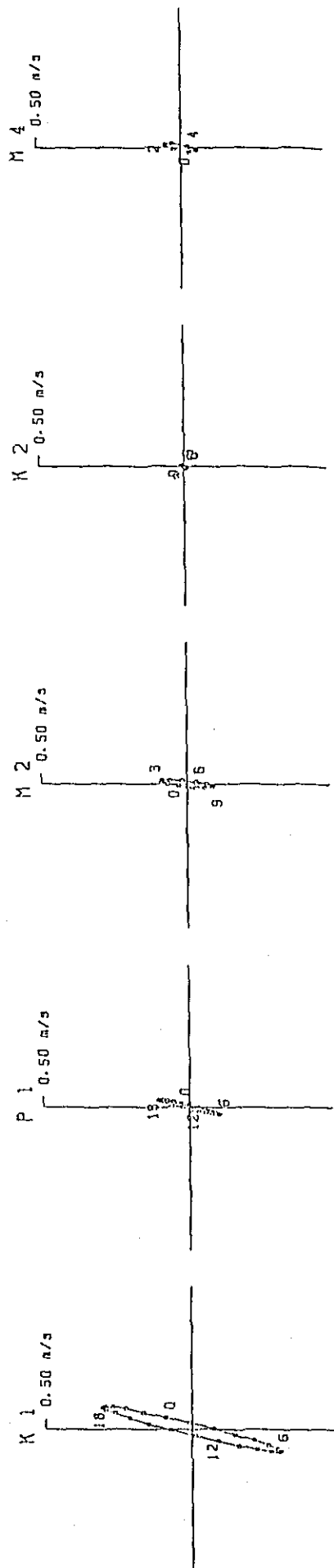


Fig. 3. 2-4 (20) Currents Ellipses (Survey Item: Current 1. 2nd Stage)
 (15 Days)

St. :5
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period : 4th Feb. -19th Feb. 1989 (2 nd half)

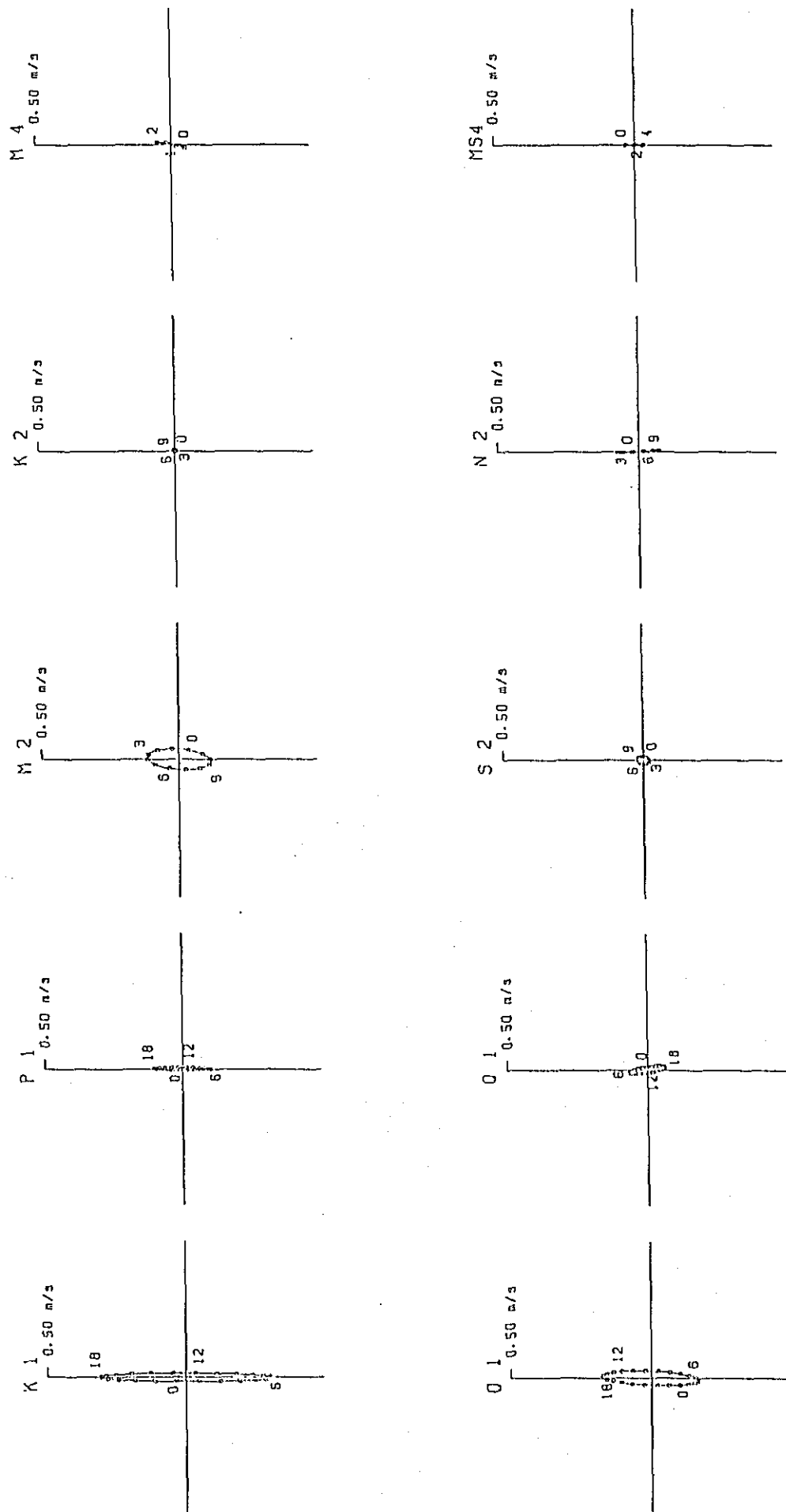


Fig. 3. 2-4 (21) Currents Ellipses (Survey Item:Current 1. 2nd Stage)
 (15 Days)

St. :6
 Layer :+0.5m (Depth:1.7m)
 Interval: Every 1 hours
 Period : 4th Feb. -19th Feb. 1989 (2 nd half)

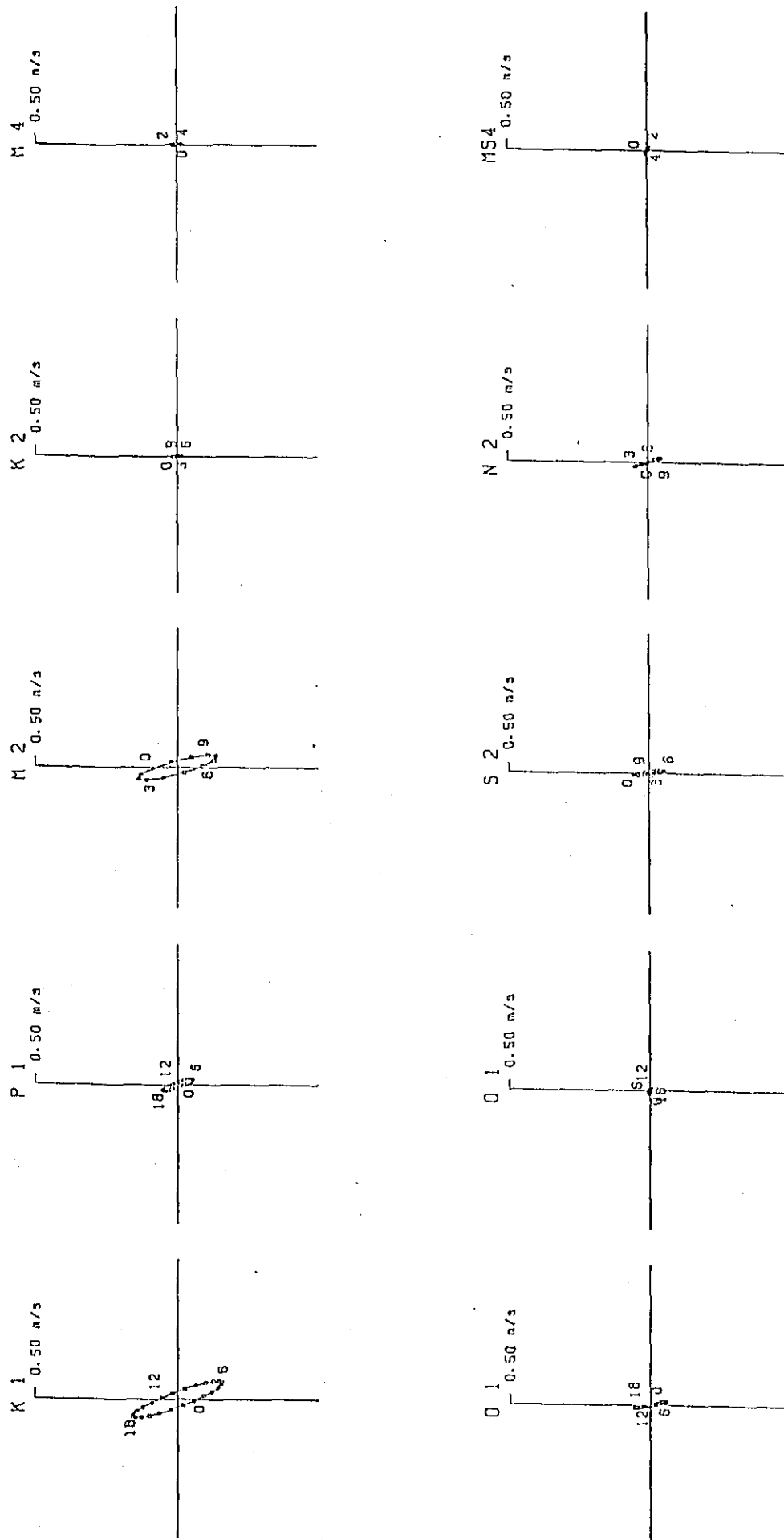


Fig. 3. 2-4 (22) Currents Ellipses (Survey Item:Current 1, 2nd Stage)
(15 Days).

St. : 9
 Layer : $\pm 0.5\text{m}$ (Depth: 1.0m)
 Interval: Every 1 hours
 Period : 4th Feb. - 19th Feb. 1989 (2 nd half)

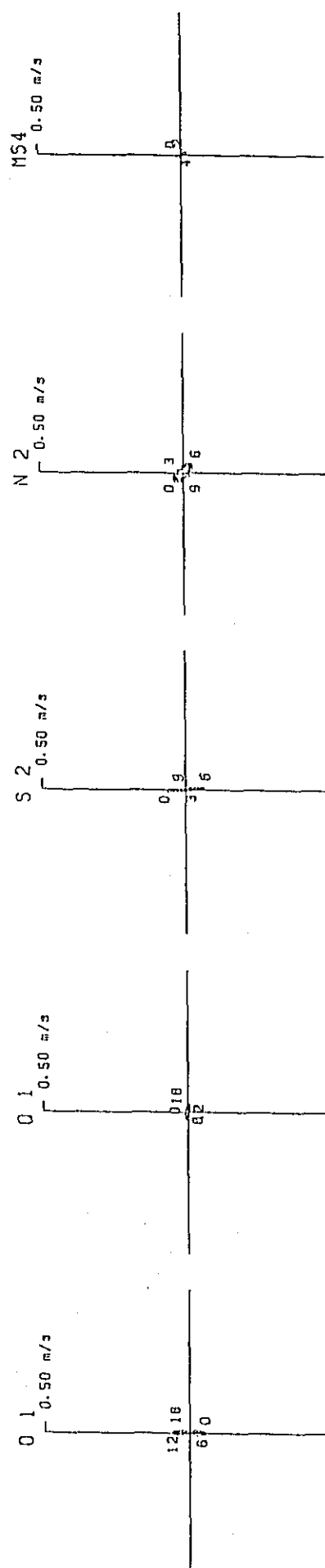
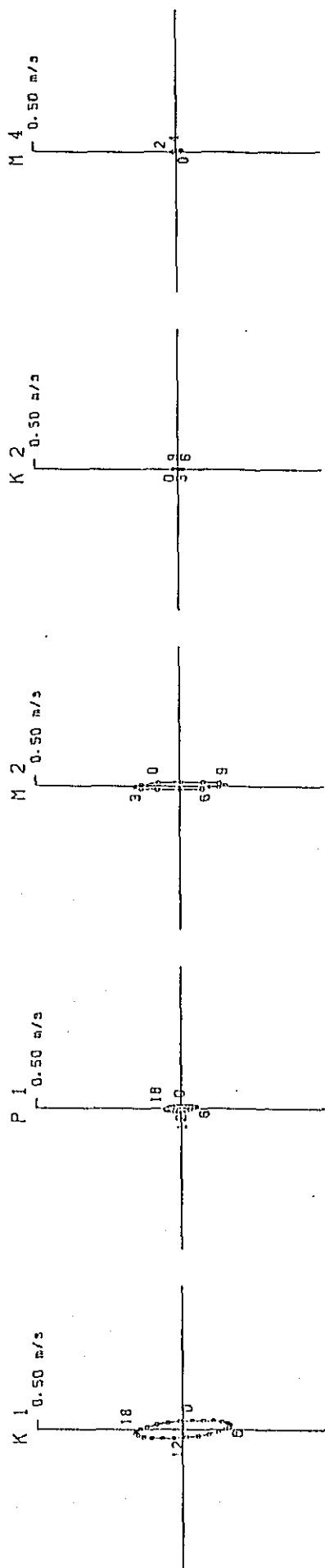


Fig. 3. 2-4 (2) Currents Ellipses (Survey Item: Current 1, 2nd Stage)
 (15 Days)

St. :10
 Layer :+0.5m(Depth:2.5m)
 Interval:Every 1 hours
 Period : 4th Feb.-19th Feb.1989 (2 nd half)

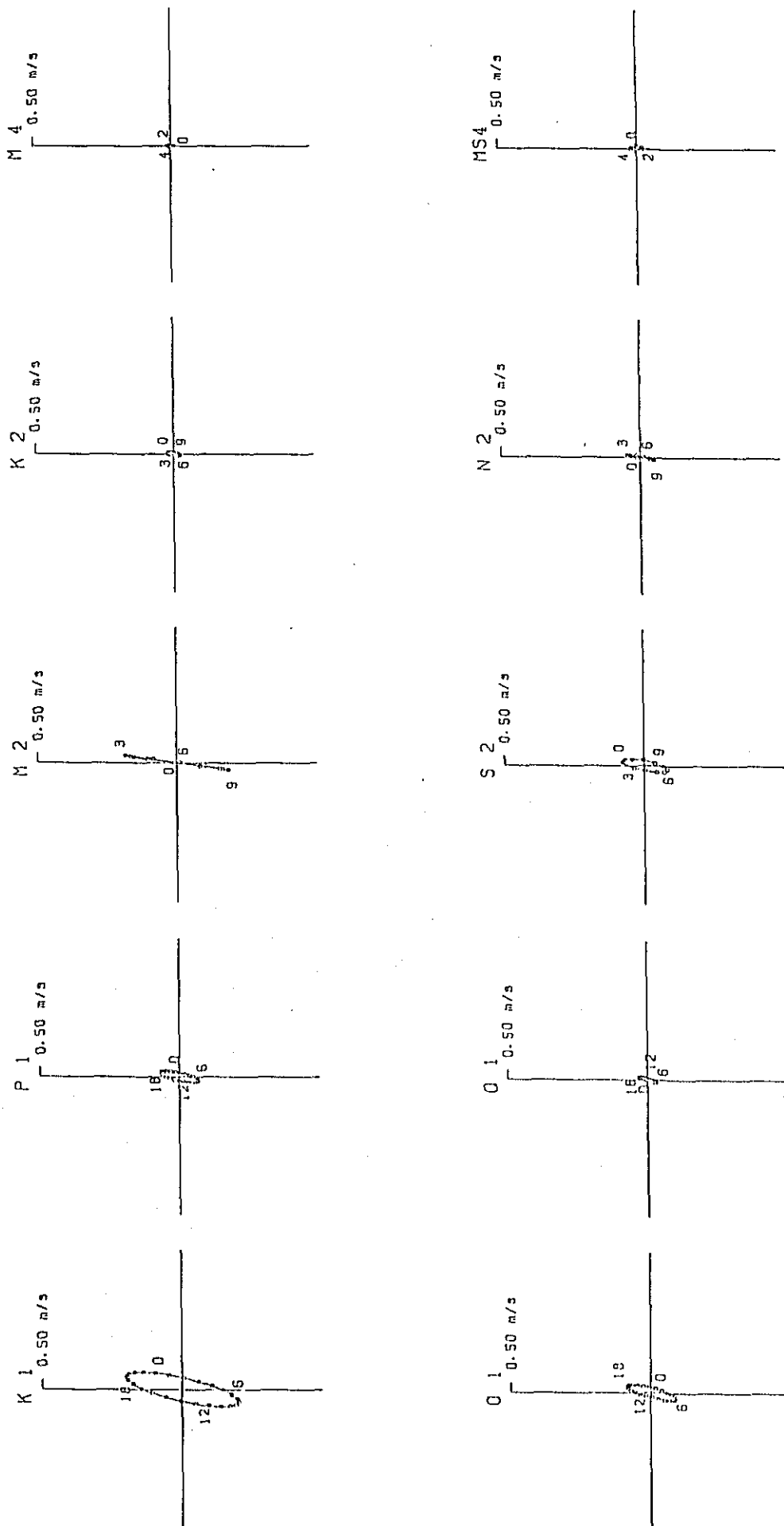


Fig. 3. 2-4 (24) Currents Ellipses (Survey Item:Current 1, 2nd Stage)
 (15 Days)

St. :11
 Layer :+0.5m (Depth:1.2m)
 Interval:Every 1 hours
 Period : 4th Feb. -19th Feb. 1989 (2 nd half)

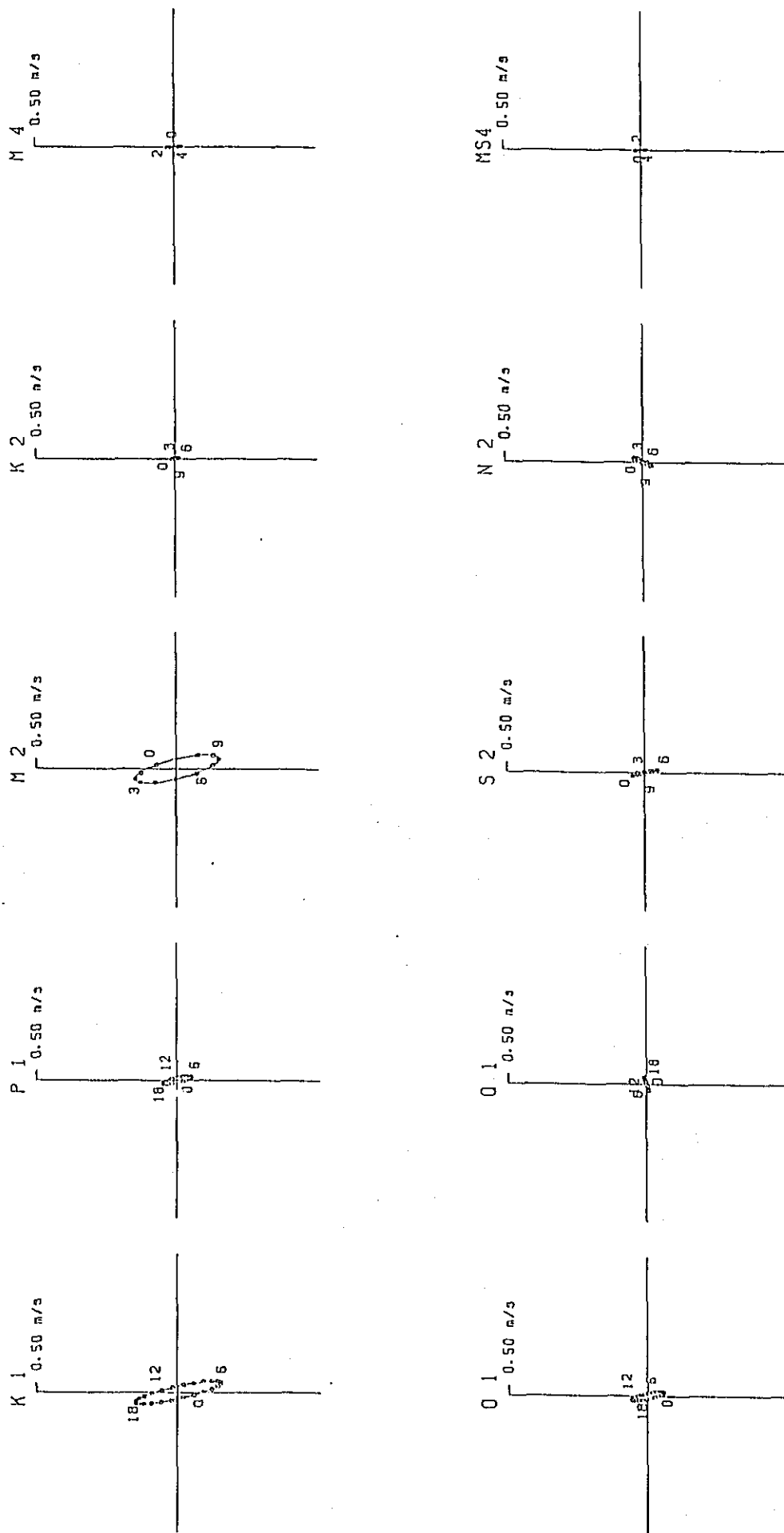


Fig. 3. 2-4 (25) Currents Ellipses (Survey Item:Current 1, 2nd Stage)
 (15 Days).

St. :3
 Layer :+0.5m (Depth:0.7m)
 Interval:Every 1 hours
 Period :19th Jan. -17th Feb. 1989

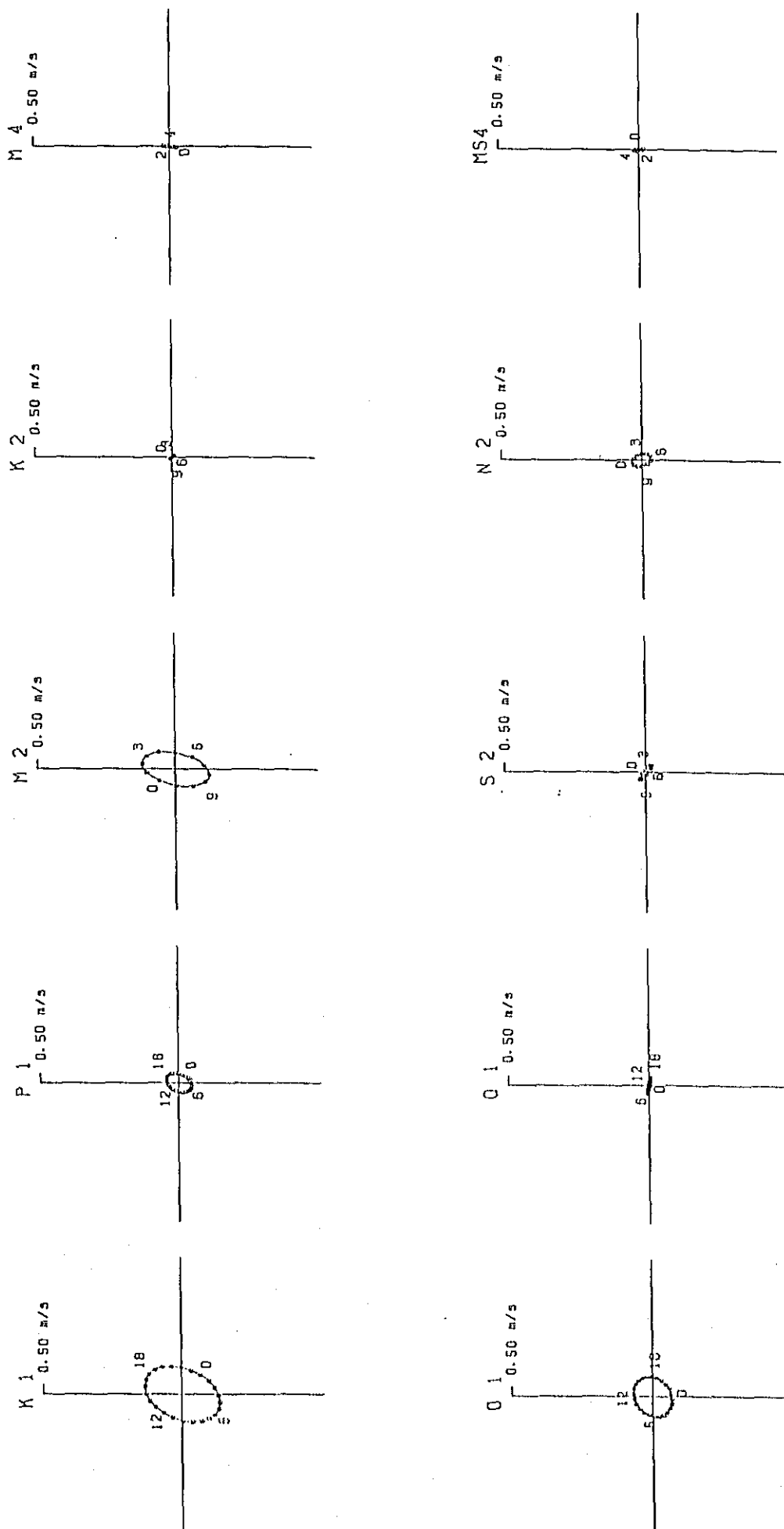


Fig. 3. 2-4 (26) Currents Ellipses (Survey Item:Current 1. 2nd Stage)
 (30 Days)

St. :4
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :19th Jan.-17th Feb. 1989

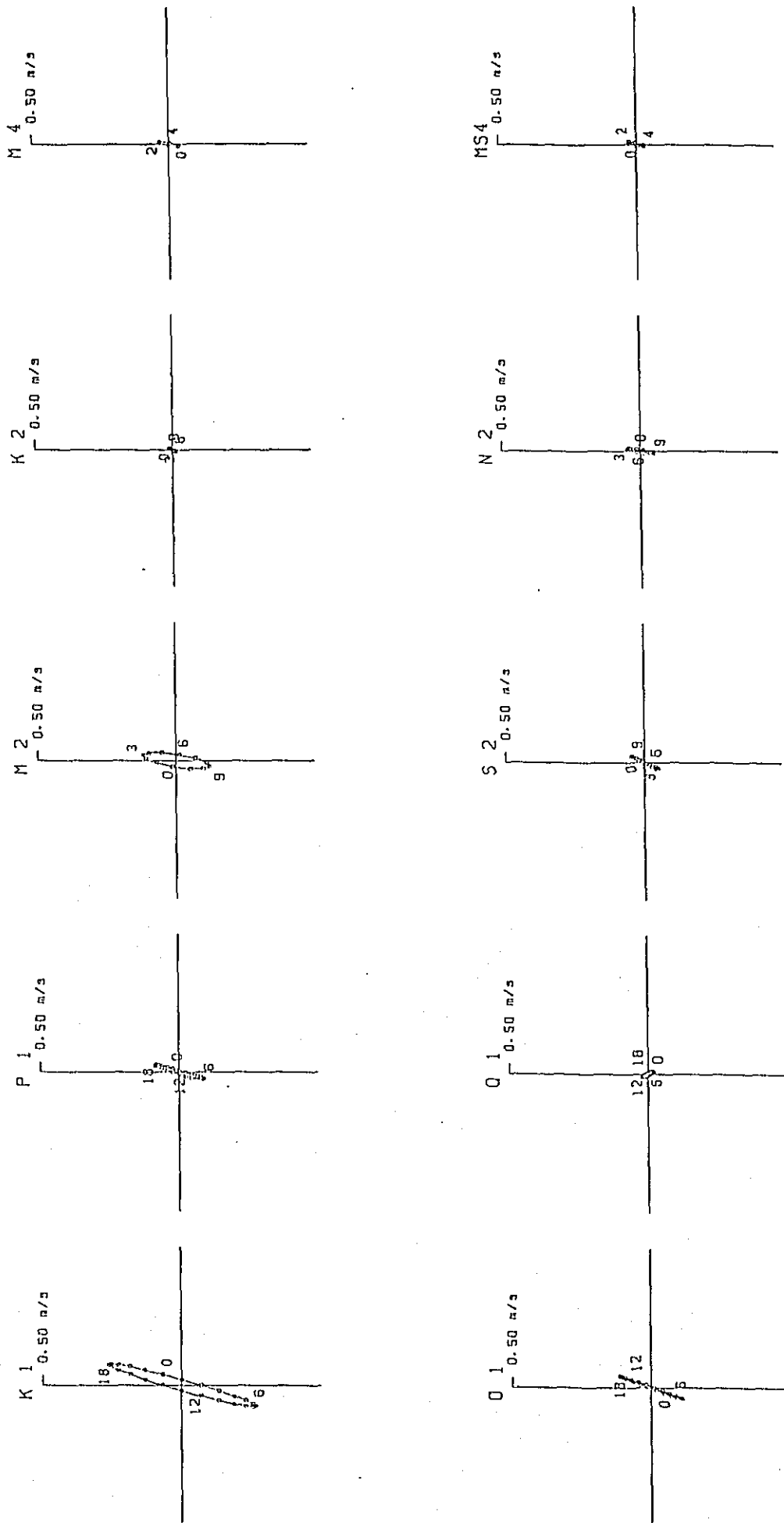


Fig. 3. 2-4 (27) Currents Ellipses (Survey Item:Current 1, 2nd Stage)
 (30 Days)

St. :S
 Layer :+0.5m (Depth:1.0m)
 Interval:Every 1 hours
 Period :19th Jan.-17th Feb. 1989

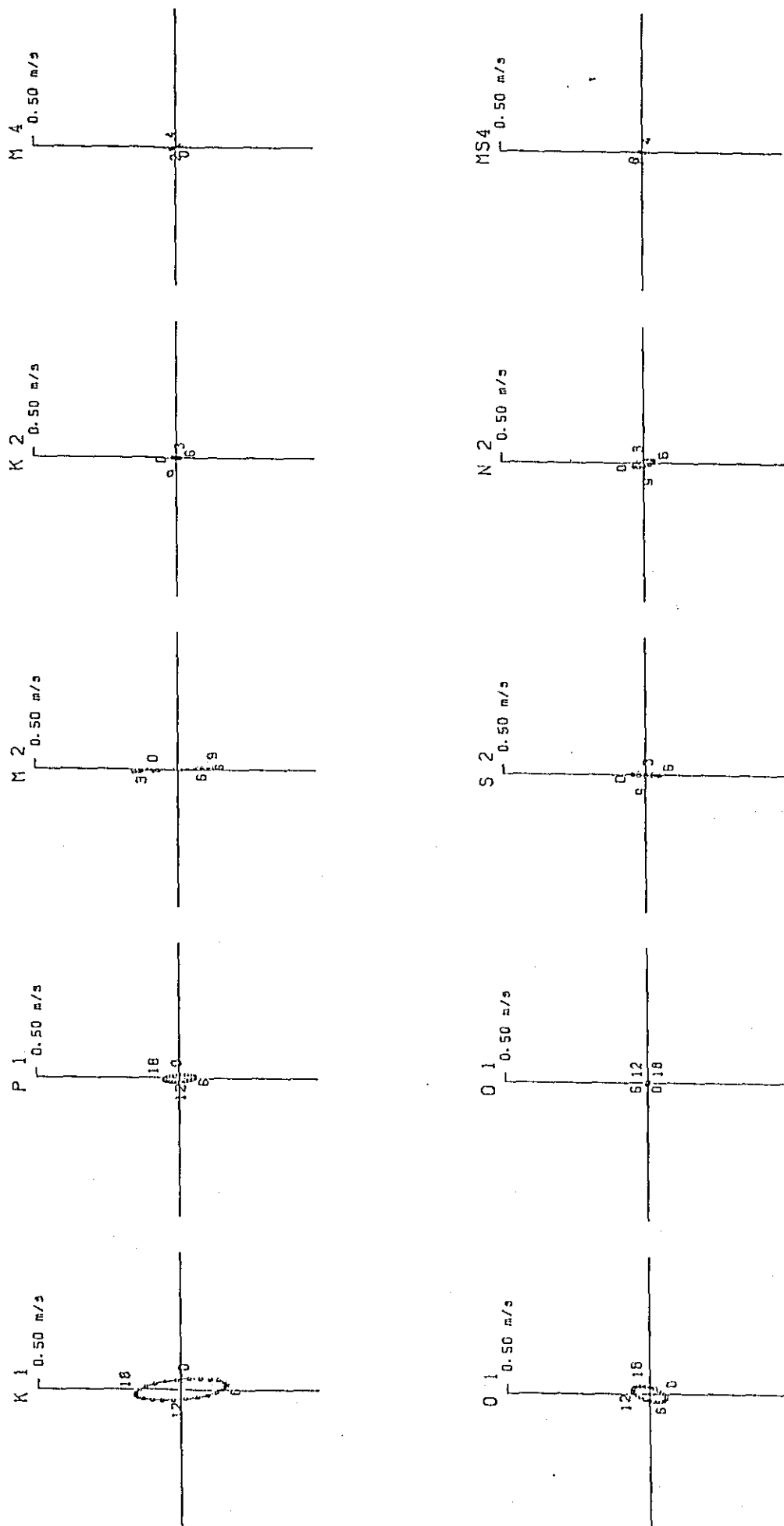


Fig. 3. 2-4 (23) Currents Ellipses (Survey Item:Current 1. 2nd Stage)
 (30 Days)

St. : I
 Layer : +0.5m (Depth: 9.1m)
 Interval: Every 2 hours
 Period : 12th Apr. - 26th Apr. 1989 (1 st half)

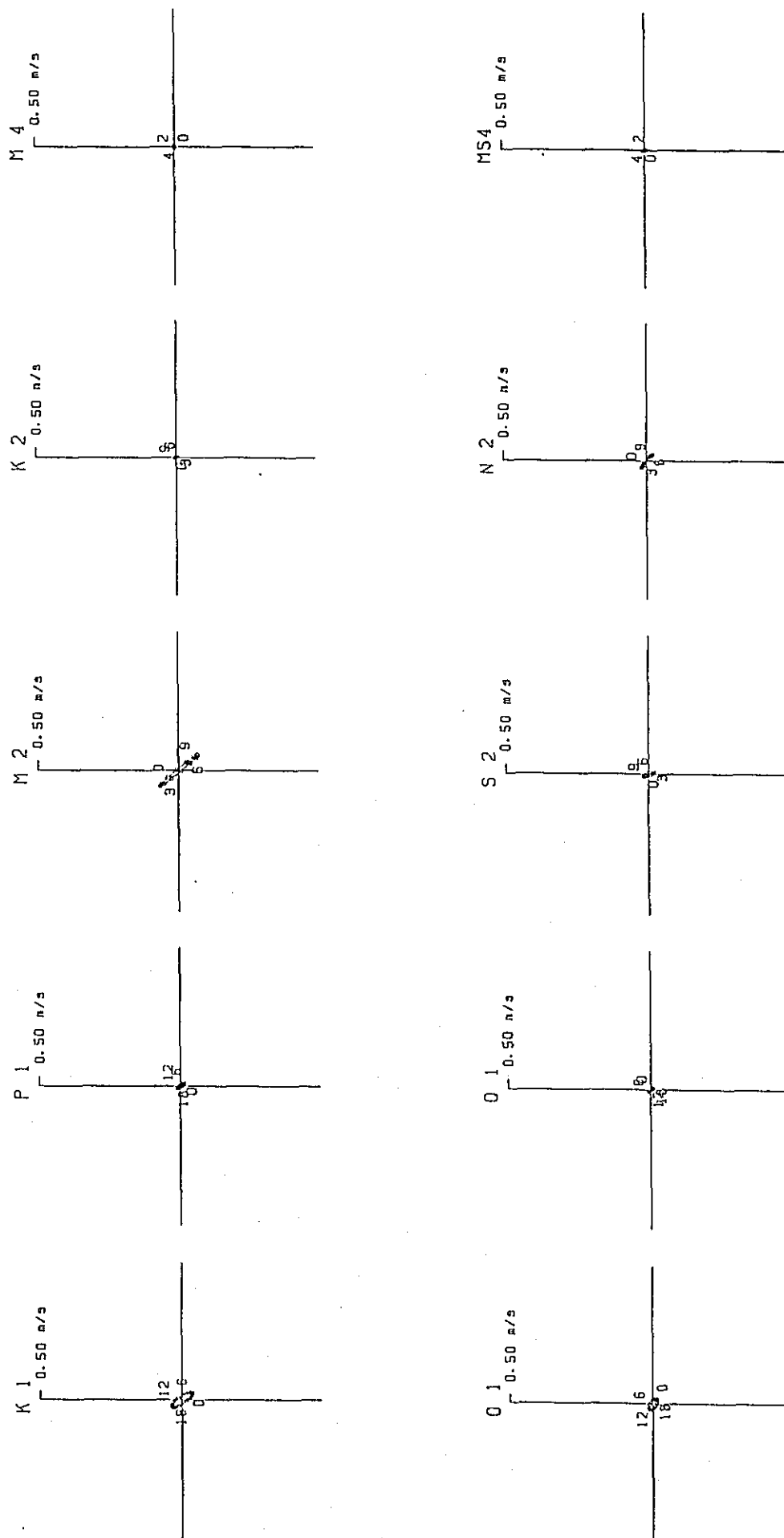


Fig. 3. 2-4 (29) Currents Ellipses (Survey Item: Current 1. 3rd Stage)
 (15 Days)

St. :4
 Layer :±0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :12th Apr. -26th Apr. 1989 (1 st half)

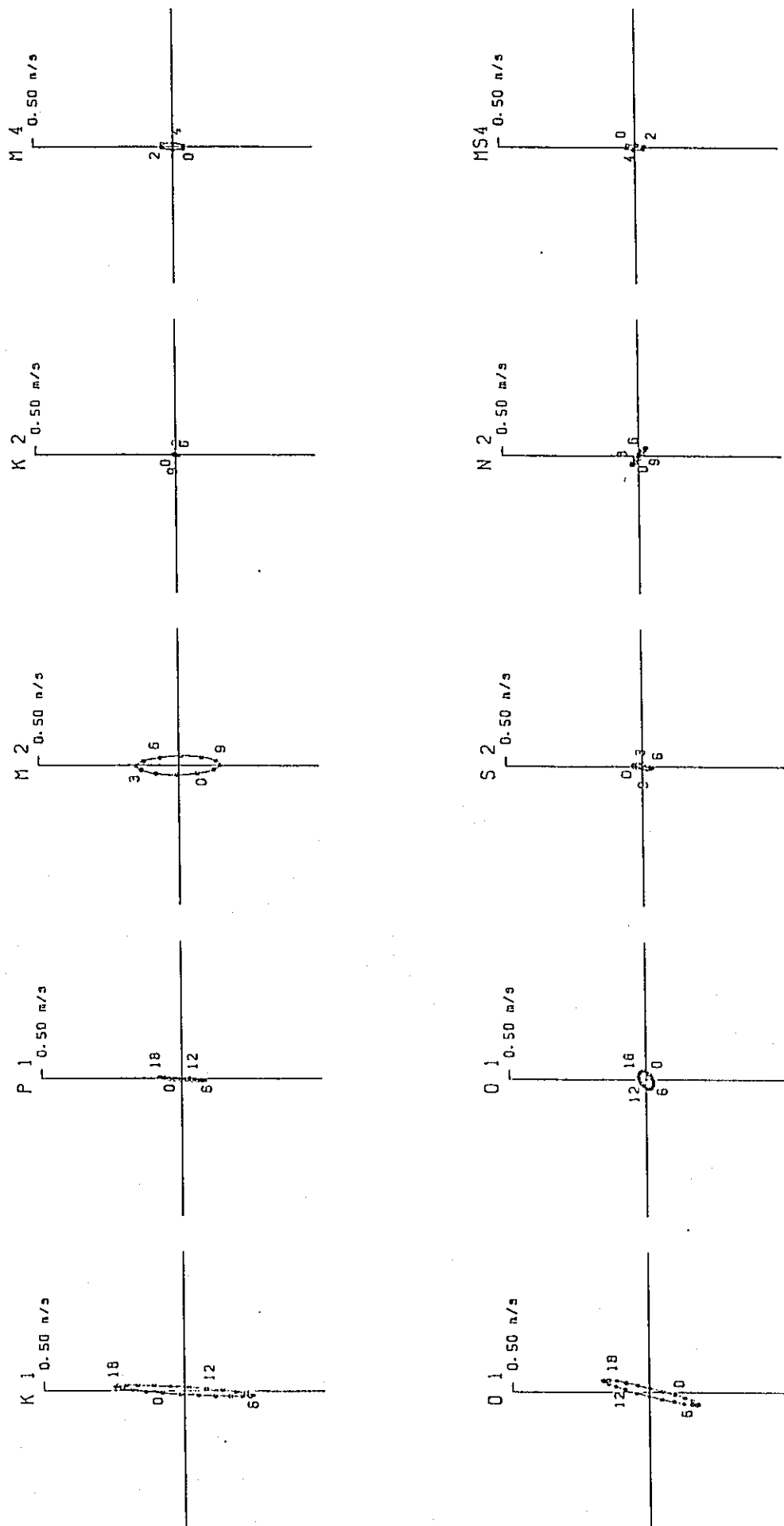


Fig. 3. 2-4 (30) Currents Ellipses (Survey Item:Current 1. 3rd Stage)
 (15 Days)

St. :5
 Layer :+0.5m(Depth:0.8m)
 Interval:Every 1 hours
 Period :12th Apr. -26th Apr. 1989 (1 st half)

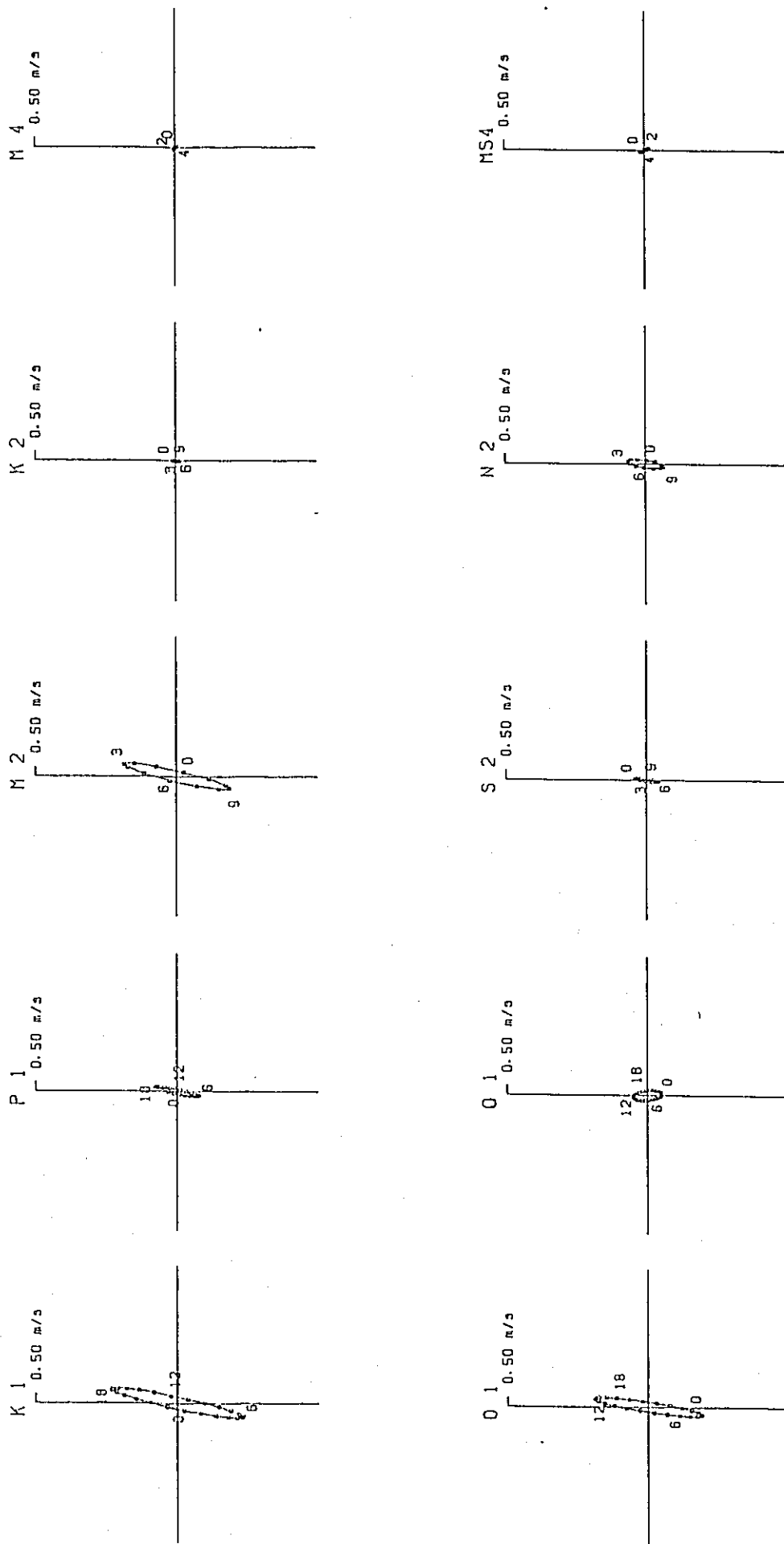


Fig. 3. 2-4 (31) Currents Ellipses (Survey Item:Current 1, 3rd Stage)
 (15 Days)

St. :7
 Layer :+0.5m(Depth:1.7m)
 Interval:Every 1 hours
 Period :12th Apr.-27th Apr. 1989 (1 st half)

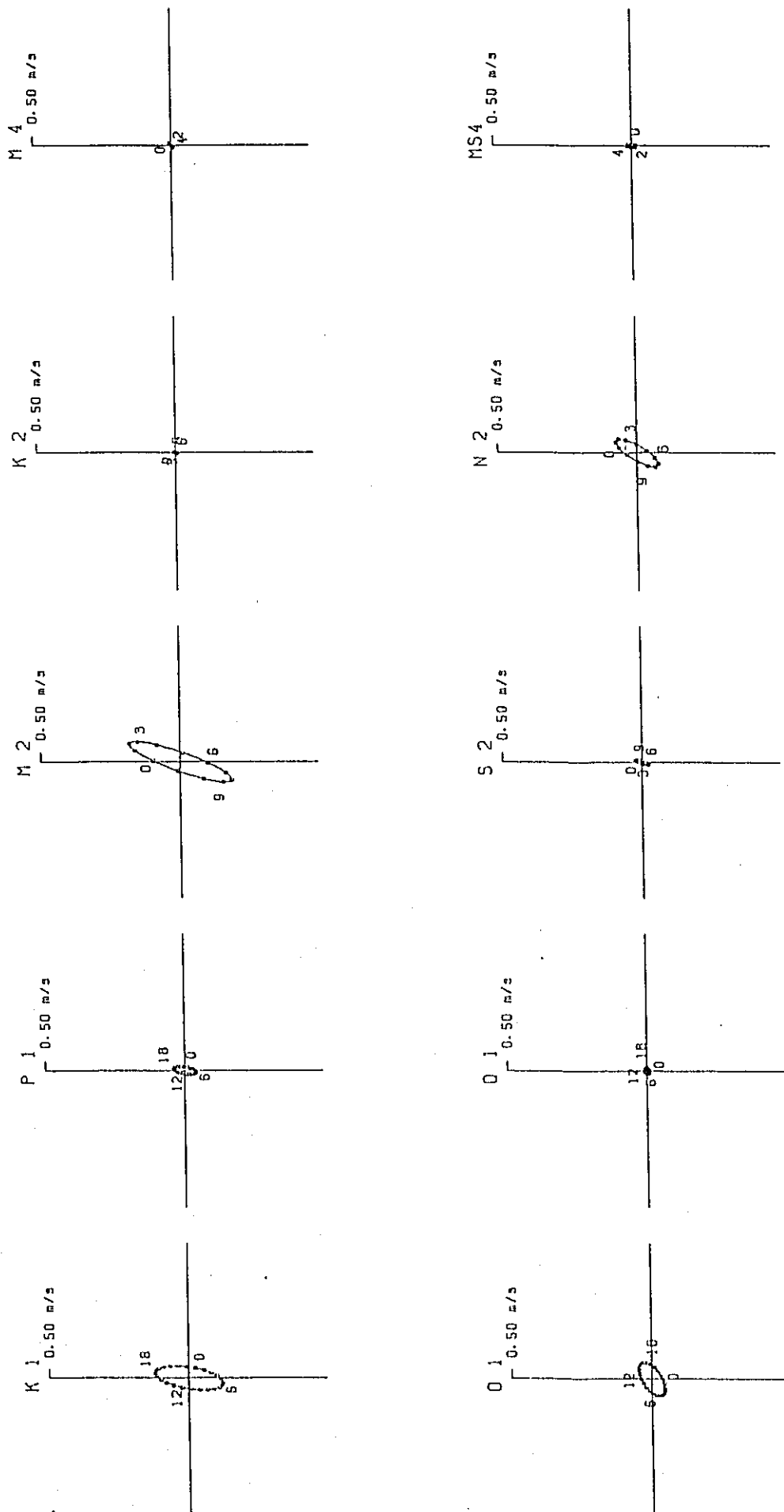


Fig. 3. 2-4 (32) Currents Ellipses (Survey Item:Current 1, 3rd Stage)
(15 Days)

St. :8
 Layer :+0.5m(Depth:1.7m)
 Interval:Every 1 hours
 Period :12th Apr.-27th Apr. 1989 (1 st half)

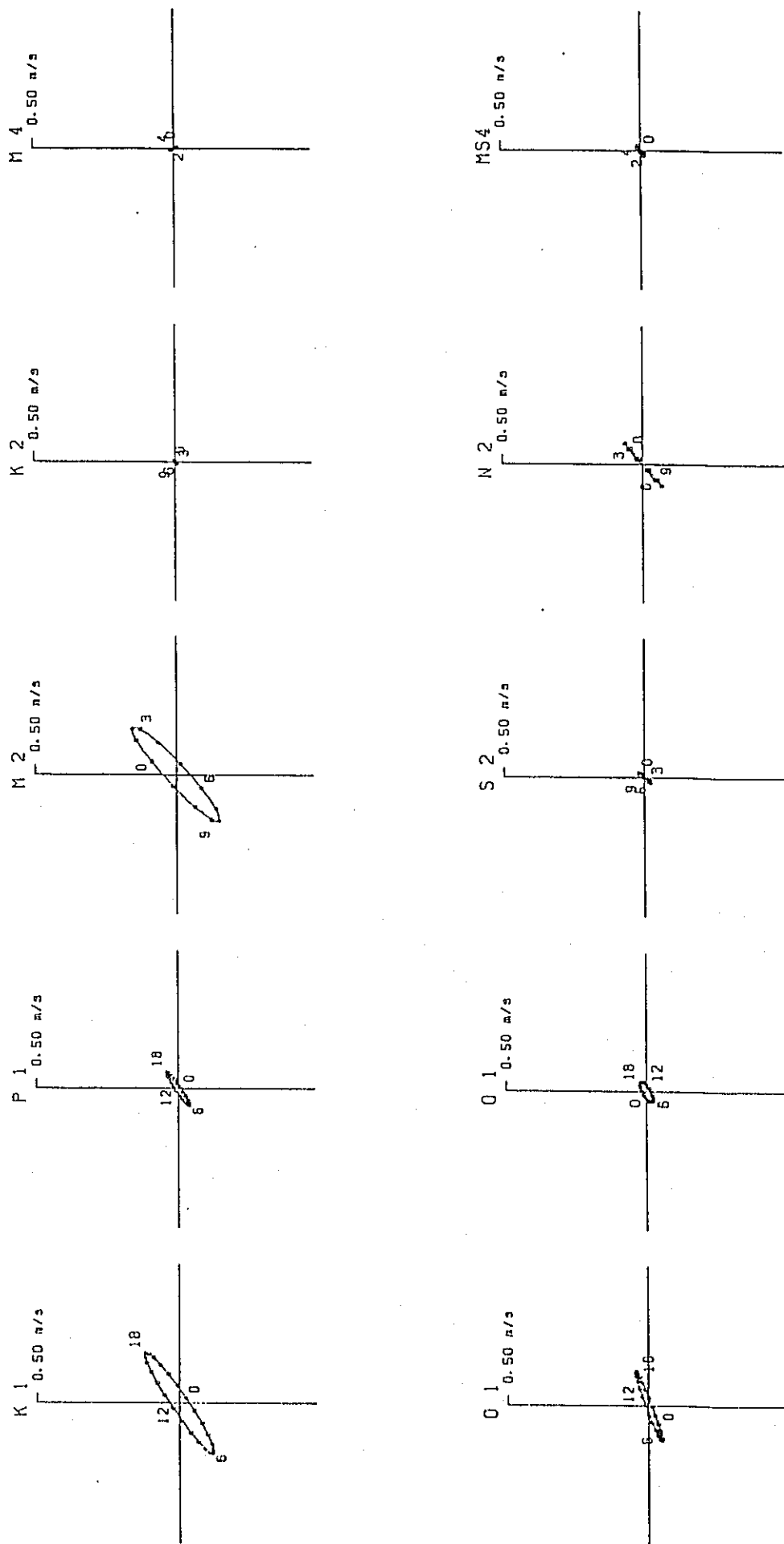


Fig. 3.2-4(33) Currents Ellipses (Survey Item:Current 1, 3rd Stage)
 (15 Days)

St. :9
 Layer :+0.5m(Depth:1.0m)
 Interval:Every 1 hours
 Period :12th Apr.-26th Apr. 1989 (1 st half)

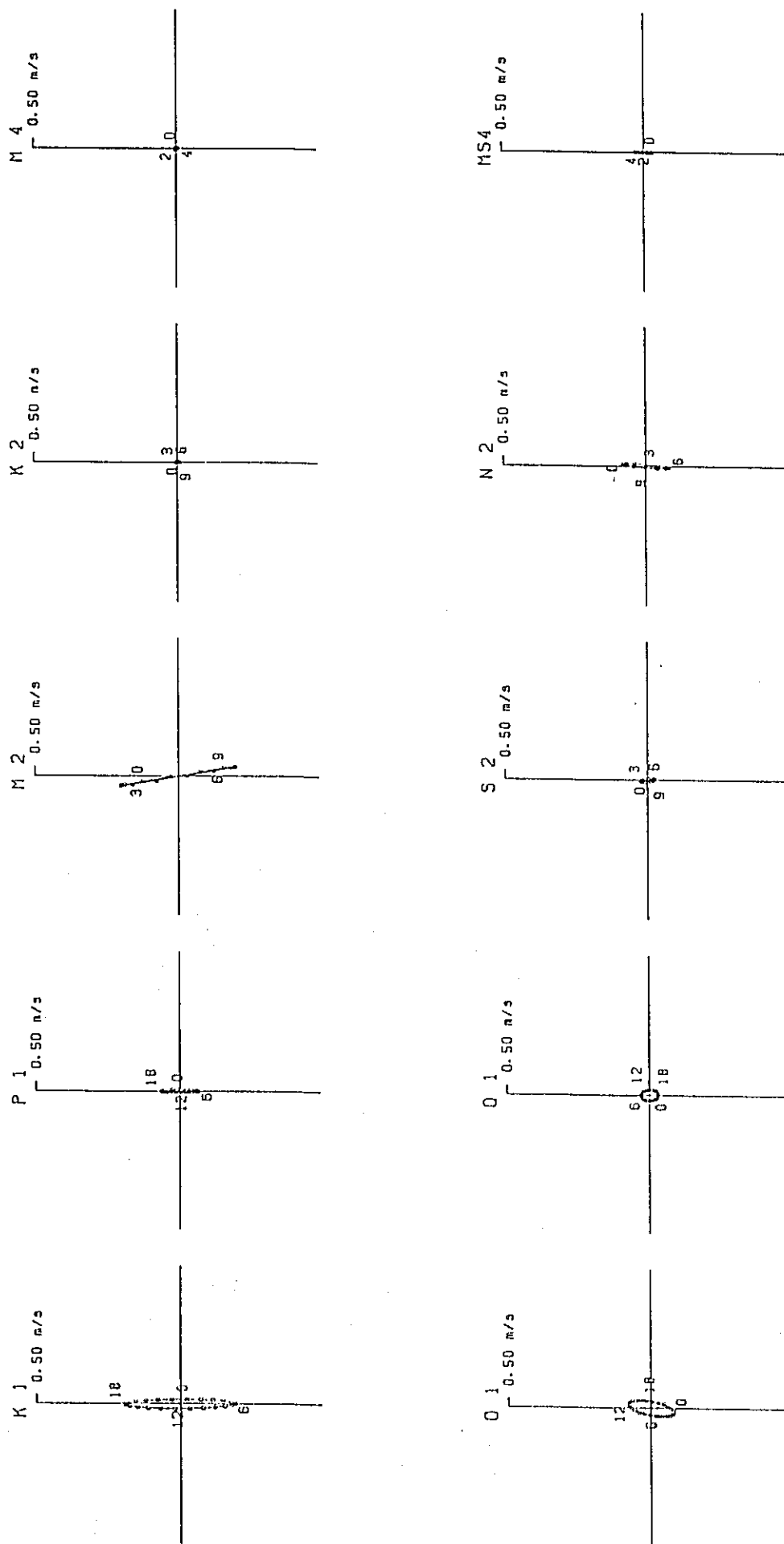


Fig. 3. 2-4 (34) Currents Ellipses (Survey Item:Current 1, 3rd Stage)
 (15 Days)

St. : 1
 Layer : +0.5m (Depth: 9.1m)
 Interval: Every 2 hours
 Period : 28th Apr. - 12th May 1989 (2 nd half)

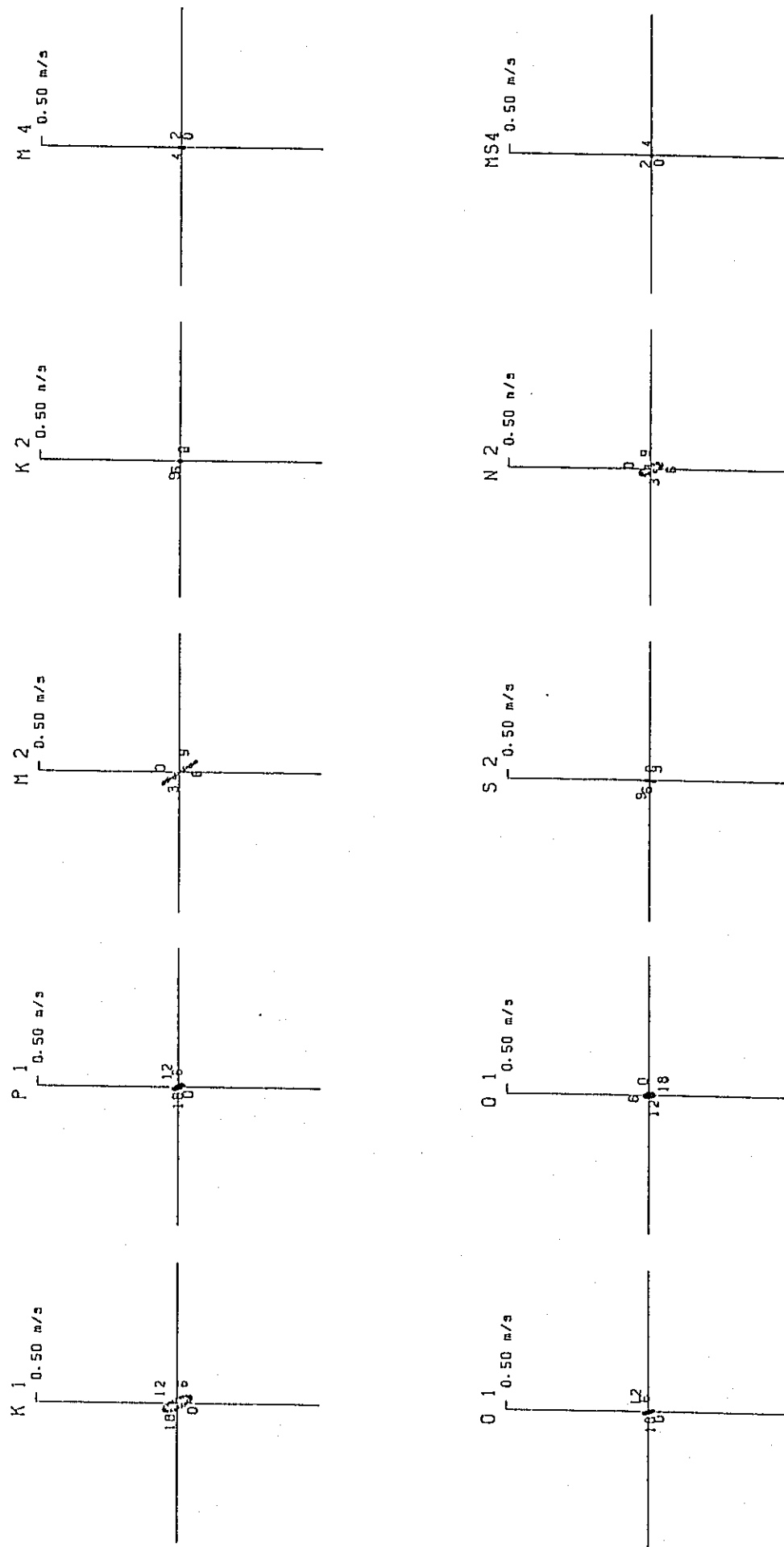
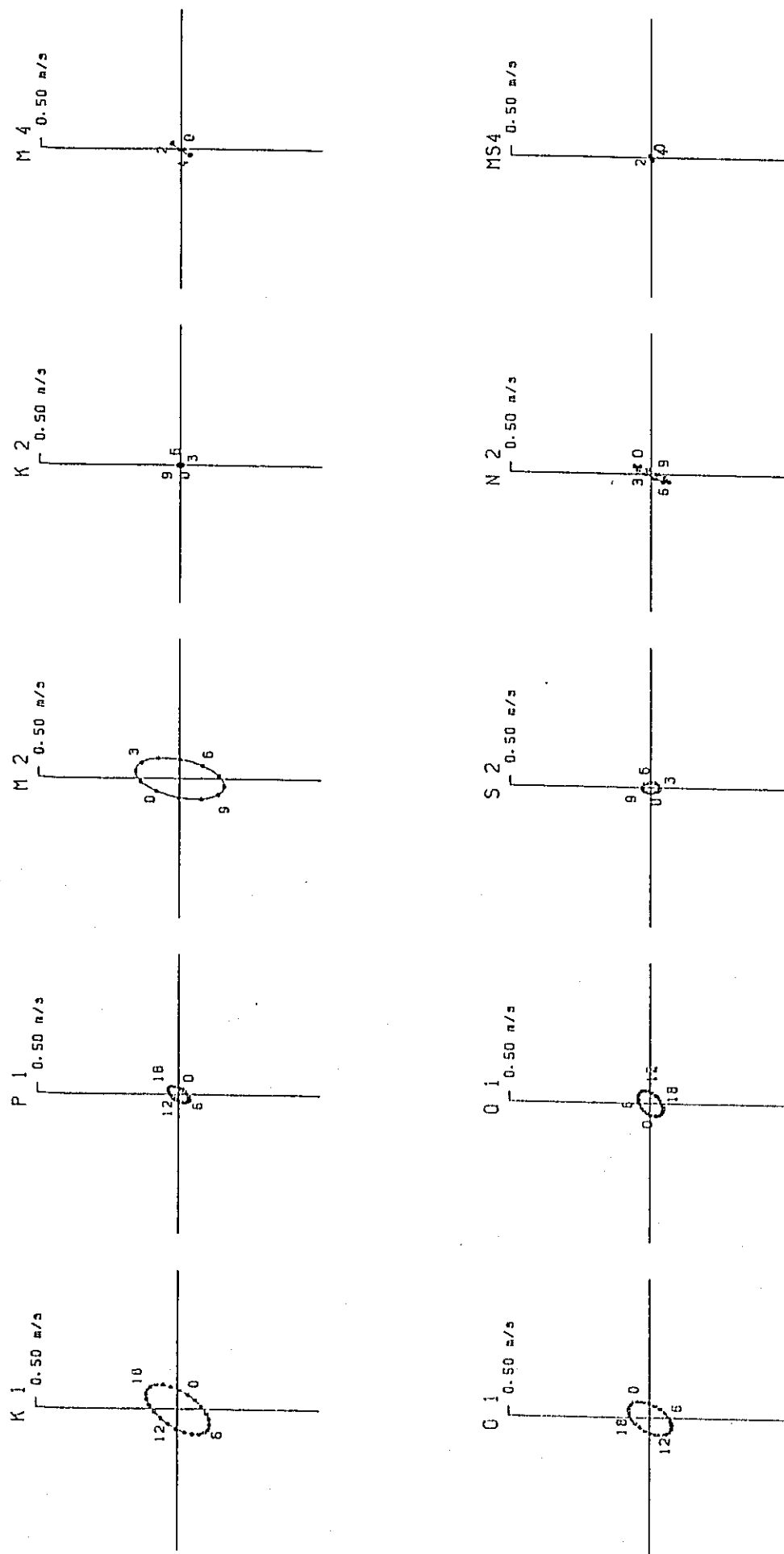


Fig. 3. 2-4 (35) Currents Ellipses (Survey Item: Current 1, 3rd Stage)
 (15 Days)

St. :2
 Layer :+0.5m (Depth:1.6m)
 Interval:Every 1 hours
 Period : 4th May -19th May 1989 (2 nd half)



St. : 3
 Layer : $\pm 0.5\text{m}$ (Depth: 0.7m)
 Interval: Every 1 hours
 Period : 21th Apr. - 5th May 1989 (2 nd half)

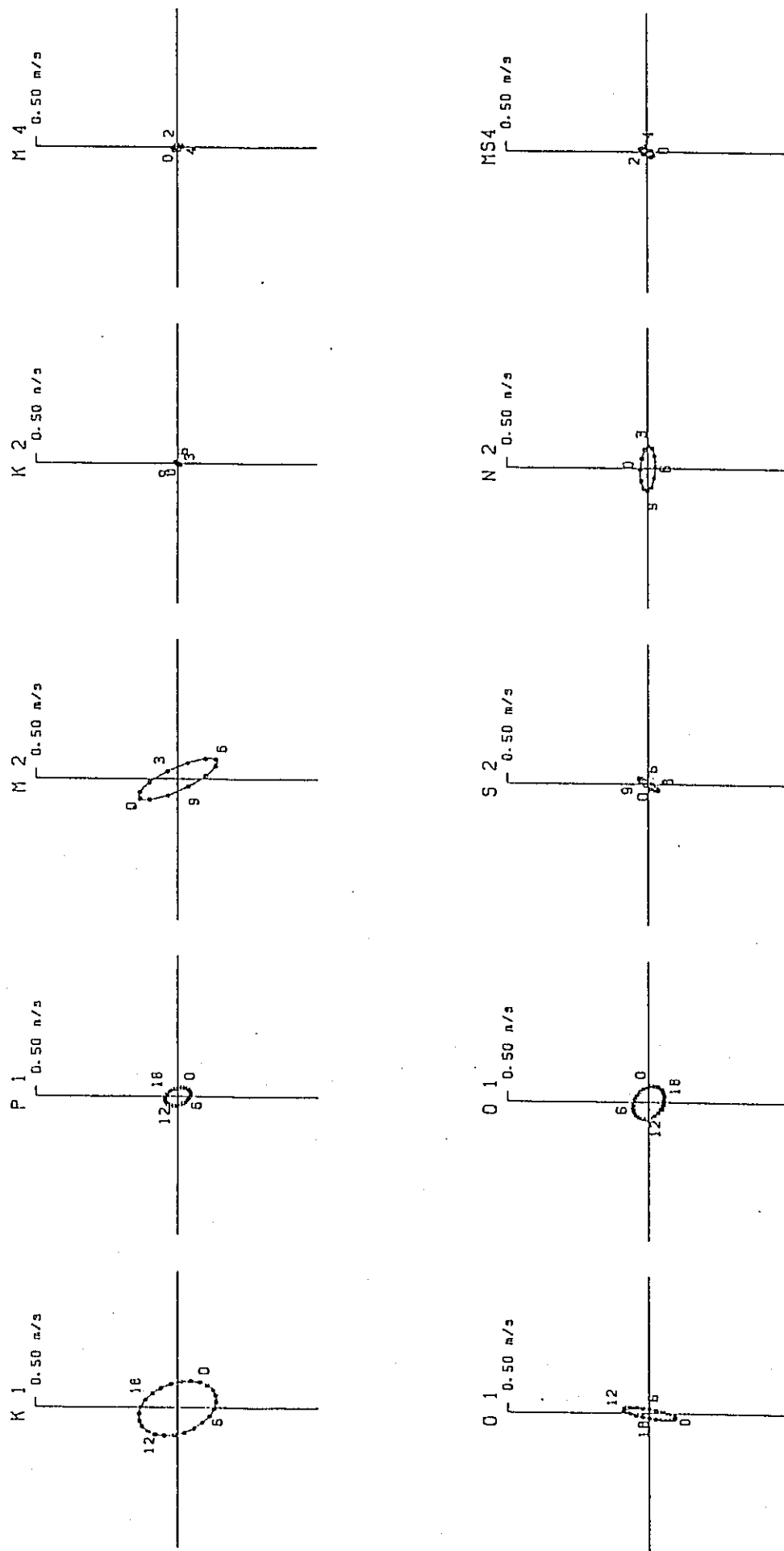


Fig. 3. 2-4 (37) Currents Ellipses (Survey Item:Current 1. 3rd Stage)
 (15 Days)

St. :4
 Layer :+0.5m(Depth:0.8m)
 Interval:Every 1 hours
 Period :28th Apr. -12th May 1989 (2 nd half)

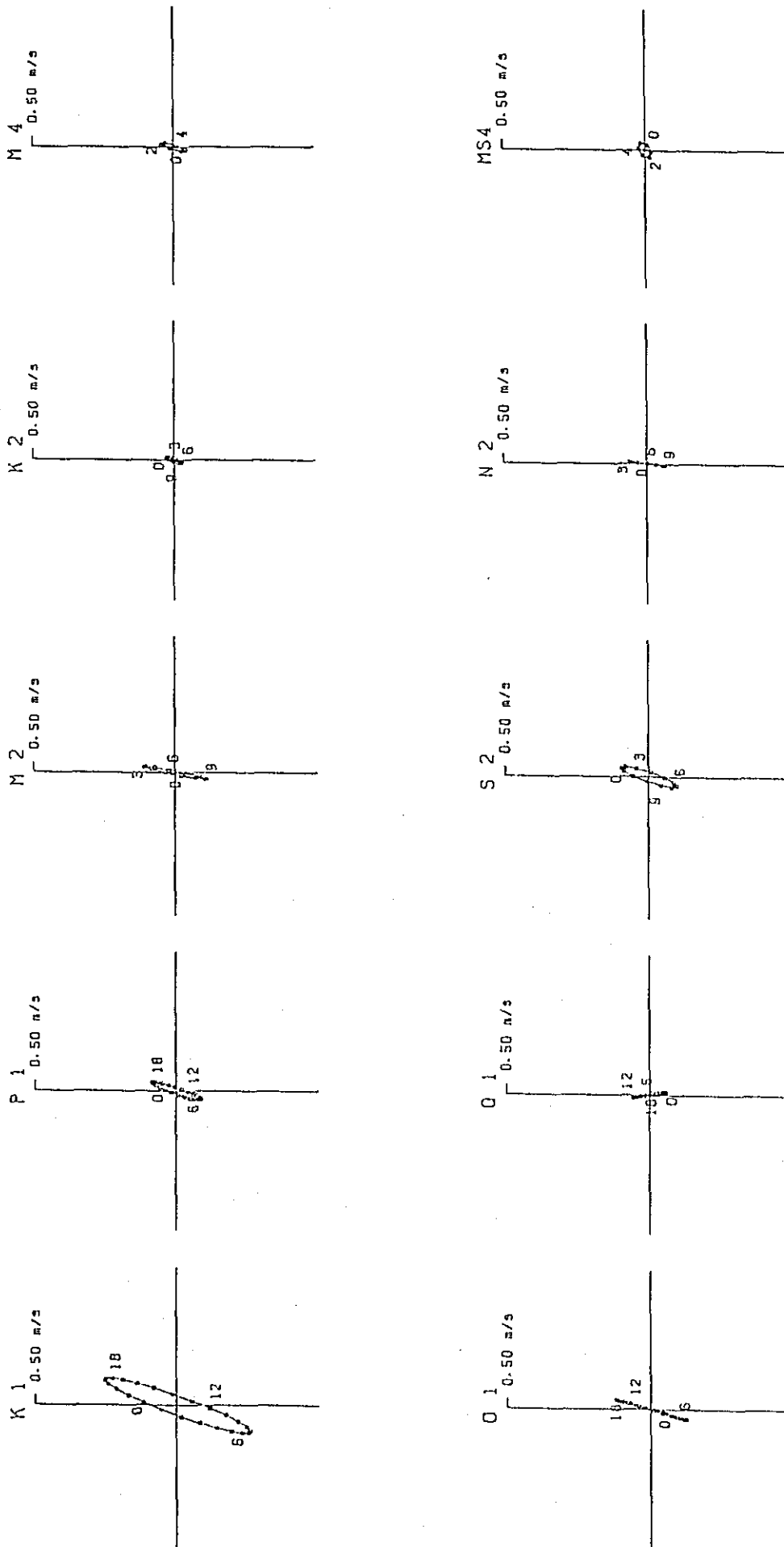


Fig. 3. 2-4 (33) Currents Ellipses (Survey Item:Current 1. 3rd Stage)
 (15 Days)

St. :5
 Layer :+0.5m(Depth:0.8m)
 Interval:Every 1 hours
 Period :28th Apr.-12th May 1989 (2 nd half)

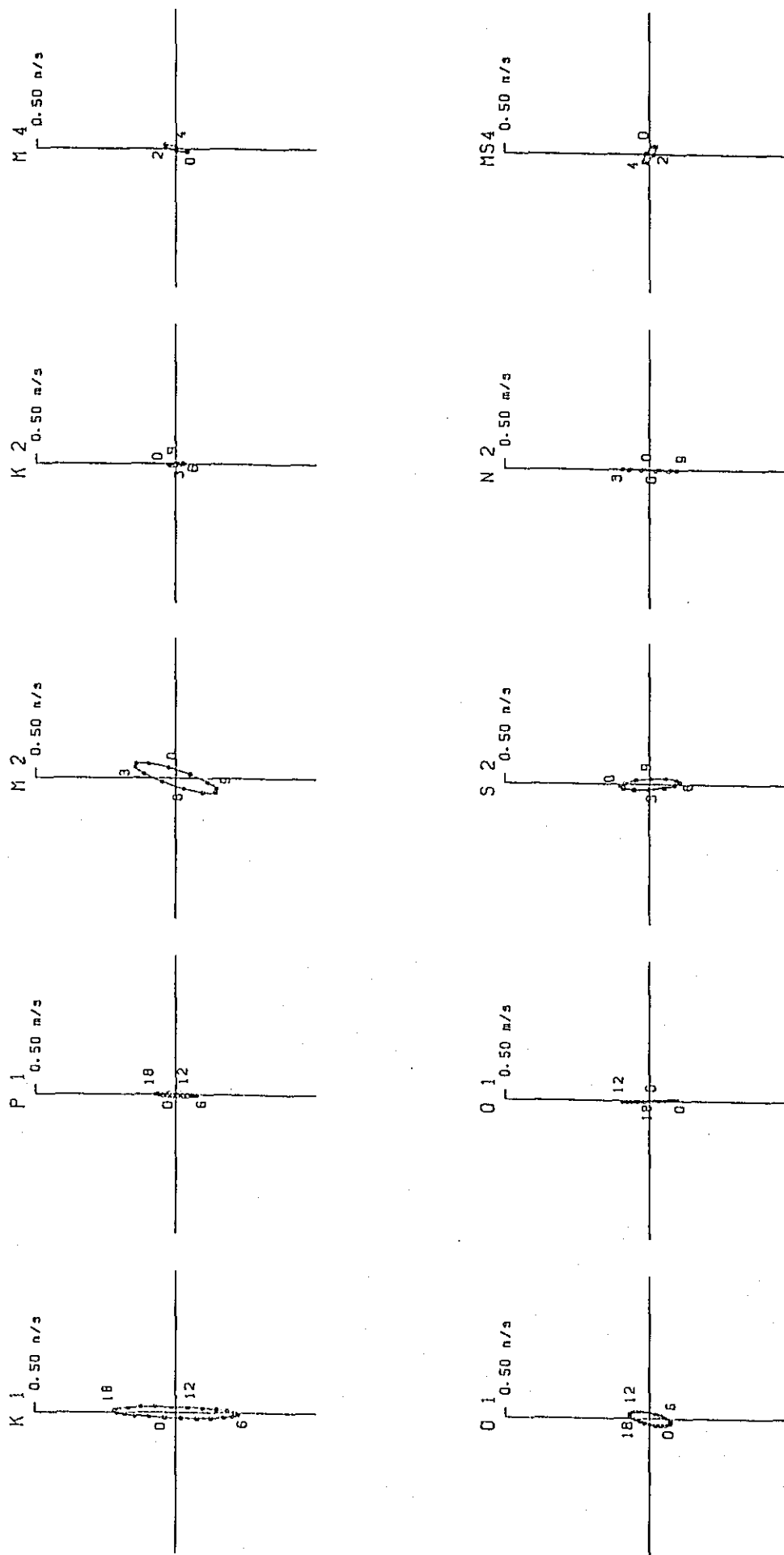


Fig. 3. 2-4 (39) Currents Ellipses (Survey Item:Current 1, 3rd Stage)
 (15 Days)

St. :6
 Layer :+0.5m (Depth:1.7m)
 Interval:Every 1 hours
 Period :28th Apr. -13th May 1989 (2 nd half)

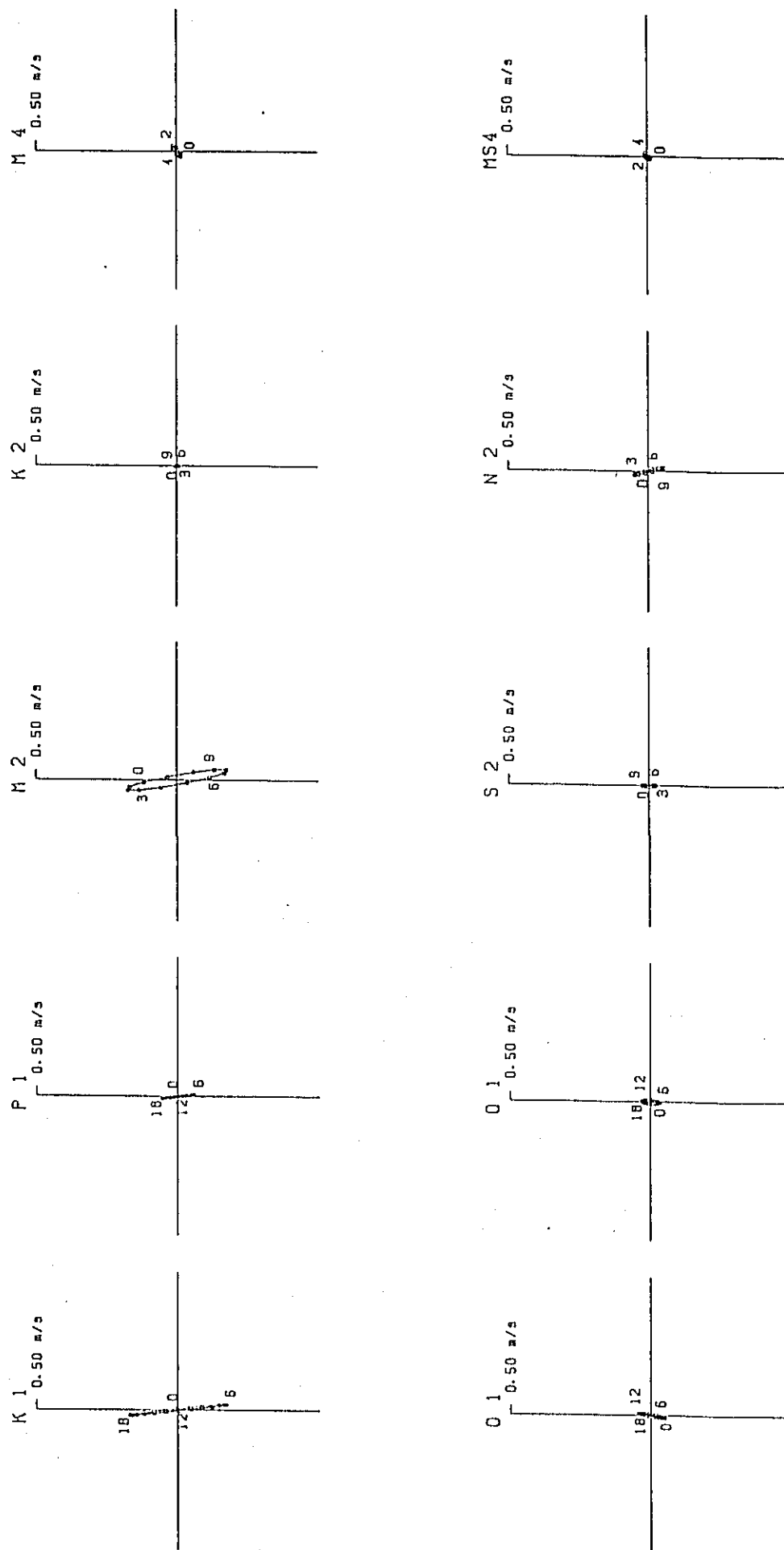


Fig. 3. 2-4 (40) Currents Ellipses (Survey Item:Current 1, 3rd Stage)
 (15 Days)

St. :9
 Layer :+0.5m (Depth:1.0m)
 Interval:Every 1 hours
 Period :28th Apr. -12th May 1989 (2 nd half)

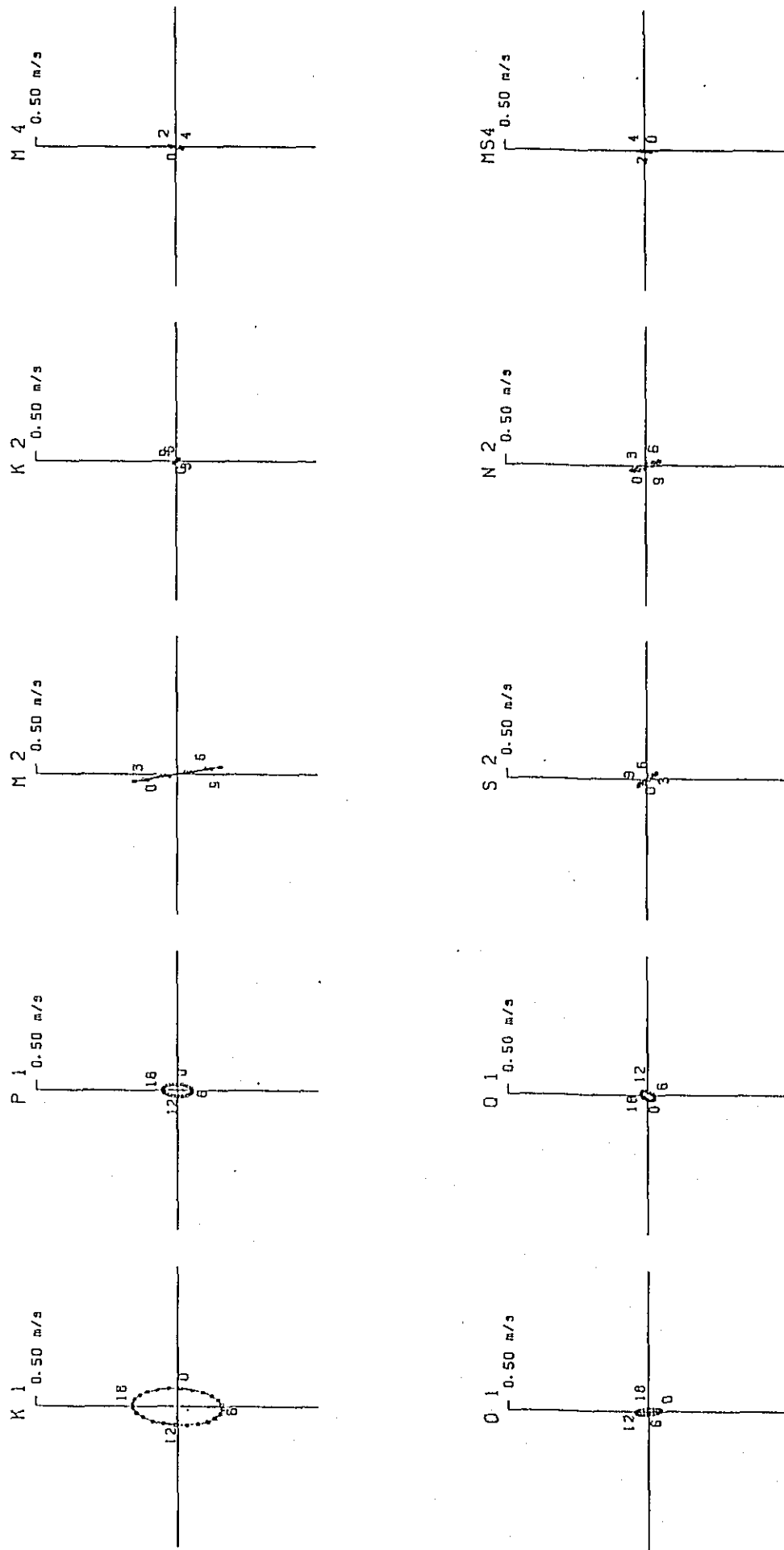


Fig. 3. 2-4 (41) Currents Ellipses (Survey Item:Current 1, 3rd Stage)
 (15 Days)

St. :10
 Layer :+0.5m (Depth:2.5m)
 Interval:Every 1 hours
 Period :28th Apr. -12th May 1989 (2 nd half)

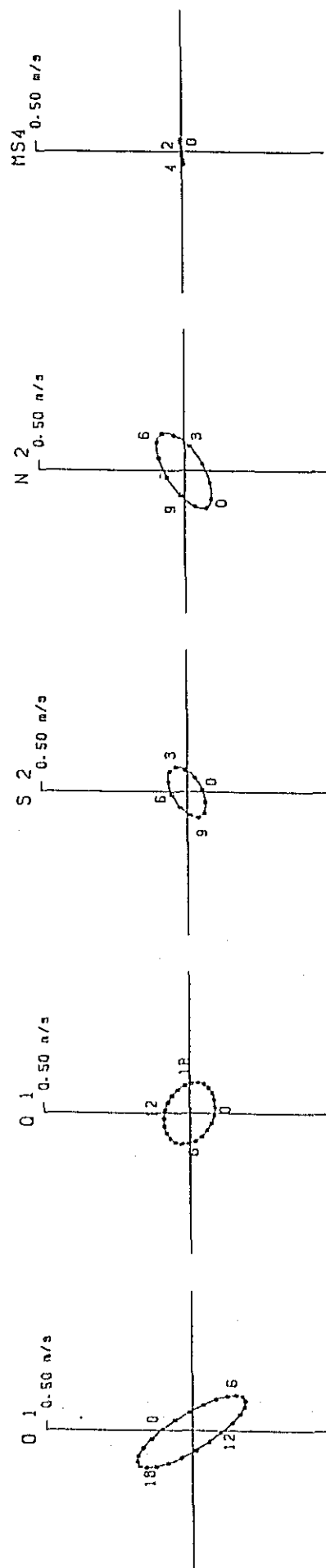
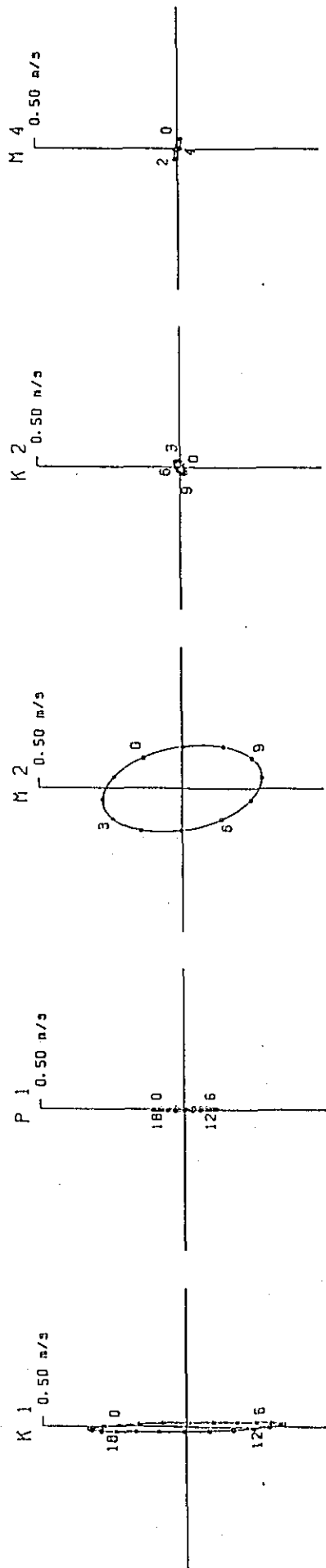


Fig. 3. 2-4 (42) Currents Ellipses (Survey Item:Current 1. 3rd Stage)
 (15 Days)

St.	:11
Layer	:+0.5m(Depth:1.2m)

Layer :+0.5m(Depth:1.2m)

Interval: Every 1 hours

Period : 28th Apr. - 13th May 1989 (2 nd half)

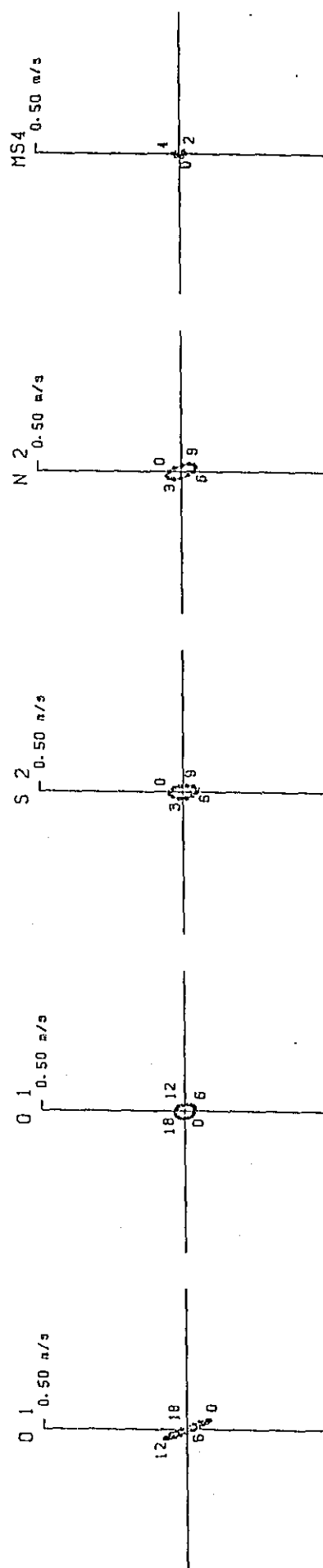
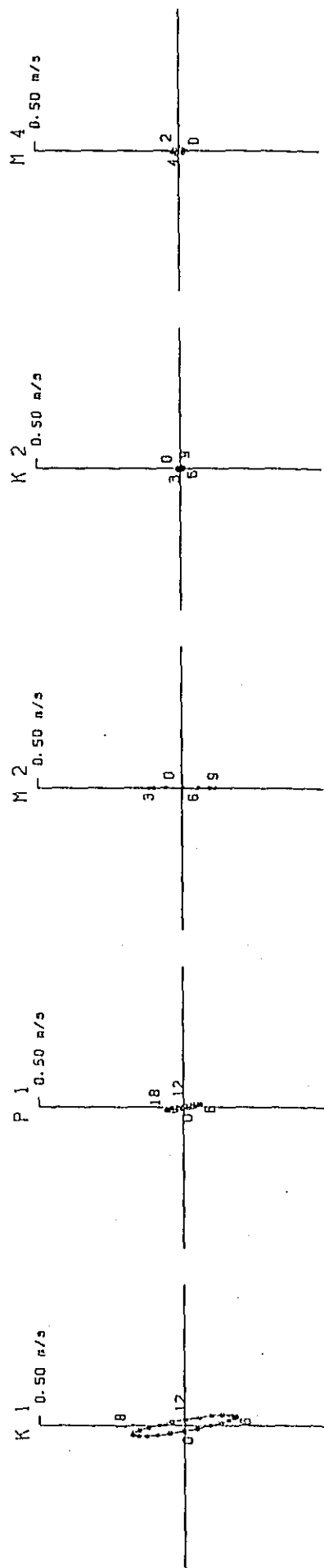


Fig. 3. 2-4 (43) Currents Ellipses (Survey Item:Current 1, 3rd Stage)
(15 Days)

St. :1
 Layer :+0.5m (Depth:9.1m)
 Interval:Every 2 hours
 Period :12th Apr. -11th May 1989

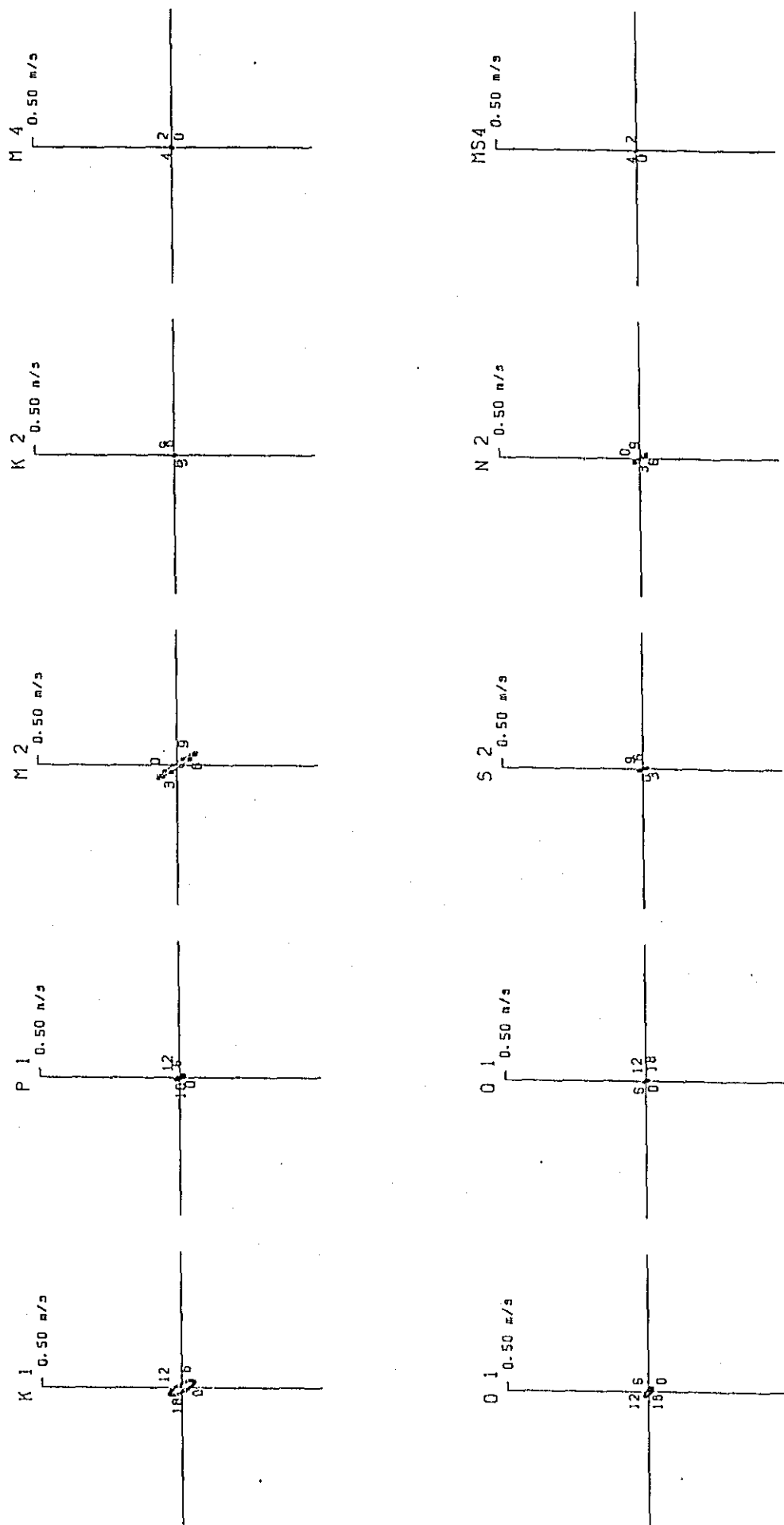


Fig. 3. 2-4 (4) Currents Ellipses (Survey Item:Current 1. 3rd Stage)
 (30 Days)

St. :4
 Layer :+0.5m(Depth:0.8m)
 Interval:Every 1 hours
 Period :12th Apr.-11th May 1989

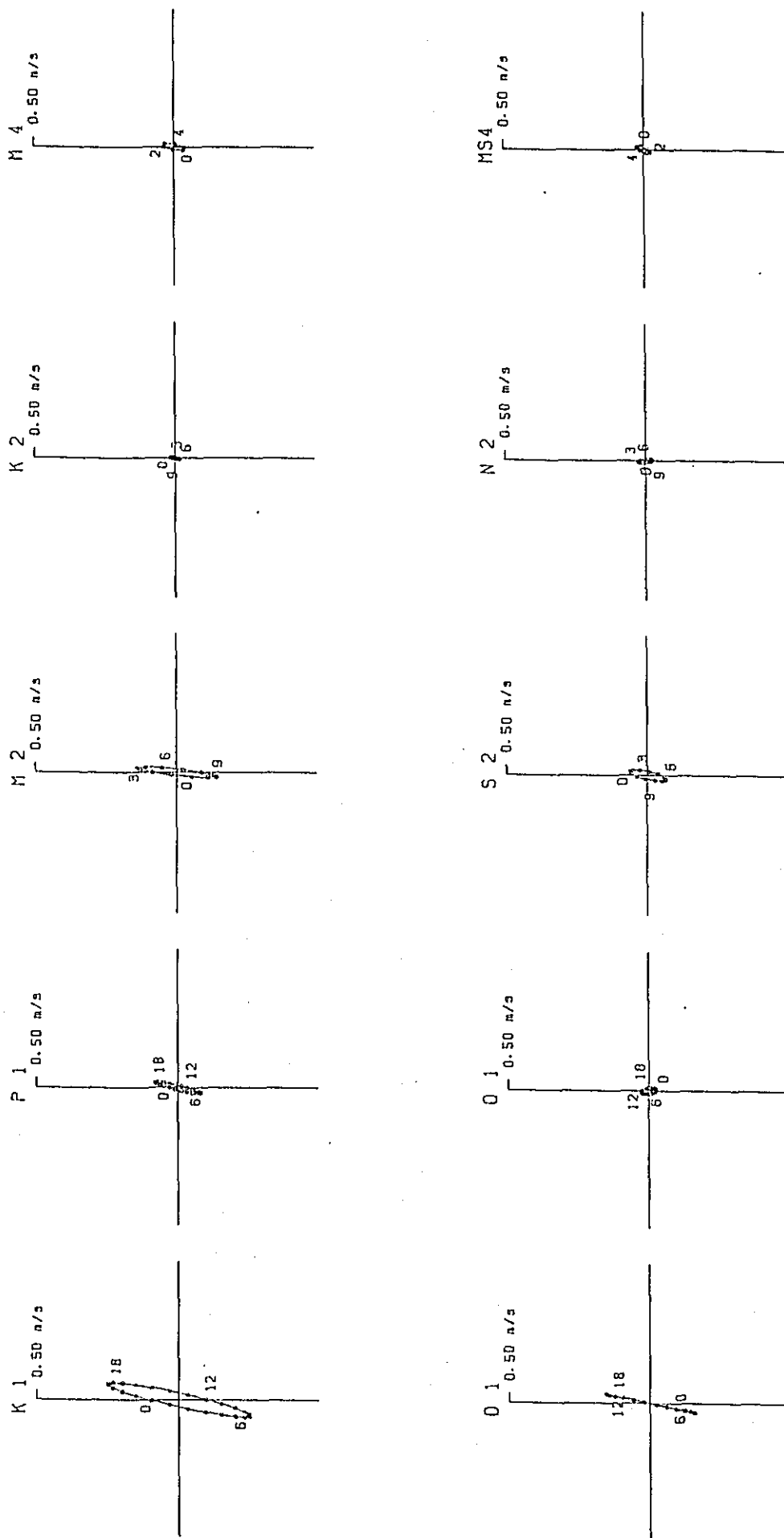


Fig. 3. 2-4 (45) Currents Ellipses (Survey Item:Current 1. 3rd Stage)
 (30 Days)

St. :5
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :12th Apr.-11th May 1989

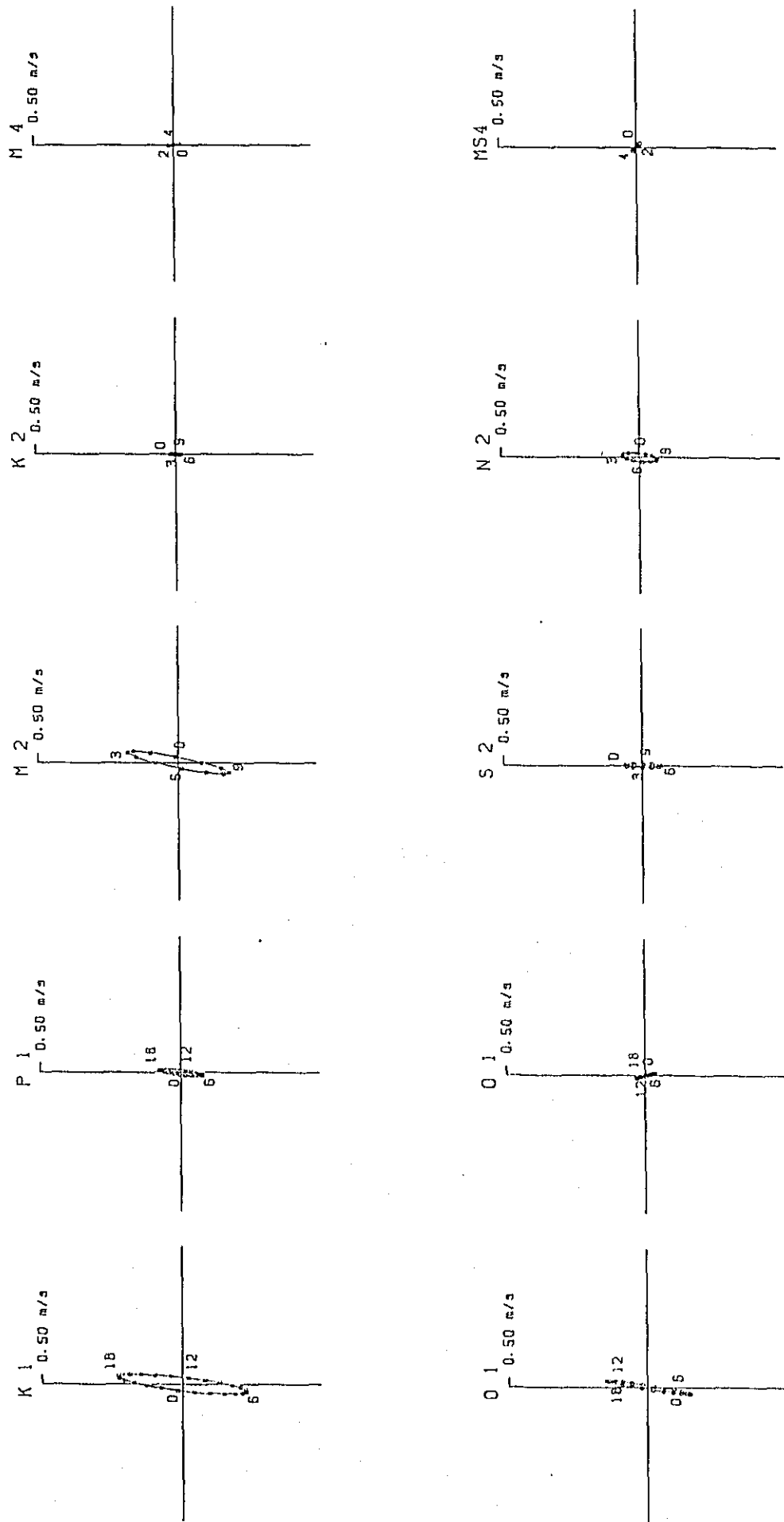


Fig. 3. 2-4 (46) Currents Ellipses (Survey Item:Current 1, 3rd Stage)
 (30 Days)

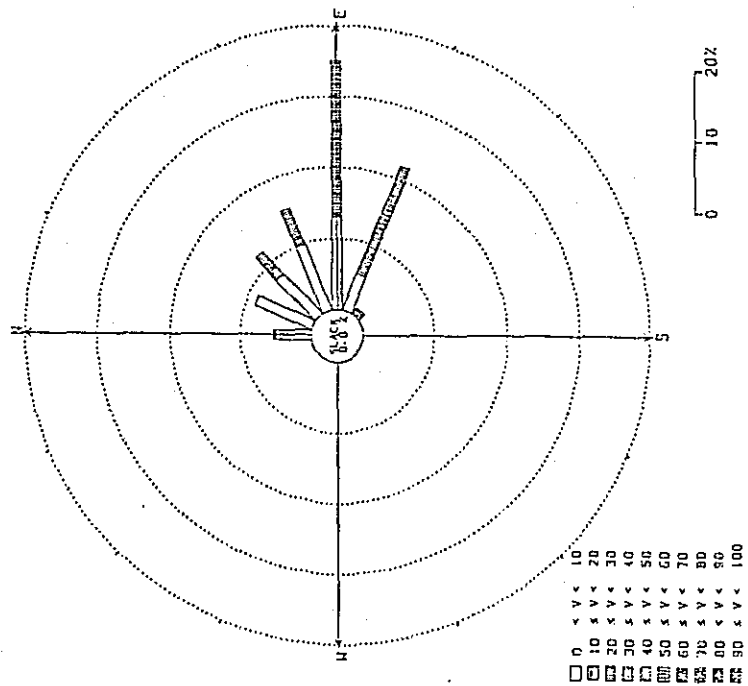
Fig. 3. 2-4 (47) Currents Ellipses (Survey Item:Current 1, 3rd Stage)
(30 Days)

St. : 1

Layer : +0.5m (Depth: 9.1m)

Interval: Every 2 hours

Period : 8th Sep. - 18th Sep. 1988



St. : 2

Layer : +0.5m (Depth: 1.6m)

Interval: Every 1 hours

Period : 8th Sep. - 18th Sep. 1988

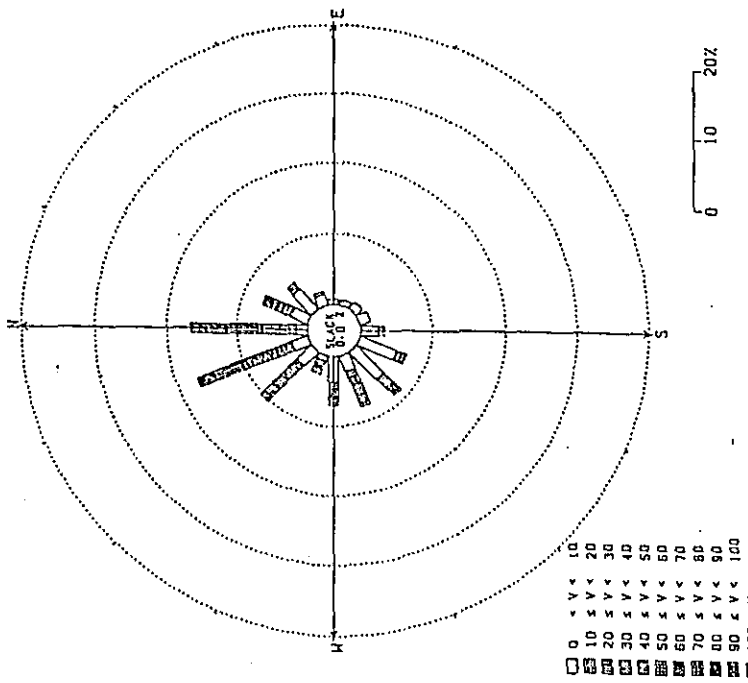
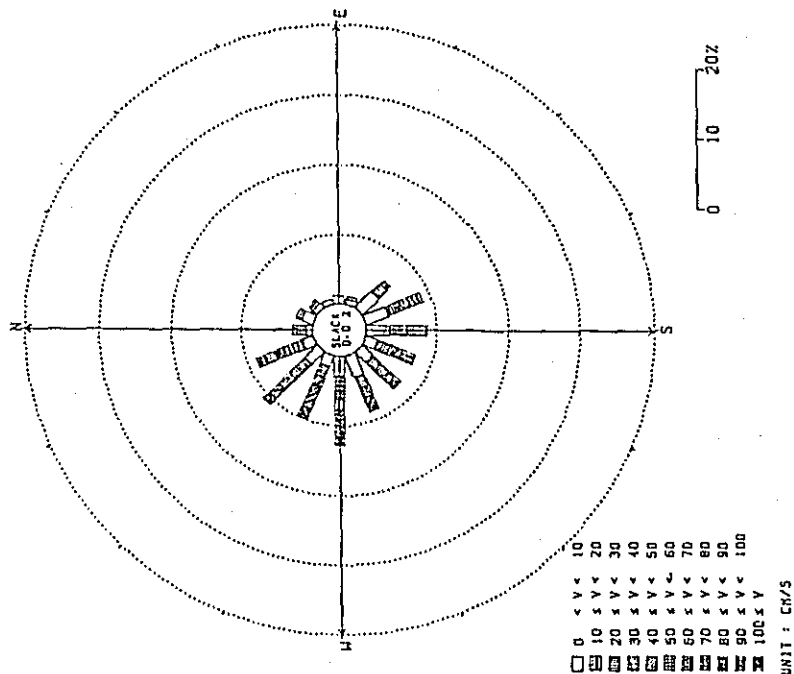


Fig. 3. 2-5 (1) Frequency Distributions of Current Direction and Velocity
(Survey Item: Current 1, 1st Stage)

St. :3
 Layer :+0.5m (Depth:0.7m)
 Interval:Every 1 hours
 Period : 8th Sep. -18th Sep. 1988



St. :4
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period : 8th Sep. -18th Sep. 1988

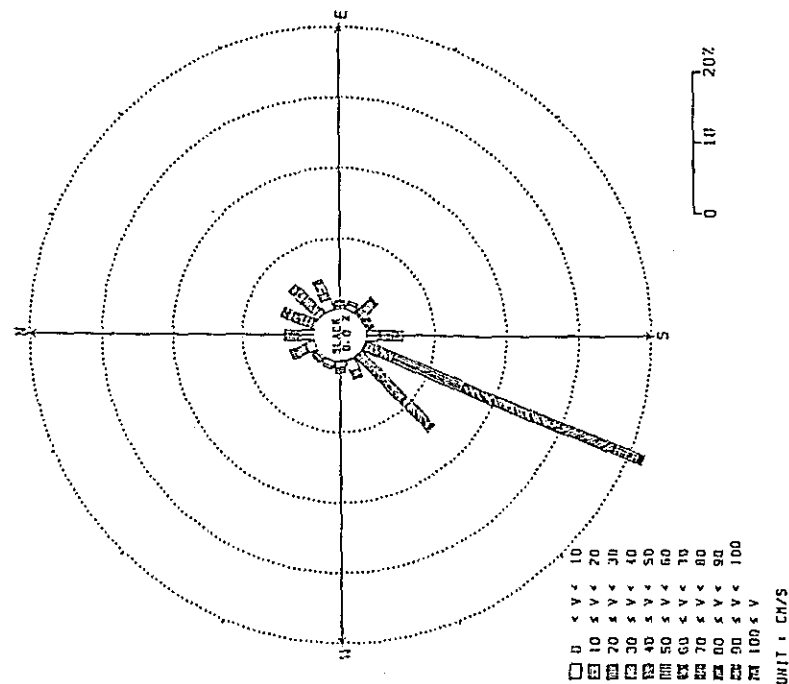
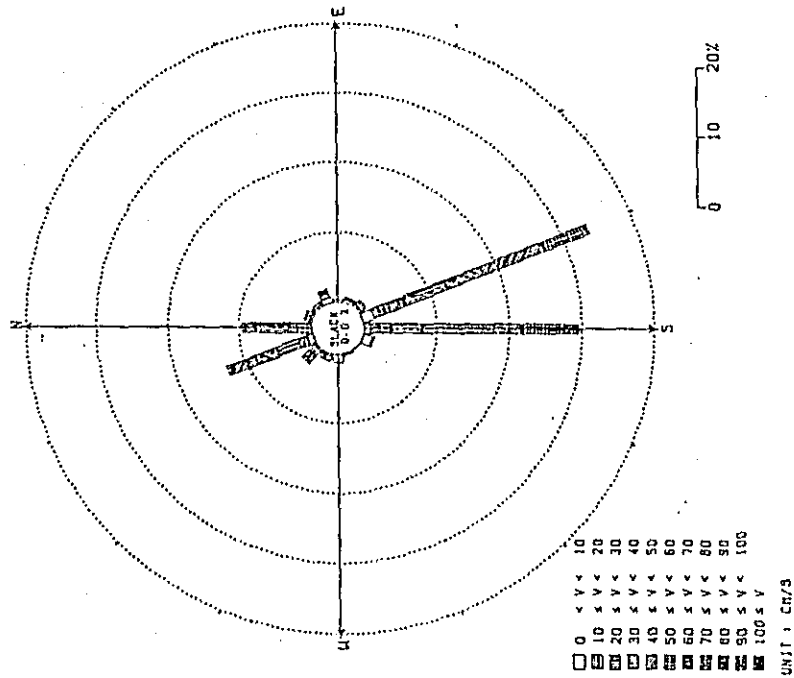


Fig. 3. 2-5 (2) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1. 1st Stage)

St. :5
 Layer :+0.5m(Depth:0.8m)
 Interval:Every 1 hours
 Period : 8th Sep.-18th Sep. 1988



St. :7
 Layer :+0.5m(Depth:1.7m)
 Interval:Every 1 hours
 Period : 8th Sep.-18th Sep. 1988

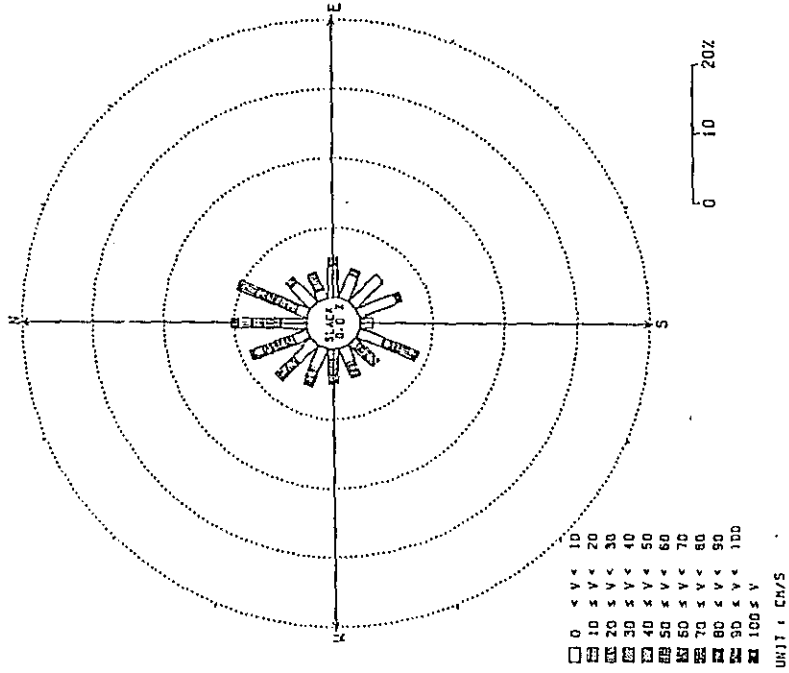
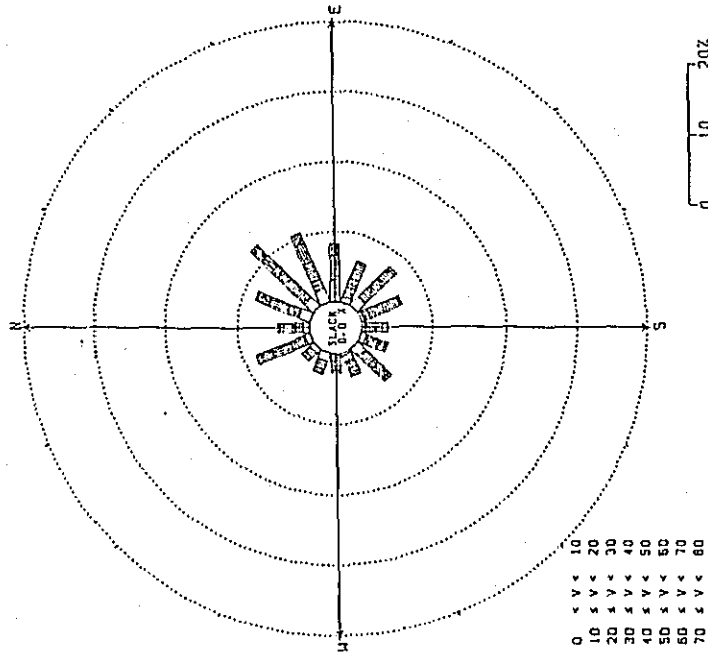


Fig. 3. 2-5 (3) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1. 1st Stage)

St. :8
 Layer :±0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period : 8th Sep. -18th Sep. 1988



St. :9
 Layer :±0.5m (Depth:1.0m)
 Interval:Every 1 hours
 Period : 8th Sep. -18th Sep. 1988

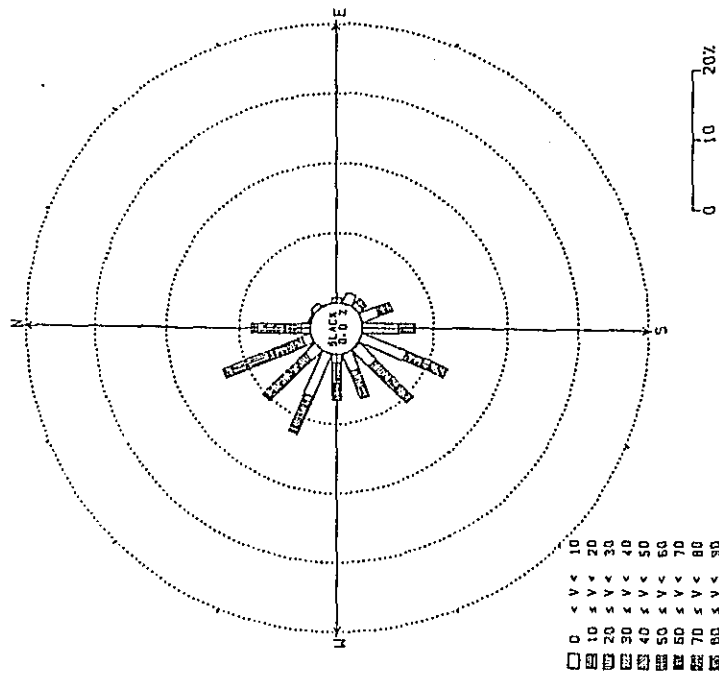


Fig. 3. 2-5 (4) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1, 1st Stage)

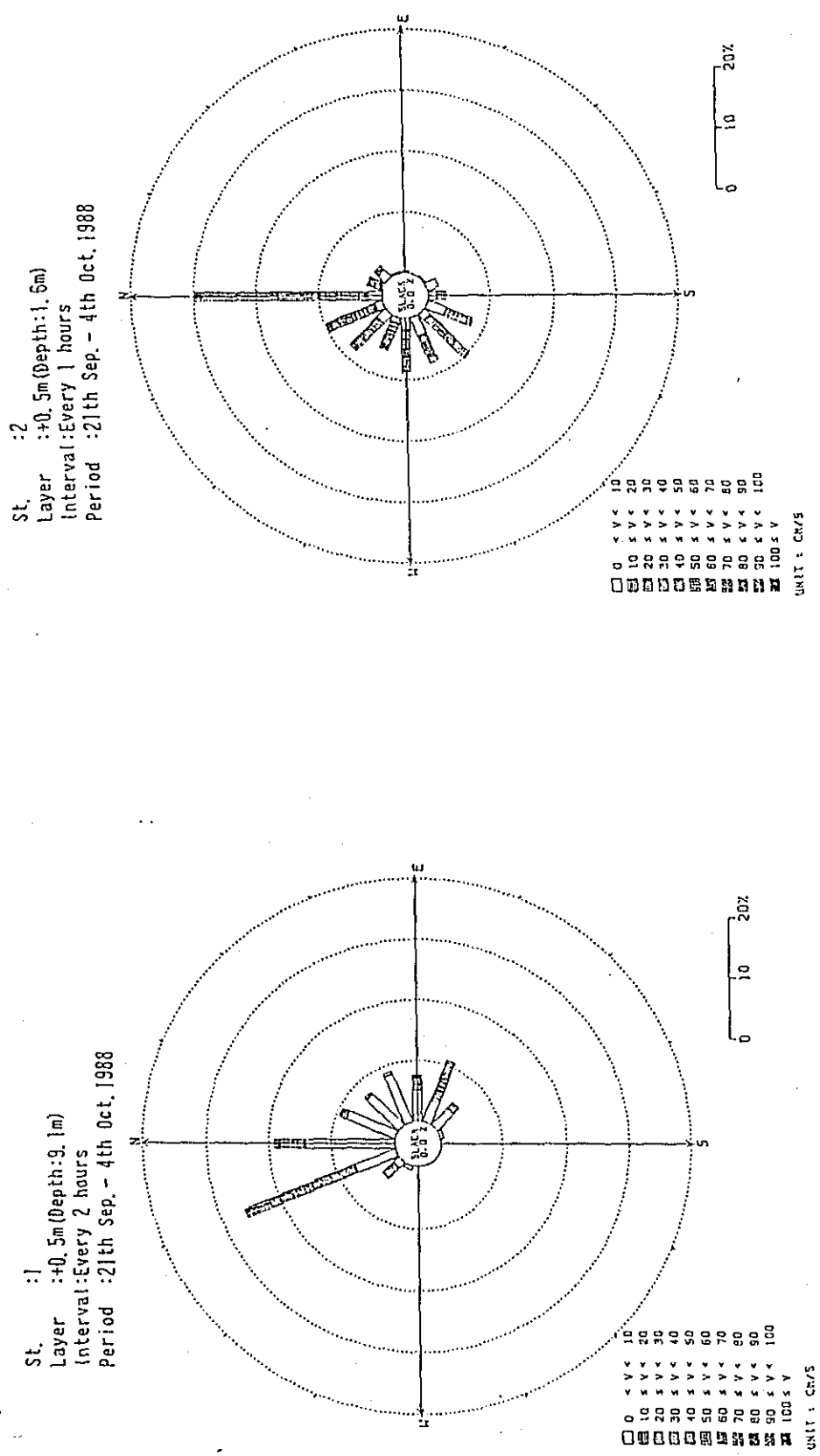
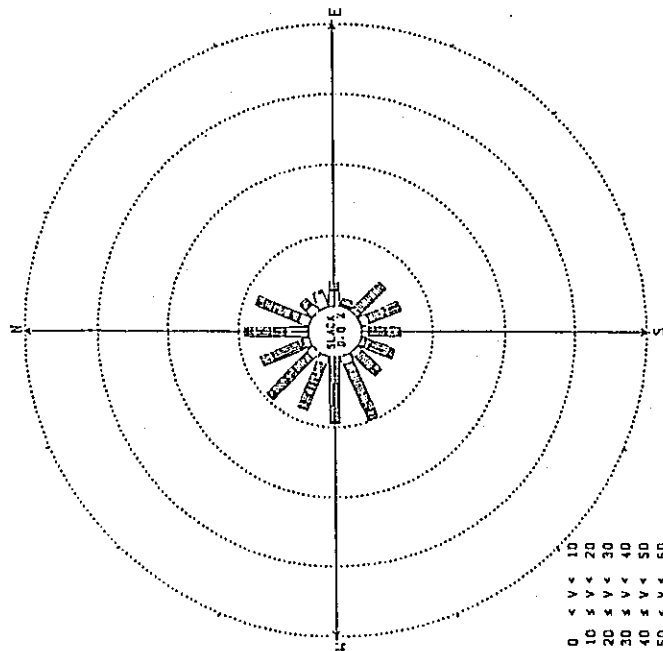


Fig. 3. 2-5 (5) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1. 1st Stage)

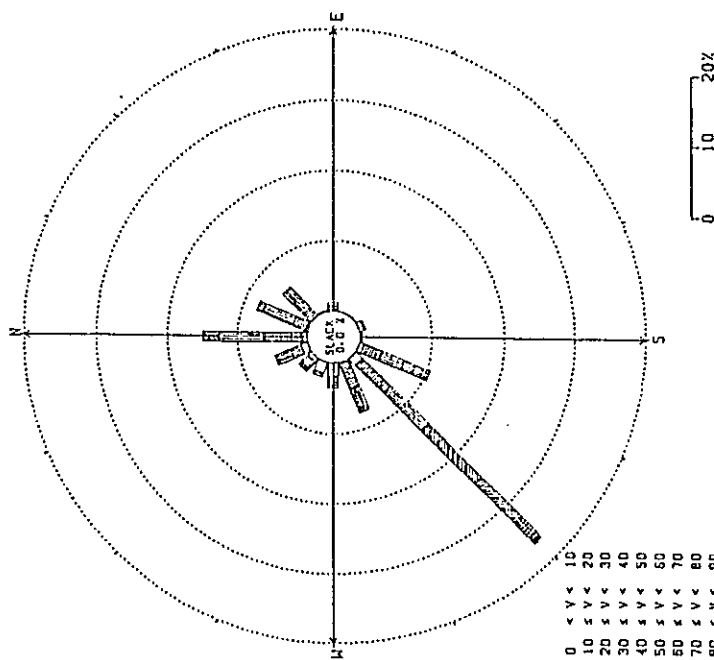
St. :3
 Layer :+0.5m (Depth:0.7m)
 Interval:Every 1 hours
 Period :21th Sep. - 4th Oct. 1988



0 < V < 10
 10 ≤ V < 20
 20 ≤ V < 30
 30 ≤ V < 40
 40 ≤ V < 50
 50 ≤ V < 60
 60 ≤ V < 70
 70 ≤ V < 80
 80 ≤ V < 90
 90 ≤ V < 100
 100 ≤ V

UNIT : CM/S

St. :4
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :21th Sep. - 4th Oct. 1988



0 < V < 10
 10 ≤ V < 20
 20 ≤ V < 30
 30 ≤ V < 40
 40 ≤ V < 50
 50 ≤ V < 60
 60 ≤ V < 70
 70 ≤ V < 80
 80 ≤ V < 90
 90 ≤ V < 100
 100 ≤ V

UNIT : CM/S

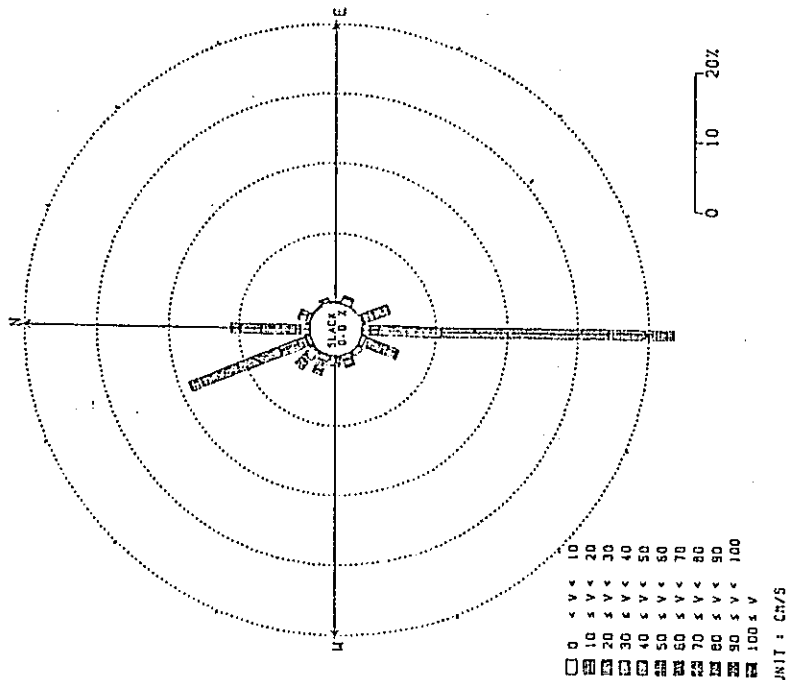
Fig. 3. 2-5 (6) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1. 1st Stage)

St. :5

Layer :+0.5m (Depth:0.8m)

Interval:Every 1 hours

Period :21th Sep. - 4th Oct. 1988



St. :6

Layer :+0.5m (Depth:1.7m)

Interval:Every 1 hours

Period :21th Sep. - 4th Oct. 1988

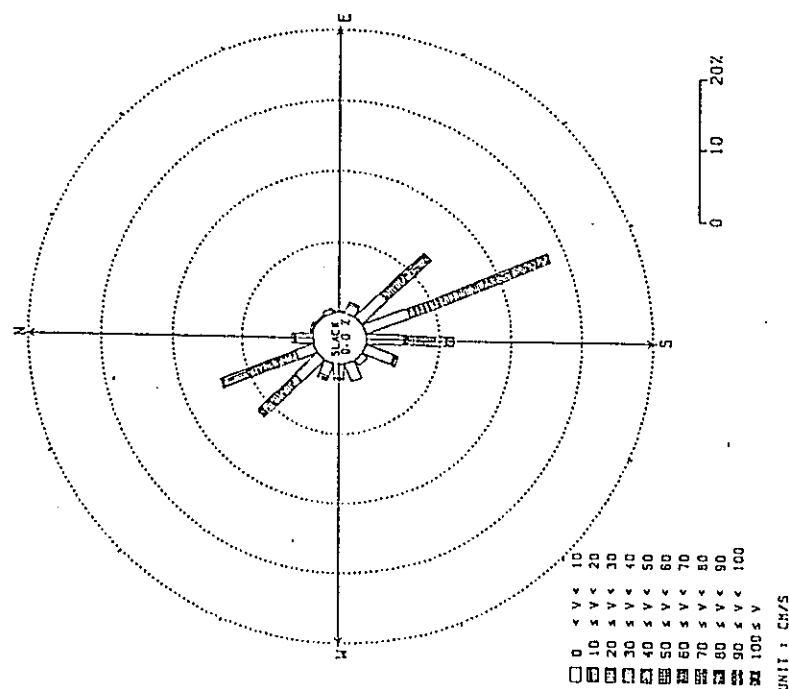
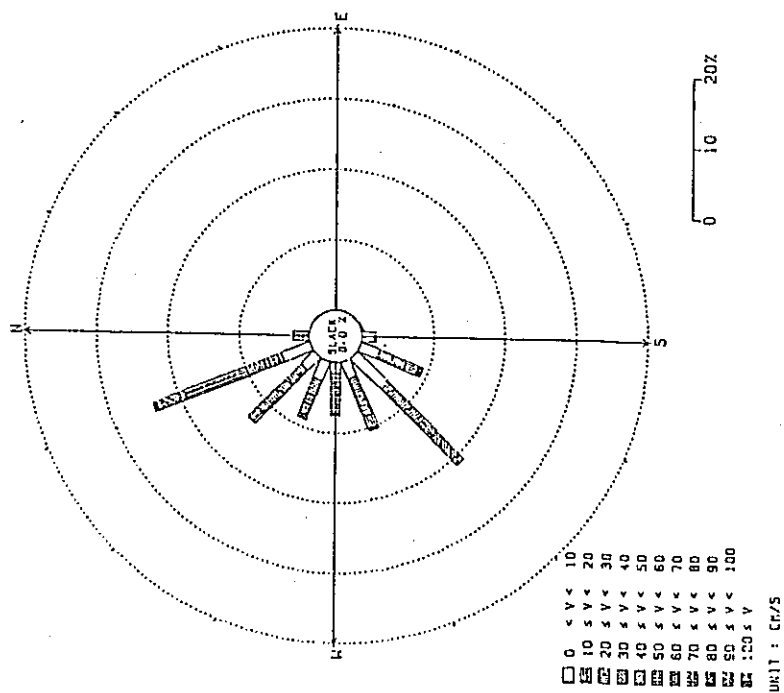


Fig. 3. 2-5 (7) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1. 1st Stage)

St. :9
 Layer :+0.5m(Depth:1.0m)
 Interval:Every 1 hours
 Period :21th Sep. - 4th Oct. 1988



St. :10
 Layer :+0.5m(Depth:2.5m)
 Interval:Every 1 hours
 Period :21th Sep. - 4th Oct. 1988

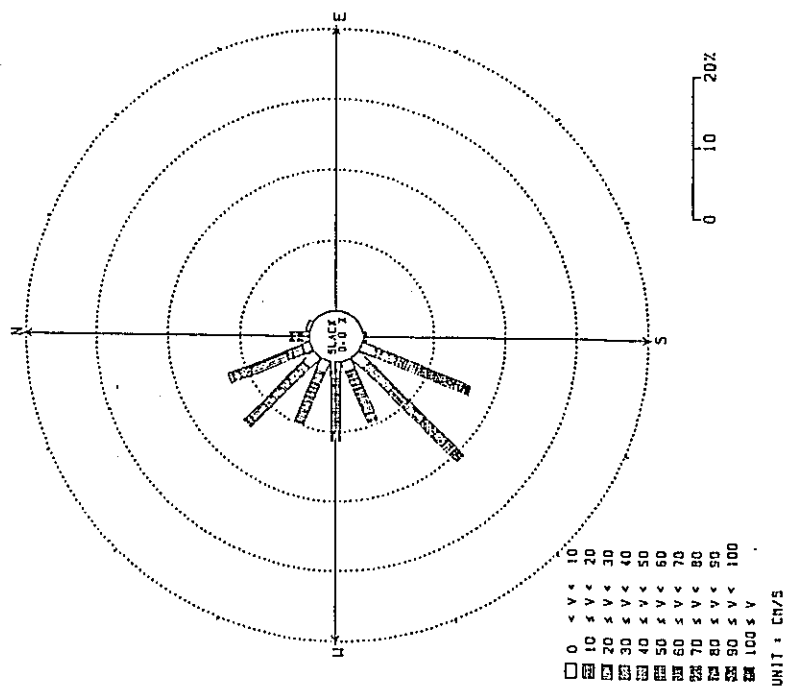


Fig. 3. 2-5 (8) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1. 1st Stage)

St. :11
 Layer :+0.5m(Depth:1.2m)
 Interval:Every 1 hours
 Period :21th Sep. - 4th Oct. 1988

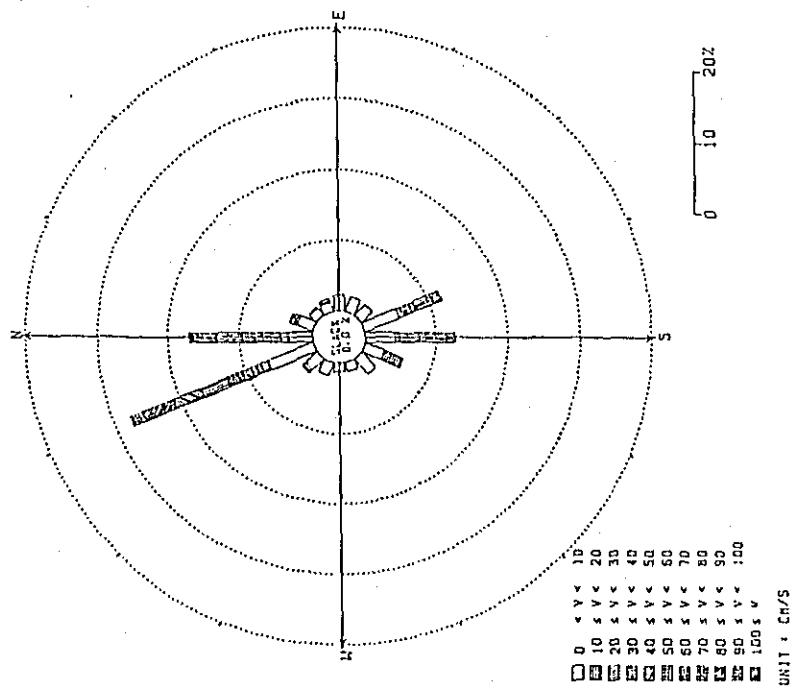


Fig. 3. 2-5 (9) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1. 1st Stage)

St. : I
 Layer : $\pm 0.5m$ (Depth: 9.1m)
 Interval: Every 2 hours
 Period : 18th Jan. - 2th Feb. 1989

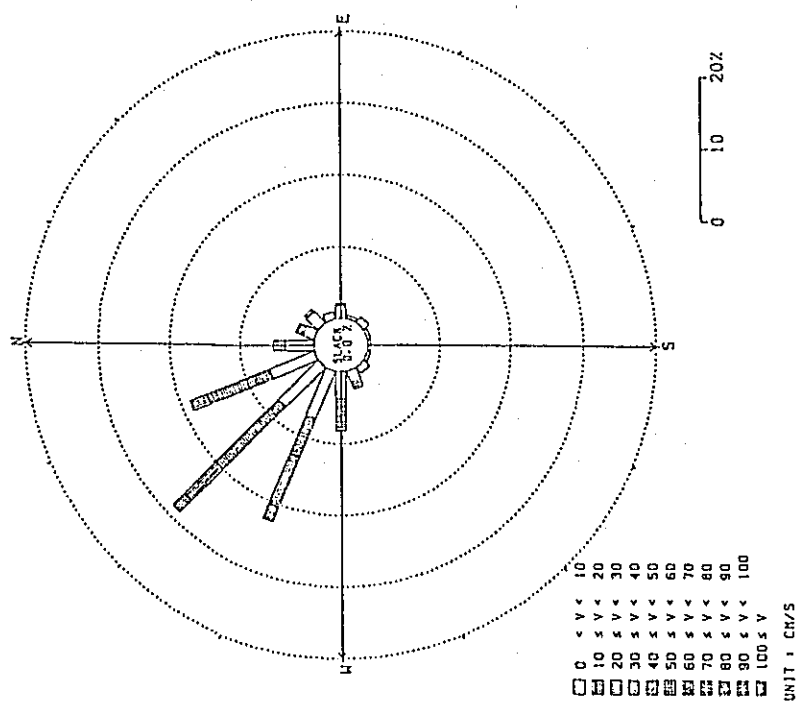
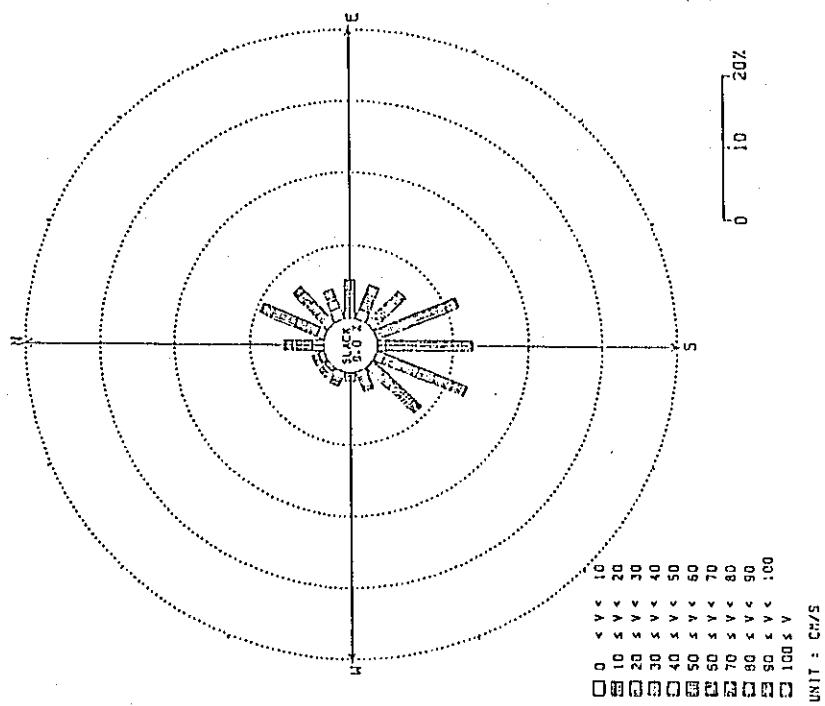


Fig. 3. 2-5 (10) Frequency Distributions of Current Direction and Velocity
 (Survey Item: Current 1. 2nd Stage) (1st half)

St. :2
 Layer :+0.5m (Depth:1.6m)
 Interval:Every 1 hours
 Period :18th Jan. - 2th Feb. 1989



St. :3
 Layer :+0.5m (Depth:0.7m)
 Interval:Every 1 hours
 Period :18th Jan. - 2th Feb. 1989

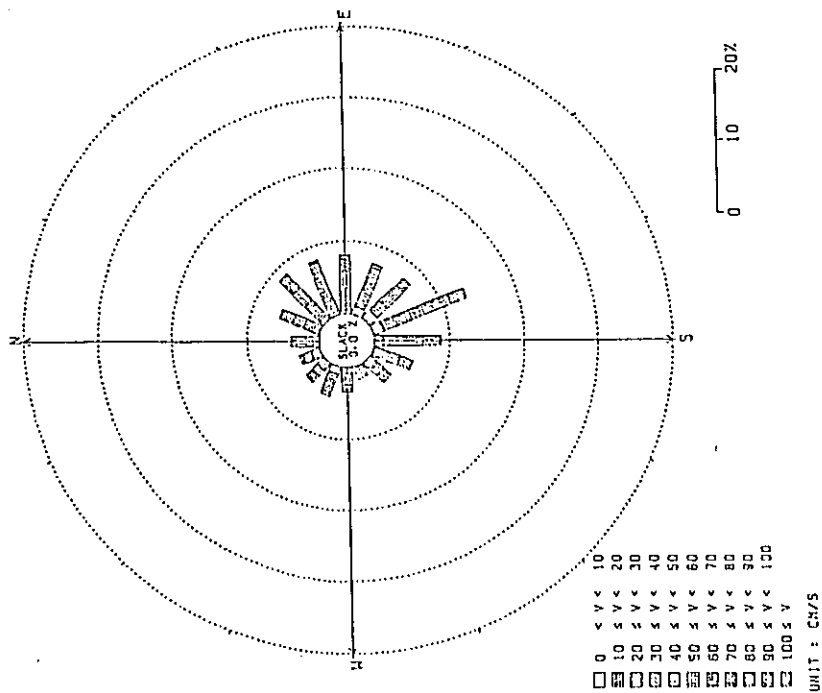


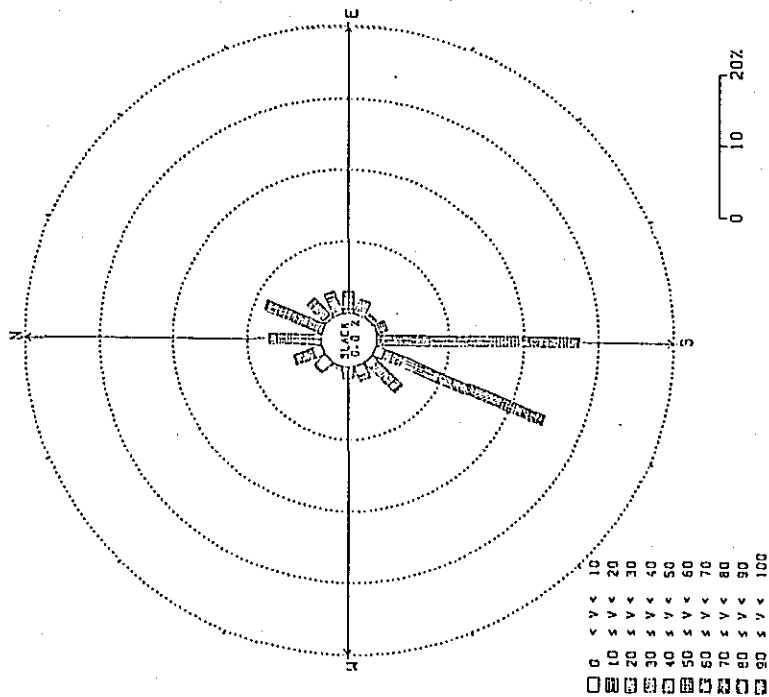
Fig. 3. 2-5 (II) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1. 2nd Stage) (1st half)

St. :4

Layer :+0.5m(Depth:0.8m)

Interval:Every 1 hours

Period :18th Jan. - 2th Feb. 1989



St. :7

Layer :+0.5m(Depth:1.7m)

Interval:Every 1 hours

Period :18th Jan. - 2th Feb. 1989

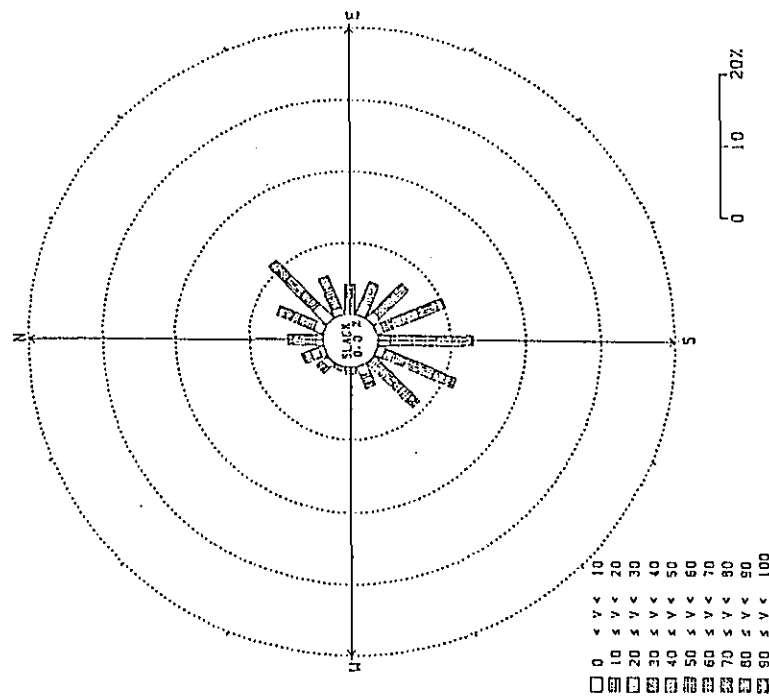
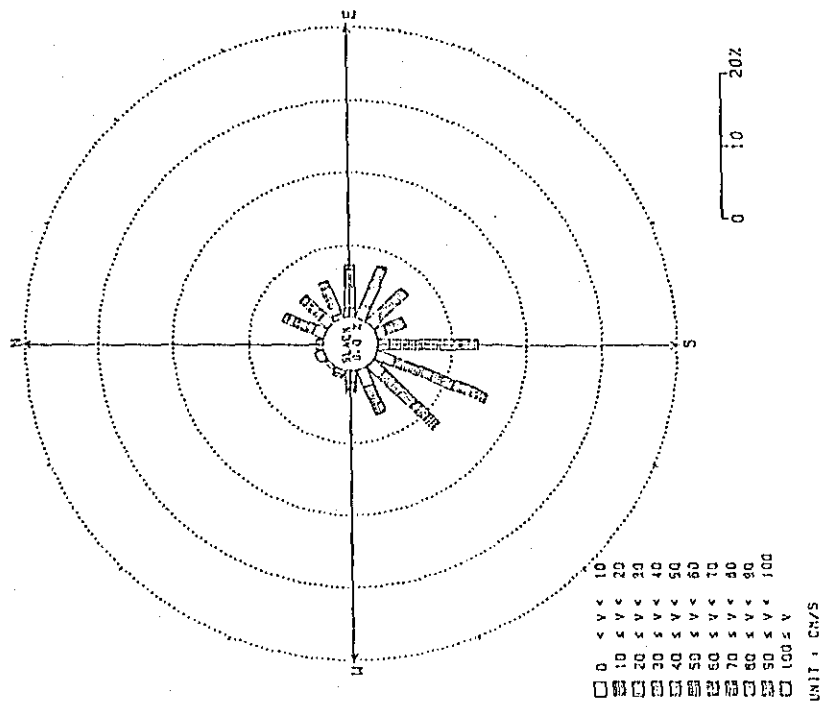


Fig. 3. 2-5 (12) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1, 2nd Stage) (1st half)

St. :8
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :18th Jan. - 2th Feb. 1989



St. :9
 Layer :+0.5m (Depth:1.0m)
 Interval:Every 1 hours
 Period :18th Jan. - 2th Feb. 1989

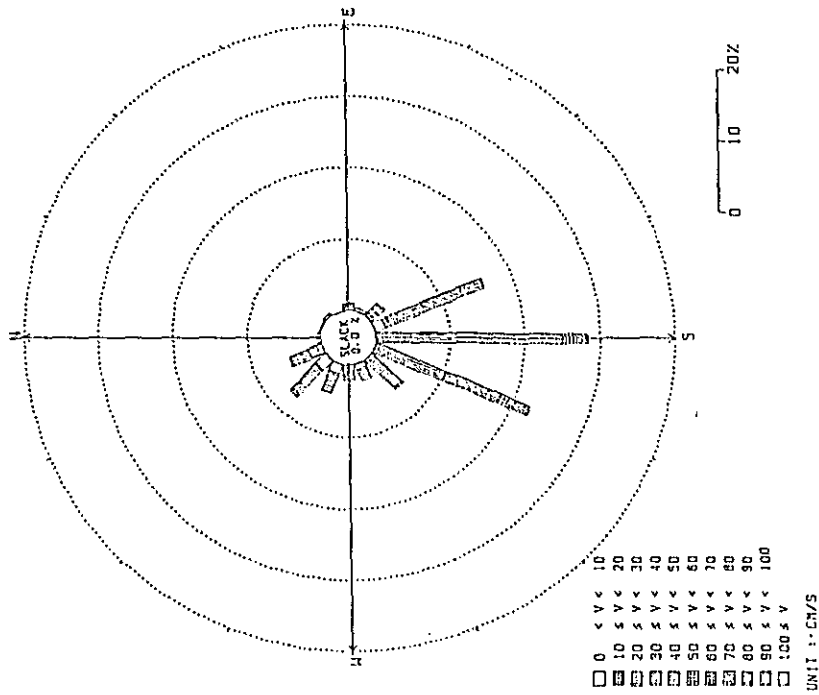


Fig. 3. 2-5 (13) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1, 2nd Stage) (1st half)

St. : 1
 Layer : +0.5m (Depth: 9.1m)
 Interval : Every 2 hours
 Period : 4th Feb. - 19th Feb. 1989

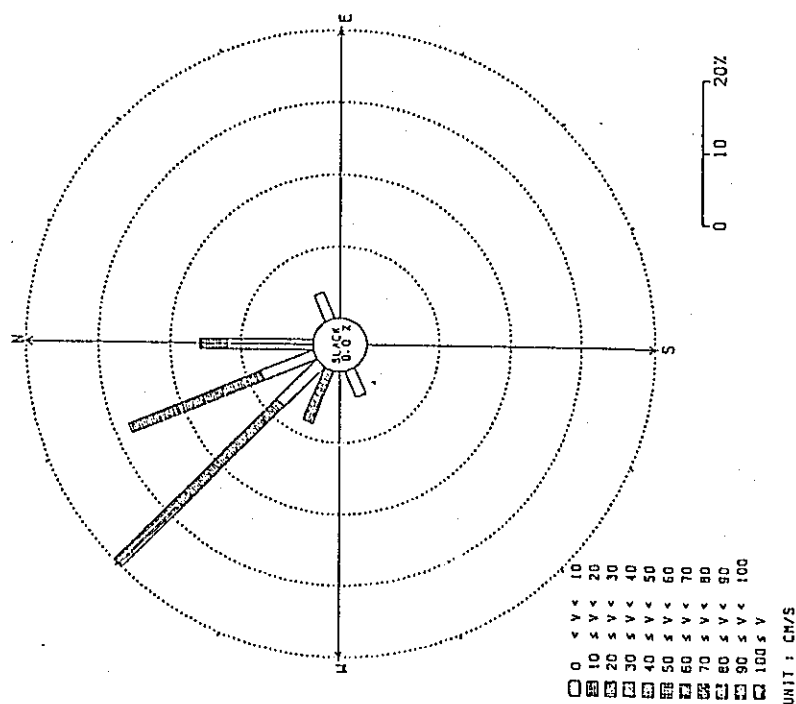


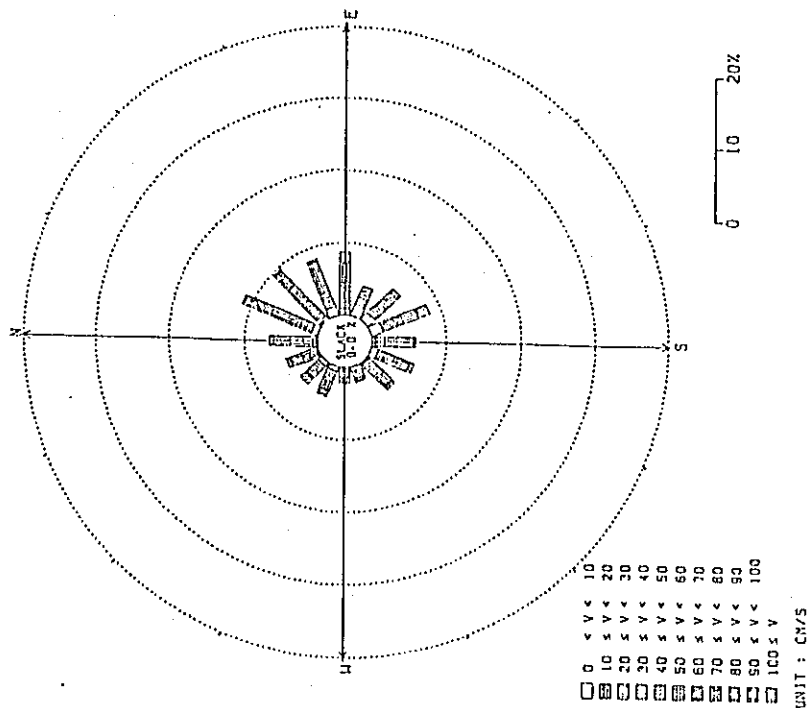
Fig. 3. 2-5 (14) Frequency Distributions of Current Direction and Velocity
 (Survey Item: Current 1. 2nd Stage) (2nd half)

St. :3

Layer :+0.5m (Depth:0.7m)

Interval:Every 1 hours

Period : 4th Feb. -17th Feb. 1989



St. :4

Layer :+0.5m (Depth:0.8m)

Interval:Every 1 hours

Period : 4th Feb. -18th Feb. 1989

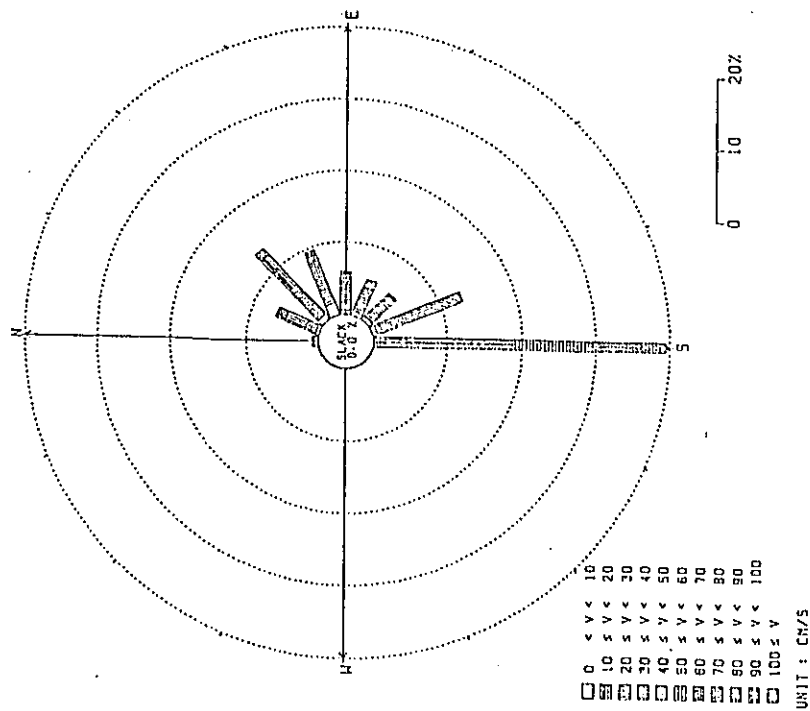


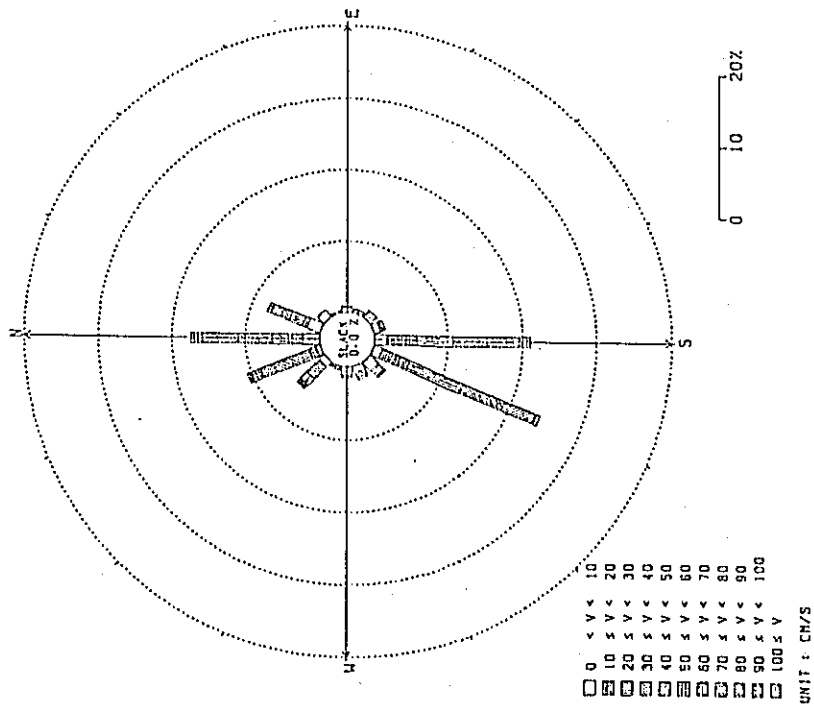
Fig. 3. 2-5 (15) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1, 2nd Stage) (2nd half)

St. :5

Layer :+0.5m(Depth:0.8m)

Interval:Every 1 hours

Period : 4th Feb. -17th Feb. 1989



St. :8

Layer :+0.5m(Depth:1.7m)

Interval:Every 1 hours

Period : 4th Feb. -19th Feb. 1989

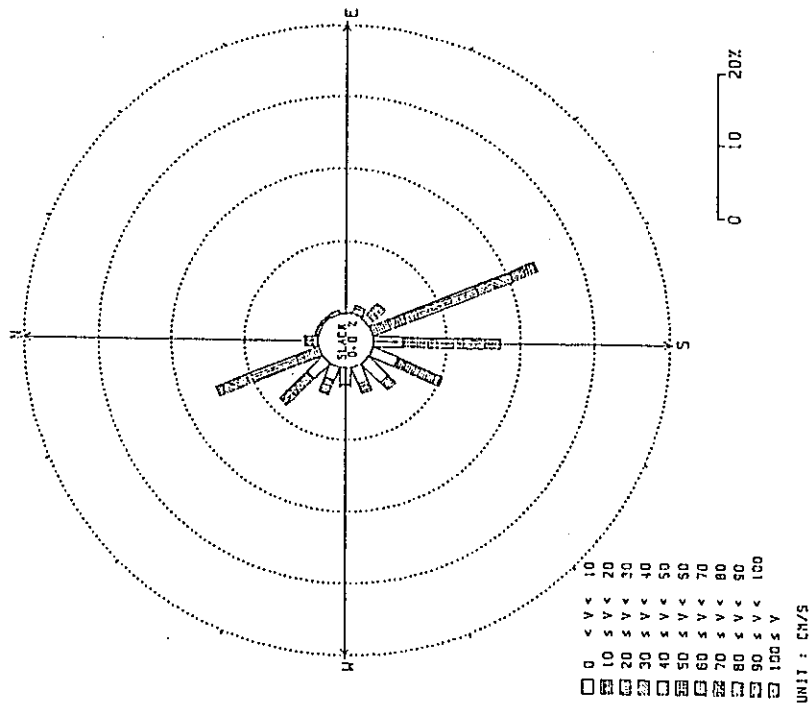
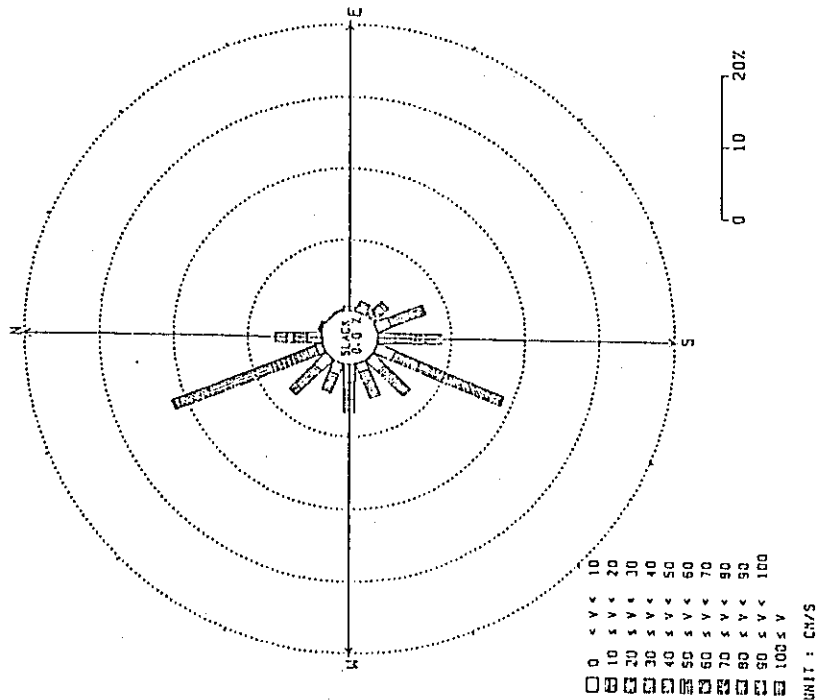


Fig. 3. 2-5 (16) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1. 2nd Stage) (2nd half)

St. :9
 Layer :+0.5m (Depth:1.0m)
 Interval:Every 1 hours
 Period : 4th Feb.-17th Feb, 1989



St. :10
 Layer :+0.5m (Depth:2.5m)
 Interval:Every 1 hours
 Period : 4th Feb.-19th Feb, 1989

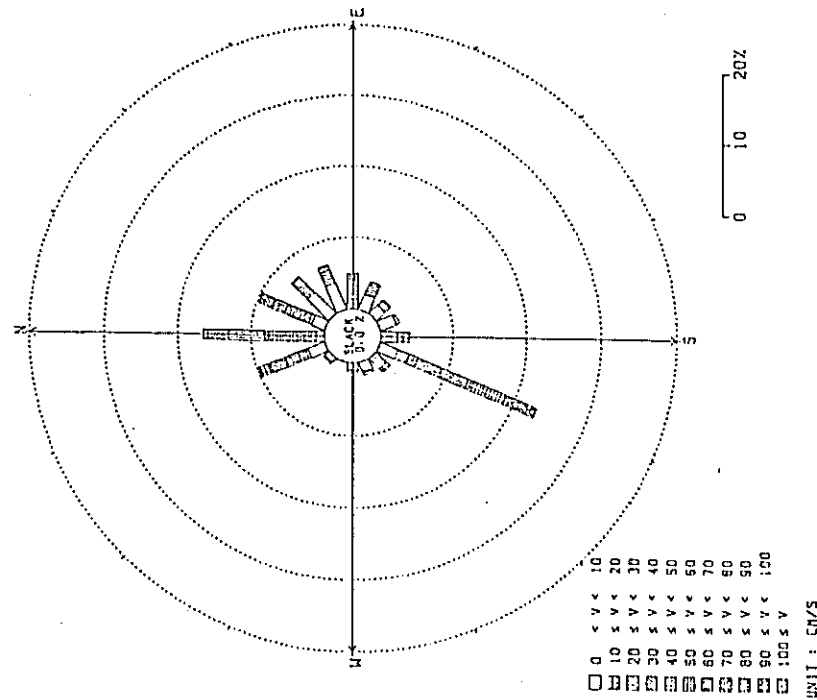


Fig. 3. 2-5 (17) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1. 2nd Stage) (2nd half)

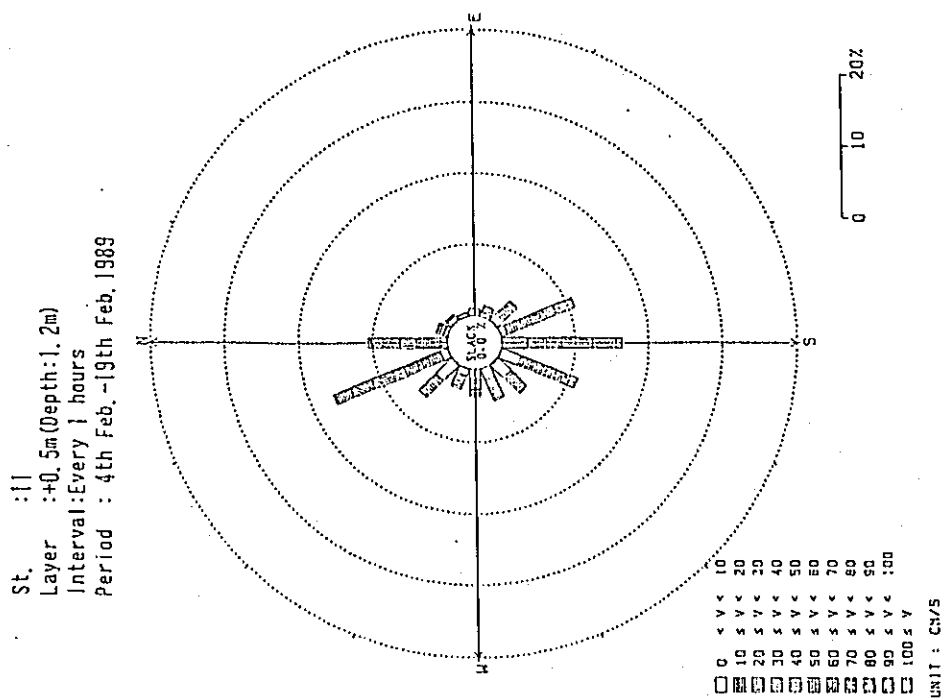
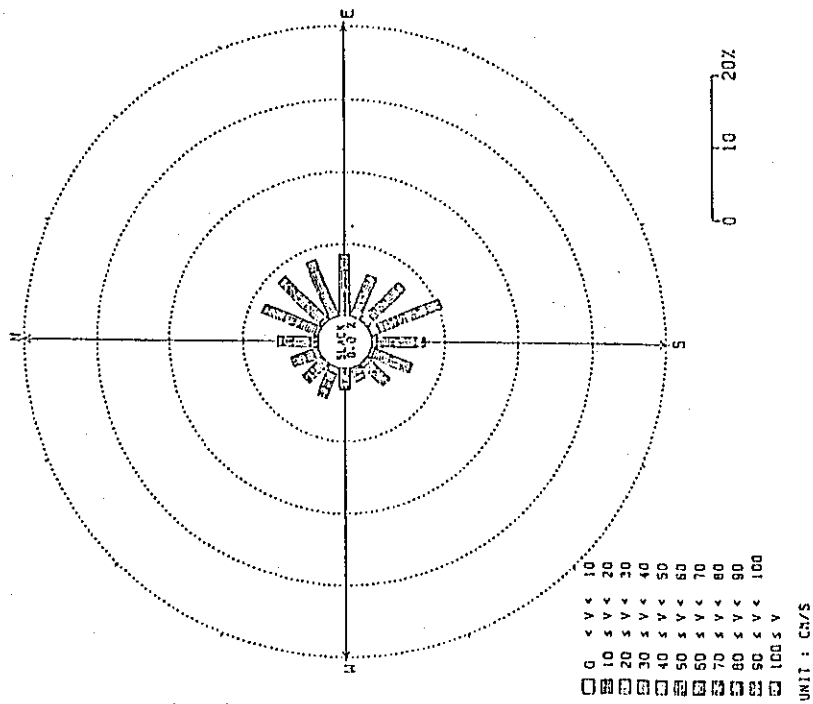


Fig. 3. 2-5 (18) Frequency Distributions of Current Direction and Velocity
 (Survey Item: Current 1. 2nd Stage) (2nd half)

St. :3
 Layer :+0.5m (Depth:0.7m)
 Interval:Every 1 hours
 Period :19th Jan. -17th Feb. 1989



St. :4
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :19th Jan. -17th Feb. 1989

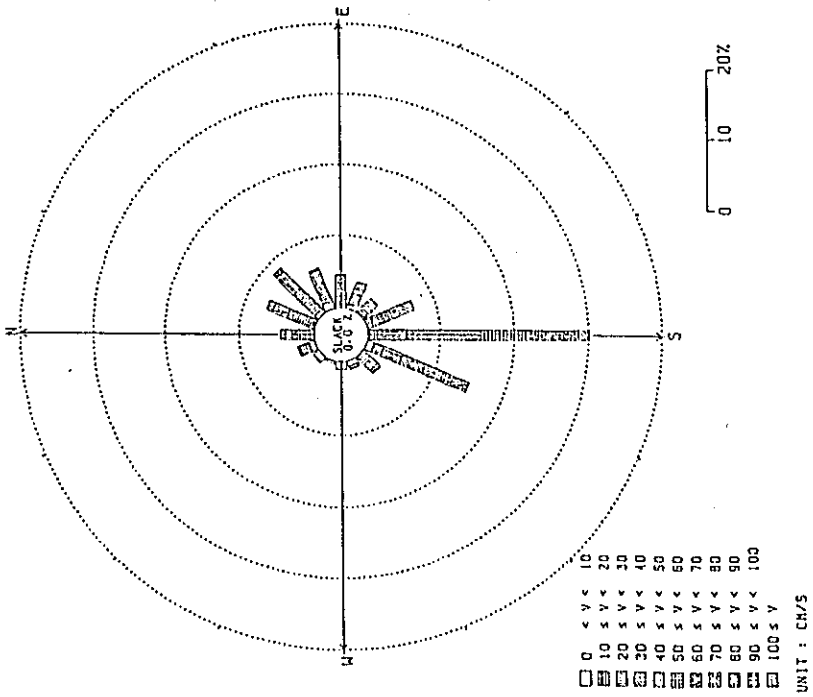


Fig. 3. 2-5 (19) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1, 2nd Stage) (30 Days)

St. :9
 Layer :+0.5m (Depth:1.0m)
 Interval:Every 1 hours
 Period :19th Jan.-17th Feb. 1989

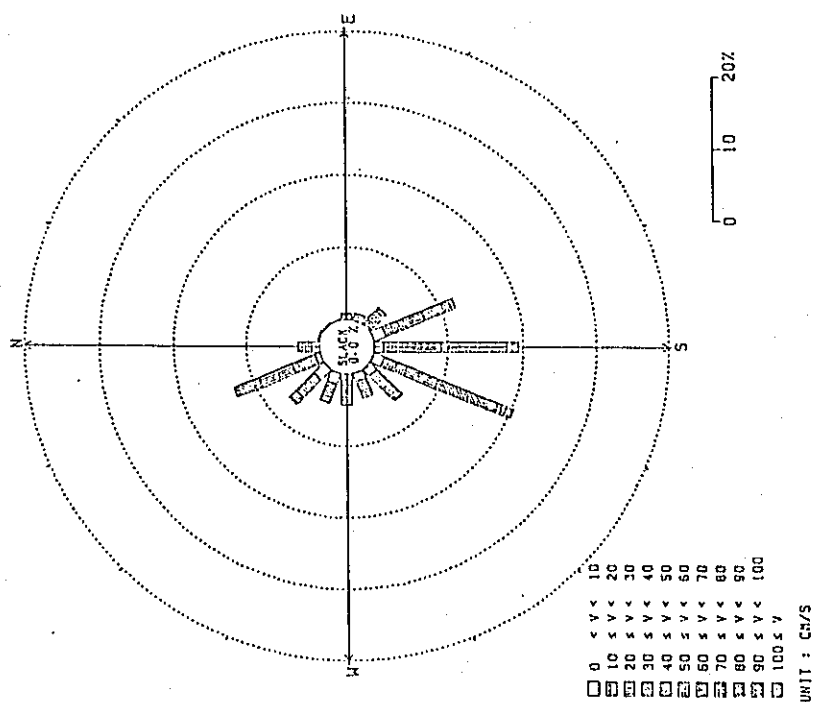
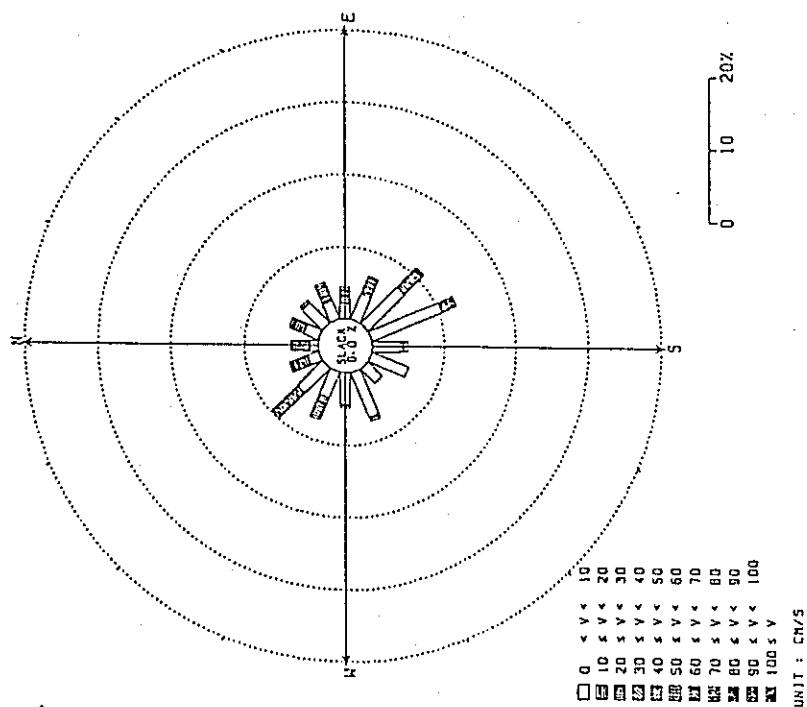


Fig. 3. 2-5 (20) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1. 2nd Stage) (30 Days)

St. :1
 Layer :+0.5m(Depth:9.1m)
 Interval:Every 2 hours
 Period :12th Apr. -27th Apr. 1989



St. :4
 Layer :+0.5m(Depth:0.8m)
 Interval:Every 1 hours
 Period :12th Apr. -27th Apr. 1989

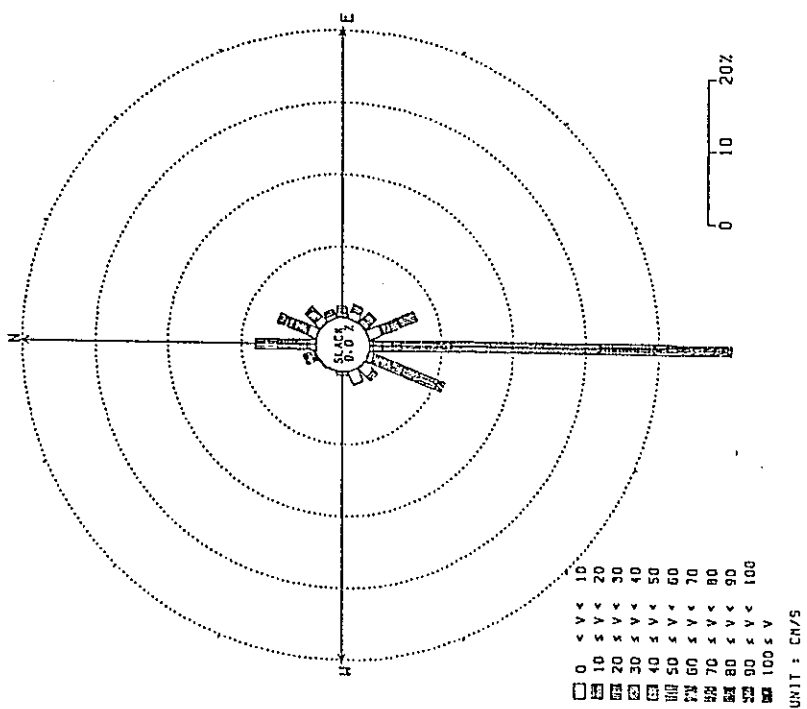
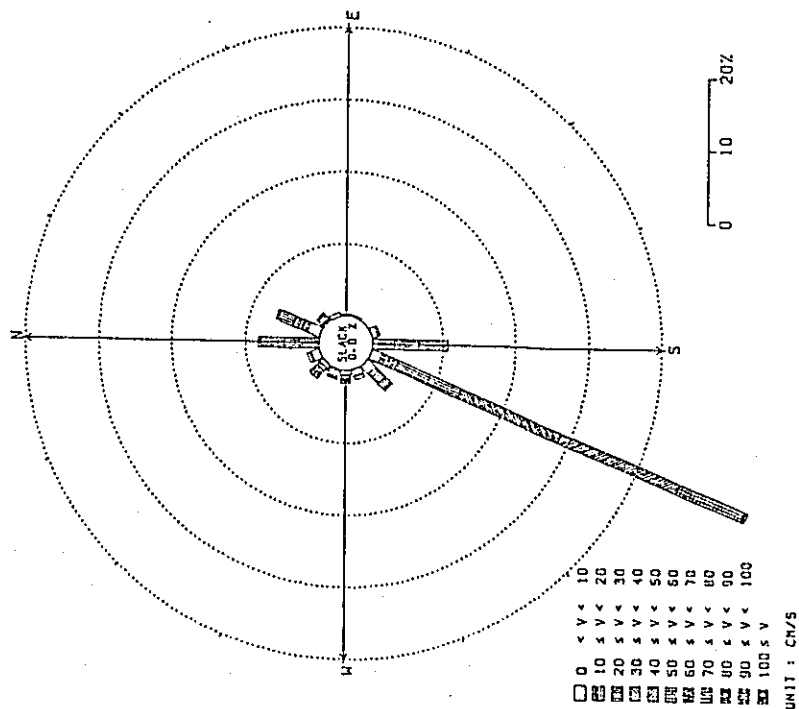


Fig. 3. 2-5 (21) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1. 3rd Stage) (1st half)

St. :5
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :12th Apr. -27th Apr. 1989



St. :7
 Layer :+0.5m (Depth:1.7m)
 Interval:Every 1 hours
 Period :12th Apr. -27th Apr. 1989

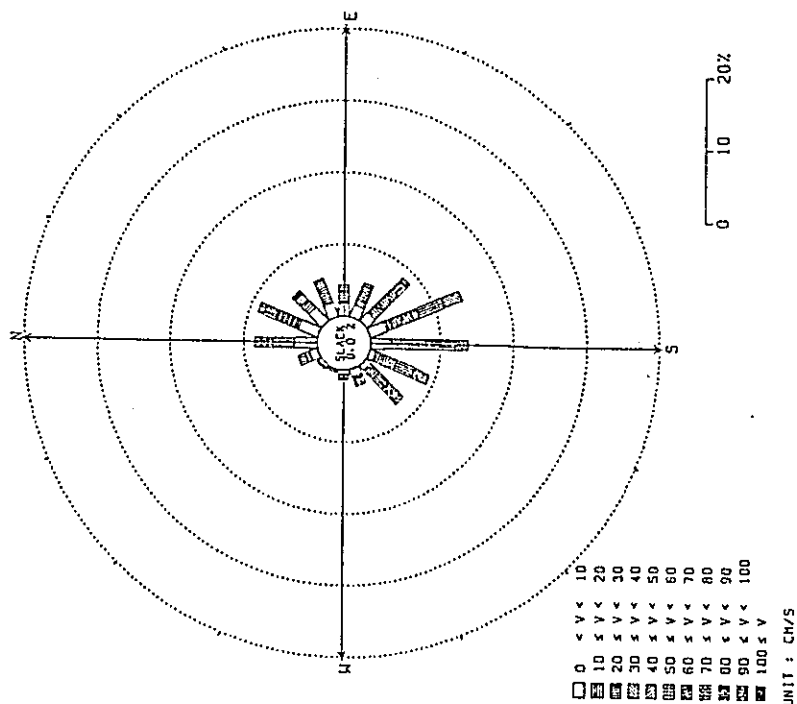
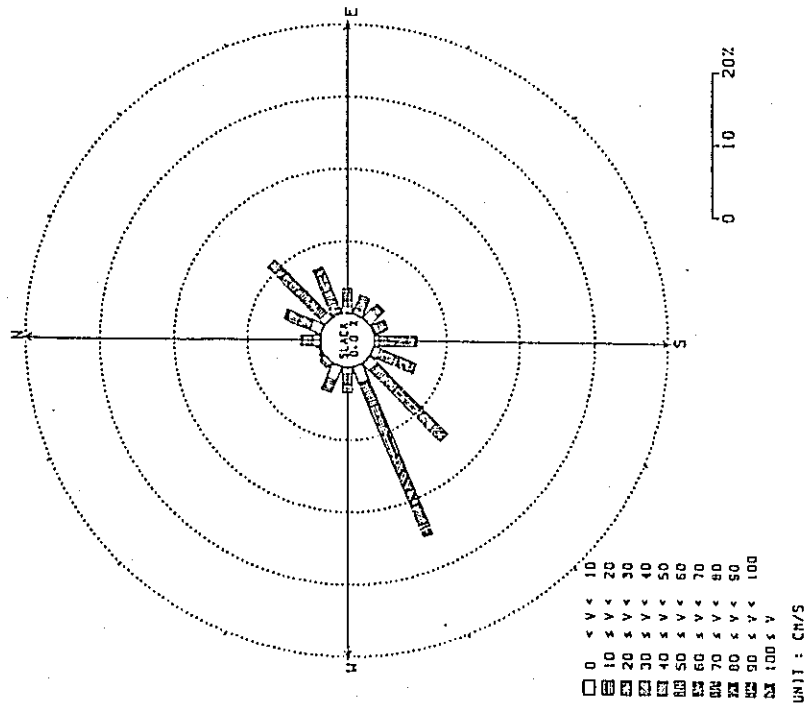


Fig. 3. 2-5 (2) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1.3rd Stage) (1st half)

St. :8
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :12th Apr. -27th Apr. 1989



St. :9
 Layer :+0.5m (Depth:1.0m)
 Interval:Every 1 hours
 Period :12th Apr. -27th Apr. 1989

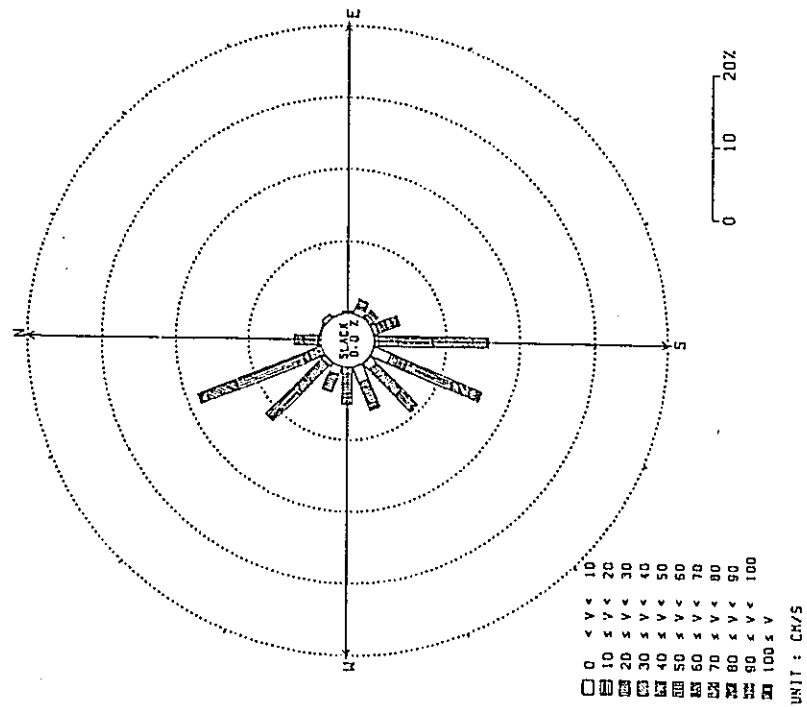
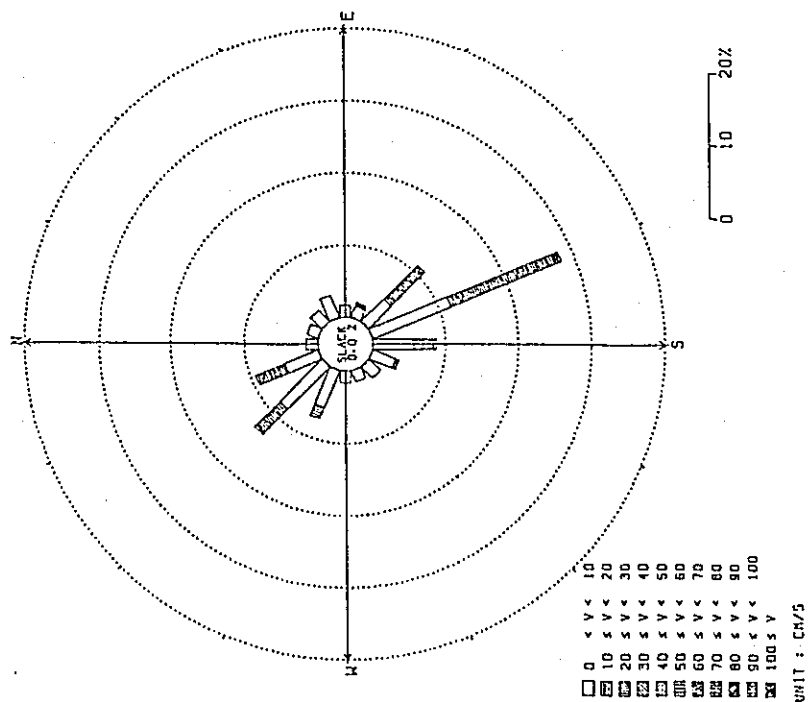


Fig. 3. 2-5 (2) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1, 3rd Stage) (1st half)

St. : 1
 Layer : +0.5m (Depth: 9.1m)
 Interval : Every 2 hours
 Period : 28th Apr. - 13th May 1989



St. : 2
 Layer : +0.5m (Depth: 1.6m)
 Interval : Every 1 hours
 Period : 28th Apr. - 13th May 1989

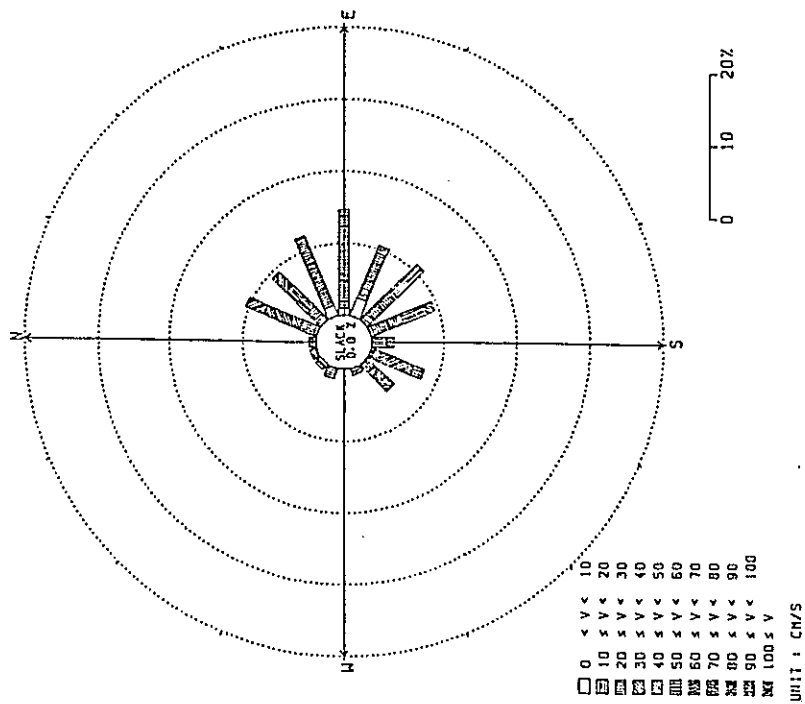
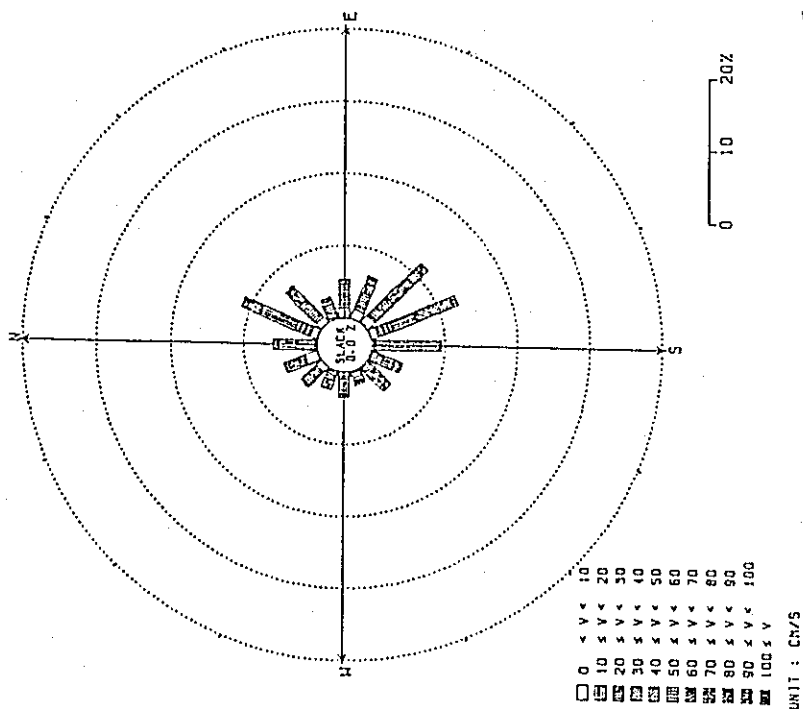


Fig. 3. 2-5 (24) Frequency.Distributions of Current Direction and Velocity
 (Survey Item:Current L. 3rd Stage) (2nd half)

St. :3
 Layer :+0.5m(Depth:0.7m)
 Interval:Every 1 hours
 Period :21th Apr. - 3th May 1989



St. :4
 Layer :+0.5m(Depth:0.8m)
 Interval:Every 1 hours
 Period :28th Apr. -13th May 1989

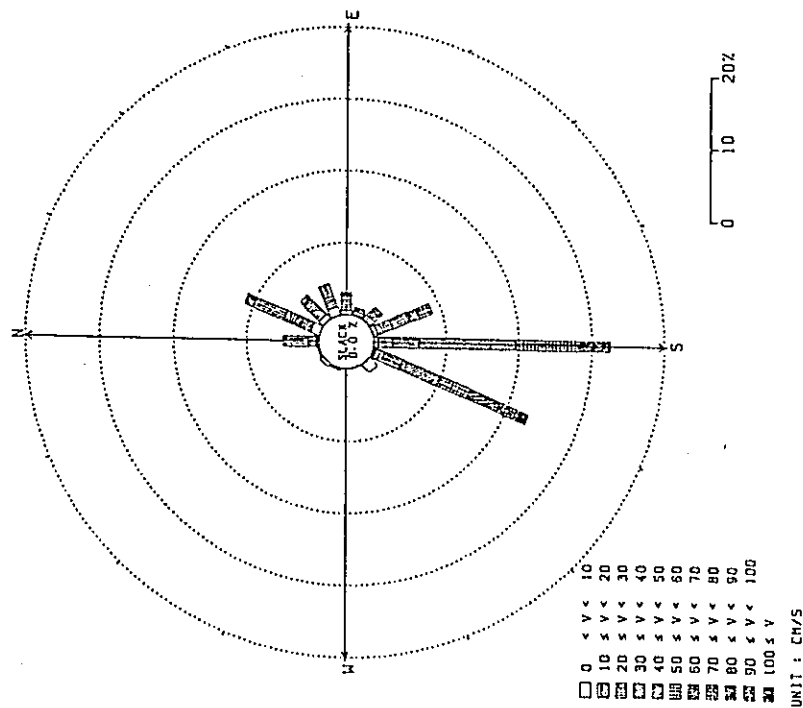
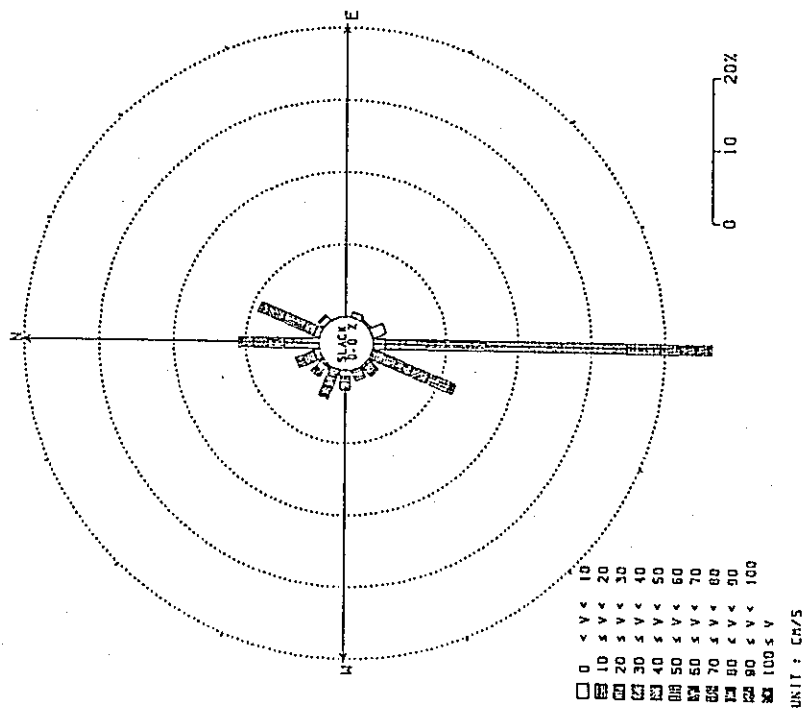


Fig. 3. 2-5 (25) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1, 3rd Stage) (2nd half)

St. :5
 Layer :+0.5m (Depth:0.8m)
 Interval:Every 1 hours
 Period :28th Apr. -13th May 1989



St. :6
 Layer :+0.5m (Depth:1.7m)
 Interval:Every 1 hours
 Period :28th Apr. -13th May 1989

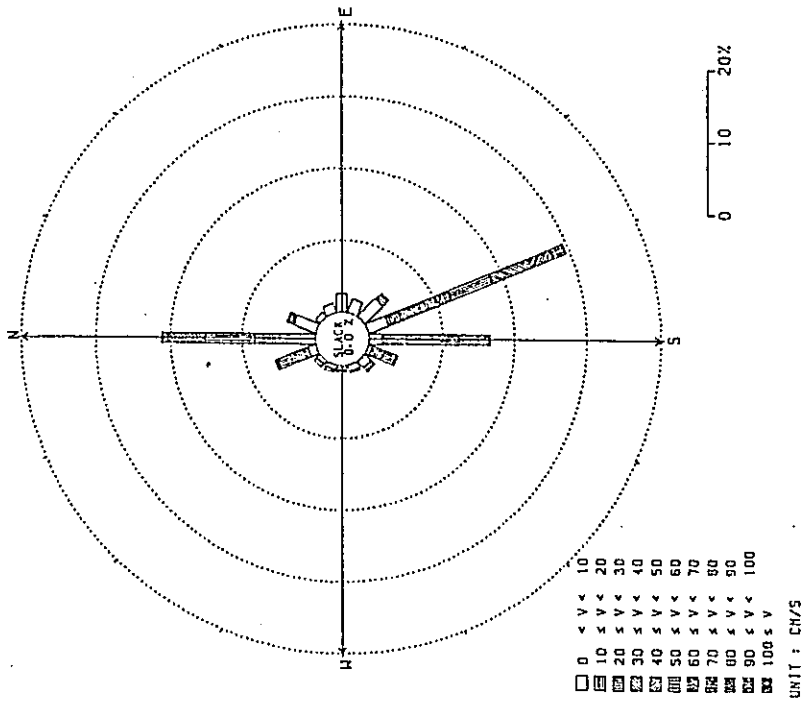


Fig. 3. 2-5 (25) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1, 3rd Stage) (2nd half)

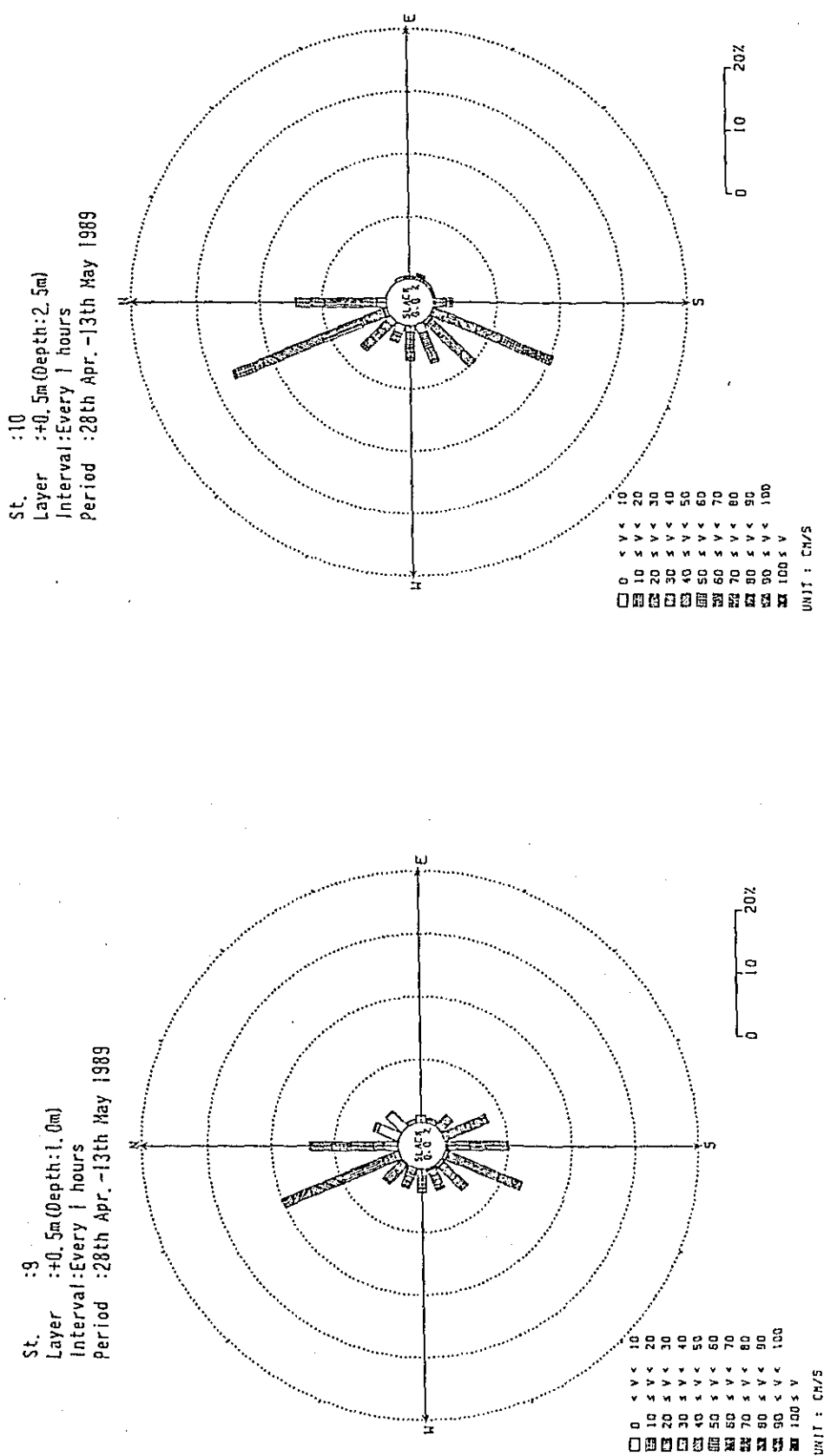


Fig. 3. 2-5 (27) Frequency Distributions of Current Direction and Velocity
 (Survey Item: Current 1. 3rd Stage) (2nd half)

St. :11
 Layer :+0.5m (Depth:1.2m)
 Interval:Every 1 hours
 Period :28th Apr. -13th May 1989

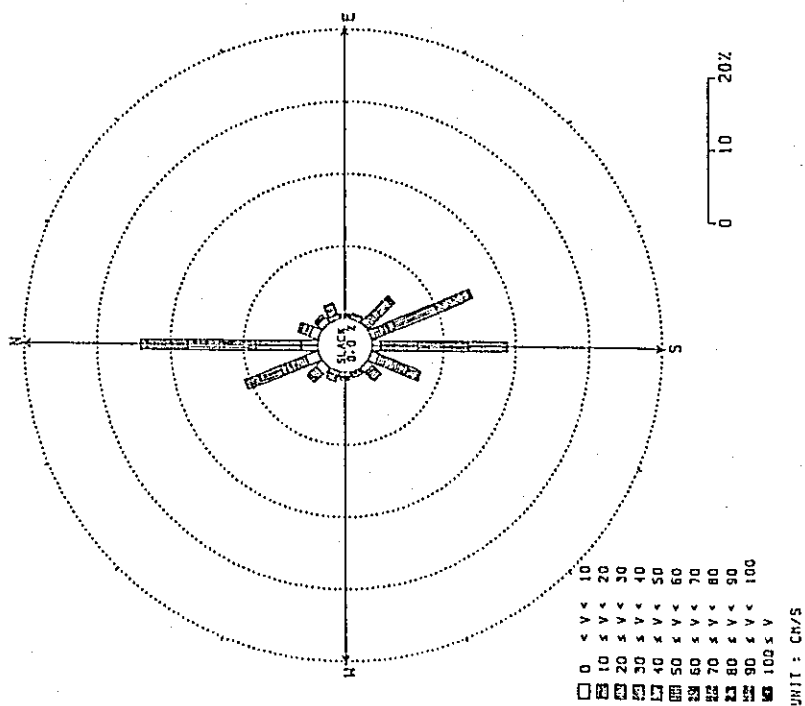
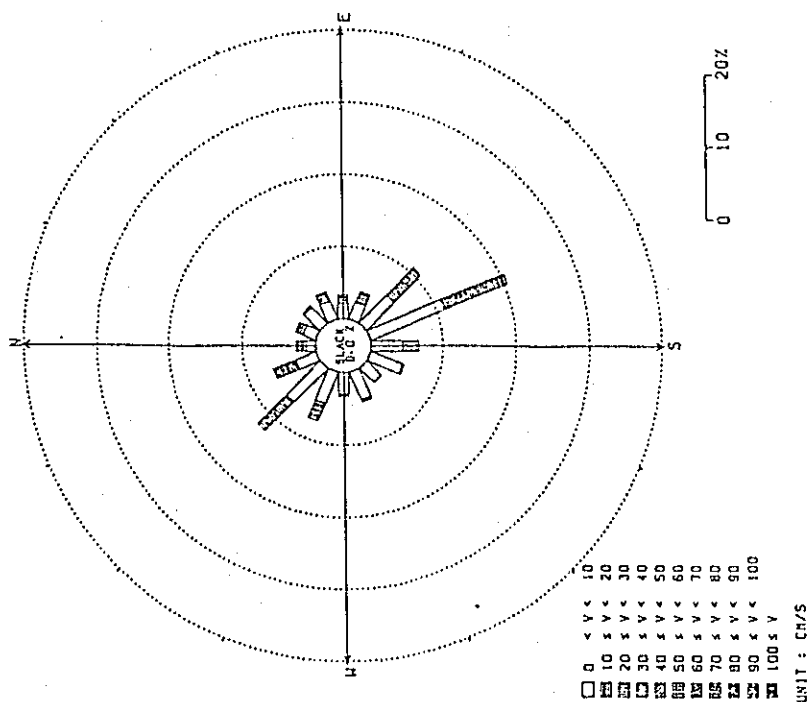


Fig. 3. 2-5 (22) Frequency Distributions of Current Direction and Velocity
 (Survey Item:Current 1, 3rd Stage) (2nd half)

St. : 1
 Layer : +0.5m (Depth: 3.1m)
 Interval: Every 2 hours
 Period : 12th Apr. - 12th May, 1989



St. : 4
 Layer : +0.5m (Depth: 0.8m)
 Interval: Every 1 hours
 Period : 12th Apr. - 12th May, 1989

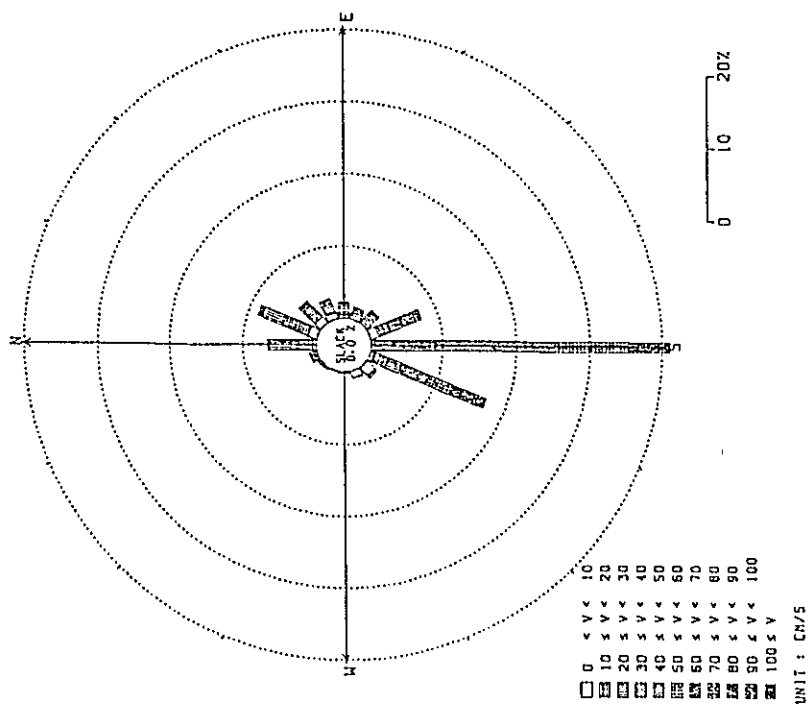
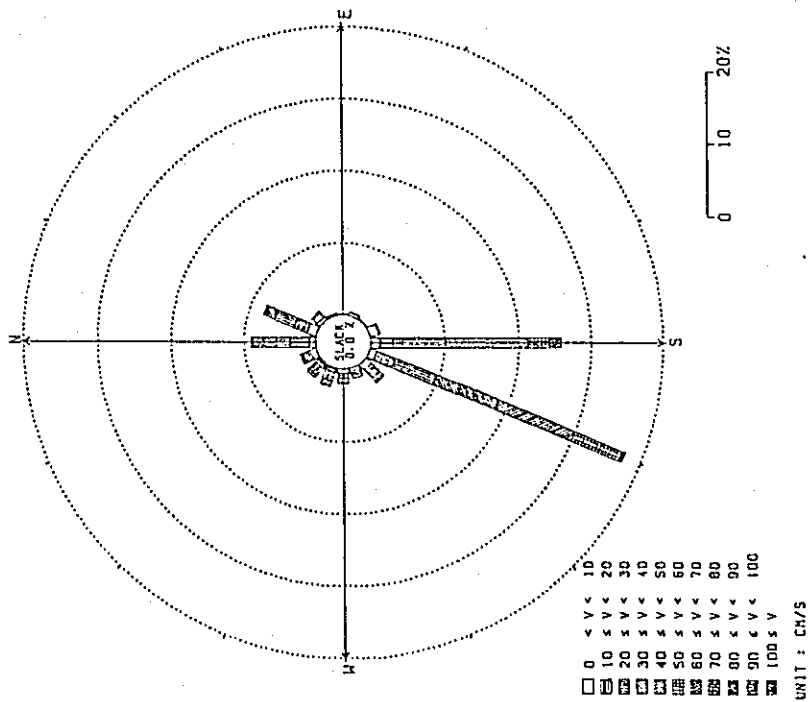


Fig. 3. 2-5 (2) Frequency Distributions of Current Direction and Velocity
 (Survey Item: Current 1, 3rd Stage) (30 Days)

St. : 5
 Layer : $\pm 0.5\text{m}$ (Depth: 0.3m)
 Interval: Every 1 hours
 Period : 12th Apr. - 12th May, 1989



St. : 9
 Layer : $\pm 0.5\text{m}$ (Depth: 1.0m)
 Interval: Every 1 hours
 Period : 12th Apr. - 12th May, 1989

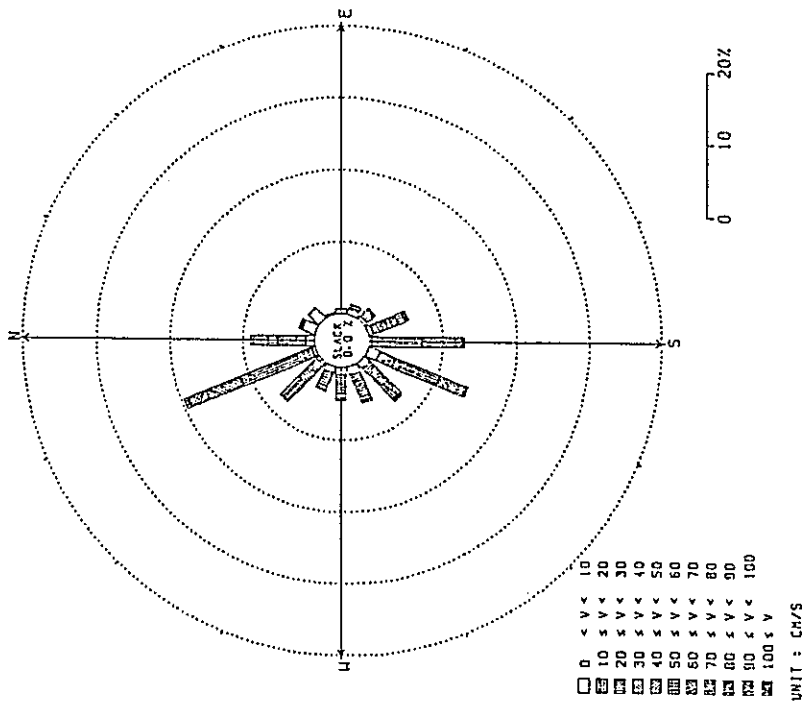
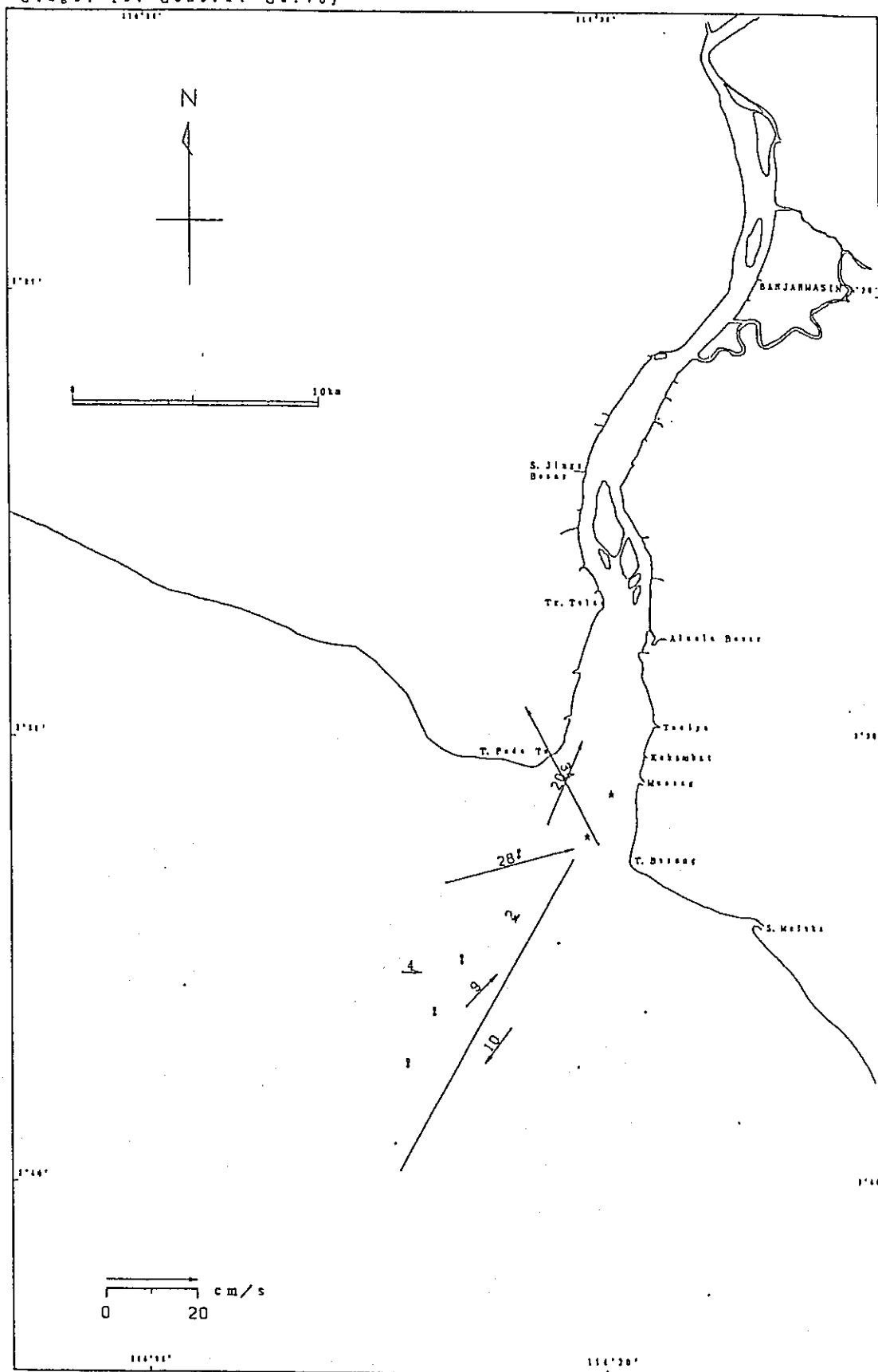


Fig. 3. 2-5 (30) Frequency Distributions of Current Direction and Velocity
 (Survey Item: Current 1, 3rd Stage) (30 Days)

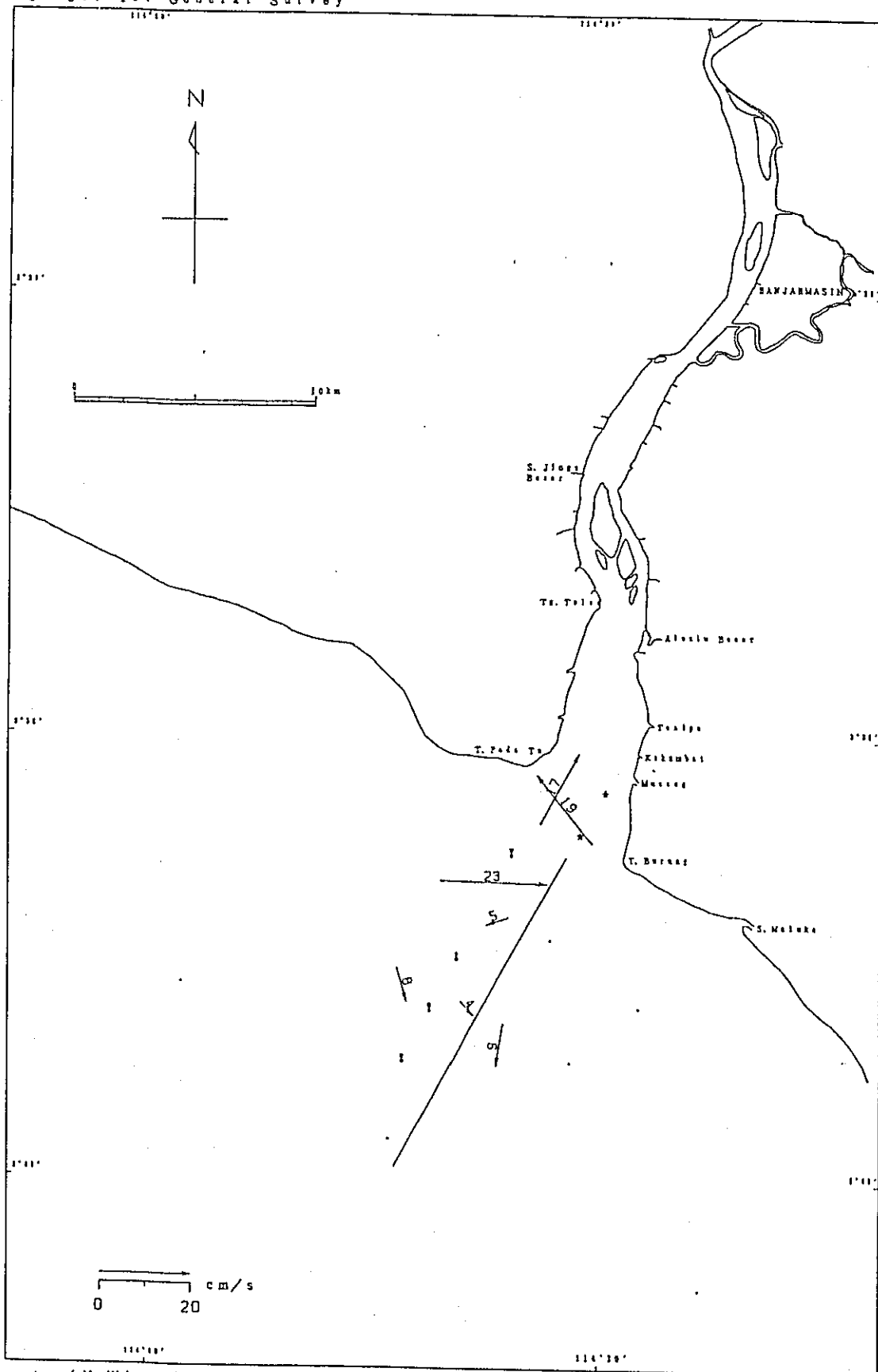
Date : 8th Sep. 1988
 Time : 5:00
 Stage: 1st General Survey



note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W

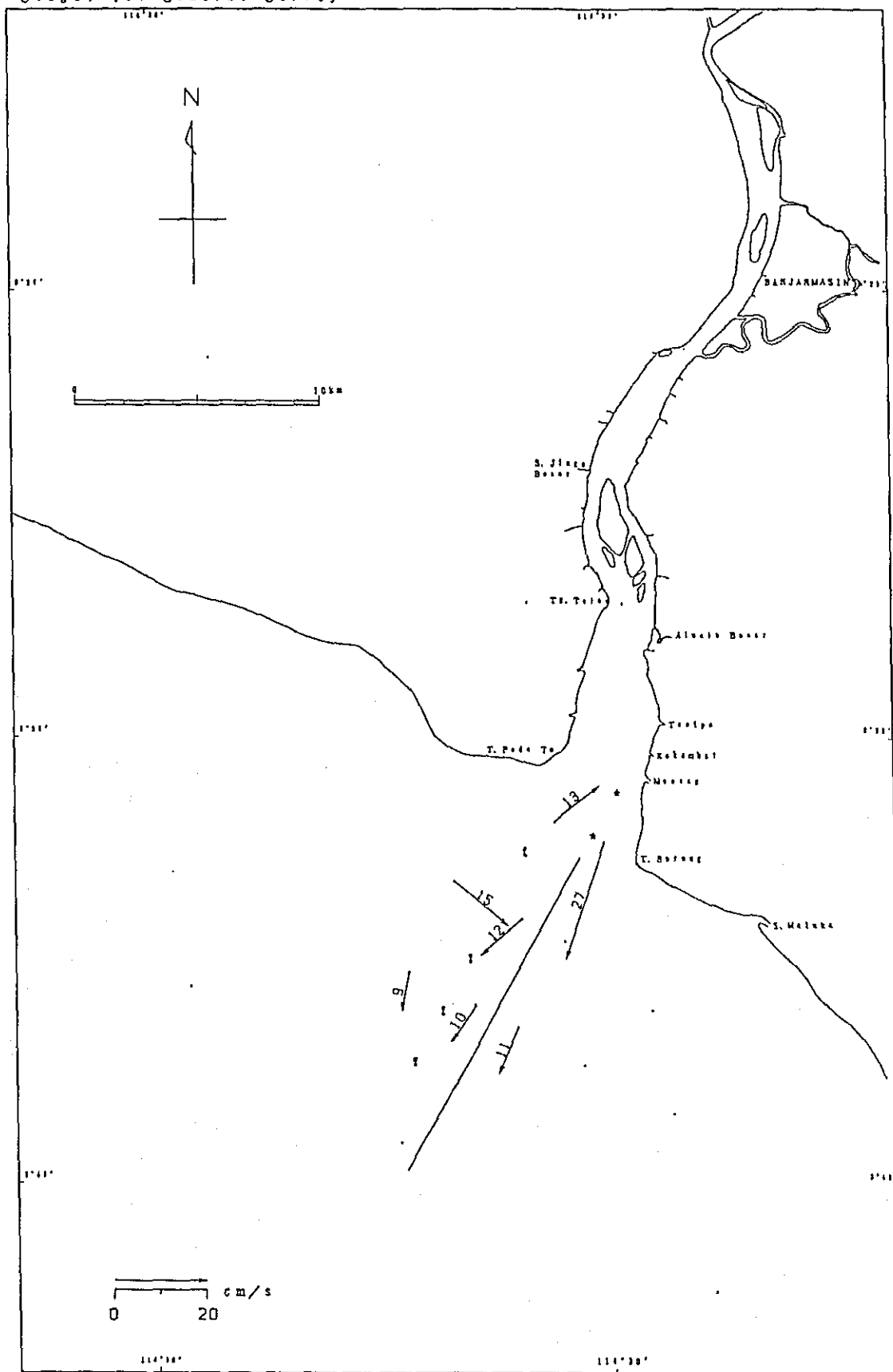
Fig. 3. 2-6 (1) Current Condition (H.W)

Date : 8th Sep. 1988
 Time : 6:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (2) Current Condition (H+1)

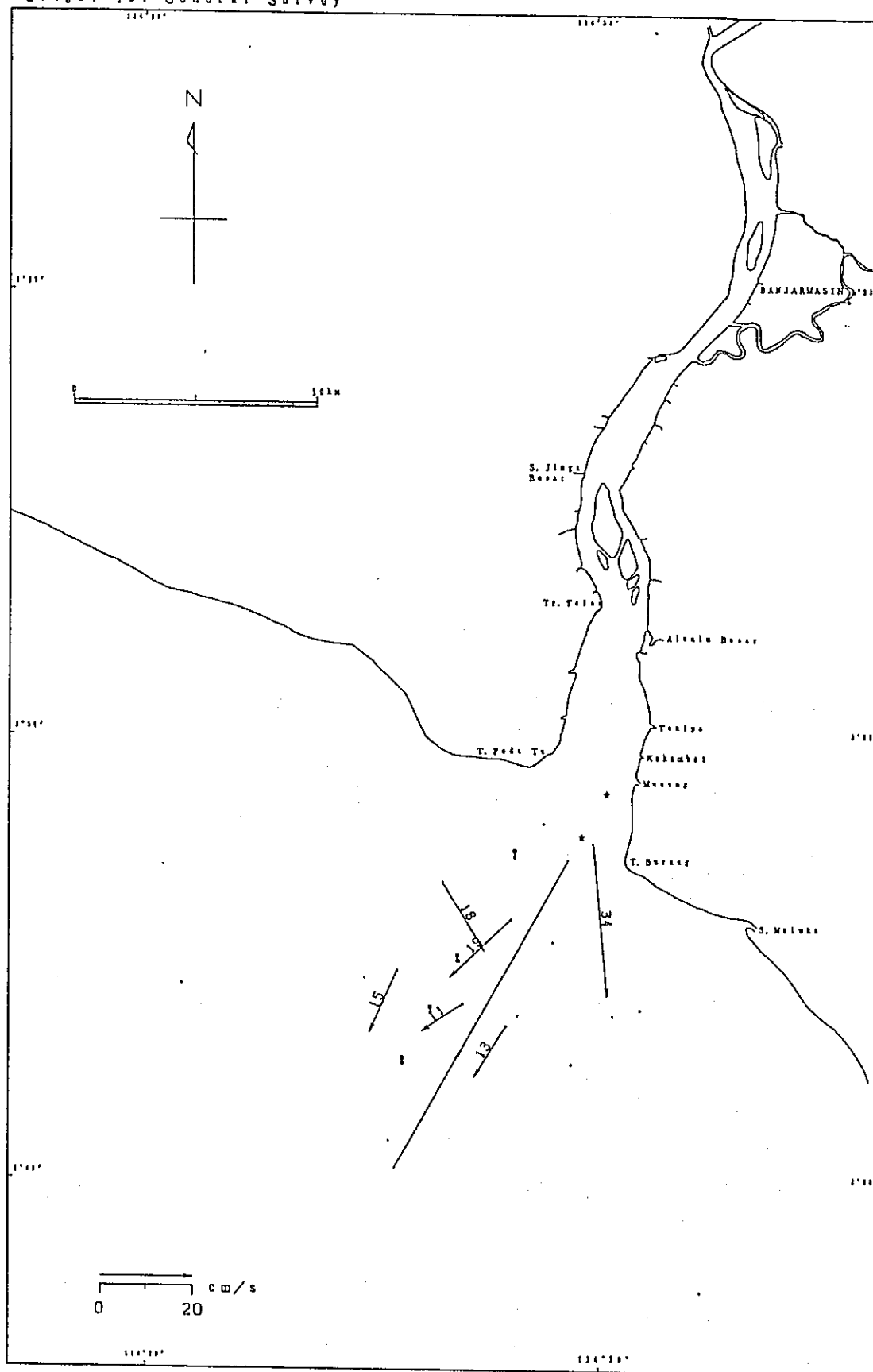
Date : 8th Sep. 1988
 Time : 7:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (3) Current Condition (H-2)

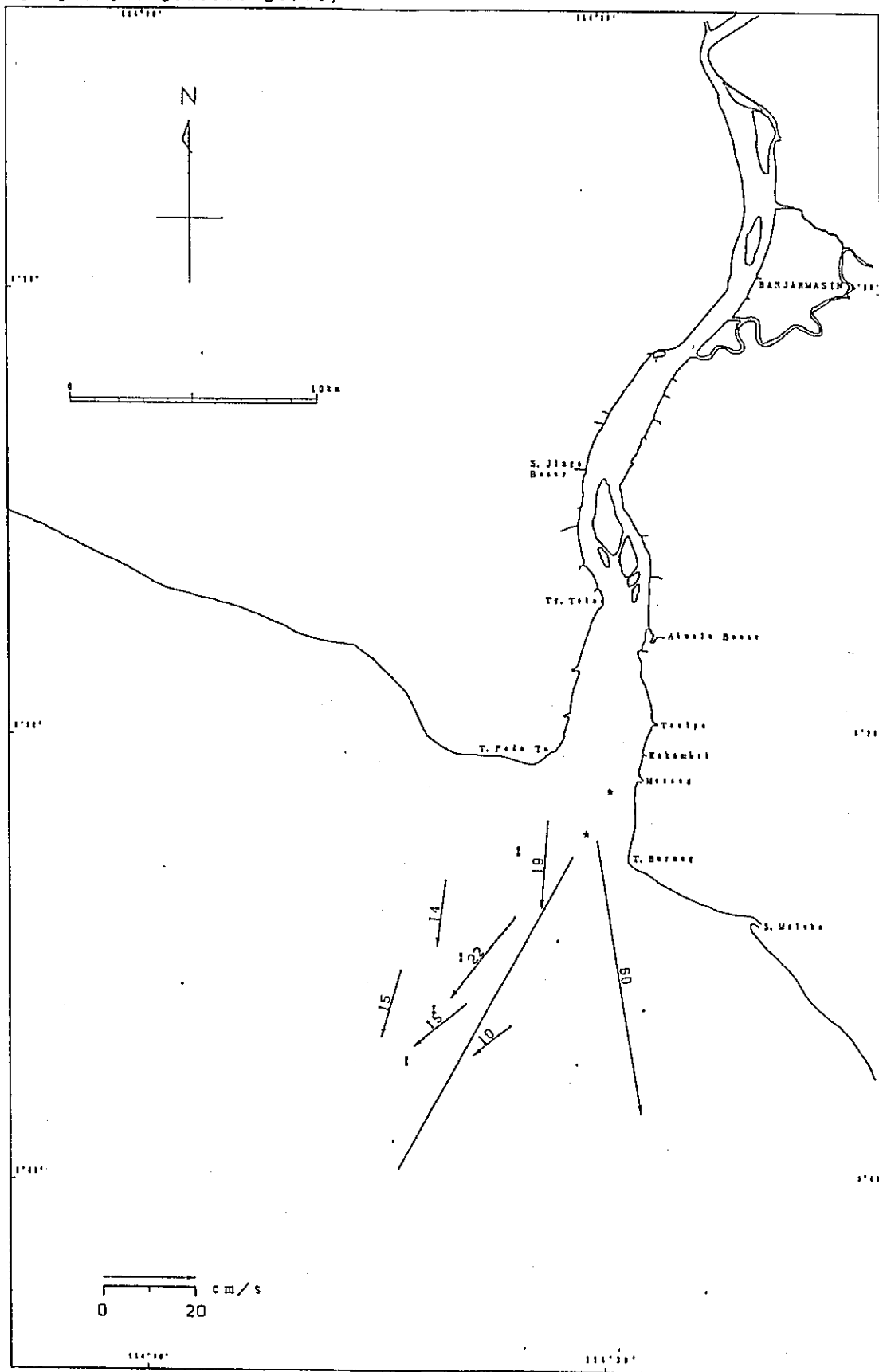
Date : 8th Sep. 1988
 Time : 8:00
 Stage: 1st General Survey



note: (H. W) High Water, (H+1) or (L+1) 1 hour after H. W or L. W
 (L. W) Low Water, (H-1) or (L-1) 1 hour before H. W or L. W

Fig. 3. 2-6 (4) Current Condition (H+3)

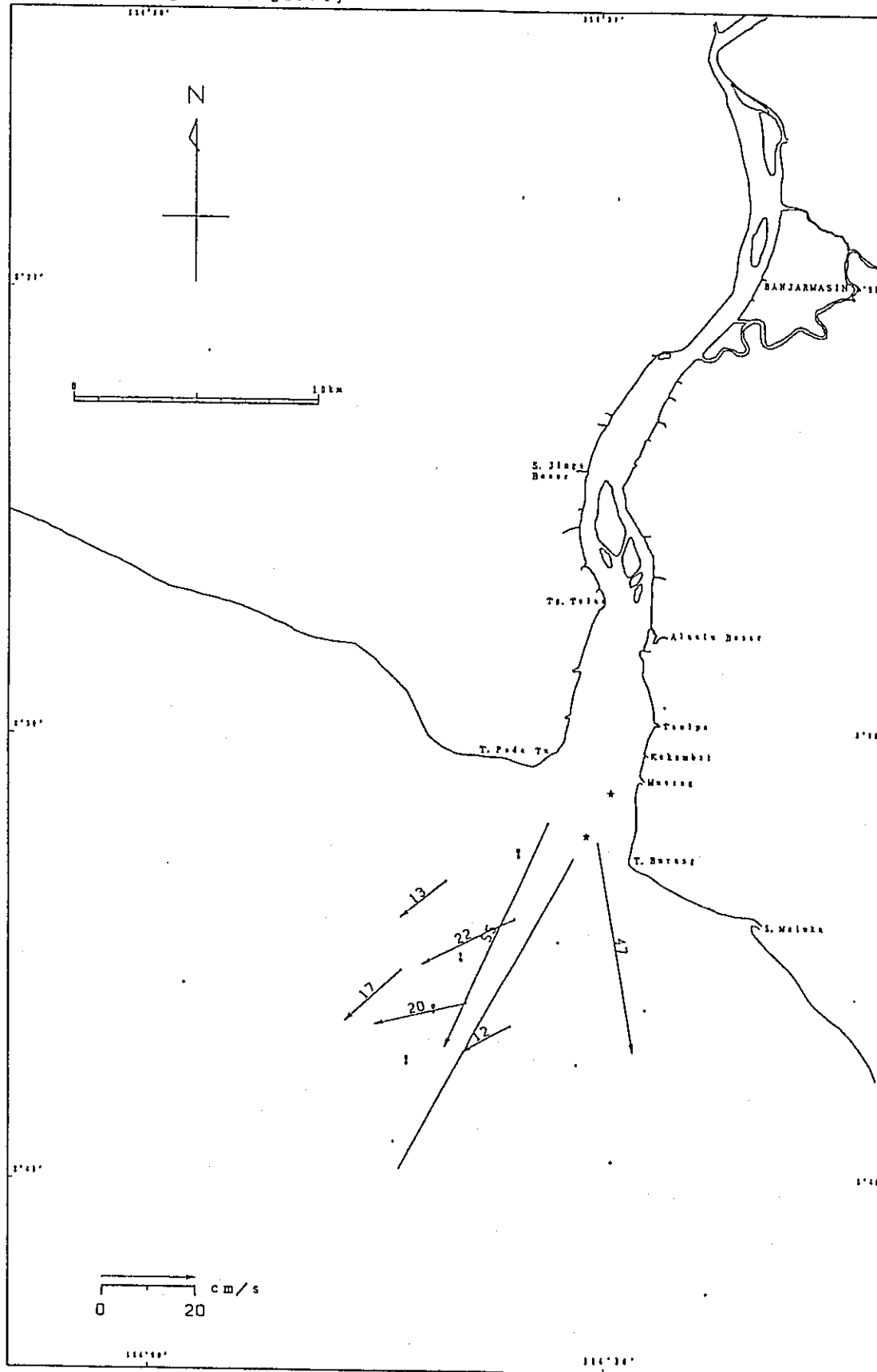
Date : 8th Sep. 1988
 Time : 9:00
 Stage: 1st General Survey



note: (H. W) High Water, (H+1) or (L-1) 1 hour after H. W or L. W
 (L. W) Low Water, (H-1) or (L-1) 1 hour before H. W or L. W

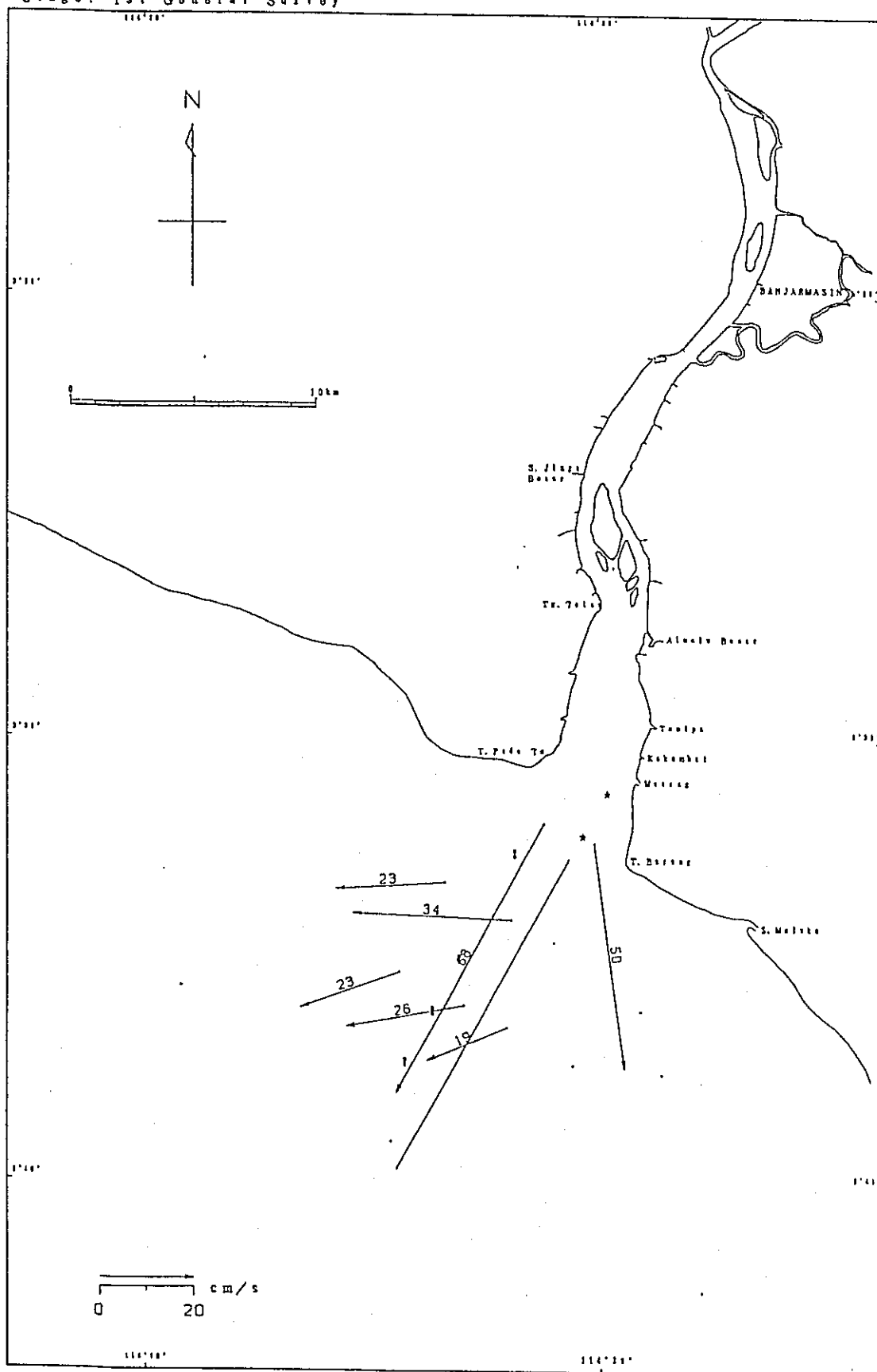
Fig. 3. 2-6 (5) Current Condition (H +4)

Date : 8th Sep. 1988
 Time : 10:00
 Stage: 1st General Survey



note: (H. W.) High Water, (H+1) or (L-1) hour after H. W or L. W
 (L. W.) Low Water, (H-1) or (L-1) hour before H. W or L. W
 Fig. 3. 2-6 (6) Current Condition (H+5)

Date : 8th Sep. 1988
 Time : 11:00
 Stage: 1st General Survey

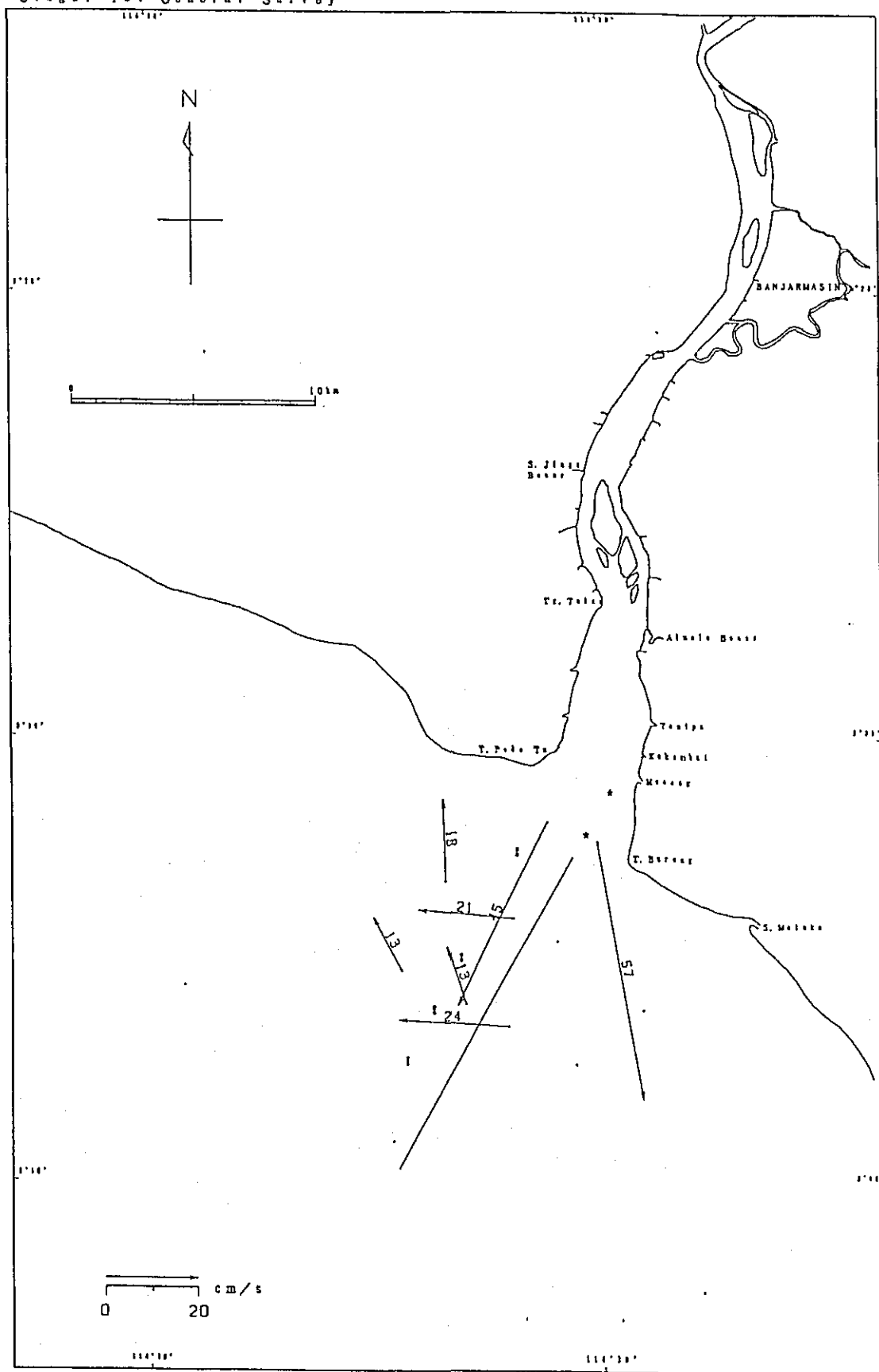


note: (H. W) High Water, (H+1) or (L+1) 1 hour after H. W or L. W
 (L. W) Low Water, (H-1) or (L-1) 1 hour before H. W or L. W
 Fig. 3. 2-6 (7) Current Condition (H-6)

Map of the Banjarmasin area showing bathymetry, depth contours, and current measurements. The map includes a north arrow, a 30km scale bar, and labels for various locations: S. Jera Besar, T. Tala, Alunin Besar, T. Poda To, T. Buraq, S. Muluha, T. Tala, Kekambai, and Muluha. Depth contours are marked with values 20, 33, 55, 12, 15, and 45. A star symbol is located near the center of the map.

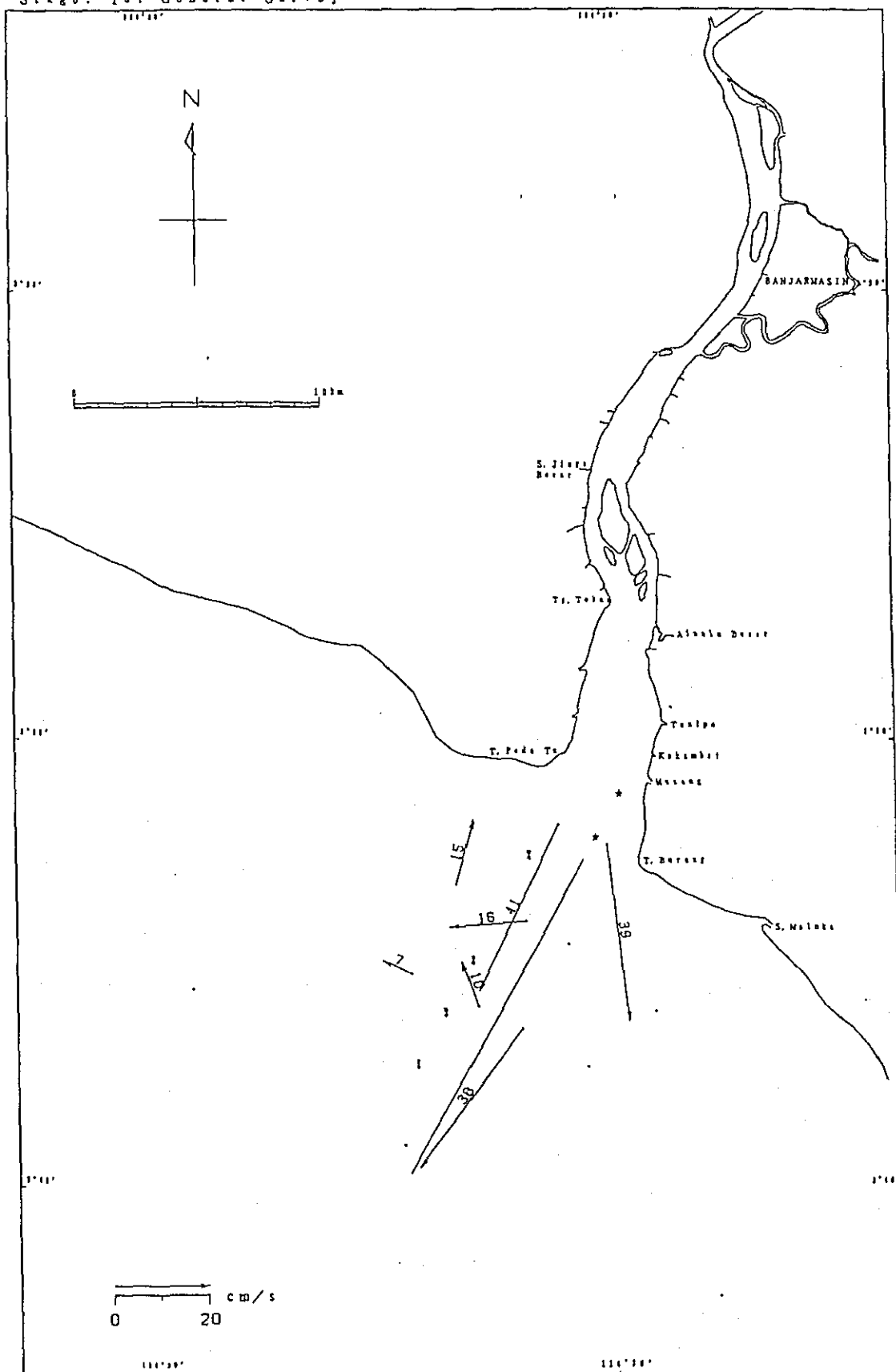
131

Date : 8th Sep. 1988
 Time : 13:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (9) Current Condition (H -3)

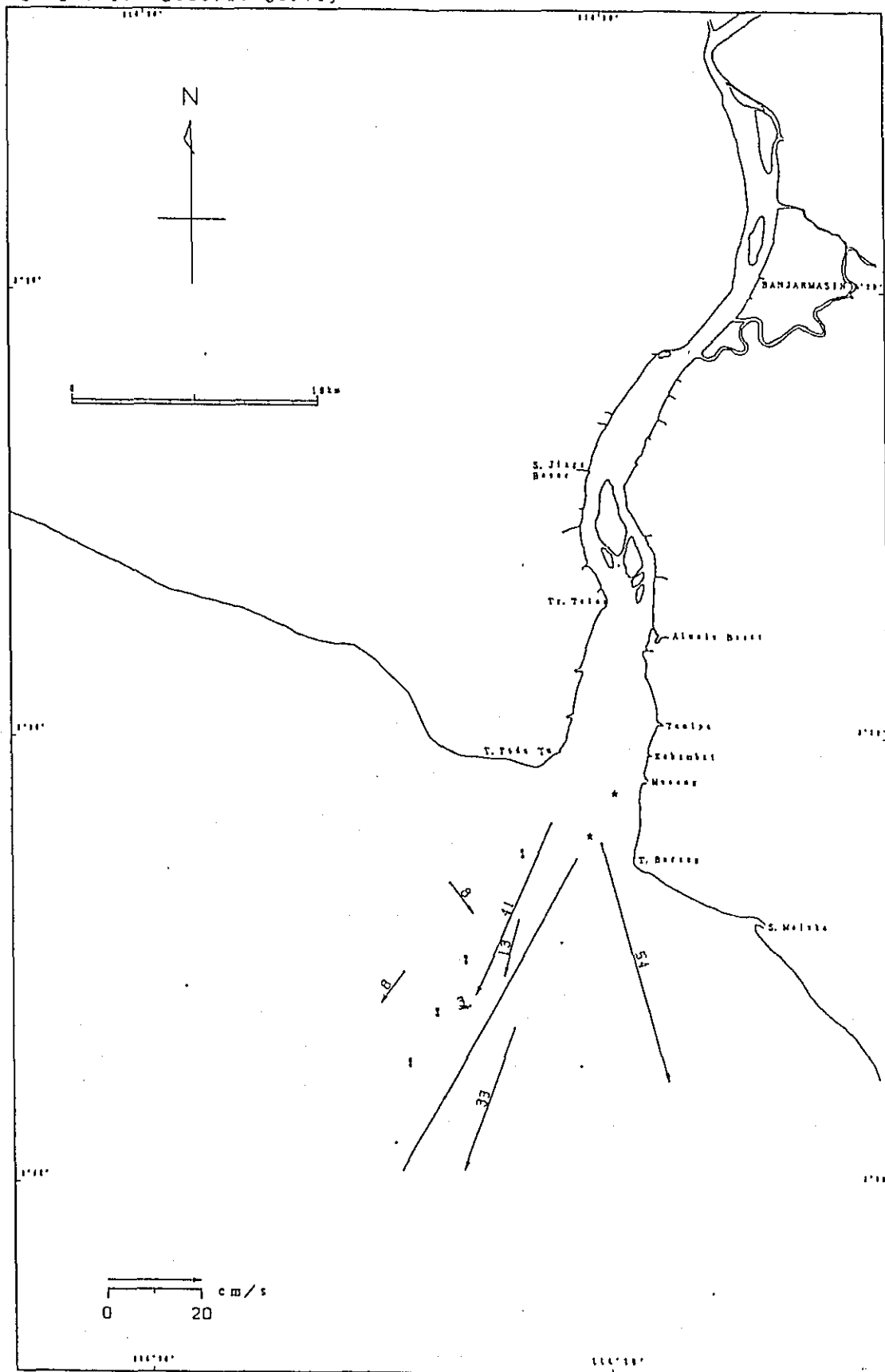
Date : 8th Sep. 1988
 Time : 14:00
 Stage: 1st General Survey



note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L, W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

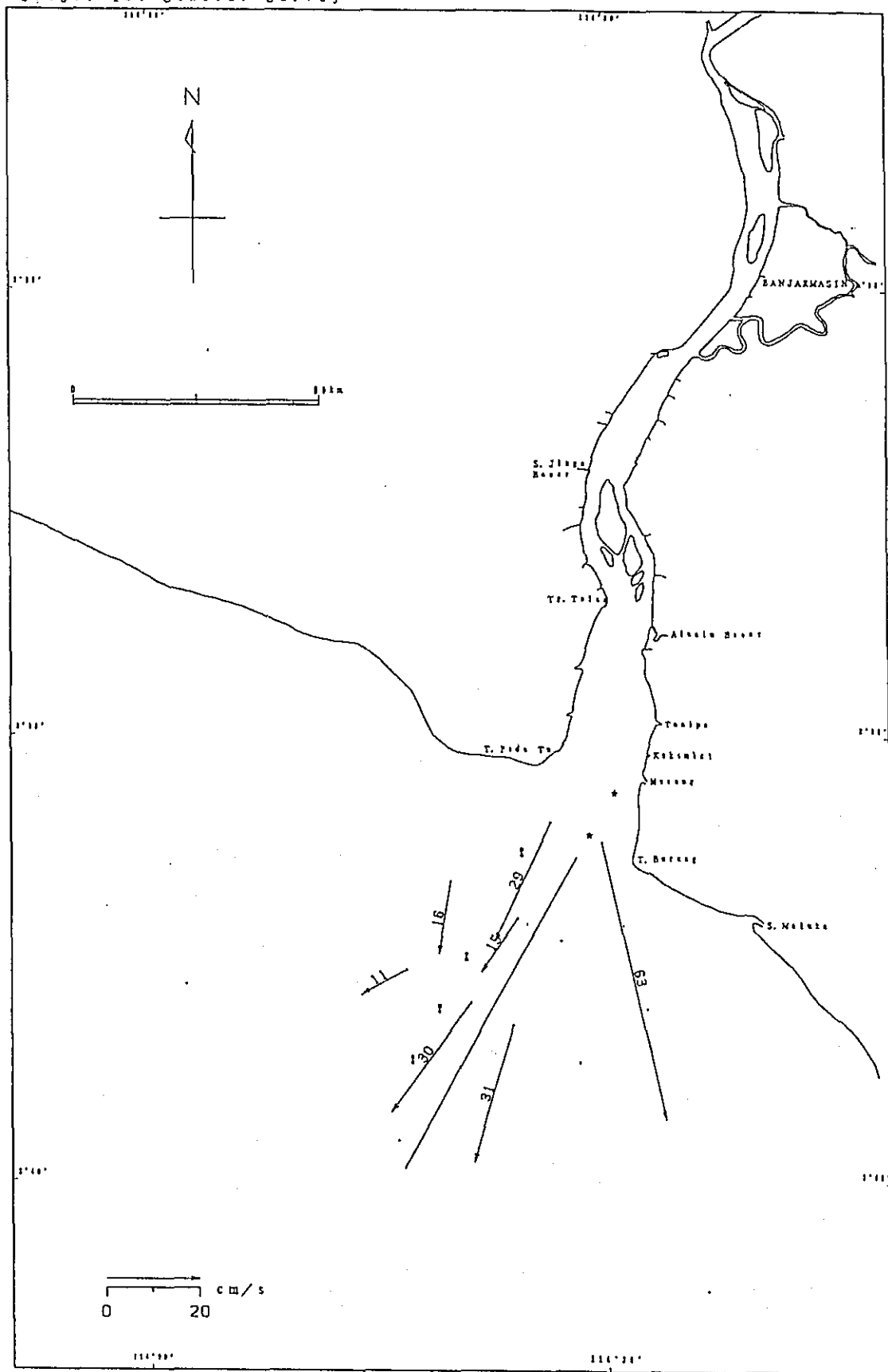
Fig. 3. 2-6 (10) Current Condition (H-3)

Date : 8th Sep. 1988
 Time : 15:00
 Stage: 1st General Survey



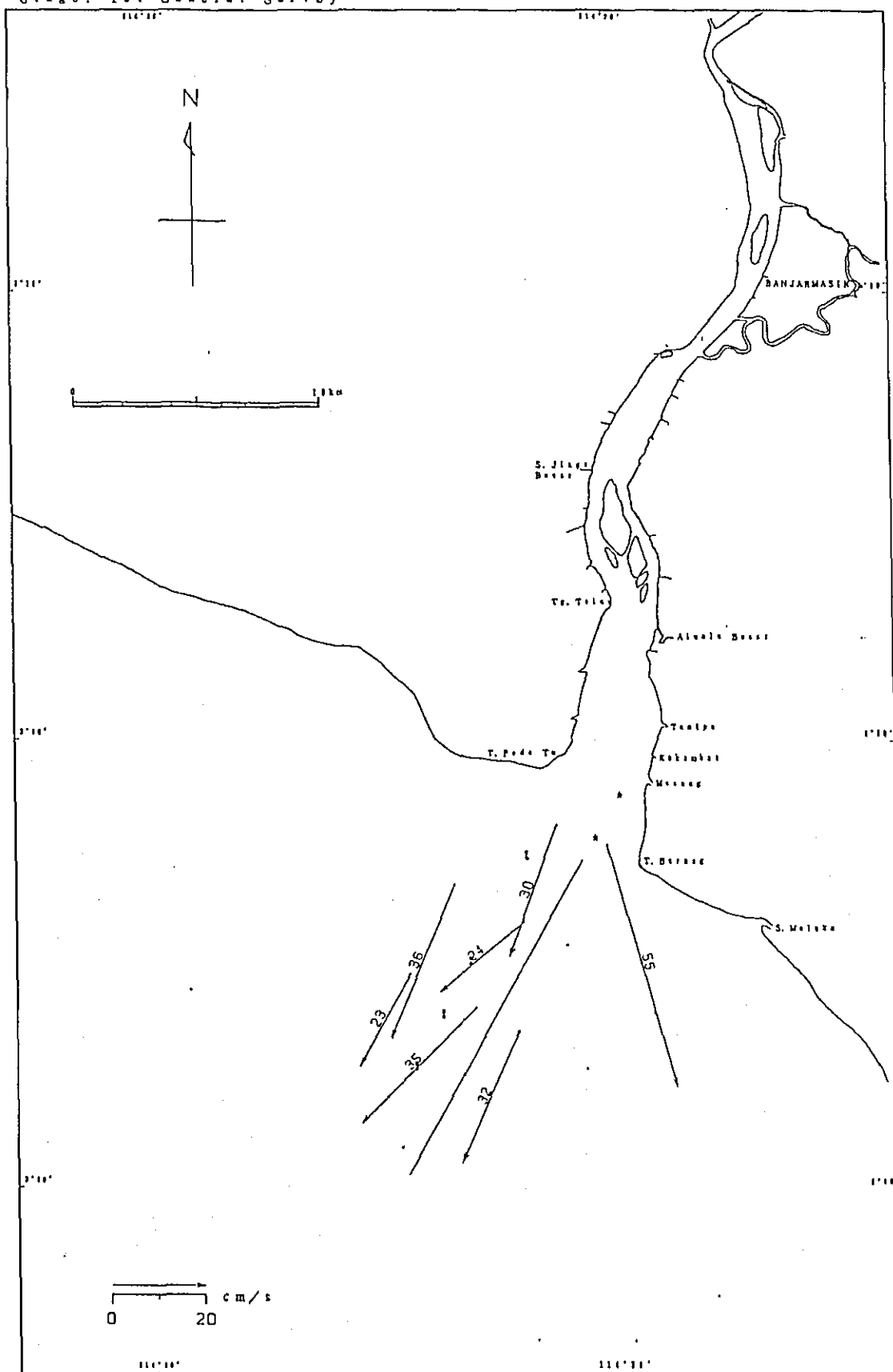
note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (1) Current Condition (H-7)

Date : 8th Sep. 1988
 Time : 16:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (2) Current Condition (H-6)

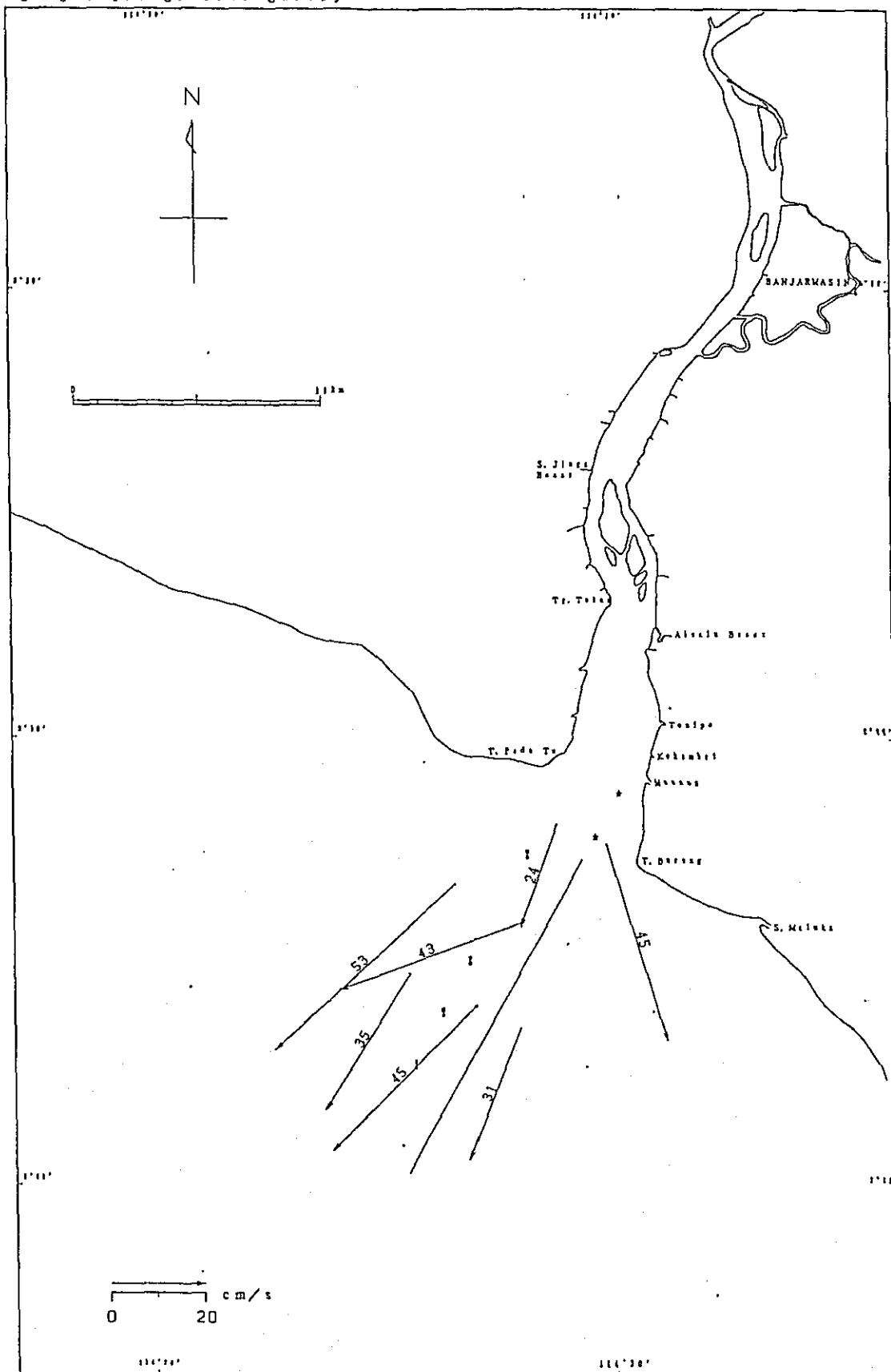
Date : 8th Sep. 1988
 Time : 17:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

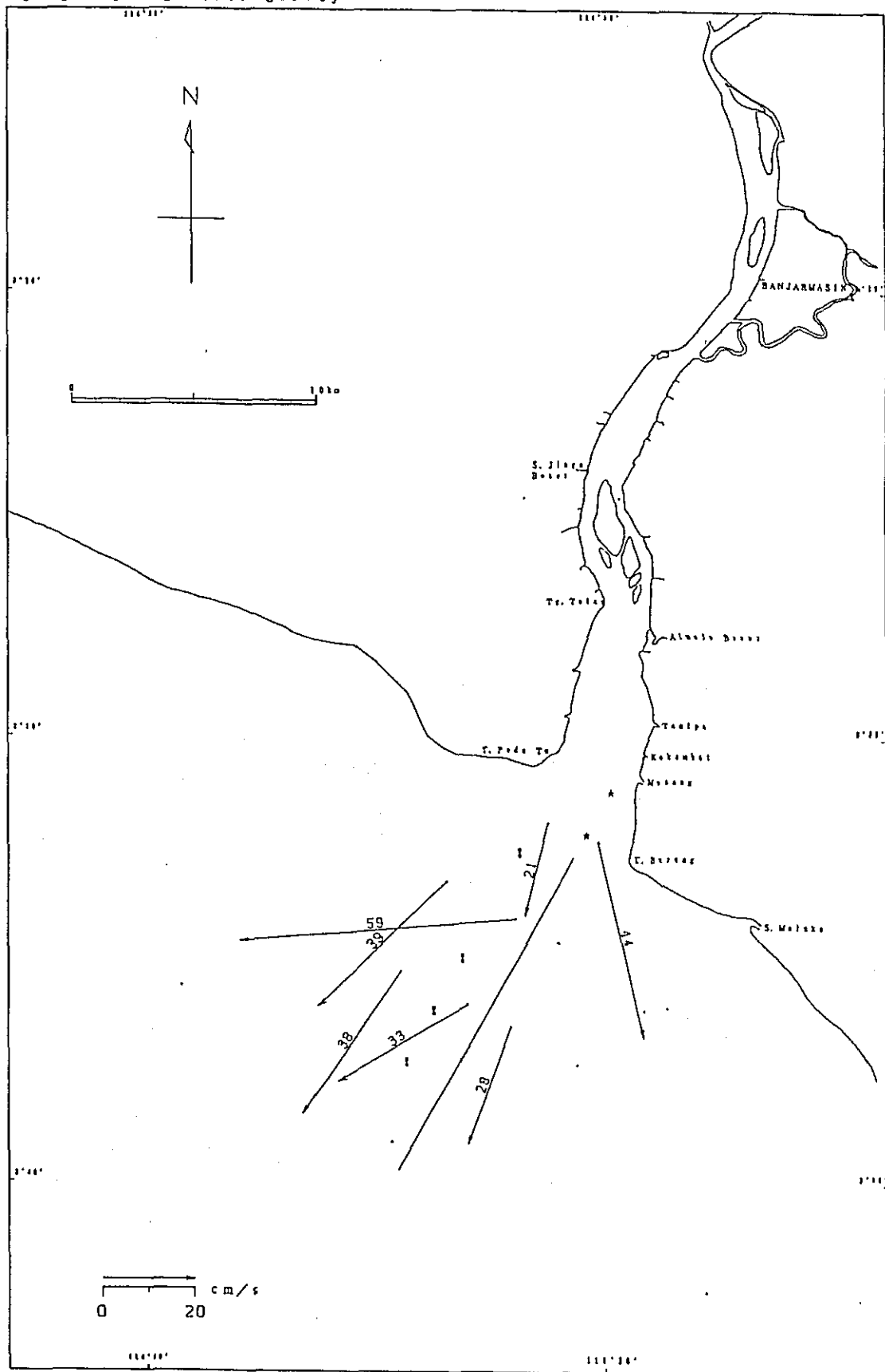
Fig. 3. 2-6 (3) Current Condition (H-5)

Date : 8th Sep. 1988
 Time : 18:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (4) Current Condition (H-4)

Date : 8th Sep. 1988
 Time : 19:00
 Stage: 1st General Survey



note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W

Fig. 3. 2-6 (5) Current Condition (H-3)

The map displays the Banjarmasin region with the following features:

- Geographic Labels:** BANJARMASIN, S. Jeneb Besar, T. Tala, T. Poda To, T. Biring, S. Melina, T. Tala, T. Poda To, T. Biring, S. Melina.
- Scale and Orientation:** A north arrow is located in the upper left. A scale bar at the top left indicates 0 to 10 km. A scale bar at the bottom left indicates 0 to 20 cm/s.
- Flow Field:** A series of arrows with numerical values (18, 20, 27, 30, 33, 34, 35) representing flow direction and magnitude. The arrows generally point towards the southeast, with values increasing from 18 to 35.

Fig. 3. 2-6 (16) Current Condition (H-2)

The map shows the Banjarmasin area with the following features:

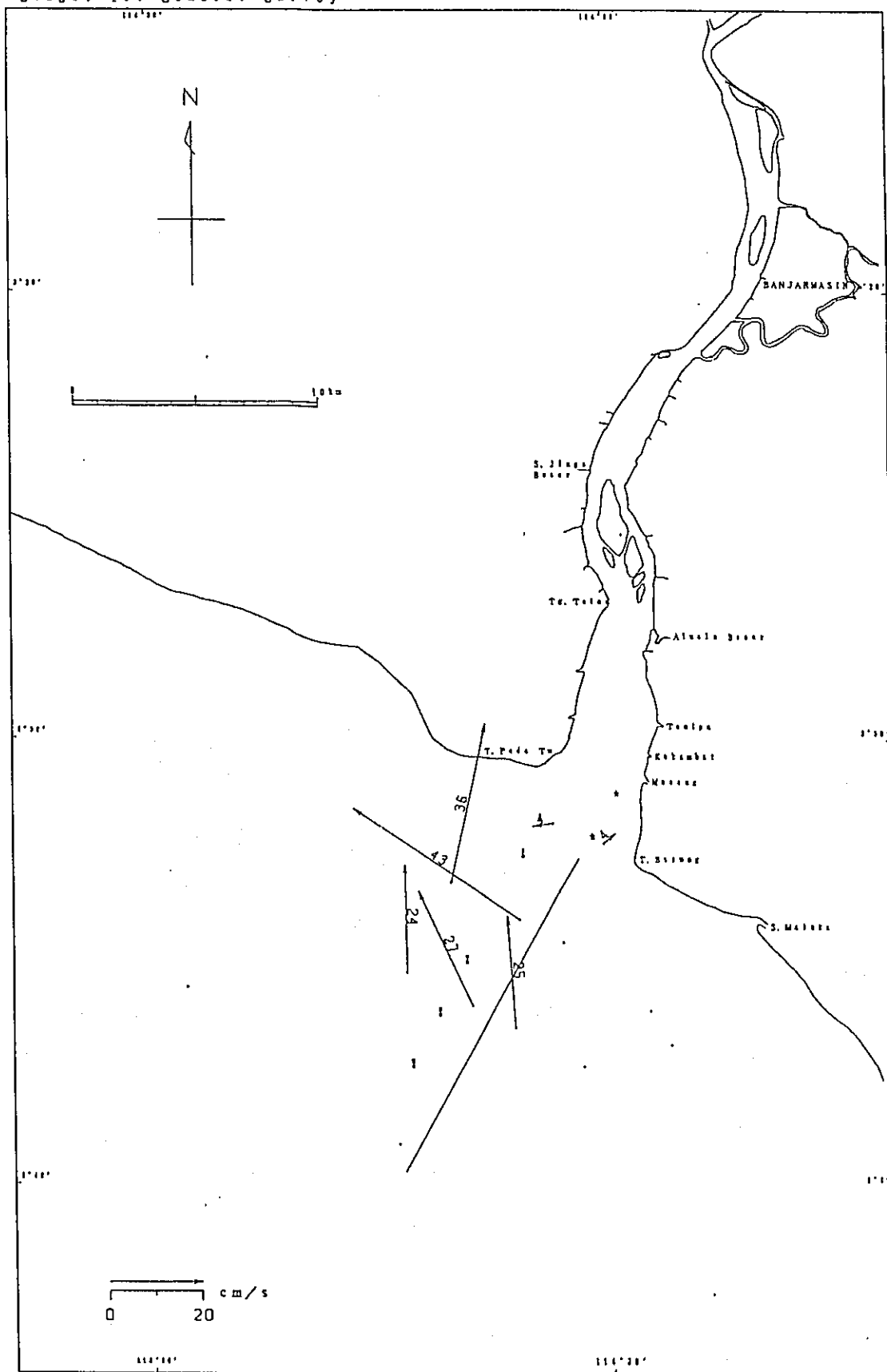
- Coastline and Rivers:** The coastline is on the right, with rivers flowing into the sea. Labeled rivers include S. Ilala Besar, Alimela Besar, and S. Malaka.
- Locations:** Tg. Tolo, T. Pado To, T. Bising, and T. Malaka are marked along the coast.
- Tide Gauge Station:** A diagram in the lower center shows a station with several measurement lines and values: 21, 40, 20, 35, 1, and 13.
- Scale and Orientation:** A north arrow is in the top left, and a scale bar (0 to 10 km) is in the bottom left.
- Coordinates:** The map is bounded by latitude 1°10'N to 1°20'N and longitude 114°10'E to 114°20'E.

Fig. 3. 2-6 (17) Current Condition (H-1)

Map of the coastal area around Banjarmasin, Indonesia, showing bathymetry, depth contours, and current measurements. The map includes a north arrow, a scale bar (0-20 cm/s), and labels for various locations: Banjarmasin, S. Jlinga River, Ta. Tulu, T. Fada Ta, T. Buring, S. Malaka, and T. Buring. Depth contours are marked with numbers 17, 18, 29, 30, and 31. A scale bar at the bottom left indicates 0 to 20 cm/s.

Fig. 3. 2-6 (18) Current Condition (L. W)

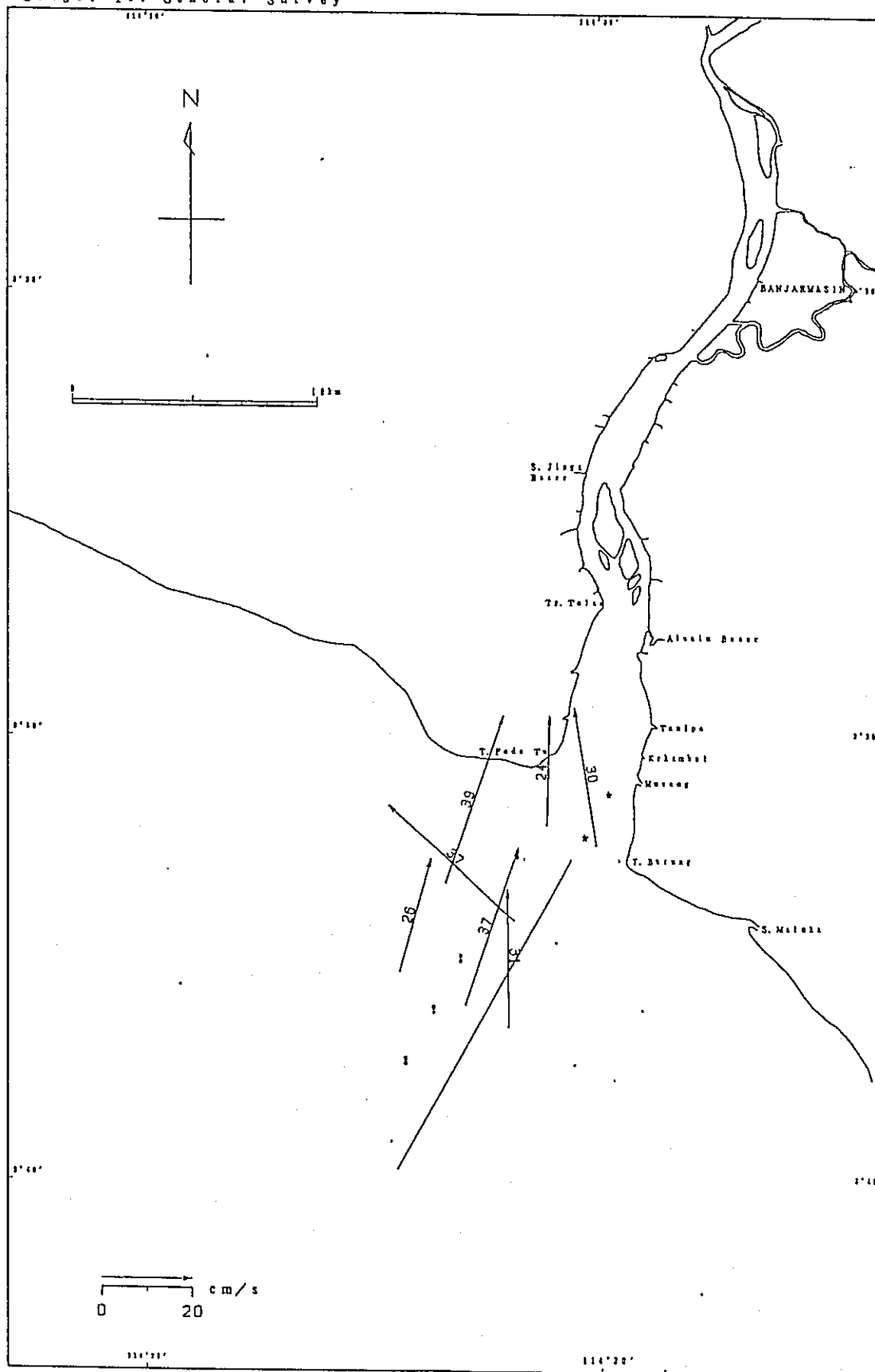
Date : 8th Sep. 1988
 Time : 23:00
 Stage: 1st General Survey



note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L, W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

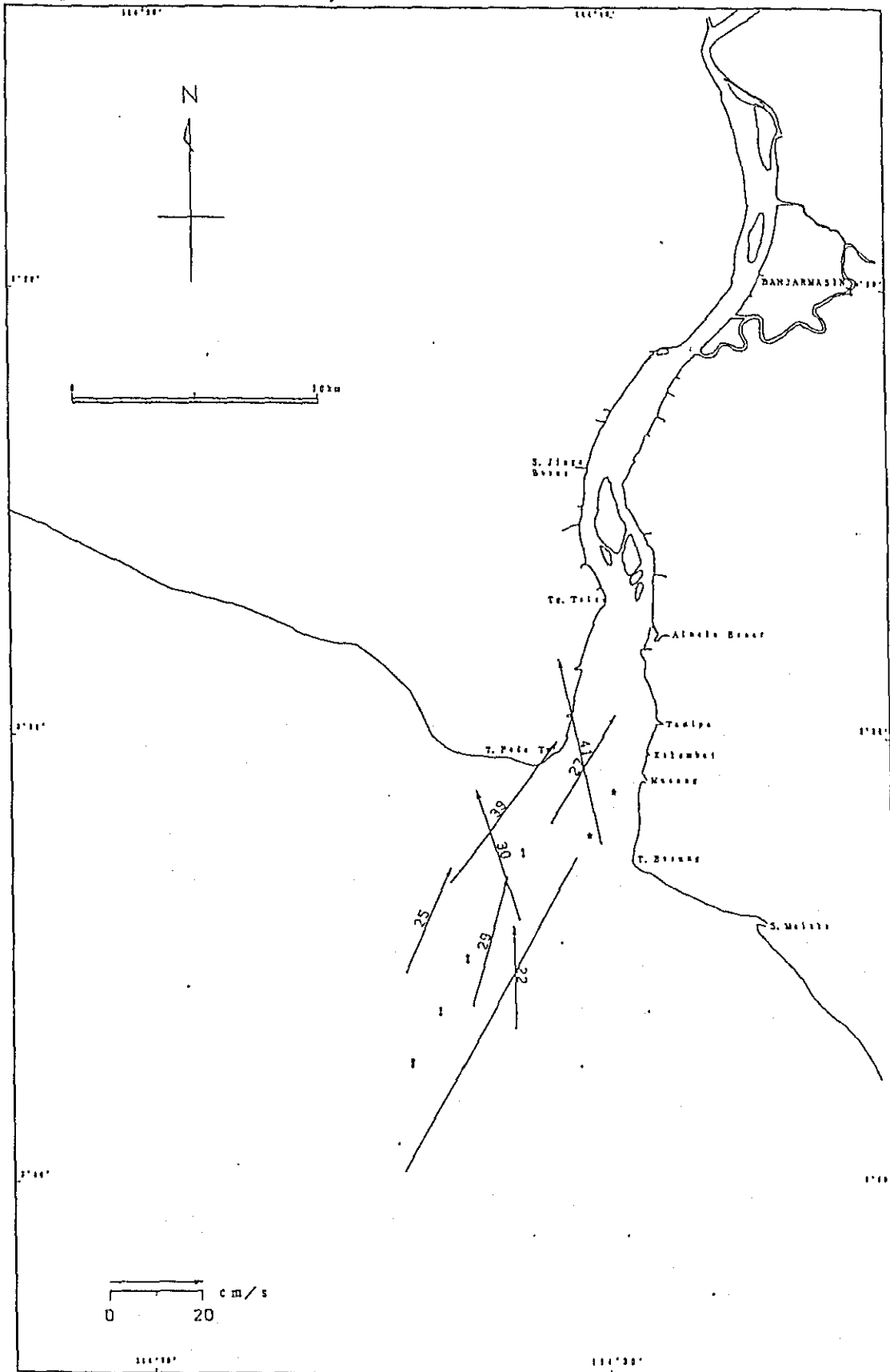
Fig. 3. 2-6 (9) Current Condition (L+1)

Date : 9th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (2) Current Condition (L-2)

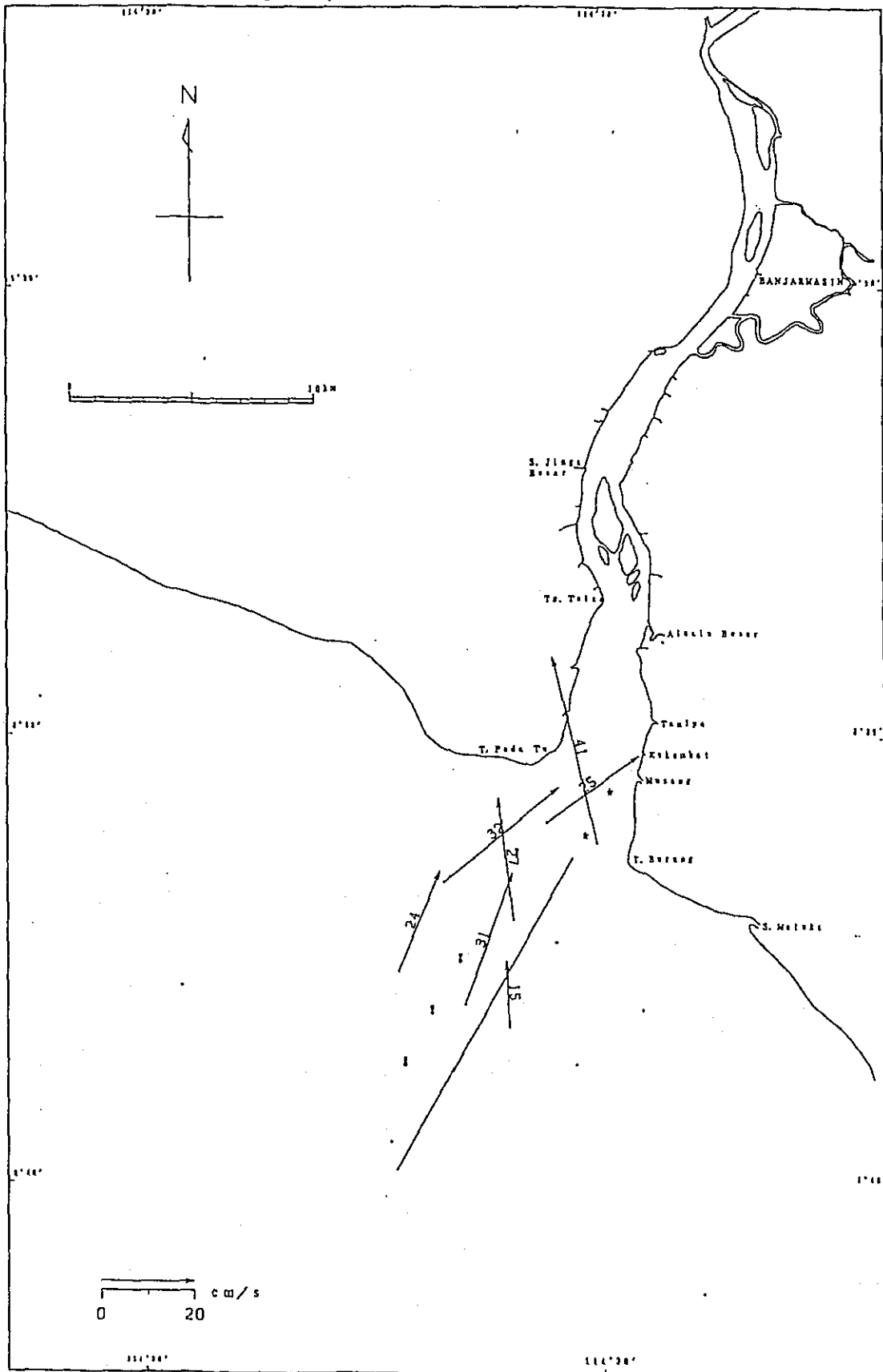
Date : 9th Sep. 1988
 Time : 1:00
 Stage: 1st General Survey



note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L, W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 ②) Current Condition (L-3)

Date : 9th Sep. 1988
 Time : 2:00
 Stage: 1st General Survey

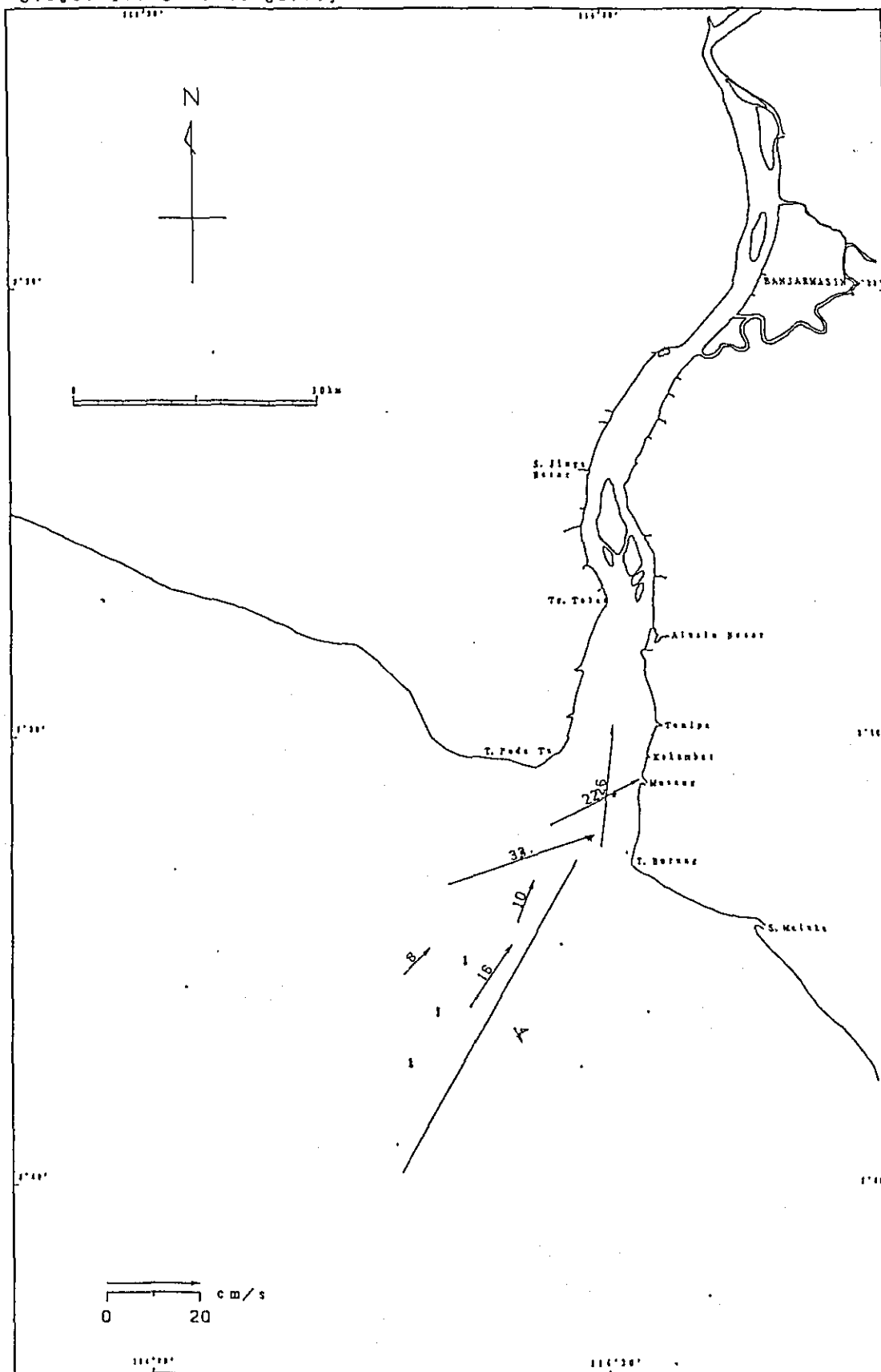


note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (2) Current Condition (L. +4)

Fig. 3. 2-6 (23) Current Condition (H -3)

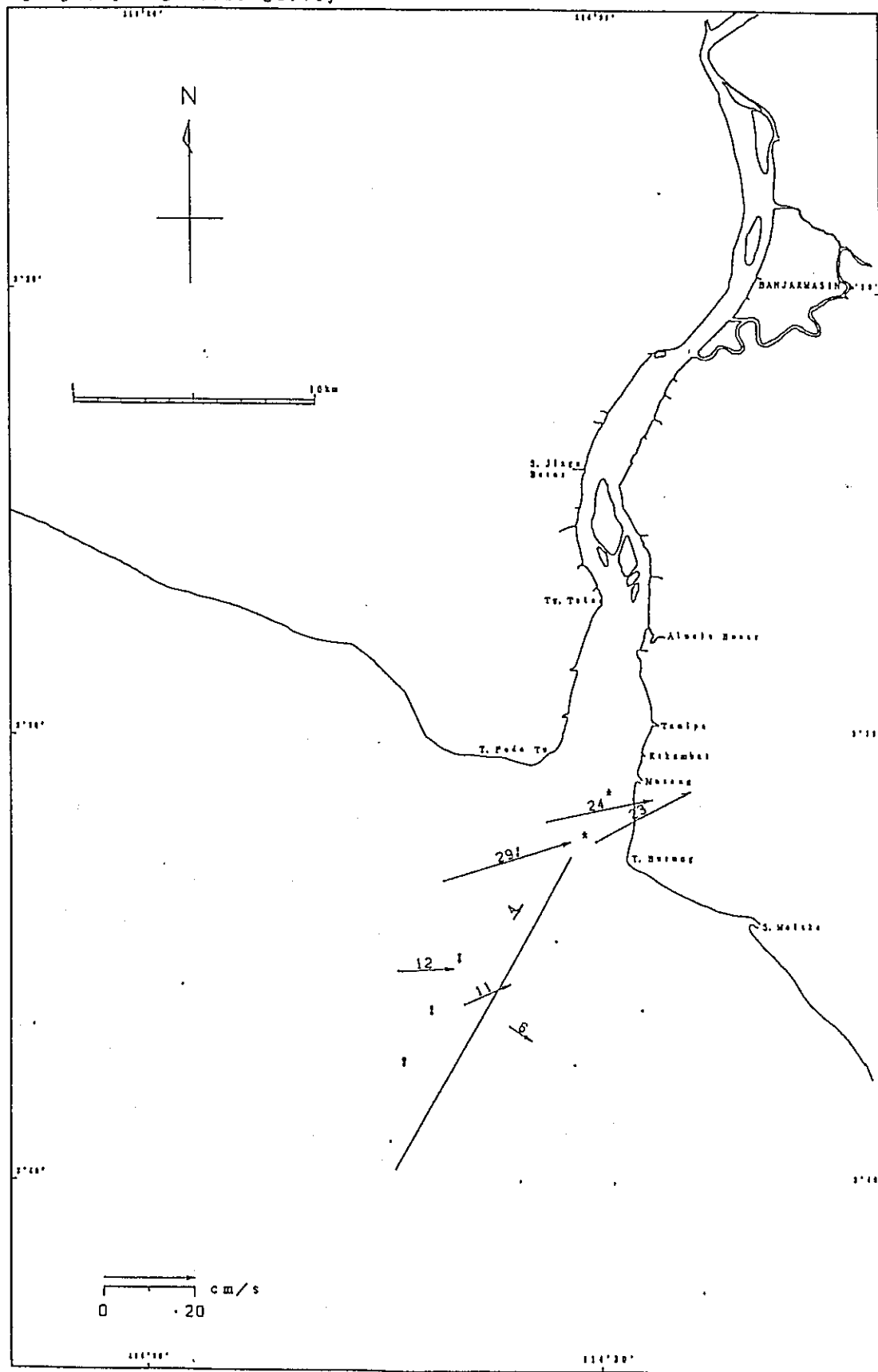
Date : 9th Sep. 1988
 Time : 4:00
 Stage: 1st General Survey



note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W

Fig. 3. 2-6 Q4 Current Condition (H-2)

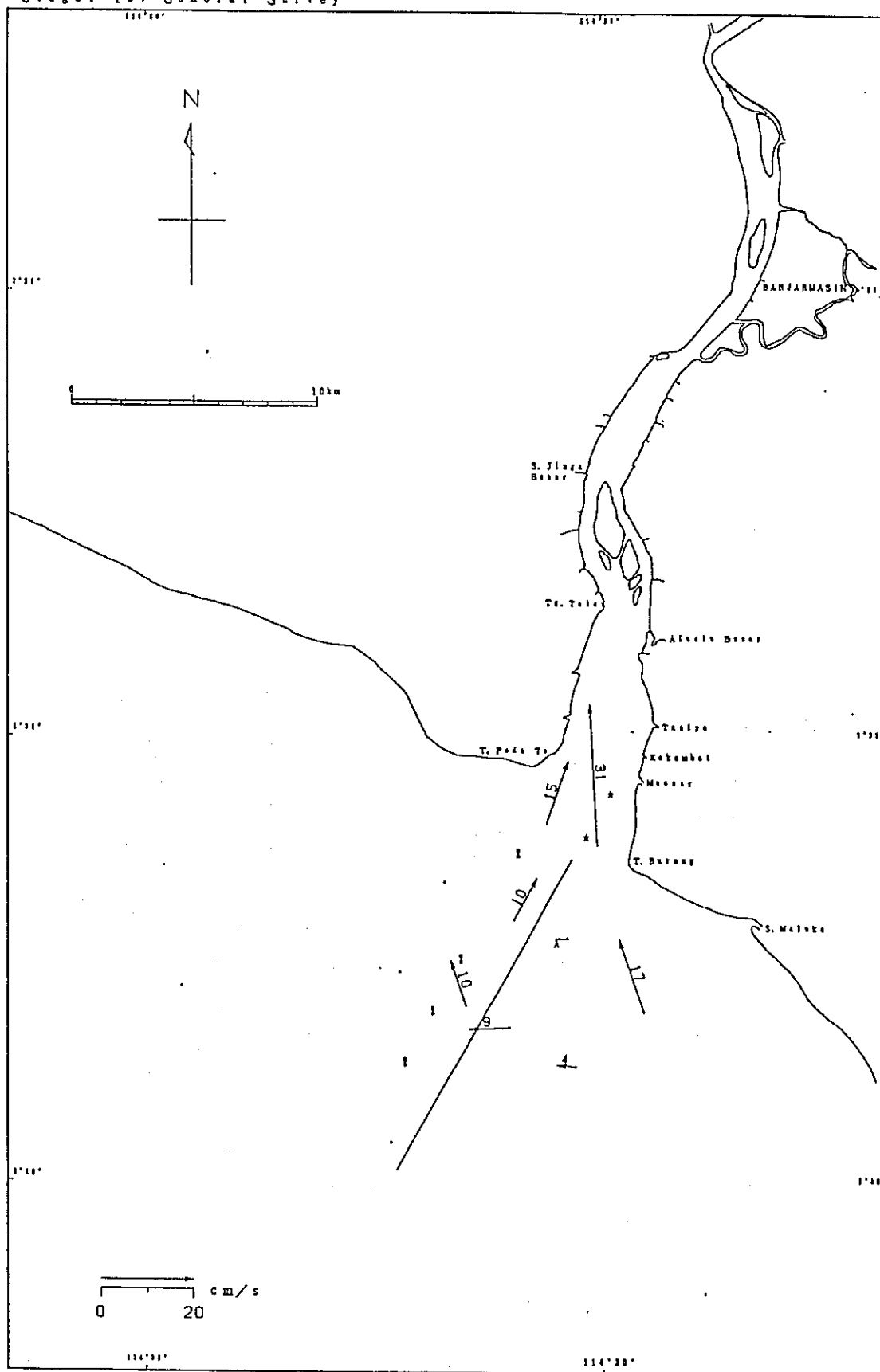
Date : 9th Sep. 1988
 Time : 5:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1hour before H. W or L. W

Fig. 3. 2-6 (5) Current Condition (H-1)

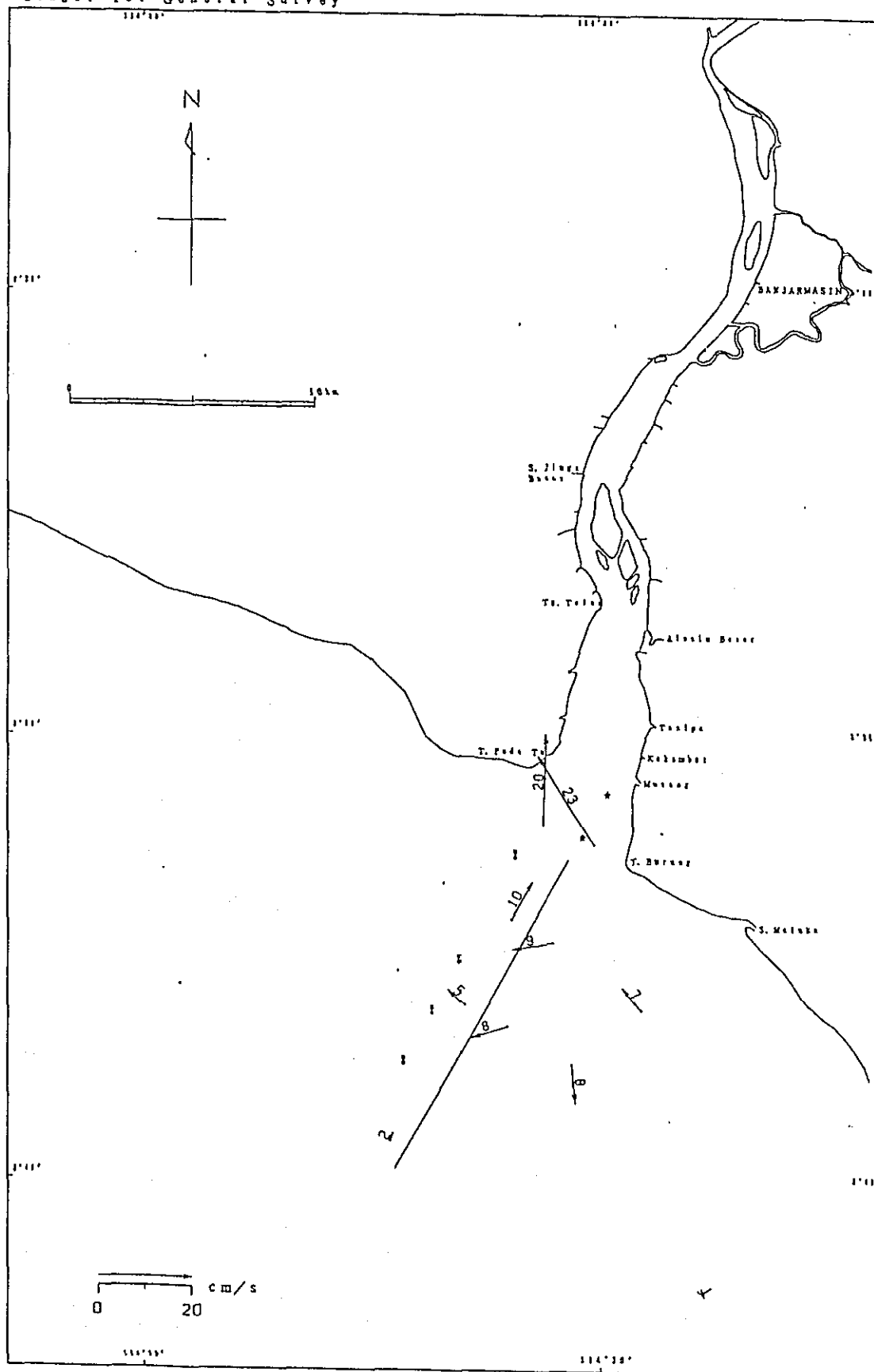
Date : 22th Sep. 1988
 Time : 3:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

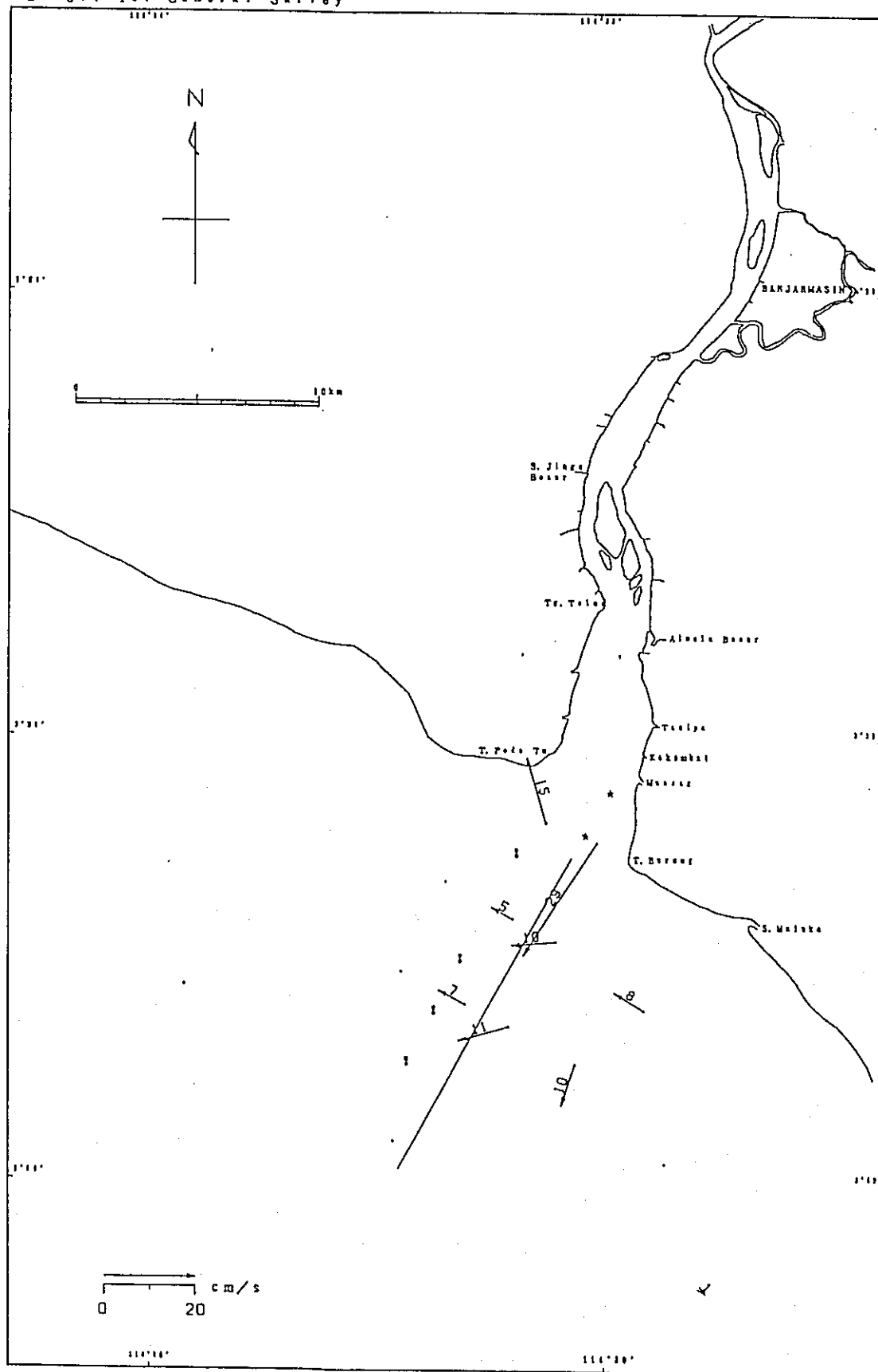
Fig. 3. 2-6 (26) Current Condition (H. W)

Date : 22th Sep. 1988
 Time : 4:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (7) Current Condition (H+1)

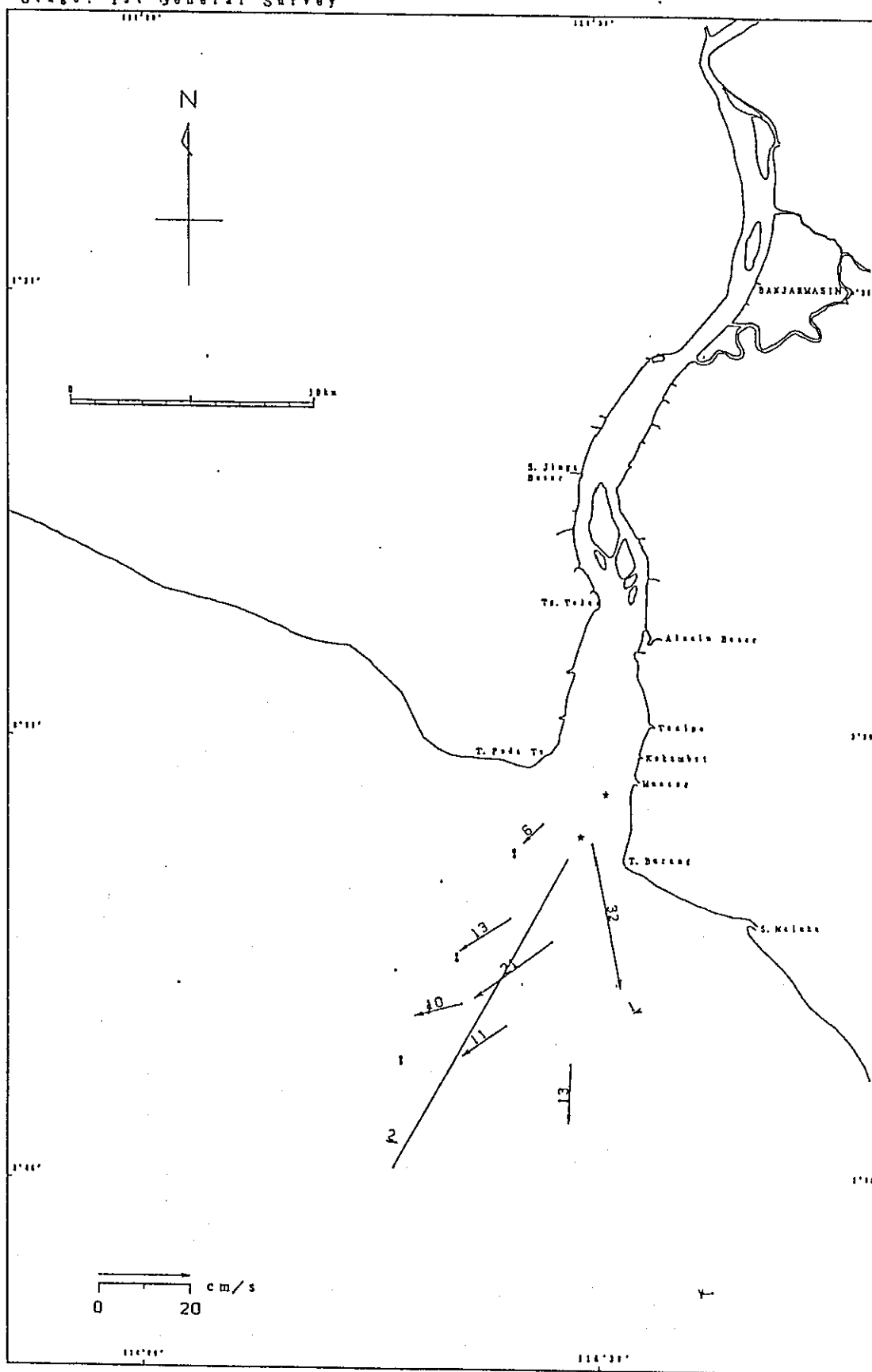
Date : 22th Sep. 1988
 Time : 5:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (28) Current Condition (H #2)

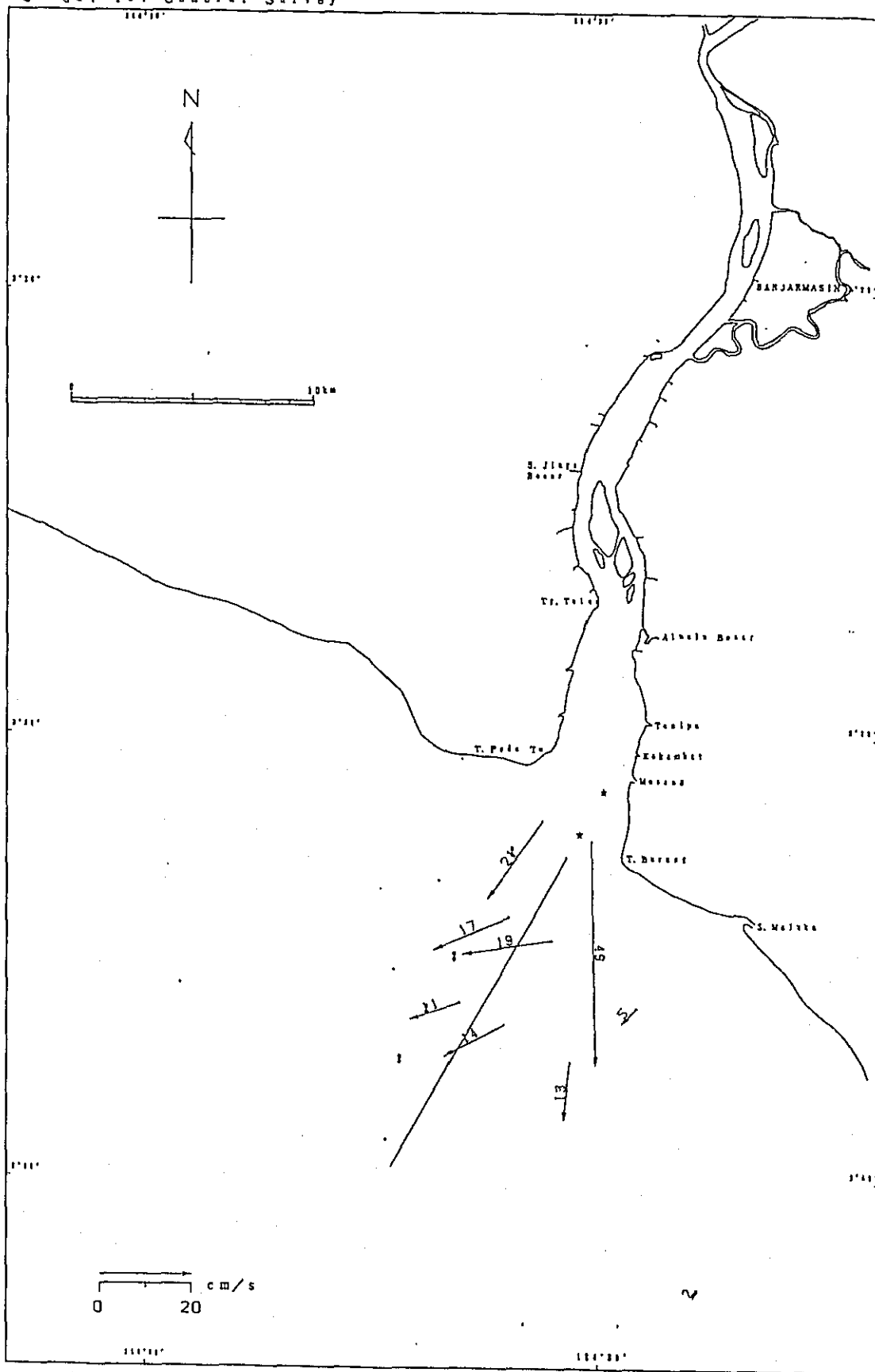
Date : 22th Sep. 1988
 Time : 6:00
 Stage : 1st General Survey



note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H, W or L, W
 (L, W).....Low Water, (H-1) or (L-1).....1 hour before H, W or L, W

Fig. 3. 2-6 (2) Current Condition (H+3)

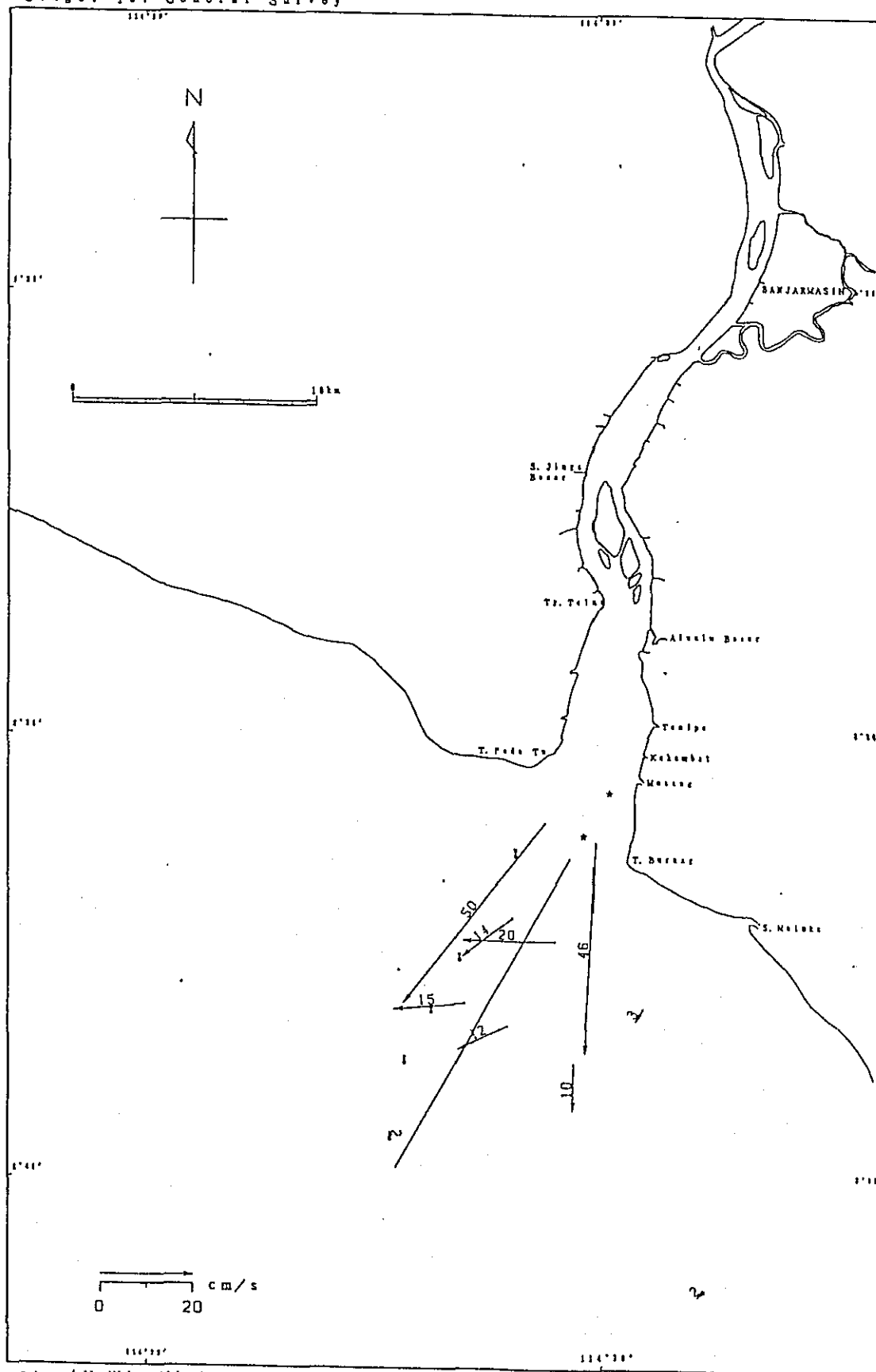
Date : 22th Sep. 1988
 Time : 7:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (0) Current Condition (H+4)

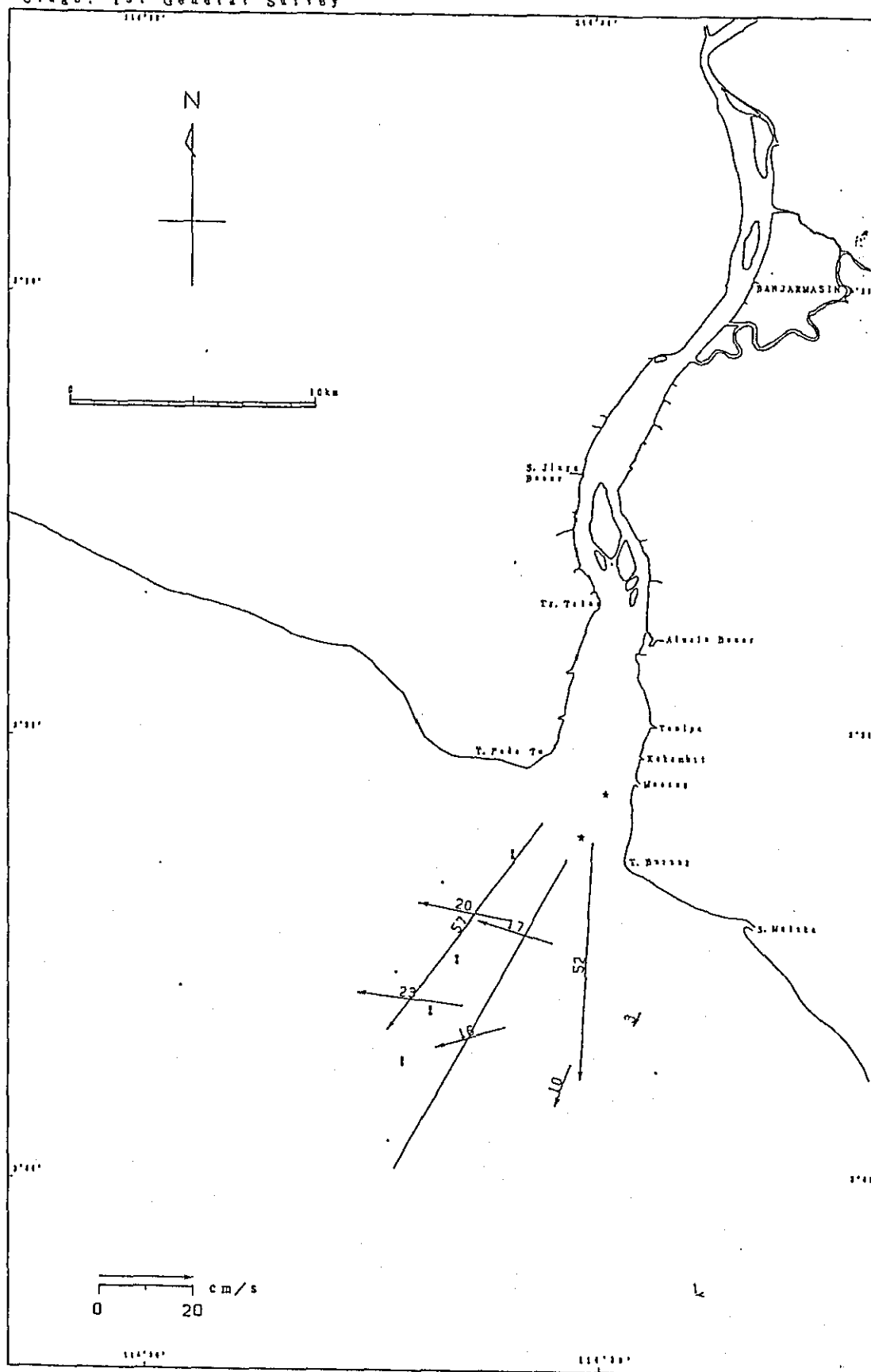
Date : 22th Sep. 1988
 Time : 8:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

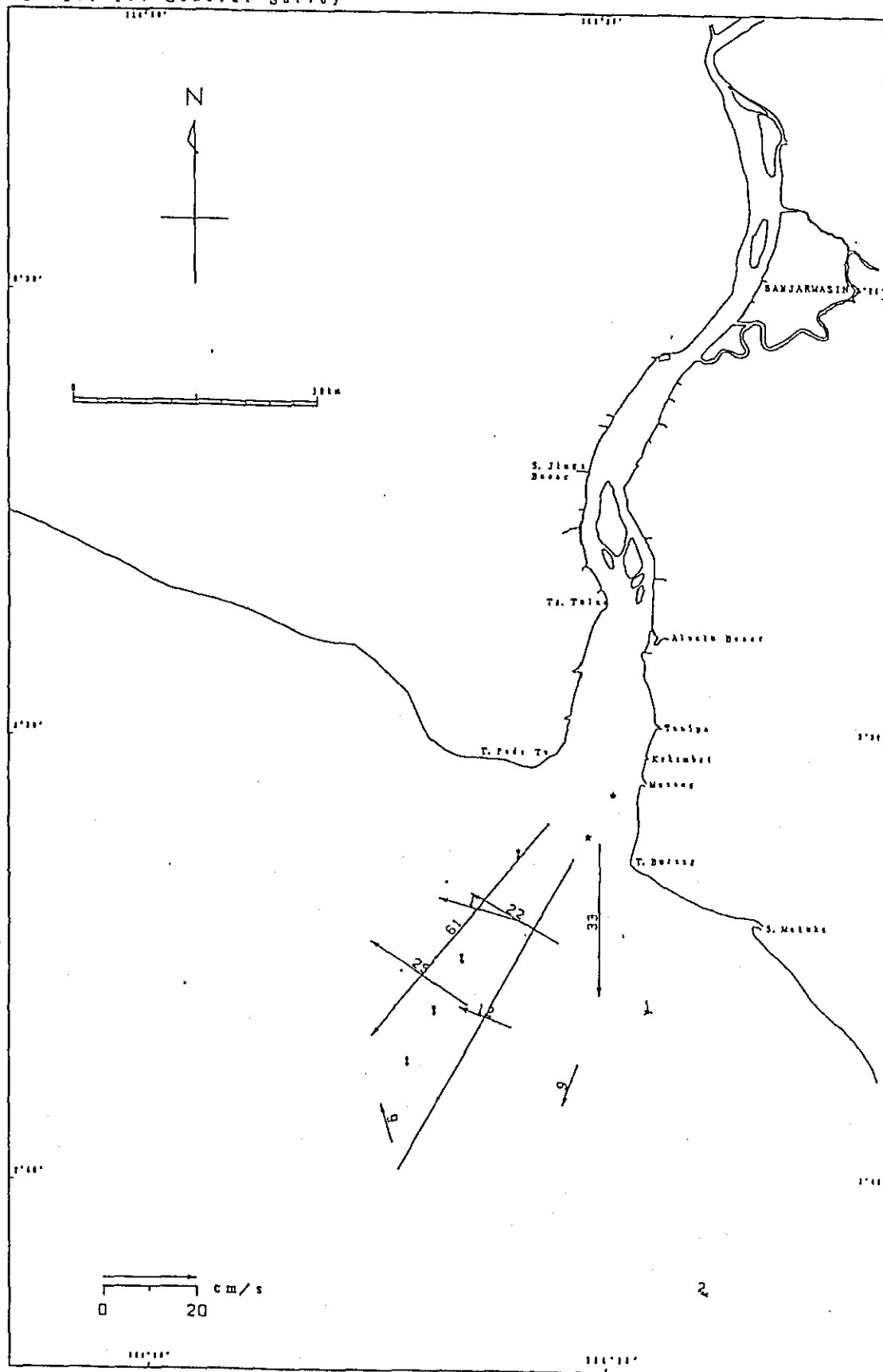
Fig. 3. 2-6 3D Current Condition (H +5)

Date : 22th Sep. 1988
 Time : 9:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 02) Current Condition (H +6)

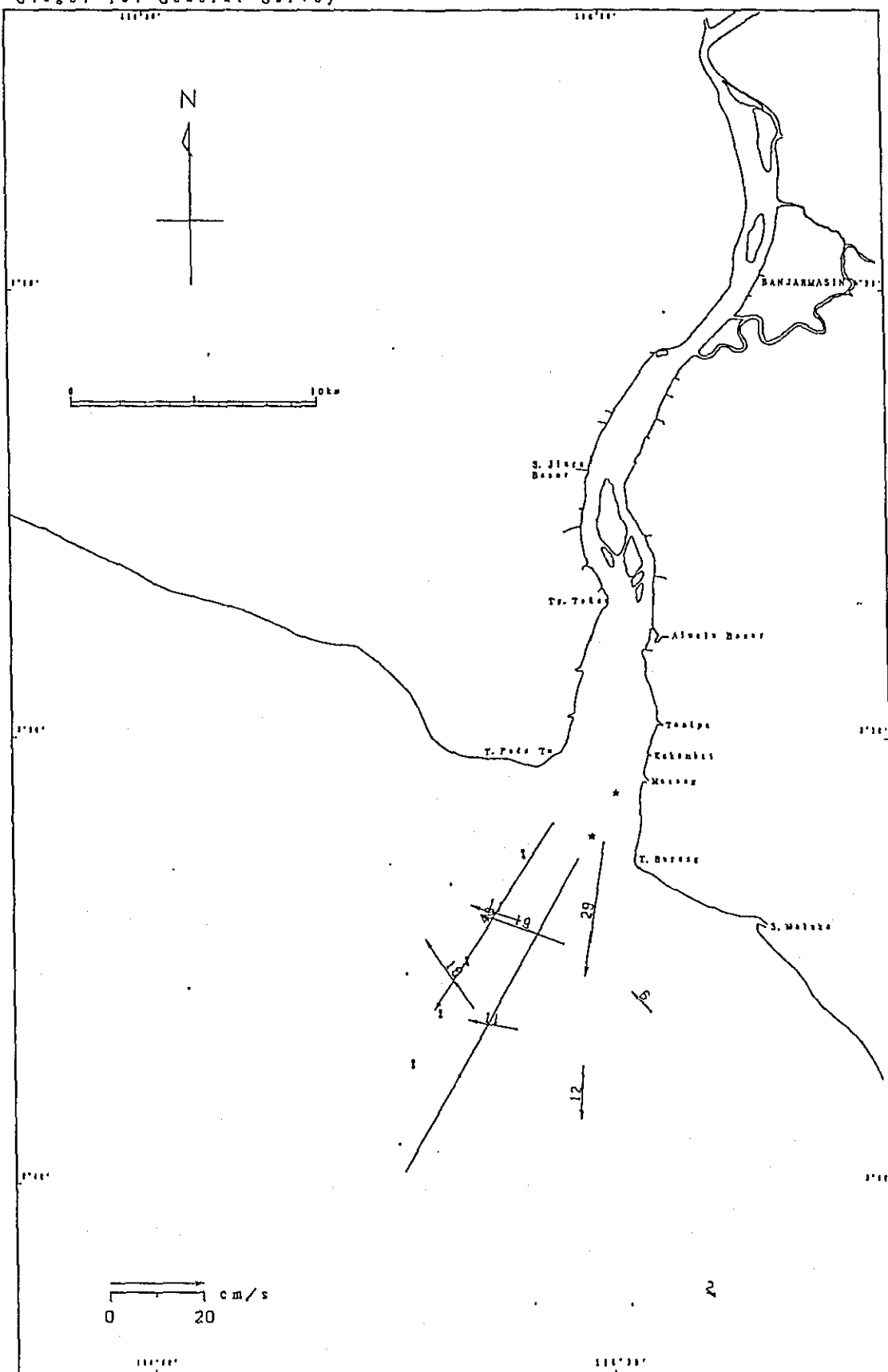
Date : 22th Sep. 1988
 Time : 10:00
 Stage: 1st General Survey



note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W

Fig. 3. 2-6 (3) Current Condition (H +7)

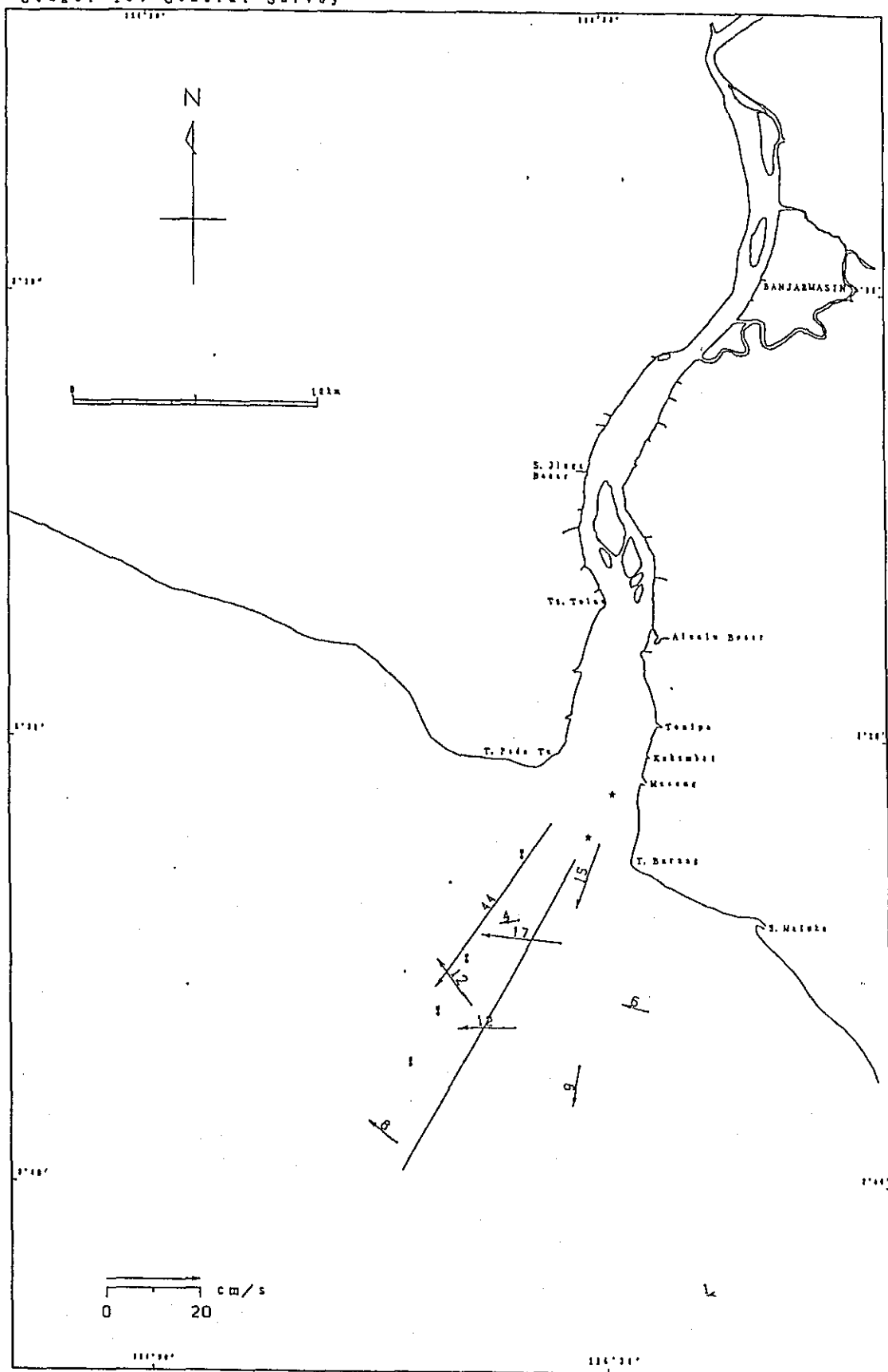
Date : 22th Sep. 1988
 Time : 11:00
 Stage: 1st General Survey



note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W

Fig. 3. 2-6 34) Current Condition (H+8)

Date : 22th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (35) Current Condition (H +9)

Date : 22th Sep. 1988
 Time : 13:00
 Stage: 1st General Survey

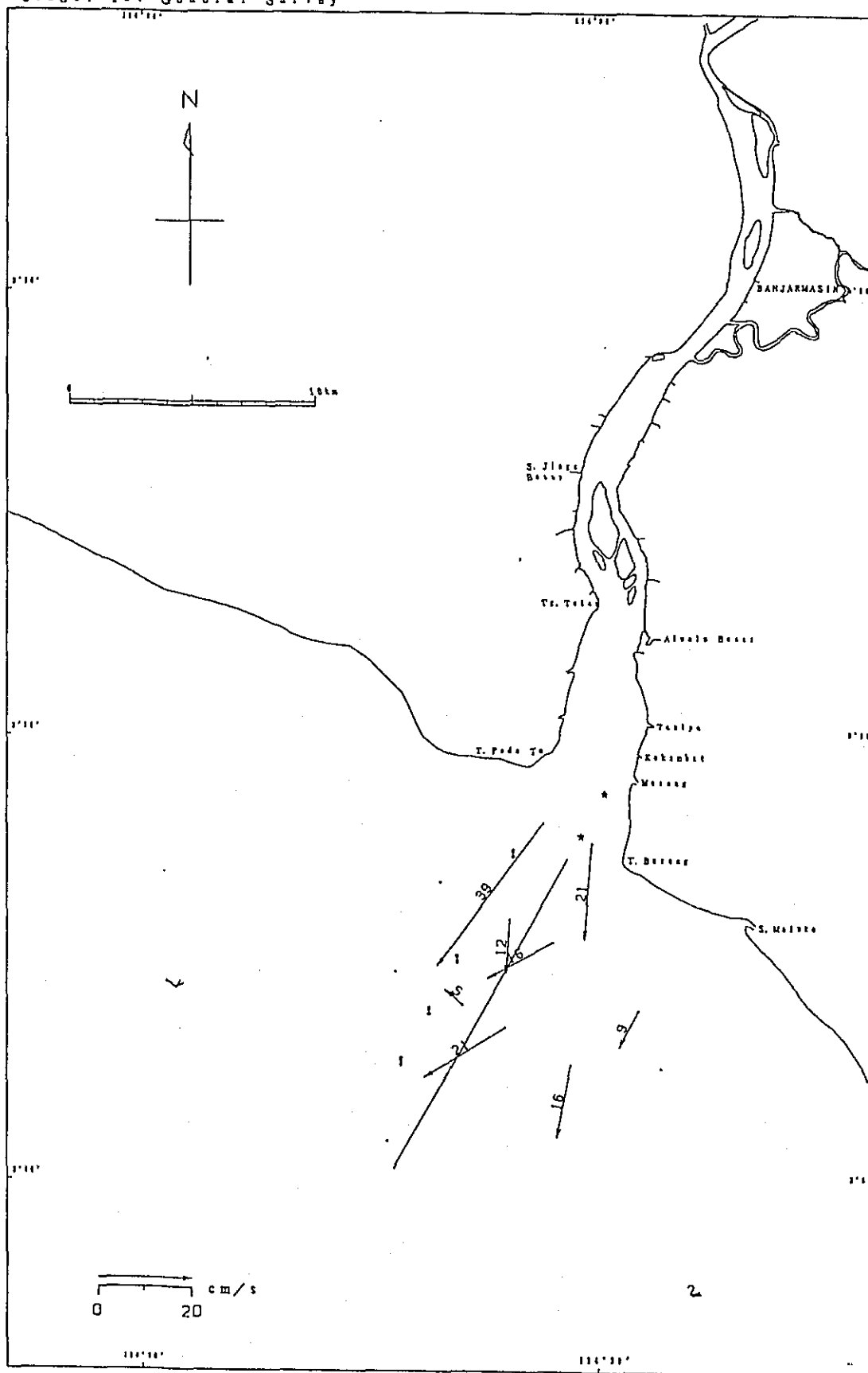
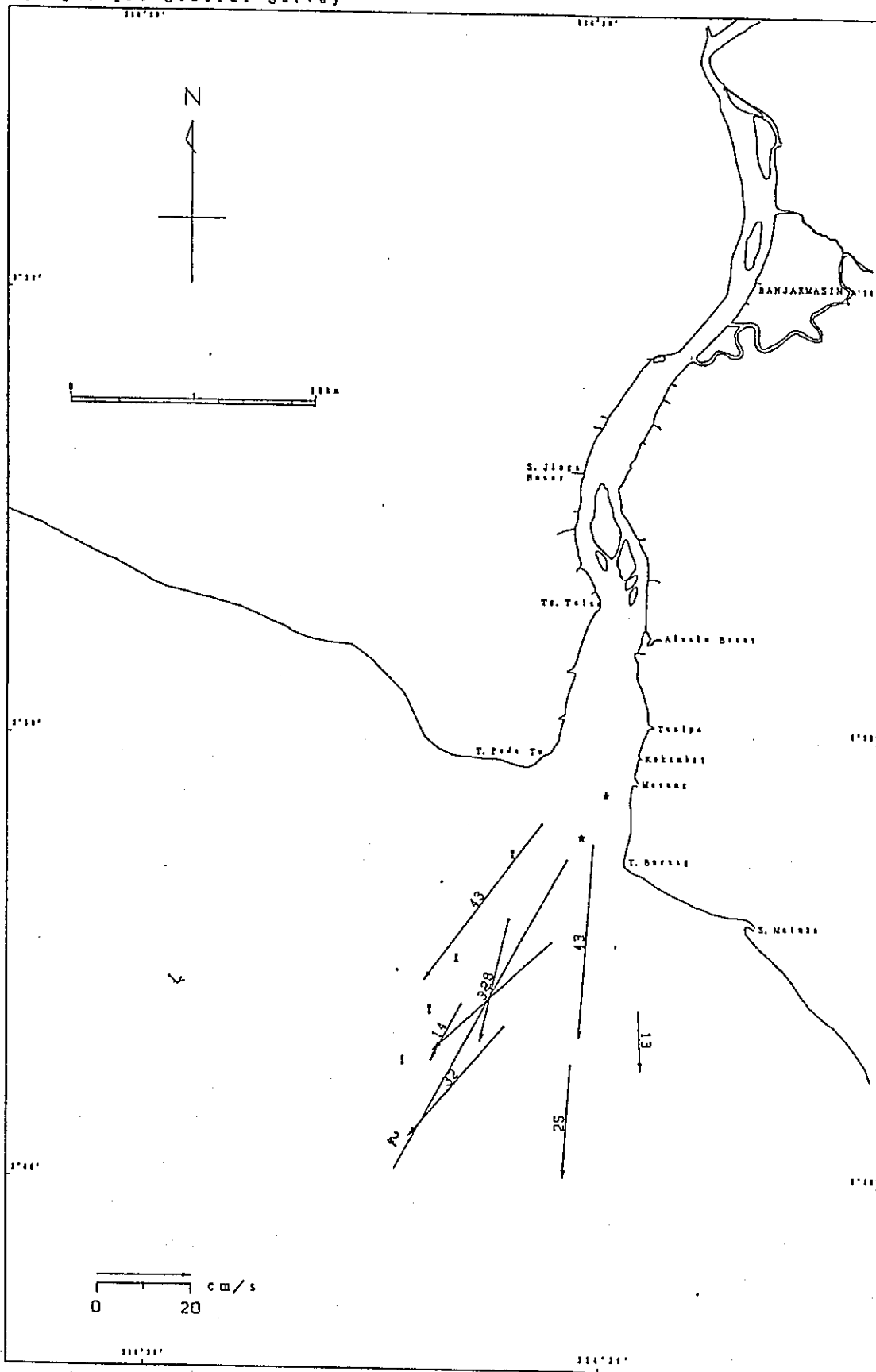


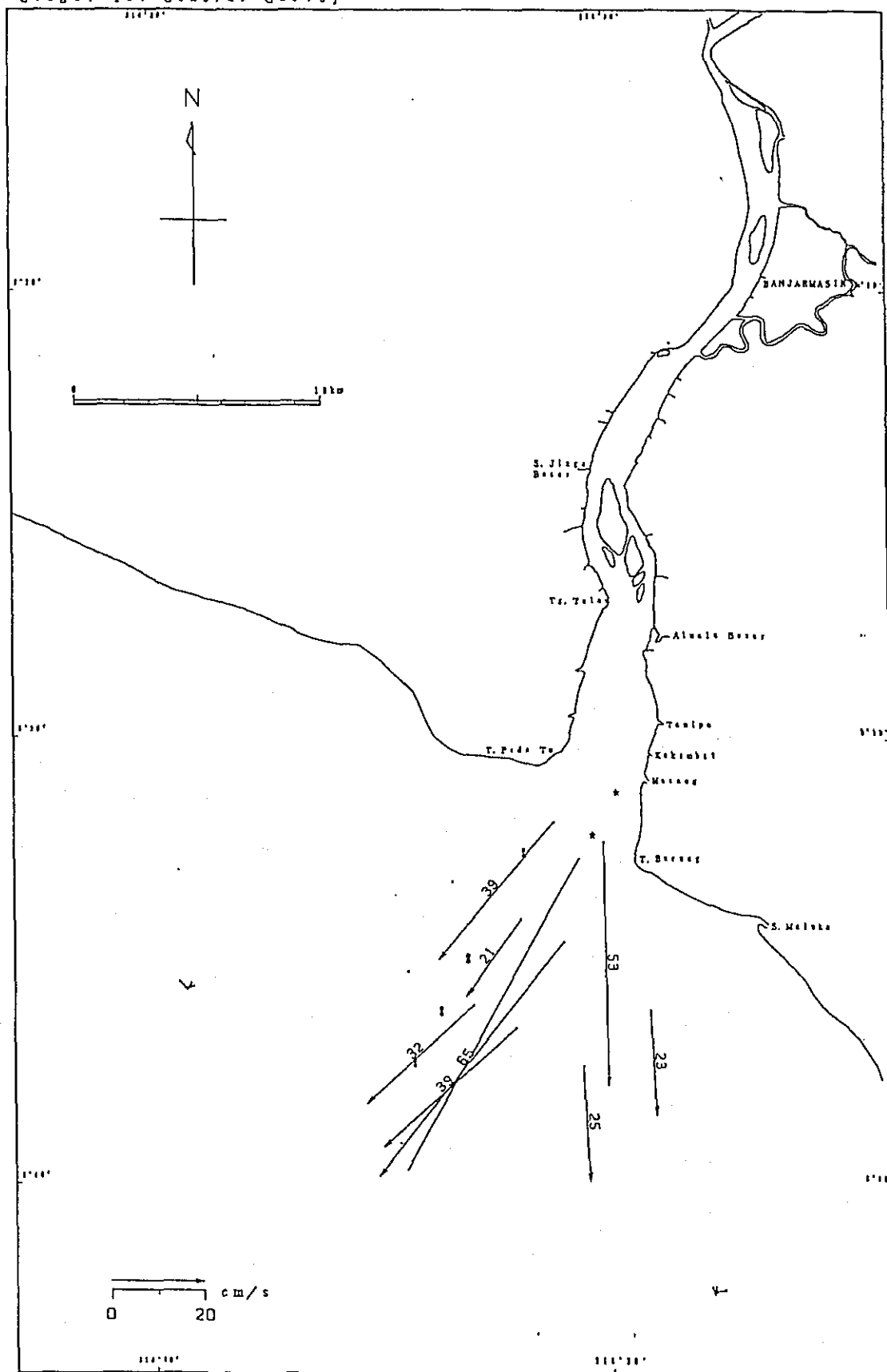
Fig. 3. 2-6 (6) Current Condition (L-8)

Date : 22th Sep. 1988
 Time : 14:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 07 Current Condition (L-7)

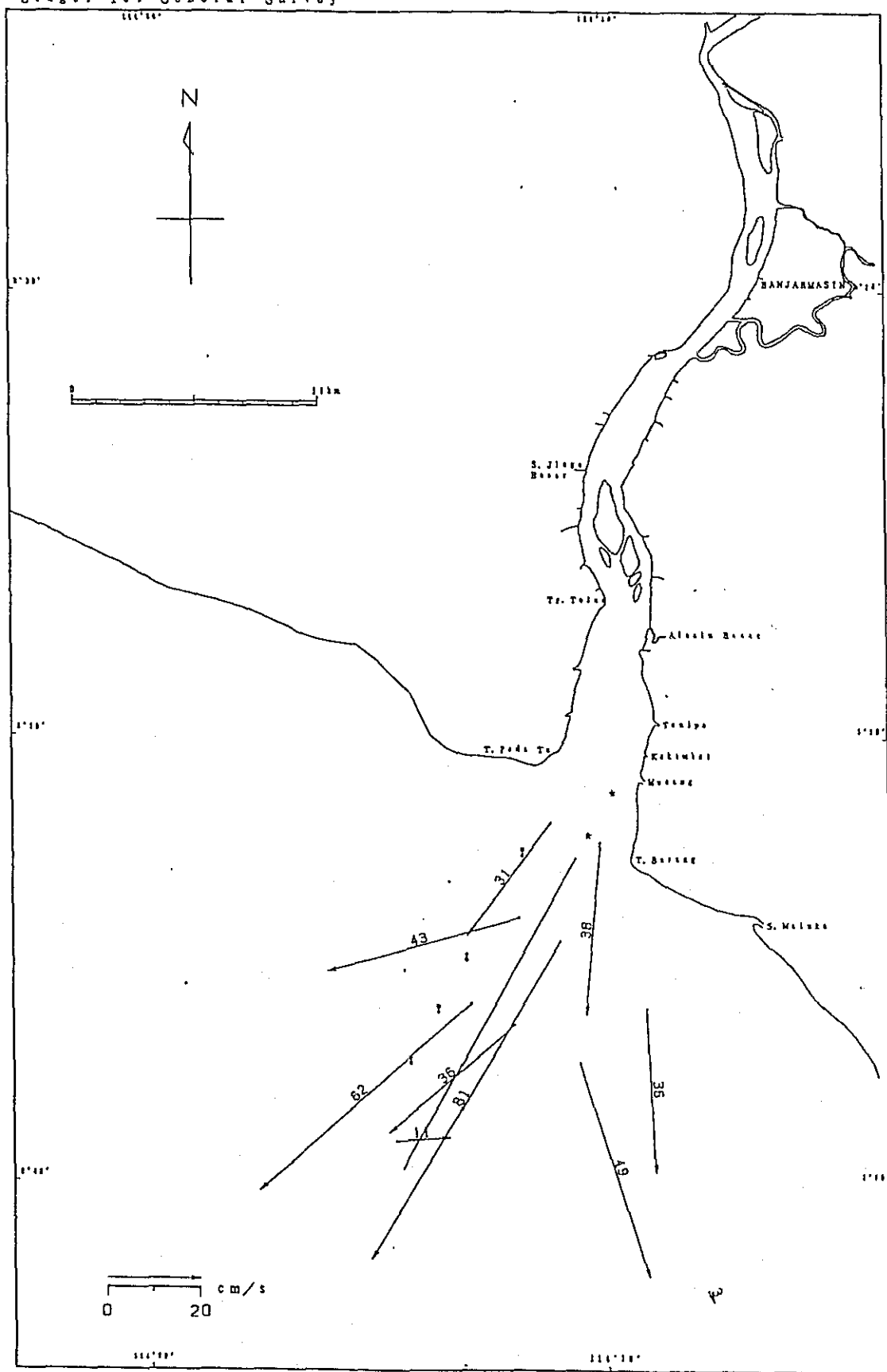
Date : 22th Sep. 1988
 Time : 15:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

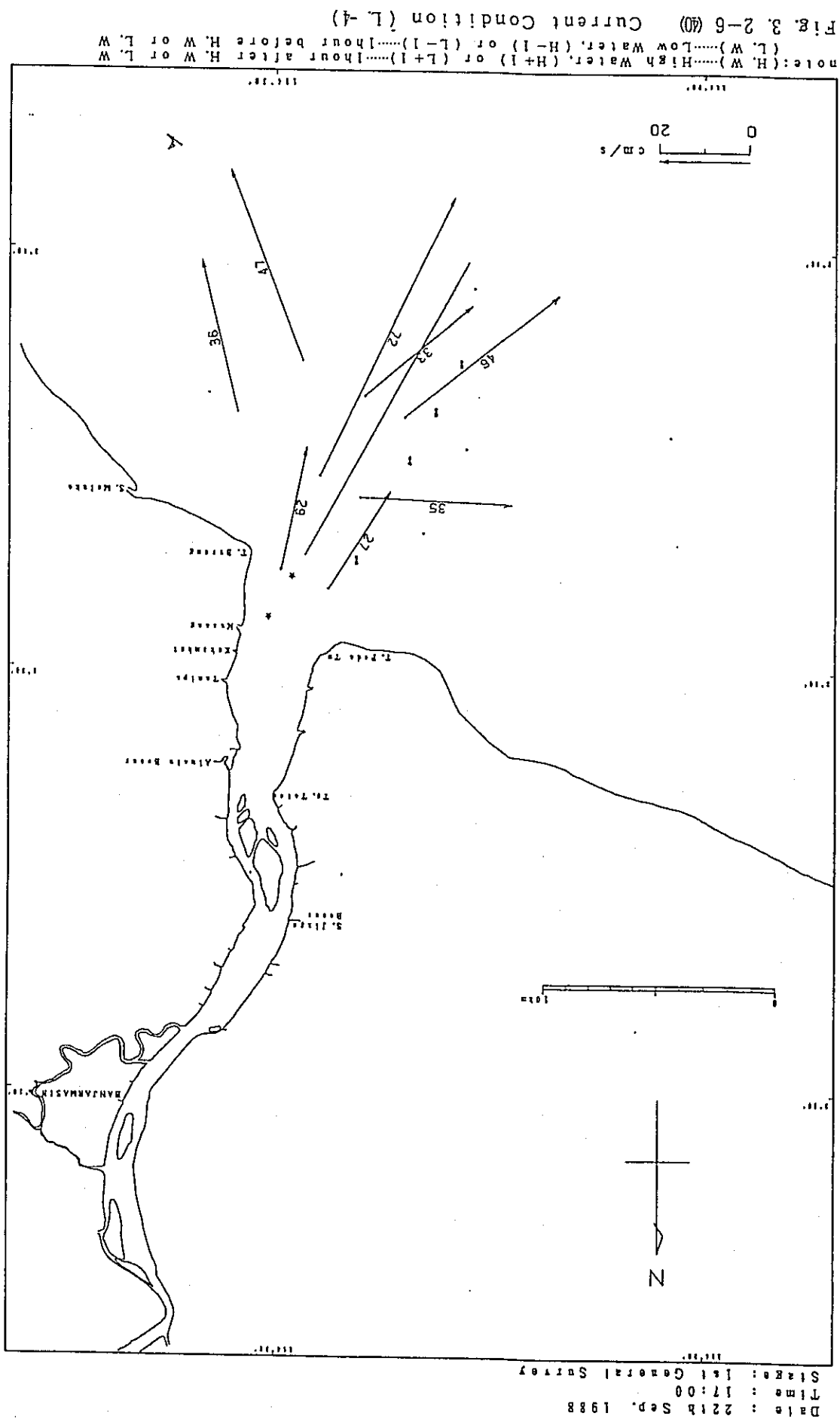
Fig. 3. 2-6 (3) Current Condition (L-6)

Date : 22th Sep. 1988
 Time : 16:00
 Stage: 1st General Survey

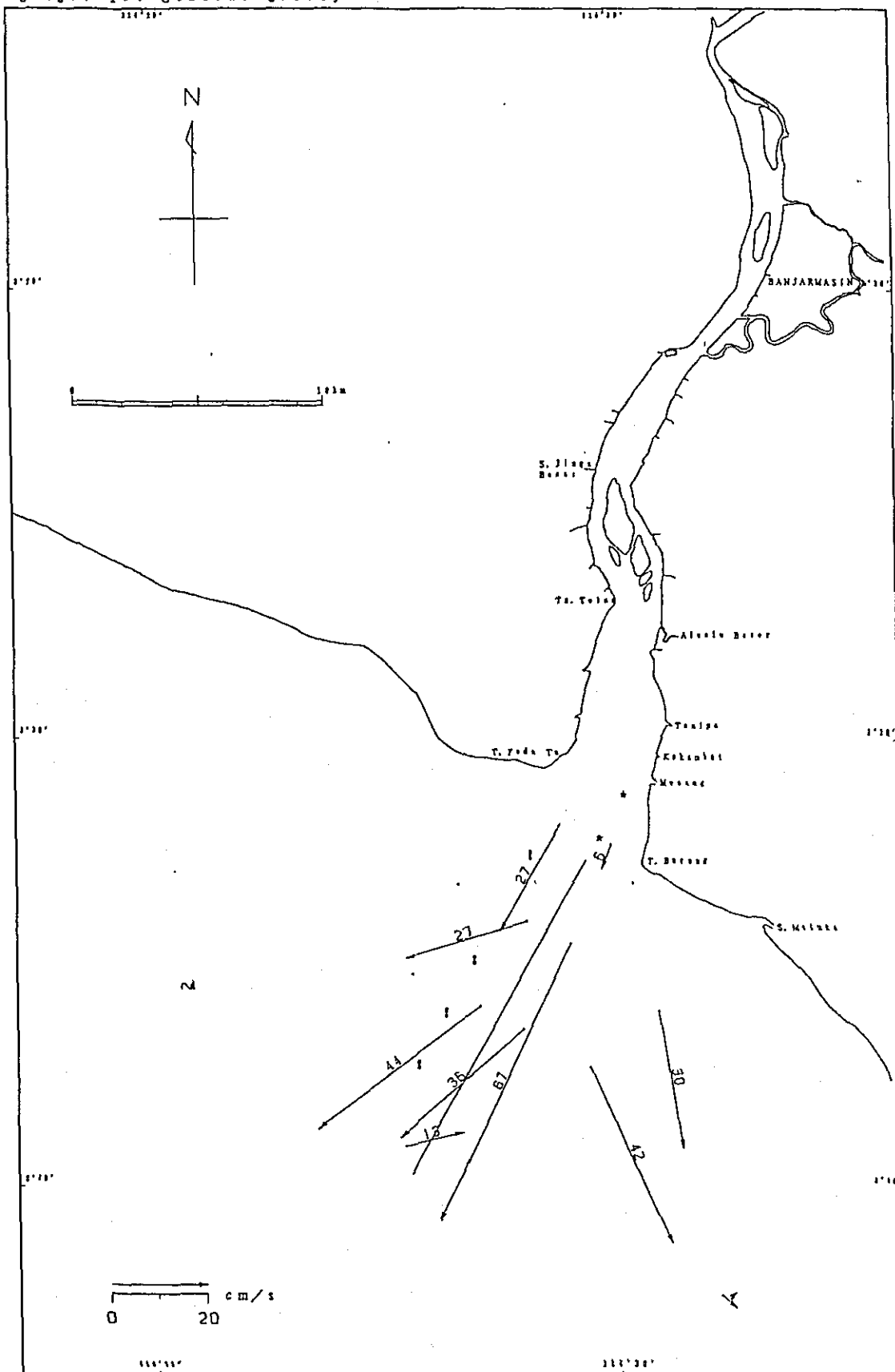


note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (9) Current Condition (L-5)



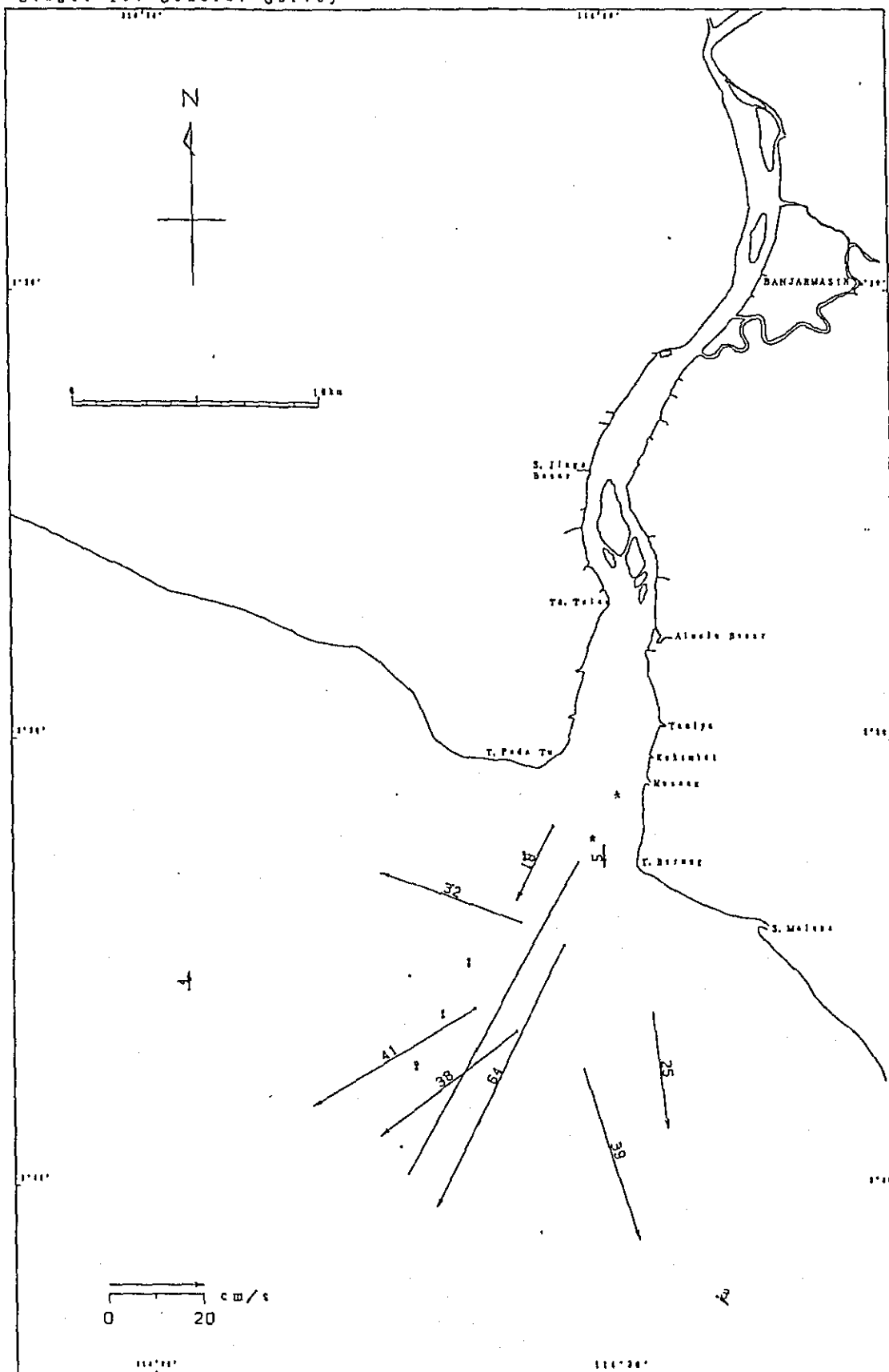
Date : 22th Sep. 1988
 Time : 18:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (41) Current Condition (L-3)

Date : 22th Sep. 1988
 Time : 19:00
 Stage: 1st General Survey

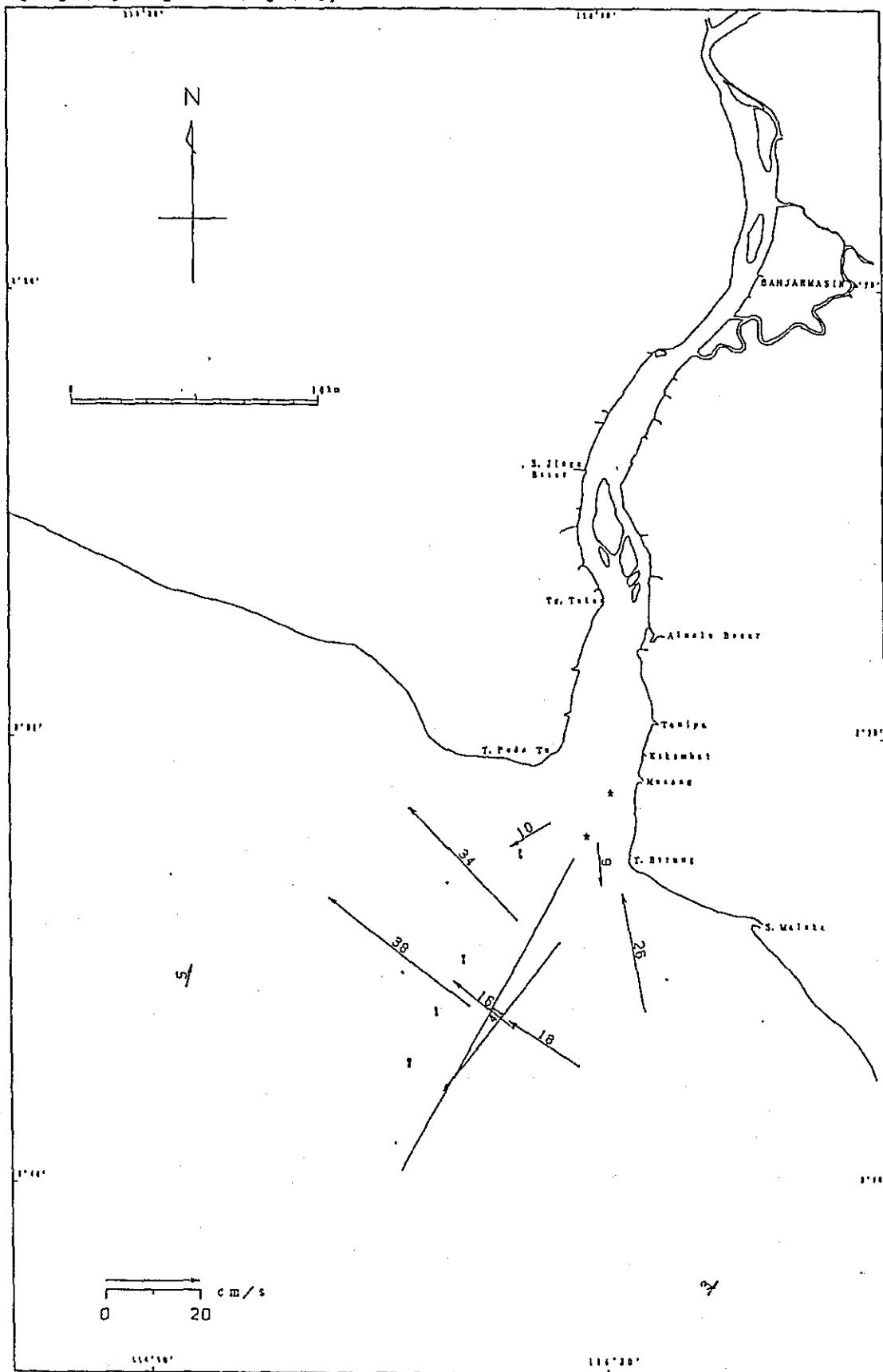


note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L, W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (42) Current Condition (L-2)

Fig. 3. 2-6 (43) Current Condition (L. -1)

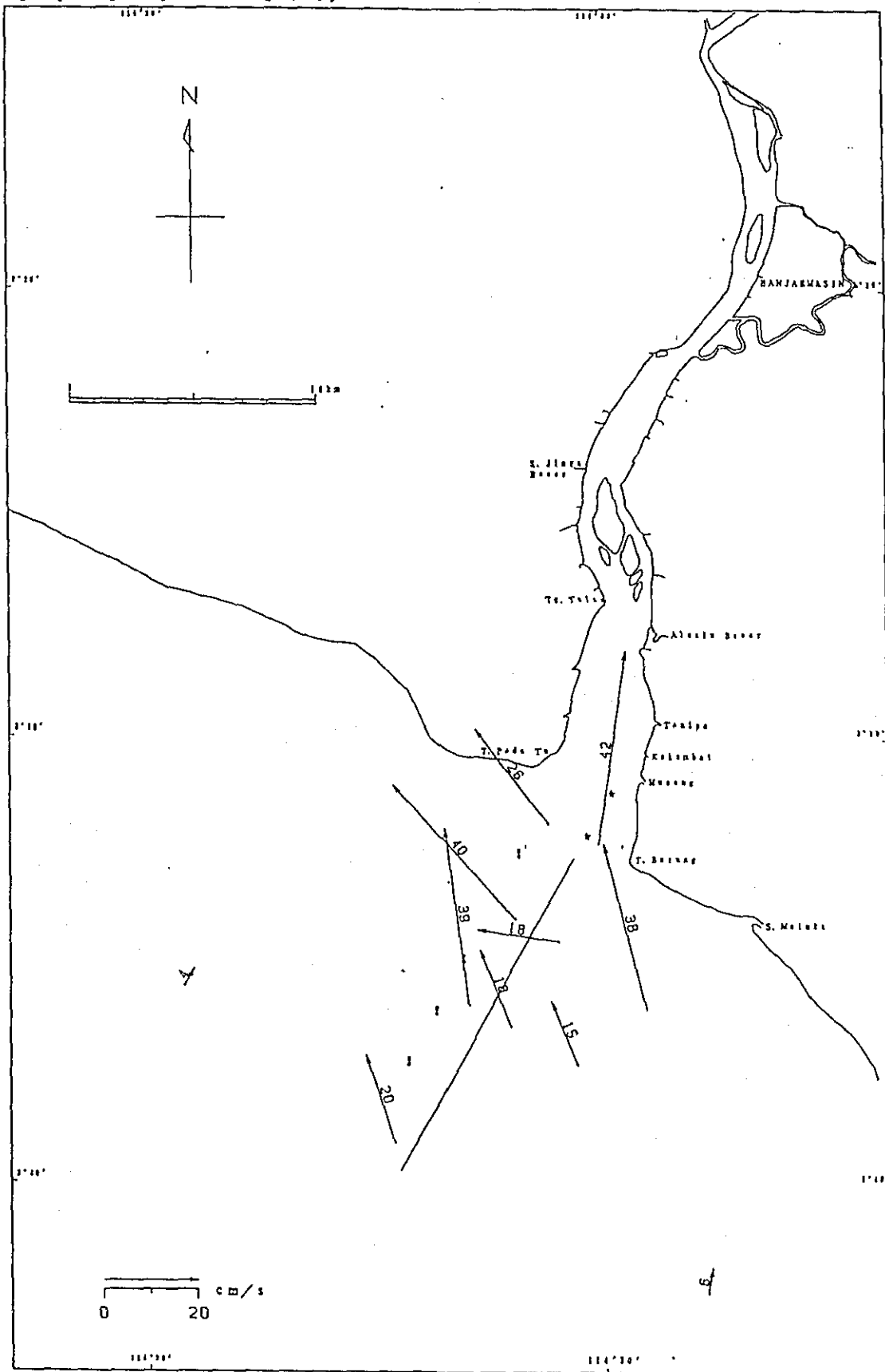
Date : 22th Sep. 1988
 Time : 21:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (44) Current Condition (L. W)

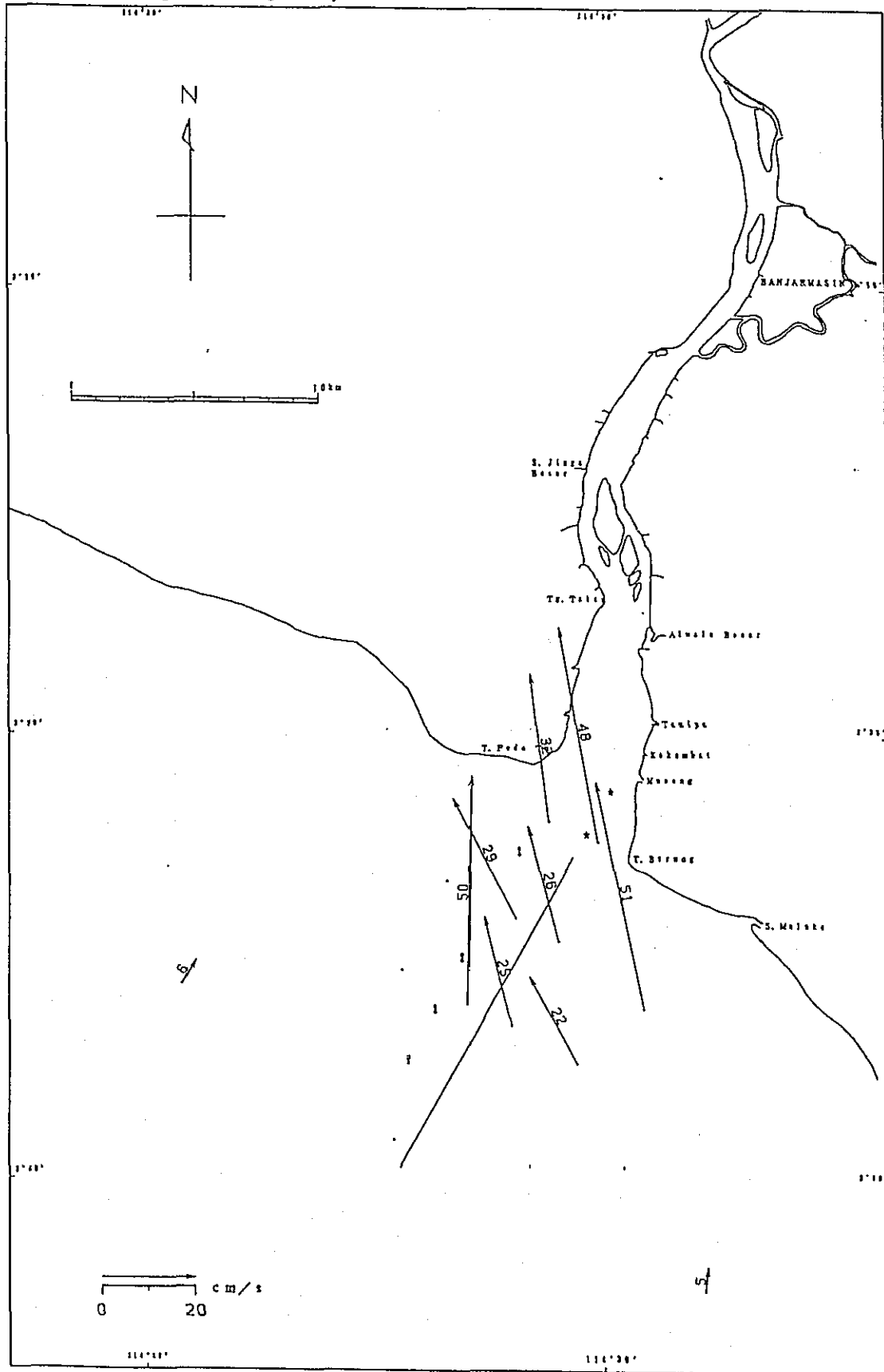
Date : 22th Sep. 1988
 Time : 22:00
 Stage: 1st General Survey



note: (H. W) High Water, (H+1) or (L+1) hour after H. W or L. W
 (L. W) Low Water, (H-1) or (L-1) hour before H. W or L. W

Fig. 3. 2-6 (45) Current Condition (L+1)

Date : 22th Sep. 1988
 Time : 23:00
 Stage: 1st General Survey

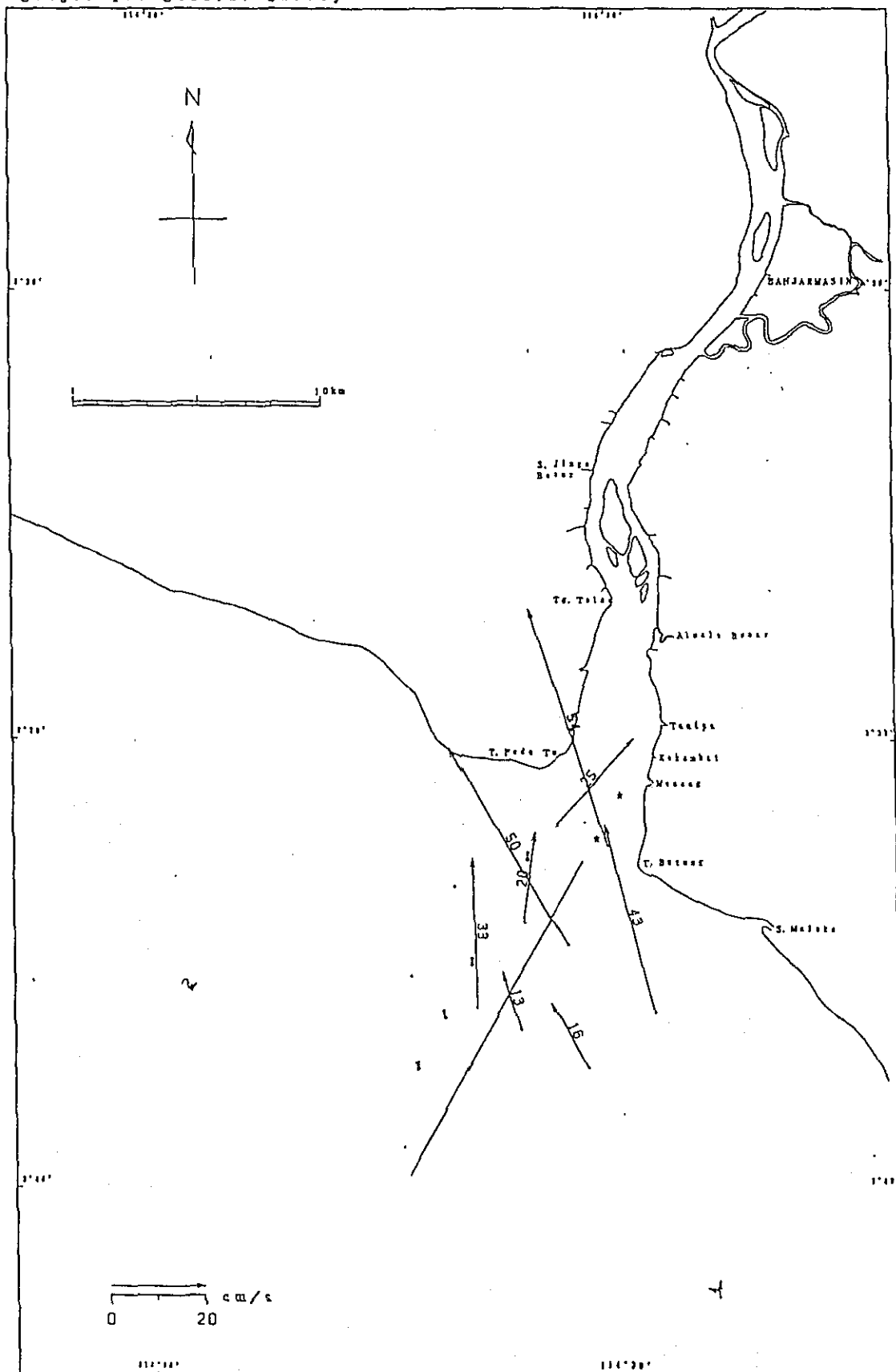


note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L, W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (46) Current Condition (L+2)

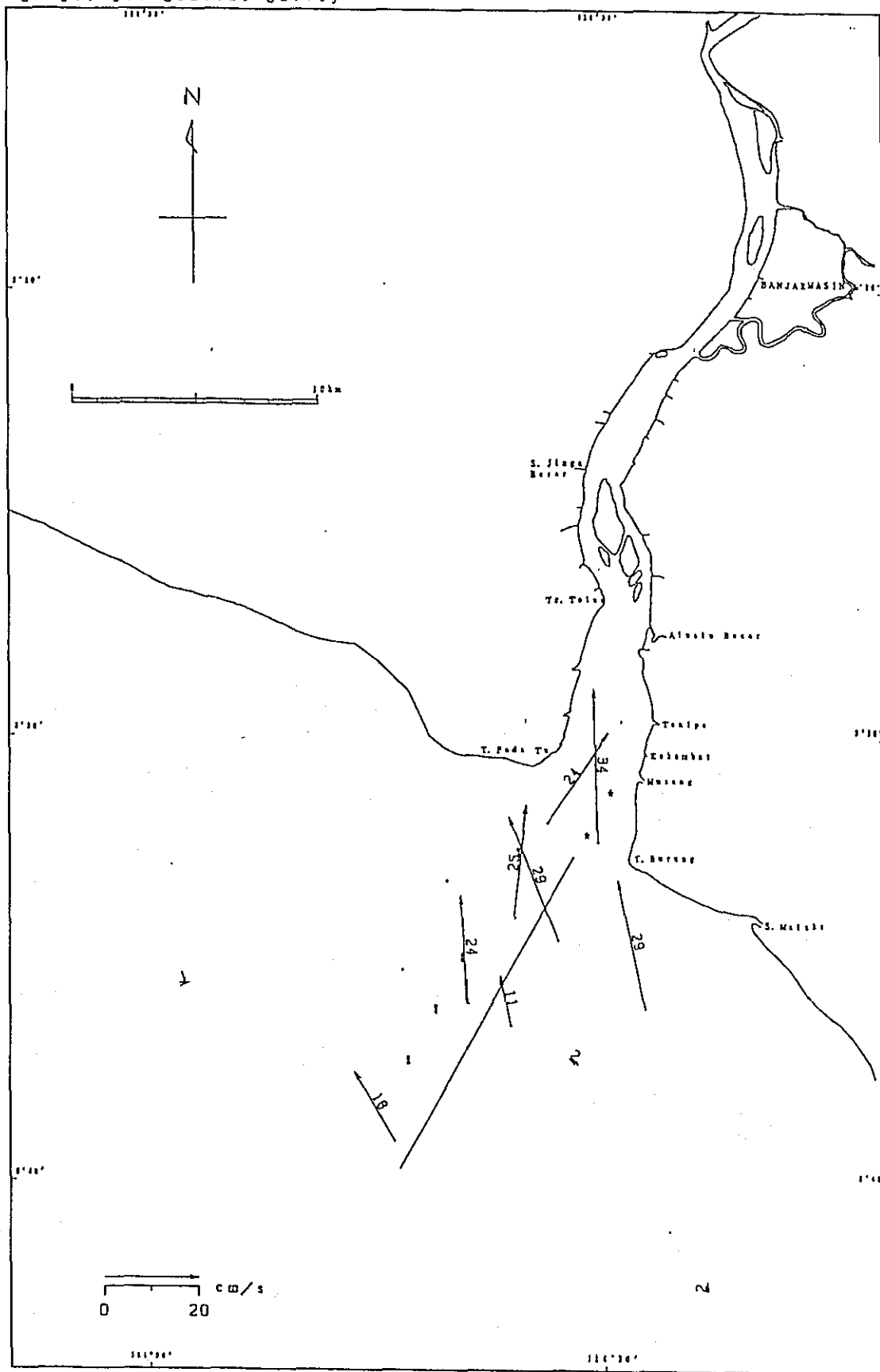
Fig. 3. 2-6 (47) Current Condition (L. +3)

Date : 23th Sep. 1988
 Time : 1:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (48) Current Condition (H-3)

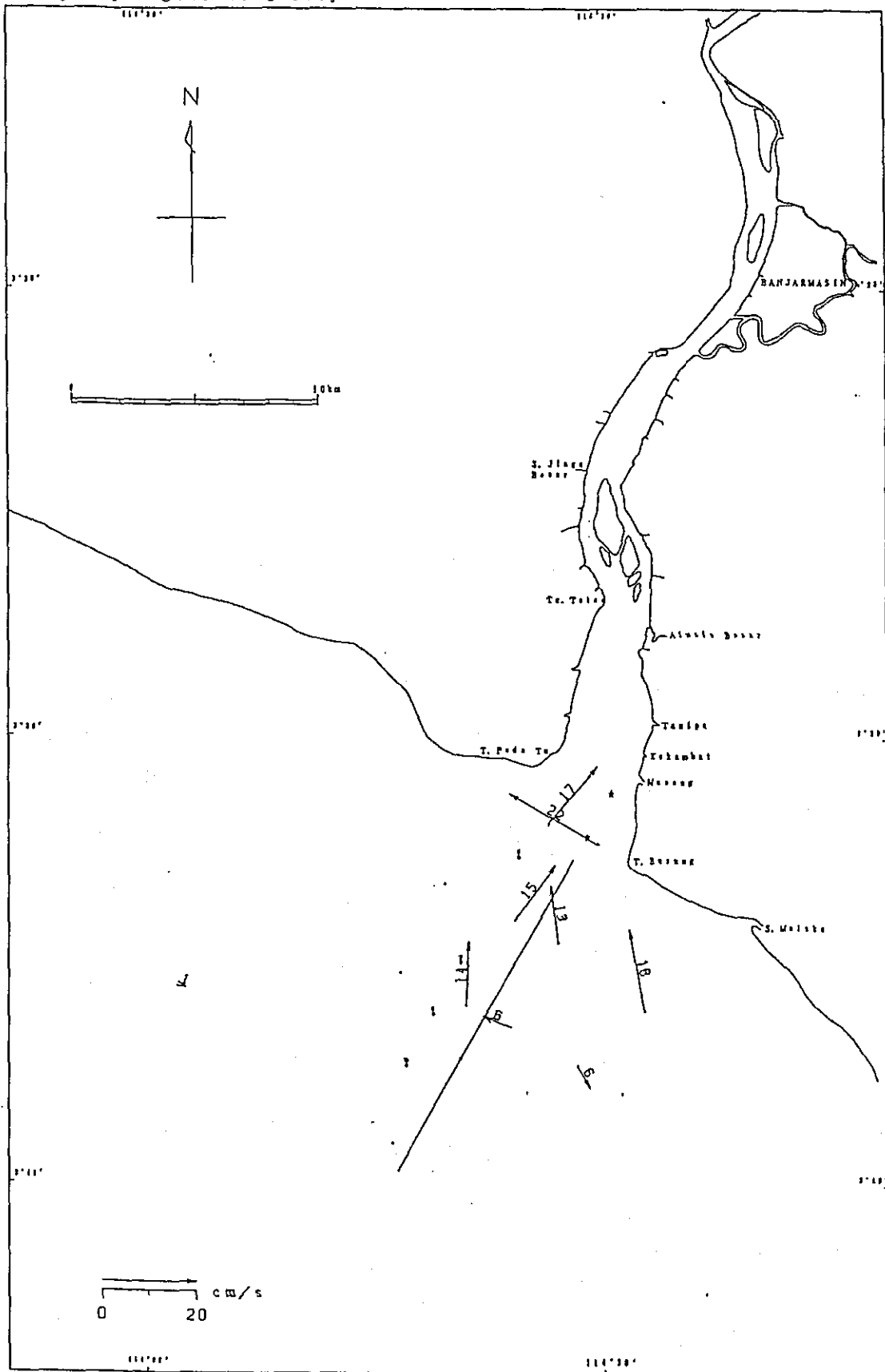
Date : 23th Sep. 1988
 Time : 2:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

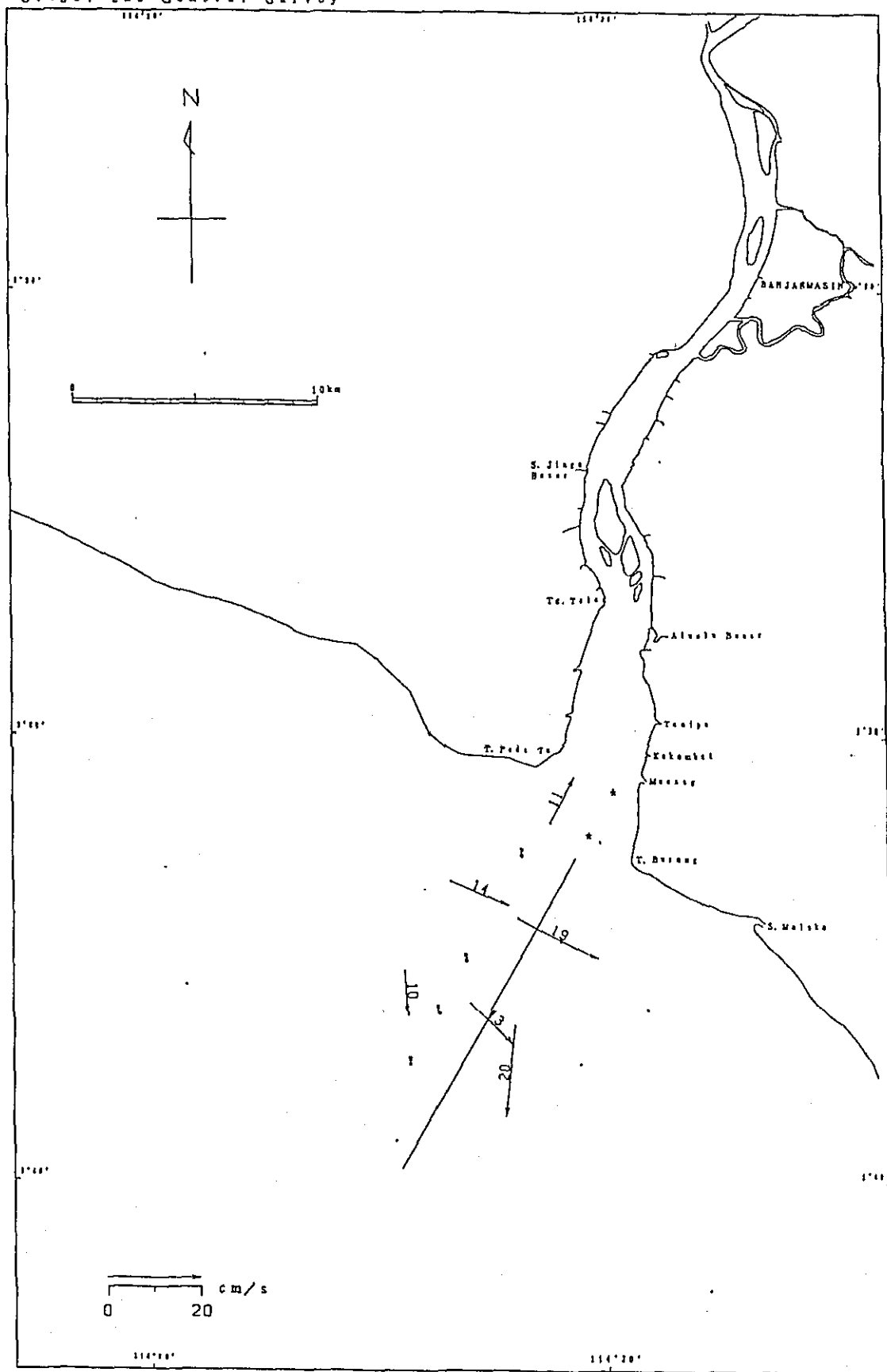
Fig. 3. 2-6 (49) Current Condition (H-2)

Date : 23th Sep. 1988
 Time : 3:00
 Stage: 1st General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 60) Current Condition (H-1)

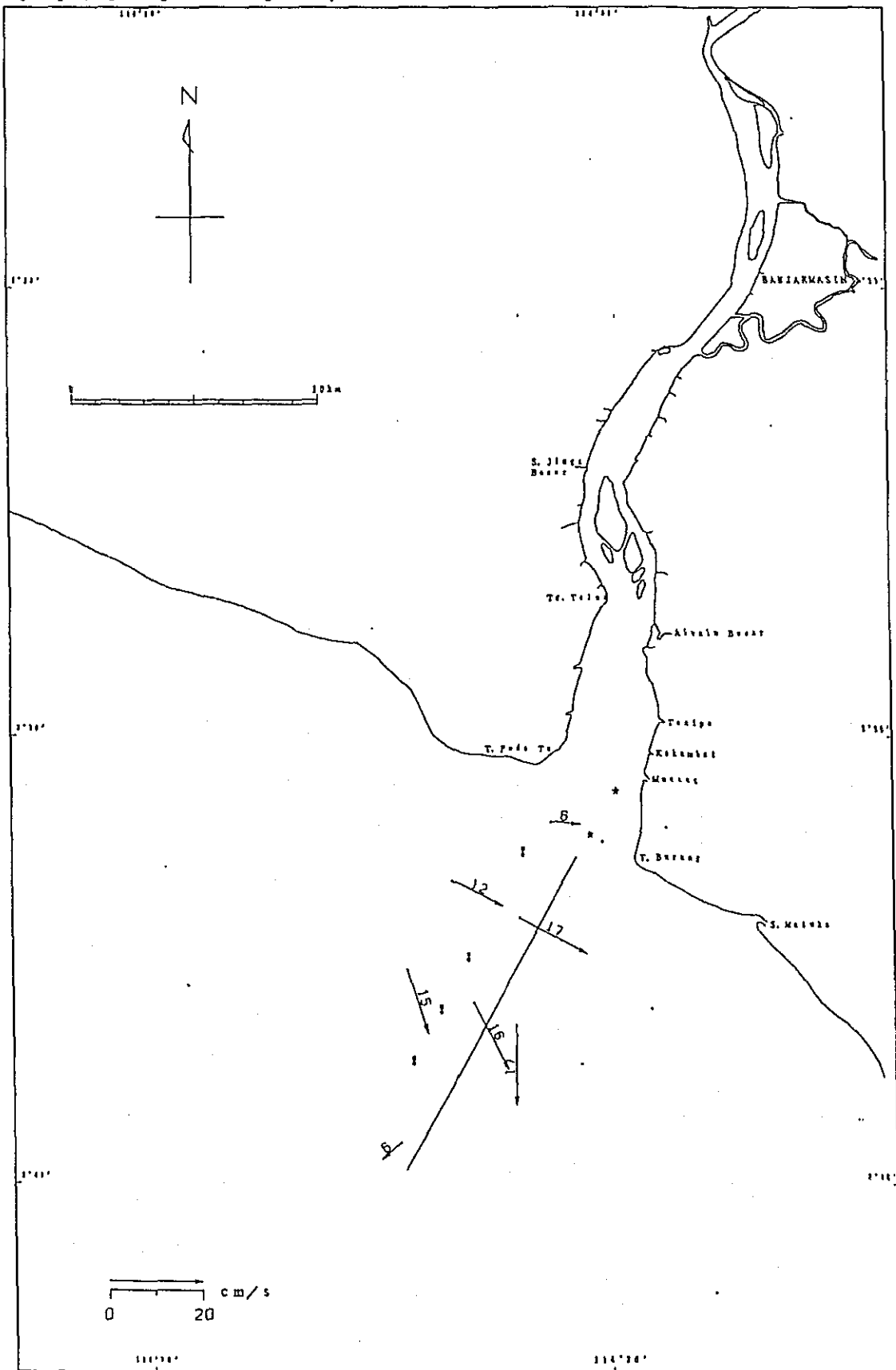
Date : 18th Jan. 1989
 Time : 17:00
 Stage: 2nd General Survey



note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W

Fig. 3. 2-6 61) Current Condition (H.W)

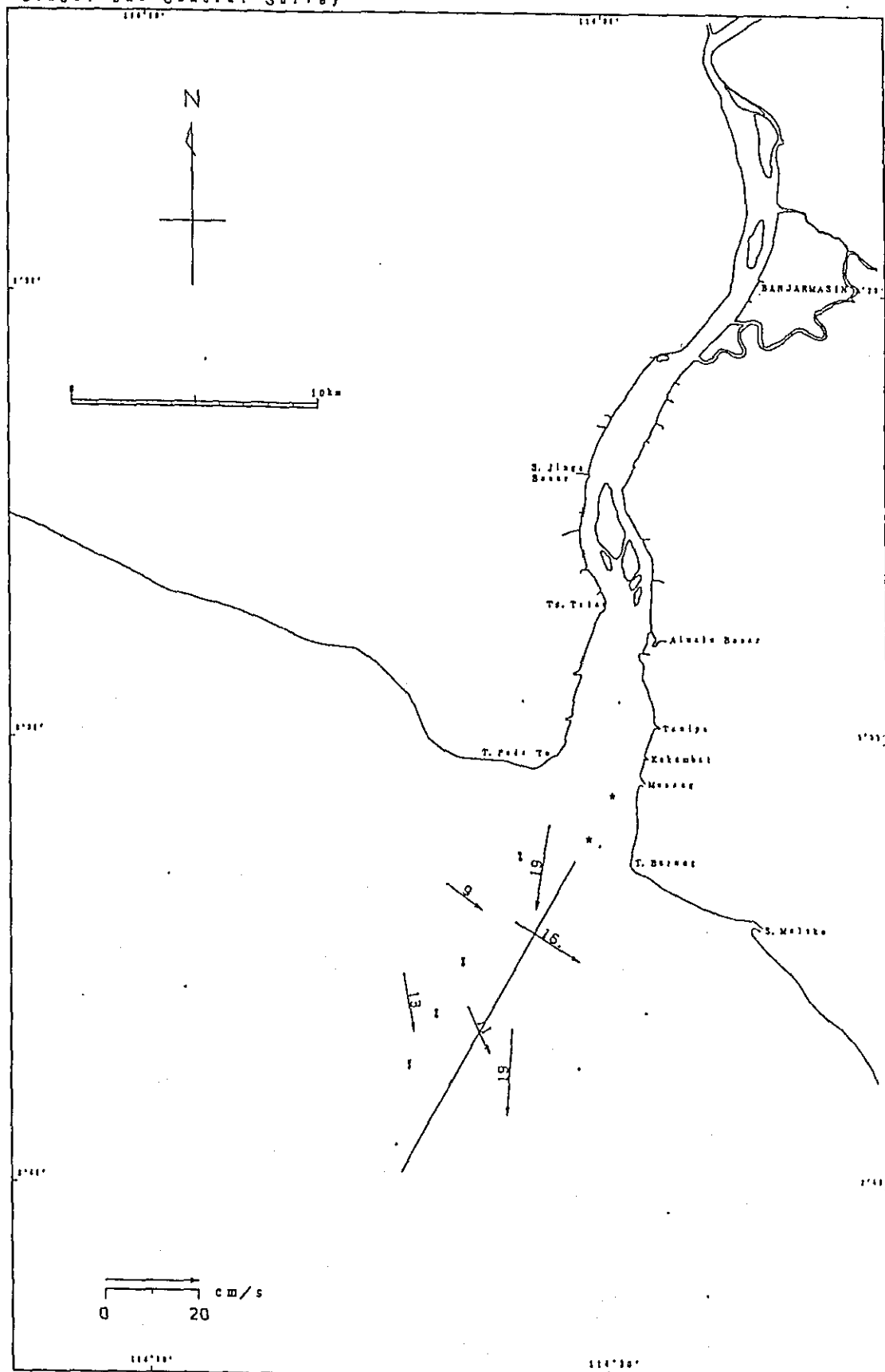
Date : 18th Jan. 1989
 Time : 18:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 62 Current Condition (H+1)

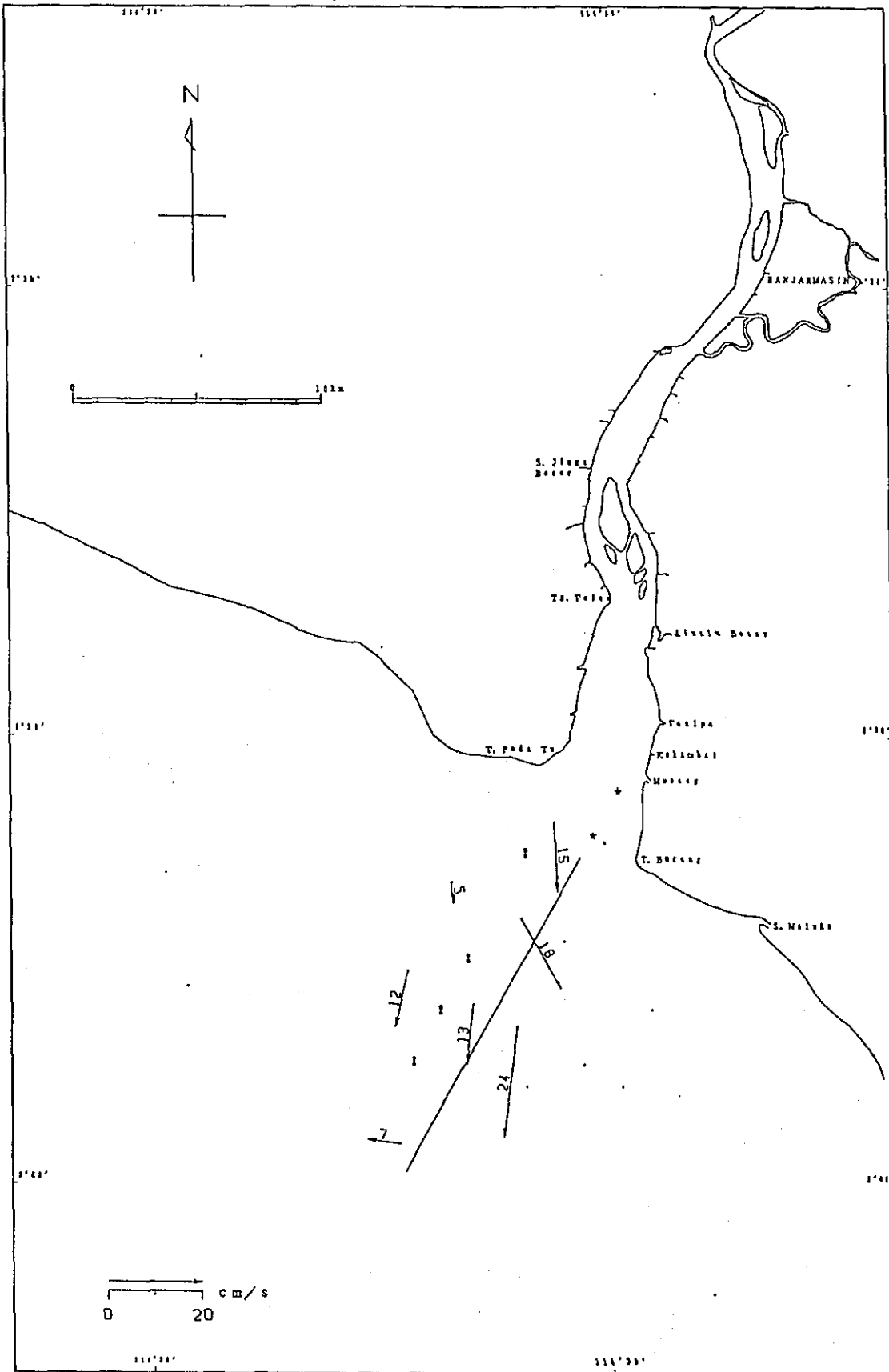
Date : 18th Jan. 1989
 Time : 19:00
 Stage: 2nd General Survey



note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W

Fig. 3. 2-6 63) Current Condition (H+2)

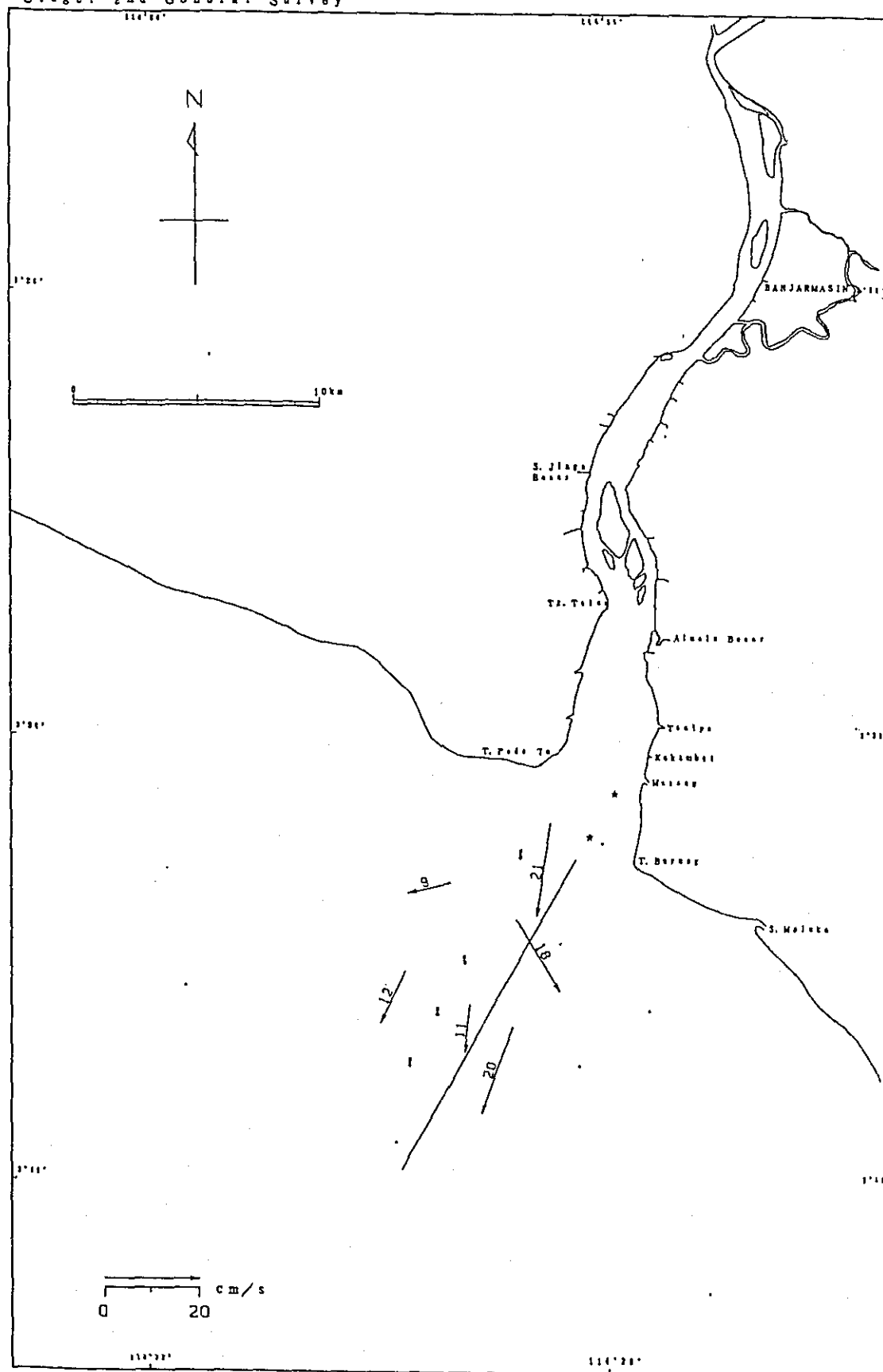
Date : 18th Jan. 1989
 Time : 20:00
 Stage : 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 69 Current Condition (H-3)

Date : 18th Jan. 1989
 Time : 21:00
 Stage: 2nd General Survey



note: (H, W) High Water, (H+1) or (L+1) 1 hour after H. W or L. W
 (L, W) Low Water, (H-1) or (L-1) 1 hour before H. W or L. W
 Fig. 3. 2-6 (55) Current Condition (H+4)

Date : 18th Jan. 1989
 Time : 22:00
 Stage: 2nd General Survey

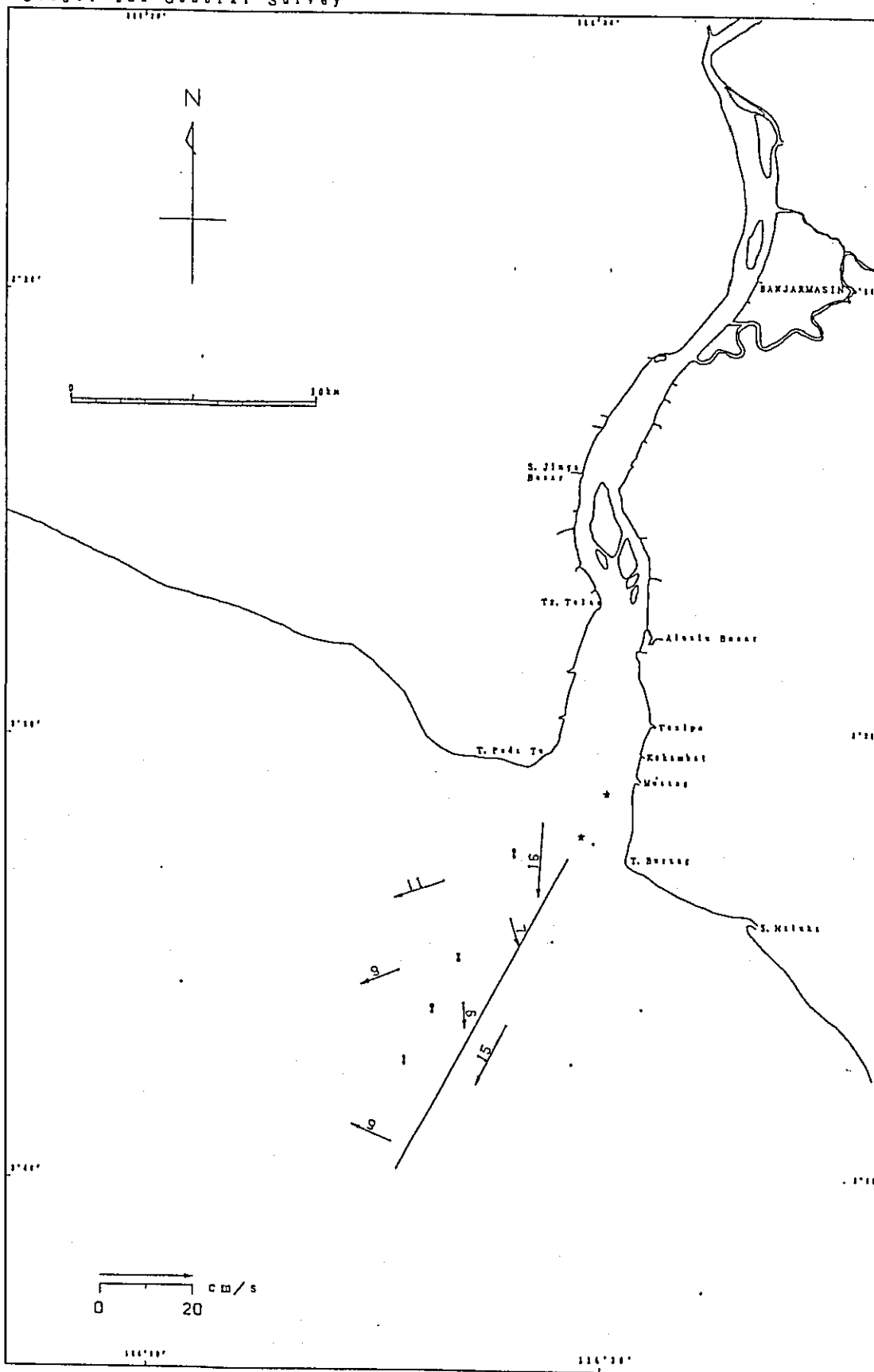
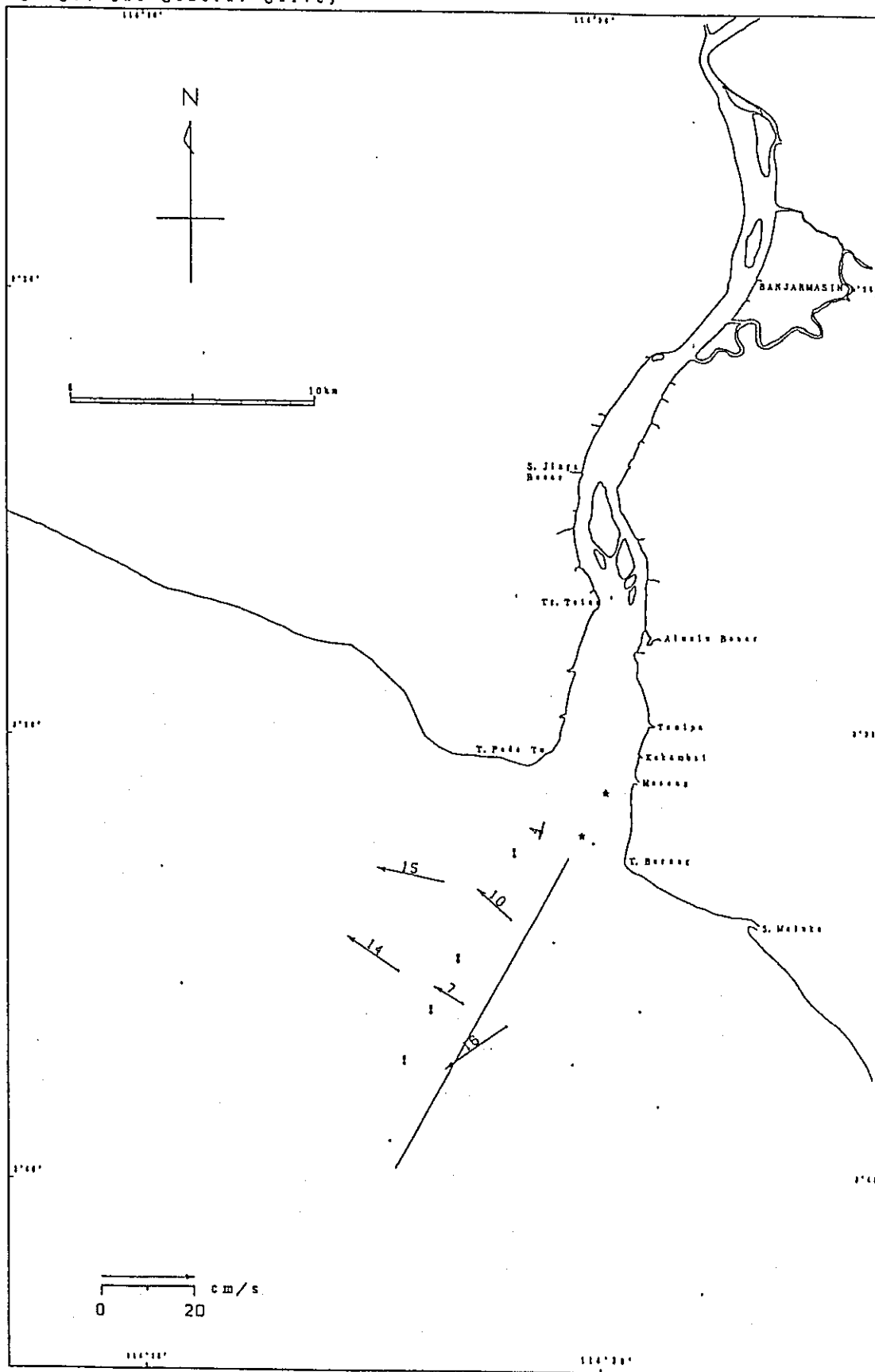


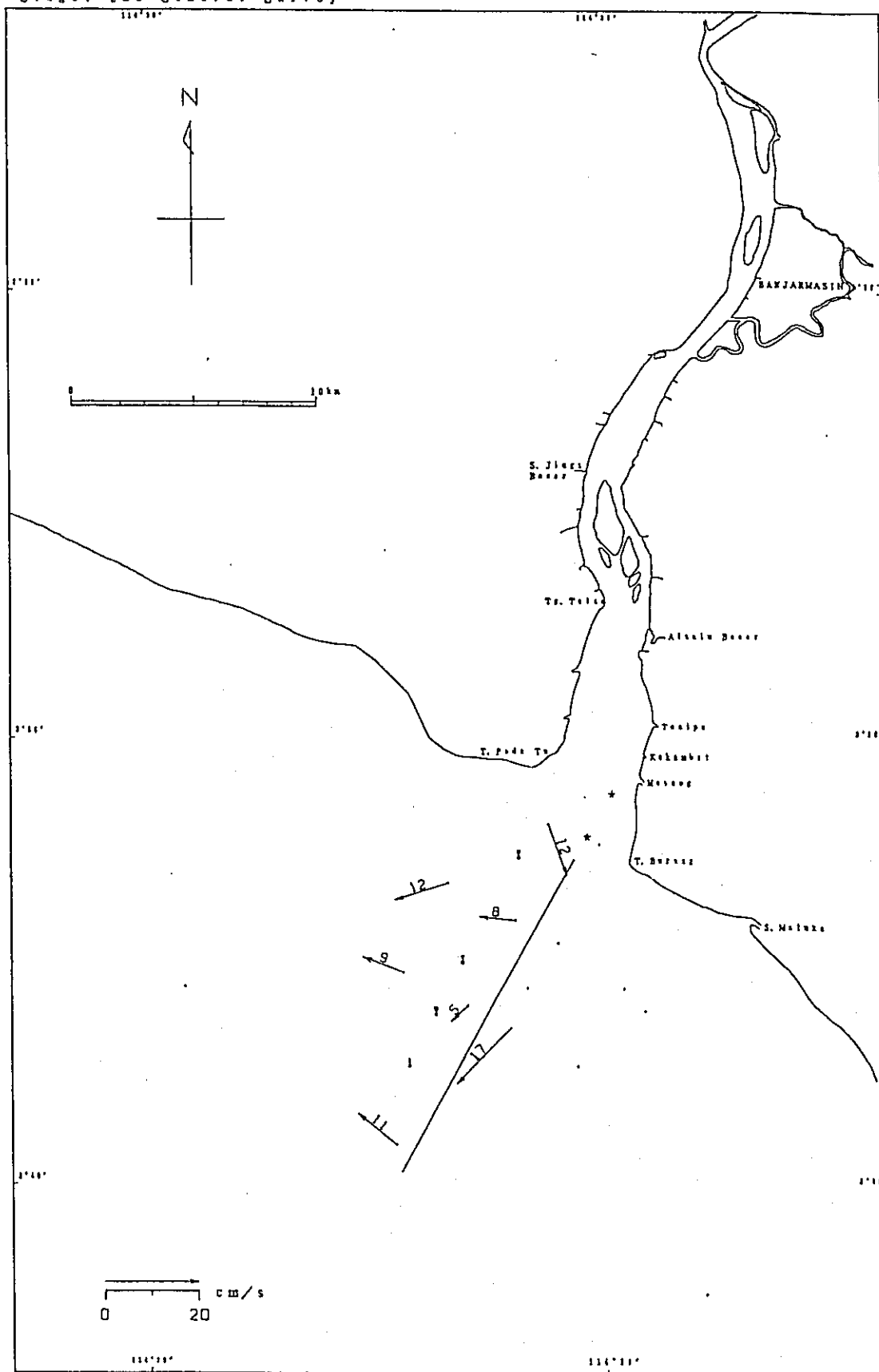
Fig. 3. 2-6 (6) Current Condition (H +5)

Date : 18th Jan. 1989
 Time : 23:00
 Stage: 2nd General Survey



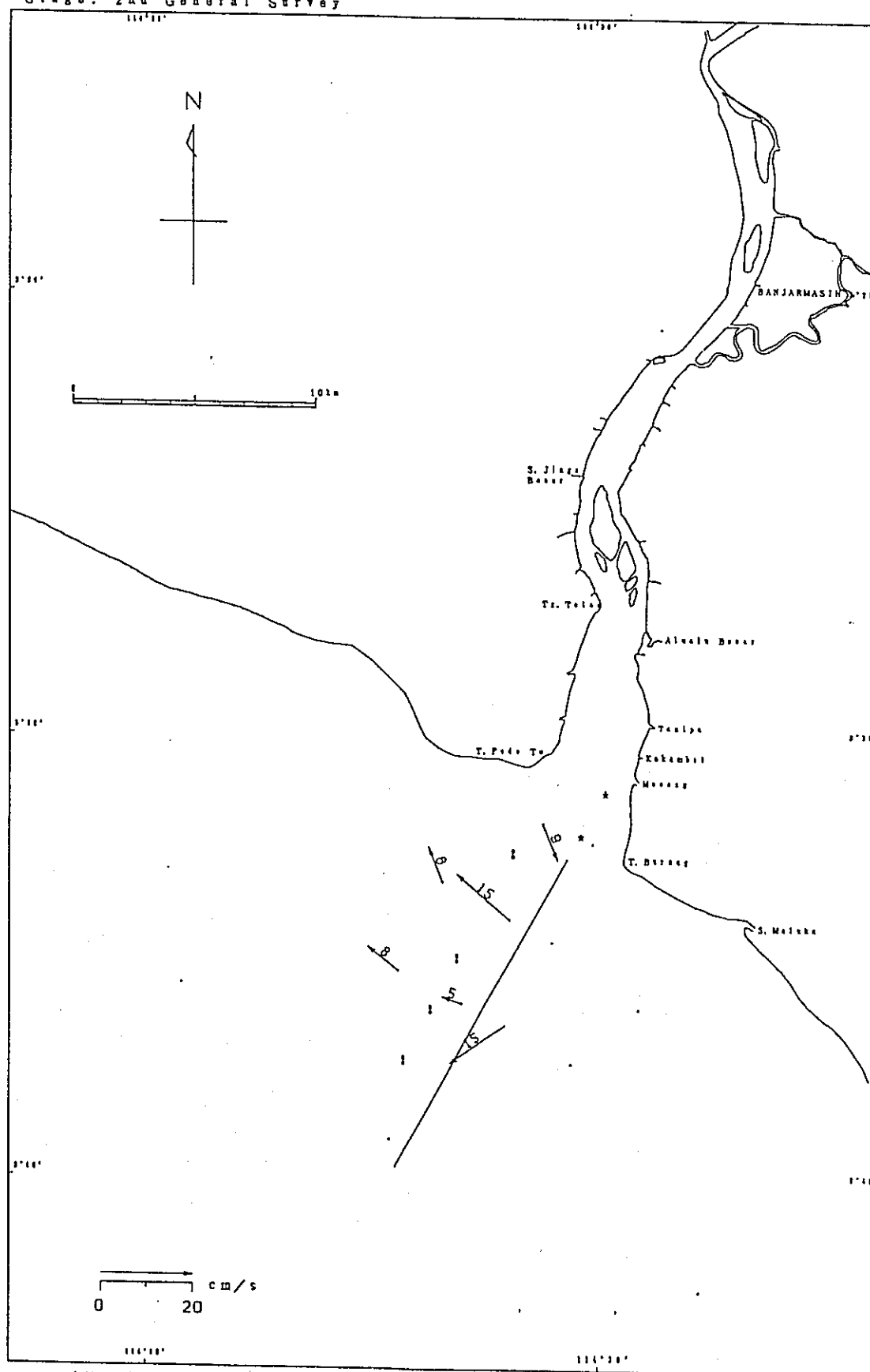
note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (7) Current Condition (H +6)

Date : 19th Jan. 1989
 Time : 0:00
 Stage: 2nd General Survey



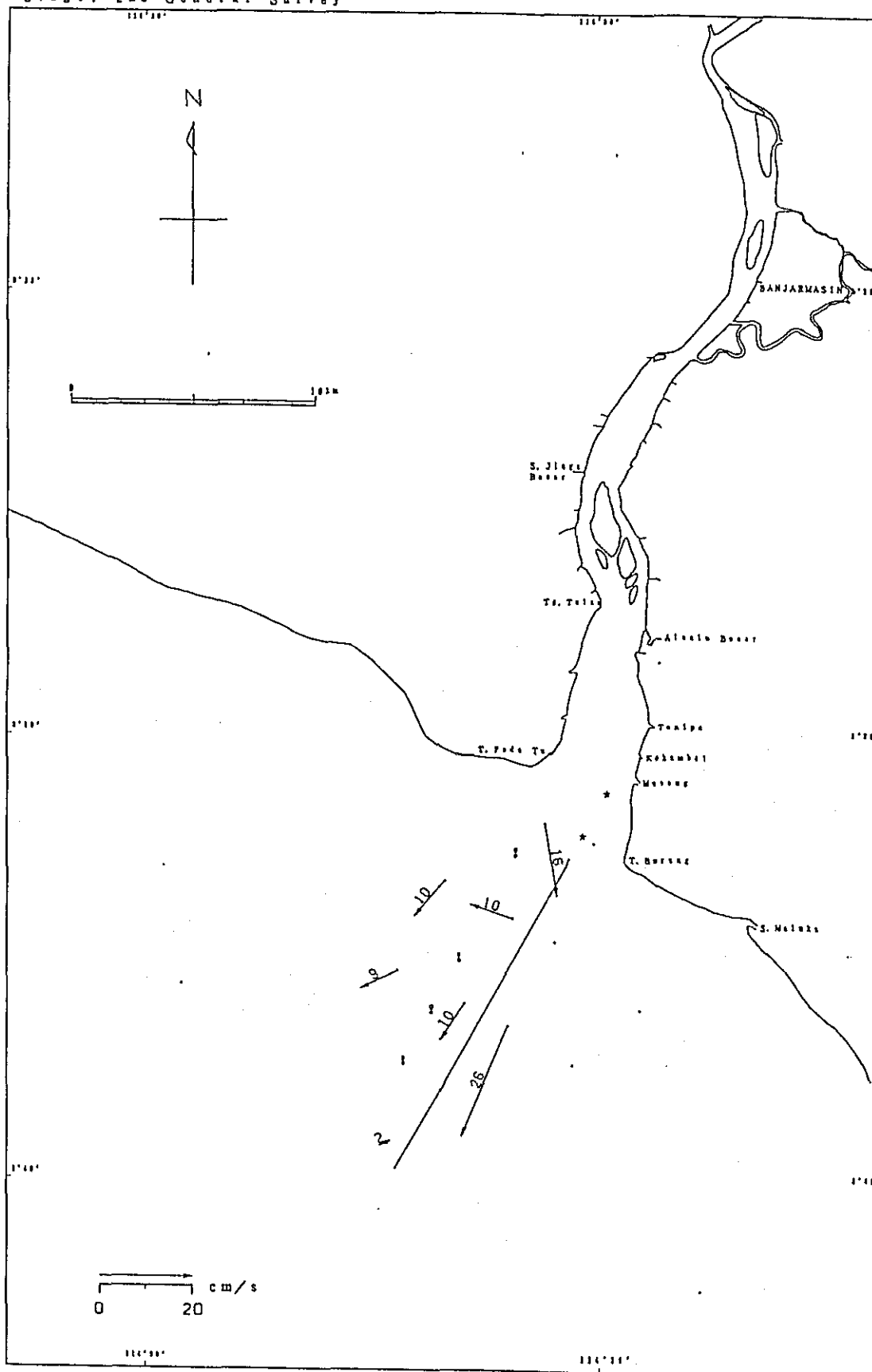
note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (8) Current Condition (H +7)

Date : 19th Jan. 1989
 Time : 1:00
 Stage: 2nd General Survey



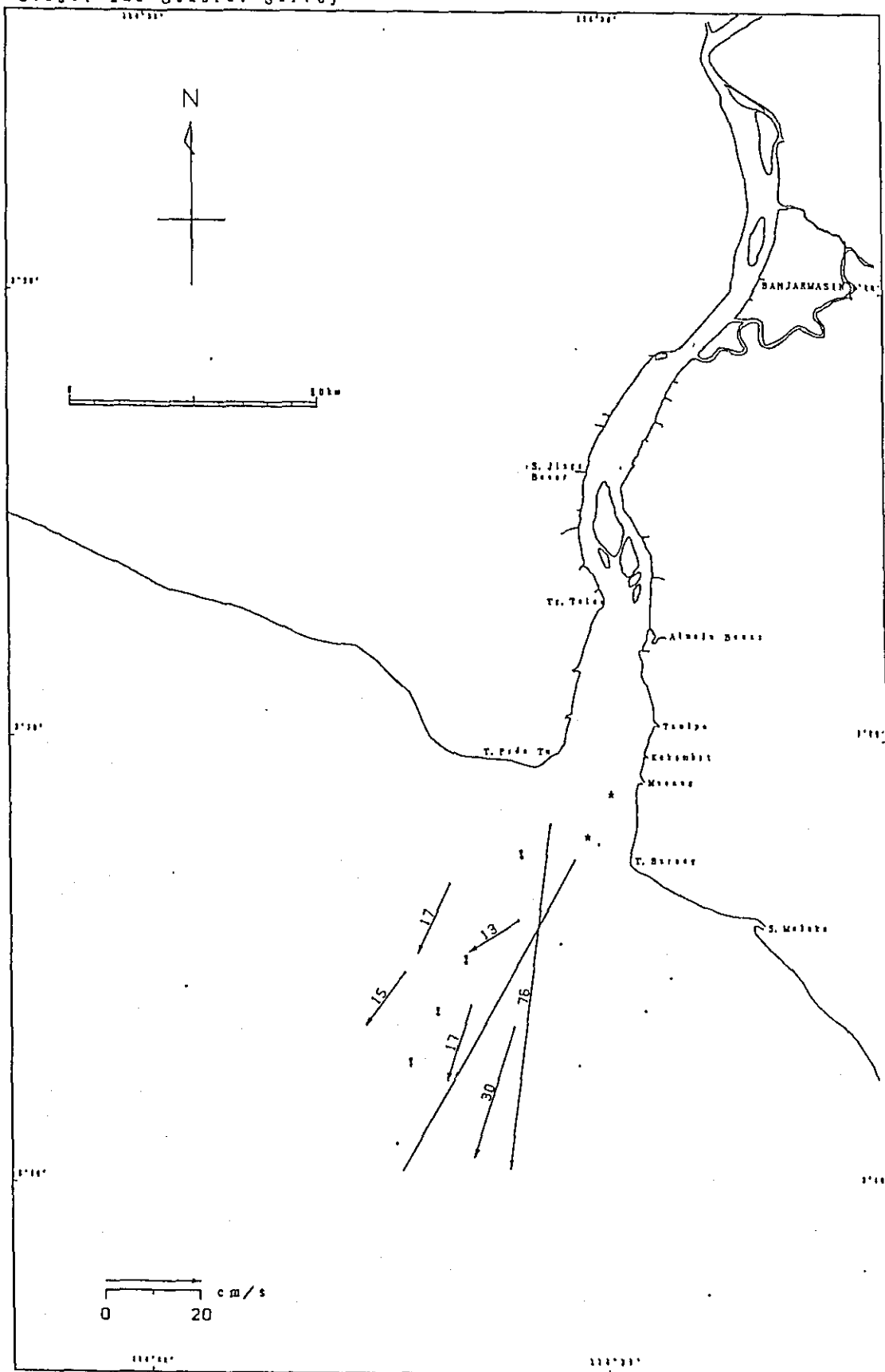
note: (H. W).....High Water, (H-1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (6) Current Condition (H+8)

Date : 19th Jan. 1989
 Time : 2:00
 Stage: 2nd General Survey



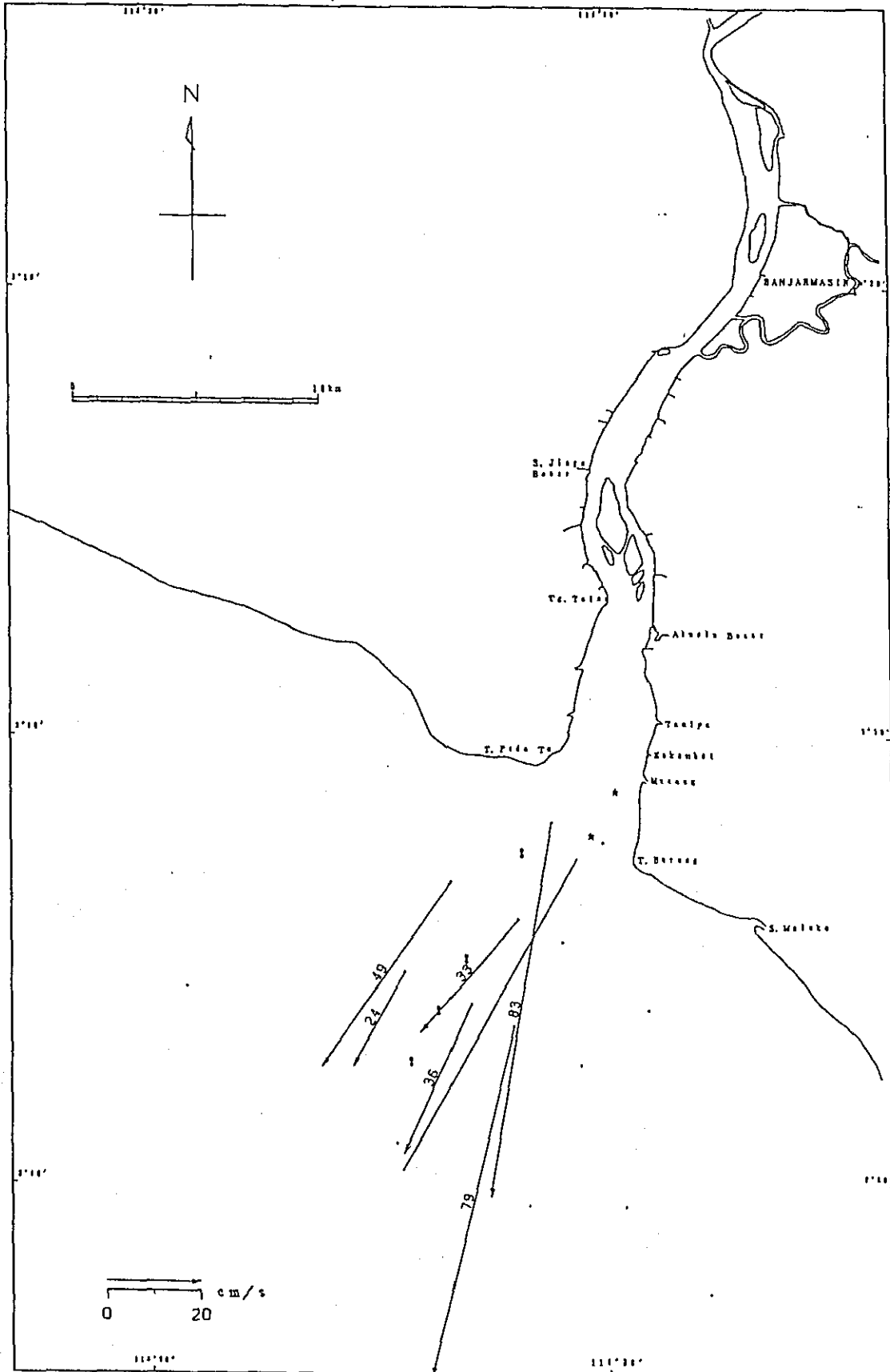
note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (60) Current Condition (L. -8)

Date : 19th Jan. 1989
 Time : 3:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (6) Current Condition (L-7)

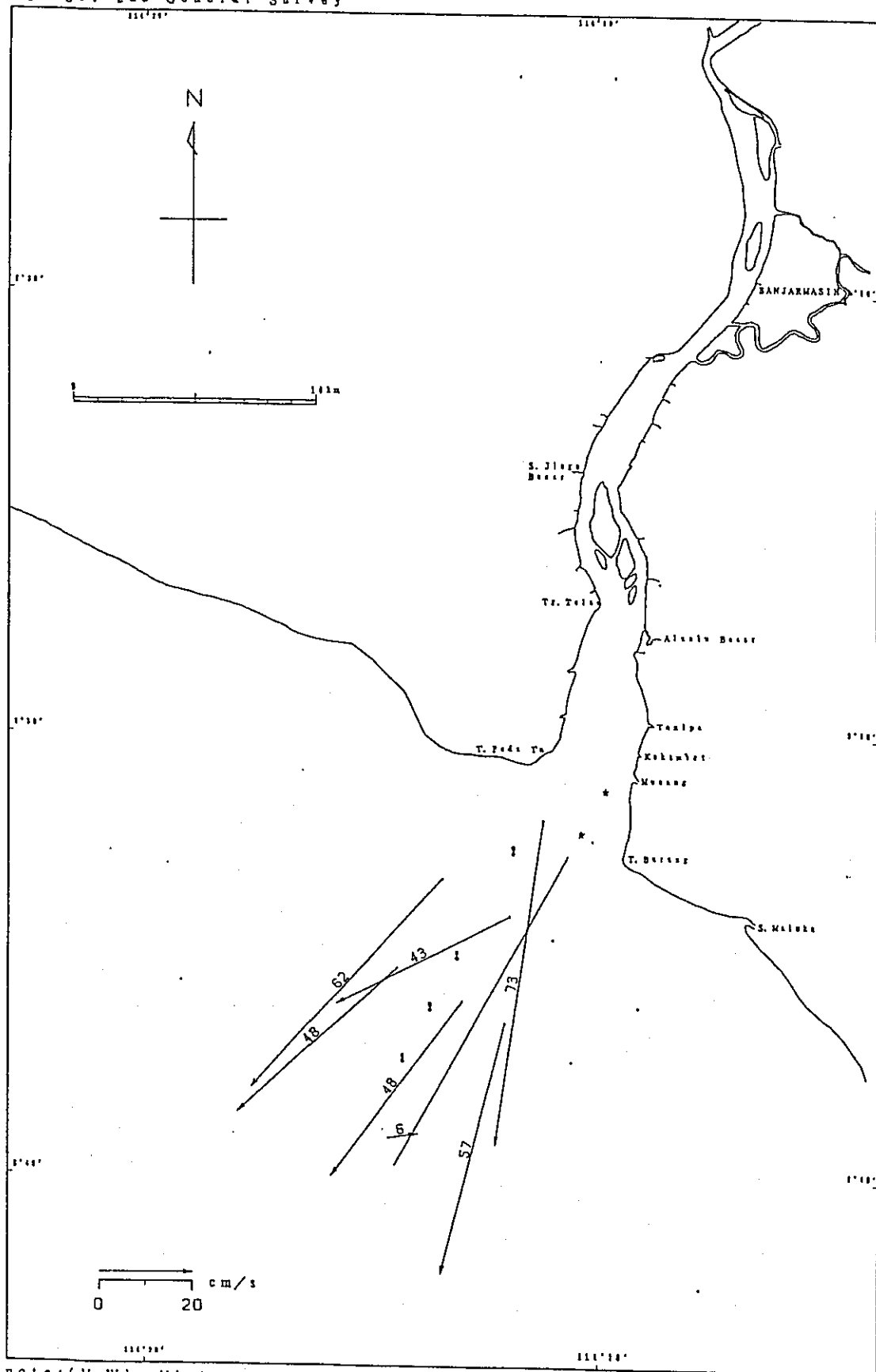
Date : 19th Jan. 1989
 Time : 5:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

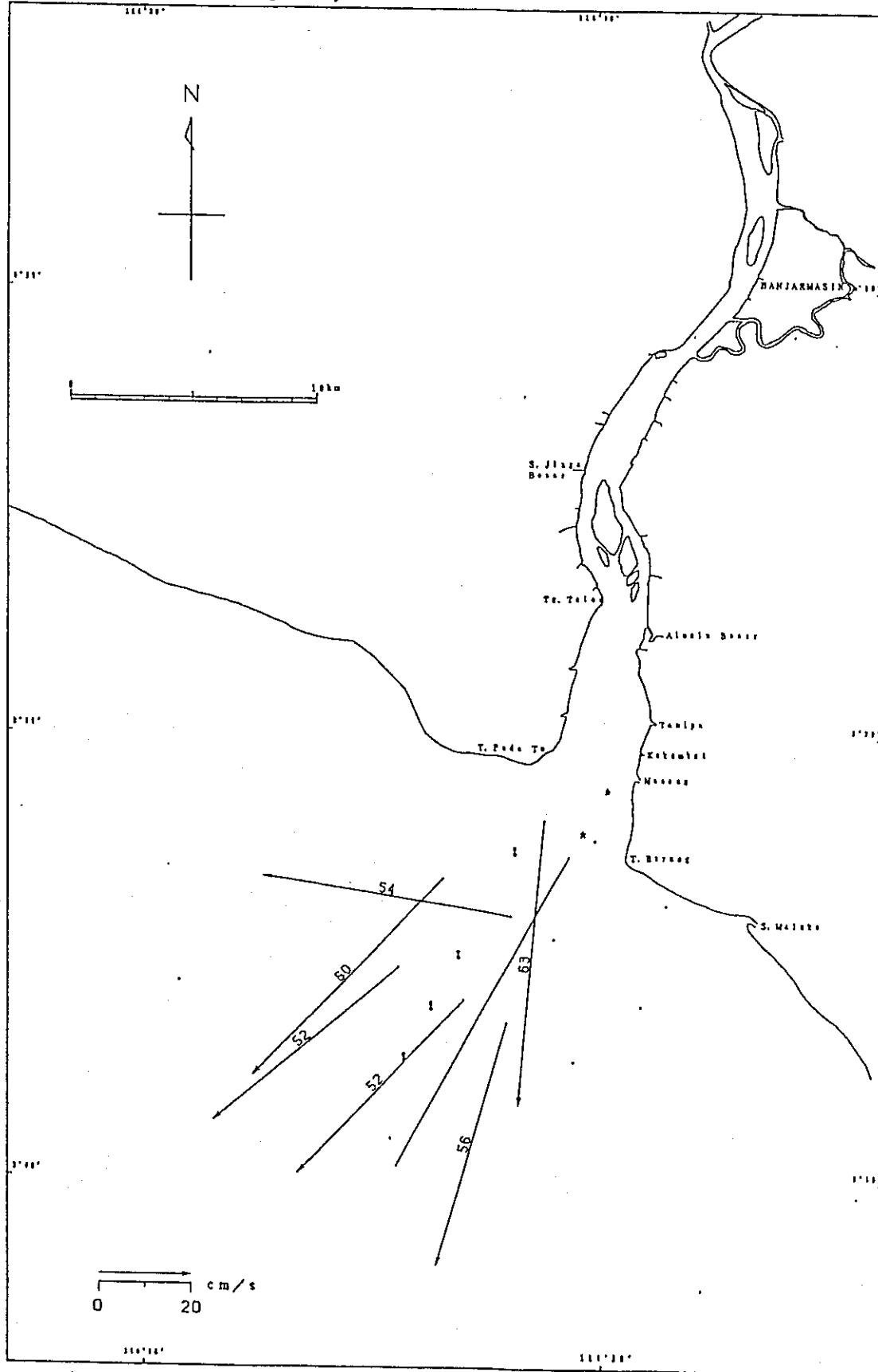
Fig. 3. 2-6 (3) Current Condition (L-5)

Date : 19th Jan. 1989
 Time : 6:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (L) Current Condition (L-4)

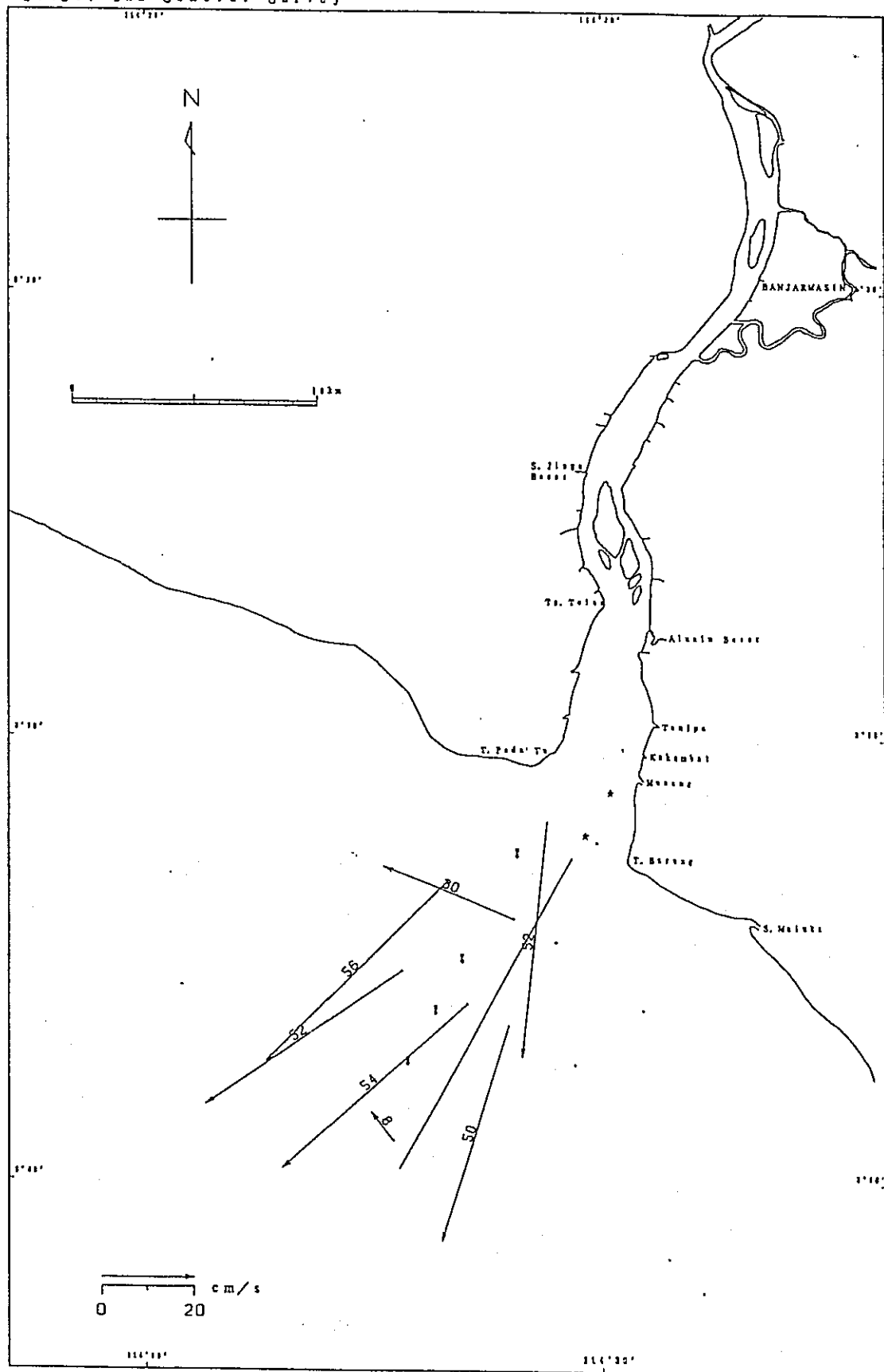
Date : 19th Jan. 1989
 Time : 7:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (5) Current Condition (L. -3)

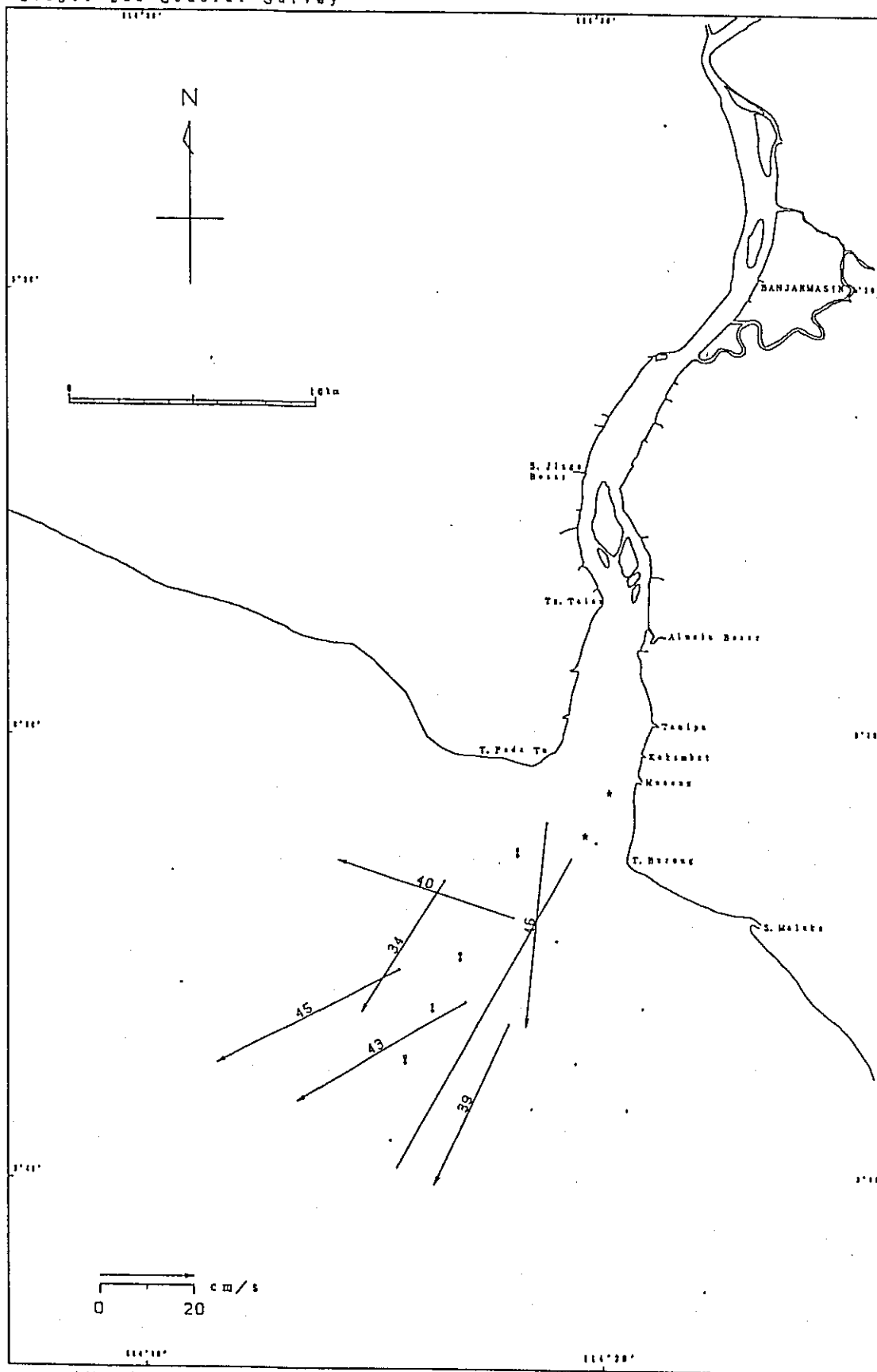
Date : 19th Jan. 1989
 Time : 8:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (66) Current Condition (L-2)

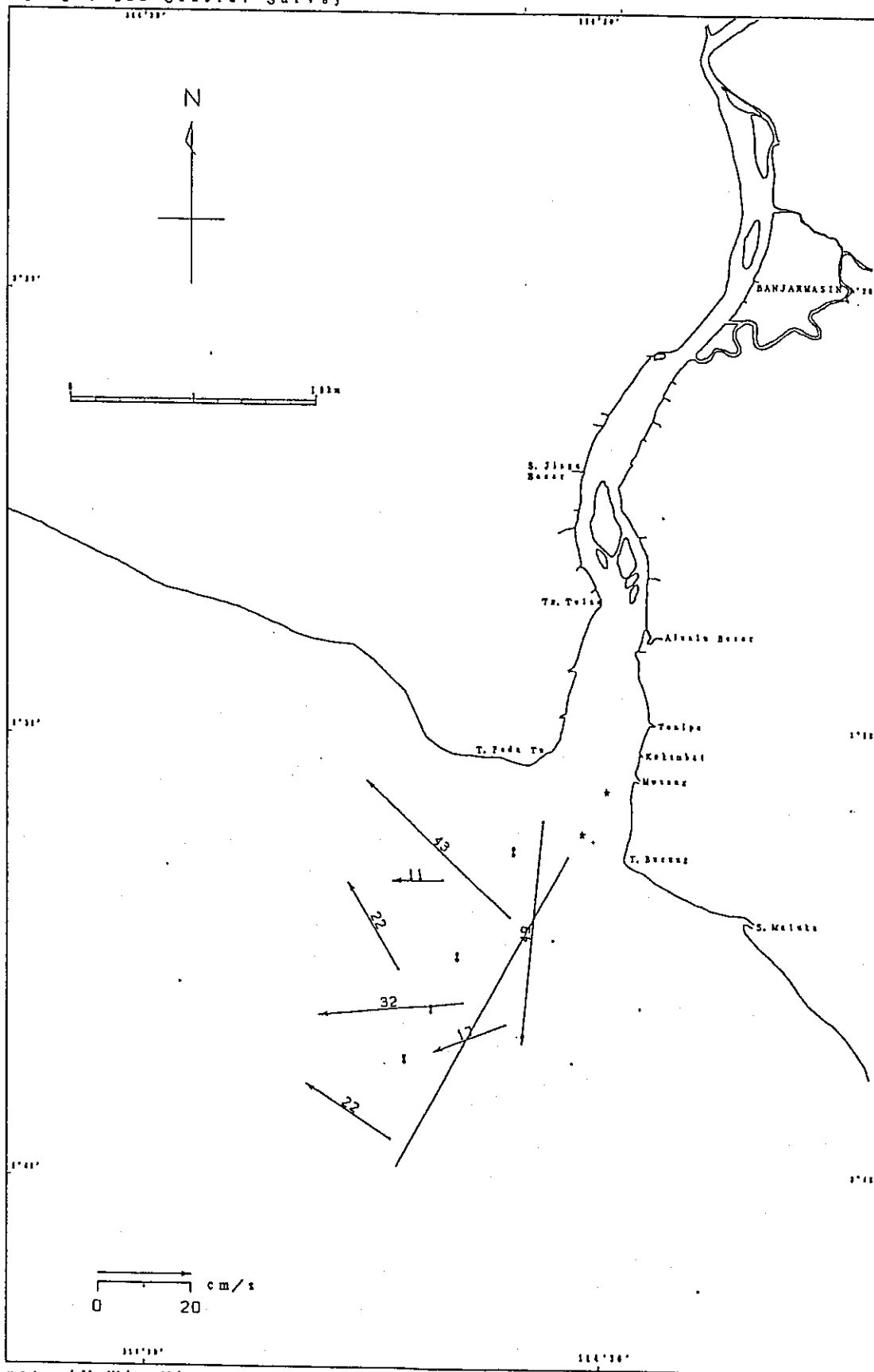
Date : 19th Jan. 1989
 Time : 9:00
 Stage : 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

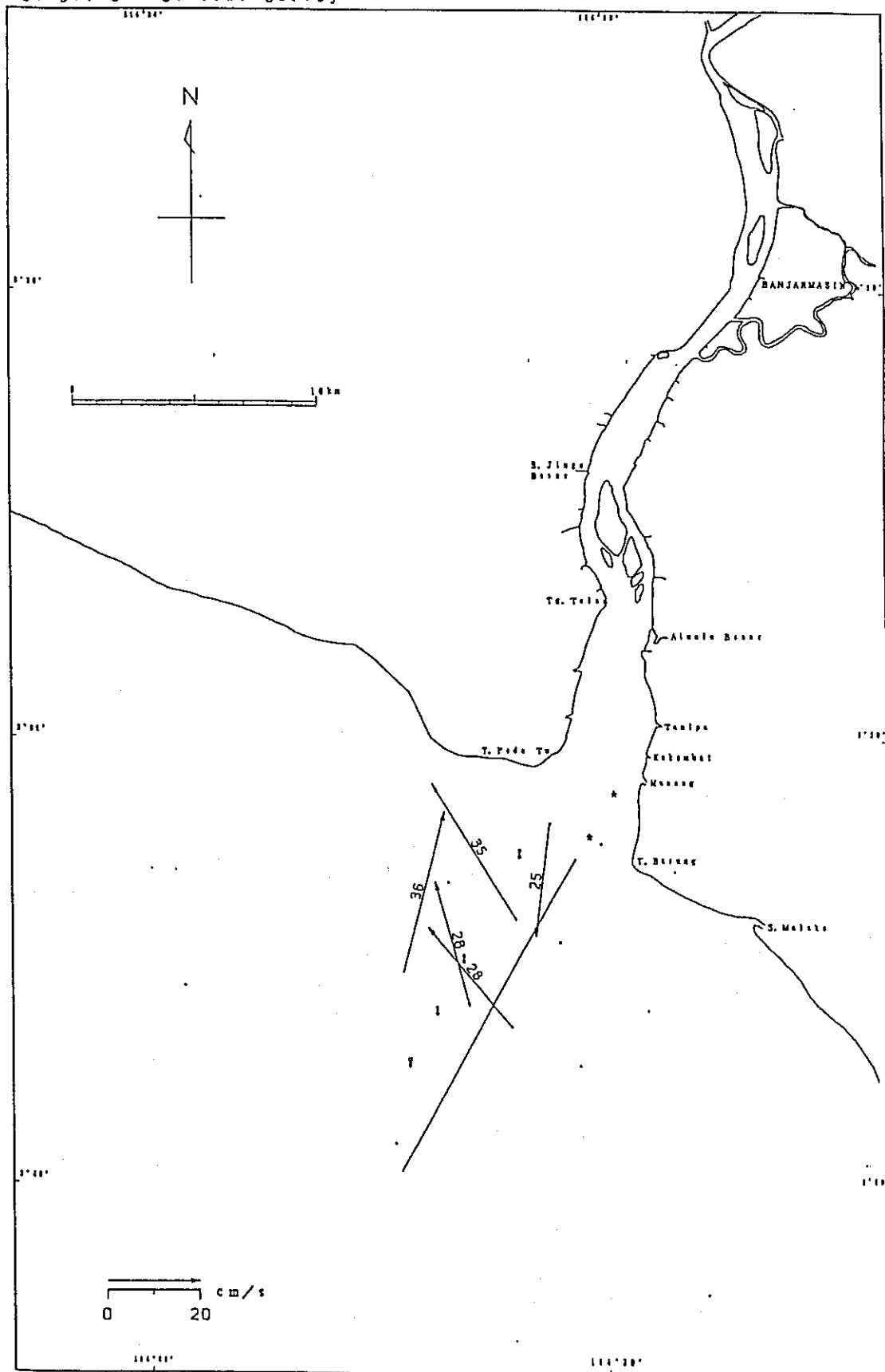
Fig. 3. 2-6 (67) Current Condition (L-1)

Date : 19th Jan. 1989
 Time : 10:00
 Stage : 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (68) Current Condition (L. W)

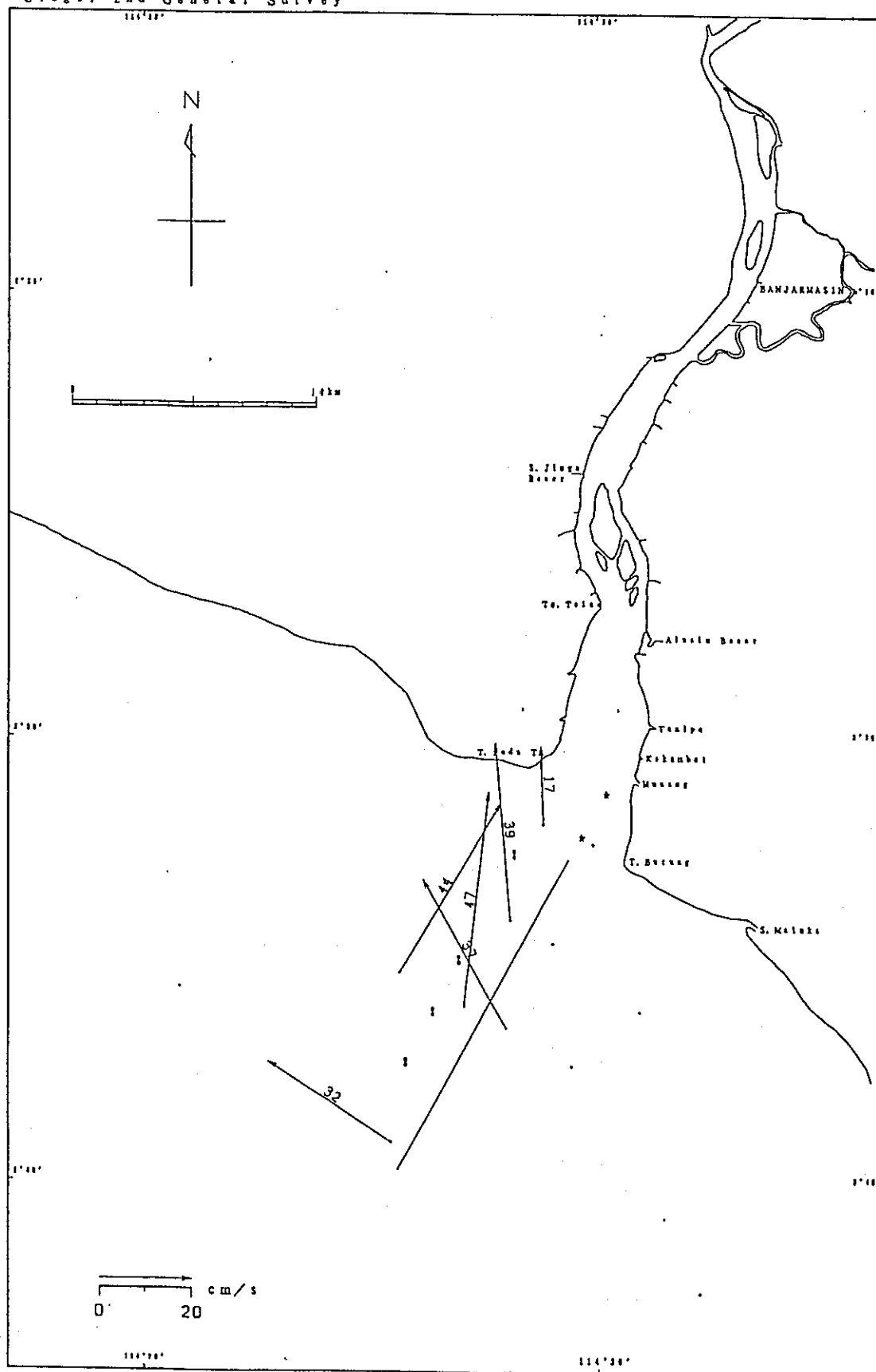
Date : 19th Jan. 1989
 Time : 11:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (6) Current Condition (L+1)

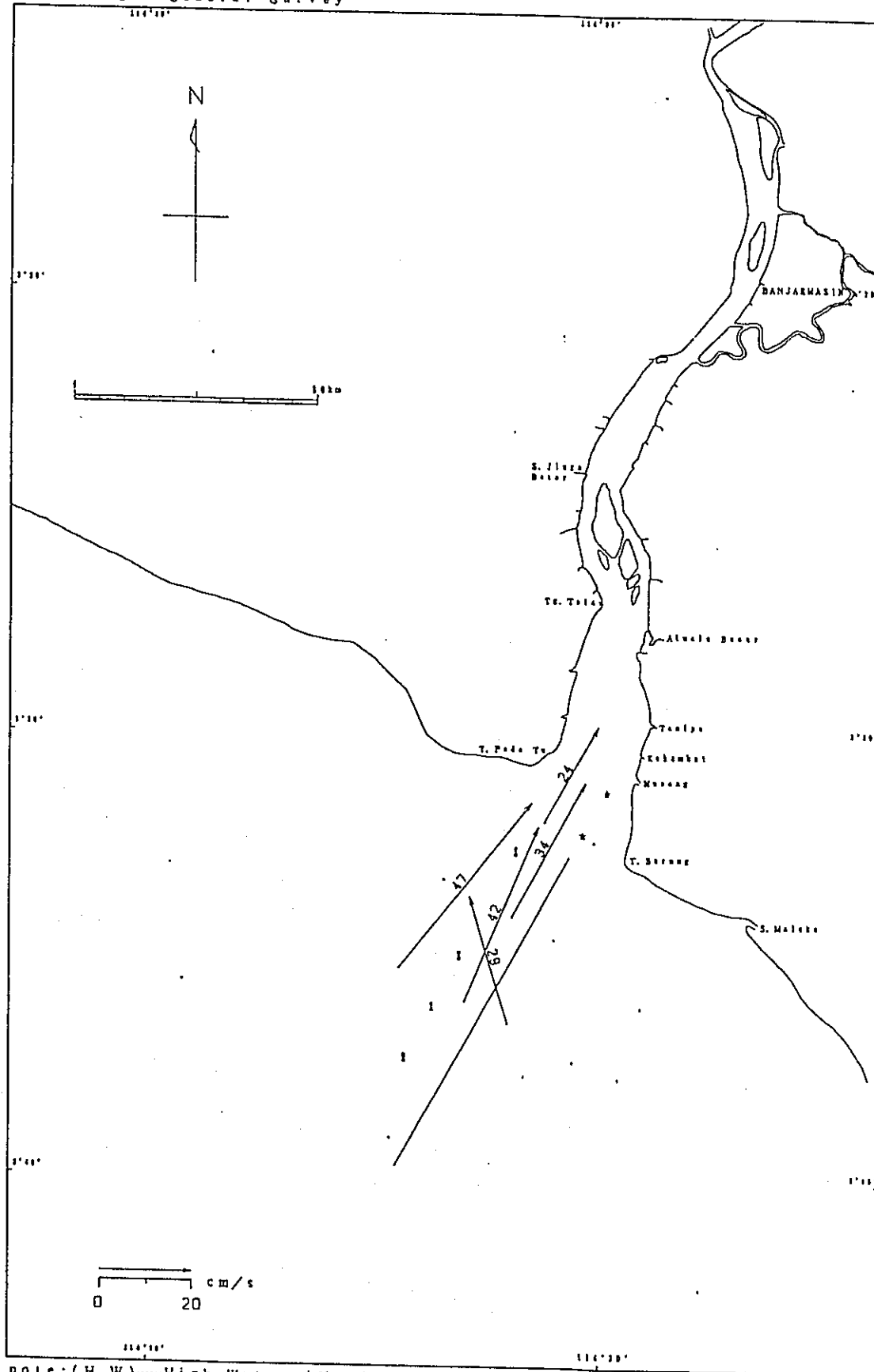
Date : 19th Jan. 1989
 Time : 12:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

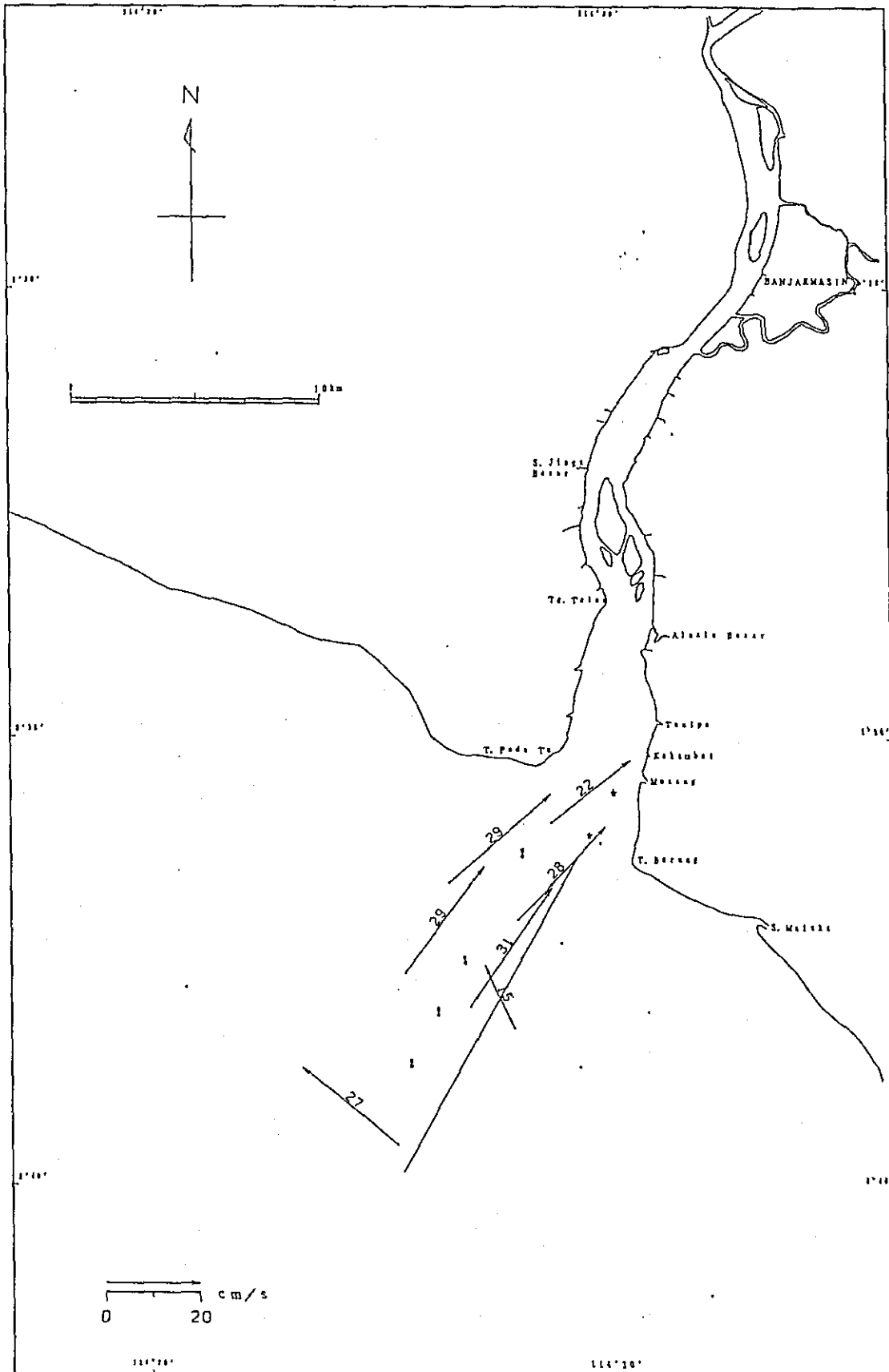
Fig. 3. 2-6 (70) Current Condition (L+2)

Date : 19th Jan. 1989
 Time : 13:00
 Stage: 2nd General Survey



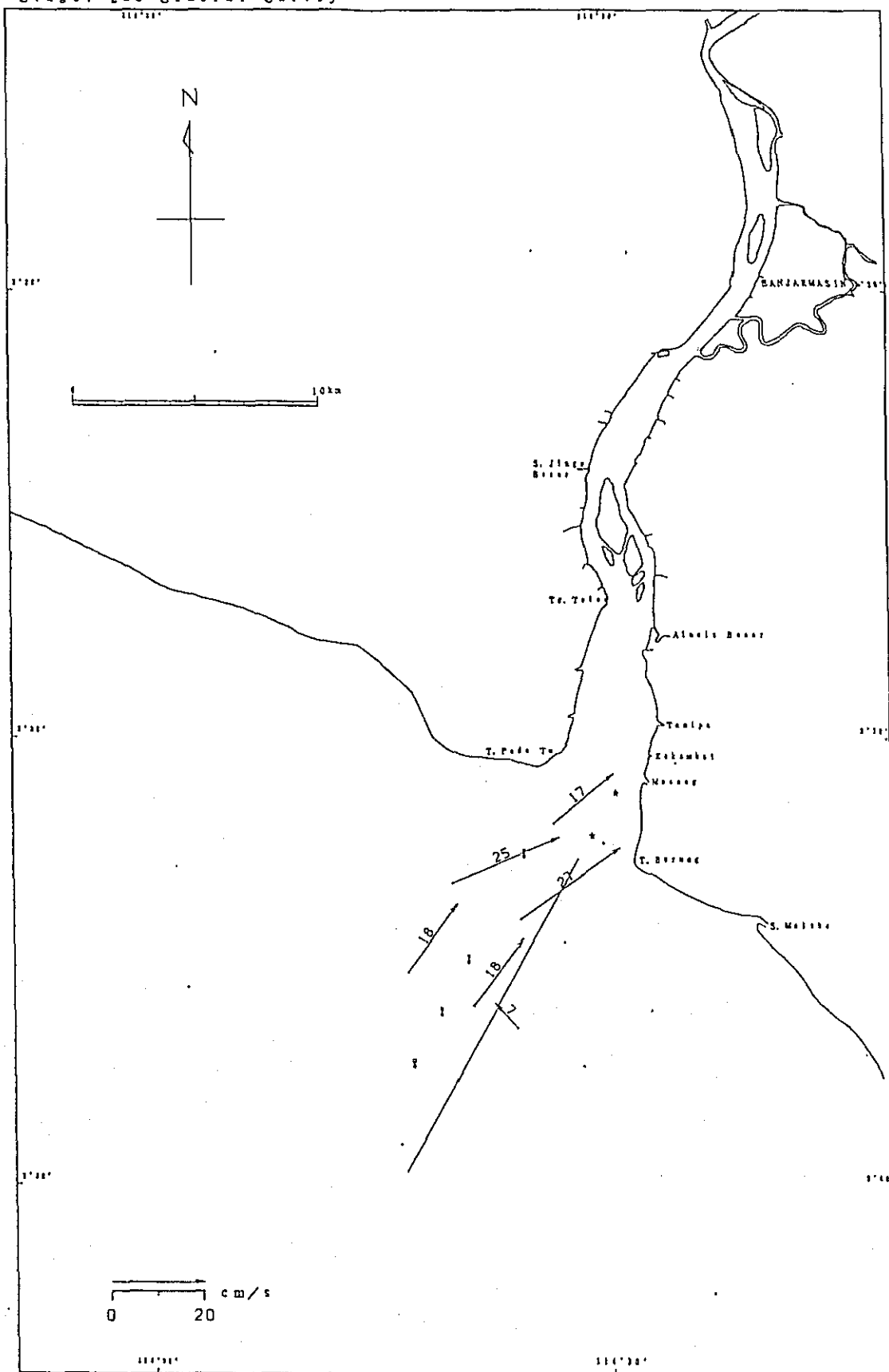
note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (71) Current Condition (L+3)

Date : 19th Jan. 1989
 Time : 14:00
 Stage : 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (2) Current Condition (L. +4)

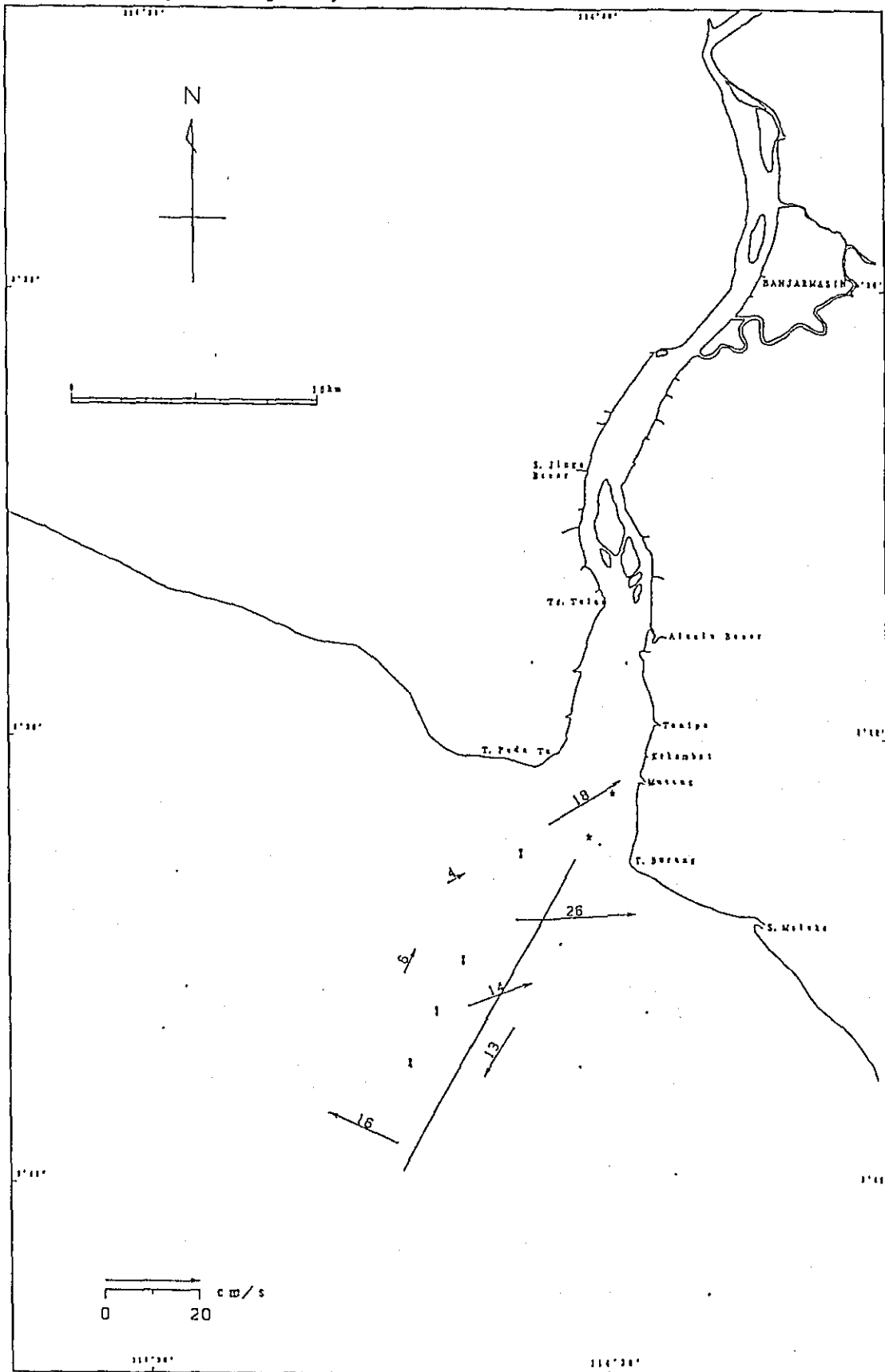
Date : 19th Jan. 1989
 Time : 15:00
 Stage: 2nd General Survey



note: (H.W).....High Water, (H-1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W

Fig. 3. 2-6 (3) Current Condition (L+5)

Date : 19th Jan. 1989
 Time : 16:00
 Stage: 2nd General Survey

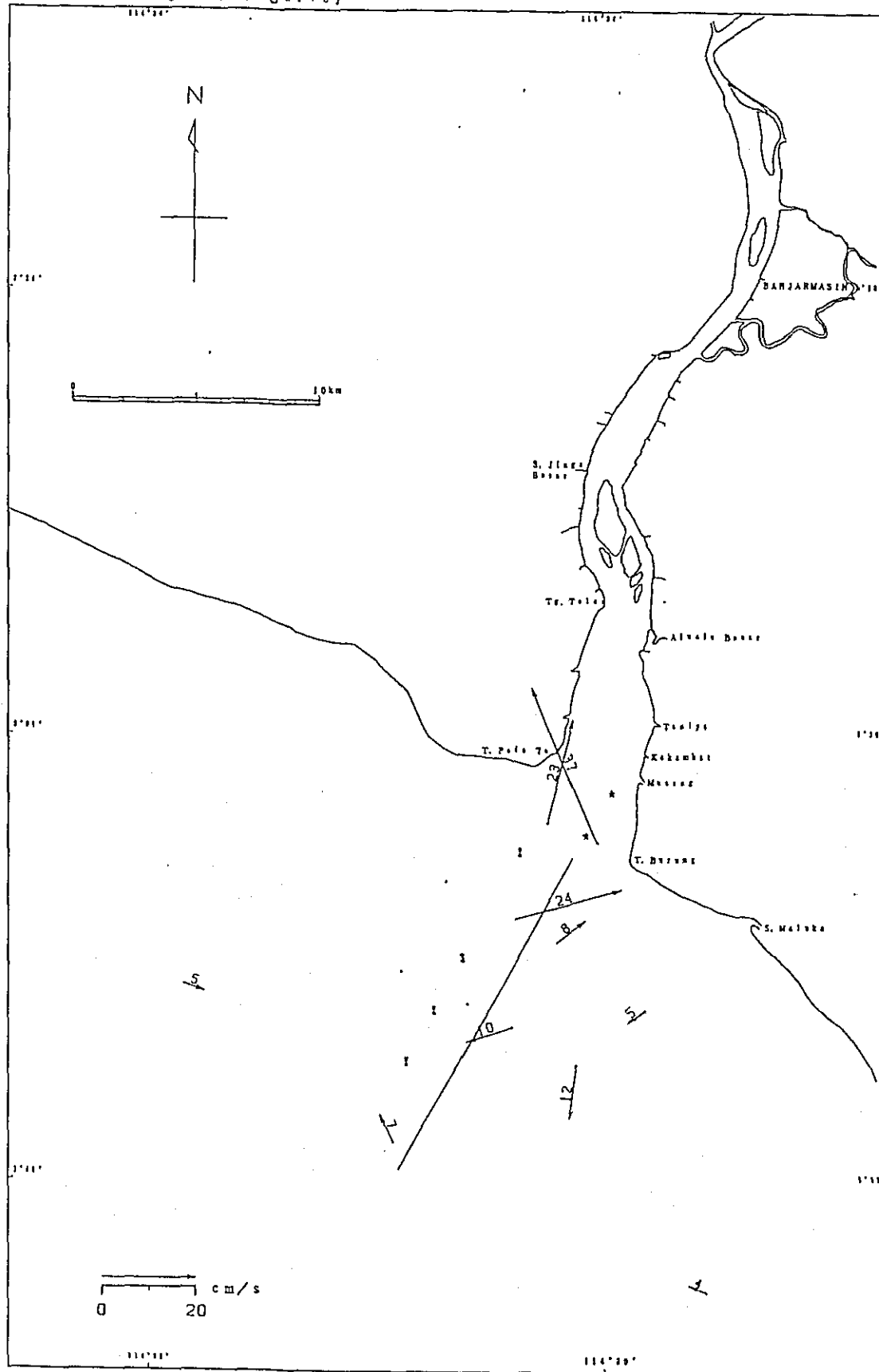


note: (H. W) High Water, (H+1) or (L+1) 1 hour after H. W or L. W
 (L. W) Low Water, (H-1) or (L-1) 1 hour before H. W or L. W
 Fig. 3. 2-6 (74) Current Condition (H-4)

[illegible]

Fig. 3. 2-6 (75) Current Condition (H-3)

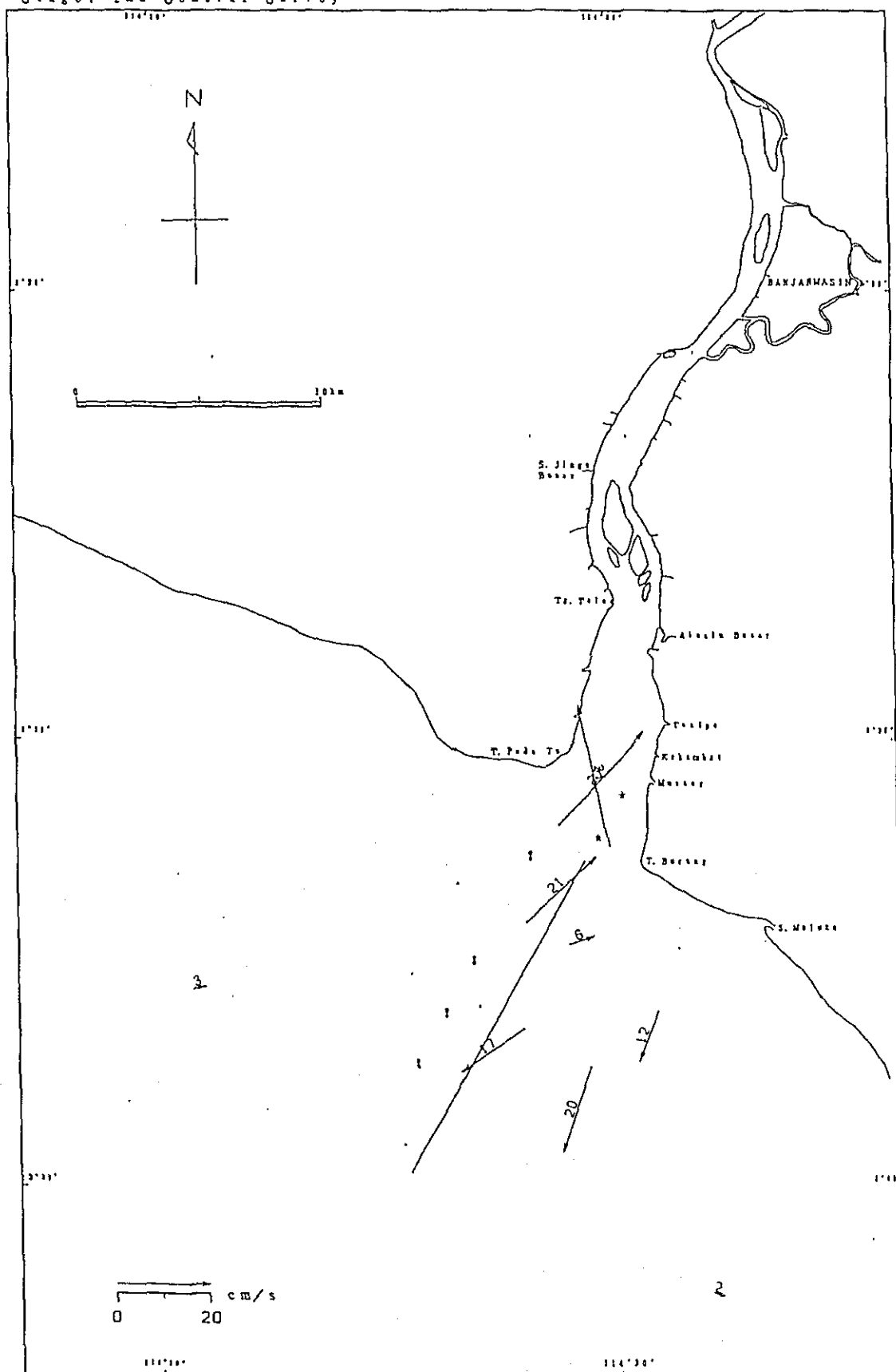
Date : 4th Feb. 1989
 Time : 18:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (6) Current Condition (H. W)

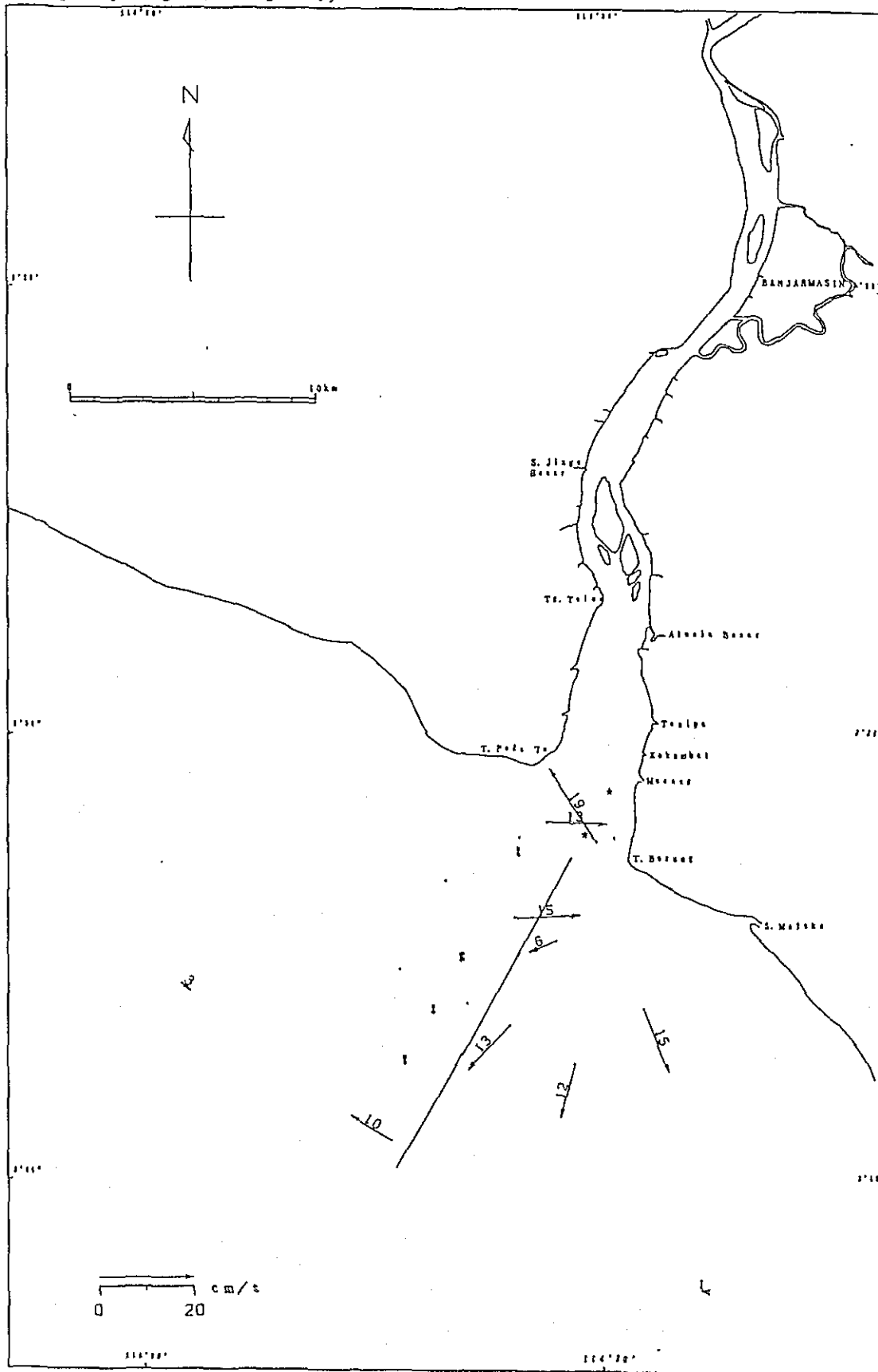
Date : 4th Feb. 1989
 Time : 19:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (7) Current Condition (H+1)

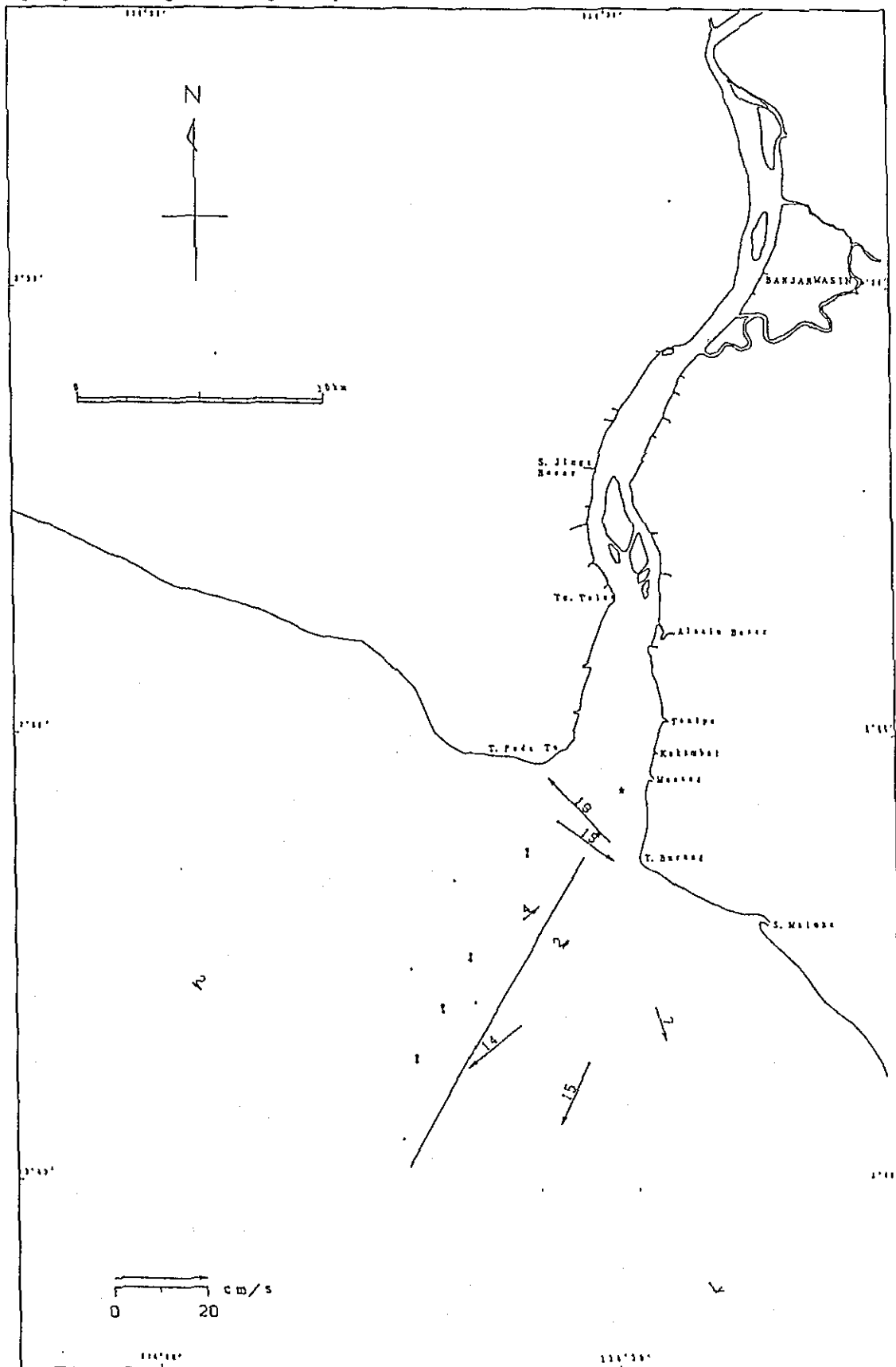
Date : 4th Feb. 1989
 Time : 20:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (8) Current Condition (H+2)

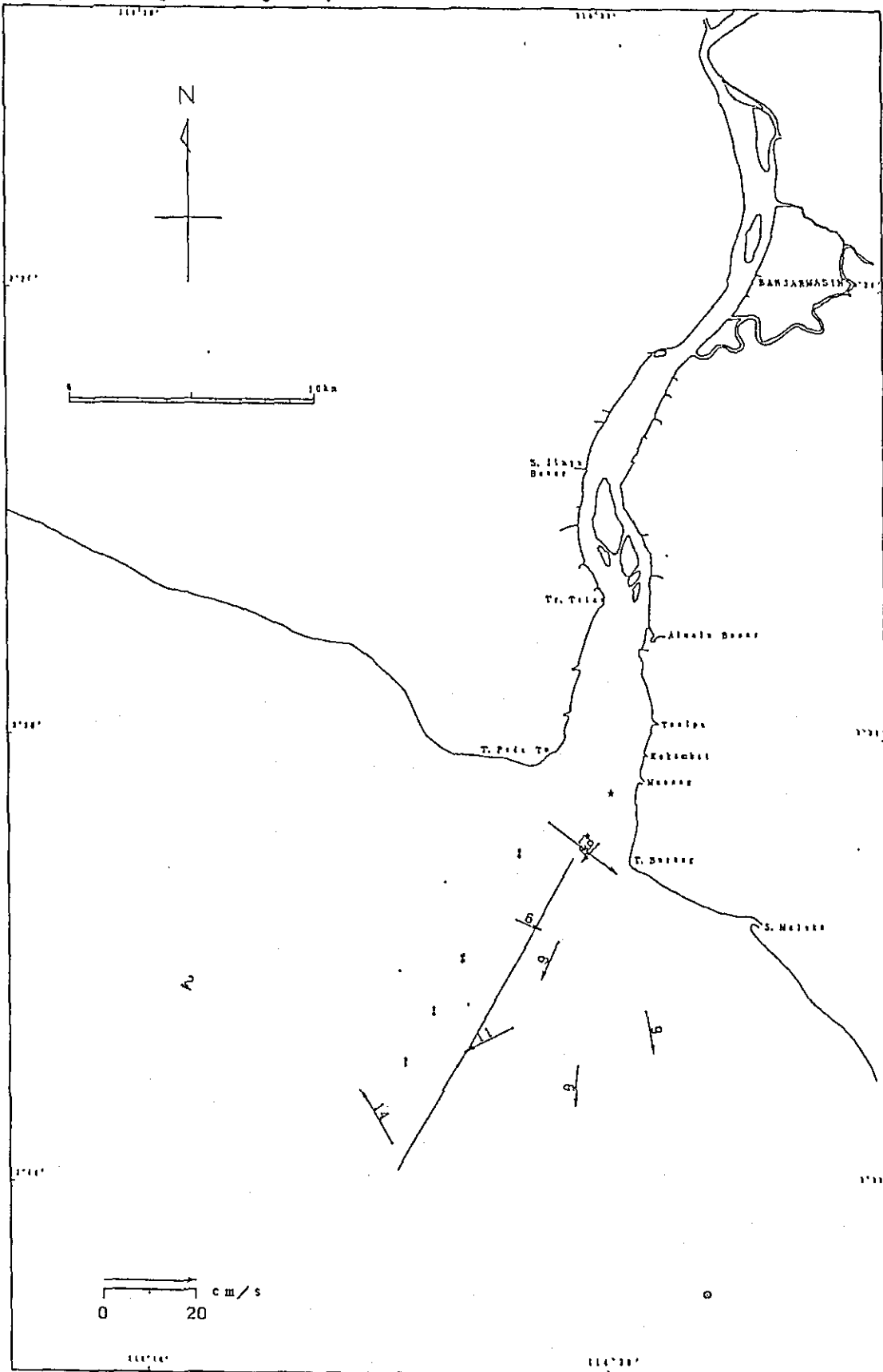
Date : 4th Feb. 1989
 Time : 21:00
 Stage: 2nd General Survey



note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L, W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (9) Current Condition (H+3)

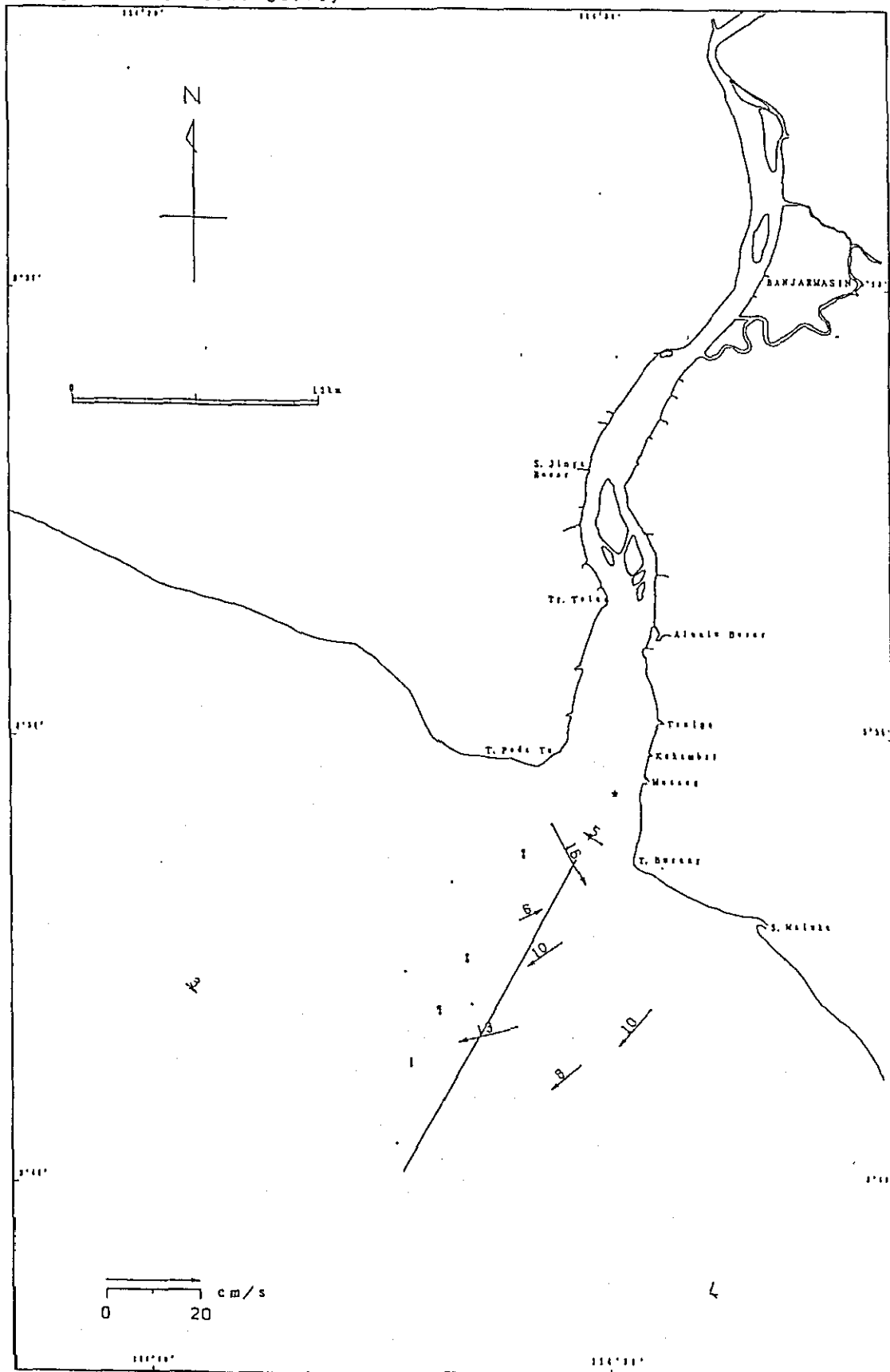
Date : 4th Feb. 1989
 Time : 22:00
 Stage: 2nd General Survey



note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H, W or L, W
 (L, W).....Low Water, (H-1) or (L-1).....1 hour before H, W or L, W

Fig. 3. 2-6 (C) Current Condition (H +4)

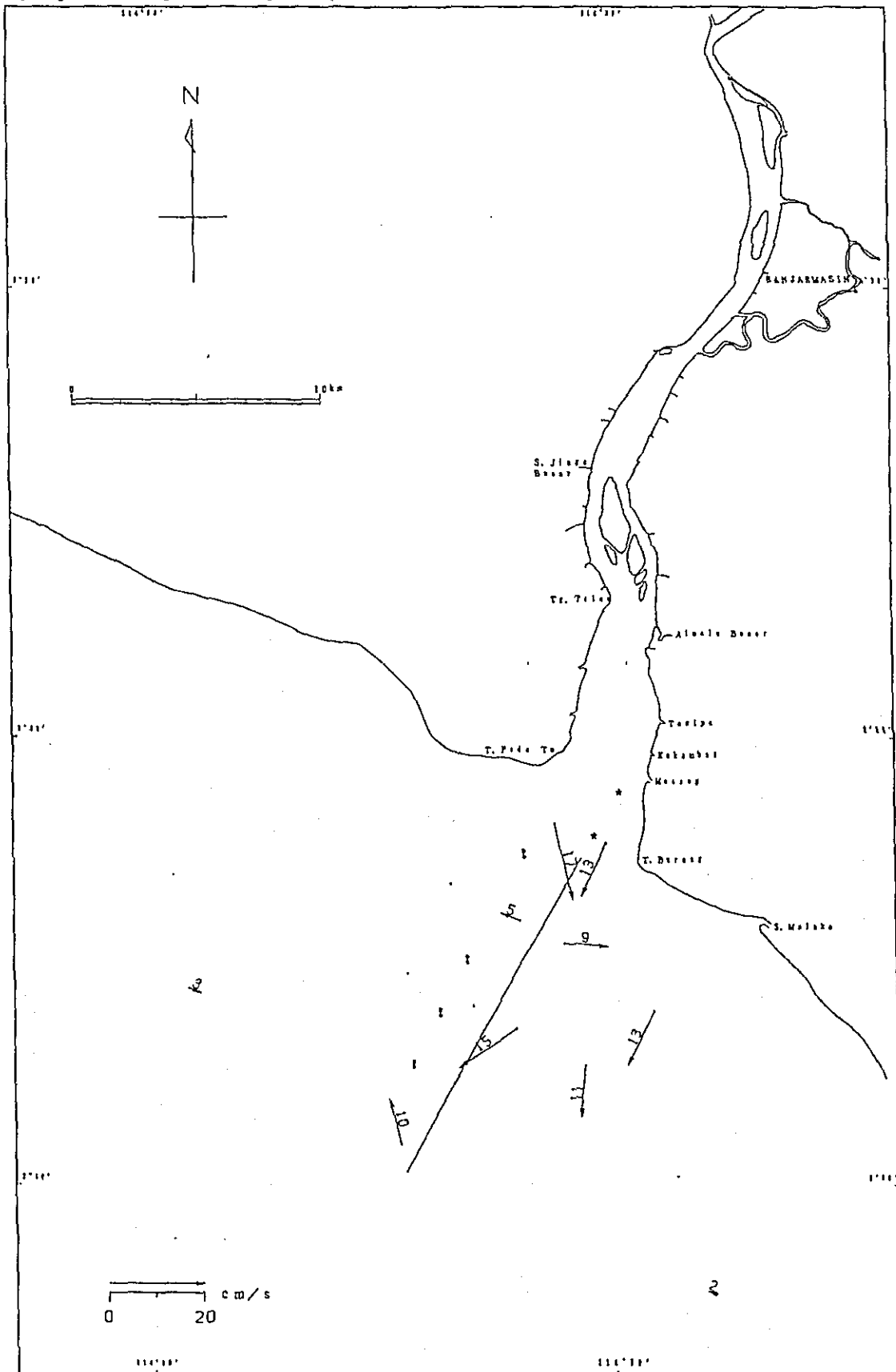
Date : 4th Feb. 1989
 Time : 23:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1hour before H. W or L. W

Fig. 3. 2-6 81) Current Condition (H +5)

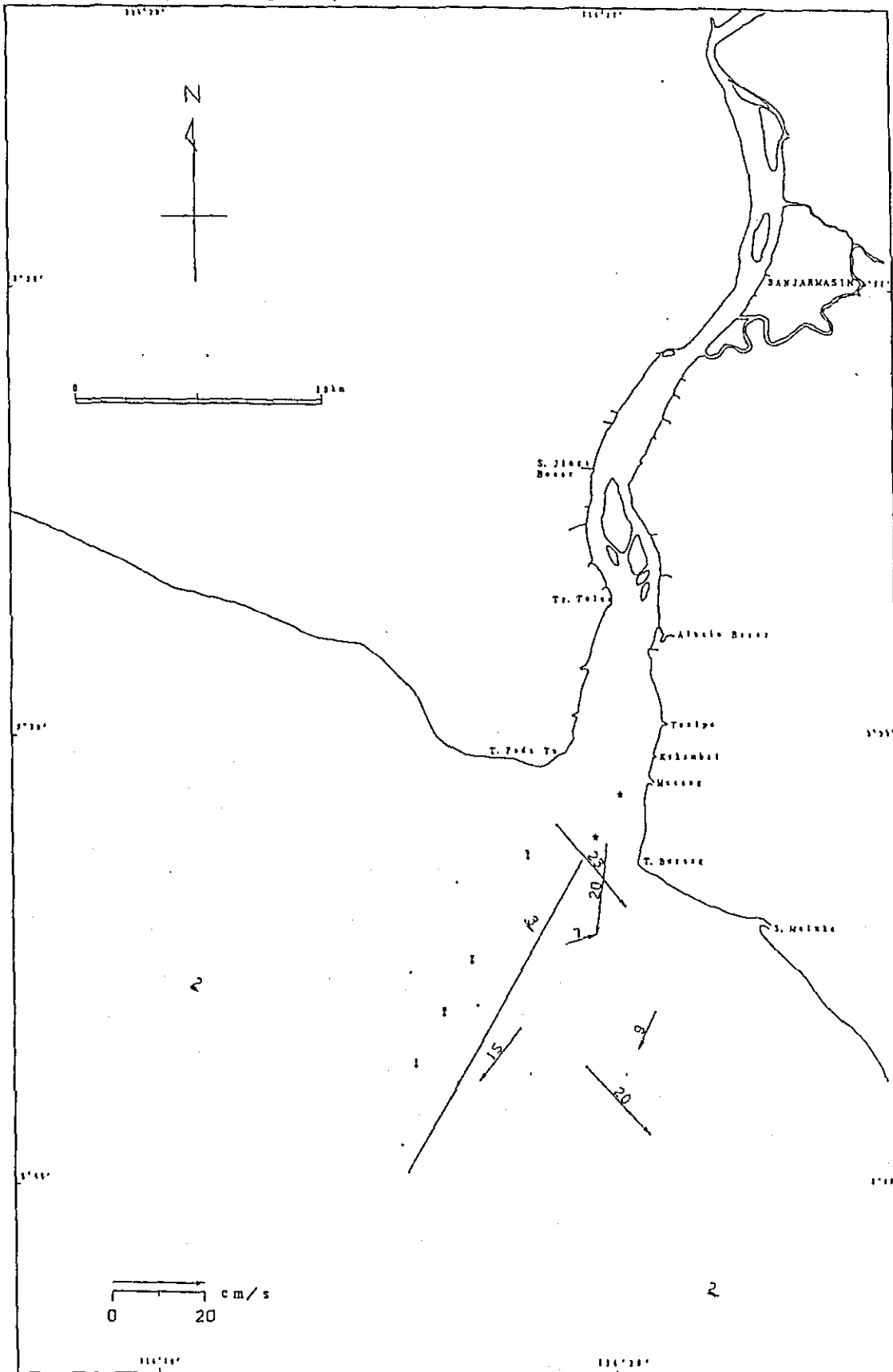
Date : 5th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey



note: (H, W).....High Water, (H+1) or (L+1).....1hour after H, W or L, W
 (L, W).....Low Water, (H-1) or (L-1).....1hour before H, W or L, W

Fig. 3. 2-6 (2) Current Condition (H +6)

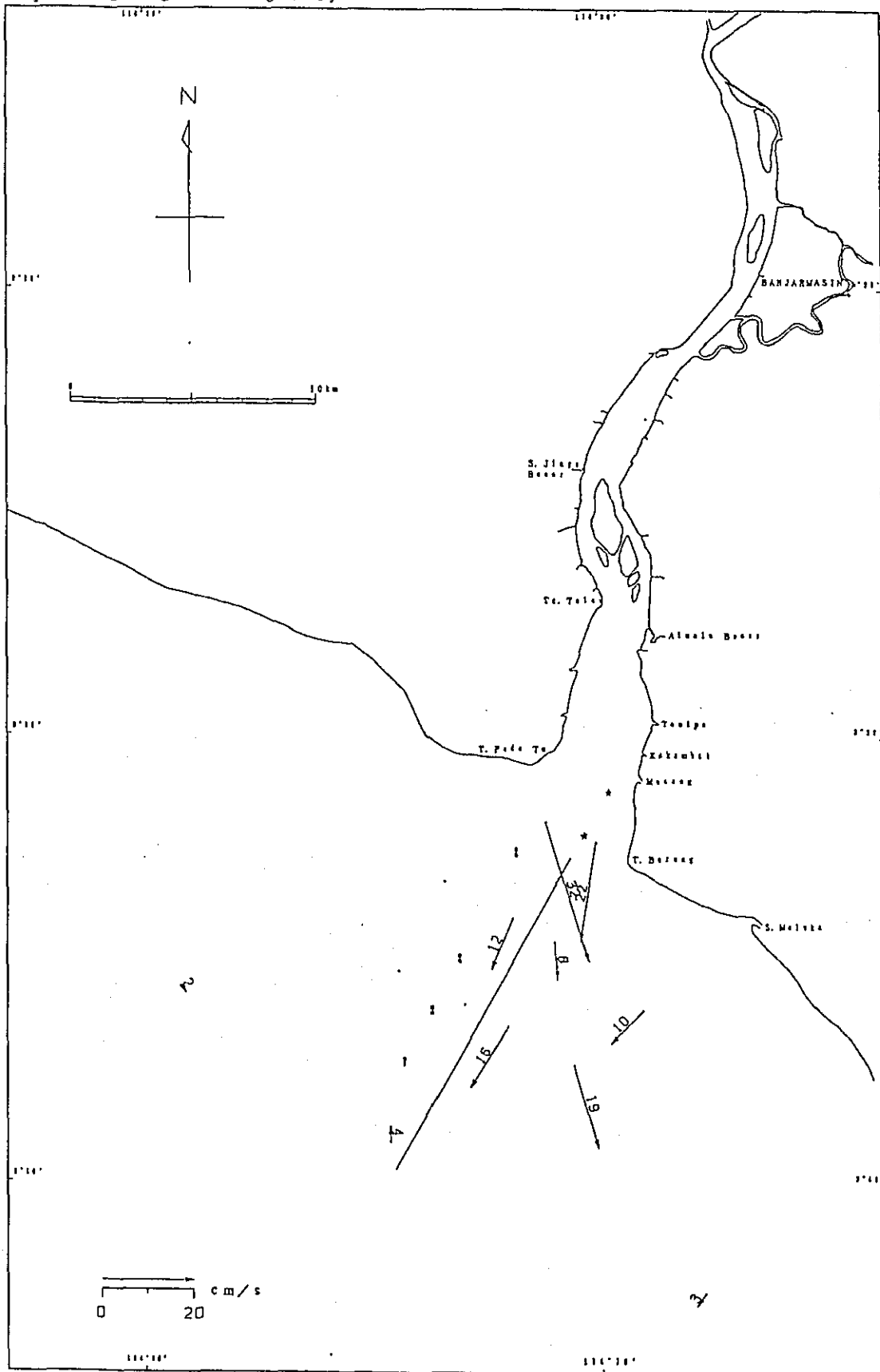
Date : 5th Feb. 1989
 Time : 1:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H-1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

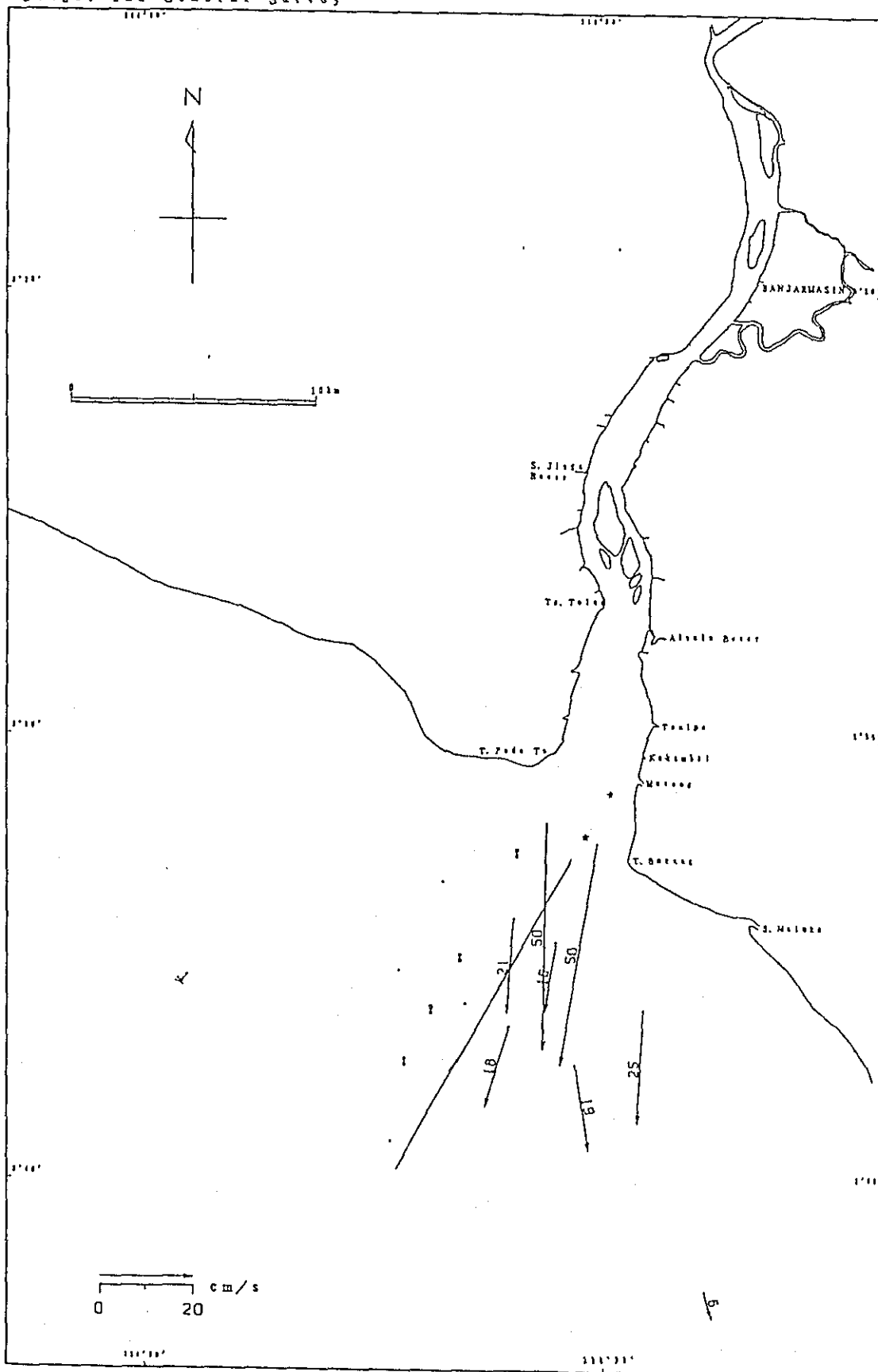
Fig. 3. 2-6 (3) Current Condition (H +7)

Date : 5th Feb. 1989
 Time : 2:00
 Stage: 2nd General Survey



note: (H.W).....High Water, (H-1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W
 Fig. 3. 2-6 (4) Current Condition (H+8)

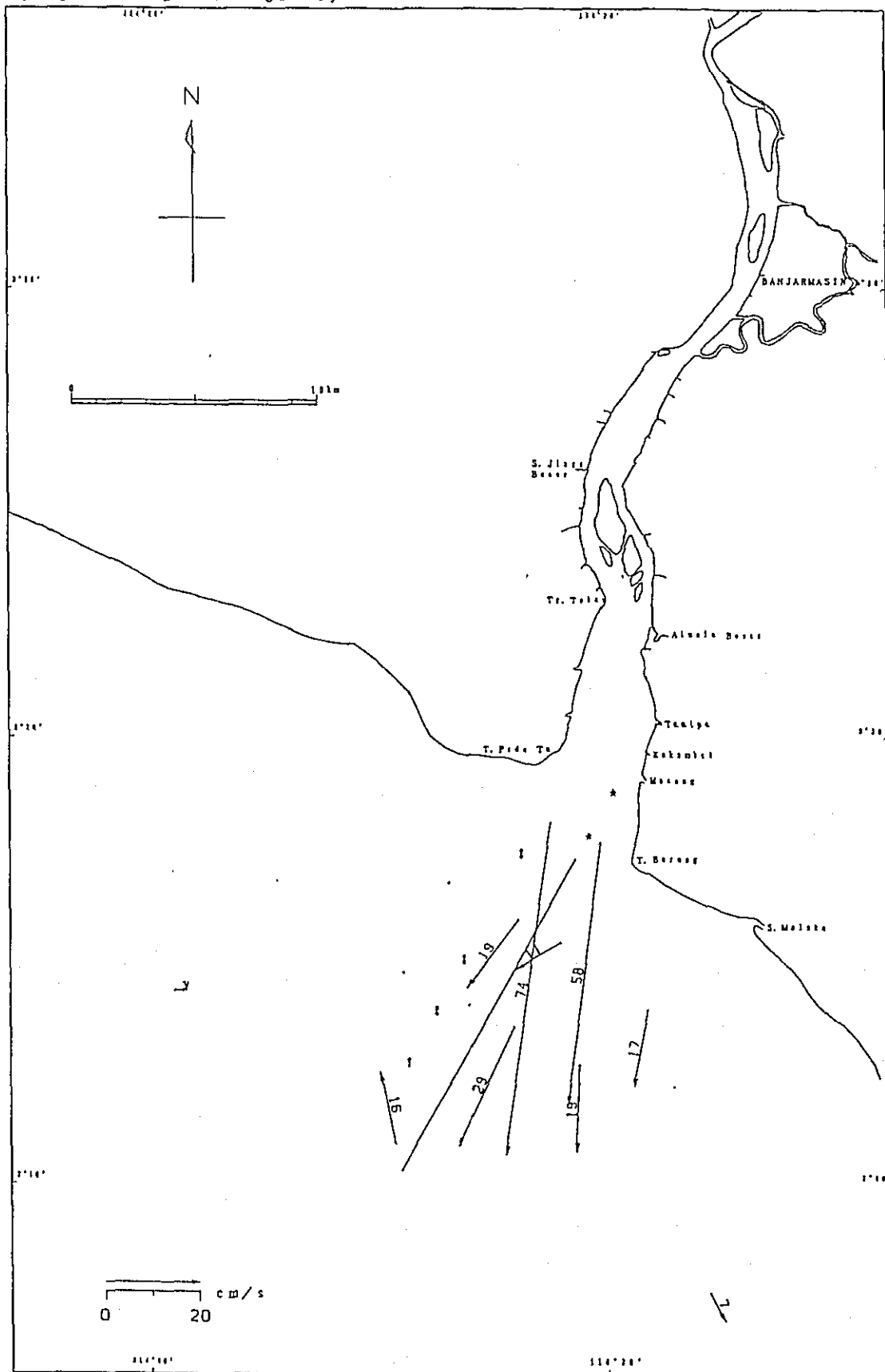
Date : 5th Feb. 1989
 Time : 3:00
 Stage: 2nd General Survey



note: (H. W) High Water, (H+1) or (L+1) 1 hour after H. W or L. W
 (L. W) Low Water, (H-1) or (L-1) 1 hour before H. W or L. W

Fig. 3. 2-6 (5) Current Condition (L-8)

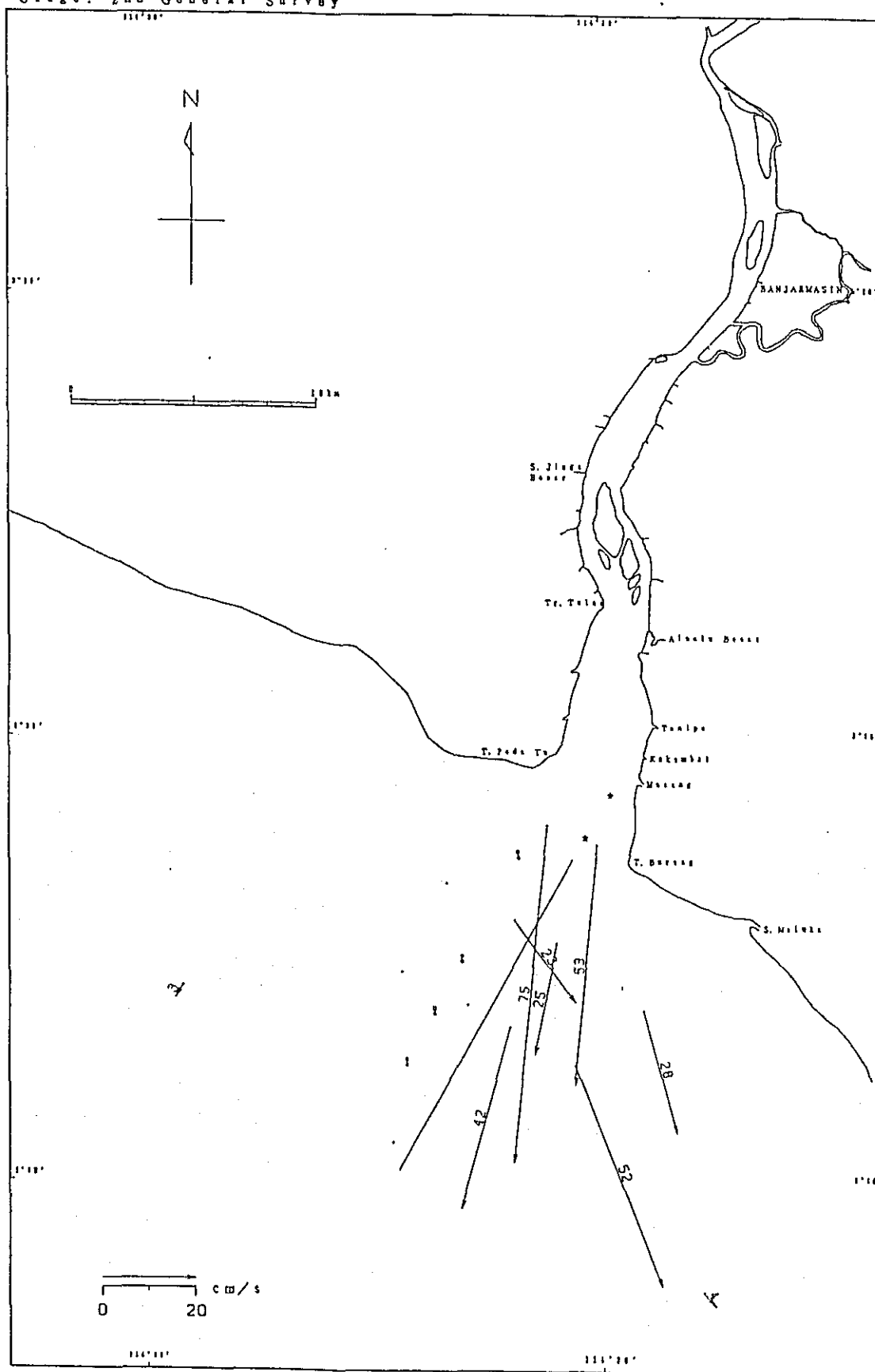
Date : 5th Feb. 1989
 Time : 4:00
 Stage: 2nd General Survey



note: (H. W).....High Water. (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water. (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (6) Current Condition (L-7)

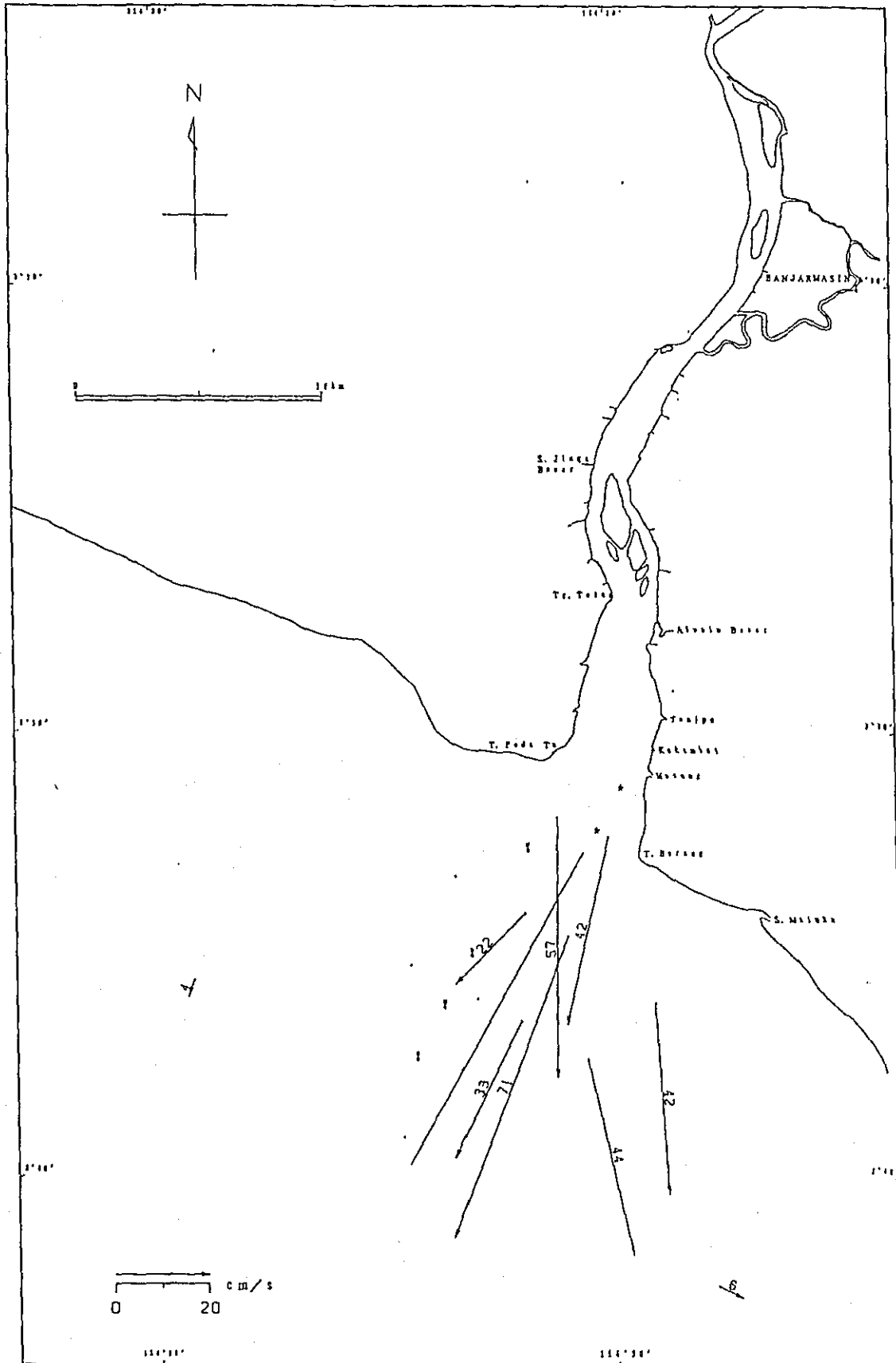
Date : 5th Feb. 1989
 Time : 5:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (7) Current Condition (L-6)

Fig. 3. 2-6 (S) Current Condition (L-5)

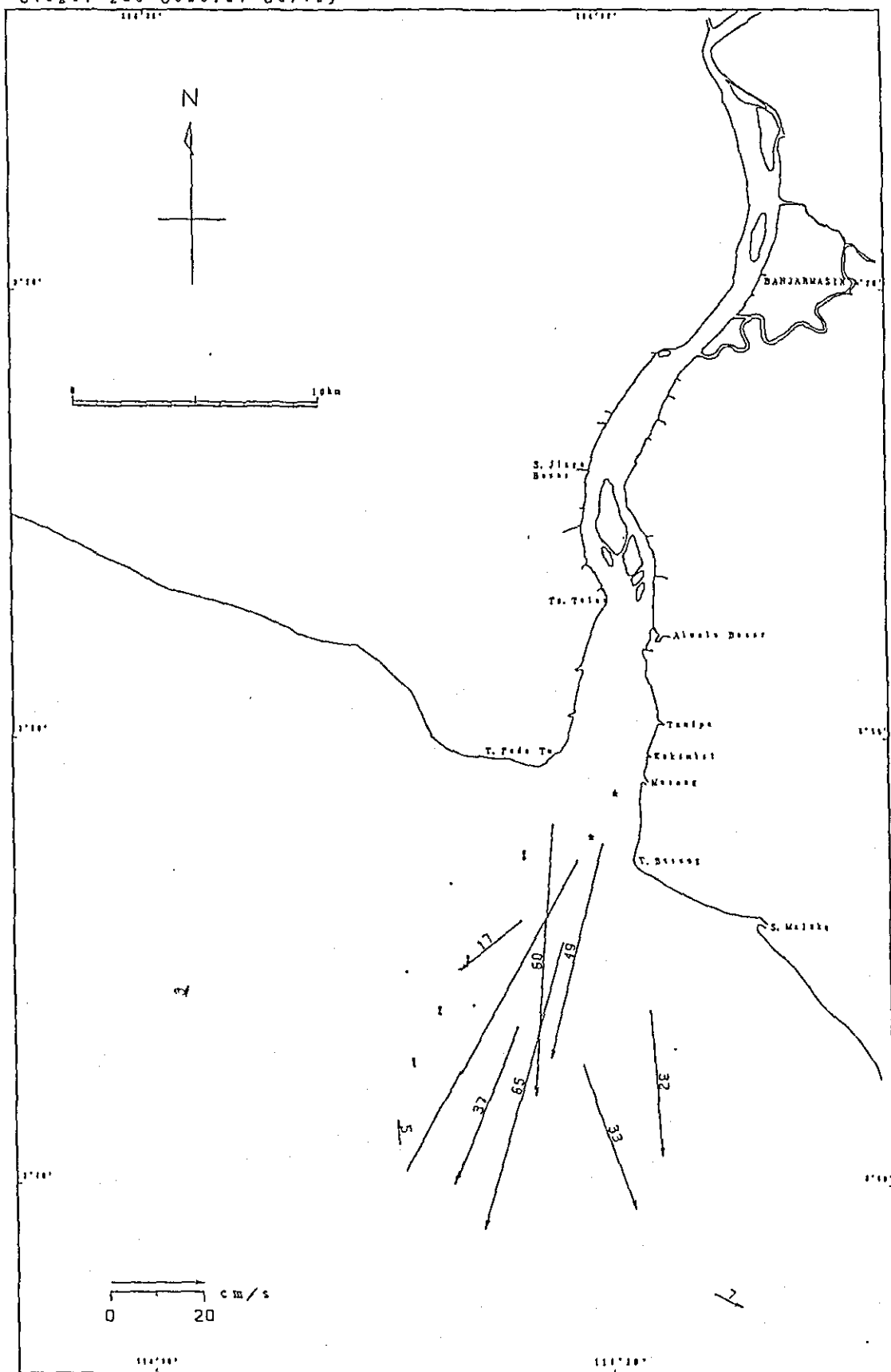
Date : 5th Feb. 1989
 Time : 7:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H-1) or (L+1).....1hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1hour before H. W or L. W

Fig. 3. 2-6 (9) Current Condition (L-4)

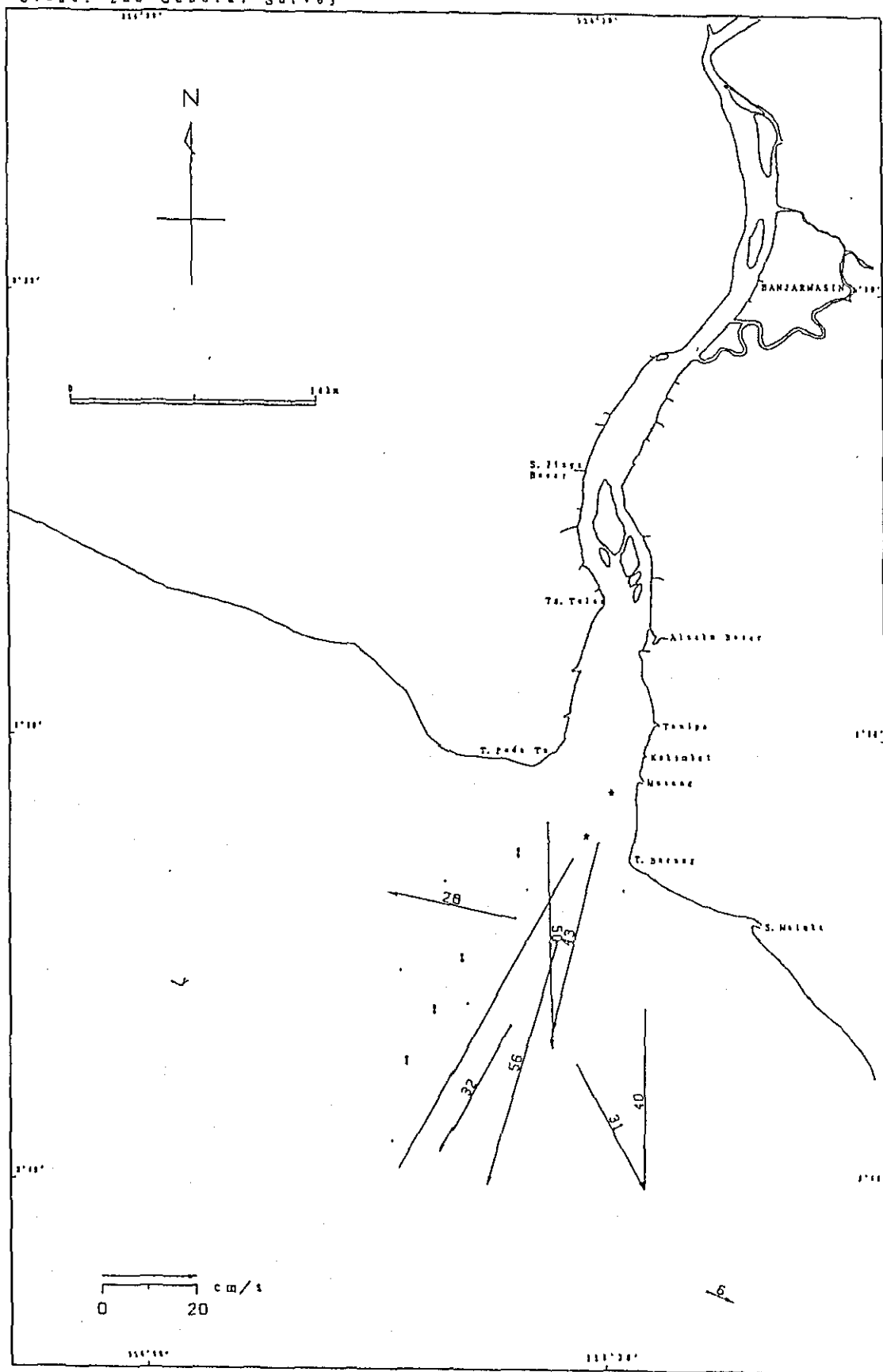
Date : 5th Feb. 1988
 Time : 8:00
 Stage: 2nd General Survey



note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W

Fig. 3. 2-6 (C) Current Condition (L-3)

Date : 5th Feb. 1929
 Time : 9:00
 Stage: 2nd General Survey



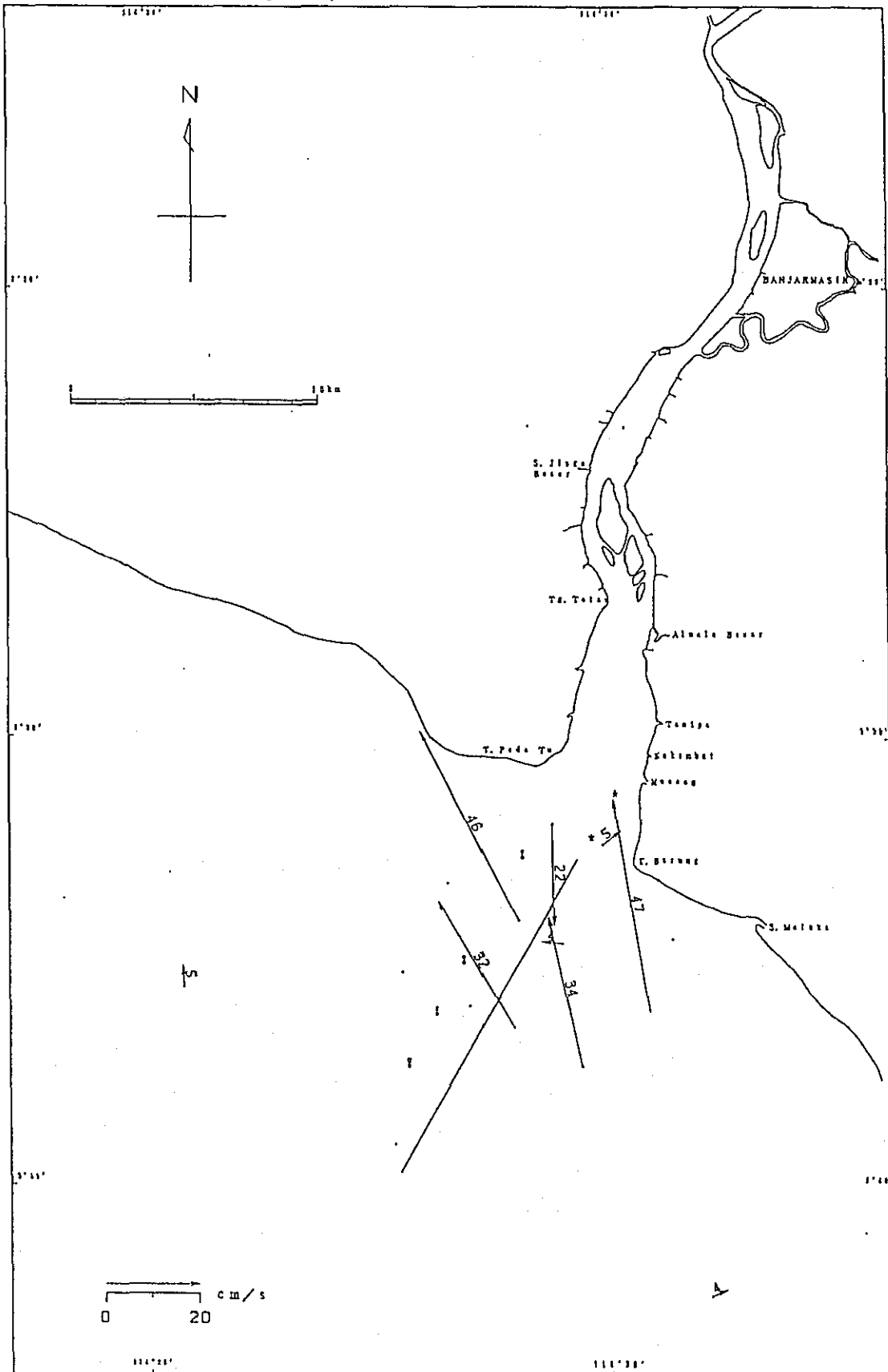
note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 0) Current Condition (L-2)

Fig. 3. 2-6 (2) Current Condition (L-1)

Map of the Banjarmasin area showing the coastline, major rivers, and various locations. The map includes a north arrow, a scale bar (0 to 10 km), and a coordinate grid. Key locations labeled include Banjarmasin, S. Banjar, Ta. Talar, Alasda Besar, T. Poda Ta, T. Balar, S. Malaka, T. Balar, K. Balar, T. Balar, and T. Balar. The map also shows several straight lines with numerical labels (32, 38, 16, 36, 17) and a star symbol.

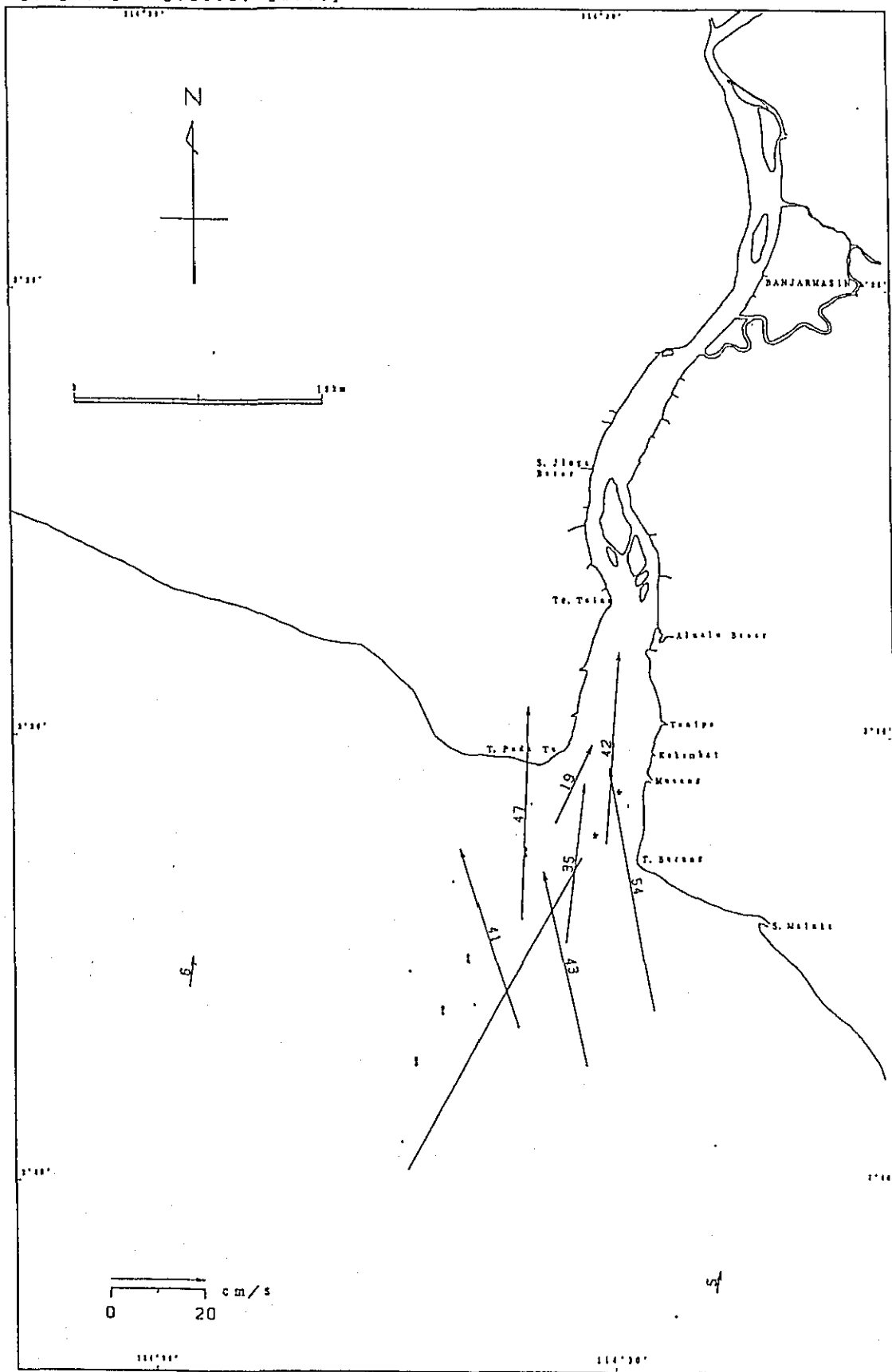
Fig. 3. 2-6 (3) Current Condition (L. W)

Date : 5th Feb. 1989
 Time : 12:00
 Stage: 2nd General Survey



note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L, W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (4) Current Condition (L+1)

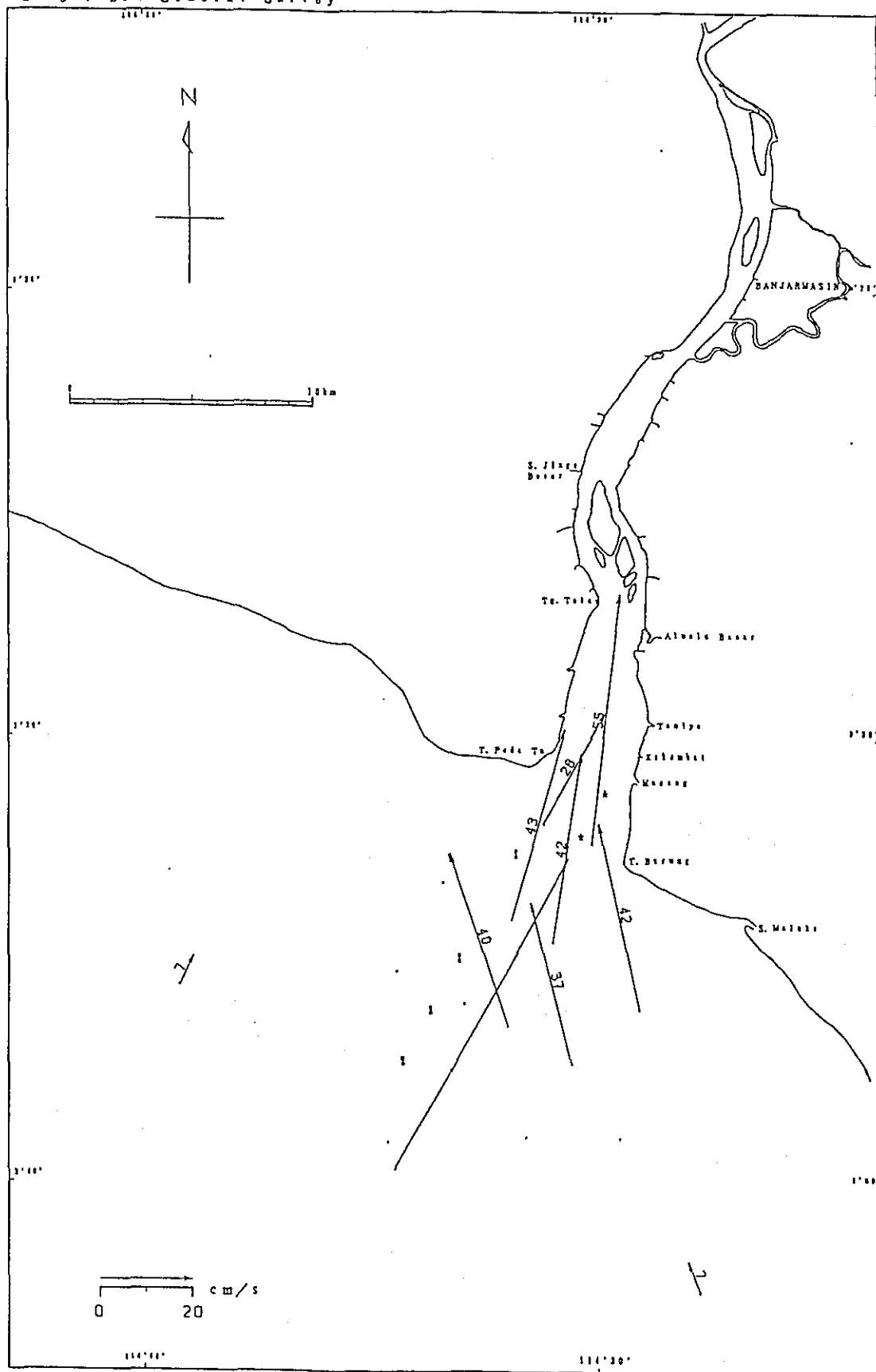
Date : 5th Feb. 1989
 Time : 13:00
 Stage: 2nd General Survey



note: (H. W).....High Water. (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water. (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (5) Current Condition (L+2)

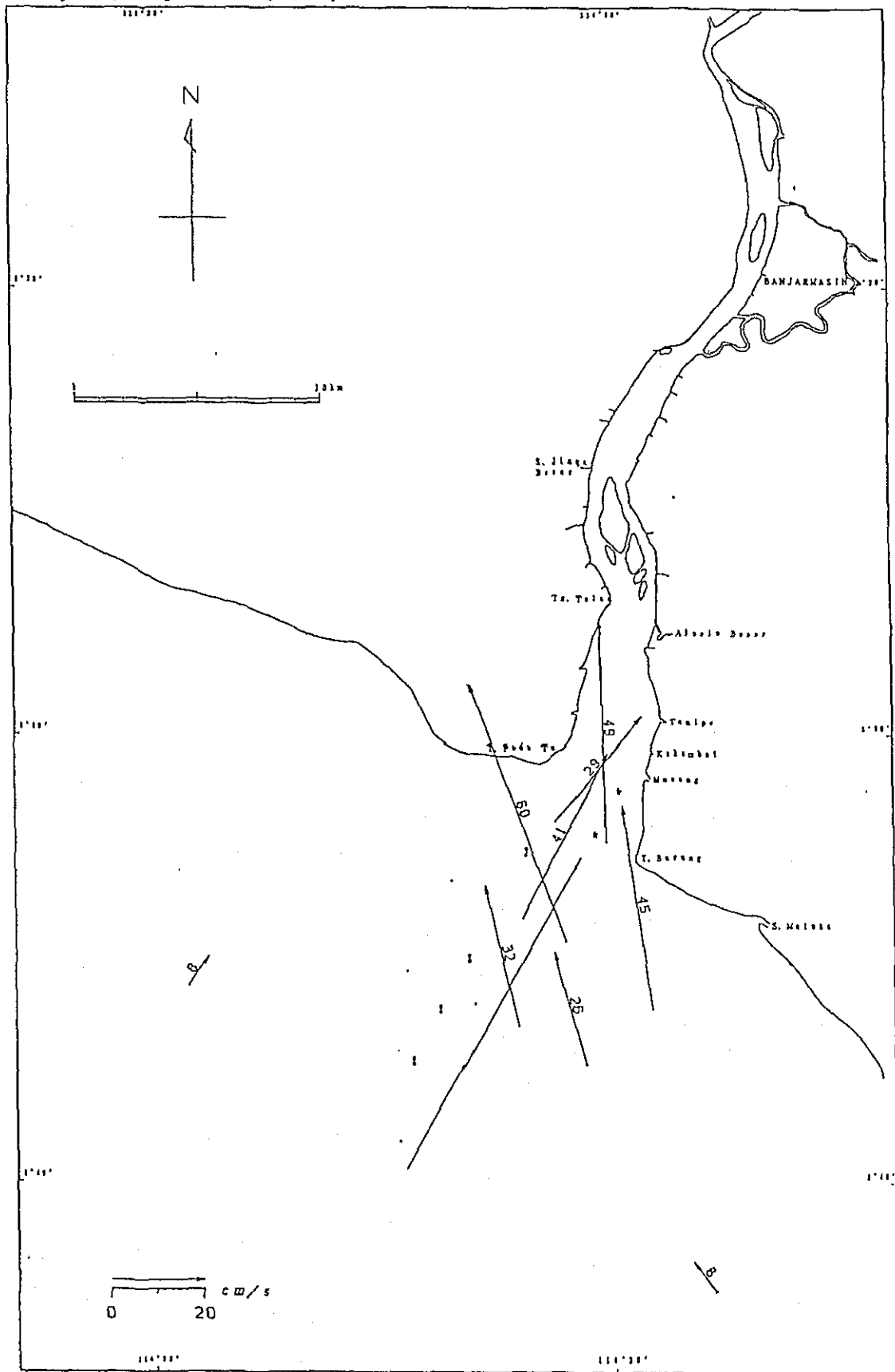
Date : 5th Feb. 1989
 Time : 14:00
 Stage: 2nd General Survey



note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W

Fig. 3. 2-6 (6) Current Condition (L +3)

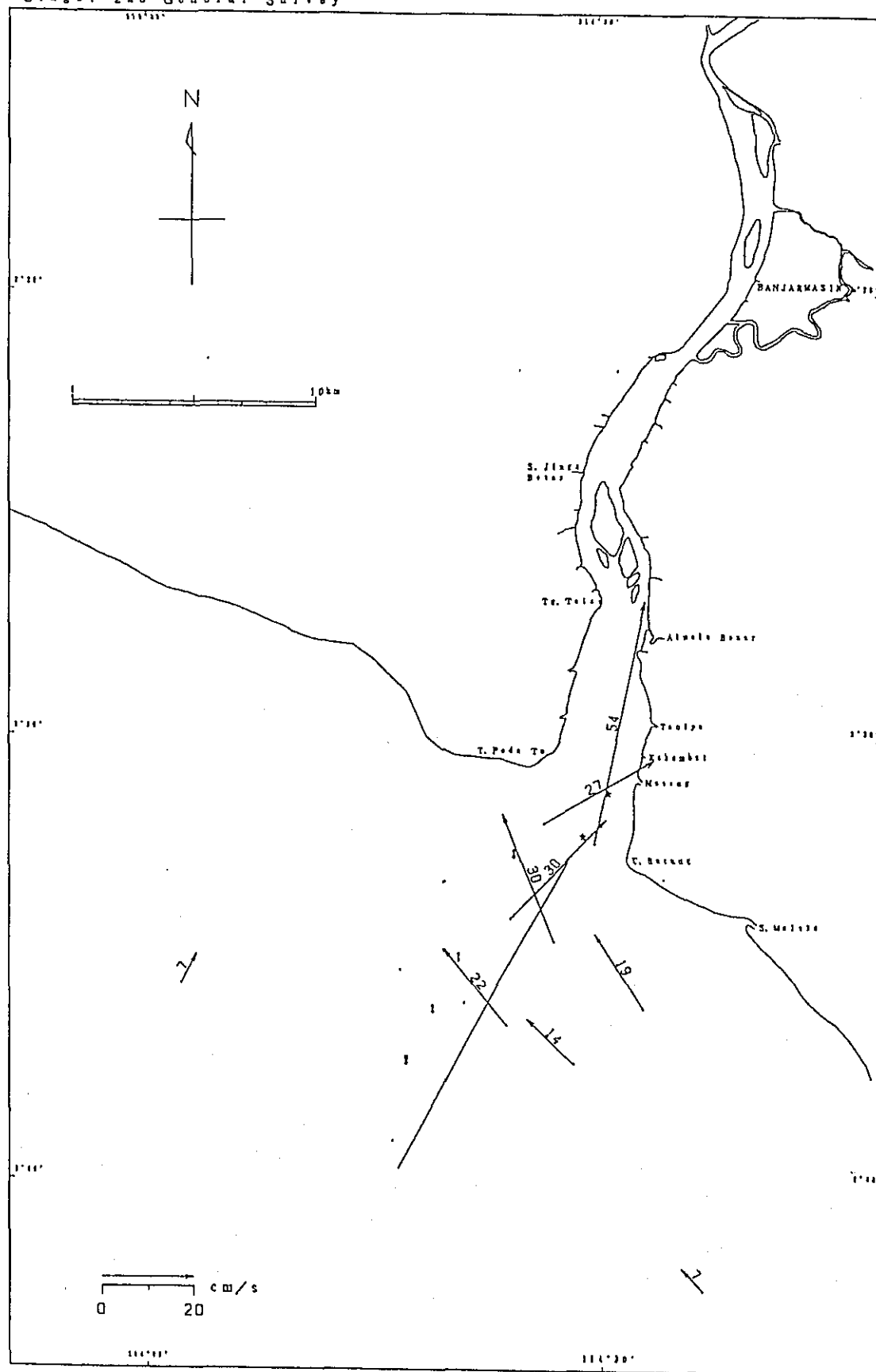
Date : 5th Feb. 1939
 Time : 15:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H-1) or (L+1).....hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....hour before H. W or L. W

Fig. 3. 2-6 (7) Current Condition (H-2)

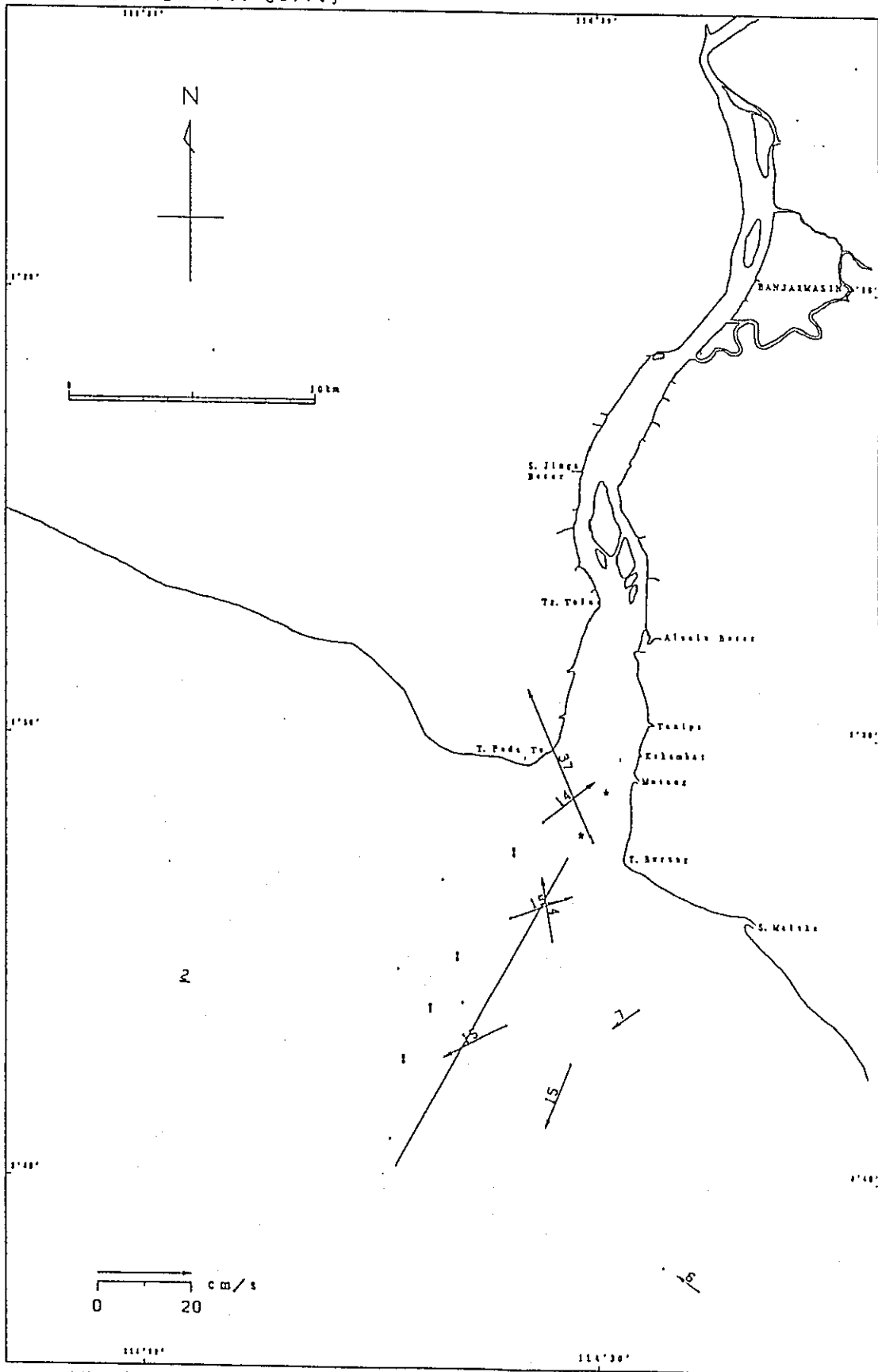
Date : 5th Feb. 1989
 Time : 16:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

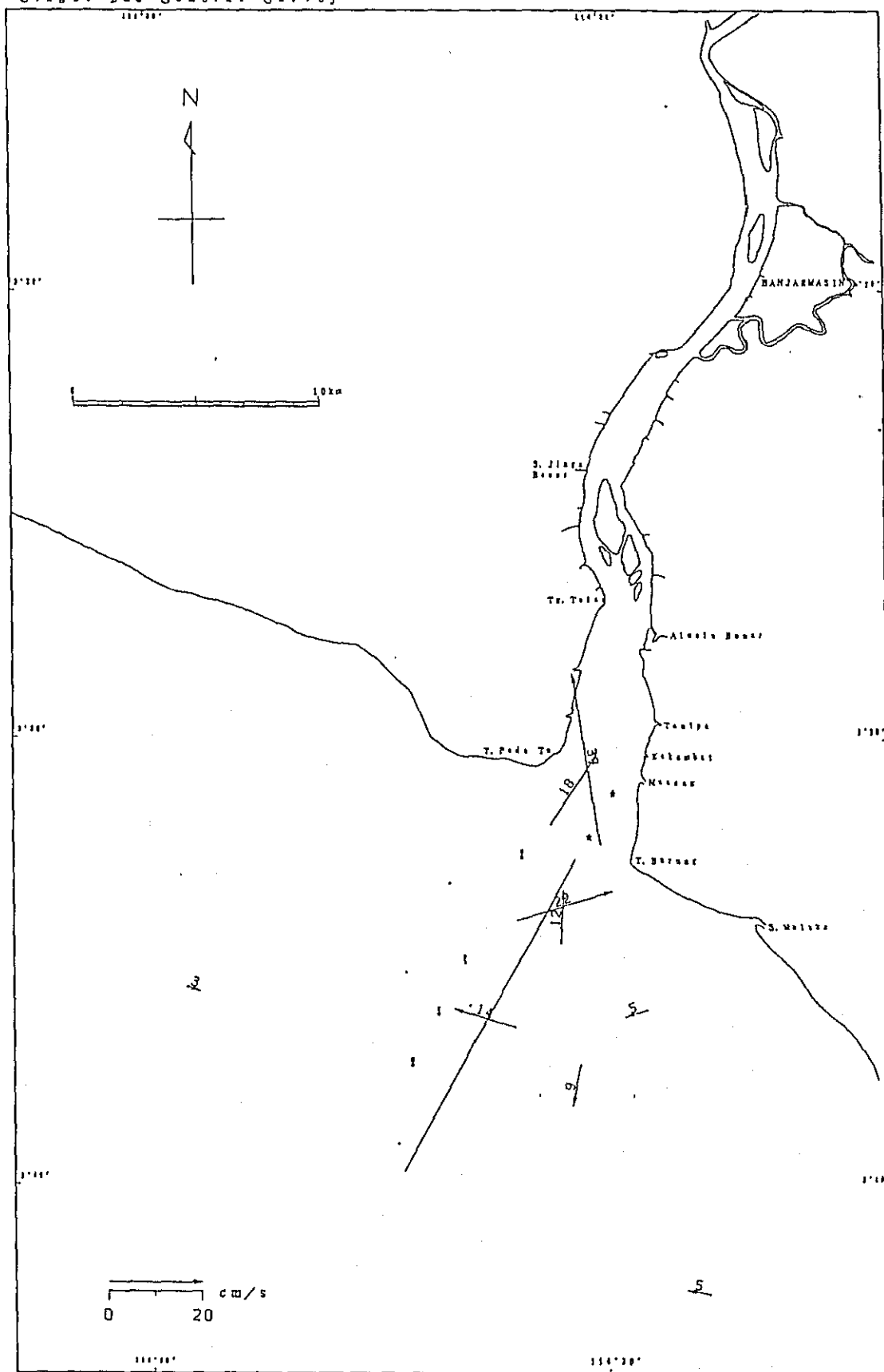
Fig. 3. 2-6 (8) Current Condition (H-1)

Date : 5th Feb. 1989
 Time : 17:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (99) Current Condition (H W)

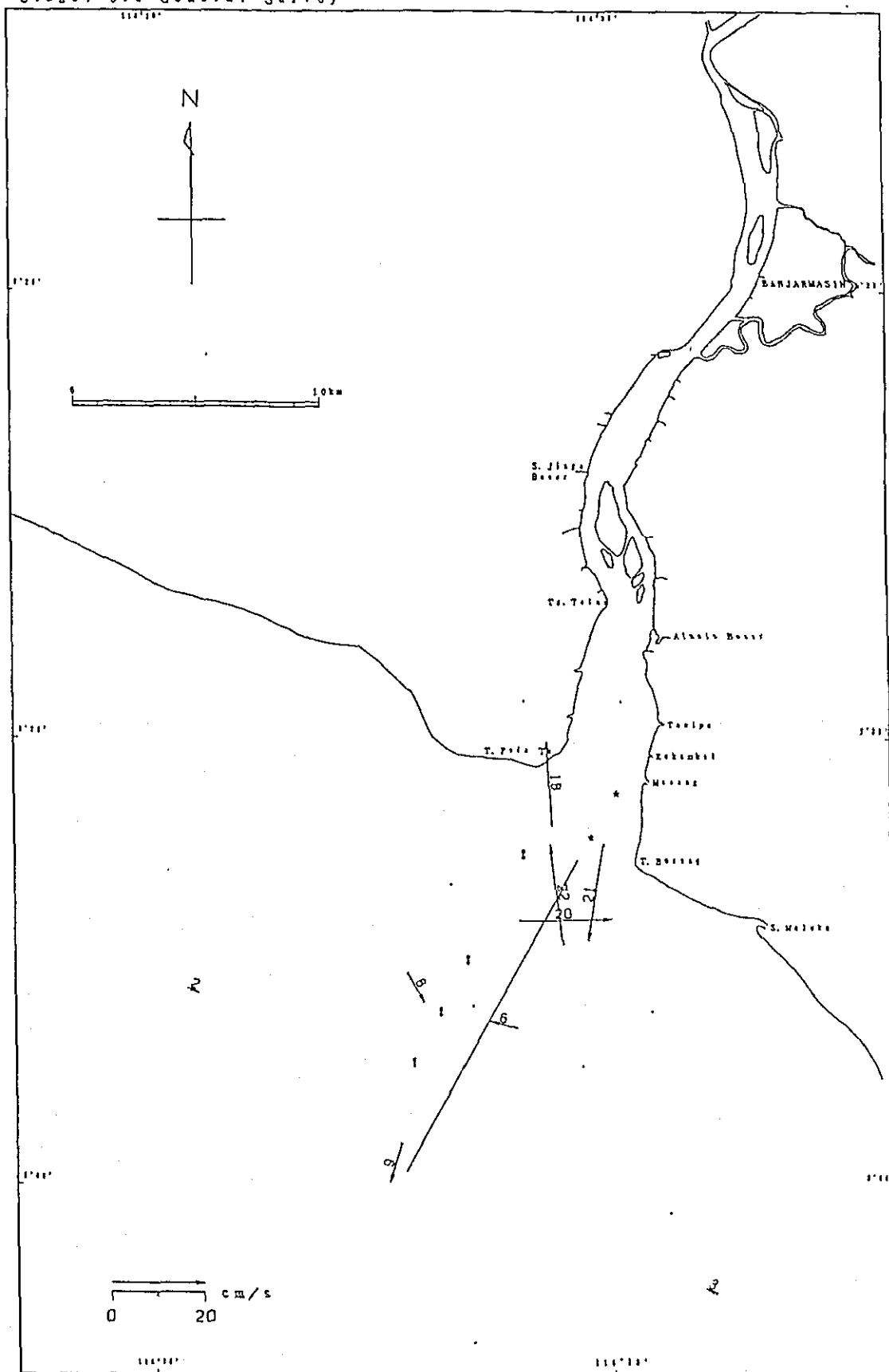
Date : 5th Feb. 1989
 Time : 18:00
 Stage: 2nd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (100) Current Condition (H+1)

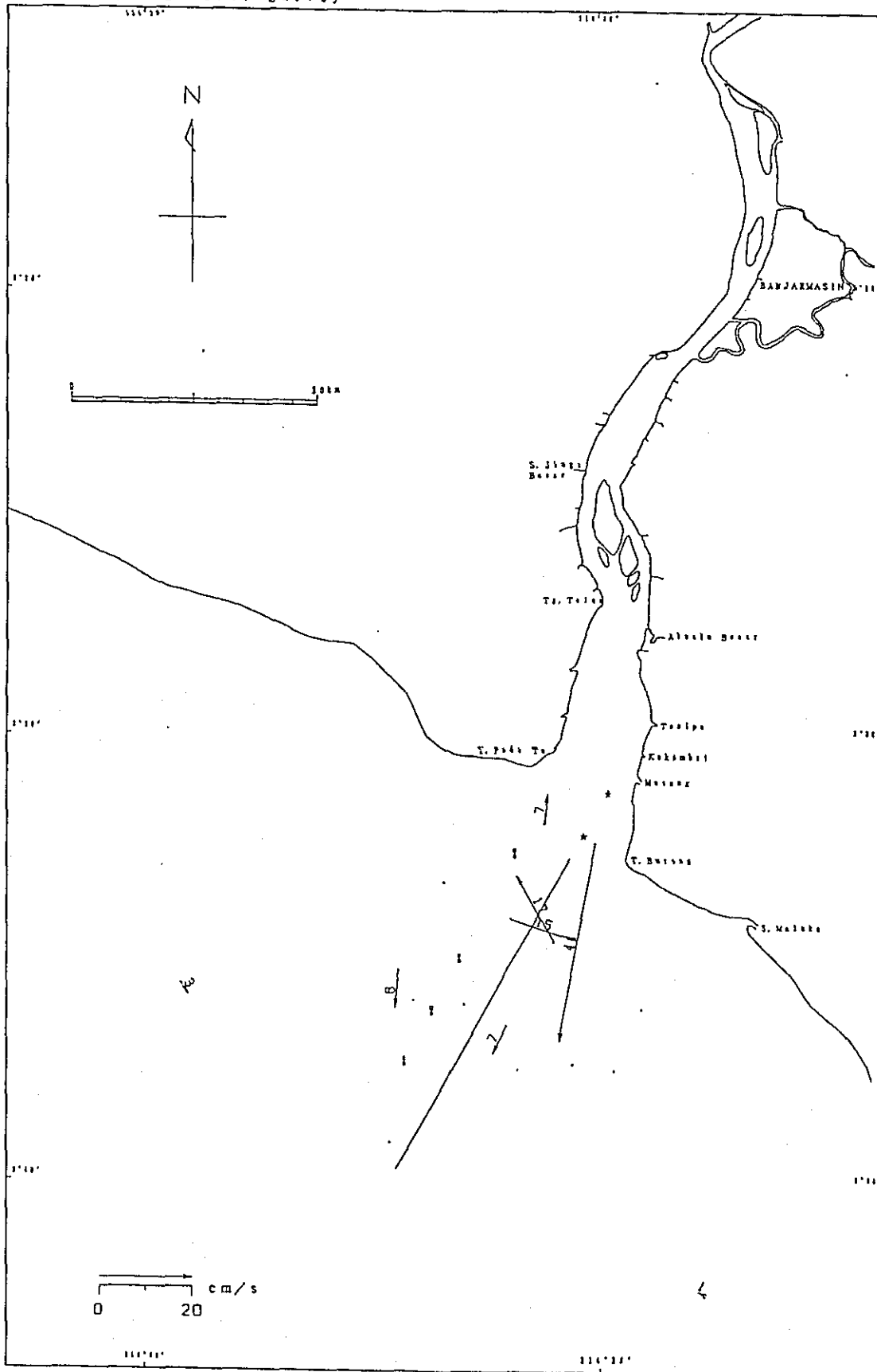
Date : 26th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

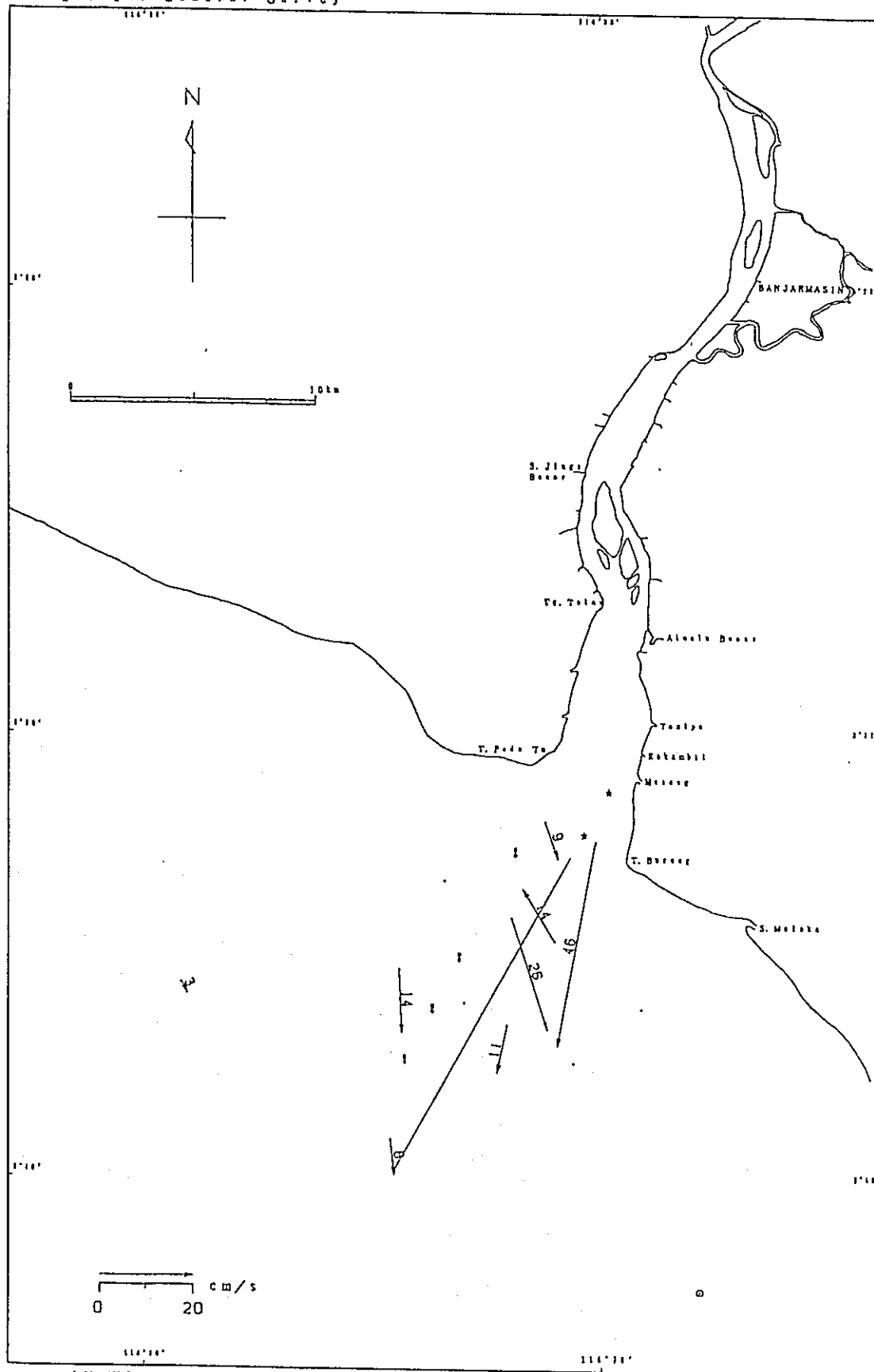
Fig. 3. 2-6 (001) Current Condition (H.W)

Date : 26th Apr. 1989
 Time : 13:00
 Stage : 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (02) Current Condition (H+1)

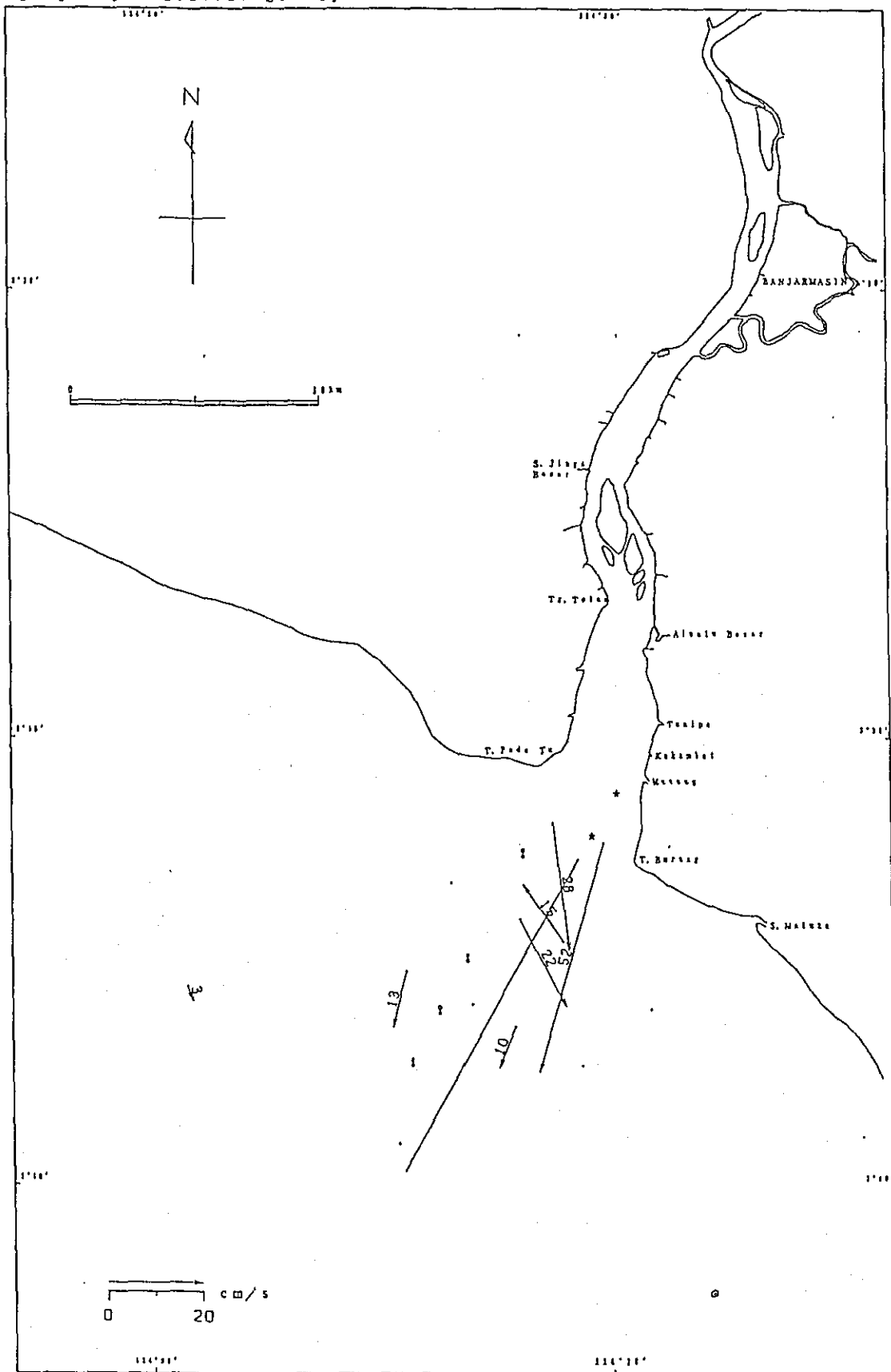
Date : 26th Apr. 1989
 Time : 14:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H-1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

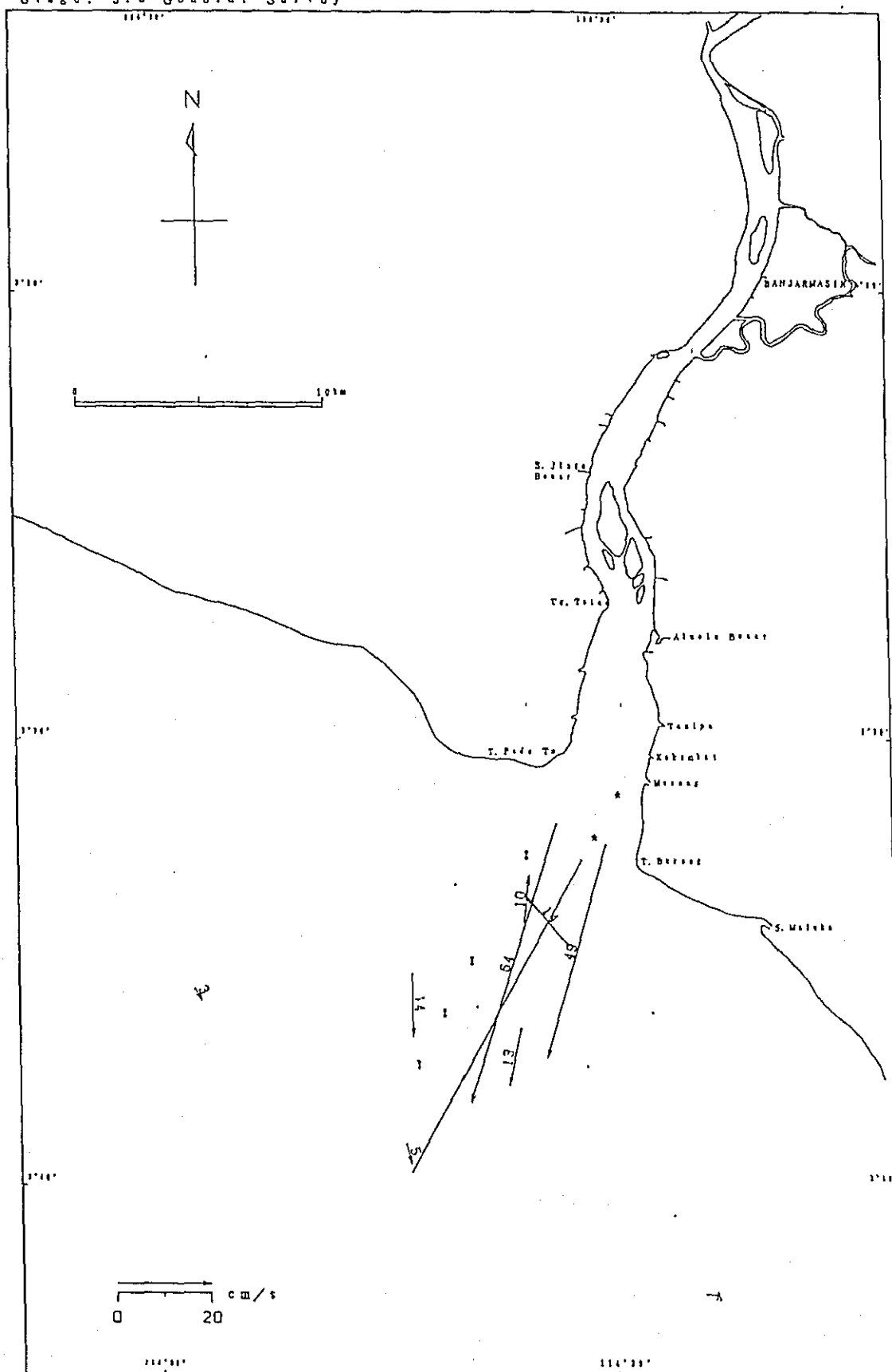
Fig. 3. 2-6 (003) Current Condition (H +2)

Date : 26th Apr. 1989
 Time : 15:00
 Stage : 3rd General Survey



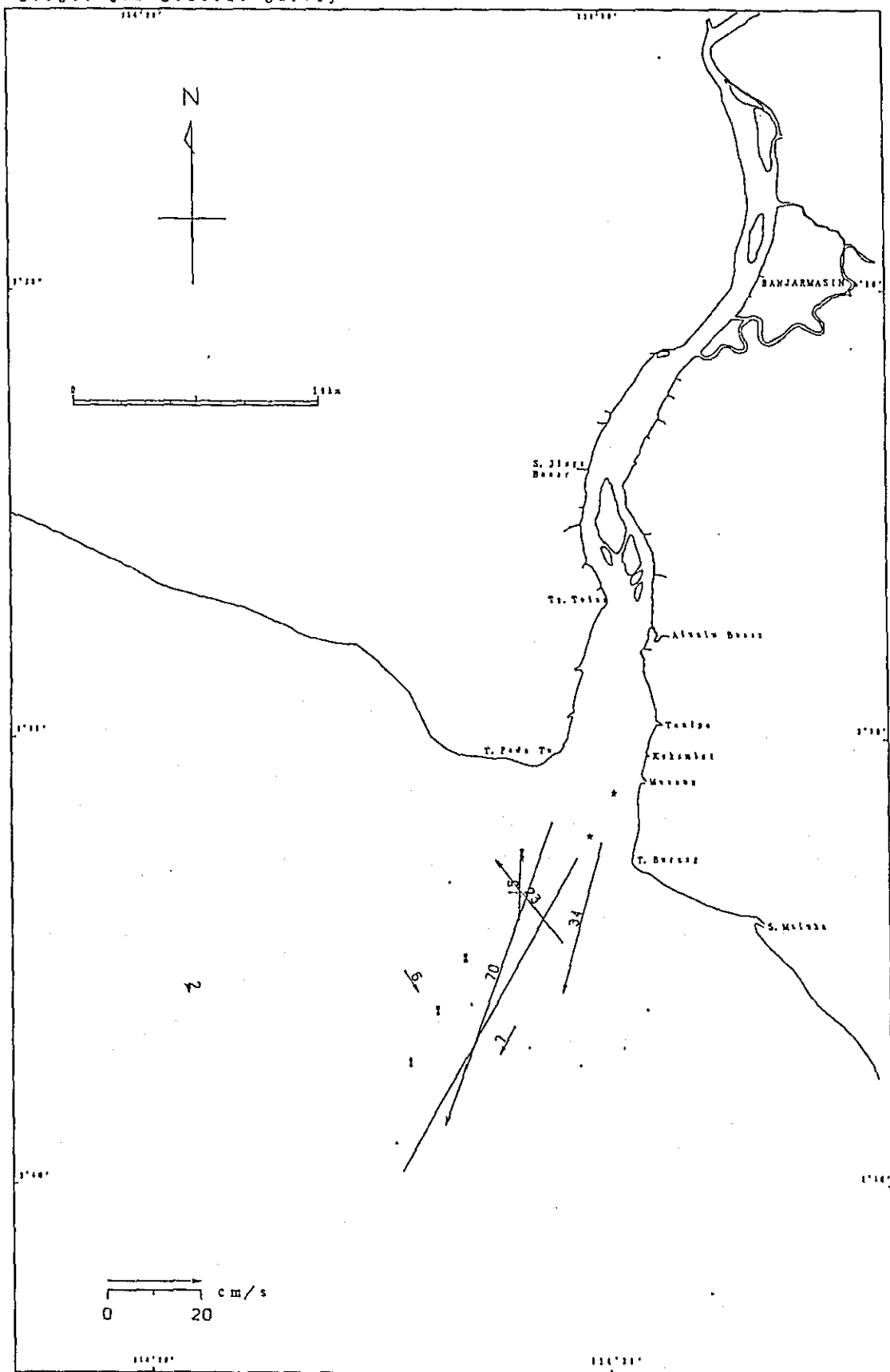
note: (H. W) High Water, (H+1) or (L+1) 1 hour after H. W or L. W
 (L. W) Low Water, (H-1) or (L-1) 1 hour before H. W or L. W
 Fig. 3. 2-6 (00) Current Condition (H +3)

Date : 26th Apr. 1989
 Time : 16:00
 Stage: 3rd General Survey



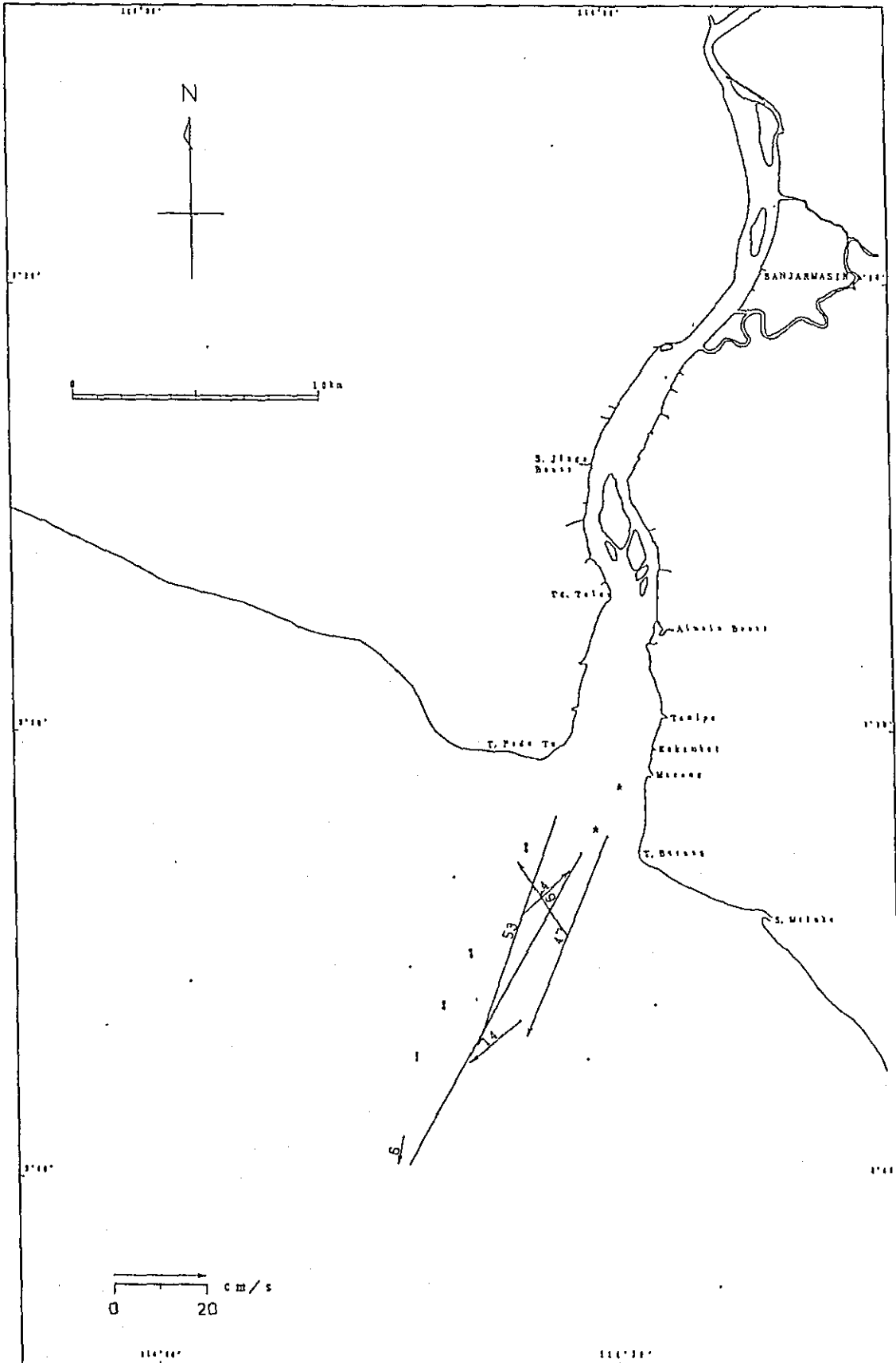
note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W
 Fig. 3. 2-6 (105) Current Condition (H +4)

Date : 26th Apr. 1989
 Time : 17:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (06) Current Condition (H +5)

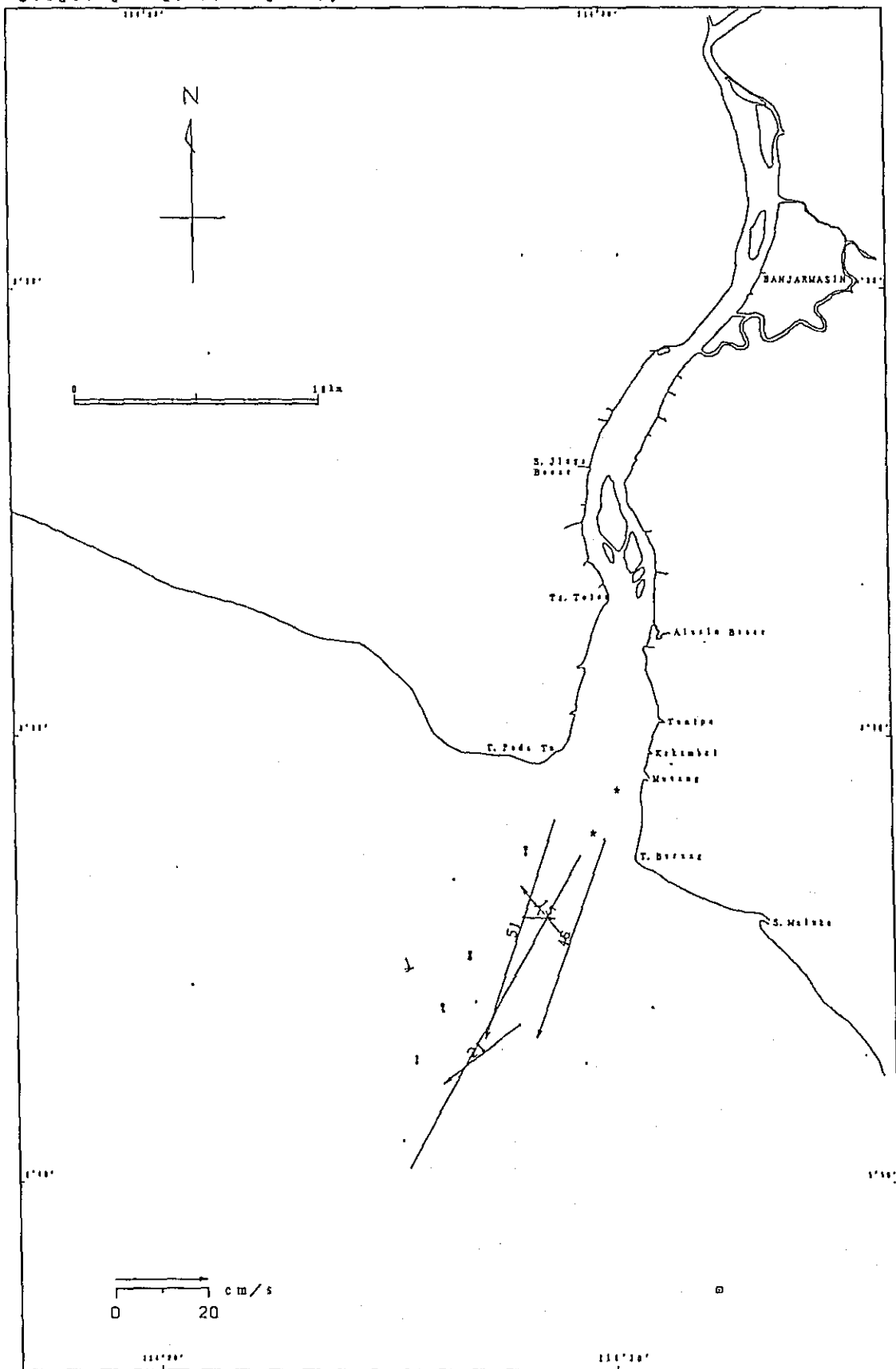
Date : 26th Apr. 1989
 Time : 18:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (107) Current Condition (H+6)

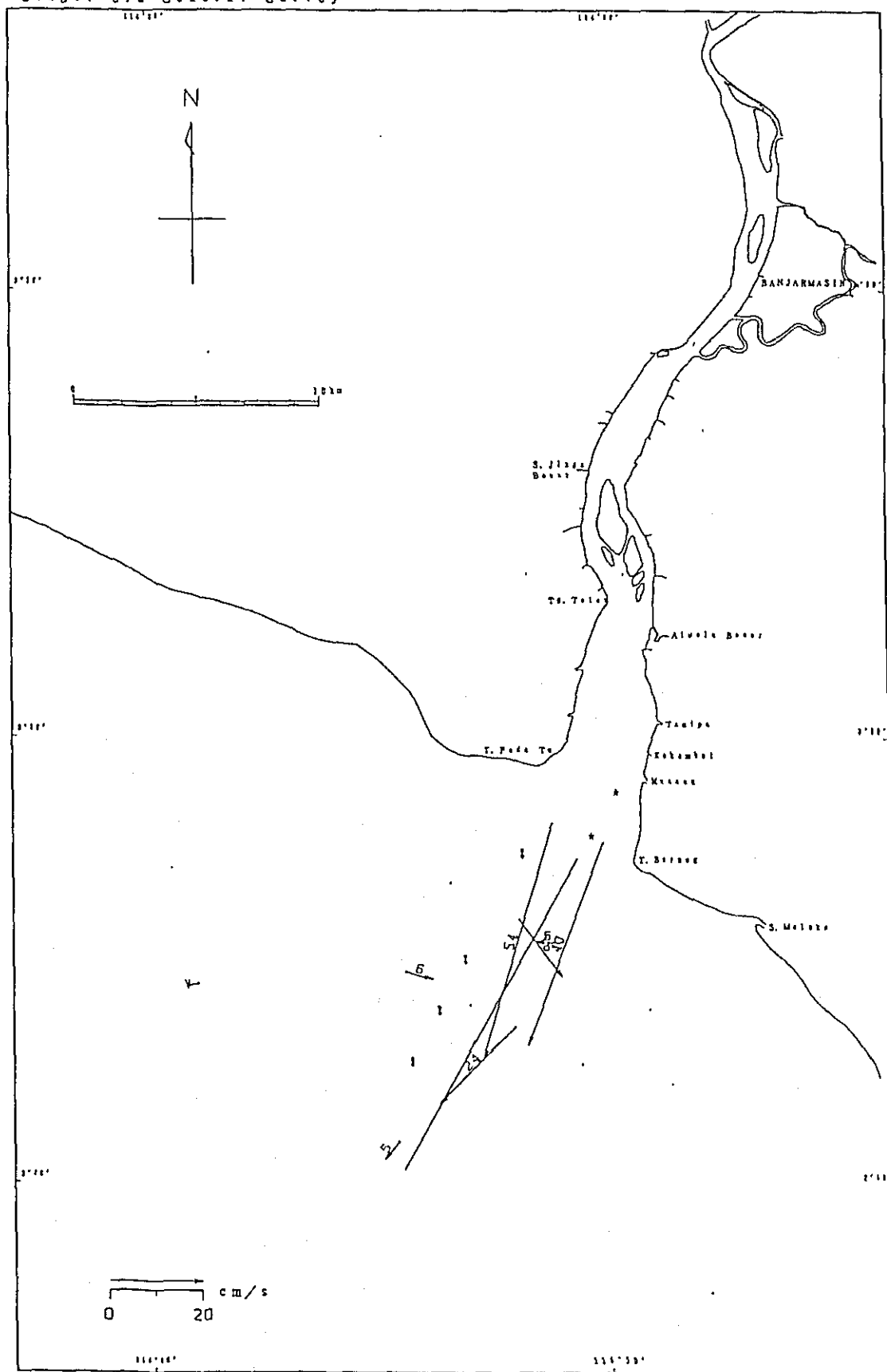
Date : 26th Apr. 1989
 Time : 19:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

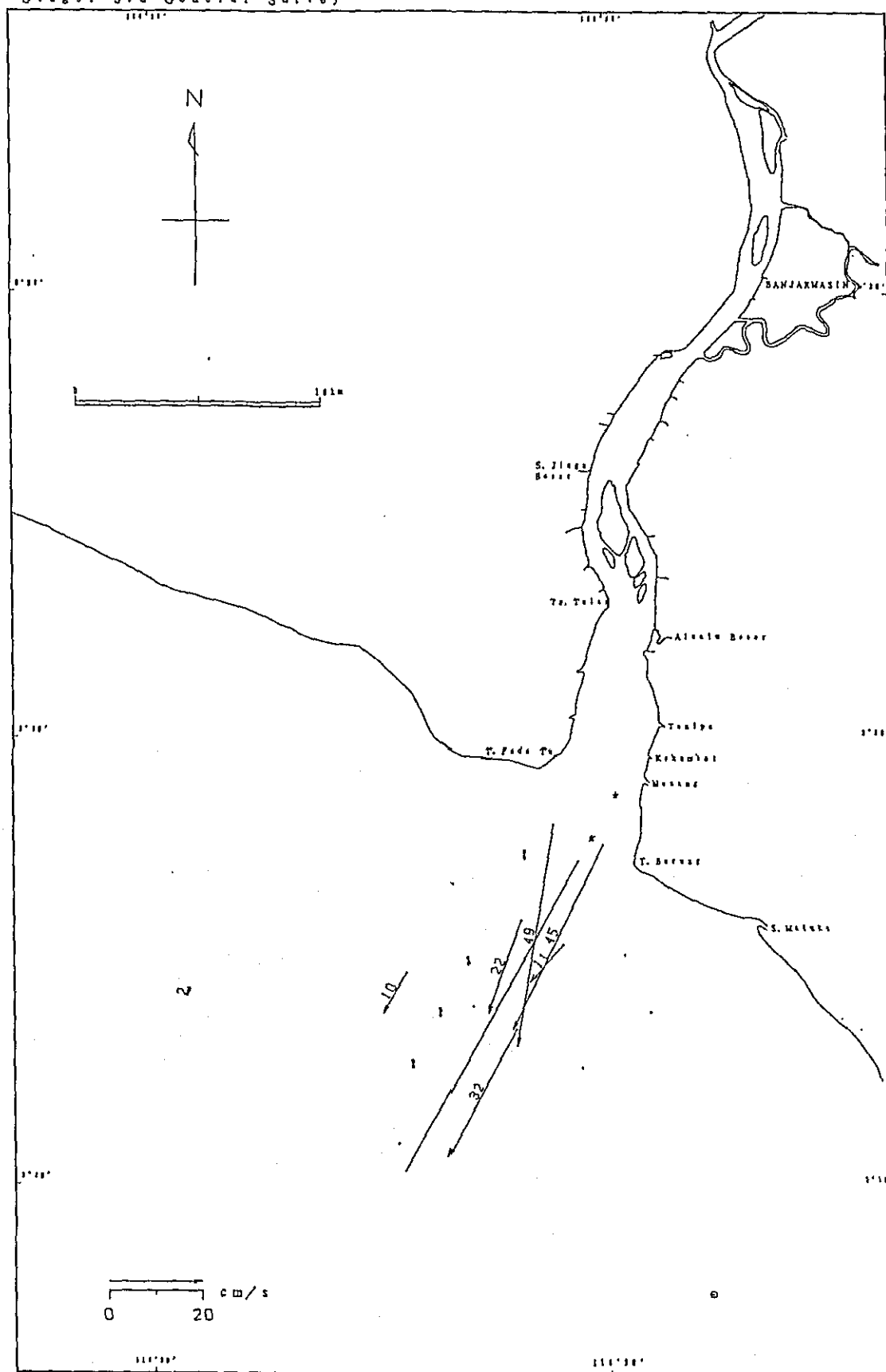
Fig. 3. 2-6 (08) Current Condition (H +7)

Date : 26th Apr. 1989
 Time : 20:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (109) Current Condition (H+3)

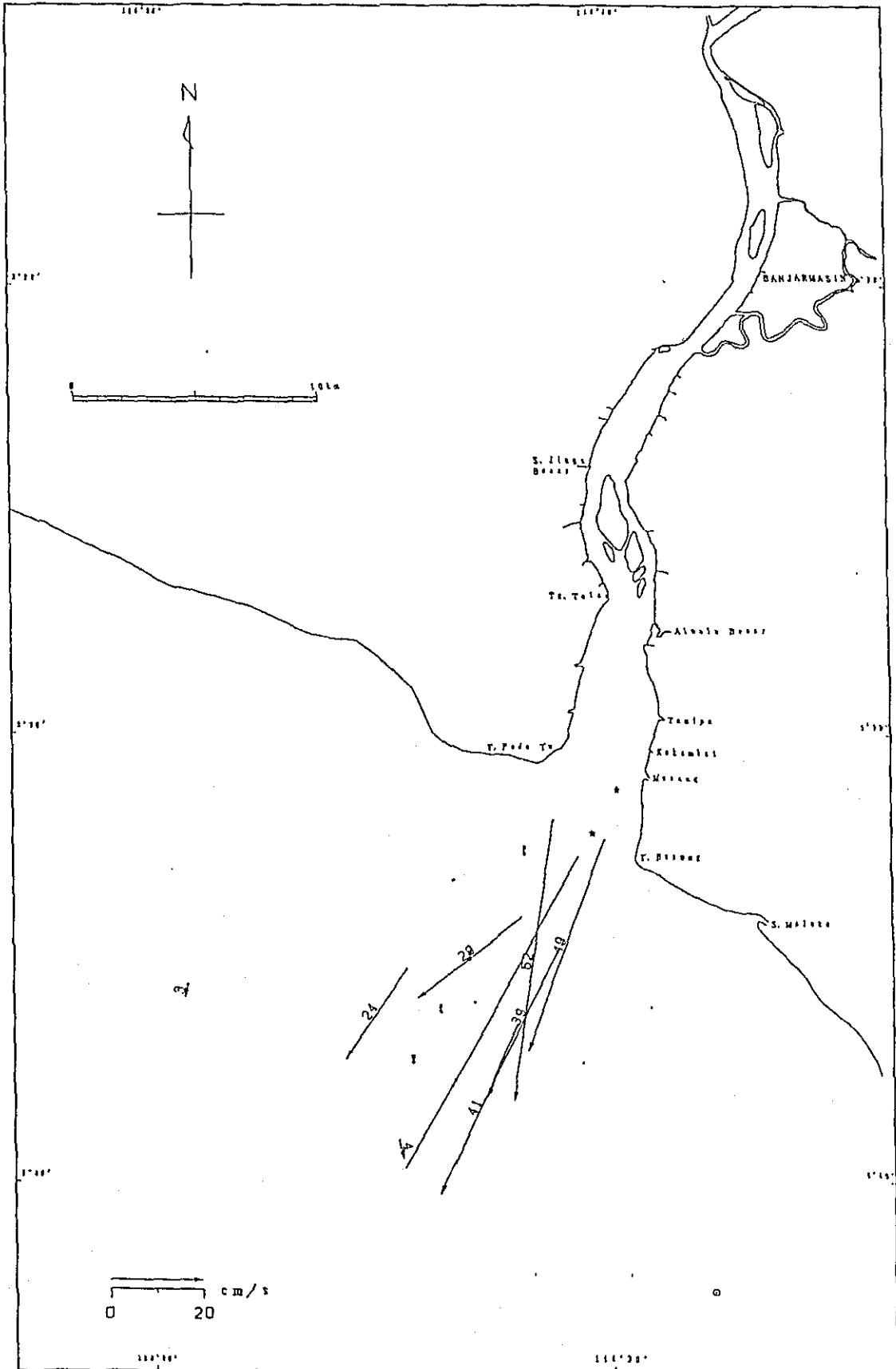
Date : 26th Apr. 1989
 Time : 21:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (10) Current Condition (L-7)

Date : 26th Apr. 1989
 Time : 22:00
 Stage: 3rd General Survey

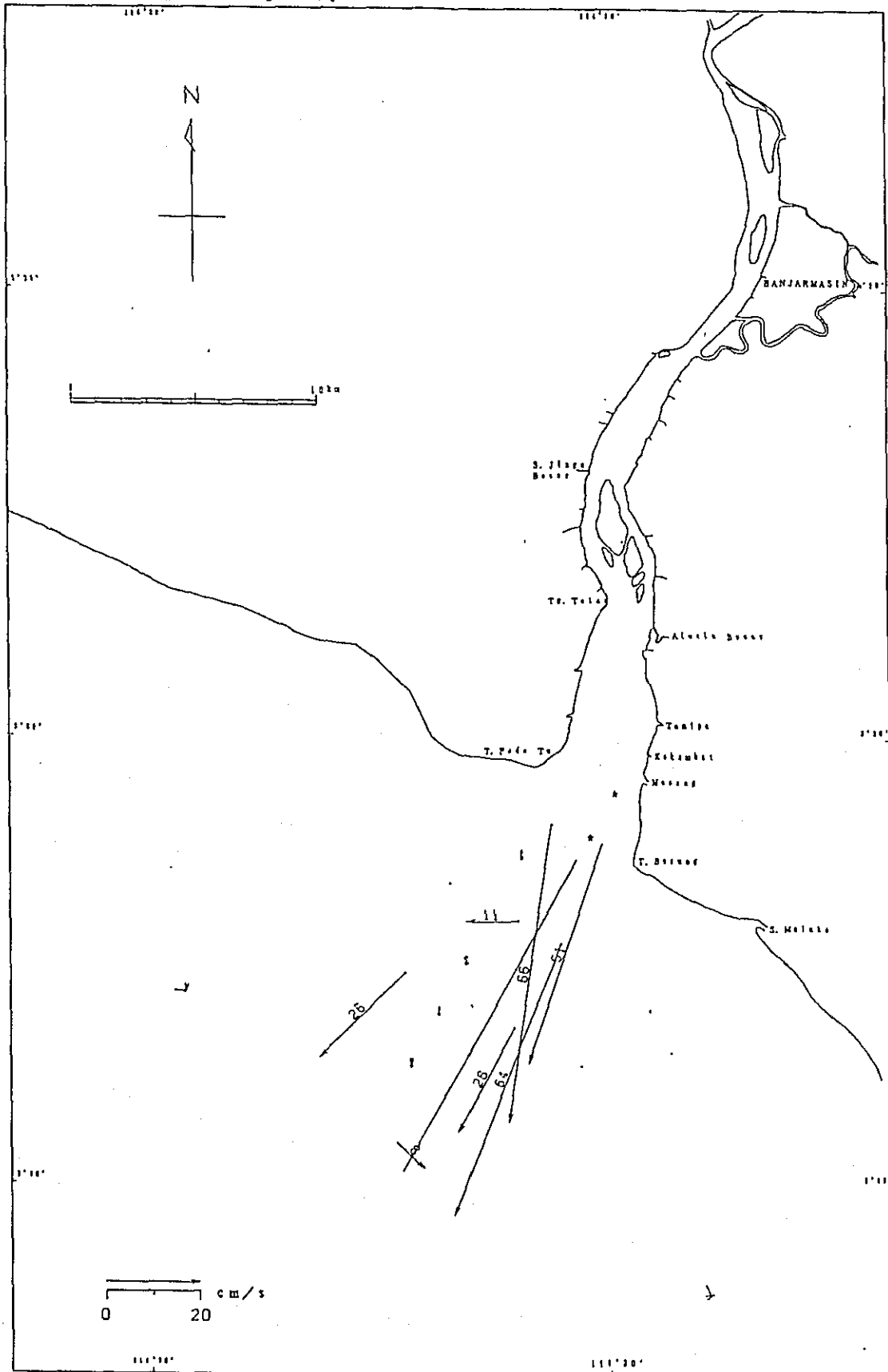


note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (11) Current Condition (L. 6)

[illegible]

Fig. 3. 2-6 (112) Current Condition (L. -5)

Date : 27th Apr. 1939
 Time : 0:00
 Stage: 3rd General Survey



note: (H. W.).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W.).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (13) Current Condition (L. -4)

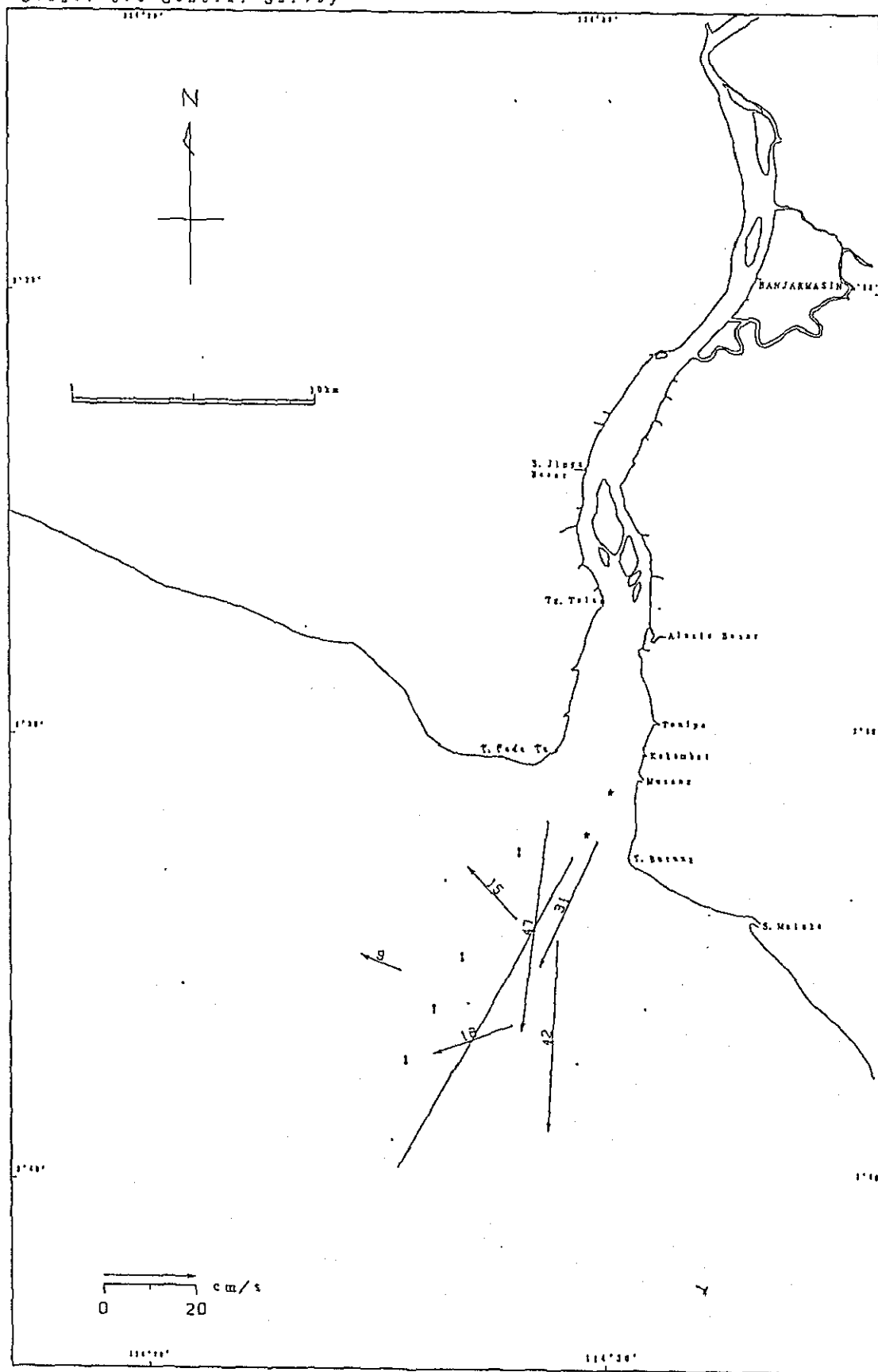
The map shows the Banjarmasin area with the S. Jinta River and S. Melaka. Key locations include T. Tolu, T. Poda To, T. Borneo, and T. Borneo. A large area is marked with a star and the number 43, and another area is marked with the number 21. The map includes a north arrow, a scale bar (0 to 20 cm/s), and a coordinate grid.

Fig. 3. 2-6 (14) Current Condition (L-3)

This map illustrates the Sunda Strait, showing bathymetric contours and current data. Key locations labeled include S. Jember, T. Tolo, Alinda Besar, T. Poda To, T. Borneo, S. Malaka, and S. Jember. Bathymetric contours are marked with values 1, 16, 19, 21, 30, and 32. A scale bar indicates 0 to 20 cm/s, and a north arrow is present. The map is bounded by coordinates 116°30' to 117°30' longitude and 1°10' to 1°20' latitude.

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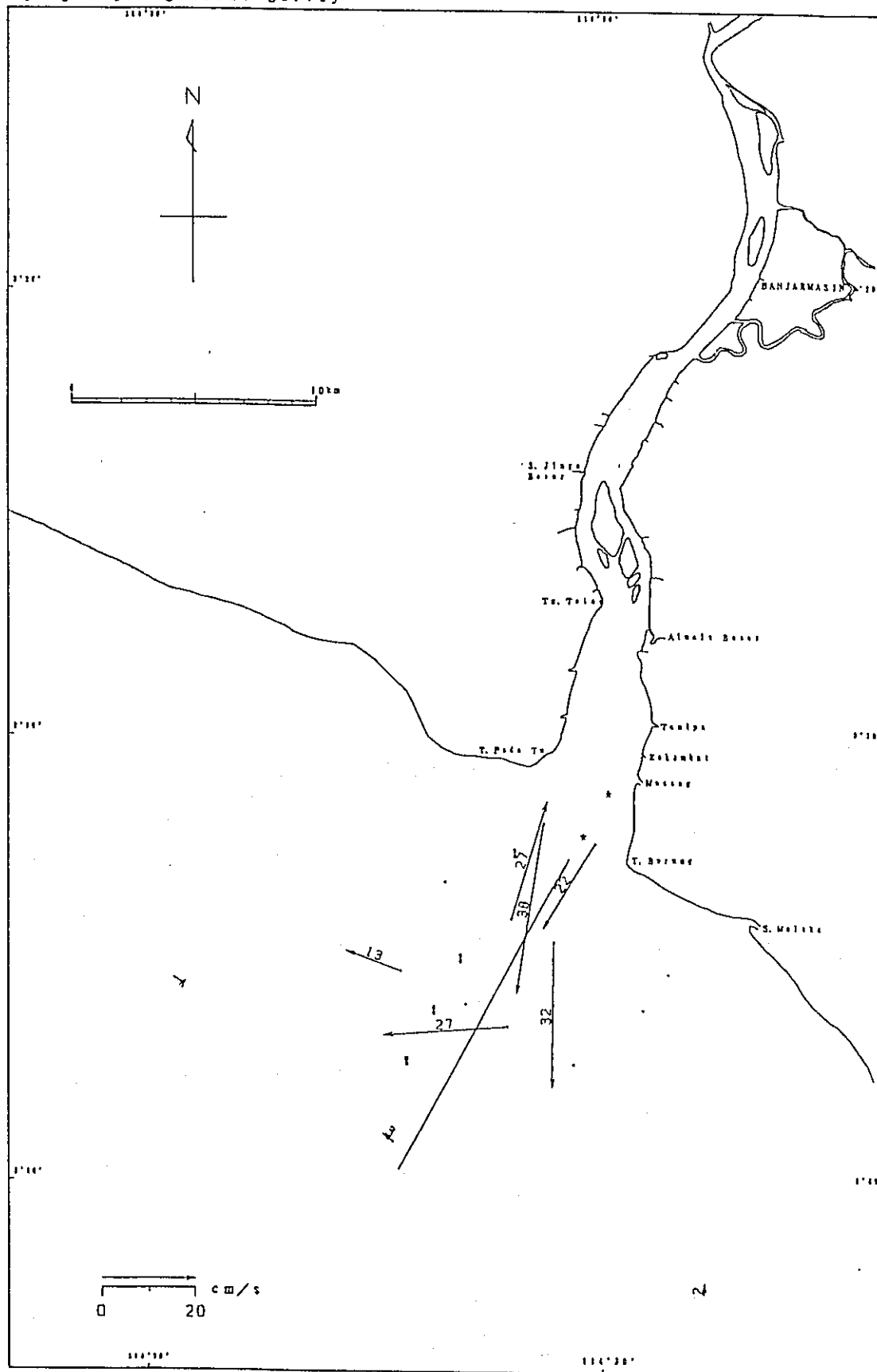
Date : 27th Apr. 1929
 Time : 3:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

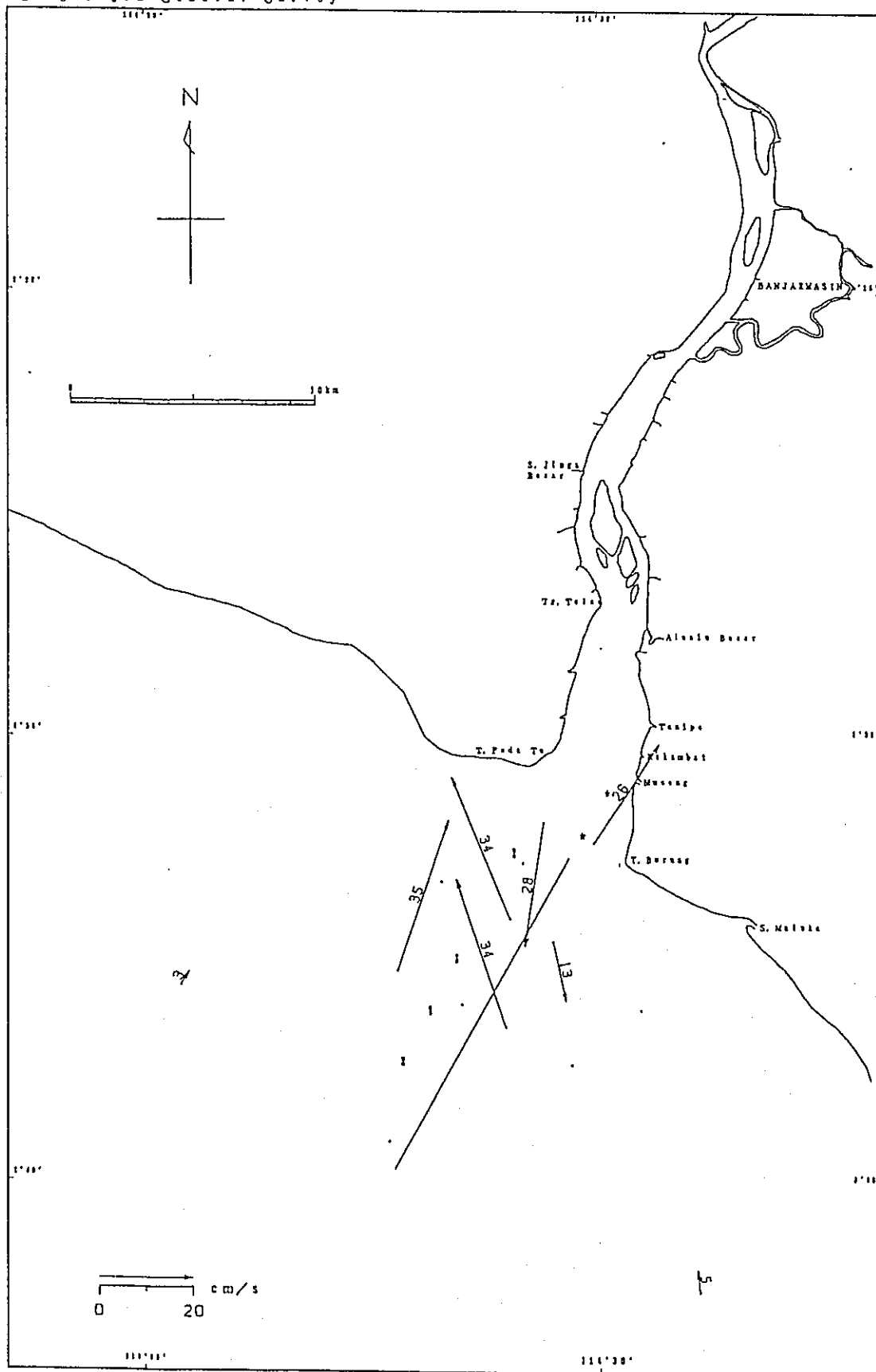
Fig. 3. 2-6 (16) Current Condition (L-1)

Date : 27th Apr. 1989
 Time : 4:00
 Stage: 3rd General Survey



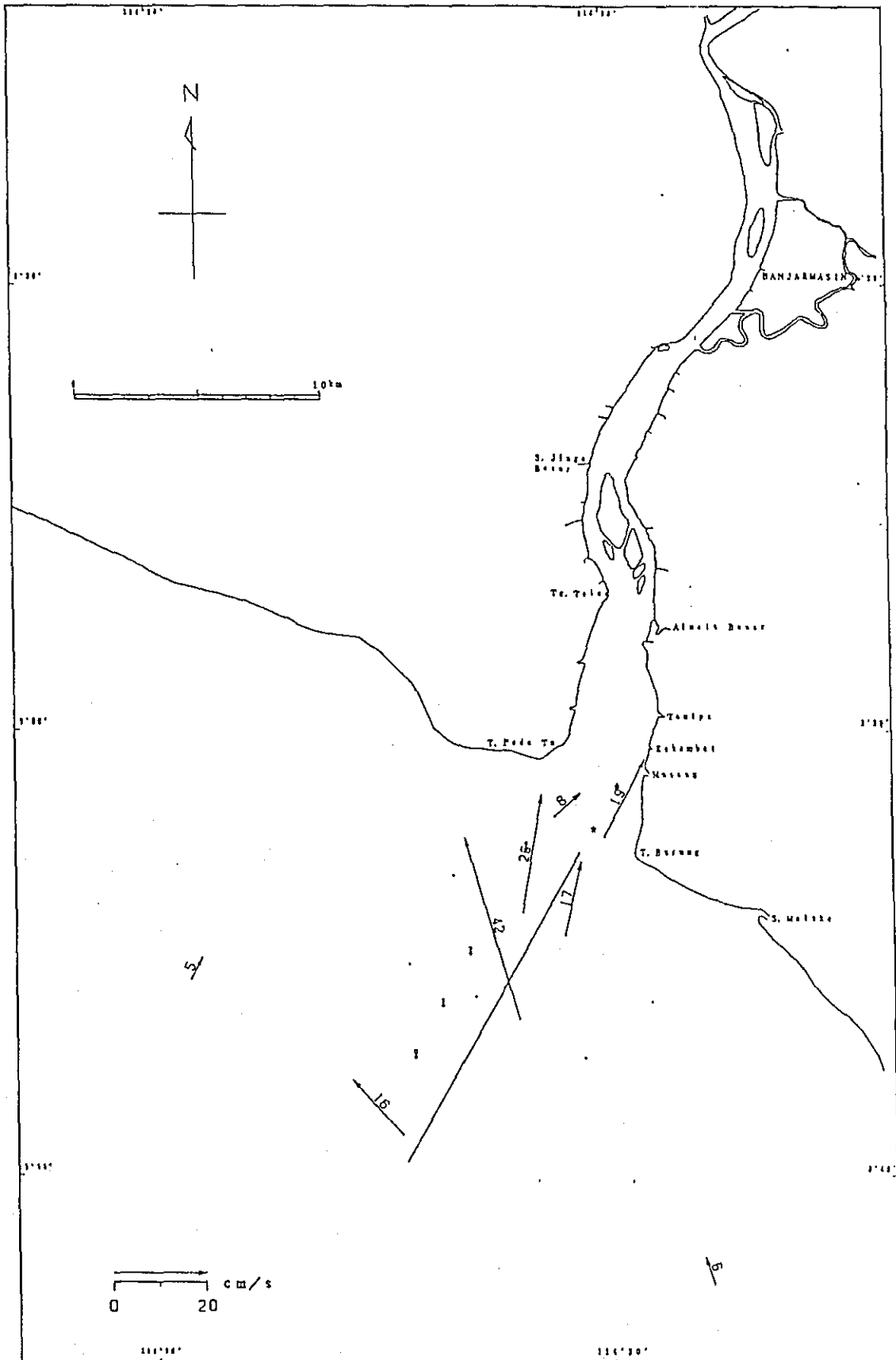
note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (17) Current Condition (L. W)

Date : 27th Apr. 1989
 Time : 5:00
 Stage: 3rd General Survey



note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W
 Fig. 3. 2-6 (18) Current Condition (L.+1)

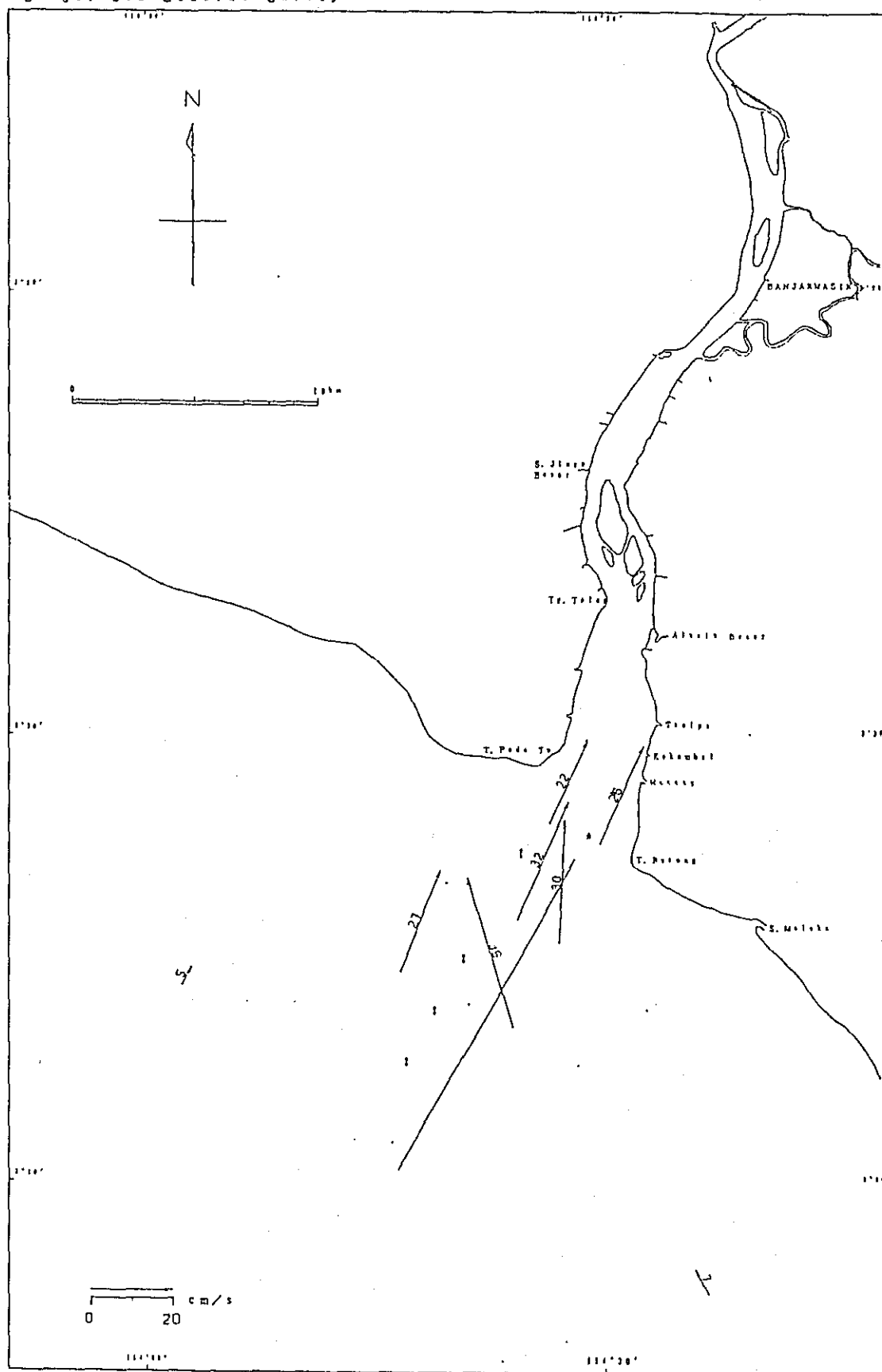
Date : 27th Apr. 1989
 Time : 6:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

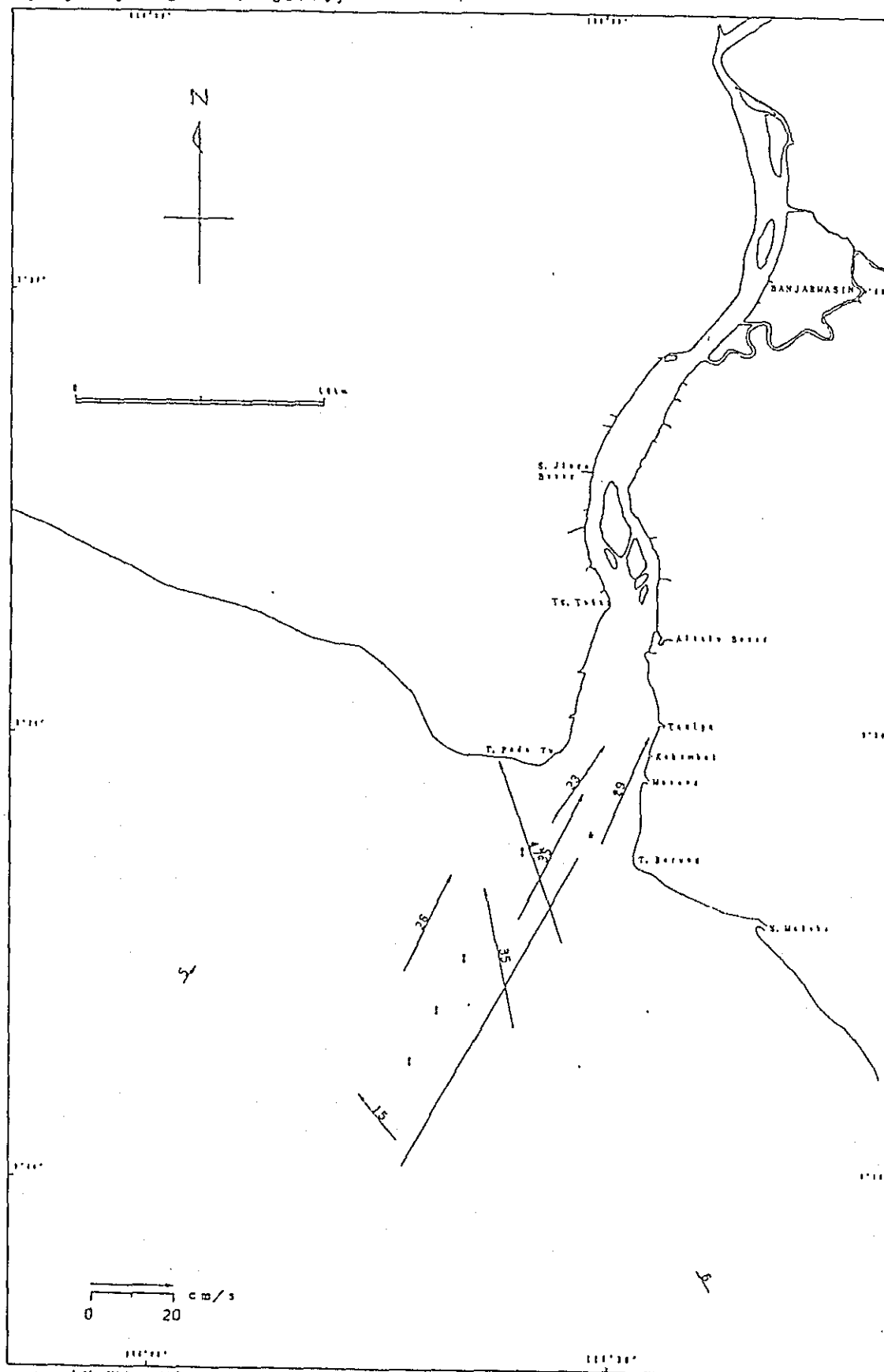
Fig. 3. 2-6 (19) Current Condition (L+2)

Date : 27th Apr. 1989
 Time : 7:00
 Stage: 3rd General Survey



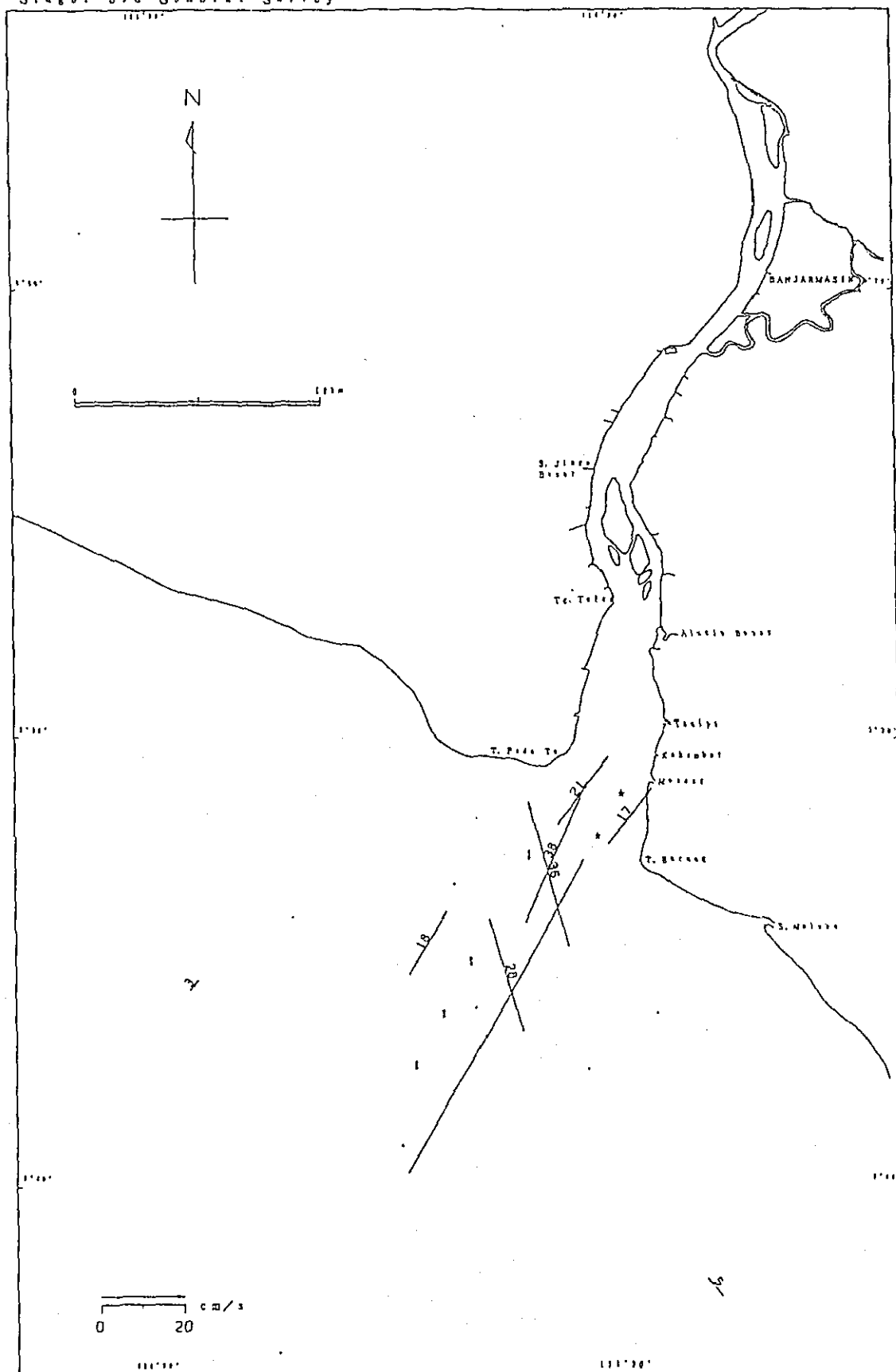
note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (120) Current Condition (L. +3)

Date : 27th Apr. 1989
 Time : 8:00
 Stage: 3rd General Survey



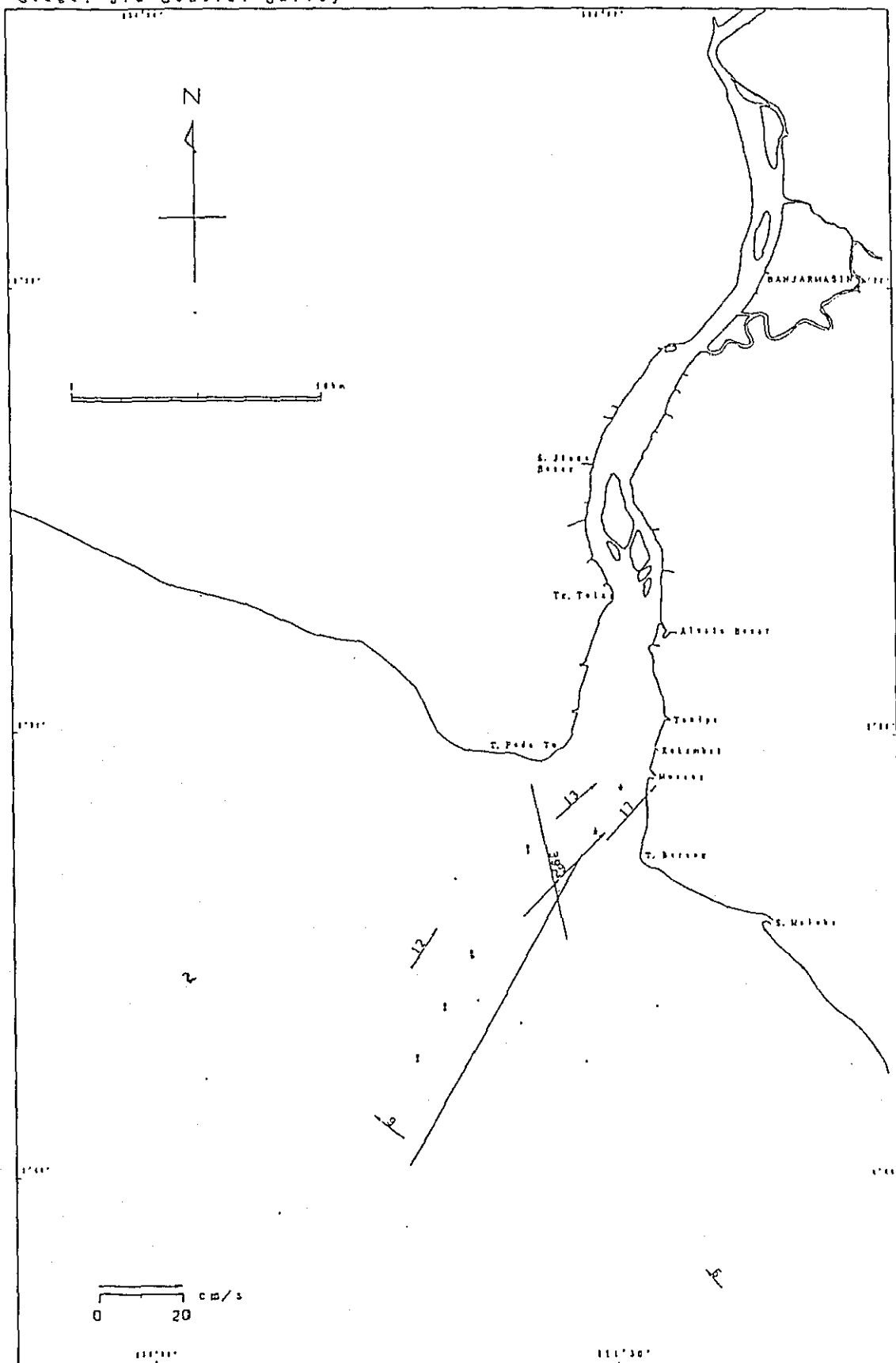
note: (H.W).....High Water, (H+1) or (L+1).....1hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1hour before H.W or L.W
 Fig. 3. 2-6 (12) Current Condition (L. 4)

Date : 27th Apr. 1989
 Time : 9:00
 Stage: 3rd General Survey



note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L, W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W
 Fig. 3. 2-6 (22) Current Condition (H-3)

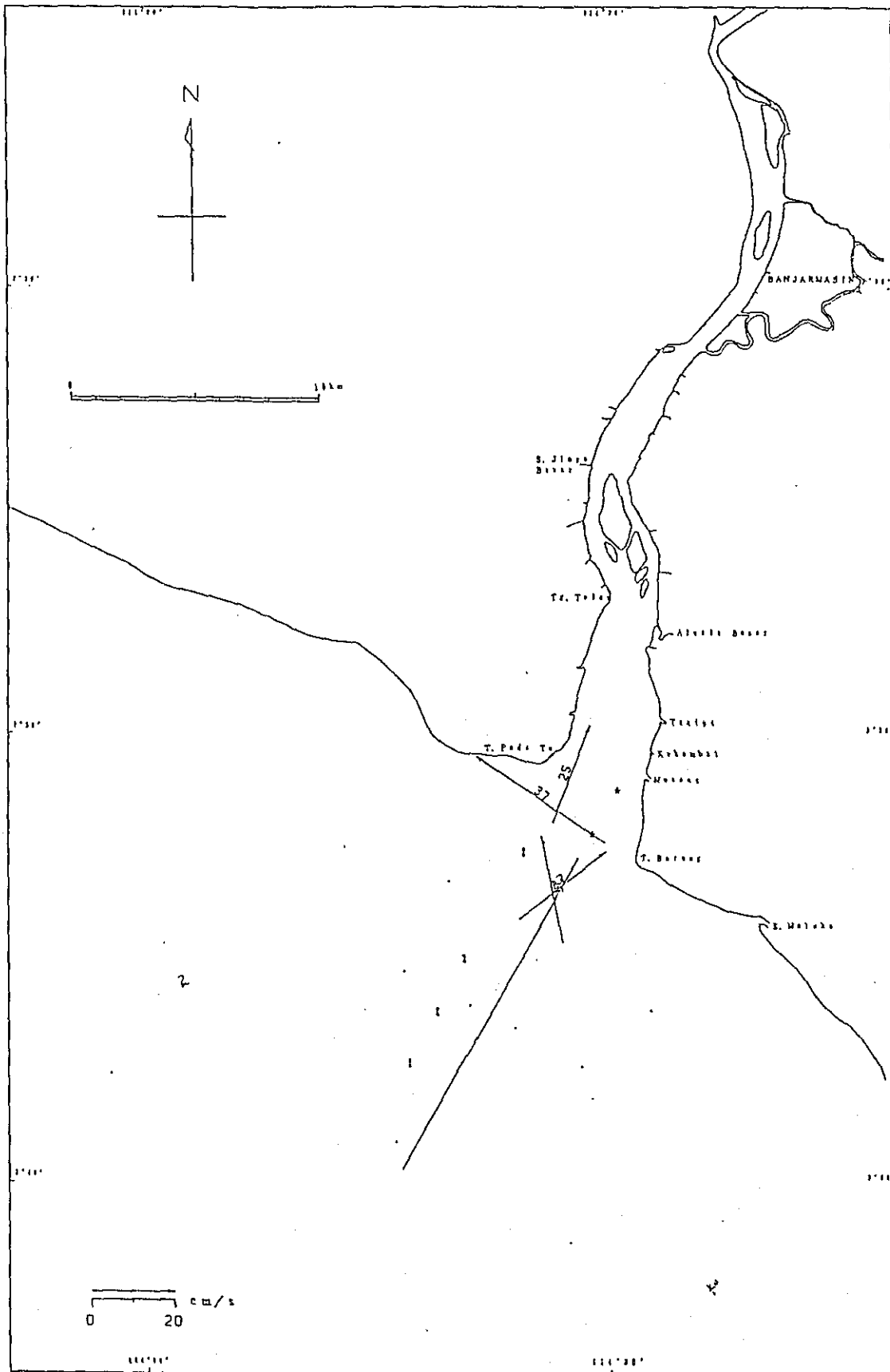
Date : 27th Apr. 1989
 Time : 10:00
 Stage: 3rd General Survey



note: (H, W) High Water, (H+1) or (L+1) 1 hour after H, W or L, W
 (L, W) Low Water, (H-1) or (L-1) 1 hour before H, W or L, W

Fig. 3. 2-6 (123) Current Condition (H-2)

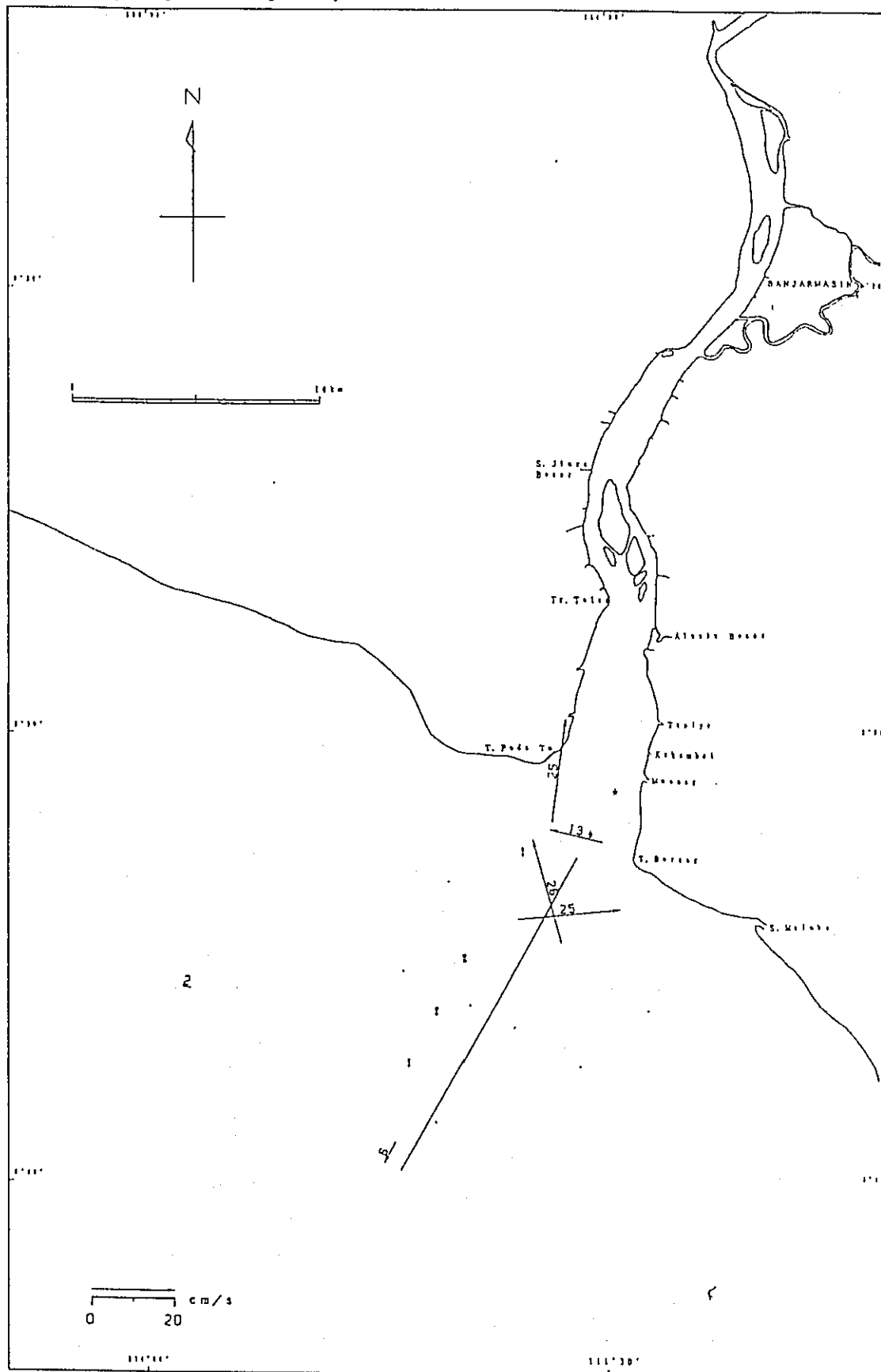
Date : 21th Apr. 1989
 Time : 11:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (24) Current Condition (H-1)

Date : 27th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey



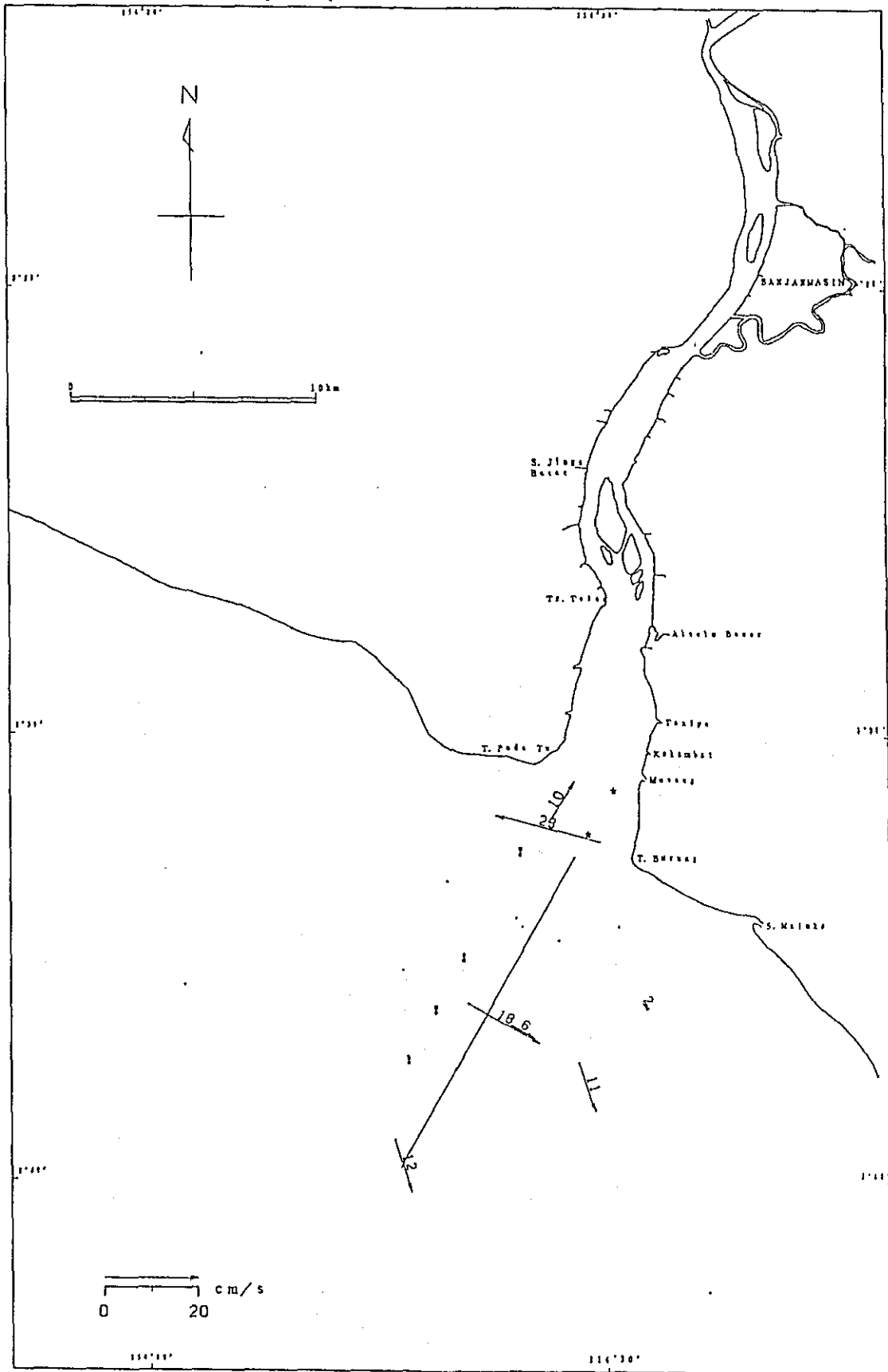
note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (25) Current Condition (H. W)

Map of the Indonesian archipelago showing the Indonesian Ocean Current. The map includes a north arrow, a 10 km scale bar, and a 20 cm/s velocity scale bar. Key locations labeled include Banjarmasin, S. Jember Besar, Tr. Tolo, Alwala Besar, T. Pado To, T. Borneo, S. Moloko, T. Tolo, Kalambei, and Mersang. A large arrow indicates the current's direction, with a velocity of 200 cm/s. Other arrows show smaller currents with velocities of 12, 9, and 34 cm/s.

Fig. 3. 2-6 (26) Current Condition (H W)

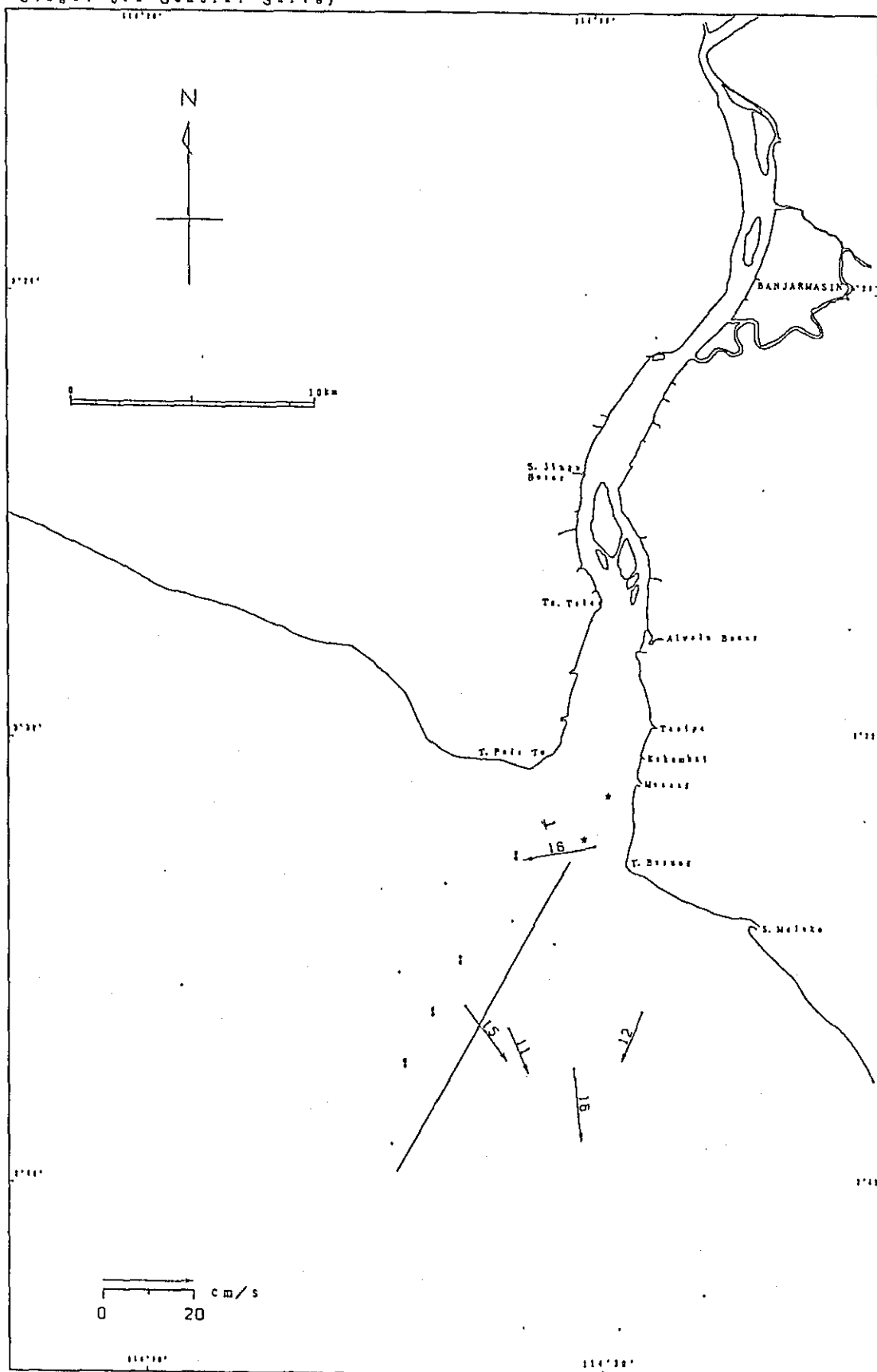
Date : 9th May 1989
 Time : 12:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 Q27) Current Condition (H+1)

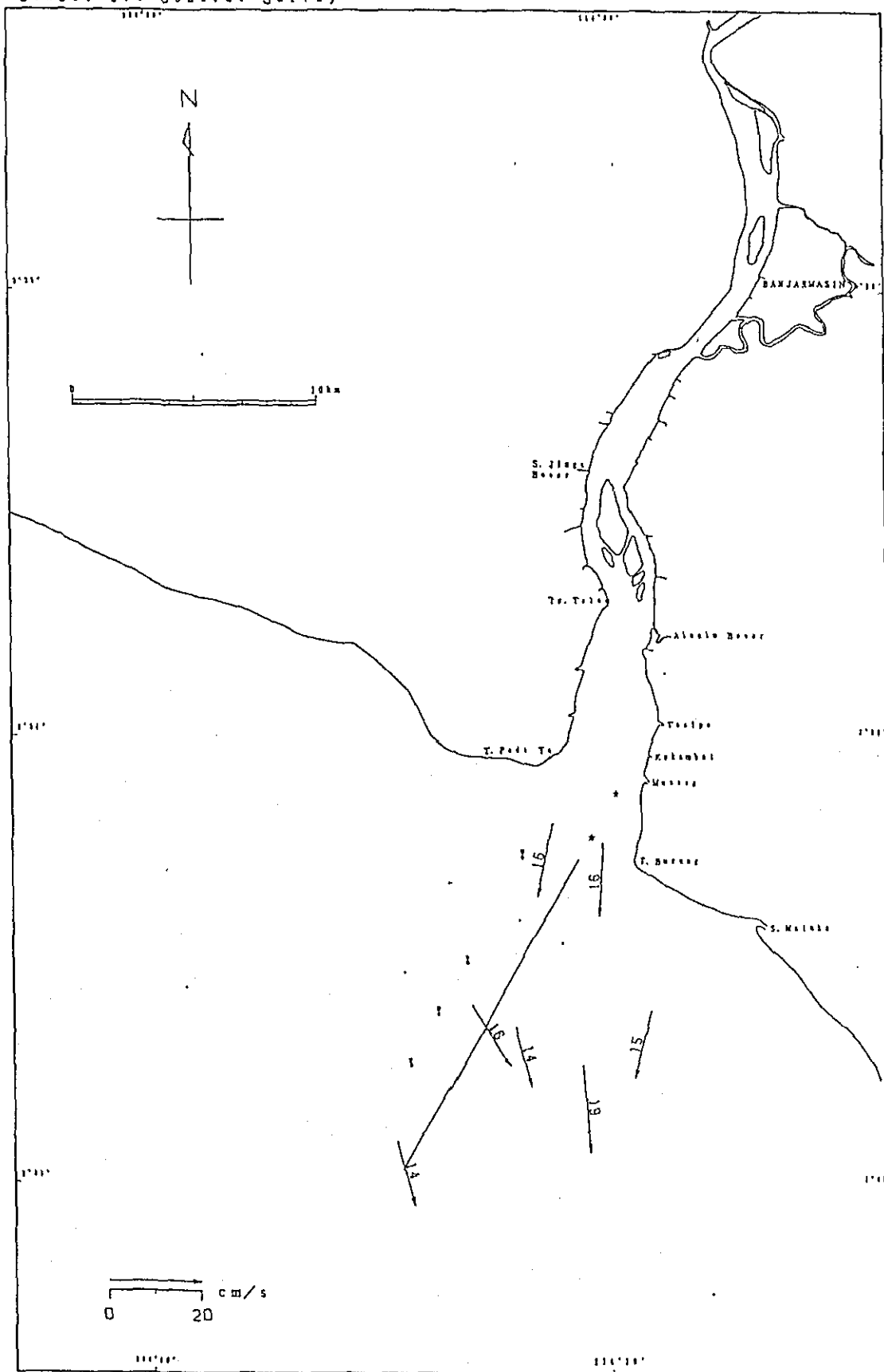
Date : 9th May 1989
 Time : 13:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (22) Current Condition (H-2)

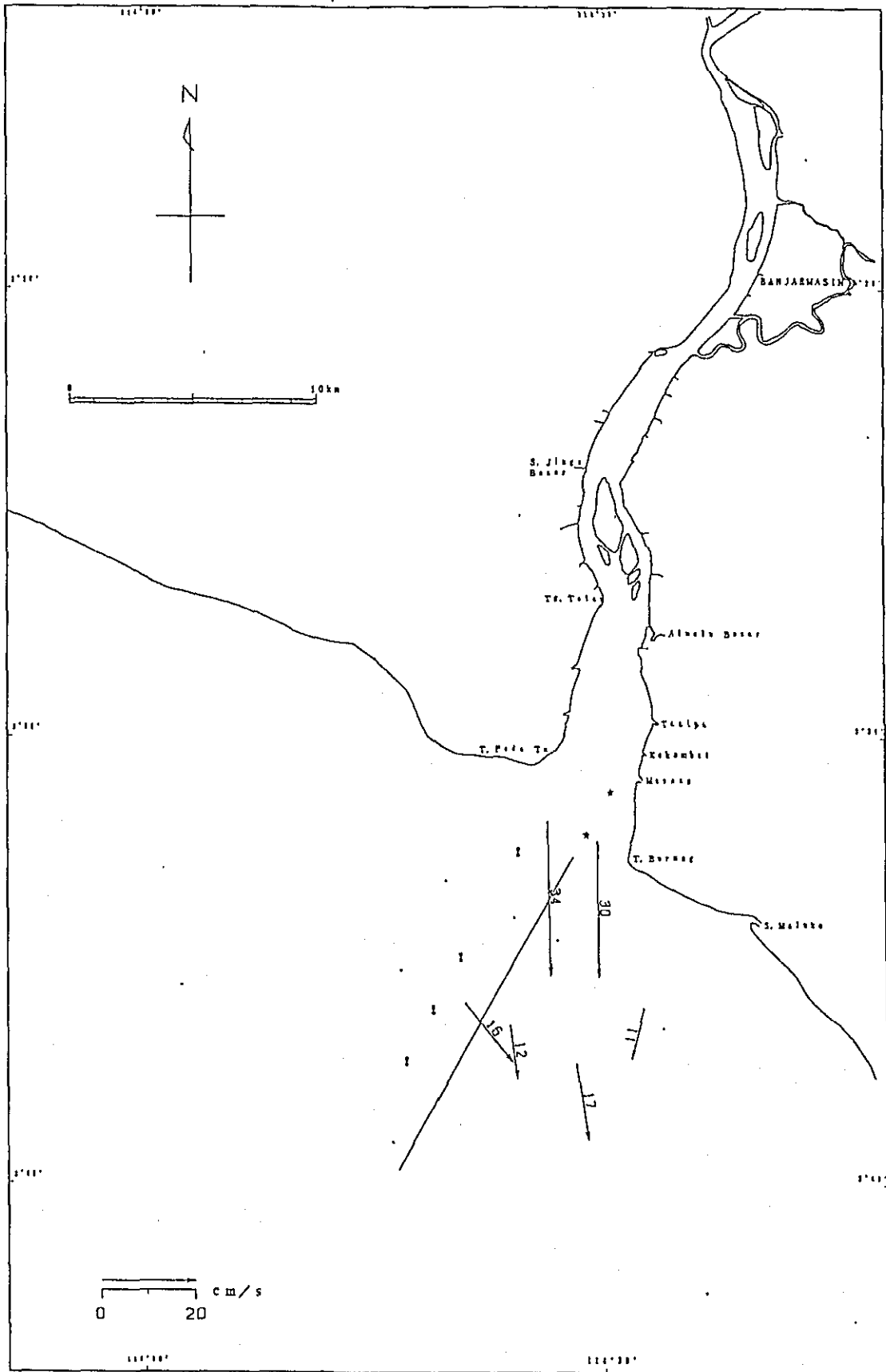
Date : 9th May 1989
 Time : 14:00
 Stage: 3rd General Survey



note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H, W or L, W
 (L, W).....Low Water, (H-1) or (L-1).....1 hour before H, W or L, W

Fig. 3. 2-6 (29) Current Condition (H+3)

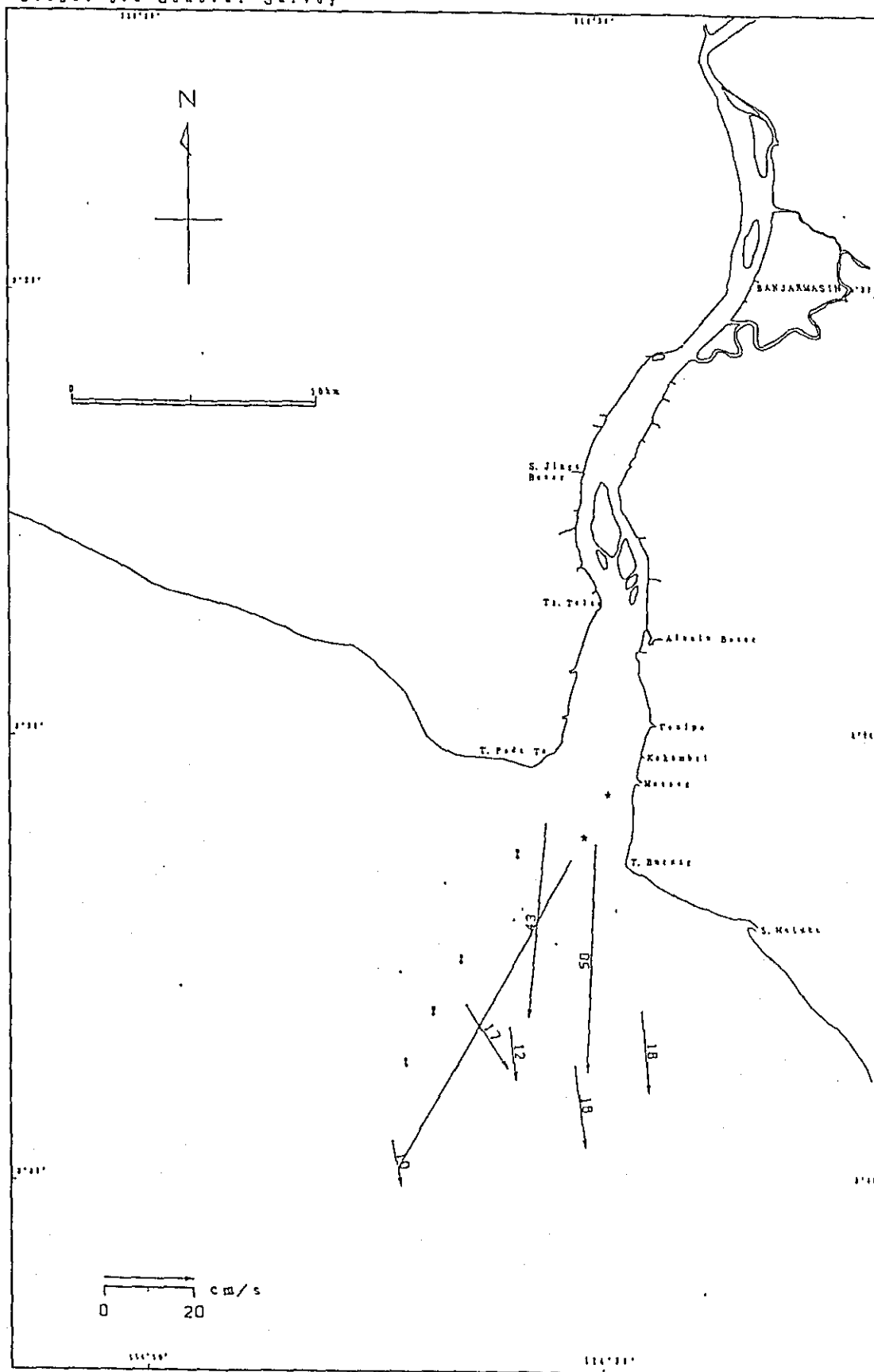
Date : 9th May 1989
 Time : 15:00
 Stage: 3rd General Survey



note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W

Fig. 3. 2-6 (30) Current Condition (H+4)

Date : 9th May 1989
 Time : 16:00
 Stage: 3rd General Survey



note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H, W or L, W
 (L, W).....Low Water, (H-1) or (L-1).....1 hour before H, W or L, W

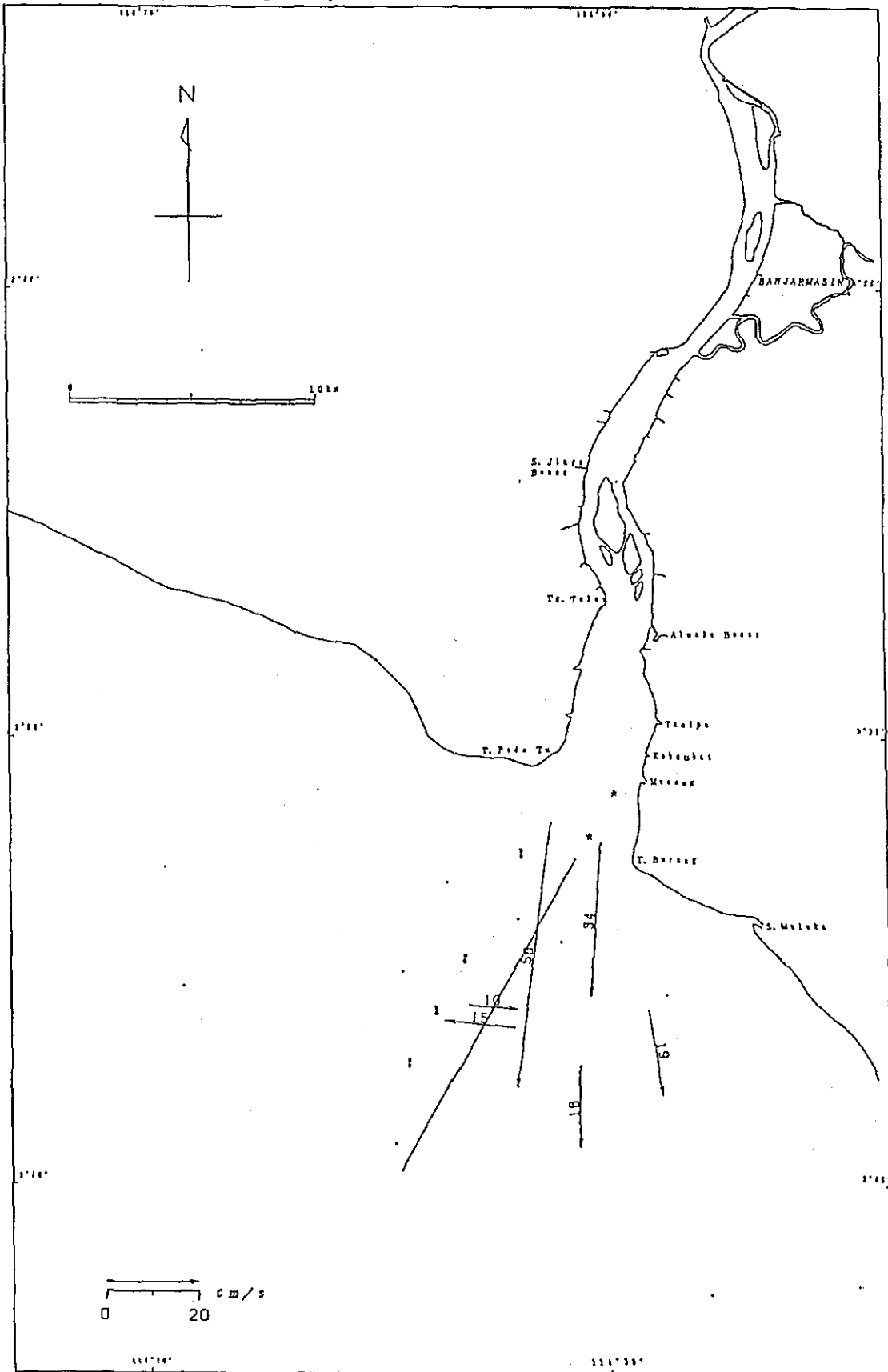
Fig. 3. 2-6 (33) Current Condition (H +5)

[illegible]

Fig. 3. 2-6 032) Current Condition (H-6)

Fig. 3. 2-6 (33) Current Condition (H +7)

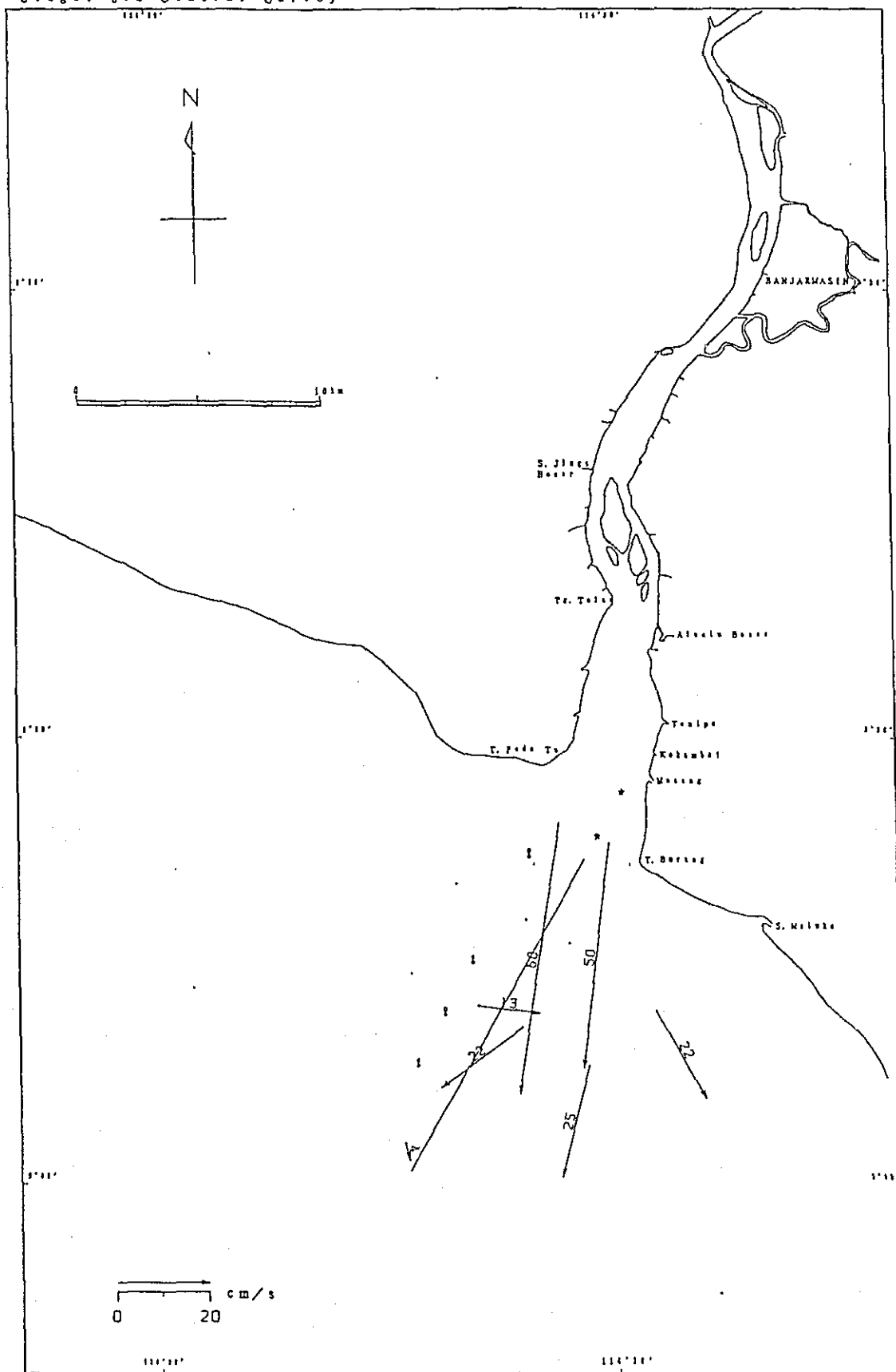
Date : 9th May 1989
 Time : 19:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (34) Current Condition (H+8)

Date : 9th May 1989
 Time : 20:00
 Stage: 3rd General Survey



note: (H, W) High Water, (H+1) or (L+1) 1 hour after H, W or L, W
 (L, W) Low Water, (H-1) or (L-1) 1 hour before H, W or L, W

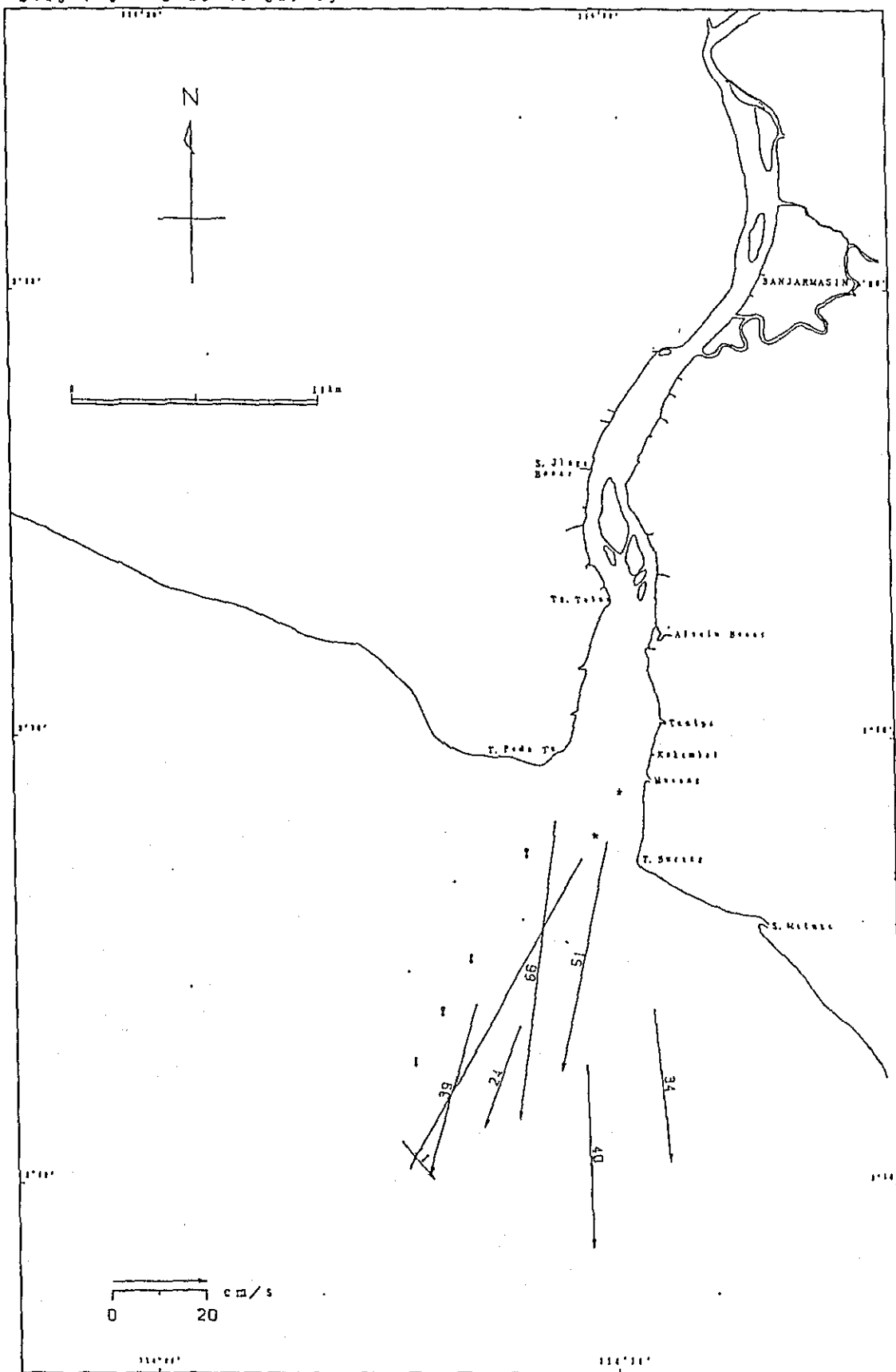
Fig. 3. 2-6 (35) Current Condition (L-7)

Map of the Banjarmasin area showing the coastline, rivers, and bathymetric contours. The map includes a north arrow, a scale bar (0 to 20 cm/s), and labels for various locations: Banjarmasin, S. Jilga Besar, Tr. Tala, Alcala Besar, T. Tala To, T. Baring, S. Melaka, and T. Baring. Bathymetric contours are labeled with values 34, 54, and 71. The map is framed by coordinates 114°30' and 114°35' longitude, and 3°30' and 3°35' latitude.

note: (H, W).....High Water, (H+1) or (L+1).....1 hour after H, W or L, W
(L, W).....Low Water, (H-1) or (L-1).....1 hour before H, W or L, W

Fig. 3. 2-6 (136) Current Condition (L-6)

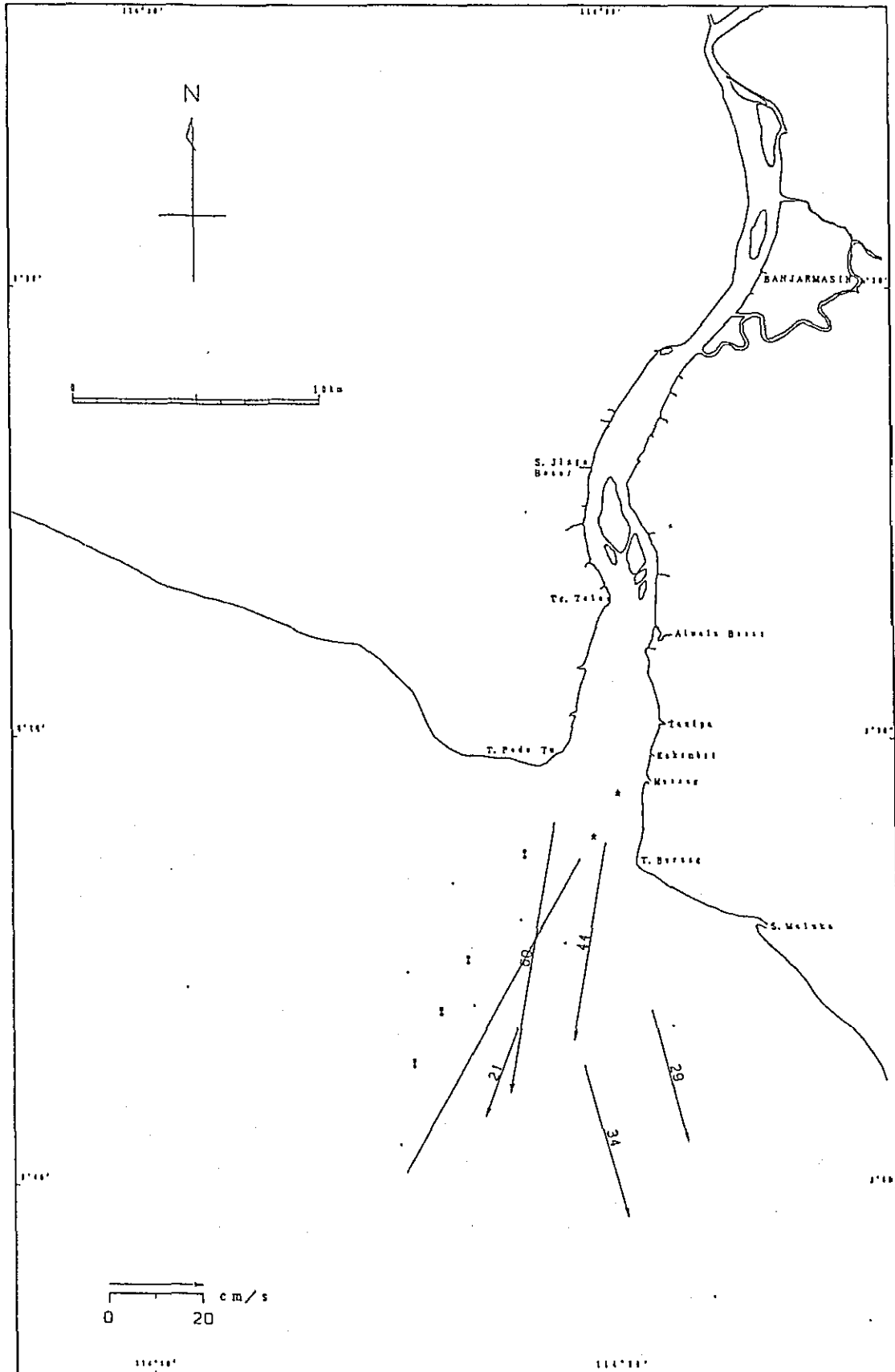
Date : 9th May 1989
 Time : 22:00
 Stage: 3rd General Survey



note: (H.W).....High Water, (H+1) or (L+1).....1 hour after H.W or L.W
 (L.W).....Low Water, (H-1) or (L-1).....1 hour before H.W or L.W

Fig. 3. 2-6 (37) Current Condition (L-5)

Date : 9th May 1989
 Time : 23:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (133) Current Condition (L-4)

Date : 10th May 1989
 Time : 0:00
 Stage: 3rd General Survey

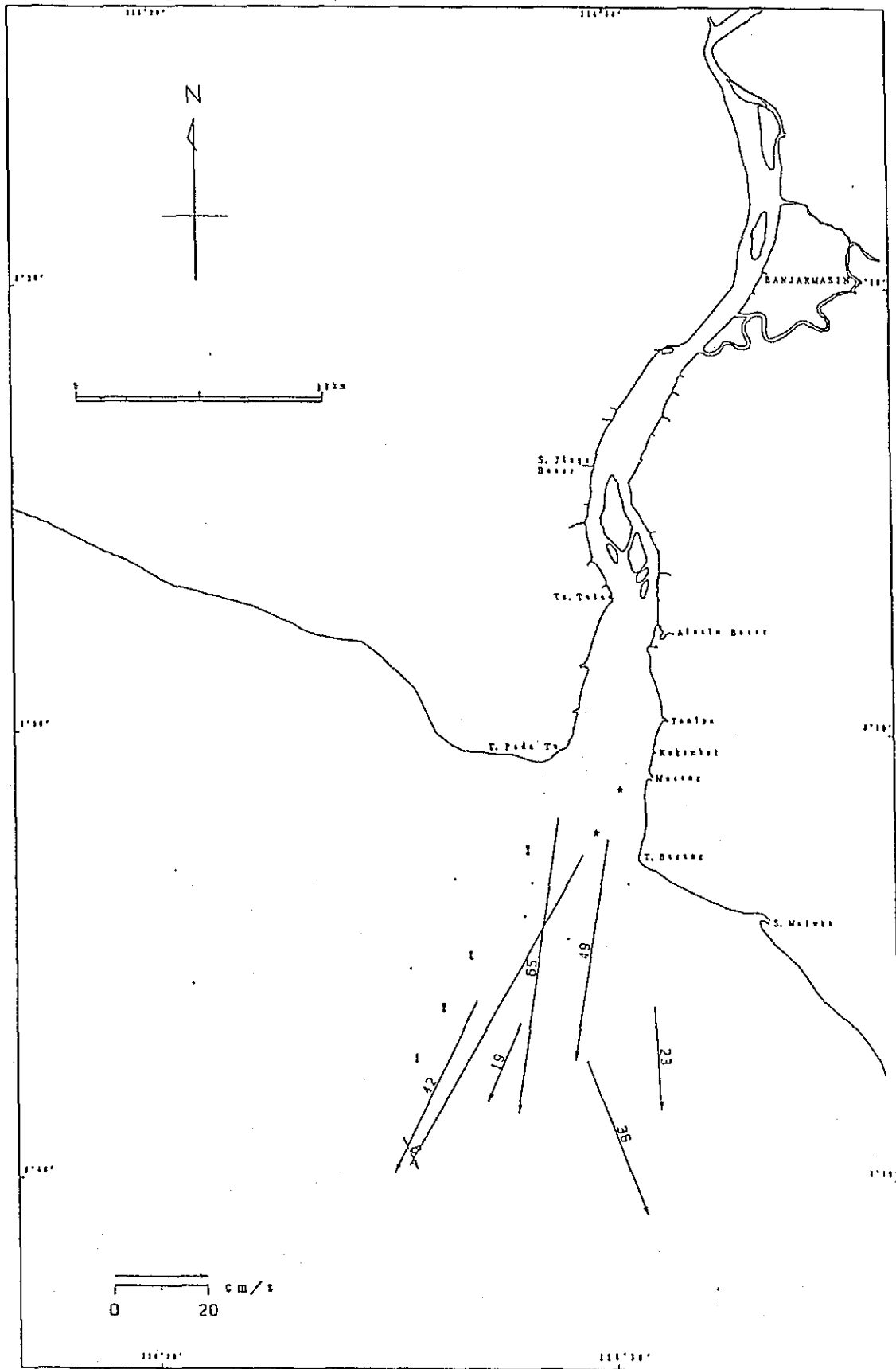
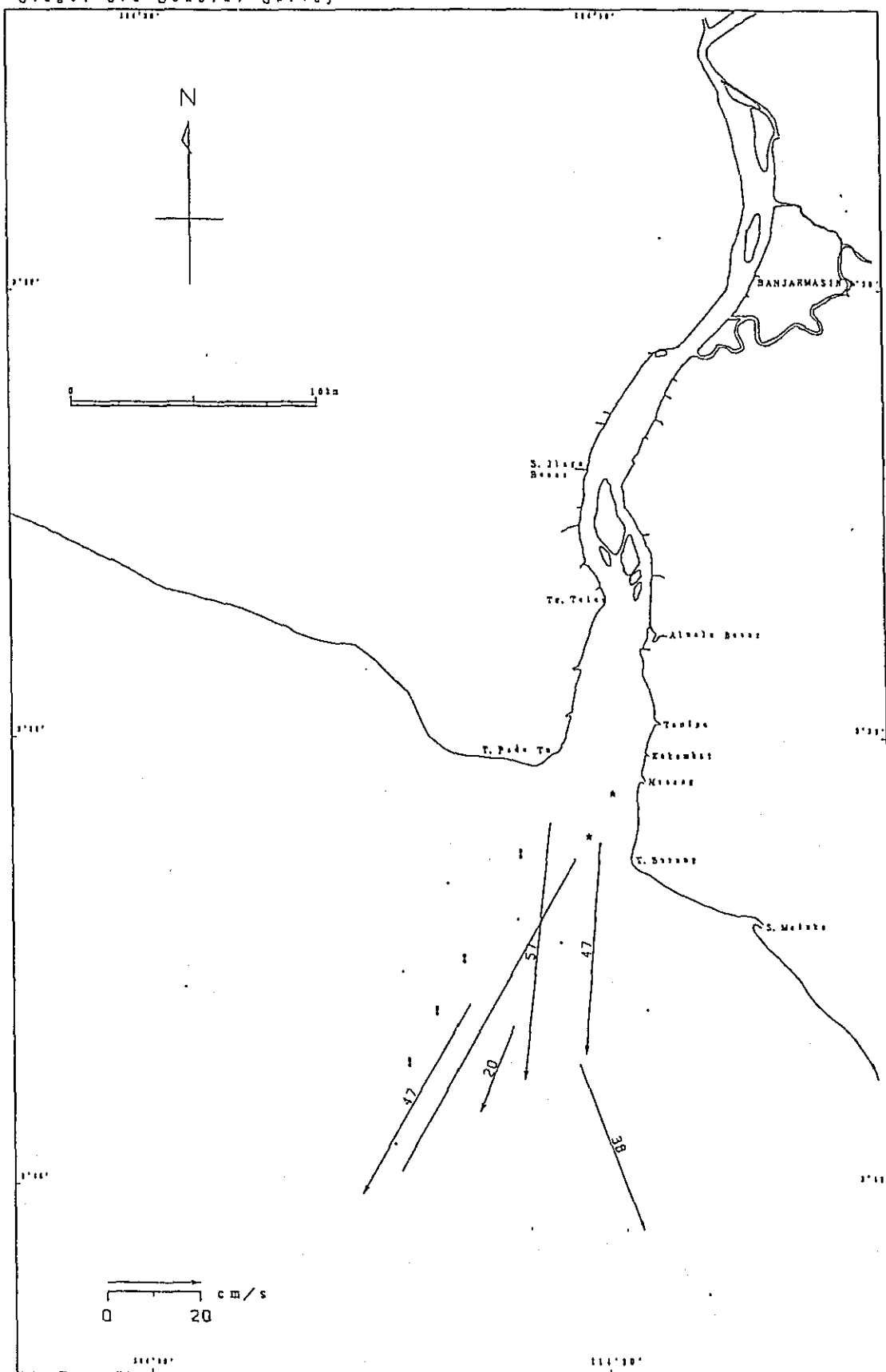


Fig. 3. 2-6 (139) Current Condition (L. -3)

Date : 10th May 1989
 Time : 1:00
 Stage: 3rd General Survey

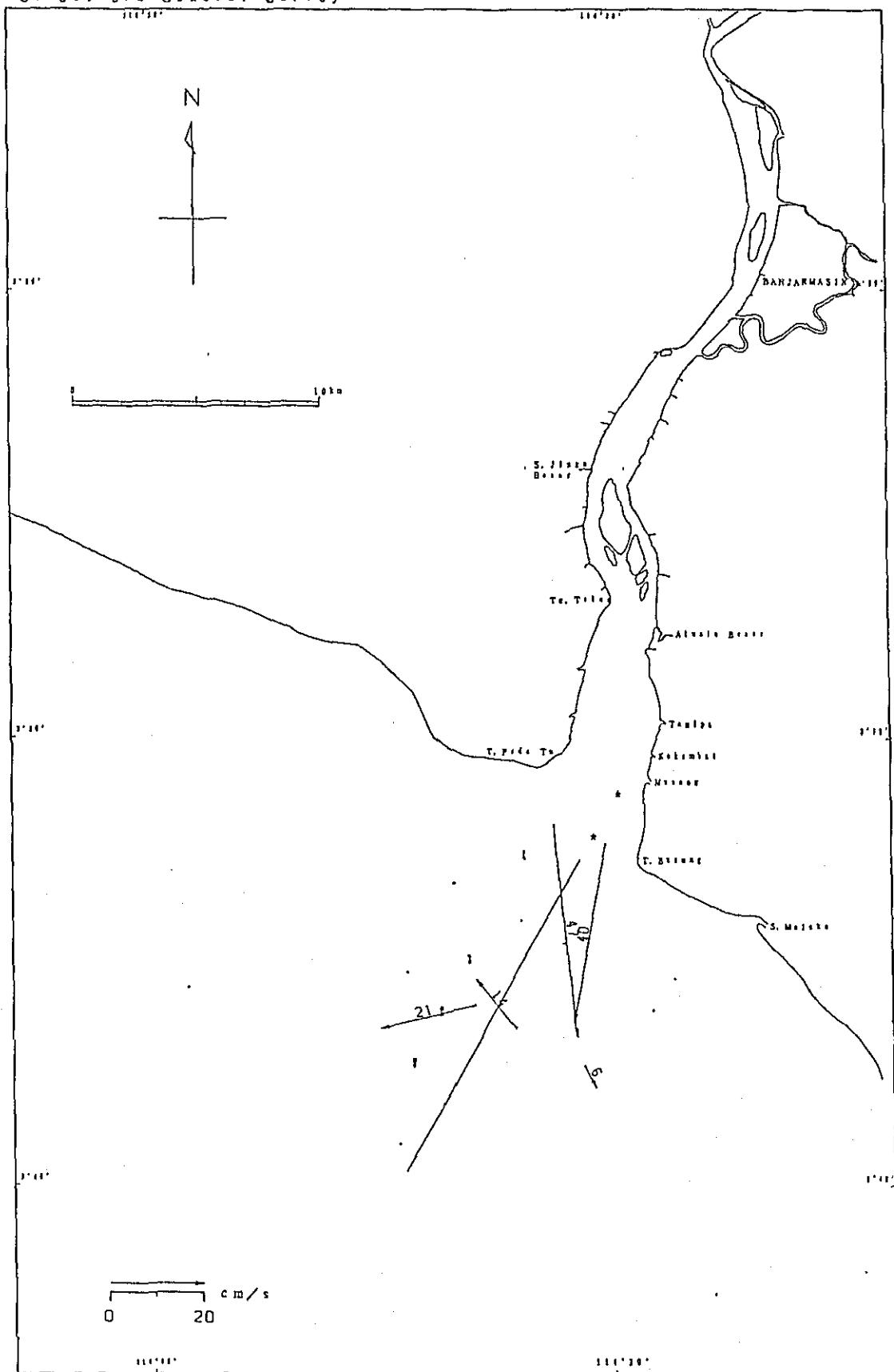


note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (40) Current Condition (L-2)

Fig. 3. 2-6 (14) Current Condition (L-1)

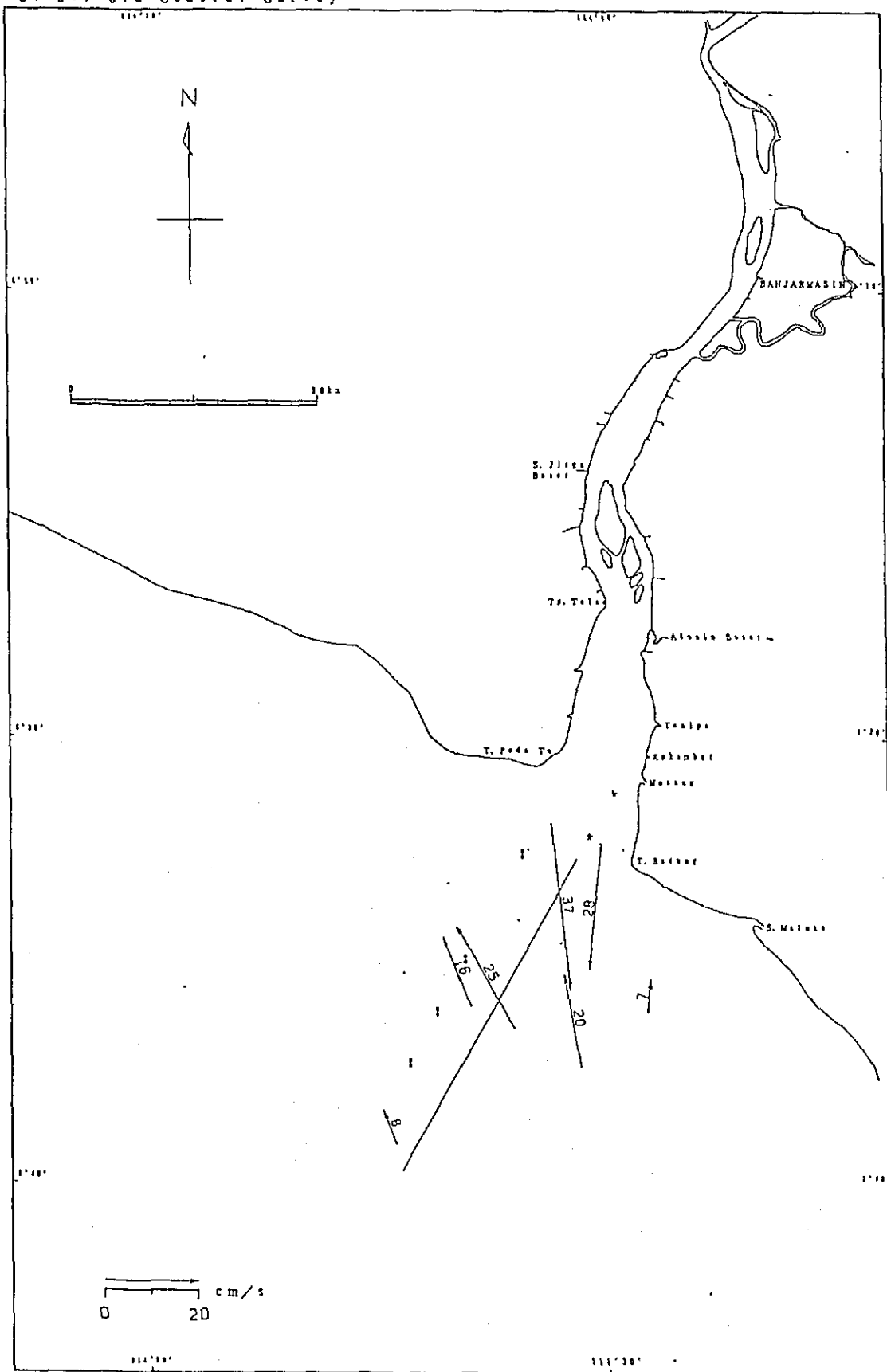
Date : 10th May 1989
 Time : 3:00
 Stage: 3rd General Survey



note: (H. W).....High Water. (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water. (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (42) Current Condition (L. W)

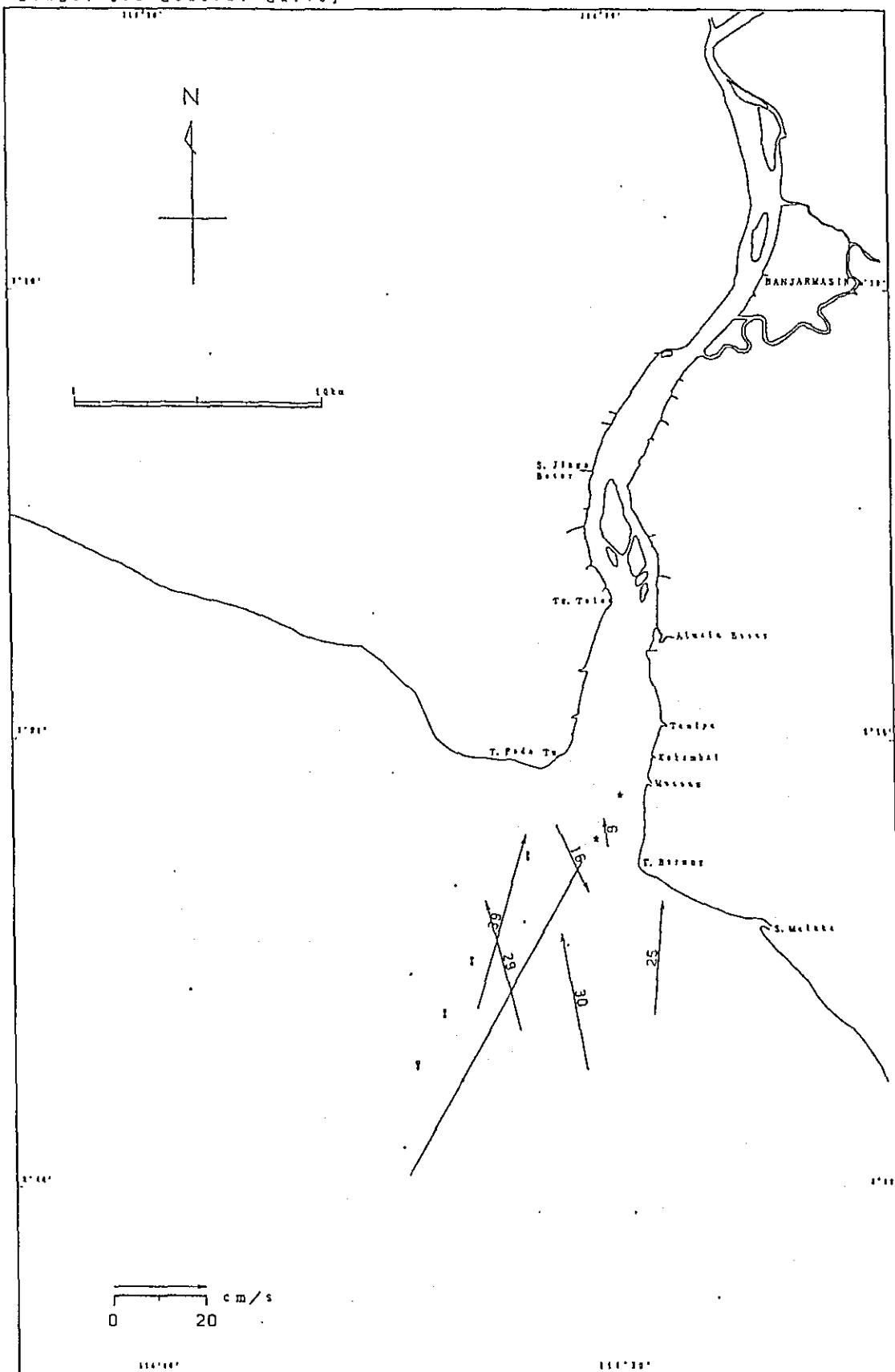
Date : 10th May 1989
 Time : 4:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (43) Current Condition (L-1)

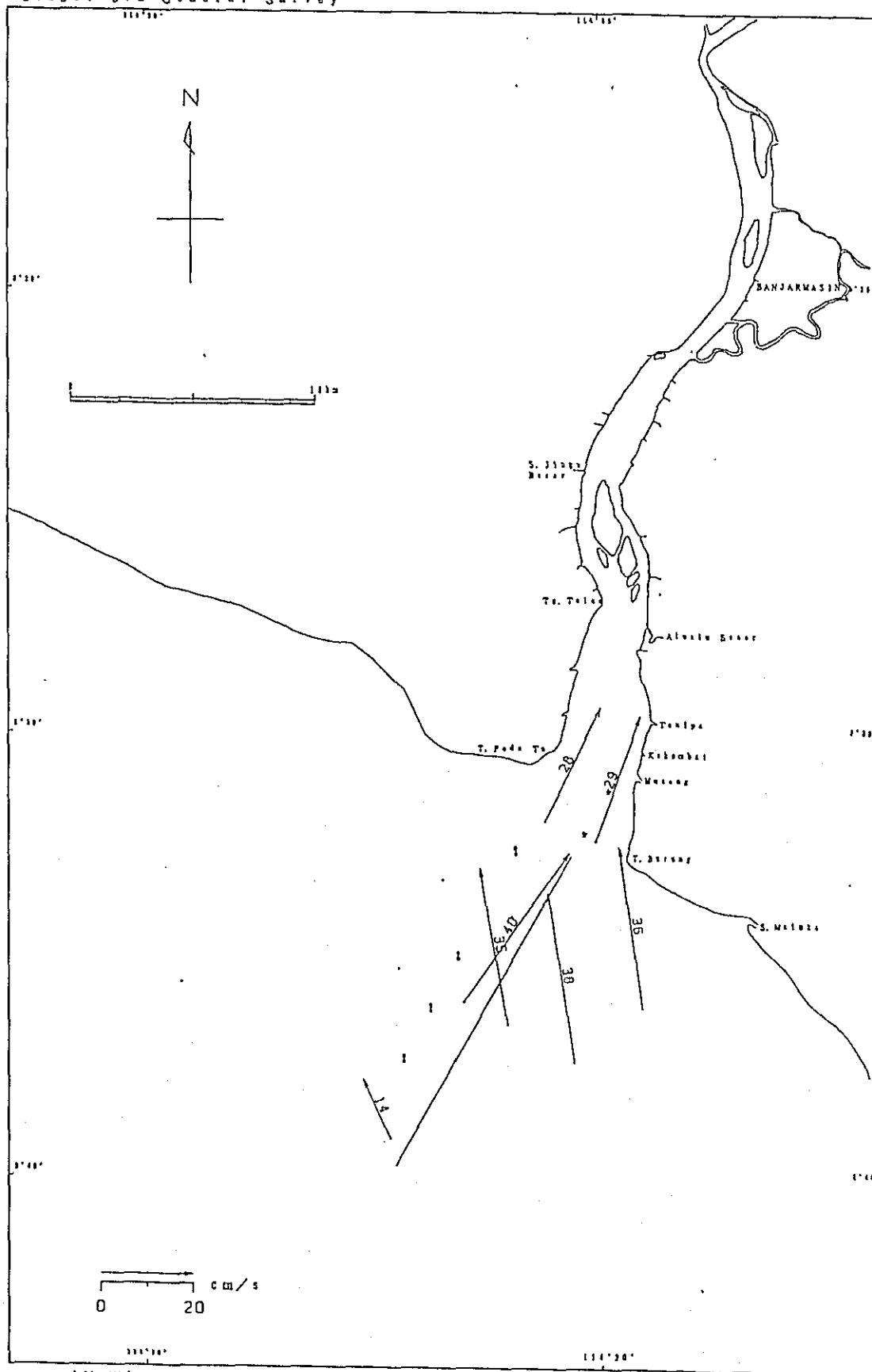
Date : 10th May 1989
 Time : 5:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (44) Current Condition (L-2)

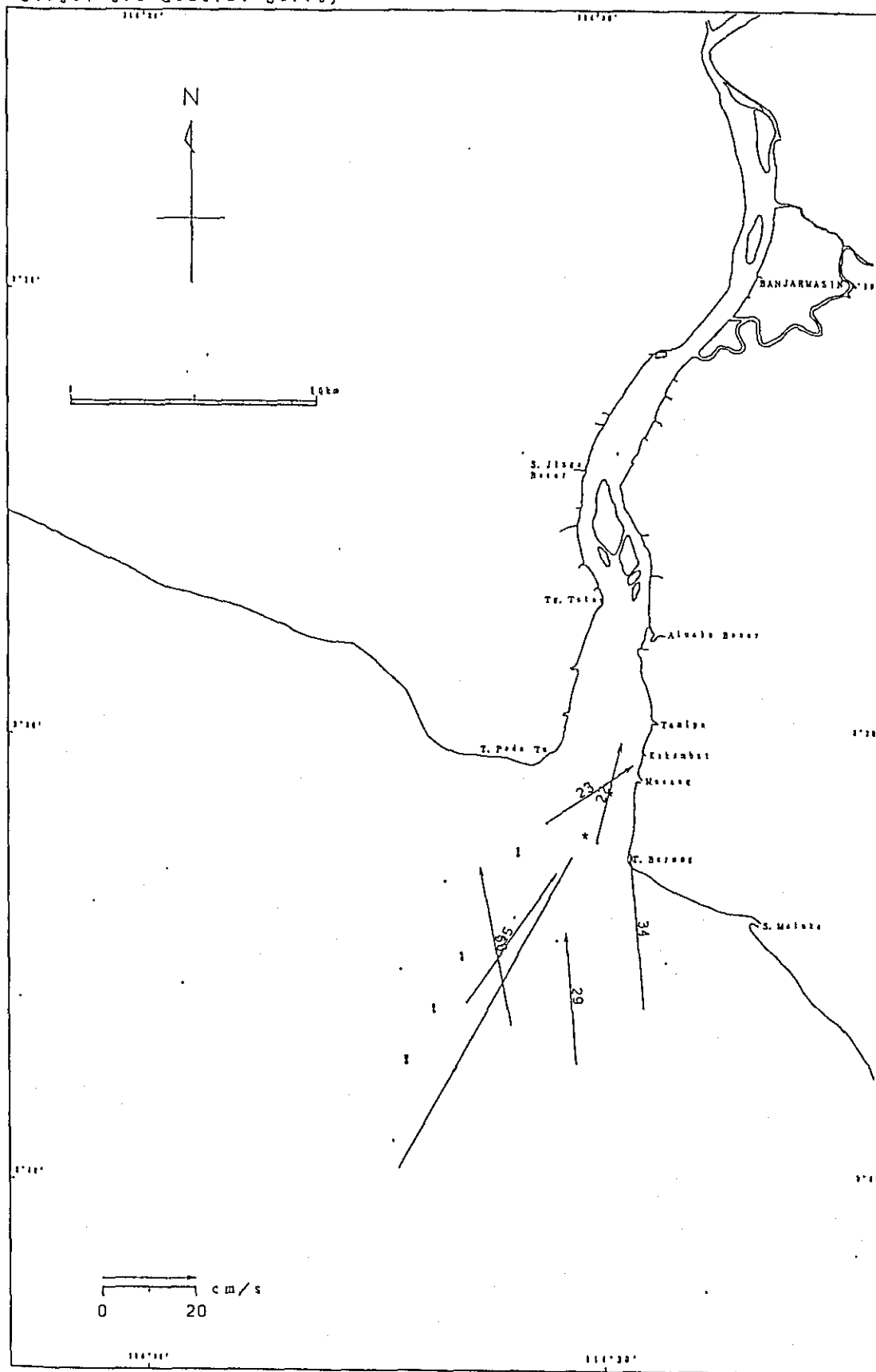
Date : 10th May 1989
 Time : 6:00
 Stage : 3rd General Survey



note: (H. W).....High Water, (H-1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (45) Current Condition (L-3)

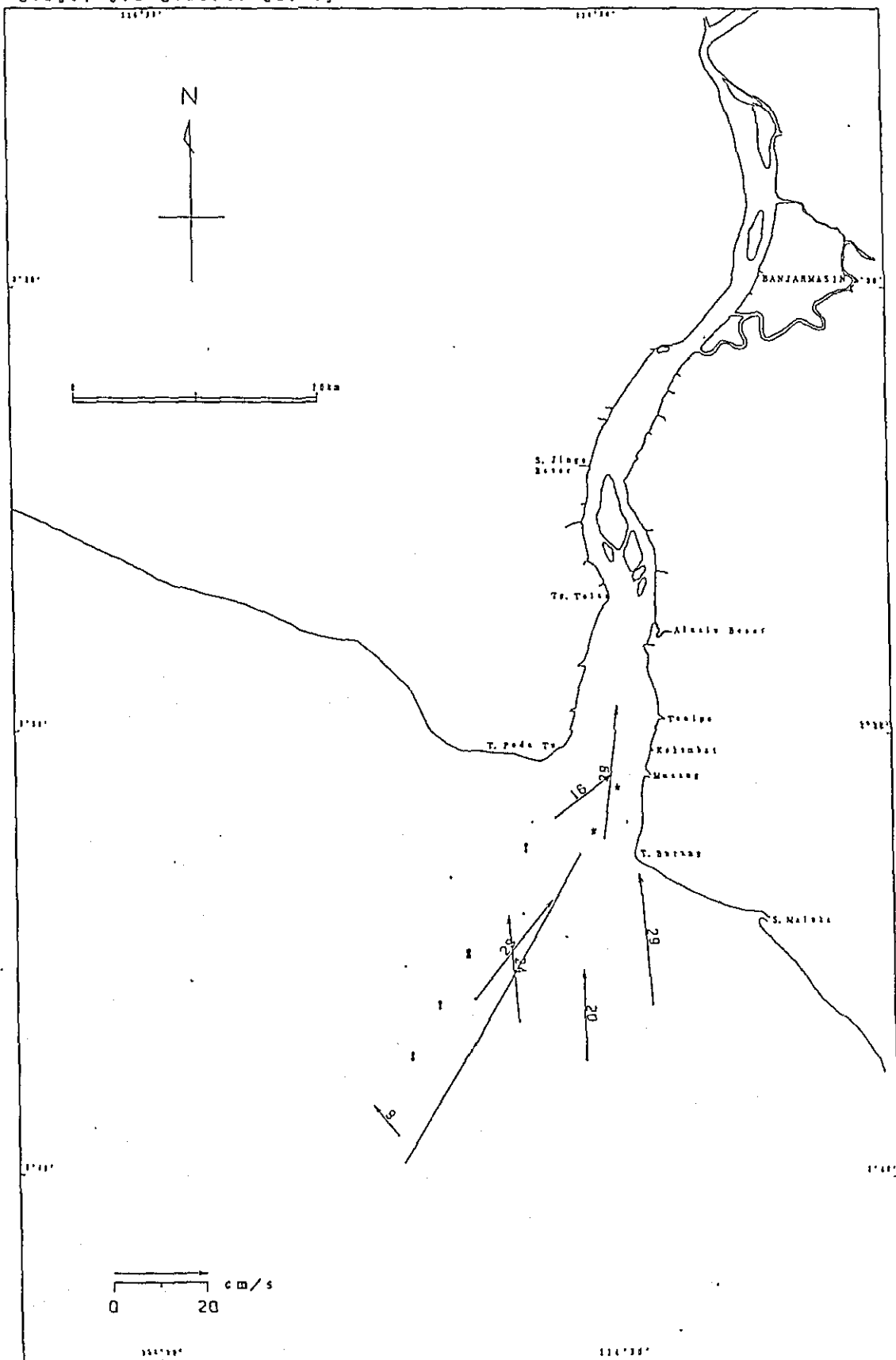
Date : 10th May 1989
 Time : 7:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (146) Current Condition (L. +4)

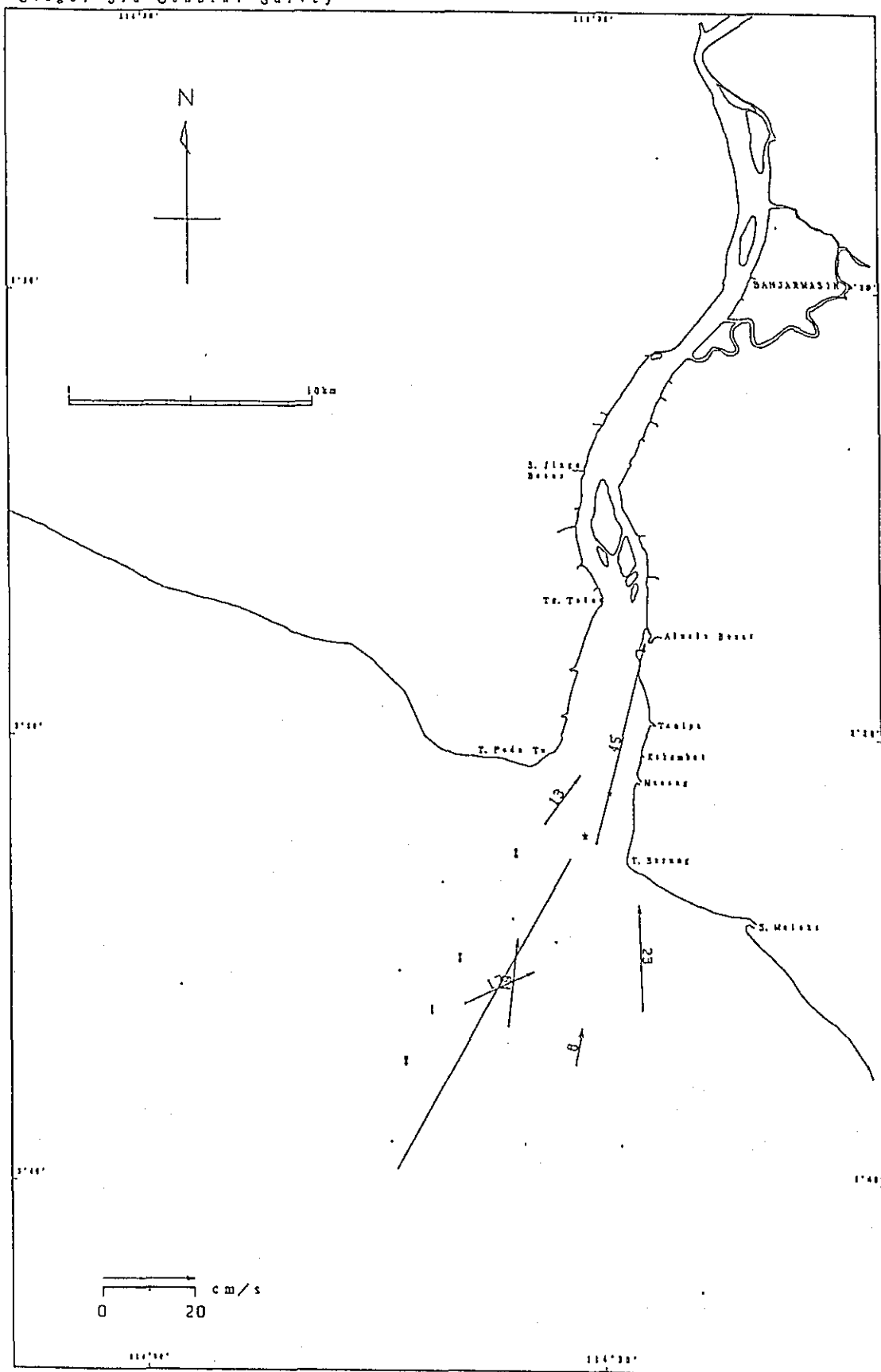
Date : 10th May 1989
 Time : 8:00
 Stage: 3rd General Survey



note: (H. W).....High Water, (H+1) or (L+1).....1 hour after H. W or L. W
 (L. W).....Low Water, (H-1) or (L-1).....1 hour before H. W or L. W

Fig. 3. 2-6 (47) Current Condition (H-4)

Date : 10th May 1989
 Time : 9:00
 Stage: 3rd General Survey

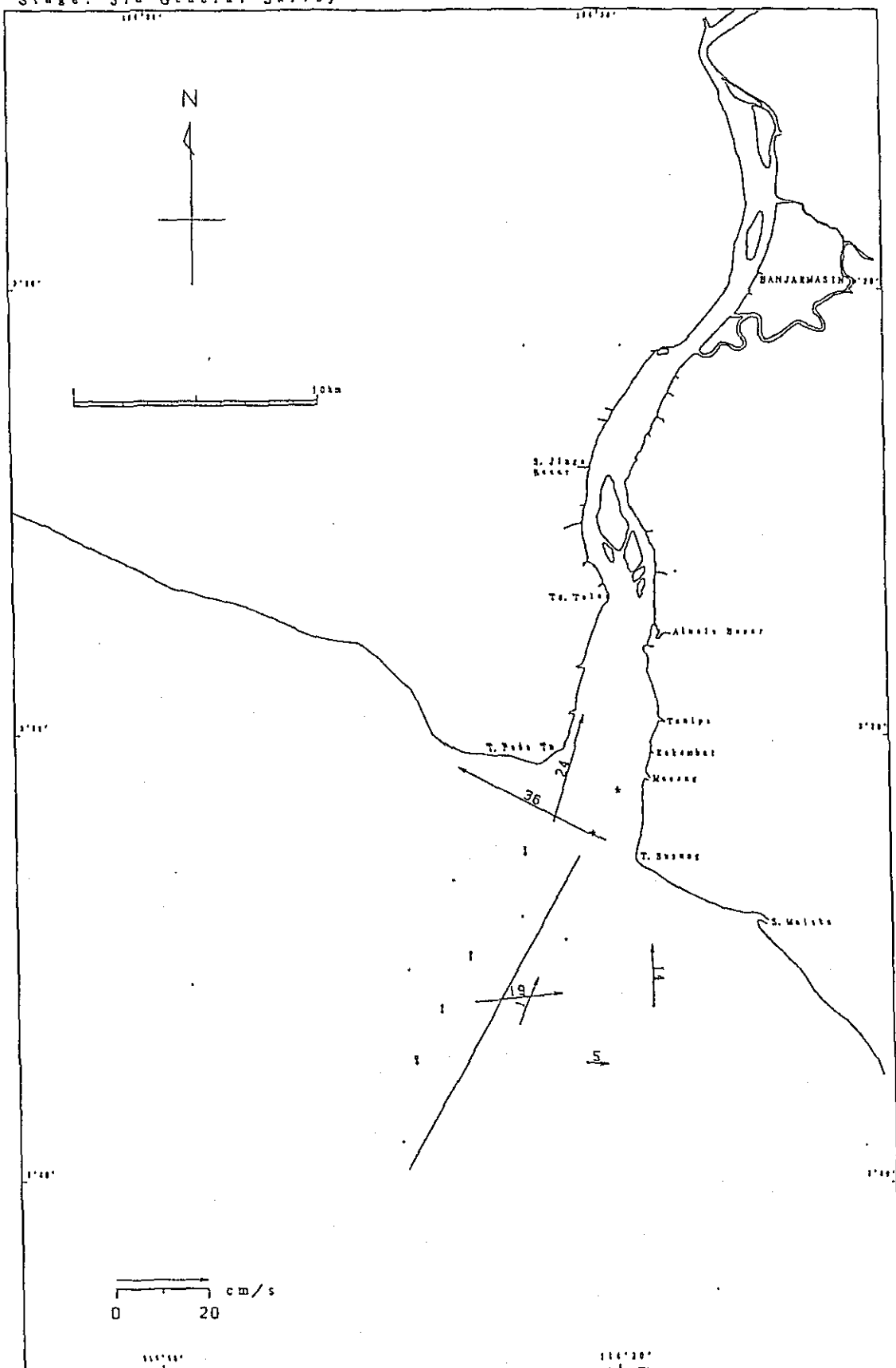


note: (H. W) High Water, (H-1) or (L+1) 1 hour after H. W or L. W
 (L. W) Low Water, (H-1) or (L-1) 1 hour before H. W or L. W

Fig. 3. 2-6 (48) Current Condition (H-3)

Fig. 3. 2-6 (149) Current Condition (H-2)

Date : 10th May 1989
 Time : 11:00
 Stage: 3rd General Survey



note: (H. W) High Water, (H-1) or (L-1) 1 hour after H. W or L. W
 (L. W) Low Water, (H-1) or (L-1) 1 hour before H. W or L. W

Fig. 3. 2-6 (150) Current Condition (H-1)

Date : 8th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

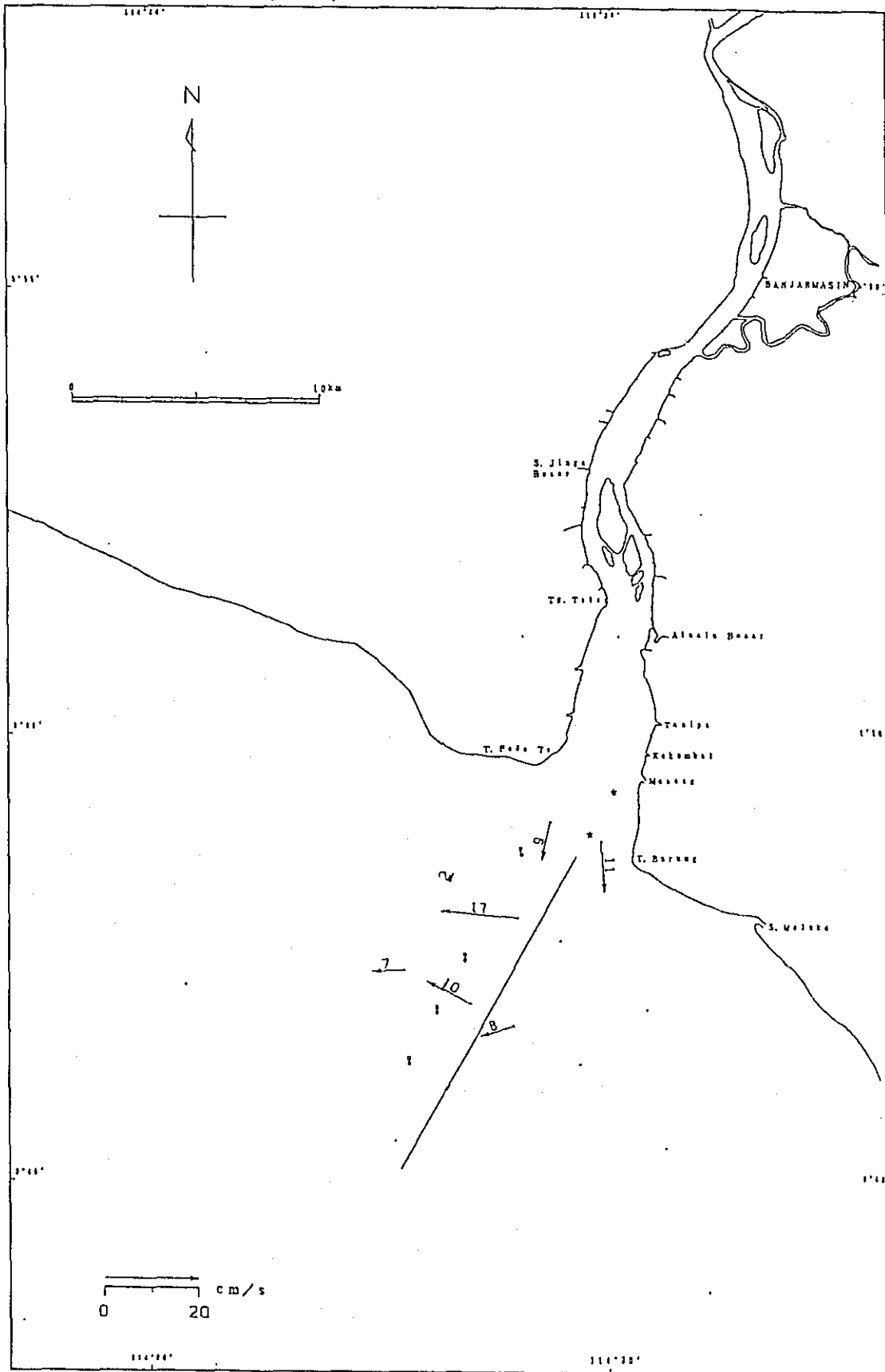


Fig. 3. 2-7 (1) Current Condition by 25 hours Running Mean

Date : 8th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

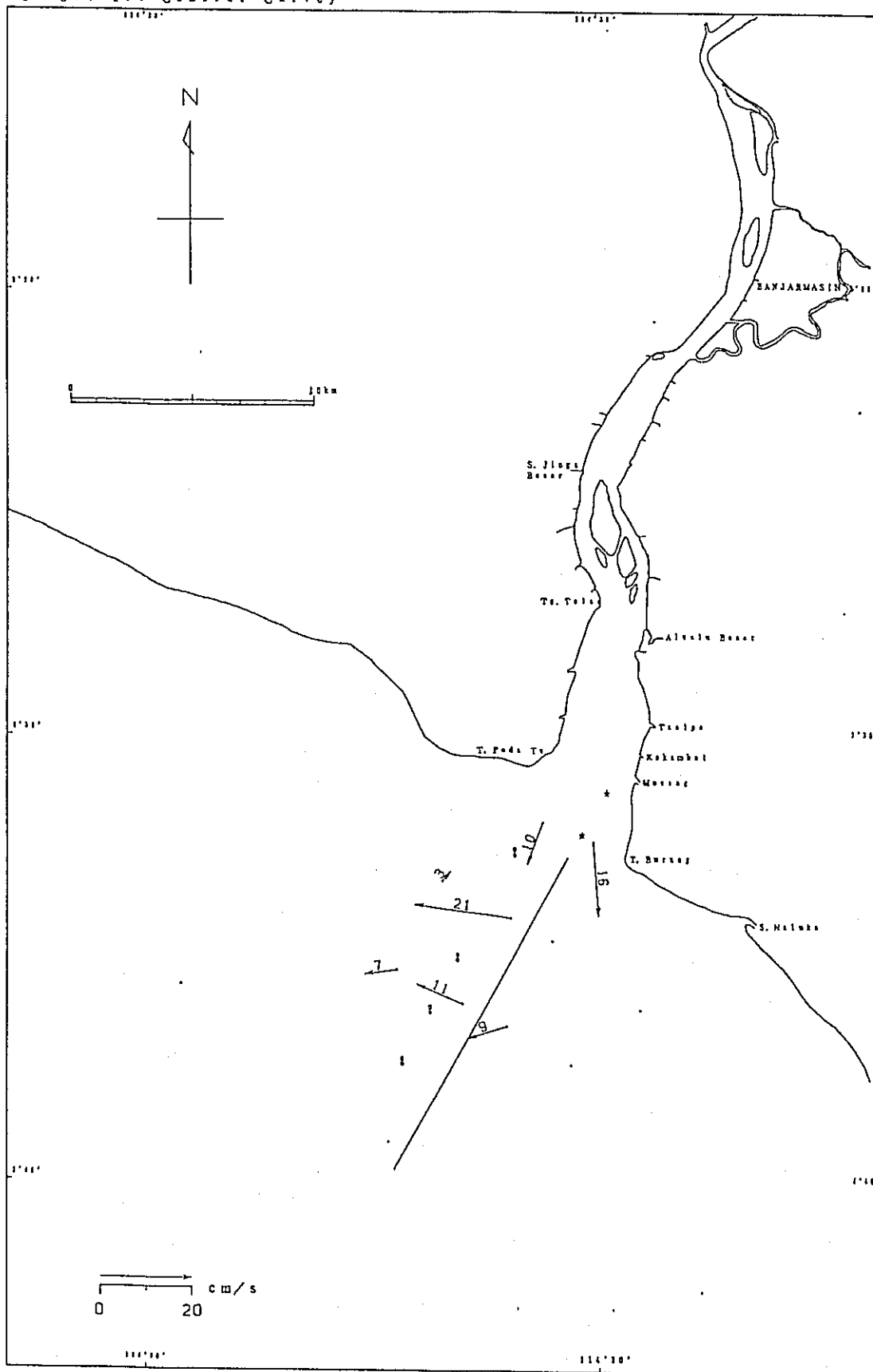


Fig. 3. 2-7 (2) Current Condition by 25 hours Running Mean

Date : 9th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

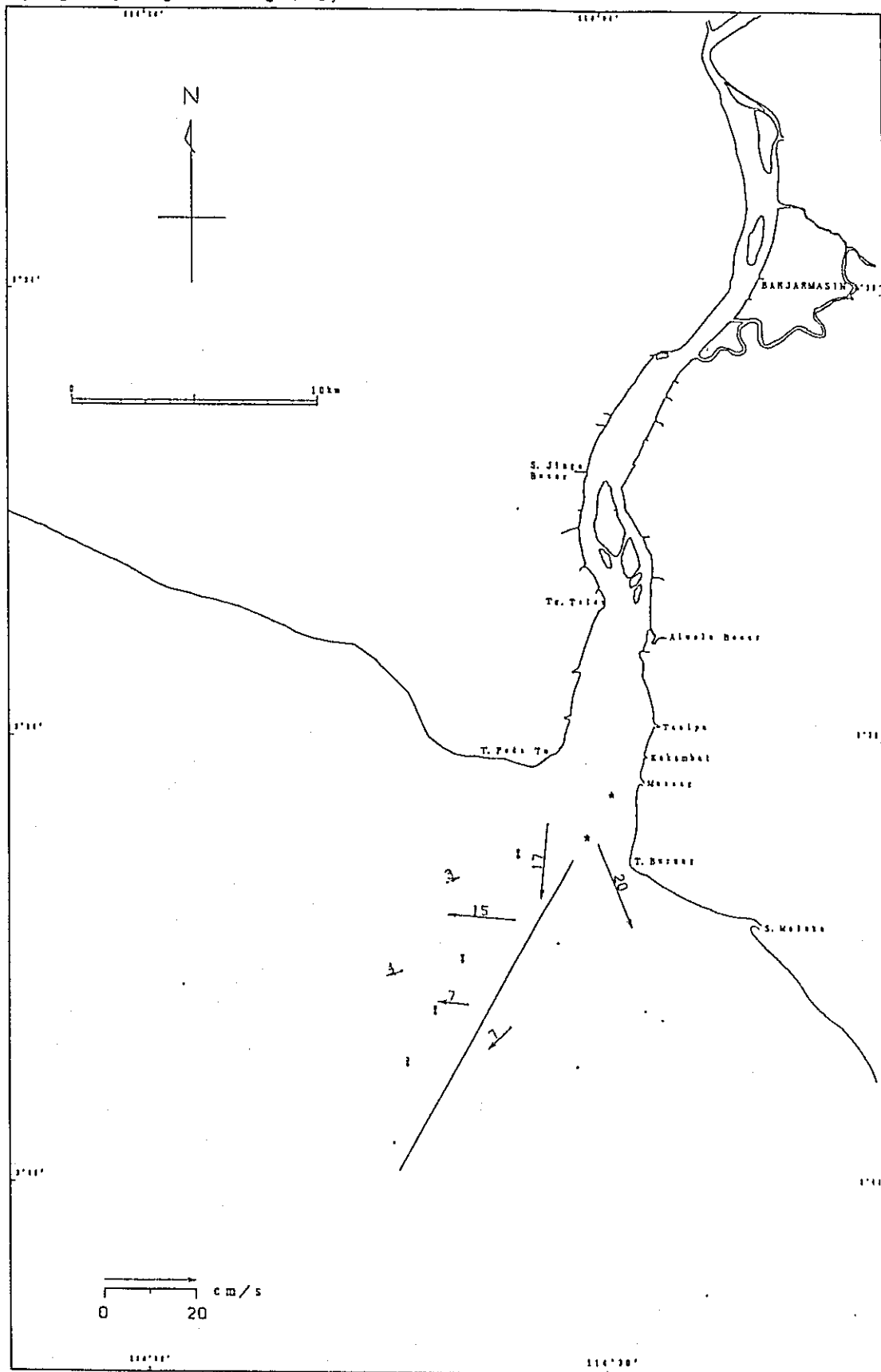


Fig. 3. 2-7 (3) Current Condition by 25 hours Running Mean

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Date : 10th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

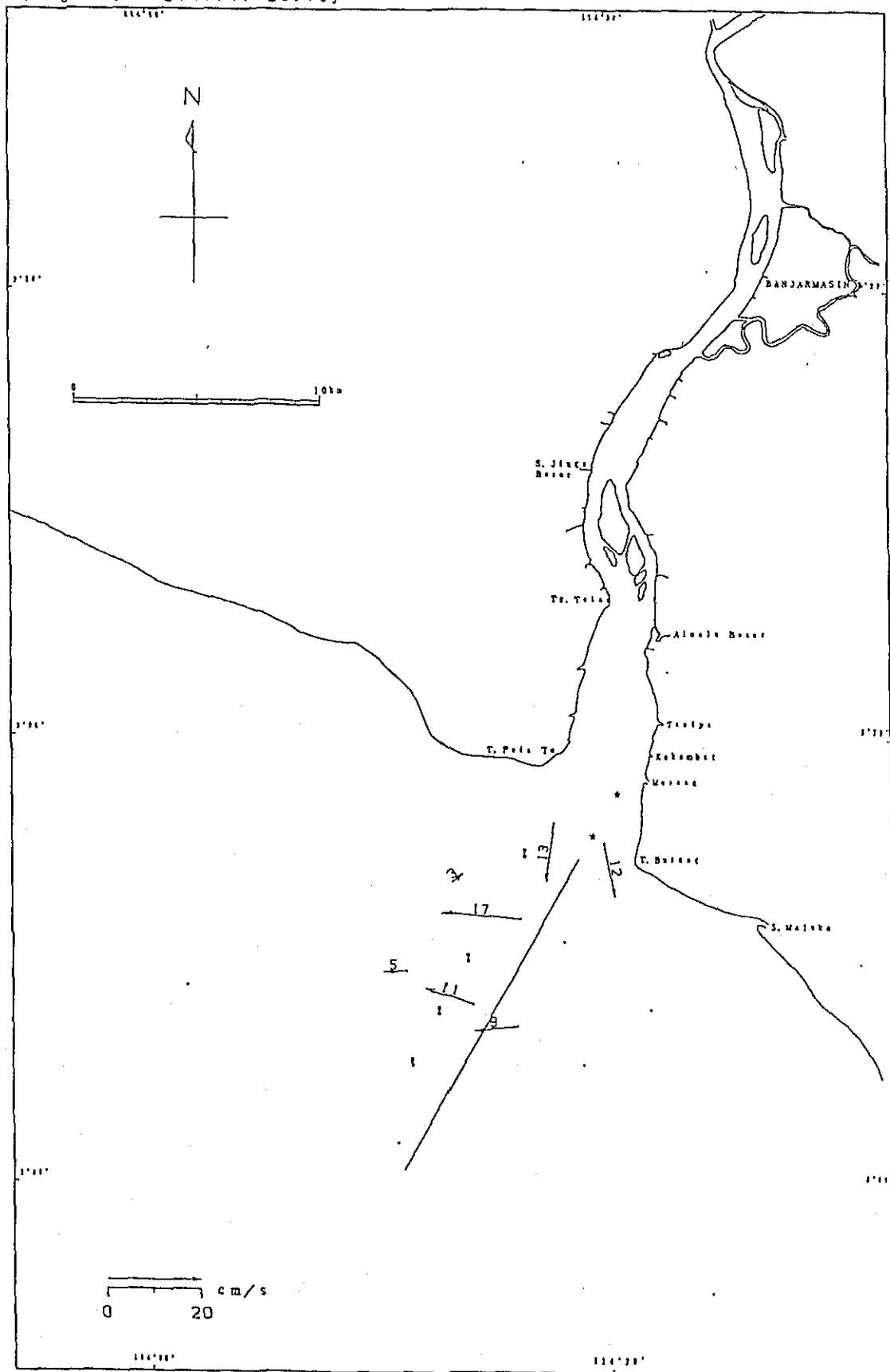


Fig. 3. 2-7 (5) Current Condition by 25 hours Running Mean

Date : 10th Sep. 1988
 Time : 12:00
 Stage : 1st General Survey

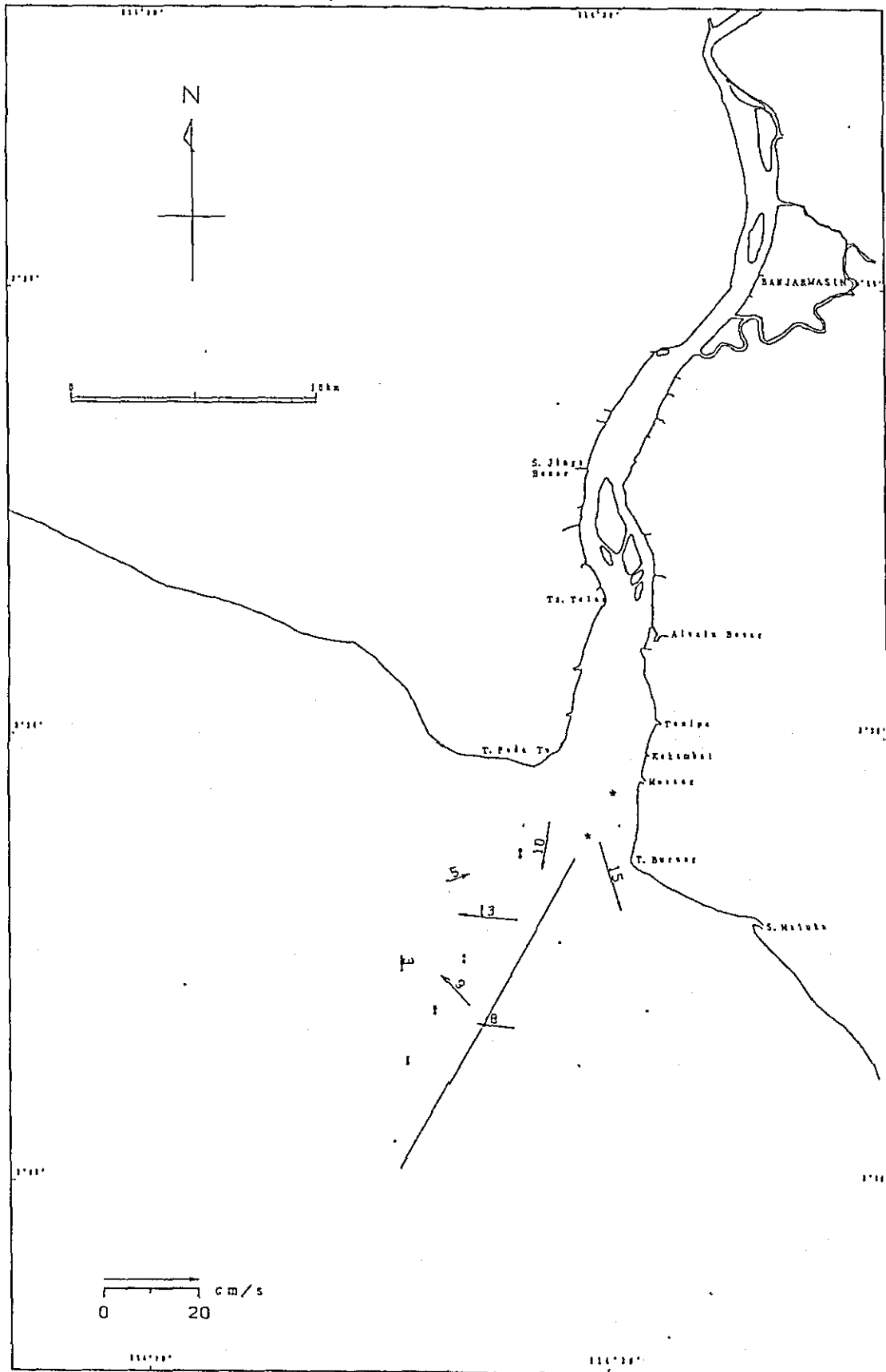


Fig. 3. 2-7 (6) Current Condition by 25 hours Running Mean

[illegible]

330

Date : 11th Sep. 1988
 Time : 12:00
 Stage : 1st General Survey

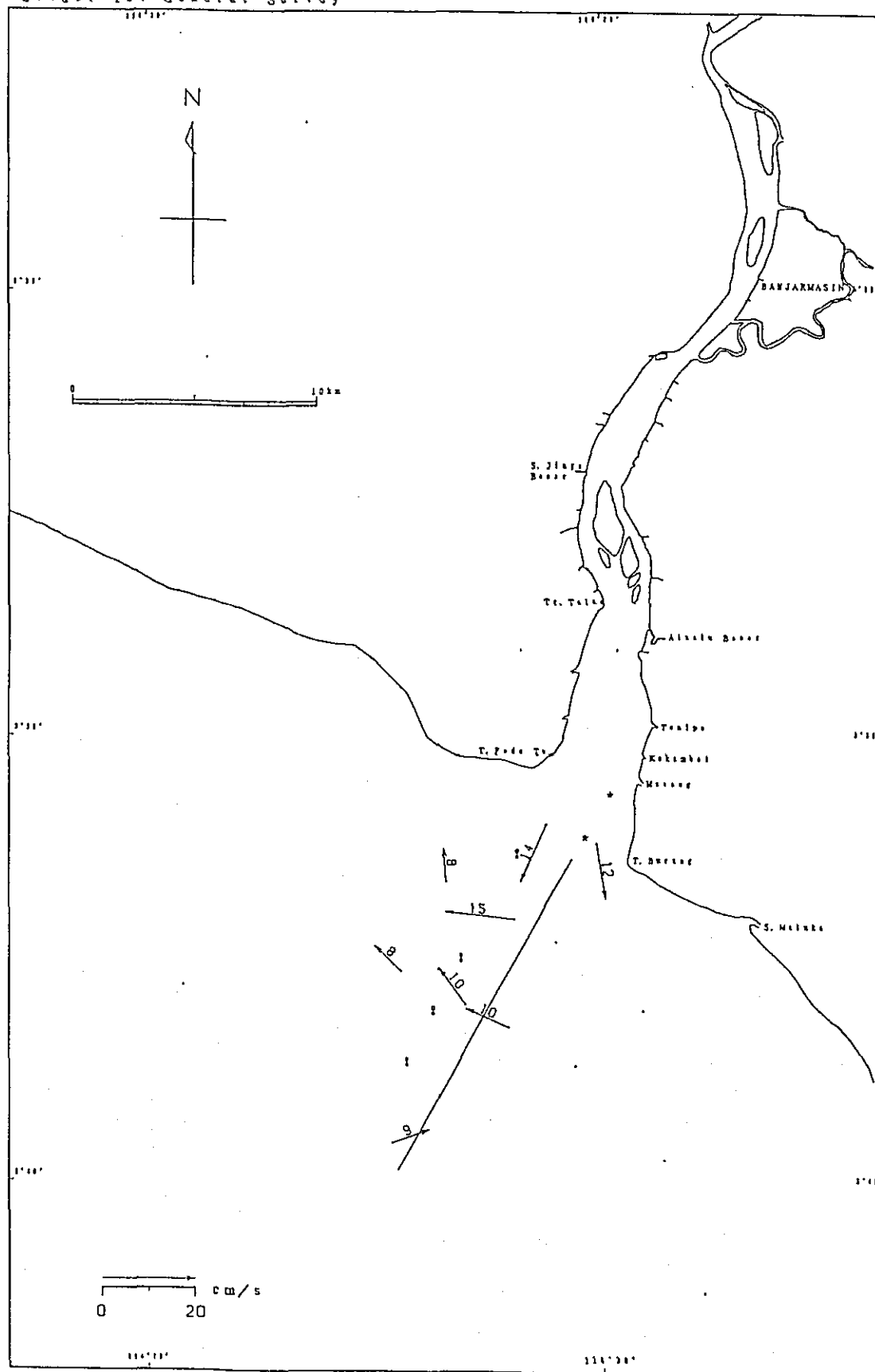


Fig. 3. 2-7 (8) Current Condition by 25 hours Running Mean

Date : 12th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

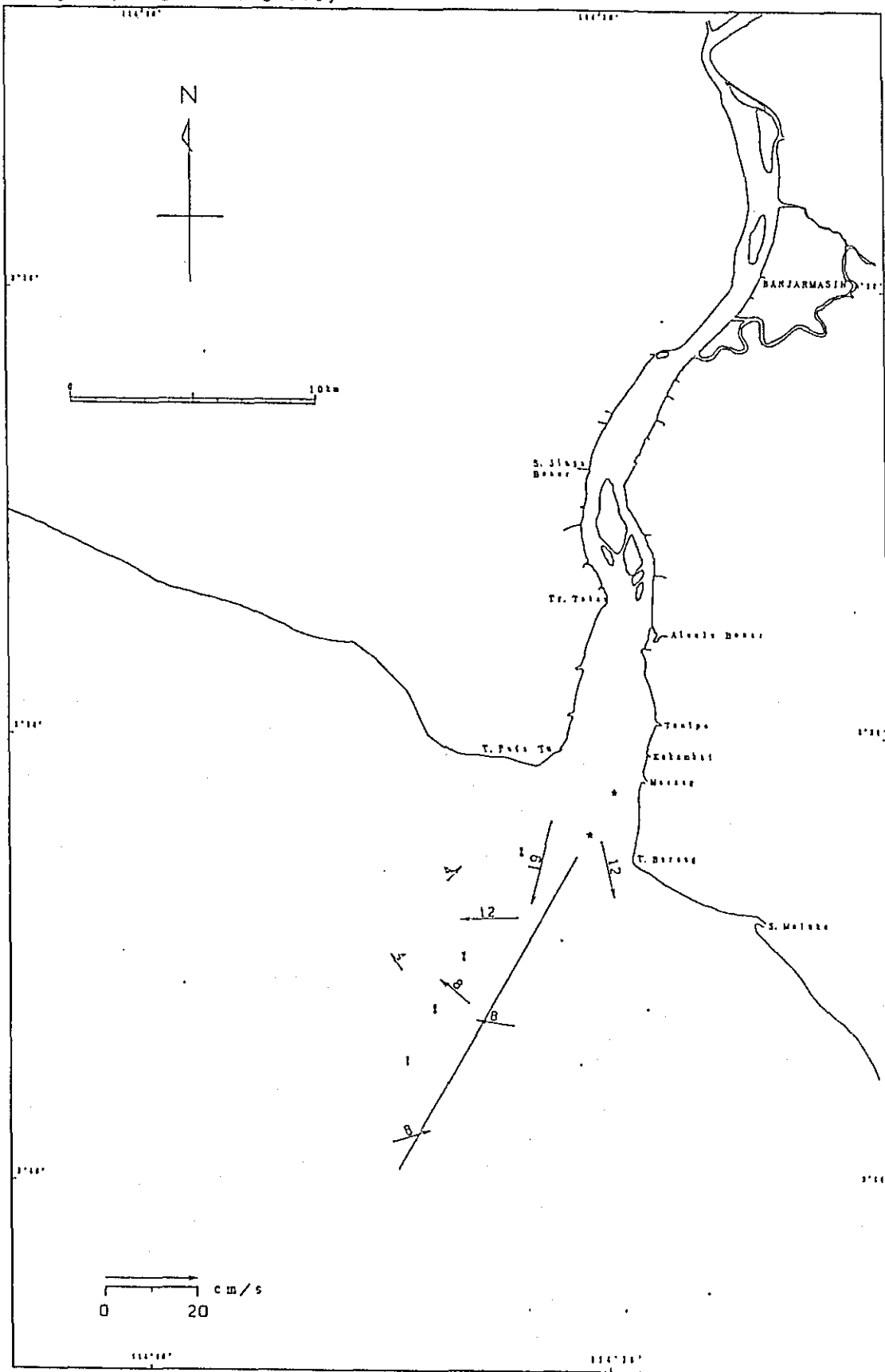


Fig. 3. 2-7 (9) Current Condition by 25 hours Running Mean

Date : 12th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

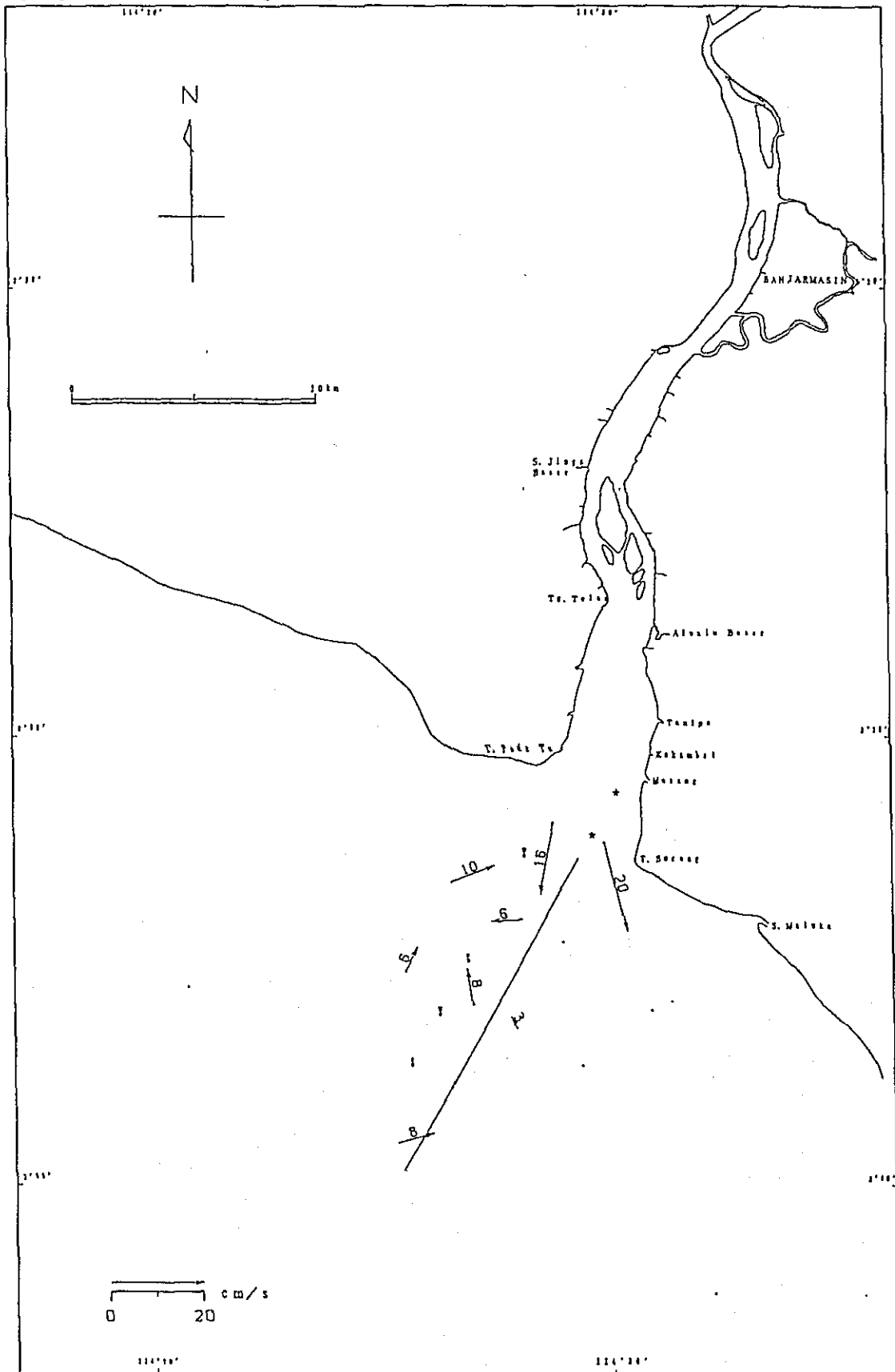


Fig. 3. 2-7 (10) Current Condition by 25 hours Running Mean

Date : 13th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

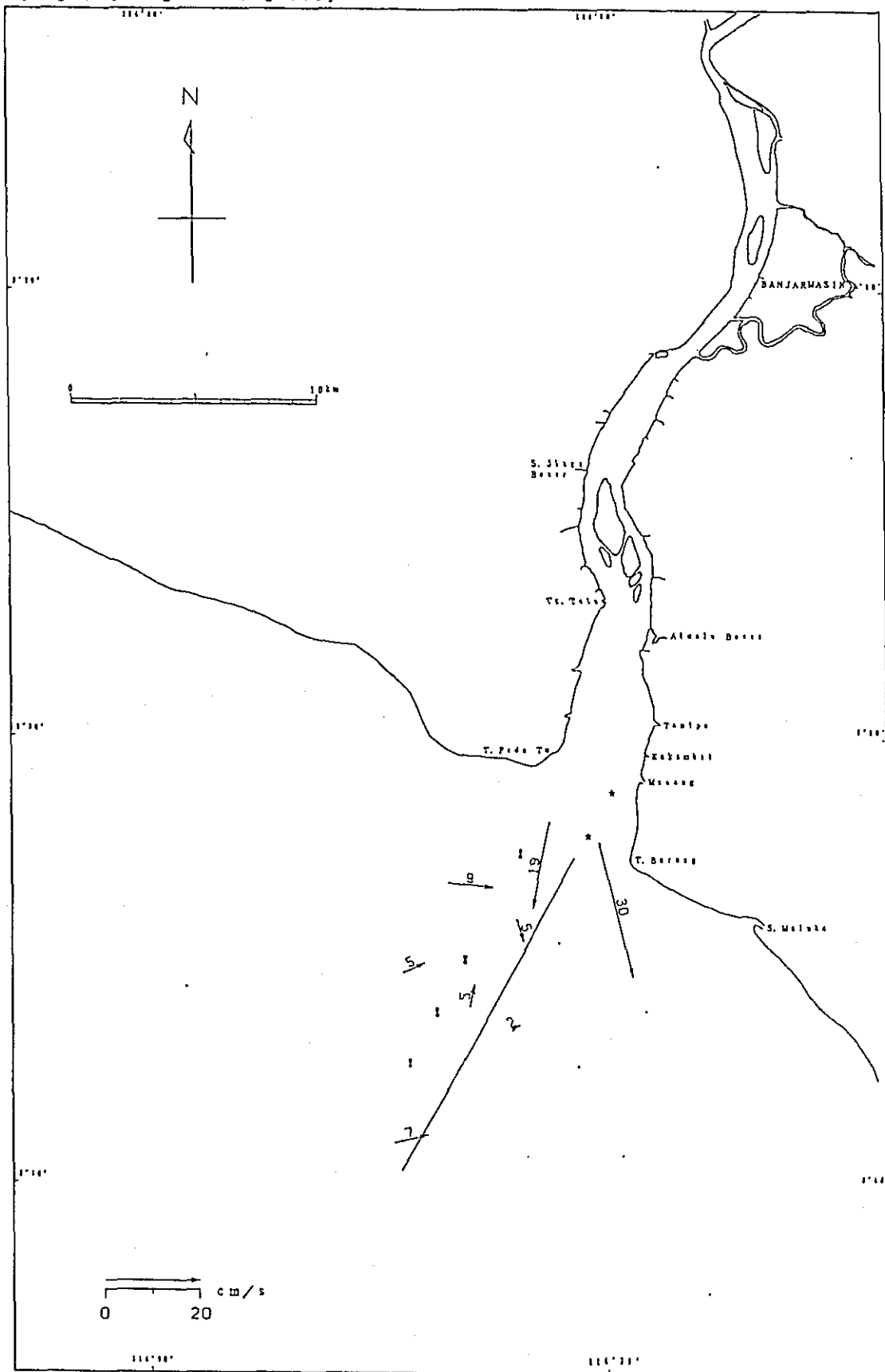


Fig. 3. 2-7 (1) Current Condition by 25 hours Running Mean

Date : 13th Sep. 1988
 Time : 12:00
 Stage : 1st General Survey

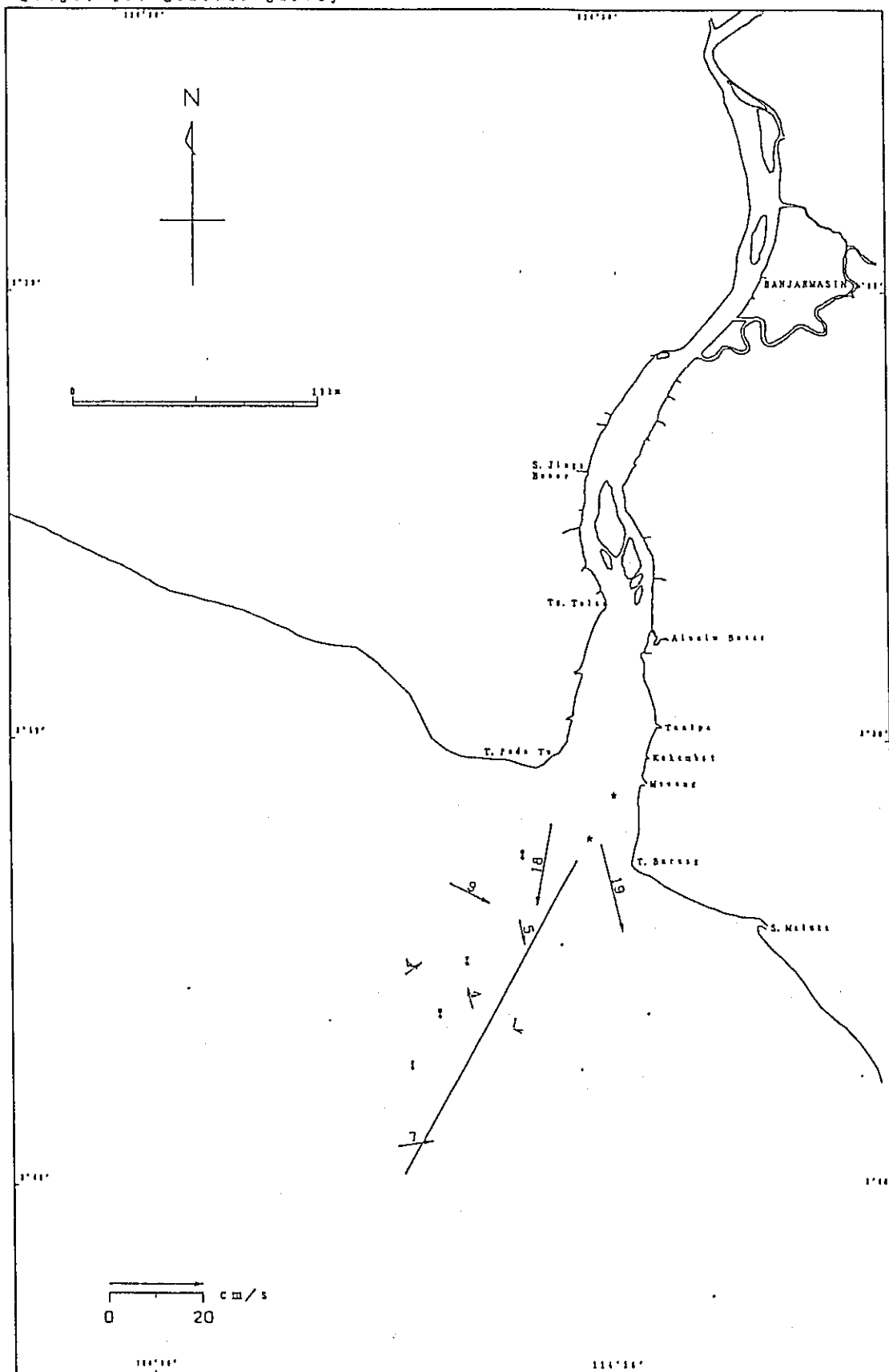


Fig. 3. 2-7 (2) Current Condition by 25 hours Running Mean

The map shows the Banjarmasin area with the following features:

- Geographical Features:** S. Jene River, S. Malaka, Tr. Tolu, T. Pede To, T. Borend, T. Tolpa, Almalu River, Zekembat, Mureng.
- Scale and Orientation:** North arrow pointing up, 10 km scale bar, 20 cm/s velocity scale bar.
- Annotations:** A star marks a location near T. Borend. A line with arrows and numbers (5, 6, 9, 22, 18) indicates a flow or measurement path.

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Date : 15th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

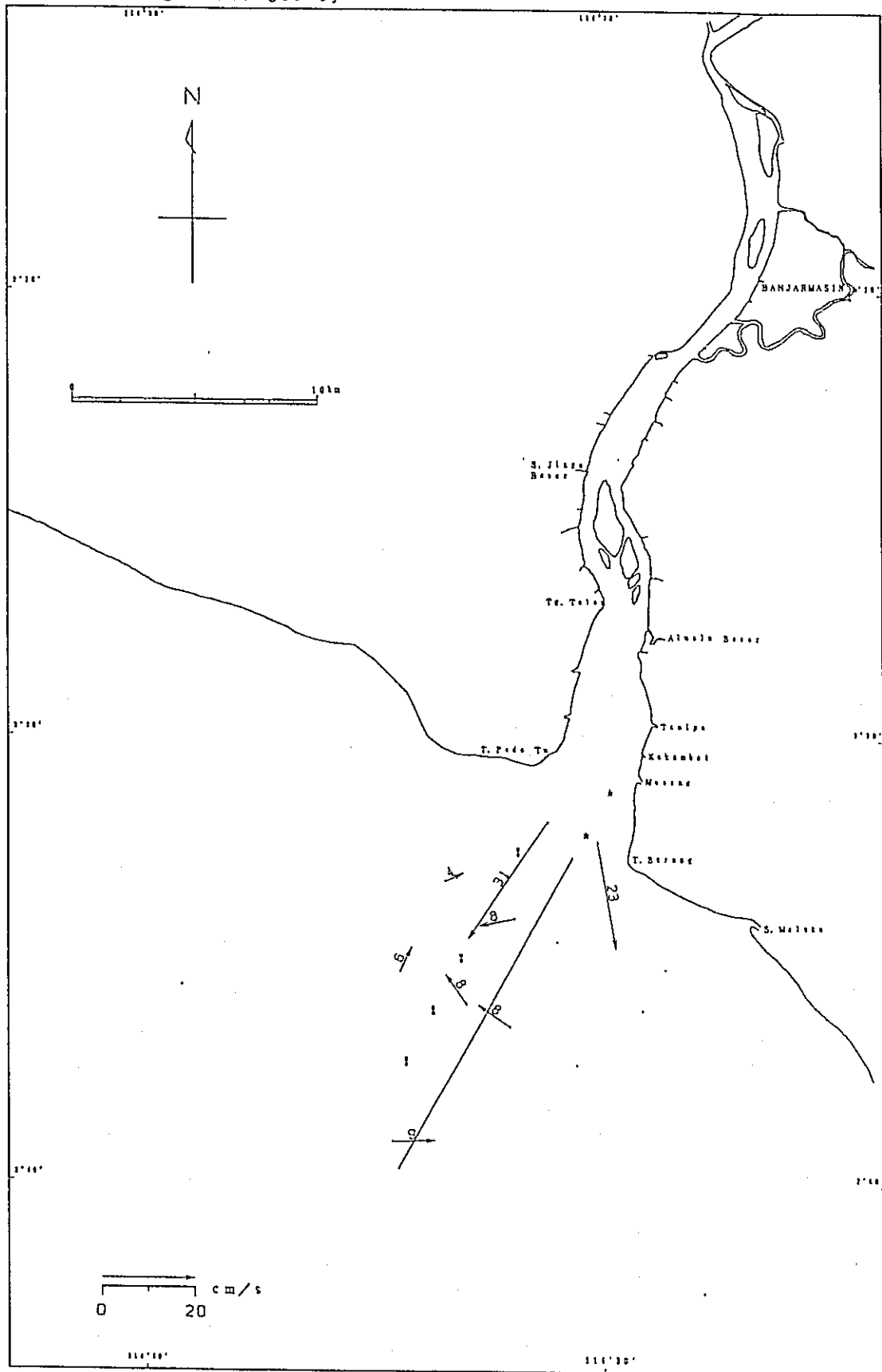


Fig. 3. 2-7 (15) Current Condition by 25 hours Running Mean

Date : 15th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

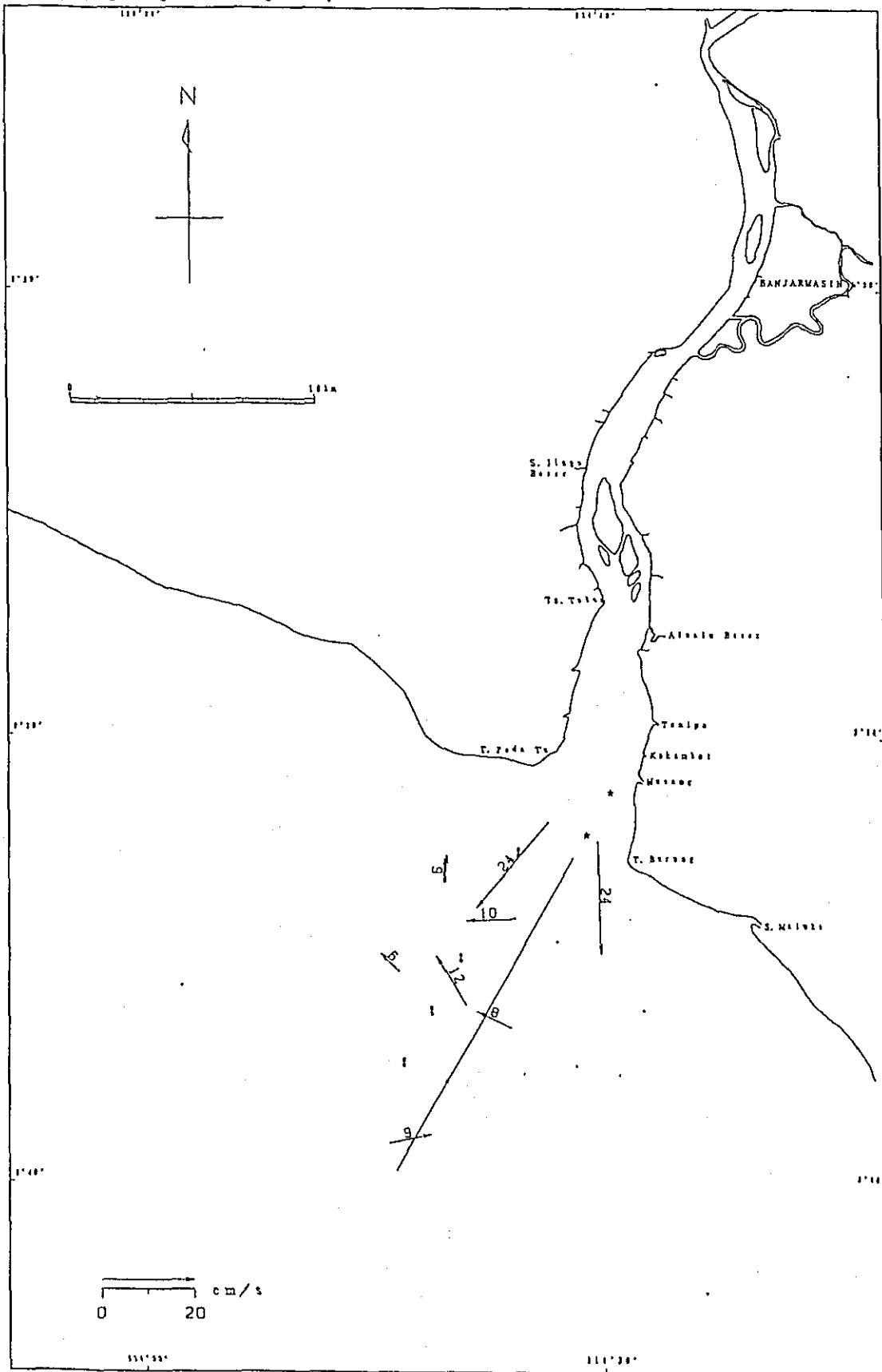


Fig. 3. 2-7 (6) Current Condition by 25 hours Running Mean

Date : 16th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

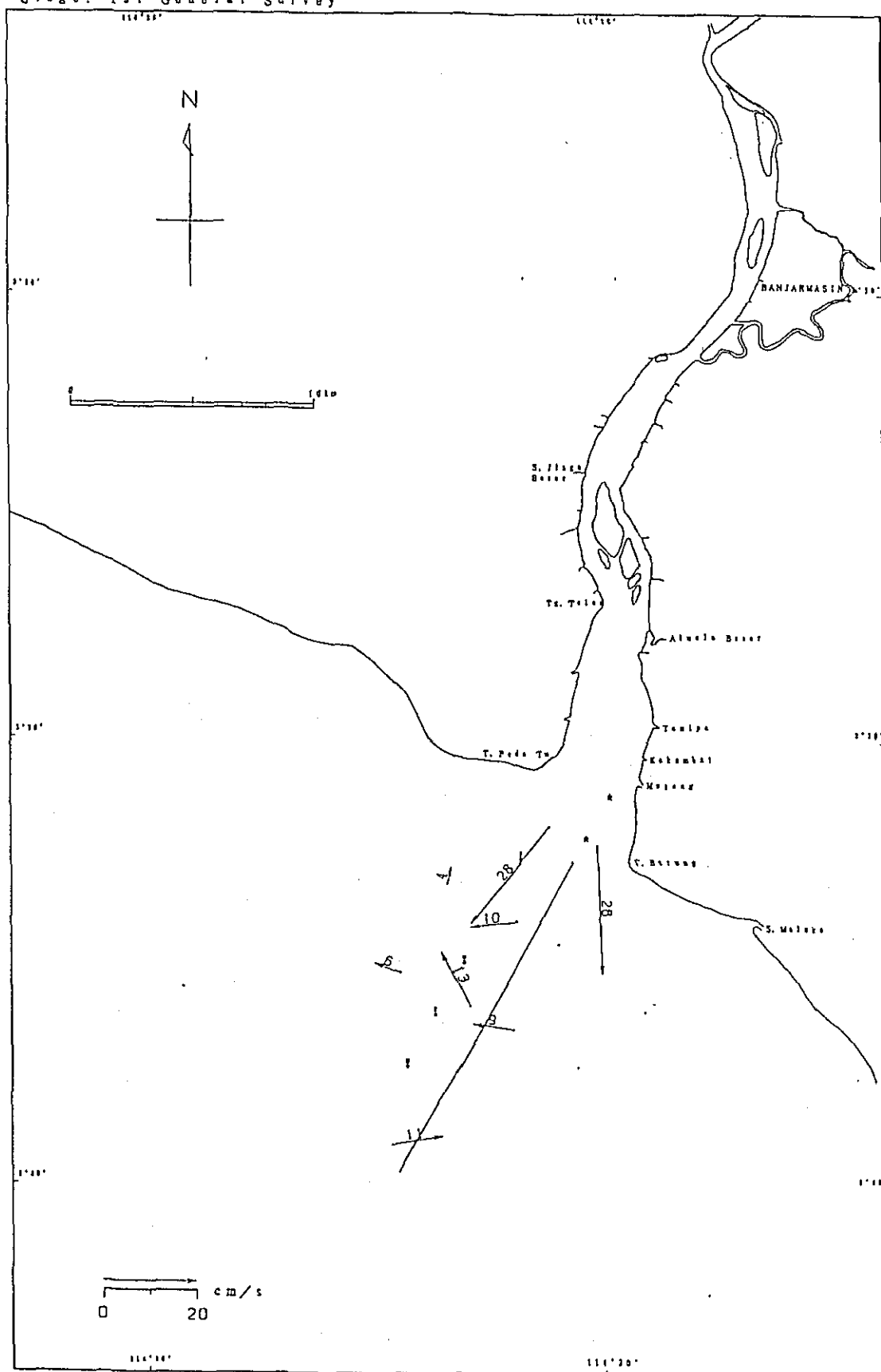


Fig. 3. 2-7 (7) Current Condition by 25 hours Running Mean

Date : 16th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

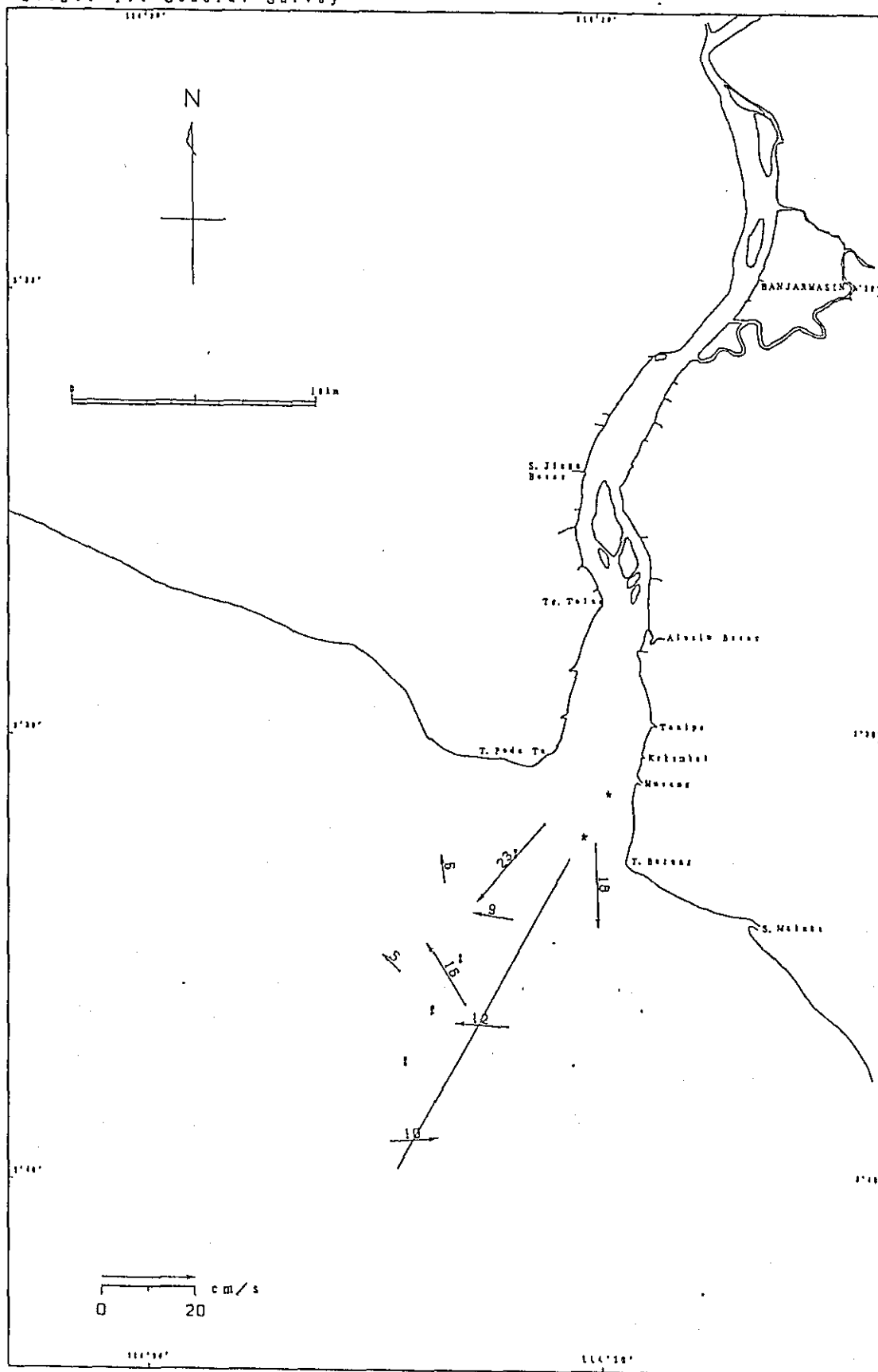


Fig. 3. 2-7 (8) Current Condition by 25 hours Running Mean

Date : 17th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

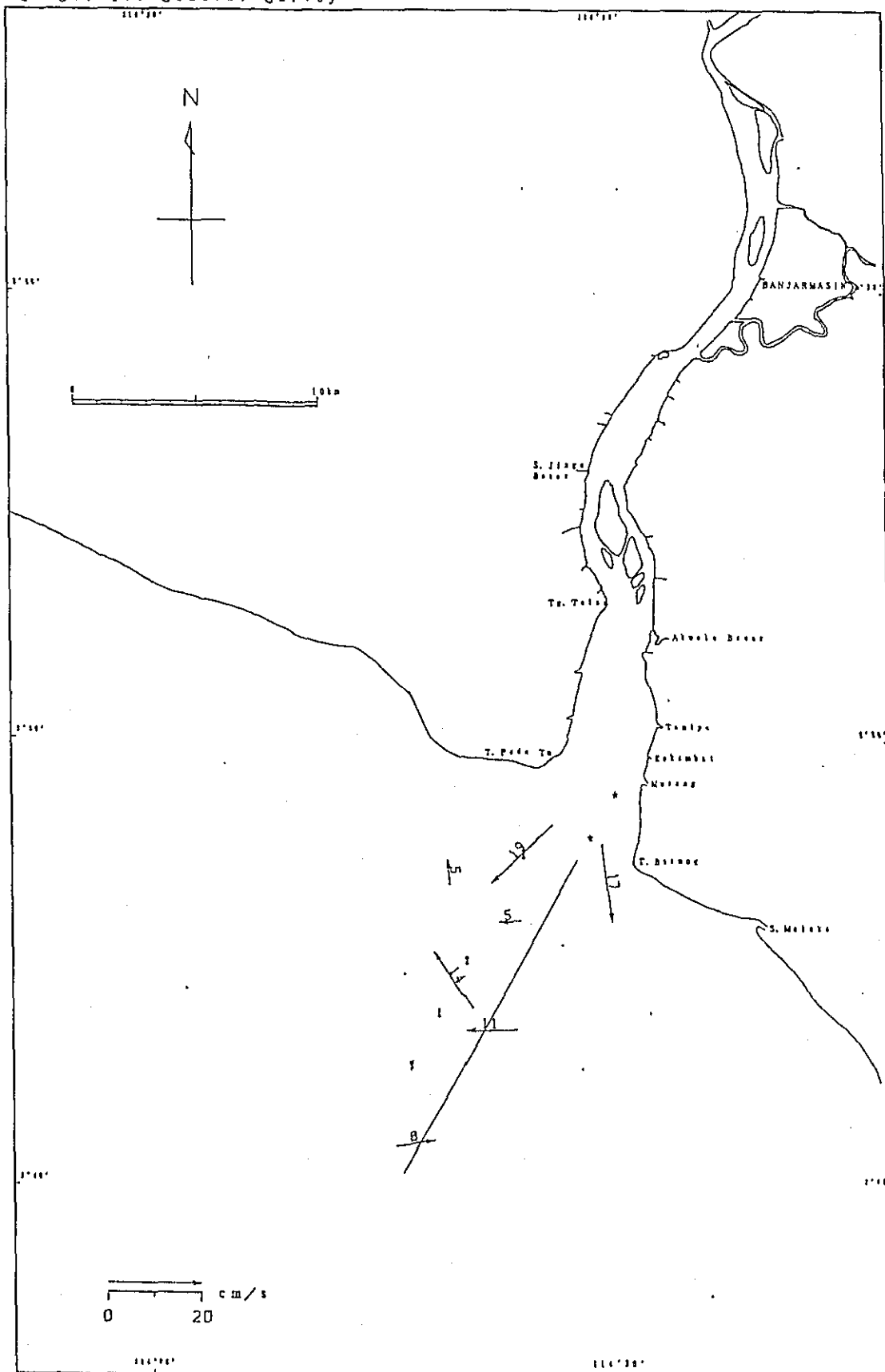


Fig. 3. 2-7 (19) Current Condition by 25 hours Running Mean

Date : 17th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

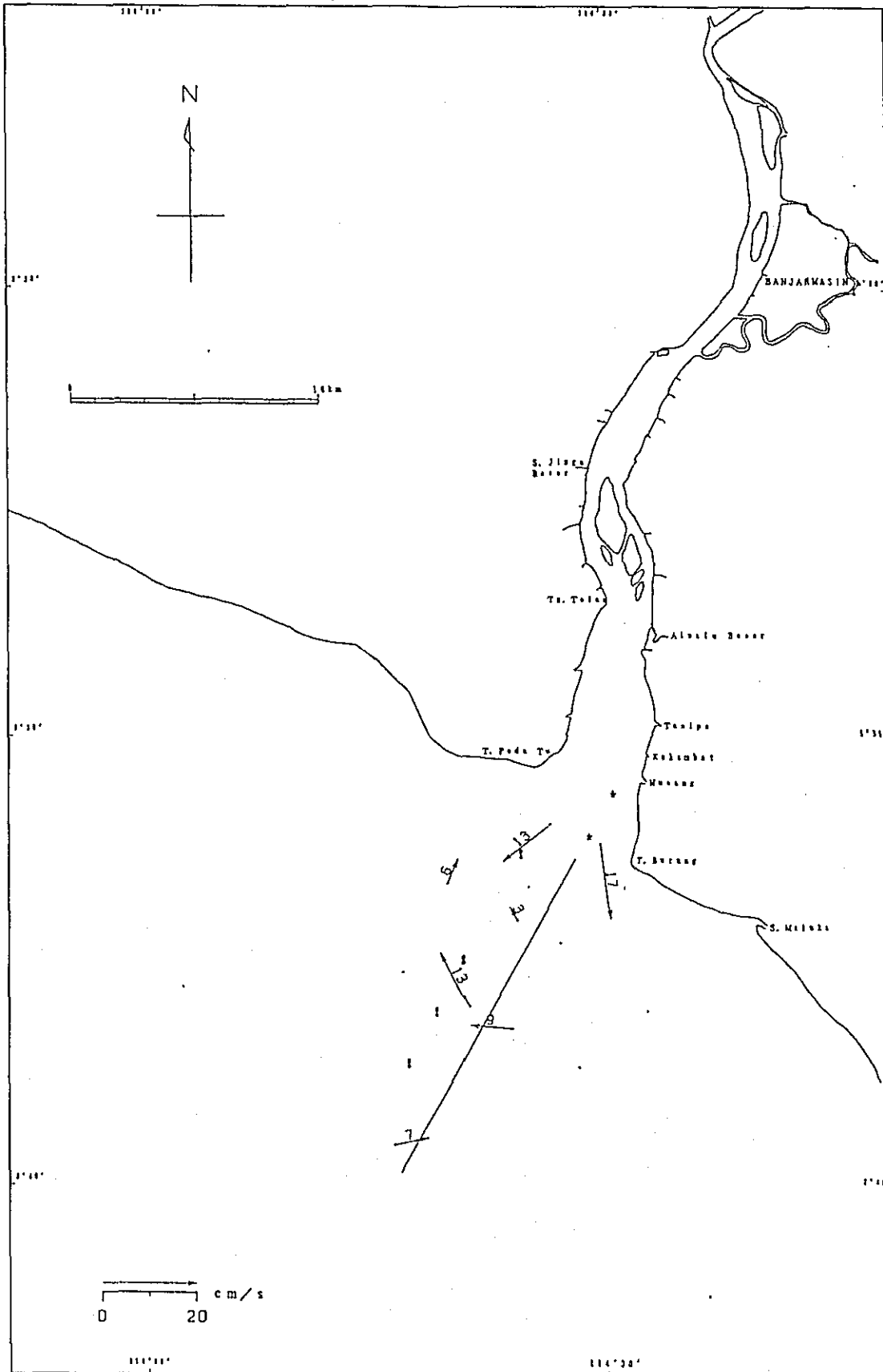


Fig. 3. 2-7 (20) Current Condition by 25 hours Running Mean

Date : 18th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

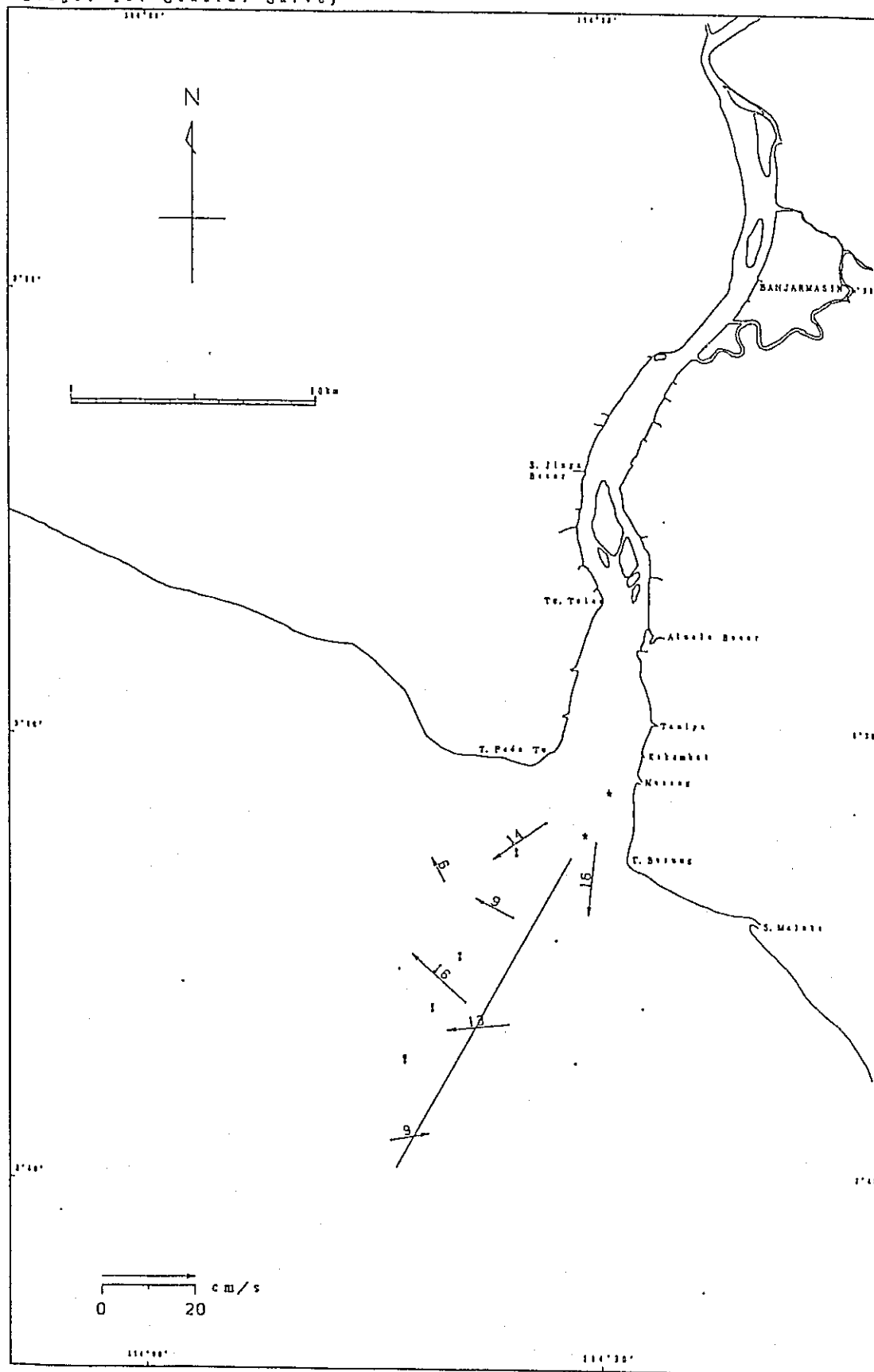


Fig. 3. 2-7 Q1) Current Condition by 25 hours Running Mean

Date : 18th Sep. 1988
 Time : 12:00
 Stage : 1st General Survey

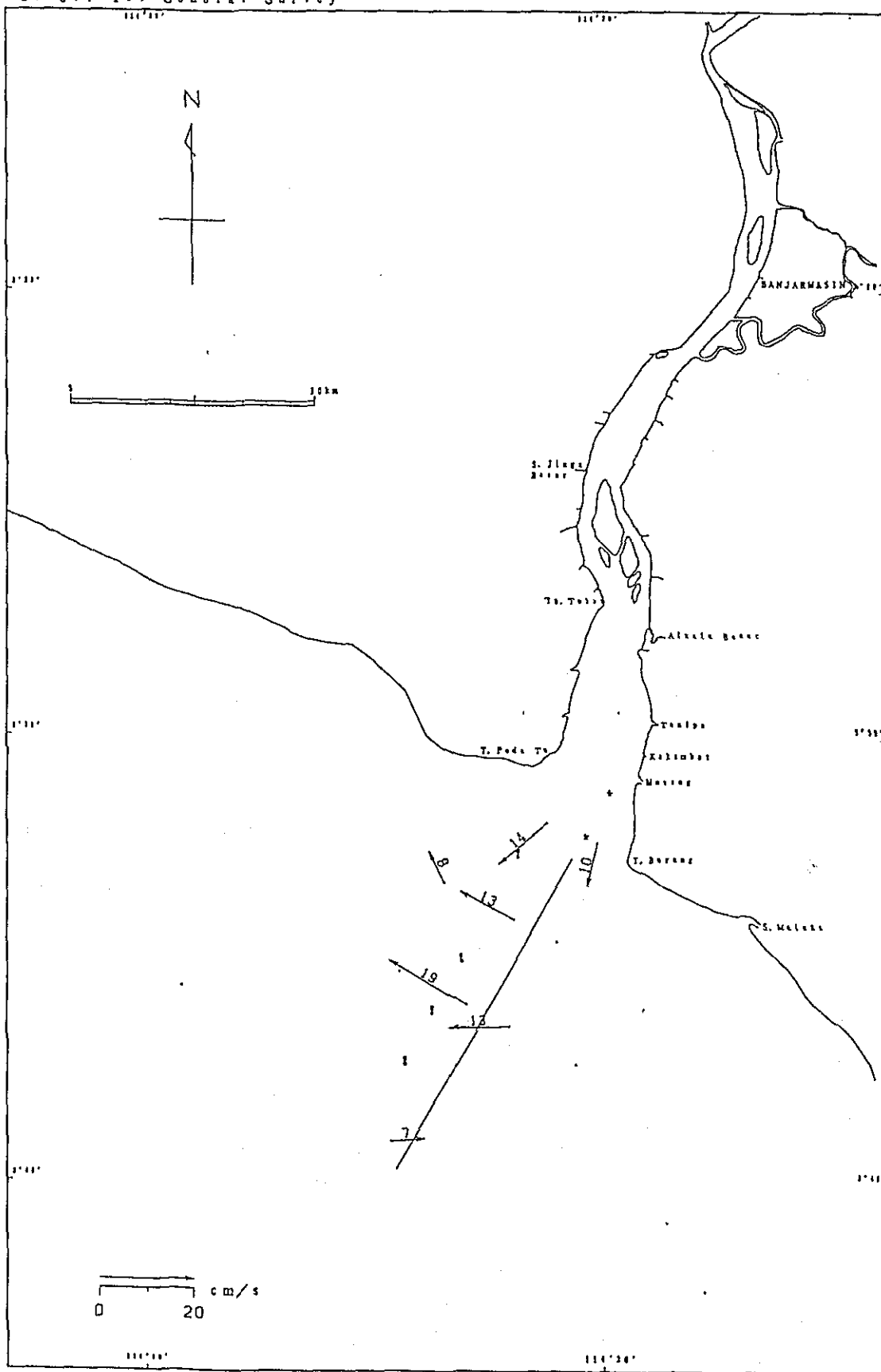


Fig. 3. 2-7 ② Current Condition by 25 hours Running Mean

Date : 19th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

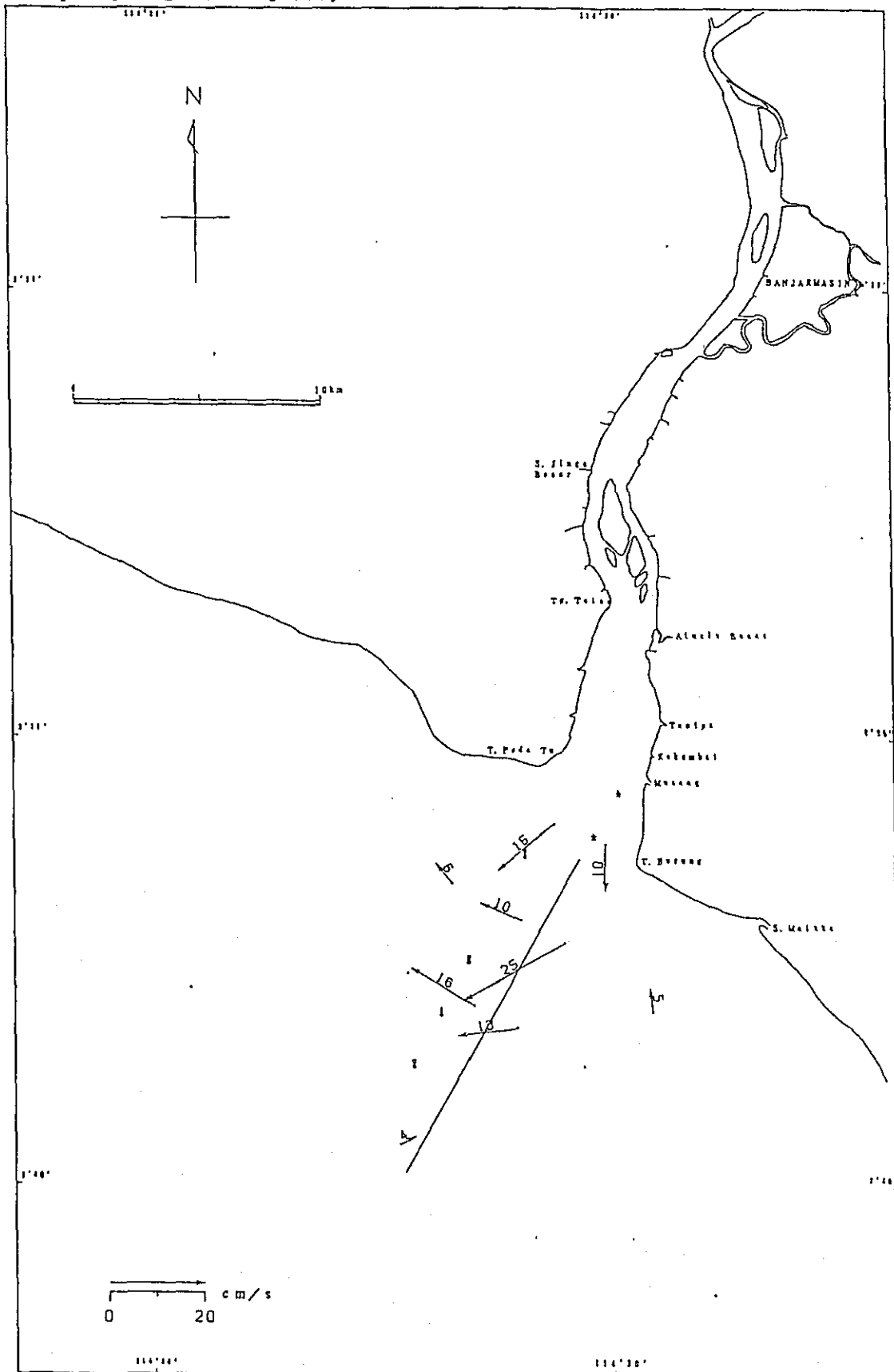


Fig. 3. 2-7 (3) Current Condition by 25 hours Running Mean

Date : 19th Sep. 1938
 Time : 12:00
 Stage: 1st General Survey

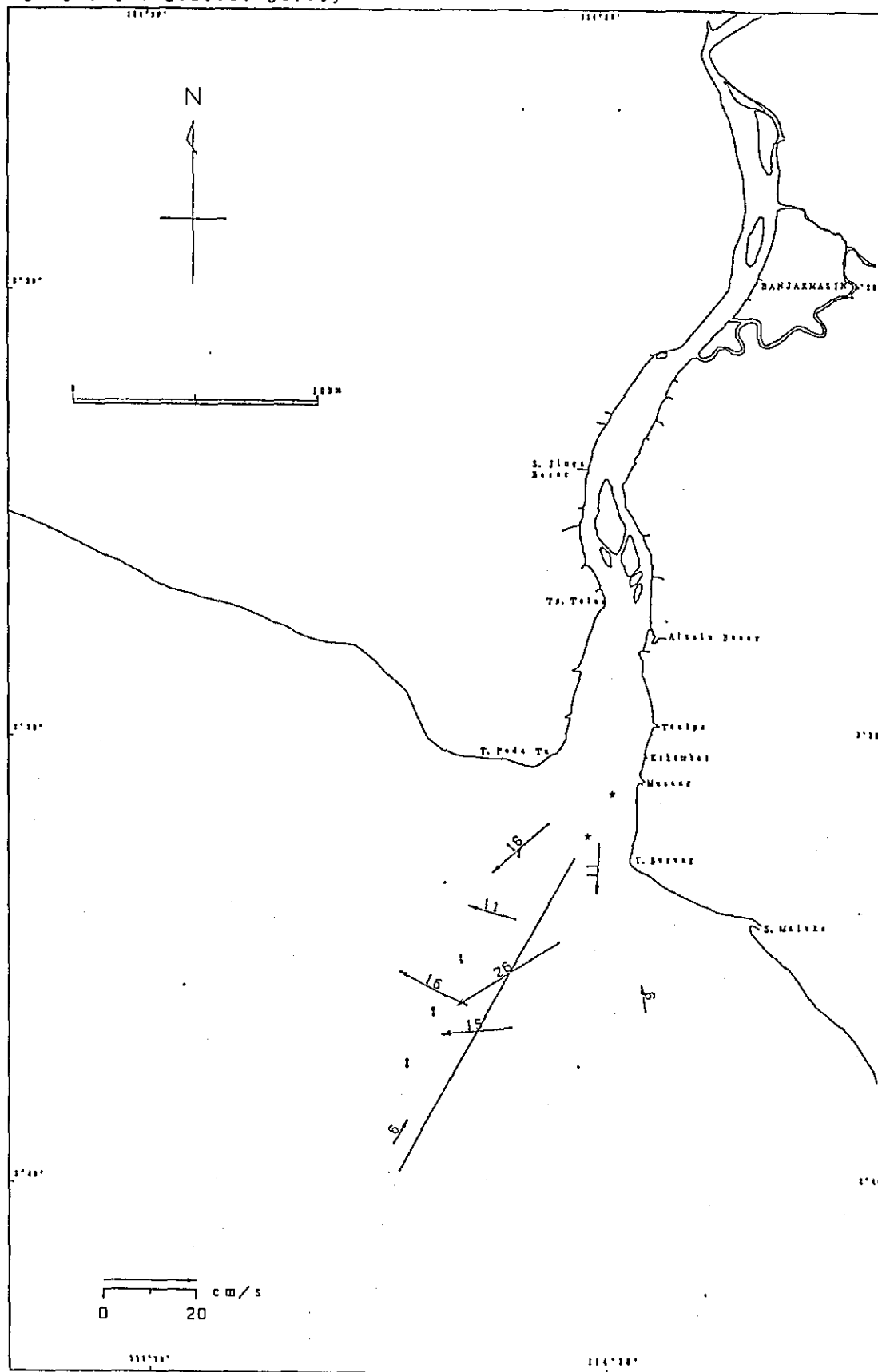


Fig. 3. 2-7 Q4 Current Condition by 25 hours Running Mean

Date : 20th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

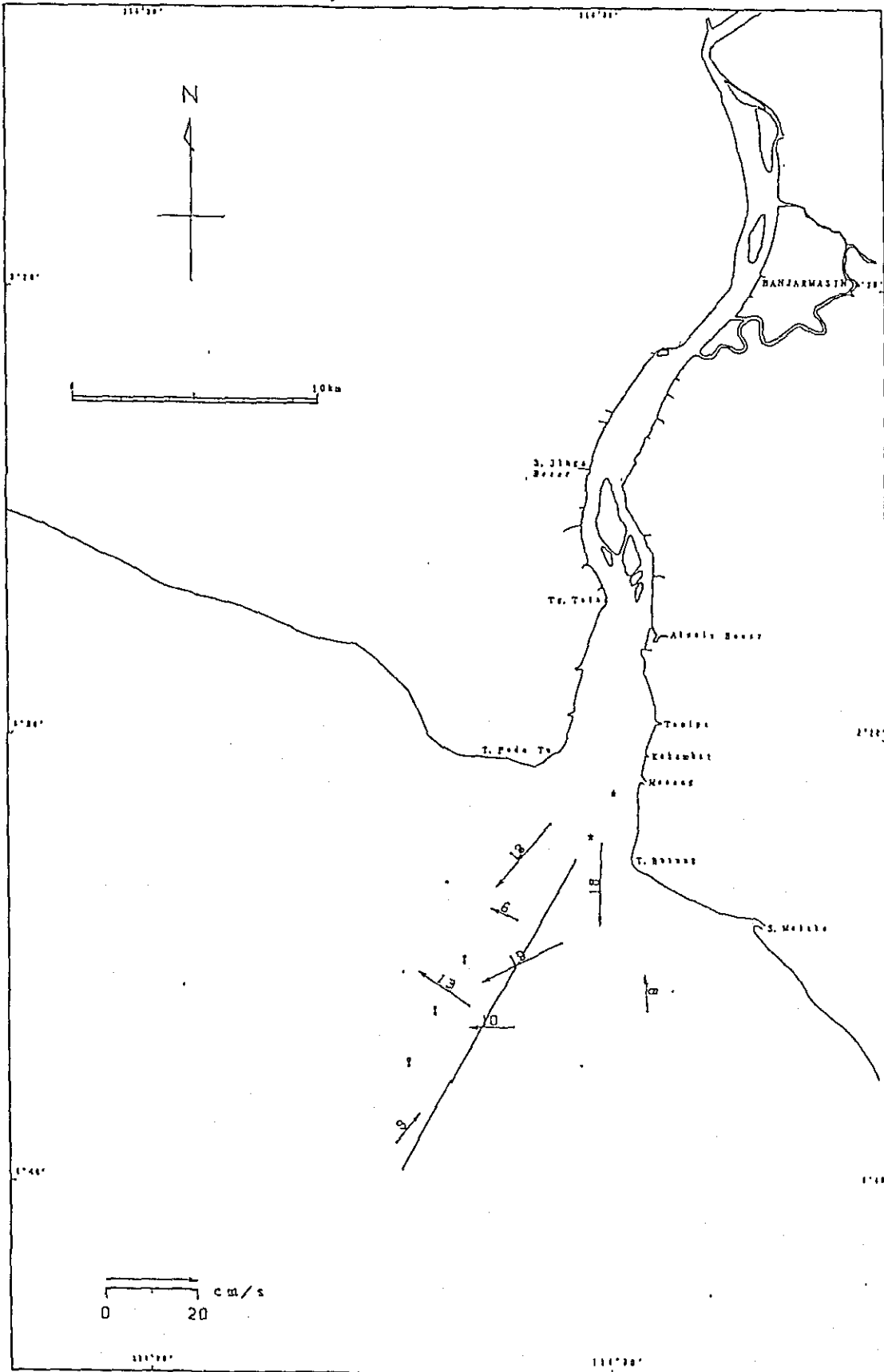


Fig. 3. 2-7 (5) Current Condition by 25 hours Running Mean

Date : 20th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

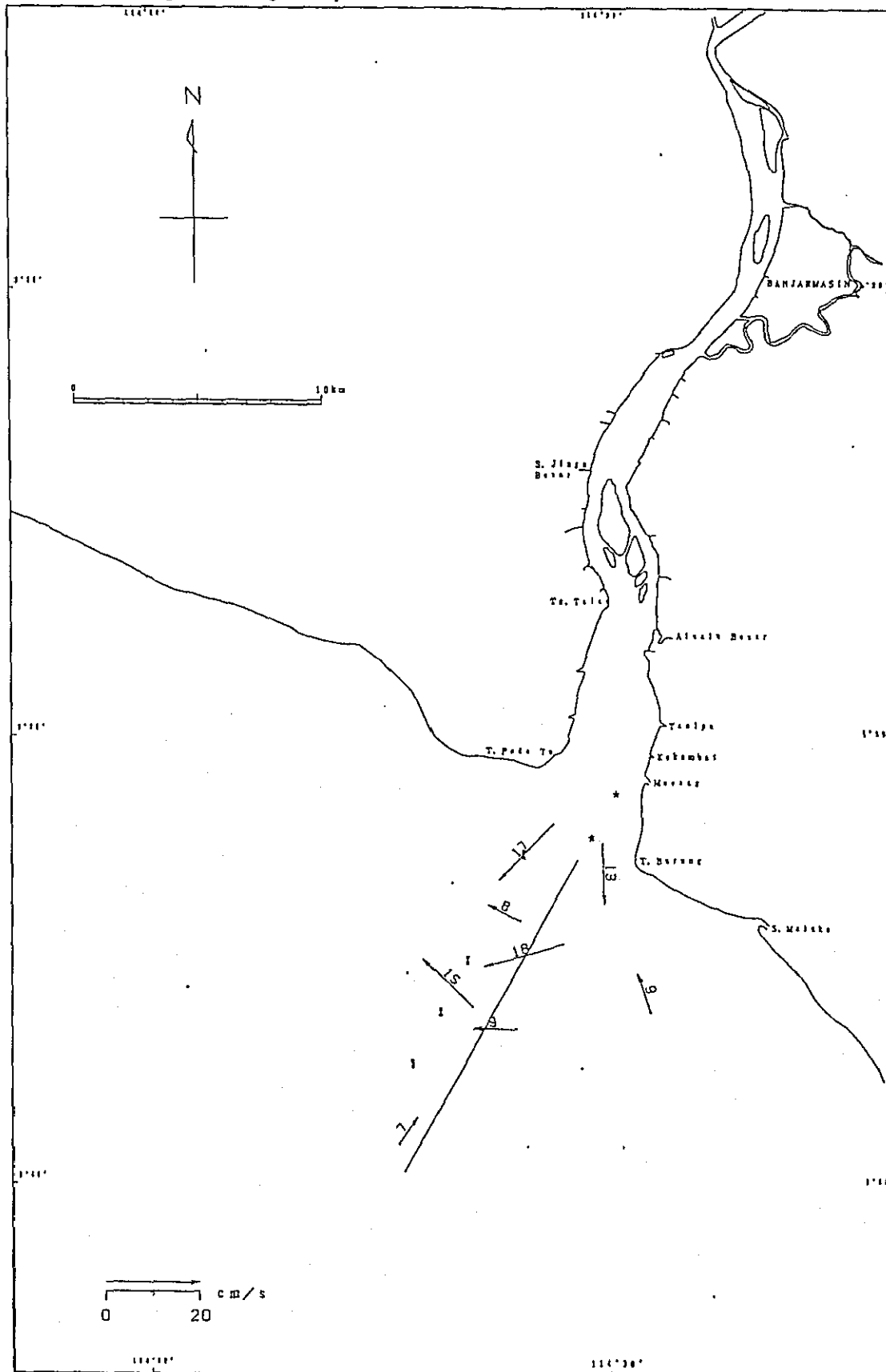


Fig. 3. 2-7 (26) Current Condition by 25 hours Running Mean

Date : 21th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

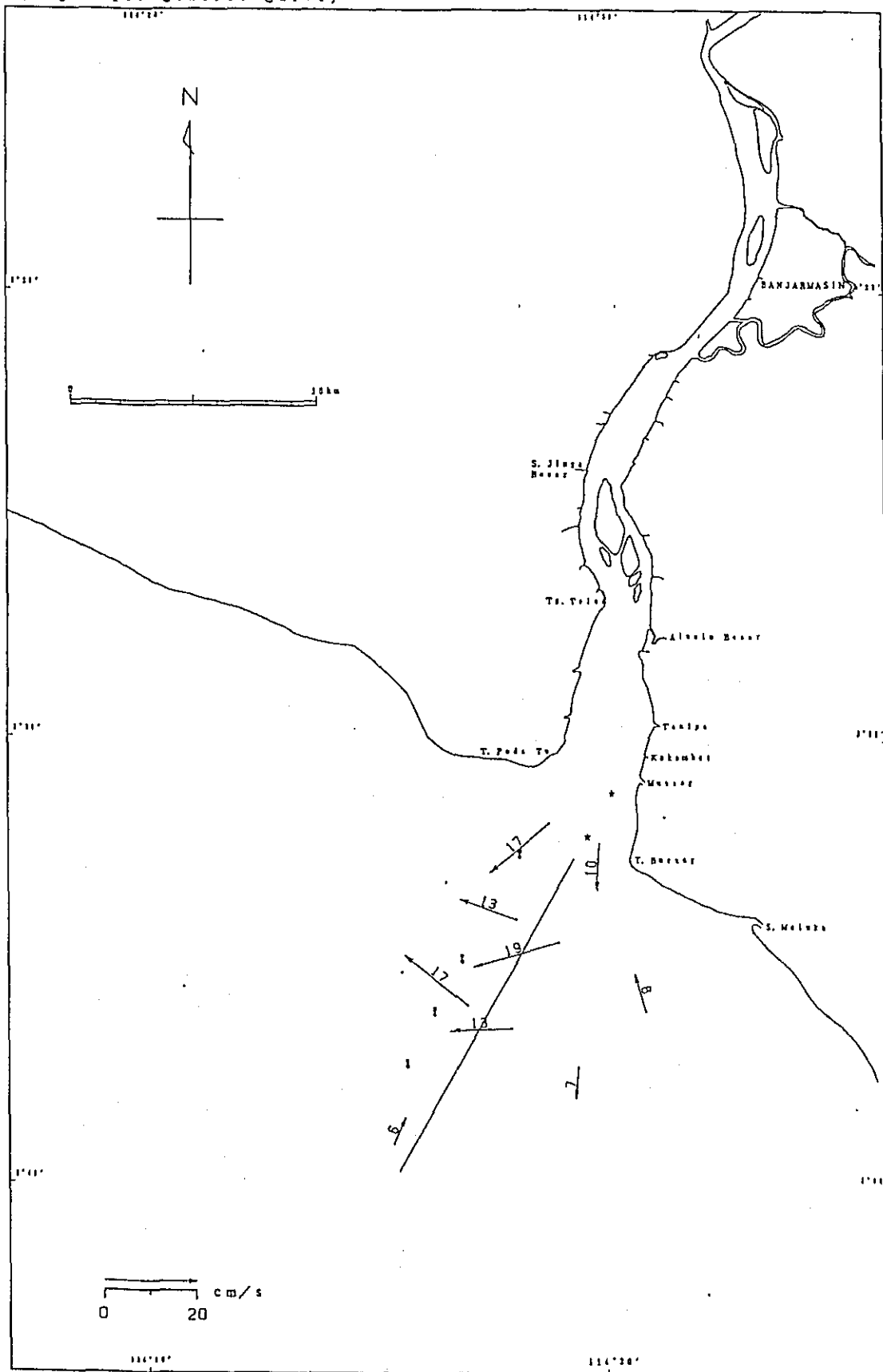


Fig. 3. 2-7 (7) Current Condition by 25 hours Running Mean

Date : 21th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

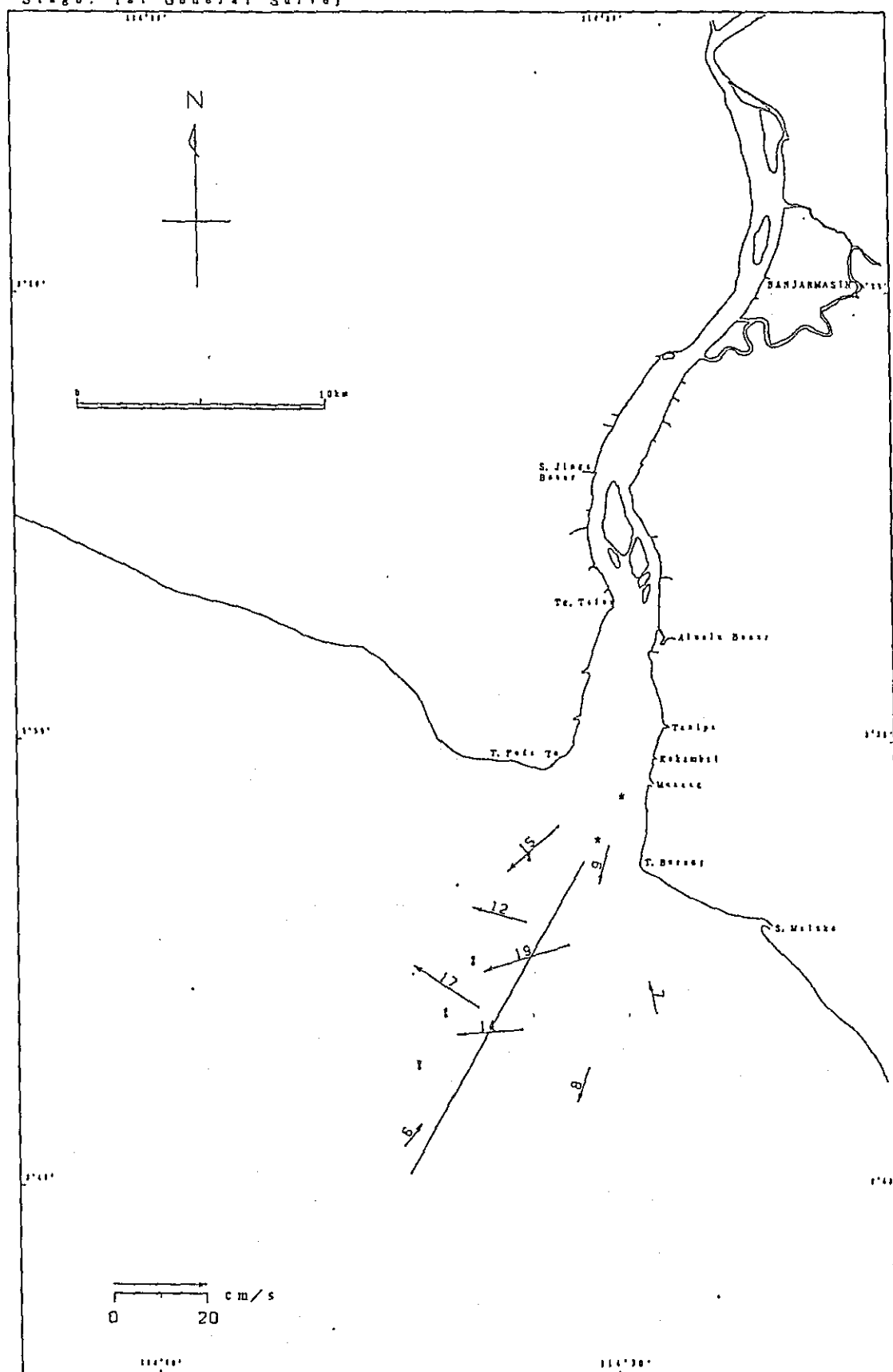


Fig. 3. 2-7 (2) Current Condition by 25 hours Running Mean

Date : 22th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

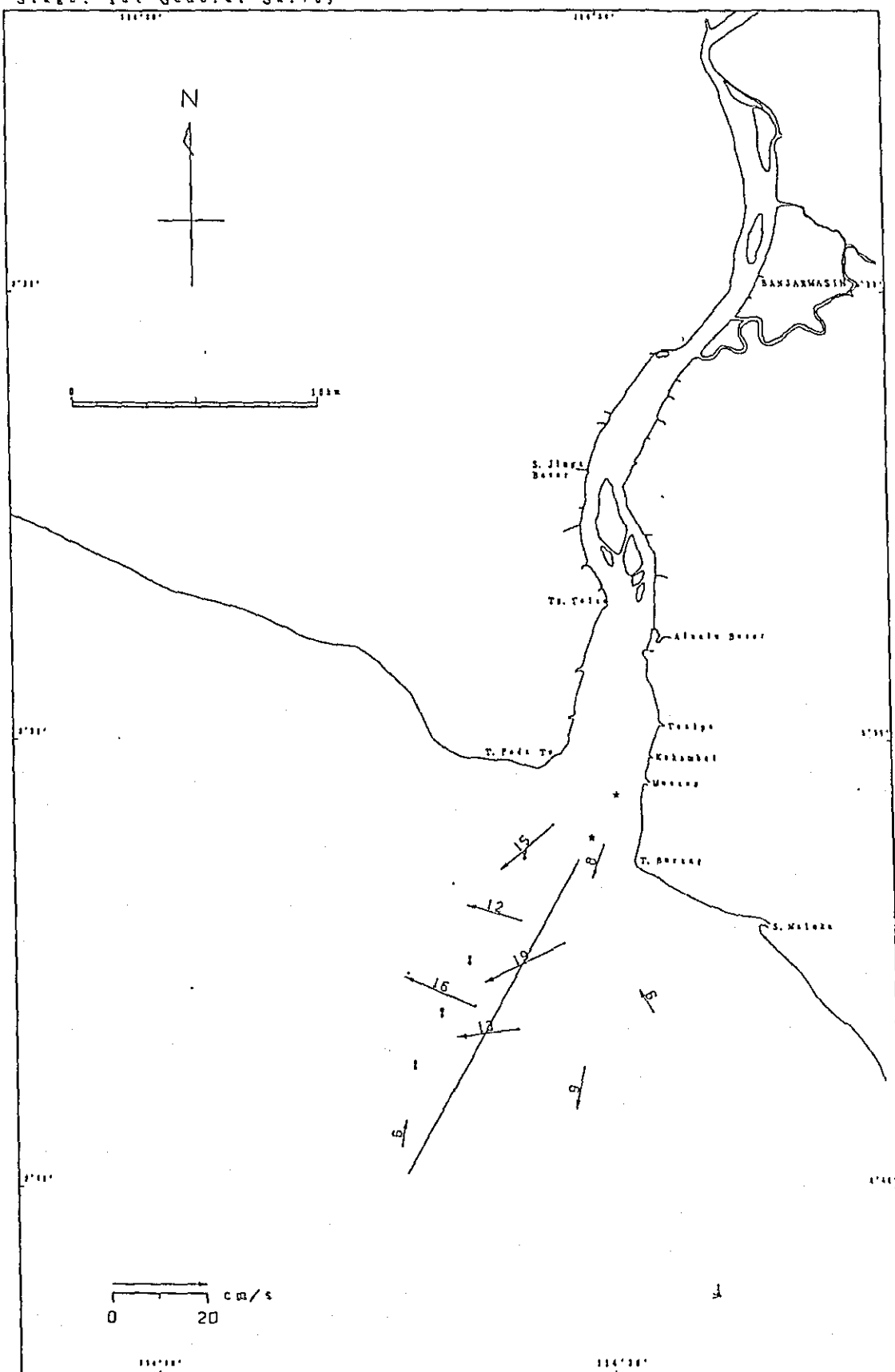


Fig. 3. 2-7 (2) Current Condition by 25 hours Running Mean

Date : 22th Sep. 1988
 Time : 12:00
 Stage : 1st General Survey

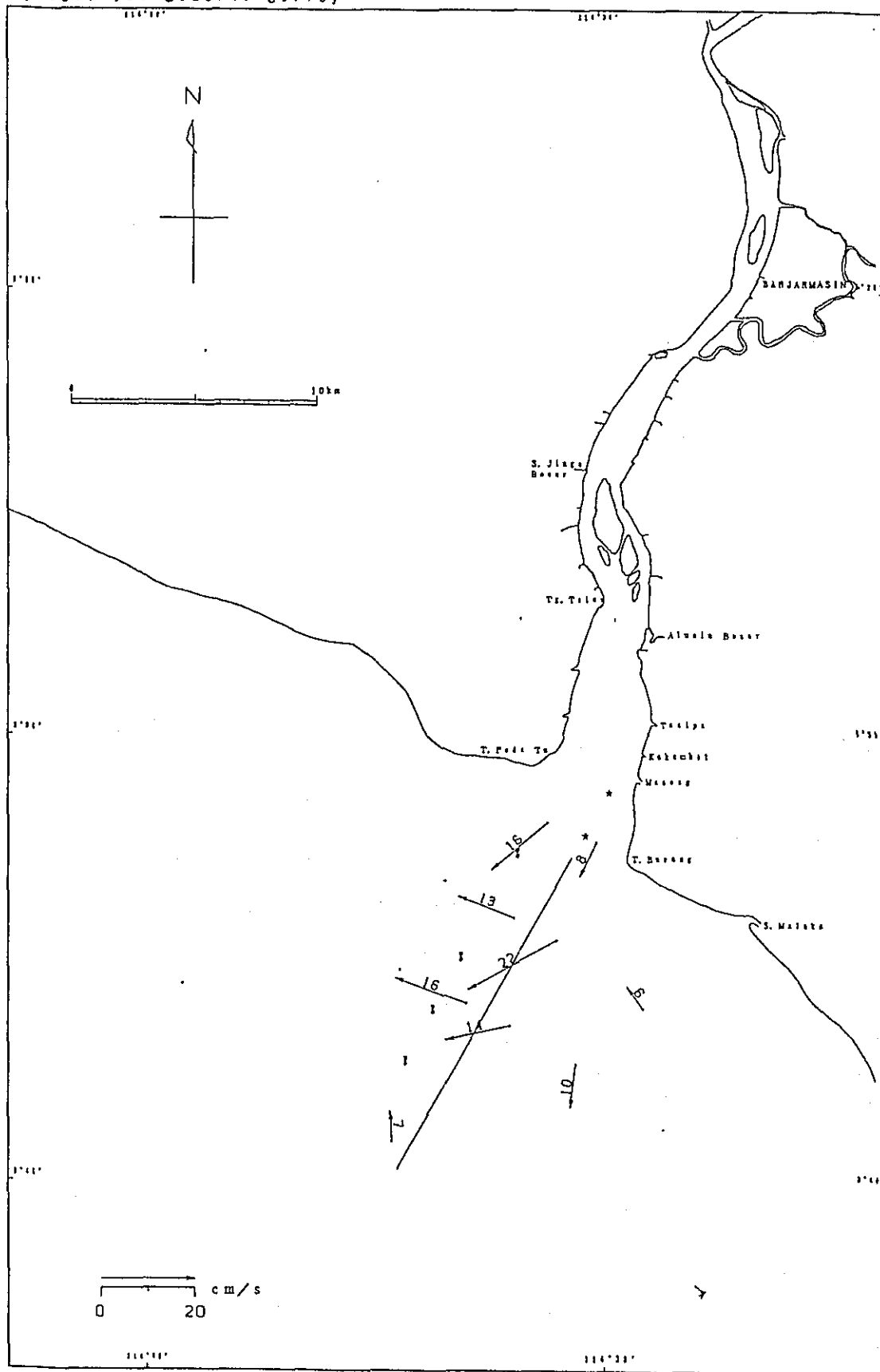


Fig. 3. 2-7 (0) Current Condition by 25 hours Running Mean

Date : 23th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

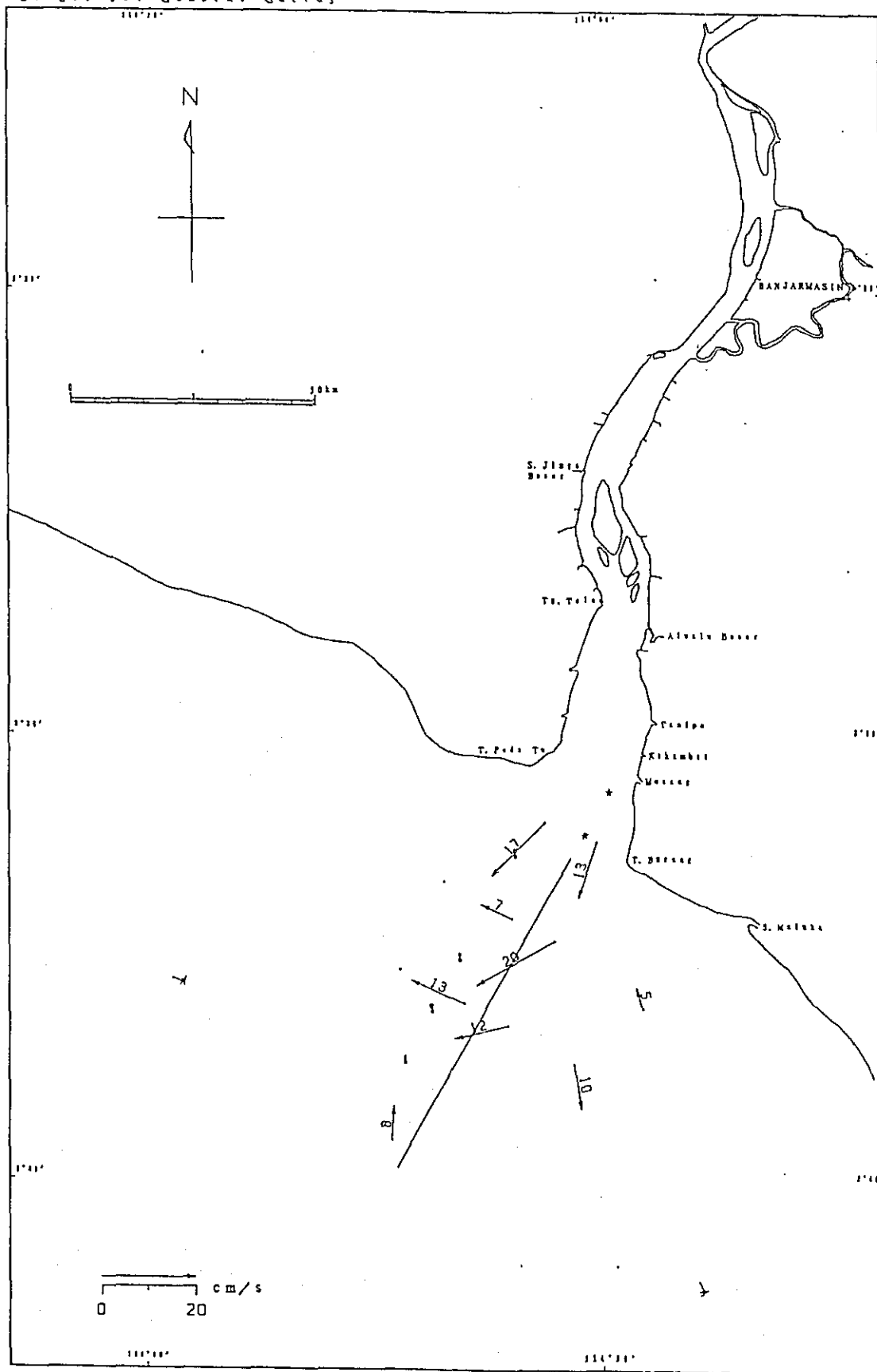


Fig. 3. 2-7 (1) Current Condition by 25 hours Running Mean

Date : 23th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

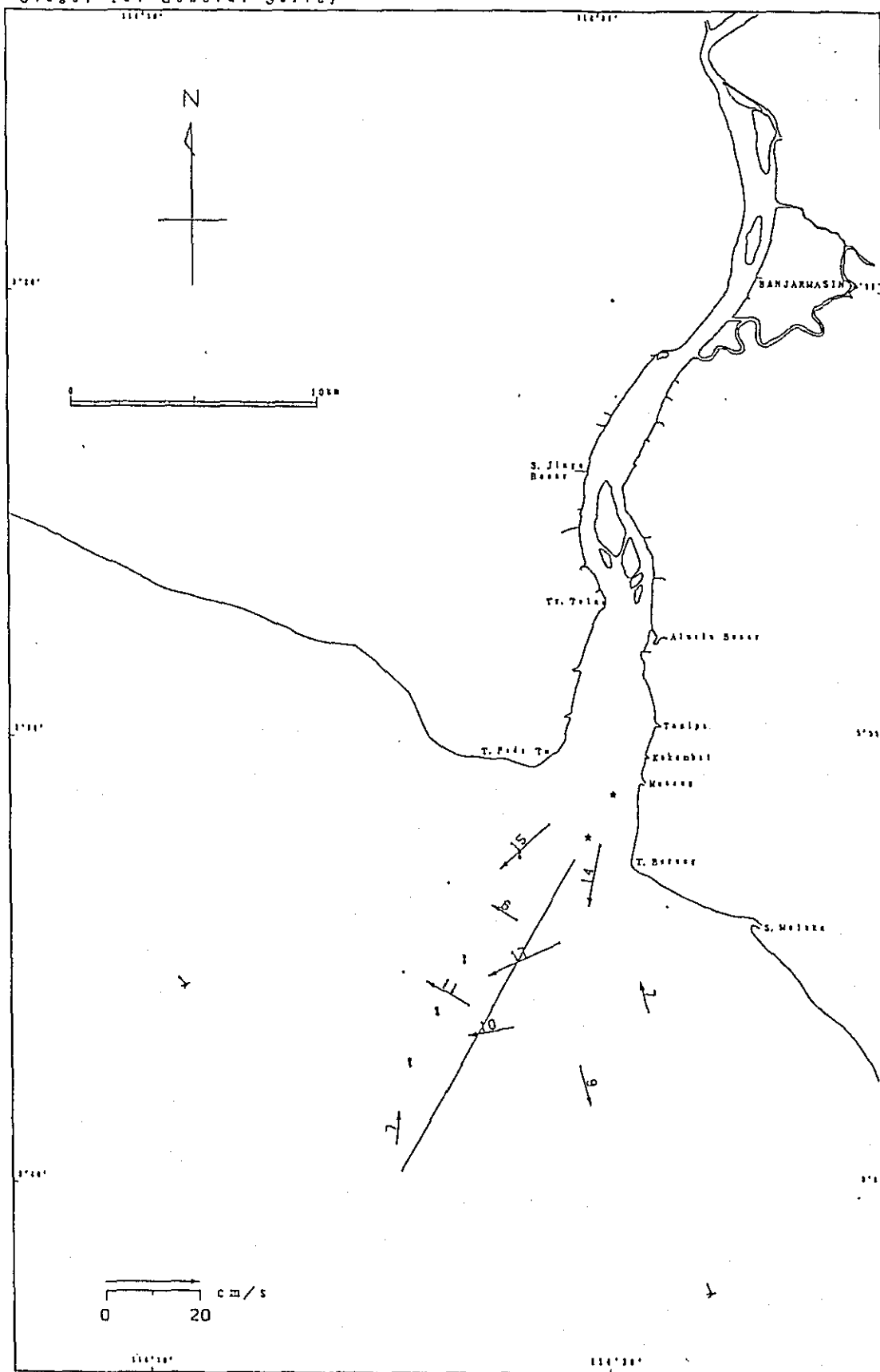


Fig. 3. 2-7 (2) Current Condition by 25 hours Running Mean

Date : 24th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

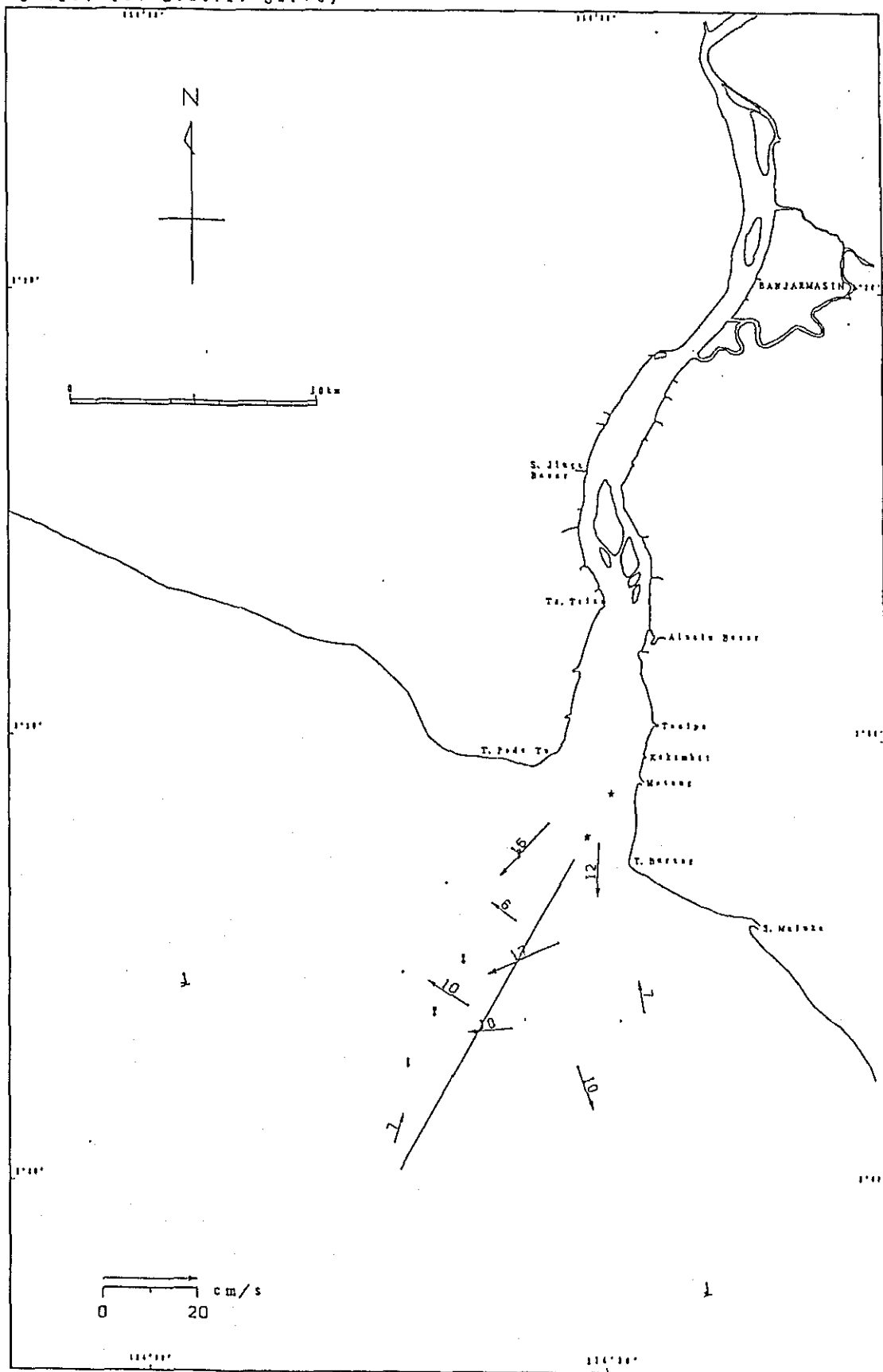


Fig. 3. 2-7 (3) Current Condition by 25 hours Running Mean

Date : 24th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

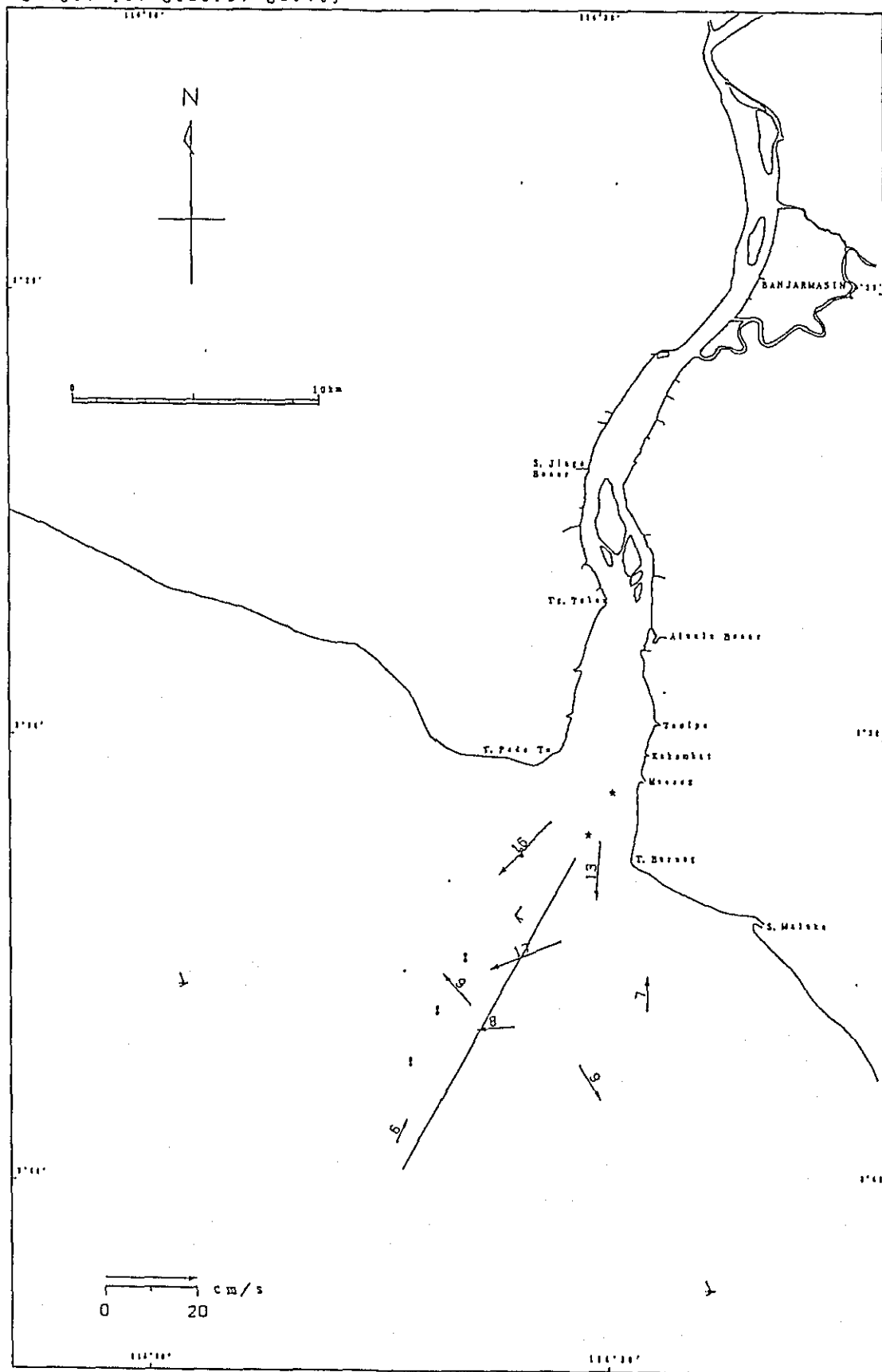


Fig. 3. 2-7 (d) Current Condition by 25 hours Running Mean

Date : 25th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

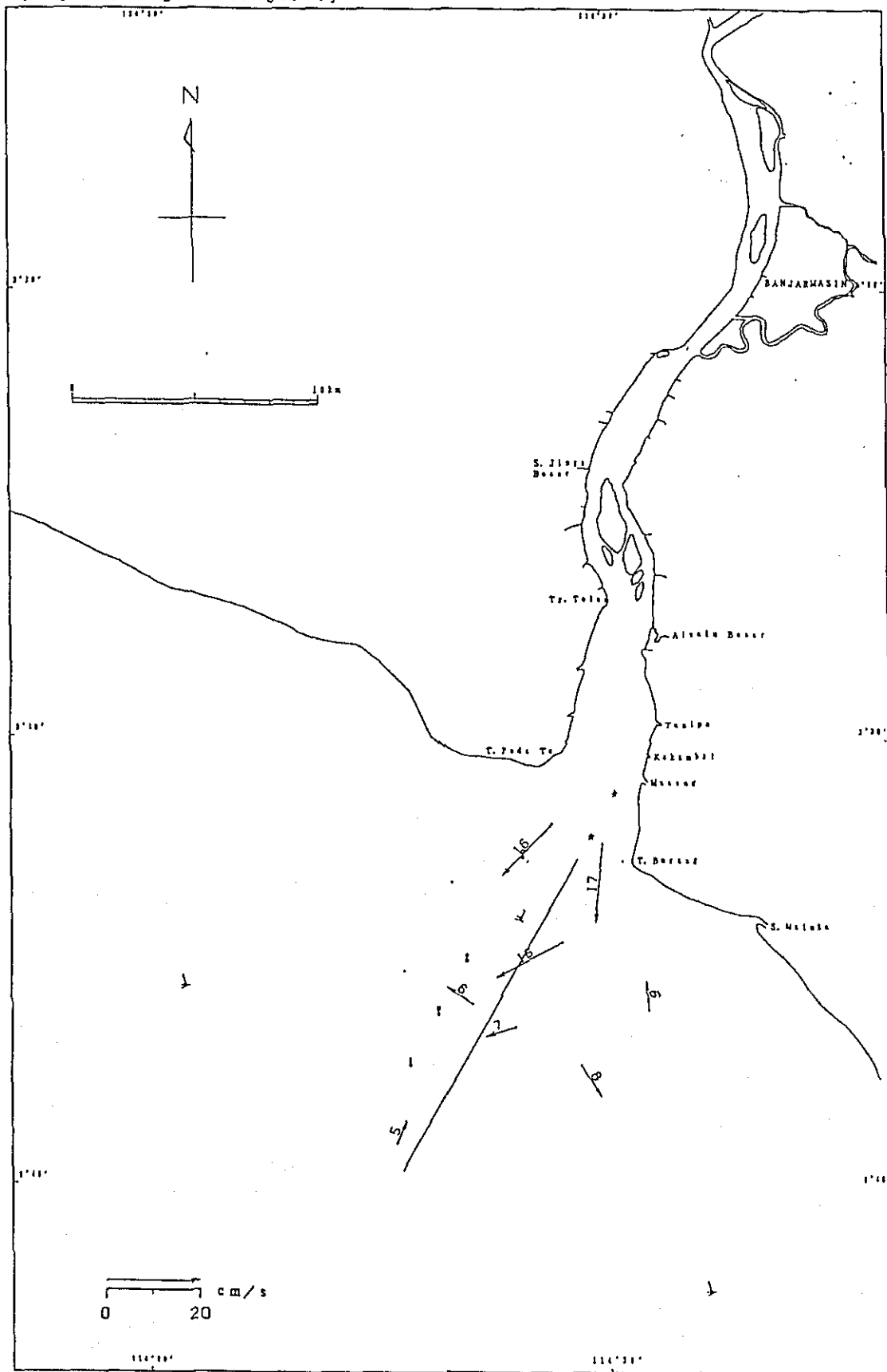


Fig. 3. 2-7 (35) Current Condition by 25 hours Running Mean

Date : 25th Sep. 1988
 Time : 12:00
 Stage : 1st General Survey

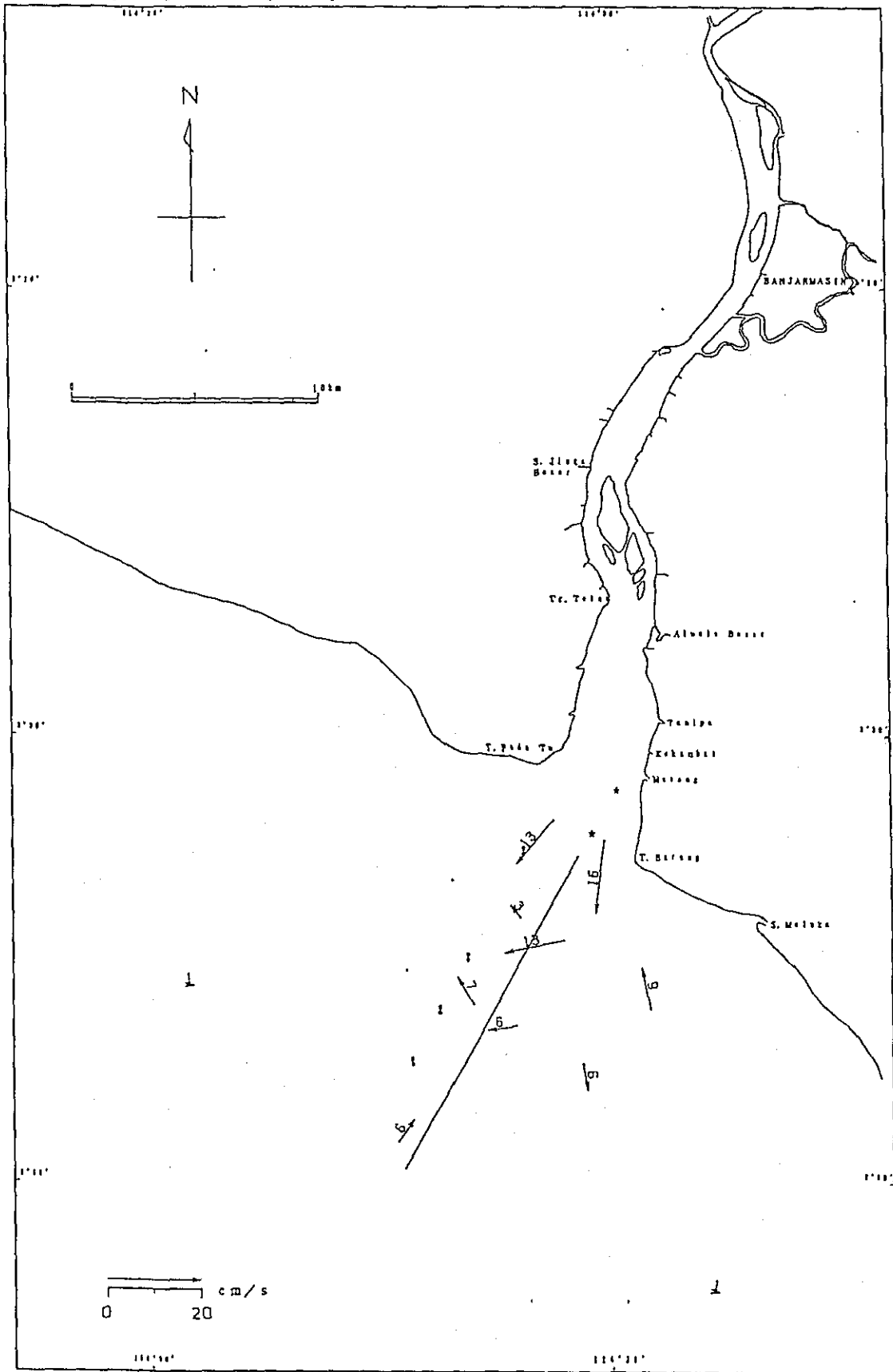


Fig. 3. 2-7 (6) Current Condition by 25 hours Running Mean

Date : 26th Sep. 1983
 Time : 0:00
 Stage : 1st General Survey

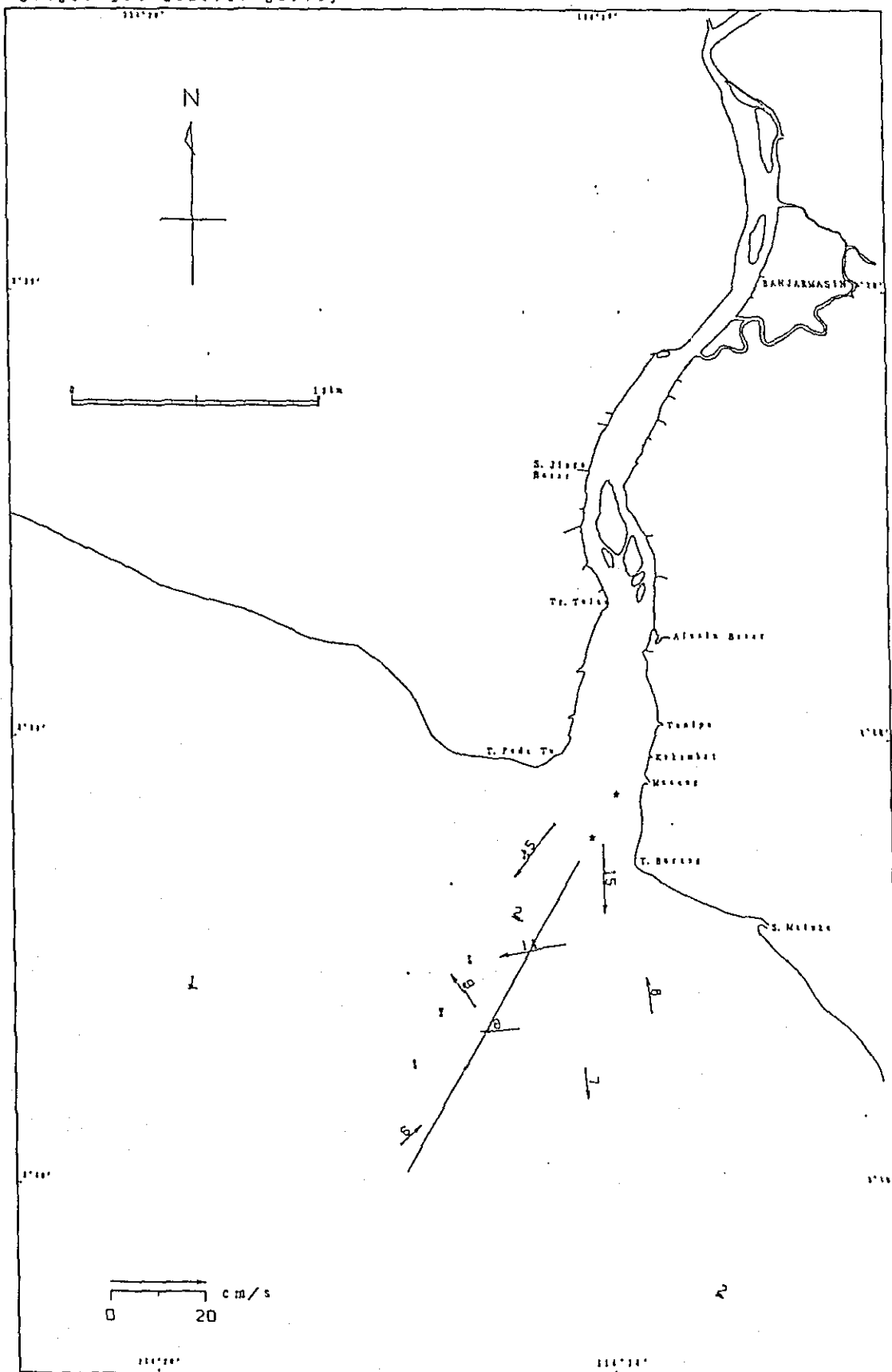


Fig. 3. 2-7 (37) Current Condition by 25 hours Running Mean

Date : 26th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

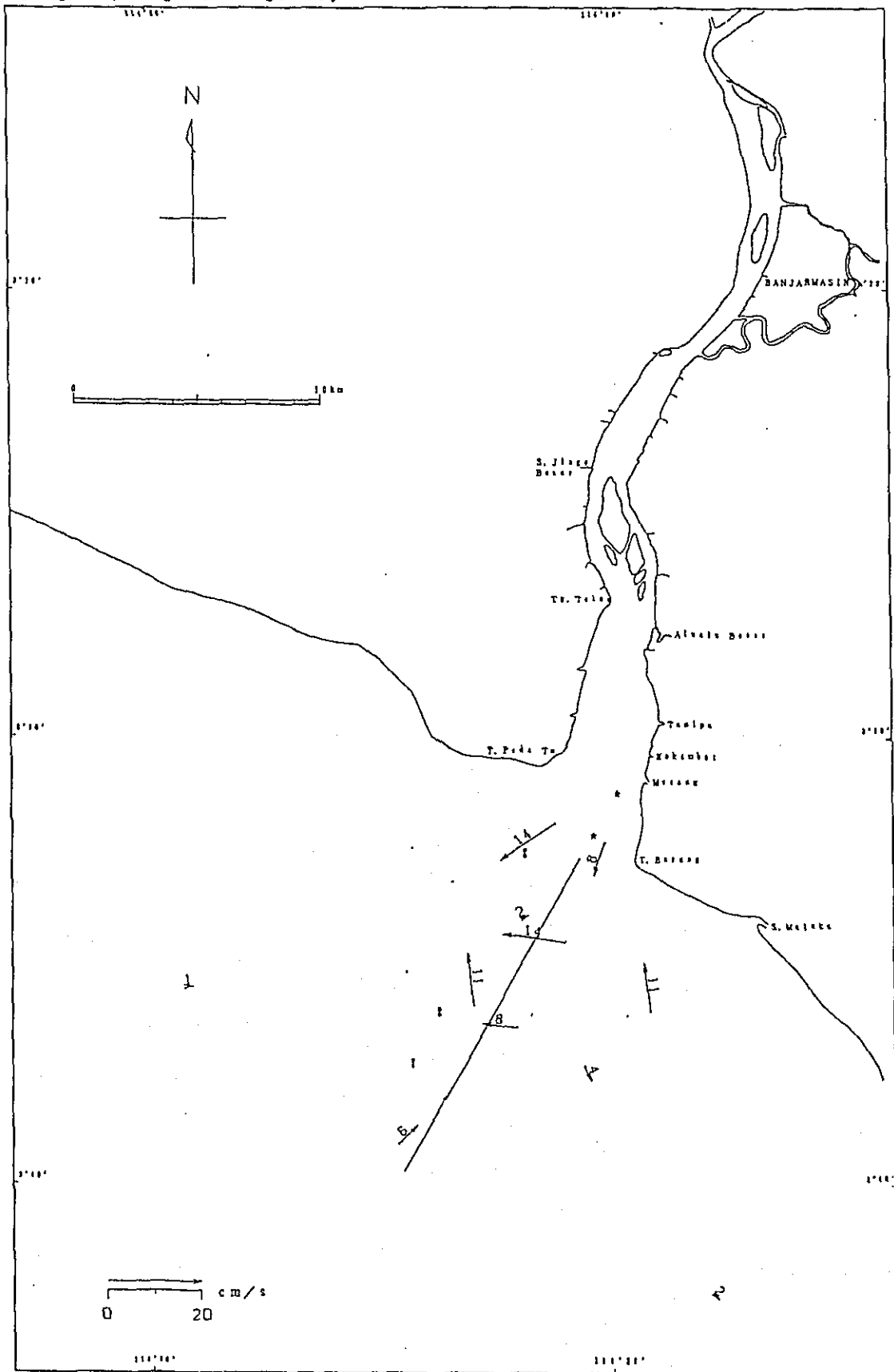


Fig. 3. 2-7 (38) Current Condition by 25 hours Running Mean

Date : 27th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

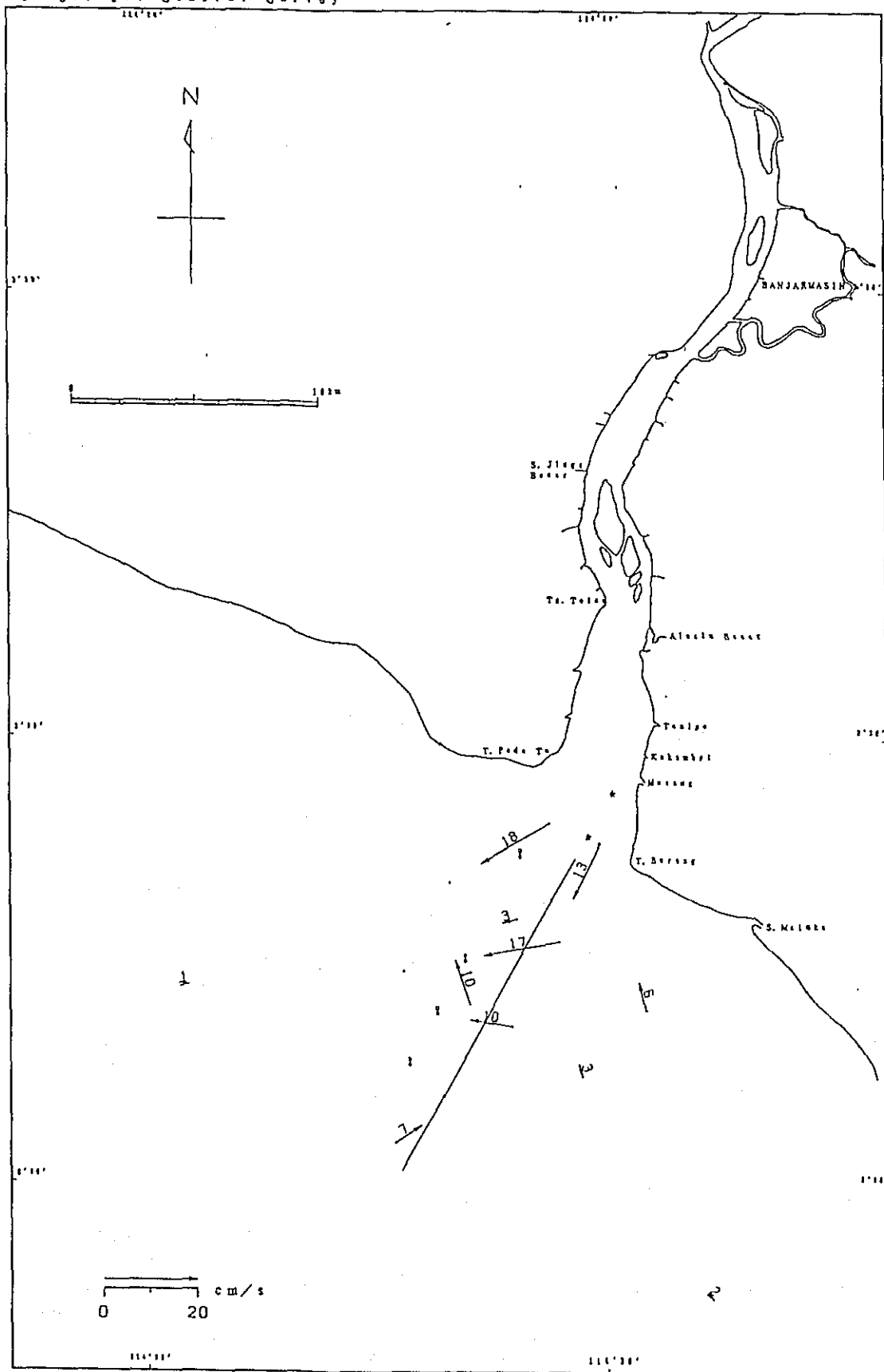


Fig. 3. 2-7 (3) Current Condition by 25 hours Running Mean

Date : 27th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

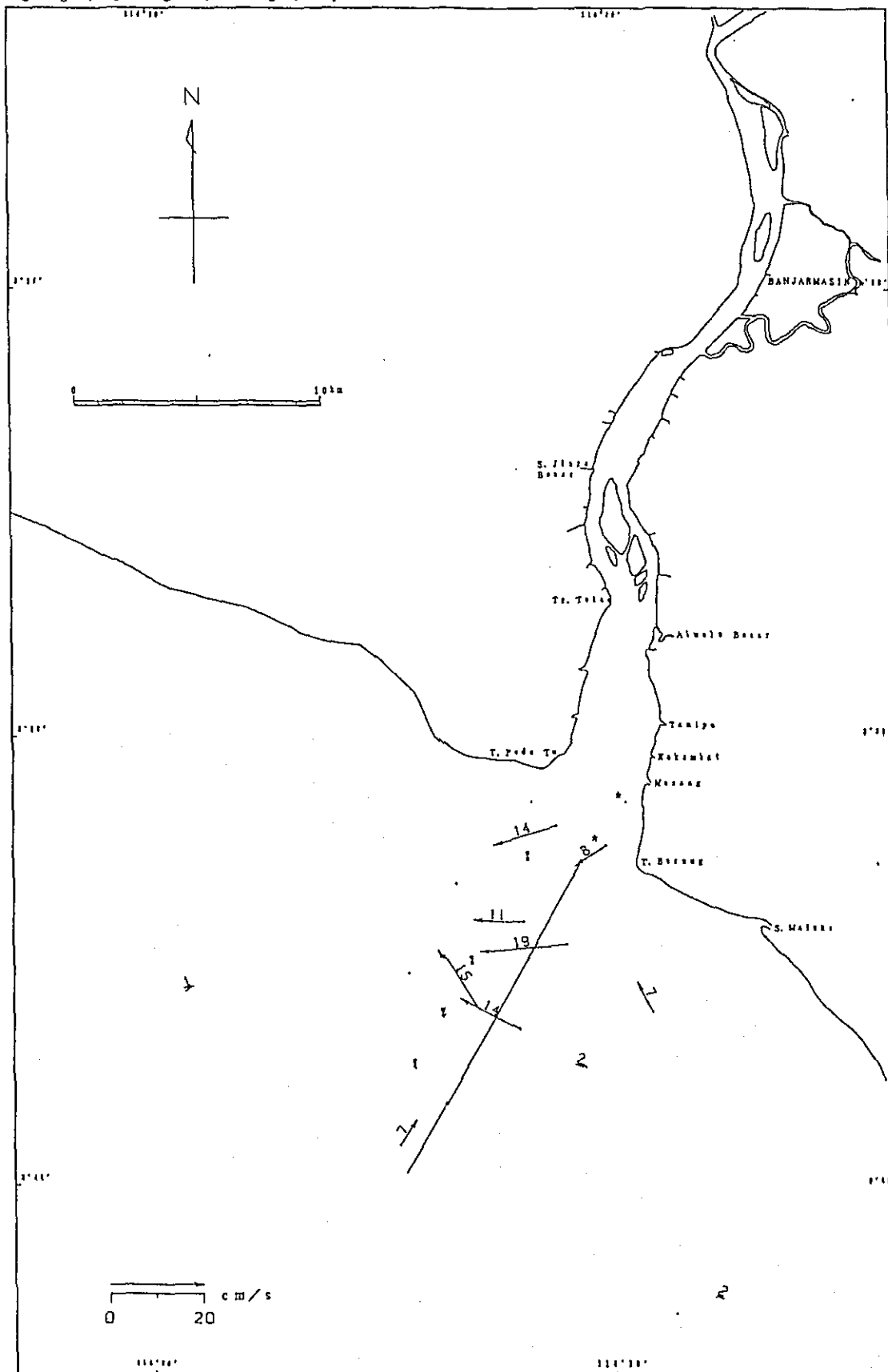


Fig. 3. 2-7 (40) Current Condition by 25 hours Running Mean

Date : 28th Sep. 1988
 Time : 0:00
 Stage : 1st General Survey

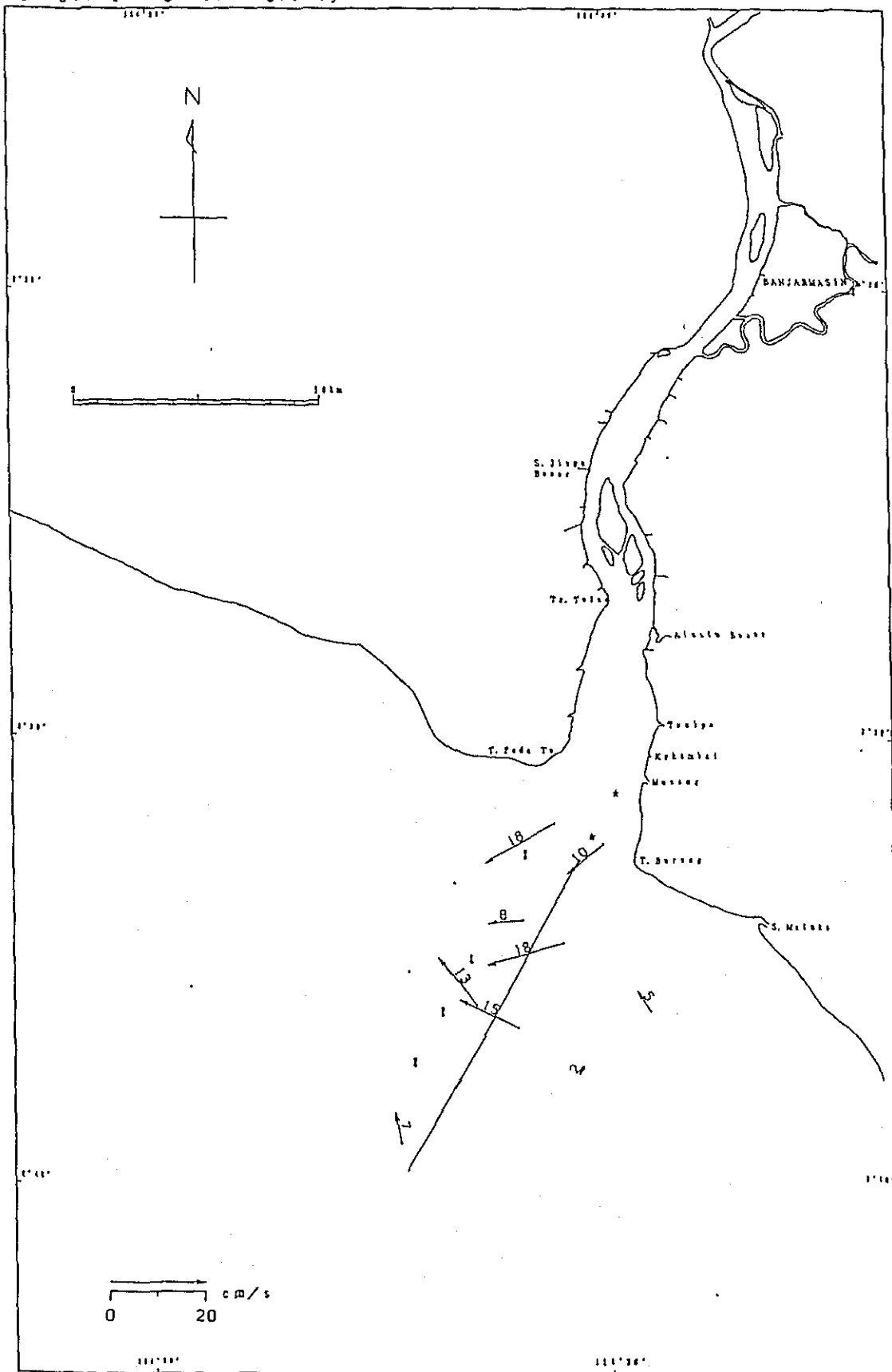


Fig. 3. 2-7 (41) Current Condition by 25 hours Running Mean

Date : 28th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

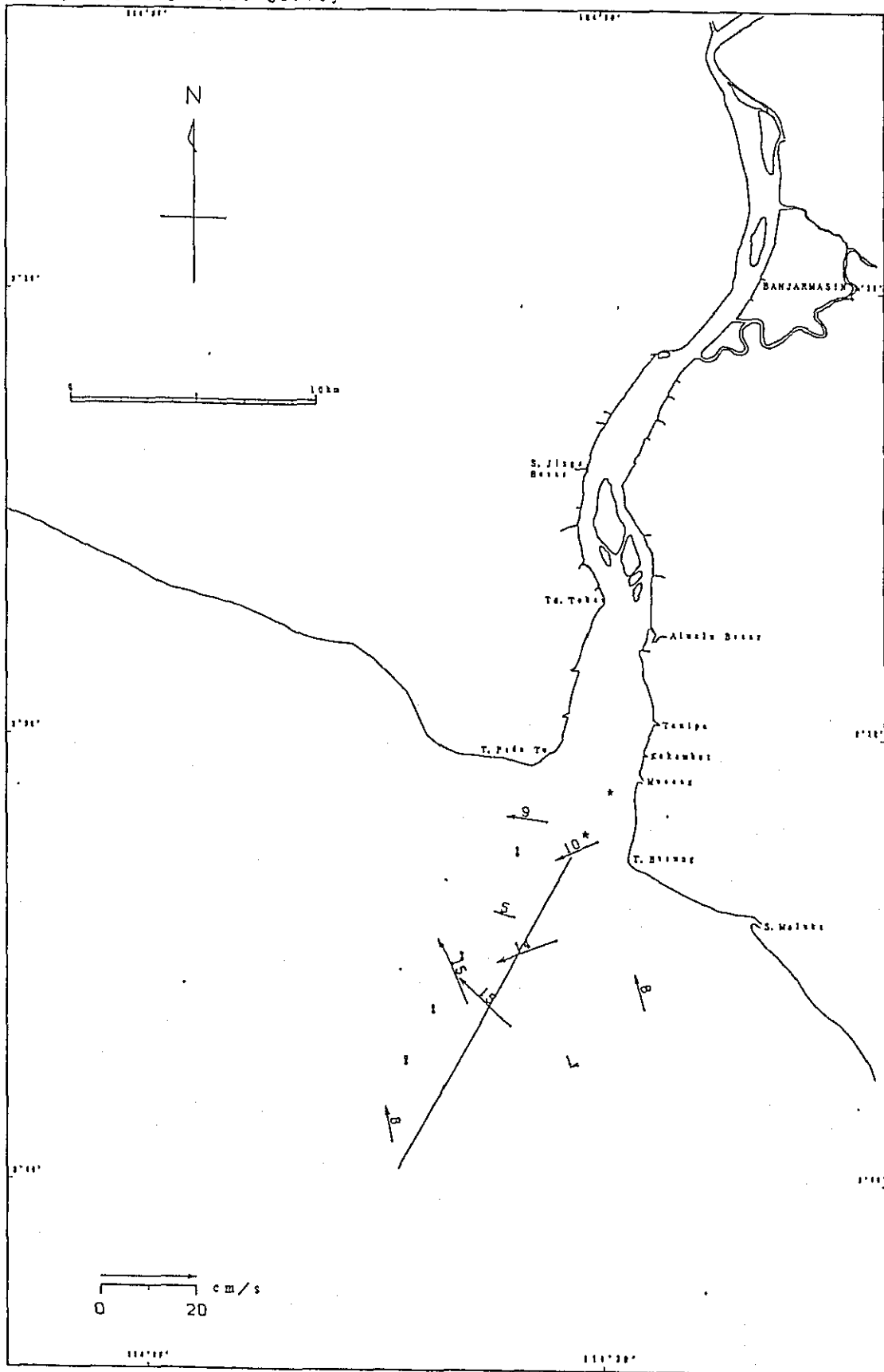


Fig. 3. 2-7 (42) Current Condition by 25 hours Running Mean

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The map displays the Banjarmasin region with its coastal features and river network. A north arrow is positioned in the upper left, and a scale bar indicates a distance of 20 cm/s. The coastline is marked with several points of interest: Banjarmasin, S. Jinez, Tr. Tolo, T. Pado To, Tanjaya, Kolumbat, Muanan, T. Biring, and S. Malisa. A series of numbers (9, 12, 13, 14, 15) are plotted along a line in the lower-left quadrant, possibly indicating a survey or measurement path. The map is framed by a coordinate grid with labels such as 114°30', 114°35', 114°40', 114°45', 114°50', 114°55', 115°00', 115°05', 115°10', 115°15', 115°20', 115°25', 115°30', 115°35', 115°40', 115°45', 115°50', 115°55', 116°00', 116°05', 116°10', 116°15', 116°20', 116°25', 116°30', 116°35', 116°40', 116°45', 116°50', 116°55', 117°00', 117°05', 117°10', 117°15', 117°20', 117°25', 117°30', 117°35', 117°40', 117°45', 117°50', 117°55', 118°00', 118°05', 118°10', 118°15', 118°20', 118°25', 118°30', 118°35', 118°40', 118°45', 118°50', 118°55', 119°00', 119°05', 119°10', 119°15', 119°20', 119°25', 119°30', 119°35', 119°40', 119°45', 119°50', 119°55', 120°00', 120°05', 120°10', 120°15', 120°20', 120°25', 120°30', 120°35', 120°40', 120°45', 120°50', 120°55', 121°00', 121°05', 121°10', 121°15', 121°20', 121°25', 121°30', 121°35', 121°40', 121°45', 121°50', 121°55', 122°00', 122°05', 122°10', 122°15', 122°20', 122°25', 122°30', 122°35', 122°40', 122°45', 122°50', 122°55', 123°00', 123°05', 123°10', 123°15', 123°20', 123°25', 123°30', 123°35', 123°40', 123°45', 123°50', 123°55', 124°00', 124°05', 124°10', 124°15', 124°20', 124°25', 124°30', 124°35', 124°40', 124°45', 124°50', 124°55', 125°00', 125°05', 125°10', 125°15', 125°20', 125°25', 125°30', 125°35', 125°40', 125°45', 125°50', 125°55', 126°00', 126°05', 126°10', 126°15', 126°20', 126°25', 126°30', 126°35', 126°40', 126°45', 126°50', 126°55', 127°00', 127°05', 127°10', 127°15', 127°20', 127°25', 127°30', 127°35', 127°40', 127°45', 127°50', 127°55', 128°00', 128°05', 128°10', 128°15', 128°20', 128°25', 128°30', 128°35', 128°40', 128°45', 128°50', 128°55', 129°00', 129°05', 129°10', 129°15', 129°20', 129°25', 129°30', 129°35', 129°40', 129°45', 129°50', 129°55', 130°00', 130°05', 130°10', 130°15', 130°20', 130°25', 130°30', 130°35', 130°40', 130°45', 130°50', 130°55', 131°00', 131°05', 131°10', 131°15', 131°20', 131°25', 131°30', 131°35', 131°40', 131°45', 131°50', 131°55', 132°00', 132°05', 132°10', 132°15', 132°20', 132°25', 132°30', 132°35', 132°40', 132°45', 132°50', 132°55', 133°00', 133°05', 133°10', 133°15', 133°20', 133°25', 133°30', 133°35', 133°40', 133°45', 133°50', 133°55', 134°00', 134°05', 134°10', 134°15', 134°20', 134°25', 134°30', 134°35', 134°40', 134°45', 134°50', 134°55', 135°00', 135°05', 135°10', 135°15', 135°20', 135°25', 135°30', 135°35', 135°40', 135°45', 135°50', 135°55', 136°00', 136°05', 136°10', 136°15', 136°20', 136°25', 136°30', 136°35', 136°40', 136°45', 136°50', 136°55', 137°00', 137°05', 137°10', 137°15', 137°20', 137°25', 137°30', 137°35', 137°40', 137°45', 137°50', 137°55', 138°00', 138°05', 138°10', 138°15', 138°20', 138°25', 138°30', 138°35', 138°40', 138°45', 138°50', 138°55', 139°00', 139°05', 139°10', 139°15', 139°20', 139°25', 139°30', 139°35', 139°40', 139°45', 139°50', 139°55', 140°00', 140°05', 140°10', 140°15', 140°20', 140°25', 140°30', 140°35', 140°40', 140°45', 140°50', 140°55', 141°00', 141°05', 141°10', 141°15', 141°20', 141°25', 141°30', 141°35', 141°40', 141°45', 141°50', 141°55', 142°00', 142°05', 142°10', 142°15', 142°20', 142°25', 142°30', 142°35', 142°40', 142°45', 142°50', 142°55', 143°00', 143°05', 143°10', 143°15', 143°20', 143°25', 143°30', 143°35', 143°40', 143°45', 143°50', 143°55', 144°00', 144°05', 144°10', 144°15', 144°20', 144°25', 144°30', 144°35', 144°40', 144°45', 144°50', 144°55', 145°00', 145°05', 145°10', 145°15', 145°20', 145°25', 145°30', 145°35', 145°40', 145°45', 145°50', 145°55', 146°00', 146°05', 146°10', 146°15', 146°20', 146°25', 146°30', 146°35', 146°40', 146°45', 146°50', 146°55', 147°00', 147°05', 147°10', 147°15', 147°20', 147°25', 147°30', 147°35', 147°40', 147°45', 147°50', 147°55', 148°00', 148°05', 148°10', 148°15', 148°20', 148°25', 148°30', 148°35', 148°40', 148°45', 148°50', 148°55', 149°00', 149°05', 149°10', 149°15', 149°20', 149°25', 149°30', 149°35', 149°40', 149°45', 149°50', 149°55', 150°00', 150°05', 150°10', 150°15', 150°20', 150°25', 150°30', 150°35', 150°40', 150°45', 150°50', 150°55', 151°00', 151°05', 151°10', 151°15', 151°20', 151°25', 151°30', 151°35', 151°40', 151°45', 151°50', 151°55', 152°00', 152°05', 152°10', 152°15', 152°20', 152°25', 152°30', 152°35', 152°40', 152°45', 152°50', 152°55', 153°00', 153°05', 153°10', 153°15', 153°20', 153°25', 153°30', 153°35', 153°40', 153°45', 153°50', 153°55', 154°00', 154°05', 154°10', 154

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Date : 30th Sep. 1988
 Time : 0:00
 Stage: 1st General Survey

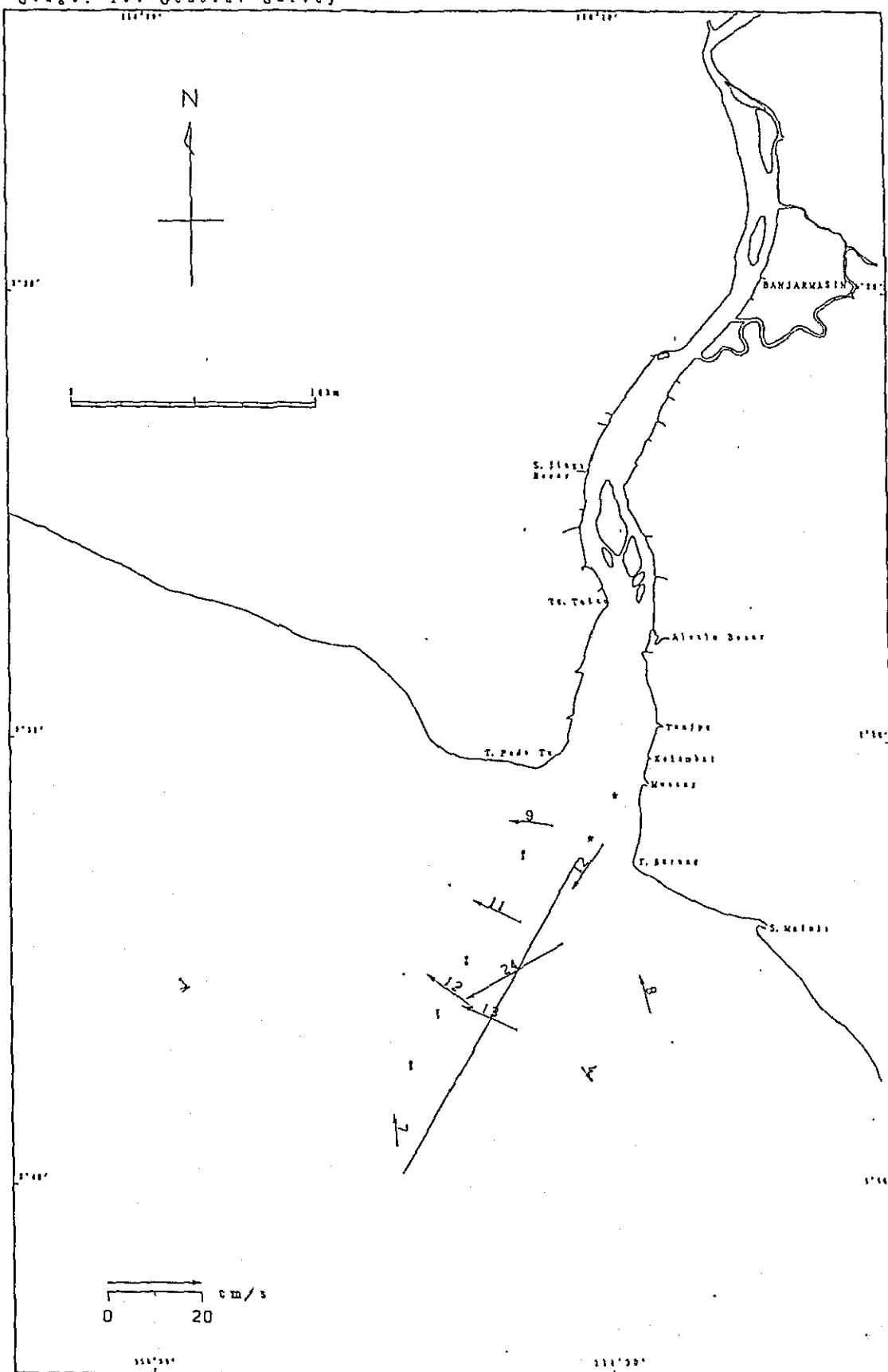


Fig. 3. 2-7 (45) Current Condition by 25 hours Running Mean

Date : 30th Sep. 1988
 Time : 12:00
 Stage: 1st General Survey

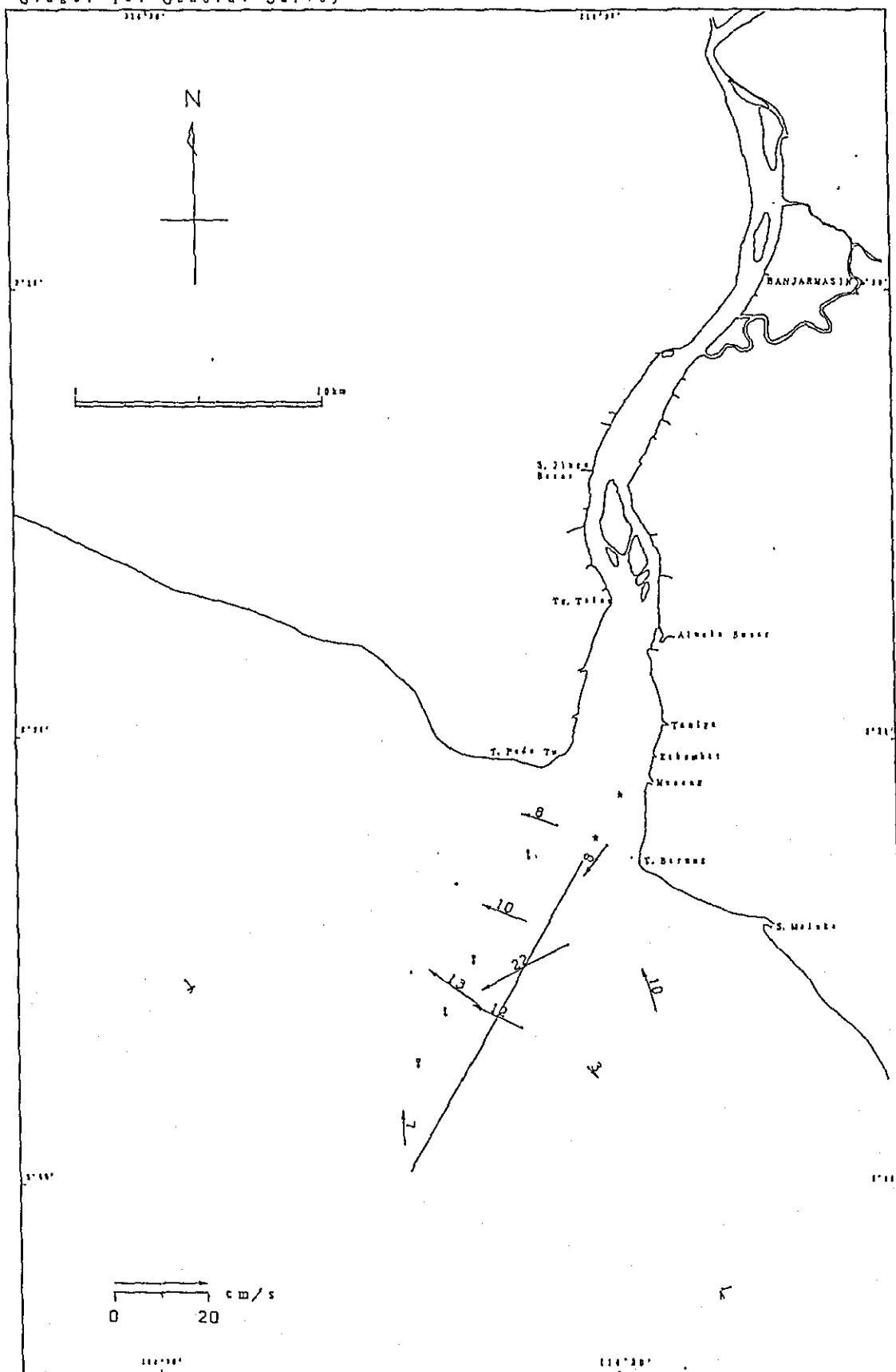


Fig. 3. 2-7 (46) Current Condition by 25 hours Running Mean

Date : 1st Oct. 1988
 Time : 0:00
 Stage: 1st General Survey

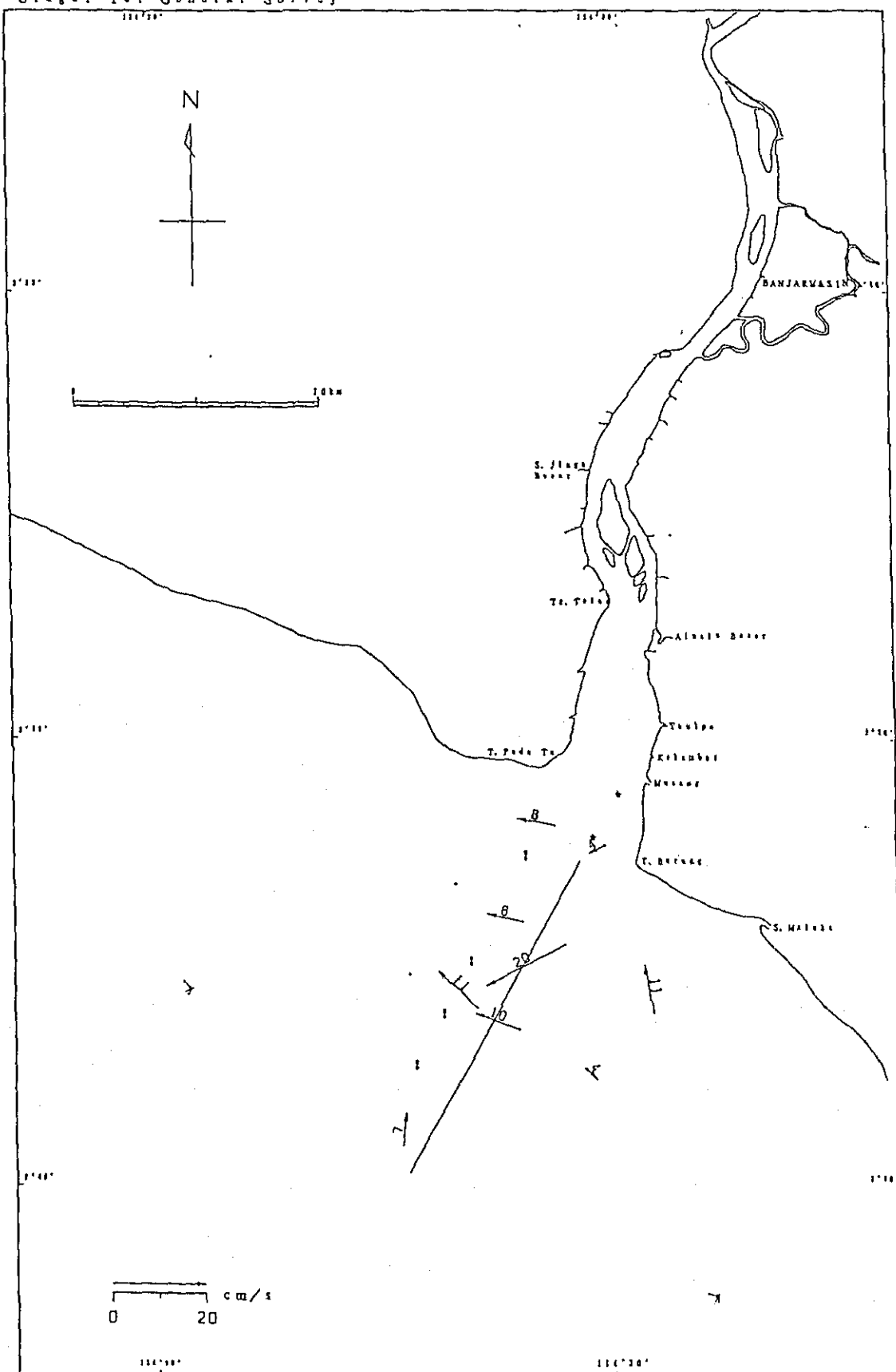


Fig. 3. 2-7 (47) Current Condition by 25 hours Running Mean

Date : 1st Oct. 1988
 Time : 12:00
 Stage: 1st General Survey

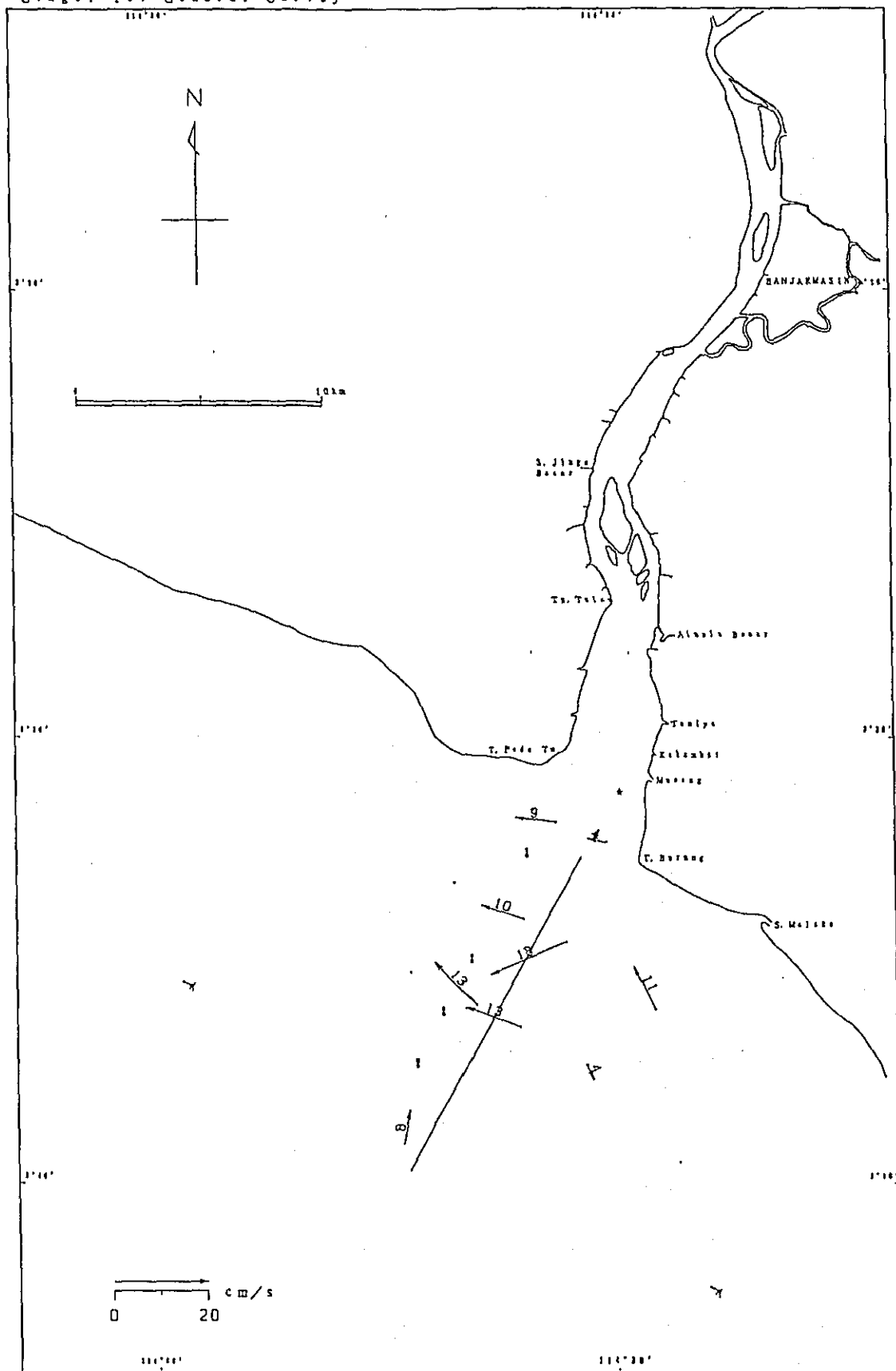


Fig. 3. 2-7 (43) Current Condition by 25 hours Running Mean

This map shows the S. Jilang River and its surrounding areas. Key features include:

- North Arrow:** Located in the upper left corner.
- Scale Bar:** A horizontal scale bar in the upper left, labeled "10 km".
- Geographic Labels:**
 - BANJARMASIN** (top right)
 - S. Jilang River** (center)
 - T. Tala** (center)
 - T. Poda Ts** (center)
 - T. Buhang** (center)
 - S. Maishi** (bottom right)
 - Alucala gase** (center)
 - Tanaka** (center)
 - Kulambel** (center)
 - Messing** (center)
- Bathymetry:** A series of lines with numerical values (1, 2, 3, 5, 10, 20) indicating depth or distance from the river.
- Scale Bar:** A horizontal scale bar at the bottom, labeled "0 20 cm/s".

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Date : 2nd Oct. 1988
 Time : 12:00
 Stage: 1st General Survey

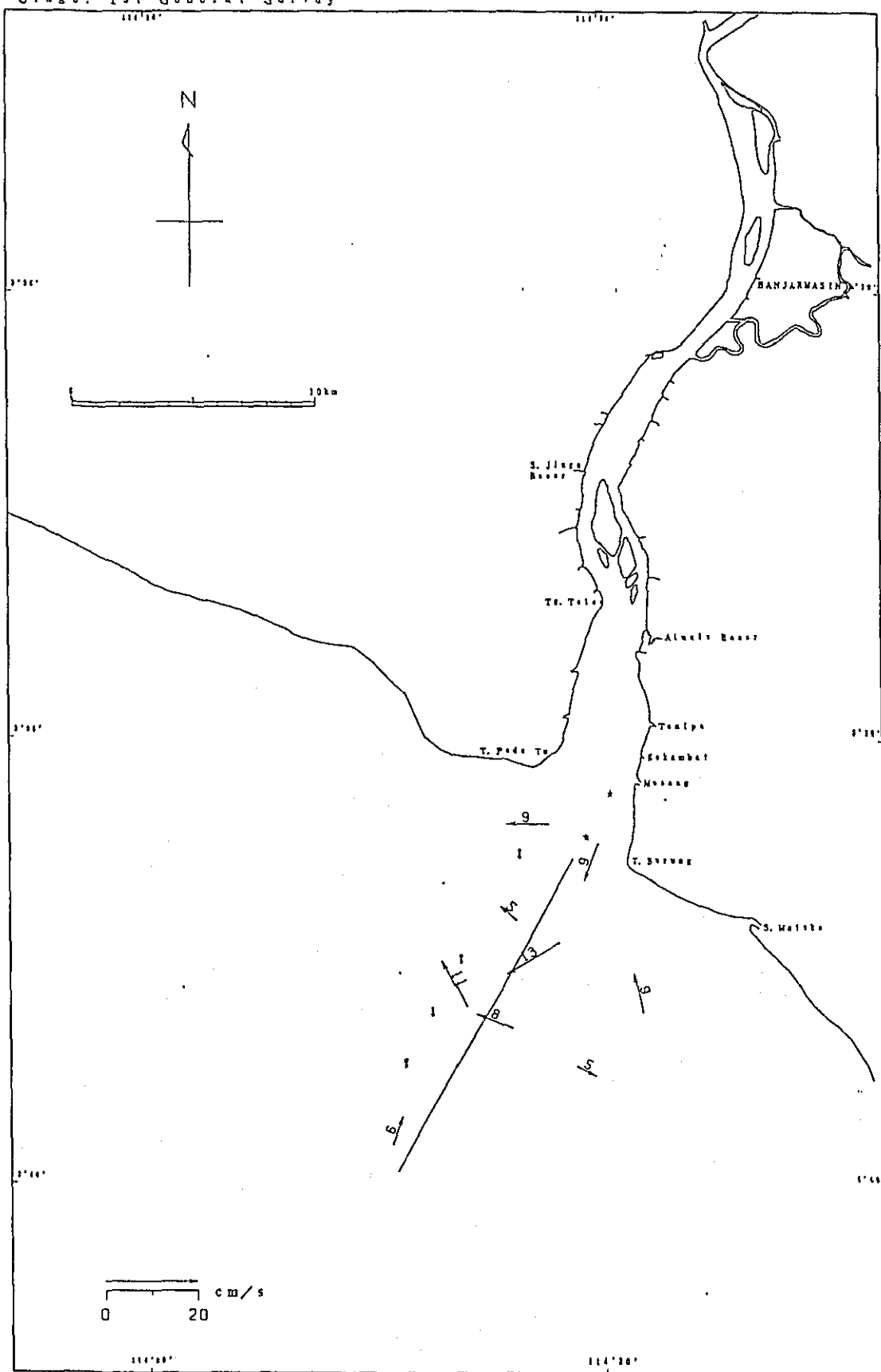


Fig. 3. 2-7 (50) Current Condition by 25 hours Running Mean

[illegible]

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Date : 3rd Oct. 1988
 Time : 12:00
 Stage: 1st General Survey

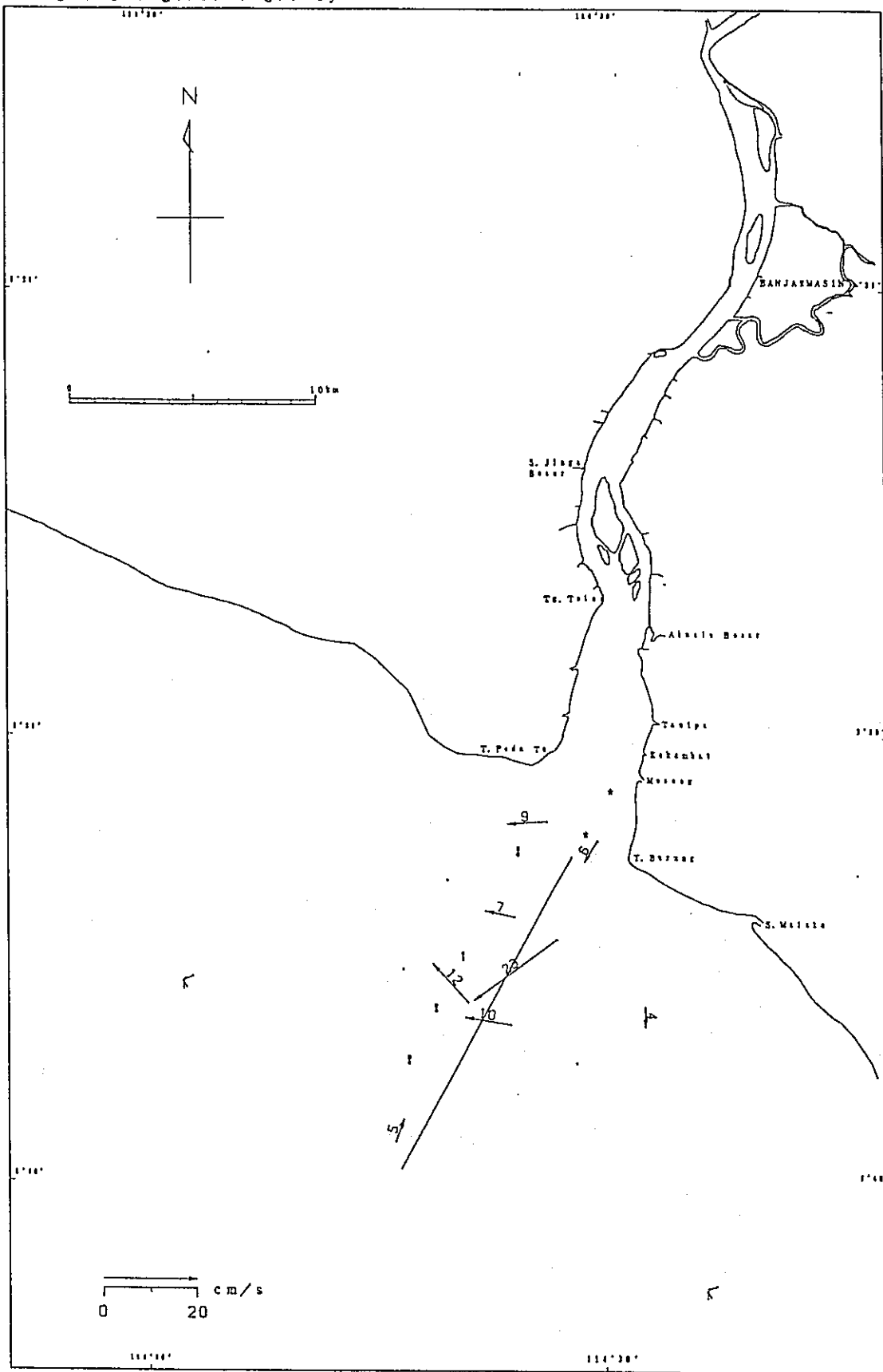


Fig. 3. 2-7 62) Current Condition by 25 hours Running Mean

Date : 4th Oct. 1988
 Time : 0:00
 Stage: 1st General Survey

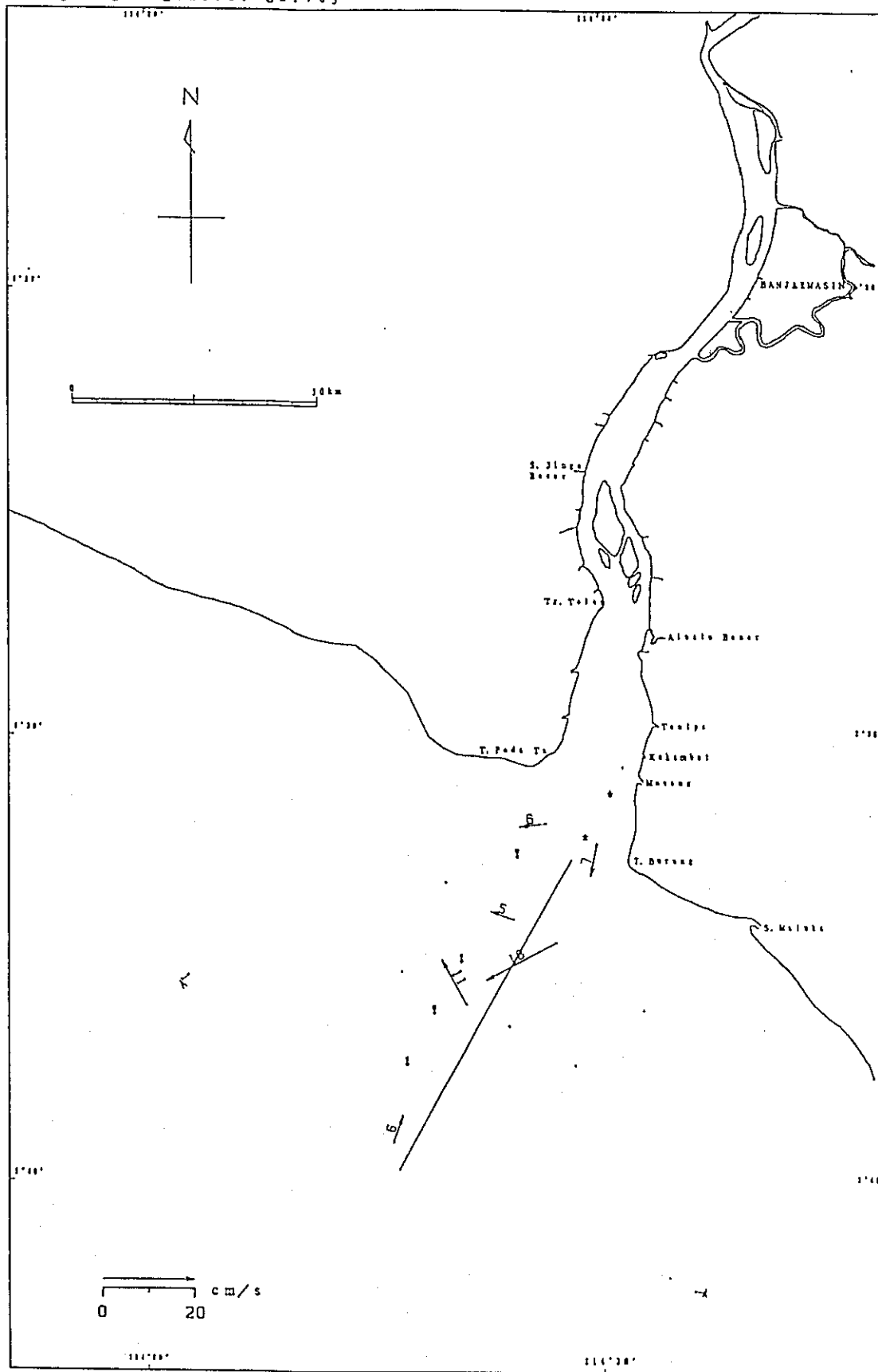


Fig. 3. 2-7 (3) Current Condition by 25 hours Running Mean

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Date : 5th Oct. 1988
 Time : 0:00
 Stage: 1st General Survey

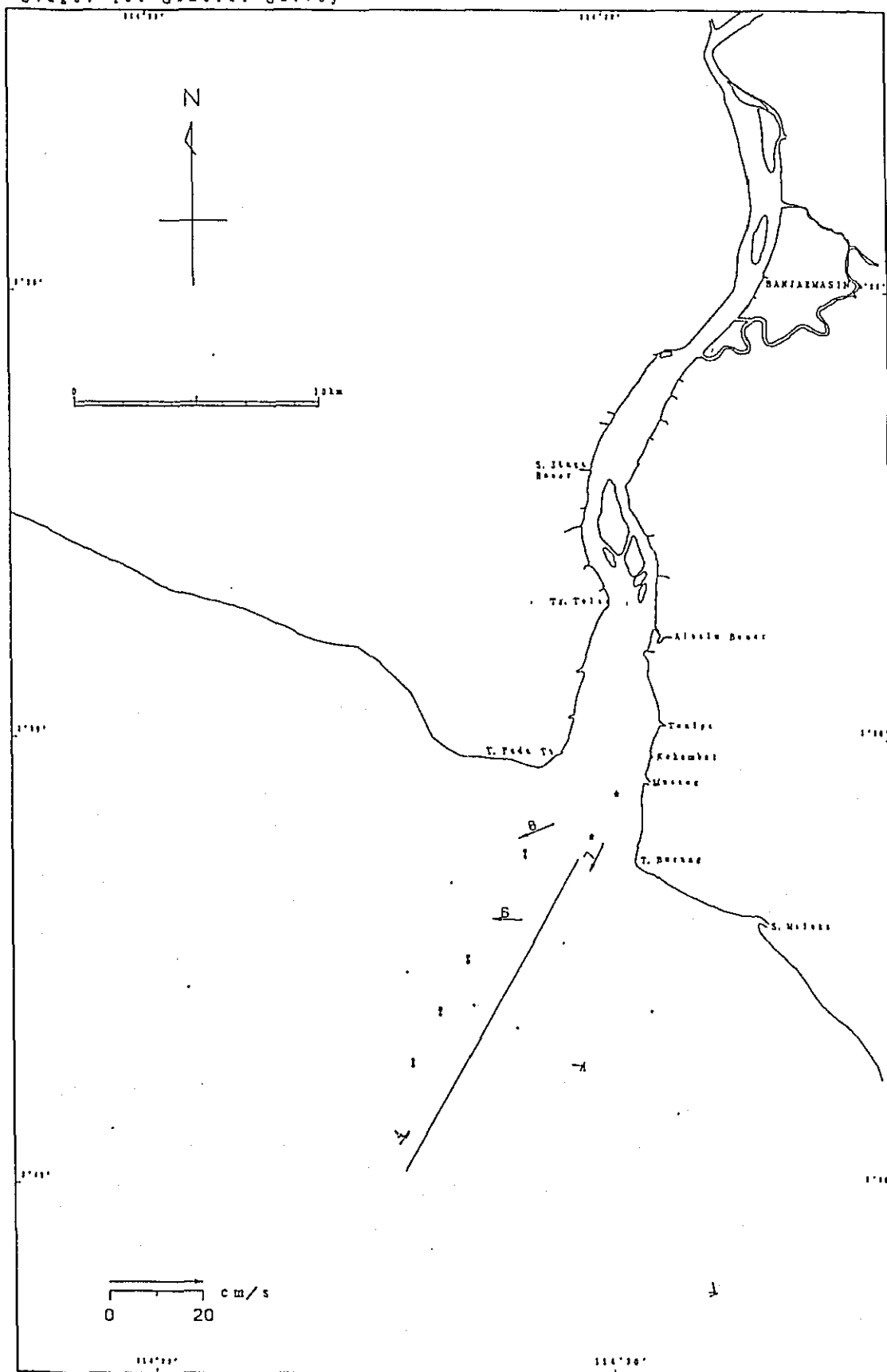


Fig. 3. 2-7 (5) Current Condition by 25 hours Running Mean

Date : 5th Oct. 1988
 Time : 12:00
 Stage: 1st General Survey

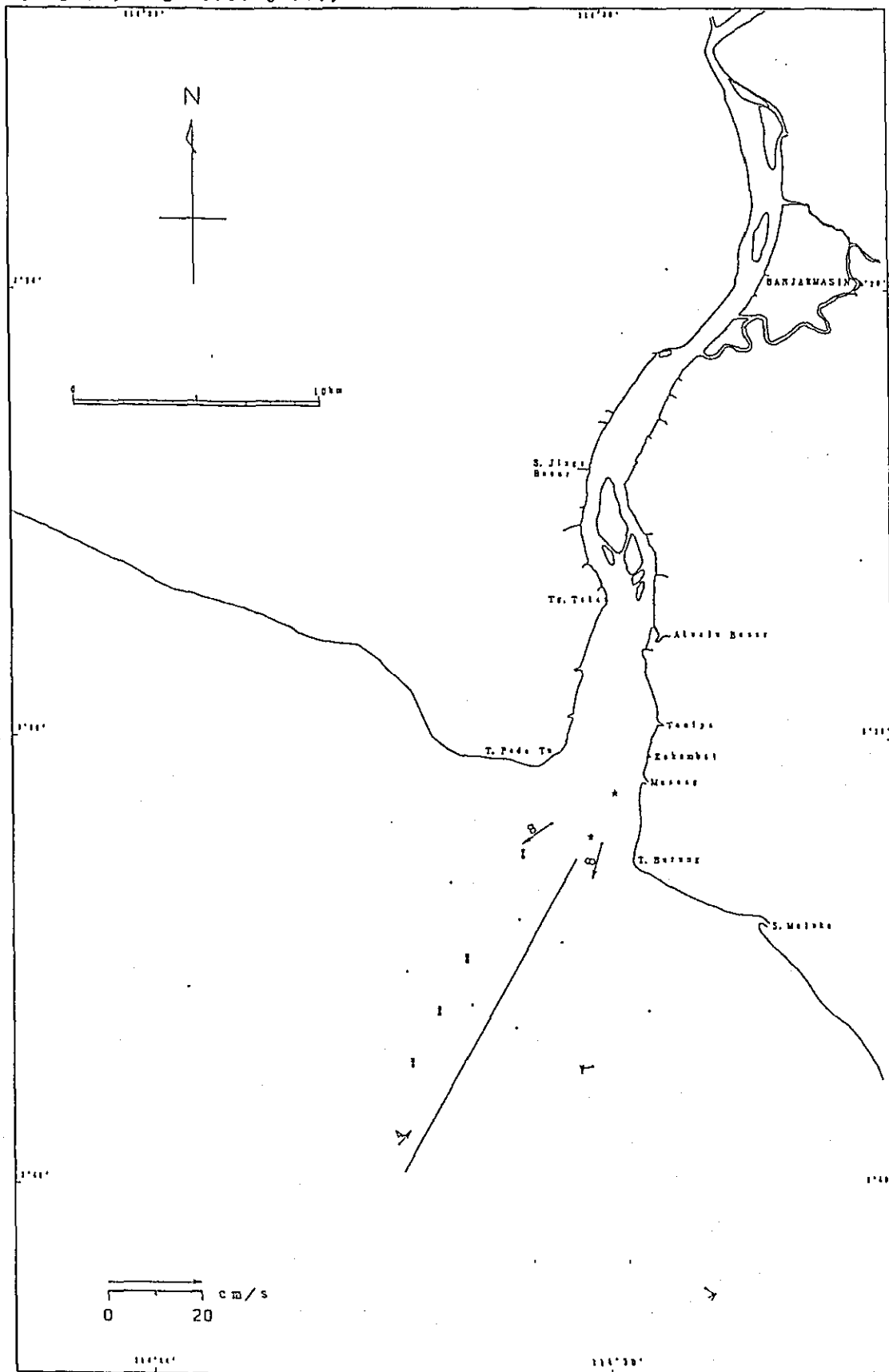


Fig. 3. 2-7 66) Current Condition by 25 hours Running Mean

Date : 6th Oct. 1988
 Time : 0:00
 Stage: 1st General Survey

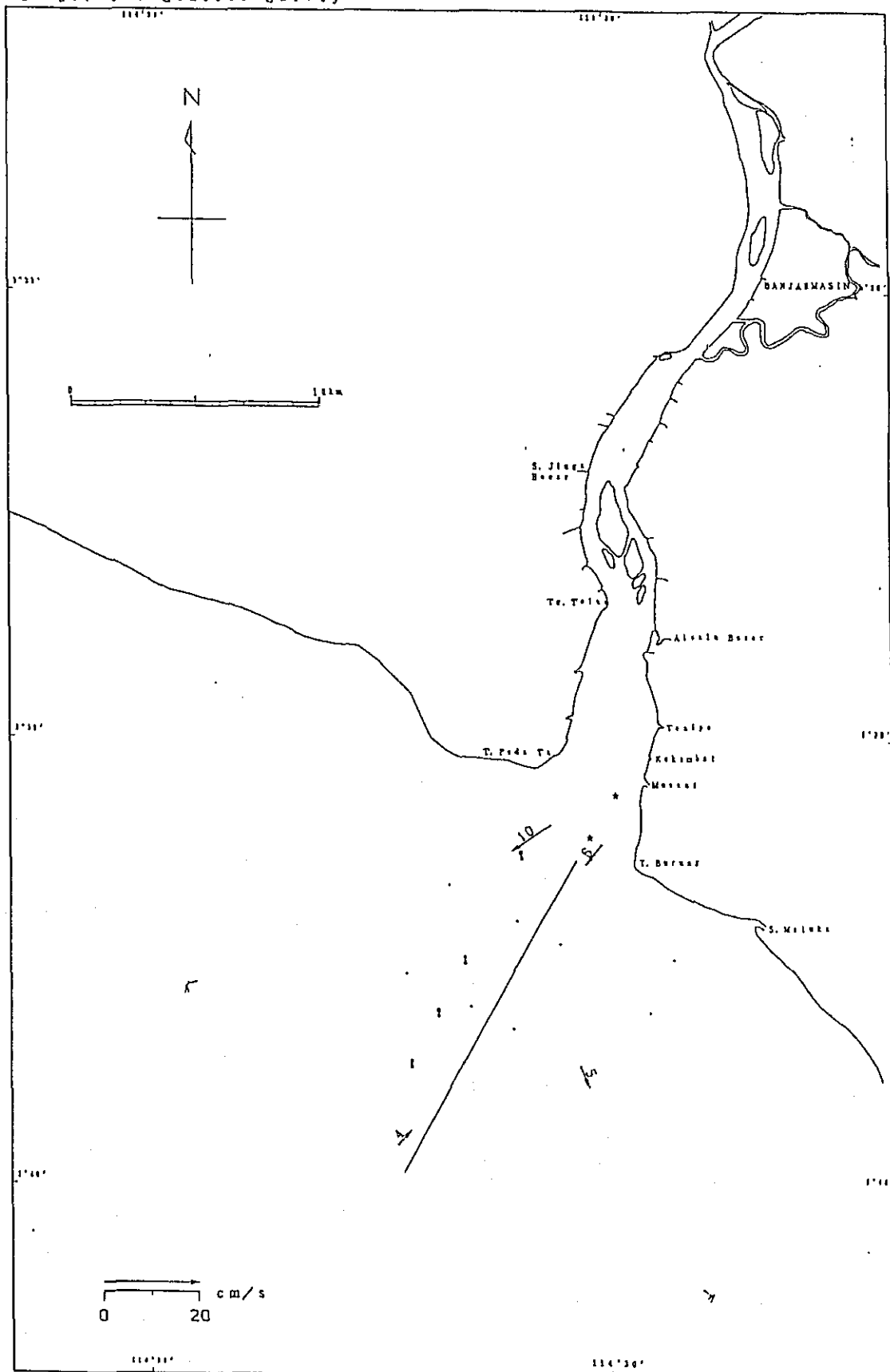


Fig. 3. 2-7 67) Current Condition by 25 hours Running Mean

Date : 19th Jan. 1989
 Time : 0:00
 Stage: 2nd General Survey

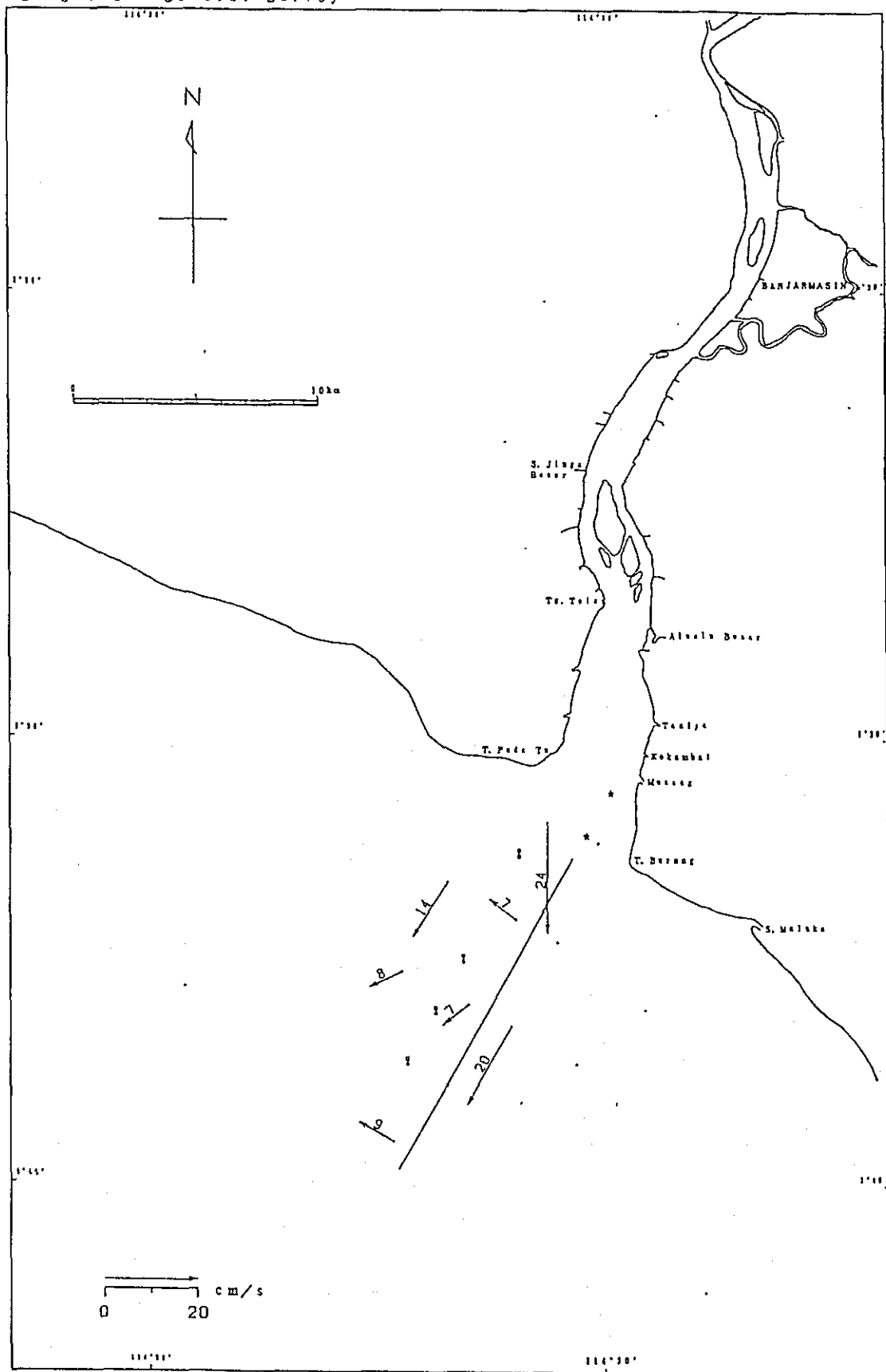


Fig. 3. 2-7 (53) Current Condition by 25 hours Running Mean

Date : 19th Jan. 1989
 Time : 12:00
 Stage : 2nd General Survey

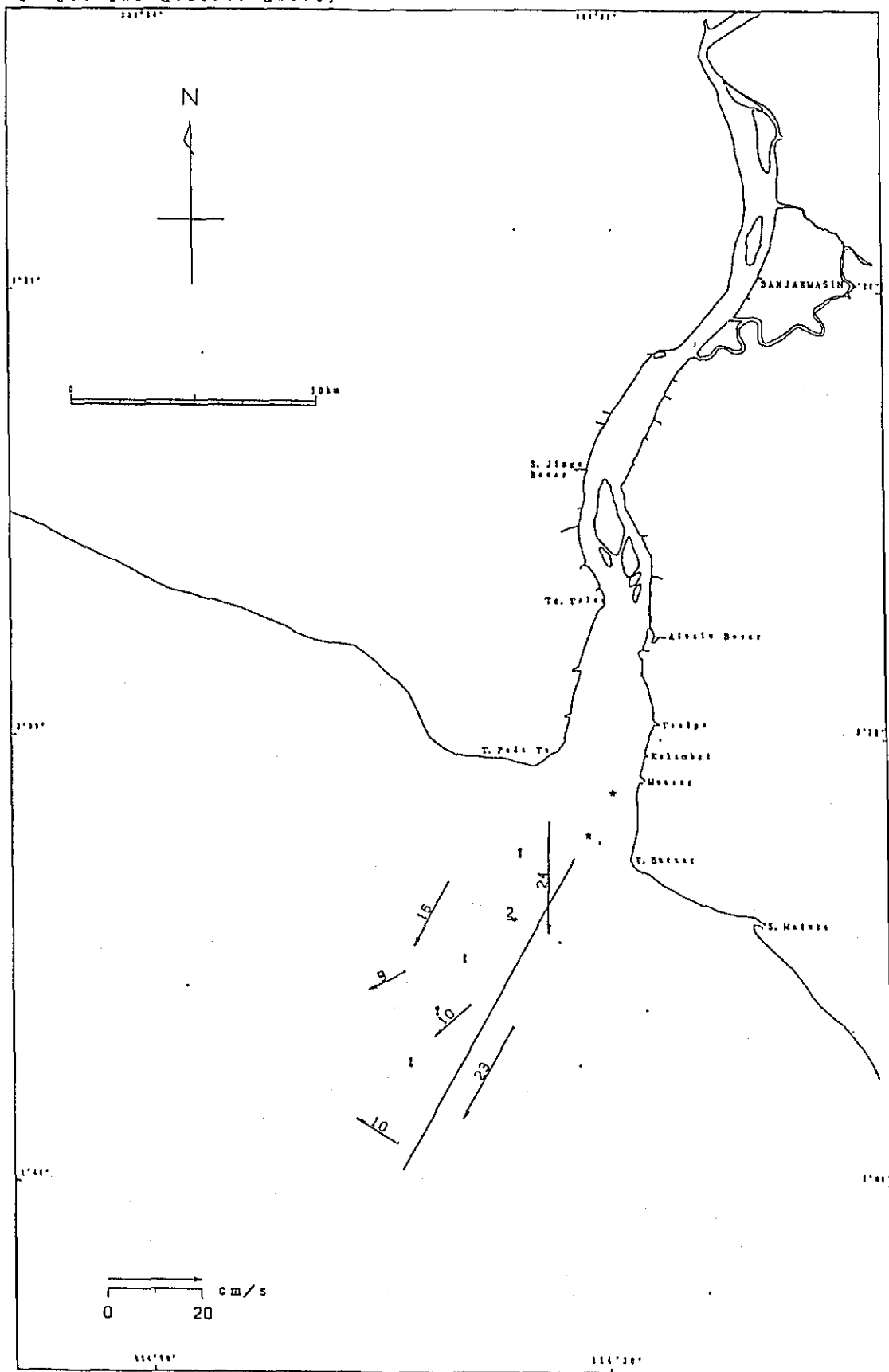


Fig. 3. 2-7 (3) Current Condition by 25 hours Running Mean

Date : 20th Jan. 1989
 Time : 0:00
 Stage: 2nd General Survey

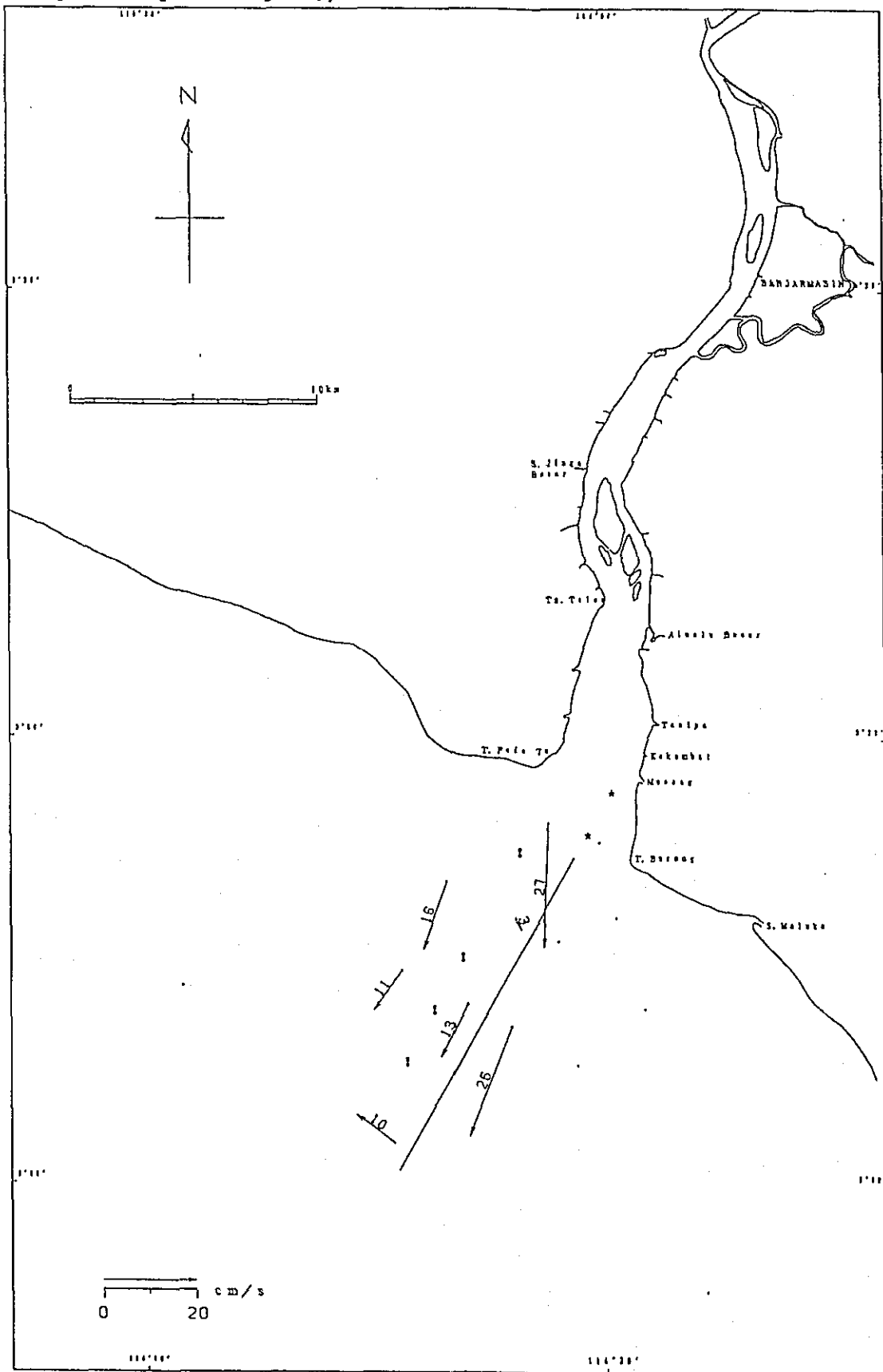


Fig. 3. 2-7 (60) Current Condition by 25 hours Running Mean

Date : 20th Jan. 1989
 Time : 12:00
 Stage: 2nd General Survey

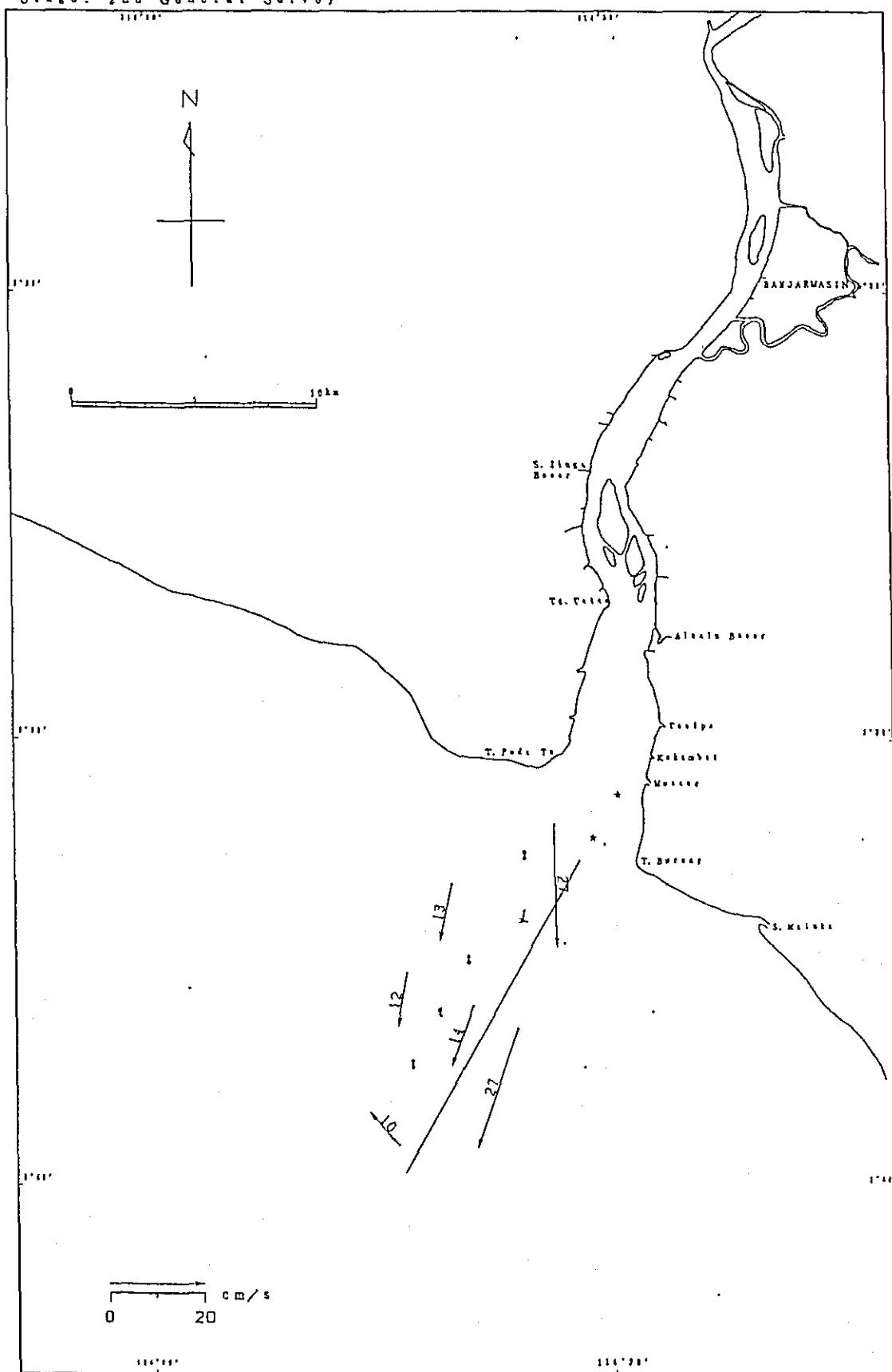


Fig. 3. 2-7 (61) Current Condition by 25 hours Running Mean

Date : 21th Jan. 1989
 Time : 0:00
 Stage : 2nd General Survey

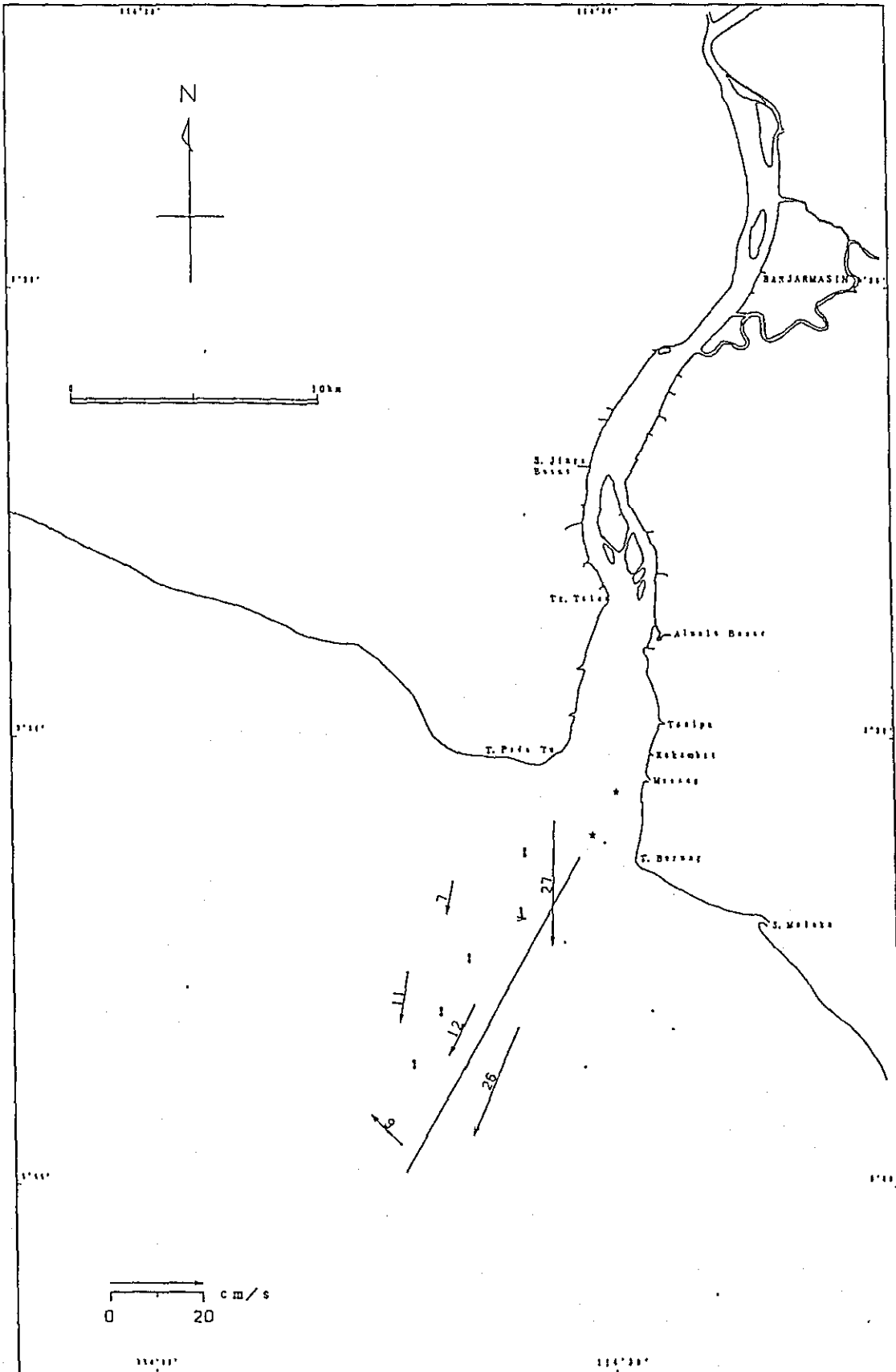


Fig. 3. 2-7 (2) Current Condition by 25 hours Running Mean

Date : 21th Jan. 1989
 Time : 12:00
 Stage : 2nd General Survey

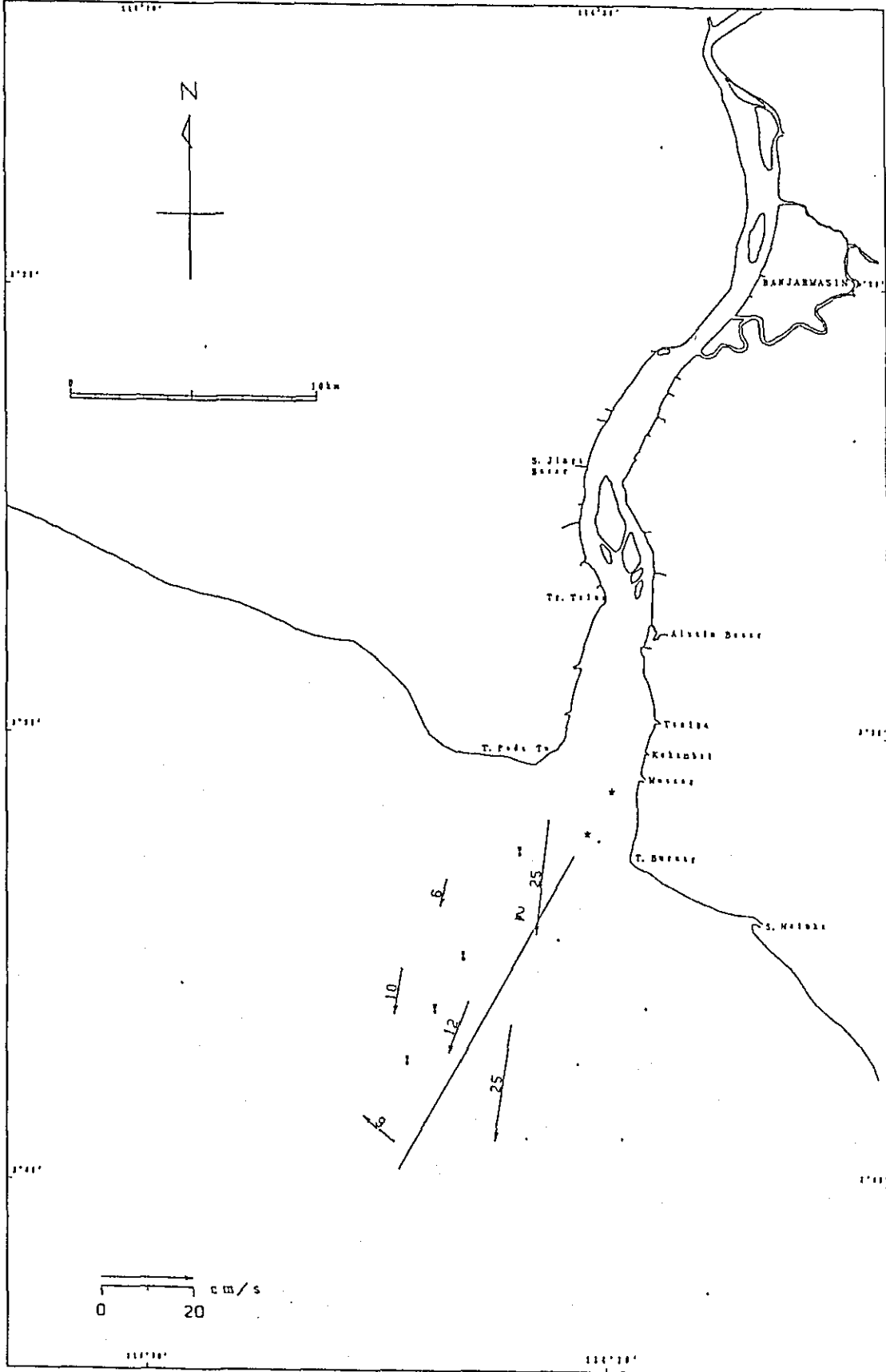


Fig. 3. 2-7 (3) Current Condition by 25 hours Running Mean

[illegible]

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Date : 22th Jan. 1989
 Time : 12:00
 Stage: 2nd General Survey

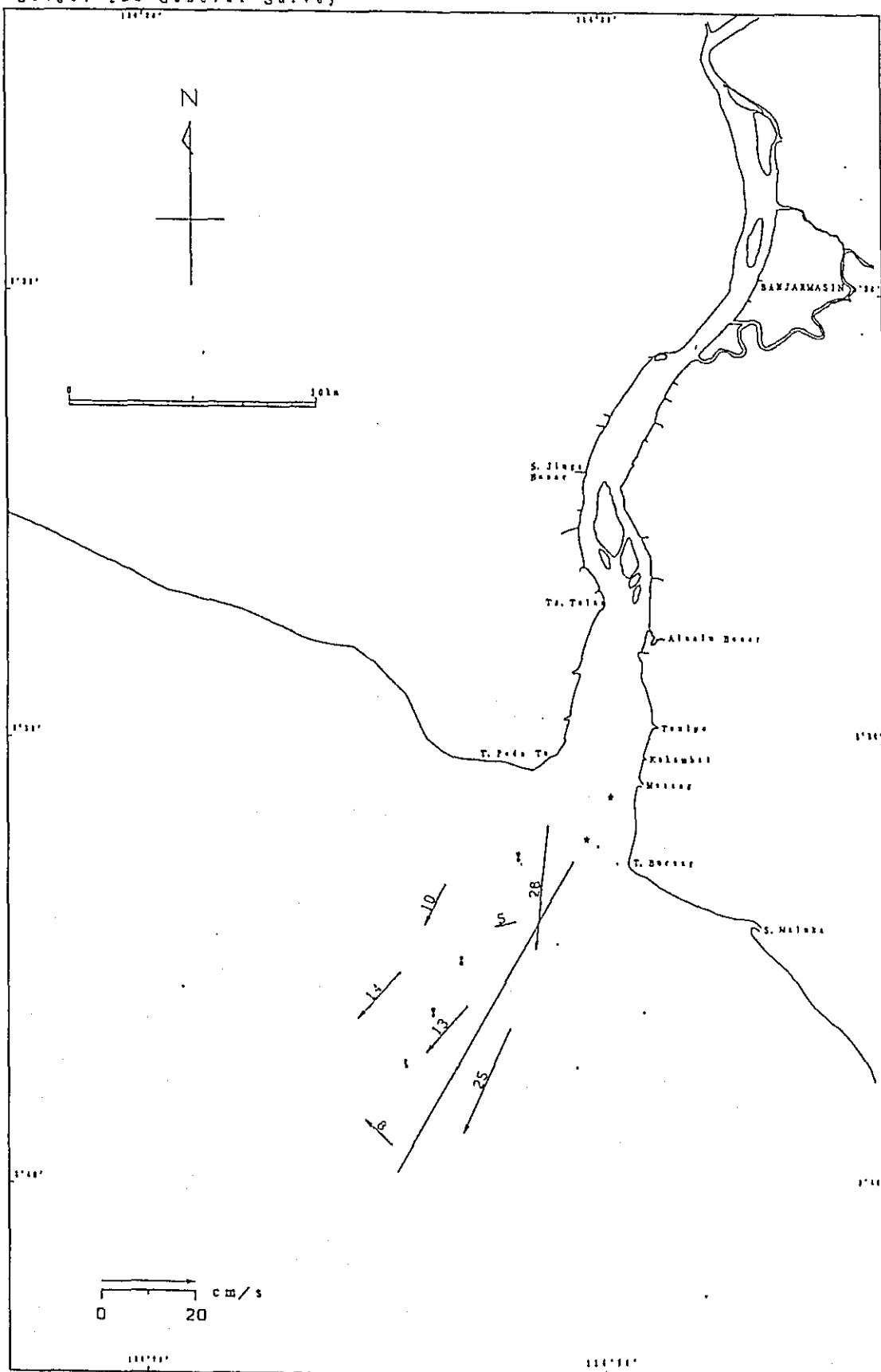


Fig. 3. 2-7 (65) Current Condition by 25 hours Running Mean

Date : 23th Jan. 1989
 Time : 0:00
 Stage: 2nd General Survey

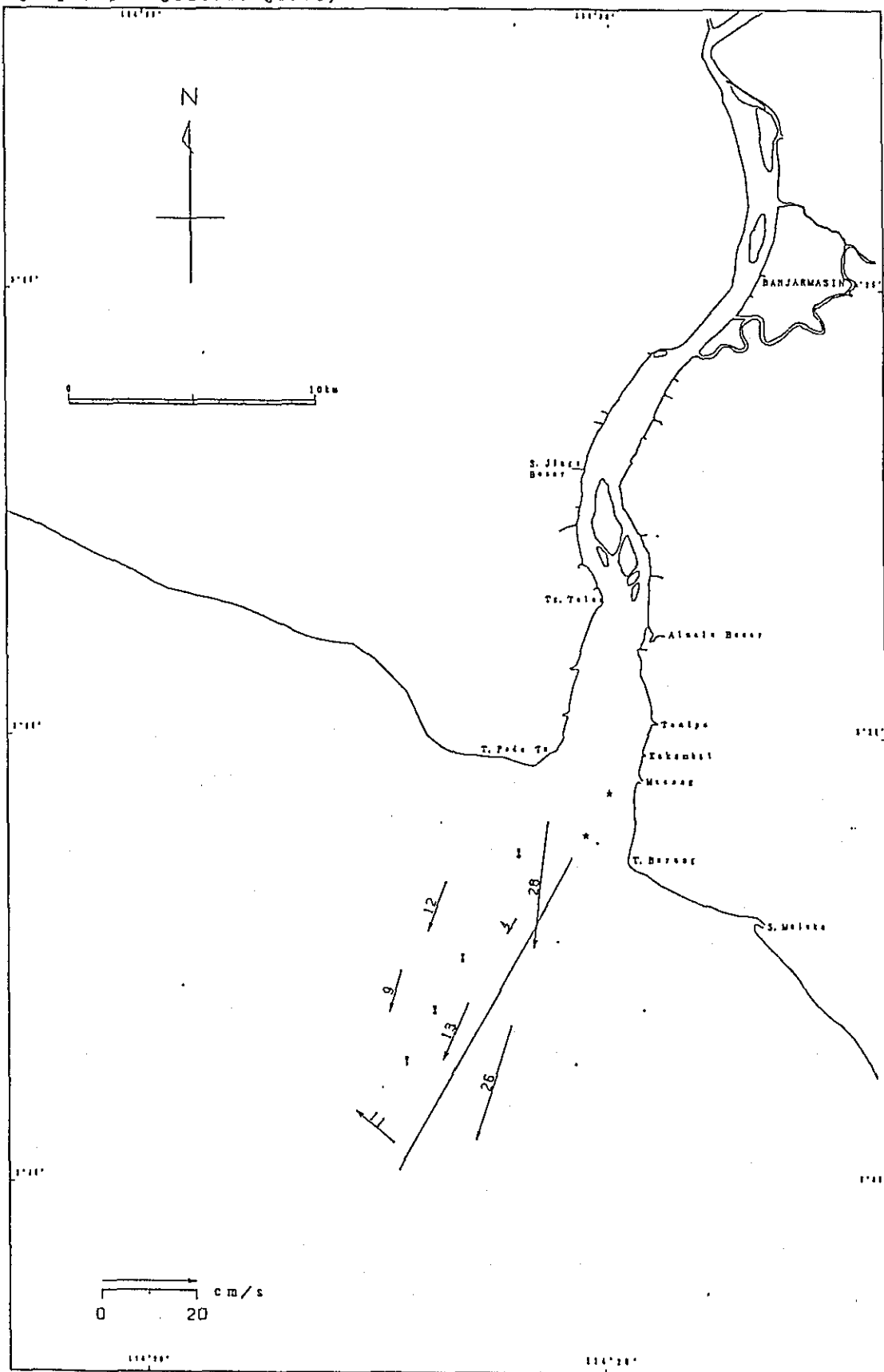


Fig. 3. 2-7 (66) Current Condition by 25 hours Running Mean

Date : 23th Jan. 1989
 Time : 12:00
 Stage: 2nd General Survey

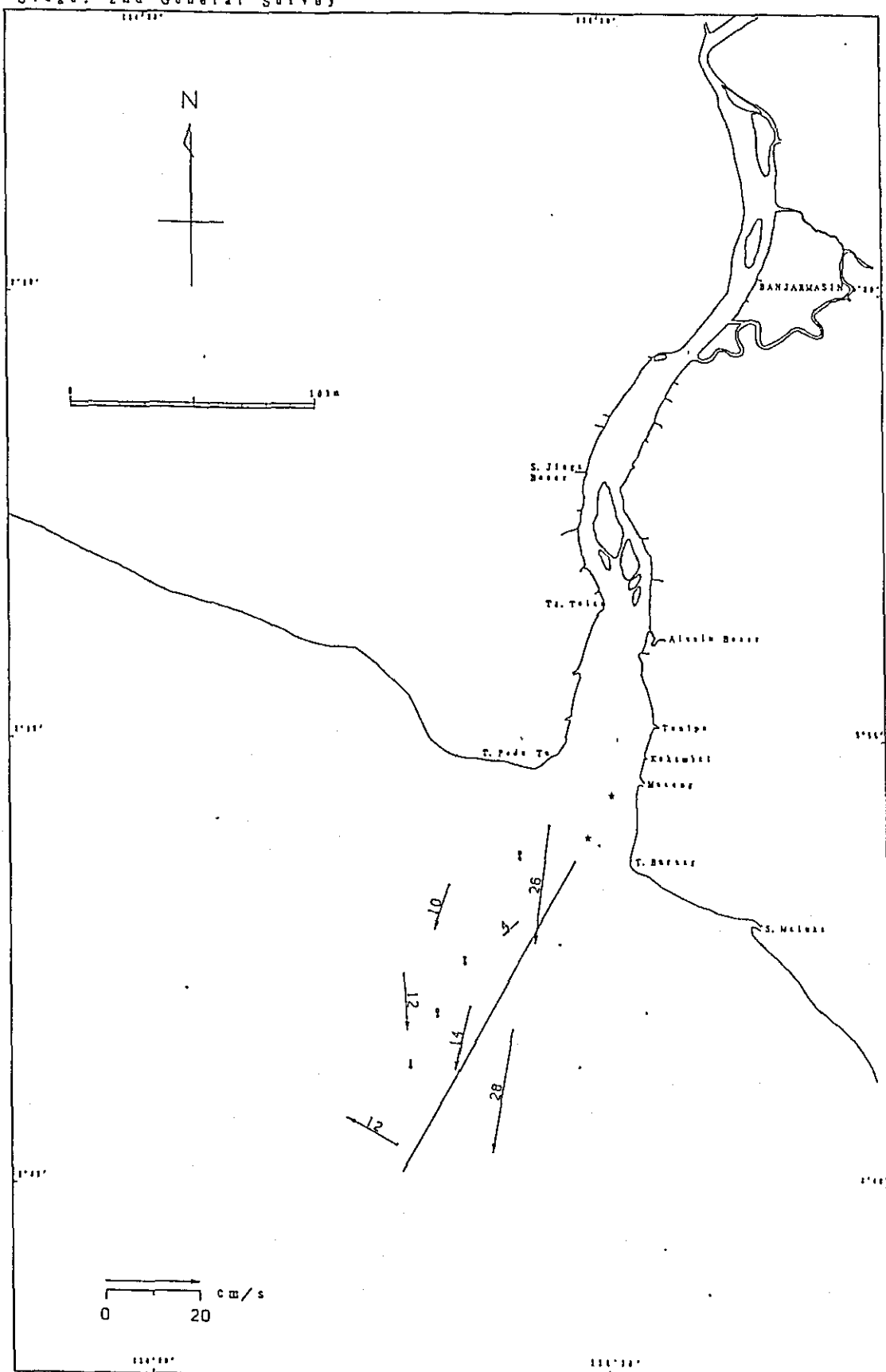


Fig. 3. 2-7 (67) Current Condition by 25 hours Running Mean

Date : 24th Jan. 1989
 Time : 0:00
 Stage : 2nd General Survey

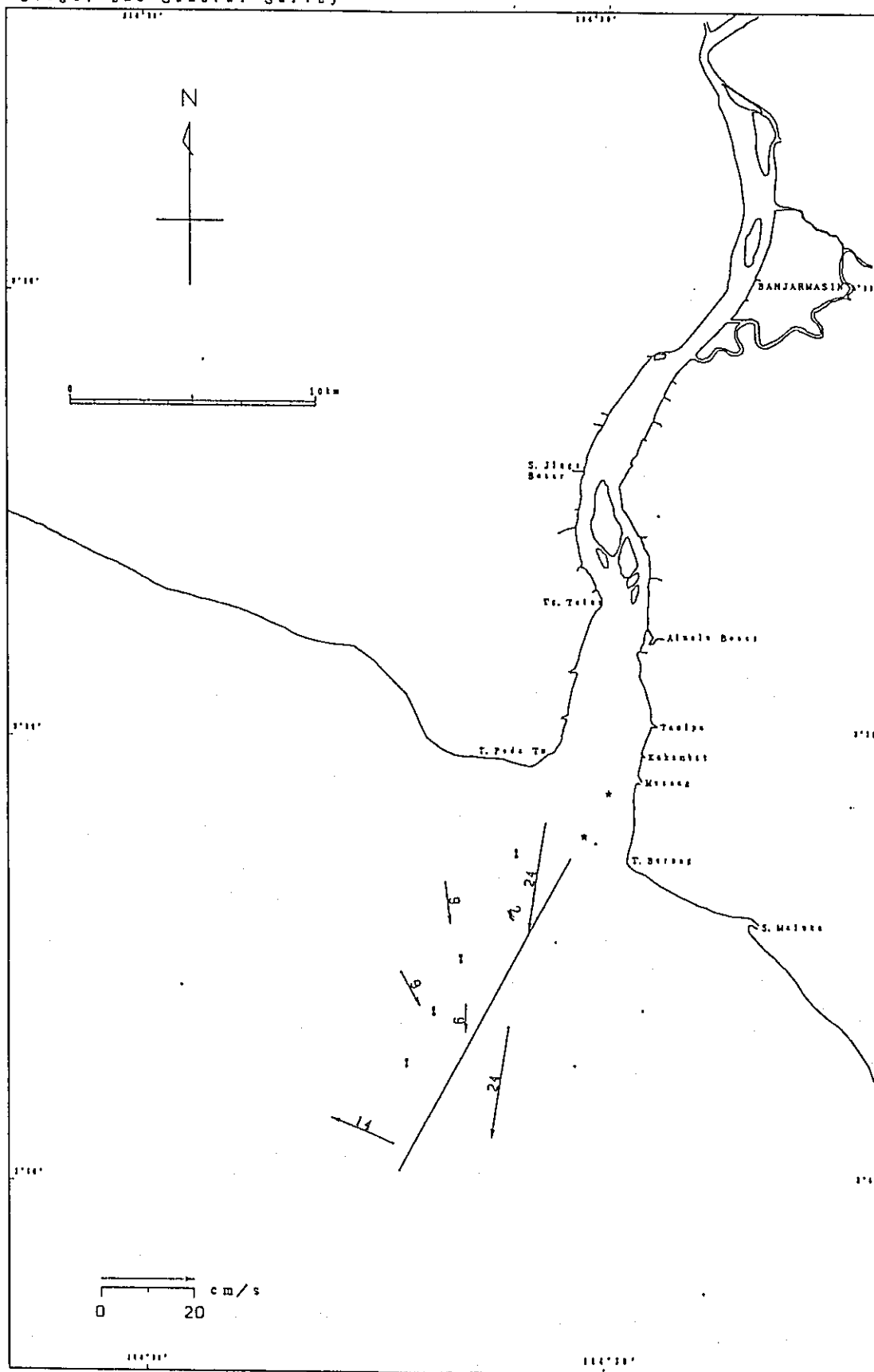


Fig. 3. 2-7 (63) Current Condition by 25 hours Running Mean

Date : 24th Jan. 1989
 Time : 12:00
 Stage: 2nd General Survey

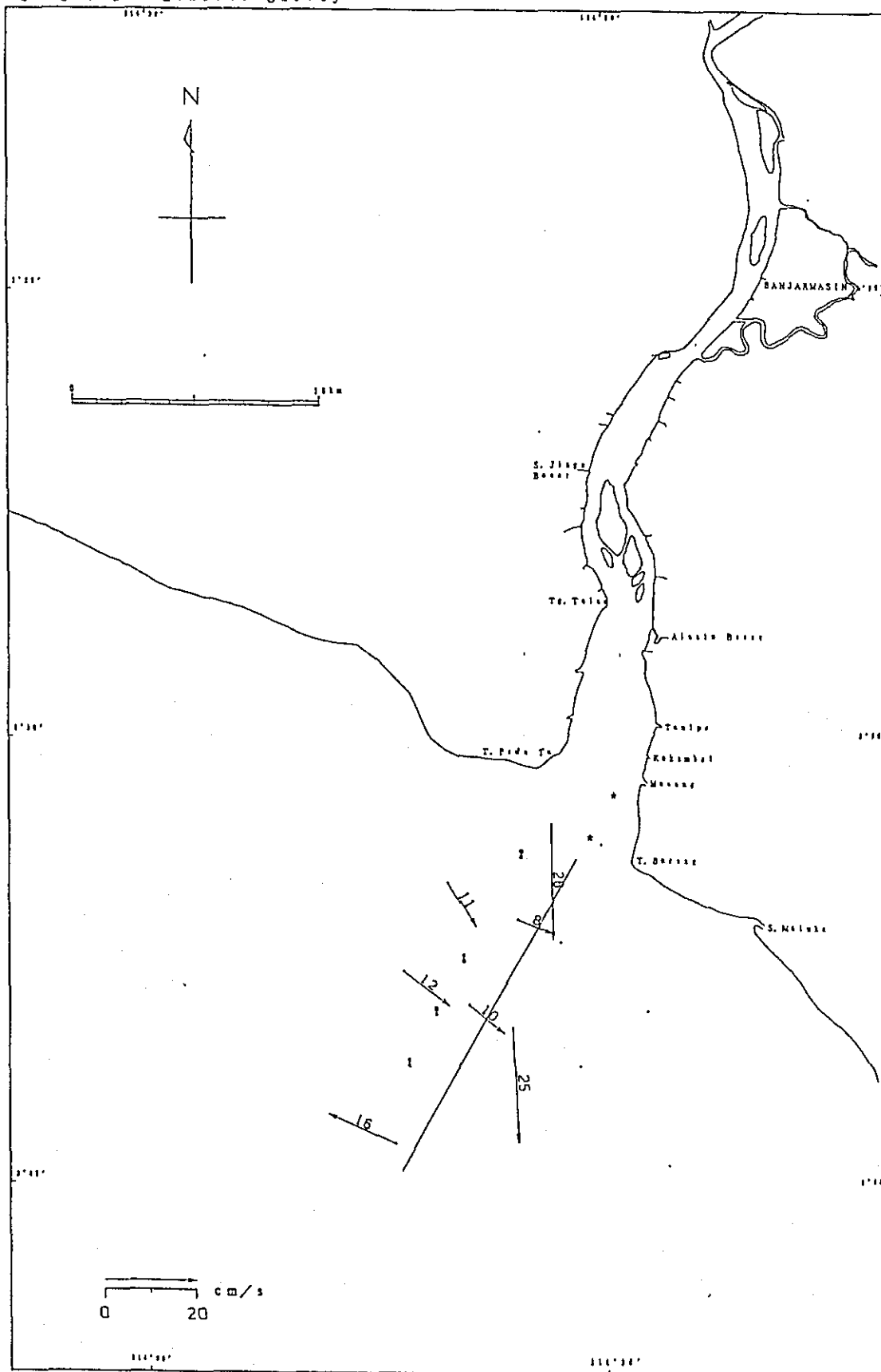


Fig. 3. 2-7 (69) Current Condition by 25 hours Running Mean

Date : 25th Jan. 1989
 Time : 0:00
 Stage: 2nd General Survey

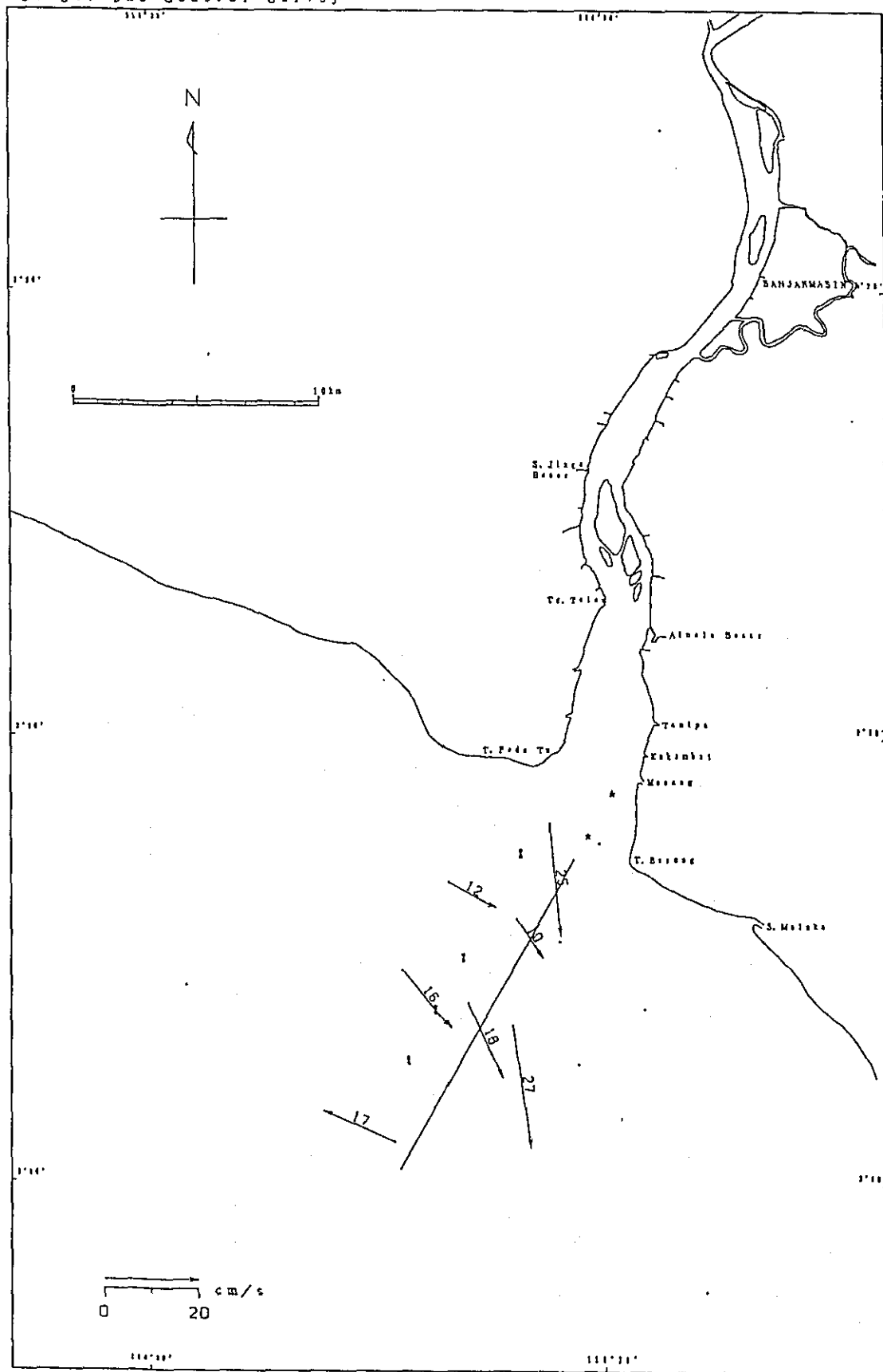


Fig. 3. 2-7 (70) Current Condition by 25 hours Running Mean

Date : 25th Jan. 1989
 Time : 12:00
 Stage: 2nd General Survey

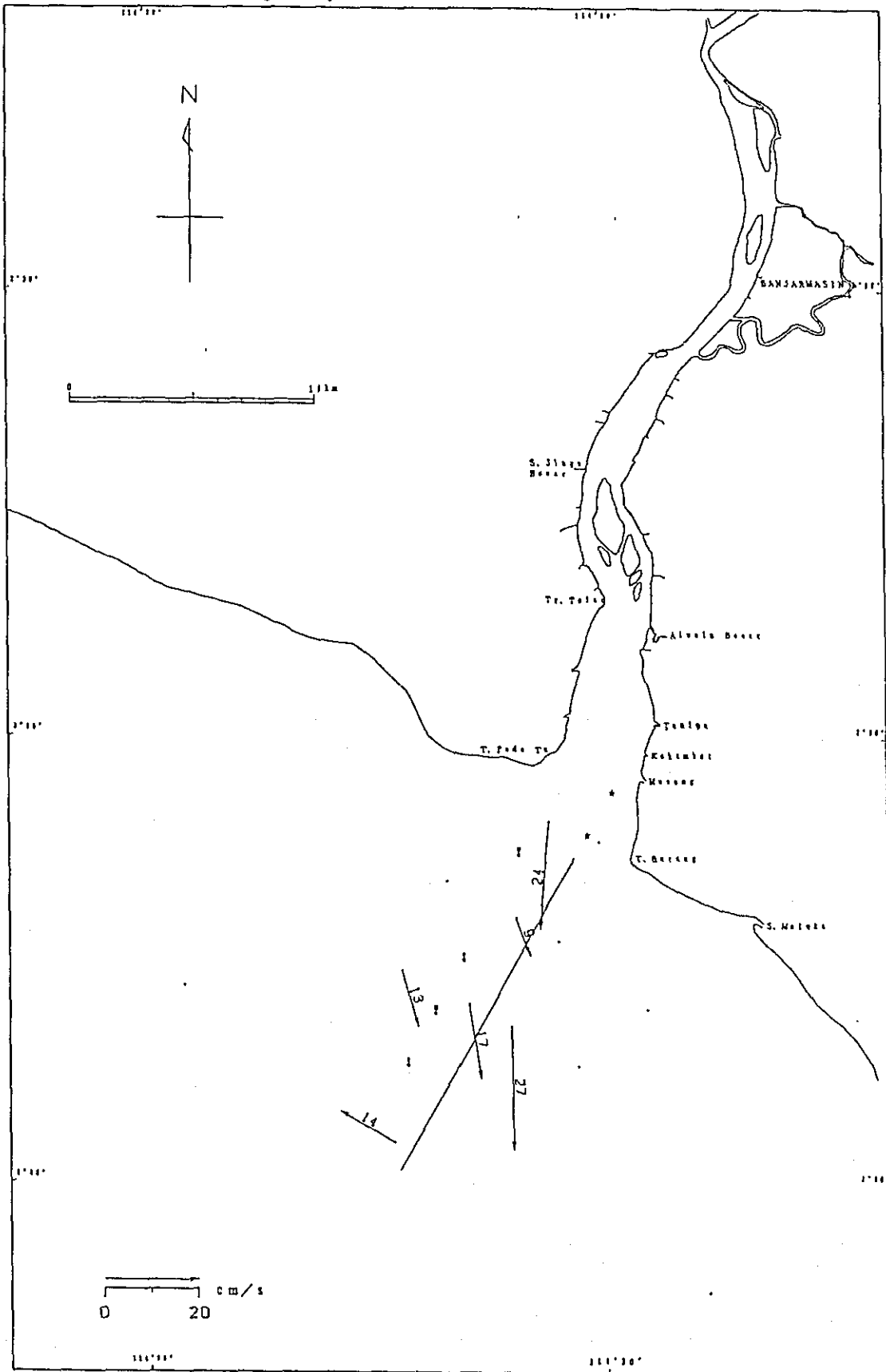


Fig. 3. 2-7 (1) Current Condition by 25 hours Running Mean

Date : 26th Jan. 1989
 Time : 0:00
 Stage: 2nd General Survey

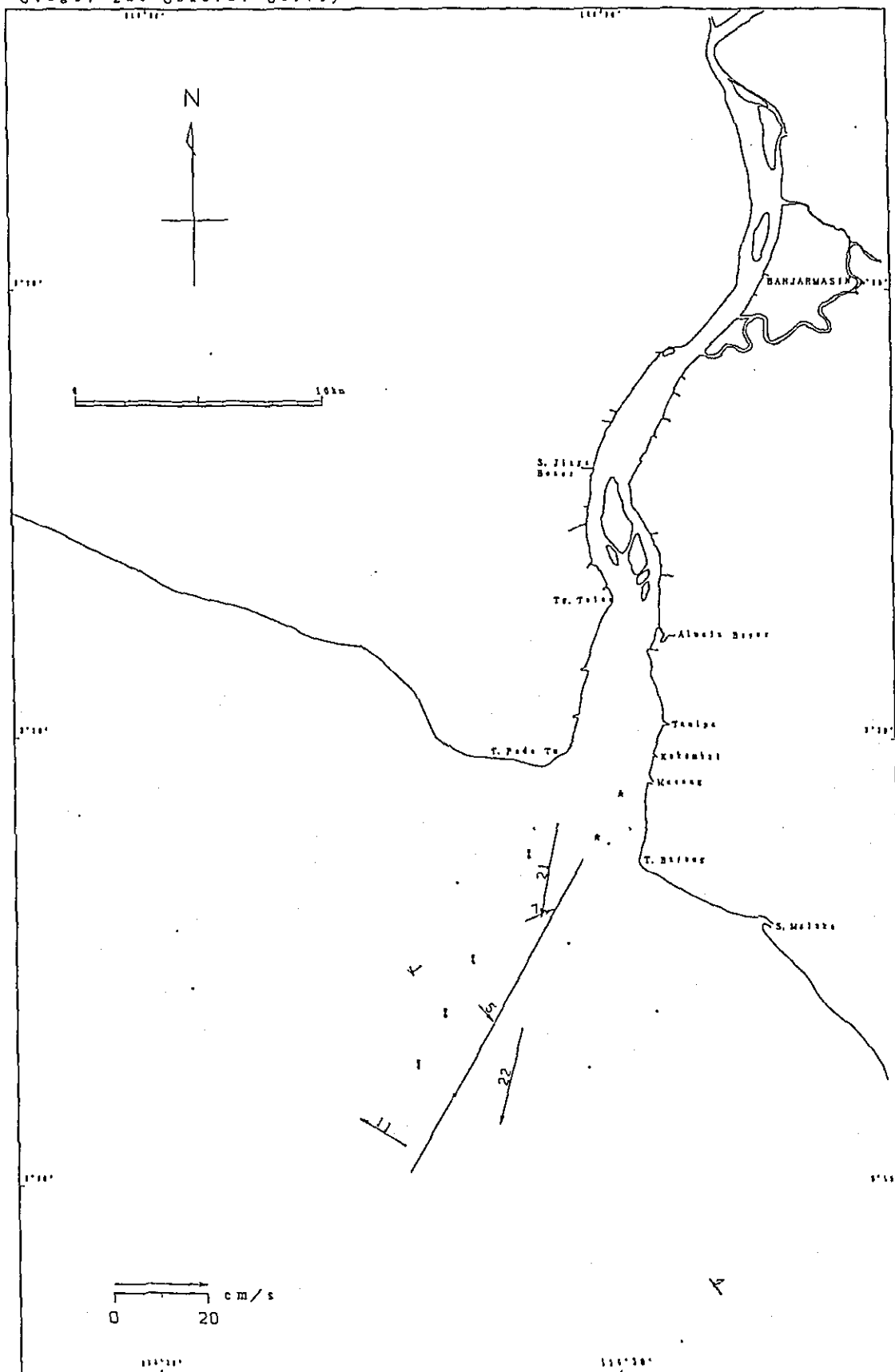


Fig. 3. 2-7 (2) Current Condition by 25 hours Running Mean

Date : 26th Jan. 1989
 Time : 12:00
 Stage: 2nd General Survey

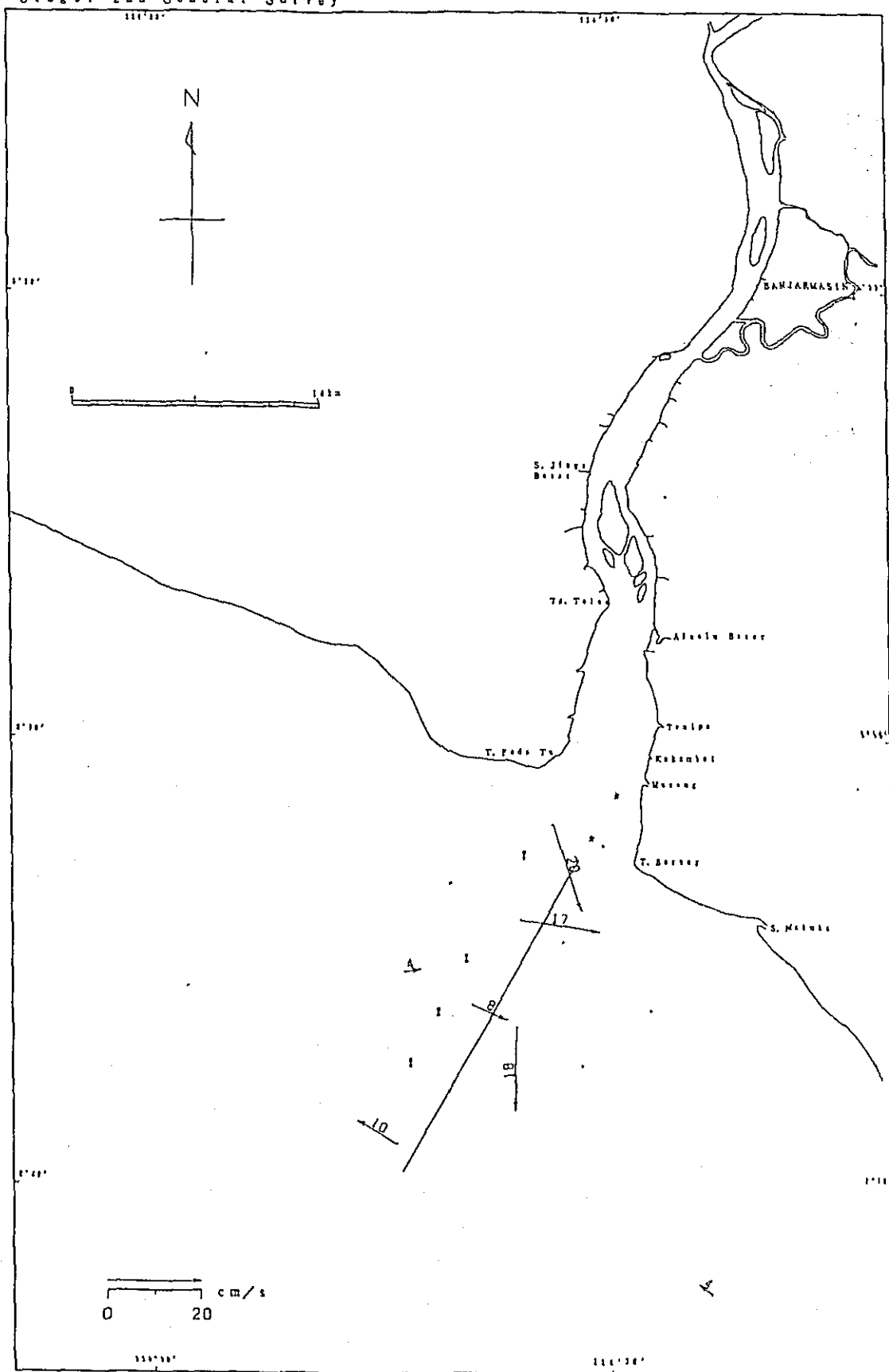


Fig. 3. 2-7 (3) Current Condition by 25 hours Running Mean

Date : 27th Jan. 1989
 Time : 0:00
 Stage: 2nd General Survey

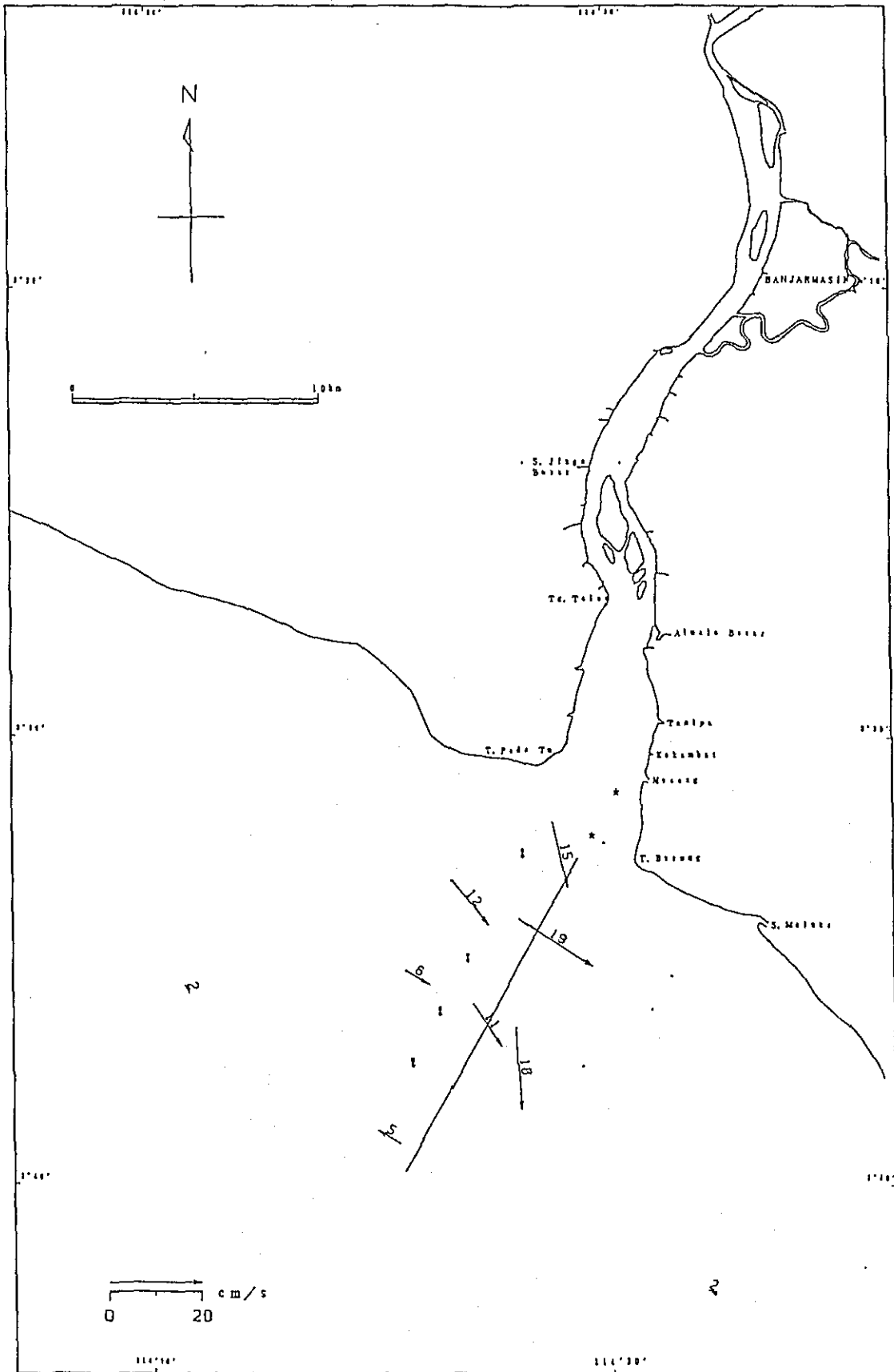


Fig. 3. 2-7 (74) Current Condition by 25 hours Running Mean

Date : 27th Jan. 1989
 Time : 12:00
 Stage: 2nd General Survey

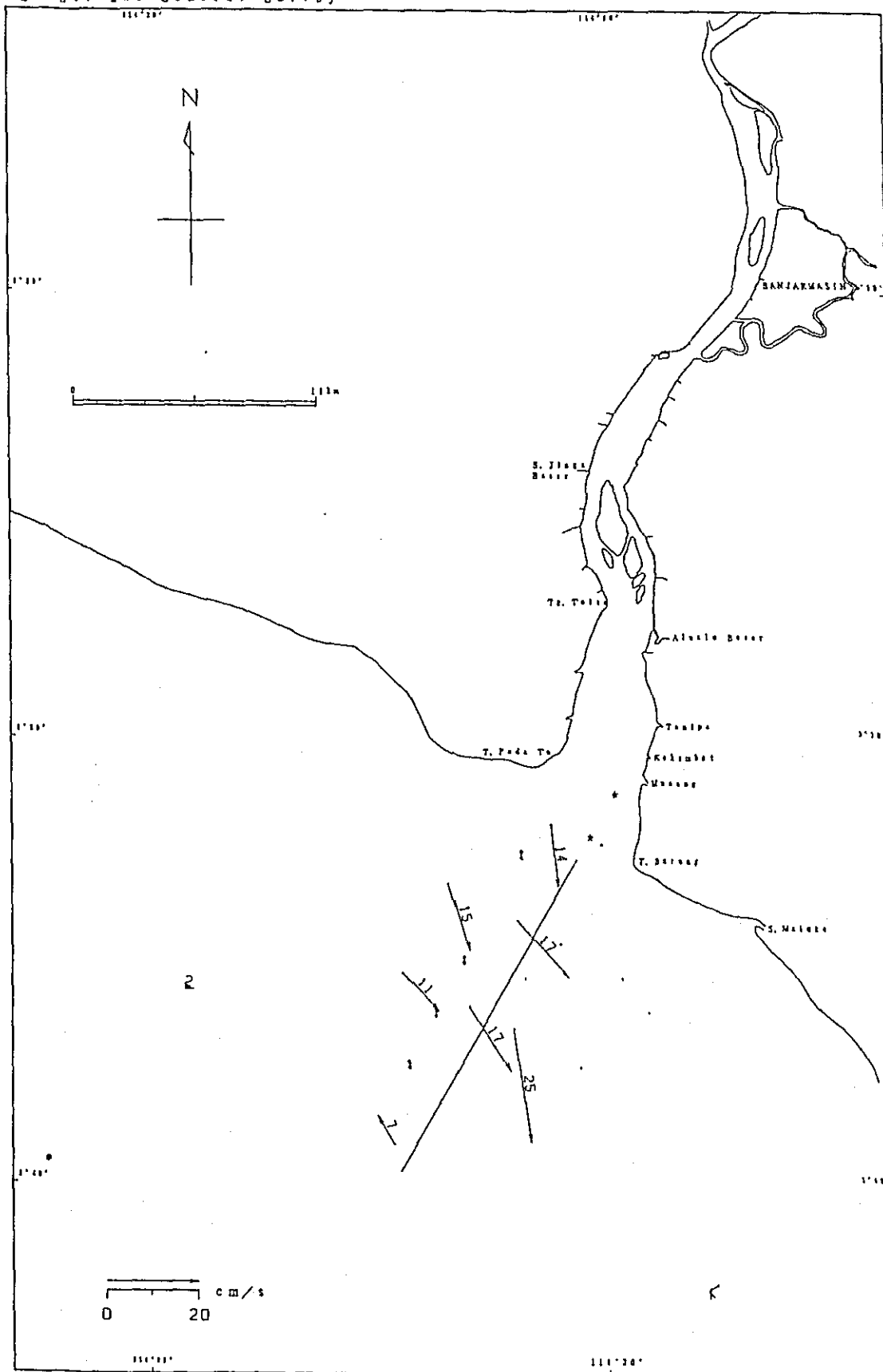


Fig. 3. 2-7 (5) Current Condition by 25 hours Running Mean

Date : 28th Jan. 1989
 Time : 0:00
 Stage: 2nd General Survey

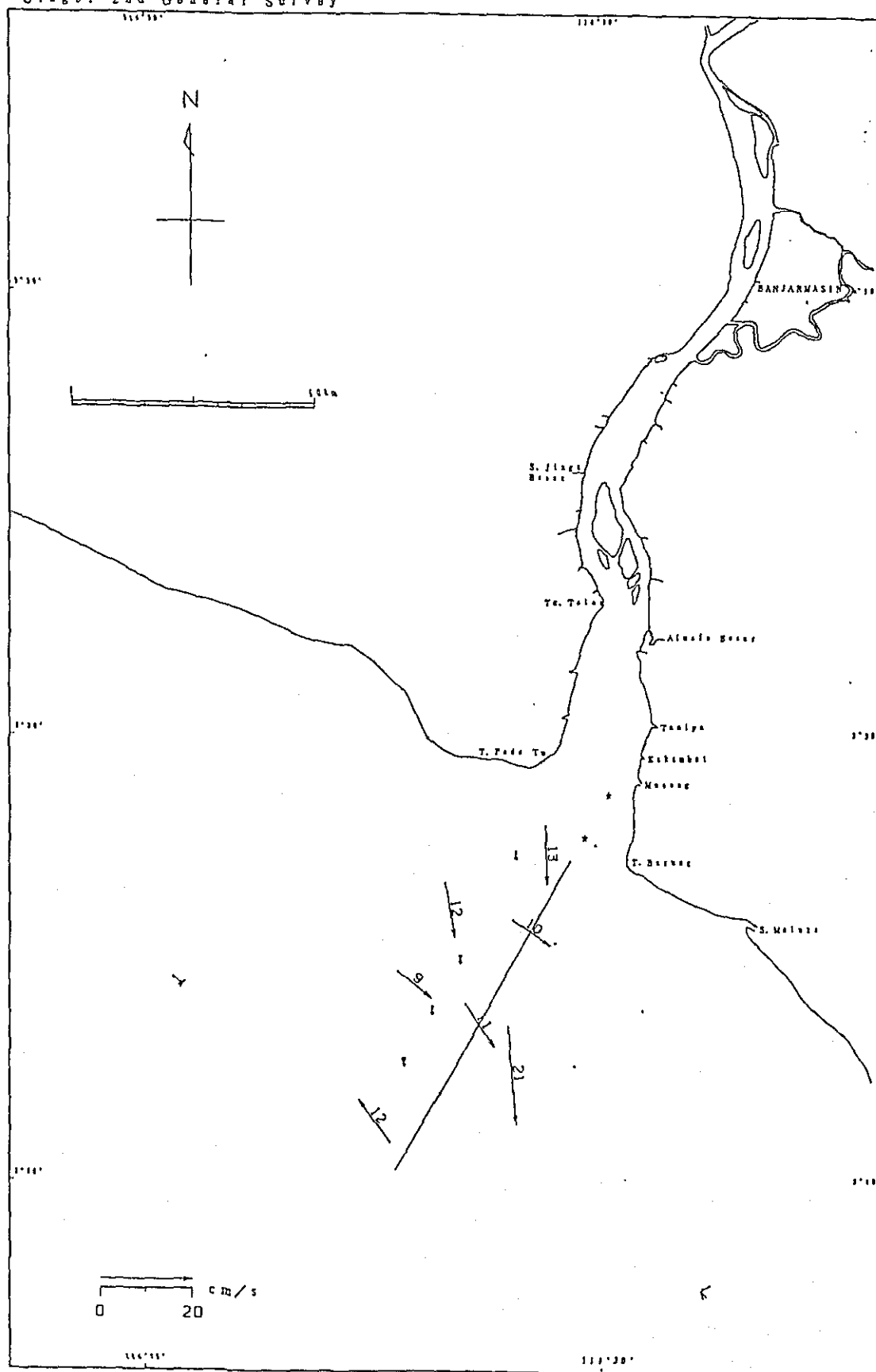


Fig. 3. 2-7 (76) Current Condition by 25 hours Running Mean

Date : 28th Jan. 1989
 Time : 12:00
 Stage : 2nd General Survey

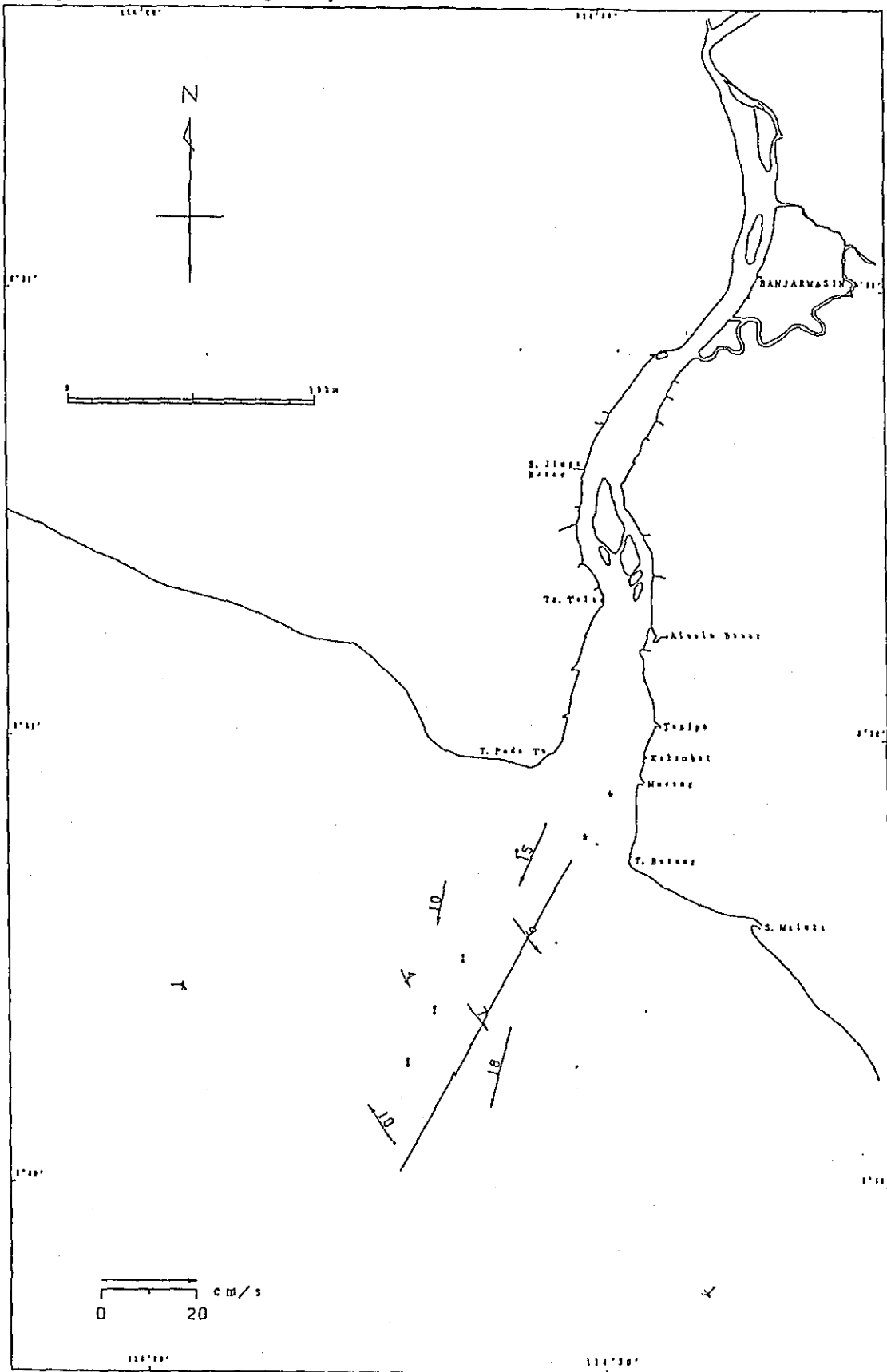


Fig. 3. 2-7 (II) Current Condition by 25 hours Running Mean

Date : 29th Jan. 1989
 Time : 0:00
 Stage: 2nd General Survey

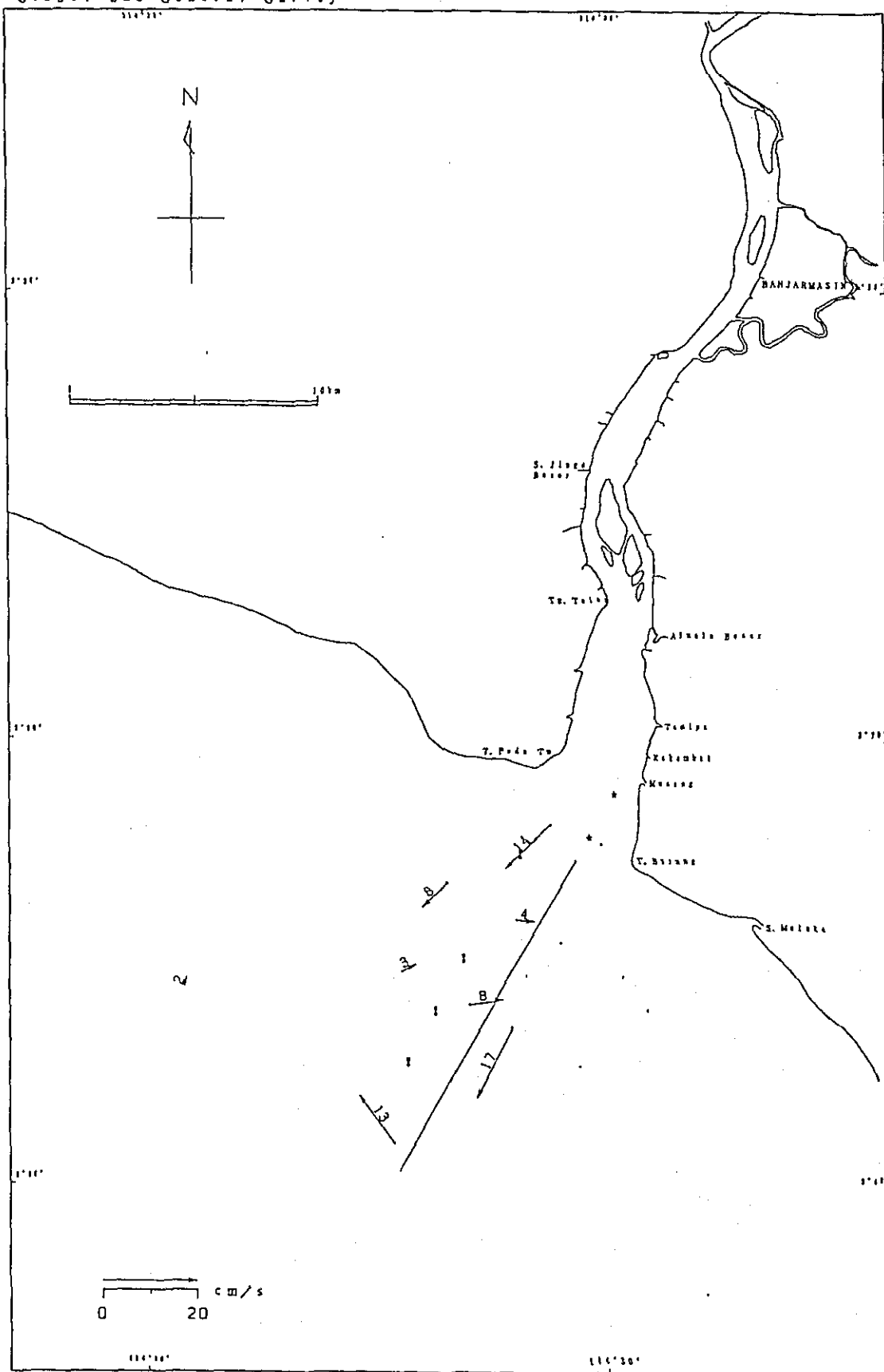


Fig. 3. 2-7 (78) Current Condition by 25 hours Running Mean

Date : 29th Jan. 1989
 Time : 12:00
 Stage: 2nd General Survey

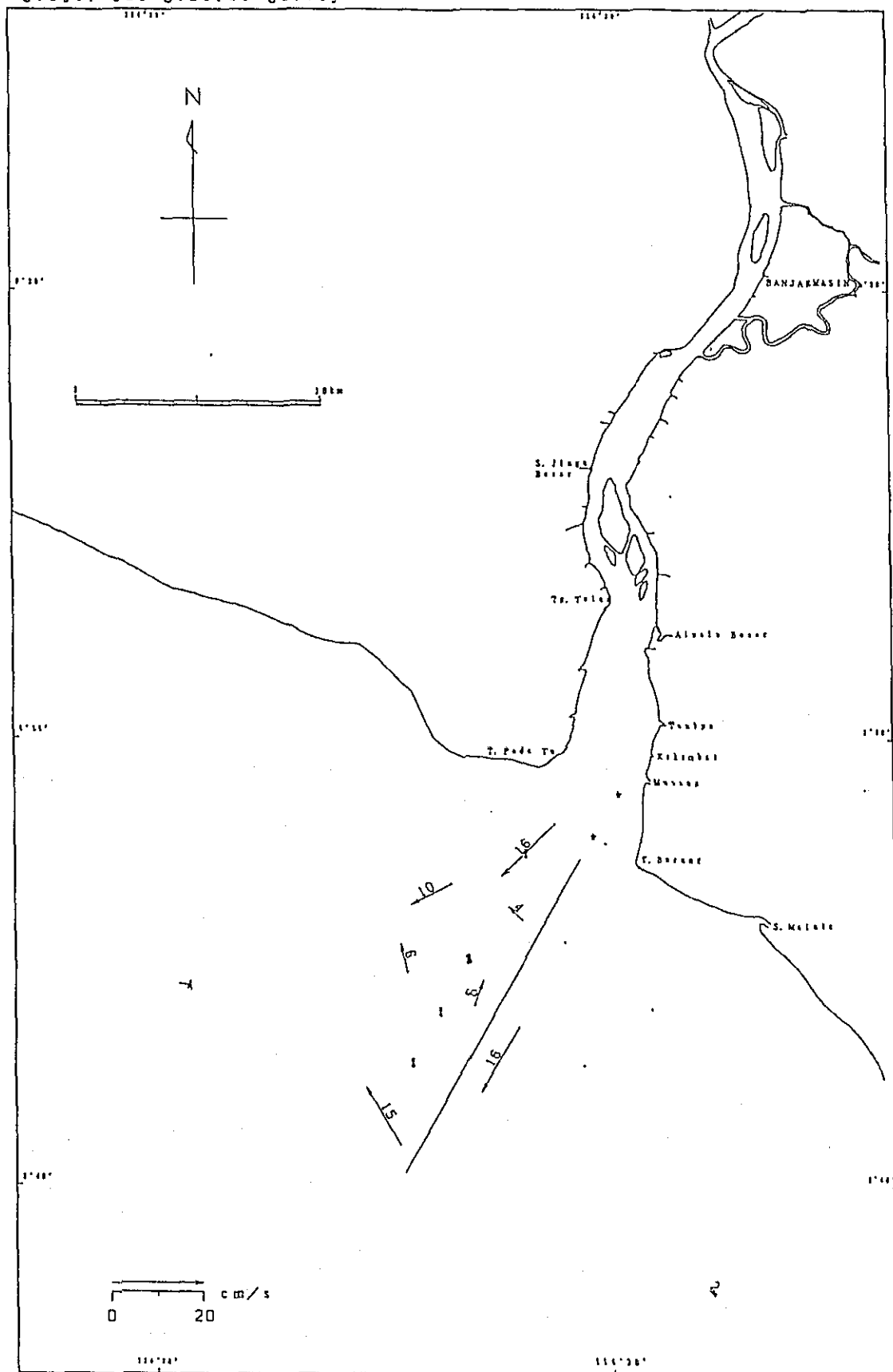


Fig. 3. 2-7 (79) Current Condition by 25 hours Running Mean

Date : 30th Jan. 1989
 Time : 0:00
 Stage: 2nd General Survey

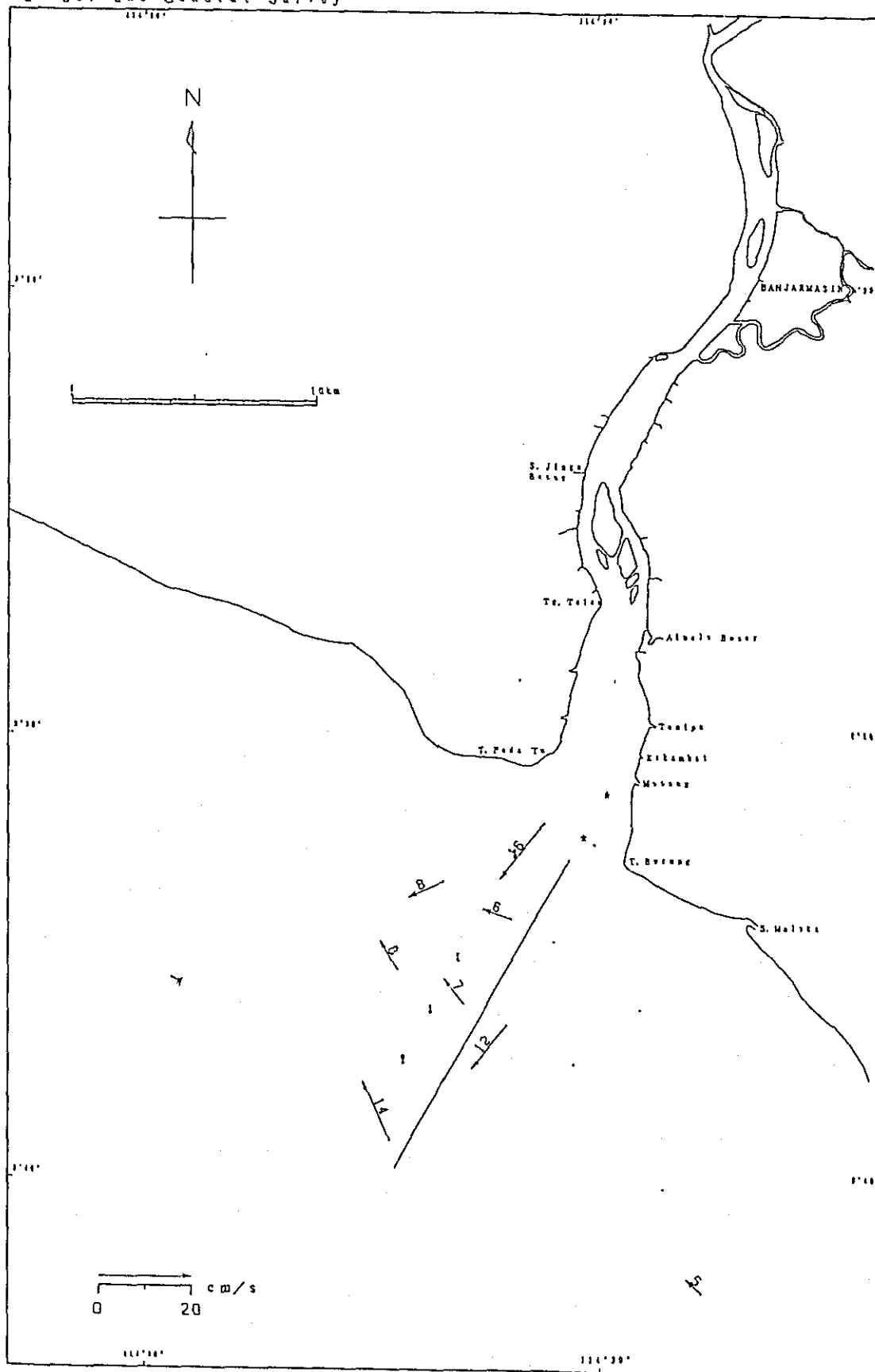


Fig. 3. 2-7 (2) Current Condition by 25 hours Running Mean

Map of the Banjarmasin area showing the coastline, major roads, and various locations. The map includes a north arrow, a scale bar (0 to 20 cm/s), and a coordinate grid. Key locations labeled include Banjarmasin, S. Jangk, Bazar, T. Tola, T. Poda T. Tola, T. Bazar, S. Mulla, T. Bazar, and S. Mulla. A large area is marked with a diagonal line and the number 14, and another area is marked with a diagonal line and the number 16. The map is titled 'BANJARMASIN' at the top.

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Date : 31th Jan, 1989
 Time : 0:00
 Stage: 2nd General Survey

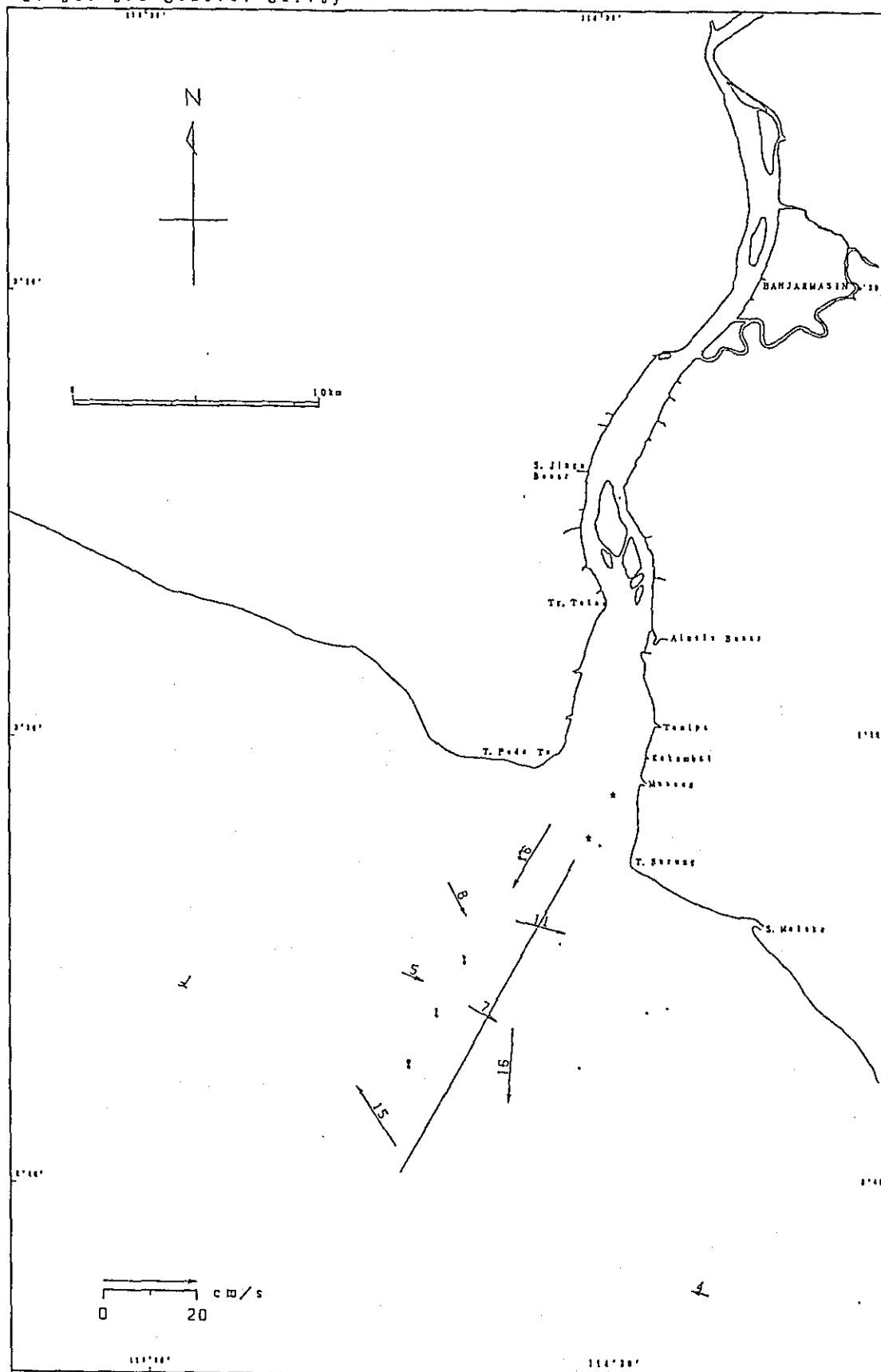


Fig. 3. 2-7 (82) Current Condition by 25 hours Running Mean

Date : 31th Jan. 1989
 Time : 12:00
 Stage: 2nd General Survey

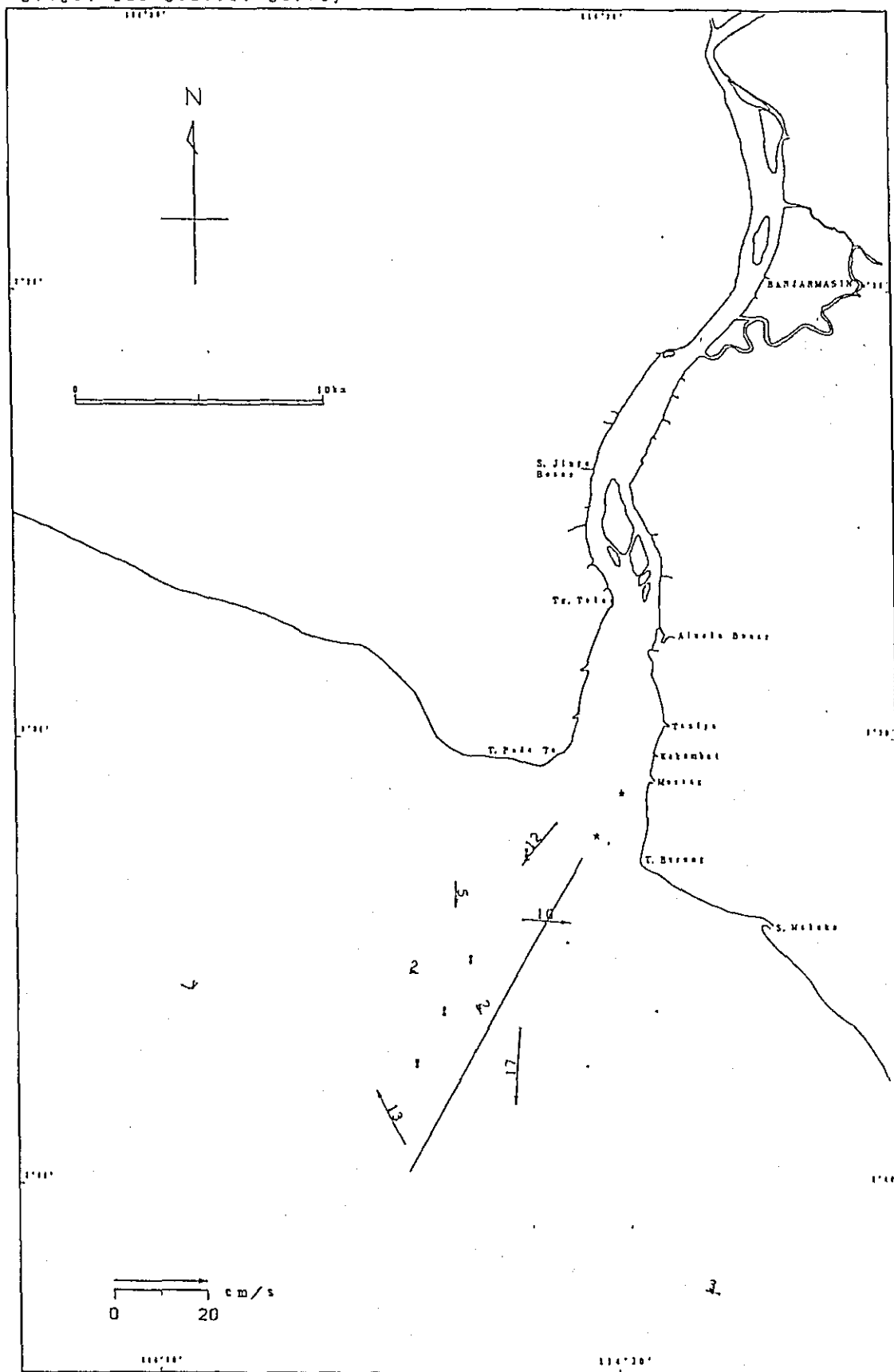


Fig. 3. 2-7 (83) Current Condition by 25 hours Running Mean

Date : 1st Feb. 1989
 Time : 0:00
 Stage : 2nd General Survey

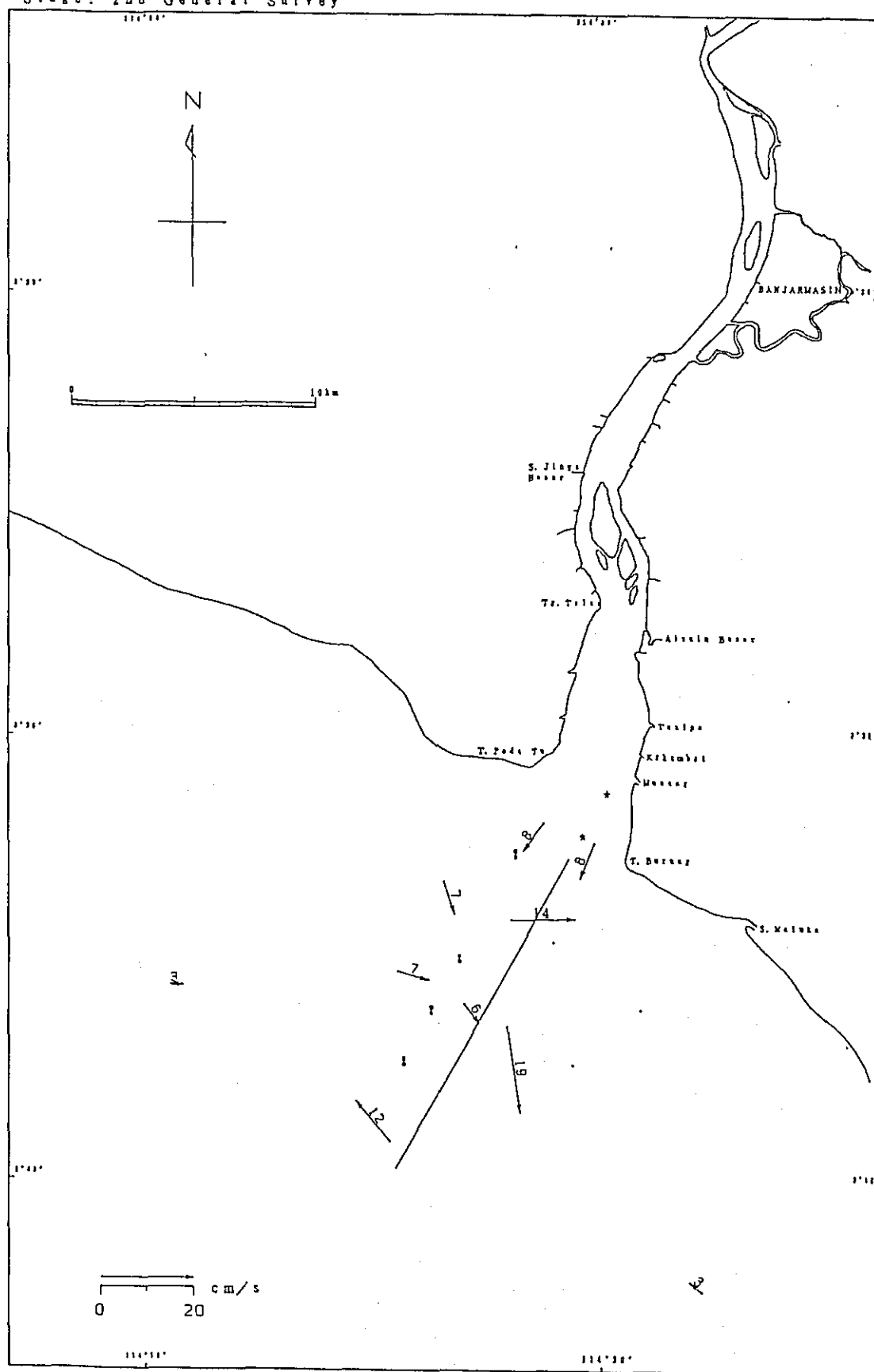


Fig. 3. 2-7 24) Current Condition by 25 hours Running Mean

Date : 1st Feb. 1989
 Time : 12:00
 Stage: 2nd General Survey

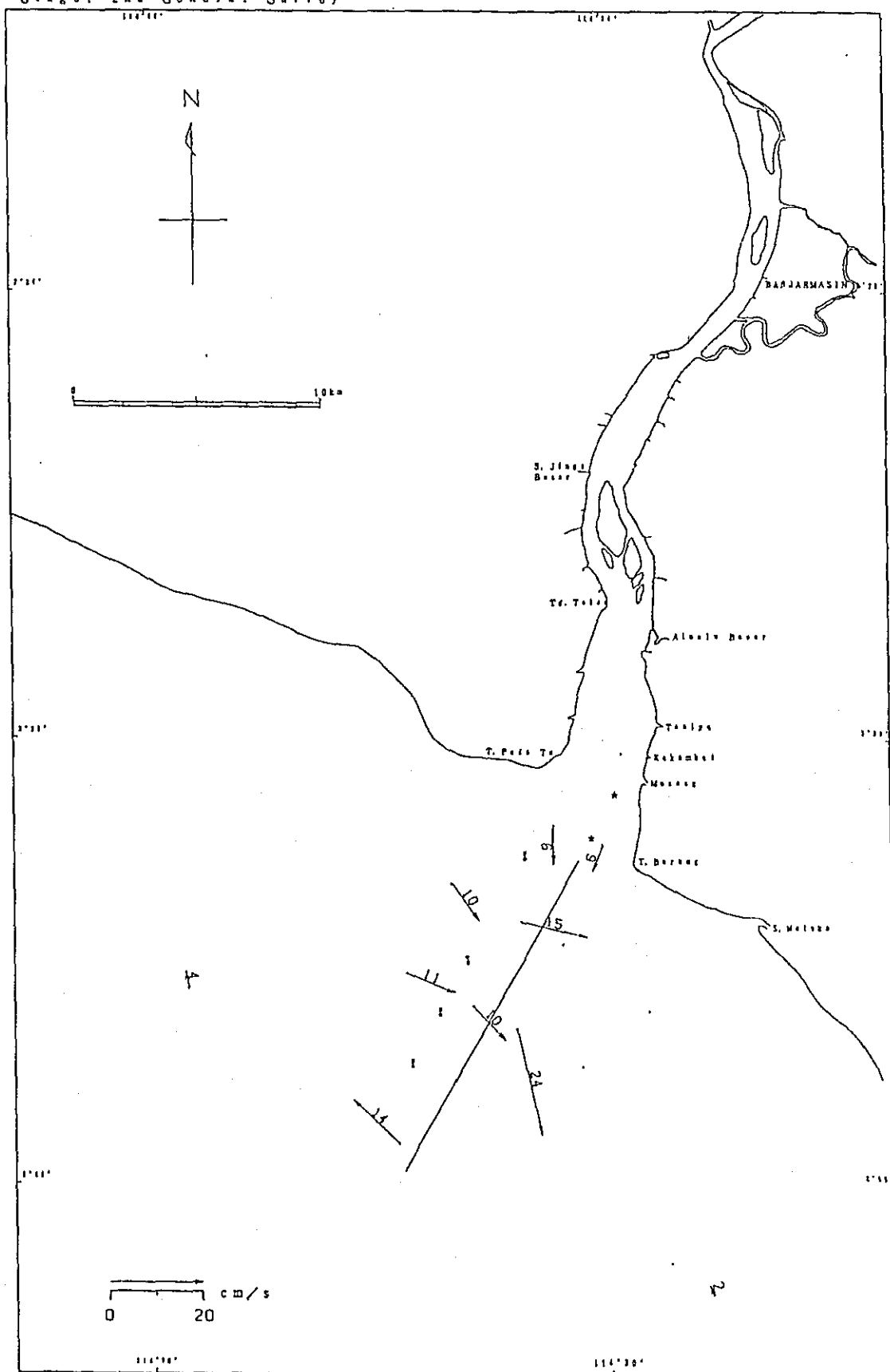


Fig. 3. 2-7 (85) Current Condition by 25 hours Running Mean

Date : 2nd Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

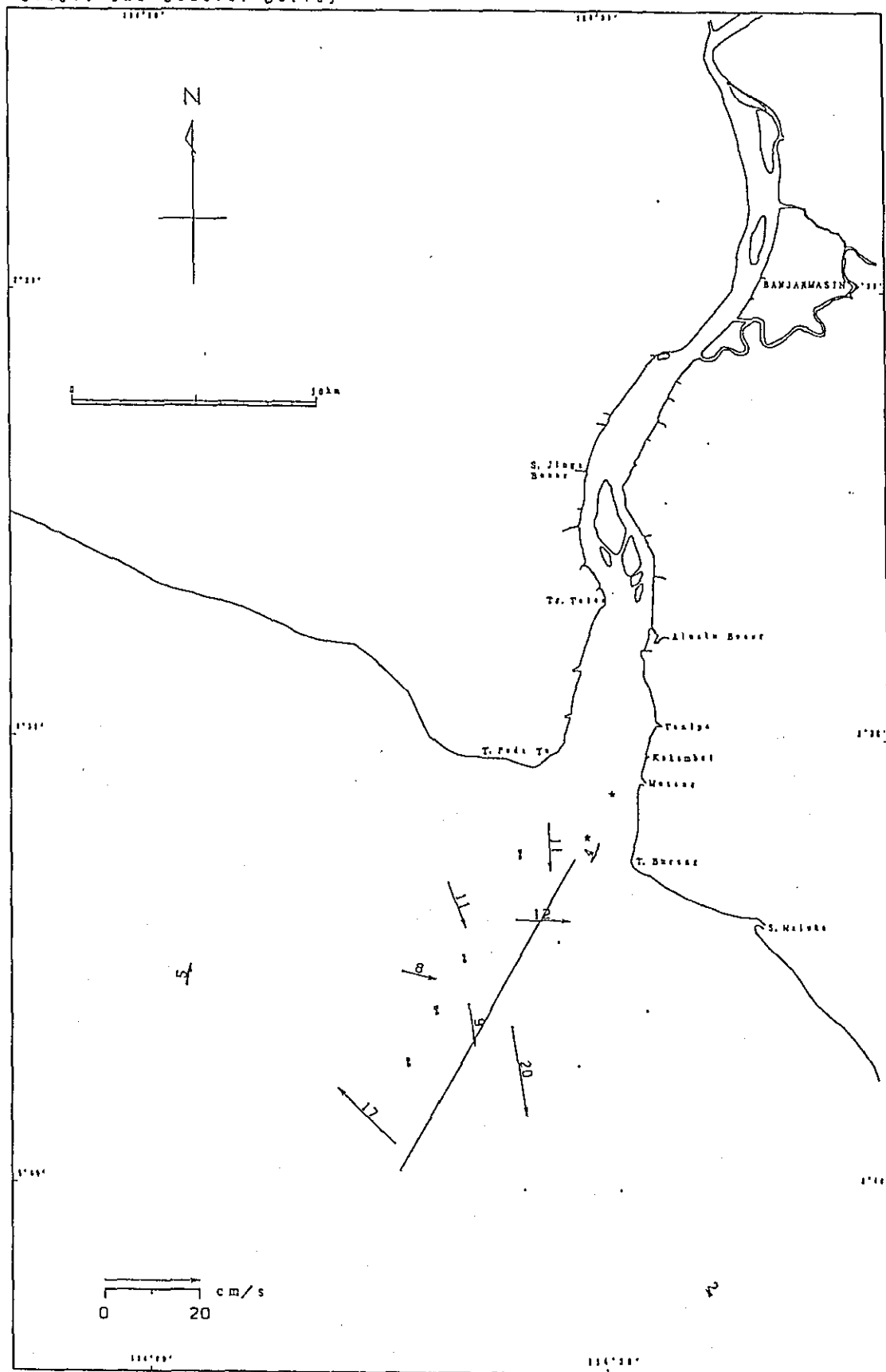


Fig. 3. 2-7 (86) Current Condition by 25 hours Running Mean

Date : 2nd Feb. 1989
 Time : 12:00
 Stage: 2nd General Survey

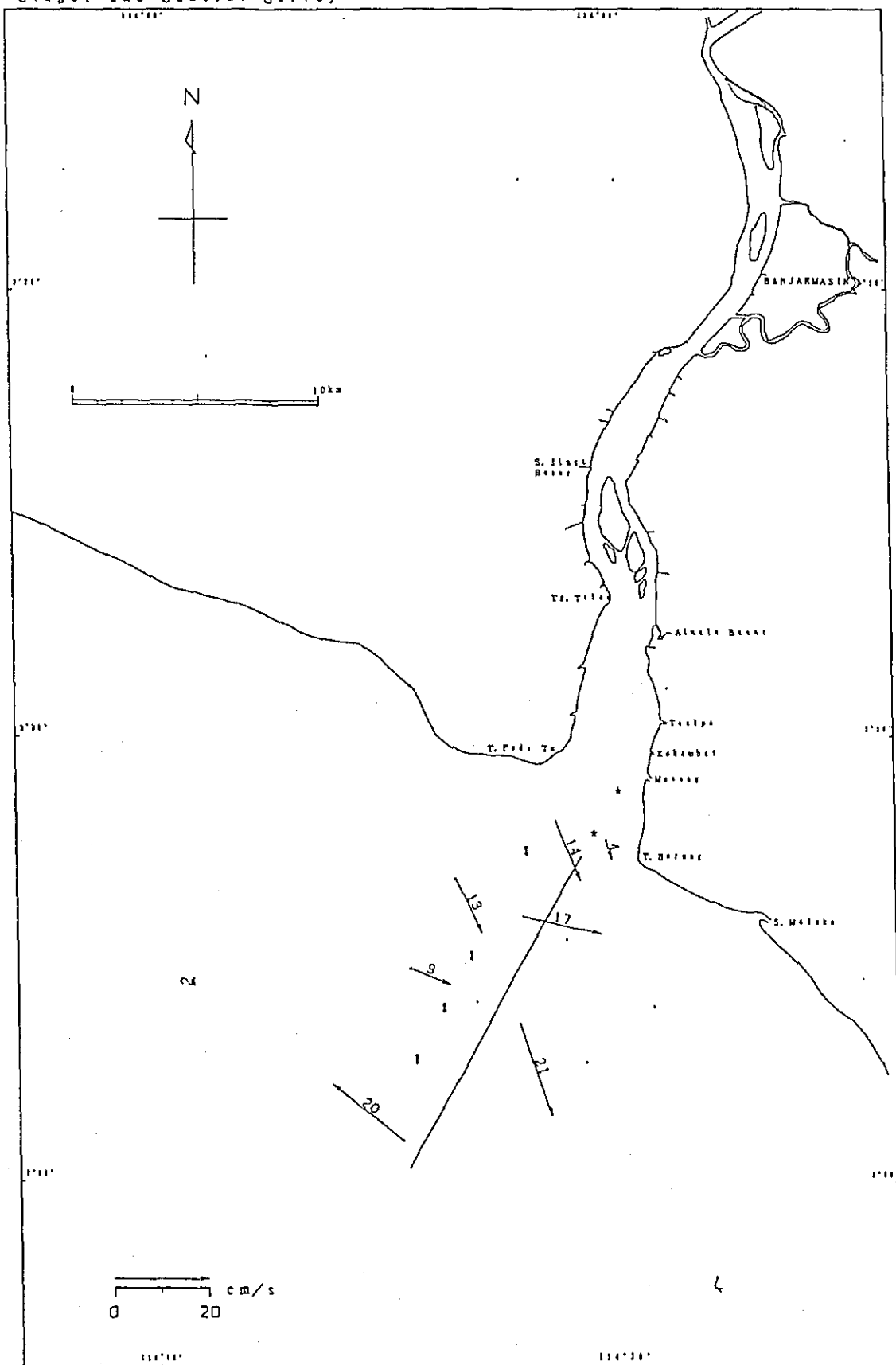


Fig. 3. 2-7 (87) Current Condition by 25 hours Running Mean

Date : 3rd Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

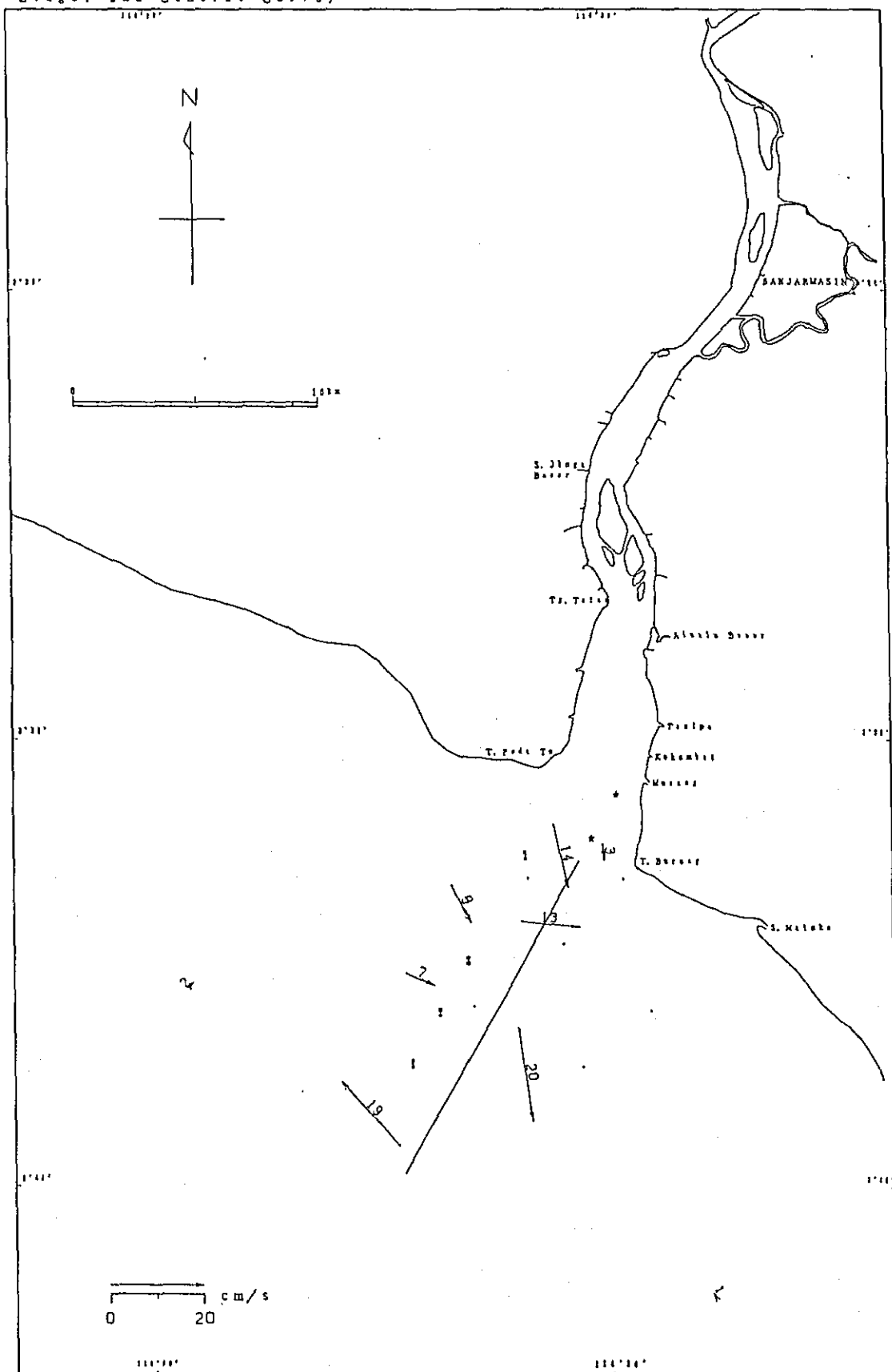


Fig. 3. 2-7 (3) Current Condition by 25 hours Running Mean

Date : 3rd Feb. 1989
 Time : 12:00
 Stage: 2nd General Survey

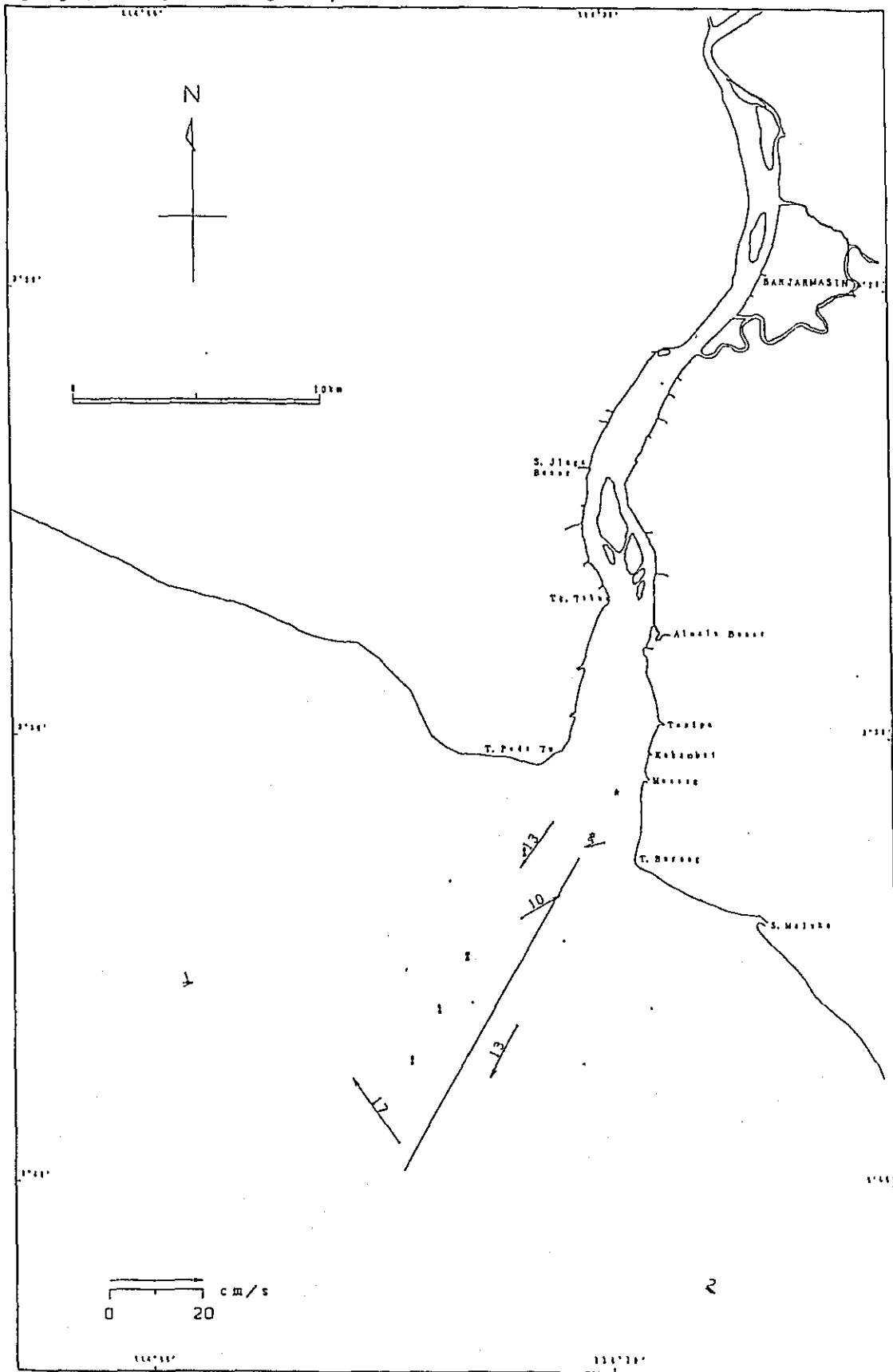


Fig. 3. 2-7 (89) Current Condition by 25 hours Running Mean

Date : 4th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

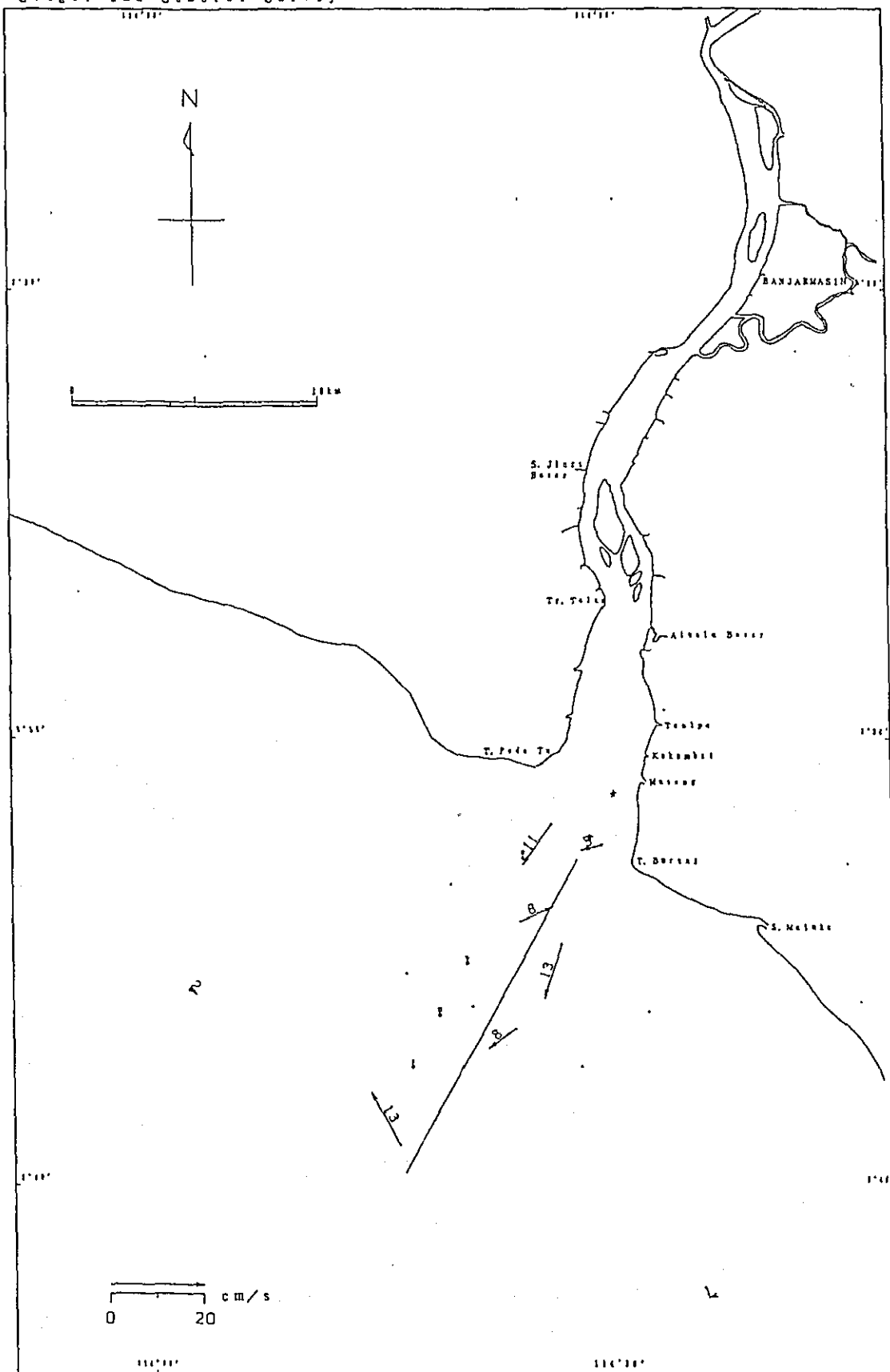


Fig. 3. 2-7 (8) Current Condition by 25 hours Running Mean

Date : 4th Feb. 1989
 Time : 12:00
 Stage: 2nd General Survey

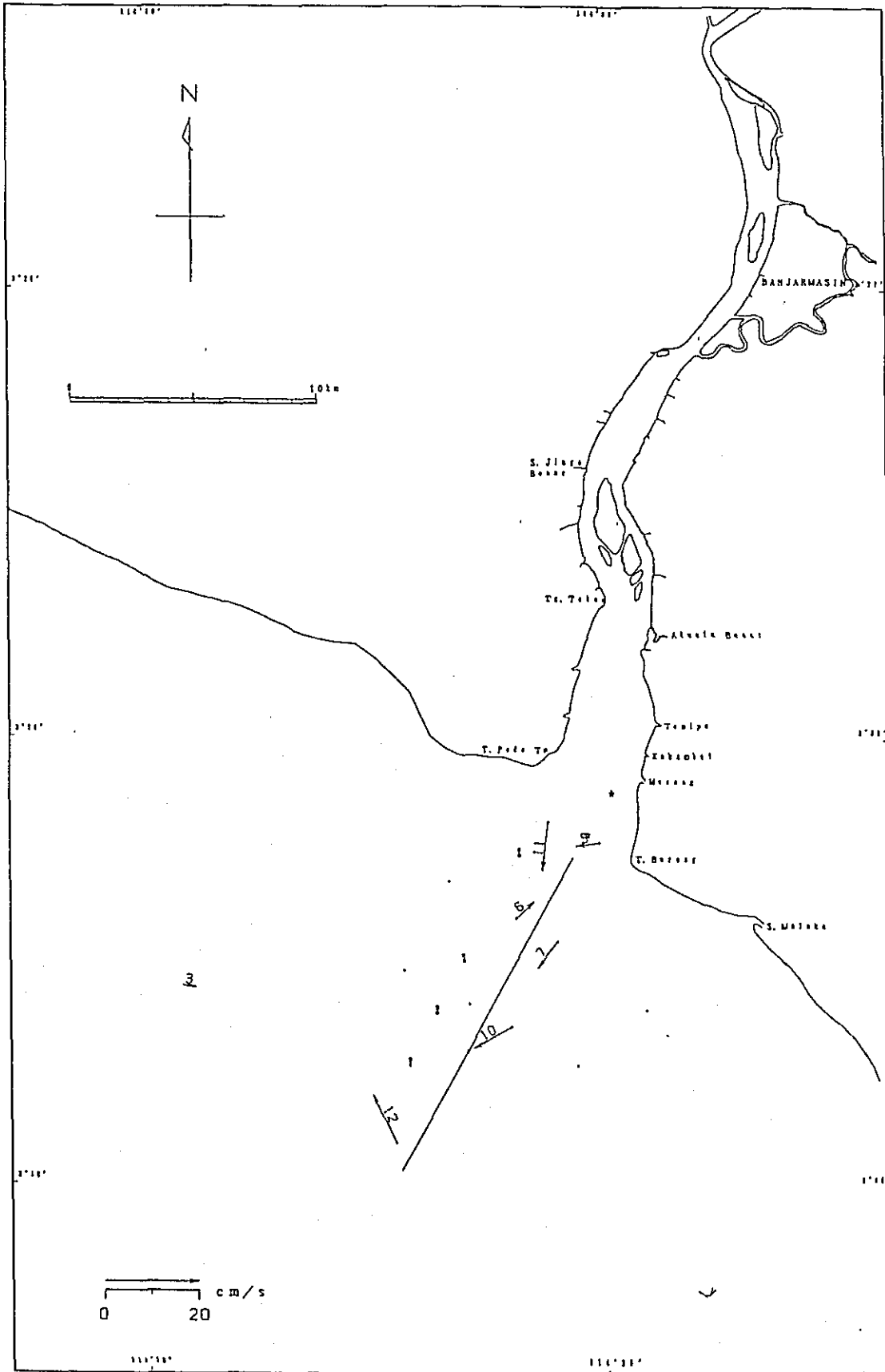


Fig. 3. 2-7 01) Current Condition by 25 hours Running Mean

Date : 5th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

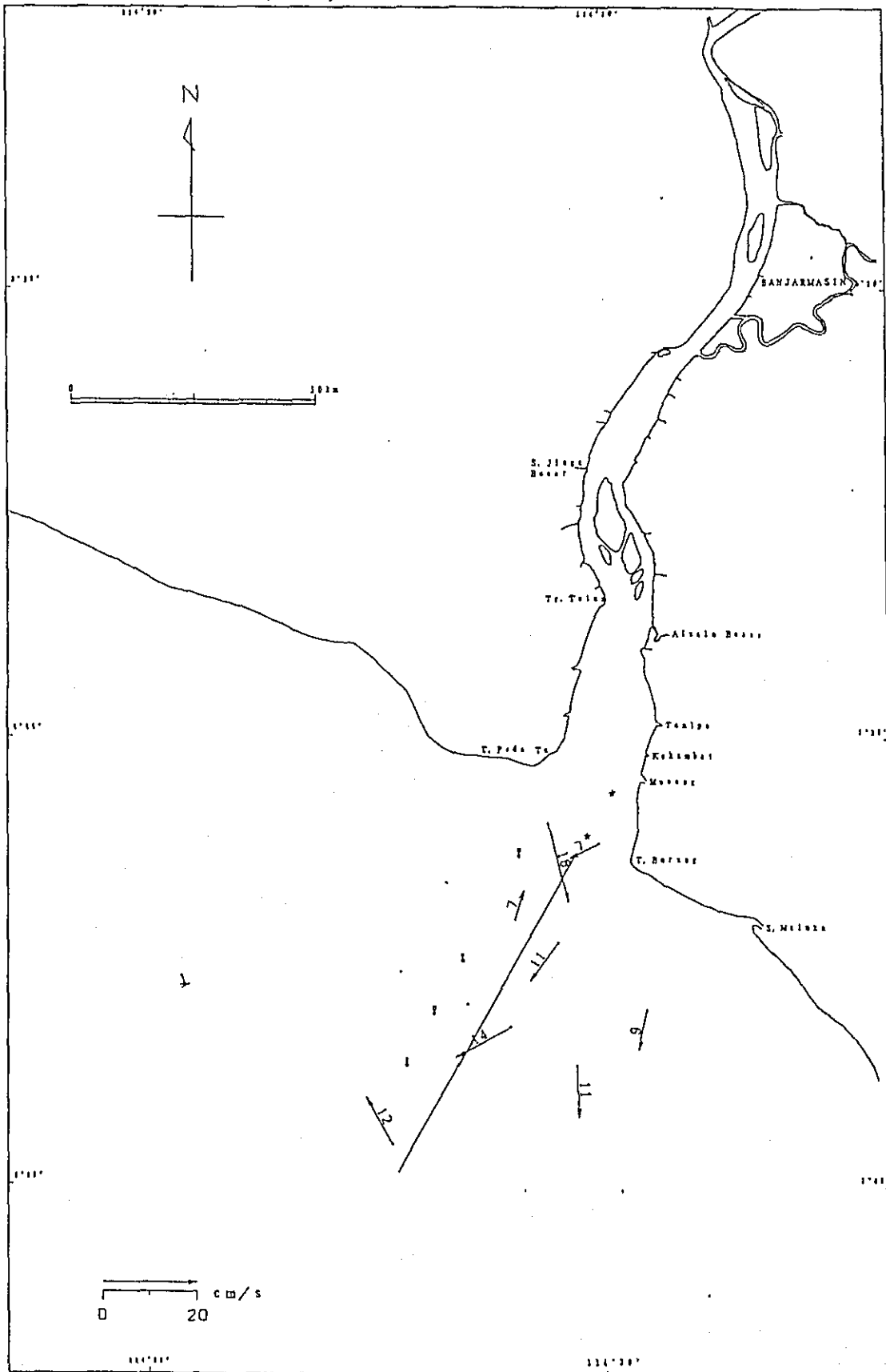


Fig. 3. 2-7 (2) - Current Condition by 25 hours Running Mean

Date : 5th Feb. 1989
 Time : 12:00
 Stage: 2nd General Survey

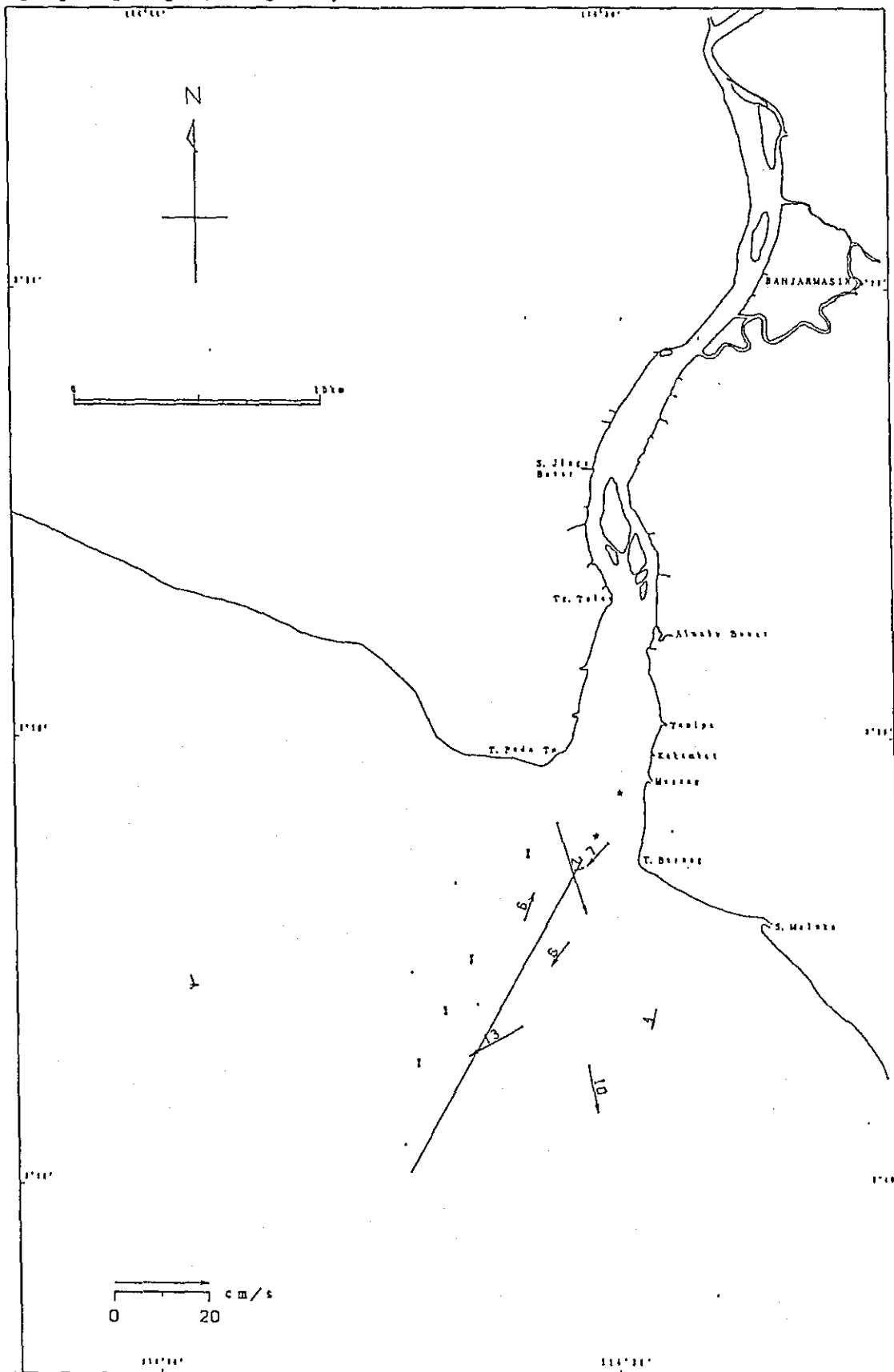


Fig. 3. 2-7 (3) Current Condition by 25 hours Running Mean

Date : 6th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

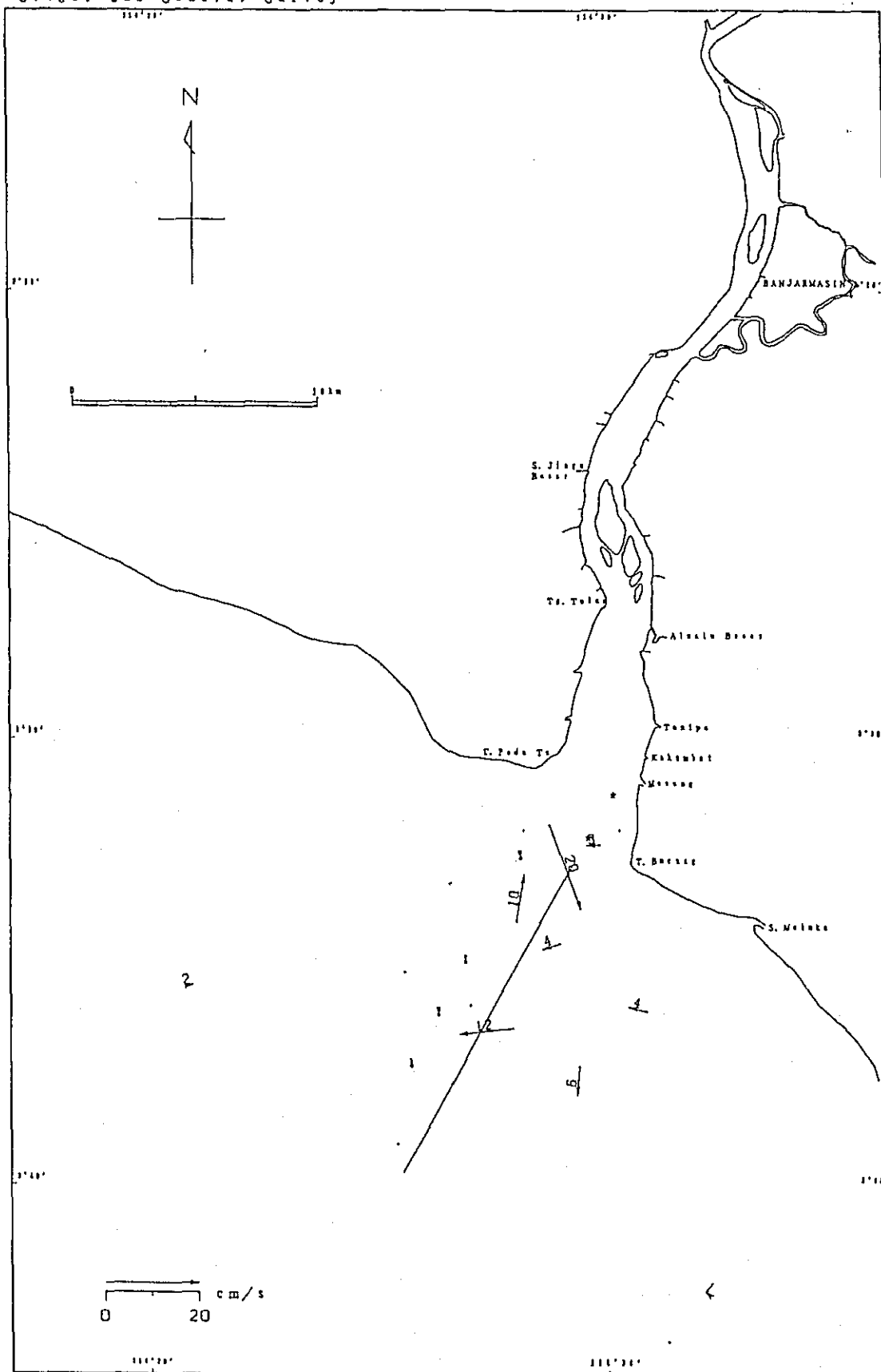


Fig. 3. 2-7 90 Current Condition by 25 hours Running Mean

Date : 6th Feb. 1989
 Time : 12:00
 Stage: 2nd General Survey

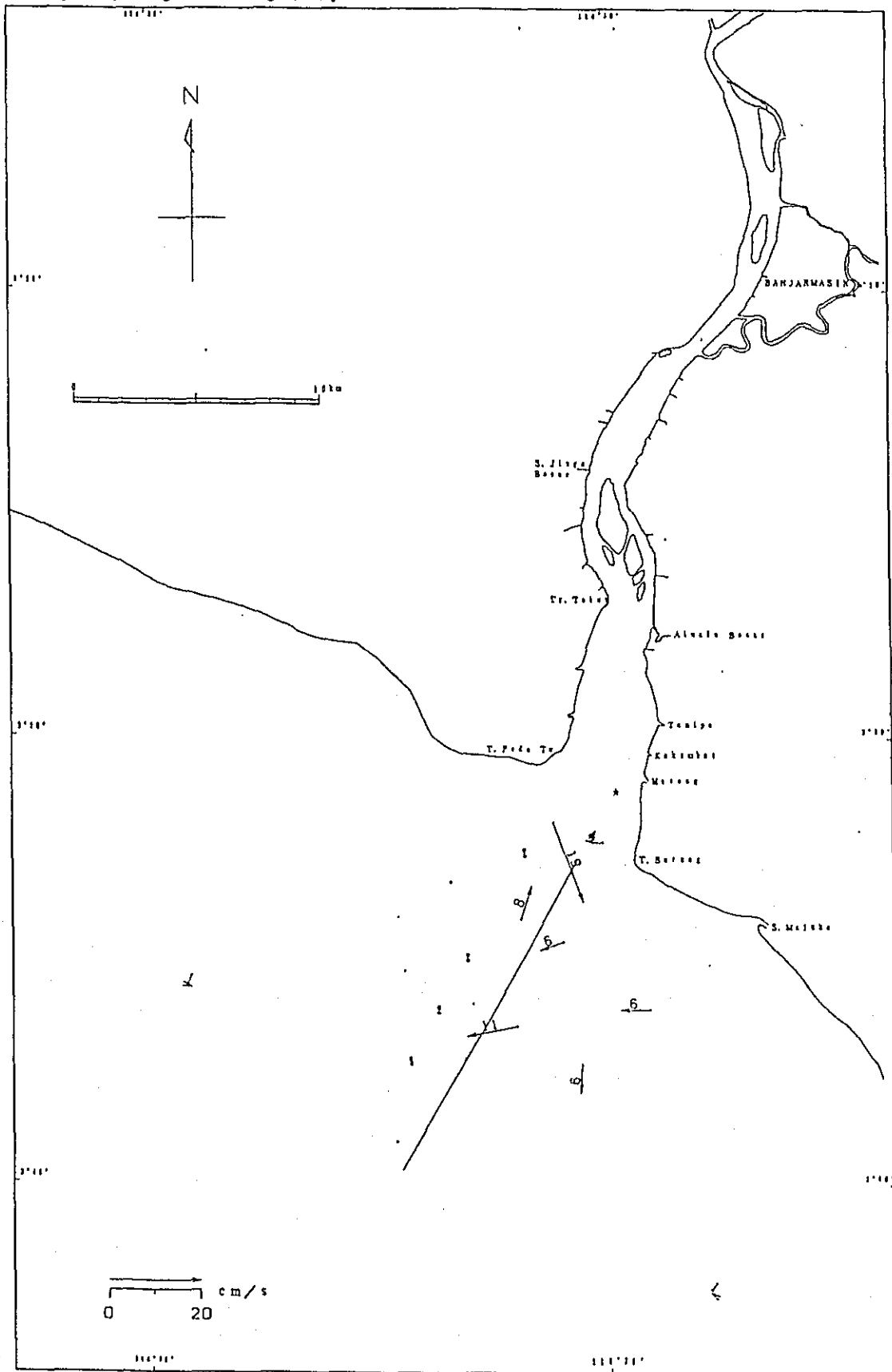


Fig. 3. 2-7 (5) Current Condition by 25 hours Running Mean

Date : 7th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

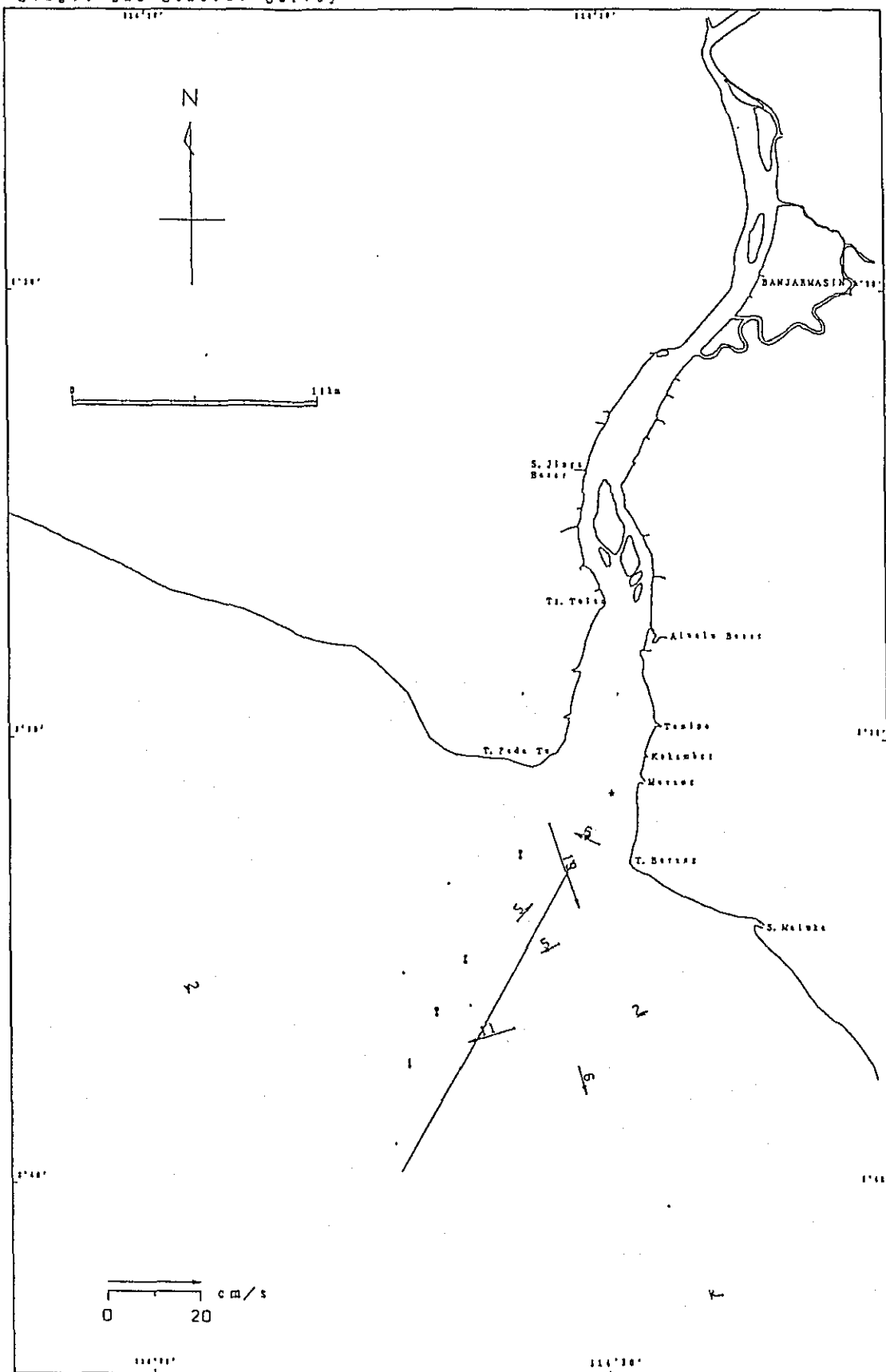


Fig. 3. 2-7 (56) Current Condition by 25 hours Running Mean

Date : 7th Feb. 1989
 Time : 12:00
 Stage: 2nd General Survey

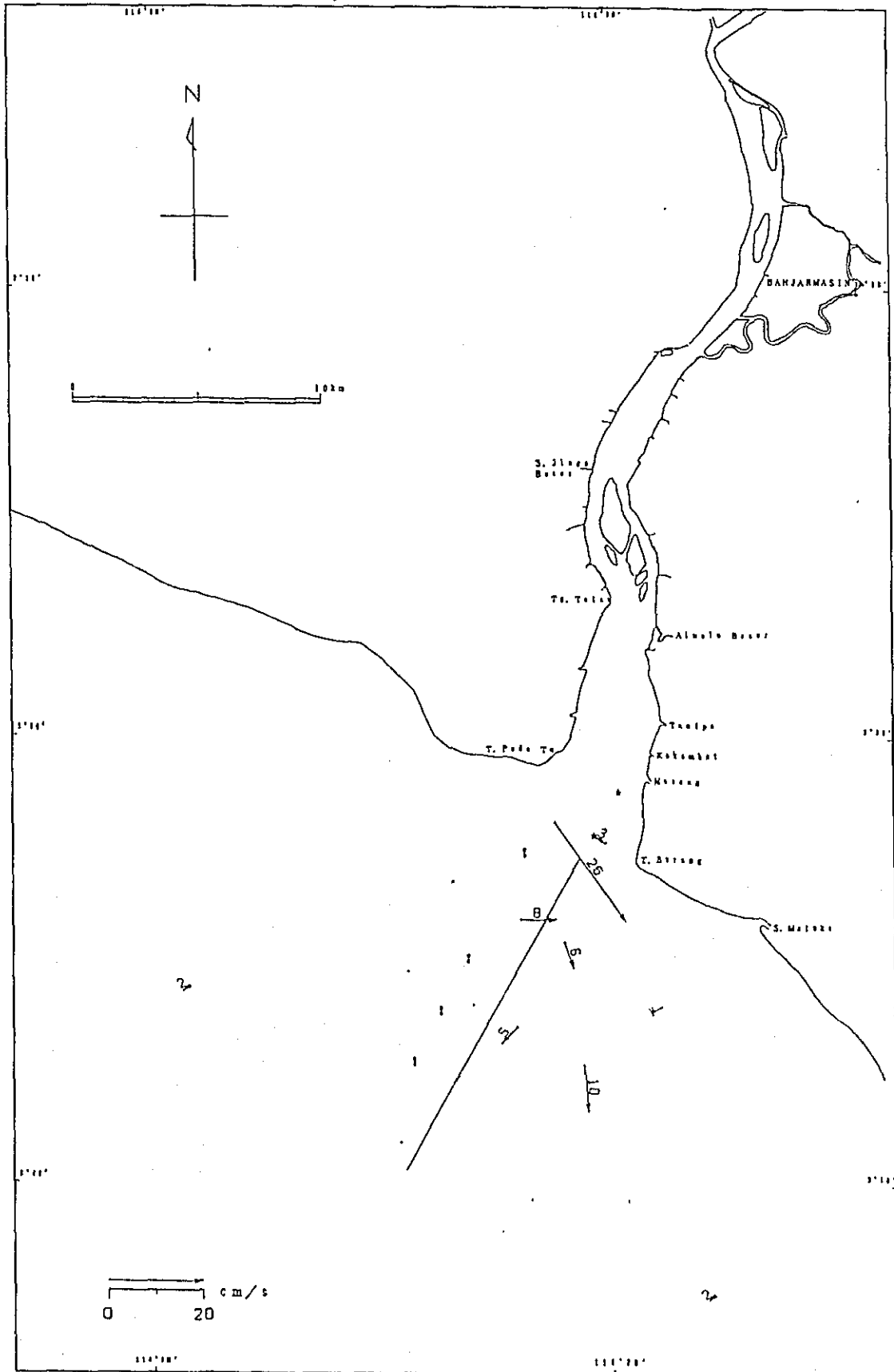


Fig. 3. 2-7 (9) Current Condition by 25 hours Running Mean

Date : 8th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

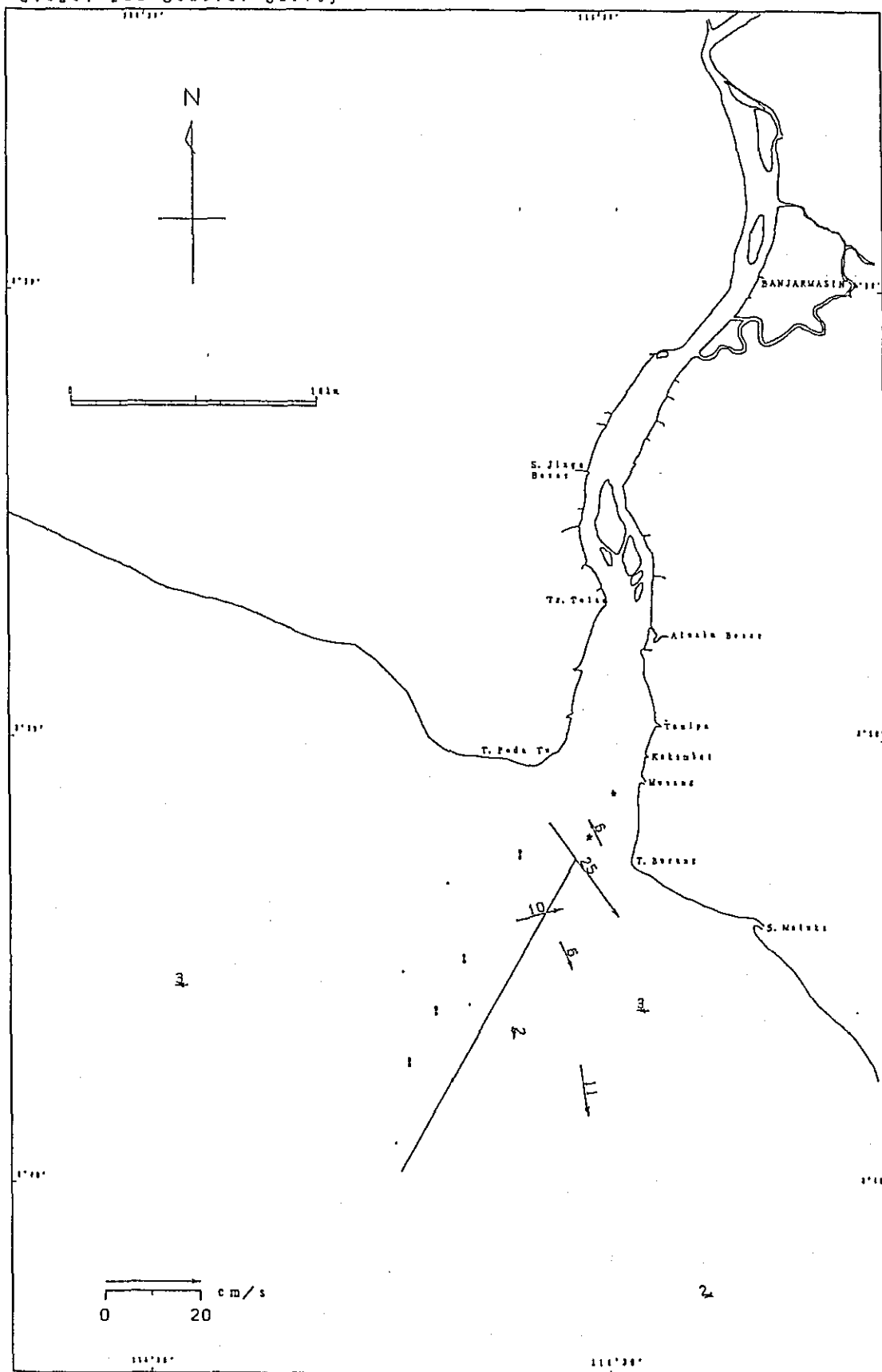


Fig. 3. 2-7 (3) Current Condition by 25 hours Running Mean

Date : 8th Feb. 1989
 Time : 12:00
 Stage: 2nd General Survey

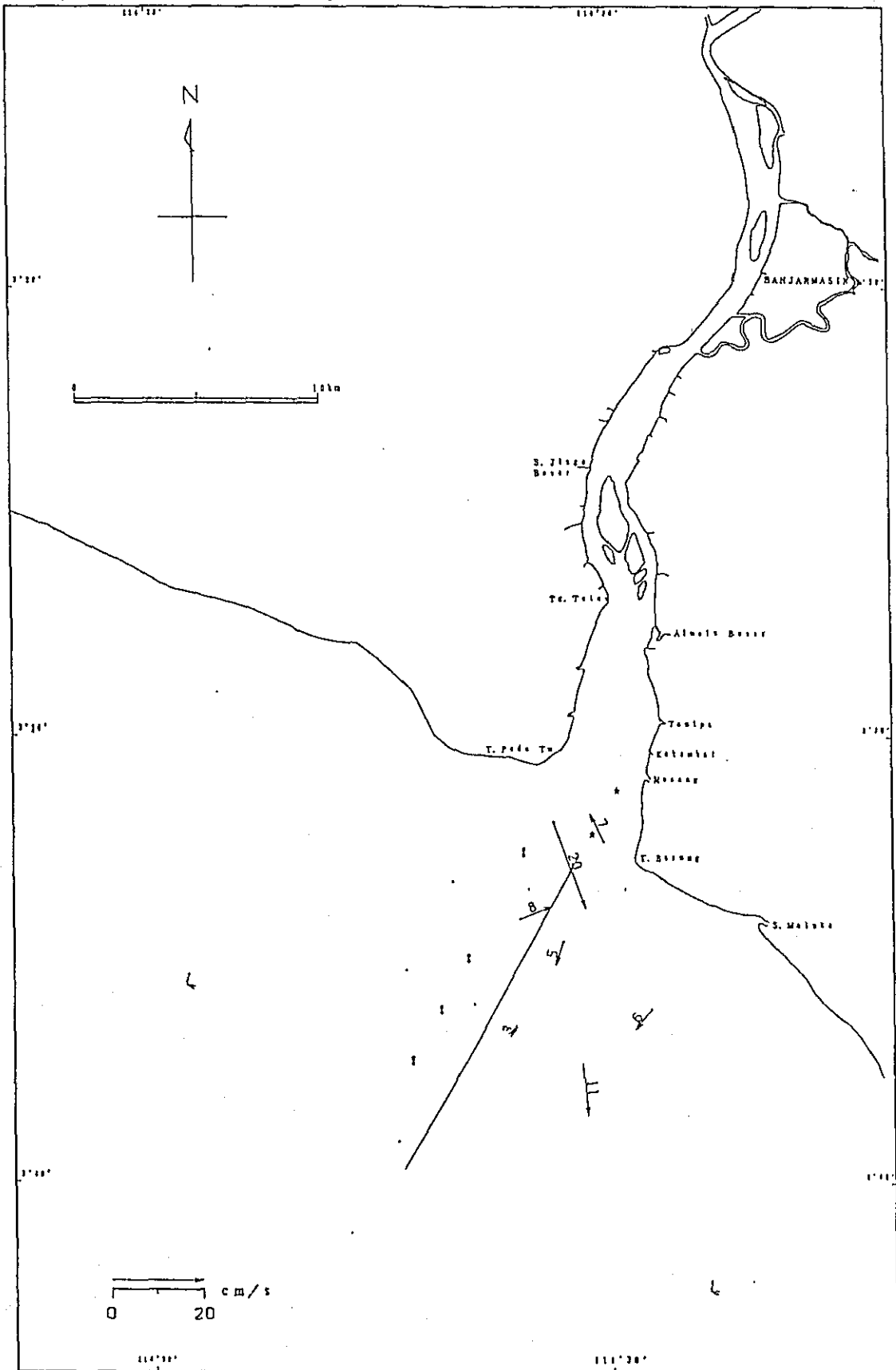


Fig. 3. 2-7 (99) Current Condition by 25 hours Running Mean

Date : 9th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

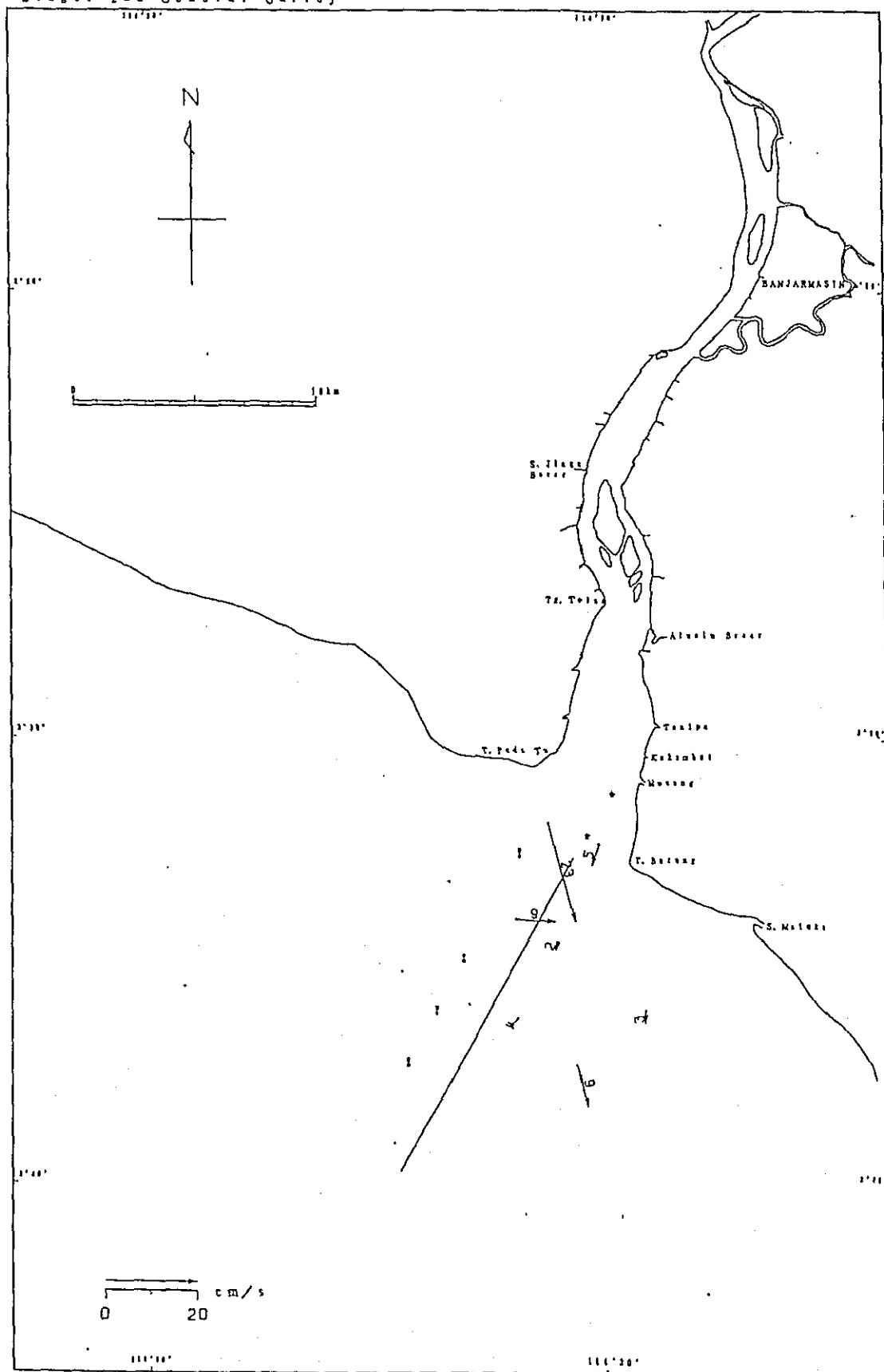


Fig. 3. 2-7 (00) Current Condition by 25 hours Running Mean

Date : 9th Feb. 1989
 Time : 12:00
 Stage : 2nd General Survey

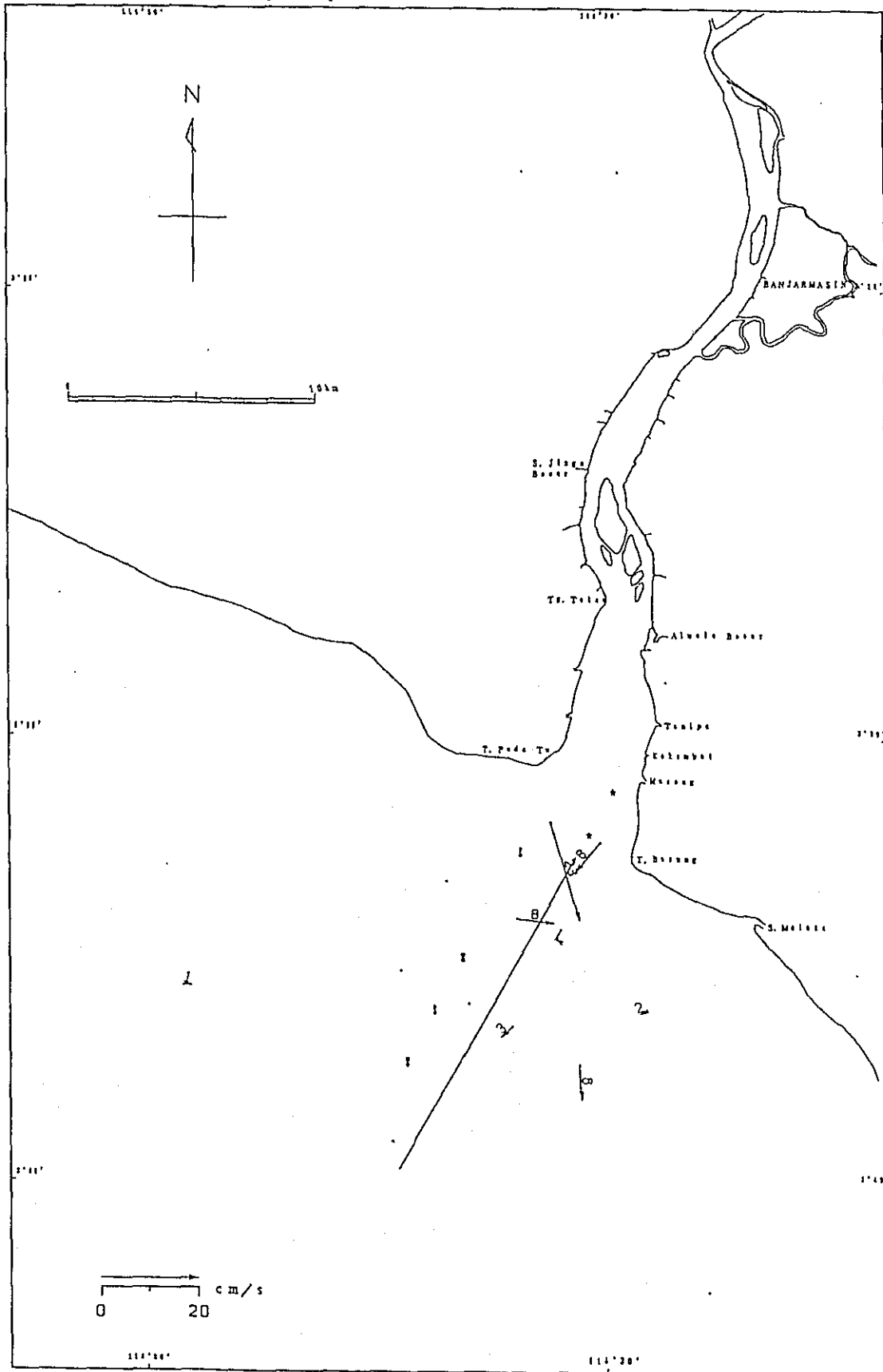


Fig. 3. 2-7 (00) Current Condition by 25 hours Running Mean

Date : 10th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

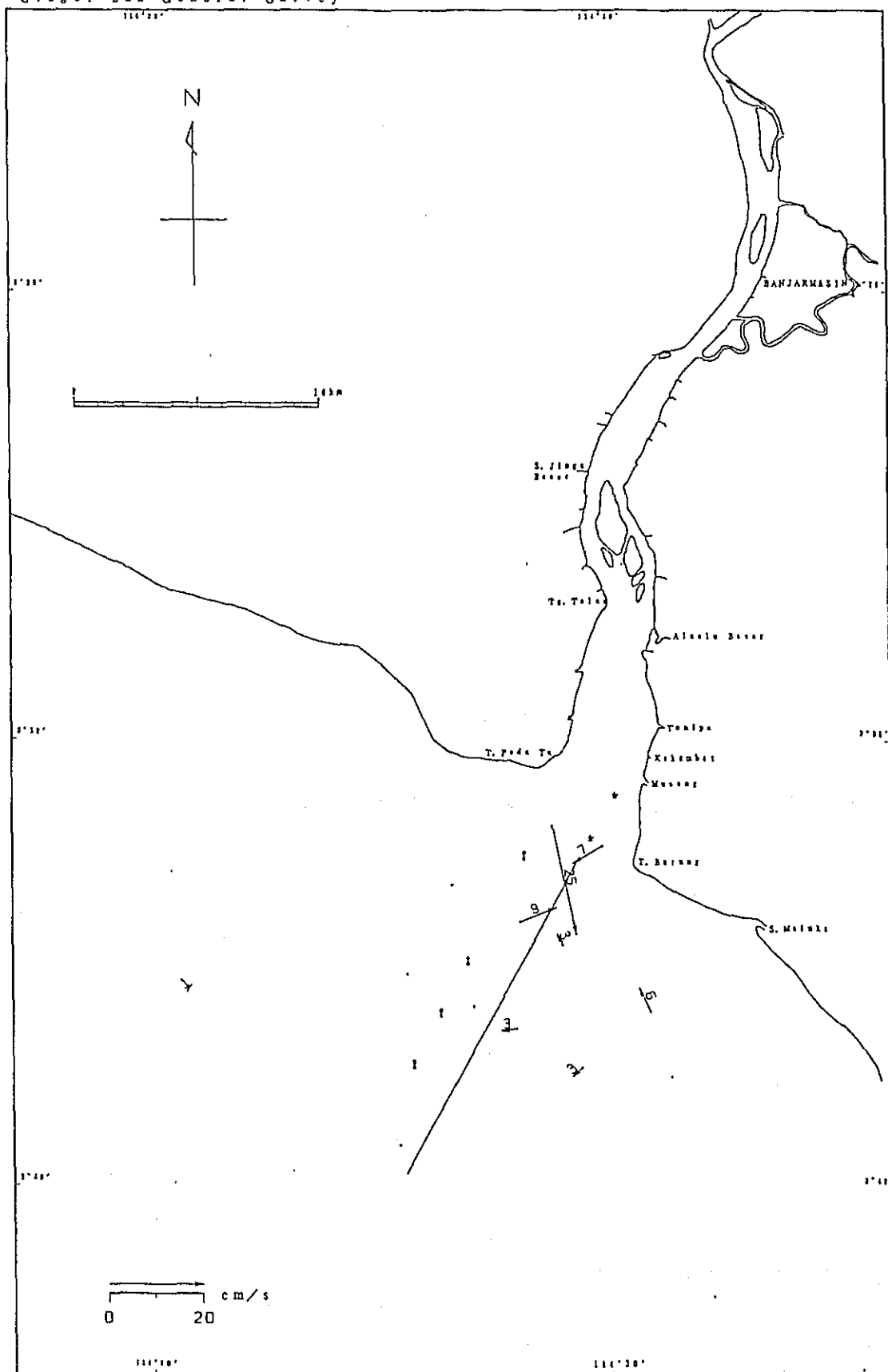


Fig. 3. 2-7 (102) Current Condition by 25 hours Running Mean.

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Date : 11th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

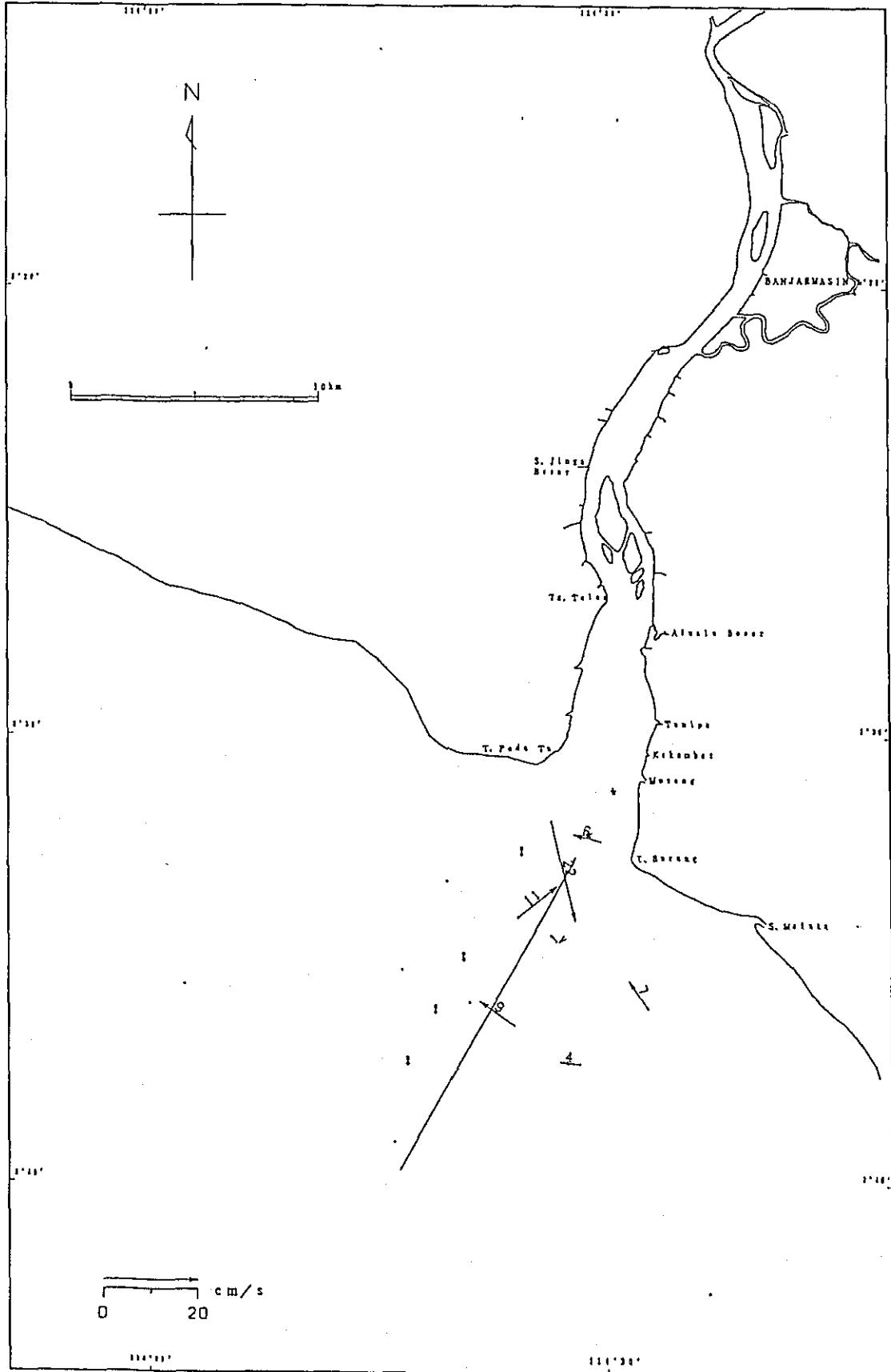


Fig. 3. 2-7 (00) Current Condition by 25 hours Running Mean.

Date : 11th Feb. 1989
 Time : 12:00
 Stage : 2nd General Survey

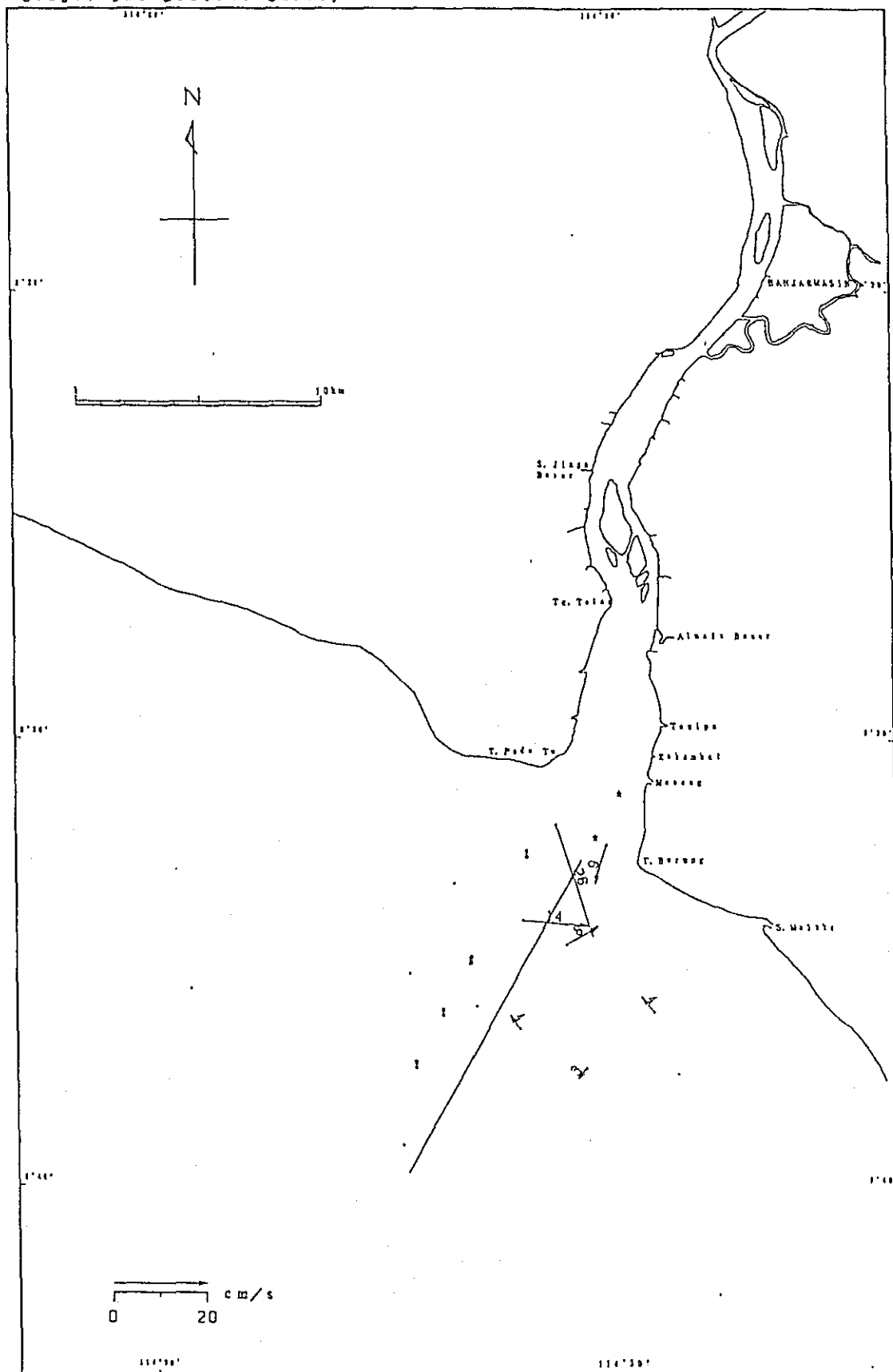


Fig. 3. 2-7 (05) Current Condition by 25 hours Running Mean

Date : 12th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

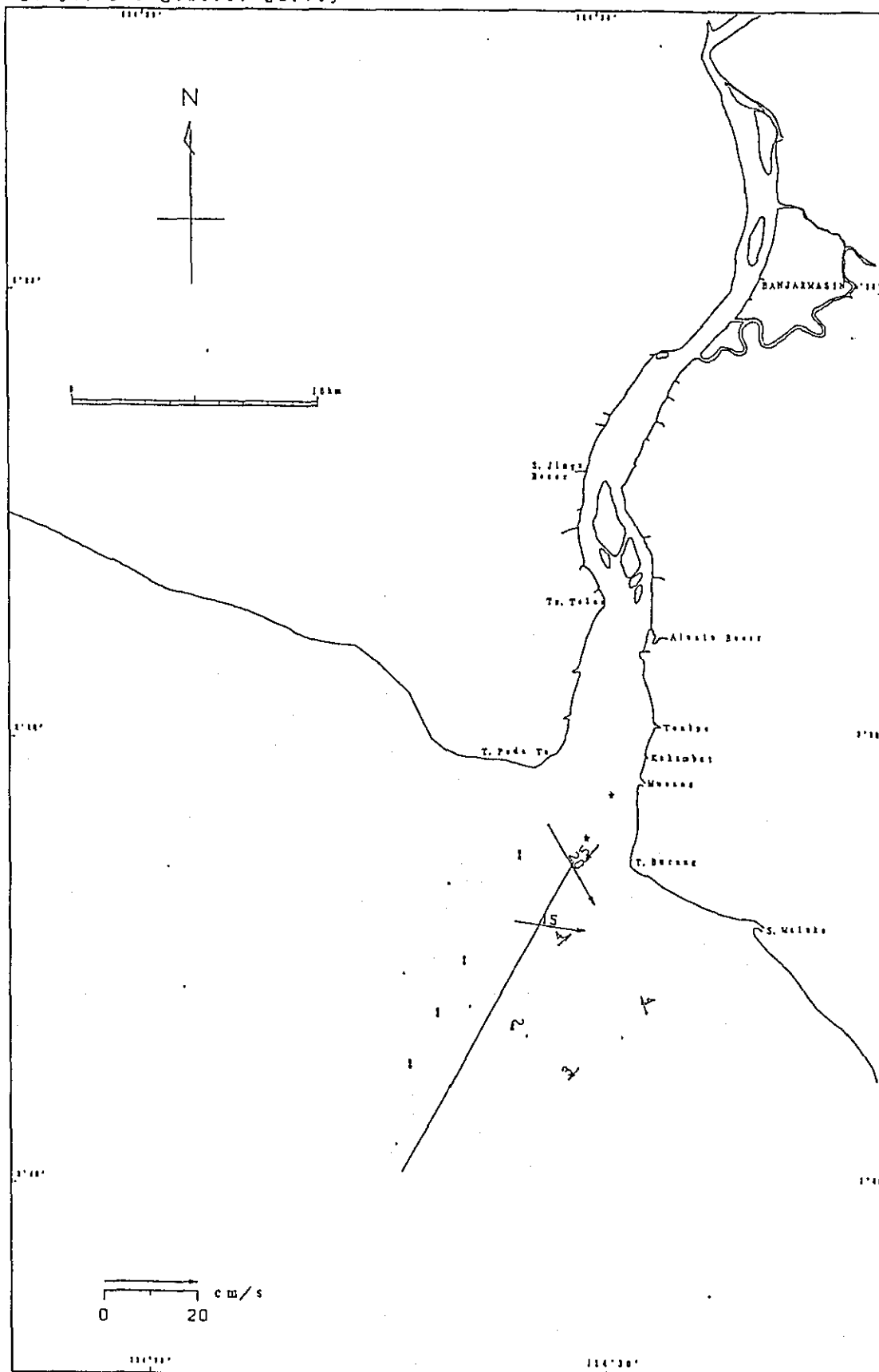


Fig. 3. 2-7 (106). Current Condition by 25 hours Running Mean

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Map of the Banjarmasin area, showing the coastline, major rivers, and various locations. The map includes a north arrow, a scale bar (0 to 10 km), and a coordinate grid. Key locations labeled include Banjarmasin, S. Jings Besar, Tr. Tala, Alusla Besar, T. Poda Ta, T. Buraq, S. Malina, T. Tala, Kelambel, and Melayu. A line with numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 is drawn across the map, likely indicating a survey or measurement line.

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Date : 13th Feb. 1989
 Time : 12:00
 Stage: 2nd General Survey

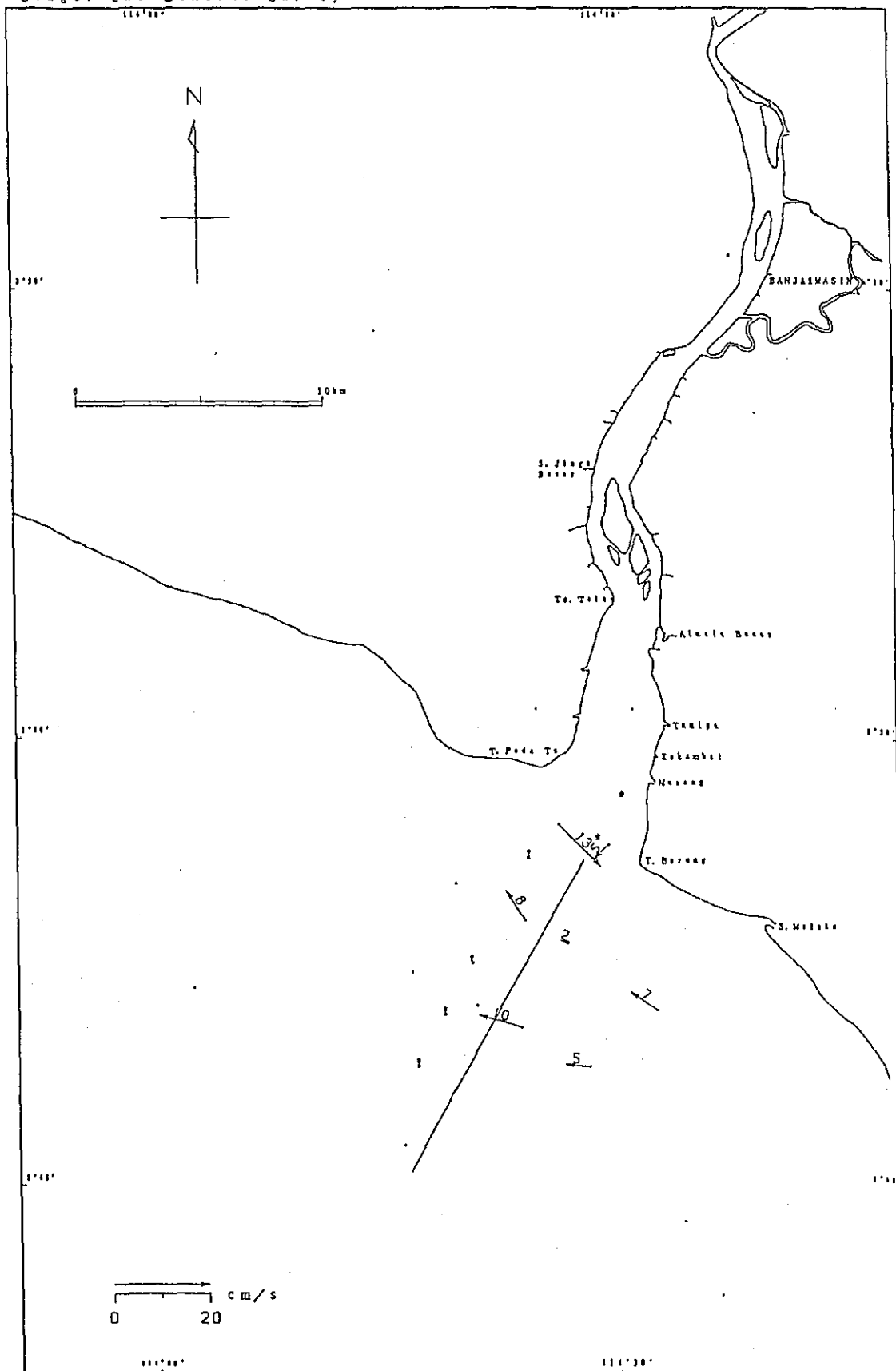


Fig. 3. 2-7 (109) Current Condition by 25 hours Running Mean

Date : 141b Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

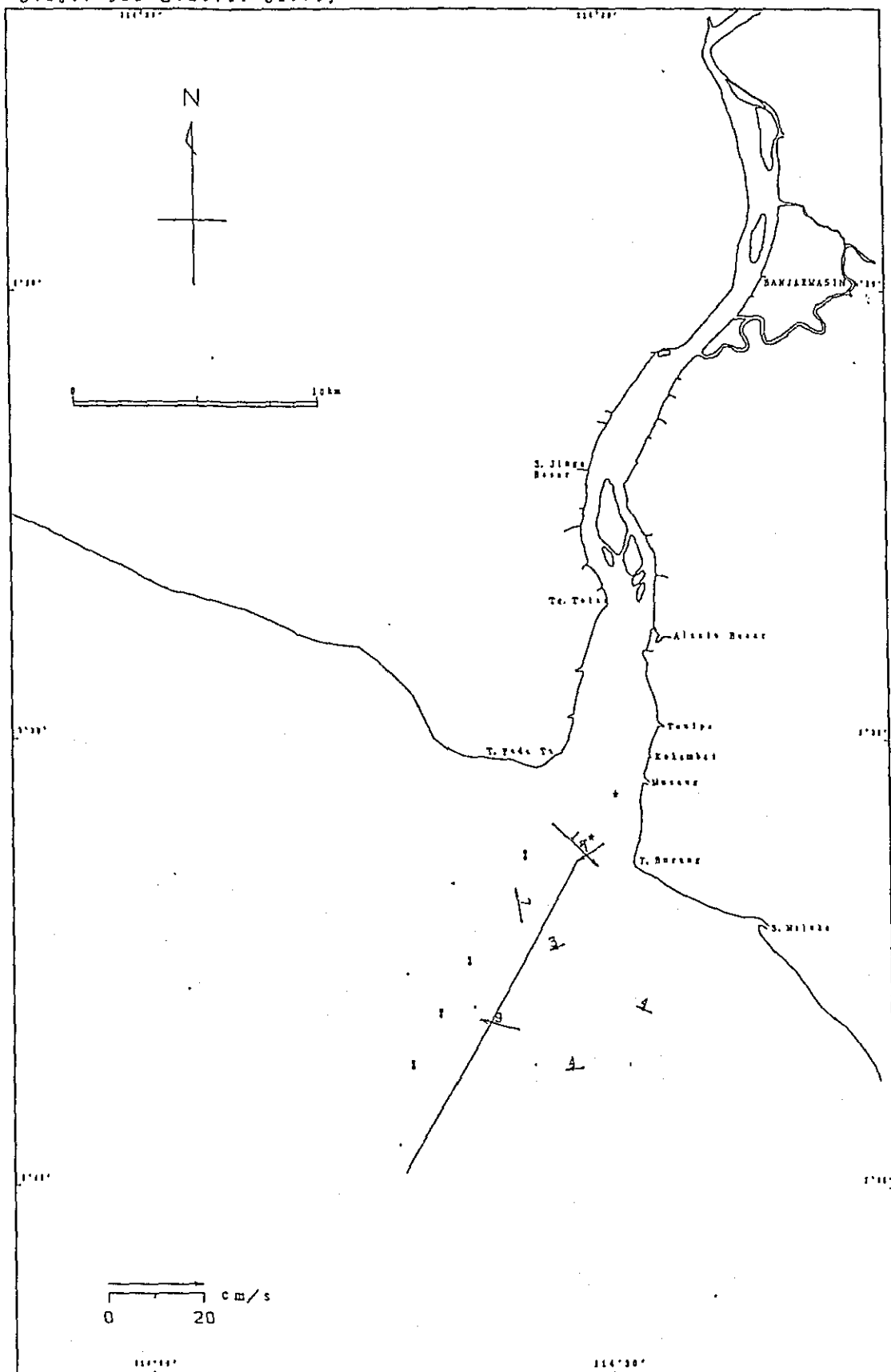


Fig. 3. 2-7 (110) Current Condition by 25 hours Running Mean

Date : 14th Feb. 1989
 Time : 12:00
 Stage : 2nd General Survey

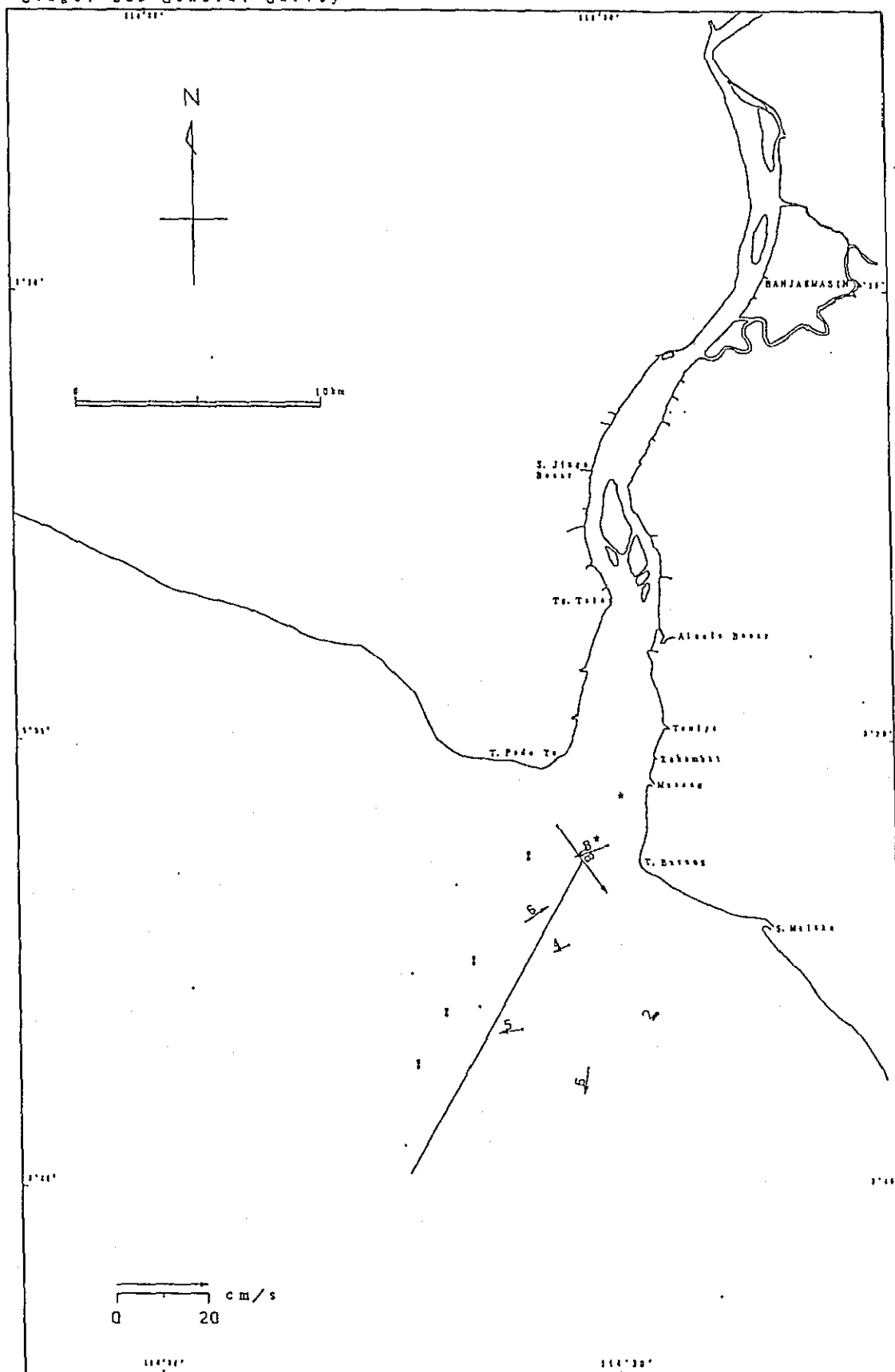


Fig. 3. 2-7 (11) Current Condition by 25 hours Running Mean

Date : 15th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

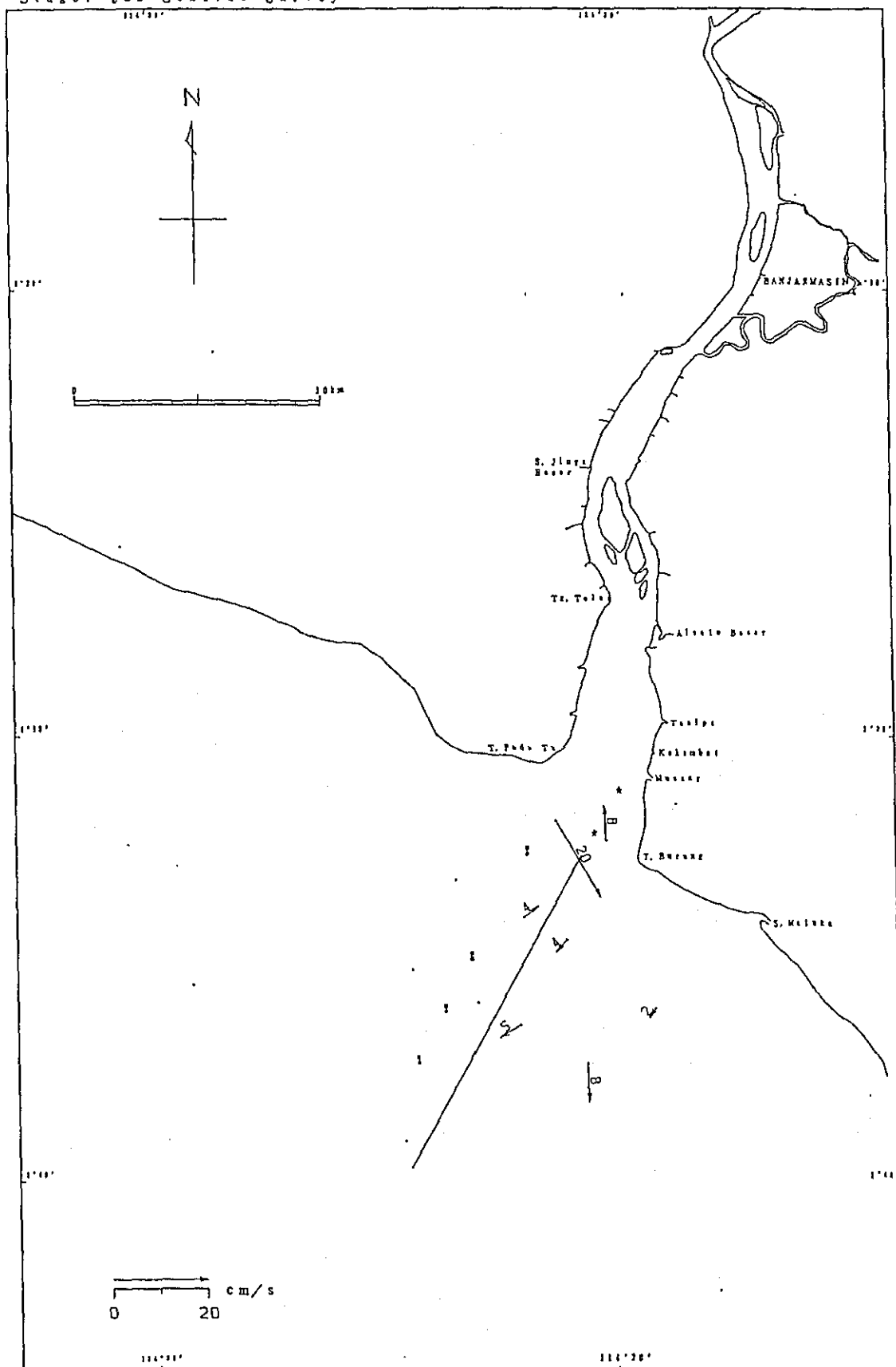


Fig. 3. 2-7 (112) Current Condition by 25 hours Running Mean

Date : 15th Feb. 1989
 Time : 12:00
 Stage: 2nd General Survey

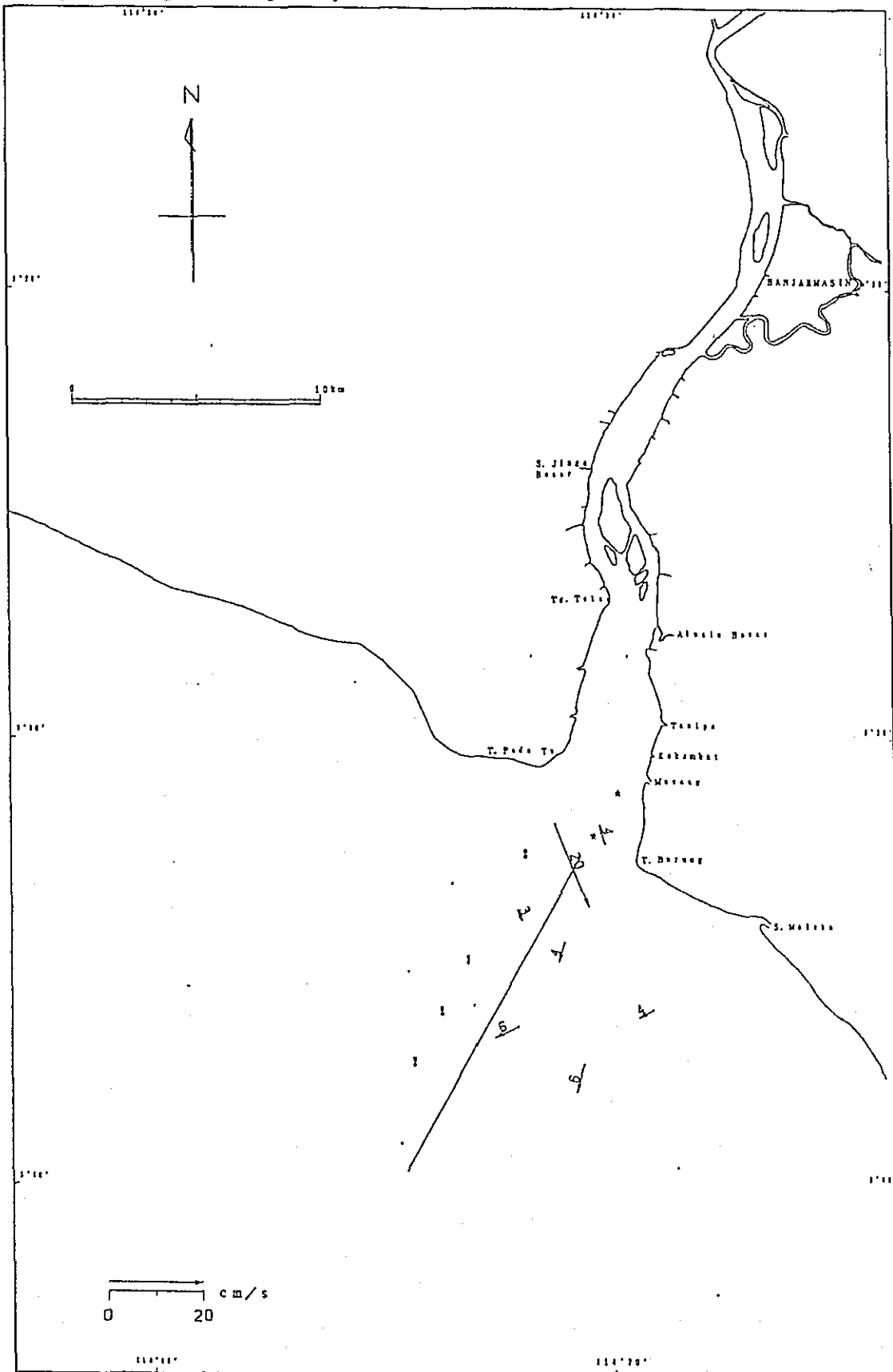


Fig. 3. 2-7 (113) Current Condition by 25 hours Running Mean

Date : 16th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

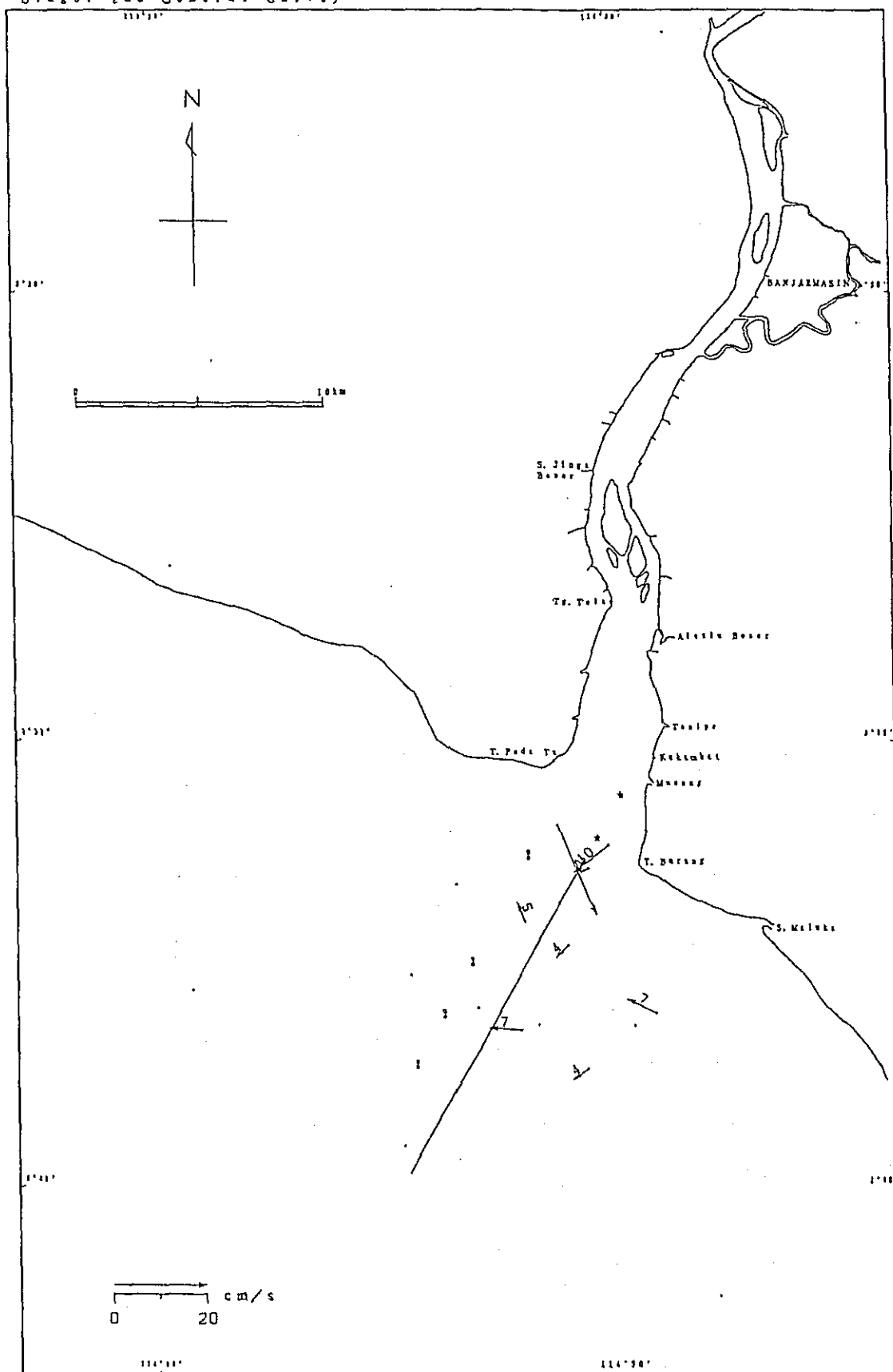


Fig. 3. 2-7 (14) Current Condition by 25 hours Running Mean

Date : 16th Feb. 1989
 Time : 12:00
 Stage: 2nd General Survey

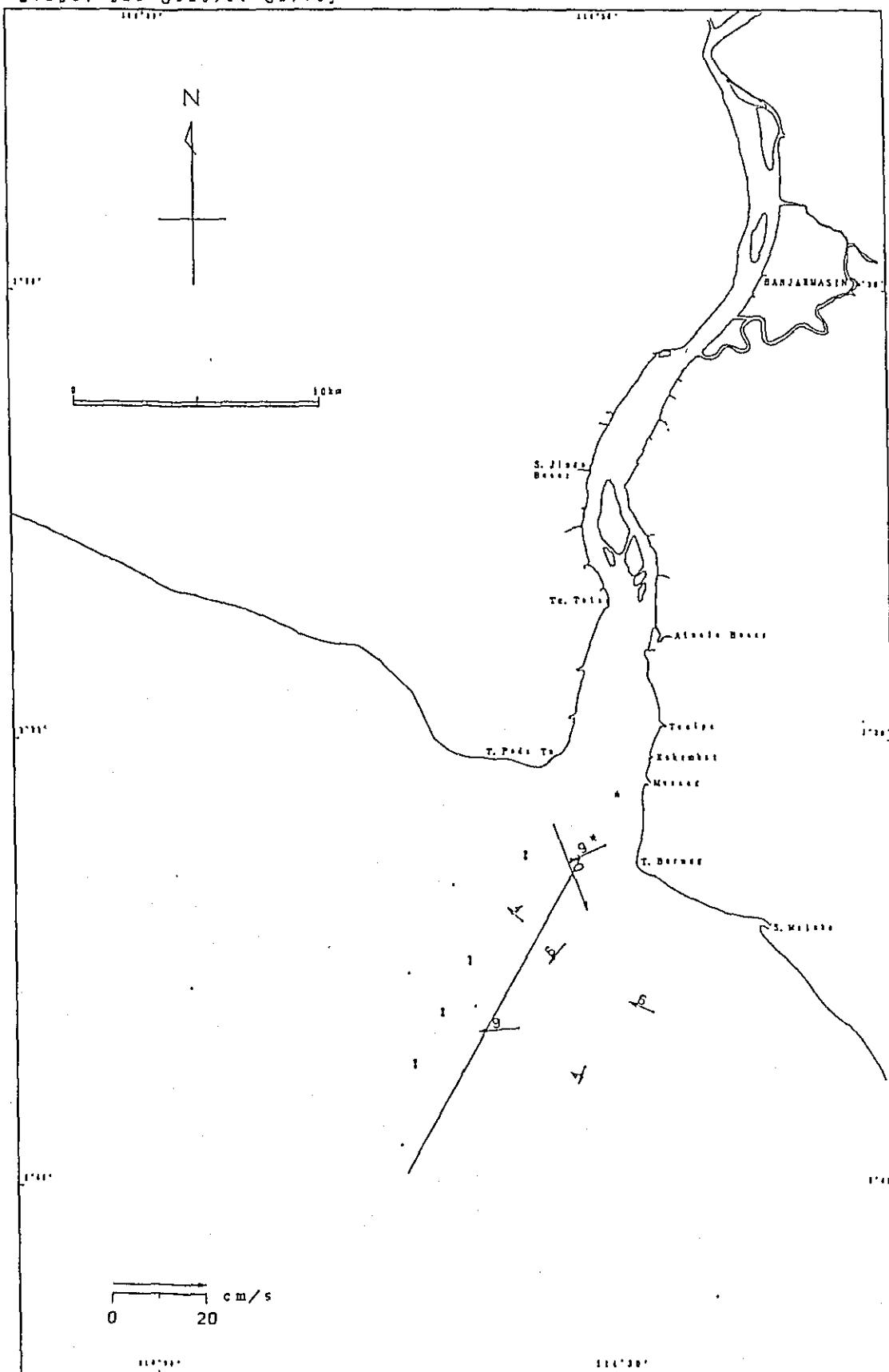


Fig. 3. 2-7 (115) Current Condition by 25 hours Running Mean

Date : 17th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

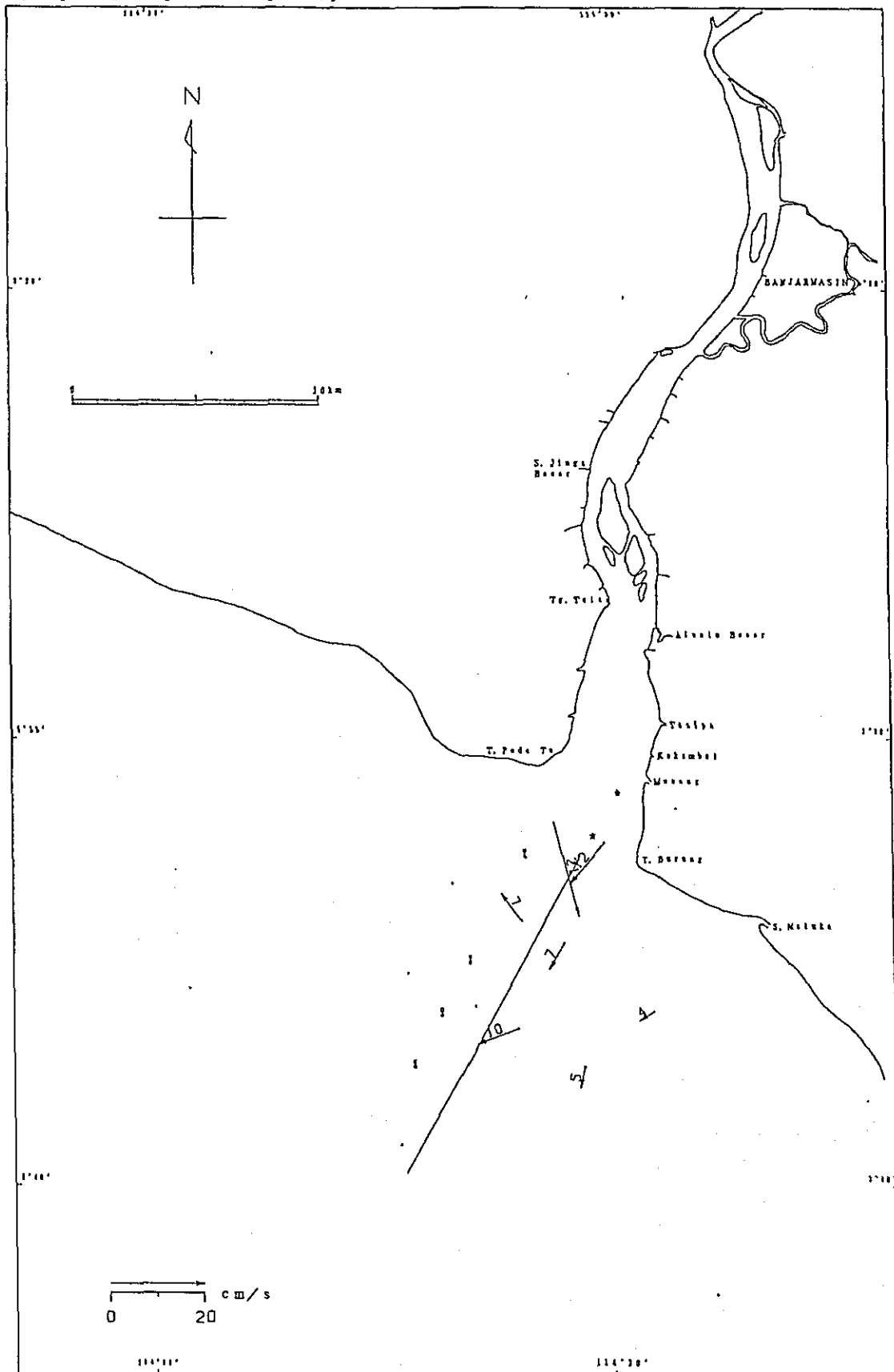


Fig. 3. 2-7 (115) Current Condition by 25 hours Running Mean

Date : 17th Feb. 1989
 Time : 12:00
 Stage : 2nd General Survey

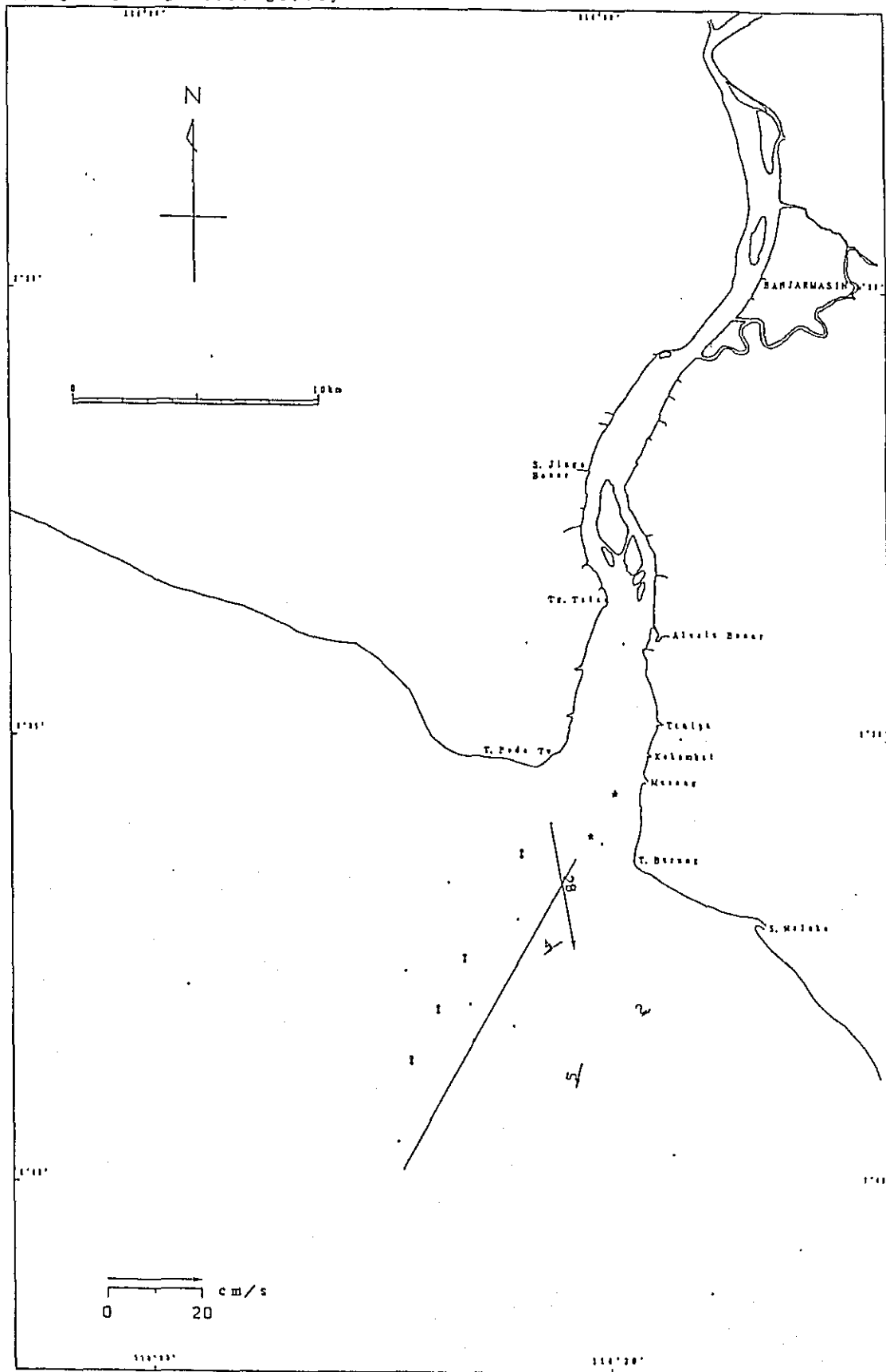


Fig. 3. 2-7 (17) Current Condition by 25 hours Running Mean

Date : 18th Feb. 1989
 Time : 0:00
 Stage: 2nd General Survey

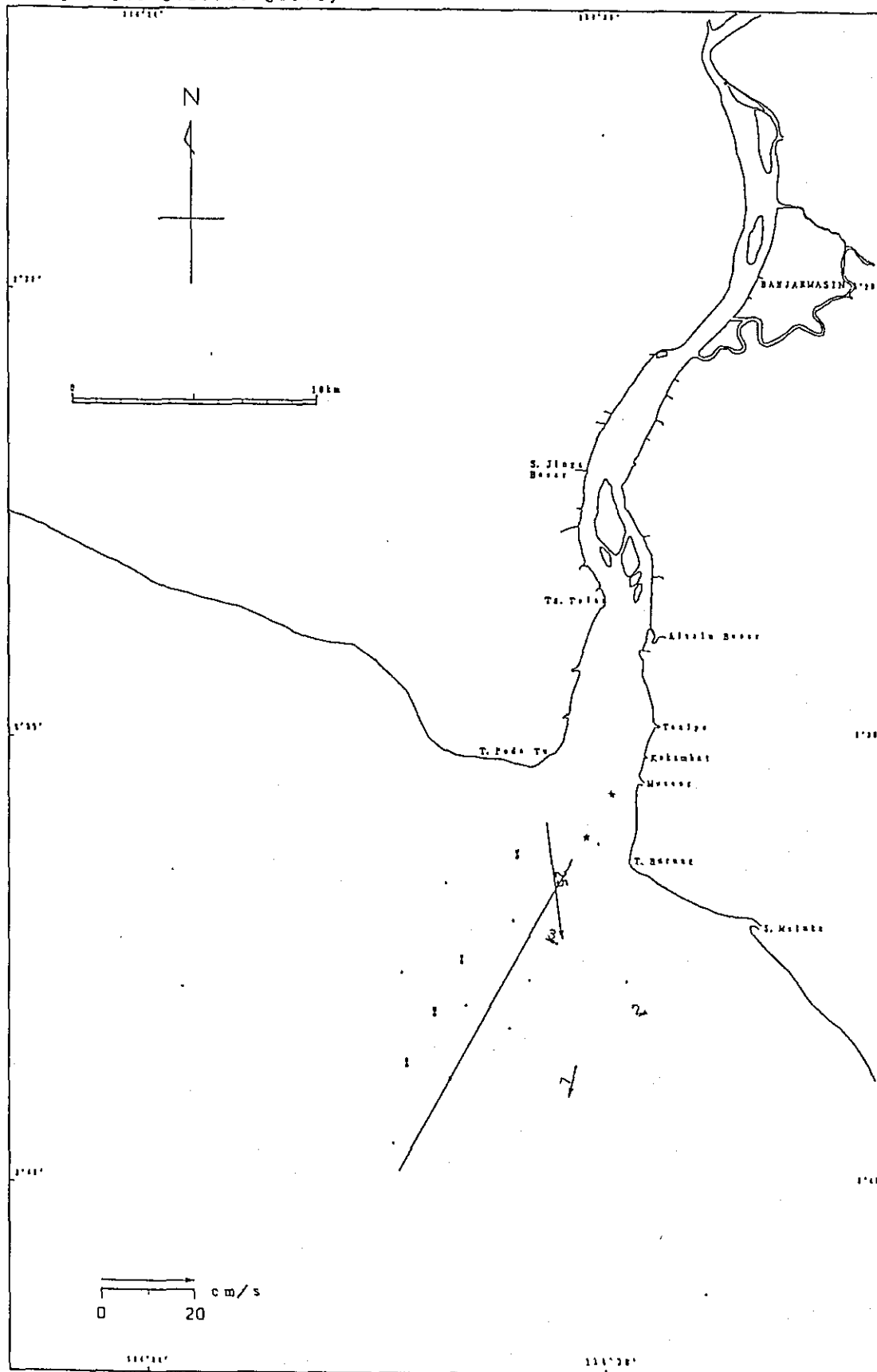


Fig. 3. 2-7 (13) Current Condition by 25 hours Running Mean

Date : 12th Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

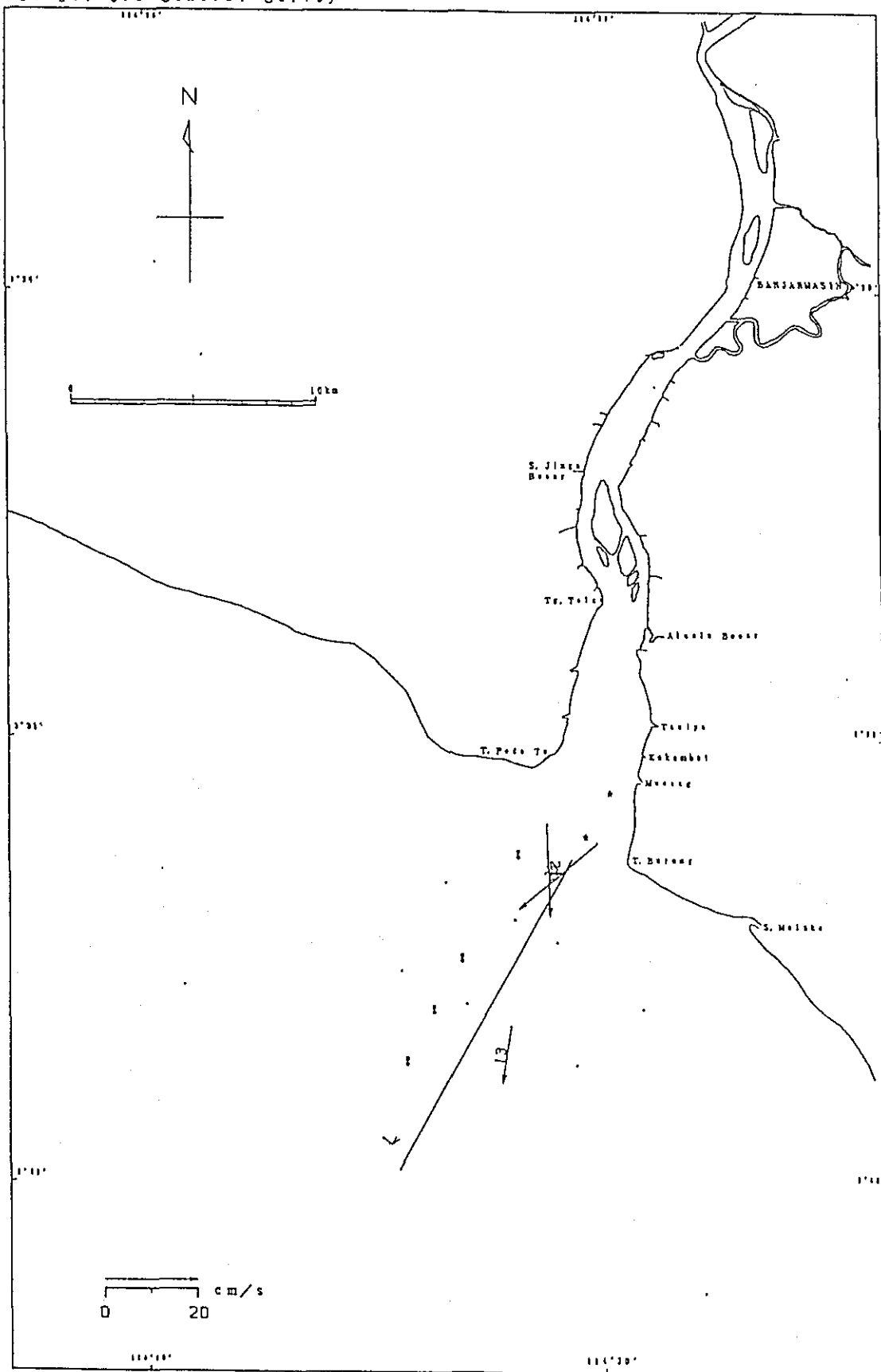


Fig. 3. 2-7 (119) Current Condition by 25 hours Running Mean

Date : 12th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

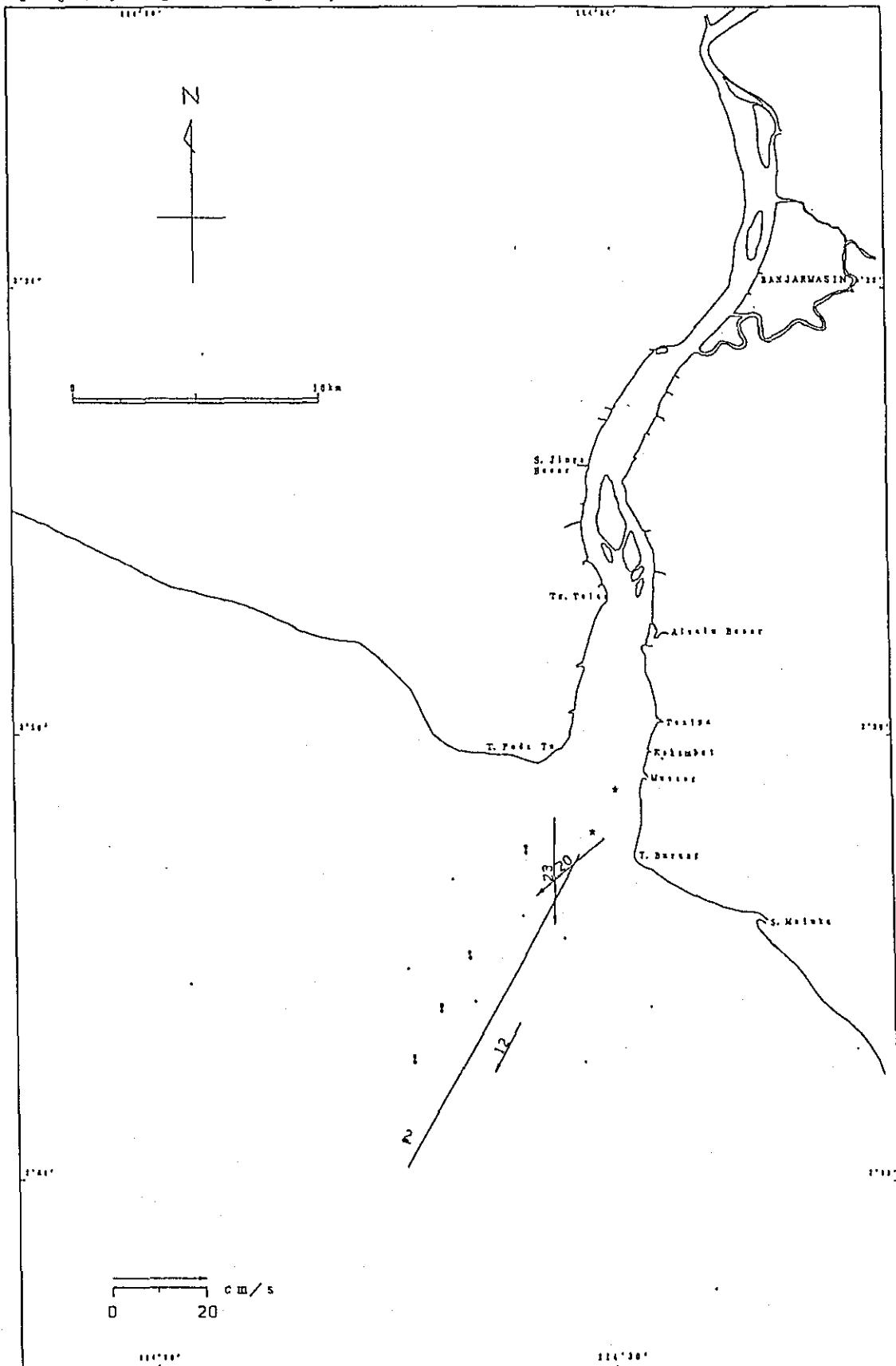


Fig. 3. 2-7 (20) Current Condition by 25 hours Running Mean

Date : 13th Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

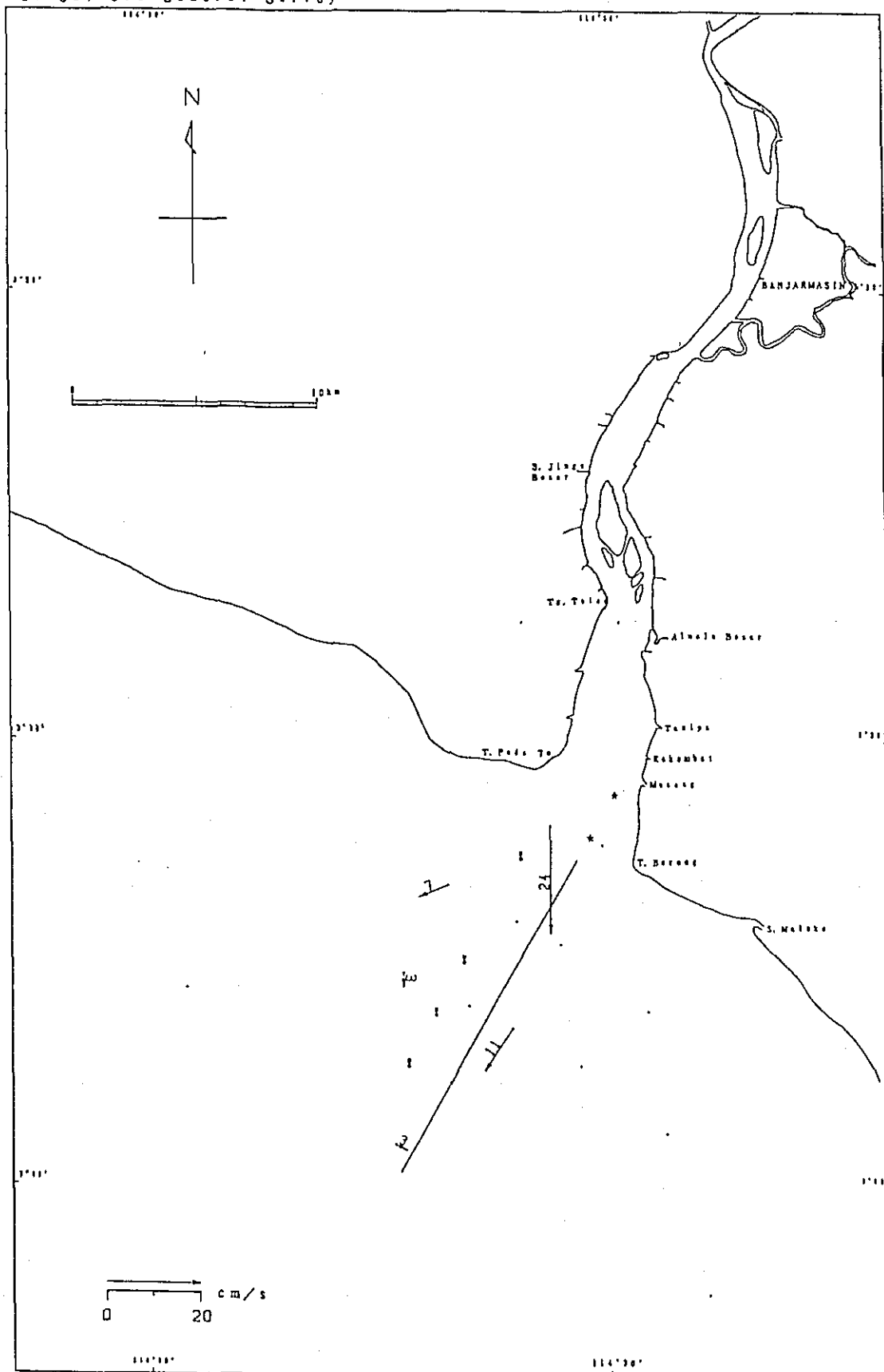


Fig. 3. 2-7 (21) Current Condition by 25 hours Running Mean

Date : 13th Apr. 1989
 Time : 12:00
 Stage : 3rd General Survey

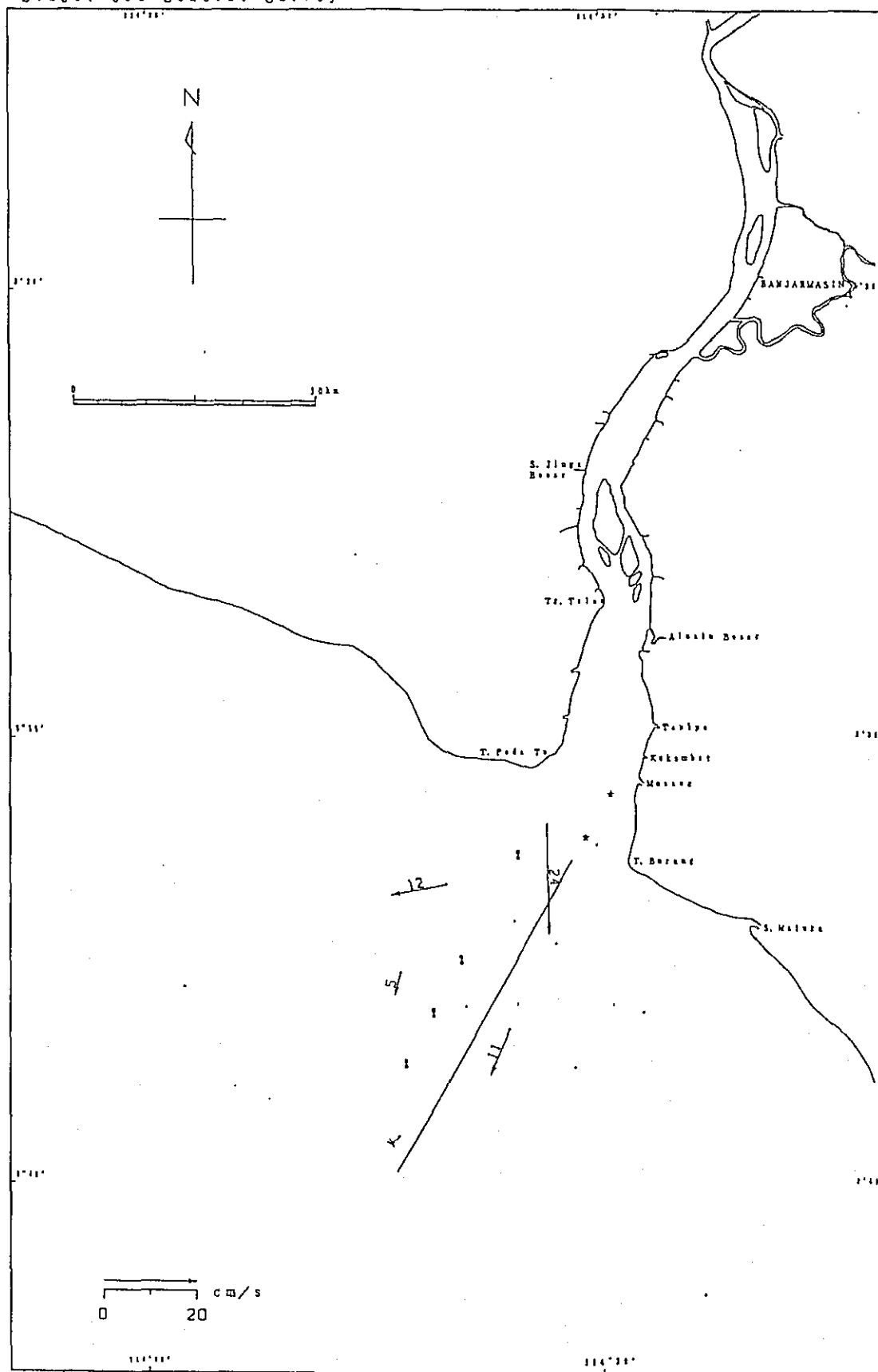


Fig. 3. 2-7 (22) Current Condition by 25 hours Running Mean

Date : 14th Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

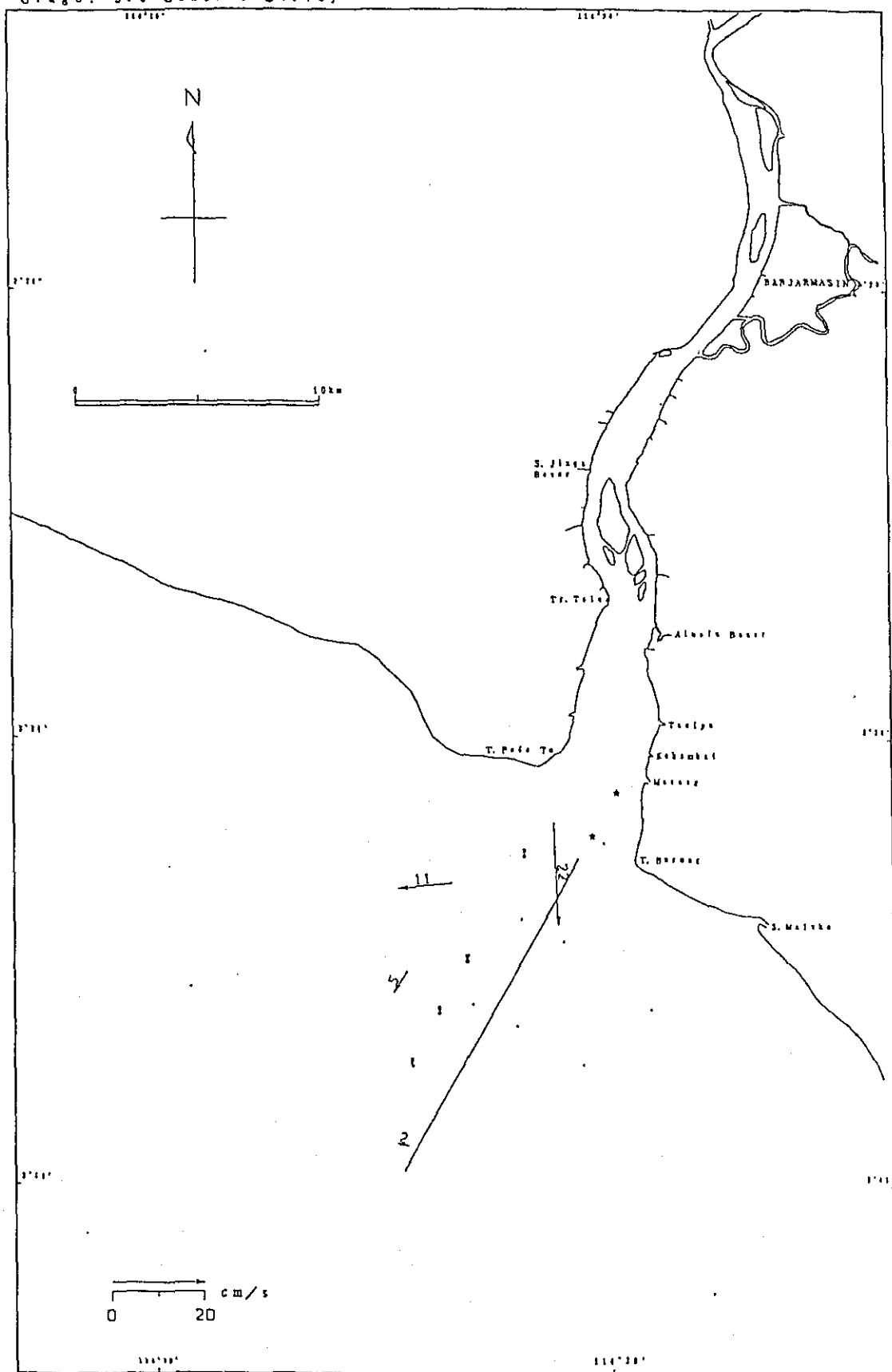


Fig. 3. 2-7 (23) Current Condition by 25 hours Running Mean

Date : 14th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

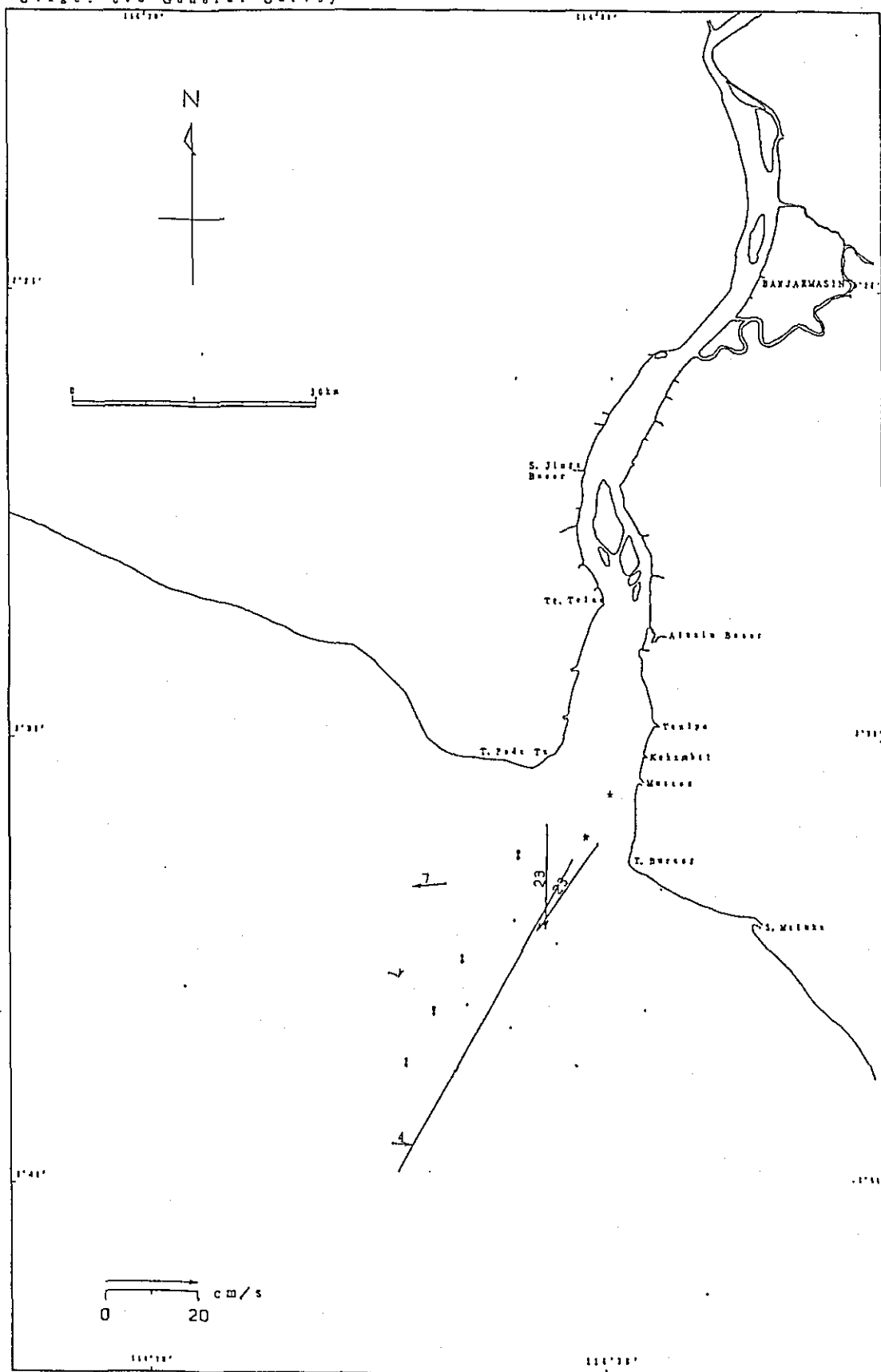


Fig. 3. 2-7 (24) Current Condition by 25 hours Running Mean

Map of the coastal area around Banjarmasin, Indonesia, showing bathymetry and current measurements. The map includes a north arrow, a 10 km scale bar, and labels for various locations: S. Jings Besar, Tl. Tulu, T. Fala Tu, T. Buraq, S. Melaka, T. Tulpa, Kolumbi, and Muring. Bathymetric contours are marked with numbers 1, 2, 4, 5, 23, and 24. A star symbol is located near the T. Buraq area. A scale bar at the bottom indicates 0 to 20 cm/s.

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Date : 15th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

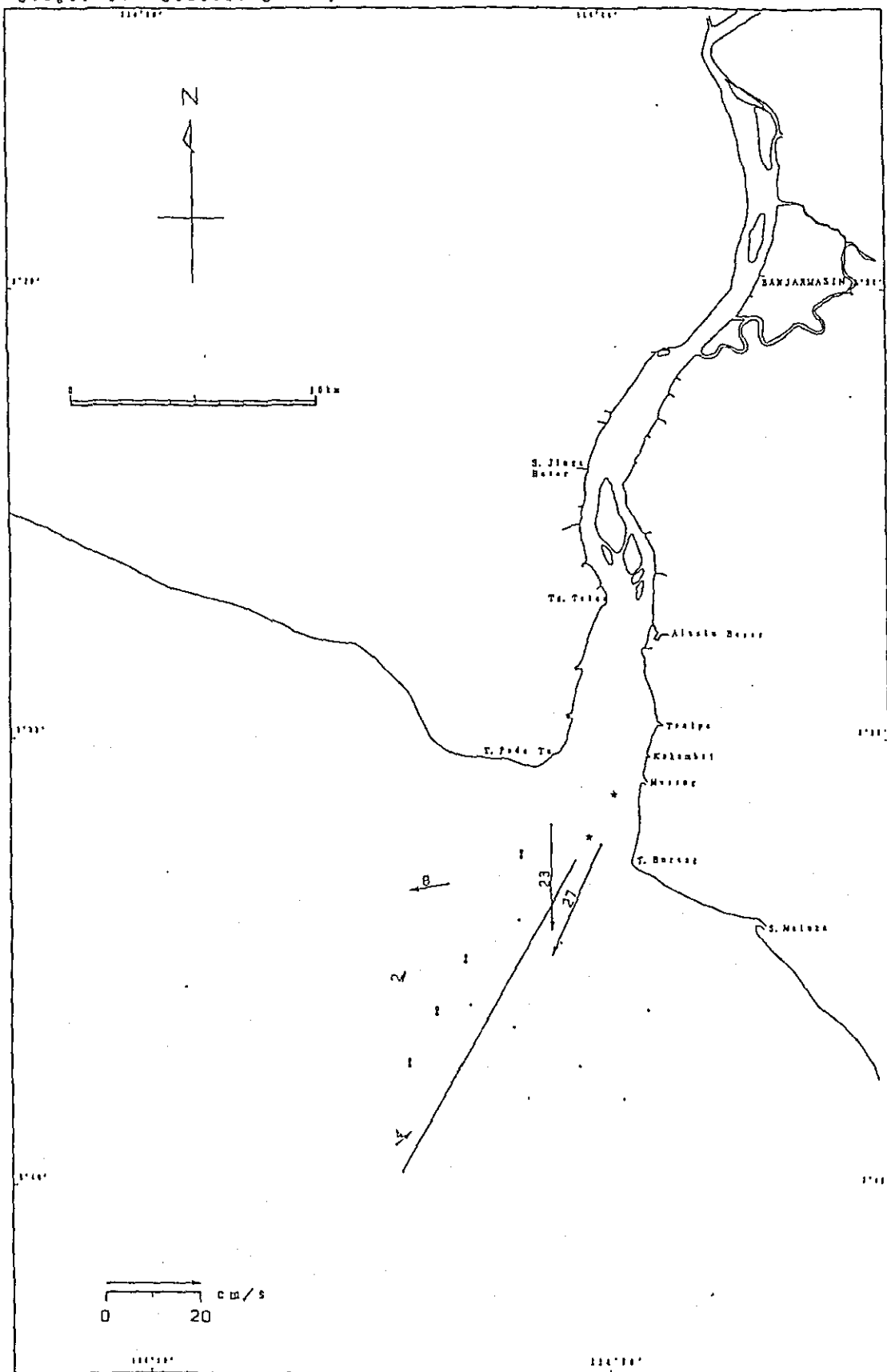


Fig. 3. 2-7 (26) Current Condition by 25 hours Running Mean

Map of the Banjarmasin area showing the coastline, rivers, and various locations. The map includes a north arrow, a scale bar (0 to 10 km), and a coordinate grid. Key locations labeled include Banjarmasin, S. Jemel Bayur, T. Tala, T. Poda To, T. Bureng, S. Melaka, T. Lapa, and T. Kambili. A large area is marked with a star and the number 2152. A scale bar at the bottom indicates 0 to 20 cm/s.

450

Date : 16th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

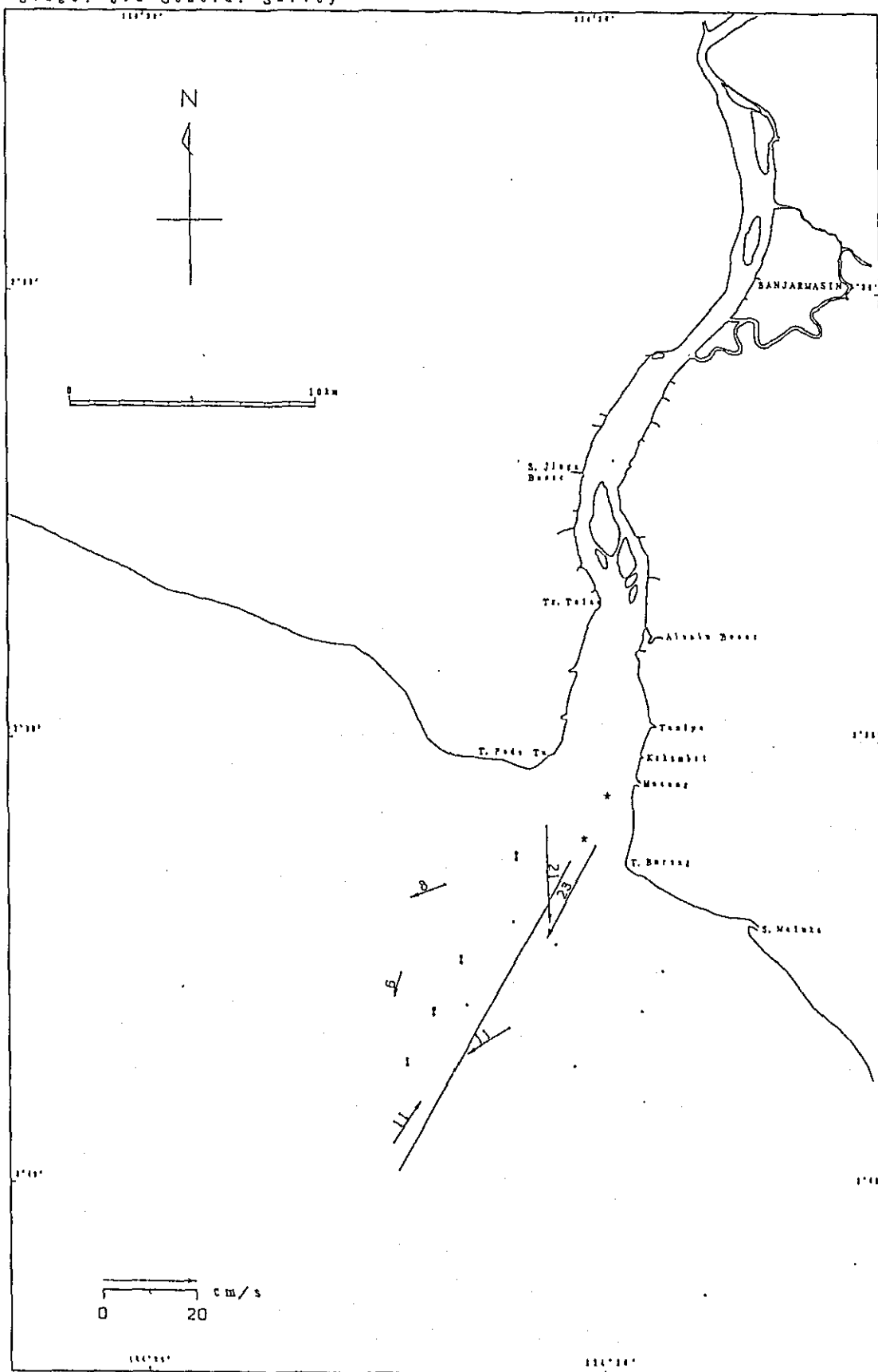


Fig. 3. 2-7 (123) Current Condition by 25 hours Running Mean

Date : 17th Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

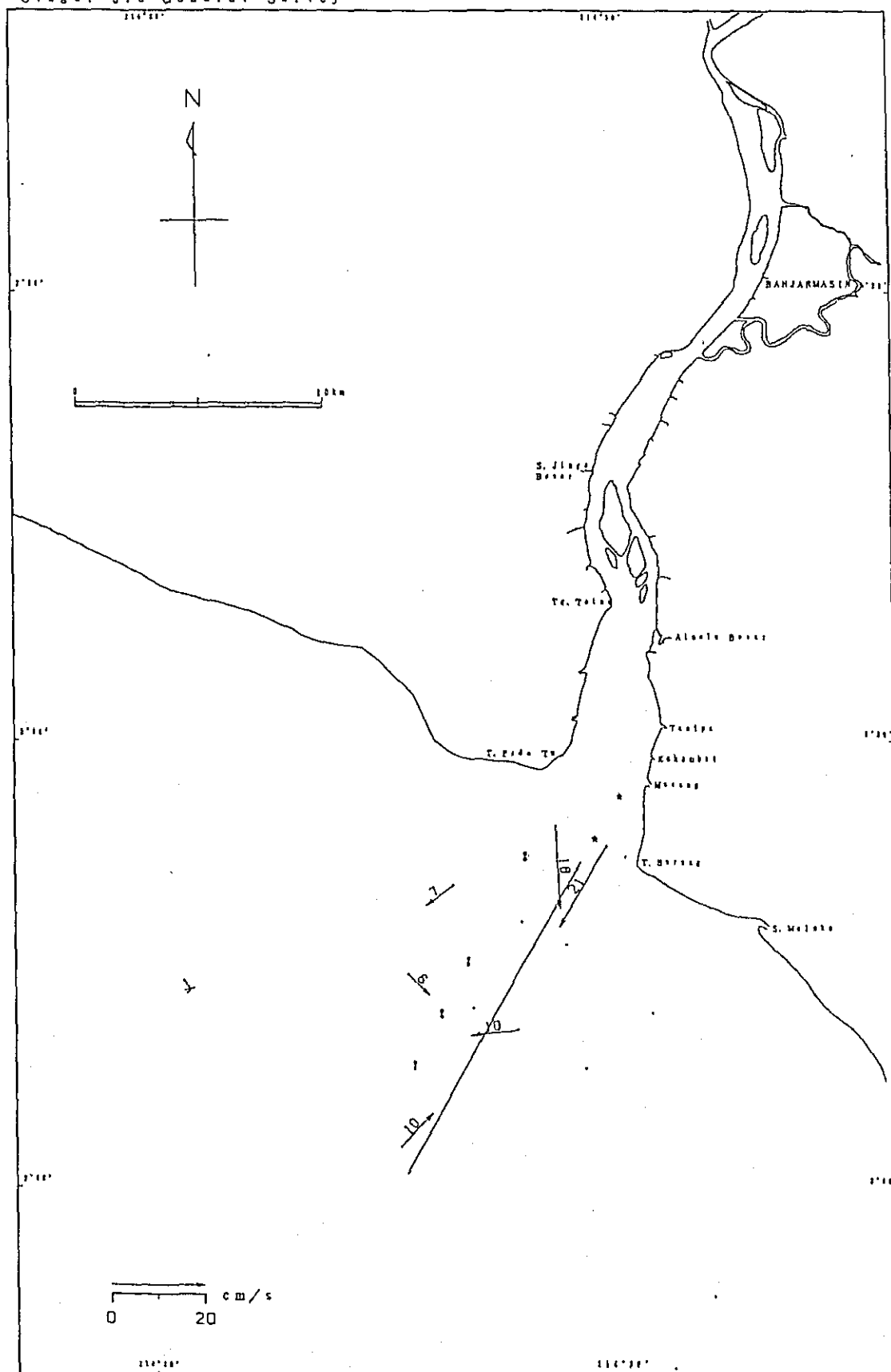


Fig. 3. 2-7 (129) Current Condition by 25 hours Running Mean

Date : 17th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

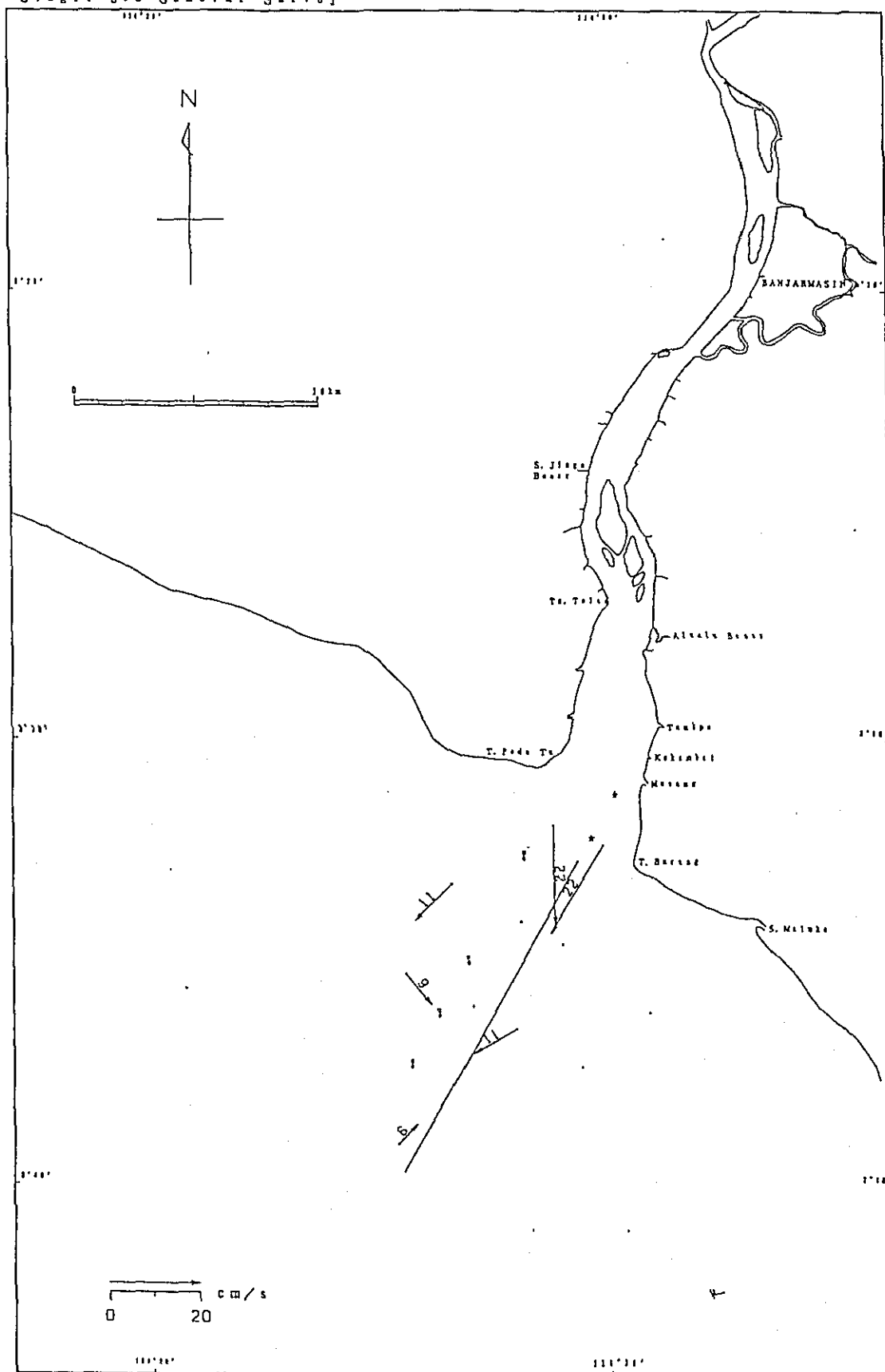


Fig. 3. 2-7 (30) Current Condition by 25 hours Running Mean

Date : 18th Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

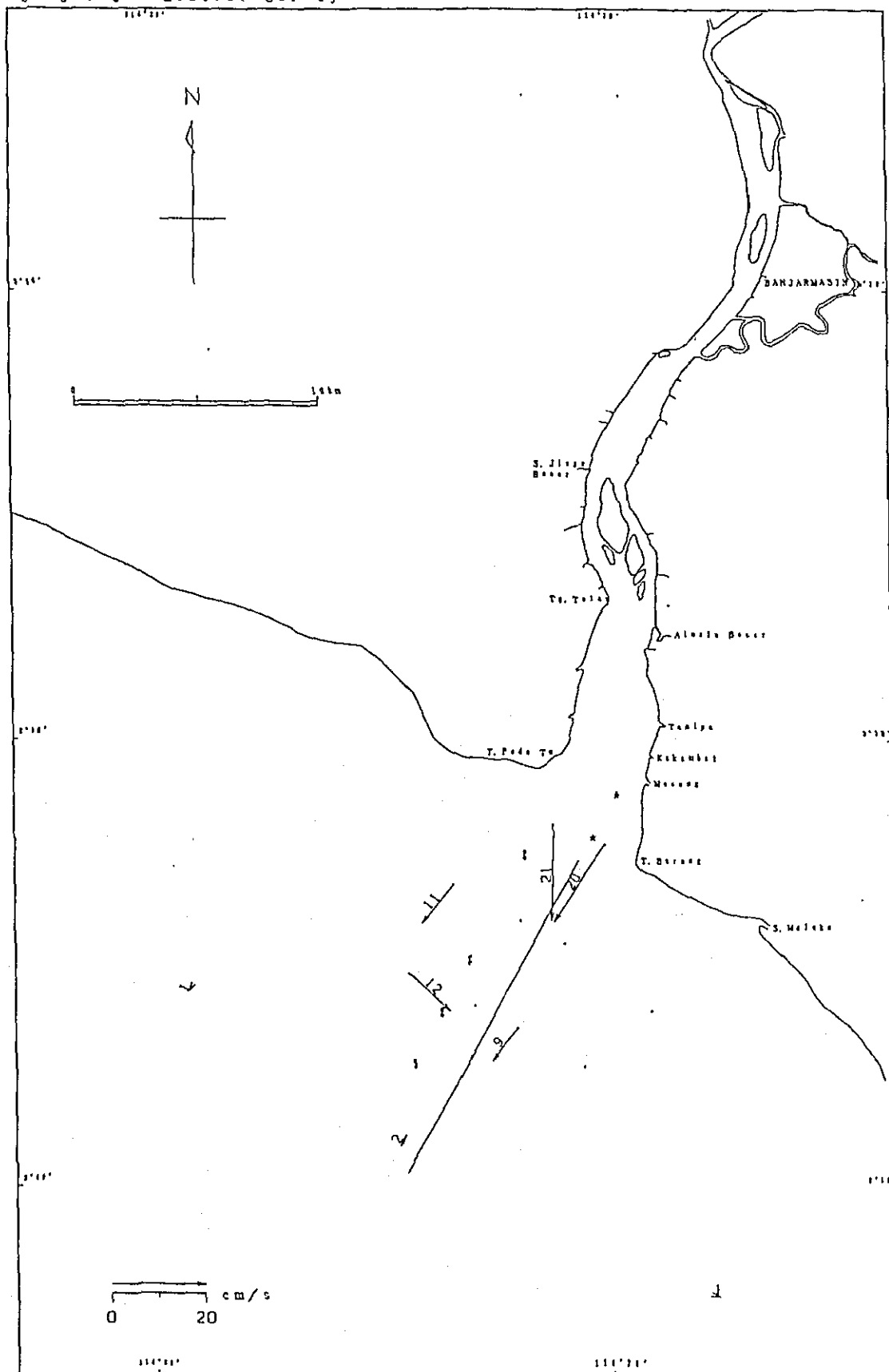


Fig. 3. 2-7 (131) Current Condition by 25 hours Running Mean

Date : 18th Apr. 1989
 Time : 12:00
 Stage : 3rd General Survey

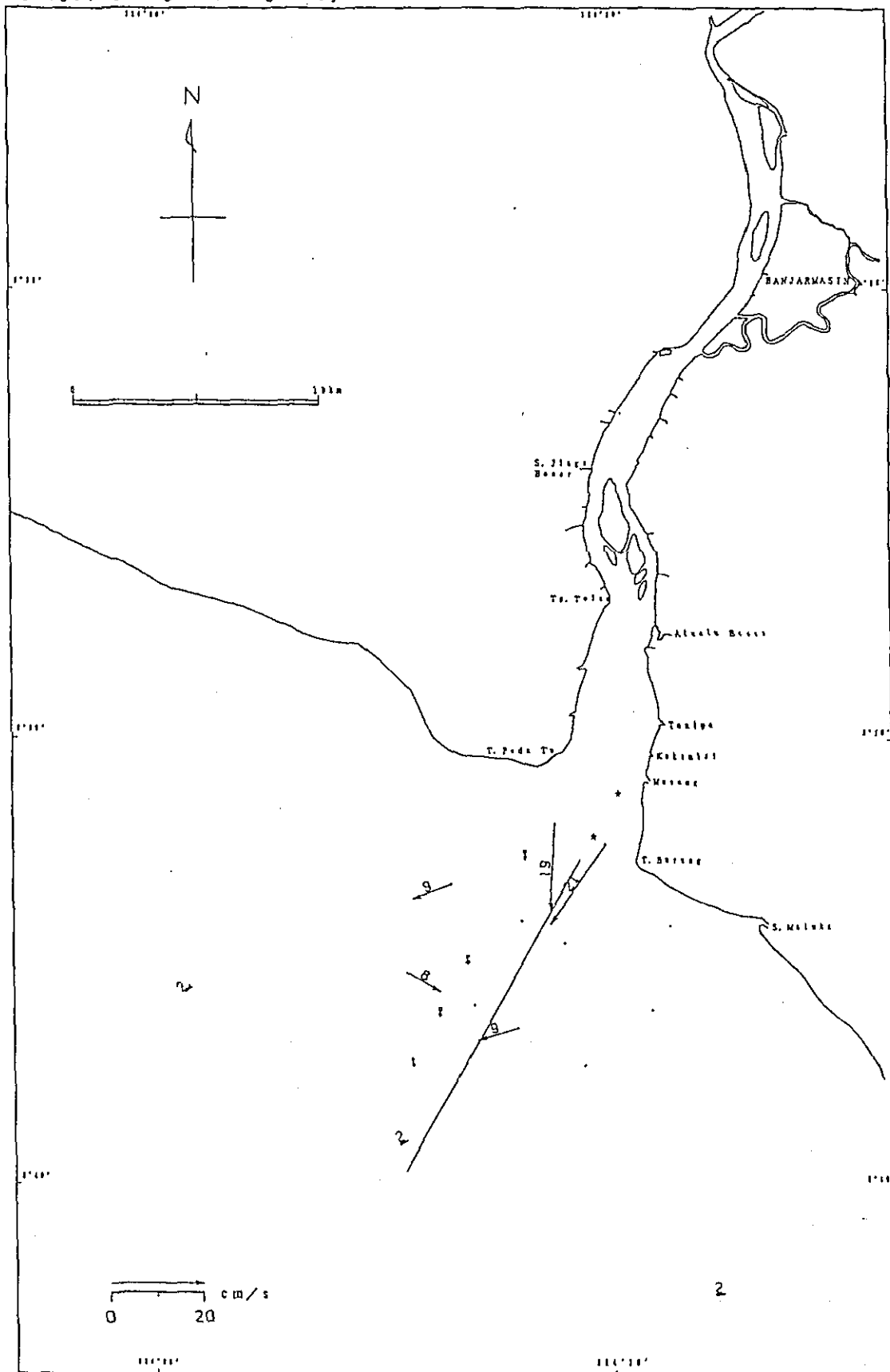


Fig. 3. 2-7 (32) Current Condition by 25 hours Running Mean

Date : 19th Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

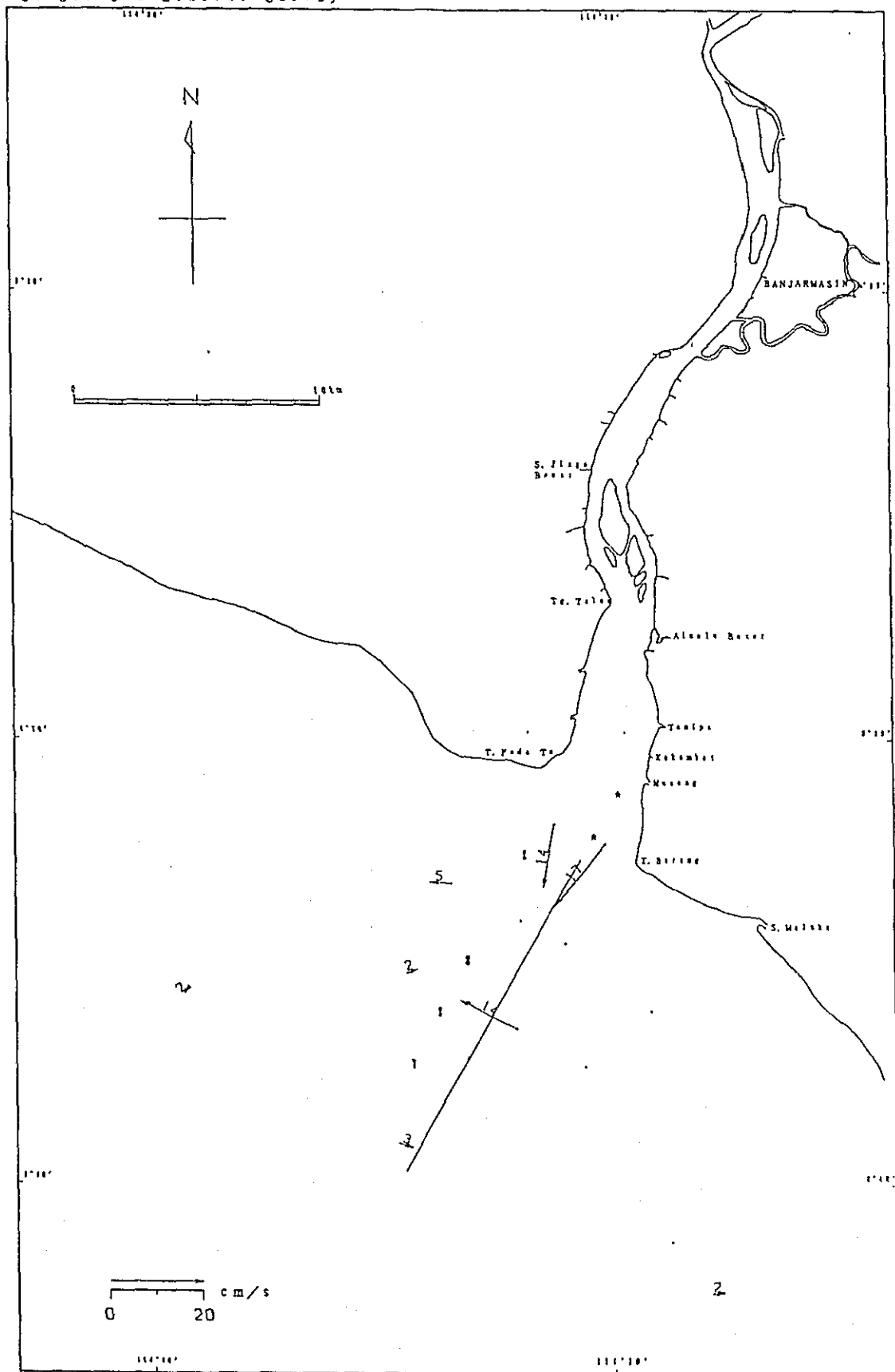


Fig. 3. 2-7 (133) Current Condition by 25 hours Running Mean

Date : 19th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

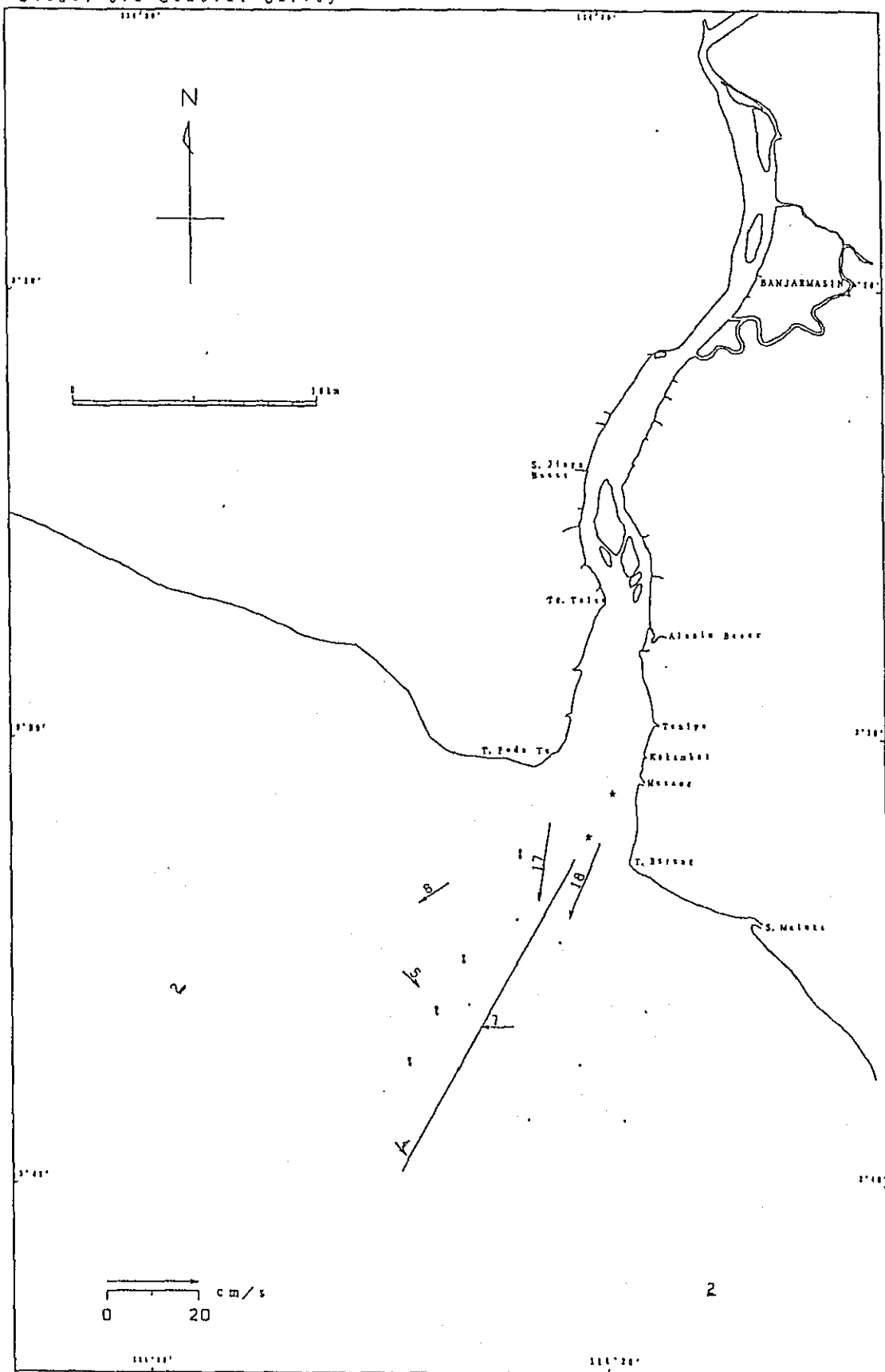


Fig. 3. 2-7 (34) Current Condition by 25 hours Running Mean

Date : 20th Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

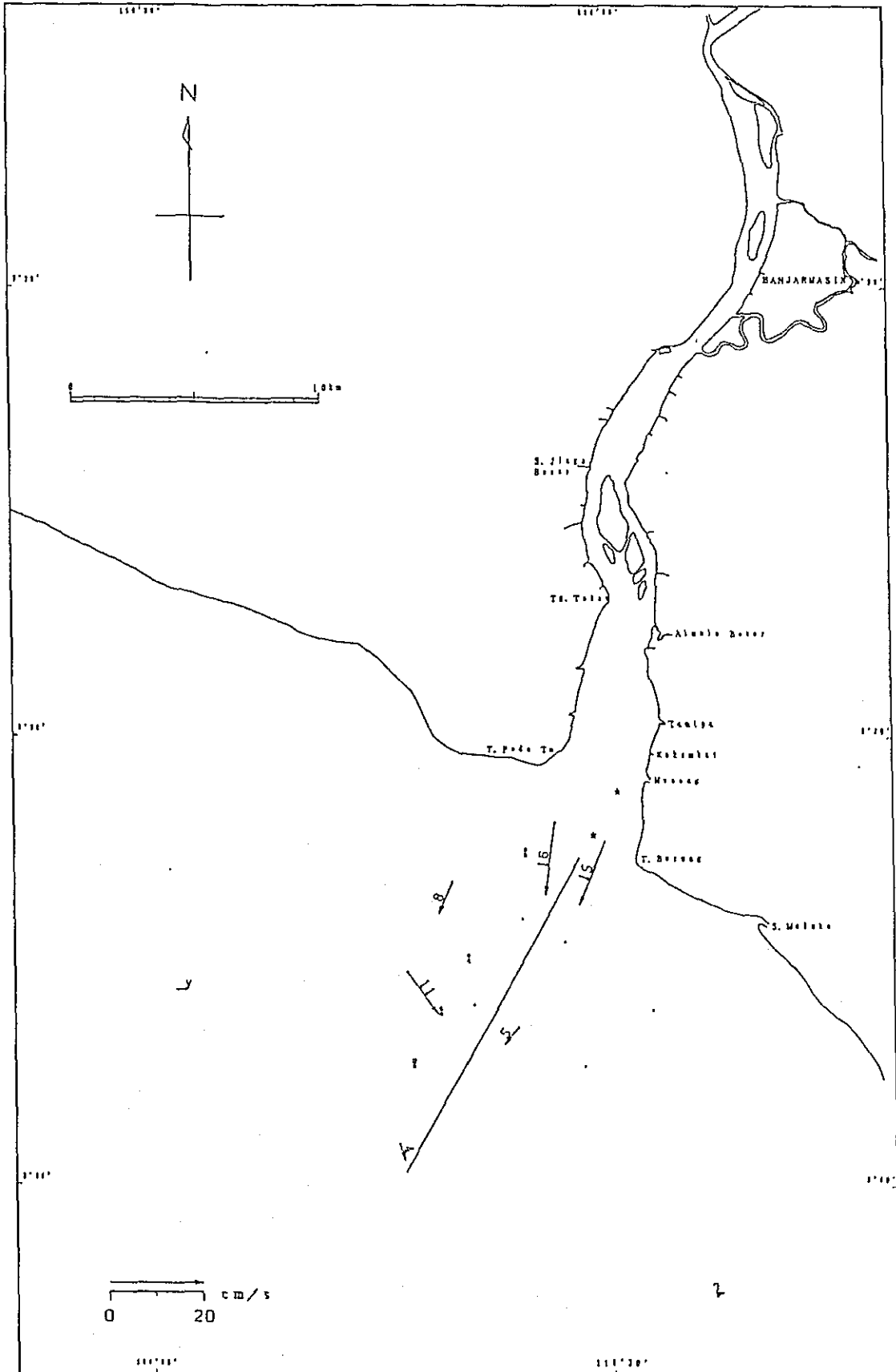


Fig. 3. 2-7 (35) Current Condition by 25 hours Running Mean

Map of the study area in Banjarmasin, showing the river, islands, and surrounding land. The map includes a north arrow, a scale bar (0 to 20 cm/s), and labels for various locations: Banjarmasin, S. Jangk, Besar, T. Tala, T. Poda, T. Tala, T. Buraq, S. Malina, and T. Tala. The map also shows a coastline with a dashed line indicating a boundary or feature.

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Date : 21th Apr. 1989
 Time : 0:00
 Stage : 3rd General Survey

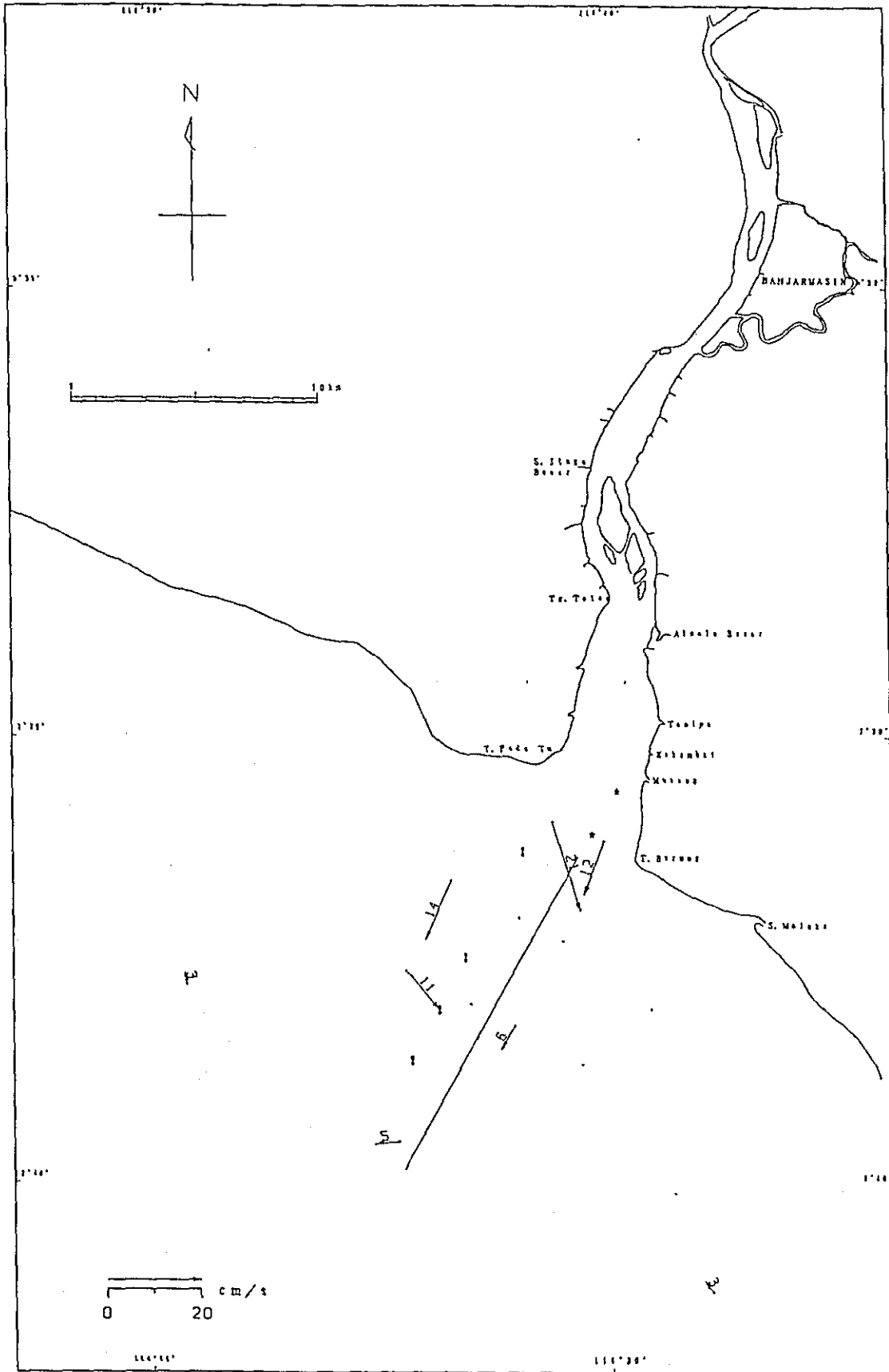


Fig. 3. 2-7 (37) Current Condition by 25 hours Running Mean

Date : 21th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

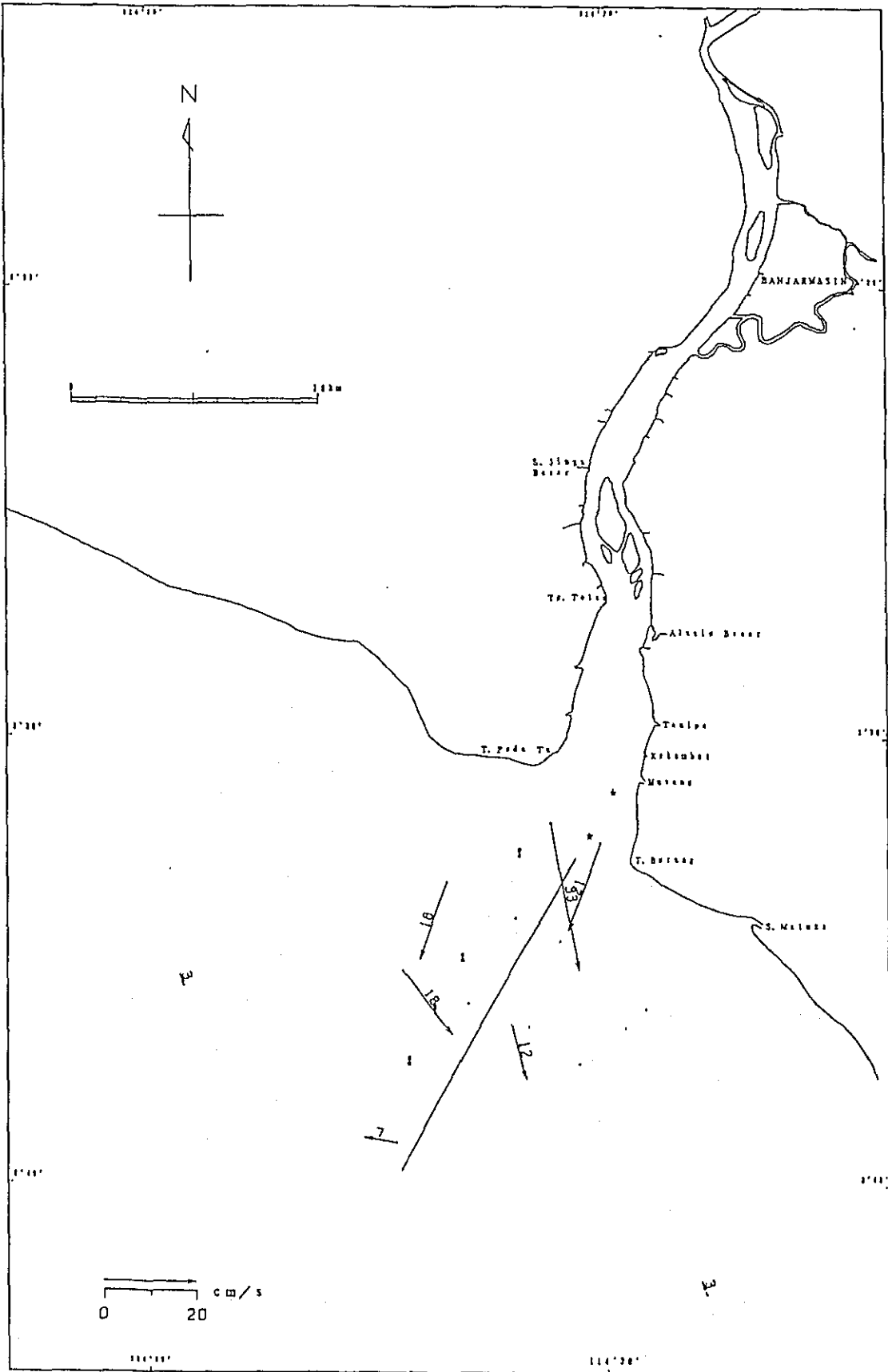


Fig. 3. 2-7 (13) Current Condition by 25 hours Running Mean

Date : 22nd Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

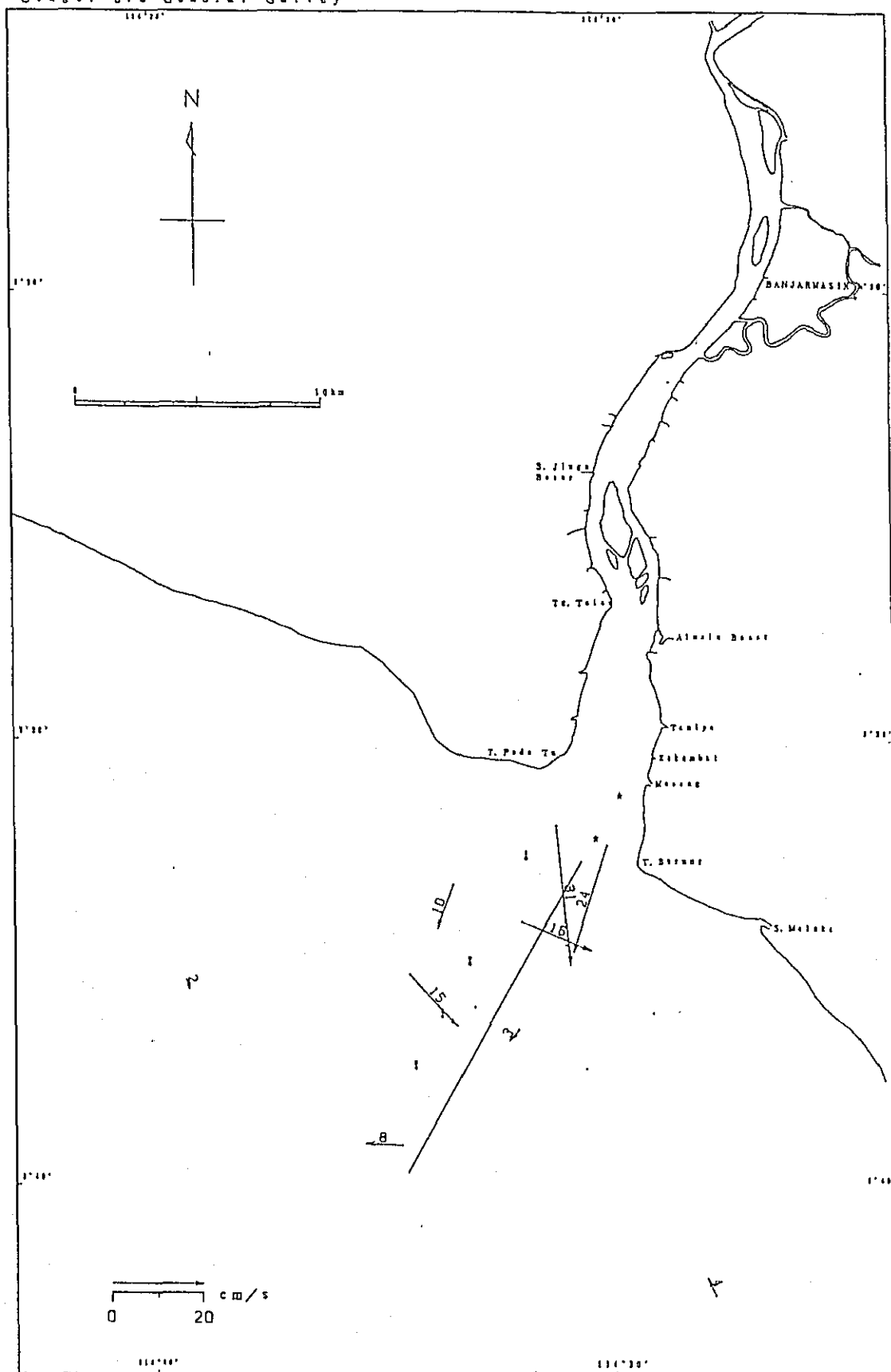


Fig. 3.2-7 (139) Current Condition by 25 hours Running Mean

463

Date : 23rd Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

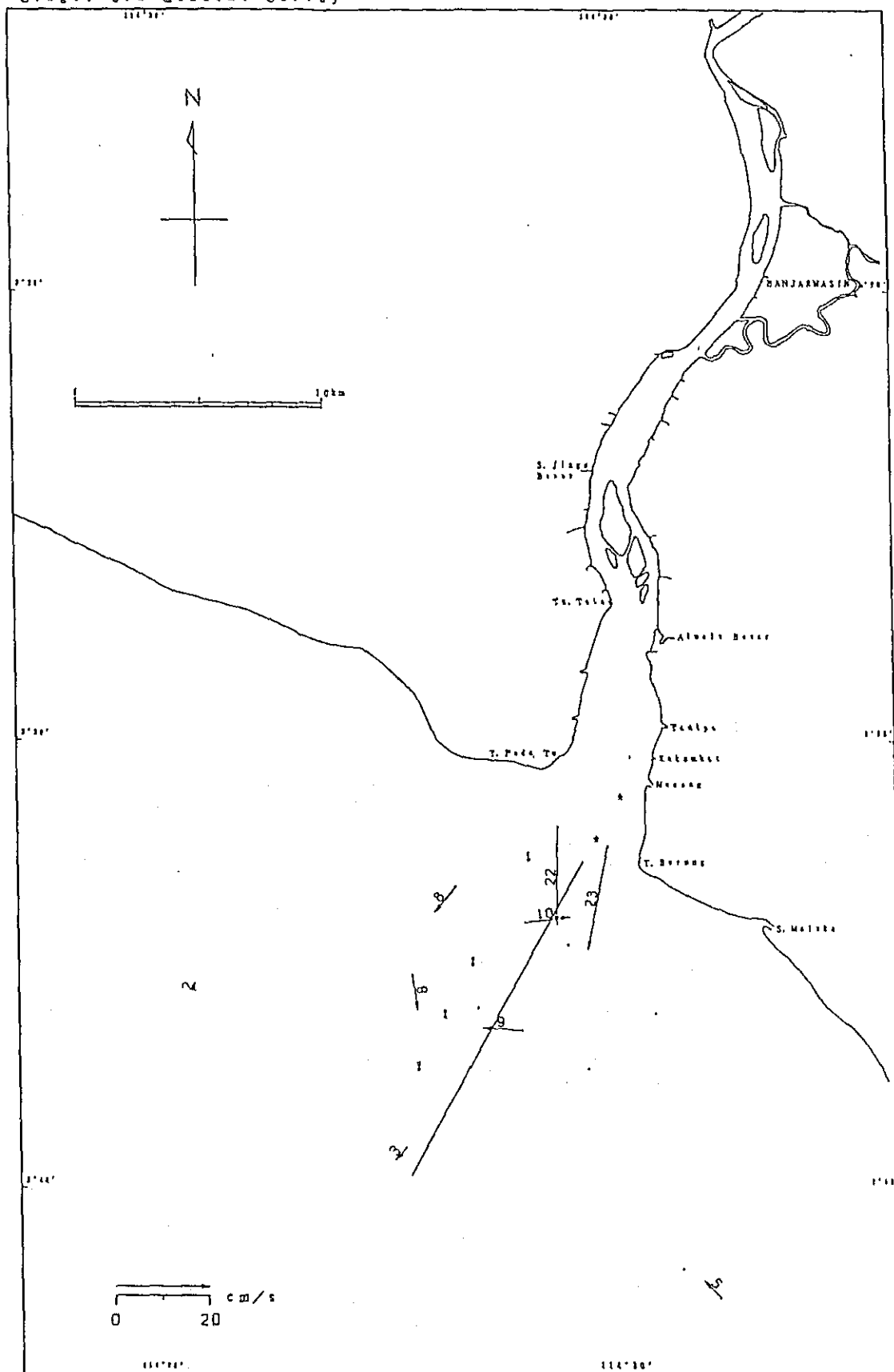


Fig. 3. 2-7 (41) Current Condition by 25 hours Running Mean

Date : 23th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

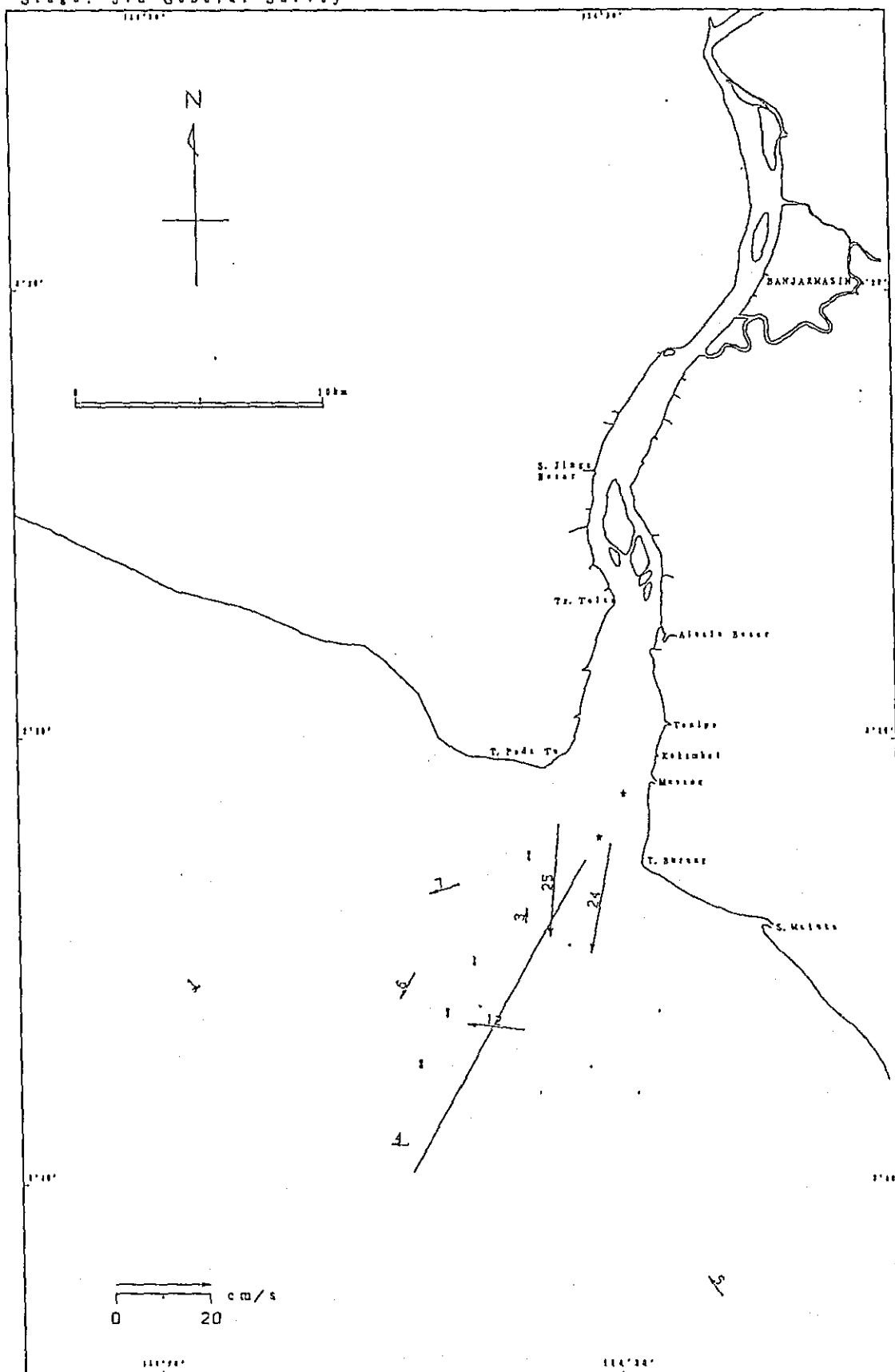


Fig. 3. 2-7 (12) Current Condition by 25 hours Running Mean

Date : 24th Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

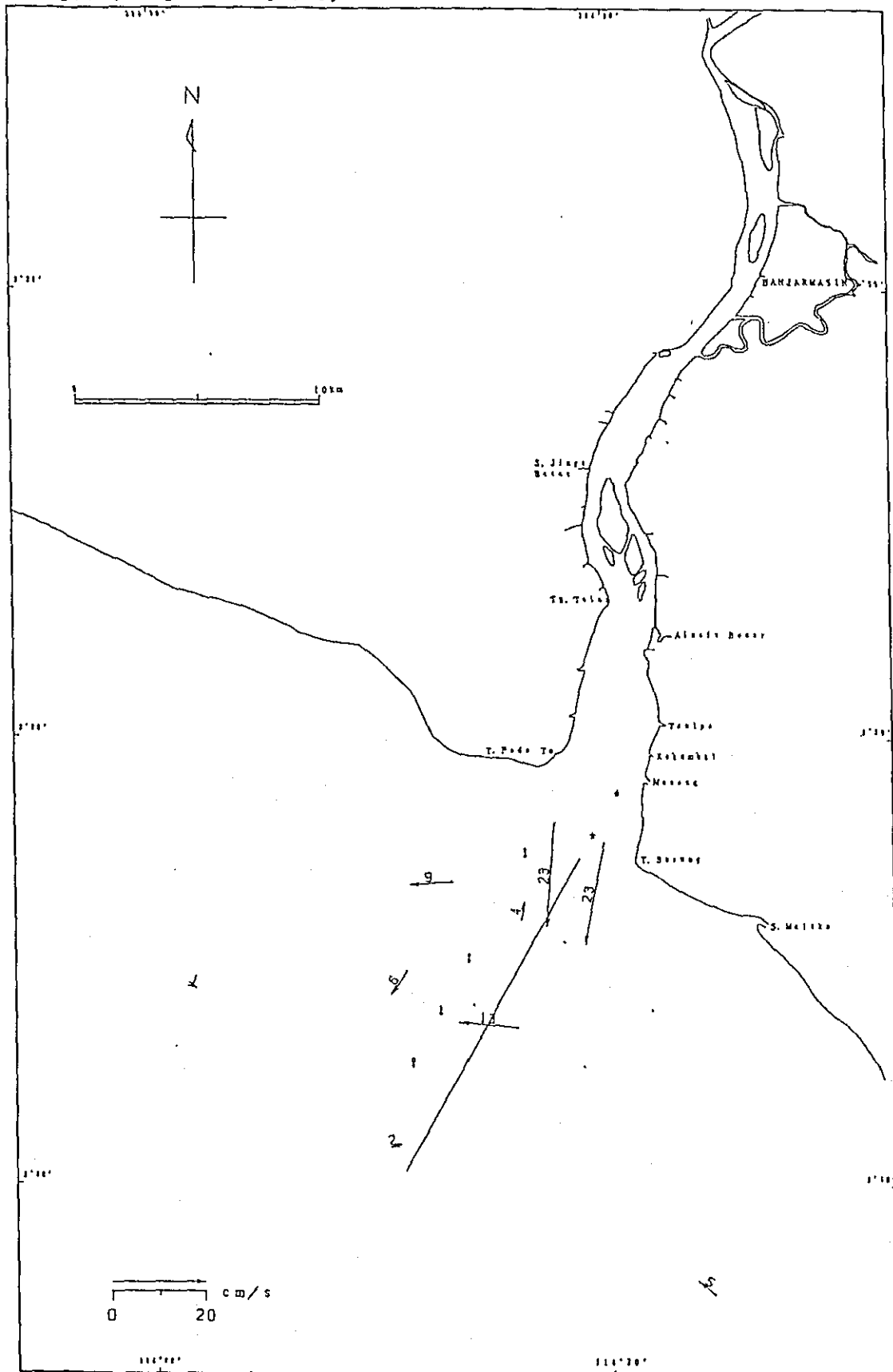


Fig. 3. 2-7 (42) Current Condition by 25 hours Running Mean

Date : 24th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

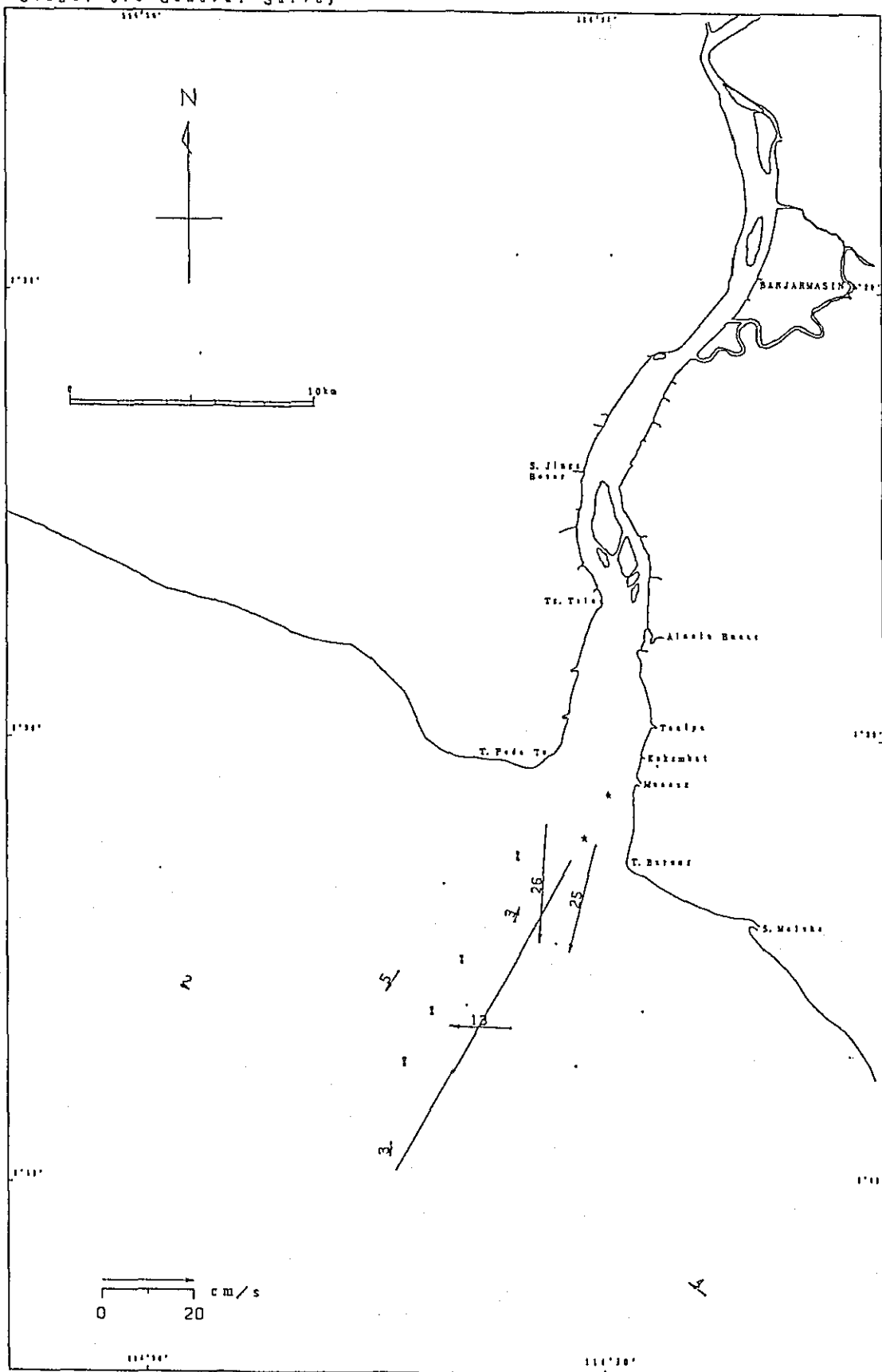


Fig. 3. 2-7 (44) Current Condition by 25 hours Running Mean

Map of the Bengali Bay area, showing the coastline, major rivers, and various locations. The map includes a north arrow, a scale bar (0 to 100 km), and a coordinate grid. Key locations labeled include BANJARMASIN, S. Jilok, T. Poda, T. Poda To, T. Poda, K. Kumbhat, T. Poda, S. Malaka, and S. Malaka. A large area is labeled '2'.

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Date : 26th Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

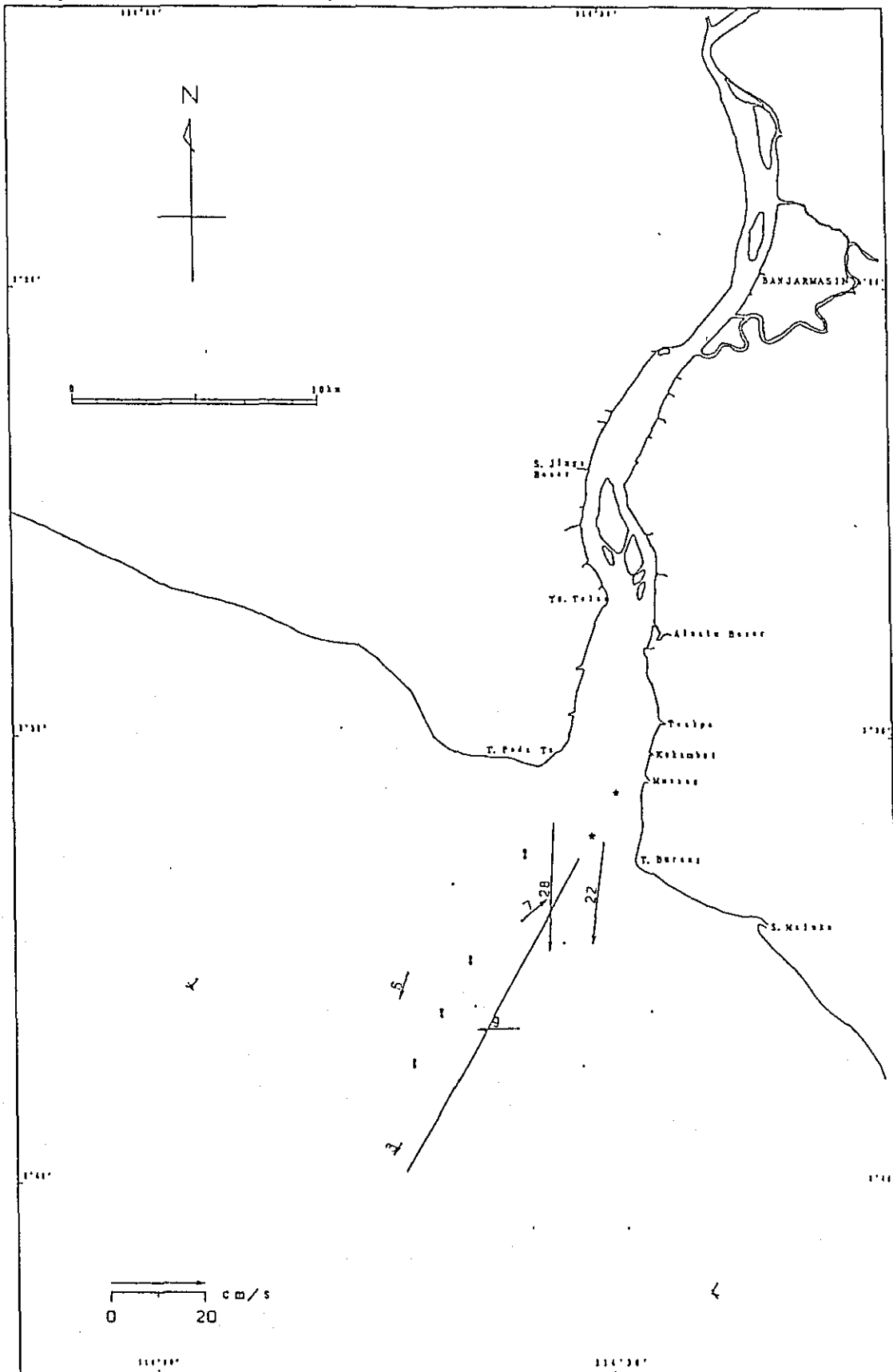


Fig. 3. 2-7 (47) Current Condition by 25 hours Running Mean

Date : 26th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

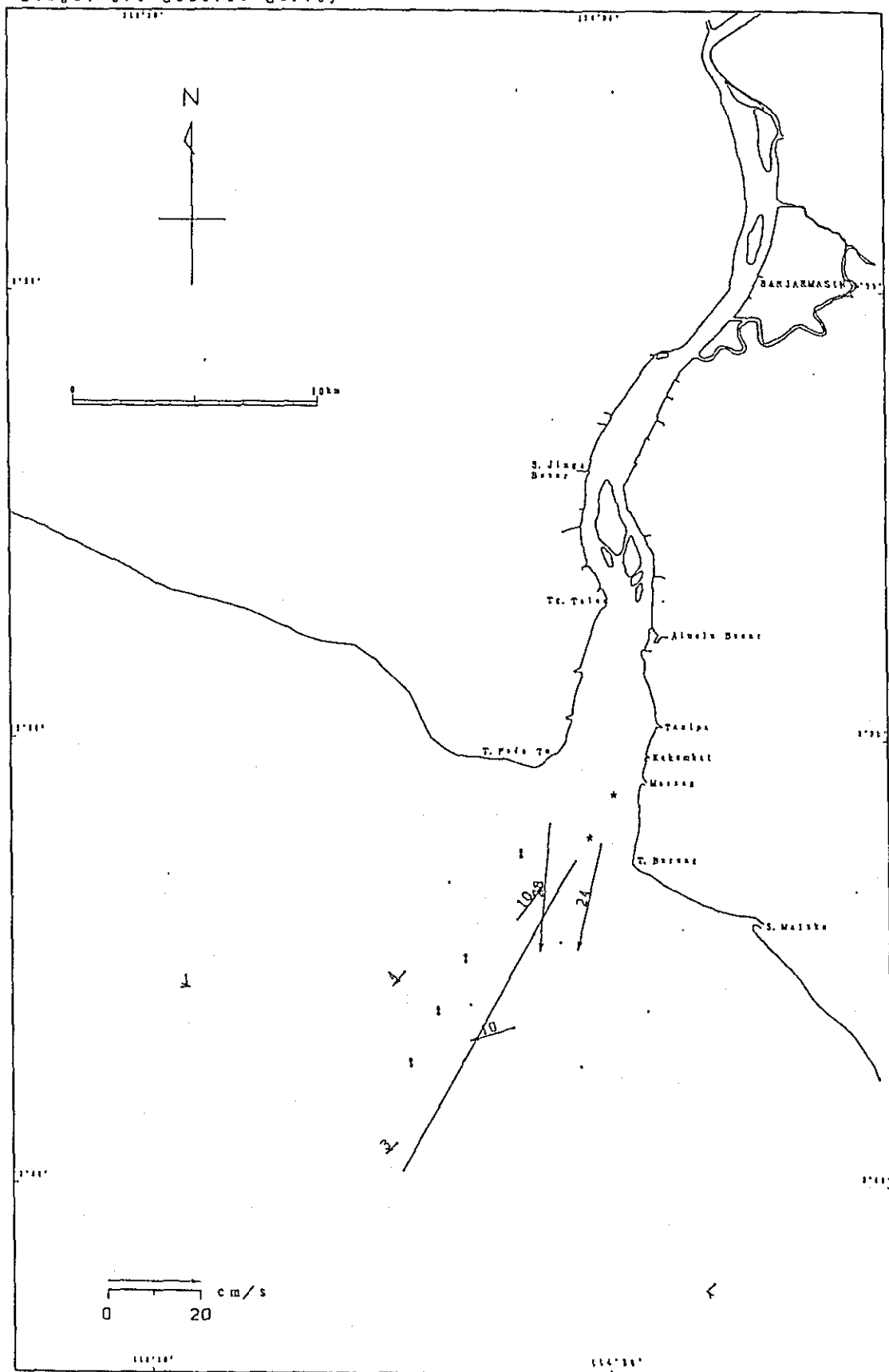


Fig. 3. 2-7 (48) Current Condition by 25 hours Running Mean

Date : 27th Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

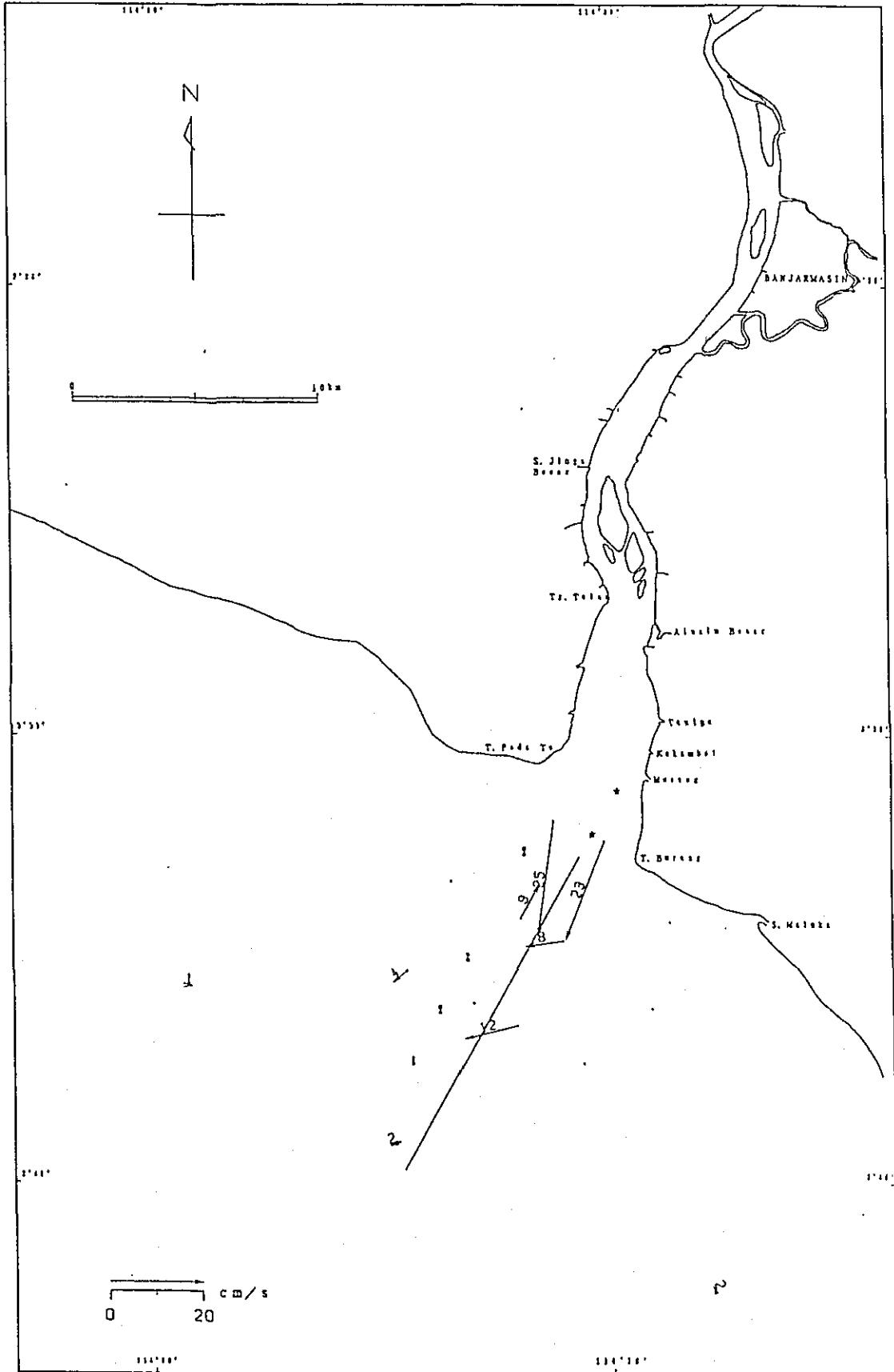


Fig. 3. 2-7 (49) Current Condition by 25 hours Running Mean

Date : 27th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

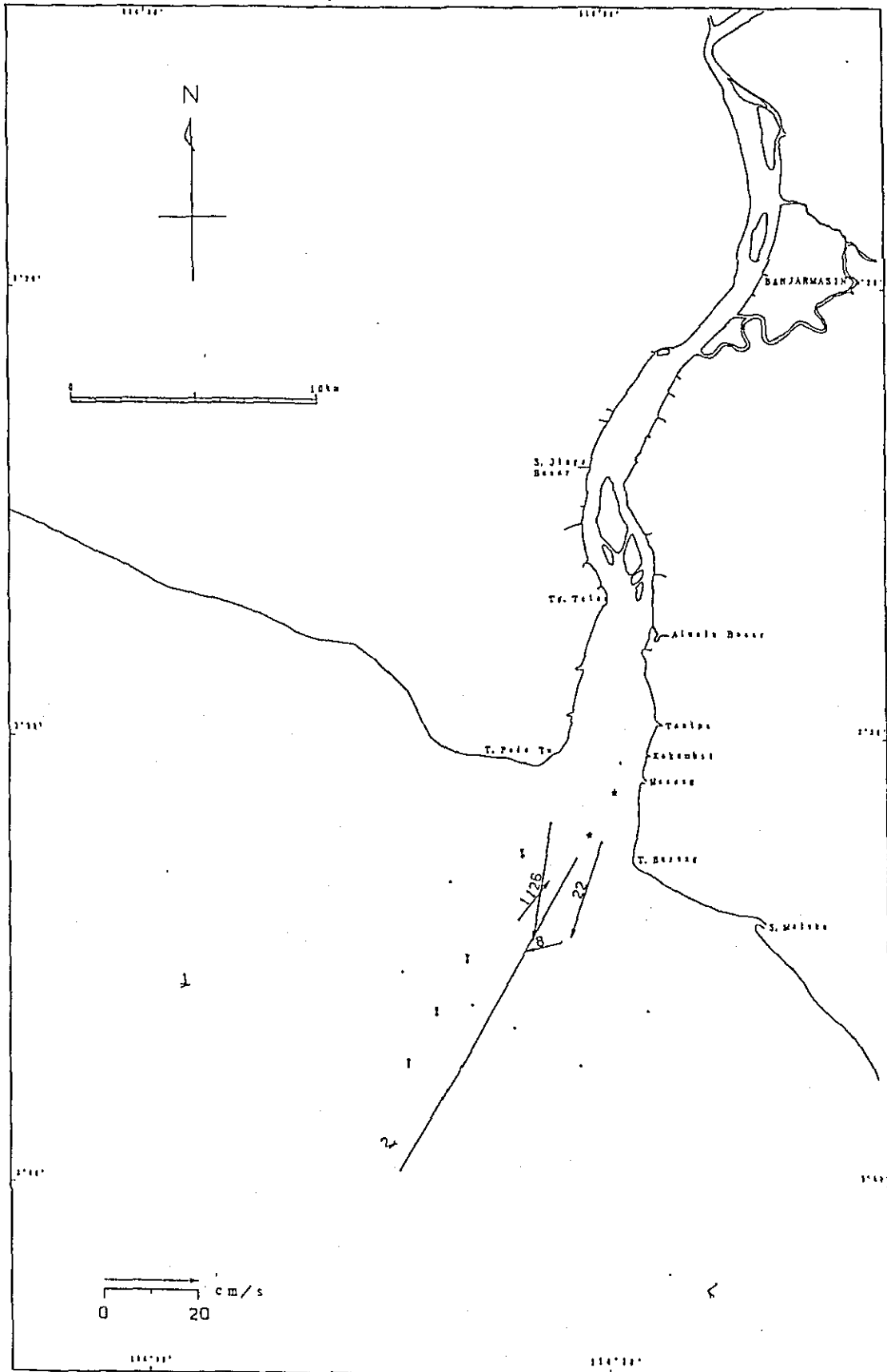


Fig. 3. 2-7 (150) Current Condition by 25 hours Running Mean

Date : 28th Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

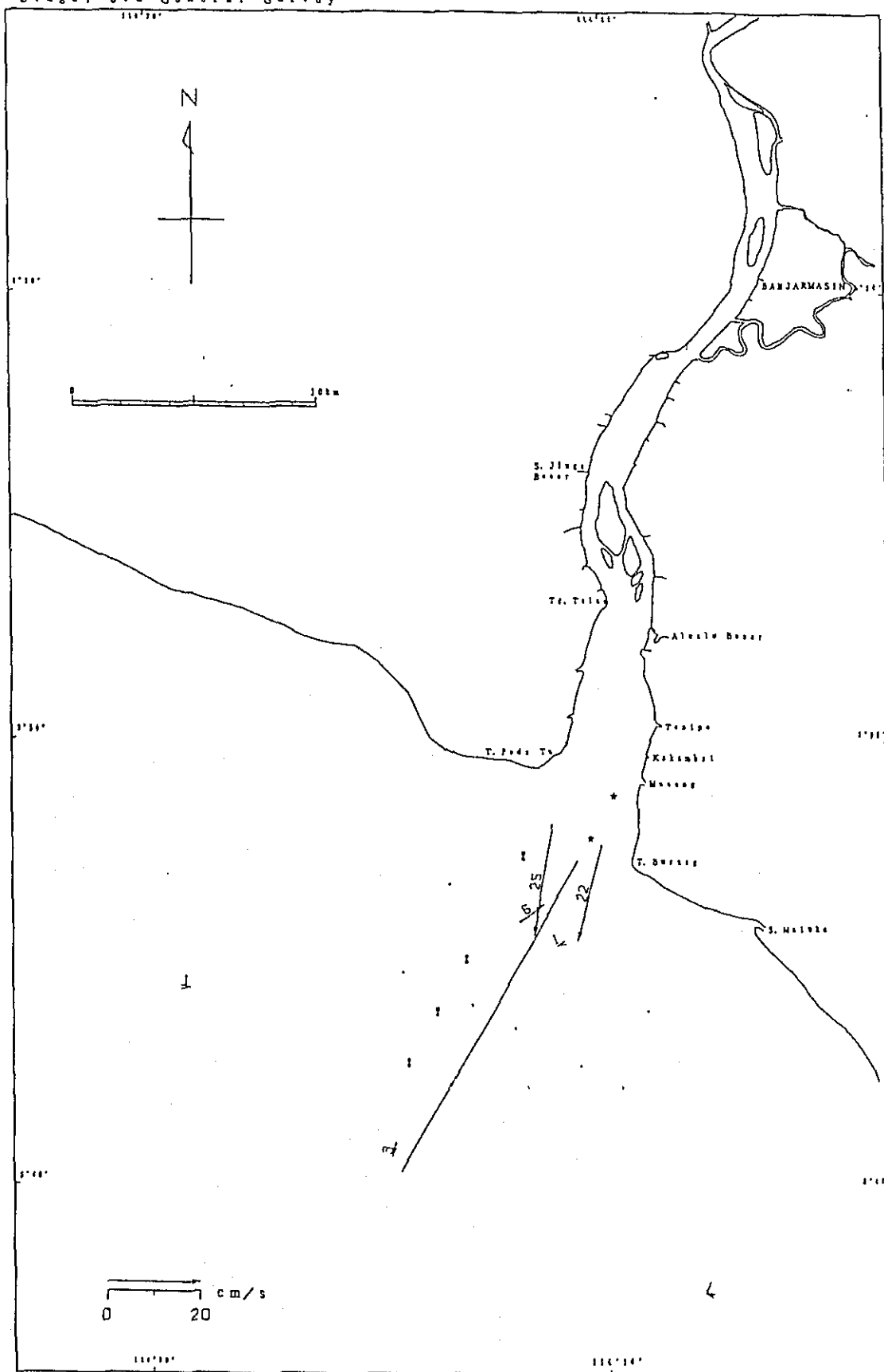


Fig. 3. 2-7 (5) Current Condition by 25 hours Running Mean

Date : 28th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

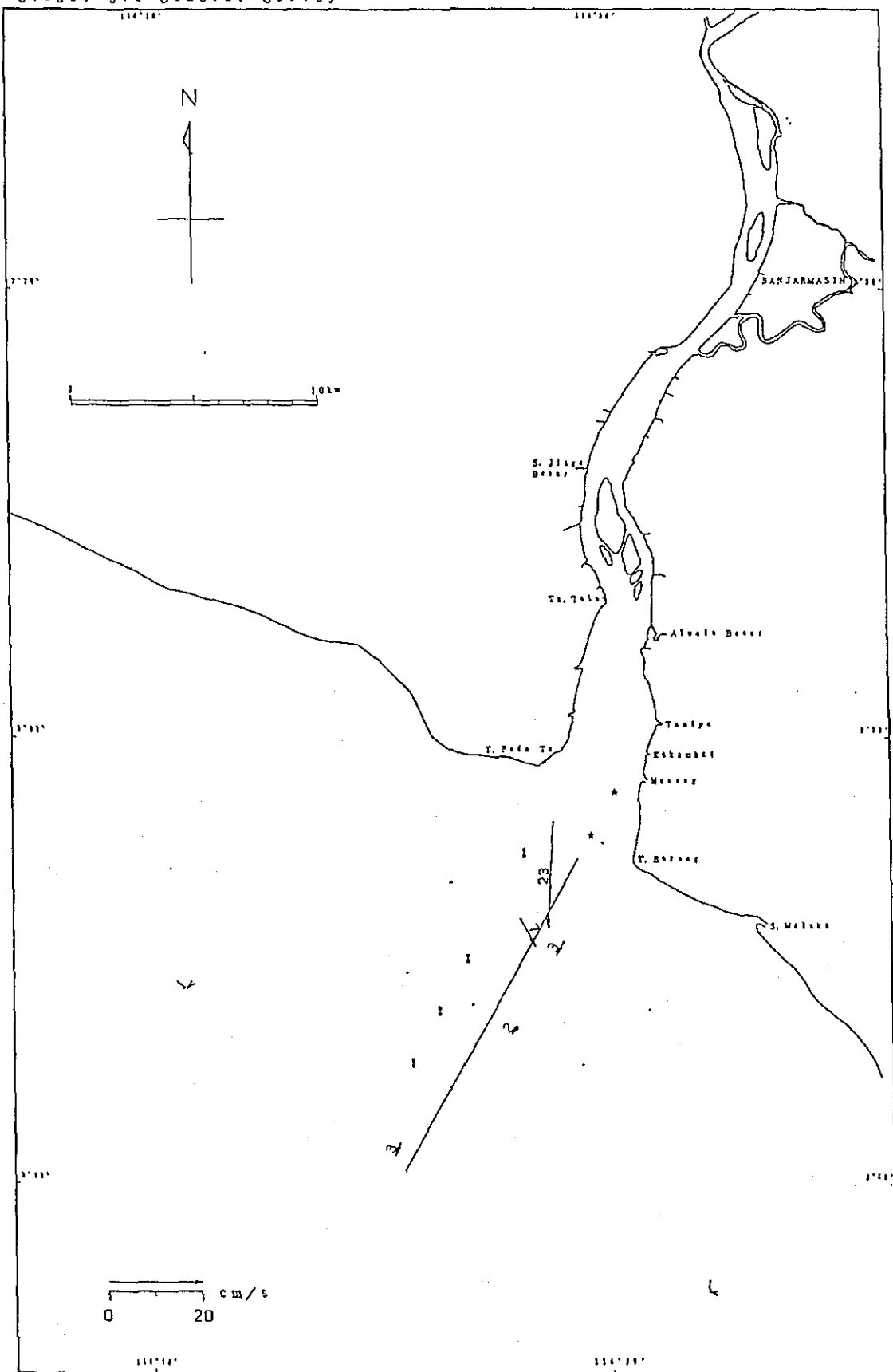


Fig. 3. 2-7 (52) Current Condition by 25 hours Running Mean

[illegible]

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Date : 29th Apr. 1989
 Time : 12:00
 Stage: 3rd General Survey

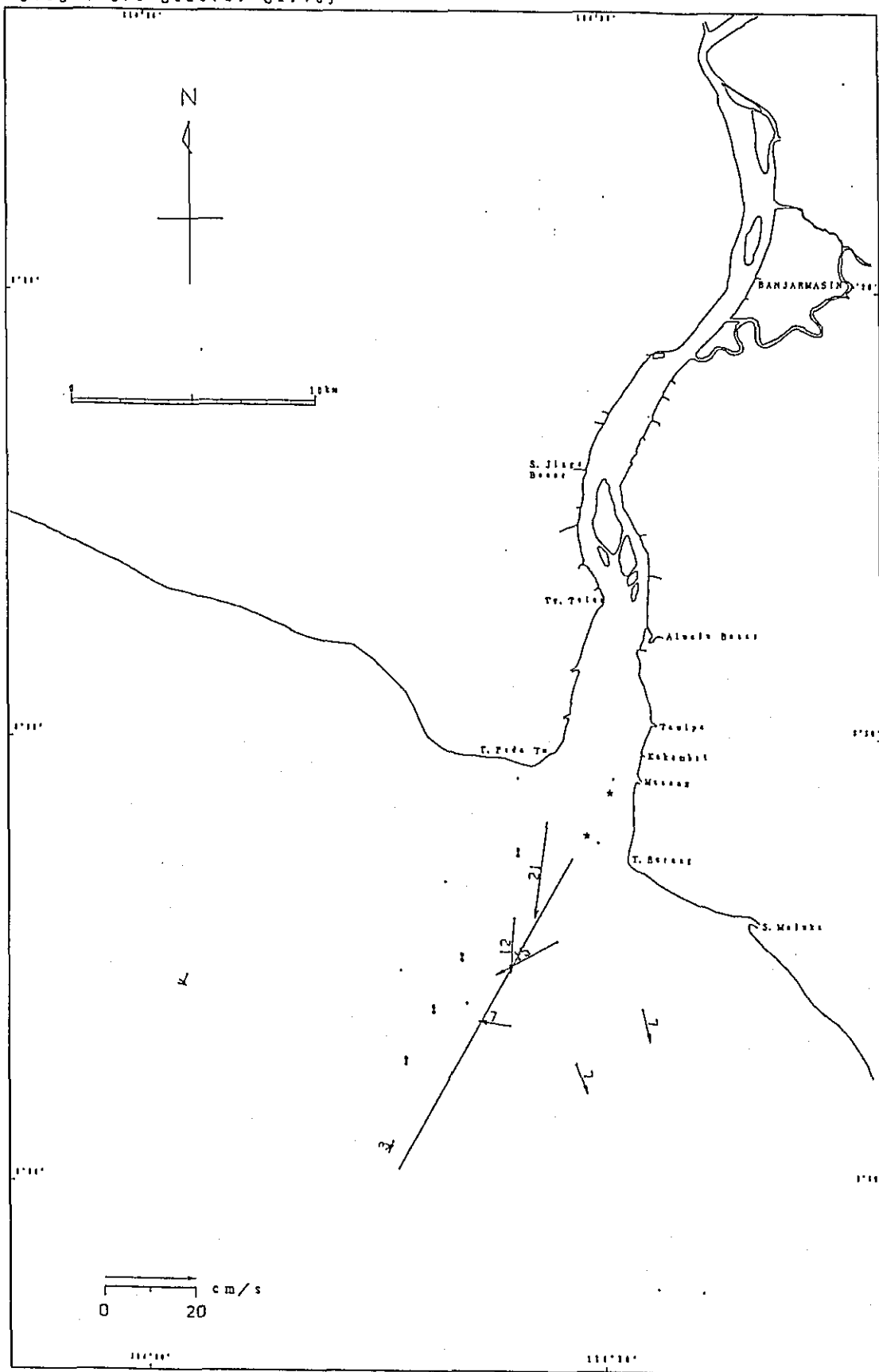


Fig. 3. 2-7 (15) Current Condition by 25 hours Running Mean

Date : 30th Apr. 1989
 Time : 0:00
 Stage: 3rd General Survey

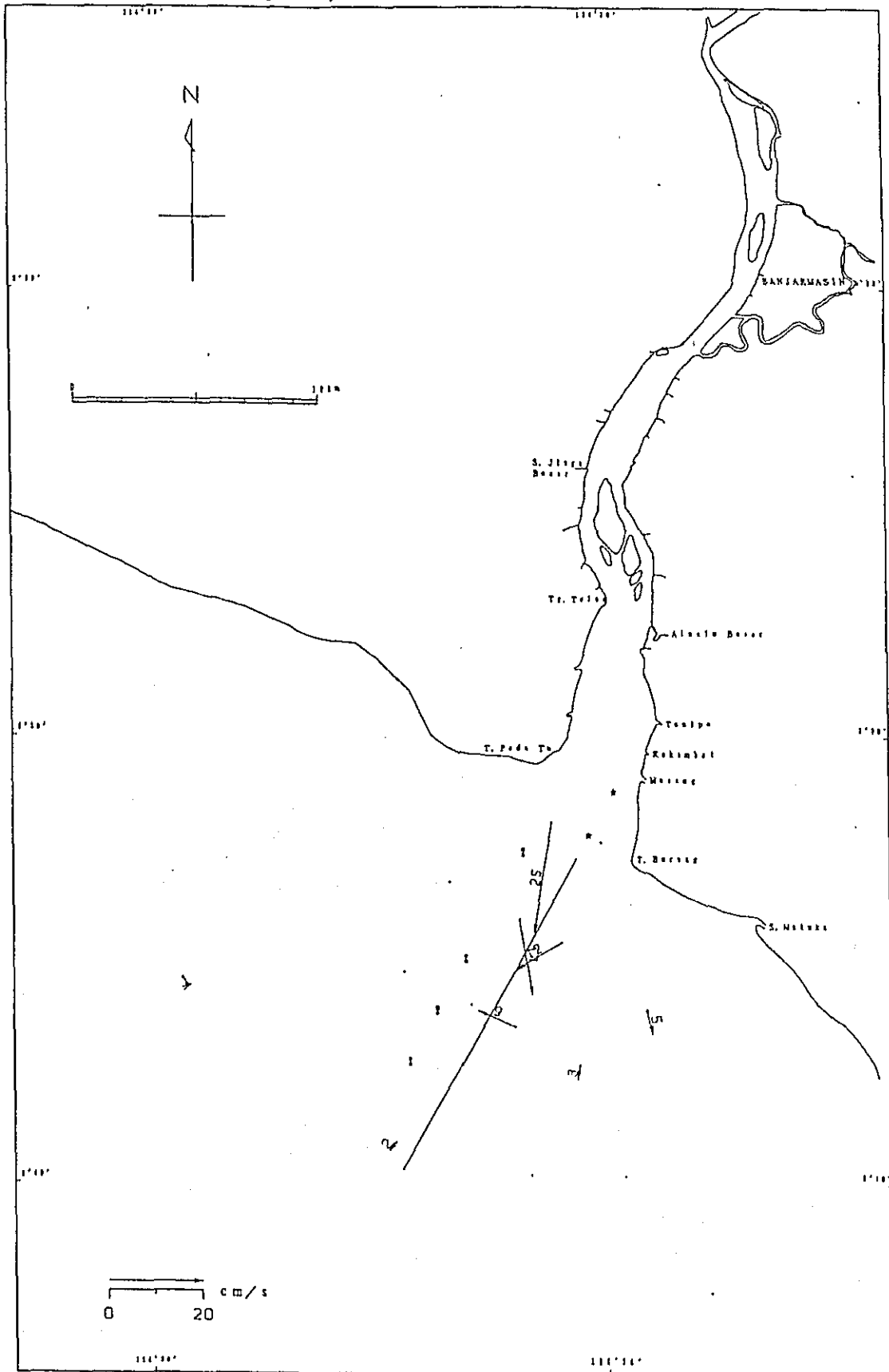


Fig. 3. 2-7 (55) Current Condition by 25 hours Running Mean

[illegible]

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Date : 1st May 1989
 Time : 0:00
 Stage: 3rd General Survey

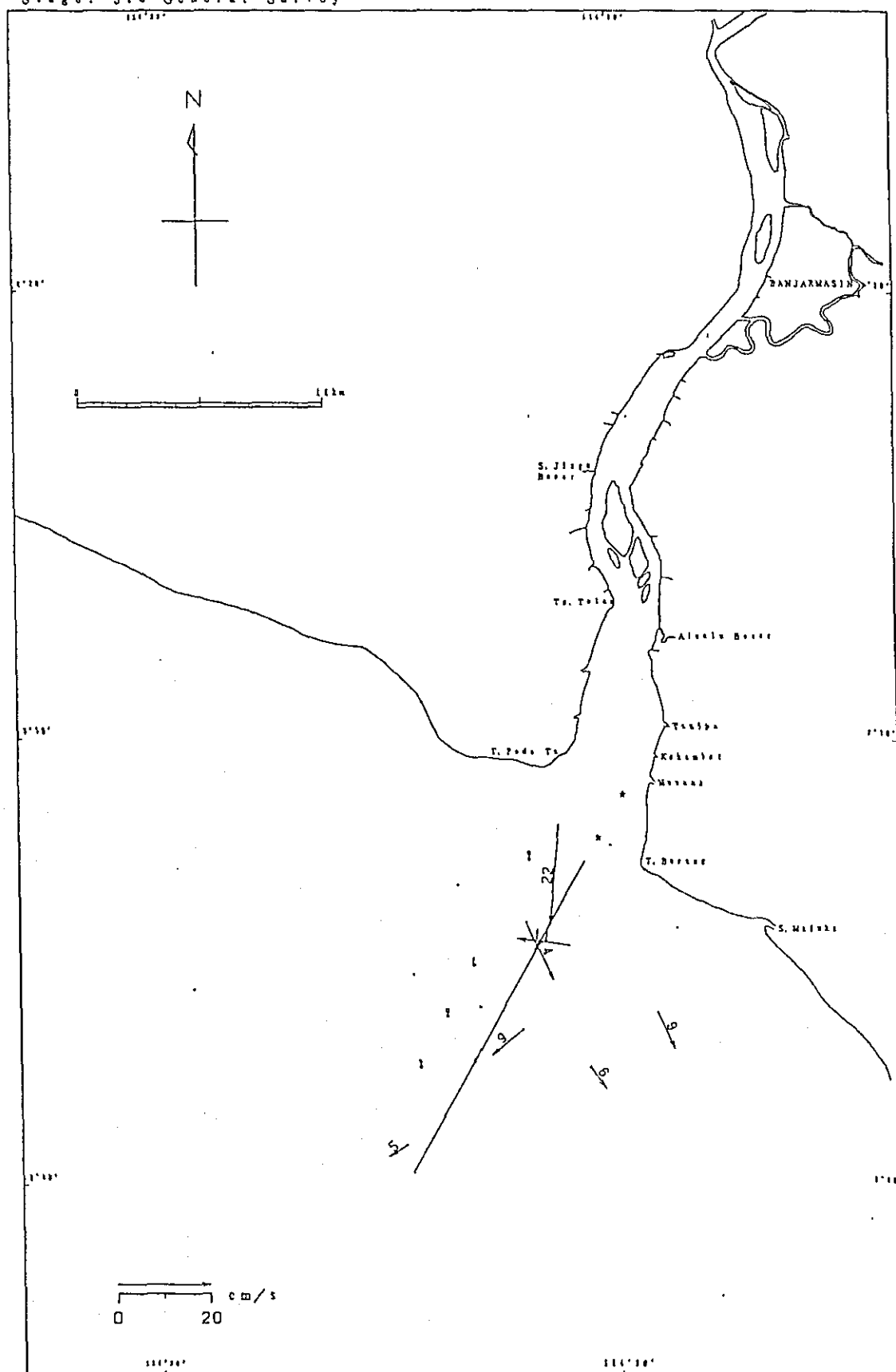


Fig. 3. 2-7 (57) Current Condition by 25 hours Running Mean

Date : 1st May 1989
 Time : 12:00
 Stage: 3rd General Survey

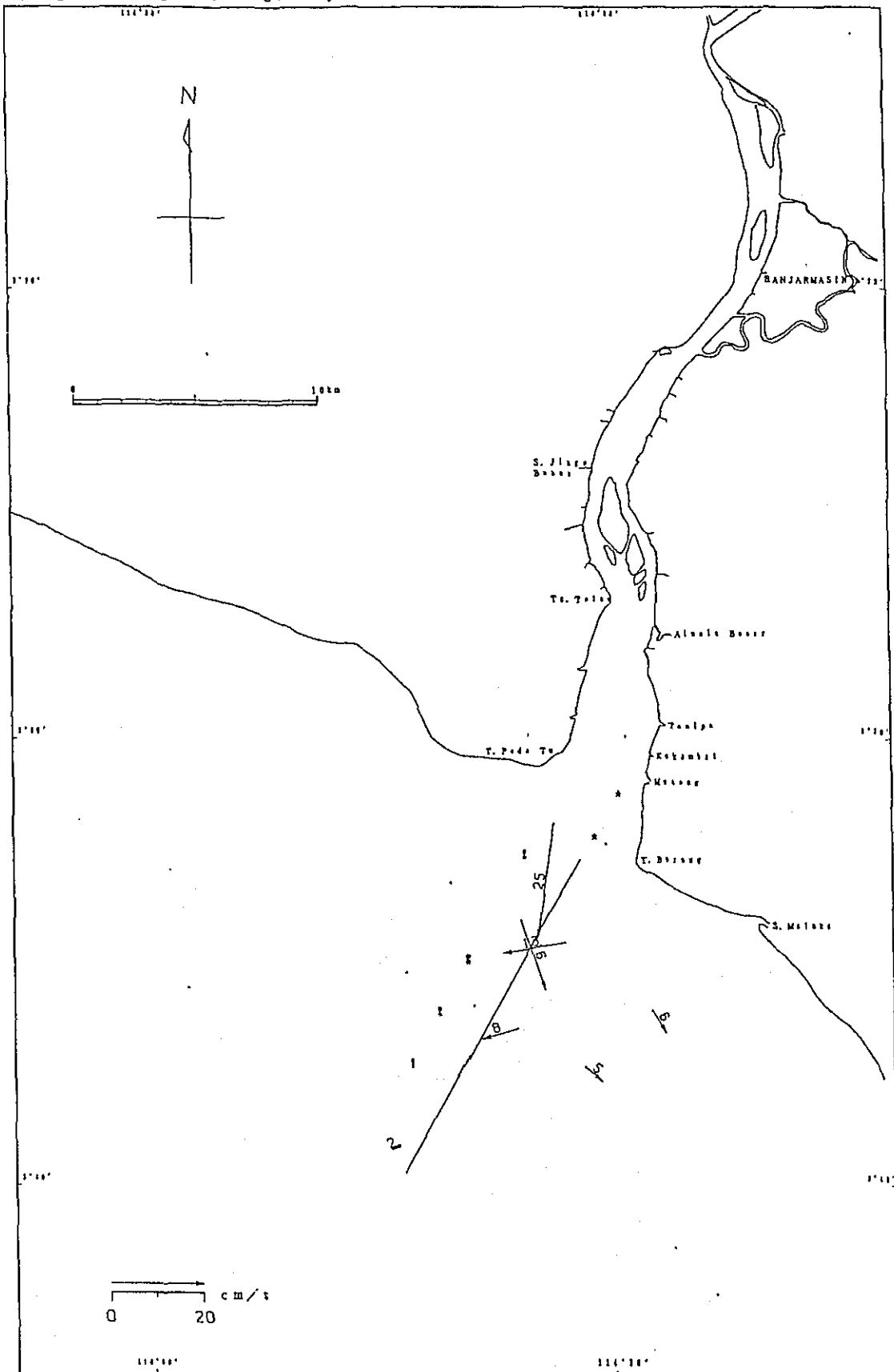


Fig. 3. 2-7 (53) Current Condition by 25 hours Running Mean

Date : 2nd May 1989
 Time : 0:00
 Stage: 3rd General Survey

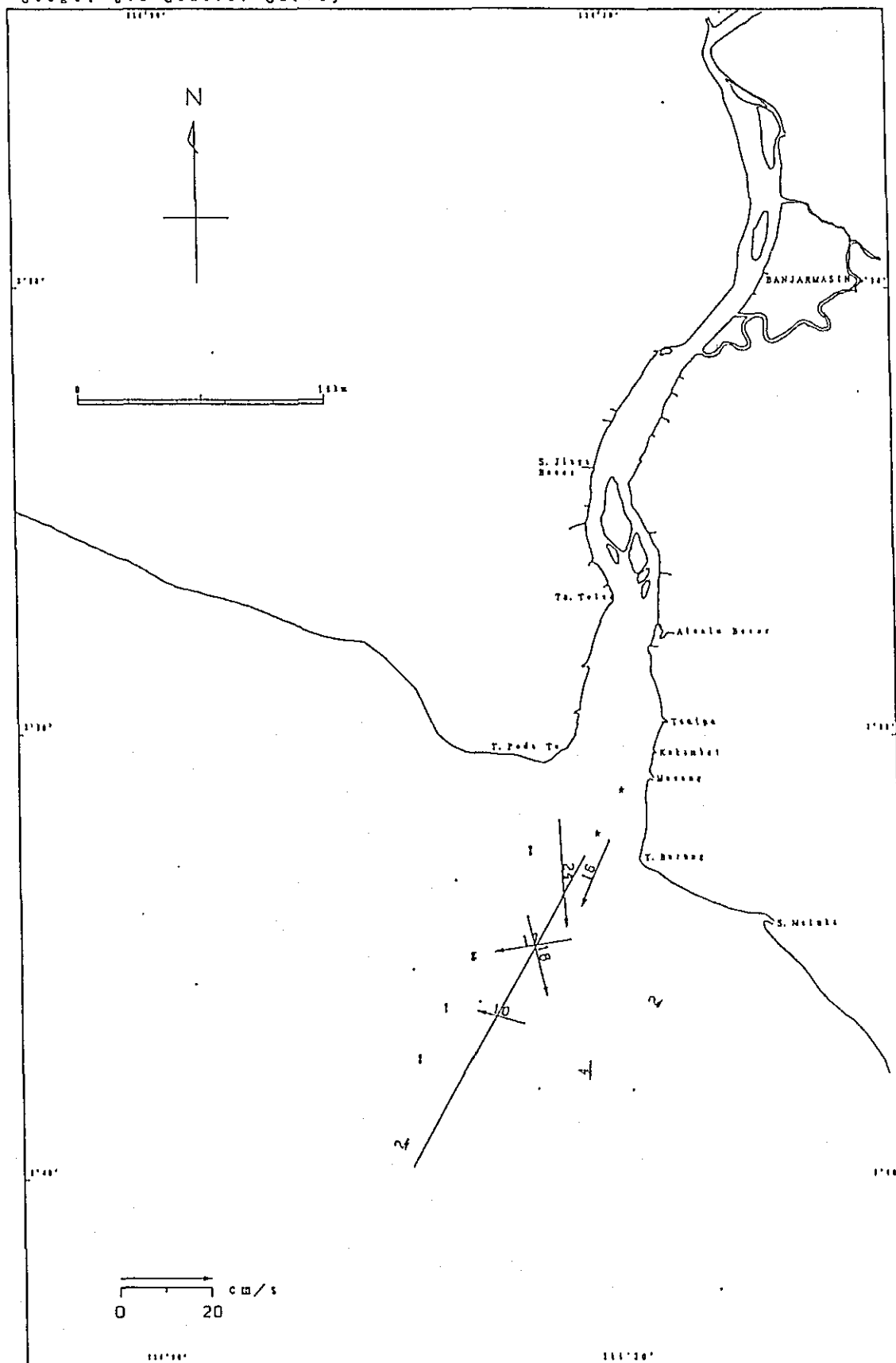


Fig. 3. 2-7 (159) Current Condition by 25 hours Running Mean

Date : 2nd May 1989
 Time : 12:00
 Stage: 3rd General Survey

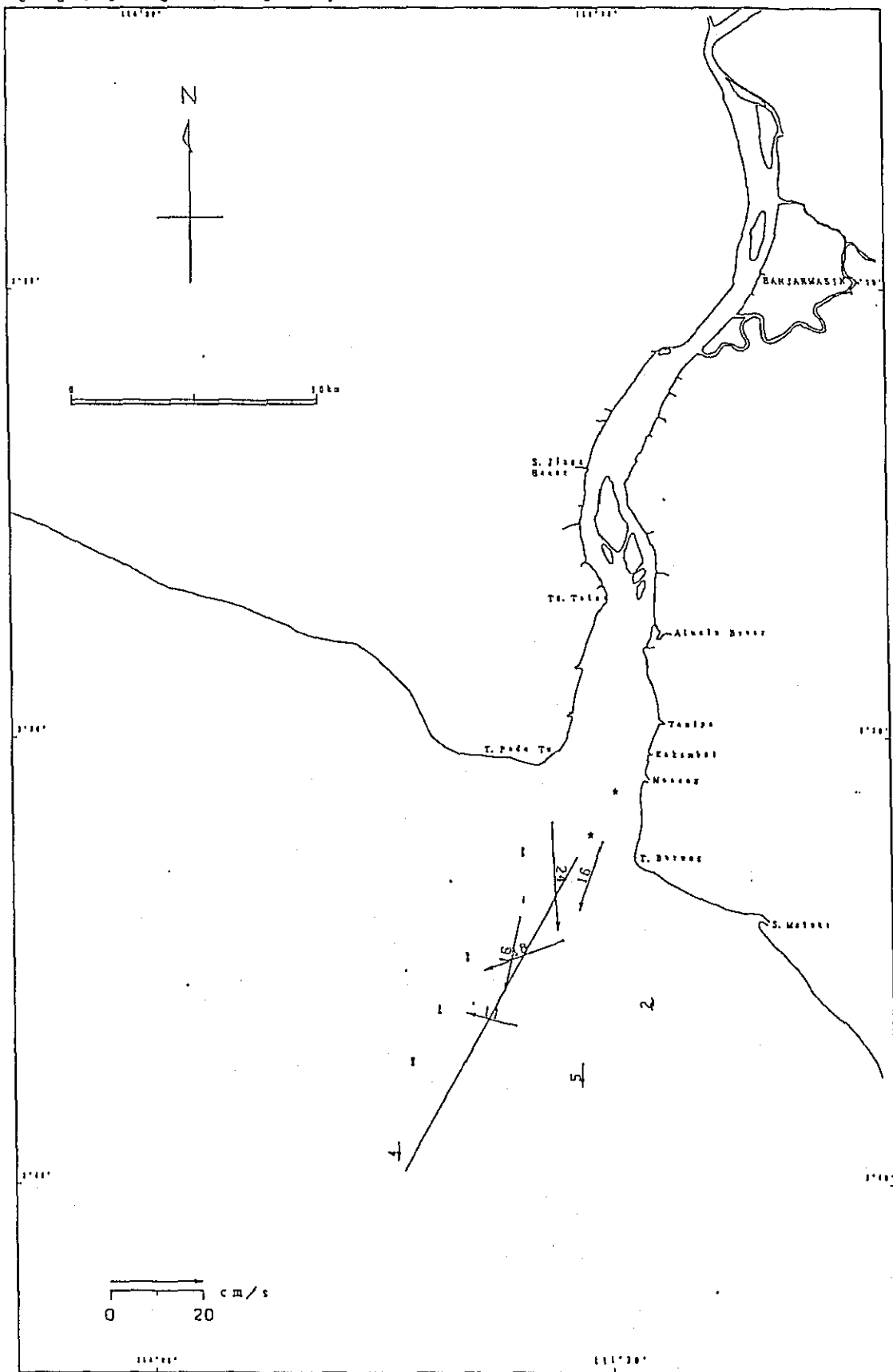


Fig. 3. 2-7 (160) Current Condition by 25 hours Running Mean

Date : 3rd May 1989
 Time : 0:00
 Stage: 3rd General Survey

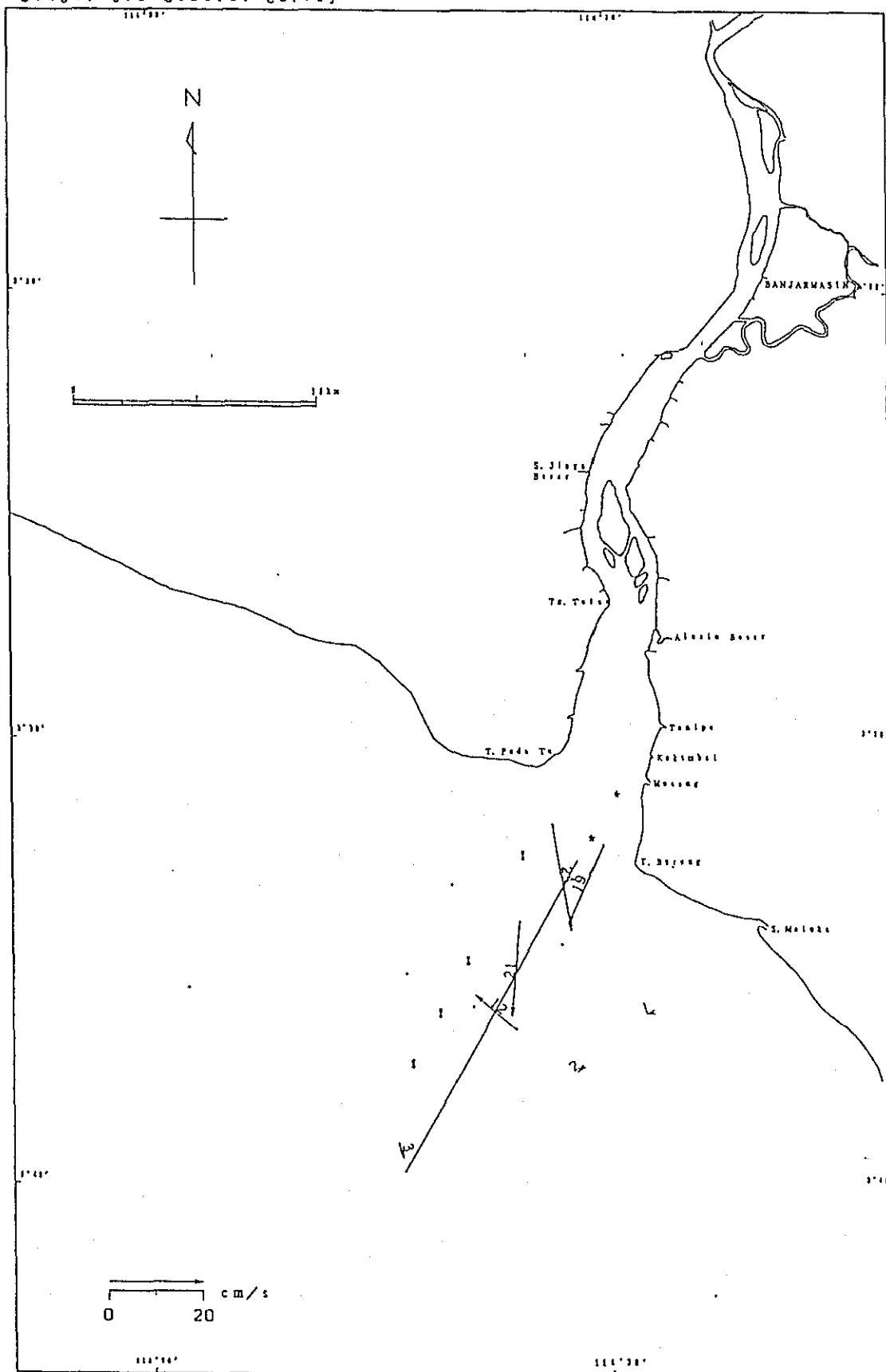


Fig. 3. 2-7 (161) Current Condition by 25 hours Running Mean

Date : 3rd May 1989
 Time : 12:00
 Stage: 3rd General Survey

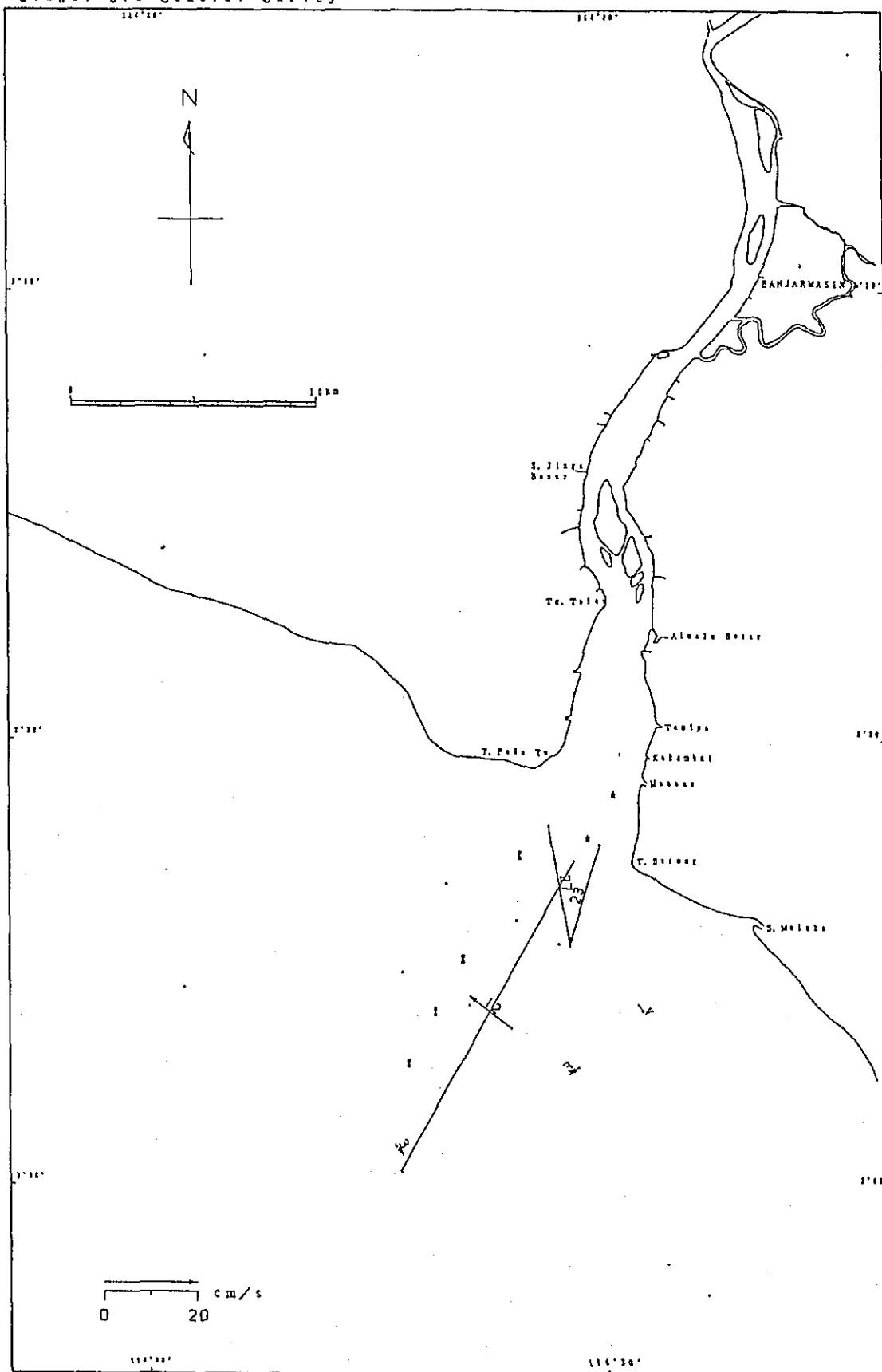


Fig. 3. 2-7 (62) Current Condition by 25 hours Running Mean

Date : 4th May 1989
 Time : 0:00
 Stage: 3rd General Survey

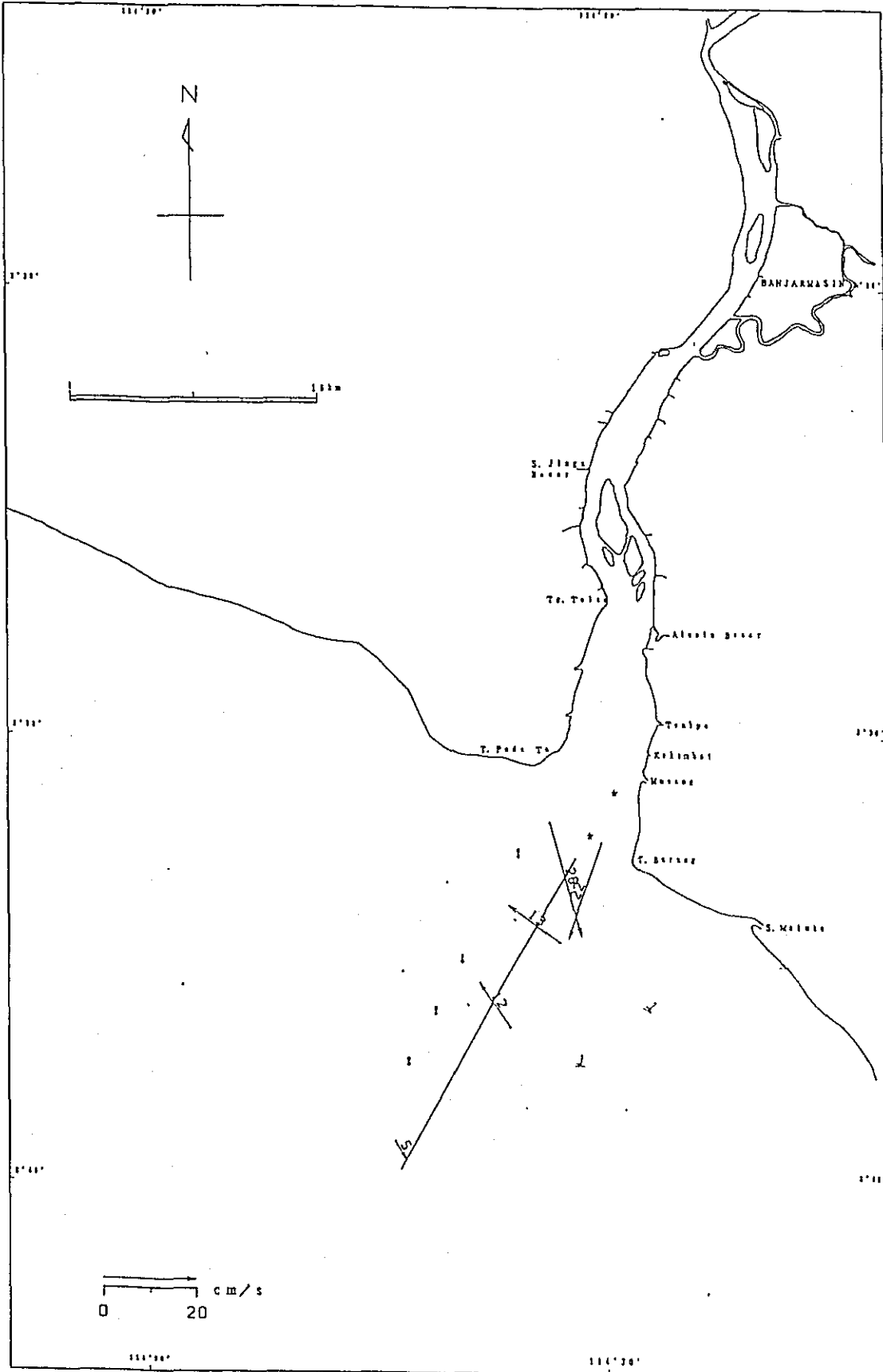


Fig. 3. 2-7 (163) Current Condition by 25 hours Running Mean

Date : 4th May 1989
 Time : 12:00
 Stage: 3rd General Survey

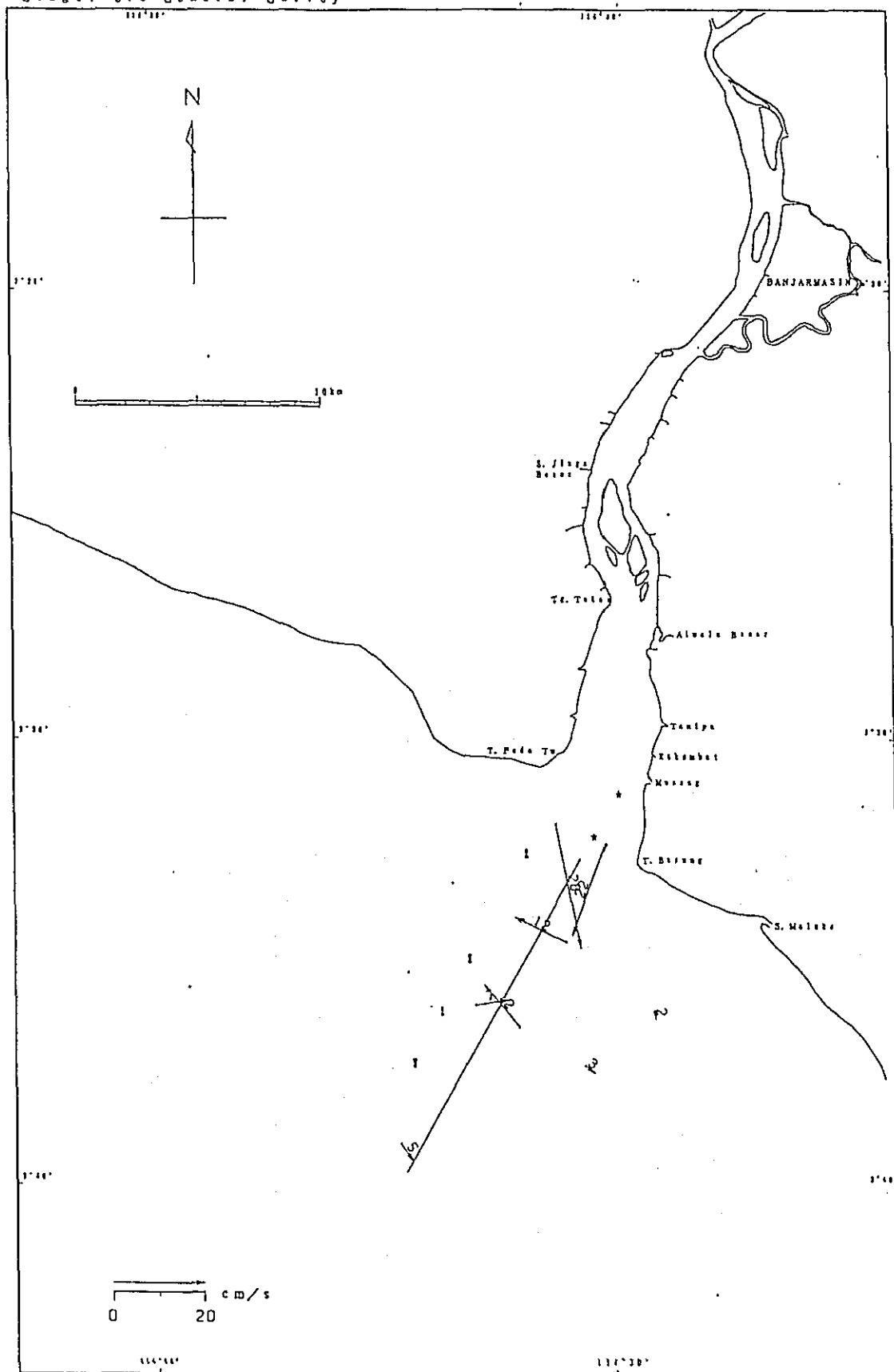


Fig. 3. 2-7 (06) Current Condition by 25 hours Running Mean

Date : 5th May 1989
 Time : 0:00
 Stage: 3rd General Survey

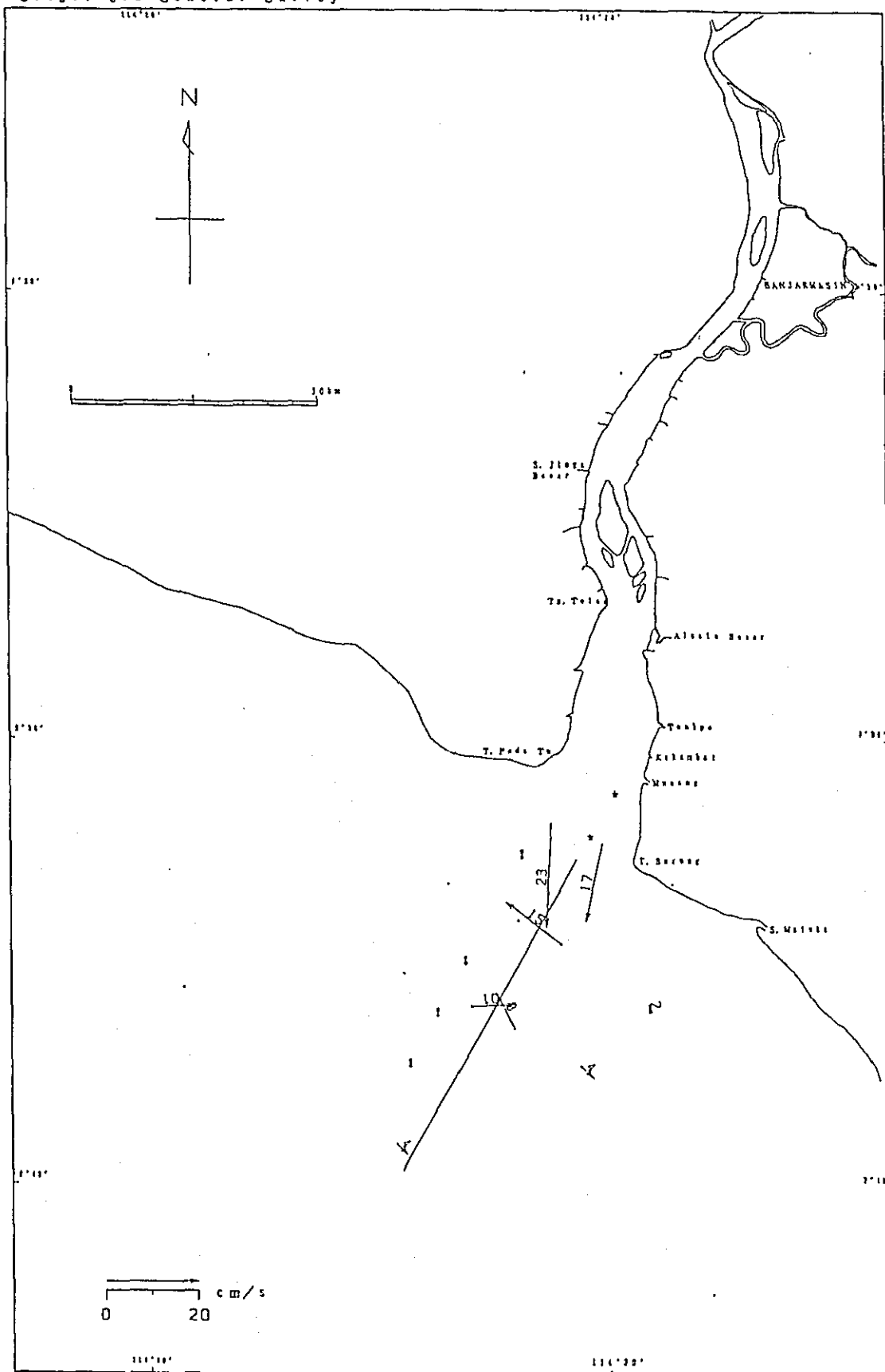


Fig. 3. 2-7 (165) Current Condition by 25 hours Running Mean

Date : 5th May 1989
 Time : 12:00
 Stage: 3rd General Survey

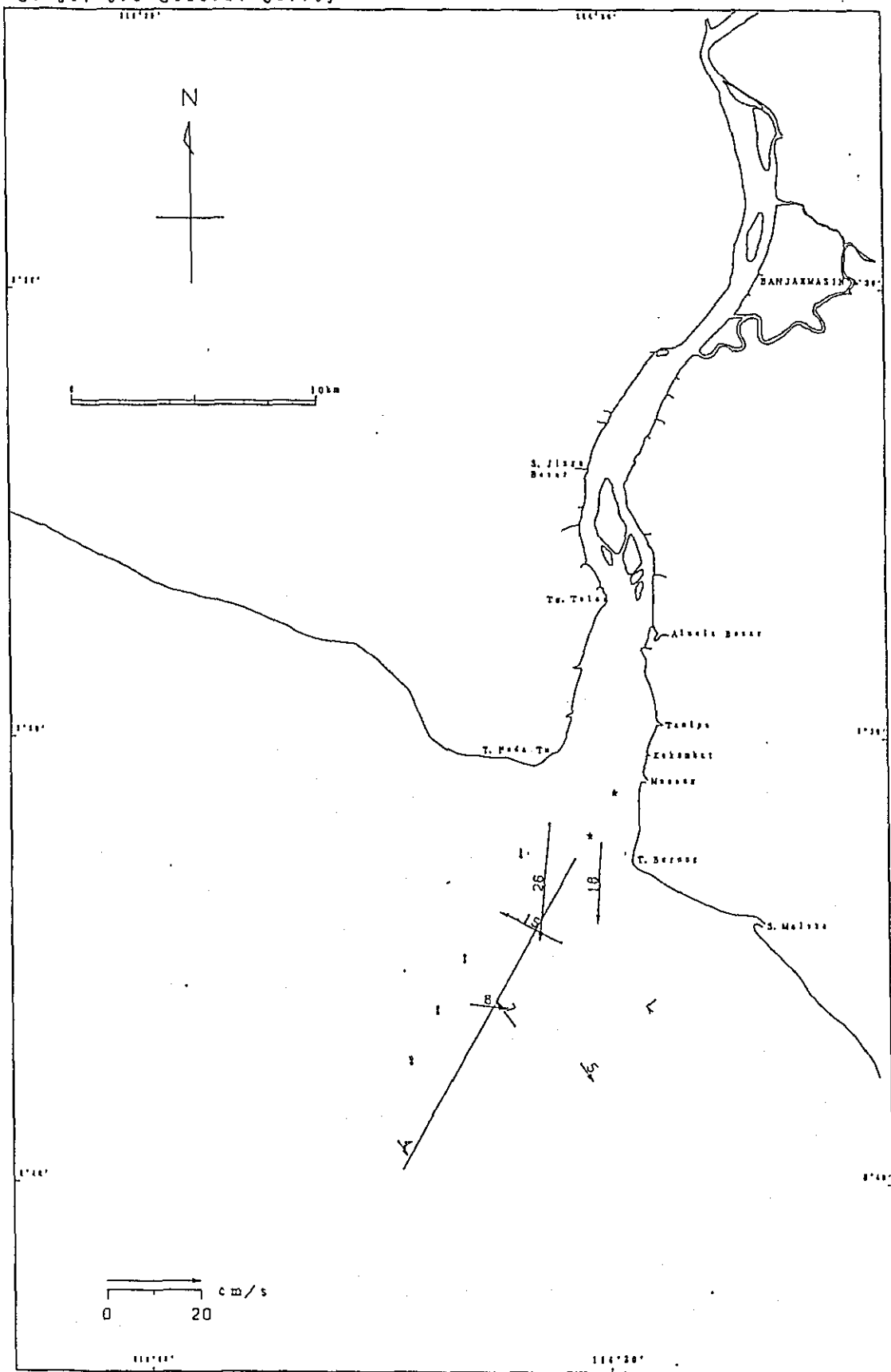


Fig. 3. 2-7 (165) Current Condition by 25 hours Running Mean

Date : 6th May 1989
 Time : 0:00
 Stage: 3rd General Survey

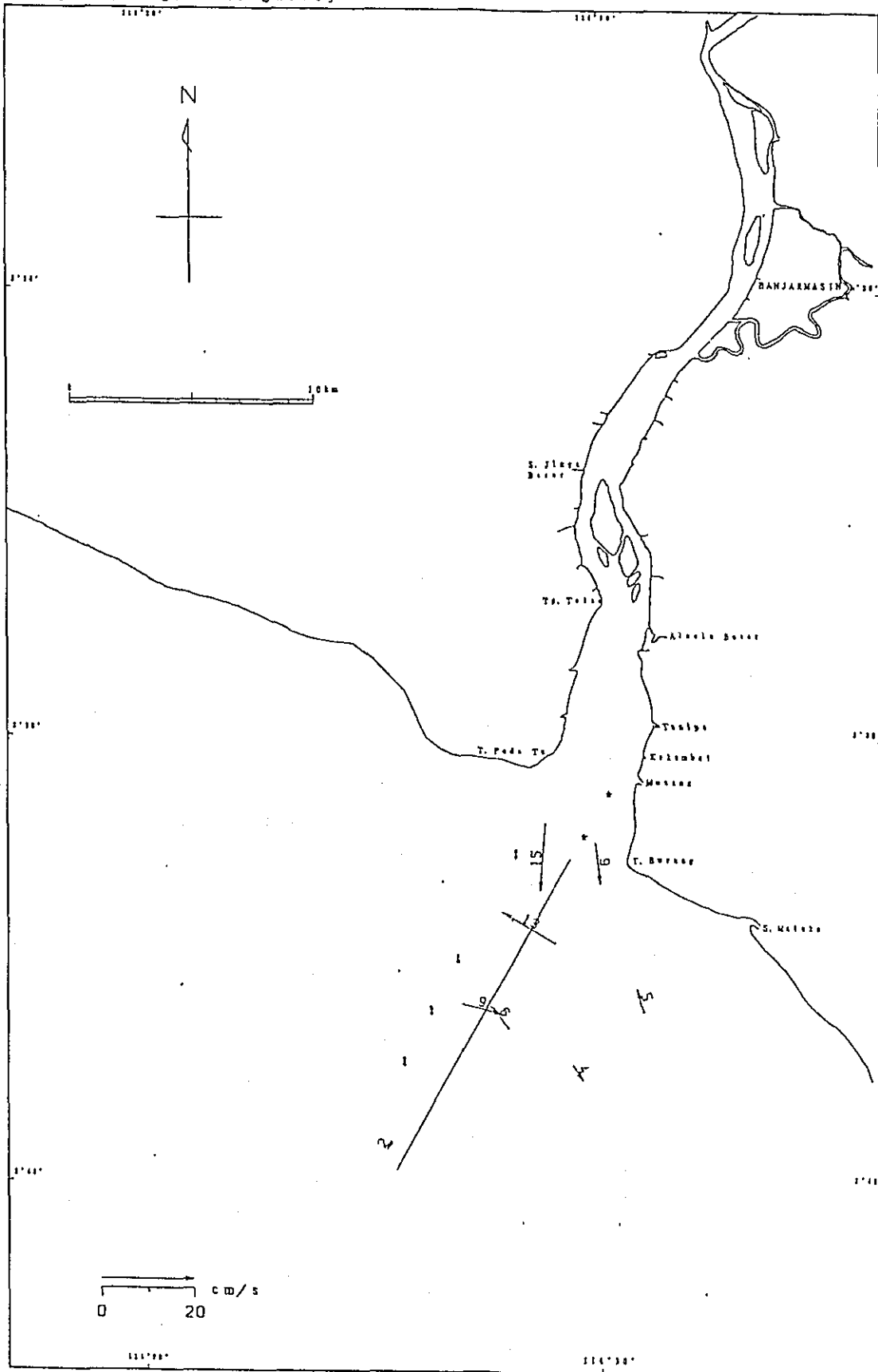


Fig. 3. 2-7 (67) Current Condition by 25 hours Running Mean

Date : 6th May 1989
 Time : 12:00
 Stage: 3rd General Survey

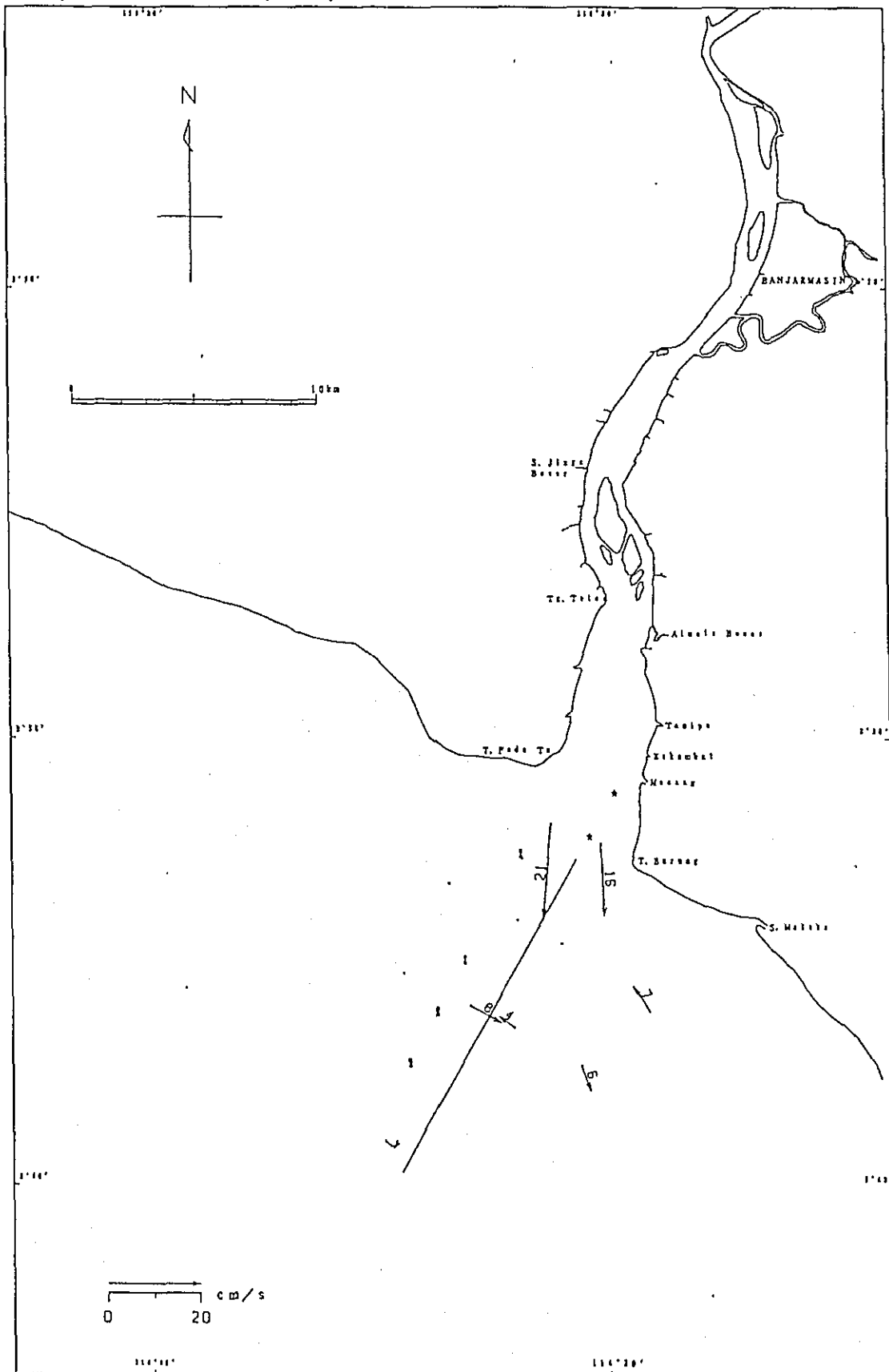


Fig. 3. 2-7 (63) Current Condition by 25 hours Running Mean

Date : 7th May 1989
 Time : 0:00
 Stage: 3rd General Survey

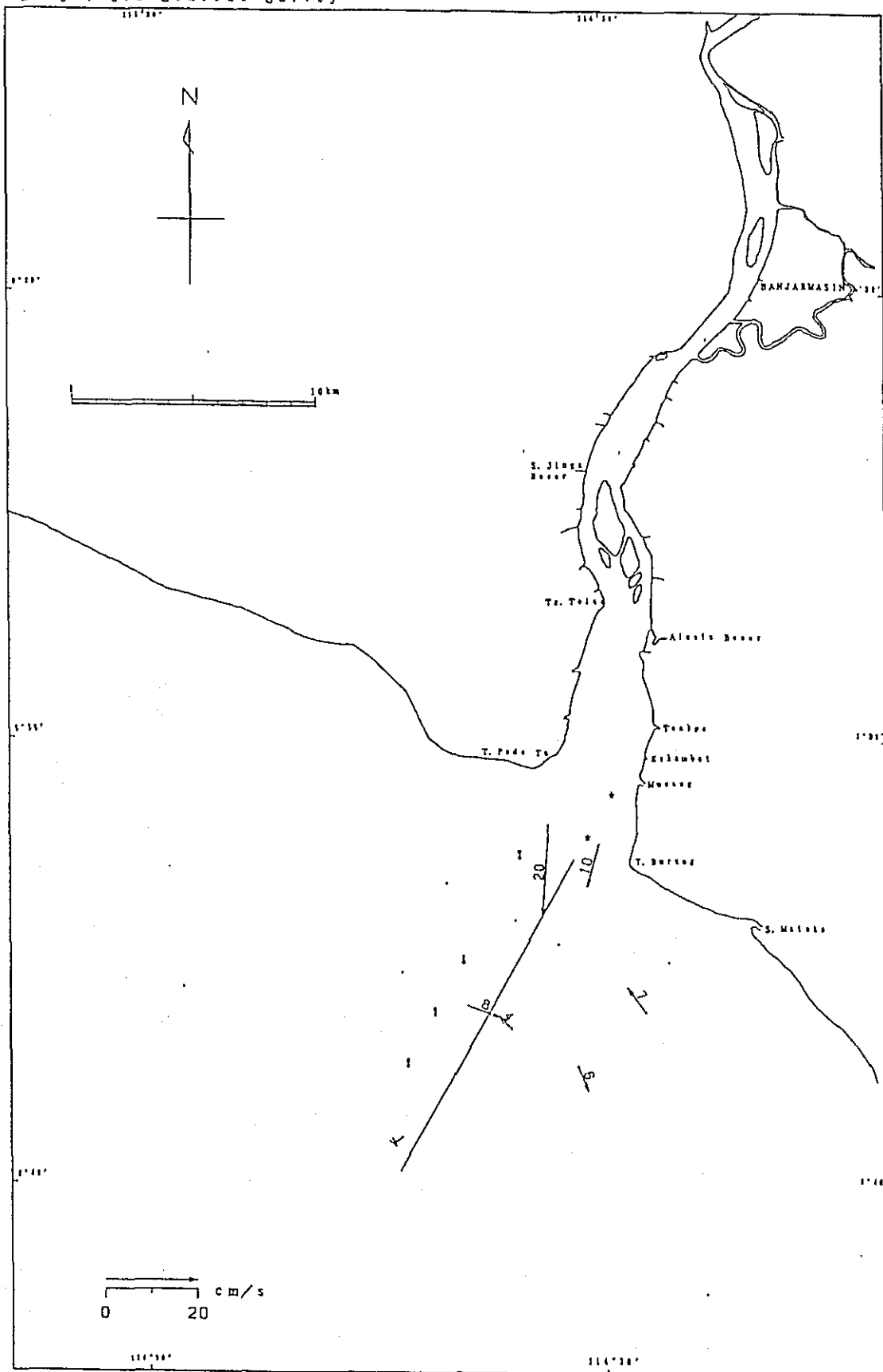


Fig. 3. 2-7 (69) Current Condition by 25 hours Running Mean

Date : 7th May 1989
 Time : 12:00
 Stage: 3rd General Survey

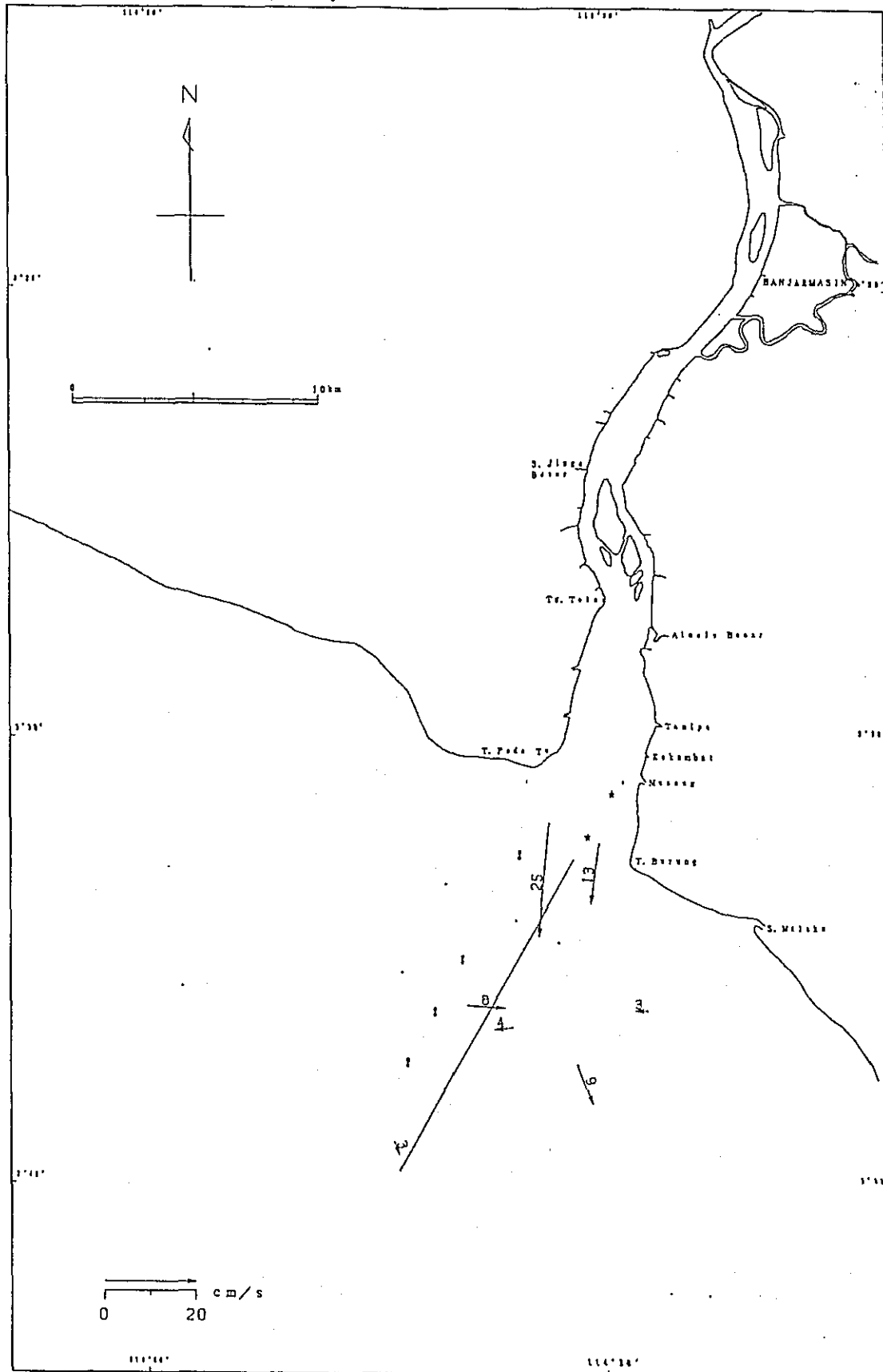


Fig. 3. 2-7 (170) Current Condition by 25 hours Running Mean

Date : 8th May 1989
 Time : 0:00
 Stage: 3rd General Survey

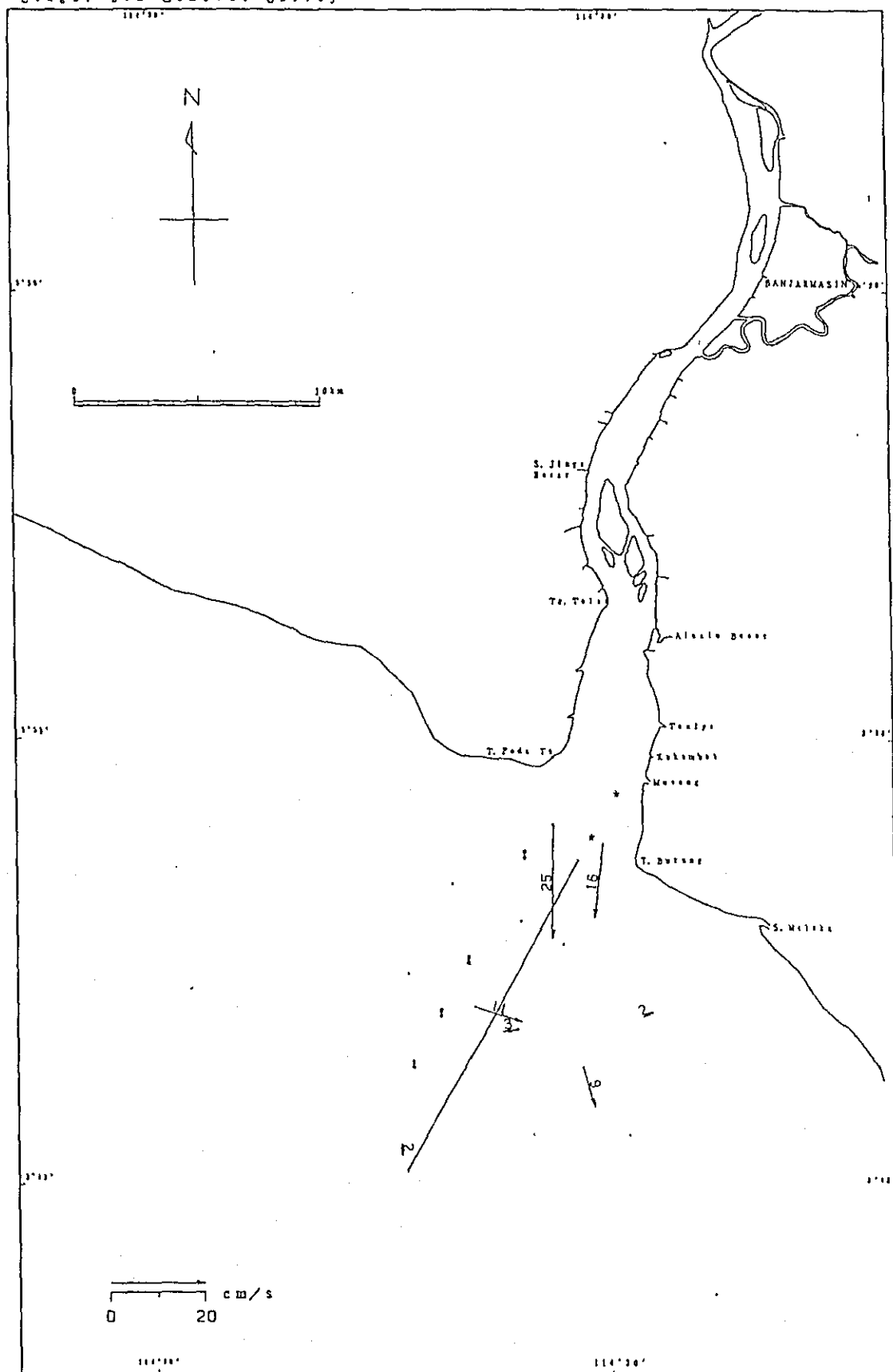


Fig. 3. 2-7 (71) Current Condition by 25 hours Running Mean

Date : 8th May 1989
 Time : 12:00
 Stage: 3rd General Survey

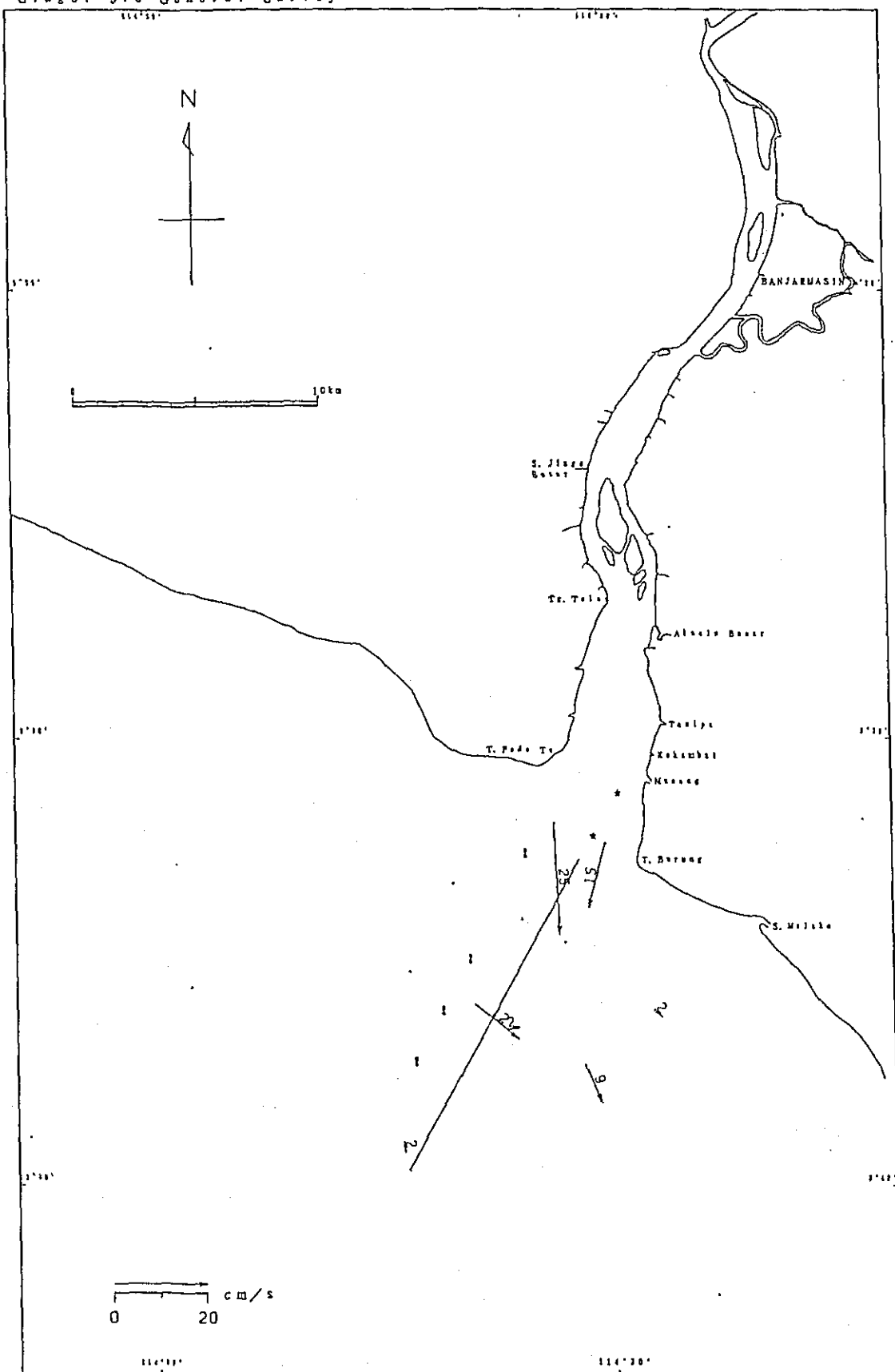


Fig. 3. 2-7 (72) Current Condition by 25 hours Running Mean

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Date : 9th May 1989
 Time : 12:00
 Stage : 3rd General Survey

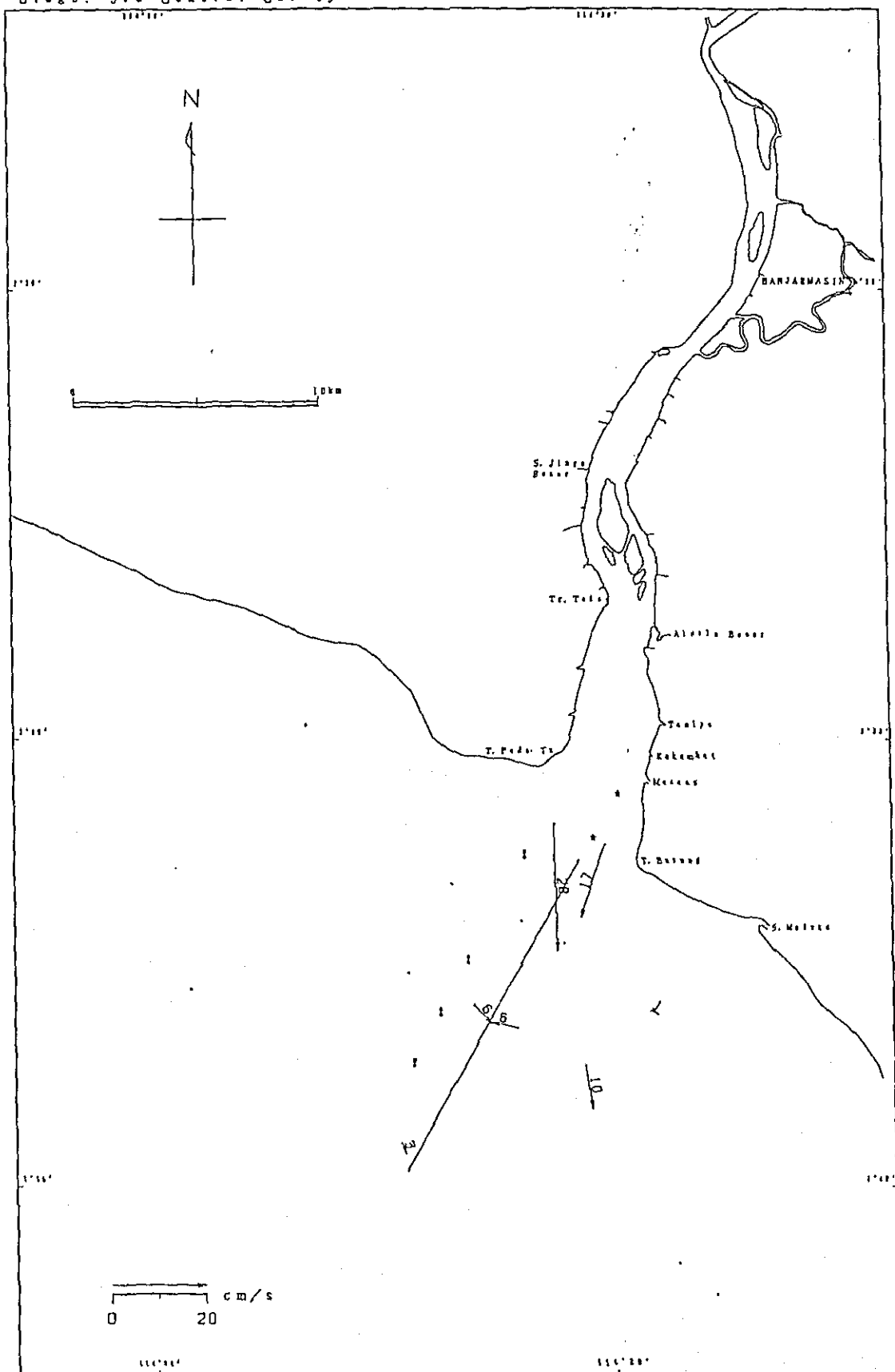


Fig. 3. 2-7 (174) Current Condition by 25 hours Running Mean

Date : 10th May 1989
 Time : 0:00
 Stage: 3rd General Survey

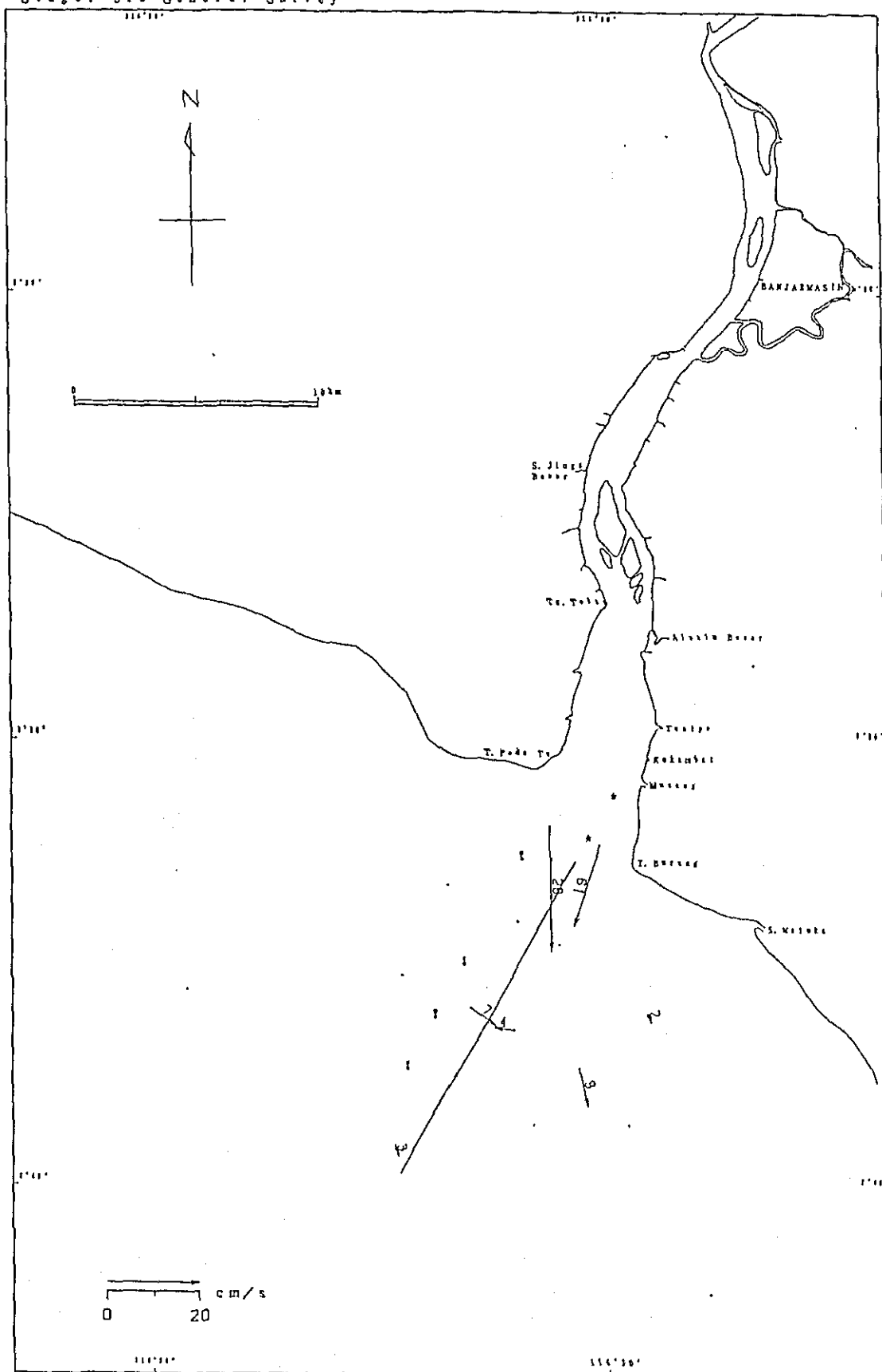


Fig. 3. 2-7 (75) Current Condition by 25 hours Running Mean

Date : 10th May 1989
 Time : 12:00
 Stage: 3rd General Survey

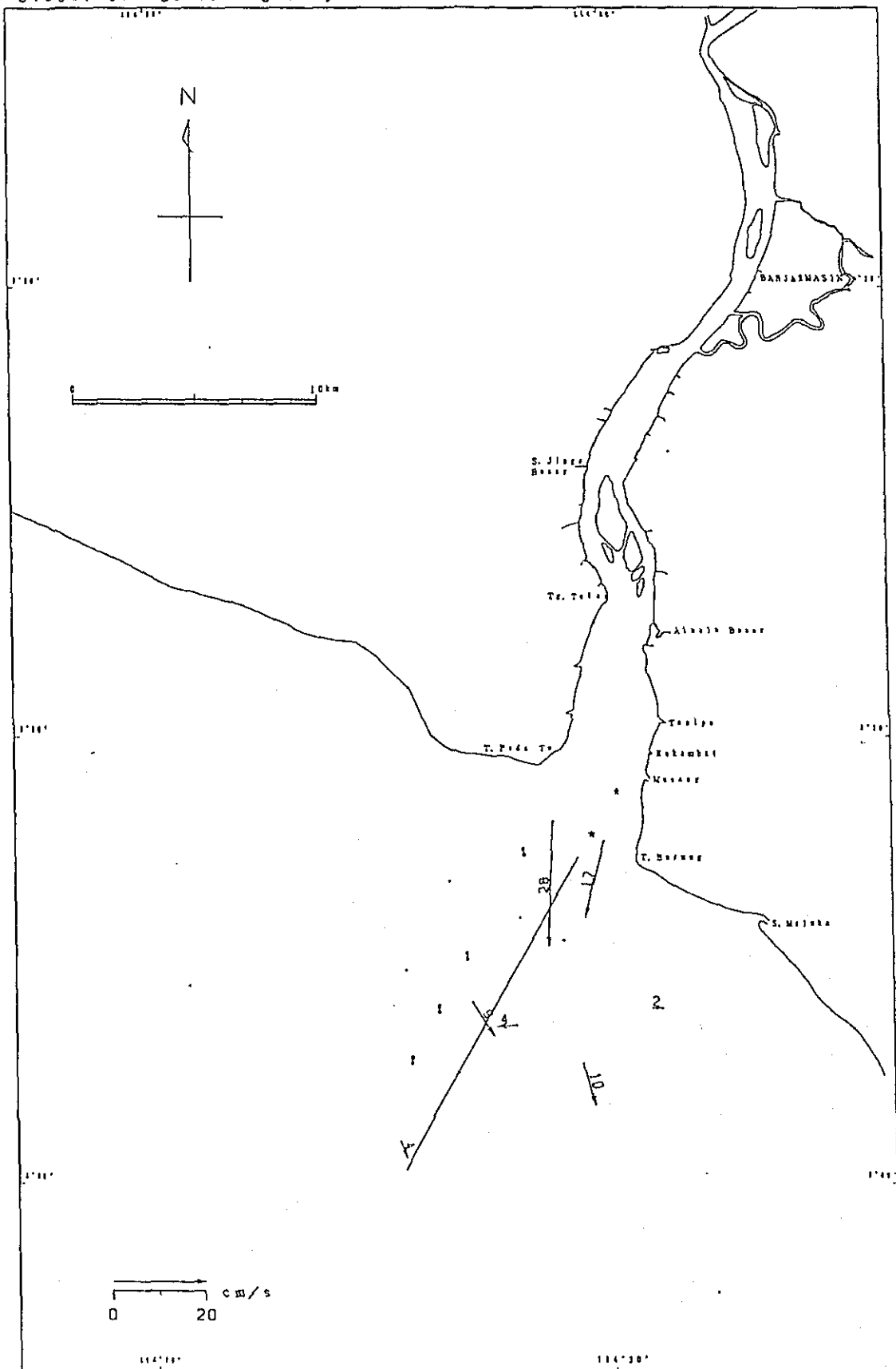


Fig. 3. 2-7 (76) Current Condition by 25 hours Running Mean

Date : 11th May 1989
 Time : 0:00
 Stage: 3rd General Survey

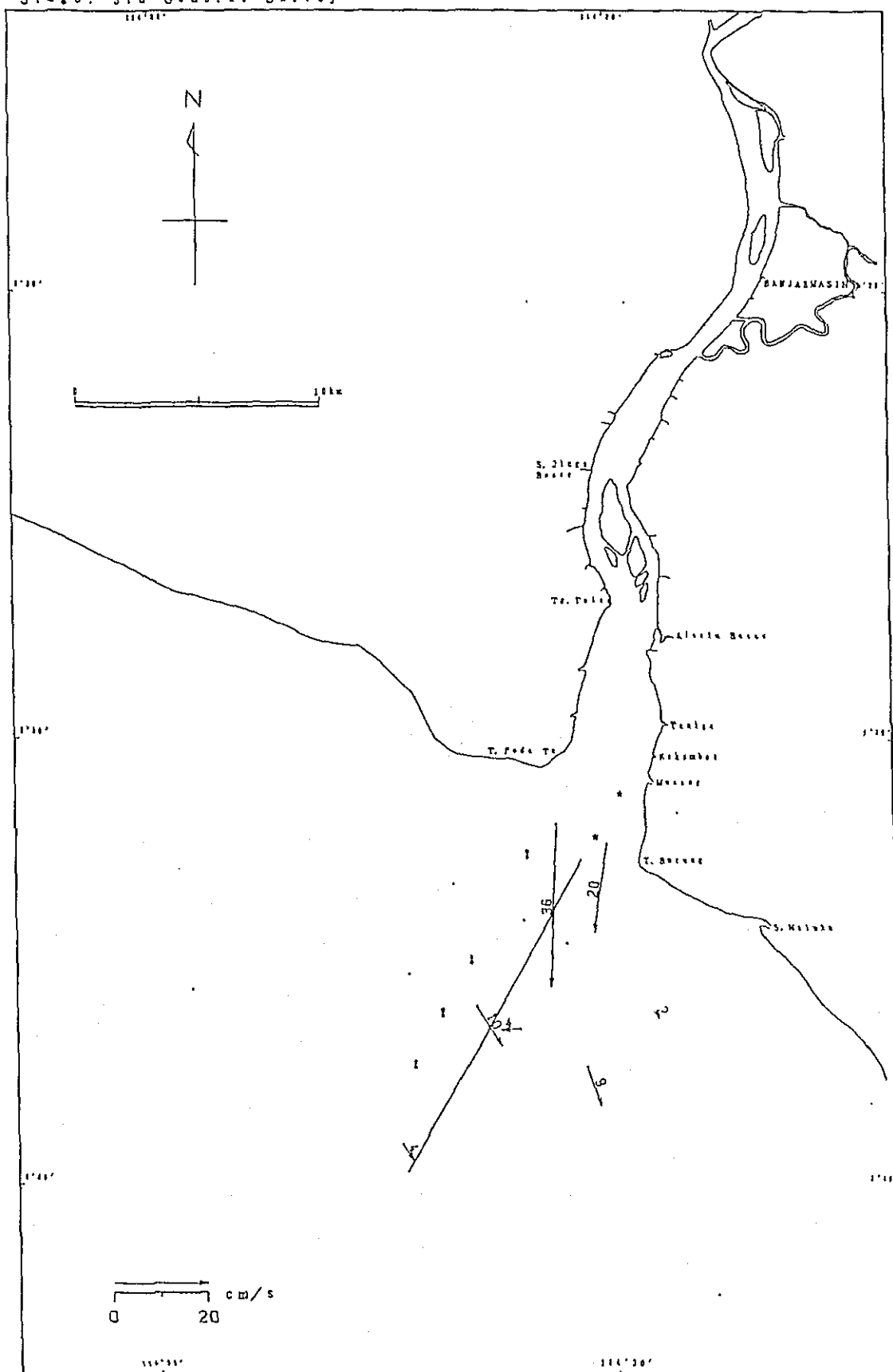


Fig. 3. 2-7 (77) Current Condition by 25 hours Running Mean

Date : 11th May 1989
 Time : 12:00
 Stage: 3rd General Survey

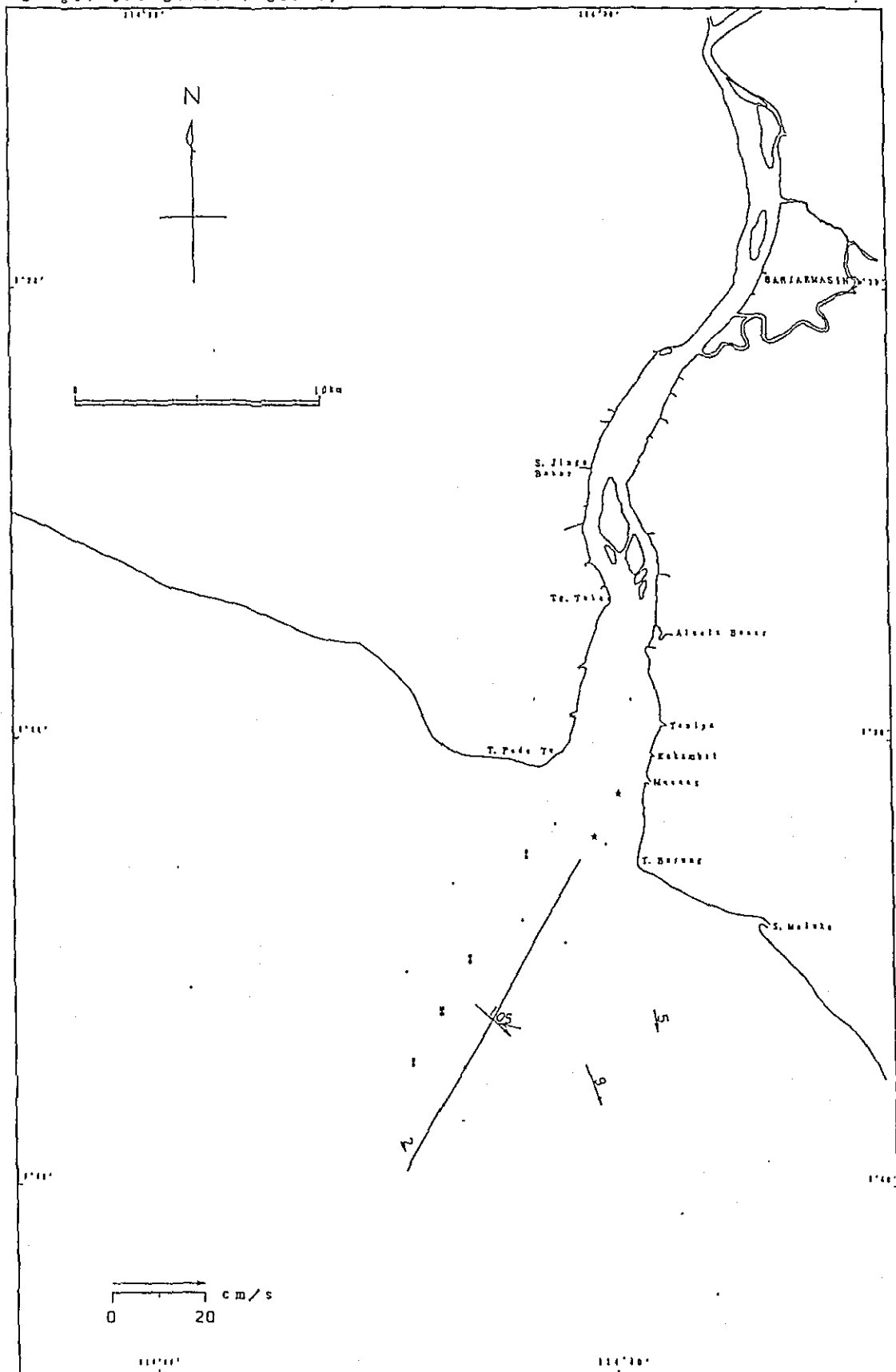


Fig. 3. 2-7 (73) Current Condition by 25 hours Running Mean

[illegible]

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Date : 12th May 1989
 Time : 12:00
 Stage: 3rd General Survey

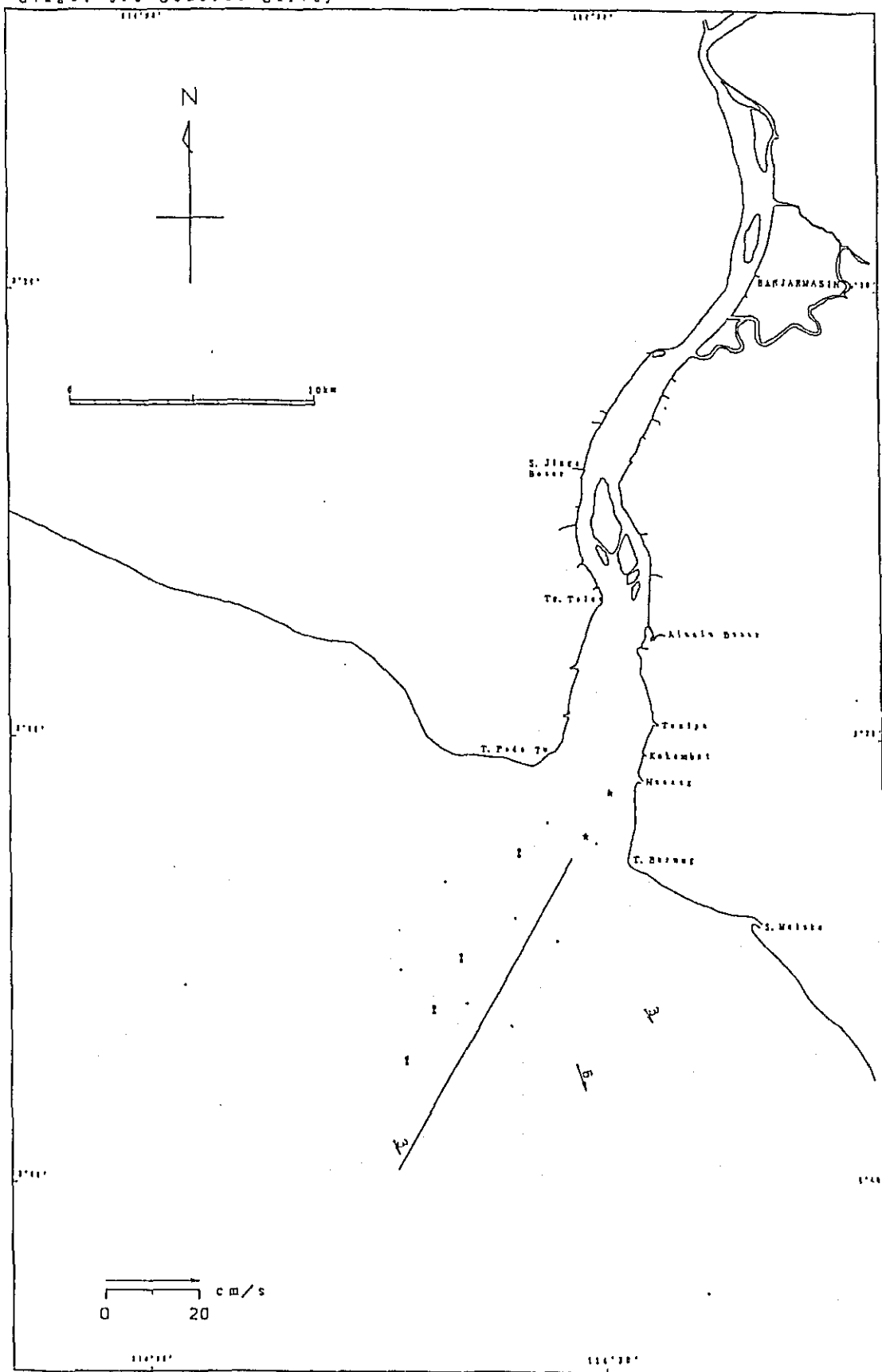


Fig. 3. 2-7 (180) Current Condition by 25 hours Running Mean

Date : 131b May 1989
 Time : 0:00
 Stage: 3rd General Survey

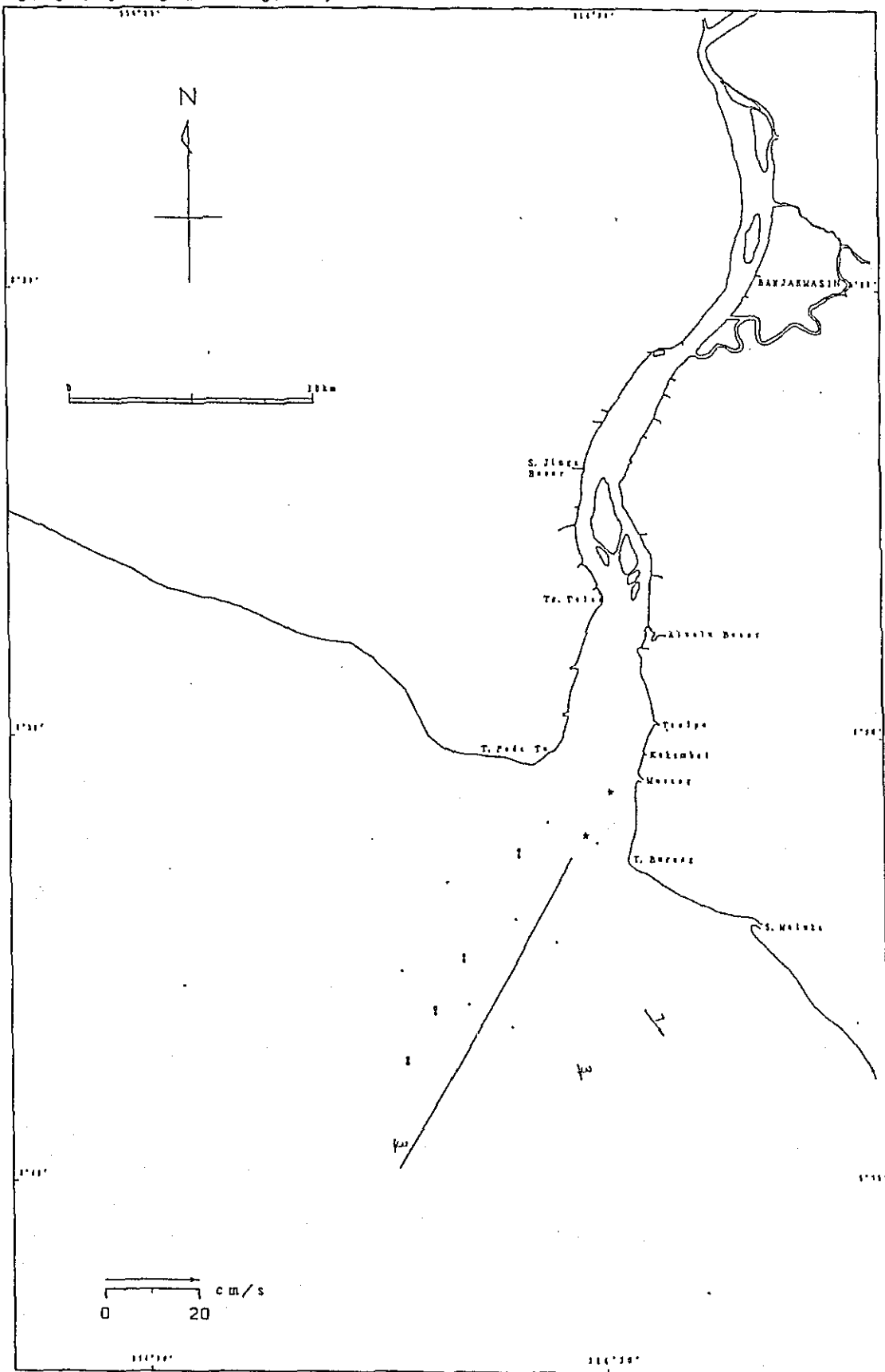


Fig. 3. 2-7 (8D) Current Condition by 25 hours Running Mean

Table 3. 2. -1 (1) Results of Harmonic Analysis
(Survey Item: Current 1, 1st Stage) (30 Days)

SL : 1 114 25.4 : E
-1.4 36.3 : N
Layer : 10.5m (Depth: 10m)
Interval : Every 2 hours
Period : 1988.9.11 0:0 - 1988.10.11 0:0
Azimuth : True N, -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal	
	Vel. M/S	Lag	Vel. M/S	Lag	Dir.	Vel. M/S	Lag	Ax.	Vel. M/S	° Ax.
K ₁	0.021	238.8	0.021	95.6	L 313.6	0.028	258.0	L 313.6	0.028	257.2
O ₁	0.009	200.5	0.003	63.0	L 343.0	0.009	204.7	L 343.0	0.008	211.7
P ₁	0.007	238.8	0.007	95.6	L 313.6	0.009	258.0	L 313.6	0.009	257.2
Q ₁	0.011	161.1	0.007	25.0	L 330.8	0.012	172.4	L 330.8	0.012	177.8
M ₂	0.034	43.4	0.029	245.5	L 320.4	0.044	52.4	L 320.4	0.044	53.2
S ₂	0.002	131.3	0.003	71.0	L 62.3	0.004	86.4	L 62.3	0.002	205.6
L ₂	0.044	224.4	0.036	52.4	L 321.1	0.057	227.6	L 321.1	0.057	227.9
K ₂	0.001	131.3	0.001	71.0	L 62.3	0.001	86.4	L 62.3	0.001	205.6
MU ₂	0.022	348.4	0.014	187.5	L 326.9	0.026	354.1	L 326.9	0.025	355.9
N ₂	0.027	70.2	0.022	269.5	L 321.7	0.035	77.6	L 321.7	0.034	78.6
NU ₂	0.005	70.2	0.004	269.5	L 321.7	0.007	77.6	L 321.7	0.007	78.6
M ₄	0.005	142.2	0.001	35.2	L 356.4	0.005	143.0	L 356.4	0.004	152.4
MS ₄	0.010	238.9	0.004	58.2	L 335.9	0.011	238.7	L 335.9	0.010	238.6
Mean Cur.	0.043		0.038		41.2	0.057			0.005	

SL : 2 114 27.0 : E
-1.4 36.3 : N
Layer : 10.5m (Depth: 10m)
Interval : Every 1 hour
Period : 1988.9.4 0:0 - 1988.10.4 0:0
Azimuth : True N, -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal	
	Vel. M/S	Lag	Vel. M/S	Lag	Dir.	Vel. M/S	Lag	Ax.	Vel. M/S	° Ax.
K ₁	0.152	269.4	0.082	352.0	L 5.5	0.153	272.3	L 5.5	0.150	279.8
O ₁	0.071	224.1	0.059	266.6	L 38.0	0.086	240.6	L 38.0	0.082	233.3
P ₁	0.050	269.4	0.027	352.0	L 5.5	0.051	272.3	L 5.5	0.050	279.8
Q ₁	0.013	232.0	0.016	246.0	L 51.2	0.021	240.5	L 51.2	0.018	236.2
M ₂	0.178	68.9	0.084	116.4	L 19.6	0.187	75.2	L 19.6	0.187	75.1
S ₂	0.044	329.3	0.036	17.5	L 37.0	0.052	347.5	L 37.0	0.050	339.6
L ₂	0.028	135.5	0.010	110.3	L 17.8	0.030	133.0	L 17.8	0.030	132.8
K ₂	0.012	329.3	0.010	17.5	L 37.0	0.014	347.5	L 37.0	0.014	339.6
MU ₂	0.016	250.3	0.012	242.5	L 38.5	0.020	247.3	L 38.5	0.019	248.6
N ₂	0.051	32.3	0.021	65.6	L 19.6	0.054	36.3	L 19.6	0.054	36.3
NU ₂	0.010	32.3	0.004	65.6	L 19.6	0.011	126.3	L 19.6	0.011	36.3
M ₄	0.017	150.1	0.009	130.9	L 26.9	0.019	146.1	L 26.9	0.019	147.1
MS ₄	0.021	305.9	0.014	21.8	L 15.7	0.022	315.9	L 15.7	0.022	318.2
Mean Cur.	0.070		-0.079		311.5	0.105			0.040	

Table 3. 2. -1 (2) Results of Harmonic Analysis
(Survey Item: Current 1. 1st Stage) (30 Days)

St. : 3 114 28.0 : E
-3. 31.9 : N
Layer : +0.5m (Depth: 0. 5m)
Interval : Every 1 hour
Period : 1988. 9. 5 0: 0 - 1988. 10. 5 0: 0
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		Elements of Ellipse				E-comp.		Principal 335.4° Ax.			
	Vel. M/S	Lag .	Vel. M/S	Dir. .	Lag .	Ax. .	Vel. M/S	Lag .	Vel. M/S	Lag .	Vel. M/S	Lag .
K ₁	0.136	249.6	0.109	12.1	L	326.3	0.154	230.3	0.153	235.1		
O ₁	0.066	194.2	0.057	280.2	L	13.9	0.066	206.2	0.063	171.9		
P ₁	0.043	249.6	0.036	12.1	L	326.3	0.051	230.3	0.051	235.1		
Q ₁	0.007	163.8	0.019	215.6	L	76.9	0.020	212.1	0.006	84.3		
M ₂	0.105	55.8	0.064	145.6	L	0.2	0.105	55.9	0.099	40.1		
S ₂	0.019	330.4	0.028	38.5	L	69.1	0.030	26.3	0.017	289.8		
L ₂	0.008	96.1	0.011	143.9	L	59.0	0.013	130.2	0.005	55.5		
K ₂	0.005	330.4	0.008	38.5	L	69.1	0.008	26.3	0.005	289.8		
MU ₂	0.008	296.6	0.007	288.9	L	43.7	0.010	293.0	0.004	302.5		
N ₂	0.030	30.3	0.017	64.6	L	27.4	0.034	37.9	0.022	19.5		
NU ₂	0.006	30.3	0.003	64.6	L	27.4	0.007	37.9	0.004	19.5		
M ₄	0.027	162.9	0.038	300.0	L	302.1	0.043	132.8	0.037	146.3		
MS ₄	0.025	305.1	0.012	153.8	L	335.5	0.027	310.3	0.027	310.3		
Mean Cur.	0.013		-0.084			279.0	0.085		0.047			

St. : 4 114 28.8 : E
-3. 31.9 : N
Layer : +0.5m (Depth: 0. 5m)
Interval : Every 1 hour
Period : 1988. 9. 8 0: 0 - 1988. 10. 8 0: 0
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		Elements of Ellipse				E-comp.		Principal 30.8° Ax.			
	Vel. M/S	Lag .	Vel. M/S	Dir. .	Lag .	Ax. .	Vel. M/S	Lag .	Vel. M/S	Lag .	Vel. M/S	Lag .
K ₁	0.255	262.6	0.140	276.6	L	28.3	0.289	265.8	0.280	266.0		
O ₁	0.122	200.8	0.076	209.0	L	32.0	0.143	203.1	0.143	203.0		
P ₁	0.084	262.6	0.046	276.6	L	28.3	0.096	265.8	0.095	266.0		
Q ₁	0.023	200.6	0.023	168.2	L	44.4	0.031	184.7	0.031	188.7		
M ₂	0.050	126.2	0.040	181.8	L	34.2	0.057	145.2	0.057	143.5		
S ₂	0.032	86.9	0.028	103.5	L	41.5	0.042	94.2	0.042	92.6		
L ₂	0.020	261.9	0.009	283.3	L	24.3	0.022	265.7	0.022	266.6		
K ₂	0.009	86.9	0.008	103.5	L	41.5	0.012	94.2	0.011	92.6		
MU ₂	0.010	46.7	0.012	39.2	L	51.1	0.016	42.2	0.015	43.5		
N ₂	0.005	50.9	0.008	124.7	L	75.0	0.008	115.9	0.007	86.7		
NU ₂	0.001	50.9	0.002	124.7	L	75.0	0.002	115.9	0.001	86.7		
M ₄	0.019	122.9	0.028	208.9	L	84.8	0.028	205.3	0.023	161.9		
MS ₄	0.011	344.4	0.017	73.4	L	89.0	0.017	72.8	0.013	27.2		
Mean Cur.	-0.094		-0.091			224.2	0.131		-0.127			

Table 3. 2. -1 (3) Results of Harmonic Analysis
(Survey Item: Current 1. 1st Stage) (30 Days)

St. : 5 114. 29.9 : E
-3. 32.4 : N
Layer : +0.5m (Depth: 0. 8m)
Interval : Every 1 hour
Period : 1988. 9. 7 0: 0 - 1988. 10. 7 0: 0
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse					Principal	
	Vel. M/S	Lag	Vel. M/S	Lag	Ax.	Dir.	Vel. M/S	Lag	Vel. M/S	Lag	
	0.374	251.0	0.067	82.0	L	350.0	0.380	251.3	0.380	251.3	
K ₁					S	80.0	0.013	161.3			
O ₁	0.175	194.4	0.024	20.7	L	352.4	0.176	194.5	0.176	194.6	
					S	82.3	0.003	104.5			
P ₁	0.124	251.0	0.022	82.0	L	350.0	0.126	251.3	0.126	251.3	
					S	80.0	0.004	161.3			
Q ₁	0.035	177.0	0.002	101.1	L	0.9	0.035	177.0	0.034	177.7	
					S	90.9	0.002	87.0			
M ₂	0.152	74.9	0.043	272.0	L	344.6	0.157	76.1	0.157	75.7	
					S	74.6	0.012	346.1			
S ₂	0.042	90.7	0.010	274.6	L	347.2	0.043	90.9	0.043	90.9	
					S	77.2	0.001	0.9			
L ₂	0.062	206.2	0.003	353.3	L	357.7	0.062	206.1	0.062	205.9	
					S	87.7	0.002	296.1			
K ₂	0.011	90.7	0.003	274.6	L	347.2	0.012	90.9	0.012	90.9	
					S	77.2	0.000	0.9			
MU ₂	0.028	327.1	0.012	82.3	L	347.9	0.028	322.5	0.028	323.1	
					S	77.9	0.011	52.5			
N ₂	0.028	42.2	0.006	181.3	L	351.1	0.028	41.0	0.028	40.8	
					S	81.1	0.004	131.0			
NU ₂	0.005	42.2	0.001	181.3	L	351.1	0.005	41.0	0.005	40.8	
					S	81.1	0.001	131.0			
M ₄	0.033	167.1	0.019	329.2	L	331.1	0.038	162.9	0.036	165.4	
					S	61.1	0.005	252.9			
MS ₄	0.018	310.0	0.010	134.4	L	330.4	0.021	311.1	0.020	310.4	
					S	60.4	0.001	221.1			
Mean Cur.	-0.119		-0.007			183.6	0.119		-0.115		

St. : 9 114. 27.9 : E
-3. 36.5 : N
Layer : +0.5m (Depth: 1.0m)
Interval : Every 1 hour
Period : 1988. 9. 6 0: 0 - 1988. 10. 6 0: 0
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal Ax. 5.7°		
	Vel. M/S	Lag	Vel. M/S	Lag	Dir.	Ax.	Vel. M/S	Lag.	Vel. M/S	Lag	
K ₁	0.133	262.4	0.052	357.1			357.8	0.133	261.5	0.132	264.6
O ₁	0.058	215.4	0.032	245.8			87.8	0.052	351.5		
P ₁	0.044	262.4	0.017	357.1			26.7	0.064	221.8	0.060	216.9
Q ₁	0.005	208.7	0.009	286.1			116.7	0.014	311.8		
M ₂	0.140	50.3	0.016	92.2			357.8	0.044	261.5	0.044	264.6
S ₂	0.029	308.7	0.011	16.7			87.8	0.017	351.5		
L ₂	0.048	356.5	0.014	225.6			78.4	0.009	279.3	0.006	217.4
K ₂	0.008	308.7	0.003	16.7			168.4	0.005	9.3		
MU ₂	0.005	11.0	0.013	103.6			4.9	0.140	50.7	0.140	50.8
N ₂	0.013	25.5	0.011	141.3			94.9	0.011	140.7		
NU ₂	0.003	25.5	0.002	141.3			9.6	0.029	312.1	0.029	310.7
M ₄	0.021	146.1	0.003	271.1			99.6	0.011	42.1		
MS ₄	0.011	291.2	0.005	358.1			349.0	0.049	358.8	0.047	355.3
Mean Cur.	0.009		-0.090				79.0	0.010	268.8	0.008	310.7
							9.6	0.008	312.1	0.008	310.7
							99.6	0.003	42.1		
							271.2	0.013	284.0	0.005	25.9
							1.2	0.005	14.0		
							326.7	0.015	3.9	0.013	29.9
							56.7	0.009	93.9		
							326.7	0.003	3.9	0.002	29.9
							56.7	0.002	93.9		
							355.5	0.021	145.6	0.021	146.7
							85.5	0.002	235.6		
							12.7	0.011	296.5	0.011	293.6
							102.7	0.005	26.5		
							275.9	0.090		0.000	

Table 3.2. -1 (4) Results of Harmonic Analysis
(Survey Item: Current 1.1st Stage) (15 Days)

St. : 5 114. 29.4 : E
-1. 37.3 : N
Layer : 40.5m (Depth: 1.7m)
Interval : Every 1 hour
Period : 1988.9.21 0:00 - 1988.10.6 0:00 (2nd half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal 336.3° Ax.	
	Vel. M/S	Lag	Vel. M/S	Lag	Dir.	Vel. M/S	Lag	Ax.	Vel. M/S	Lag
K ₁	0.116	274.4	0.069	96.6	L	329.2	0.135	275.0	0.134	274.8
O ₁	0.052	208.3	0.015	98.9	L	354.3	0.053	209.8	0.050	214.6
P ₁	0.038	274.4	0.023	96.6	L	329.2	0.045	275.0	0.044	274.8
Q ₁	0.024	252.2	0.004	12.9	L	354.5	0.024	251.4	0.023	248.4
M ₂	0.116	53.8	0.052	253.1	L	336.7	0.126	56.9	0.126	56.9
S ₂	0.028	332.0	0.008	148.4	L	343.9	0.029	331.7	0.029	331.6
K ₂	0.008	332.0	0.002	148.4	L	343.9	0.008	331.7	0.008	331.6
N ₂	0.041	55.6	0.030	206.5	L	325.6	0.050	46.1	0.049	48.8
M ₄	0.006	166.2	0.006	103.1	L	51.7	0.007	128.7	0.005	195.5
MS ₄	0.012	264.4	0.007	44.6	L	334.3	0.013	256.3	0.013	256.9
Mean Cur.	-0.040		0.010			165.8	0.042		-0.041	

St. : 7 114. 25.5 : E
-1. 35.3 : N
Layer : 40.5m (Depth: 0.5m)
Interval : Every 1 hour
Period : 1988.9.5 0:00 - 1988.9.20 0:00 (1st half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal 6.8° Ax.	
	Vel. M/S	Lag	Vel. M/S	Lag	Dir.	Vel. M/S	Lag	Ax.	Vel. M/S	Lag
K ₁	0.108	269.4	0.070	10.9	L	347.9	0.110	261.9	0.106	273.8
O ₁	0.048	217.1	0.049	235.8	L	45.7	0.067	226.7	0.053	219.1
P ₁	0.036	269.4	0.023	10.9	L	347.9	0.036	261.9	0.035	273.8
Q ₁	0.004	156.0	0.028	174.2	L	81.7	0.028	173.8	0.007	163.9
M ₂	0.159	62.1	0.027	142.8	L	1.6	0.159	62.3	0.159	63.2
S ₂	0.037	341.3	0.031	58.6	L	26.0	0.039	1.6	0.038	346.8
K ₂	0.010	341.3	0.008	58.6	L	26.0	0.011	1.6	0.010	346.8
N ₂	0.071	30.3	0.021	37.9	L	16.5	0.074	30.9	0.073	30.5
M ₄	0.018	147.1	0.005	259.9	L	353.7	0.018	145.6	0.018	148.8
MS ₄	0.023	303.7	0.016	35.6	L	357.2	0.023	301.7	0.023	308.5
Mean Cur.	0.014		-0.029			295.6	0.032		0.010	

Table 3. 2. -1 (5) Results of Harmonic Analysis
(Survey Item: Current 1. 1st Stage) (15 Days)

SL : 8 114 26.5 : E
114 30.9 : E
114 30.9 : N
Layer : 0.5m (Depth: 0.5m)
Interval : Every 1 hour
Period : 1988.9.9 0: 0 - 1988.9.20 0: 0 (1st half)
Azimuth : True N - J Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Ax.	Dir.	Vel. M/S	Lag.	Vel. M/S	Lag
K ₁	0.156	258.8	0.131	334.5	L	27.1 117.1	0.165 0.121	279.4 9.4	0.164	283.8
O ₁	0.086	217.8	0.084	233.0	L	44.2 134.2	0.119 0.016	225.2 315.2	0.117	223.7
P ₁	0.052	258.8	0.043	334.5	L	27.1 117.1	0.054 0.040	279.4 9.4	0.054	283.8
Q ₁	0.010	203.5	0.035	167.8	L	75.9 165.9	0.036 0.006	170.2 80.2	0.027	178.9
M ₂	0.183	60.6	0.080	111.0	L	17.3 107.3	0.191 0.059	66.1 156.1	0.184	71.1
S ₂	0.025	328.6	0.049	44.9	L	80.6 170.6	0.049 0.024	40.2 130.2	0.038	11.7
K ₂	0.007	328.6	0.013	44.9	L	80.6 170.6	0.013 0.007	40.2 130.2	0.010	11.7
N ₂	0.078	34.4	0.019	63.9	L	12.0 102.0	0.080 0.009	35.8 125.8	0.075	38.3
M ₄	0.016	162.5	0.017	320.1	L	311.7 41.7	0.023 0.005	150.1 240.1	0.006	202.1
MS ₄	0.027	312.0	0.011	2.1	L	16.2 106.2	0.028 0.008	316.9 46.9	0.027	322.0
Mean Cur.	0.024		0.020			40.5	0.031		0.031	

SL : 10 114 30.9 : E
114 30.9 : E
114 30.9 : N
Layer : 0.5m (Depth: 0.5m)
Interval : Every 1 hour
Period : 1988.9.9 0: 0 - 1988.10.4 0: 0 (2nd half)
Azimuth : True N - J Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal 12.3' Ax.	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Ax.	Dir. M/S	Vel. M/S	Lag.	Vel. M/S	Lag .
K ₁	0.241	315.9	0.071	336.4	L S	15.5 105.5	0.250 0.024	317.4 47.4	0.250	317.1
O ₁	0.123	247.9	0.040	266.3	L S	17.5 107.5	0.128 0.012	249.6 339.6	0.128	249.1
P ₁	0.080	315.9	0.023	336.4	L S	15.5 105.5	0.083 0.008	317.4 47.4	0.083	317.1
Q ₁	0.039	311.2	0.019	272.7	L S	22.7 112.7	0.042 0.011	304.9 214.9	0.041	307.7
M ₂	0.199	83.3	0.034	83.9	L S	9.7 99.7	0.201 0.000	83.4 173.4	0.201	83.4
S ₂	0.040	315.8	0.008	127.9	L S	348.7 78.7	0.041 0.001	315.5 45.5	0.037	316.2
K ₂	0.011	315.8	0.002	127.9	L S	348.7 78.7	0.011 0.000	315.5 45.5	0.010	316.2
N ₂	0.049	79.4	0.033	66.8	L S	34.2 124.2	0.059 0.006	75.4 345.4	0.054	77.8
M ₄	0.012	157.8	0.006	298.9	L S	337.4 67.4	0.013 0.004	151.5 241.5	0.011	162.0
MS ₄	0.012	333.6	0.008	128.4	L S	327.1 57.1	0.015 0.003	326.0 56.0	0.011	337.7
Mean Cur.	-0.076		-0.166			245.4	0.183			-0.110

Table 3. 2. -1 (6) Results of Harmonic Analysis
(Survey Item: Current 1. 1st Stage) (15 Days)

St. : 11 114 30.9 : E
114 30.1 : N
Layer : 0.5m (Depth: 1.2m)
Interval : Every Hour
Period : 1988. 9. 19 0: 0 - 1988. 10. 4 0: 0 (2 nd half)
Azimuth : True N. -1 Degree

Tidal comp.	H-comp.		E-comp.		Elements of Ellipse				Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Vel. M/S	Lag .	Vel. M/S	Dir. .	Lag .
K ₁	0.175	273.7	0.038	84.2	L	347.9	0.179	273.3	0.179	273.3
O ₁	0.084	218.5	0.011	0.7	L	353.8	0.084	218.0	0.084	217.5
P ₁	0.058	273.7	0.013	84.2	L	347.9	0.059	273.3	0.059	273.3
Q ₁	0.026	208.5	0.014	59.5	L	334.6	0.029	214.5	0.028	211.5
M ₂	0.144	67.1	0.033	270.5	L	348.2	0.147	68.1	0.147	68.1
S ₂	0.041	328.9	0.016	148.2	L	339.0	0.044	328.8	0.043	328.9
K ₂	0.011	328.9	0.004	148.2	L	339.0	0.012	328.8	0.012	328.9
N ₂	0.052	46.1	0.018	255.7	L	342.9	0.055	48.8	0.055	48.1
M ₄	0.007	103.8	0.004	229.8	L	336.7	0.007	93.7	0.007	98.4
MS ₄	0.016	270.1	0.007	33.4	L	345.5	0.016	265.2	0.016	266.0
Mean Cur.	0.068		-0.018			345.1	0.071			0.071

Table 3.2.-1(7) Results of Harmonic Analysis
(Survey Item: Current 1.2nd Stage) (15 Days)

SL. : 1 114. 25.4 : E
-3. 39.1 : N
Layer : +0.5m (Depth: 9.1m)
Interval : Every 2 hours
Period : 1983.1.18 14: 0 - 1983.2.2 14: 0 (1st half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal 301.5° Ax.	
	Vel. M/S	Lag °	Vel. M/S	Lag °	Ax.	Dif. °	Vel. M/S	Lag °	Vel. M/S	Lag °
K ₁	0.031	209.2	0.045	46.0	L	303.9	0.054	220.8	0.054	221.1
O ₁	0.012	152.4	0.041	25.1	L	280.6	0.042	202.7	0.039	197.8
P ₁	0.010	209.2	0.015	46.0	L	303.9	0.018	220.8	0.018	221.1
Q ₁	0.009	185.1	0.023	65.7	L	281.6	0.024	242.0	0.023	235.5
M ₂	0.051	43.5	0.066	237.0	L	307.5	0.084	52.0	0.083	52.7
S ₂	0.018	310.9	0.023	141.8	L	307.4	0.029	317.8	0.029	318.3
K ₂	0.005	310.9	0.006	141.8	L	307.4	0.008	317.8	0.008	318.3
N ₂	0.005	97.2	0.012	267.9	L	290.6	0.013	89.1	0.013	89.7
M ₄	0.011	160.6	0.006	39.7	L	339.1	0.011	170.3	0.009	189.3
MS ₄	0.010	294.1	0.002	342.5	L	6.0	0.010	294.8	0.005	281.2
Mean Cur.	0.078		-0.085			312.8	0.115		0.113	

Table 3. 2. -1 (8) Results of Harmonic Analysis
(Survey Item: Current 1. 2nd Stage) (15 Days)

St. : 2 114. 27.0 : E 114. 28.0 : E
 -3. 36.3 : N -3. 34.1 : N
 Layer : 40.5m (Depth: 1.6m) Layer : 40.5m (Depth: 0.7m)
 Interval : Every 1 hour Interval : Every 1 hour
 Period : 1989.1.18 14: 0 - 1989. 2. 2 14: 0 (1 st half) Period : 1989.1.18 14: 0 - 1989. 2. 2 14: 0 (1 st half)
 Azimuth : True N. -1 Degree Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal Ax.	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Vel. M/S	Lag .	Vel. M/S	32.7
K ₁	0.137	261.4	0.073	323.2	L 17.6	0.143	269.2	0.139	275.9
O ₁	0.064	204.5	0.082	259.9	L 57.2	0.093	242.1	0.087	229.3
P ₁	0.045	261.4	0.024	323.2	L 17.6	0.047	269.2	0.046	275.9
Q ₁	0.021	157.9	0.035	276.7	L 291.1	0.037	107.1	0.019	220.4
M ₂	0.163	67.2	0.104	106.0	L 29.6	0.185	77.3	0.185	78.2
S ₂	0.022	32.0	0.032	55.0	L 56.4	0.038	47.8	0.035	43.1
K ₂	0.006	32.0	0.009	55.0	L 56.4	0.010	47.8	0.010	43.1
N ₂	0.057	21.8	0.049	91.4	L 33.2	0.062	45.6	0.062	45.2
M ₄	0.015	123.1	0.006	354.2	L 346.3	0.018	126.8	0.013	111.2
MS ₄	0.014	3.5	0.012	43.0	L 38.9	0.018	19.4	0.018	17.2
Mean Cur.	-0.073		0.008		173.9	0.074		-0.058	

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal Ax.	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Vel. M/S	Lag .	Vel. M/S	35.8
K ₁	0.122	236.9	0.097	311.6	L 24.1	0.128	254.2	0.126	262.5
O ₁	0.087	176.3	0.115	260.6	L 80.3	0.115	253.4	0.102	217.3
P ₁	0.040	236.9	0.032	311.6	L 24.1	0.042	254.2	0.042	262.5
Q ₁	0.031	138.6	0.077	264.3	L 284.8	0.079	89.0	0.037	230.2
M ₂	0.117	61.8	0.093	109.5	L 35.8	0.137	78.9	0.137	78.9
S ₂	0.017	280.4	0.022	97.7	L 308.4	0.028	278.7	0.001	305.9
K ₂	0.005	280.4	0.006	97.7	L 308.4	0.008	278.7	0.000	305.9
N ₂	0.028	357.3	0.061	99.6	L 277.0	0.061	282.8	0.038	63.9
M ₄	0.028	191.0	0.005	304.4	L 355.7	0.028	190.3	0.021	198.2
MS ₄	0.019	235.5	0.005	11.8	L 350.0	0.020	233.9	0.014	243.2
Mean Cur.	-0.022		0.046		115.2	0.051		0.009	

Table 3.2.-1 (9) Results of Harmonic Analysis
(Survey Item: Current 1, 2nd Stage) (15 Days)

SL : 4 114. 28.8 : E
 -3. 31.0 : N
Layer : 40.5m (Depth: 0.5m)
Interval : Every 1 hour
Period : 1989.1.18 14: 0 - 1989.2.2 14: 0 (1st half)
Azimuth : True N. -1 Degree

SL : 7 114. 28.5 : E
 -3. 35.3 : N
Layer : 40.5m (Depth: 0.5m)
Interval : Every 1 hour
Period : 1989.1.18 14: 0 - 1989.2.2 14: 0 (1st half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Ax. .	Lag .	Vel. M/S	Ax. .
K ₁	0.238	283.8	0.073	298.9	L 16.5	0.249	285.0	0.249	285.1
O ₁	0.131	226.6	0.047	232.8	L 19.5	0.139	227.3	0.139	227.3
P ₁	0.079	283.8	0.024	298.9	L 16.5	0.082	285.0	0.082	285.1
Q ₁	0.040	203.7	0.022	319.2	L 34.3	0.042	195.7	0.036	213.5
M ₂	0.123	94.4	0.040	142.6	L 12.9	0.126	97.4	0.125	98.5
S ₂	0.064	286.5	0.032	283.8	L 26.8	0.072	285.9	0.071	286.1
K ₂	0.017	286.5	0.009	283.8	L 116.8	0.001	195.9	0.019	286.1
N ₂	0.043	106.0	0.007	150.6	L 8.7	0.043	106.6	0.043	107.2
M ₄	0.039	180.3	0.010	268.5	L 98.7	0.003	196.6	0.037	185.3
MS ₄	0.025	93.5	0.002	126.6	L 0.5	0.039	180.5	0.024	94.2
Mean Cur.	-0.192		-0.029		188.7	0.194		-0.192	

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Ax. .	Lag .	Vel. M/S	Ax. .
K ₁	0.130	252.8	0.063	290.4	L 22.6	0.140	258.9	0.137	261.8
O ₁	0.072	188.1	0.095	242.8	L 112.6	0.036	348.9	0.100	213.6
P ₁	0.043	252.8	0.021	290.4	L 57.9	0.107	225.8	0.055	261.8
Q ₁	0.031	145.3	0.048	265.2	L 147.9	0.052	315.8	0.026	206.3
M ₂	0.159	57.3	0.100	85.6	L 22.6	0.046	258.9	0.183	65.6
S ₂	0.037	0.7	0.031	60.4	L 112.6	0.012	348.9	0.042	21.5
K ₂	0.010	0.7	0.008	60.4	L 294.6	0.051	98.0	0.011	21.5
N ₂	0.061	19.6	0.053	54.8	L 24.6	0.025	188.0	0.077	32.4
M ₄	0.015	97.6	0.007	75.3	L 35.6	0.011	22.5	0.016	92.6
MS ₄	0.026	347.9	0.012	33.1	L 40.1	0.077	34.4	0.027	357.9
Mean Cur.	-0.051		0.015		L 130.1	0.024	124.4	0.008	83.6
					L 22.4	0.016	94.3		
					L 112.4	0.002	4.3		
					L 19.2	0.028	353.6		
					L 109.2	0.008	83.6		
					164.2	0.053		-0.035	

Table 3. 2. -1 (10) Results of Harmonic Analysis
(Survey Item: Current 1, 2nd Stage) (15 Days)

St. : 8 114. 26.5 : E
-3. 33.3 : N
Layer : 0.5m (Depth: 0.5m)
Interval : Every 1 hour
Period : 1989. 1. 18 14: 0 - 1989. 2. 2 14: 0 (1st half)
Azimuth : True N. - Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal Ax.	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Ax.	Vel. M/S	Lag .	40.4°
K ₁	0.098	266.9	0.080	284.2	38.9 128.9	L S	0.125 0.019	273.8 3.8	0.125 274.0
O ₁	0.066	220.5	0.097	231.5	55.9 145.9	L S	0.117 0.010	228.1 318.1	0.113 226.7
P ₁	0.032	266.9	0.026	284.2	38.9 128.9	L S	0.041 0.006	273.8 3.8	0.041 274.0
Q ₁	0.025	210.1	0.048	247.8	65.5 155.5	L S	0.052 0.014	240.8 330.8	0.048 233.5
M ₂	0.129	66.6	0.075	94.2	28.5 118.5	L S	0.146 0.031	73.1 163.1	0.143 75.6
S ₂	0.020	21.0	0.020	44.5	44.8 134.8	L S	0.028 0.006	32.7 122.7	0.028 31.8
K ₂	0.006	21.0	0.005	44.5	44.8 134.8	L S	0.008 0.002	32.7 122.7	0.008 31.8
N ₂	0.040	10.8	0.042	61.0	47.4 137.4	L S	0.053 0.025	37.7 127.7	0.052 34.4
M ₄	0.013	139.8	0.005	290.1	542.9 72.9	L S	0.014 0.002	137.1 227.1	0.008 150.5
MS ₄	0.011	47.3	0.006	327.5	6.8 96.8	L S	0.011 0.005	43.9 313.9	0.010 25.7
Mean Cur.	-0.079		0.003		177.5		0.079		-0.058

St. : 9 114. 27.9 : E
-2. 36.5 : N
Layer : 0.5m (Depth: 0.5m)
Interval : Every 1 hour
Period : 1989. 1. 18 14: 0 - 1989. 2. 2 14: 0 (1st half)
Azimuth : True N. - Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal Ax.	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Ax.	Vel. M/S	Lag .	1.7°
K ₁	0.161	261.9	0.044	28.6	350.2 80.2	L S	0.163 0.035	259.8 349.8	0.160 262.3
O ₁	0.078	194.3	0.052	260.7	21.8 111.8	L S	0.082 0.045	206.7 296.7	0.079 195.4
P ₁	0.053	261.9	0.015	28.6	350.2 80.2	L S	0.054 0.012	259.8 349.8	0.053 262.3
Q ₁	0.025	149.8	0.027	261.6	309.5 39.5	L S	0.031 0.021	110.6 200.6	0.025 151.5
M ₂	0.176	59.0	0.011	130.7	1.1 91.1	L S	0.176 0.010	59.0 149.0	0.176 59.1
S ₂	0.045	0.6	0.015	8.9	17.8 107.8	L S	0.047 0.002	1.4 91.4	0.046 0.7
K ₂	0.012	0.6	0.004	8.9	17.8 107.8	L S	0.013 0.001	1.4 91.4	0.012 0.7
N ₂	0.059	14.3	0.034	121.0	346.5 76.5	L S	0.060 0.032	6.9 96.9	0.059 15.2
M ₄	0.019	139.4	0.010	306.4	331.9 61.9	L S	0.021 0.002	136.5 226.5	0.019 139.6
MS ₄	0.003	274.0	0.004	331.8	66.6 156.6	L S	0.004 0.002	320.6 50.6	0.003 276.3
Mean Cur.	-0.210		-0.032		188.7		0.212		-0.211

Table 3. 2. -1 (11) Results of Harmonic Analysis
(Survey Item:Current 1, 2nd Stage) (15 Days)

St. 13 114. 28.0 : E
-3. 34.1 : N
Layer : 0.5m (Depth: 0.7m)
Interval : Every 1 hour
Period : 1989. 2. 4 14: 0 - 1989. 2. 19 14: 0 (2 nd half)
Azimuth : true N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Ax. .	Vel. M/S	Lag .	Ax. .
K ₁	0.154	246.3	0.109	310.9	25.1	0.164	261.0	0.164	257.7
O ₁	0.058	191.7	0.069	261.6	115.1	0.092	351.0		
P ₁	0.051	246.3	0.036	310.9	57.5	0.075	238.4	0.066	210.3
Q ₁	0.011	78.5	0.008	241.4	147.5	0.050	328.4		
M ₂	0.107	59.4	0.066	144.7	25.1	0.054	261.0	0.054	257.7
S ₂	0.024	315.1	0.024	90.5	115.1	0.030	351.0		
K ₂	0.006	315.1	0.007	90.5	323.3	0.014	72.4	0.008	84.3
N ₂	0.048	27.8	0.011	116.4	53.3	0.002	162.4		
M ₄	0.020	144.6	0.010	166.0	4.6	0.107	62.2	0.105	71.3
MS ₄	0.012	294.2	0.008	32.2	94.6	0.066	152.2		
Mean Cur.	0.034		0.041		314.0	0.032	292.0	0.018	333.7
					44.0	0.013	22.0		
					314.0	0.009	292.0	0.005	333.7
					44.0	0.004	22.0		
					0.4	0.048	27.9	0.046	32.6
					90.4	0.011	117.9		
					25.7	0.022	148.7	0.022	147.7
					115.7	0.003	238.7		
					352.0	0.012	289.2	0.011	306.5
					82.0	0.008	19.2		
					50.0	0.053			0.046

St. 14 114. 28.8 : E
-7. 41.9 : N
Layer : 0.5m (Depth: 0.8m)
Interval : Every 1 hour
Period : 1989. 2. 4 14: 0 - 1989. 2. 19 14: 0 (2 nd half)
Azimuth : true N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Ax. .	Vel. M/S	Lag .	Ax. .
K ₁	0.310	286.7	0.081	301.4	14.2	0.320	287.6	0.320	287.7
O ₁	0.124	239.9	0.037	233.0	104.2	0.020	17.6		
P ₁	0.103	286.7	0.027	301.4	16.3	0.129	239.3	0.129	239.4
Q ₁	0.025	87.8	0.010	135.4	106.3	0.004	149.3		
M ₂	0.090	71.2	0.013	116.5	14.2	0.106	287.6	0.106	287.7
S ₂	0.029	291.0	0.021	279.3	104.2	0.007	17.6		
K ₂	0.008	291.0	0.006	279.3	17.2	0.026	92.8	0.026	92.2
N ₂	0.079	84.8	0.025	90.3	107.2	0.007	182.8		
M ₄	0.052	123.6	0.015	168.1	6.1	0.090	71.9	0.089	72.8
MS ₄	0.027	101.0	0.018	152.0	96.1	0.009	161.9		
Mean Cur.	-0.190		0.074		35.5	0.035	287.1	0.033	289.1
					125.5	0.003	197.1		
					35.5	0.010	287.1	0.009	289.1
					125.5	0.001	197.1		
					17.2	0.083	85.3	0.083	85.2
					107.2	0.002	175.3		
					12.4	0.053	126.1	0.053	126.6
					102.4	0.011	216.1		
					26.9	0.030	112.9	0.030	107.9
					116.9	0.012	202.9		
					158.7	0.204			-0.165

Table 3. 2. -1 (I2) Results of Harmonic Analysis
(Survey Item:Current 1, 2nd Stage) (15 Days)

SL : 5 114 28.9 : E
114 28.9 : E
32.4 : N
Layer : +0.5m (Depth:0.8m)
Interval : Every 1 hour
Period : 1989. 2. 4 14: 0 - 1989. 2. 19 14: 0 (2 nd half)
Azimuth : true N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal 2.2 Ax.		
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Ax. .	Vel. M/S	Lag. .	Vel. M/S	Lag .	
K ₁	0.305	276.2	0.016	191.9	L	0.3	90.3	0.305	276.2	0.305	276.1
O ₁	0.173	233.3	0.027	159.1	L	2.5	92.5	0.173	233.0	0.173	233.0
P ₁	0.101	276.2	0.005	191.9	L	0.3	90.3	0.101	276.2	0.101	276.1
Q ₁	0.061	87.1	0.015	317.4	L	350.8	80.8	0.062	88.8	0.061	86.7
M ₂	0.113	108.3	0.039	29.6	L	4.3	94.3	0.114	106.9	0.114	107.6
S ₂	0.018	242.1	0.015	320.3	L	22.5	112.5	0.019	259.4	0.018	243.9
K ₂	0.005	242.1	0.004	320.3	L	22.5	112.5	0.005	259.4	0.005	243.9
N ₂	0.076	72.4	0.004	256.0	L	357.3	87.3	0.076	72.4	0.076	72.4
M ₄	0.048	128.7	0.010	113.9	L	10.9	100.9	0.049	128.1	0.049	128.6
MS ₄	0.035	34.4	0.002	285.3	L	358.8	88.8	0.035	34.5	0.035	34.3
Mean Cur.	-0.013		-0.046			253.6	0.048			-0.015	

SL : 6 114 29.4 : E
114 29.4 : E
37.1 : N
Layer : +0.5m (Depth:1.7m)
Interval : Every 1 hour
Period : 1989. 2. 4 14: 0 - 1989. 2. 19 14: 0 (2 nd half)
Azimuth : true N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal Ax. 343.6	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Ax.	Dir.	vel. M/S	Lag.	Vel. M/S	Lag .
K ₁	0.159	249.0	0.066	94.1	L S	338.8 68.8	0.170 0.026	252.4 162.4	0.169	251.6
O ₁	0.054	219.3	0.011	29.4	L S	348.7 78.7	0.055 0.002	218.9 308.9	0.055	218.7
P ₁	0.053	249.0	0.022	94.1	L S	338.8 68.8	0.056 0.009	252.4 162.4	0.056	251.6
Q ₁	0.005	63.7	0.011	196.3	L S	287.6 17.6	0.011 0.003	21.5 111.5	0.007	44.6
M ₂	0.141	51.1	0.045	263.3	L S	344.5 74.5	0.146 0.023	53.7 323.7	0.146	53.8
S ₂	0.054	346.2	0.008	200.1	L S	353.1 83.1	0.054 0.004	346.7 256.7	0.053	347.5
K ₂	0.015	346.2	0.002	200.1	L S	353.1 83.1	0.015 0.001	346.7 256.7	0.015	347.5
N ₂	0.044	58.0	0.015	227.7	L S	340.8 70.8	0.046 0.003	56.8 146.8	0.046	57.0
M ₄	0.017	110.6	0.003	224.0	L S	356.0 86.0	0.017 0.003	110.0 200.0	0.016	108.0
MS ₄	0.006	324.5	0.010	117.3	L S	299.2 29.2	0.012 0.002	304.0 34.0	0.009	315.6
Mean Cur.	-0.059		-0.010			189.3	0.060		-0.054	

Table 3. 2. -1 (13) Results of Harmonic Analysis
(Survey Item:Current 1. 2nd Stage) (15 Days)

St. : 9 114. 27.9 : E
-3. 36.5 : N
Layer : +0.5m (Depth:1.0m)
Interval : Every 1 hour
Period : 1989. 2. 4 14: 0 - 1989. 2. 19 14: 0 (2 nd half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal 357.4° Ax.	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Vel. M/S	Lag .	Ax. .	Vel. M/S	Lag .
K ₁	0.165	258.9	0.032	13.7	L S	355.2	0.165	258.1	0.165	258.5
O ₁	0.054	218.7	0.004	282.6	L S	92.0	0.054	218.8	0.054	218.5
P ₁	0.055	258.9	0.011	13.7	L S	355.2	0.055	258.1	0.055	258.5
Q ₁	0.004	4.8	0.021	232.4	L S	277.0	0.021	51.5	0.004	14.0
M ₂	0.156	60.7	0.014	316.9	L S	358.8	0.156	60.8	0.156	61.0
S ₂	0.060	350.9	0.003	181.5	L S	357.4	0.060	351.0	0.060	351.0
K ₂	0.016	350.9	0.001	181.5	L S	357.4	0.016	351.0	0.016	351.0
N ₂	0.028	31.2	0.028	163.8	L S	315.7	0.037	8.0	0.029	29.4
M ₄	0.019	115.3	0.004	251.9	L S	349.8	0.019	113.8	0.019	115.0
MS ₄	0.012	327.6	0.003	143.1	L S	344.3	0.013	327.2	0.012	327.5
Mean Cur.	-0.011		-0.061			259.5	0.062		-0.008	

St. : 10 114. 29.0 : E
-3. 34.6 : N
Layer : +0.5m (Depth:2.5m)
Interval : Every 1 hour
Period : 1989. 2. 4 14: 0 - 1989. 2. 19 14: 0 (2 nd half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal 11.4° Ax.	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Vel. M/S	Lag .	Ax. .	Vel. M/S	Lag .
K ₁	0.204	298.5	0.061	342.8	L S	12.7	0.209	301.1	0.209	300.8
O ₁	0.086	258.6	0.029	296.9	L S	15.2	0.089	261.6	0.089	260.9
P ₁	0.067	298.5	0.020	342.8	L S	12.7	0.069	301.1	0.069	300.8
Q ₁	0.031	257.6	0.010	244.9	L S	17.3	0.032	256.5	0.032	256.8
M ₂	0.187	86.4	0.026	89.1	L S	7.9	0.188	86.5	0.188	86.5
S ₂	0.079	27.1	0.023	334.8	L S	10.8	0.080	24.6	0.080	24.5
K ₂	0.021	27.1	0.006	334.8	L S	10.8	0.022	24.6	0.022	24.5
N ₂	0.048	78.2	0.009	95.6	L S	9.7	0.049	78.7	0.049	78.8
M ₄	0.013	175.6	0.003	83.2	L S	359.4	0.013	175.7	0.012	172.8
MS ₄	0.021	270.1	0.008	0.2	L S	359.9	0.021	270.0	0.020	274.5
Mean Cur.	-0.021		-0.017			219.5	0.027		-0.024	

Table 3. 2. -1 (14) Results of Harmonic Analysis
(Survey Item:Current 1, 2nd Stage) (15 Days)

St. : 11 114. 30.9 : E
-3. 36.1 : N
Layer : 10.5m (Depth:1.2m)
Interval : Every 1 hour
Period : 1982. 2. 4 14: 0 - 1982. 2. 19 14: 0 (2 nd half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. Ax.	Vel. M/S	Lag .	Vel. M/S	346.4° Ax.	
K ₁	0.154	247.9	0.042	100.7	L S	346.7 76.7	0.158 159.8	0.158 249.9		
O ₁	0.059	213.8	0.017	70.8	L S	346.5 76.5	0.061 126.1	0.061 216.1		
P ₁	0.051	247.9	0.014	100.7	L S	346.7 76.7	0.052 159.8	0.052 249.9		
Q ₁	0.009	221.9	0.025	231.6	L S	69.5 159.5	0.026 320.4	0.003 205.5		
M ₂	0.151	60.8	0.052	286.1	L S	345.6 75.6	0.156 334.2	0.156 64.0		
S ₂	0.046	5.1	0.012	160.3	L S	346.9 76.9	0.047 93.7	0.047 3.7		
K ₂	0.012	5.1	0.003	160.3	L S	346.9 76.9	0.013 93.7	0.013 3.7		
N ₂	0.033	59.3	0.014	86.9	L S	21.8 111.8	0.035 153.3	0.029 56.3		
M ₄	0.025	114.2	0.004	331.0	L S	353.4 83.4	0.025 24.8	0.025 115.4		
MS ₄	0.018	11.2	0.002	184.5	L S	353.5 83.5	0.019 101.1	0.018 11.0		
Mean Cur.	-0.003		-0.024			263.5	0.024		0.003	

Table 3.2. -1 (15) Results of Harmonic Analysis
(Survey Item:Current 1,2nd Stage) (30 Days)

St. : 3 114. 28.0 : E
-3. 34.1 : N
Layer : +0.5m (Depth:0.7m)
Interval : Every 1 hour
Period : 1989.1.19 0: 0 - 1989. 2.18 0: 0
Azimuth : True N, -1 Degree

Tidal comp.	N-comp.		Elements of Ellipse				E-comp.		Principal 18.9° Ax.			
	Vel. M/S	Lag	Vel. M/S	Dir.	Ax.	Lag	Vel. M/S	Lag	Vel. M/S	Lag	Vel. M/S	Ax.
K ₁	0.136	240.9	0.106	312.9	L S	24.4 114.4	0.143 0.084	257.5 347.5	0.142	253.9		
O ₁	0.069	183.7	0.074	263.1	L S	55.8 145.8	0.079 0.064	234.0 324.0	0.074	202.5		
P ₁	0.045	240.9	0.034	312.9	L S	24.4 114.4	0.047 0.031	257.5 347.5	0.047	253.9		
Q ₁	0.006	119.0	0.028	265.3	L S	279.3 9.3	0.029 0.003	86.3 176.3	0.006	234.5		
M ₂	0.120	60.4	0.064	132.2	L S	12.4 102.4	0.123 0.060	66.5 156.5	0.122	69.7		
S ₂	0.022	306.2	0.028	101.8	L S	308.2 38.2	0.035 0.007	291.2 21.2	0.013	322.3		
L ₂	0.013	96.2	0.026	63.6	L S	64.9 154.9	0.028 0.007	69.8 339.8	0.020	83.3		
K ₂	0.006	306.2	0.008	101.8	L S	308.2 38.2	0.010 0.002	291.2 21.2	0.004	322.3		
MU ₂	0.011	323.1	0.018	181.9	L S	298.9 28.9	0.021 0.006	352.3 262.3	0.007	292.2		
N ₂	0.034	2.5	0.023	112.8	L S	339.0 69.0	0.035 0.021	349.7 79.7	0.030	16.0		
NU ₂	0.007	2.5	0.004	112.8	L S	339.0 69.0	0.007 0.004	349.7 79.7	0.006	16.0		
M ₄	0.021	175.5	0.002	216.0	L S	4.1 94.1	0.021 0.001	175.8 265.8	0.020	176.7		
MS ₄	0.015	253.2	0.005	5.1	L S	352.1 82.1	0.015 0.005	250.8 340.8	0.013	259.6		
Mean Cur.	0.004		0.049		84.8 0.049			0.020				

St. : 4 114. 28.8 : E
-3. 31.9 : N
Layer : +0.5m (Depth:0.8m)
Interval : Every 1 hour
Period : 1989.1.19 0: 0 - 1989. 2.18 0: 0
Azimuth : True N, -1 Degree

Tidal comp.	N-comp.		Elements of Ellipse				E-comp.		Principal 16.8° Ax.			
	Vel. M/S	Lag	Vel. M/S	Dir.	Ax.	Lag	Vel. M/S	Lag	Vel. M/S	Lag	Vel. M/S	Ax.
K ₁	0.262	285.0	0.078	299.7	L S	16.2 106.2	0.273 0.019	286.2 16.2	0.273	286.2		
O ₁	0.110	230.3	0.042	226.8	L S	20.8 110.8	0.117 0.002	229.9 139.9	0.117	230.0		
P ₁	0.087	285.0	0.026	299.7	L S	16.2 106.2	0.090 0.006	286.2 16.2	0.090	286.2		
Q ₁	0.018	201.4	0.010	350.2	L S	333.8 63.8	0.020 0.005	195.0 285.0	0.015	207.0		
M ₂	0.119	84.6	0.030	135.3	L S	9.5 99.5	0.121 0.023	86.4 176.4	0.120	87.8		
S ₂	0.045	293.9	0.023	281.7	L S	27.0 117.0	0.050 0.004	291.3 201.3	0.049	292.2		
L ₂	0.045	175.3	0.015	200.1	L S	17.1 107.1	0.047 0.006	177.6 267.6	0.047	177.5		
K ₂	0.012	293.9	0.006	281.7	L S	27.0 117.0	0.014 0.001	291.3 201.3	0.013	292.2		
MU ₂	0.014	293.6	0.008	331.1	L S	25.7 115.7	0.016 0.004	301.2 31.2	0.016	298.7		
N ₂	0.045	75.8	0.008	39.6	L S	8.5 98.5	0.046 0.005	74.9 344.9	0.045	74.0		
NU ₂	0.009	75.8	0.002	39.6	L S	8.5 98.5	0.009 0.001	74.9 344.9	0.009	74.0		
M ₄	0.040	147.3	0.008	187.3	L S	9.3 99.3	0.040 0.005	148.6 238.6	0.040	149.6		
MS ₄	0.027	98.2	0.009	136.9	L S	14.8 104.8	0.028 0.005	101.1 191.1	0.028	101.5		
Mean Cur.	-0.184		0.019		174.2 0.185			-0.171				

Table 3. 2. -1 (16) Results of Harmonic Analysis
(Survey Item: Current 1, 2nd Stage) (30 Days)

St. : 9 114. 27.9 : E
Layer : 0.5m (Depth: 1.0m)
Interval : Every 1 hour
Period : 1989. 1. 19 0: 0 - 1989. 2. 18 0: 0
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Ax.	Dir. .	Vel. M/S	Lag. .	Vel. M/S	Lag .
K ₁	0.161	260.5	0.041	17.6	L S	353.0 83.0	0.162 0.037	258.9 348.9	0.162	260.0
O ₁	0.059	208.4	0.029	268.7	L S	16.0 106.0	0.061 0.024	214.8 304.8	0.059	207.5
P ₁	0.053	260.5	0.014	17.6	L S	353.0 83.0	0.054 0.012	258.9 348.9	0.053	260.0
Q ₁	0.003	110.3	0.005	245.6	L S	296.3 26.3	0.006 0.002	75.3 165.3	0.003	107.9
M ₂	0.158	63.2	0.011	243.5	L S	356.1 86.0	0.158 0.000	63.2 333.2	0.158	63.2
S ₂	0.051	0.0	0.005	76.8	L S	1.3 91.3	0.051 0.005	0.2 90.2	0.051	359.8
L ₂	0.025	32.2	0.004	245.2	L S	352.6 82.6	0.025 0.002	32.9 302.9	0.025	32.4
K ₂	0.014	0.0	0.001	76.8	L S	1.3 91.3	0.014 0.001	0.2 90.2	0.014	359.8
MU ₂	0.008	60.4	0.008	164.1	L S	314.9 44.9	0.009 0.007	22.1 112.1	0.008	58.4
N ₂	0.039	358.2	0.015	135.0	L S	342.7 72.7	0.041 0.010	353.8 83.8	0.039	357.6
NU ₂	0.008	358.2	0.003	135.0	L S	342.7 72.7	0.008 0.002	353.8 83.8	0.008	357.6
M ₄	0.017	127.4	0.007	305.4	L S	337.5 67.5	0.018 0.000	127.1 217.1	0.017	127.4
MS ₄	0.008	310.6	0.002	306.6	L S	15.1 105.1	0.008 0.000	310.3 220.3	0.008	310.6
Mean Cur.	-0.117		-0.043			200.4	0.124		-0.115	

Table 3.2. -1 (17) Results of Harmonic Analysis
(Survey Item: Current 1, 3rd Stage) (15 Days)

St. : 1
114. 25.1 : E
-1. 39.1 : N
Layer : 10.5m (Depth: 9.1m)
Interval : Every 2 hours
Period : 1989.4.12 0:0 - 1989.4.27 0:0 (1st half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal 320.1	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Ax.	Dir. .	Vel. M/S	Lag .	Vel. M/S
K ₁	0.038	216.1	0.029	69.1	L	323.1	0.046	228.2	0.046
O ₁	0.015	144.2	0.023	8.9	L	298.9	0.025	177.5	0.024
P ₁	0.012	216.1	0.010	69.1	L	323.1	0.015	228.2	0.015
Q ₁	0.007	109.1	0.008	290.0	L	310.0	0.011	109.6	0.011
M ₂	0.067	53.1	0.057	241.6	L	319.8	0.088	56.7	0.088
S ₂	0.018	279.8	0.009	127.4	L	335.5	0.019	284.7	0.019
K ₂	0.005	279.8	0.002	127.4	L	335.5	0.005	284.7	0.005
N ₂	0.020	36.0	0.024	222.3	L	309.9	0.032	39.7	0.031
M ₄	0.003	137.0	0.003	69.9	L	46.0	0.003	102.5	0.002
MS ₄	0.005	223.9	0.002	66.1	L	342.9	0.005	225.9	0.005
Mean Cur.	0.000		0.002			78.9	0.002		-0.001

St. : 4
114. 28.8 : E
-1. 31.9 : N
Layer : 10.5m (Depth: 9.8m)
Interval : Every 1 hour
Period : 1989.4.12 0:0 - 1989.4.27 0:0 (1st half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal 5.7	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Ax.	Dir. .	Vel. M/S	Lag .	Vel. M/S
K ₁	0.248	288.4	0.021	247.3	L	3.7	0.248	288.2	0.248
O ₁	0.172	239.3	0.048	258.6	L	14.8	0.178	240.6	0.176
P ₁	0.082	288.4	0.007	247.3	L	3.7	0.082	288.2	0.082
Q ₁	0.026	247.0	0.033	309.9	L	59.0	0.037	290.8	0.028
M ₂	0.149	116.8	0.035	212.8	L	358.5	0.150	116.4	0.148
S ₂	0.035	28.4	0.009	87.0	L	8.4	0.036	30.2	0.036
K ₂	0.010	28.4	0.003	87.0	L	8.4	0.010	30.2	0.010
N ₂	0.026	61.9	0.033	225.7	L	308.5	0.042	52.0	0.023
M ₄	0.044	149.9	0.012	227.9	L	38.5	0.044	150.9	0.044
MS ₄	0.036	321.6	0.010	51.1	L	0.1	0.036	321.6	0.036
Mean Cur.	-0.232		-0.002			180.6	0.232		-0.231

Table 3.2. -1 (18) Results of Harmonic Analysis
(Survey Item: Current 1. 3rd Stage) (15 Days)

SL : 5 114. 29.9 : E
-3. 32.4 : N
Layer : 0.5m (Depth: 0.8m)
Interval : Every 1 hour
Period : 1989.4.12 14: 0 - 1989.4.27 0:0 (1st half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. Ax.	Vel. M/S	Lag .	Vel. M/S	10.9° Ax.
K ₁	0.232	264.2	0.054	239.9	L 12.1	0.237	263.1	0.237	263.2
O ₁	0.193	216.0	0.034	249.6	L 8.4	0.195	216.8	0.195	217.0
P ₁	0.077	264.2	0.018	239.9	L 12.1	0.079	263.1	0.079	263.2
Q ₁	0.050	201.1	0.018	306.7	L 353.6	0.051	198.8	0.049	205.0
M ₂	0.188	97.4	0.046	72.0	L 12.7	0.193	96.1	0.193	96.3
S ₂	0.041	3.9	0.006	323.2	L 6.9	0.041	3.2	0.041	2.8
K ₂	0.011	3.9	0.002	323.2	L 6.9	0.011	3.2	0.011	2.8
N ₂	0.064	93.9	0.017	37.2	L 8.6	0.064	92.0	0.064	91.5
M ₄	0.005	138.9	0.009	340.2	L 299.6	0.010	154.9	0.003	129.2
MS ₄	0.013	319.3	0.007	111.3	L 334.9	0.015	314.0	0.012	322.1
Mean Cur.	-0.197		-0.084		203.0	0.214			-0.209

SL : 7 114. 25.5 : E
-3. 35.3 : N
Layer : 0.5m (Depth: 0.8m)
Interval : Every 1 hour
Period : 1989.4.12 12: 0 - 1989.4.27 12:0 (1st half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. Ax.	Vel. M/S	Lag .	Vel. M/S	22.1° Ax.
K ₁	0.123	258.7	0.045	324.2	L 9.7	0.125	261.9	0.122	266.0
O ₁	0.045	199.8	0.062	255.8	L 59.7	0.069	239.8	0.058	219.1
P ₁	0.041	258.7	0.015	324.2	L 9.7	0.041	261.9	0.040	266.0
Q ₁	0.009	191.2	0.012	273.3	L 78.0	0.012	264.6	0.010	218.0
M ₂	0.185	57.2	0.074	87.0	L 19.7	0.196	60.8	0.196	61.2
S ₂	0.023	302.0	0.010	271.7	L 20.2	0.025	298.1	0.025	297.8
K ₂	0.006	302.0	0.003	271.7	L 20.2	0.007	298.1	0.007	297.8
N ₂	0.075	31.6	0.051	67.9	L 32.0	0.087	42.2	0.085	39.2
M ₄	0.006	59.9	0.009	63.4	L 55.3	0.011	62.2	0.009	61.2
MS ₄	0.015	265.6	0.007	350.0	L 93.6	0.015	267.4	0.014	276.6
Mean Cur.	-0.053		0.017		161.8	0.055			-0.042

Table 3.2. -1 (19) Results of Harmonic Analysis
(Survey Item:Current 1,3rd Stage) (15 Days)

SL : 8 114 26.5 : E
-1 33.3 : N
Layer : 0.5m (Depth:0.8m)
Interval : Every 1 hour
Period : 1989.4.12 12: 0 - 1989. 4.27 12: 0 (1 st half)
Azimuth : True N. -1 degree

Tidal comp.	N-comp.		Elements of Ellipse				E-comp.		Principal Ax.			
	Vel. M/S	Lag .	Vel. M/S	Dir. Ax.	Lag .	Dir. Ax.	Vel. M/S	Lag .	Vel. M/S	Dir. Ax.	Lag .	Principal Ax.
K ₁	0.121	259.2	0.181	275.9	L	56.6	0.216	270.8	0.216	270.7		
O ₁	0.045	225.4	0.124	238.8	L	70.6	0.132	237.3	0.127	236.2		
P ₁	0.040	259.2	0.060	275.9	L	56.6	0.071	270.8	0.071	270.7		
Q ₁	0.023	281.5	0.037	237.2	L	62.4	0.041	247.6	0.041	250.0		
M ₂	0.154	54.9	0.168	73.6	L	47.6	0.225	65.1	0.223	66.4		
S ₂	0.021	315.0	0.018	330.6	L	40.3	0.027	321.5	0.026	323.6		
K ₂	0.006	315.0	0.005	330.6	L	40.3	0.007	321.5	0.007	323.6		
N ₂	0.065	48.8	0.079	44.5	L	50.4	0.103	46.3	0.102	46.1		
M ₄	0.014	204.5	0.006	13.8	L	336.9	0.015	202.8	0.003	221.4		
MS ₄	0.013	263.1	0.016	290.7	L	51.7	0.020	280.0	0.020	280.9		
Mean Cur.	-0.050		-0.067			233.2	0.083		-0.083			

SL : 9 114 27.9 : E
-1 36.5 : N
Layer : 0.5m (Depth:1.0m)
Interval : Every 1 hour
Period : 1989.4.12 14: 0 - 1989. 4.27 0: 0 (1 st half)
Azimuth : True N. -1 degree

Tidal comp.	N-comp.		Elements of Ellipse				E-comp.		Principal Ax.			
	Vel. M/S	Lag .	Vel. M/S	Dir. Ax.	Lag .	Dir. Ax.	Vel. M/S	Lag .	Vel. M/S	Dir. Ax.	Lag .	Principal Ax.
K ₁	0.194	264.1	0.017	0.6	L	359.4	0.194	264.0	0.194	263.9		
O ₁	0.080	192.8	0.030	254.2	L	11.2	0.081	196.4	0.079	192.0		
P ₁	0.064	264.1	0.005	0.6	L	359.4	0.064	264.0	0.064	263.9		
Q ₁	0.029	126.6	0.021	220.5	L	354.2	0.029	122.4	0.029	124.7		
M ₂	0.203	52.2	0.036	236.9	L	350.0	0.206	52.3	0.204	52.2		
S ₂	0.024	59.3	0.007	172.4	L	353.5	0.024	57.6	0.024	58.6		
K ₂	0.007	59.3	0.002	172.4	L	353.5	0.007	57.6	0.007	58.6		
N ₂	0.082	358.8	0.009	38.6	L	4.8	0.083	359.1	0.082	358.6		
M ₄	0.005	83.8	0.004	336.3	L	334.7	0.005	101.4	0.005	85.7		
MS ₄	0.028	244.0	0.001	246.7	L	3.0	0.028	244.0	0.027	244.0		
Mean Cur.	-0.033		-0.076			246.1	0.083		-0.030			

Table 3. 2. -1 (21) Results of Harmonic Analysis
(Survey Item:Current 1, 3rd Stage) (15 Days)

St. : 3 114. 28.0 : E
-3. 34.1 : N
Layer : 0.5m (Depth:0.7m)
Interval : Every 1 hour
Period : 1989.4.21 0:0 - 1989. 5. 6 0:0 (2 nd half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		Elements of Ellipse				Principal	
	vel. M/S	Lag .	vel. M/S	Dir. .	Lag .	Ax. .	348.9' Ax.	
K ₁	0.136	235.0	0.099	342.6	338.3	0.142	220.8	0.140 227.6
O ₁	0.091	180.3	0.022	133.6	9.8	0.092	178.6	0.086 182.4
P ₁	0.045	235.0	0.033	342.6	338.3	0.047	220.8	0.046 227.6
Q ₁	0.055	83.9	0.060	339.0	305.6	0.065	130.6	0.058 95.0
M ₂	0.138	15.0	0.075	158.9	334.5	0.152	7.9	0.148 11.7
S ₂	0.035	258.1	0.023	232.2	32.3	0.041	250.6	0.031 261.7
K ₂	0.010	258.1	0.006	232.2	122.3	0.009	160.6	0.008 261.7
N ₂	0.026	356.4	0.080	94.1	272.8	0.080	275.0	0.032 327.8
M ₄	0.017	47.3	0.010	160.4	340.8	0.017	36.9	0.017 41.2
MS ₄	0.024	177.9	0.018	229.5	34.2	0.027	195.3	0.021 170.4
Mean Cur.	-0.042		0.043		134.7	0.060		-0.050

St. : 4 114. 28.8 : E
-3. 31.9 : N
Layer : 0.5m (Depth:0.8m)
Interval : Every 1 hour
Period : 1989.4.28 0:0 - 1989. 5.13 0:0 (2 nd half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		Elements of Ellipse				Principal	
	vel. M/S	Lag .	vel. M/S	Dir. .	Lag .	Ax. .	17.2' Ax.	
K ₁	0.256	296.7	0.096	275.7	19.7	0.271	294.2	0.271 294.5
O ₁	0.126	235.4	0.034	233.7	14.9	0.130	235.3	0.130 235.3
P ₁	0.085	296.7	0.032	275.7	19.7	0.090	294.2	0.090 294.5
Q ₁	0.058	188.3	0.011	26.9	349.9	0.059	188.9	0.053 187.2
M ₂	0.109	100.7	0.024	116.6	11.9	0.111	101.4	0.110 101.7
S ₂	0.099	26.1	0.035	57.7	17.2	0.103	29.1	0.103 29.1
K ₂	0.027	26.1	0.009	57.7	107.2	0.017	119.1	0.028 29.1
N ₂	0.061	89.6	0.006	98.3	17.2	0.028	29.1	0.028 29.1
M ₄	0.041	134.8	0.015	165.6	5.2	0.062	89.7	0.060 89.9
MS ₄	0.023	253.3	0.026	315.9	95.2	0.001	179.7	0.043 138.0
Mean Cur.	-0.242		-0.003		180.7	0.242		-0.232

Table 3.2. -1 (22) Results of Harmonic Analysis
(Survey Item: Current I, 3rd Stage) (15 Days)

St. : 5 114 29.9 : E
32.4 : N
Layer : 40.5m (Depth: 0.8m)
Interval : Every 1 hour
Period : 1989.4.28 0:0 - 1989.5.13 0:0 (2nd half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal	
	vel. M/S	Lag .	vel. M/S	Lag .	Dir. Ax.	vel. M/S	Lag .	5.0° Ax.	
K ₁	0.225	280.6	0.021	206.6	L 1.5 91.5	0.225 0.020	280.4 190.4	0.225 0.025	280.1
O ₁	0.072	224.6	0.025	167.0	L 11.7 101.7	0.073 0.021	221.2 131.2	0.073 0.023	223.2
P ₁	0.074	280.6	0.007	206.6	L 1.5 91.5	0.075 0.007	280.4 190.4	0.074 0.074	280.1
Q ₁	0.094	191.9	0.005	31.1	L 356.9 86.9	0.094 0.002	191.9 101.9	0.094 0.094	191.8
M ₂	0.151	79.3	0.054	45.2	L 17.2 107.2	0.158 0.029	76.0 346.0	0.155 0.028	78.3
S ₂	0.103	2.4	0.021	246.2	L 354.7 84.7	0.104 0.019	3.4 273.4	0.102 0.098	1.5
K ₂	0.028	2.4	0.006	246.2	L 354.7 84.7	0.028 0.005	3.4 273.4	0.028 0.028	1.5
N ₂	0.098	78.3	0.003	4.4	L 0.5 90.5	0.098 0.003	78.3 348.3	0.098 0.098	78.2
M ₄	0.046	150.1	0.013	188.4	L 12.7 102.7	0.047 0.008	152.3 242.3	0.046 0.046	151.0
MS ₄	0.022	249.3	0.033	27.7	L 299.5 29.5	0.038 0.013	218.5 308.5	0.019 0.019	254.9
Mean Cur.	-0.168		-0.039		193.0	0.173		-0.171	

St. : 6 114 29.4 : E
32.4 : N
Layer : 40.5m (Depth: 1.7m)
Interval : Every 1 hour
Period : 1989.4.28 0:0 - 1989.5.13 0:0 (2nd half)
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal	
	vel. M/S	Lag .	vel. M/S	Lag .	Dir. Ax.	vel. M/S	Lag .	353.8° Ax.	
K ₁	0.172	270.5	0.021	80.0	L 353.1 83.1	0.173 0.004	270.4 0.4	0.173	270.4
O ₁	0.044	202.3	0.011	172.8	L 11.9 101.9	0.045 0.005	201.0 111.0	0.043	203.1
P ₁	0.057	270.5	0.007	80.0	L 353.1 83.1	0.057 0.001	270.4 0.4	0.057	270.4
Q ₁	0.030	231.1	0.009	156.8	L 5.2 95.2	0.030 0.009	229.6 139.6	0.029	233.0
M ₂	0.180	49.0	0.039	256.1	L 349.1 79.1	0.183 0.017	50.0 320.0	0.182	49.6
S ₂	0.023	281.7	0.004	192.9	L 0.2 90.2	0.023 0.004	281.6 191.6	0.023	282.8
K ₂	0.006	281.7	0.001	192.9	L 0.2 90.2	0.006 0.001	281.6 191.6	0.006	282.8
N ₂	0.050	46.1	0.013	204.7	L 346.3 76.3	0.051 0.005	44.9 134.9	0.051	45.5
M ₄	0.015	151.9	0.019	108.4	L 53.6 143.6	0.023 0.009	124.3 34.3	0.014	157.9
MS ₄	0.011	195.0	0.010	256.5	L 38.9 128.9	0.013 0.007	220.4 310.4	0.010	189.8
Mean Cur.	-0.057		0.019		161.1	0.060		-0.058	

Table 3.2. -1 (23) Results of Harmonic Analysis
(Survey Item: Current 1, 3rd Stage) (15 Days)

St. : 10 114. 23.0 : E
-1. 14.6 : N
Layer : 0.5m (Depth: 2.5m)
Interval : Every 1 hour
Period : 1989.4.28 0: 0 - 1989.5.13 0: 0 (2 nd half)
Azimuth : true N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Ax.	Dir.	Vel. M/S	Lag .	Vel. M/S	Ax.
K ₁	0.339	313.8	0.019	74.9	L	358.3	0.340	313.7	0.339	313.6
O ₁	0.185	303.5	0.130	88.1	L	326.8	0.217	292.5	0.191	302.2
P ₁	0.112	313.8	0.006	74.9	L	358.3	0.112	313.7	0.112	313.6
Q ₁	0.089	176.3	0.111	281.1	L	294.7	0.116	119.2	0.091	172.2
M ₂	0.280	60.7	0.154	315.1	L	348.4	0.284	66.7	0.282	62.5
S ₂	0.064	143.2	0.088	83.9	L	61.0	0.097	100.0	0.062	147.4
K ₂	0.018	143.2	0.024	83.9	L	151.0	0.050	10.0		
N ₂	0.095	188.8	0.133	139.1	L	58.8	0.150	153.6	0.090	192.7
M ₄	0.011	101.9	0.041	326.7	L	281.3	0.042	144.6	0.013	109.7
MS ₄	0.005	91.9	0.045	73.8	L	11.3	0.008	54.6		
Mean Cur.						83.9	0.045	74.0	0.003	110.9
						173.9	0.002	344.0		
	0.006		-0.110			273.0	0.110		0.012	

St. : 9 114. 27.9 : E
-3. 36.5 : N
Layer : 0.5m (Depth: 1.0m)
Interval : Every 1 hour
Period : 1989.4.28 0: 0 - 1989.5.13 0: 0 (2 nd half)
Azimuth : true N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Ax.	Dir.	Vel. M/S	Lag .	Vel. M/S	Ax.
K ₁	0.161	266.2	0.066	350.8	L	2.7	0.161	267.3	0.160	263.6
O ₁	0.046	195.6	0.010	302.9	L	355.9	0.046	194.7	0.046	194.2
P ₁	0.053	266.2	0.022	350.8	L	85.9	0.010	284.7		
Q ₁	0.024	238.4	0.017	173.8	L	2.7	0.053	267.3	0.053	263.6
M ₂	0.160	49.0	0.028	223.6	L	25.4	0.026	223.5	0.023	242.6
S ₂	0.032	289.4	0.023	125.4	L	115.4	0.014	133.5		
K ₂	0.009	289.4	0.006	125.4	L	350.1	0.163	48.8	0.162	48.9
N ₂	0.051	28.2	0.019	186.6	L	80.1	0.003	138.8		
M ₄	0.023	100.6	0.005	144.1	L	324.8	0.039	294.8	0.034	290.6
MS ₄	0.020	234.0	0.002	251.3	L	54.8	0.001	204.8	0.009	290.6
Mean Cur.						340.5	0.054	25.7	0.052	27.4
						70.5	0.007	115.7		
	0.020		-0.055			9.7	0.023	102.1	0.022	99.6
						99.7	0.004	192.1		
						5.6	0.020	234.2	0.019	233.9
						95.6	0.001	324.2		
	0.020		289.8	0.058					0.025	

Table 3.2. -1 (24) Results of Harmonic Analysis
(Survey Item: Current 1, 3rd Stage) (15 Days)

St. : 11 114.30.9 : E
-3.30.1 : N
Layer : 0.5m (Depth: 1.2m)
Interval : Every 1 hour
Period : 1989.4.28 (3: 0 - 1989.5.13 13: 0 (2 nd half)
Azimuth : True N. - J degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse				Principal Ax.	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. Ax.	Vel. M/S	Lag .	Vel. M/S	350.1	171.0
K ₁	0.183	271.2	0.039	121.8	L	349.4	0.186	272.3	0.186	272.2
					S	79.4	0.020	182.3		
O ₁	0.079	193.1	0.036	356.8	L	336.3	0.086	190.4	0.084	191.9
					S	66.3	0.009	280.4		
P ₁	0.061	271.2	0.013	121.8	L	349.4	0.062	272.3	0.062	272.2
					S	79.4	0.006	182.3		
Q ₁	0.034	228.8	0.025	129.5	L	346.6	0.035	238.3	0.035	235.8
					S	76.6	0.024	148.3		
M ₂	0.114	60.7	0.001	358.2	L	0.3	0.114	60.7	0.112	60.8
					S	90.3	0.001	350.7		
S ₂	0.047	16.7	0.023	276.4	L	353.6	0.047	19.8	0.047	21.4
					S	85.6	0.022	289.8		
K ₂	0.013	16.7	0.006	276.4	L	353.6	0.013	19.8	0.013	21.4
					S	83.6	0.006	289.8		
N ₂	0.050	31.8	0.027	268.8	L	339.7	0.053	40.5	0.052	36.1
					S	69.7	0.022	310.5		
M ₄	0.022	166.1	0.011	60.7	L	349.7	0.022	171.2	0.022	171.0
					S	79.7	0.011	81.2		
MS ₄	0.021	250.3	0.010	159.6	L	359.6	0.021	250.4	0.021	254.8
					S	89.6	0.010	160.4		
Mean Cur.	-0.021		0.009			155.9	0.023		-0.022	

Table 3.2 -1 (25) Results of Harmonic Analysis
(Survey Item: Current 1.3rd Stage) (30 Days)

SL : 1
114.25.4 : E
-3.31.9 : N
Layer : 40.5m (Depth: 2.1m)
Interval : Every 1 hour
Period : 1989.4.12 0:00 - 1989.5.12 0:00
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. Ax.	Vel. M/S	Lag .	Vel. M/S	Ax. .
K ₁	0.044	224.1	0.030	80.4	L 328.3 58.3	0.051 0.015	234.6 144.6	0.051	235.1
O ₁	0.014	167.7	0.017	24.2	L 309.4 39.4	0.021 0.007	189.3 99.3	0.020	183.6
P ₁	0.015	224.1	0.010	80.4	L 328.3 58.3	0.017 0.005	234.6 144.6	0.017	235.1
Q ₁	0.007	118.9	0.004	258.7	L 337.4 67.4	0.008 0.002	112.4 202.4	0.008	109.3
M ₂	0.067	47.7	0.048	241.1	L 325.1 55.1	0.082 0.009	52.1 322.1	0.082	52.0
S ₂	0.016	286.0	0.005	125.0	L 342.3 72.3	0.017 0.002	287.8 197.8	0.016	289.4
L ₂	0.003	144.9	0.006	202.2	L 67.3 157.3	0.006 0.003	191.7 281.7	0.003	78.3
K ₂	0.004	286.0	0.001	125.0	L 342.3 72.3	0.005 0.000	287.8 197.8	0.004	289.4
MU ₂	0.010	9.4	0.003	104.5	L 358.4 88.4	0.010 0.003	8.9 98.9	0.009	358.6
N ₂	0.023	20.8	0.015	222.6	L 328.2 58.2	0.027 0.005	26.9 296.9	0.027	27.2
NU ₂	0.004	20.8	0.003	222.6	L 328.2 58.2	0.005 0.001	26.9 296.9	0.005	27.2
M ₄	0.005	137.3	0.002	88.2	L 14.5 104.5	0.005 0.001	133.5 43.5	0.004	149.6
MS ₄	0.003	216.6	0.001	57.9	L 345.2 75.2	0.003 0.000	218.1 128.1	0.003	219.9
Mean Cur.	-0.012		0.002		171.0	0.012		-0.011	

SL : 4
114.28.8 : E
-3.31.9 : N
Layer : 40.5m (Depth: 0.8m)
Interval : Every 1 hour
Period : 1989.4.12 0:00 - 1989.5.12 0:00
Azimuth : True N. -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. Ax.	Vel. M/S	Lag .	Vel. M/S	Ax. .
K ₁	0.256	292.5	0.063	268.6	L 12.9 102.9	0.262 0.025	291.2 201.2	0.262	291.4
O ₁	0.156	232.7	0.033	234.0	L 11.9 101.9	0.159 0.001	232.8 322.8	0.159	232.8
P ₁	0.085	292.5	0.021	268.6	L 12.9 102.9	0.087 0.008	291.2 201.2	0.087	291.4
Q ₁	0.027	199.5	0.012	307.2	L 350.6 80.6	0.027 0.011	195.6 285.6	0.026	204.5
M ₂	0.143	111.5	0.019	148.3	L 6.1 96.1	0.144 0.011	112.0 202.0	0.144	112.4
S ₂	0.064	23.9	0.020	73.2	L 11.8 101.8	0.065 0.015	26.5 116.5	0.065	26.4
L ₂	0.046	192.8	0.037	241.8	L 35.7 125.7	0.034 0.024	210.3 300.3	0.050	199.0
K ₂	0.017	23.9	0.005	73.2	L 11.8 101.8	0.018 0.004	26.5 116.5	0.018	26.4
MU ₂	0.013	148.1	0.014	92.5	L 47.0 137.0	0.017 0.009	118.7 28.7	0.015	139.4
N ₂	0.025	68.5	0.007	187.0	L 352.6 82.6	0.026 0.006	66.9 156.9	0.024	71.2
NU ₂	0.005	68.5	0.001	187.0	L 352.6 82.6	0.005 0.001	66.9 156.9	0.005	71.2
M ₄	0.042	145.3	0.012	199.2	L 10.4 100.4	0.042 0.010	147.7 237.7	0.042	147.9
MS ₄	0.024	300.7	0.013	342.0	L 24.6 114.6	0.026 0.008	308.6 38.6	0.025	304.5
Mean Cur.	-0.238		-0.004		181.0	0.238		-0.234	

Table 3.2. -1 (26) Results of Harmonic Analysis
(Survey Item: Current 1.3rd Stage) (30 Days)

SL : 5 114.29.9 : E
114.29.9 : N
Layex : 0.5m (Depth: 0.5m)
Interval : Every 1 hour
Period : 1982.4.12 0:0 - 1989.5.12 0:0
Azimuth : True N, -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Ax. .	Lag .	Vel. M/S	8.0' Ax. .
K ₁	0.228	274.7	0.037	231.8	6.9	0.229	274.0	0.229	273.9
O ₁	0.151	218.1	0.025	202.0	9.0	0.153	217.7	0.153	217.8
P ₁	0.075	274.7	0.012	231.8	6.9	0.076	274.0	0.076	273.9
Q ₁	0.034	211.5	0.010	14.3	344.6	0.035	210.3	0.032	212.2
M ₂	0.180	86.7	0.042	58.9	12.0	0.184	85.5	0.183	85.9
S ₂	0.066	1.5	0.008	279.0	0.9	0.066	1.4	0.065	0.5
L ₂	0.059	160.7	0.013	96.6	5.6	0.059	159.6	0.059	159.2
K ₂	0.018	1.5	0.002	279.0	0.9	0.018	1.4	0.018	0.5
MU ₂	0.022	133.7	0.008	301.6	339.8	0.024	132.2	0.021	134.3
N ₂	0.062	82.6	0.016	13.2	5.6	0.062	81.2	0.062	80.6
NU ₂	0.012	82.6	0.003	13.2	5.6	0.012	81.2	0.012	80.6
M ₄	0.020	149.5	0.002	295.5	354.7	0.020	149.2	0.020	150.0
MS ₄	0.012	256.0	0.013	39.8	310.2	0.017	235.1	0.010	262.2
Mean Cur.	-0.187		-0.065		199.3	0.198			-0.194

SL : 9 114.27.9 : E
114.27.9 : N
Layex : 0.5m (Depth: 0.5m)
Interval : Every 1 hour
Period : 1982.4.12 0:0 - 1989.5.12 0:0
Azimuth : True N, -1 Degree

Tidal comp.	N-comp.		E-comp.		Elements of Ellipse			Principal	
	Vel. M/S	Lag .	Vel. M/S	Lag .	Dir. .	Ax. .	Lag .	Vel. M/S	355.9' Ax. .
K ₁	0.173	266.1	0.047	350.4	1.7	0.173	266.6	0.172	265.0
O ₁	0.062	207.9	0.017	256.2	10.7	0.063	210.1	0.061	207.1
P ₁	0.057	266.1	0.015	350.4	1.7	0.057	266.6	0.057	265.0
Q ₁	0.002	222.0	0.011	197.6	82.0	0.011	198.1	0.001	240.3
M ₂	0.183	55.0	0.040	224.8	347.8	0.187	54.5	0.185	54.8
S ₂	0.017	339.4	0.012	133.7	327.0	0.020	331.7	0.018	338.2
L ₂	0.045	85.1	0.017	273.3	339.1	0.048	86.2	0.046	85.3
K ₂	0.005	339.4	0.003	133.7	327.0	0.006	331.7	0.005	338.2
MU ₂	0.013	211.9	0.007	239.0	26.5	0.015	217.4	0.013	210.8
N ₂	0.051	9.2	0.005	174.7	354.3	0.051	9.0	0.051	9.1
NU ₂	0.010	9.2	0.001	174.7	354.3	0.010	9.0	0.010	9.1
M ₄	0.013	100.0	0.002	31.5	6.8	0.013	99.8	0.013	100.2
MS ₄	0.022	240.1	0.002	235.1	5.8	0.022	240.0	0.022	240.1
Mean Cur.	-0.005		-0.066		265.5	0.066			0.000

Table 3.2.-2(1): Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1,1st Stage)

		St. : 2												
		Layer : 10.5m (Depth:1.0m)												
		Interval : Every 1 hour												
		Period : 1988. 9. 8 0: 0 - 1988. 9. 18 0: 0 (1st half)												
Dir.	Vel. cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total	
N	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	4.0	1.7	5.4	4.6	3.7	1.2	0	0	0	0	0	0	0	16.7
NE	6.0	2.5	2.5	0.8	0.8	0	0.4	0	0	0	0	0	0	7.1
ENE	9.0	3.7	1.2	0	0	0	0	0	0	0	0	0	0	12
E	4.0	1.7	0.4	0	0	0	0	0	0	0	0	0	0	5.0
ESE	2.0	0.8	0	0	0	0	0	0	0	0	0	0	0	2.1
SE	0.8	0.8	0	0	0	0	0	0	0	0	0	0	0	0.8
SSE	2.0	1.2	0	0	0	0	0	0	0	0	0	0	0	3
S	4.0	1.7	0	0	0	0	0	0	0	0	0	0	0	1.2
SSW	6.0	2.5	0.8	0	0	0	0	0	0	0	0	0	0	1.7
SW	13.0	5.4	1.7	0	0	0	0	0	0	0	0	0	0	3.3
WSW	13.0	5.4	1.7	0.4	0.4	0.4	0.4	0	0	0	0	0	0	17
W	6.0	2.5	0.8	1.2	1.7	1.2	0.4	0	0	0	0	0	0	8.7
WNW	9.0	3.7	0.8	1.2	0.8	0.4	0	0	0	0	0	0	0	19
NW	2.0	0.8	0.8	0.4	0.8	0	0	0	0	0	0	0	0	7.1
NNW	7.0	2.9	5.0	1.7	0.8	0	0	0	0	0	0	0	0	2.9
Total	6.0	2.5	7.9	4.2	2.1	0.4	0	0	0	0	0	0	0	25
	96	40.0	29.2	14.6	11.2	3.7	1.2	0	0	0	0	0	0	10.4
	40.0	29.2	14.6	11.2	3.7	1.2	0	0	0	0	0	0	0	17.1
	96	40.0	29.2	14.6	11.2	3.7	1.2	0	0	0	0	0	0	24.0
	40.0	29.2	14.6	11.2	3.7	1.2	0	0	0	0	0	0	0	100.0

Short Data
Data Obtained 99.6%

		St. : 1												
		Layer : 10.5m (Depth:3.1m)												
		Interval : Every 2 hours												
		Period : 1988. 9. 8 0: 0 - 1988. 9. 18 0: 0 (1st half)												
Dir.	Vel. cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total	
N	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	3.3	3.3	2.2	0	0	0	0	0	0	0	0	0	5.5	
NE	8.8	8.8	0	0	0	0	0	0	0	0	0	0	8.8	
ENE	7.7	7.7	4.4	0	0	0	0	0	0	0	0	0	12.1	
E	9.9	9.9	5.5	0	0	0	0	0	0	0	0	0	15.4	
ESE	13.2	13.2	22.0	0	0	0	0	0	0	0	0	0	35.2	
SE	5.5	5.5	16.5	0	0	0	0	0	0	0	0	0	22.0	
SSE	0	0	1.1	0	0	0	0	0	0	0	0	0	1.1	
S	0	0	0	0	0	0	0	0	0	0	0	0	0	
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	
W	0	0	0	0	0	0	0	0	0	0	0	0	0	
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	44	48.4	51.6	0	0	0	0	0	0	0	0	0	91	
	48.4	51.6	0	0	0	0	0	0	0	0	0	0	100.0	

Short Data
Data Obtained 100.0%

Note : Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %

Table 3.2.-2 (2) Frequency Distributions of Current Direction and Velocity
(Survey Item: Current 1.1st Stage)

St. : 3
Layer : 40.5m (Depth: 0.7m)
Interval : Every 1 hour
Period : 1988. 9. 8 0:0 - 1988. 9. 18 0:0 (1st half)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.8	1.2	3.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
NE	1.7	0.8	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
ENE	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
E	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
ESE	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
SE	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
SSE	3.3	1.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8
S	3.3	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7
SSW	2.5	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7
SW	1.7	3.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18
WSW	2.1	4.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5
W	3.3	1.7	1.7	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21
WNW	2.9	3.3	1.7	1.2	2.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31
NW	1.7	1.7	1.7	3.3	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
NNW	6.7	6.7	4.2	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26
NNW	2.5	2.9	2.5	1.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.8
NNW	4.2	10.0	4.2	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21
Total	75	92	34	21	14	3	0	0	0	0	0	0	0	240
	31.2	38.3	14.2	8.7	5.8	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Short Data
Data Obtained 99.6%

Note: Upper layer shows number of Obs. frequency and
Lower layer shows number of Obs. frequency in %

St. : 4
Layer : 40.5m (Depth: 0.8m)
Interval : Every 1 hour
Period : 1988. 9. 8 0:0 - 1988. 9. 18 0:0 (1st half)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.4	1.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1
NE	0.4	2.9	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0
ENE	0.8	2.5	1.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8
E	1.7	0.8	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6
ESE	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
SE	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
SSE	0.4	2.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3
S	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
SSW	1.7	2.1	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4
SW	0	11	26	32	22	9	2	0	0	0	0	0	0	102
WSW	0	4.6	10.8	13.3	9.1	3.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0	42.3
W	0	7	15	11	2	1	0	0	0	0	0	0	0	36
WNW	0	2.9	6.2	4.6	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.9
NW	1.7	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
NNW	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
NNW	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
NNW	0.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
NNW	1.2	1.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7
Total	29	61	65	50	20.7	10.0	4.1	0.8	0.0	0.0	0.0	0.0	0.0	241
	12.0	25.3	27.0	20.7	10.0	4.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Short Data
Data Obtained 100.0%

Table 3.2.-2 (3) Frequency Distributions of Current Direction and Velocity
(Survey Item: Current 1, 1st Stage)

St. : 5
Layer : 0.5m (Depth: 0.8m)
Interval : Every 1 hour
Period : 1988. 9. 8 0: 0 - 1988. 9. 18 0: 0 (1st half)

Dir.	Vel.	cm/sec.	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	3.7	4.1	9	4	1.8	0.9	0	0	0	0	0	0	0	23
NE	4	13	6	0	0	0	0	0	0	0	0	0	0	23
ENE	1.8	6.0	2.8	0	0	0	0	0	0	0	0	0	0	10.6
E	9	2	0	0	0	0	0	0	0	0	0	0	0	11
ESE	4.1	0.9	0	0	0	0	0	0	0	0	0	0	0	5.1
SE	3	6	0	0	0	0	0	0	0	0	0	0	0	9
SSE	1.4	2.8	0	0	0	0	0	0	0	0	0	0	0	4.1
S	4.6	1.4	0	0	0	0	0	0	0	0	0	0	0	13
SSW	8	2	0	0	0	0	0	0	0	0	0	0	0	6.0
SW	3.7	0.9	0	0	0	0	0	0	0	0	0	0	0	10
WSW	12	0	0	0	0	0	0	0	0	0	0	0	0	12
W	5.5	0.9	0	0	0	0	0	0	0	0	0	0	0	5.5
WNW	4	0	0	0	0	0	0	0	0	0	0	0	0	4
NW	1.8	0	0	0	0	0	0	0	0	0	0	0	0	1.8
NNW	8	5	1	0	0	0	0	0	0	0	0	0	0	19
Total	49.8	30.4	13.8	6.0	0	0	0	0	0	0	0	0	0	217
	108	66	30	13	0	0	0	0	0	0	0	0	0	100.0

Short Data
Data Obtained 24
90.0%

St. : 5
Layer : 0.5m (Depth: 0.8m)
Interval : Every 1 hour
Period : 1988. 9. 8 0: 0 - 1988. 9. 18 0: 0 (1st half)

Dir.	Vel.	cm/sec.	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	3.7	4.1	9	4	1.8	0.9	0	0	0	0	0	0	0	23
NE	4	13	6	0	0	0	0	0	0	0	0	0	0	23
ENE	1.8	6.0	2.8	0	0	0	0	0	0	0	0	0	0	10.6
E	9	2	0	0	0	0	0	0	0	0	0	0	0	11
ESE	4.1	0.9	0	0	0	0	0	0	0	0	0	0	0	5.1
SE	3	6	0	0	0	0	0	0	0	0	0	0	0	9
SSE	1.4	2.8	0	0	0	0	0	0	0	0	0	0	0	4.1
S	4.6	1.4	0	0	0	0	0	0	0	0	0	0	0	13
SSW	8	2	0	0	0	0	0	0	0	0	0	0	0	6.0
SW	3.7	0.9	0	0	0	0	0	0	0	0	0	0	0	10
WSW	12	0	0	0	0	0	0	0	0	0	0	0	0	12
W	5.5	0.9	0	0	0	0	0	0	0	0	0	0	0	5.5
WNW	4	0	0	0	0	0	0	0	0	0	0	0	0	4
NW	1.8	0	0	0	0	0	0	0	0	0	0	0	0	1.8
NNW	8	5	1	0	0	0	0	0	0	0	0	0	0	19
Total	49.8	30.4	13.8	6.0	0	0	0	0	0	0	0	0	0	217
	108	66	30	13	0	0	0	0	0	0	0	0	0	100.0

Short Data
Data Obtained 98.0%

Note: Upper layer shows number of Obs. frequency and
Lower layer shows number of Obs. frequency in X.

Table 3.2.-2 (4) Frequency Distributions of Current Direction and Velocity
(Survey Item: Current 1, 1st Stage)

St. : 8
Layer : 40.5m (Depth: 0.8m)
Interval : Every 1 hour
Period : 1988. 9. 8 0:0 - 1988. 9. 18 0:0 (1st half)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	4	3	1	1	0	0	0	0	0	0	0.0
NNE	0.8	1.7	1.2	1.2	0.4	0.4	0.4	0	0	0	0	0	0	4.6
NE	1.7	1.7	2.9	2.1	5	5	0	0	0	0	0	0	0	8.3
ENE	1.7	6.6	2.1	1.7	0.4	1	0	0	0	0	0	0	0	30
E	5	10	7	4	0	0	0	0	0	0	0	0	0	26
ESE	2.1	4.1	2.9	1.7	0	0	0	0	0	0	0	0	0	10.8
SE	2.1	4.6	1.7	0	0	0	0	0	0	0	0	0	0	8.3
SSE	0.8	5.4	0.4	0	0	0	0	0	0	0	0	0	0	6.2
S	1.7	6.2	0	0	0	0	0	0	0	0	0	0	0	19
SSW	0.4	2.5	0.8	0	0	0	0	0	0	0	0	0	0	3.7
SW	0.8	2.1	0.8	0.4	0	0	0	0	0	0	0	0	0	4.1
WSW	1.2	2.1	0.8	2.1	0	0	0	0	0	0	0	0	0	9
W	0.4	0.8	0.4	0.8	1.2	0	0	0	0	0	0	0	0	6.6
WNW	1.2	1.2	0.8	0	0	0	0	0	0	0	0	0	0	3.3
NW	0.8	0.8	0.8	0	0	0	0	0	0	0	0	0	0	2.5
NNW	0.8	2.1	2.9	1.7	0.8	0	0	0	0	0	0	0	0	20
Total	41	118	47	27	7	1	0	0	0	0	0	0	0	241
	17.0	49.0	19.5	11.2	2.9	0.4	-	-	-	-	-	-	-	100.0

Short Data
Data Obtained 100.0%

Note: Upper layer shows number of Obs. frequency and
Lower layer shows number of Obs. frequency in %

St. : 9
Layer : 10.5m (Depth: 1.0m)
Interval : Every 1 hour
Period : 1988. 9. 8 0:0 - 1988. 9. 18 0:0 (1st half)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	6	9	1	1	0	0	0	0	0	0	0.0
NNE	1.3	2.5	3.8	0.4	0.4	0.4	0.4	0	0	0	0	0	0	8.4
NE	0.4	1	0	0	0	0	0	0	0	0	0	0	0	0.4
ENE	0.8	2	0	0	0	0	0	0	0	0	0	0	0	2
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0.8	2	0	0	0	0	0	0	0	0	0	0	0	2
SE	1.7	1.7	0	0	0	0	0	0	0	0	0	0	0	1.7
SSE	0.8	0.8	0	0	0	0	0	0	0	0	0	0	0	1.7
S	2.5	2.1	0	0	0	0	0	0	0	0	0	0	0	4.6
SSW	12	6	0	0	0	0	0	0	0	0	0	0	0	18
SW	5.0	2.5	0	0	0	0	0	0	0	0	0	0	0	7.5
WSW	16	6	3	6	0	0	0	0	0	0	0	0	0	31
W	6.7	2.5	1.3	2.5	0	0	0	0	0	0	0	0	0	13.0
WNW	3.3	3.3	1.7	1.7	0.8	0	0	0	0	0	0	0	0	26
NW	7	6	4	0	0	0	0	0	0	0	0	0	0	17
NNW	2.9	2.5	1.7	0	0	0	0	0	0	0	0	0	0	7.1
Total	3	7	6	0	0	0	0	0	0	0	0	0	0	16
	1.3	2.9	2.5	0	0	0	0	0	0	0	0	0	0	6.7
	16	13	1	0	0	0	0	0	0	0	0	0	0	30
	6.7	5.4	0.4	0	0	0	0	0	0	0	0	0	0	12.6
	5	16	3	1	0	0	0	0	0	0	0	0	0	25
	2.1	6.7	1.3	0.4	0	0	0	0	0	0	0	0	0	10.5
	3	13	13	3	0	0	0	0	0	0	0	0	0	32
	1.3	5.4	5.4	1.3	0	0	0	0	0	0	0	0	0	13.4
Total	90	88	43	15	3	0	0	0	0	0	0	0	0	239
	37.7	36.8	18.0	6.3	1.3	-	-	-	-	-	-	-	-	100.0

Short Data
Data Obtained 99.2%

Table 3.2.-2 (5) Frequency Distributions of Current Direction and Velocity
(Survey Item: Current 1.1st Stage)

St. : 1
Layer : +0.5m (Depth: 9.1m)
Interval : Every 2 hours
Period : 1988. 9.21 0:0 - 1988. 10.4 0:0 (2nd half)

Dir.	Rel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	22	0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	14.0	5.1	0	0	0	0	0	0	0	0	0	0	0	19.1
NE	8.3	1.3	0	0	0	0	0	0	0	0	0	0	0	9.6
ENE	11	0.6	0	0	0	0	0	0	0	0	0	0	0	7.6
E	13	0.6	0	0	0	0	0	0	0	0	0	0	0	14
ESE	8.3	0.6	0	0	0	0	0	0	0	0	0	0	0	8.9
SE	5.1	2.5	0	0	0	0	0	0	0	0	0	0	0	7.6
SSE	3.8	7.0	0	0	0	0	0	0	0	0	0	0	0	10.8
S	6	2	0	0	0	0	0	0	0	0	0	0	0	8
SSW	3.8	1.3	0	0	0	0	0	0	0	0	0	0	0	5.1
SW	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0.6
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	1	0	0	0	0	0	0	0	0	0	0	0	0	1
NW	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0.6
NNW	1.3	2.5	0	0	0	0	0	0	0	0	0	0	0	3.8
Total	7.0	14.6	4.5	7	7	7	7	7	7	7	7	7	7	157
	59.9	35.7	4.5											100.0

Short Data
Data Obtained 100.0%

Note: Upper layer shows number of Obs. frequency and
Lower layer shows number of Obs. frequency in %

St. : 2
Layer : +0.5m (Depth: 1.6m)
Interval : Every 1 hour
Period : 1988. 9.21 0:0 - 1988. 10.4 0:0 (2nd half)

Dir.	Rel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	7	25	20	21	18	3	0	0	0	0	0	0	94
NNE	2.2	8.0	6.4	6.7	5.8	1.0	0	0	0	0	0	0	0	30.0
NE	0.3	1.9	0	0.3	0	0	0	0	0	0	0	0	0	2.6
ENE	5	3	0	0	0	0	0	0	0	0	0	0	0	8
E	1.6	1.0	0	0	0	0	0	0	0	0	0	0	0	2.6
ESE	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0.3
SE	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0.3
SSE	1.9	0	0	0	0	0	0	0	0	0	0	0	0	1.9
S	4	5	0	0	0	0	0	0	0	0	0	0	0	9
SSW	1.3	1.6	0	0	0	0	0	0	0	0	0	0	0	2.9
SW	10	12	2	1	0	0	0	0	0	0	0	0	0	25
WSW	3.2	3.8	0.6	0.3	0	0	0	0	0	0	0	0	0	8.0
W	4	5	8	6	5	3	1	0	0	0	0	0	0	32
WNW	1.3	1.6	2.6	1.9	1.6	1.0	0.3	0	0	0	0	0	0	10.2
NW	10	4	7	1	3	0	0	0	0	0	0	0	0	25
NNW	3.2	1.3	2.2	0.3	1.0	0	0	0	0	0	0	0	0	8.0
Total	1.9	3.2	1.3	1.6	0.6	0.3	0	0	0	0	0	0	0	8.9
	3	12	1	1	1	0	0	0	0	0	0	0	0	18
	1.0	3.8	0.3	0.3	0.3	0	0	0	0	0	0	0	0	5.6
	6	13	5	2	0	0	0	0	0	0	0	0	0	26
	1.9	4.2	1.6	0.6	0	0	0	0	0	0	0	0	0	8.3
	4	13	8	4	2	0	0	0	0	0	0	0	0	31
	1.3	4.2	2.6	1.3	0.6	0	0	0	0	0	0	0	0	9.9
Total	69	108	55	42	31	7	1	0	0	0	0	0	0	313
	22.0	34.5	17.6	13.4	9.9	2.2	0.3	0	0	0	0	0	0	100.0

Short Data
Data Obtained 100.0%

Table 3. 2. -2 (6) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1, 1st Stage)

St. : 3
Layer : +0.5m (Depth:0.7m)
Interval : Every 1 hour
Period : 1988. 9. 21 0: 0 - 1988. 10. 4 0:0 (2nd half)

Vel. Dir.	cm/sec 0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	10	7	10	2	0	0	0	0	0	0	0.0
NNE	3.2	2.2	3.2	0.6	-	-	-	-	-	-	-	9.3
NE	1.6	5.4	1.3	-	-	-	-	-	-	-	-	8.3
ENE	1.3	1.3	-	-	-	-	-	-	-	-	-	2.6
E	2.2	0.3	-	-	-	-	-	-	-	-	-	2.6
ESE	2.2	1.3	-	-	-	-	-	-	-	-	-	3.5
SE	0.3	1.0	-	-	-	-	-	-	-	-	-	1.3
SSE	0.6	4.5	0.6	-	-	-	-	-	-	-	-	5.8
S	1.3	2.6	2.2	-	-	-	-	-	-	-	-	6.1
SSW	1.0	2.6	1.6	0.3	-	-	-	-	-	-	-	5.4
SW	-	1.6	2.9	0.6	-	-	-	-	-	-	-	5.1
WSW	1.0	2.6	1.0	0.3	-	-	-	-	-	-	-	4.8
W	1.3	6.1	1.3	0.6	0.6	-	-	-	-	-	-	9.9
WNW	0.3	3.5	3.2	1.0	1.3	-	0.3	-	-	-	-	9.6
NW	1.3	4.8	1.3	1.0	-	-	-	-	-	-	-	8.3
NNW	1.3	2.9	1.9	2.6	1.0	-	-	-	-	-	-	9.6
Total	62	135	77	28	9	0	1	0	0	0	0	312
	19.9	43.3	24.7	9.0	2.9	-	0.3	-	-	-	-	100.0

Short Data
Data Obtained 99.7%

Note: Upper layer shows number of Obs. frequency and
Lower layer shows number of Obs. frequency in %

St. : 4
Layer : +0.5m (Depth:0.8m)
Interval : Every 1 hour
Period : 1988. 9. 21 0: 0 - 1988. 10. 4 0:0 (2nd half)

Vel. Dir.	cm/sec 0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	2	18	20	7	0	0	0	0	0	0	47
NNE	0.6	5.8	6.4	2.2	-	-	-	-	-	-	-	15.0
NE	0.3	1.9	4.8	1.0	-	-	-	-	-	-	-	8.0
ENE	-	1.6	4.2	-	-	-	-	-	-	-	-	5.8
E	-	0.3	-	-	-	-	-	-	-	-	-	0.3
ESE	0.3	1.0	-	-	-	-	-	-	-	-	-	1.3
SE	-	-	-	-	-	-	-	-	-	-	-	0
SSE	2	1	0	0	0	0	0	0	0	0	0	3
S	0.6	0.3	-	-	-	-	-	-	-	-	-	1.0
SSW	2	8	11	5	4	3	0	0	0	0	0	33
SW	0.6	2.6	3.5	1.6	1.3	1.0	-	-	-	-	-	10.5
WSW	1.3	5.4	7.7	10.5	7.7	2.9	1.3	-	-	-	-	36.7
W	0.3	3.8	2.9	0.6	-	-	-	-	-	-	-	7.7
WNW	1.9	1.6	-	-	-	-	-	-	-	-	-	3.5
NW	1.6	0.6	-	-	-	-	-	-	-	-	-	2.2
NNW	0.6	1.3	0.6	-	-	-	-	-	-	-	-	2.6
Total	29	88	101	51	28	12	4	0	0	0	0	313
	9.3	28.1	32.3	16.3	8.9	3.8	1.3	-	-	-	-	100.0

Short Data
Data Obtained 100.0%

Table 3. 2. -2 (7) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1.1st Stage)

St. : 5
Layer : +0.5m (Depth:0.8m)
Interval : Every 1 hour
Period : 1988. 9.21 0: 0 - 1988. 10.4 0:0 (2nd half)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	21	46	68	76	62	29	7	0	0	0	0	0	0	309
	6.8	14.9	22.0	24.6	20.1	9.4	2.3	-	-	-	-	-	-	100.0

Short Data
Data Obtained 98.7%

Note: Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %

St. : 6
Layer : +0.5m (Depth:1.7m)
Interval : Every 1 hour
Period : 1988. 9.21 0: 0 - 1988. 10.4 0:0 (2nd half)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	119	109	39	19	6	2.1	-	-	-	-	-	-	-	292
	40.8	37.3	13.4	6.5	2.1	-	-	-	-	-	-	-	-	100.0

Short Data
Data Obtained 93.3%

Table 3. 2. -2 (8) Frequency Distributions of Current Direction and Velocity
(Survey Item: Current 1, 1st Stage)

St. : 9
Layer : 10.5m (Depth: 1.0m)
Interval : Every 1 hour
Period : 1988. 9.21 0: 0 - 1988. 10.4 0:0 (2nd half)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	7.2	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	2.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
S	1.6	0.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
SSW	2.6	4.2	1.9	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
SW	1.8	2.3	8.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
WSW	5.8	7.4	2.6	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.2
W	2.6	5.8	1.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
WNW	1.6	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7
NW	2.9	5.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0
NNW	2.6	9.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.5
Total	4.5	5.4	9.3	3.5	0.6	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	24.0
Total	7.6	14.3	5.8	3.0	3.1	1.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	31.2
	24.4	45.8	18.6	9.6	1.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Short Data
Data Obtained 99.7%

Note: Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %

St. : 10
Layer : 10.5m (Depth: 2.5m)
Interval : Every 1 hour
Period : 1988. 9.21 0: 0 - 1988. 10.4 0:0 (2nd half)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	1.1	1.3	1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	3.7
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
SSW	1.9	0.3	0.6	0.3	2.2	3.5	4.2	2.2	1.0	0.3	0.0	0.0	0.0	16.6
SW	2.2	4.8	6.4	2.6	1.9	1.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0	21.1
WSW	1.6	4.2	2.6	1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6
W	2.6	7.7	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5
WNW	1.9	7.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9
NW	2.2	8.3	2.9	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4
NNW	1.3	2.6	5.8	1.6	1.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.8
Total	4.9	11.3	6.3	2.2	1.9	6.1	5.8	2.2	1.3	0.3	0.0	0.0	0.0	31.3
	15.7	36.1	20.1	7.0	6.1	5.8	2.2	1.3	0.3	0.0	0.0	0.0	0.0	100.0

Short Data
Data Obtained 100.0%

Table 3.2. -2 (9) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1, 1st Stage)

St. : 11
Layer : +0.5m (Depth: 1.2m)
Interval : Every 1 hour
Period : 1988. 9. 21 0: 0 - 1988. 10. 4 0: 0 (2nd half)

Dir.	Vel. cm/sec	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Total
-	0	0.0										0
N	10	19	11	10	1	1	0	0	0	0	0	52
	3.3	6.3	3.6	3.3	0.3	0.3	-	-	-	-	-	17.1
NNE	7	3	0	1	0	0	0	0	0	0	0	11
	2.3	1.0	-	0.3	-	-	-	-	-	-	-	3.6
NE	4	1	0	0	0	0	0	0	0	0	0	5
	1.3	0.3	-	-	-	-	-	-	-	-	-	1.6
ENE	4	2	0	0	0	0	0	0	0	0	0	6
	1.3	0.7	-	-	-	-	-	-	-	-	-	2.0
E	7	0	0	0	0	0	0	0	0	0	0	7
	2.3	-	-	-	-	-	-	-	-	-	-	2.3
ESE	7	0	0	0	0	0	0	0	0	0	0	7
	2.3	-	-	-	-	-	-	-	-	-	-	2.3
SE	7	0	0	0	0	0	0	0	0	0	0	7
	2.3	-	-	-	-	-	-	-	-	-	-	2.3
SSE	16	8	8	4	0	0	0	0	0	0	0	36
	5.3	2.6	2.6	1.3	-	-	-	-	-	-	-	11.8
S	13	13	9	4	0	0	0	0	0	0	0	39
	4.3	4.3	3.0	1.3	-	-	-	-	-	-	-	12.8
SSW	9	9	0	0	0	0	0	0	0	0	0	18
	3.0	3.0	-	-	-	-	-	-	-	-	-	5.9
SW	9	0	0	0	0	0	0	0	0	0	0	9
	3.0	-	-	-	-	-	-	-	-	-	-	3.0
WSW	4	0	0	0	0	0	0	0	0	0	0	4
	1.3	-	-	-	-	-	-	-	-	-	-	1.3
W	4	0	0	0	0	0	0	0	0	0	0	4
	1.3	-	-	-	-	-	-	-	-	-	-	1.3
WNW	6	0	0	0	0	0	0	0	0	0	0	6
	2.0	-	-	-	-	-	-	-	-	-	-	2.0
NW	7	1	1	0	0	0	0	0	0	0	0	9
	2.3	0.3	0.3	-	-	-	-	-	-	-	-	3.0
NNW	20	19	12	13	14	5	1	0	0	0	0	84
	6.6	6.3	3.9	4.3	4.6	1.6	0.3	-	-	-	-	27.6
Total	134	75	41	32	15	6	1	0	0	0	0	304
	44.1	24.7	13.5	10.5	4.9	2.0	0.3	-	-	-	-	100.0

Short Data
Data Obtained 97.1%

Note: Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %

Table 3. 2. -2 (10) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1, 2nd Stage)

SL : 1
Layer : 0.5m (Depth: 9.1m)
Interval : Every 2 hours
Period : 1989.1.18 14: 0 - 1989.2.2 13:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	3.9	1.7	3.9	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5
NE	1.7	1.1	1.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
ENE	2.2	0.6	2.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
E	1.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
ESE	1.7	0.6	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
SE	2.2	0.6	2.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2
SSE	1.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
S	0.6	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
SSW	0.6	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
SW	1.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
WSW	1.7	1.1	1.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
W	3.9	3.9	3.9	3.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.8
WNW	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3
NW	7.2	6.6	7.2	6.6	6.6	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	22.7
NNW	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
Total	41.4	37.5	41.4	37.5	16.6	3.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0	181.0

Short Data
Data Obtained 100.0%

Note: Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %

Table 3. 2. -2 (11) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1.2nd Stage)

St. : 2
Layer : +0.5m (Depth:1.5m)
Interval : Every 1 hour
Period : 1989.1.18 14: 0 - 1989.2.2 10:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
-	-	0.0	0.0											0.0
N		0.6	8	2	3	1	0	0	0	0	0	0	0	20
NNE		1.7	2.2	0.6	0.8	0.3								5.6
NE		1.1	12	12	5	1	0	0	0	0	0	0	0	34
ENE		1.4	3.4	3.4	1.4	0.3								9.5
E		1.1	10	7	3	0	0	0	0	0	0	0	0	23
ESE		1.7	2.8	2.0	0.8									7.0
SE		1.7	1.1	0.6	1.1									4.5
SSE		1.1	10	5	0	0	0	0	0	0	0	0	0	19
S		1.4	2.2	1.4										5.0
SSW		1.1	1.7	2.8	0.6									6.2
SW		0.6	4.5	5.0	1.4	0.3								11.8
WSW		1.1	14	17	5	4	1	0	0	0	0	0	0	45
W		1.1	3.9	4.8	1.4	1.1	0.3							12.6
WNW		1.1	4.8	2.5	2.5	0.8	0.3							12.9
NW		0.6	1.7	1.7	0.3	1.4	2.0	0.3	0.6					9.0
NNW		0.8	1.4	0.3	0.3	0.3								3.1
Total		58	121	103	42	16	11	3	1	0	0	0	0	357
		16.2	33.9	28.9	11.8	4.5	3.1	1.1	0.6					100.0

Short Data
Data Obtained 100.0%

Note : Upper layer shows number of Obs. frequency and
Lower layer shows number of Obs. frequency in %

St. : 3
Layer : +0.5m (Depth:0.7m)
Interval : Every 1 hour
Period : 1989.1.18 14: 0 - 1989.2.2 13:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
-	-	0.0	0.0											0.0
N		0.6	2	5	5	3	0	0	0	0	0	0	0	15
NNE		1.1	8	6	7	0	0	0	0	0	0	0	0	22
NE		0.3	10	9	5	4	0	0	0	0	0	0	0	31
ENE		0.8	2.8	2.5	1.4	1.1								8.7
E		0.6	3.1	2.2	0.6	1.4	0.3							8.1
ESE		0.6	3.1	2.2	1.7	0.6								8.1
SE		1.1	3.6	2.2	0.6									7.6
SSE		1.4	2.0	3.1	1.4									7.8
S		1.4	5.9	3.9	2.2									13.4
SSW		1.1	2.0	3.4	1.7	0.3	0.3	0.3						9.0
SW		0.3	2.0	1.4	1.7	0.3								5.6
WSW		1.1	0.3	1.1	0.8	0.6								3.9
W		0.3	0.3	0.8	0.3	0.3								2.0
WNW		0.8	0.3	1.4	0.6	0.3	0.3							3.6
NW		1.1	0.8	0.6	1.4	0.6								4.5
NNW		1.1	4	4	1	4	0	0	0	0	0	0	0	14
Total		43	114	105	66	25	7.0	0.8	0.3	1	0	0	0	357
		12.0	31.9	29.4	18.5	7.0	0.3	0.3	0.3	0.3	0	0	0	100.0

Short Data
Data Obtained 99.2%

Table 3. 2. -2 (12) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1. 2nd Stage)

St. : 4
Layer : <0.5m (Depth:0.8m)
Interval : Every 1 hour
Period : 1989.1.18 14: 0 - 1989.2.2 13:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	4	17	4	0	0	0	0	0	0	0	0	0.0
NNE	1.1	4.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	7.1
NE	0.6	5.9	1.7	0.3	0	0	0	0	0	0	0	0	0	3.0
ENE	0.6	2.3	0.8	0	0	0	0	0	0	0	0	0	0	8.5
E	0.6	2.3	0.8	0	0	0	0	0	0	0	0	0	0	13
ESE	0.6	2.0	0.8	0	0	0	0	0	0	0	0	0	0	3.7
SE	0.6	0.6	0.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	12
SSE	0.6	0.6	0.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	3.4
S	0.6	0.6	0.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	11
SSW	0.6	0.6	0.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	3.1
SW	0.6	0.6	0.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	8
WSW	0.6	0.6	0.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.3
W	0.6	0.6	0.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.7
WNW	0.6	0.6	0.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6
NW	0.6	0.6	0.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.3
NNW	0.6	0.6	0.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5
Total	4.9	103	66	37	35	23	22	13	4	1	0	0	0	353
	13.9	29.2	18.7	10.5	9.9	6.5	6.2	3.7	1.1	0.3	-	-	-	100.0

Short Data
Data Obtained 98.1%

Note: Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %

St. : 7
Layer : <0.5m (Depth:0.5m)
Interval : Every 1 hour
Period : 1989.1.18 14: 0 - 1989.2.2 13:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	4	5	6	0	3	0	0	0	0	0	0	0.0
NNE	1.1	1.4	1.7	1.7	1.7	1.7	0.8	-	-	-	-	-	-	5.0
NE	1.4	2.2	1.1	1.1	1.1	1.1	1.1	-	-	-	-	-	-	25
ENE	2.8	2.5	3.1	1.7	1.7	1.7	1.4	-	-	-	-	-	-	6.9
E	1.1	2.5	0.6	1.7	1.7	1.7	1.7	-	-	-	-	-	-	4.1
ESE	0.6	1.7	1.9	1.7	1.7	1.7	1.7	-	-	-	-	-	-	11.4
SE	1.9	2.5	0.3	0.3	0.3	0.3	0.3	-	-	-	-	-	-	2.1
SSE	1.4	3.9	1.7	1.7	1.7	1.7	1.7	-	-	-	-	-	-	5.8
S	1.7	6.4	2.2	1.4	1.4	1.4	1.1	0.3	-	-	-	-	-	18
SSW	1.1	3.1	4.4	1.7	0.8	0.8	0.6	-	-	-	-	-	-	10.3
SW	0	1.1	6	2	2	2	2	0.6	1.7	0.8	0.6	-	-	4.7
WSW	1.4	1.1	1.1	0.3	0.3	0.3	0.6	-	-	-	-	-	-	13.1
W	0.6	0.3	0.3	0.3	0.3	0.3	0.6	-	-	-	-	-	-	4.2
WNW	0.3	0.3	0.3	0.3	0.3	0.3	0.6	-	-	-	-	-	-	11.7
NW	0.3	0.3	0.3	0.3	0.3	0.3	0.6	-	-	-	-	-	-	8.9
NNW	0.3	0.3	0.3	0.3	0.3	0.3	0.6	-	-	-	-	-	-	3.3
Total	63	137	86	36	23	10	6.4	2.8	0.8	0.6	-	-	-	360
	17.5	38.1	23.9	10.0	6.4	2.8	0.8	0.6	-	-	-	-	-	100.0

Short Data
Data Obtained 100.0%

Table 3. 2. -2 (13) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1, 2nd Stage)

St. : 8
Layer : 0.5m (Depth:0.8m)
Interval : Every 1 hour
Period : 1989.1.18 14: 0 - 1989.2.2 13:0 (all duration)

Vel. Dir.	0- cm/sec	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	1	0	0	0	0	0	0	0	0	0	0.0
NNE	0.6	0.3	-	-	-	-	-	-	-	-	-	1.0
NE	1.6	2.9	3	2	0	0	0	0	0	0	0	19
ENE	1.6	1.0	1.0	1.0	0	0	0	0	0	0	0	6.1
E	0.6	1.6	2.6	1.0	-	-	-	-	-	-	-	5.5
ESE	1.3	2.9	2.6	0.6	-	-	-	-	-	-	-	5.8
SE	1.9	5.5	0.3	0.3	-	-	-	-	-	-	-	25
SSE	1.6	4.2	1.0	-	-	-	-	-	-	-	-	8.0
S	1.3	1.3	1.3	0.3	-	-	-	-	-	-	-	4.2
SSW	1.6	6.8	4.5	0.3	-	-	-	-	-	-	-	13.5
SW	2.6	5.5	3.2	2.6	0.6	1.3	0.3	-	-	-	-	16.1
WSW	2.3	3.5	2.3	1.0	1.6	1.6	0.3	-	-	-	-	12.5
W	2.6	2.6	1.6	-	-	-	-	-	-	-	-	6.8
WNW	1.6	1.0	0.3	0.3	-	-	-	-	-	-	-	3.2
NW	0.6	0.6	-	-	-	-	-	-	-	-	-	1.3
NNW	0.6	-	-	-	-	-	-	-	-	-	-	0.6
Total	74	123	70	25	7	10	2	0	0	0	0	311
	23.8	39.5	22.5	8.0	2.3	3.2	0.6	-	-	-	-	100.0

Short Data 49
Data Obtained 86.4%

Note : Upper layer shows number of lbs. frequency and
Lower layer shows number of lbs. frequency in %

St. : 9
Layer : 0.5m (Depth:1.0m)
Interval : Every 1 hour
Period : 1989.1.18 14: 0 - 1989.2.2 13:0 (all duration)

Vel. Dir.	0- cm/sec	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	0.6	-	-	-	-	-	-	-	-	-	-	0.6
NE	0	1	0	0	0	0	0	0	0	0	0	1
ENE	0.3	0.3	-	-	-	-	-	-	-	-	-	0.6
E	0	2	2	0	0	0	0	0	0	0	0	4
ESE	0	2	0	0	0	0	0	0	0	0	0	2
SE	0	2	3	3	1	0	0	0	0	0	0	9
SSE	1.4	2.2	3.6	5.6	2.2	0.8	0.3	-	-	-	-	16.2
S	1	16	22	28	23	5	4	2	1	0	0	102
SSW	0.3	4.5	6.1	7.8	6.4	1.4	1.1	0.6	0.3	-	-	28.4
SW	0.6	3.9	5.8	6.1	1.7	2.2	1.7	0.3	-	-	-	22.6
WSW	0.6	4.7	0.3	-	0.3	-	-	-	-	-	-	5.8
W	0.8	1.7	-	-	-	-	-	-	-	-	-	2.5
WNW	0.6	1.4	0.3	-	-	-	-	-	-	-	-	2.2
NW	1.4	2.8	0.3	-	-	-	-	-	-	-	-	4.5
NNW	1.9	3.3	1.4	0.6	-	-	-	-	-	-	-	7.2
NW	0.8	1.1	1.1	1.7	0.3	-	-	-	-	-	-	5.0
Total	33	100	73	81	40	16	11	3	1	1	0	359
	9.2	27.9	20.3	22.6	11.1	4.5	3.1	0.8	0.3	0.3	-	100.0

Short Data 1
Data Obtained 99.7%

Table 3. 2. -2 (14) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1, 2nd Stage)

St. : I
Layer : 40.5m (Depth:0.1m)
Interval : Every 2 hours
Period : 1989.2.4 14:00 - 1989.2.19 13:00 (all duration)

Vel. Dir.	cm/sec 0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
-	0											0
N	0.0											0.0
NNE	12.0	3	1	0	0	0	0	0	0	0	0	4
NE	0	0	0	0	0	0	0	0	0	0	0	0
ENE	1	0	0	0	0	0	0	0	0	0	0	1
E	4.0	0	0	0	0	0	0	0	0	0	0	4.0
ESE	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0
WSW	1	0	0	0	0	0	0	0	0	0	0	1
W	4.0	0	0	0	0	0	0	0	0	0	0	4.0
WNW	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	1	1	0	0	0	0	0	0	0	0	2
NNW	2	5	3	0	0	0	0	0	0	0	0	10
Total	8.0	20.0	12.0	0	0	0	0	0	0	0	0	40.0
	2	5	0	0	0	0	0	0	0	0	0	7
	8.0	20.0	0	0	0	0	0	0	0	0	0	28.0
	9	12	4	0	0	0	0	0	0	0	0	25
	36.0	48.0	16.0	0	0	0	0	0	0	0	0	100.0

Short Data 156
Data Obtained 13.8%

Note : Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %

Table 3.2.-2 (15) Frequency Distributions of Current Direction and Velocity
(Survey Item: Current 1, 2nd Stage)

St. : 3
Layer : +0.5m (Depth: 0.7m)
Interval : Every 1 hour
Period : 1989.2.4 14: 0 - 1989.2.17 11:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	1	10	7	2	0	0	0	0	0	0	21
NNE	0.3	0.3	3	10	3.3	2.3	0.7	-	-	-	-	-	-	6.8
NE	1.0	2.3	3.9	3.3	0.7	0.3	-	-	-	-	-	-	-	11.4
ENE	0.3	3.6	2.9	2.6	0.3	-	-	-	-	-	-	-	-	9.8
E	1.3	2.3	4.6	0.3	-	-	-	-	-	-	-	-	-	8.5
ESE	1.0	3.6	2.6	1.6	-	-	-	-	-	-	-	-	-	8.8
SE	1.6	1.6	0.7	0.7	-	-	-	-	-	-	-	-	-	4.6
SSE	1.3	2.9	1.3	0.7	-	-	-	-	-	-	-	-	-	6.2
S	1.6	2.9	2.3	1.6	-	-	-	-	-	-	-	-	-	8.5
SSW	0.3	2.9	2.3	0.3	-	-	-	-	-	-	-	-	-	5.9
SW	1.0	2.3	2.3	0.7	-	-	-	-	-	-	-	-	-	6.2
WSW	0.3	2.6	1.6	0.7	-	-	-	-	-	-	-	-	-	5.2
W	0.7	1.0	0.7	-	-	-	-	-	-	-	-	-	-	2.3
WNW	0.3	1.0	1.0	-	-	-	-	-	-	-	-	-	-	2.3
NW	0.7	1.6	1.3	0.7	0.3	-	-	-	-	-	-	-	-	4.6
NNW	0.7	2.3	0.3	1.0	-	-	-	-	-	-	-	-	-	4.2
Total	38	103	102	55	8	1	0	0	0	0	0	0	0	307
	12.4	33.6	33.2	17.9	2.6	0.3	-	-	-	-	-	-	-	100.0

Short Data
Data Obtained 99.0%

Note: Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %

St. : 4
Layer : +0.5m (Depth: 0.8m)
Interval : Every 1 hour
Period : 1989.2.4 14: 0 - 1989.2.18 12:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	0	2	1	0	0	0	0	0	0	0	3
NNE	0.6	2	5	10	5	0	0	0	0	0	0	0	0	22
NE	0.9	3	19	19	4	0	0	0	0	0	0	0	0	43
ENE	1.8	6	13	11	1	1	0	0	0	0	0	0	0	32
E	0.6	2	12	1	2	2	1	0	0	0	0	0	0	20
ESE	0.6	2	10	2	3	1	0	0	0	0	0	0	0	18
SE	0.6	2	11	3	1	0	0	0	0	0	0	0	0	17
SSE	0.6	2	10	4	2	0	0	0	0	0	0	0	0	17
S	0.9	0	3	12	21	26	35	22	10	2	1	0	0	132
SSW	0.9	0	0	3	3.6	6.3	7.8	10.5	6.6	3.0	0.6	0.3	-	39.6
SW	0.9	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0.9	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0.9	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0.9	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0.9	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0.9	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	17	93	74	47	31	36	22	10	2	1	0	0	0	333
	5.1	27.9	22.2	14.1	9.3	10.8	6.6	3.0	0.6	0.3	-	-	-	100.0

Short Data
Data Obtained 99.4%

Table 3. 2. -2 (16) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1, 2nd Stage)

St. : 5
Layer : 0.5m (Depth:0.5m)
Interval : Every 1 hour
Period : 1989.2. 4 14: 0 - 1989.2.17 9:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Short Data
Data Obtained 100.0%

Note : Upper layer shows number of lbs, frequency and
Lower layer shows number of lbs, frequency in %

St. : 6
Layer : 0.5m (Depth:1.7m)
Interval : Every 1 hour
Period : 1989.2. 4 14: 0 - 1989.2.19 9:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Short Data
Data Obtained 100.0%

Table 3.2.-2 (17) Frequency Distributions of Current Direction and Velocity
(Survey Item: Current 1, 2nd Stage)

St. : 9
Layer : 40.5m (Depth: 1.0m)
Interval : Every 1 hour
Period : 1989.2.4 14:00 - 1989.2.17 10:00 (all duration)

Dir.	Vel.	cm/sec	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Total
N	6	0.0	6	3	4	1	0	0	0	0	0	0	0.0
NNE	1.9	1.9	1.9	1.0	1.3	0.3	-	-	-	-	-	-	6.5
NE	0	0.3	0.3	0	0	0	0	0	0	0	0	0	0.6
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0.3	0	0	0	0	0	0	0	0	0	0	0	0.3
ESE	0.6	0	0	0	0	0	0	0	0	0	0	0	0.6
SE	1.0	0.6	0	0	0	0	0	0	0	0	0	0	1.6
SSE	0.3	1.9	0.6	0	0	0	0	0	0	0	0	0	2.9
S	6	1.9	3.6	1.6	-	-	-	-	-	-	-	-	7.1
SSW	2.3	2.3	1.9	1.9	0.3	-	-	-	-	-	-	-	8.7
SW	8	11	12	21	5	1	0	0	0	0	0	0	58
WSW	2.6	3.6	3.9	6.8	1.6	0.3	-	-	-	-	-	-	18.8
W	7	14	1	0	0	0	0	0	0	0	0	0	22
WNW	2.3	4.5	0.3	-	-	-	-	-	-	-	-	-	7.1
NW	4	12	0	0	0	0	0	0	0	0	0	0	16
NNW	1.3	3.9	-	-	-	-	-	-	-	-	-	-	5.2
W	8	13	0	0	0	0	0	0	0	0	0	0	21
WNW	2.6	4.2	-	-	-	-	-	-	-	-	-	-	6.8
NW	5	8	1	0	0	0	0	0	0	0	0	0	14
NNW	1.6	2.6	0.3	-	-	-	-	-	-	-	-	-	4.5
NW	7	11	4	0	0	0	0	0	0	0	0	0	22
NNW	2.3	3.6	1.3	-	-	-	-	-	-	-	-	-	7.1
NNW	3	20	29	13	2	1	0	0	0	0	0	0	68
NNW	1.0	6.5	9.4	4.2	0.6	0.3	-	-	-	-	-	-	22.0
Total	68	122	64	44	9	2	0	0	0	0	0	0	309
	22.0	39.5	20.7	14.2	2.9	0.6	-	-	-	-	-	-	100.0

Short Data
Data Obtained 100.0%

Note : Upper layer shows number of Obs. frequency and
Lower layer shows number of Obs. frequency in %

St. : 10
Layer : 40.5m (Depth: 2.5m)
Interval : Every 1 hour
Period : 1989.2.4 14:00 - 1989.2.19 9:00 (all duration)

Dir.	Vel.	cm/sec	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Total
N	4	0.0	25	18	10	2	0	0	0	0	0	0	55
NNE	1.1	7.0	5.1	2.8	0.6	-	-	-	-	-	-	-	16.6
NE	7	14	7	7	0	0	0	0	0	0	0	0	35
ENE	2.0	3.9	2.0	2.0	-	-	-	-	-	-	-	-	9.8
E	15	10	1	0	0	0	0	0	0	0	0	0	26
ESE	4.2	2.8	0.3	-	-	-	-	-	-	-	-	-	7.3
SE	14	7	3	0	0	0	0	0	0	0	0	0	24
SSE	3.9	2.0	0.8	-	-	-	-	-	-	-	-	-	6.7
S	5	9	4	0	0	0	0	0	0	0	0	0	18
SSW	1.4	2.5	1.1	-	-	-	-	-	-	-	-	-	5.1
SW	2.2	2.0	-	0	0	0	0	0	0	0	0	0	4.2
WSW	6	3	1	0	0	0	0	0	0	0	0	0	10
W	1.7	0.8	0.3	-	-	-	-	-	-	-	-	-	2.8
WNW	2.2	0.6	-	-	-	-	-	-	-	-	-	-	2.8
NW	8	3	3	0	0	0	0	0	0	0	0	0	14
NNW	2.2	0.8	0.8	-	-	-	-	-	-	-	-	-	3.9
NW	9	6	5	13	14	19	12	4	1	0	0	0	83
NNW	2.5	1.7	1.4	3.7	3.9	5.3	3.4	1.1	0.3	-	-	-	23.3
NNW	0.6	1.4	0.6	0.3	-	-	-	-	-	-	-	-	2.8
NNW	5	2	0	0	0	0	0	0	0	0	0	0	7
NNW	1.4	0.6	-	-	-	-	-	-	-	-	-	-	2.0
NNW	4	1	0	0	0	0	0	0	0	0	0	0	5
NNW	1.1	0.5	-	-	-	-	-	-	-	-	-	-	1.6
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	3	1	0	0	0	0	0	0	0	0	0	0	4
NNW	0.8	0.3	-	-	-	-	-	-	-	-	-	-	1.1
NNW	9	5	7	8	1	4	2	0	0	0	0	0	36
NNW	2.5	1.4	2.0	2.2	0.3	1.1	0.6	-	-	-	-	-	10.1
Total	107	100	51	39	17	23	14	4	1	0	0	0	356
	30.1	28.1	14.3	11.0	4.8	6.5	3.9	1.1	0.3	-	-	-	100.0

Short Data
Data Obtained 100.0%

Table 3. 2. -2 (18) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1, 2nd Stage)

St. : 11
Layer : 0.5m (Depth: f. 2a)
Interval : Every 1 hour
Period : 1989.2.4 14: 0 - 1989.2.19 10:0 (all duration)

Dir.	Vel. cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
-	0	0											0
N	0.0	3	12	8	8	6	1	0	0	0	0	0	38
	0.8	3.4	2.2	2.2	1.7	0.3	-	-	-	-	-	-	10.6
NNE	2	2	2	0	0	0	0	0	0	0	0	0	6
	0.6	0.6	0.6	-	-	-	-	-	-	-	-	-	1.7
NE	3	1	0	0	0	0	0	0	0	0	0	0	4
	0.8	0.3	-	-	-	-	-	-	-	-	-	-	1.1
ENE	2	0	0	0	0	0	0	0	0	0	0	0	2
	0.6	-	-	-	-	-	-	-	-	-	-	-	0.6
E	4	0	0	0	0	0	0	0	0	0	0	0	4
	1.1	-	-	-	-	-	-	-	-	-	-	-	1.1
ESE	2	4	0	0	0	0	0	0	0	0	0	0	6
	0.6	1.1	-	-	-	-	-	-	-	-	-	-	1.7
SE	4	7	2	1	0	0	0	0	0	0	0	0	14
	1.1	2.0	0.6	0.3	-	-	-	-	-	-	-	-	3.9
SSE	3	13	13	9	1	0	0	0	0	0	0	0	39
	0.8	3.6	3.6	2.5	0.3	-	-	-	-	-	-	-	10.9
S	12	17	15	12	3	0	0	0	0	0	0	0	59
	3.4	4.8	4.2	3.4	0.8	-	-	-	-	-	-	-	16.5
SSW	10	26	4	0	0	0	0	0	0	0	0	0	40
	2.8	7.3	1.1	-	-	-	-	-	-	-	-	-	11.2
SW	9	10	1	0	0	0	0	0	0	0	0	0	20
	2.5	2.8	0.3	-	-	-	-	-	-	-	-	-	5.6
WSW	6	11	0	0	0	0	0	0	0	0	0	0	17
	1.7	3.1	-	-	-	-	-	-	-	-	-	-	4.8
W	10	4	0	0	0	0	0	0	0	0	0	0	14
	2.8	1.1	-	-	-	-	-	-	-	-	-	-	3.9
WNW	4	7	0	0	0	0	0	0	0	0	0	0	11
	1.1	2.0	-	-	-	-	-	-	-	-	-	-	3.1
NW	11	11	1	0	0	0	0	0	0	0	0	0	23
	3.1	3.1	0.3	-	-	-	-	-	-	-	-	-	6.4
NNW	4	19	17	11	8	1	0	0	0	0	0	0	60
	1.1	5.3	4.8	3.1	2.2	0.3	-	-	-	-	-	-	16.8
Total	89	144	63	41	18	2	0	0	0	0	0	0	357
	24.9	40.3	17.6	11.5	5.0	0.6	-	-	-	-	-	-	100.0

Short Data 0
Data Obtained 100.0%

Note: Upper layer shows number of Obs. frequency and
Lower layer shows number of Obs. frequency in %

Table 3.2.-2 (19) Frequency Distributions of Current Direction and Velocity
(Survey Item: Current 1, 2nd Stage)

St. : 3
Layer : +0.5m (Depth: 0.7m)
Interval : Every 1 hour
Period : 1989.1.19 0:0 - 1989.2.17 10:0 (all duration)

Bir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.4	0.9	2.1	1.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6
NE	0.6	2.1	2.4	2.4	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3
ENE	0.6	3.0	2.3	1.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6
E	0.9	2.9	3.3	0.6	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6
ESE	0.7	3.1	2.6	1.6	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7
SE	1.3	2.4	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3
SSE	1.3	3.0	2.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6
S	1.3	4.0	3.3	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
SSW	0.7	2.3	3.0	1.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4
SW	0.6	2.1	2.0	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
WSW	0.7	1.3	1.4	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
W	0.4	0.7	0.7	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
WNW	0.6	0.9	1.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
NW	0.9	1.3	1.1	1.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7
NNW	0.3	1.7	0.7	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9
Total	7.9	22.7	22.0	12.7	4.2	5.1	0.7	0.1	0.0	0.0	0.0	0.0	0.0	70.1
	11.3	32.4	31.4	18.1	6.0	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Short Data
Data Obtained 99.2%

Note: Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %

St. : 4
Layer : +0.5m (Depth: 0.8m)
Interval : Every 1 hour
Period : 1989.1.19 0:0 - 1989.2.17 23:0 (all duration)

Bir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.4	0.6	2.4	1.0	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6
NE	0.4	0.4	3.5	2.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
ENE	0.7	0.7	3.9	3.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6
E	1.1	1.1	2.7	2.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0
ESE	0.4	0.4	2.0	0.3	0.8	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	4.6
SE	0.6	0.6	1.7	1.0	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1
SSE	0.3	0.3	1.8	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
S	0.1	0.1	3.5	2.0	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
SSW	0.3	0.3	1.0	4.1	4.5	5.8	6.5	4.6	2.5	0.7	0.3	0.0	0.0	30.2
SW	1.0	1.0	1.3	3.0	3.4	2.8	1.4	1.4	0.8	0.1	0.0	0.0	0.0	15.2
WSW	0.6	0.6	2.0	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
W	0.7	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
WNW	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
NW	0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
NNW	1.0	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Total	7.0	19.8	14.6	9.2	7.3	10.3	8.0	6.0	3.4	0.8	0.3	0.0	0.0	71.1
	9.8	27.8	20.5	12.9	10.3	12.9	10.3	8.0	6.0	3.4	0.8	0.3	0.0	100.0

Short Data
Data Obtained 98.7%

Table 3. 2. -2 (20) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1. 2nd Stage)

St. : 9
Layer : (0.5m (Depth:1.0m)
Interval : Every 1 hour
Period : 1989.1.19 0: 0 - 1989.2.17 10:0 (all duration)

Vel. Dir.	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	107	225	152	136	51	18	11	3	1	1	705

Short Data 2
Data Obtained 99.7%

Note: Upper layer shows number of Obs. frequency and
Lower layer shows number of Obs. frequency in %

Table 3. 2. -2 (21) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1. 3rd Stage)

St. : 1
Layer : 40.5m (Depth: 0. 1m)
Interval : Every 2 hours
Period : 1989. 4. 12 0: 0 - 1989. 4. 27 0:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	1.1	2.8	5	0	0	0	0	0	0	0	0	0	0	3.9
NE	2.2	2.2	4	0	0	0	0	0	0	0	0	0	0	4.4
ENE	3.9	0.6	7	0	0	0	0	0	0	0	0	0	0	4.4
E	2.8	2.8	5	0	0	0	0	0	0	0	0	0	0	5.5
ESE	2.2	2.2	4	0	0	0	0	0	0	0	0	0	0	4.4
SE	3.9	2.8	7	0	0	0	0	0	0	0	0	0	0	6.6
SSE	7.2	3.3	13	0.6	1	0	0	0	0	0	0	0	0	11.0
S	10.5	2.2	19	0	0	0	0	0	0	0	0	0	0	12.7
SSW	3.9	1.1	7	0	0	0	0	0	0	0	0	0	0	5.0
SW	5.5	0	10	0	0	0	0	0	0	0	0	0	0	5.5
WSW	2.8	0	5	0	0	0	0	0	0	0	0	0	0	2.8
W	6.6	0.6	12	0	0	0	0	0	0	0	0	0	0	7.2
WNW	4.4	0.6	8	0	0	0	0	0	0	0	0	0	0	5.0
NW	3.9	3.3	7	0	0	0	0	0	0	0	0	0	0	7.2
NNW	5.0	5.0	9	0	0	0	0	0	0	0	0	0	0	9.9
Total	122	57	122	57	2	0	0	0	0	0	0	0	0	181
	67.4	31.5			1.1									100.0

Short Data
Data Obtained 100.0%

Note: Upper layer shows number of this, frequency and
Lower layer shows number of this, frequency in %

St. : 4
Layer : 10.5m (Depth: 0. 8m)
Interval : Every 1 hour
Period : 1989. 4. 12 0: 0 - 1989. 4. 27 0:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	0.8	4.4	16	11	3.1	0	0	0	0	0	0	0	0	30
NE	1.4	3.3	12	4	1.1	0	0	0	0	0	0	0	0	21
ENE	1.1	1.4	5	2	0.6	0	0	0	0	0	0	0	0	5.8
E	0.6	0.8	3	0	0	0	0	0	0	0	0	0	0	3.1
ESE	0.3	1.4	5	0	0	0	0	0	0	0	0	0	0	1.4
SE	1.1	0.8	3	1	0.3	0	0	0	0	0	0	0	0	1.7
SSE	0	1.9	7	1	0.3	0	0	0	0	0	0	0	0	2.2
S	1.9	1.4	5	5	2.5	9	0	0	0	0	0	0	0	26
SSW	0.6	3.9	14	25	40	34	37	24	6.7	0.6	0	0	0	178
SW	0.8	2.8	10	6	2	7	9	2	0.6	0.6	0	0	0	41
WSW	1.7	0.8	3	0	0	0	0	0	0	0	0	0	0	11.4
W	1.9	0	0	0	0	0	0	0	0	0	0	0	0	2.5
WNW	0.6	0	0	0	0	0	0	0	0	0	0	0	0	1.9
NW	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0.6
NNW	0.3	0.6	1	2	3	1	0	0	0	0	0	0	0	1
Total	13.3	48	85	58	52	41	46	26	7.2	1.1	0	0	0	360
														100.0

Short Data
Data Obtained 99.7%

Table 3. 2. -2 (22) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1, 3rd Stage)

St. : 5
Layer : 0.5m (Depth:0.8m)
Interval : Every 1 hour
Period : 1989.4.12 0:0 - 1989.4.27 0:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.3	0.3	0.3	2.4	2.1	1.8	1.5	0.3	0.0	0.0	0.0	0.0	0.0	8.4
NE	1.8	2.1	2.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
ENE	0.3	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
E	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
ESE	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.3	1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
S	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
SSW	0.9	2.1	3.6	1.2	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7
SW	1.5	2.4	9.9	14.9	17.6	9.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	56.4
WSW	1.5	1.8	1.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
W	0.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
WNW	0.6	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.6	0.6	0.6	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Total	11.6	14.3	21.5	19.1	23.0	9.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	335

Short Data : 26
Data Obtained : 92.8%

Note : Upper layer shows number of this frequency and
Lower layer shows number of this frequency in %

St. : 7
Layer : 0.5m (Depth:0.5m)
Interval : Every 1 hour
Period : 1989.4.12 0:0 - 1989.4.27 0:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	3.2	2.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	8.6
NE	1.0	1.2	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
ENE	2.9	3.4	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9
E	9.5	5.4	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
ESE	2.6	1.4	1.1	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7
SE	7.7	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
SSE	2.0	3.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7
S	6.9	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0
SSW	1.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3
SW	6.1	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0
WSW	1.7	2.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2
W	6.1	16.6	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0
WNW	1.7	4.6	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6
NW	9.9	17.1	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0
NNW	2.6	4.9	4.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1
Total	9.9	18.1	15.6	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.0

Short Data : 1
Data Obtained : 99.7%

Table 3. 2. -2 (23) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1. 3rd Stage)

St. : 8
Layer : 0.5m (Depth:0.5m)
Interval : Every 1 hour
Period : 1989. 4. 12 0: 0 - 1989. 4. 27 0: 0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	1.1	1.8	5	1.8	0	0	0	0	0	0	0	0	0	2.8
NE	1.8	1.8	5	1.8	1.8	0.4	0	0	0	0	0	0	0	5.6
ENE	1.1	6.3	18	4	3	4	0	0	0	0	0	0	0	32
E	0.4	3.2	9	7	3	0	0	0	0	0	0	0	0	20
ESE	1.1	1.8	5	2	2.5	1.1	0	0	0	0	0	0	0	10
SE	0.7	2.1	2	1	0	0	0	0	0	0	0	0	0	3.5
SSE	1.8	0.7	0.4	0	0	0	0	0	0	0	0	0	0	2.8
S	0.4	1.8	0	0	0	0	0	0	0	0	0	0	0	2.1
SSW	0.7	2.1	2.8	0.4	0	0	0	0	0	0	0	0	0	6.0
SW	1.1	2.1	0.7	1.8	0.7	0	0	0	0	0	0	0	0	18
WSW	1.4	4.2	4.9	2.5	2.1	0	0	0	0	0	0	0	0	43
W	2.5	3.5	7.4	7.4	2.8	0	0	0	0	0	0	0	0	25.4
WNW	1.1	1.4	1.1	0	0	0	0	0	0	0	0	0	0	3.5
NW	2.1	1.8	0	0	0	0	0	0	0	0	0	0	0	3.9
NNW	0.7	0.4	0	0	0	0	0	0	0	0	0	0	0	1.1
Total	17.6	35.6	50	101	67	41	20	3	2	0	0	0	0	284
														100.0

Short Data
Data Obtained 99.3%

Note: Upper layer shows number of Obs, frequency and
Lower layer shows number of Obs, frequency in %

St. : 9
Layer : 0.5m (Depth:1.0m)
Interval : Every 1 hour
Period : 1989. 4. 12 0: 0 - 1989. 4. 27 0: 0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.3	1.9	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	3.9
NE	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	6.6
ENE	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	6.6
E	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.3
ESE	1.0	1.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.3
SE	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	6.6
SSE	0.6	1.3	1.0	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.9
S	0.6	2.6	4.9	5.5	1.9	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	15.9
SSW	2.6	3.9	5.5	2.6	1.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	16.2
SW	1.3	4.9	2.9	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	9.4
WSW	2.3	3.2	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	6.5
W	1.0	3.2	1.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	5.2
WNW	1.3	2.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.9
NW	0.6	5.8	5.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	11.7
NNW	0.6	5.8	5.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	11.7
Total	12.6	34.0	32.7	14.2	5.2	1.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	309
														100.0

Short Data
Data Obtained 85.0%

Table 3.2.-2 (24) Frequency Distributions of Current Direction and Velocity
(Survey Item: Current 1, 3rd Stage)

SL : 2
Layer : +0.5m (Depth: 1.0m)
Interval : Every 1 hour
Period : 1989.4.28 0:0 - 1989.5.13 0:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	1	0	1	0	0	0	0	0	0	0	0.0
NNE	0.0	0.0	0	0.5	0	0.5	0	0	0	0	0	0	0	1.1
NE	0.0	0.0	0	0.5	2.1	5.3	2.6	0	0	0	0	0	0	10.5
ENE	0.0	0.0	0	2.6	4.2	2.6	0	0	0	0	0	0	0	9.5
E	0.0	0.0	0	1.6	10.5	0	0	0	0	0	0	0	0	12.1
ESE	0.0	0.0	0	1.1	13.7	0	0	0	0	0	0	0	0	14.7
SE	0.0	0.0	0	2.6	6.8	1.1	0	0	0	0	0	0	0	10.5
SSE	0.0	0.0	0	0.5	5.3	5.3	0	0	0	0	0	0	0	11.1
S	0.0	0.0	0	0.5	4.2	3.7	1.1	0	0	0	0	0	0	9.5
SSW	0.0	0.0	0	0.5	1.6	1.1	0	0	0	0	0	0	0	3.2
SW	0.0	0.0	0	0	0.5	1.1	1.1	3	0	0	0	0	0	15
WSW	0.0	0.0	0	0	1.6	2.1	1.6	0	0	0	0	0	0	7.9
W	0.0	0.0	0	0.5	0.5	0	0	0	0	0	0	0	0	5.3
WNW	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	1.1
NW	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
Total	13	92	39	26	17	8.9	1.6	0	0	0	0	0	0	190
	6.8	48.4	20.5	13.7	8.9	1.6	0	0	0	0	0	0	0	100.0

Short Data
Data Obtained 13
91.6%

SL : 1
Layer : +0.5m (Depth: 0.1m)
Interval : Every 2 hours
Period : 1989.4.28 0:0 - 1989.5.13 0:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	1.7	1.7	0	0	0	0	0	0	0	0	0	0	0	1.7
NE	1.7	1.7	0	0	0	0	0	0	0	0	0	0	0	1.7
ENE	2.2	2.2	0	0	0	0	0	0	0	0	0	0	0	2.2
E	3.3	3.3	0	0	0	0	0	0	0	0	0	0	0	3.3
ESE	1.7	1.7	0	0	0	0	0	0	0	0	0	0	0	1.7
SE	1.7	1.7	0	0	0	0	0	0	0	0	0	0	0	1.7
SSE	4.4	4.4	0	0	0	0	0	0	0	0	0	0	0	4.4
S	11.6	11.6	0	0	0	0	0	0	0	0	0	0	0	11.6
SSW	5.5	5.5	0	0	0	0	0	0	0	0	0	0	0	5.5
SW	3.3	3.3	0	0	0	0	0	0	0	0	0	0	0	3.3
WSW	2.2	2.2	0	0	0	0	0	0	0	0	0	0	0	2.2
W	1.7	1.7	0	0	0	0	0	0	0	0	0	0	0	1.7
WNW	1.7	1.7	0	0	0	0	0	0	0	0	0	0	0	1.7
NW	5.5	5.5	0	0	0	0	0	0	0	0	0	0	0	5.5
NNW	8.3	8.3	0	0	0	0	0	0	0	0	0	0	0	8.3
Total	111	111	0	0	0	0	0	0	0	0	0	0	0	111
	61.3	61.3	0	0	0	0	0	0	0	0	0	0	0	100.0

Short Data
Data Obtained 0
100.0%

Note: Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %.

Table 3. 2. -2 (25) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1, 3rd Stage)

St. : 3
Layer : 0.5m (Depth:0.7m)
Interval : Every 1 hour
Period : 1989.4.21 10: 0 - 1989.5. 3 7:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	7	7	2	0	0	0	0	0	0	0	0.0
NNE	0.4	0.4	2.5	2.5	0.7	6	2	0	0	0	0	0	0	6.0
NE	1.1	1.1	2.1	5.3	2.1	0.7	2	0	0	0	0	0	0	11.3
ENE	1.1	1.1	3.2	1.8	0.7	0.4	1	0	0	0	0	0	0	7.1
E	0.4	0.4	1.8	0.7	0.4	0	0	0	0	0	0	0	0	3.2
ESE	1.4	1.4	3.2	0.7	0	0	0	0	0	0	0	0	0	5.3
SE	1.4	1.4	2.5	1.4	0.7	0.4	2	1	0	0	0	0	0	6.4
SSE	1.4	1.4	3.5	3.9	1.8	1.1	5	0	0	0	0	0	0	11.7
S	1.1	1.1	2.1	3.5	2.1	3.2	0.7	2	0	0	0	0	0	12.8
SSW	0.4	0.4	2.1	2.5	1.8	2.5	0.4	1	0	0	0	0	0	9.6
SW	0.4	0.4	1.4	1.8	0.7	0.4	1	0	0	0	0	0	0	4.6
WSW	0.4	0.4	1.1	2.5	0.7	2	0	0	0	0	0	0	0	4.6
W	0.4	0.4	1.1	0.4	0.4	1	0	0	0	0	0	0	0	2.1
WNW	0.7	0.7	0.4	2.1	0.4	1	0	0	0	0	0	0	0	3.5
NW	0.4	0.4	1.1	1.4	0	0	0	0	0	0	0	0	0	2.8
NNW	1.1	1.1	2.5	0.4	0	0	0	0	0	0	0	0	0	3.9
Total	38	38	89	91	37	24	8.5	1.1	0	0	0	0	0	282
	13.5	13.5	31.6	32.3	13.1	8.5	1.1	0	0	0	0	0	0	100.0

Short Data
Data Obtained 98.6%

Note: Upper layer shows number of this frequency and
Lower layer shows number of this frequency in %

St. : 4
Layer : 0.5m (Depth:0.8m)
Interval : Every 1 hour
Period : 1989.4.28 0: 0 - 1989.5.13 0:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	4	10	1	0	0	0	0	0	0	0	0.0
NNE	0.3	0.3	1.3	3.1	0.3	0	0	0	0	0	0	0	0	5.0
NE	1.3	1.3	4.1	4.7	1.3	4	0	0	0	0	0	0	0	11.3
ENE	0.9	0.9	2.8	0.3	0.6	0	0	0	0	0	0	0	0	4.7
E	1.3	1.3	1.6	1.9	0	0	0	0	0	0	0	0	0	4.7
ESE	0.6	0.6	1.9	0.3	0.3	1	0	0	0	0	0	0	0	3.1
SE	0	0	0.6	0.6	0	0	0	0	0	0	0	0	0	1.3
SSE	0.6	0.6	2.2	2.5	0.3	2	0	0	0	0	0	0	0	2.5
S	0.6	0.6	2.2	2.5	0.3	1.3	1.9	6	0	0	0	0	0	8.8
SSW	0.6	0.6	1.9	3.8	6.3	6.9	8.8	13	1	0	0	0	0	32.6
SW	0.3	0.3	1.3	2.8	0.6	2	16	14	4	10	4	0	0	74
WSW	1.6	1.6	5	0	0	0	5.0	4.4	4.4	3.1	1.3	0	0	23.2
W	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6
WNW	0.3	0.3	0	0	0	0	0	0	0	0	0	0	0	0.3
NW	0.6	0.6	2	0	0	0	0	0	0	0	0	0	0	0.6
NNW	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0.3
Total	27	27	59	68	33	42	48	27	11	4	1.3	0	0	319
	8.5	8.5	18.5	21.3	10.3	13.2	15.0	8.5	3.4	1.3	0	0	0	100.0

Short Data
Data Obtained 99.1%

Table 3.2.-2 (26) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1.3rd Stage)

St. : 5
Layer : 0.5m (Depth:0.8m)
Interval : Every 1 hour
Period : 1989.4.28 0:0 - 1989.5.13 0:0 (all duration)

Vel. Dir.	cm/sec 0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	4	8	6	5	4	1	0	0	0	0	0.0
NNE	1.6	3.2	2.4	2.0	1.6	0.4	-	-	-	-	-	11.1
NE	0.8	1.6	3.2	2.4	0.8	0.4	-	-	-	-	-	9.1
ENE	0.8	0	0.4	0	0	0	0	0	0	0	0	1.2
E	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0
SE	0.8	1	0	0	0	0	0	0	0	0	0	0.8
SSE	0.4	0	0	0	0	0	0	0	0	0	0	0.4
S	2.0	5	0	0	0	0	0	0	0	0	0	2.0
SSW	4	11	24	27	22	18	10	1	0	0	0	117
SW	1.6	4.4	9.5	10.7	8.7	7.1	4.0	0.4	-	-	-	46.4
WSW	0.4	3.2	1.2	1.2	2.4	3.2	0.8	-	-	-	-	12.3
W	1	3	1	0	0	0	0	0	0	0	0	5
WNW	0.4	1.2	0.4	-	-	-	-	-	-	-	-	2.0
NW	0	4	0	0	0	0	0	0	0	0	0	4
NNW	0	1.6	1.2	0.4	0.4	1	0	0	0	0	0	4.4
Total	26	48	56	45	36	28	12	1	0	0	0	252
	10.3	19.0	22.2	17.9	14.3	11.1	4.8	0.4	-	-	-	100.0

Short Data
Data Obtained 71
78.0%

Note: Upper layer shows number of Obs. frequency and
Lower layer shows number of Obs. frequency in %

St. : 6
Layer : 0.5m (Depth:1.7m)
Interval : Every 1 hour
Period : 1989.4.28 0:0 - 1989.5.13 0:0 (all duration)

Vel. Dir.	cm/sec 0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	7	22	24	18	3	0	0	0	0	0	0.0
NNE	2.0	6.3	6.9	5.2	0.9	-	-	-	-	-	-	21.3
NE	3.2	1.1	0	0	0	0	0	0	0	0	0	4.3
ENE	0.9	0	0	0	0	0	0	0	0	0	0	0.9
E	1.4	0	0	0	0	0	0	0	0	0	0	1.4
ESE	2.6	0	0	0	0	0	0	0	0	0	0	2.6
SE	2.0	7	0	0	0	0	0	0	0	0	0	2.0
SSE	3.4	0.9	0.3	1	0	0	0	0	0	0	0	4.6
S	10	32	22	20	12	6	0	1	0	0	0	103
SSW	2.9	9.2	6.3	5.7	3.4	1.7	-	0.3	-	-	-	29.6
SW	6	27	10	9	5	1	0	0	0	0	0	58
WSW	1.7	7.8	2.9	2.6	1.4	0.3	-	-	-	-	-	16.7
W	0.6	1.7	1.7	0.3	-	-	-	-	-	-	-	4.3
WNW	1.1	0.6	0.3	-	-	-	-	-	-	-	-	2.0
NW	0.9	0.3	-	-	-	-	-	-	-	-	-	1.1
NNW	0.3	0.3	0.3	-	-	-	-	-	-	-	-	0.9
Total	25.3	88	111	72	49	20	7	1	0	0	0	348
	10.3	31.9	20.7	14.3	5.7	2.0	-	0.3	-	-	-	100.0

Short Data
Data Obtained 8
100.0%

Table 3. 2. -2 (27) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1.3rd Stage)

St. : 9
Layer : 10.5m (Depth:1.0m)
Interval : Every 1 hour
Period : 1989.4.28 0:0 - 1989.5.13 0:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	2.1	2.1	2.0	11	1	0	0	0	0	0	0	0	0	4.8
NE	12	3.0	0	0	0	0	0	0	0	0	0	0	0	14.1
ENE	3.5	0.9	0	0	0	0	0	0	0	0	0	0	0	1.5
E	11	1	0	0	0	0	0	0	0	0	0	0	0	4.4
ESE	3.2	0.3	0	0	0	0	0	0	0	0	0	0	0	1.3
SE	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0	3.5
SSE	2	0	0	0	0	0	0	0	0	0	0	0	0	0.6
S	4	0	0	0	0	0	0	0	0	0	0	0	0	4
SSW	1.2	0	0	0	0	0	0	0	0	0	0	0	0	1.2
SW	2	0.6	0.3	0	0	0	0	0	0	0	0	0	0	3
WSW	0.6	0.3	0	0	0	0	0	0	0	0	0	0	0	0.9
W	0.6	0.6	0.3	0	0	0	0	0	0	0	0	0	0	2.6
WNW	1.2	1.8	0.9	0	0	0	0	0	0	0	0	0	0	7.6
NW	0.6	1.8	0.9	0.3	0	0	0	0	0	0	0	0	0	3.5
NNW	1	0.6	2.1	0.3	0	0	0	0	0	0	0	0	0	4.4
Total	58	117	87	57	19	3	0	0	0	0	0	0	0	341
	17.0	34.3	25.5	16.7	5.6	0.9	-	-	-	-	-	-	-	100.0

Short Data
Data Obtained 98.3%

Note: Upper layer shows number of Obs. frequency and
Lower layer shows number of Obs. frequency in %

St. : 10
Layer : 10.5m (Depth:2.5m)
Interval : Every 1 hour
Period : 1989.4.28 0:0 - 1989.5.13 0:0 (all duration)

Dir.	Vel.	cm/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	1.5	2.6	5	11	4	5	0	0	0	0	0	0	0	28
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	14.4
ENE	0.5	1	0	0	0	0	0	0	0	0	0	0	0	0.5
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0
SE	0.5	1	0	0	0	0	0	0	0	0	0	0	0	0.5
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5
S	0	2	0	0	0	1	1	2	0	0	0	0	0	6
SSW	0	5	3	7	8	7	8	7	6	4	0	0	0	40
SW	0.5	3.1	4.1	1.5	1.0	2	0	0	0	0	0	0	0	20.5
WSW	3	5	4	1	0	0	0	0	0	0	0	0	0	13
W	1.5	2.6	2.1	0.5	0	0	0	0	0	0	0	0	0	6.7
WNW	1.0	4.1	0	0.5	0	0	0	0	0	0	0	0	0	5.6
NW	1.5	0.5	1.0	0	0	0	0	0	0	0	0	0	0	3.1
NNW	1.0	2.1	1.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	13
Total	17	44	44	39	21	17	21	17	9	4	0	0	0	195
	8.7	22.6	22.6	20.0	10.8	8.7	10.8	8.7	4.6	2.1	-	-	-	100.0

Short Data
Data Obtained 96.1%

Table 3.2.-2 (28) Frequency Distributions of Current Direction and Velocity
(Survey Item: Current 1, 3rd Stage)

St. : 11
Layer : 10.5m (Depth: 1.2m)
Interval : Every 1 hour
Period : 1989.4.28 0:0 - 1989.5.13 0:0 (all duration)

Dir.	Rel.	ca/sec	0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
-	-	0.0	0											0.0
N		7	24	28	18	3	0	0	0	0	0	0	0	80
		2.1	7.2	8.4	5.4	0.9								24.1
NNE		4	4	2	0	0	0	0	0	0	0	0	0	10
		1.2	1.2	0.6										3.0
NE		3	2	0	0	0	0	0	0	0	0	0	0	5
		0.9	0.6											1.5
ENE		2	5	1	0	0	0	0	0	0	0	0	0	8
		0.6	1.5	0.3										2.4
E		1	1	0	0	0	0	0	0	0	0	0	0	2
		0.3	0.3											0.6
ESE		2	1	0	0	0	0	0	0	0	0	0	0	3
		0.6	0.3											0.9
SE		1	8	7	1	1	0	0	0	0	0	0	0	18
		0.3	2.4	2.1	0.3	0.3								5.4
SSE		0	12	21	14	3	1	0	0	0	0	0	0	51
		-	3.6	6.3	4.2	0.9	0.3							15.4
S		4	17	24	16	2	0	0	0	0	0	0	0	63
		1.2	5.1	7.2	4.6	0.6								19.0
SSW		2	12	6	1	0	0	0	0	0	0	0	0	25
		1.2	4.2	1.6	0.3									7.5
SW		3	5	1	0	0	0	0	0	0	0	0	0	9
		0.9	1.5	0.3										2.7
WSW		1	2	0	0	0	0	0	0	0	0	0	0	3
		0.3	0.6											0.9
W		2	2	0	0	0	0	0	0	0	0	0	0	4
		0.6	0.6											1.2
WNW		2	3	0	0	0	0	0	0	0	0	0	0	5
		0.6	0.9											1.5
NW		4	4	2	0	0	0	0	0	0	0	0	0	10
		1.2	1.2	0.6										3.0
NNW		6	12	11	7	0	0	0	0	0	0	0	0	36
		1.8	3.6	3.3	2.1									10.8
Total		46	116	103	57	9	1	0	0	0	0	0	0	332
		13.9	34.9	31.0	17.2	2.7	0.3							100.0

Short Data 17
Data Obtained 95.1%

Note: Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %

Table 3. 2. -2 (29) Frequency Distributions of Current Direction and Velocity
(Survey Item:Current 1, 3rd Stage)

St. : 1
Layer : +0.5m (Depth: 9.1m)
Interval : Every 2 hours
Period : 1989. 4. 12 0: 0 - 1989. 5. 12 0: 0 (all duration)

Dir.	Vel.	cm/sec 0~	10~	20~	30~	40~	50~	60~	70~	80~	90~	100~	Total
N	-	0.0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	-	1.4	1.4	5	0	0	0	0	0	0	0	0	10
NE	-	7	4	0	0	0	0	0	0	0	0	0	2.8
ENE	-	1.9	1.1	0	0	0	0	0	0	0	0	0	3.0
E	-	3.0	0.3	0	0	0	0	0	0	0	0	0	12
ESE	-	10	5	0	0	0	0	0	0	0	0	0	15
SE	-	2.8	1.4	0	0	0	0	0	0	0	0	0	4.2
SSE	-	8	4	0	0	0	0	0	0	0	0	0	12
S	-	2.2	1.1	0	0	0	0	0	0	0	0	0	3.3
SSW	-	2.5	1.7	0	0	0	0	0	0	0	0	0	4.2
SW	-	20	18	1	0	0	0	0	0	0	0	0	39
WSW	-	5.5	5.0	0.3	0	0	0	0	0	0	0	0	10.8
W	-	4.0	3.4	0	0	0	0	0	0	0	0	0	7.4
WNW	-	11.1	9.4	0	0	0	0	0	0	0	0	0	20.5
NW	-	16	8	0	0	0	0	0	0	0	0	0	24
NNW	-	4.4	2.2	0	0	0	0	0	0	0	0	0	6.6
Total	-	17	0	1	0	0	0	0	0	0	0	0	18
	-	4.7	0	0.3	0	0	0	0	0	0	0	0	5.0
	-	10	0	0	0	0	0	0	0	0	0	0	10
	-	2.8	0	0	0	0	0	0	0	0	0	0	2.8
	-	15	1	0	0	0	0	0	0	0	0	0	16
	-	4.2	0.3	0	0	0	0	0	0	0	0	0	4.5
	-	11	1	0	0	0	0	0	0	0	0	0	12
	-	3.0	0.3	0	0	0	0	0	0	0	0	0	3.3
	-	17	9	0	0	0	0	0	0	0	0	0	26
	-	4.7	2.5	0	0	0	0	0	0	0	0	0	7.2
	-	24	20	0	0	0	0	0	0	0	0	0	44
	-	6.6	5.5	0	0	0	0	0	0	0	0	0	12.1
	-	11	11	1	0	0	0	0	0	0	0	0	23
	-	3.0	0.3	0	0	0	0	0	0	0	0	0	3.3
Total	-	231	127	3	0	0	0	0	0	0	0	0	361
	-	64.0	35.2	0.8	0	0	0	0	0	0	0	0	100.0

Short Data
Data Obtained 100.0%

Note: Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %

St. : 4
Layer : +0.5m (Depth: 0.8m)
Interval : Every 1 hour
Period : 1989. 4. 12 0: 0 - 1989. 5. 12 0: 0 (all duration)

Dir.	Vel.	cm/sec 0~	10~	20~	30~	40~	50~	60~	70~	80~	90~	100~	Total
N	-	0.0	0	0	0	0	0	0	0	0	0	0	0.0
NNE	-	4	20	22	1	0	0	0	0	0	0	0	47
NE	-	0.6	2.8	3.1	0.1	0	0	0	0	0	0	0	6.7
ENE	-	9	26	22	4	0	0	0	0	0	0	0	61
E	-	1.3	3.7	3.1	0.6	0	0	0	0	0	0	0	8.7
ESE	-	8	15	4	2	0	0	0	0	0	0	0	29
SE	-	1.1	2.1	0.6	0.3	0	0	0	0	0	0	0	4.1
SSE	-	6	9	6	0	0	0	0	0	0	0	0	21
S	-	0.9	1.3	0.9	0	0	0	0	0	0	0	0	3.0
SSW	-	3	11	1	1	0	0	0	0	0	0	0	16
SW	-	0.4	1.6	0.1	0.1	0	0	0	0	0	0	0	2.3
WSW	-	0.6	0.7	0.4	0	0	0	0	0	0	0	0	1.7
W	-	0	11	4	2	0	0	0	0	0	0	0	17
WNW	-	0	1.6	0.6	0.3	0	0	0	0	0	0	0	2.4
NW	-	9	12	13	10	4	6	0	0	0	0	0	54
NNW	-	1.3	1.7	1.9	1.4	0.6	0.9	0	0	0	0	0	7.7
Total	-	4	20	39	61	57	67	38	3	0	0	0	289
	-	0.6	2.8	5.6	8.7	8.1	9.5	5.4	0.4	0	0	0	41.2
	-	4	14	15	4	25	24	17	13	5	0	0	121
	-	0.6	2.0	2.1	0.6	3.6	3.4	2.4	1.9	0.7	0	0	17.2
	-	11	3	0	0	0	0	0	0	0	0	0	14
	-	1.6	0.4	0	0	0	0	0	0	0	0	0	2.0
	-	7	0	0	0	0	0	0	0	0	0	0	7
	-	1.0	0	0	0	0	0	0	0	0	0	0	1.0
	-	2	0	0	0	0	0	0	0	0	0	0	2
	-	0.3	0	0	0	0	0	0	0	0	0	0	0.3
	-	1	0	0	0	0	0	0	0	0	0	0	1
	-	0.1	0	0	0	0	0	0	0	0	0	0	0.1
	-	3	0	0	0	0	0	0	0	0	0	0	3
	-	0.4	0	0	0	0	0	0	0	0	0	0	0.4
	-	1	2	4	1	0	0	0	0	0	0	0	8
	-	0.1	0.3	0.6	0.1	0	0	0	0	0	0	0	1.1
Total	-	76	148	133	86	86	97	55	16	5	0	0	702
	-	10.8	21.1	18.9	12.3	12.3	13.8	7.8	2.3	0.7	0	0	100.0

Short Data
Data Obtained 99.4%

Table 3.2.-2 (30) Frequency Distributions of Current Direction and Velocity
(Survey Item: Current 1, 3rd Stage)

St. : 5
Layer : 0.5m (Depth: 0.5m)
Interval : Every 1 hour
Period : 1989.4.12 0:0 - 1989.5.12 0:0 (all duration).

Vel. Dir.	cm/sec 0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	5	16	13	11	9	2	0	0	0	0	0.0
NNE	0.8	2.6	2.1	1.8	1.5	0.3	-	-	-	-	-	9.2
NE	1.3	2.0	3.1	1.1	0.3	0.2	-	-	-	-	-	4.9
ENE	0.5	0.8	0.3	-	-	-	-	-	-	-	-	8.0
E	0.3	0	0	0	0	0	0	0	0	0	0	1.6
ESE	0.2	-	-	-	-	-	-	-	-	-	-	0.2
SE	0.5	0	0	0	0	0	0	0	0	0	0	0.5
SSE	0.2	1	0	0	0	0	0	0	0	0	0	0.2
S	1.3	0.2	-	-	-	-	-	-	-	-	-	1.5
SSW	1.1	3.1	5.9	5.6	5.4	3.0	1.6	0.2	-	-	-	25.9
SW	1.0	2.6	6.1	9.0	11.3	7.0	0.7	-	-	-	-	37.7
WSW	0.5	1.0	0.8	0.2	-	-	-	-	-	-	-	3.4
W	0.7	0.7	0.7	0.7	0.2	-	-	-	-	-	-	1.5
WNW	-	0.7	1.3	0.7	0.2	-	-	-	-	-	-	2.1
NW	0.3	0.5	0.8	0.5	0.5	-	-	-	-	-	-	2.6
NNW	1.0	1.0	0.5	-	-	-	-	-	-	-	-	2.5
Total	65	101	132	115	118	64	14	1	0	0	0	610
	10.7	16.6	21.6	18.9	19.3	10.5	2.3	0.2	-	-	-	100.0

Short Data
Data Obtained 97 86.3%

Note : Upper layer shows number of obs. frequency and
Lower layer shows number of obs. frequency in %

St. : 9
Layer : 0.5m (Depth: 1.0m)
Interval : Every 1 hour
Period : 1989.4.12 0:0 - 1989.5.12 0:0 (all duration)

Vel. Dir.	cm/sec 0-	10-	20-	30-	40-	50-	60-	70-	80-	90-	100-	Total
N	0.0	8	26	9	13	3	0	0	0	0	0	59
NNE	1.2	4.0	1.4	2.0	0.5	-	-	-	-	-	-	9.1
NE	1.2	4	0	0	0	0	0	0	0	0	0	16
ENE	1.8	0.6	-	-	-	-	-	-	-	-	-	2.5
E	2.0	0.2	0	0	0	0	0	0	0	0	0	2.2
ESE	0.3	0	0	0	0	0	0	0	0	0	0	0.3
SE	0.8	0	0	0	0	0	0	0	0	0	0	0.8
SSE	0.8	0.6	0.2	1	0	0	0	0	0	0	0	1.5
S	0.5	1.2	0.3	0.2	-	-	-	-	-	-	-	2.2
SSW	4	24	7	2	1	0	0	0	0	0	0	38
SW	0.6	3.7	1.1	0.3	0.2	-	-	-	-	-	-	5.8
WSW	2	21	24	29	7	1	0	0	0	0	0	84
W	0.3	3.2	3.7	4.5	1.1	0.2	-	-	-	-	-	12.9
WNW	10	21	37	18	6	1	0	0	0	0	0	94
NW	1.5	3.2	5.7	2.8	0.9	0.2	-	-	-	-	-	14.5
NNW	6	22	16	2	1	0	0	0	0	0	0	47
Total	0.9	3.4	2.5	0.3	0.2	-	-	-	-	-	-	7.2
	8	21	4	2	0	0	0	0	0	0	0	35
	1.2	3.2	0.6	0.3	-	-	-	-	-	-	-	5.4
	1.1	2.5	1.1	-	-	-	-	-	-	-	-	30
	0.9	2.0	0.6	0.2	-	-	-	-	-	-	-	4.6
	3	23	23	1	0	0	0	0	0	0	0	50
	0.5	3.5	3.5	0.2	-	-	-	-	-	-	-	7.7
	3	15	56	33	17	4	0	0	0	0	0	128
	0.5	2.3	8.6	5.1	2.6	0.6	-	-	-	-	-	19.7
Total	97	219	190	102	35	6	0	1	0	0	0	650
	14.9	33.7	29.2	15.7	5.4	0.9	-	0.2	-	-	-	100.0

Short Data
Data Obtained 71 90.2%