

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

[Vol. 5/9 2. Monthly Survey]
2.4 Echo-sounding
(Narrow Area)

March 1990

Japan International Cooperation Agency

Contents

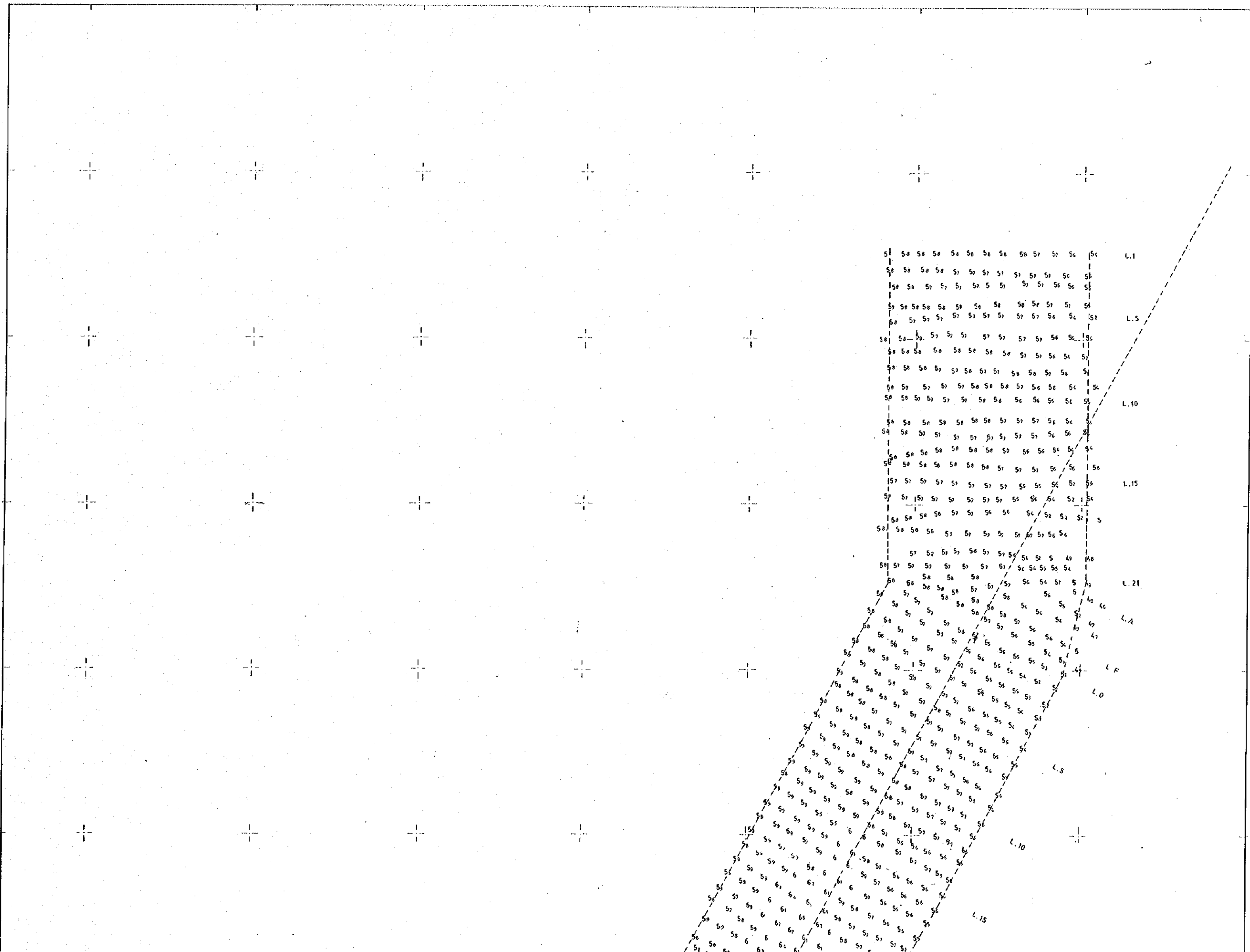
2. Monthly Survey

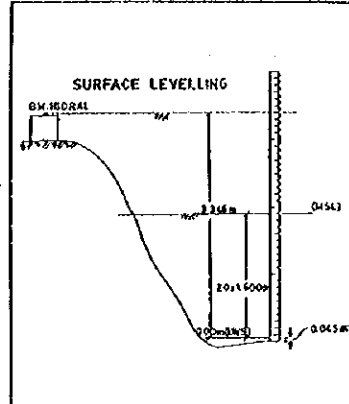
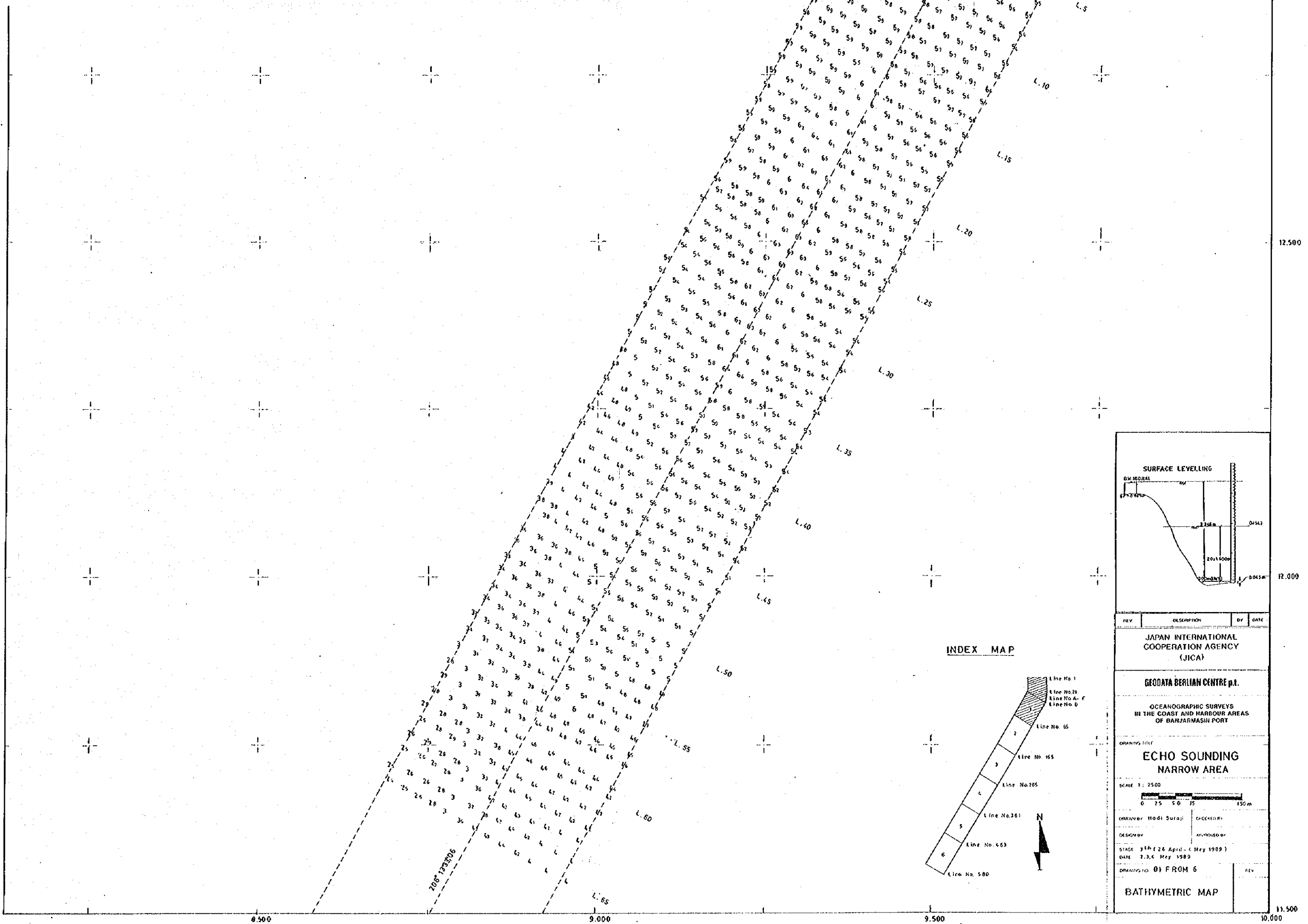
2.4 Echo-sounding in Narrow Area

Tracking Maps
Contour Maps
Bathymetric Maps

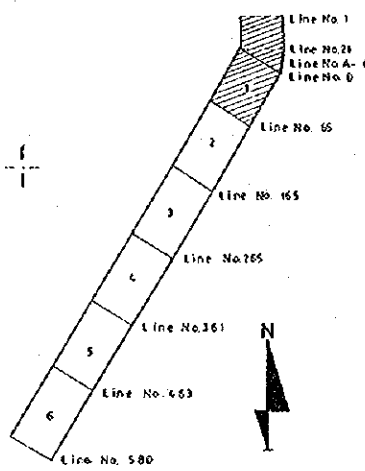
Echo-sounding Survey(Narrow Area) in each stage was conducted in the following Date

Stage	Date
1st stage(Frequency ; 210Khz) :	8 October -22 November 1988
2nd stage(Frequency ; 210Khz) :	23 November 1988 -13 January 1989
3rd stage(Frequency ; 210Khz) :	14 January -17 February 1989
4th stage(Frequency ; 210Khz) :	30 January -20 February 1989
5th stage(Frequency ; 210Khz) :	21 February - 8 March 1989
6th stage(Frequency ; 210Khz and 33Khz) :	8 March-17 April 1989
7th stage(Frequency ; 210Khz and 33Khz) :	26 April- 4 May 1989
8th satge(Frequency ; 210Khz) :	25 May - 3 June 1989
9th stage(Frequency ; 210Khz) :	16 June -23 June 1989
10th stage(Frequency ; 210Khz) :	16 July -22 July 1989
11th stage(Frequency ; 210Khz) :	21 July - 1 August 1989
12th stage(Frequency ; 210Khz) :	7 August -13 August 1989





INDEX MAP



REV.	DESCRIPTION	BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIH PORT			
DRAWING TITLE			
ECHO SOUNDING NARROW AREA			
SCALE 1: 2500			
DRAWN BY: Haddi Suraji		CHECKED BY:	
DESIGNED BY:		APPROVED BY:	
STAGE: 3rd (26 April - 1 May 1989)			
DATE: 23.4 May 1989			
DRAWING NO: 01 FROM 6			REV:
BATHYMETRIC MAP			

8.500

9.000

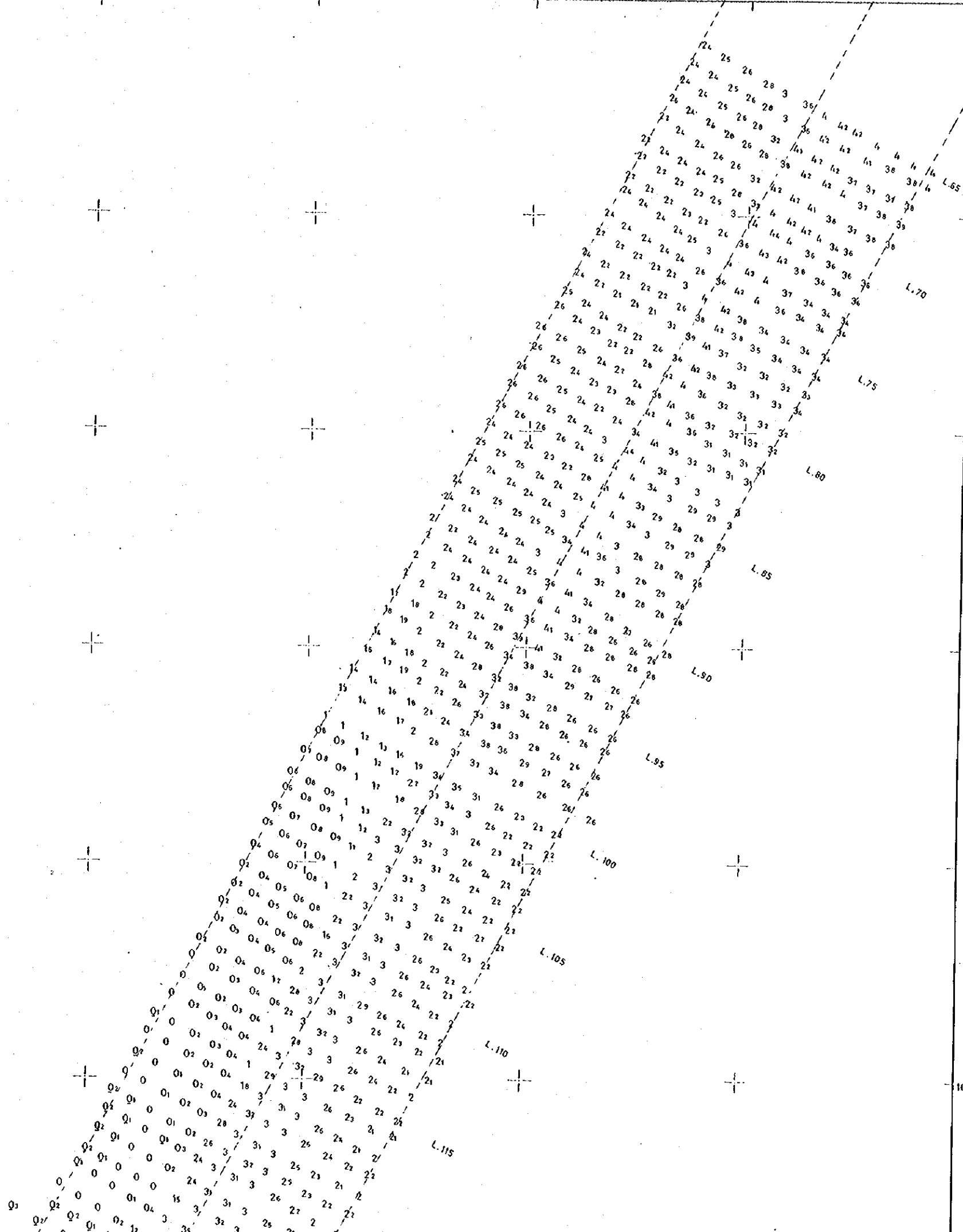
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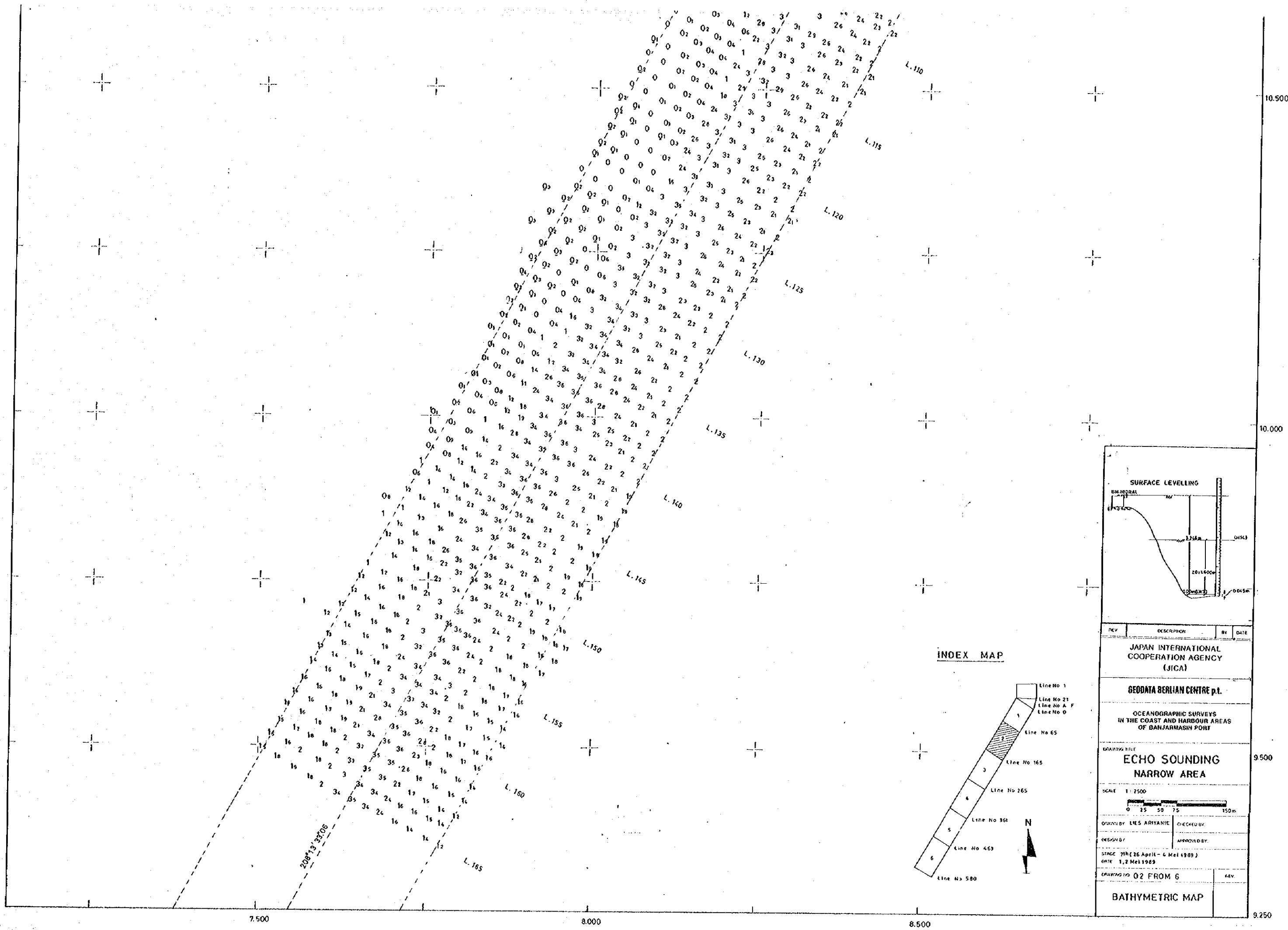
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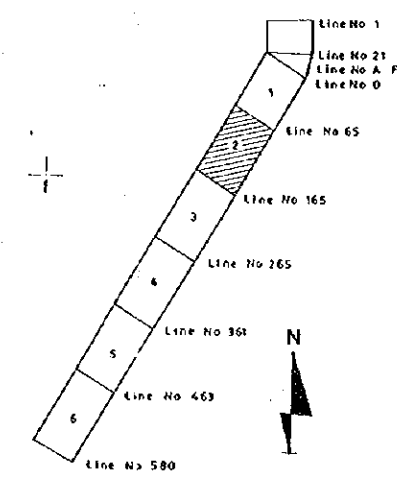
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11.500





INDEX MAP



SURFACE LEVELLING			
REV	DESCRIPTION	BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE			
ECHO SOUNDING NARROW AREA			
SCALE 1:2500			
DRAWN BY LIES ARIYANTIE		CHECKED BY	
DESIGN BY		APPROVED BY	
STAGE 7th (26 April - 6 Mei 1989)			
DATE 1, 2 Mei 1989			
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BATHYMETRIC MAP			

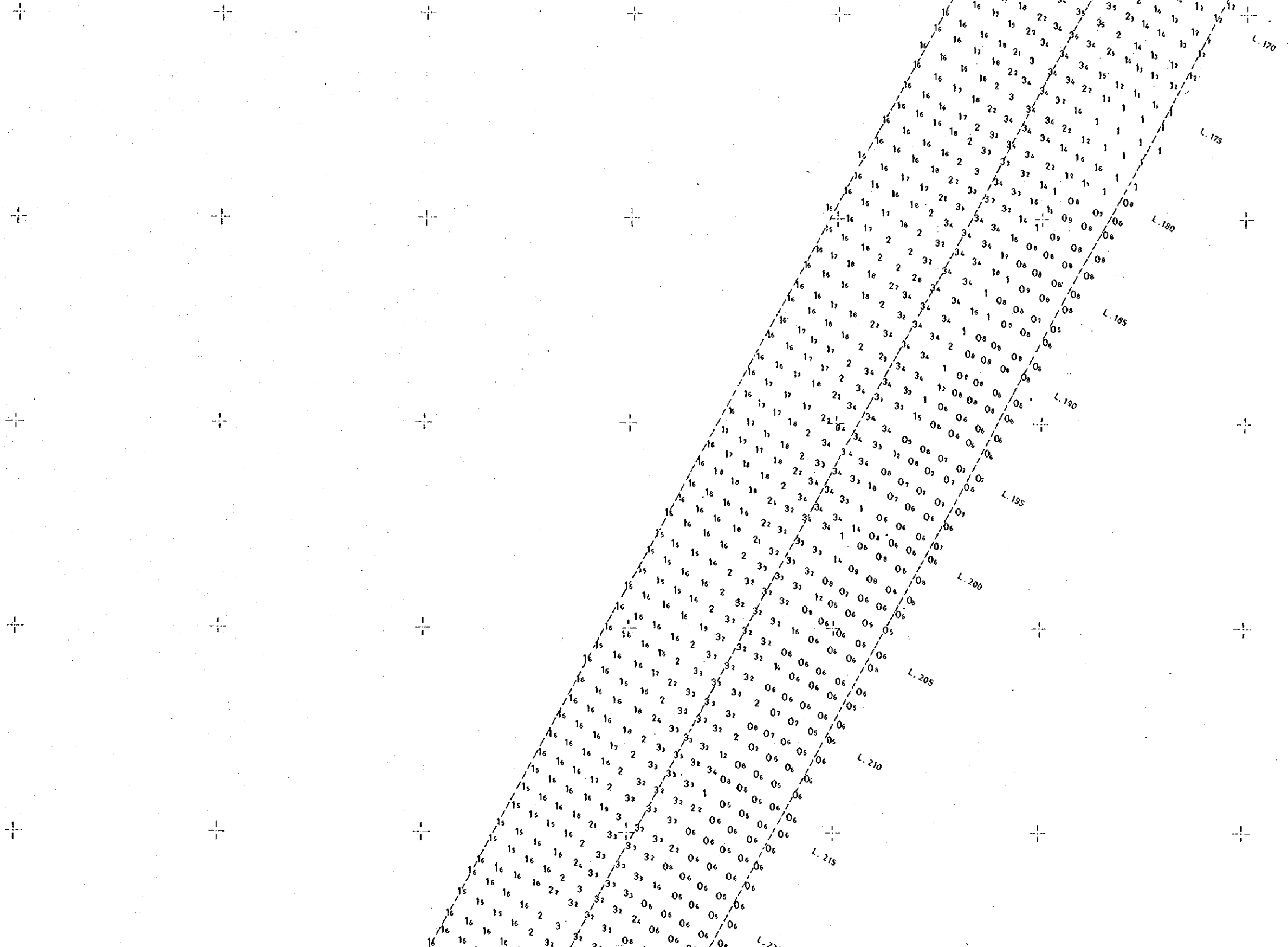
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6.500

7.000

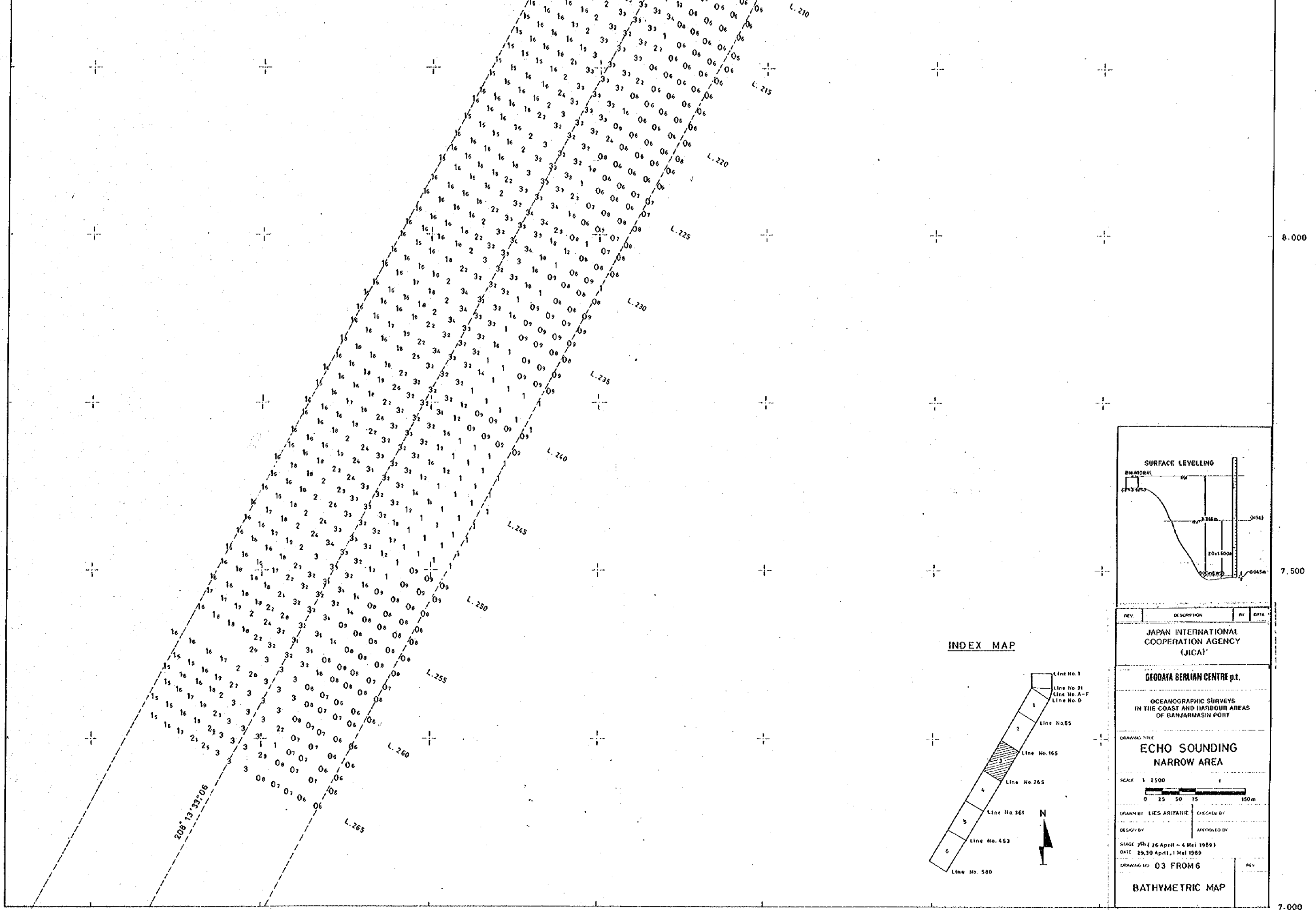
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9.000

8.500

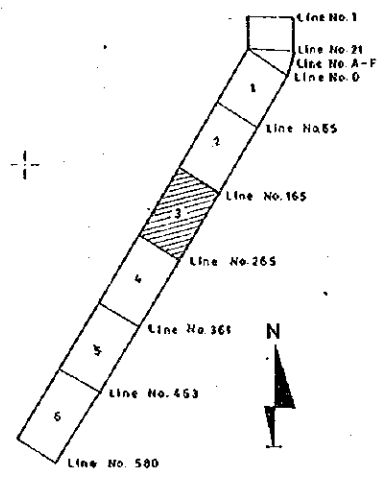


8.000

7.500

7.000

INDEX MAP



SURFACE LEVELLING

REV.	DESCRIPTION	BY	DATE

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

GEODATA BERLIAN CENTRE p.t.

OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT

DRAWING TITLE
ECHO SOUNDING NARROW AREA

SCALE 1:2500

DRAWN BY LIES ARYANTIE CHECKED BY

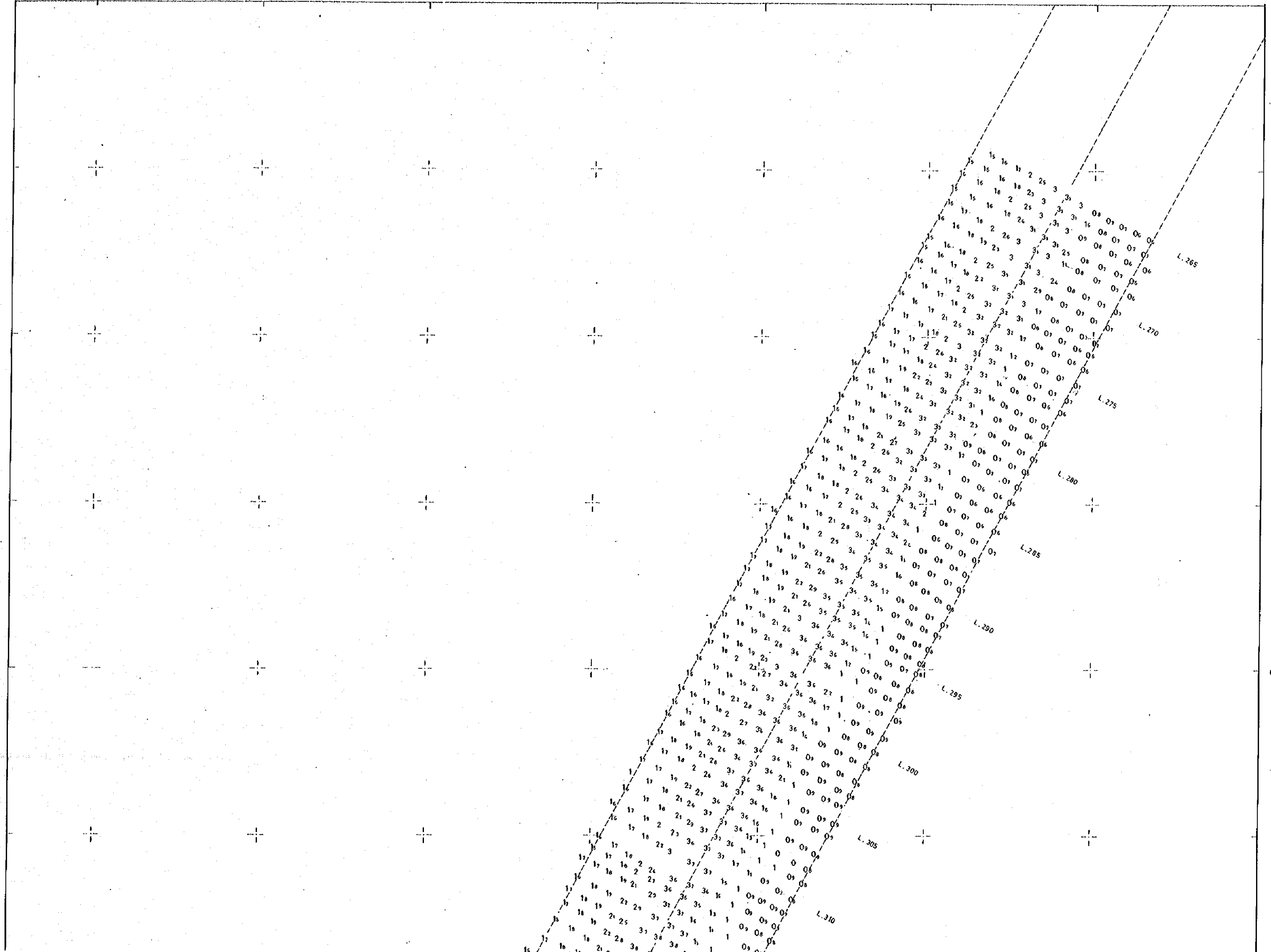
DESIGN BY APPROVED BY

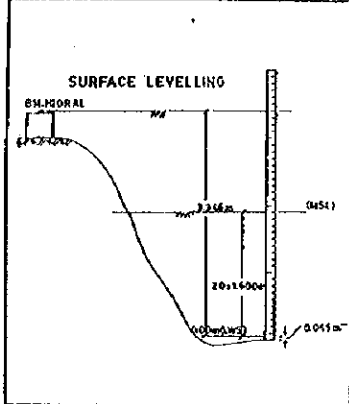
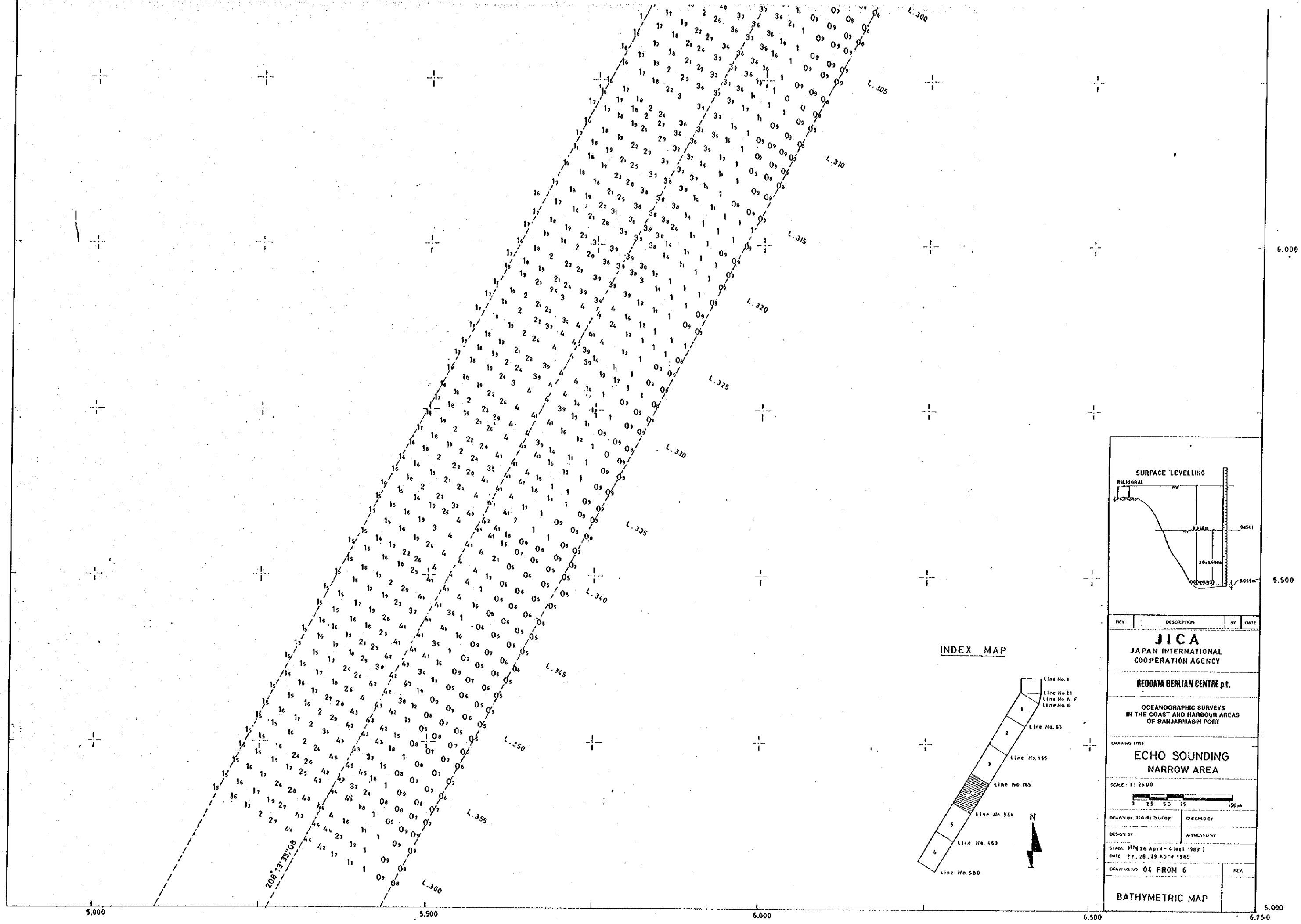
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DATE 29.30 April, 1 Mei 1989

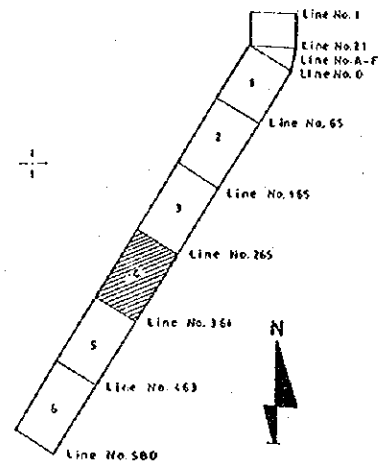
DRAWING NO. 03 FROM 6 REV.

BATHYMETRIC MAP





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REV.	DESCRIPTION	BY	DATE
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			
GEODATA BERLIAN CENTRE pt.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANGKALAN PORT			
DRAWING TITLE			
ECHO SOUNDING NARROW AREA			
SCALE: 1: 2500			
DRAWN BY: Hadi Suroji		CHECKED BY:	
DESIGN BY:		APPROVED BY:	
STAGE: 3rd (26 April - 4 May 1989)			
DATE: 27, 28, 29 April 1989			
DRAWING NO: 04 FROM 6			REV.
BATHYMETRIC MAP			

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5.000

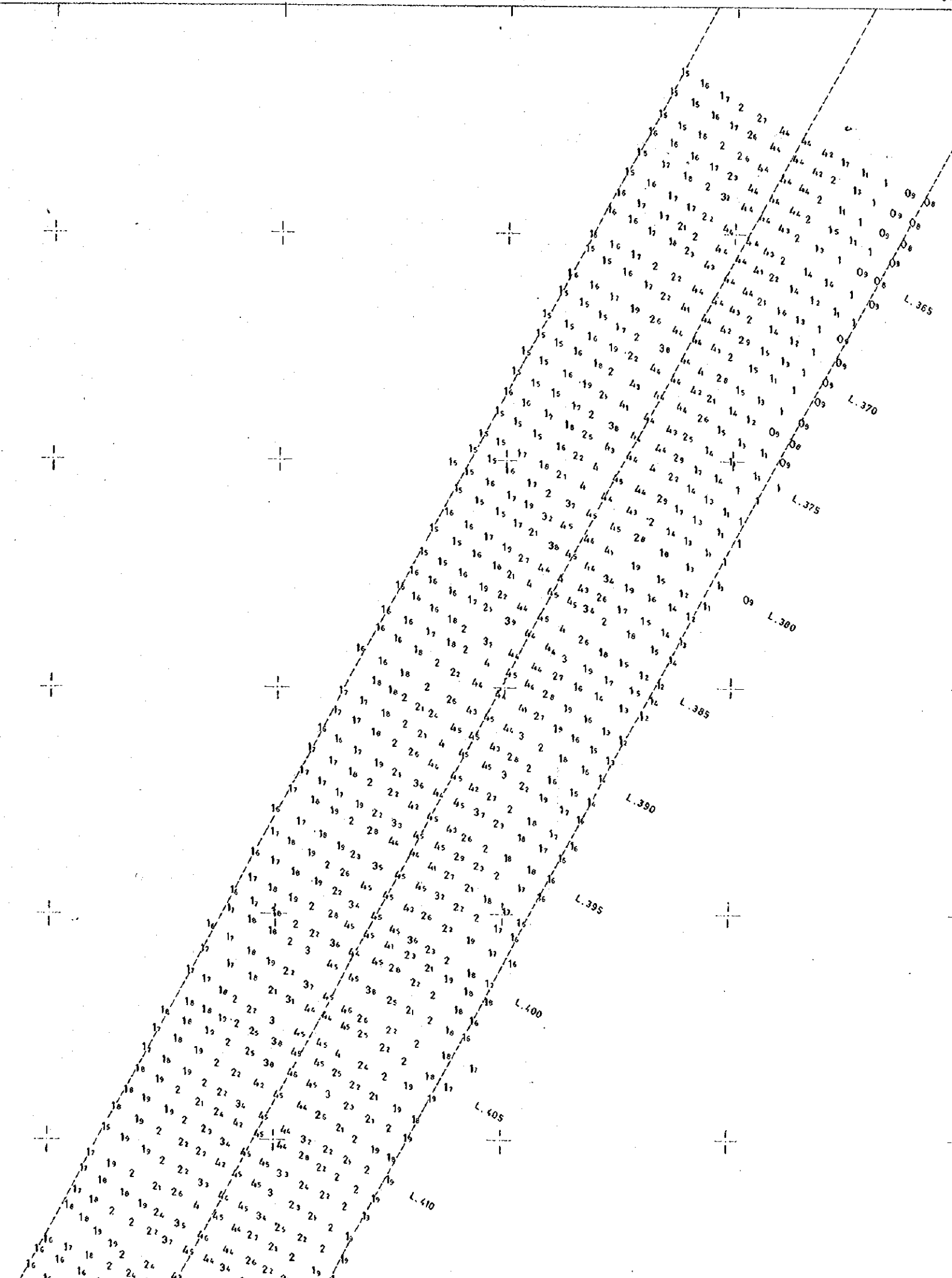
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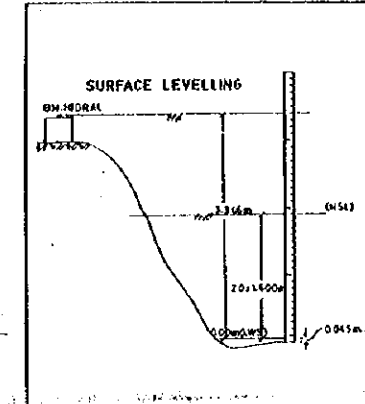
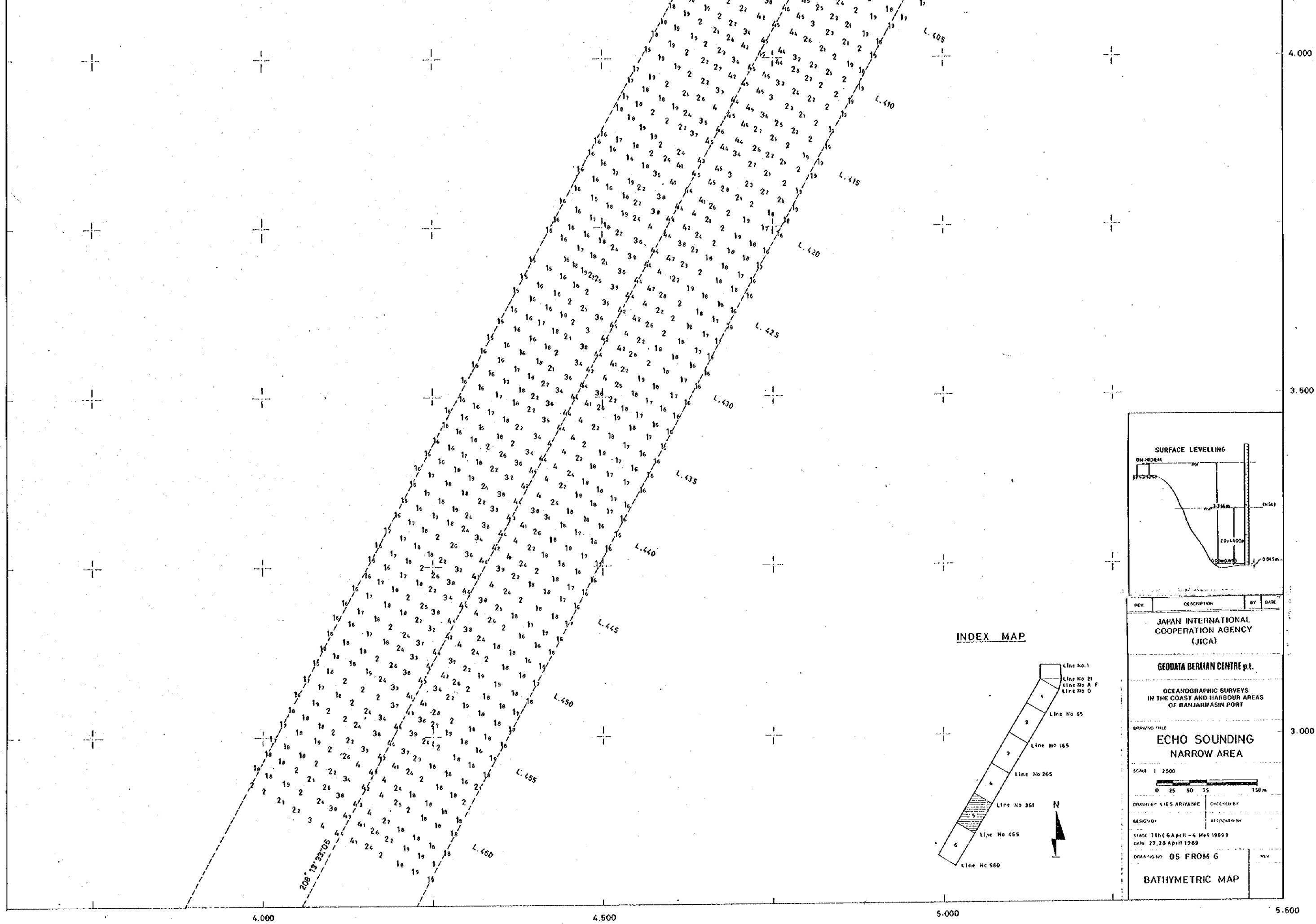
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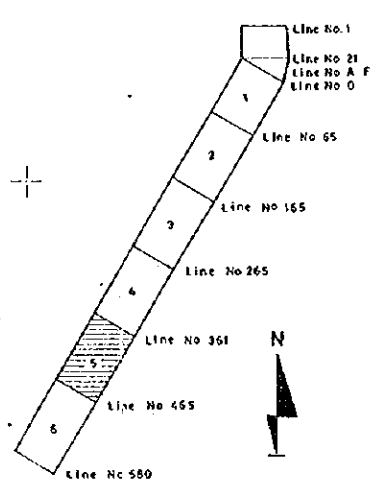
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4.000





INDEX MAP



REV.	DESCRIPTION	BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
GEODATA BERKIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE			
ECHO SOUNDING NARROW AREA			
SCALE 1:2500			
0 25 50 75 150m			
DRAWN BY: KIES ARHYANI		CHECKED BY:	
DESIGNED BY:		APPROVED BY:	
STAGE: 1 (16 April - 4 May 1985)			
DATE: 27, 28 April 1985			
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BATHYMETRIC MAP			

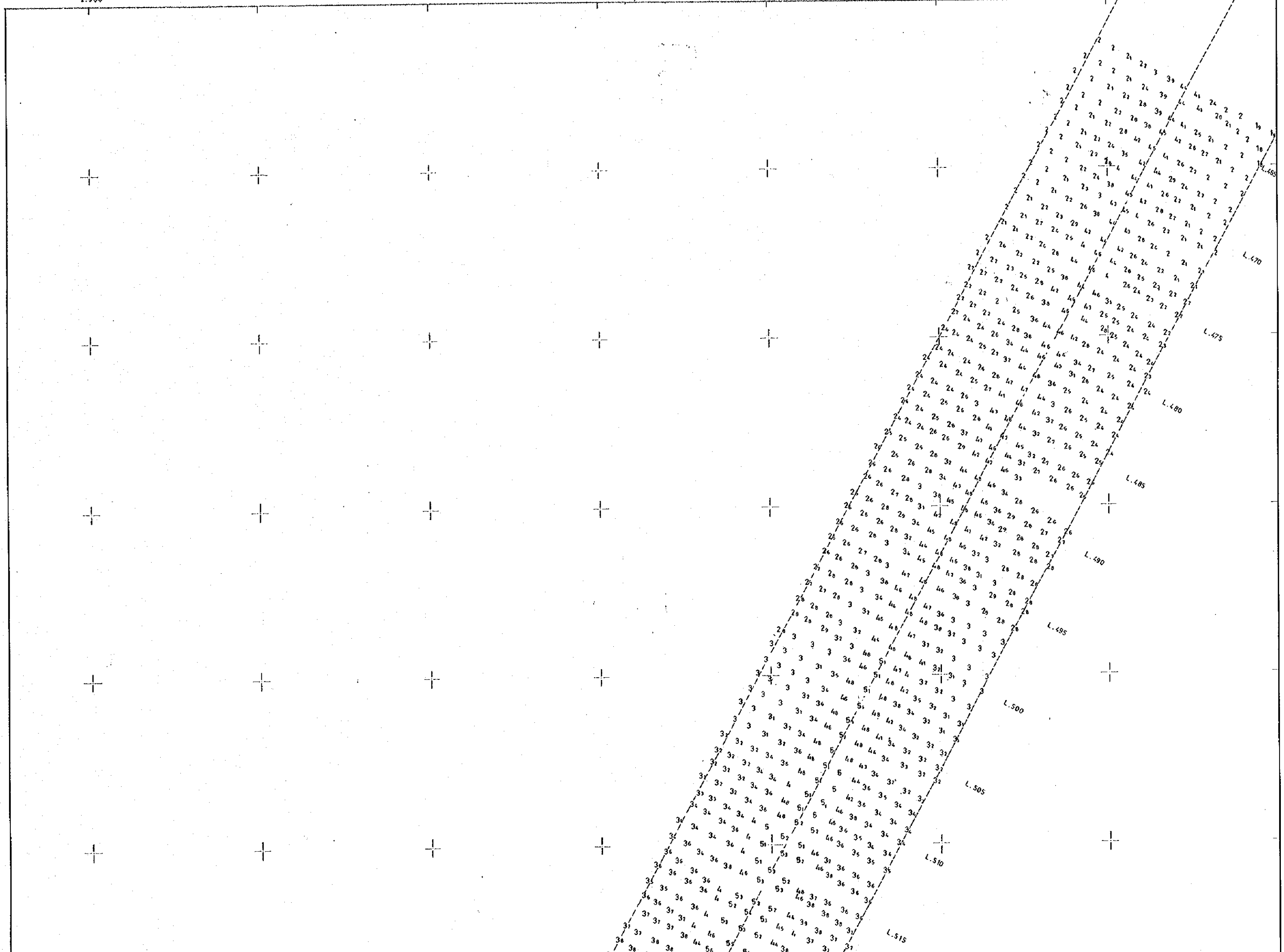
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3.000

3.500

4.000

3.000

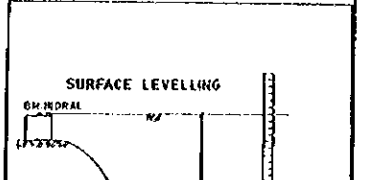
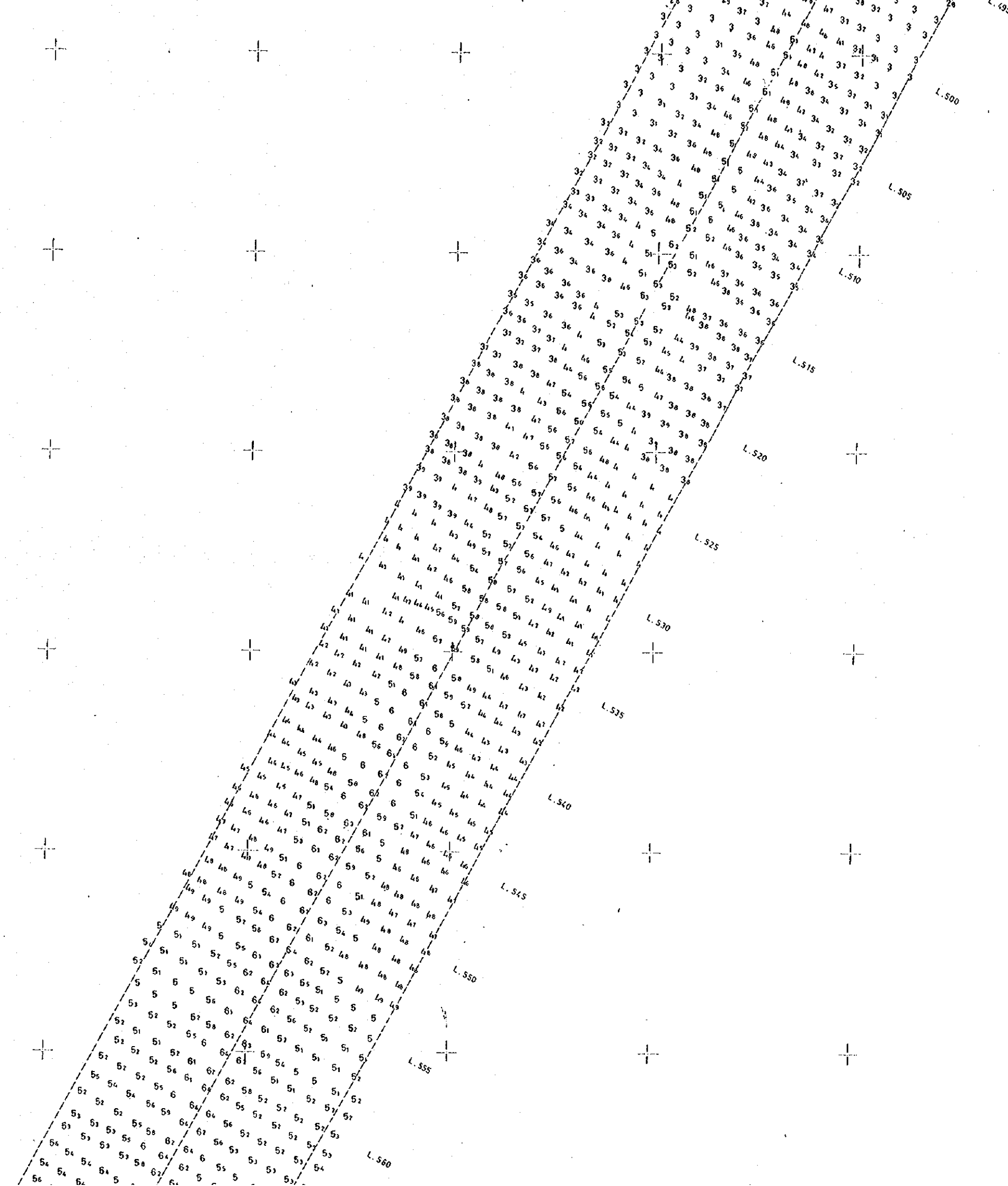


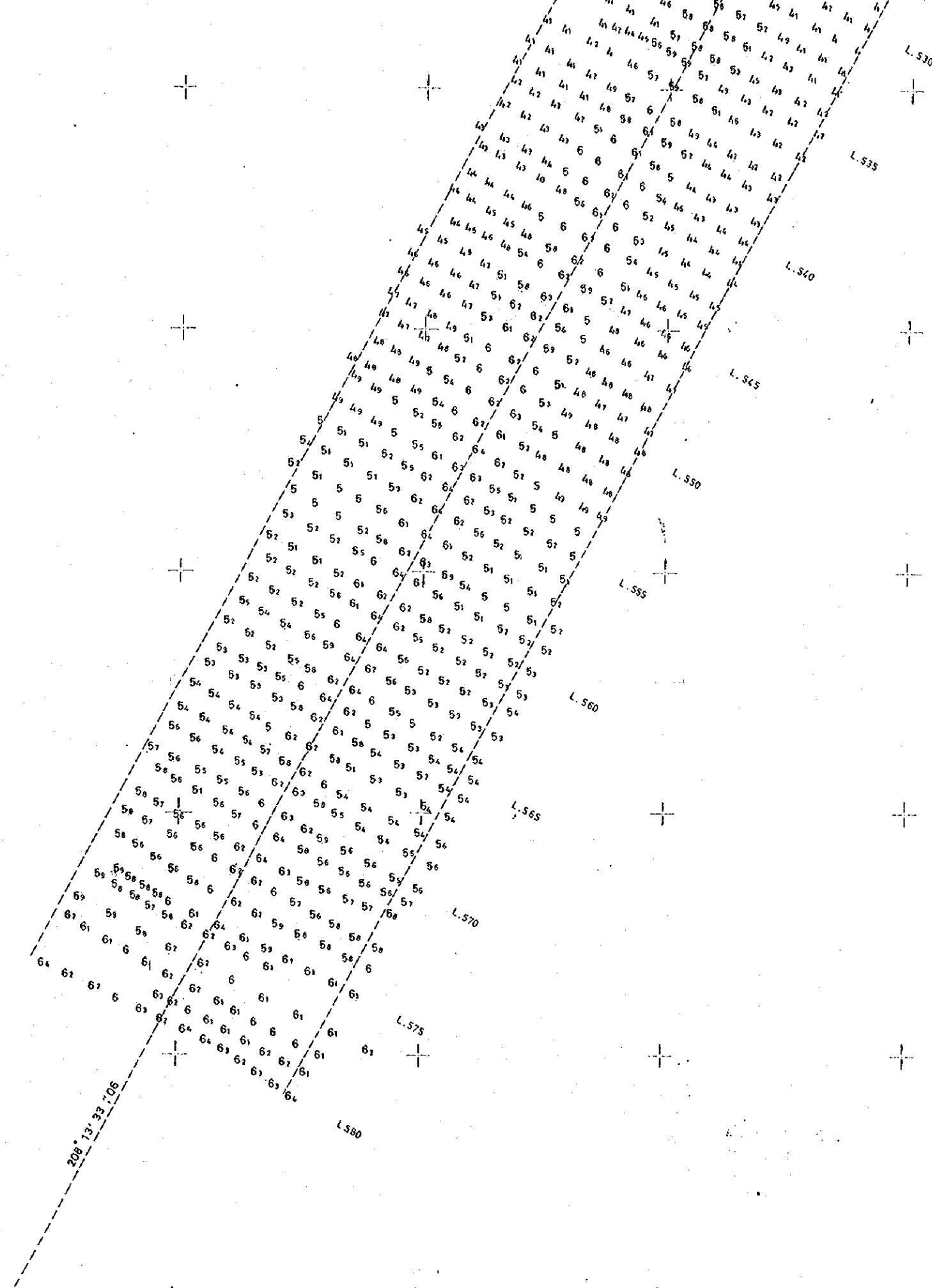
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2.000

1.500

1.000

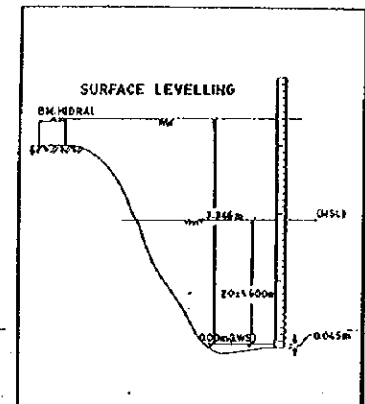
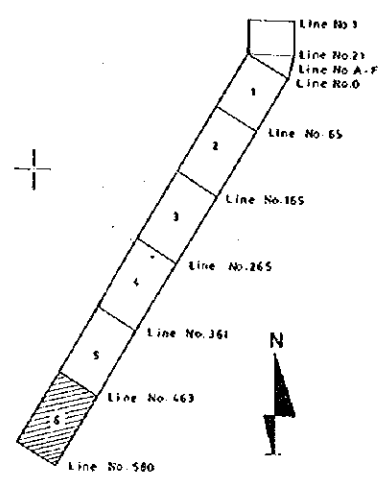




1.000

500

INDEX MAP



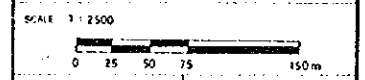
REV	DESCRIPTION	BY	DATE

JICA
JAPAN INTERNATIONAL
COOPERATION AGENCY

GEODATA BERLIAN CENTRE p.t.

OCEANOGRAPHIC SURVEYS
IN THE COAST AND HARBOUR AREAS
OF BANJARMASIN FORT

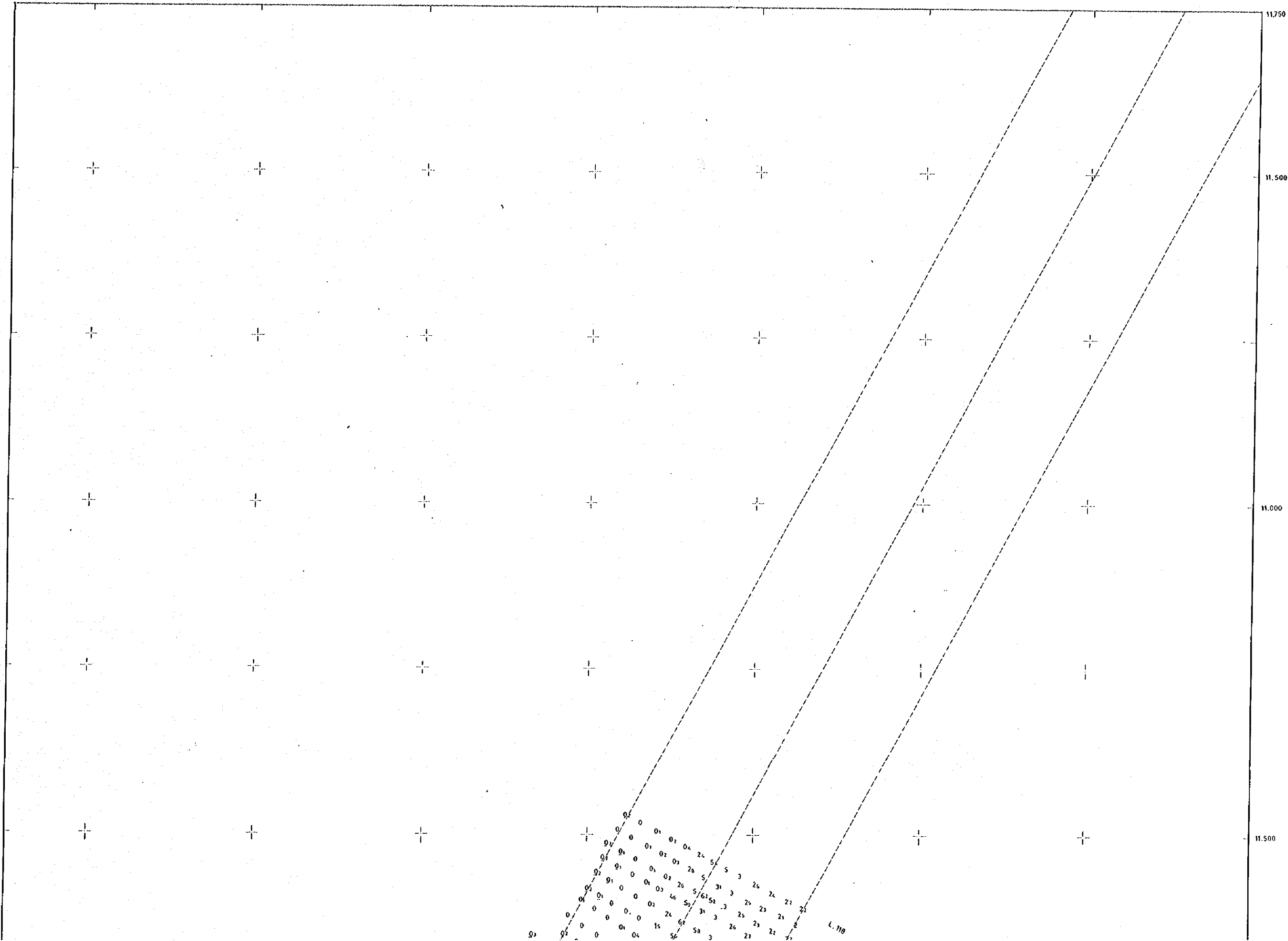
DRAWING TITLE
**ECHO SOUNDING
NARROW AREA**

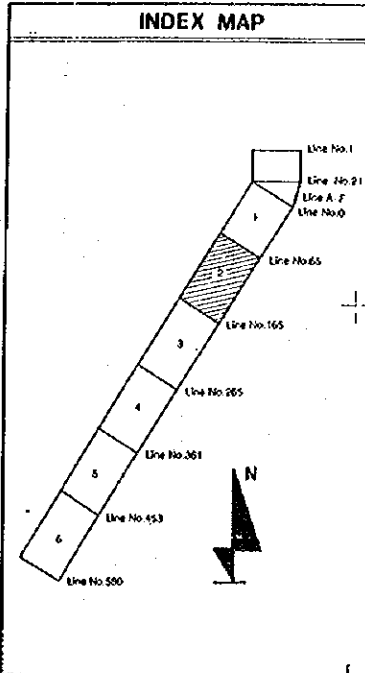
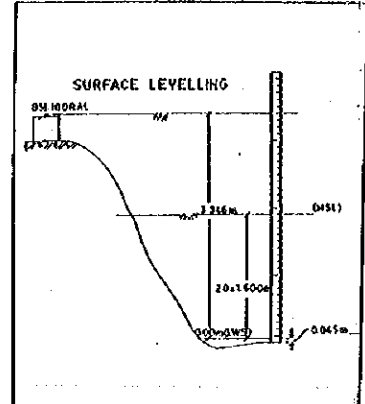
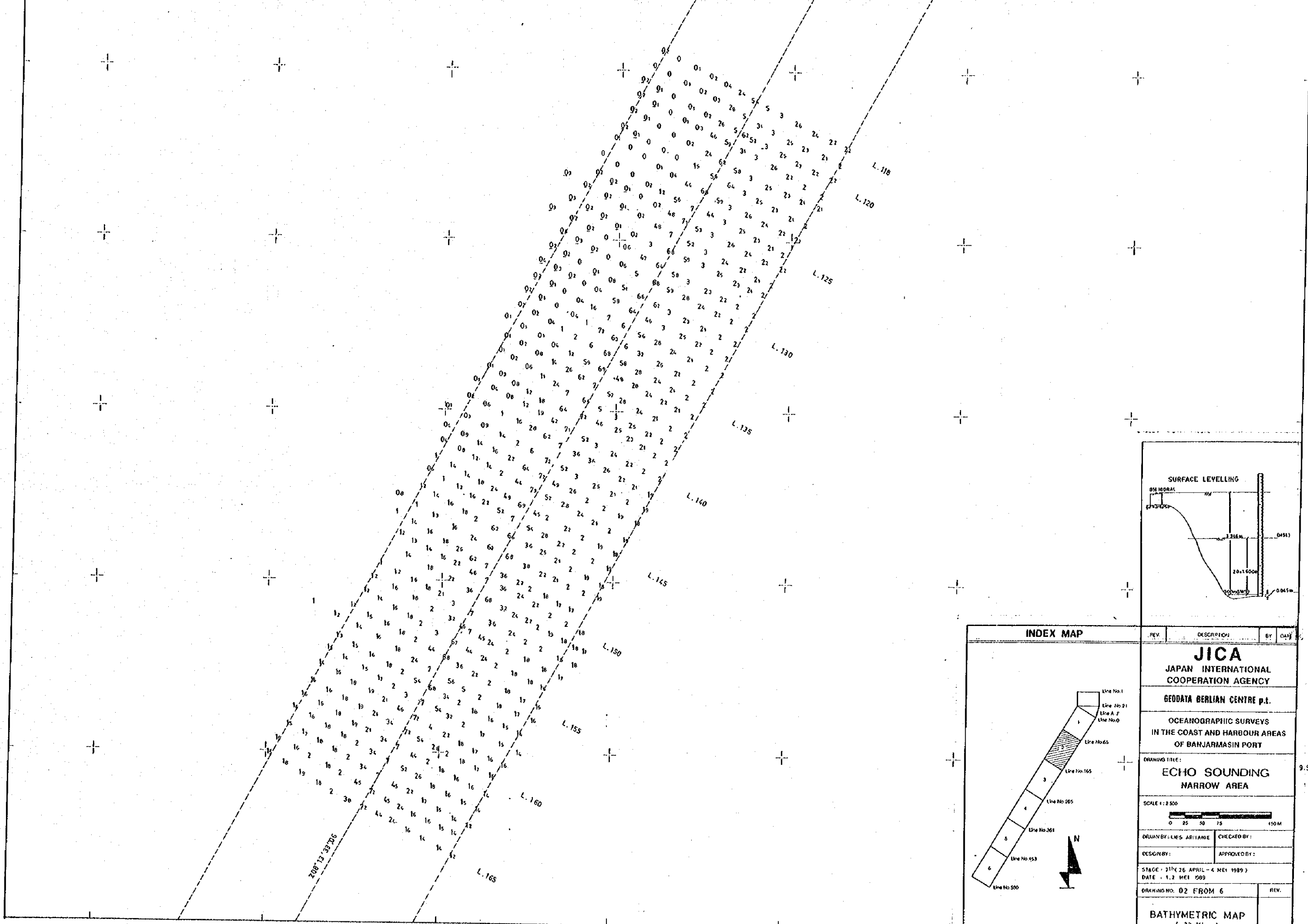


DRAWN BY: LIES ARIVANE CHECKED BY: APPROVED BY: DATE: 26, 27 April 1969

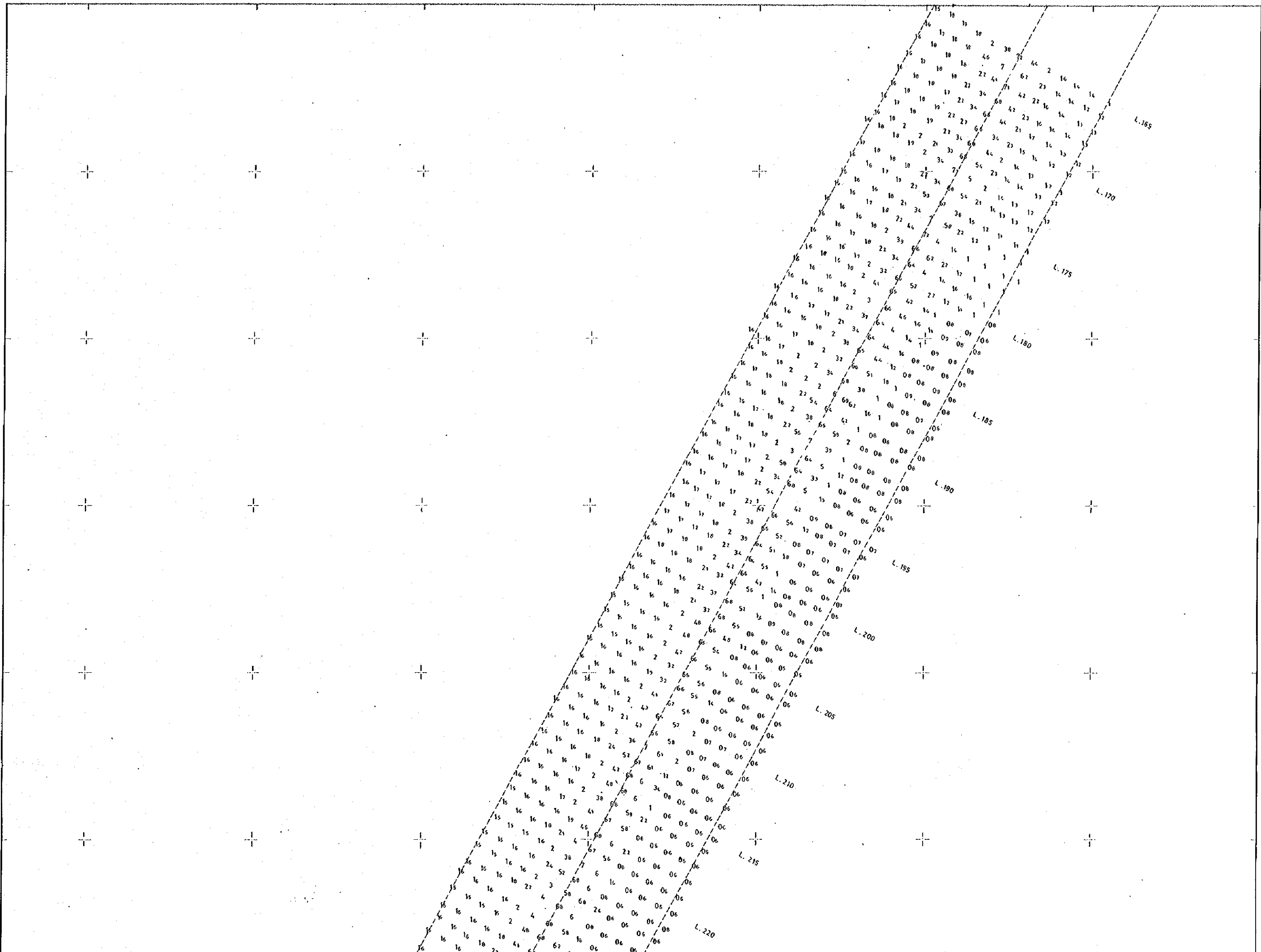
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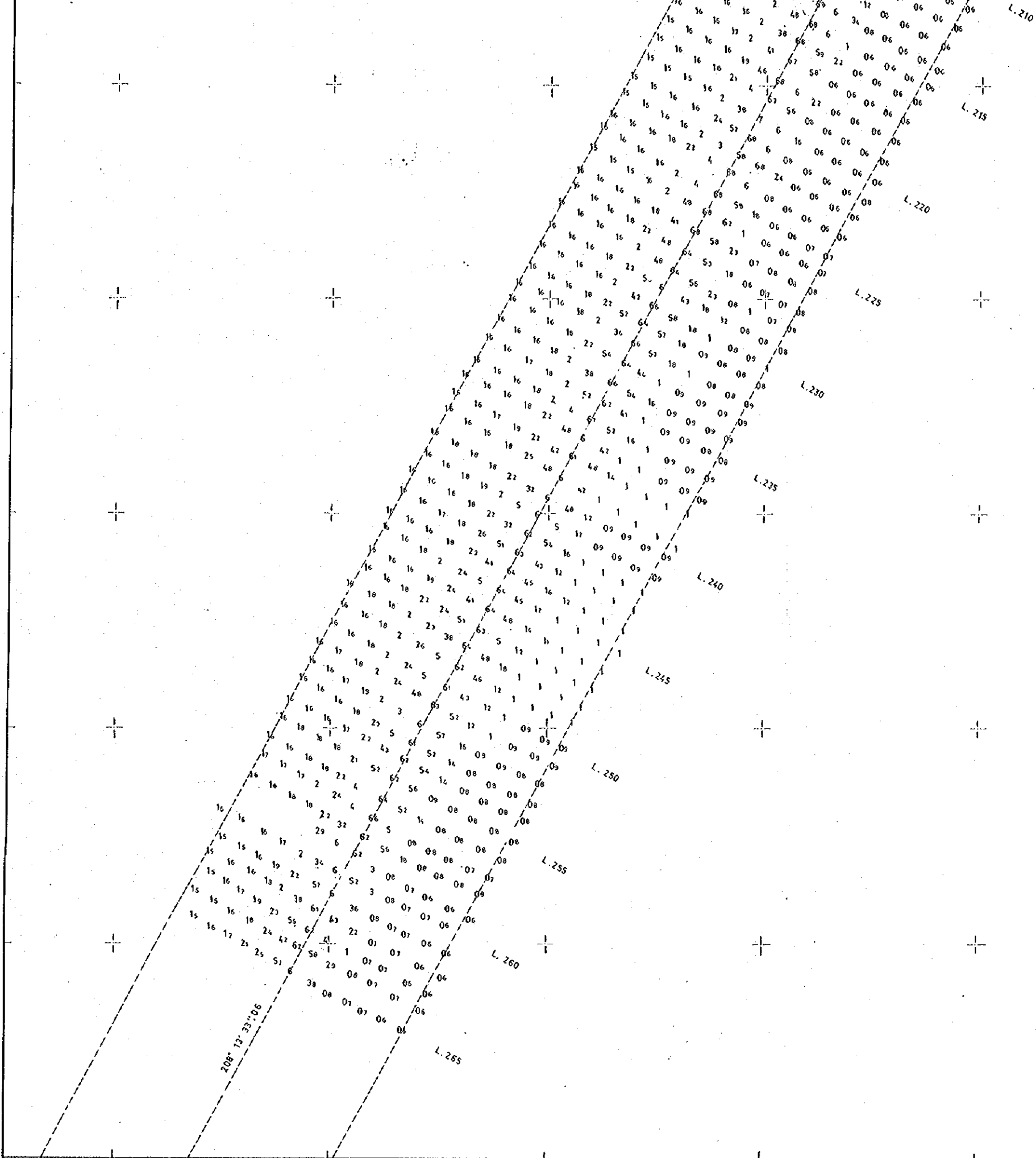
BATHYMETRIC MAP





REV.	DESCRIPTION	BY	DATE
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			
GEDDATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE:			
ECHO SOUNDING NARROW AREA			
SCALE 1:2500			
DRAWN BY: LNS. ARIVANDI		CHECKED BY:	
DESIGN BY:		APPROVED BY:	
STAGE: 211 (26 APRIL - 4 MAY 1989)			
DATE: 1.2 MCI 509			
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BATHYMETRIC MAP (33 KHz)			

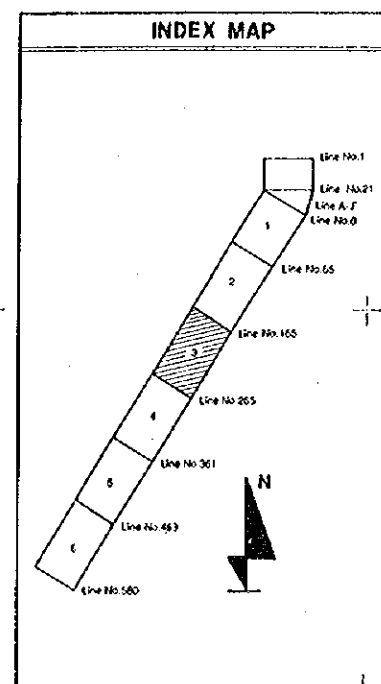
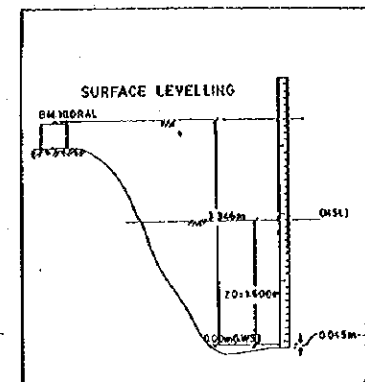




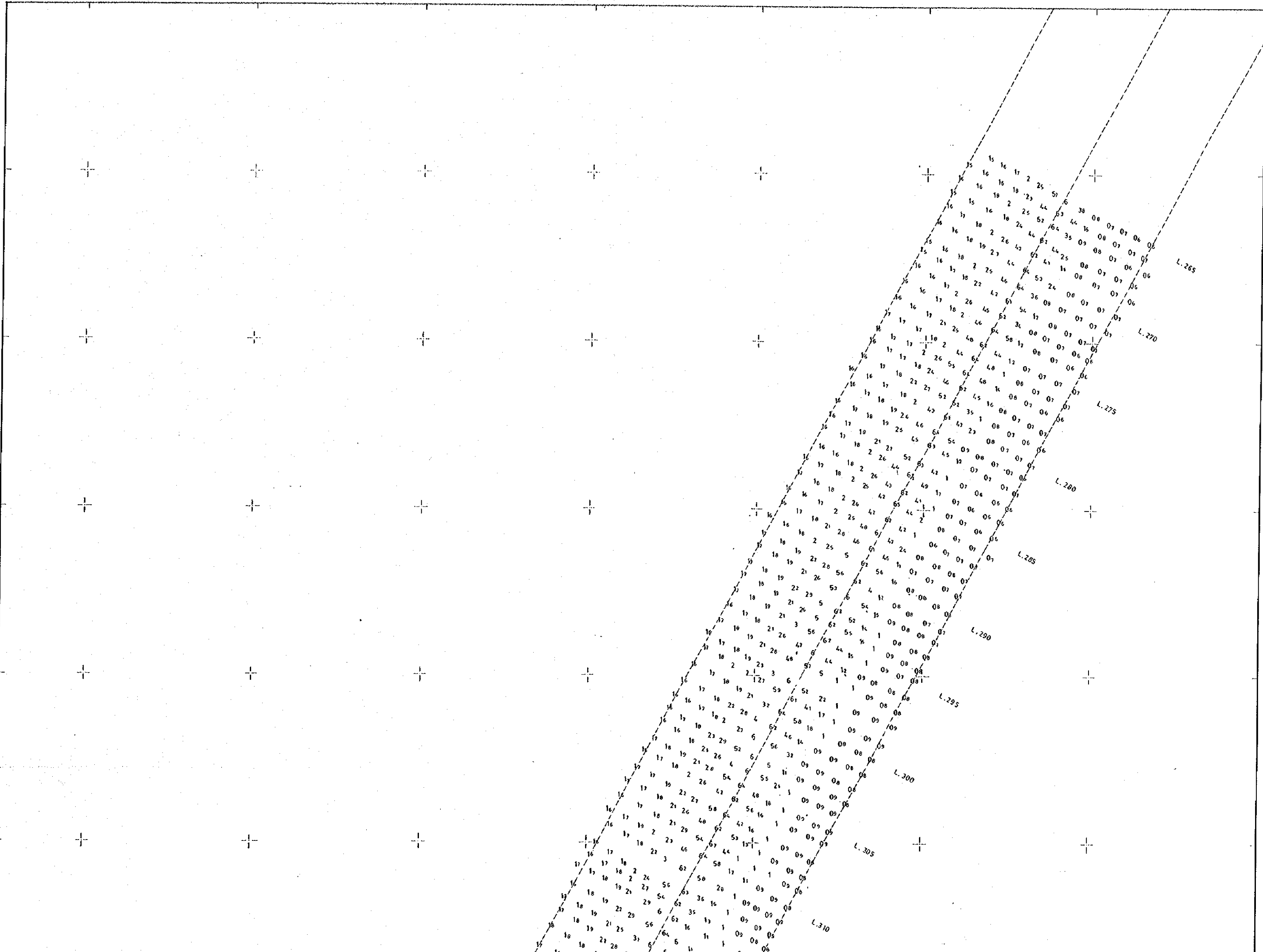
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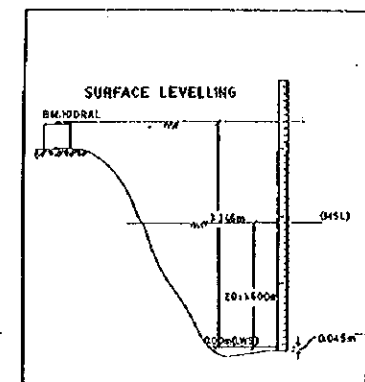
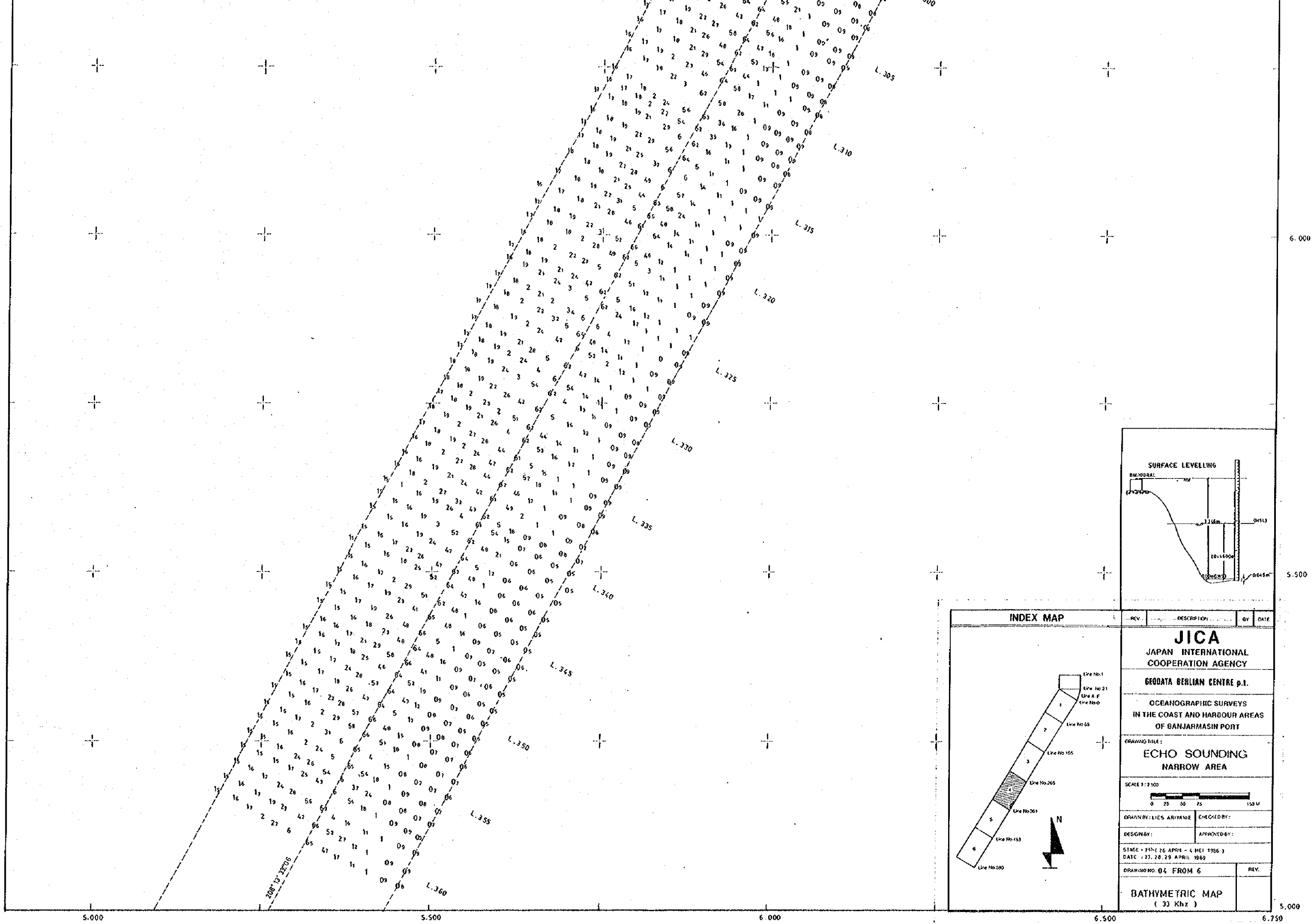
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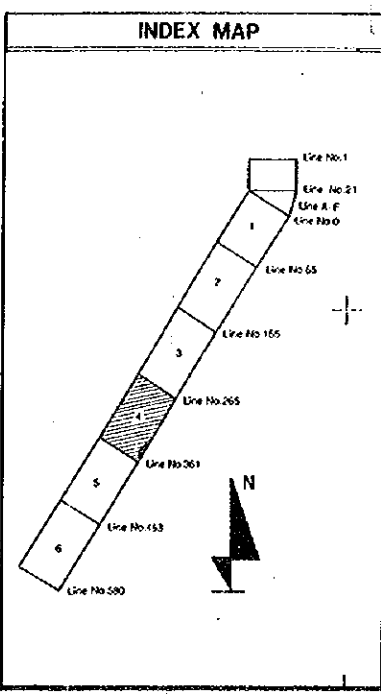


REV.	DESCRIPTION	BY	DATE
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			
GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE:			
ECHO SOUNDING NARROW AREA			
SCALE: 1:2500			
DRAWN BY: LIES ARWANIE		CHECKED BY:	
DESIGN BY:		APPROVED BY:	
STAGE: 2 nd (26 APRIL - 6 MEI 1989)			
DATE: 25.30 APRIL 13 MEI 1989			
DRAWING NO. 03 FROM 6			REV.
BATHYMETRIC MAP (33 KHz)			





REV.	DESCRIPTION	BY	DATE
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			
GEODATA BERLIAN CENTRE p.1.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE:			
ECHO SOUNDING NARROW AREA			
SCALE: 1:2500			
DRAWN BY: LIES ARIYANI		CHECKED BY:	
DESIGN BY:		APPROVED BY:	
STAGE: 211 (26 APRIL - 4 MEI 1986)			
DATE: 27. 28. 29 APRIL 1989			
DRAWING NO. 04 FROM 6			REV.
BATHYMETRIC MAP (33 KHz)			



6.000

5.500

5.000

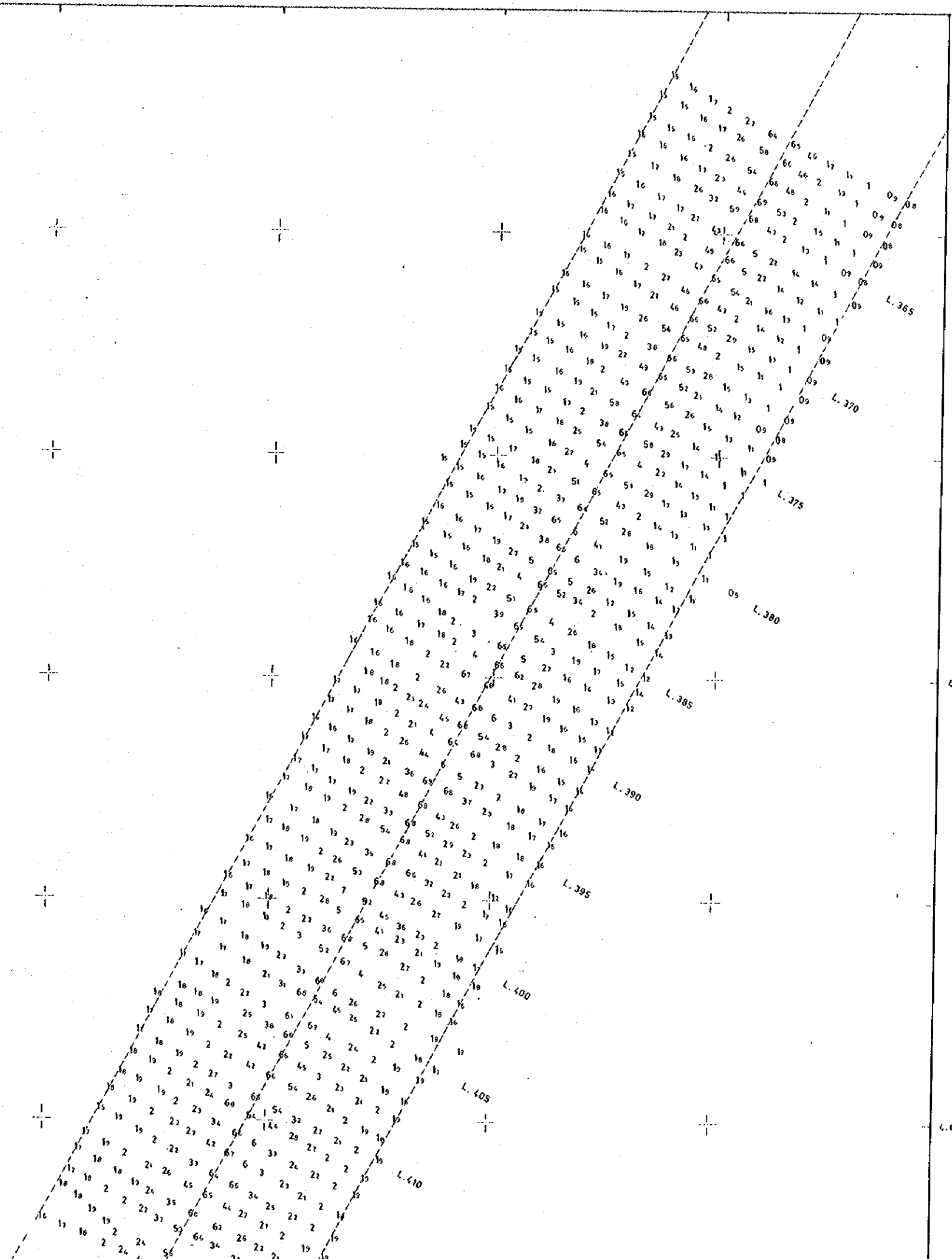
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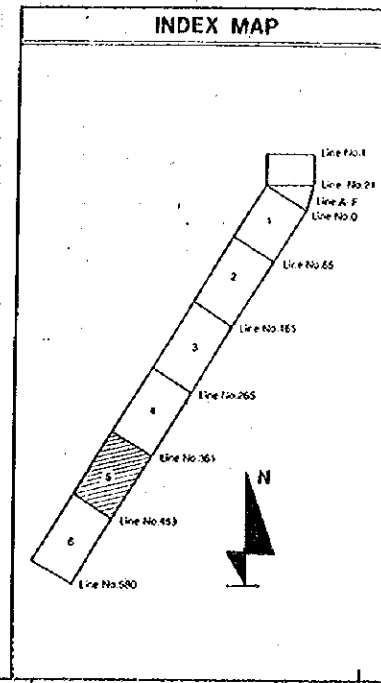
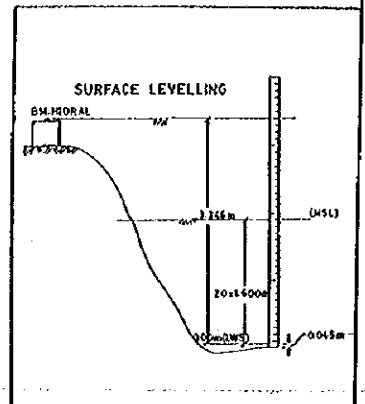
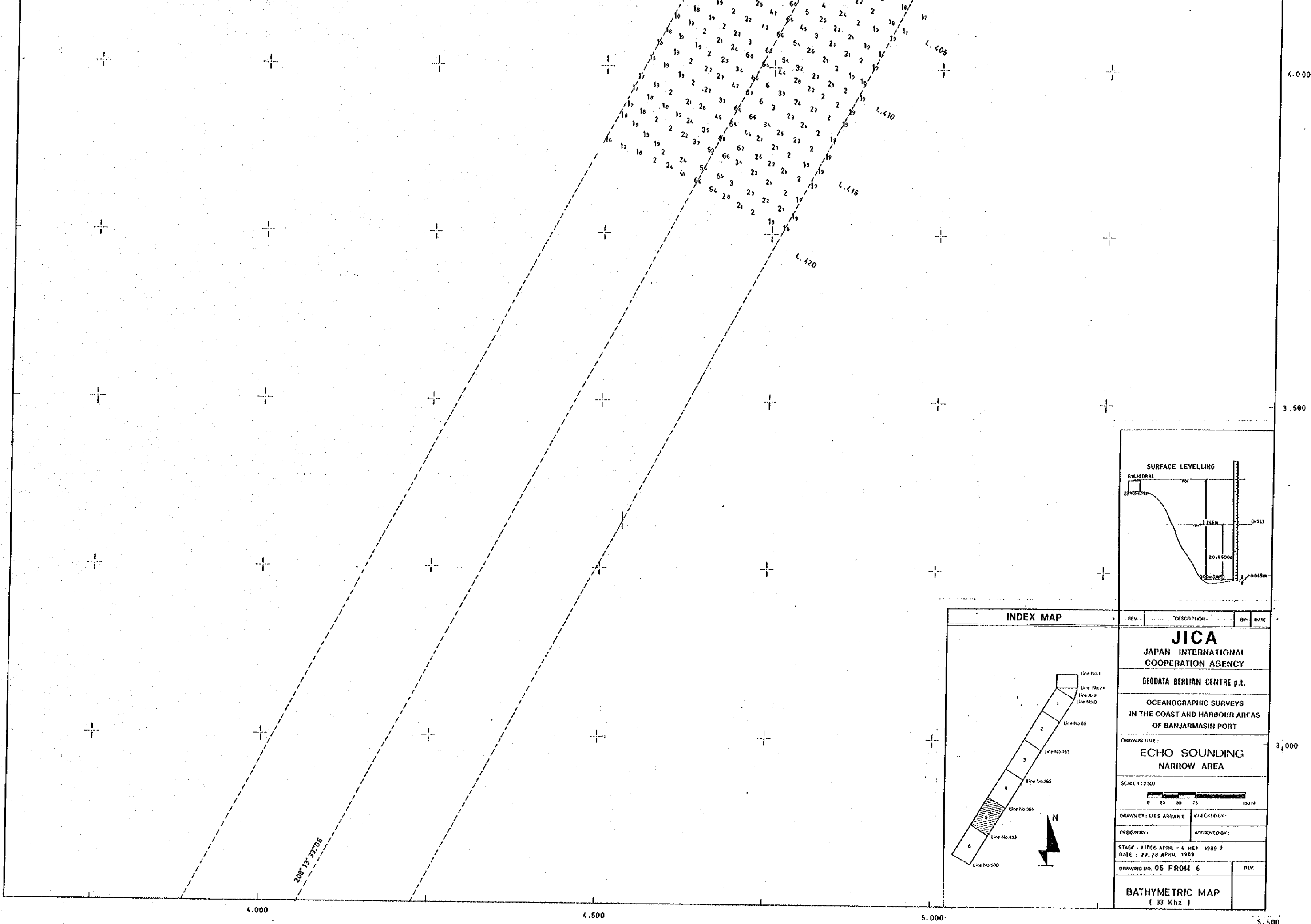
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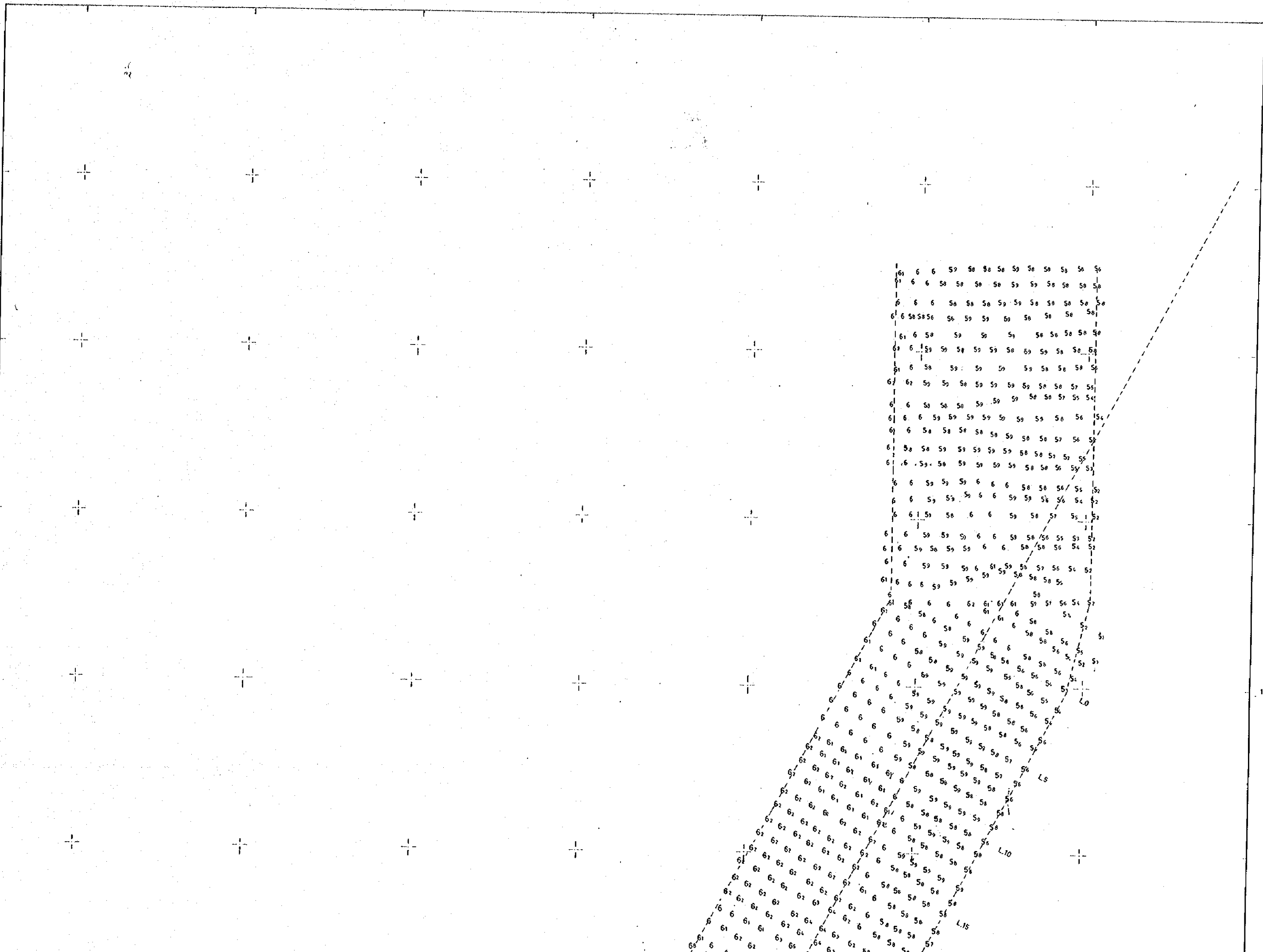
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6.750





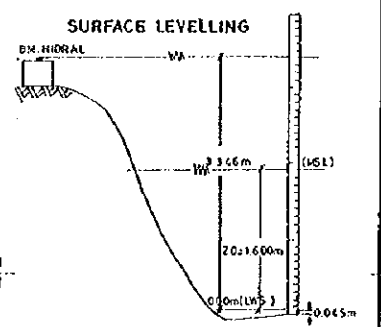
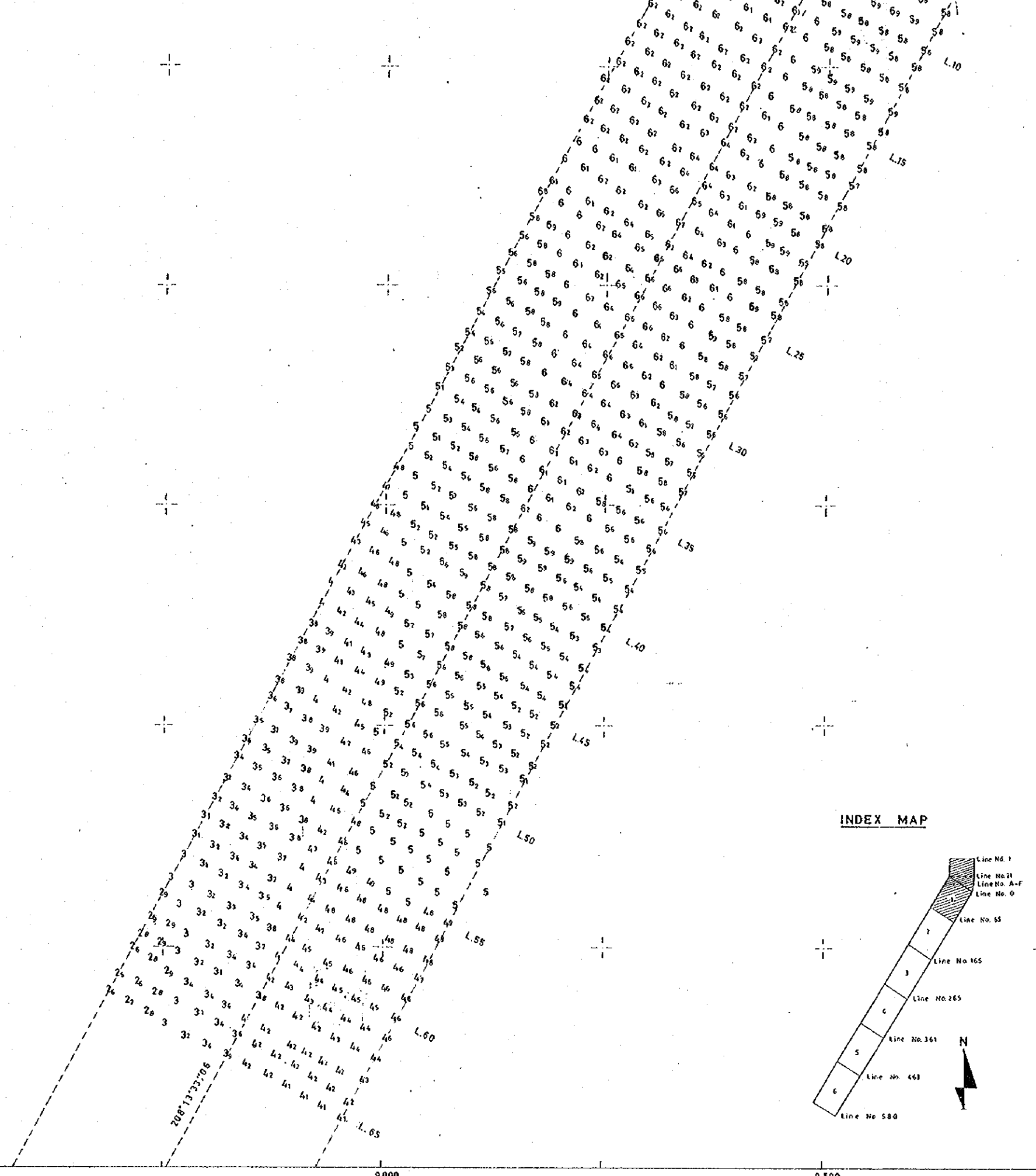
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GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE:			
ECHO SOUNDING NARROW AREA			
SCALE 1:2500			
DRAWN BY: LIES ARWANE		CHECKED BY:	
DESIGN BY:		APPROVED BY:	
STAGE: 71 (6 APRIL - 4 MAY 1989)			
DATE: 27, 28 APRIL 1989			
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BATHYMETRIC MAP (33 KHz)			



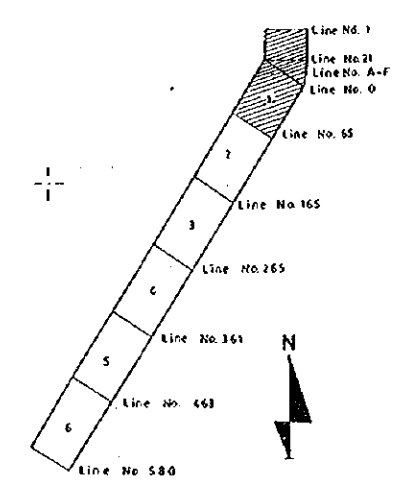
12.500

12.000

11.500



INDEX MAP



REV	DESCRIPTION	BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE			
ECHO SOUNDING NARROW AREA			
SCALE 1:2500			
DRAWN BY: Nadi S.		CHECKED BY:	
DESIGNED BY:		APPROVED BY:	
STAGE 8th (25 MAY - 3 JUNE 1989)			
DATE 03.04 JUNE 1989			
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BATHYMETRIC MAP			

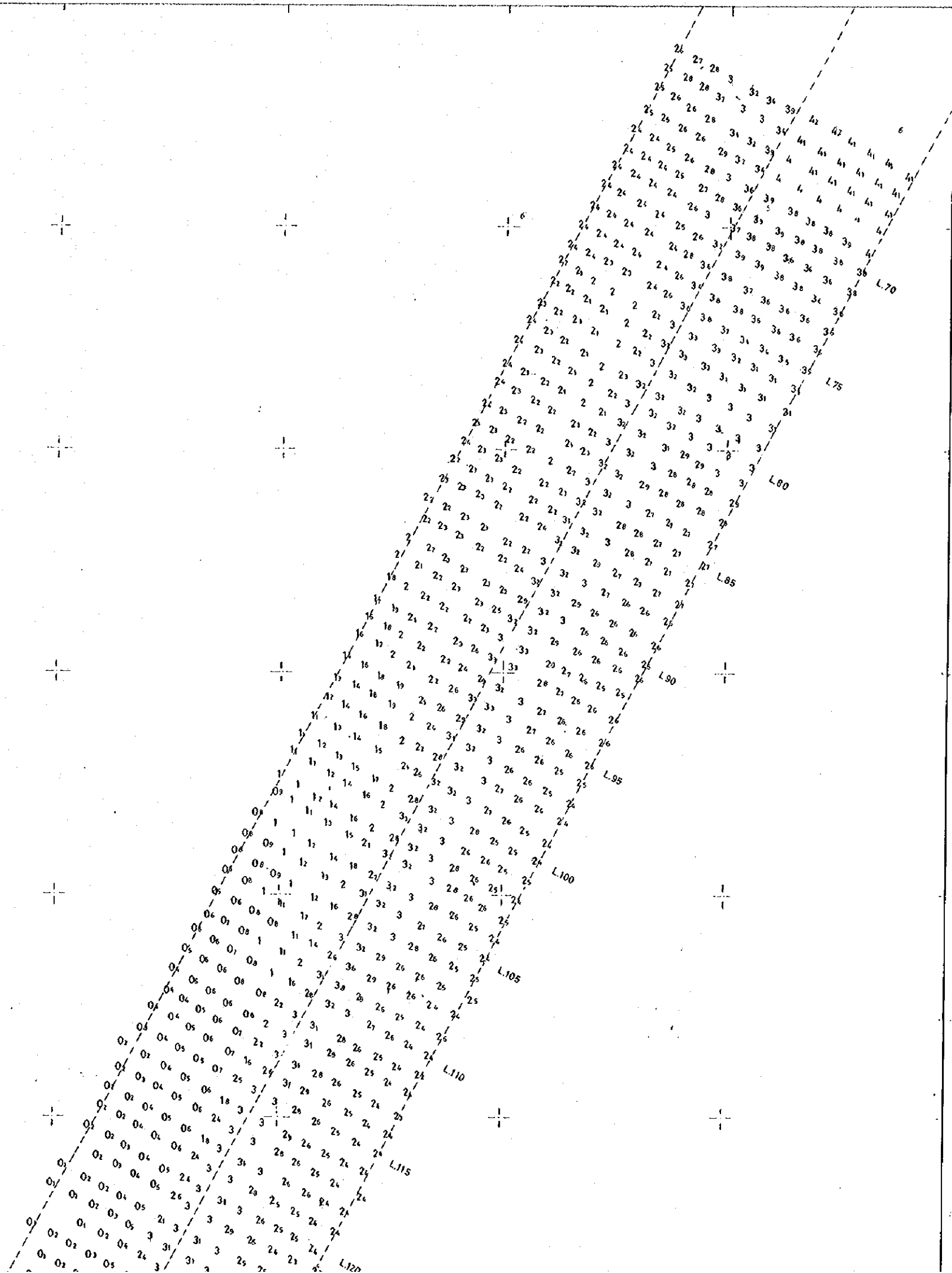
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8.500

9.000

9.500

10.000



10.500

10.000

9.500

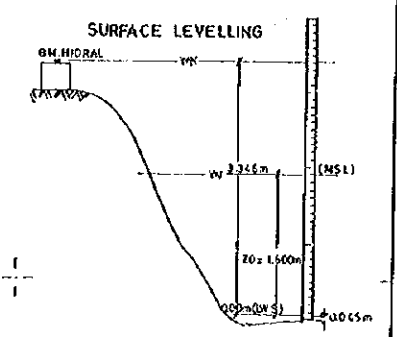
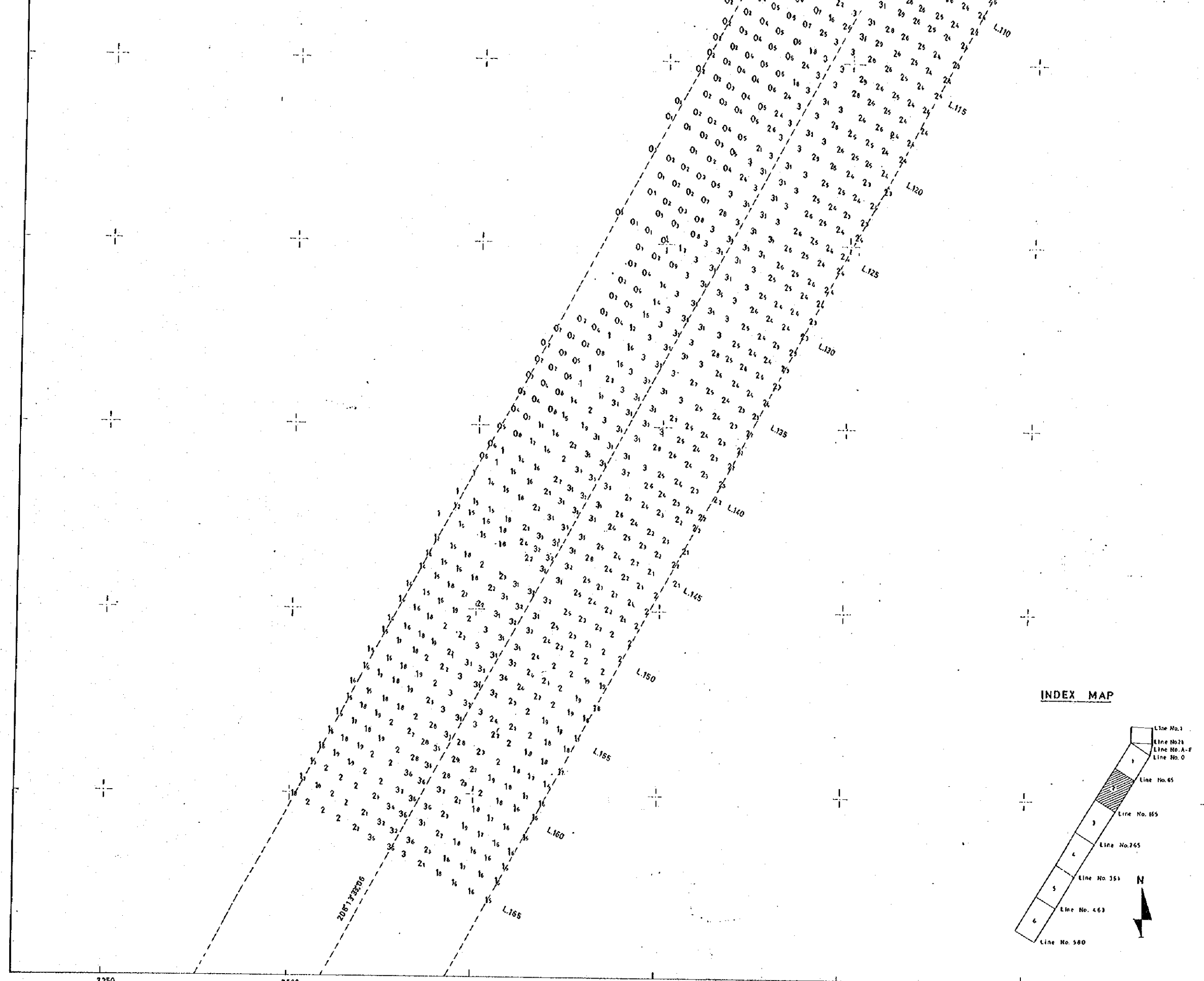
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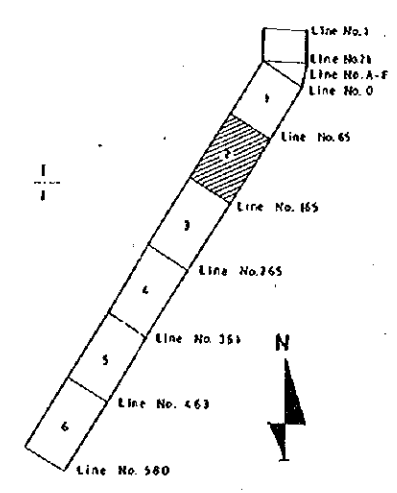
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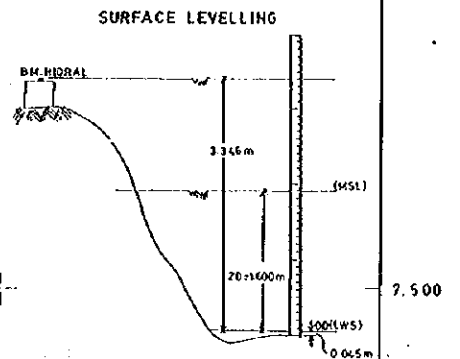
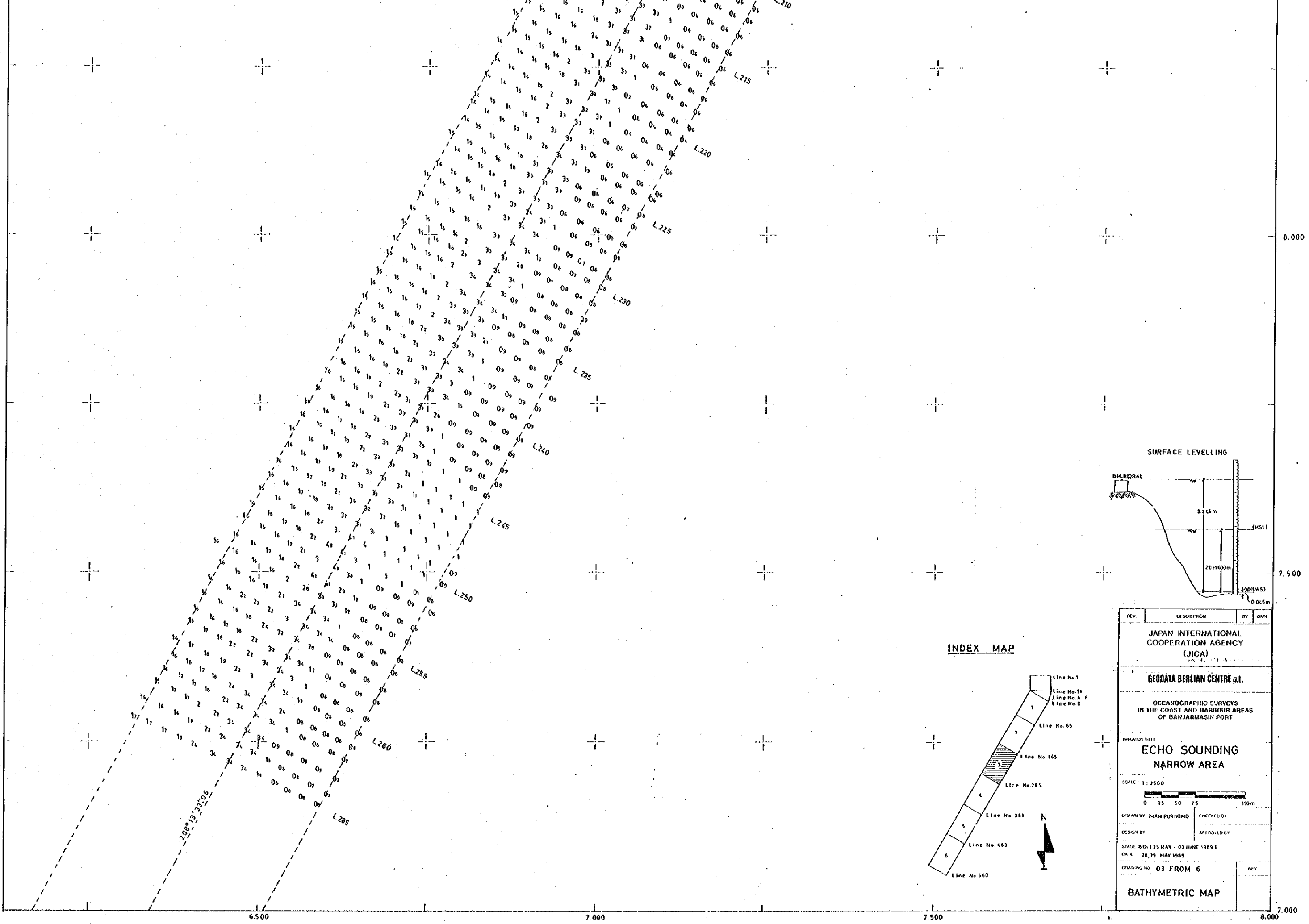
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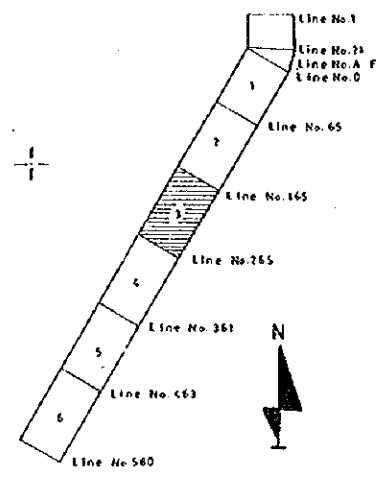
INDEX MAP



REV.	DESCRIPTION	BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
GEODATA BERLIAN CENTRE p.l.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING FILE			
ECHO SOUNDING			
NARROW AREA			
SCALE 1:1500			
DRAWN BY: HODI. S.		CHECKED BY:	
DESIGNED BY:		APPROVED BY:	
STAGE 6th (25 MAY - 3 JUNE 1989)			
DATE 19 MAY, 3 JUNE 1989			
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BATHYMETRIC MAP			



INDEX MAP



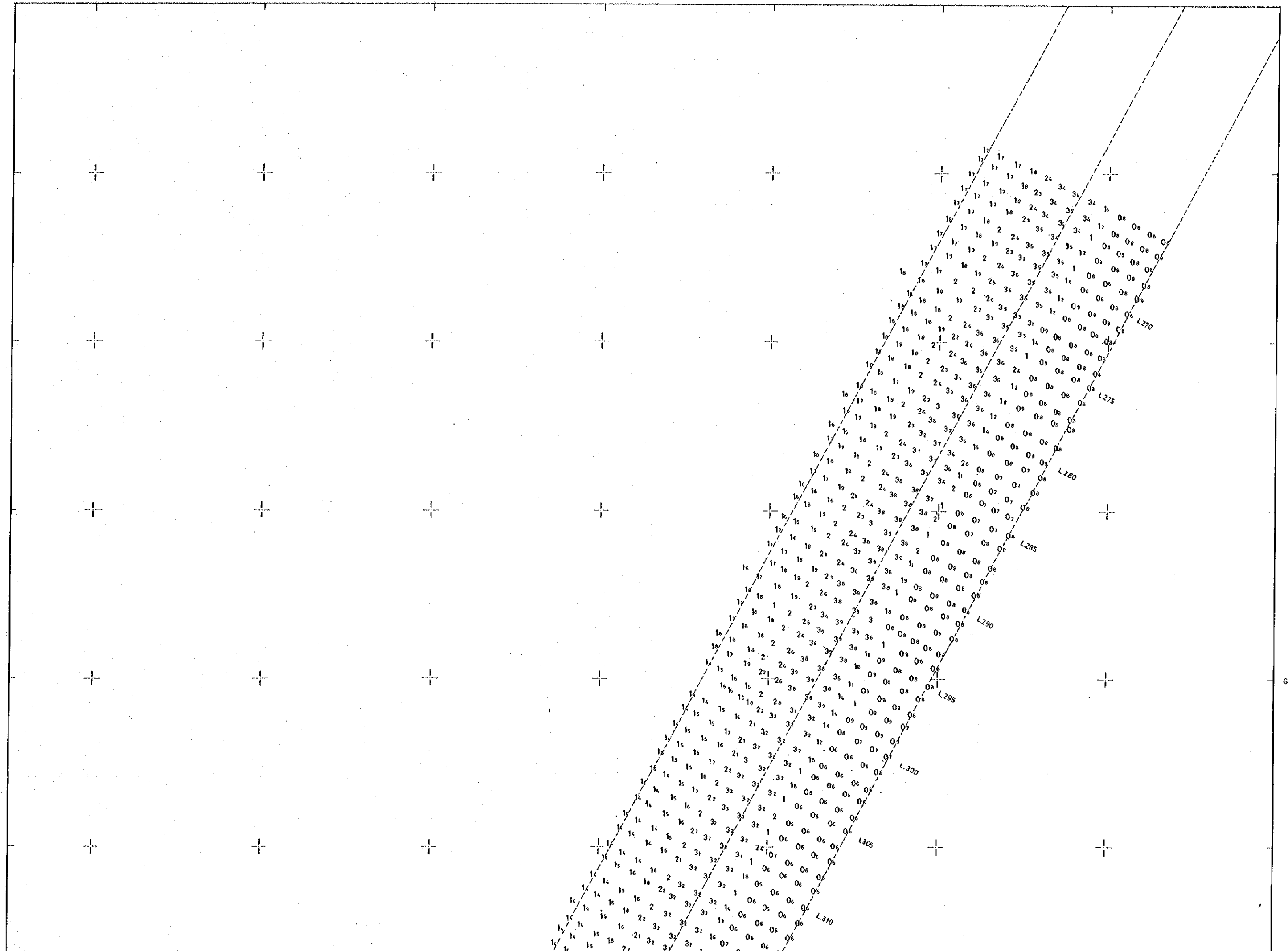
REV.	DESCRIPTION	BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE			
ECHO SOUNDING NARROW AREA			
SCALE: 1: 2500			
DRAWN BY: SWAM PURNOMO		CHECKED BY:	
DESIGNED BY:		APPROVED BY:	
STAGE: 0th. (31 MAY - 03 JUNE 1989)			
DATE: 28, 29 MAY 1989			
DRAWING NO. 03 FROM 6			REV.
BATHYMETRIC MAP			

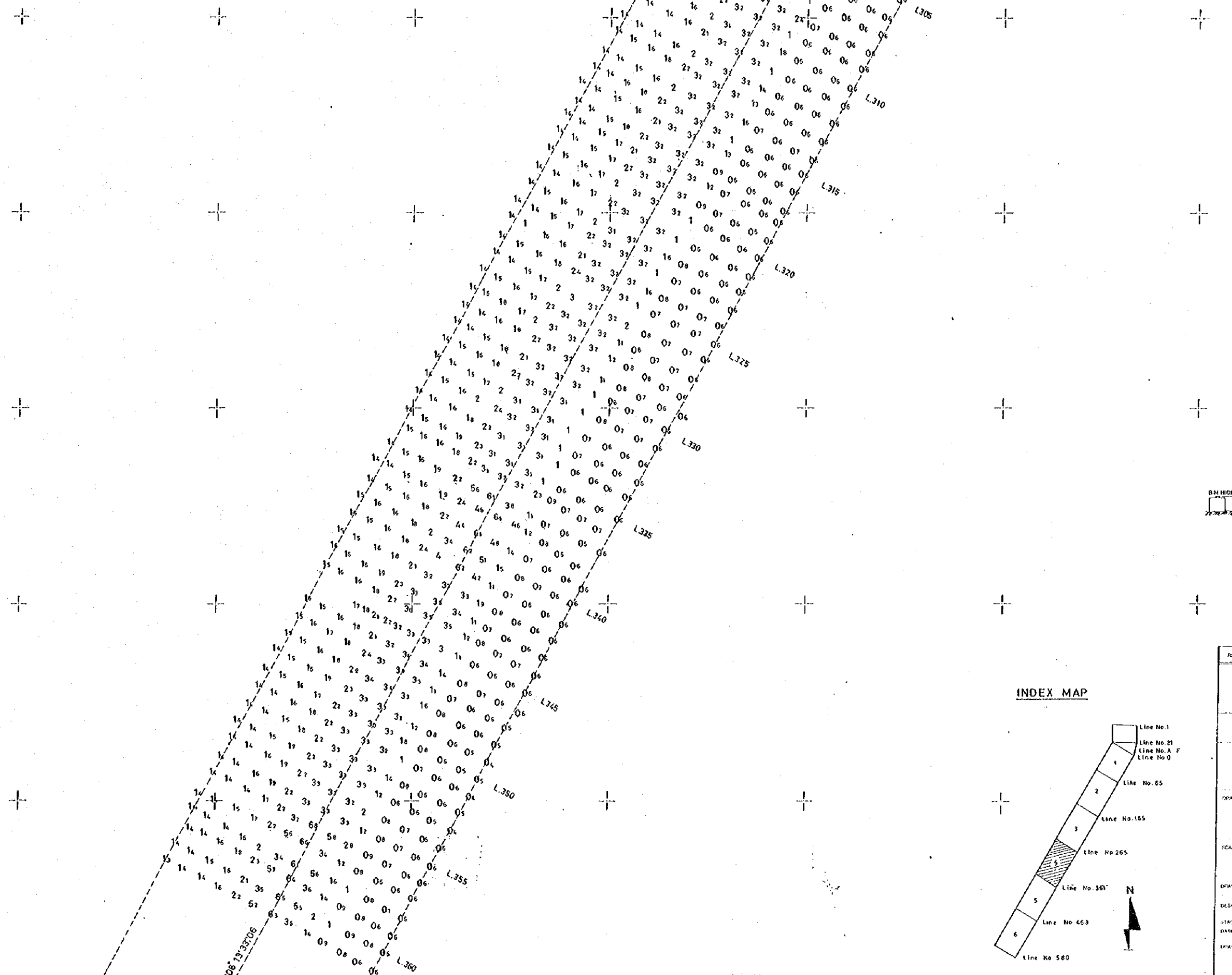
5.250

6.750

6.250

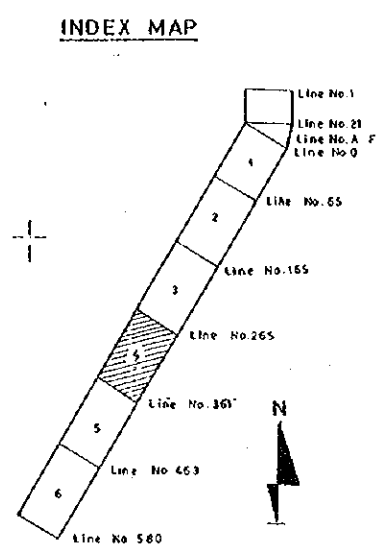
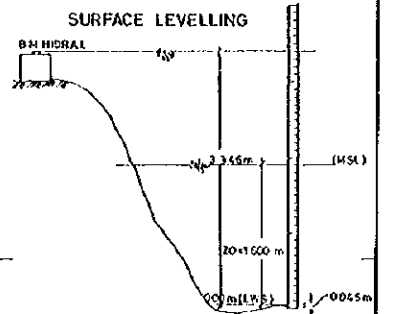
7.500





6.000

5.500



REV.	DESCRIPTION	BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE			
ECHO SOUNDING NARROW AREA			
SCALE 1:2500			
DRAWN BY LIES ARYANIE		CHECKED BY	
DESIGNED BY		APPROVED BY	
STAGE 04 (25 May - 3 June 1989)			
DATE 27 28 May 1989			
DRAWING NO. 04 FROM 6			
BATHYMETRIC MAP			

4.000

4.500

5.000

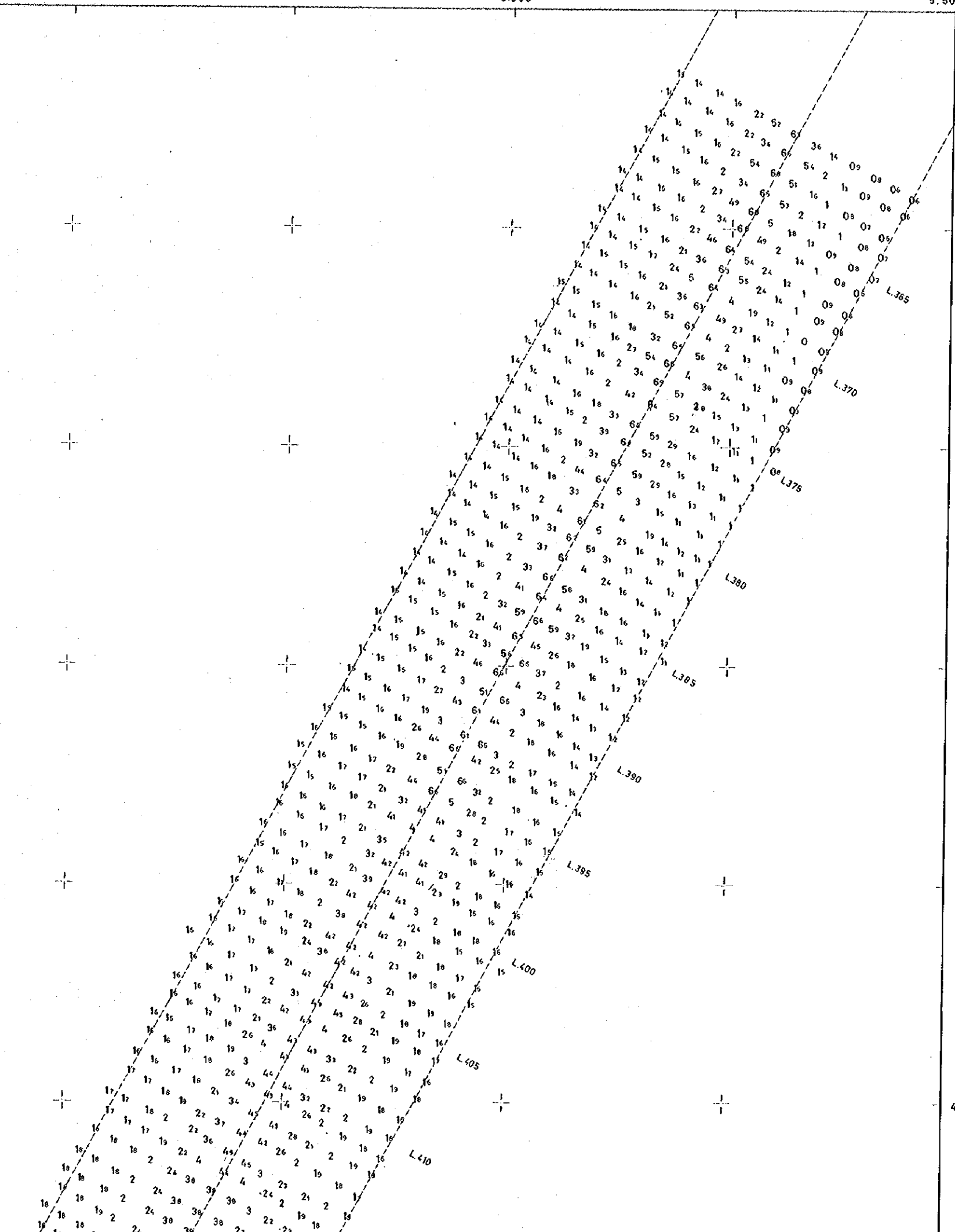
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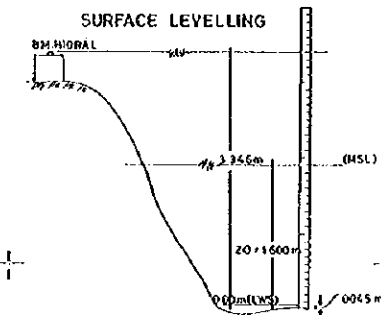
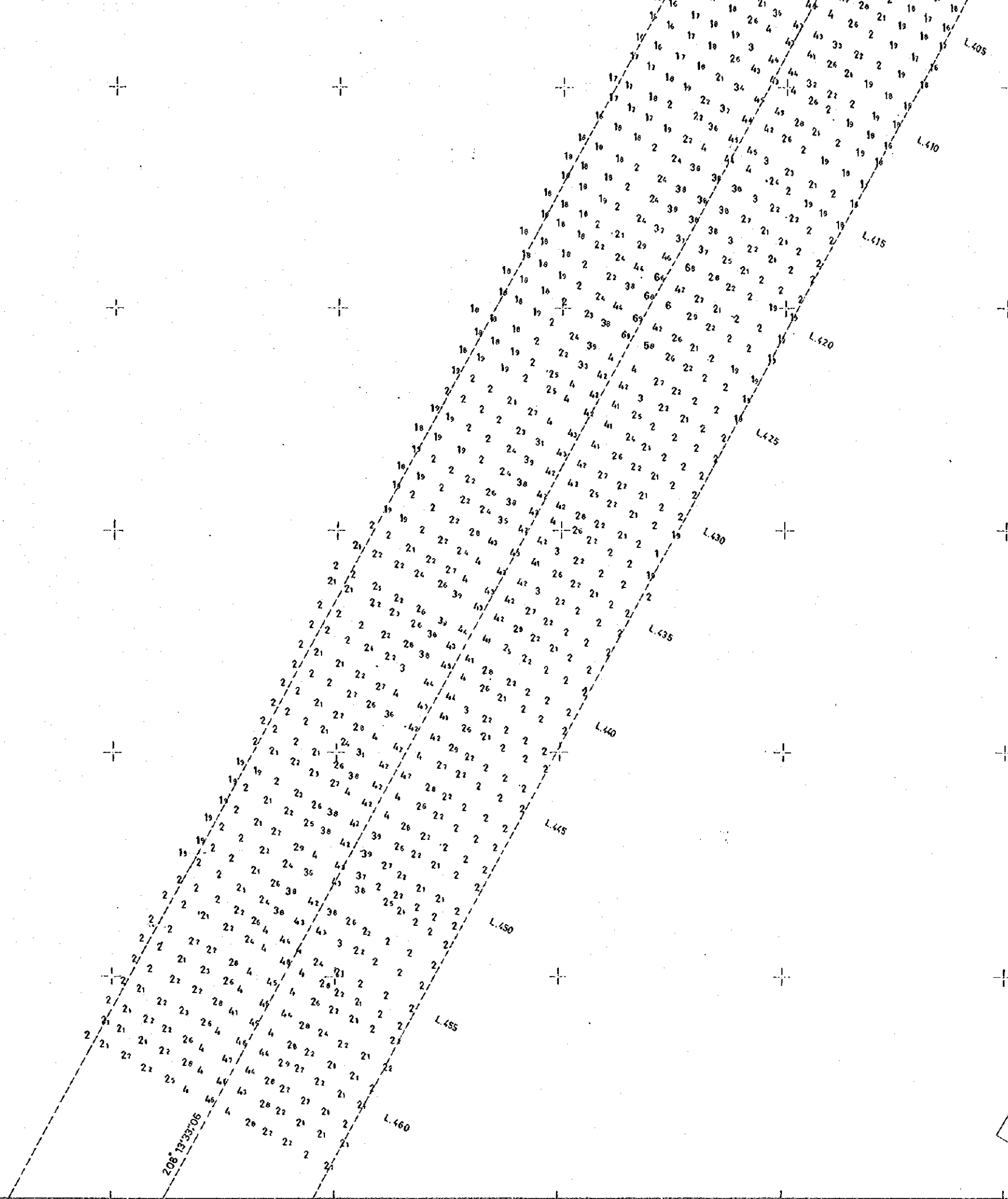
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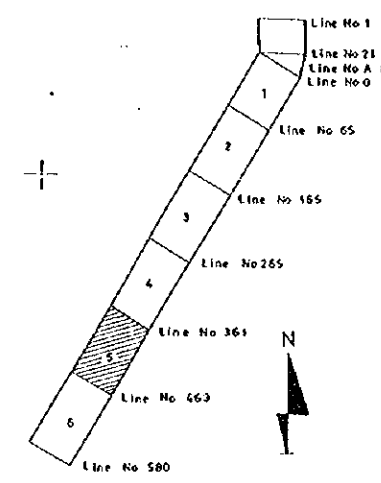
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3.500

3.000



INDEX MAP



REV.	DESCRIPTION	BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF DANJARMASIN PORT			
GRAPHIC TITLE			
ECHO SOUNDING NARROW AREA			
SCALE 1:2500			
DRAWN BY: LIES ARWANE		CHECKED BY:	
DESIGNED BY:		APPROVED BY:	
STAGE: 05 FROM 6			
DATE: 26.27 May 1989			
GRAPHIC NO: 05 FROM 6			
BATHYMETRIC MAP			

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3.000

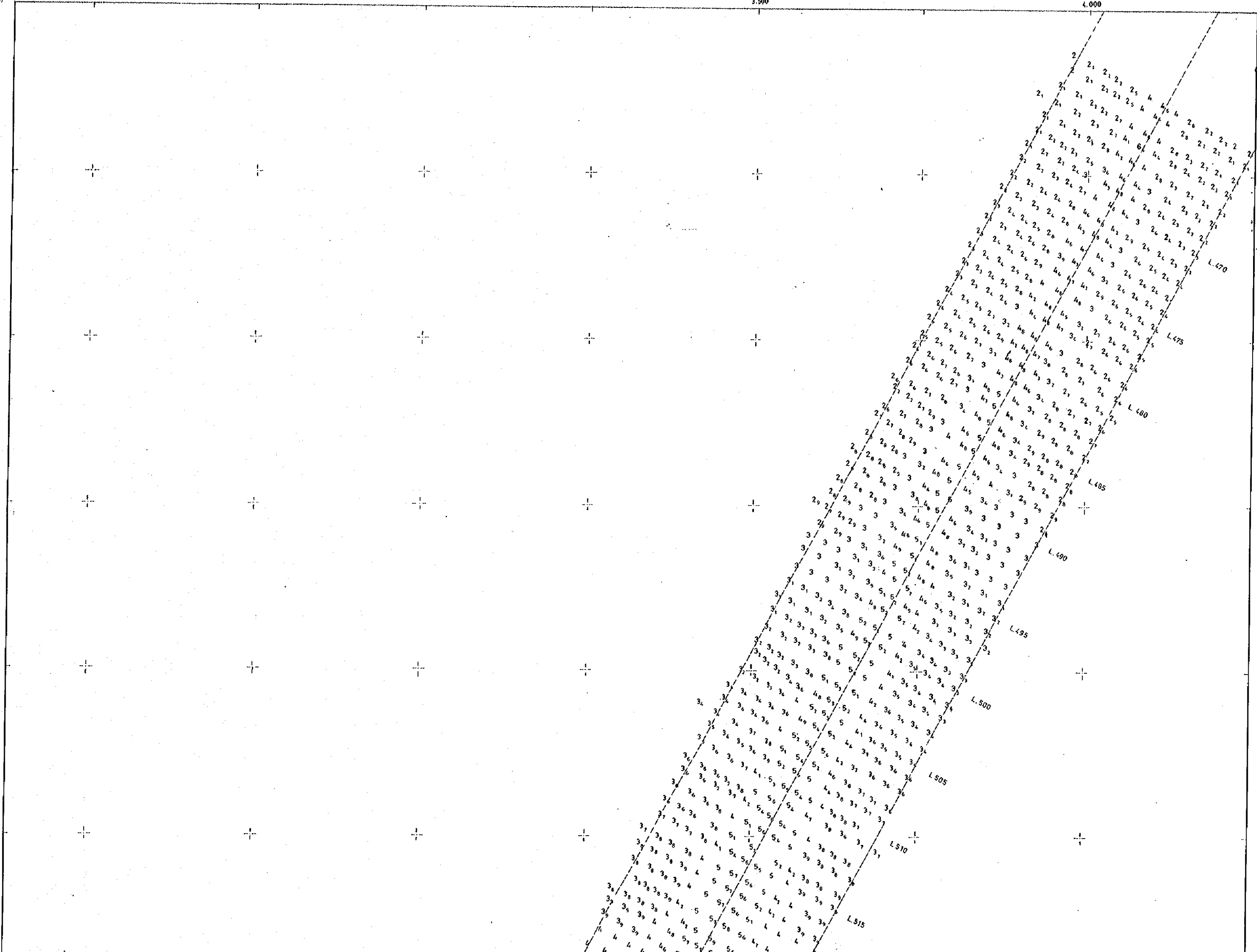
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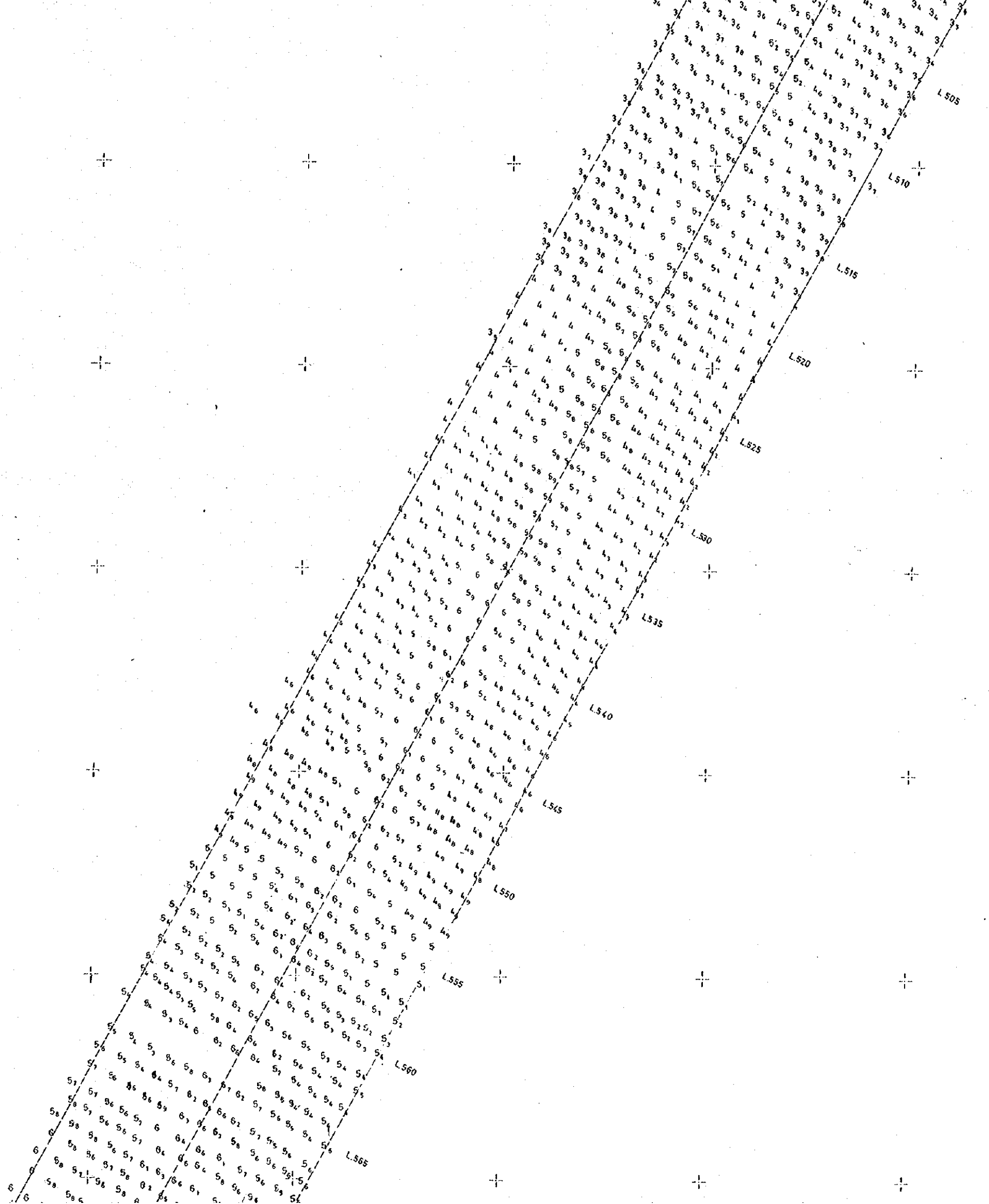
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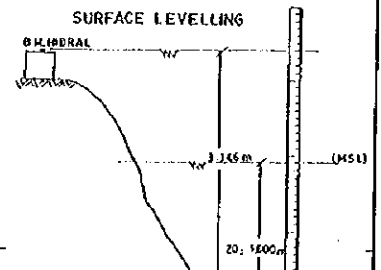


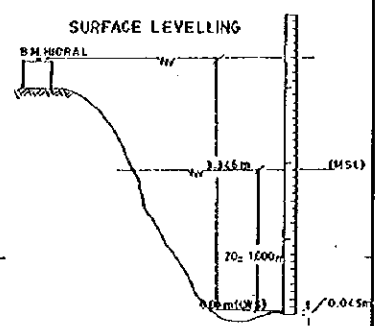
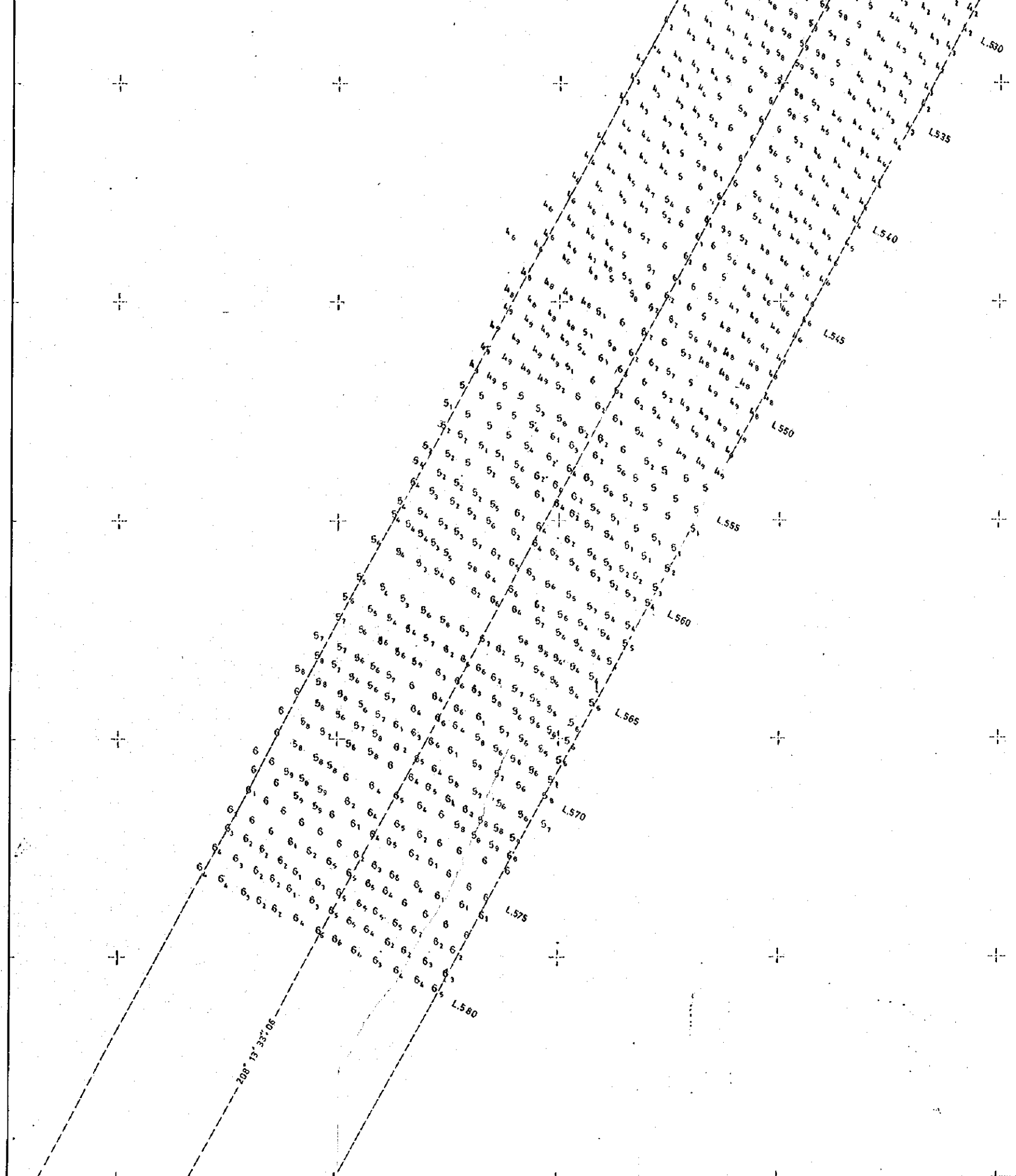


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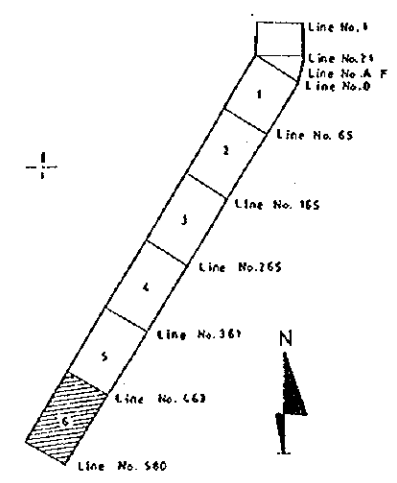
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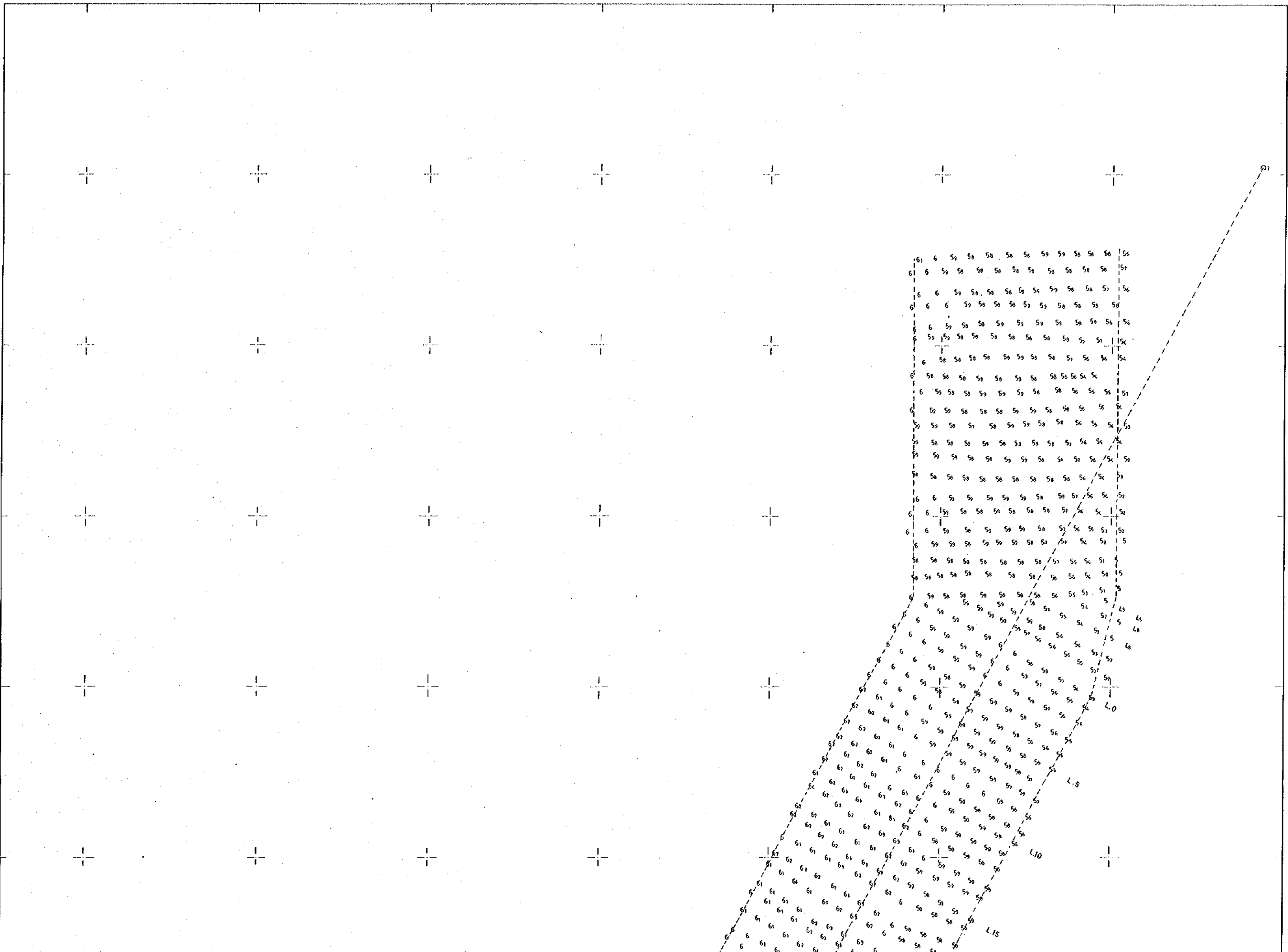


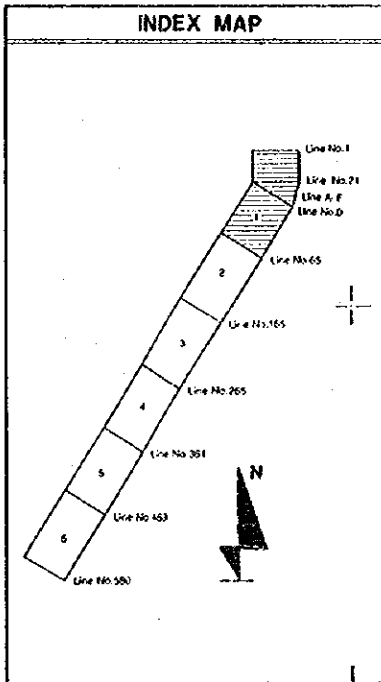
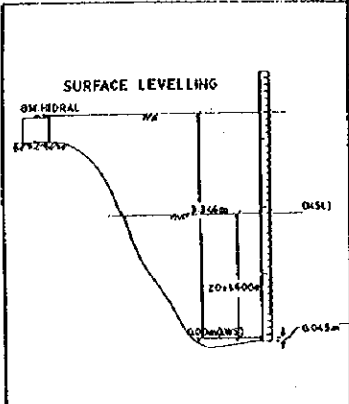
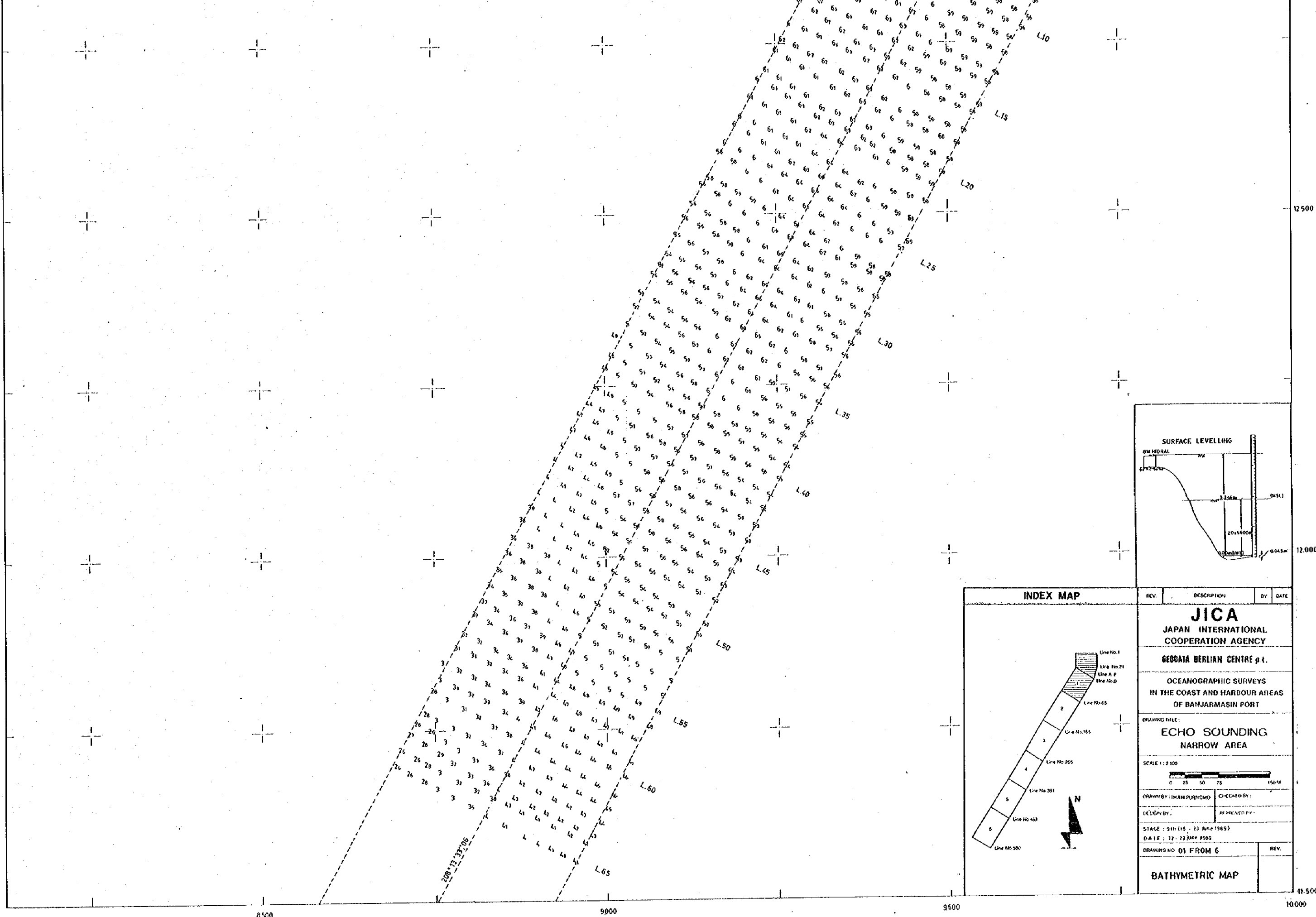


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REV.	DESCRIPTION	BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE			
ECHO SOUNDING NARROW AREA			
SCALE 1: 2500			
DRAWN BY M. GHOLIB		CHECKED BY	
DESIGNED BY		APPROVED BY	
STAR: 06 FROM 25 MAY 3 JUNI 1989			
DATE: 25, 26 MAY 1989			
DRAWING NO: 06 FROM 6			
BATHYMETRIC MAP			





REV.	DESCRIPTION	BY	DATE
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			
GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE:			
ECHO SOUNDING NARROW AREA			
SCALE 1:2500			
DRAWN BY: IMAM PURNOMO		CHECKED BY:	
LAYOUT BY:		REPRESENT BY:	
STAGE : 911 (16 - 23 APR 1989)			
DATE : 27 - 29 APR 1989			
DRAWING NO 01 FROM 6			REV.
BATHYMETRIC MAP			

8500

9000

9500

11500

12500

7.500

8.000

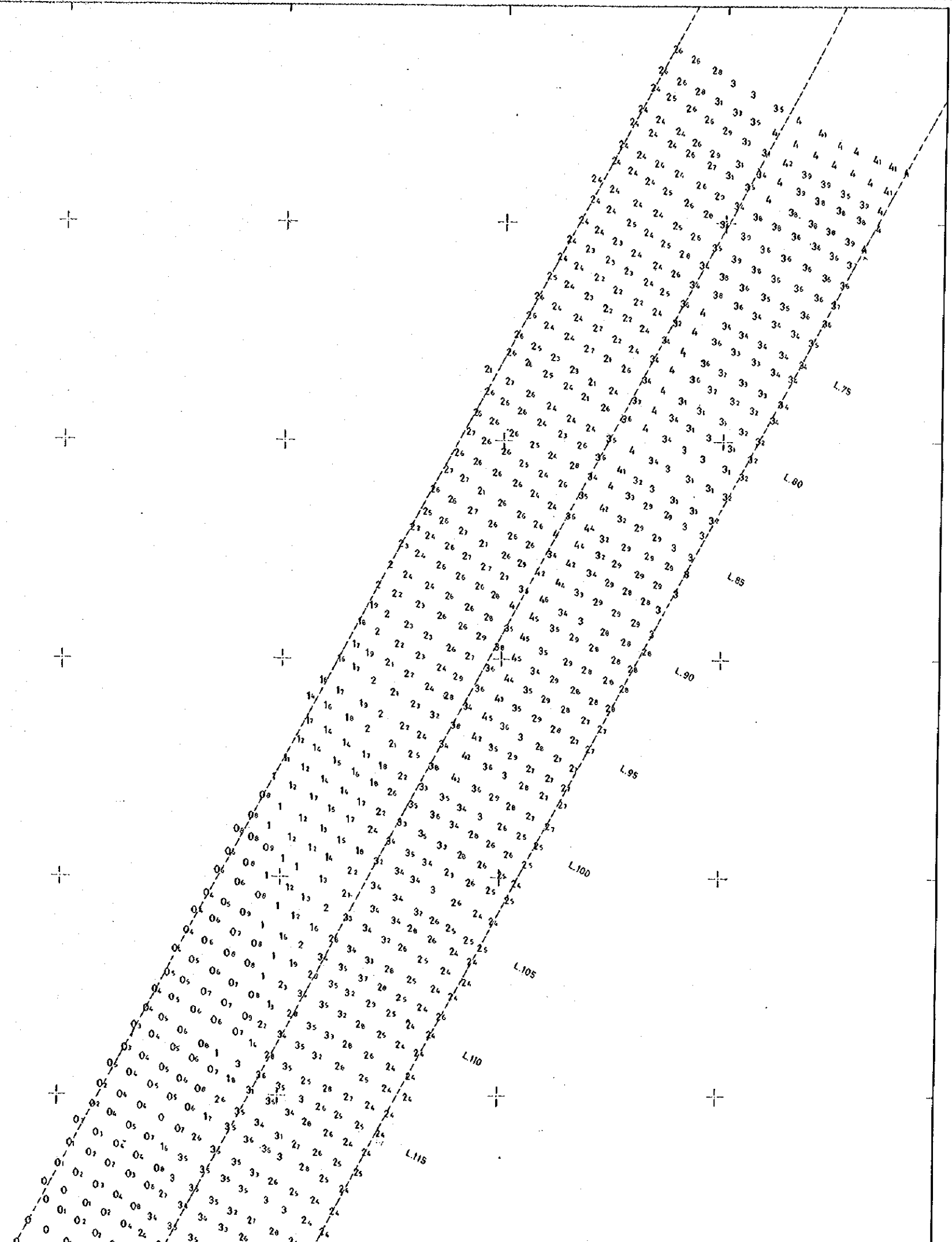
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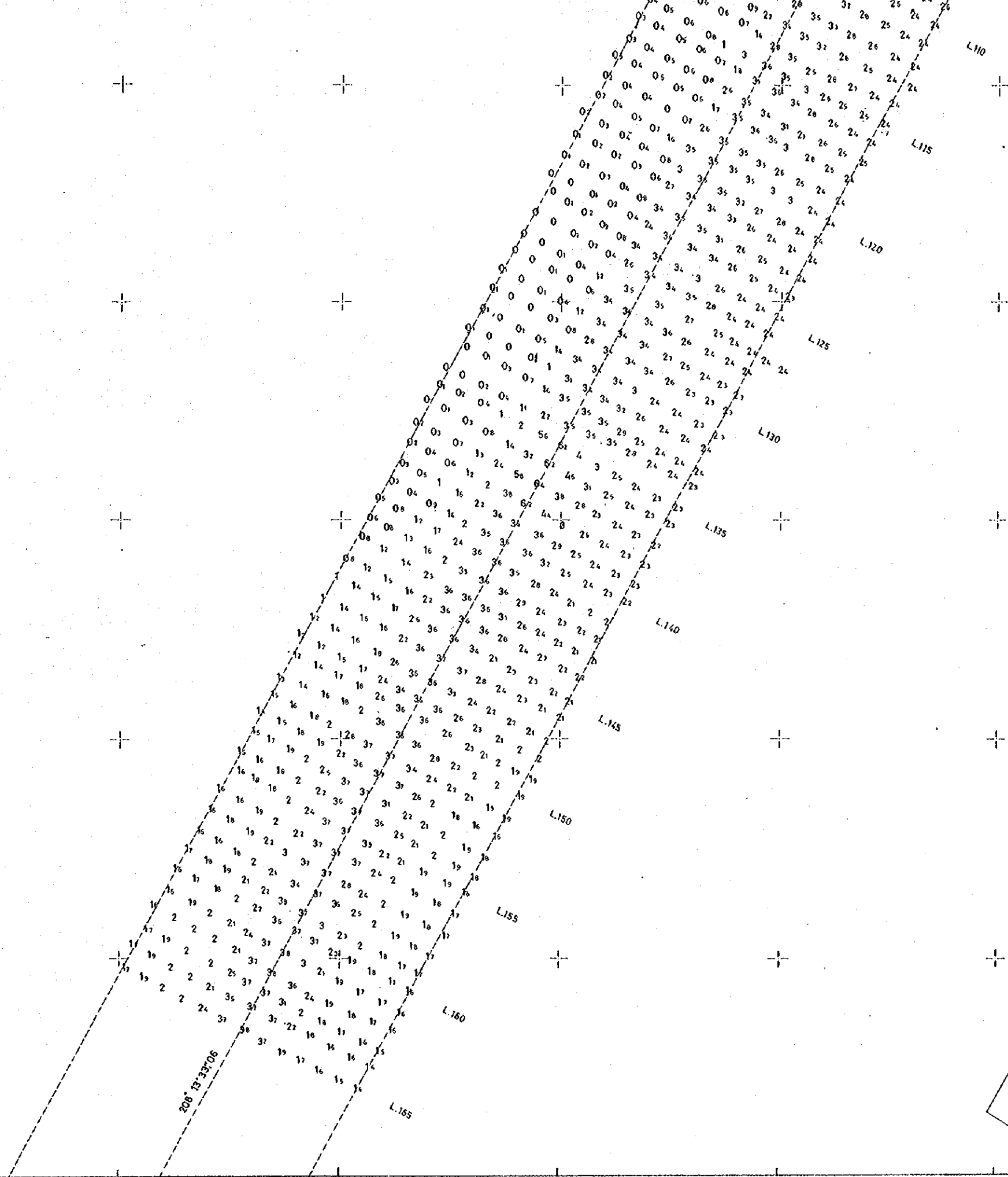
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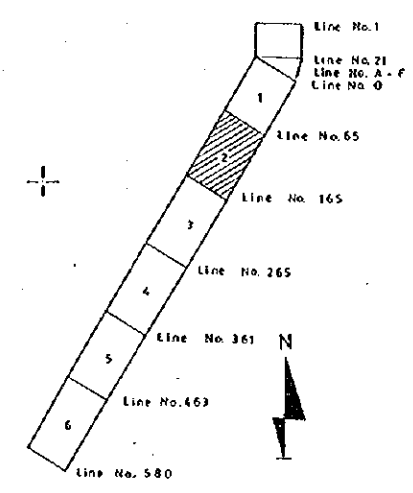
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10.750





INDEX MAP



SURFACE LEVELLING

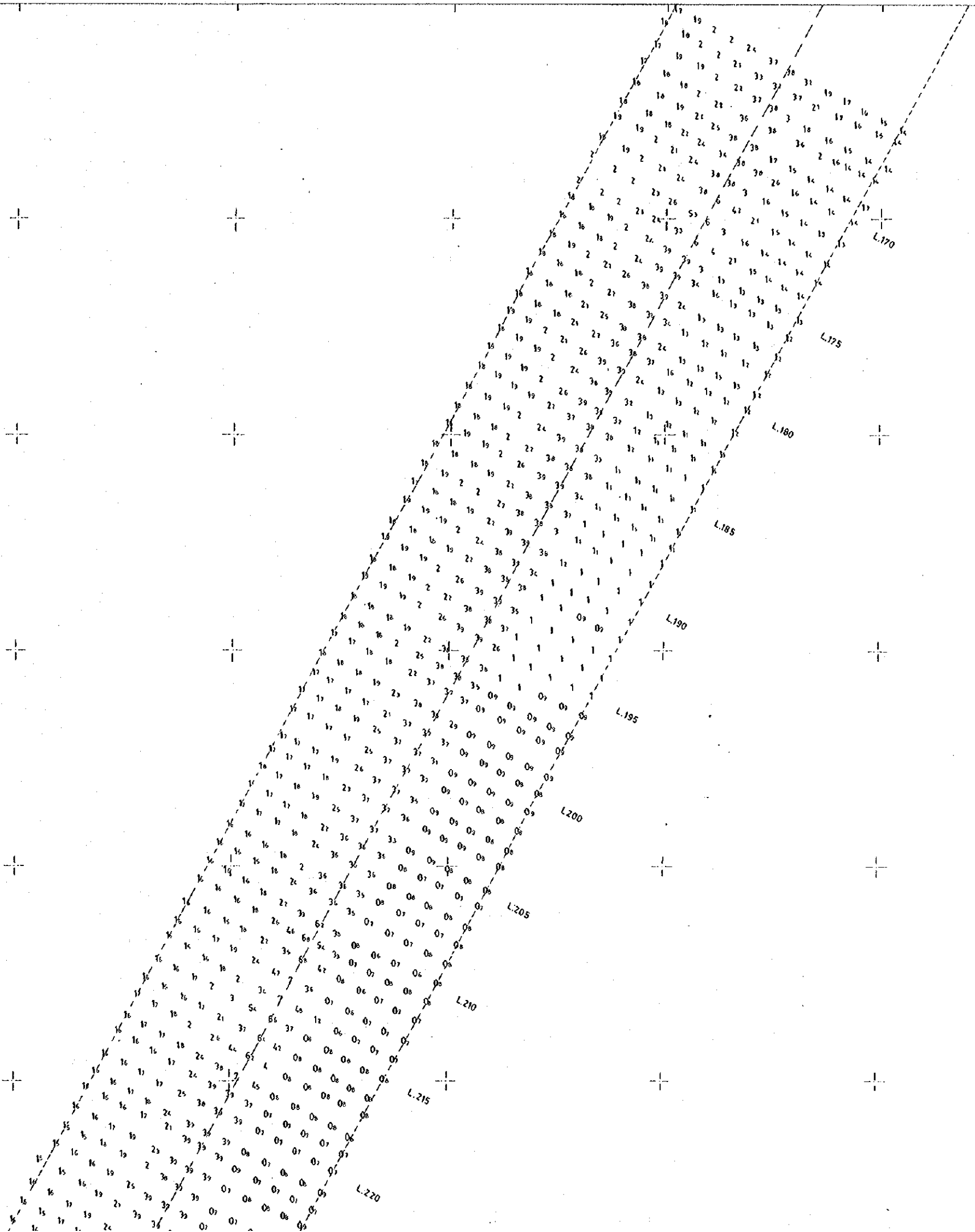
REV.	DESCRIPTION	BY	DATE
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			
GEODATA BERLIAN CENTRE P.T.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE:			
ECHO SOUNDING NARROW AREA			
SCALE: 1:2500			
0 25 50 75 100 M			
DRAWN BY: LIES ARIYANI		CHECKED BY:	
DESIGN BY:		APPROVED BY:	
STAGE: 9th (16 - 23 June 1989)			
DATE: 21, 22 June 1989			
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BATHYMETRIC MAP			

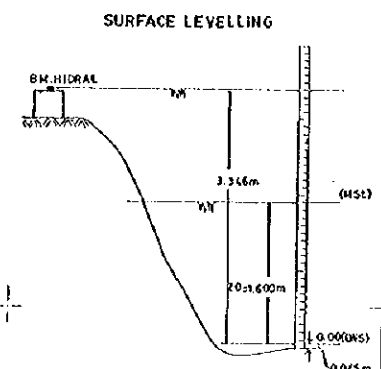
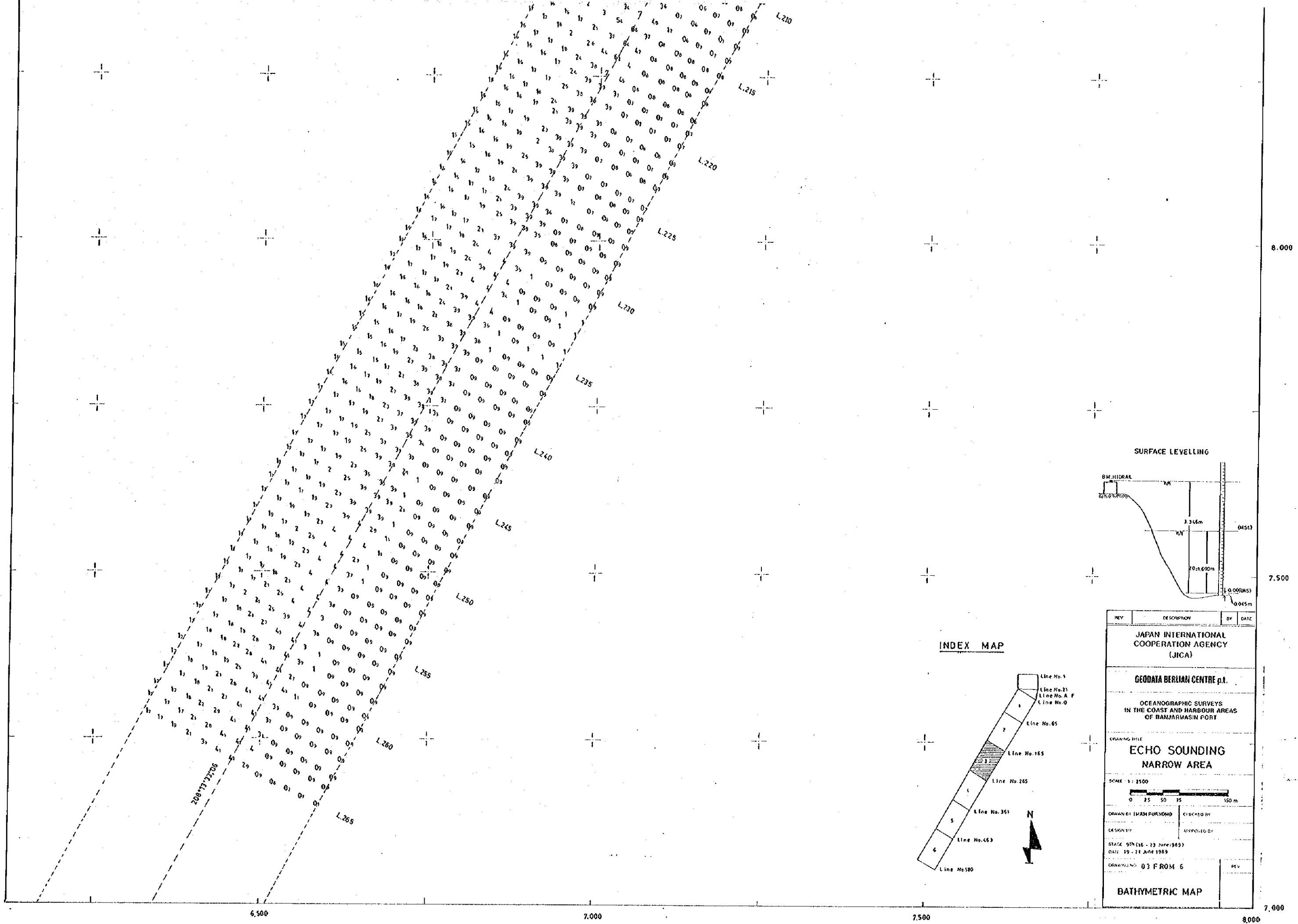
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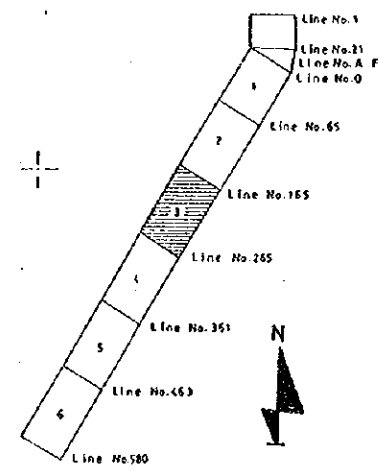
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9.250





INDEX MAP



REV	DESCRIPTION	BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE			
ECHO SOUNDING NARROW AREA			
SCALE 1:1500			
0 25 50 75 100 m			
DRAWN BY: MAM PURNOMO		CHECKED BY:	
DESIGN BY:		APPROVED BY:	
STAGE: 9TH (16 - 23 June 1989)			
DATE: 19 - 21 JUNE 1989			
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BATHYMETRIC MAP			

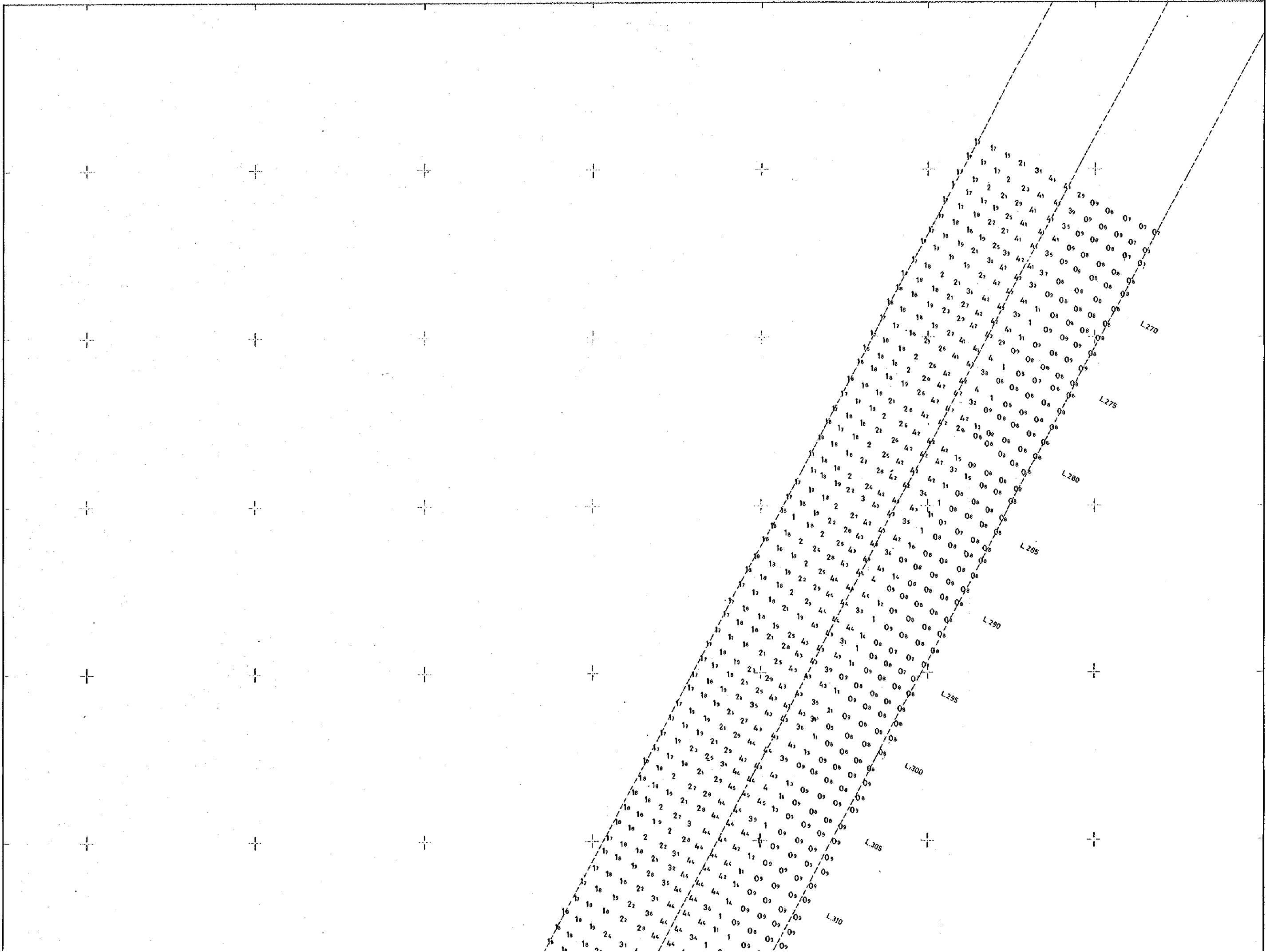
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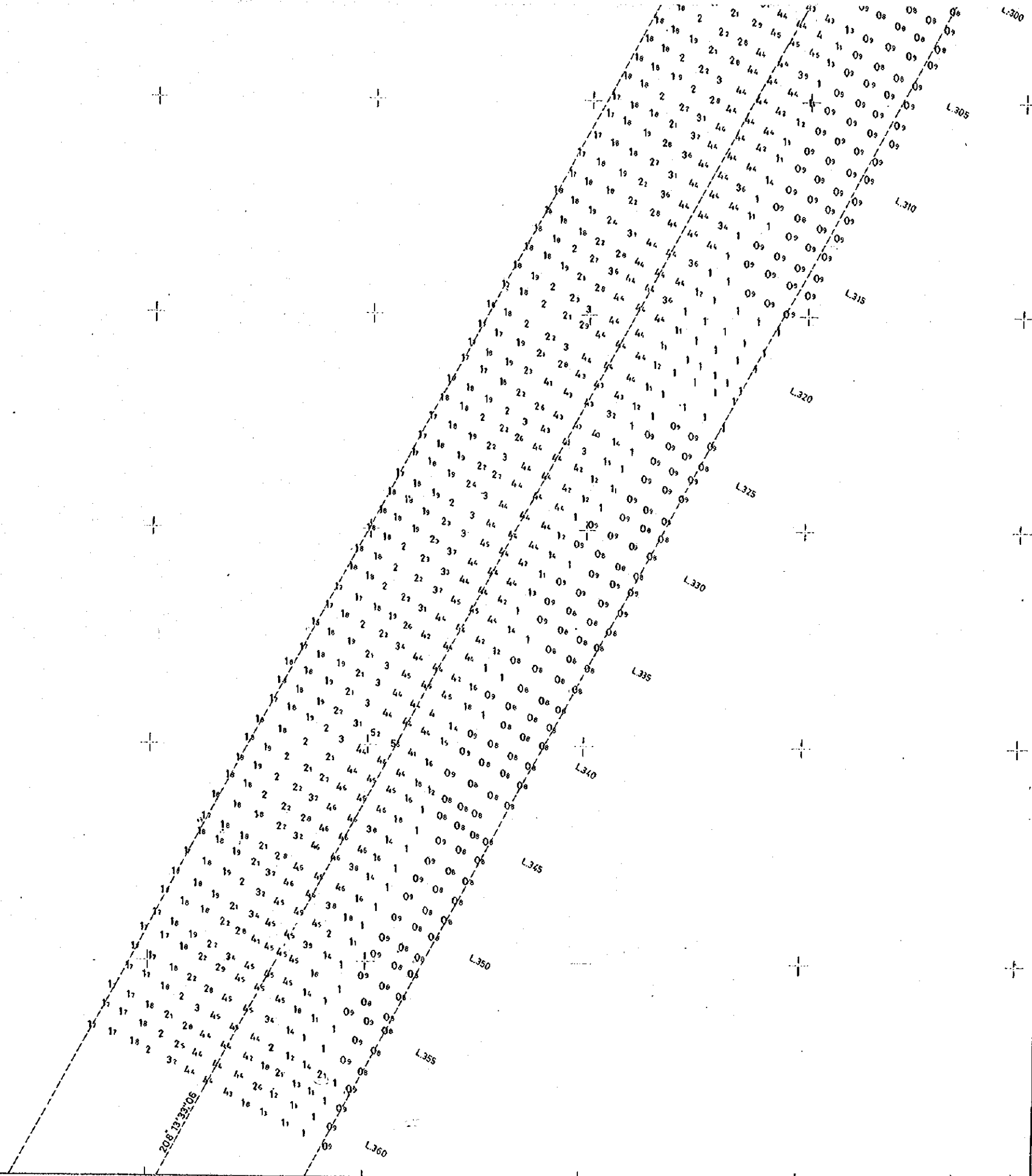
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6.250

6.750

7.500

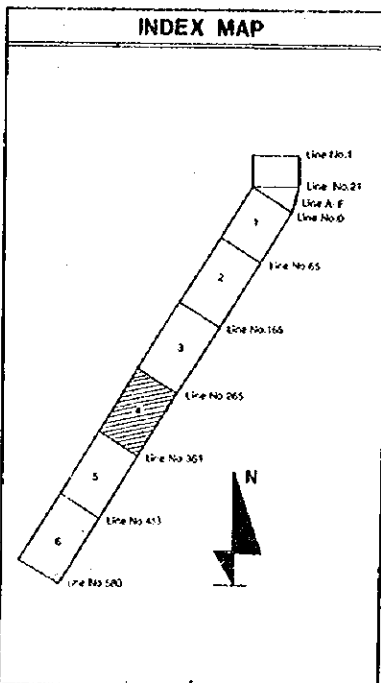
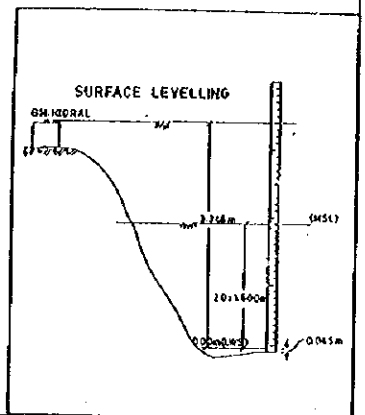




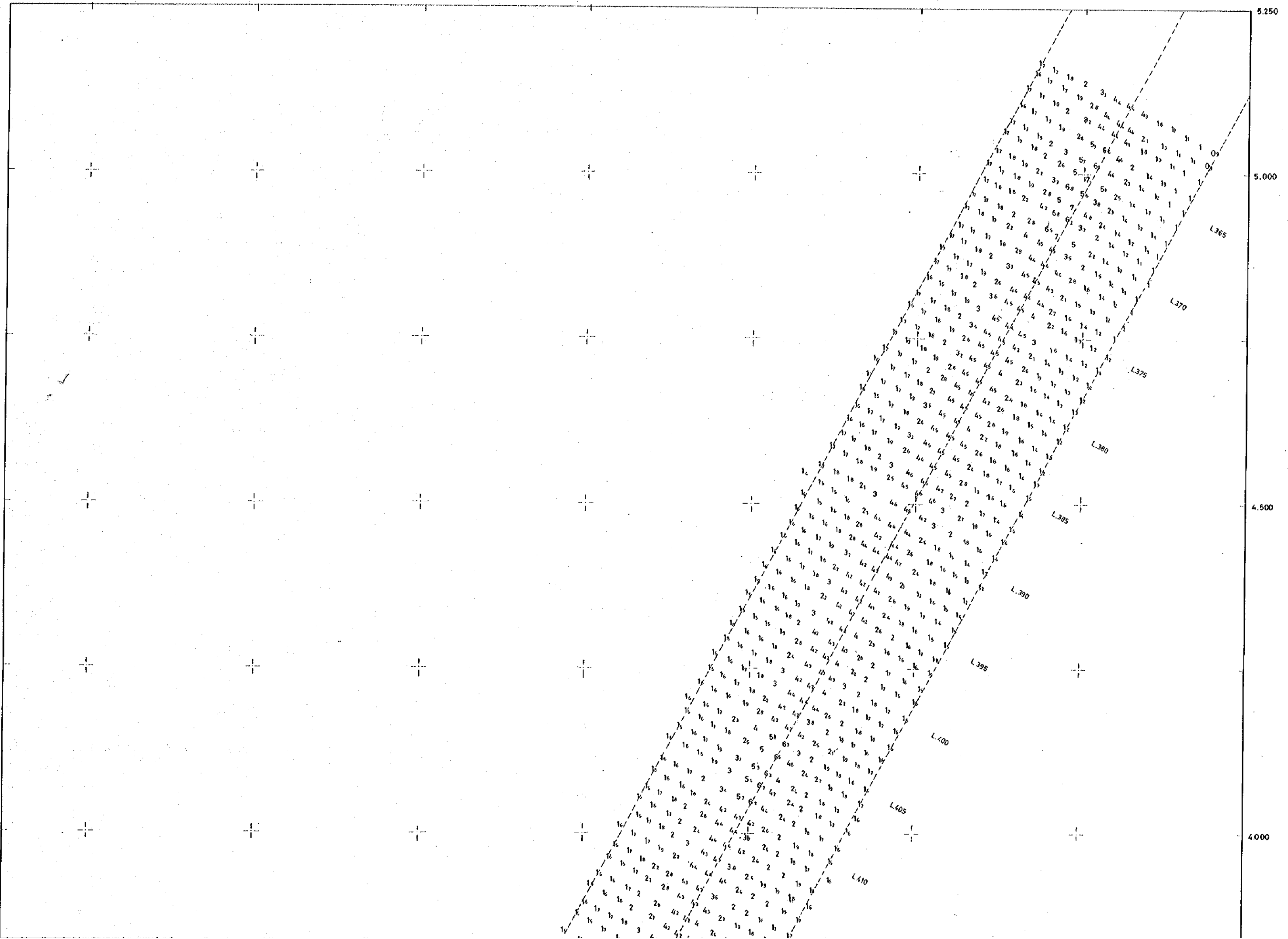
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5.500

5.000



REV	DESCRIPTION	BY	DATE
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			
GEODATA BERLIAN CENTRE p.l.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE			
ECHO SOUNDING NARROW AREA			
SCALE 1:2,500			
DRAWN BY LIES ARIYANE		CHECKED BY	
DESIGNED BY		APPROVED BY	
STAGE 5 th (16 - 23 June 1989)			
DATE 19 June 1989			
DRAWING NO 04 FROM 6			REV
BATHYMETRIC MAP			



5250

5.000

4.500

4000

L365

L370

L375

L380

L385

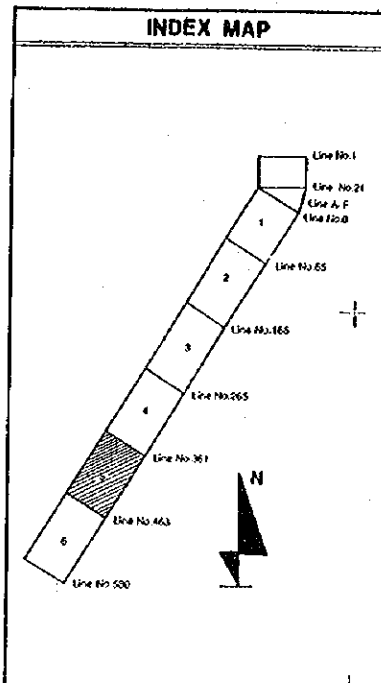
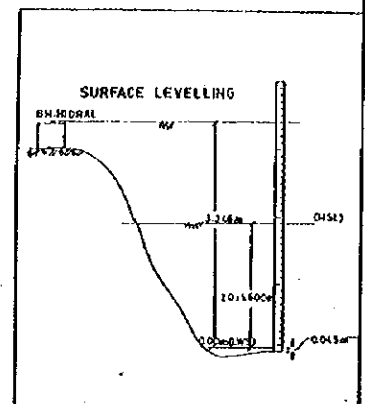
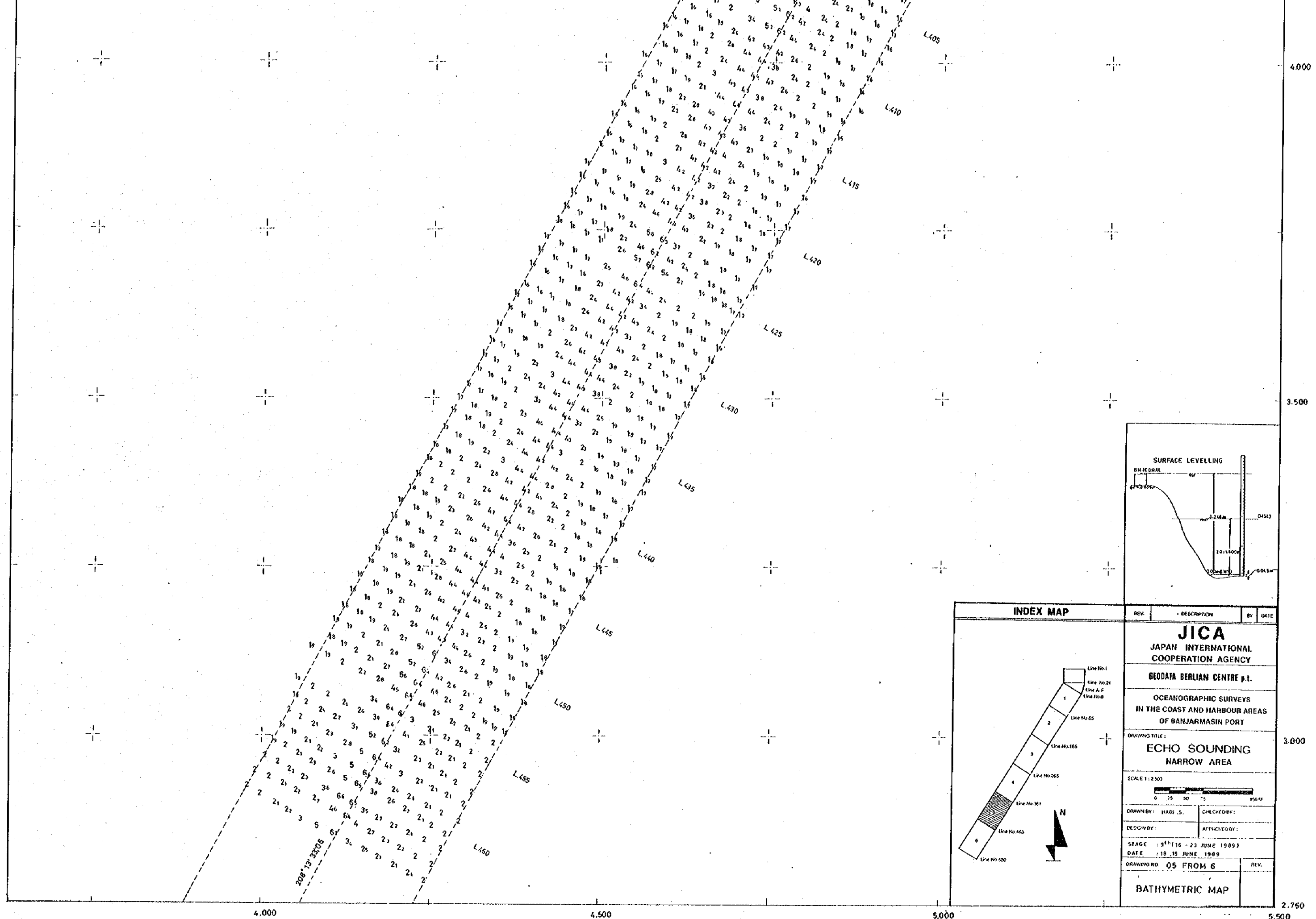
L390

L395

L400

L405

L410



REV.	DESCRIPTION	BY	DATE
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			
GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE:			
ECHO SOUNDING NARROW AREA			
SCALE 1:2500			
DRAWN BY: HADI S.		CHECKED BY:	
DESIGN BY:		APPROVED BY:	
STAGE : 3 rd (15 - 23 JUNE 1989)			
DATE : 18, 19 JUNE 1989			
DRAWING NO. 05 FROM 6			REV.
BATHYMETRIC MAP			

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3.500
3.000
2.750
5.000
5.500

2.500

3.000

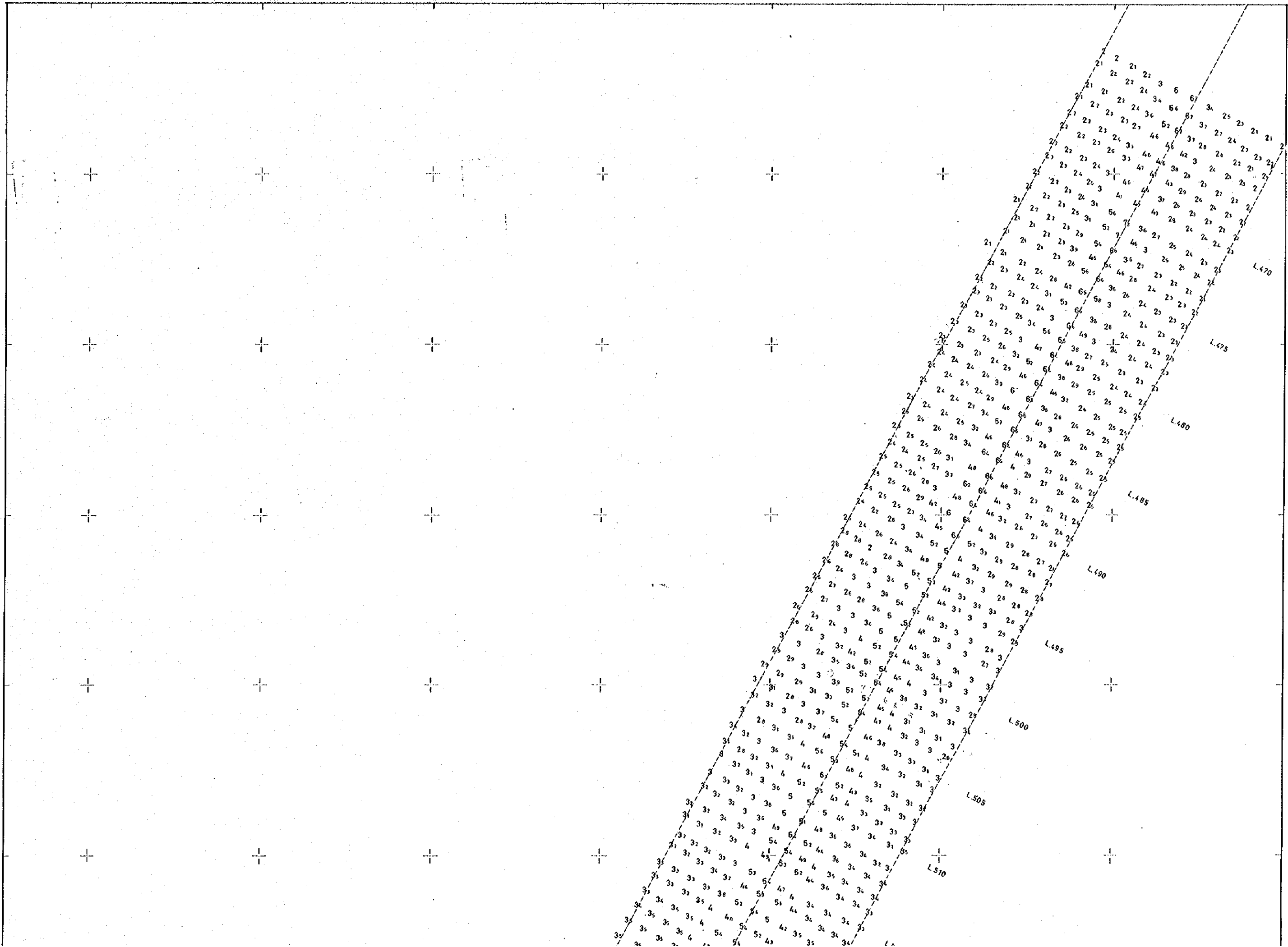
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4.000

3.000

2.500

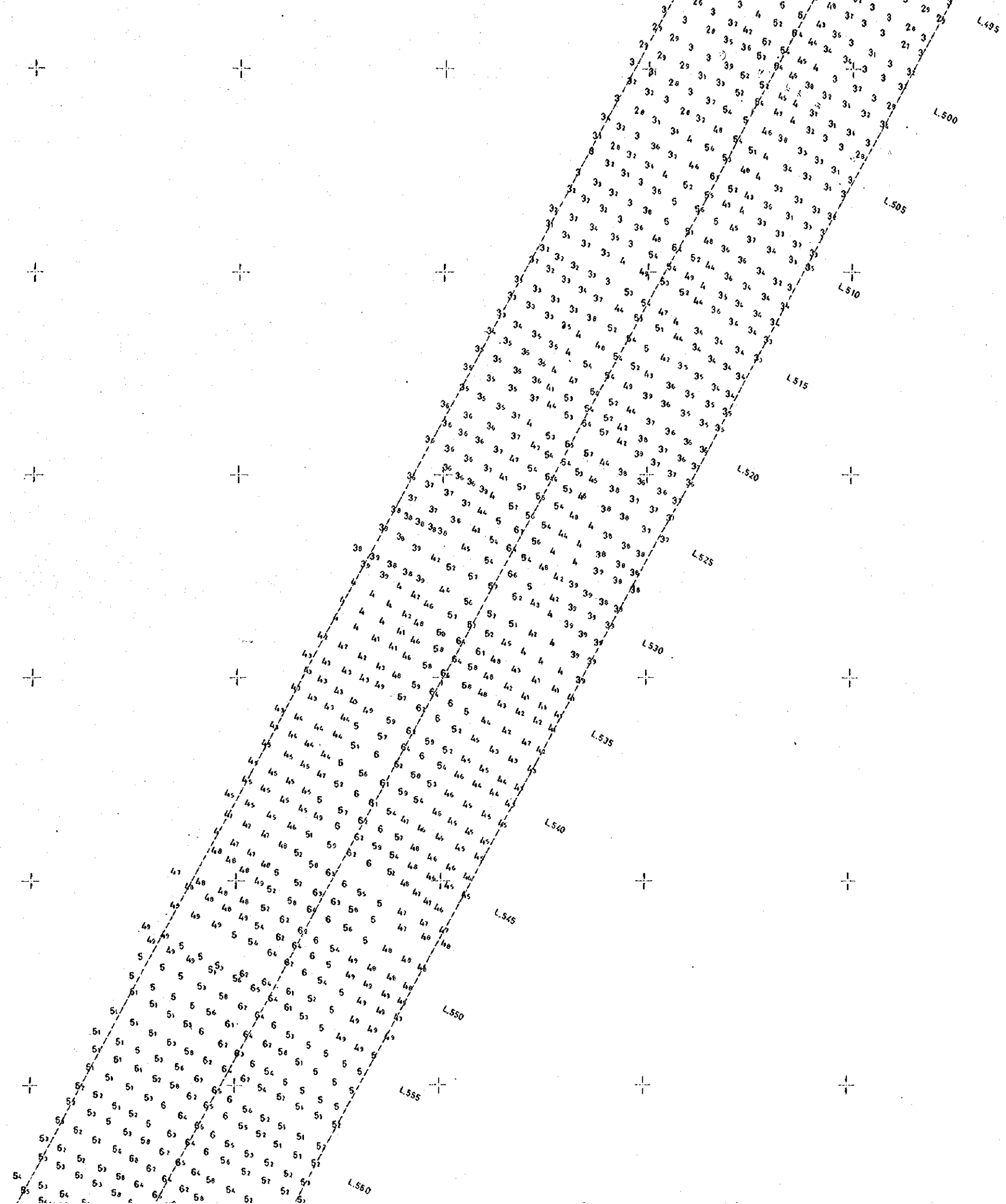
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1.500

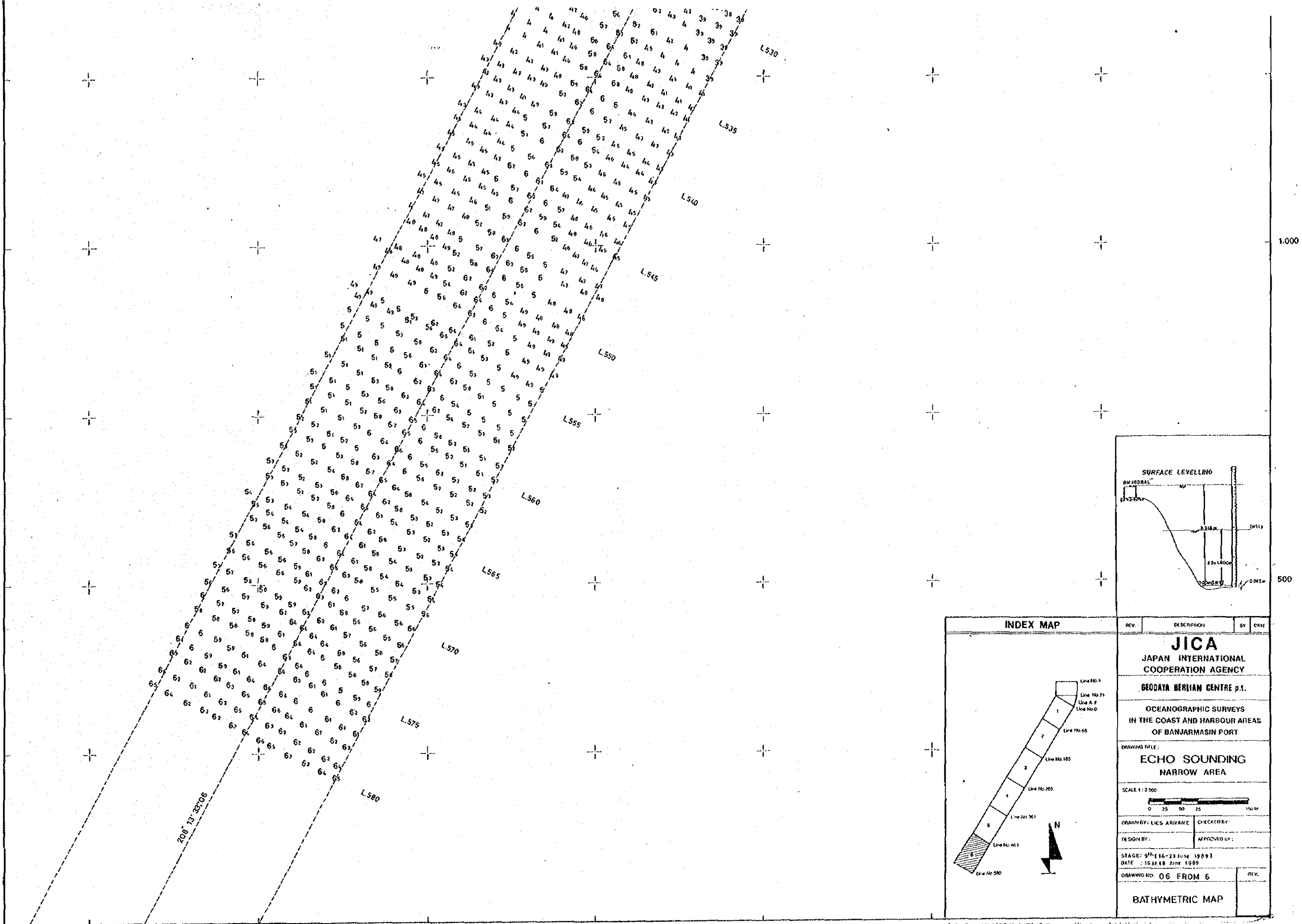
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SURFACE LEVELLING

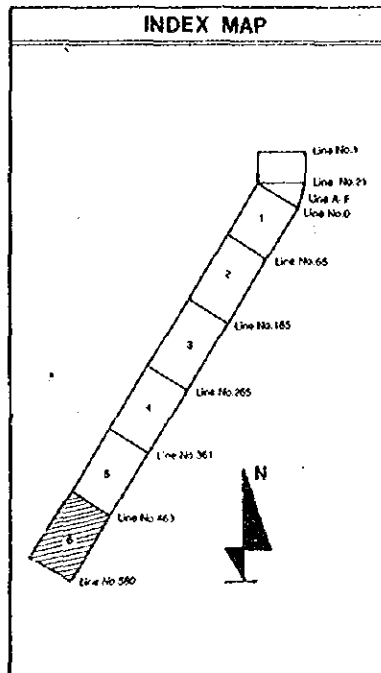
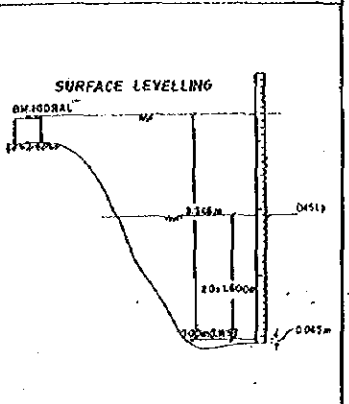
BY: MORAL

DATE: / /



1.000

500



REV.	DESCRIPTION	BY	DATE
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			
GEODATA BERLIAN CENTRE p.t.			
OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT			
DRAWING TITLE:			
ECHO SOUNDING NARROW AREA			
SCALE 1:2 500			
DRAWN BY: LIES ARIVANI		CHECKED BY:	
DESIGN BY:		APPROVED BY:	
STAGE: 3/16-23 June 1989			
DATE: 15.11.88 June 1989			
DRAWING NO. 06 FROM 6			REV.
BATHYMETRIC MAP			