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

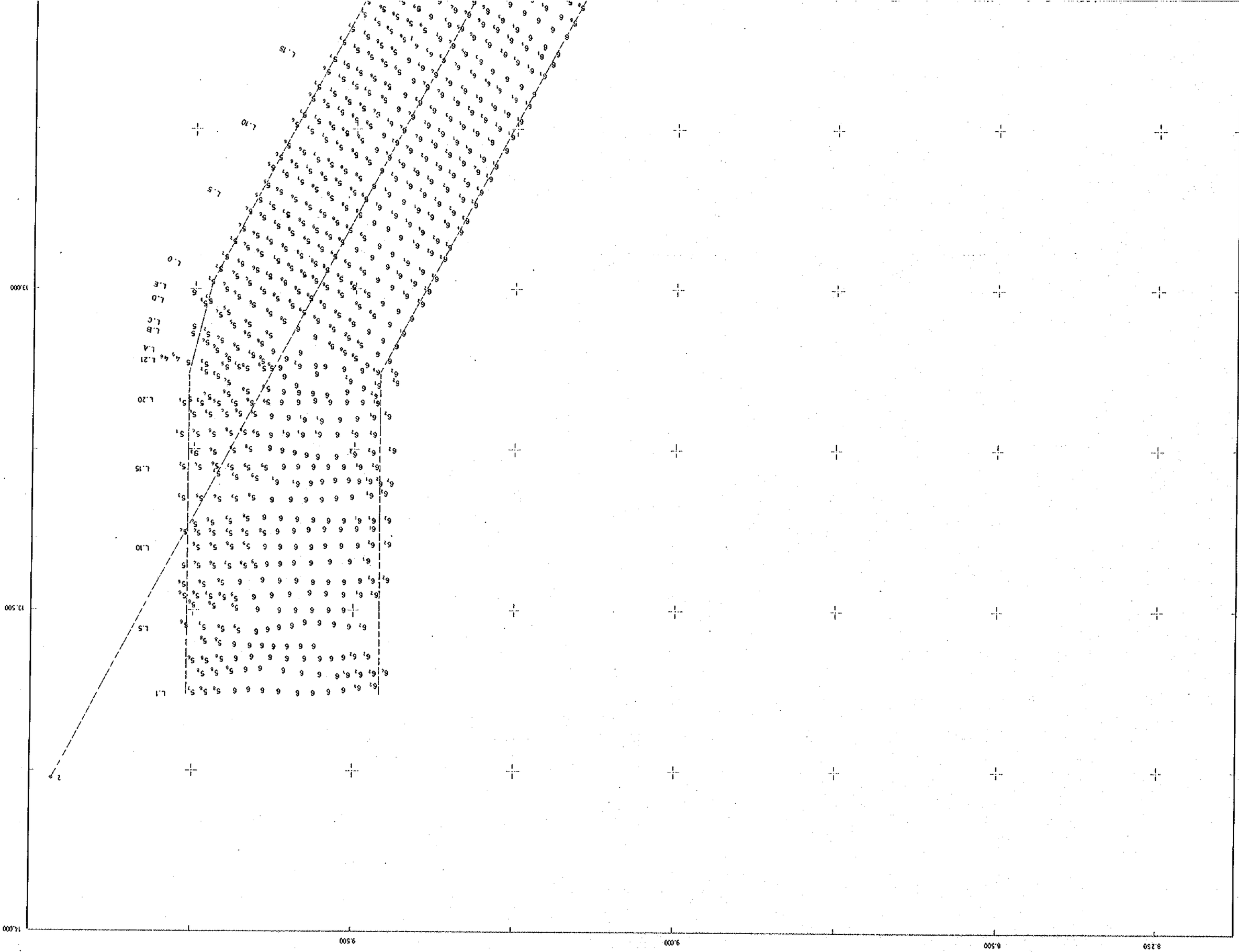
2. Monthly Survey

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

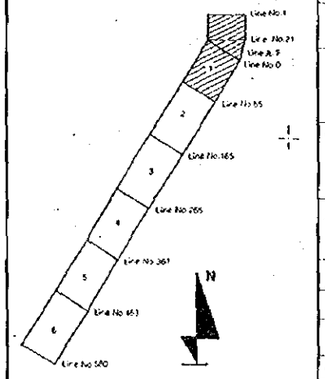
Stage	Date
1st stage(Frequency ; 210Khz) :	8 October -22 November 1988
2nd stage(Frequency ; 210Khz) :	23 November 1988 -13 January 1989
3rd stage(Frequency ; 210Khz) :	14 January -17 February 1989
4th stage(Frequency ; 210Khz) :	30 January -20 February 1989
5th stage(Frequency ; 210Khz) :	21 February - 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


L.20
L.15
L.10
L.5
L.0
L.E
L.D
L.C
L.B
L.A
L.21
L.15
L.10
L.5
L.1
2
13,000
13,500
14,000
8,250
8,500
9,000
9,500

L.10
L.15
L.20
L.25
L.30
L.35
L.40
L.45
L.50
L.55
L.60
L.65
108° 13' 33"06
12.500
12.000
11.500

SURFACE LEVELLING

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 PORT

DRAWING TITLE
ECHO SOUNDING
NARROW AREA

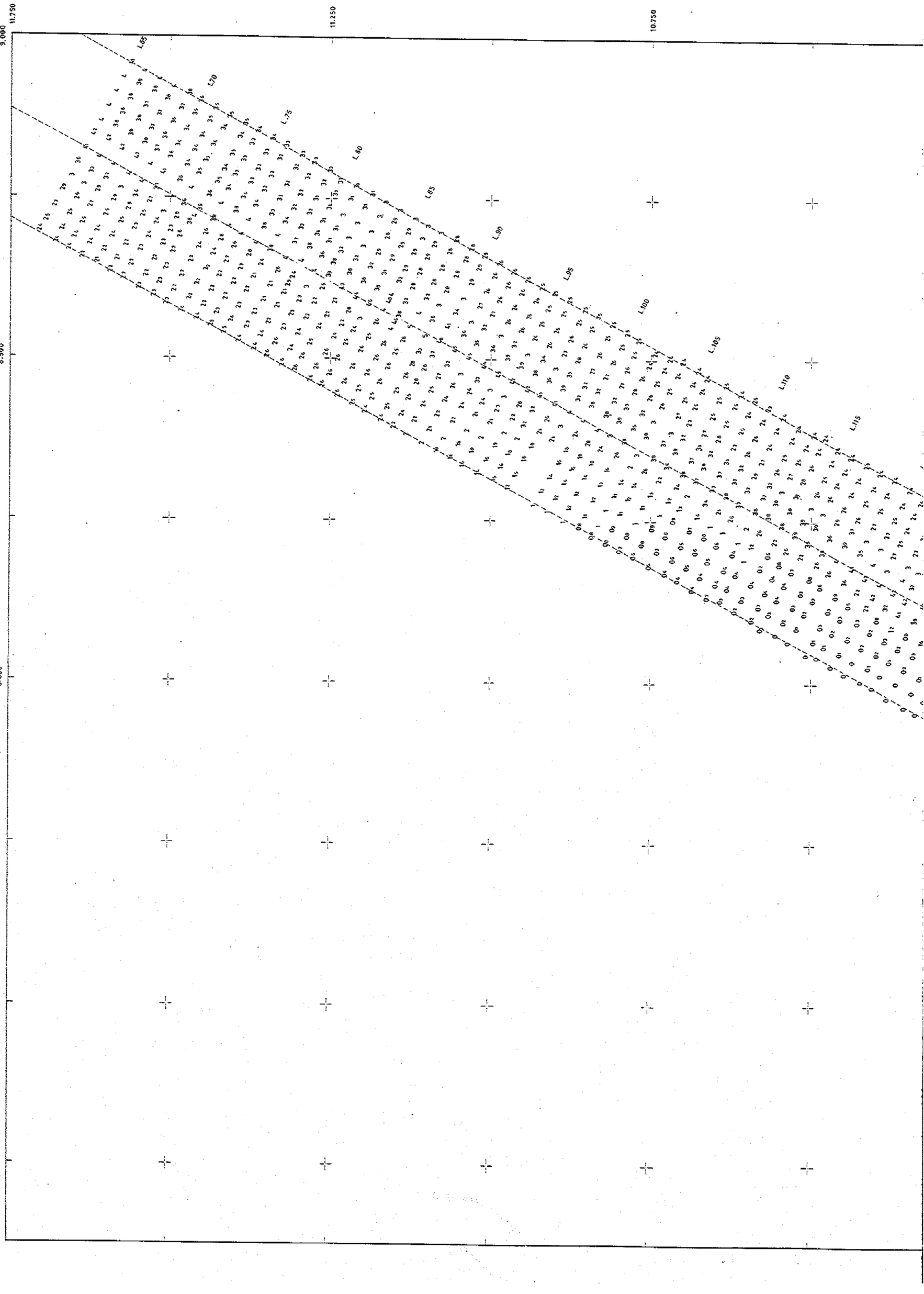
SCALE 1 : 2.500
0 25 50 75 100 M

DRAWN BY : M. GHOLIB
DESIGN BY :
CHECKED BY :
APPROVED BY :

STAGE : 10th (06 - 22 JULY 1989)
DATE : 17 - 18 JULY 1989.

DRAWING NO. 01 FROM 6
REV.

BATHYMETRIC MAP


11.750
11.250
10.750
9.000
8.500
8.000
7.500
L65
L70
L75
L80
L85
L90
L95
L100
L105
L110
L115

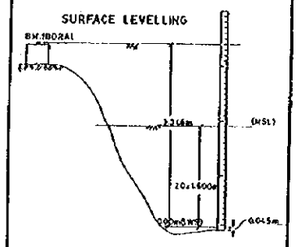
L.110
L.115
L.120
L.125
L.130
L.135
L.140
L.145
L.150
L.155
L.160
L.165
208° 13' 32"06

10.250

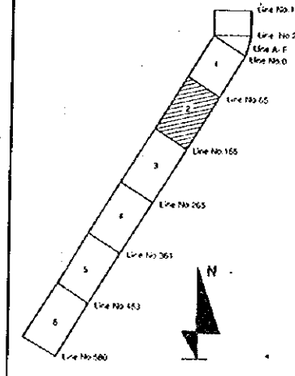
9.750

9.250

SURFACE LEVELLING



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 PORT

DRAWING TITLE:
ECHO SOUNDING
NARROW AREA

SCALE 1 : 2.500
0 25 50 75 100(m)

DRAWN BY : LIES ARIYANIE | CHECKED BY :
DESIGN BY : | APPROVED BY :

STAGE : 30TH (6 - 22 JULI 1989)
DATE : 16,17 JULI 1989

DRAWING NO 02 FROM 6 | REV.

BATHYMETRIC MAP

9.500

9.000

8.500

L.165

L.170

L.175

L.180

L.185

L.190

L.195

L.200

L.205

L.210

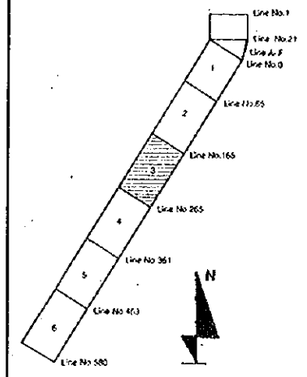
L.215

L.220

L.210
L.215
L.220
L.225
L.230
L.235
L.240
L.245
L.250
L.255
L.260
L.265
208°13' 33"06
8.000
7.500
7.000
6.500
7.000
7.500
8.000

SURFACE LEVELLING

INDEX MAP



REV.	DESCRIPTION	BY	DATE

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

GEODATA BERLIAN CENTRE p.t.

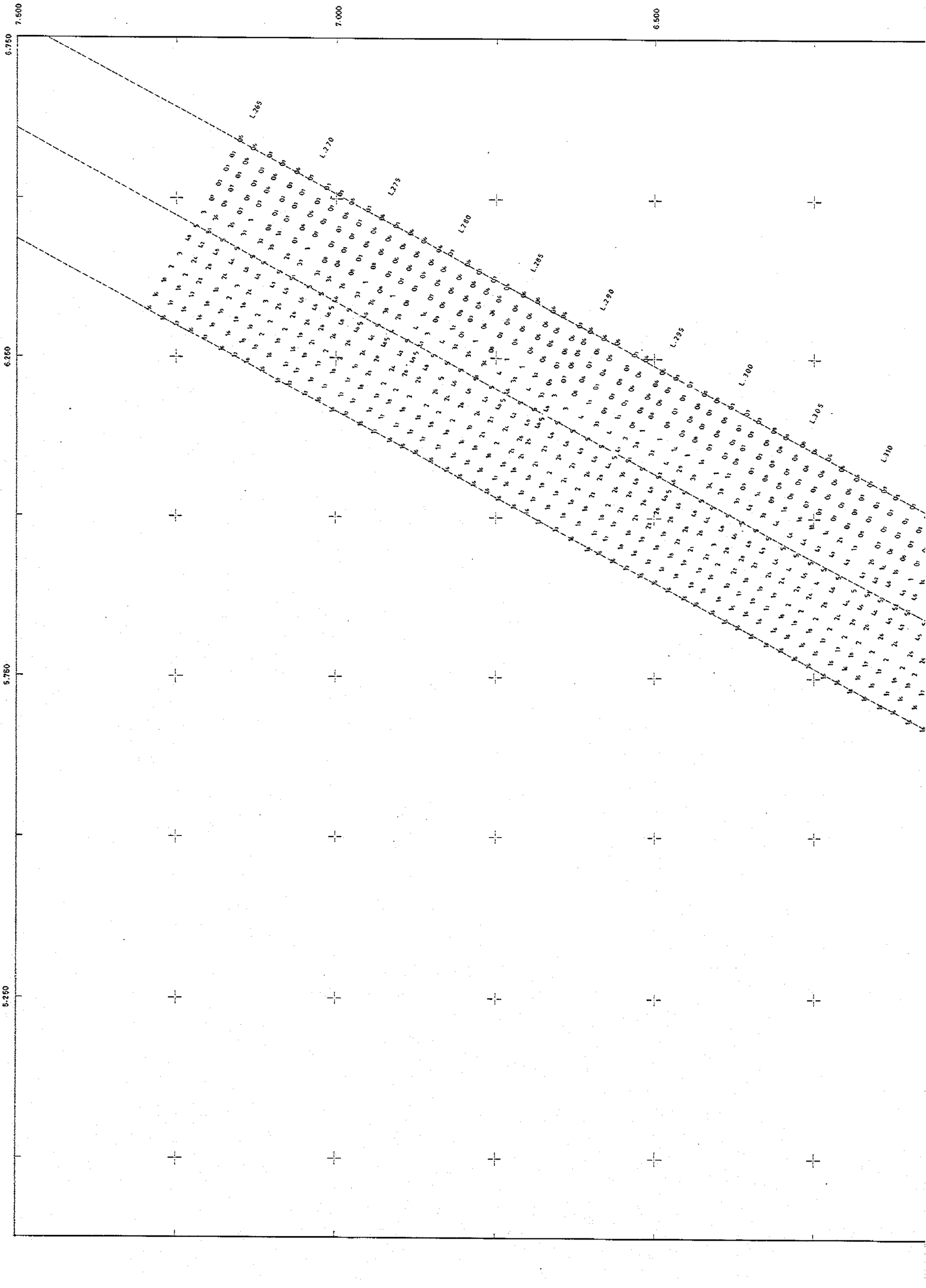
OCEANOGRAPHIC SURVEYS
IN THE COAST AND HARBOUR AREAS
OF BANJARMASIN PORT

DRAWING TITLE :
ECHO SOUNDING
NARROW AREA

SCALE 1 : 2.500
0 25 50 75 100 M

DRAWN BY : Imam Purnama | CHECKED BY :
DESIGN BY : | APPROVED BY :
STAGE : IOAR (06 - 22 JULI 1989)
DATE : 16 - 16, 22 JULI 1989
DRAWING NO 03 FROM 6 | REV.

BATHYMETRIC MAP


7.500
7.000
6.500
6.750
6.250
5.750
5.250
L.265
L.270
L.275
L.280
L.285
L.290
L.295
L.300
L.305
L.310

L.300
L.305
L.310
L.315
L.320
L.325
L.330
L.335
L.340
L.345
L.350
L.355
L.360

208° 13' 35:06

6.000

5.500

5.000

SURFACE LEVELLING

BM JEDRAL

INDEX MAP

Line No.1
Line No.21
Line A-F
Line No.0
Line No.65
Line No.185
Line No.265
Line No.351
Line No.463
Line No.583
1
2
3
4
5
6
N

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

0 25 50 75 150 M

DRAWN BY : Imam Purnomo | CHECKED BY :

DESIGN BY : | APPROVED BY :

STAGE : 10th (06 - 22 JULI 1989)

DATE : 11, 16 JULI 1989

DRAWING NO 04 FROM 6 | REV.

BATHYMETRIC MAP

5.250

5.000

4.500

4.000

L.361

L.365

L.370

L.375

L.380

L.385

L.390

L.395

L.400

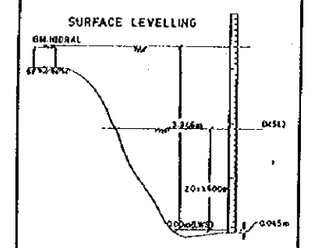
L.405

L.410

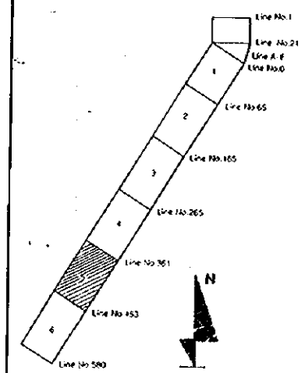
L.415

L.405
L.410
L.415
L.420
L.425
L.430
L.435
L.440
L.445
L.450
L.455
L.462
108° 13' 33"05
4.000
3.500
3.000
2.750
3.750
4.000
4.500
5.000
5.500

SURFACE LEVELLING



INDEX MAP



REV.	DESCRIPTION	BY	DATE

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

GEODATA SEKLIAN CENTRE p.t.

OCEANOGRAPHIC SURVEYS
IN THE COAST AND HARBOUR AREAS
OF BANJARMASIN PORT

DRAWING TITLE :

ECHO SOUNDING
NARROW AREA

SCALE 1 : 2 500

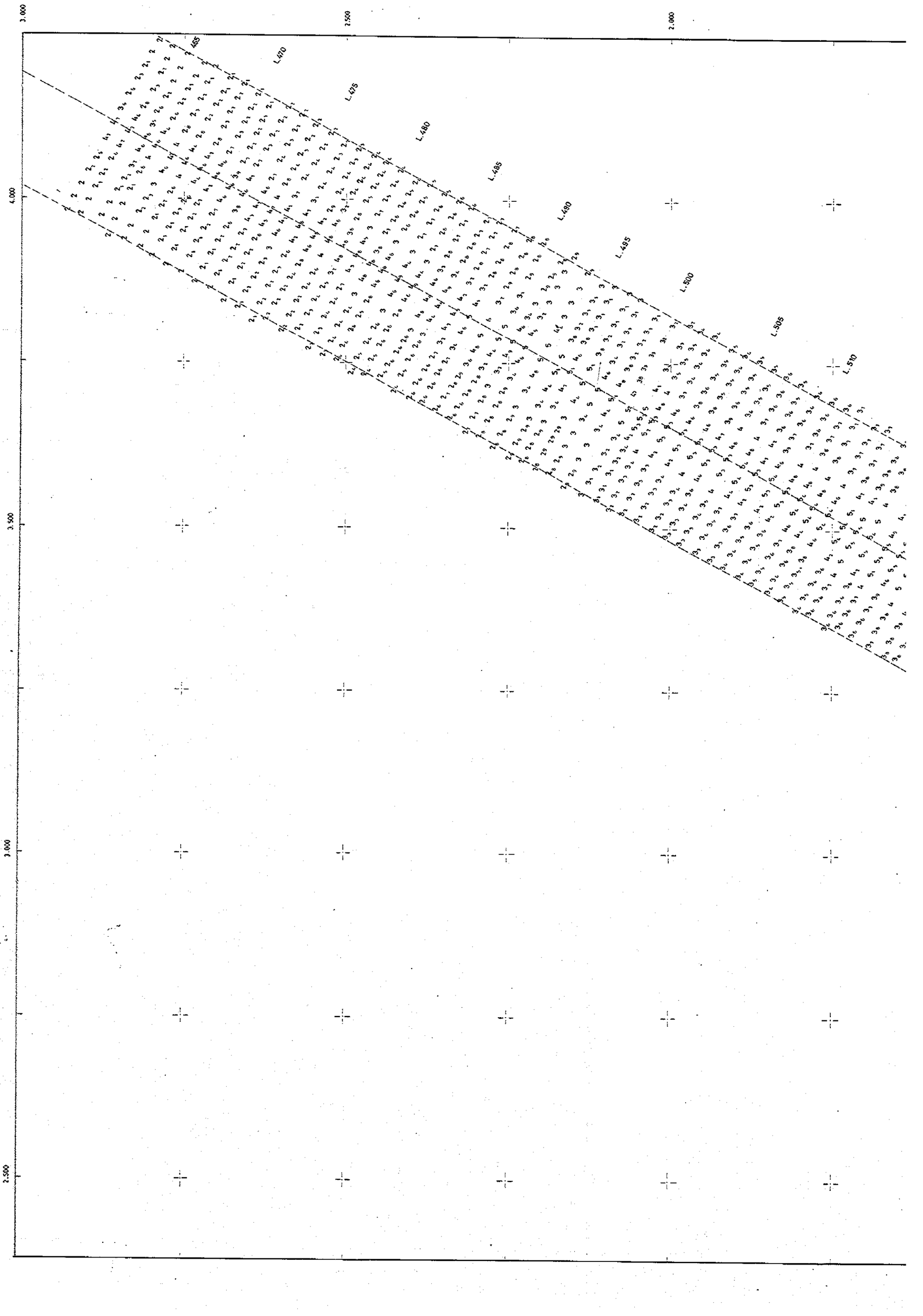
0 25 50 75 100 M

DRAWN BY : HADI S.	CHECKED BY :
DESIGNED BY :	APPROVED BY :

STAGE : 10 th (06 - 22 JULI 1989)
DATE : 8,10,11 JULI 1989

DRAWING NO. 05 FROM 6 | REV.

BATHYMETRIC MAP


3.000
2.500
2.000
4.000
3.500
3.000
2.500
L.470
L.475
L.480
L.485
L.490
L.495
L.500
L.505
L.510

L.510
L.515
L.520
L.525
L.530
L.535
L.540
L.545
L.550
L.555
L.560
L.565
L.570
L.575

1,500
1,000
500

SURFACE LEVELLING

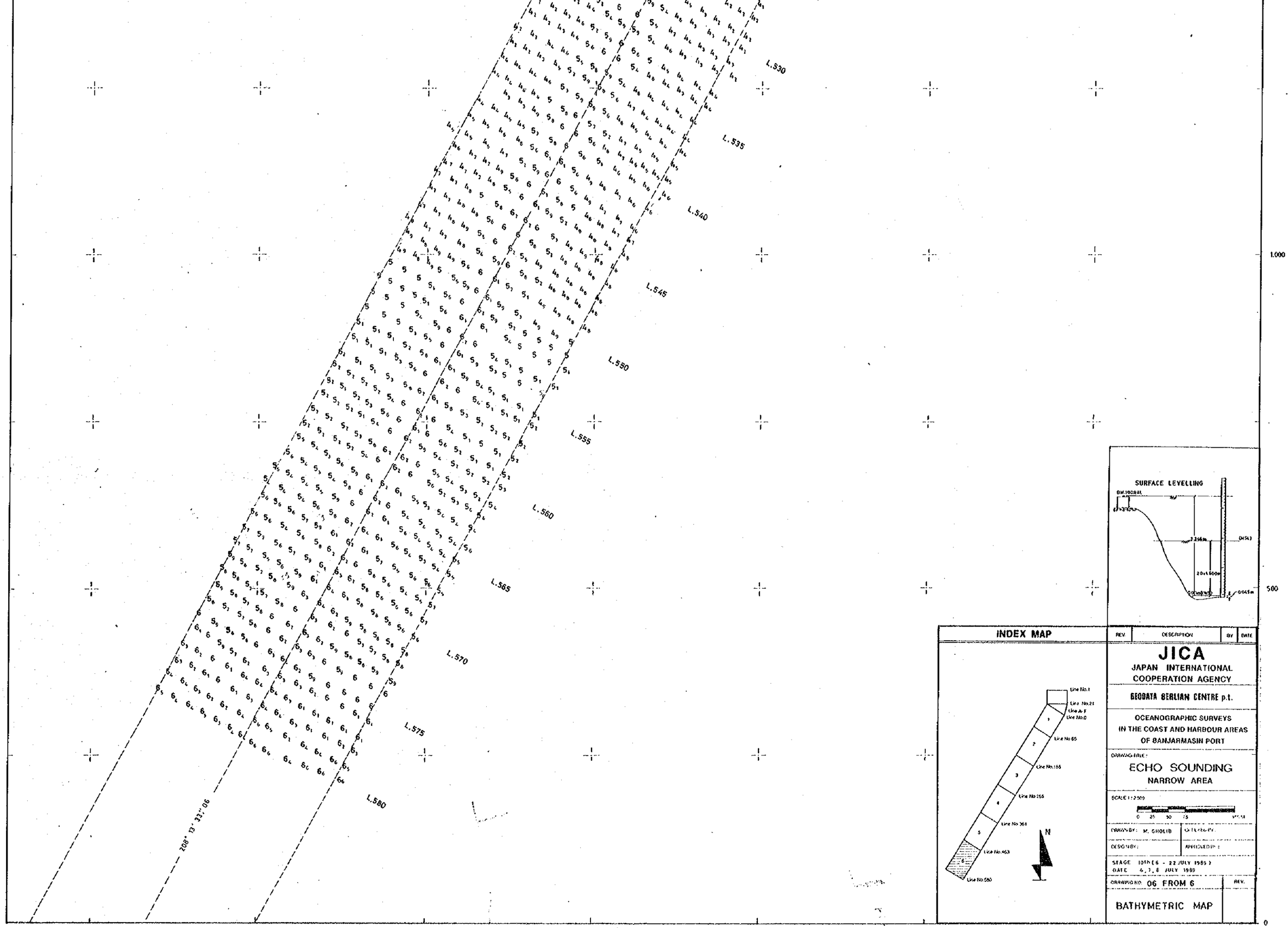
INDEX MAP

REV.	DESCRIPTION	BY	DATE

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

GEODATA BERLIAN CENTRE p.t.

OCEANOGRAPHIC SURVEYS
IN THE COAST AND HARBOUR AREAS


L.530
L.535
L.540
L.545
L.550
L.555
L.560
L.565
L.570
L.575
L.580
208° 13' 33" 06
1.000
500
0
SURFACE LEVELLING
INDEX MAP
N
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: M. GHOLIB
CHECKED BY:
DESIGN BY:
APPROVED BY:
STAGE 10th (6 - 22 JULY 1989)
DATE 6, 7, 8 JULY 1989
DRAWING NO. 06 FROM 6
REV.
BATHYMETRIC MAP

14000 13.750 13.500 13.250 13.000 12.750

9.750 9.500 9.250 9.000 8.750 8.500 8.250

Line 01 Line 05 Line 10 Line 15 Line 21 Line A Line E Line O Line 5 Line 10 Line 15

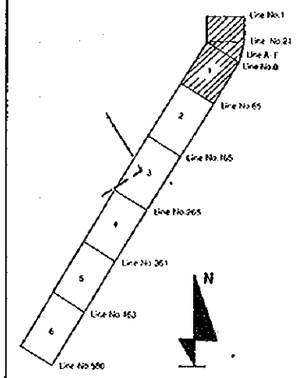
Line 10
Line 15
Line 20
Line 25
Line 30
Line 35
Line 40
Line 45
Line 50
Line 55
Line 60
Line 65

208°13' 3706

12.750
12.500
12.250
12.000
11.750

SURFACE LEVELLING

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 PORT

DRAWING TITLE :
ECHO SOUNDING
NARROW AREA

SCALE 1 : 2 500
0 25 50 75 100 M

DRAWN BY : TOTI. H | CHECKED BY :
DESIGN BY : Ir. DENNY. ST | APPROVED BY :

STAGE : II (21 JULY 1989 — 1 AUGUST 1989)
DATE : 1 AUGUST 1989

DRAWING NO. 1 FROM 6 | REV.

BATHYMETRIC MAP

11500

11000

10500

L.70

L.75

L.80

L.85

L.90

L.95

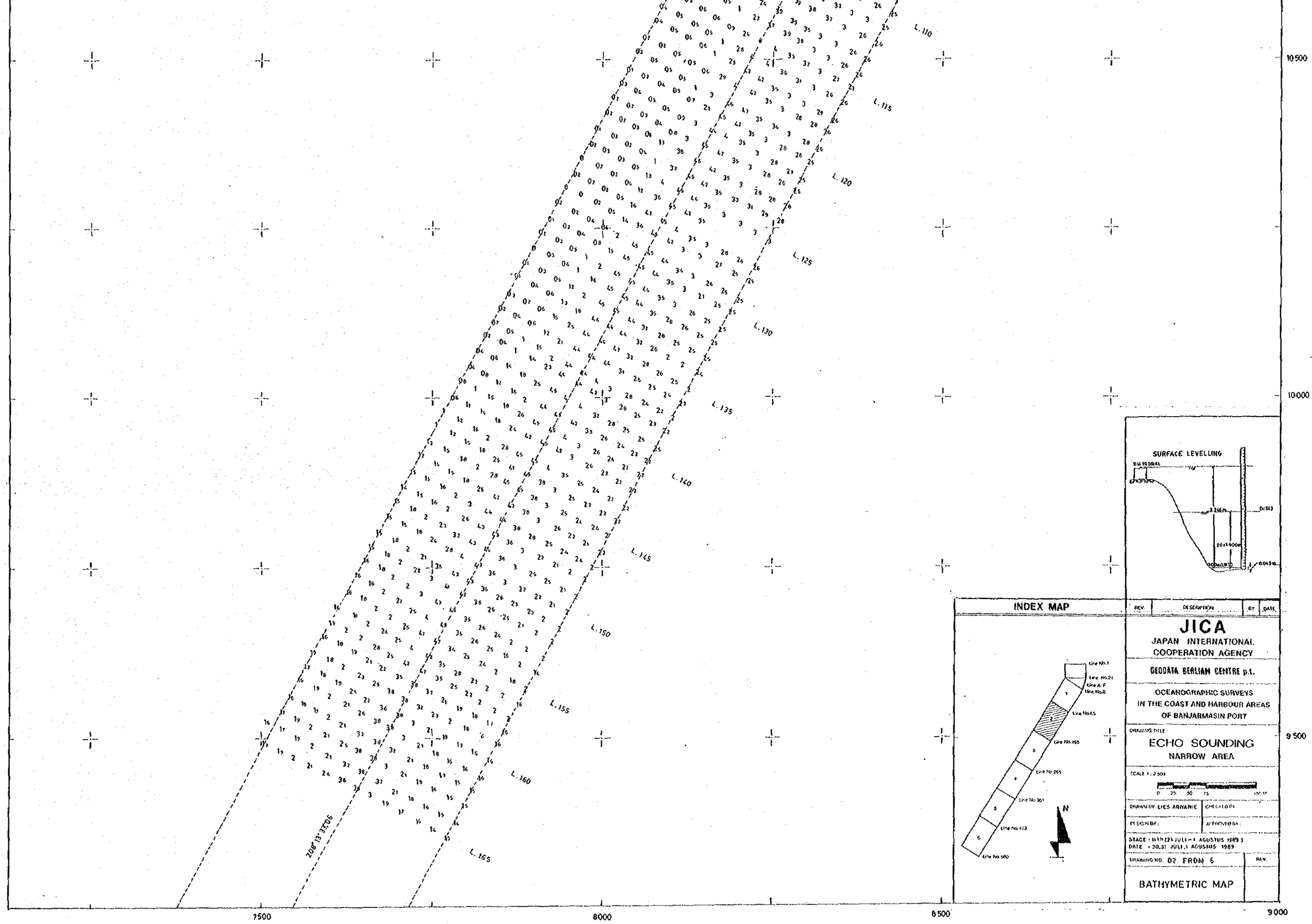
L.100

L.105

L.110

L.115

L.120



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

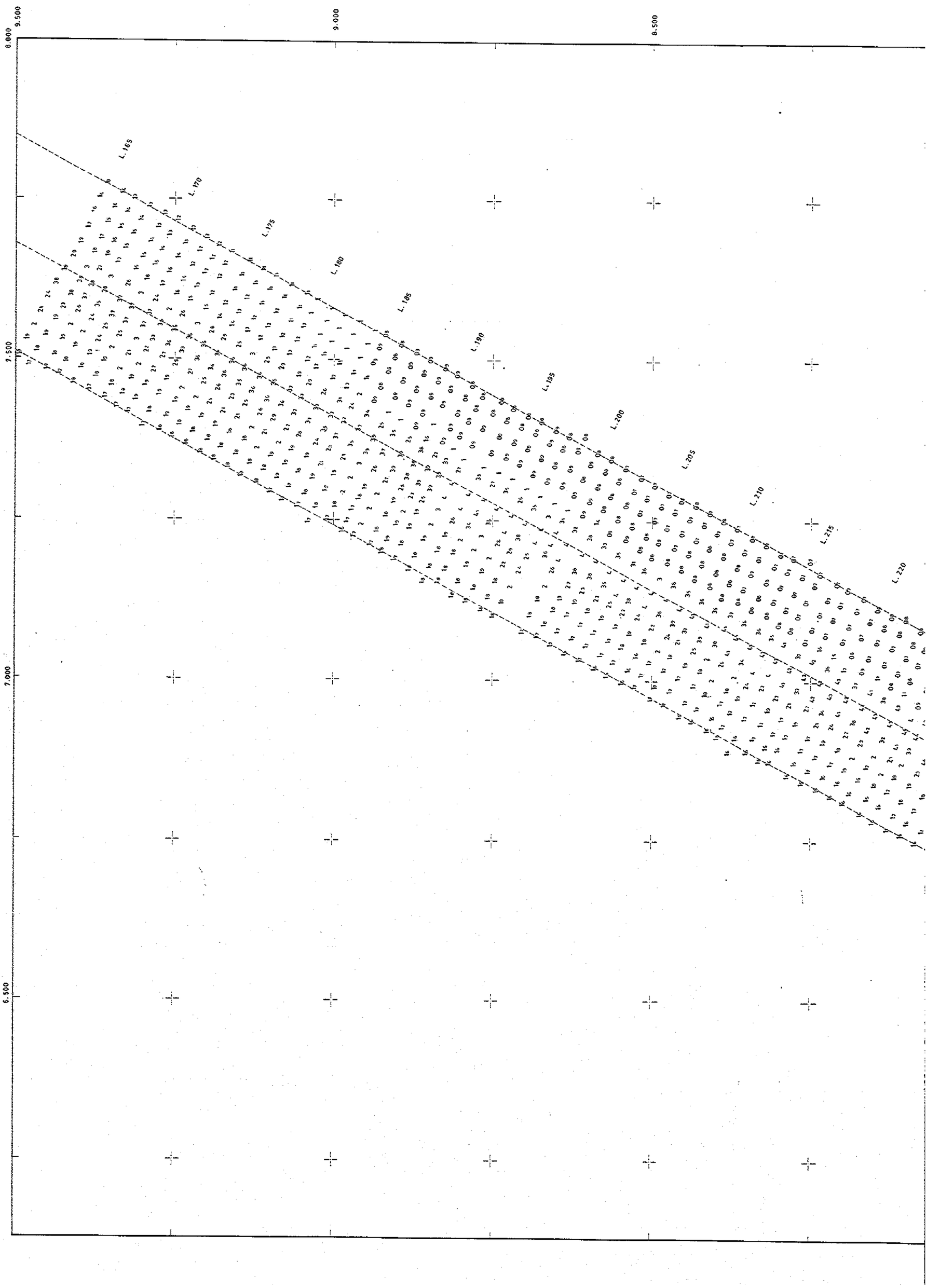
SCALE 1 : 2 500

DRAWN BY: LIES ARIVANIE
CHECKED BY:
DESIGN BY:
APPROVED BY:

STAGE : II (II (21 JULI – 1 AGUSTUS 1989)
DATE : 20,31 JULI, 1 AGUSTUS 1989

DRAWING NO. 02 FROM 6
REV.

BATHYMETRIC MAP


8.000
9.500
9.000
8.500
7.500
7.000
6.500
L.165
L.170
L.175
L.180
L.185
L.190
L.195
L.200
L.205
L.210
L.215
L.220

L. 210

L. 215

L. 220

L. 225

L. 230

L. 235

L. 240

L. 245

L. 250

L. 255

L. 260

L. 265

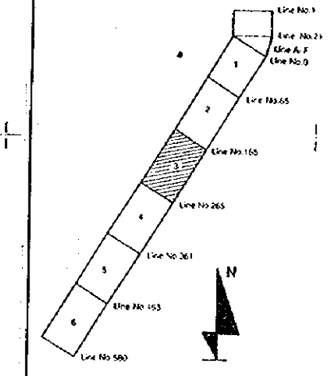
208° 13' 33":06

8.000

7.500

SURFACE LEVELLING

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 PORT

DRAWING TITLE :

ECHO SOUNDING
NARROW AREA

SCALE 1 : 2.500

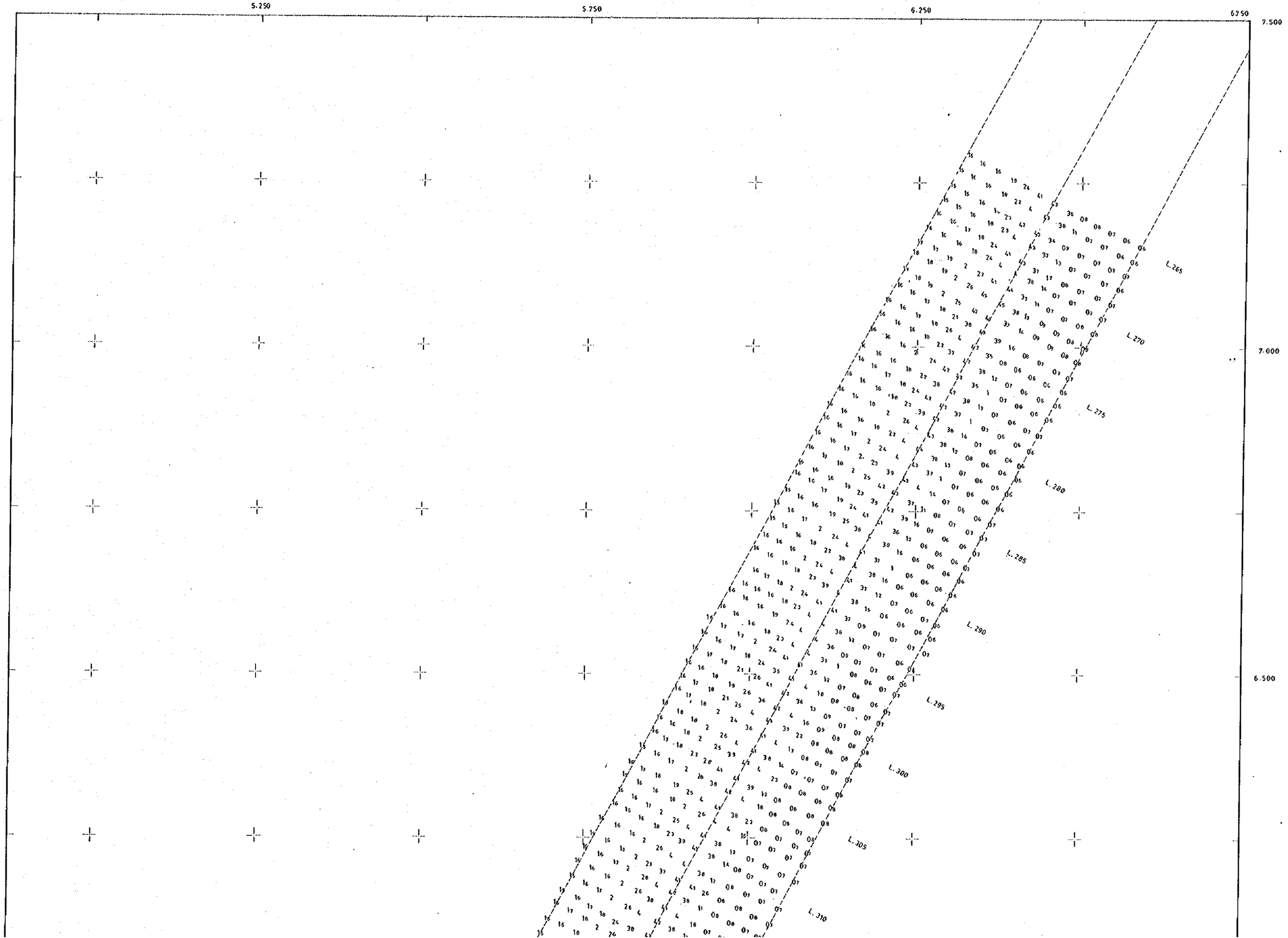
0 25 50 75 100 (M)

DRAWN BY : LIES ARIYANTI	CHECKED BY :
DESIGN BY :	APPROVED BY :

STAGE : III (tgl 21 JULI – 1 AGUSTUS 1989)
DATE : 28, 29, 30 AGUSTUS 1989

DRAWING NO. 03 FROM 6 | REV.

BATHYMETRIC MAP


5.250
5.750
6.250
6.750
7.500
7.000
6.500
L.265
L.270
L.275
L.280
L.285
L.290
L.295
L.300
L.305
L.310

L.305
L.310
L.315
L.320
L.325
L.330
L.335
L.340
L.345
L.350
L.355
L.360

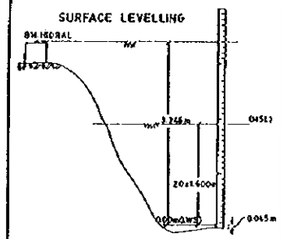
208°13'33"06

6.000

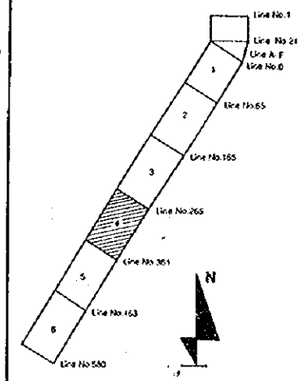
5.500

5.000

SURFACE LEVELLING



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 PORT

DRAWING TITLE :

ECHO SOUNDING NARROW AREA

SCALE 1 : 2 500

0 25 50 75 100 m

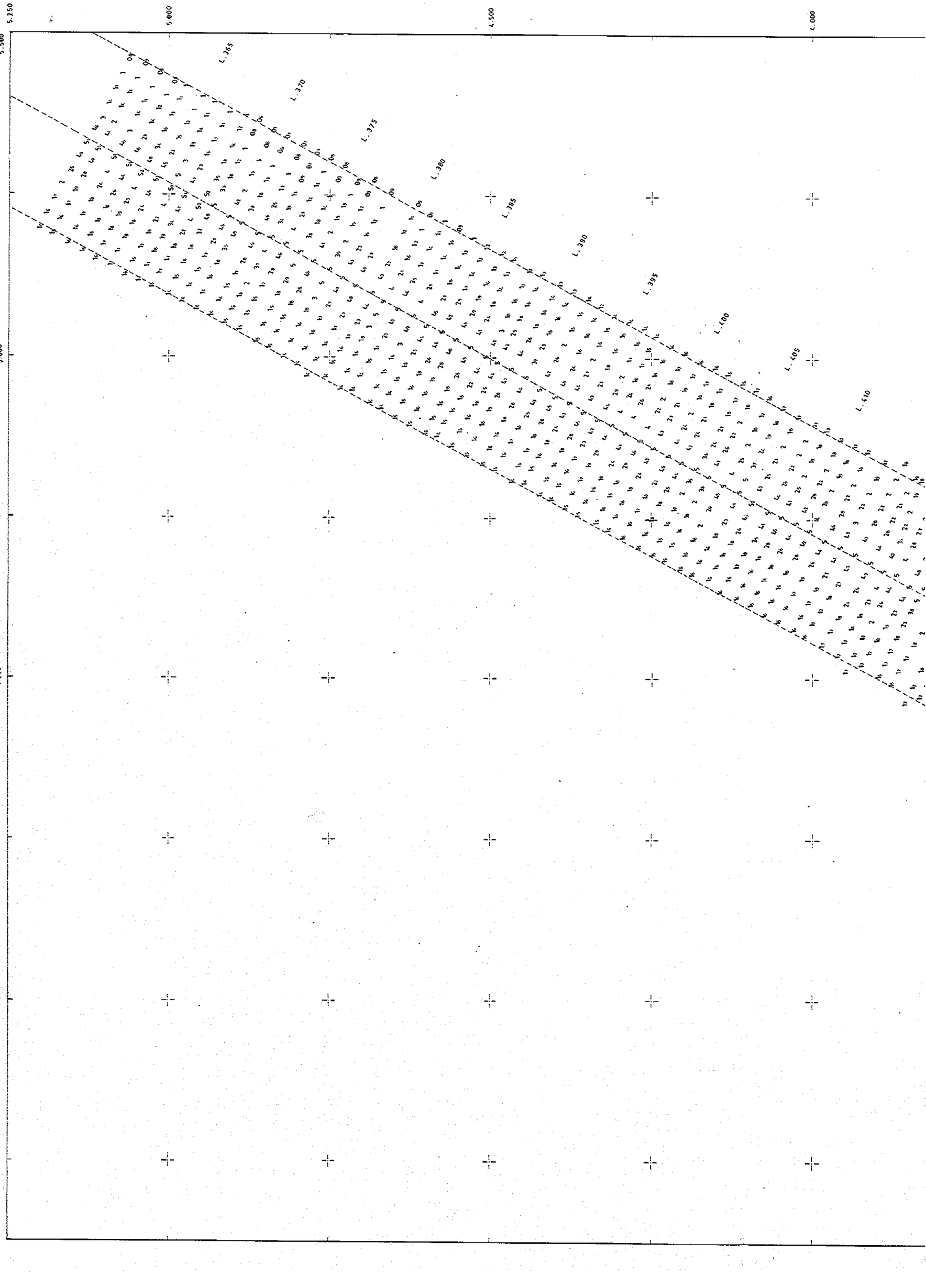
DRAWN BY : LIES JURYANIE | CHECKED BY :

DESIGN BY : | APPROVED BY :

STAGE : IIIth (2) JULI – 4 AGUSTUS 1989)
DATE : 28, 29 JULI 1989

DRAWING NO. 04 FROM 6 | REV.

BATHYMETRIC MAP


5.250
5.000
4.500
4.000
5.500
5.000
4.500
4.000
L.365
L.370
L.375
L.380
L.385
L.390
L.395
L.400
L.405
L.410

L. 405

L. 410

L. 415

L. 420

L. 425

L. 430

L. 435

L. 440

L. 445

L. 450

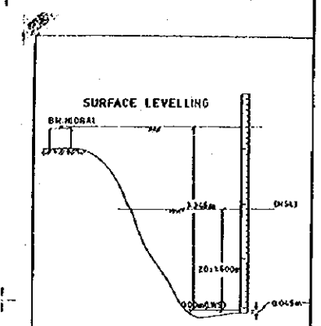
L. 455

L. 460

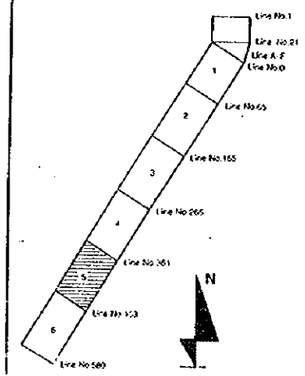
4.000

3.500

3.000



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 PORT

DRAWING TITLE :

ECHO SOUNDING
NARROW AREA

SCALE 1 : 2.500

0 25 50 75 100 M

DRAWN BY : Imam Purnomo | CHECKED BY :

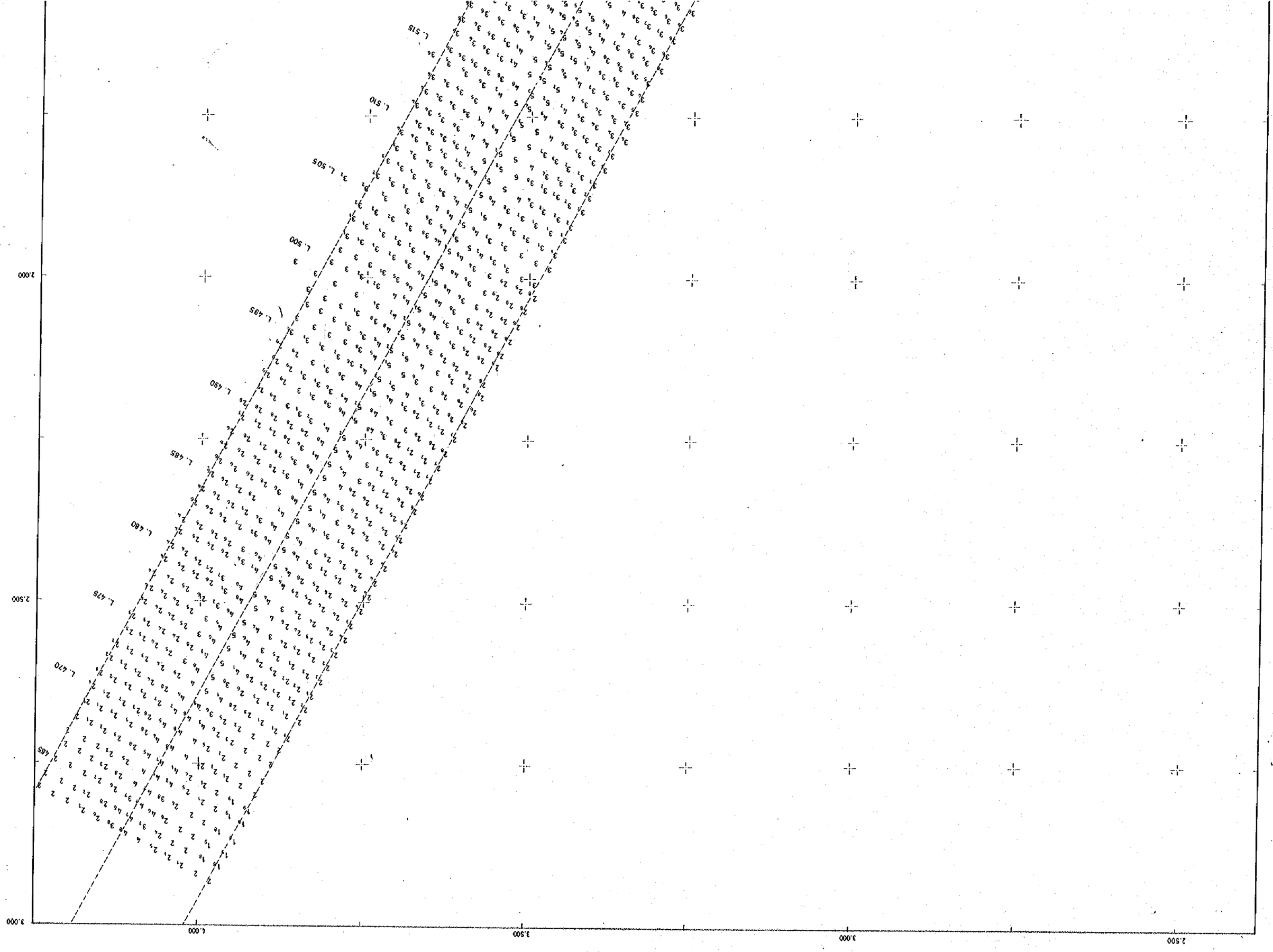
DESIGNED BY : | APPROVED BY :

STAGE : IIIth (21 JULI - 01 AUGUST 1989)

DATE : 22, 27, 28 JULI 1989

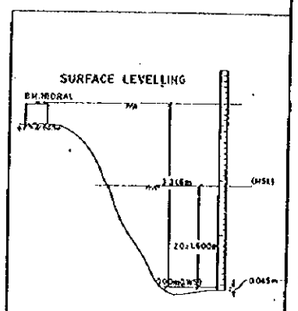
DRAWING NO 05 FROM 6 | REV.

BATHYMETRIC MAP


L. 515
L. 510
L. 505
L. 500
L. 495
L. 490
L. 485
L. 480
L. 475
L. 470
465
2.000
2.500
3.000
3.500
4.000

L. 505
L. 510
L. 515
L. 520
L. 525
L. 530
L. 535
L. 540
L. 545
L. 550
L. 555
L. 560
L. 565

1.500
1.000
500



INDEX-MAP

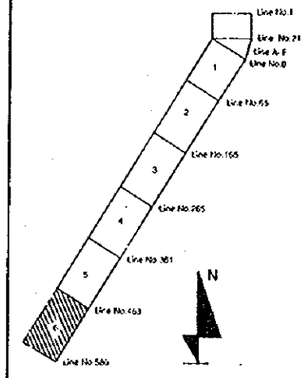
L. 530
L. 535
L. 540
L. 545
L. 550
L. 555
L. 560
L. 565
L. 570
L. 575
L. 580
208° 13' 33" 06

1.000

500

SURFACE LEVELLING

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 PORT

DRAWING TITLE:
ECHO SOUNDING
NARROW AREA

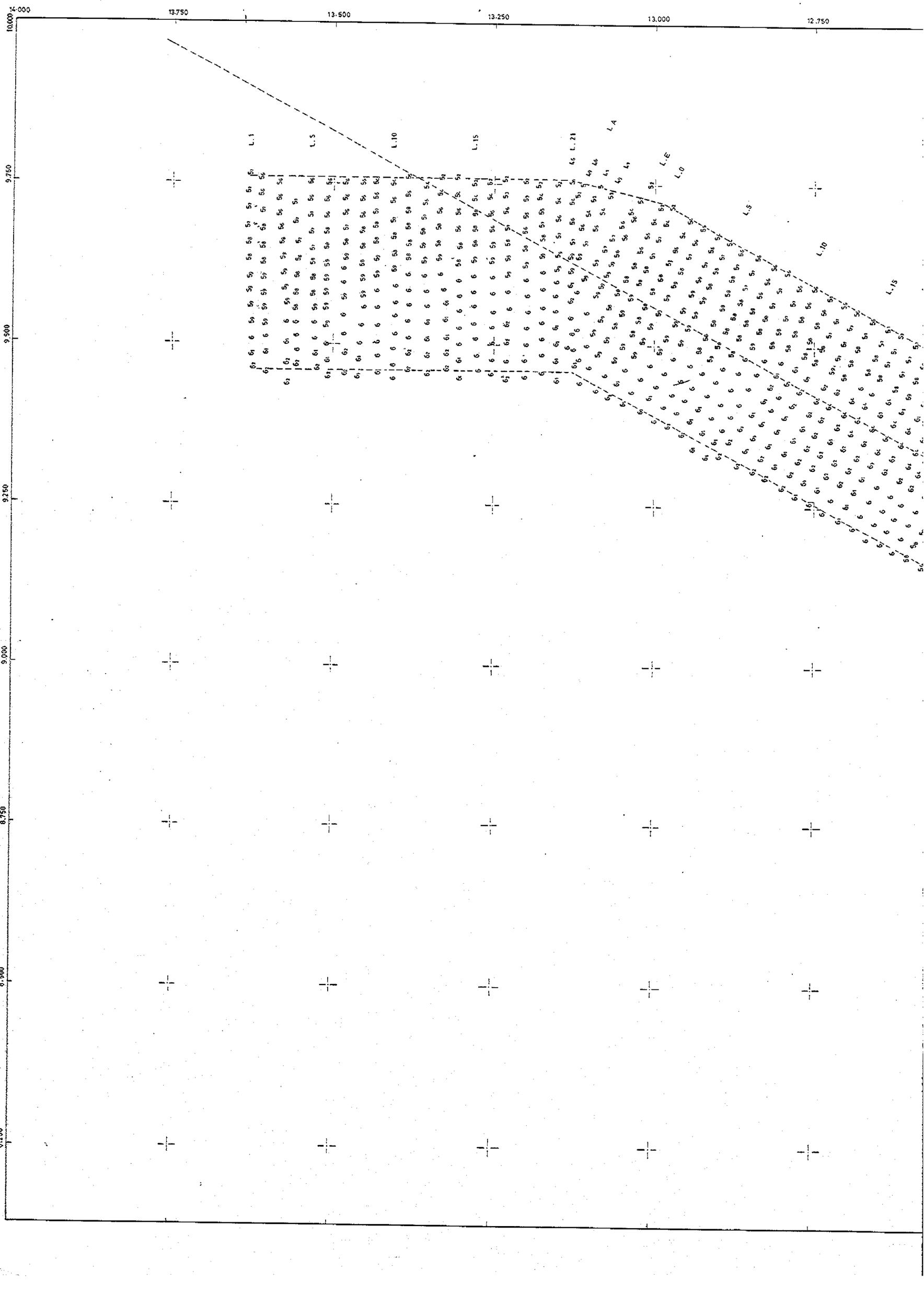
SCALE 1 : 2 500
0 25 50 75 100 M

DRAWN BY : M. GHOLIB	CHECKED BY :
DESIGN BY :	APPROVED BY :

STAGE : II'th (21 JULY - 1 AUGUST 1989)
DATE : 21 JULI, 22 JULI 1989.

DRAWING NO. 06 FROM 6 — REV.

BATHYMETRIC MAP

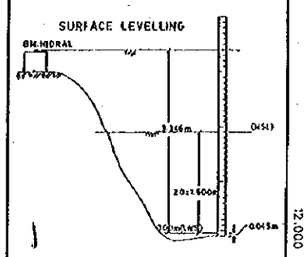

14.000
13.750
13.500
13.250
13.000
12.750
10.000
9.750
9.500
9.250
9.000
8.750
8.500
8.250
L.1
L.5
L.10
L.15
L.21
L.A
L.E
L.O
L.5
L.10
L.15

L.5
L.10
L.15
L.20
L.25
L.30
L.35
L.40
L.45
L.50
L.55
L.60
L.65

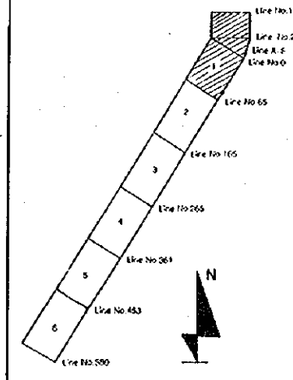
208° 13' 33".06

12.750
12.500
12.250
12.000
11.750
11.500

SURFACE LEVELLING



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 PORT

DRAWING TITLE :
ECHO SOUNDING
NARROW AREA

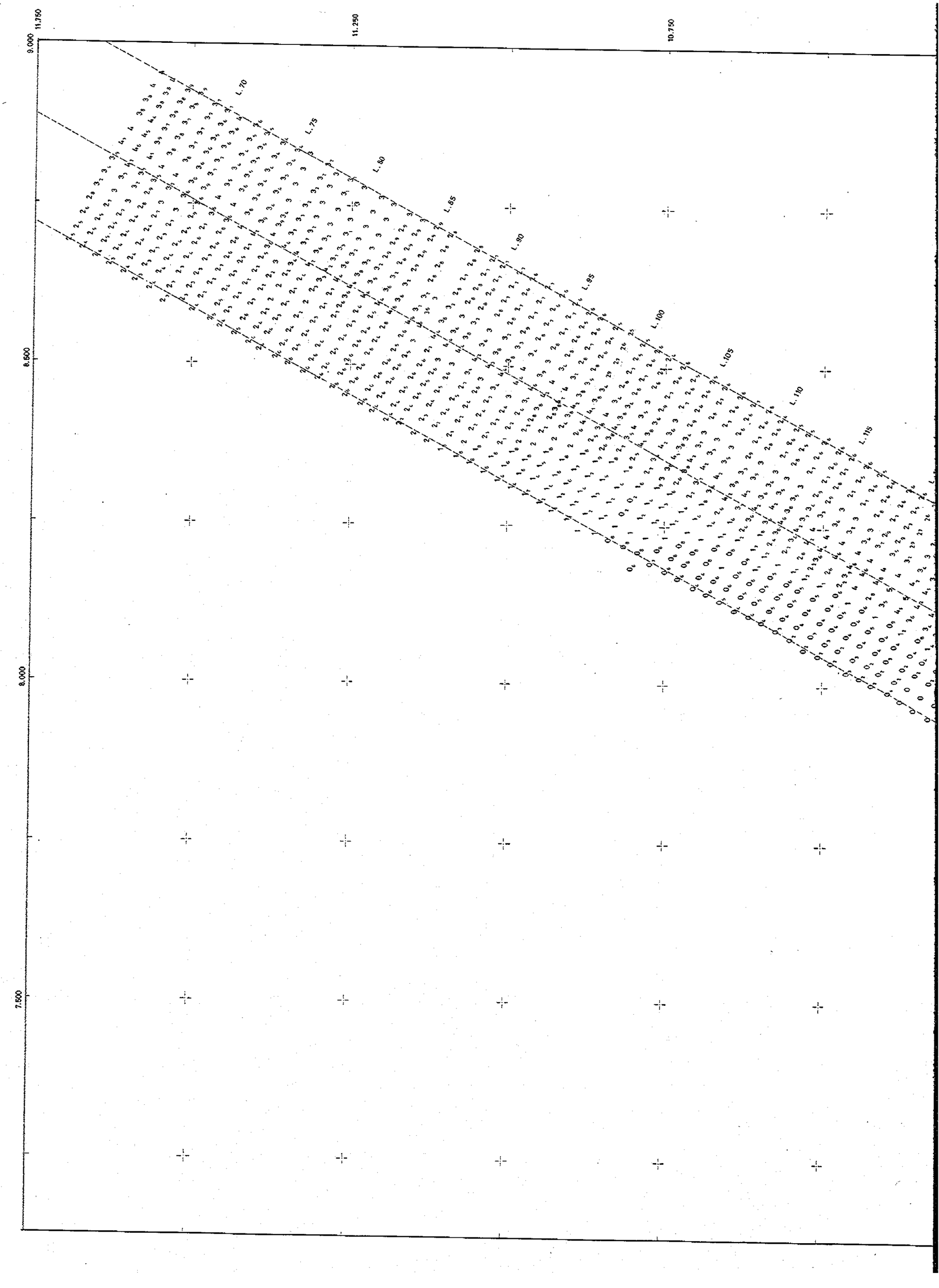
SCALE 1 : 2.500
0 25 50 75 150 M

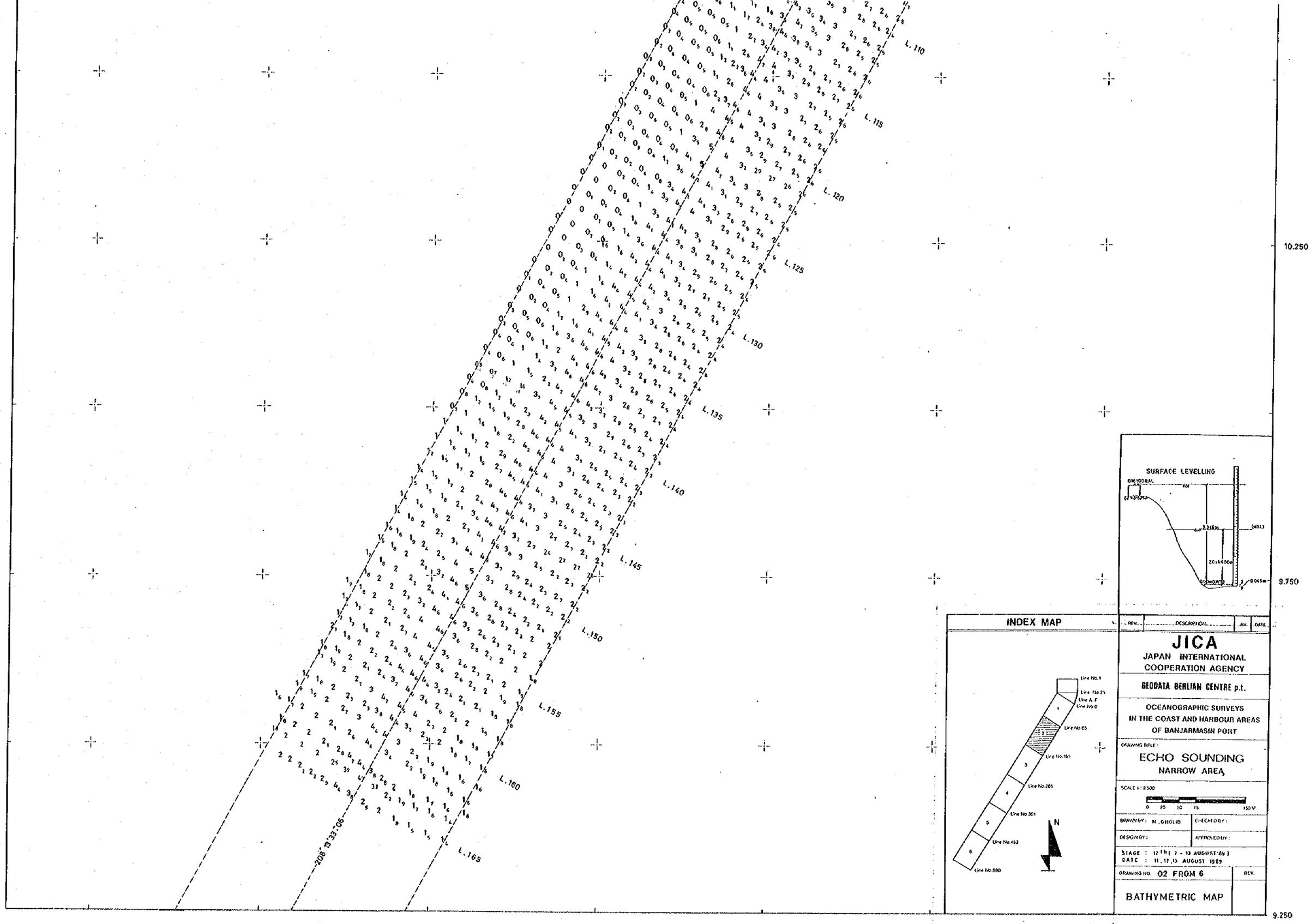
DRAWN BY : TUTI. H	CHECKED BY :
DESIGN BY : Ir. Benie. ST.	APPROVED BY :

STAGE : 12th (August 7 - 13, 1989)
DATE : August 13 1989

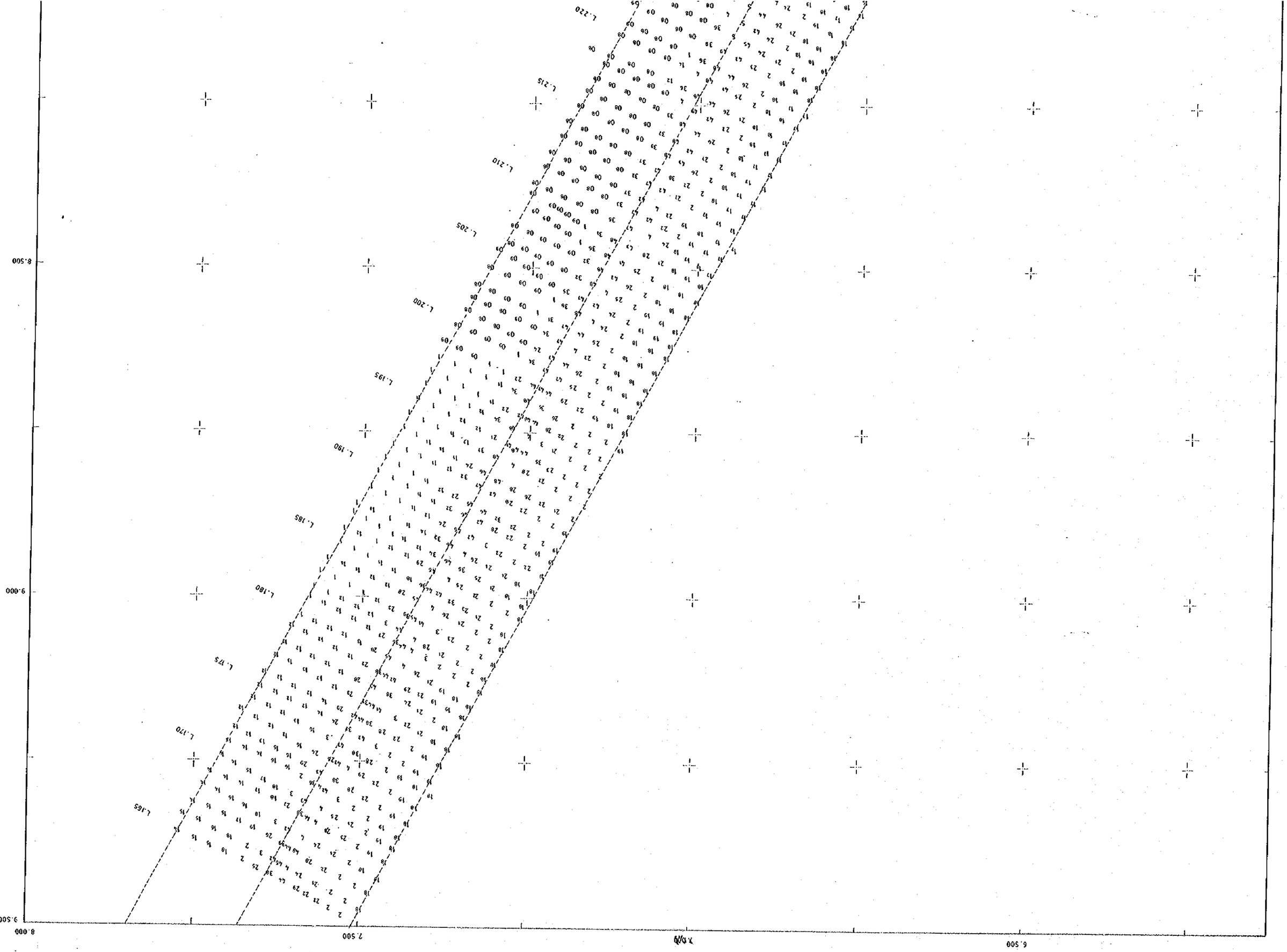
DRAWING NO. 1 : FROM 6 — REV.

BATHYMETRIC MAP
(210 Khz)


11.750
11.250
10.750
9.000
8.500
8.000
7.500
L.70
L.75
L.80
L.85
L.90
L.95
L.100
L.105
L.110
L.115



L.110
L.115
L.120
L.125
L.130
L.135
L.140
L.145
L.150
L.155
L.160
L.165
208° 13' 33" 06
10.250
9.750
9.250
SURFACE LEVELLING
INDEX MAP
Line No.1
Line No.21
Line A-F
Line No.0
Line No.65
Line No.165
Line No.265
Line No.361
Line No.453
Line No.580
N
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
0 25 50 75 150 M
DRAWN BY : M. GHOLIB
CHECKED BY :
DESIGN BY :
APPROVED BY :
STAGE : 12th (7 - 13 AUGUST '89)
DATE : 11, 12, 13 AUGUST 1989
DRAWING NO. 02 FROM 6
REV.
BATHYMETRIC MAP


L.220
L.215
L.210
L.205
L.200
L.195
L.190
L.185
L.180
L.175
L.170
L.165
8.500
9.000
9.500
8.000
7.500
7.000
6.500

L.210

L.215

L.220

L.225

L.230

L.235

L.240

L.245

L.250

L.255

L.260

L.265

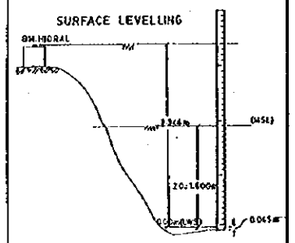
208° 13' 33"06

8.000

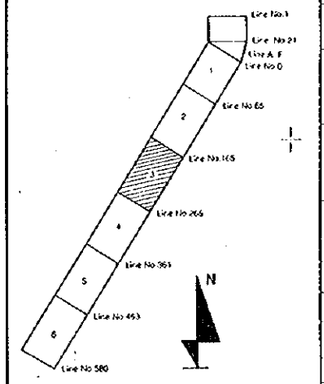
7.500

7.000

SURFACE LEVELLING



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 PORT

DRAWING TITLE :

ECHO SOUNDING

NARROW AREA

SCALE 1 : 2.500

0 25 50 75 100 M

DRAWN BY : LIES ARWANI

CHECKED BY :

DESIGN BY :

APPROVED BY :

STAGE : 12th (7 - 13 AGUSTUS 1989)

DATE : 10.11 AGUSTUS 1989

DRAWING NO. 03 FROM 6

REV.

BATHYMETRIC MAP

5.250

5.750

6.250

6.750

6.500

7.000

6.500

L.265

L.270

L.275

L.280

L.285

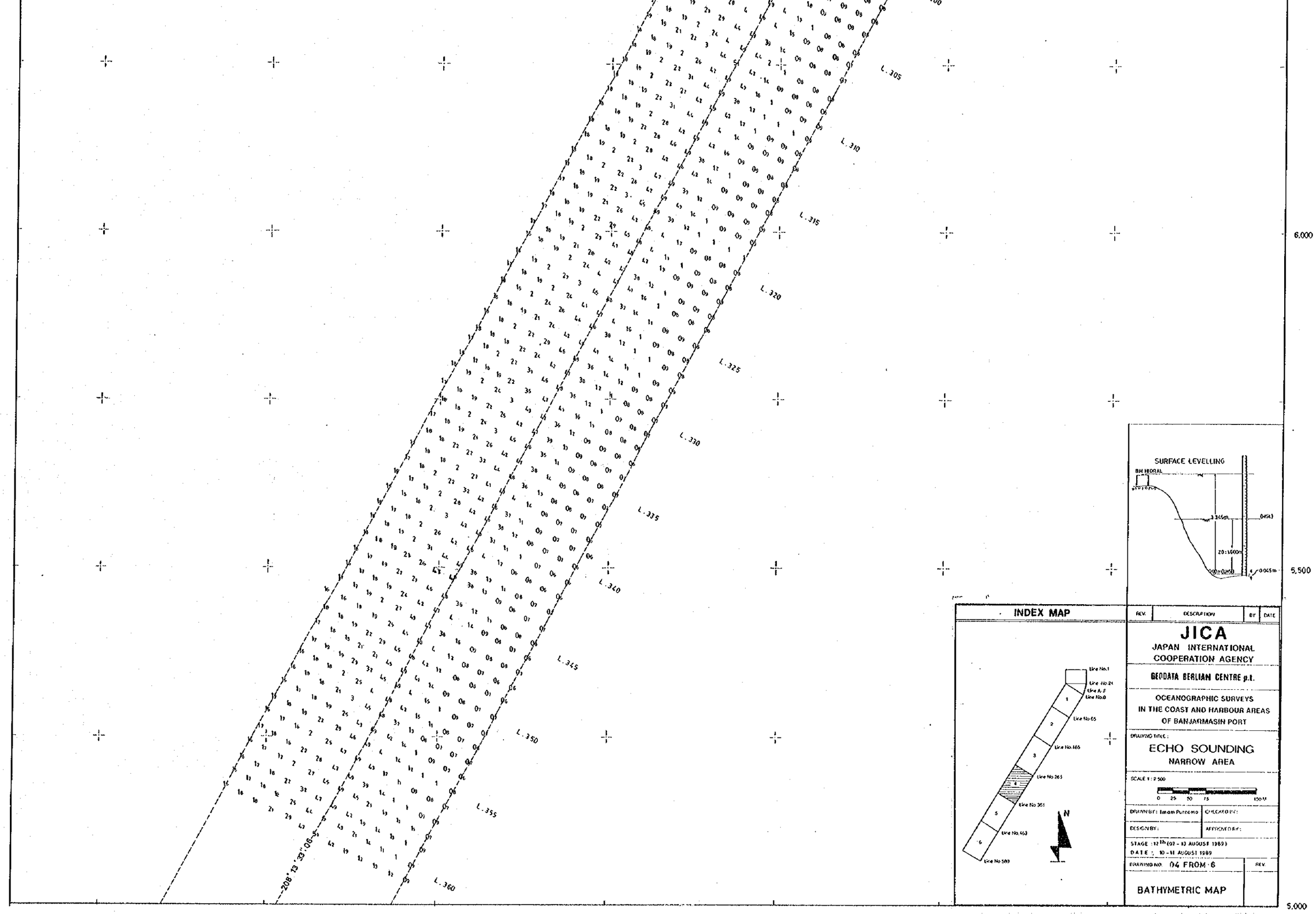
L.290

L.295

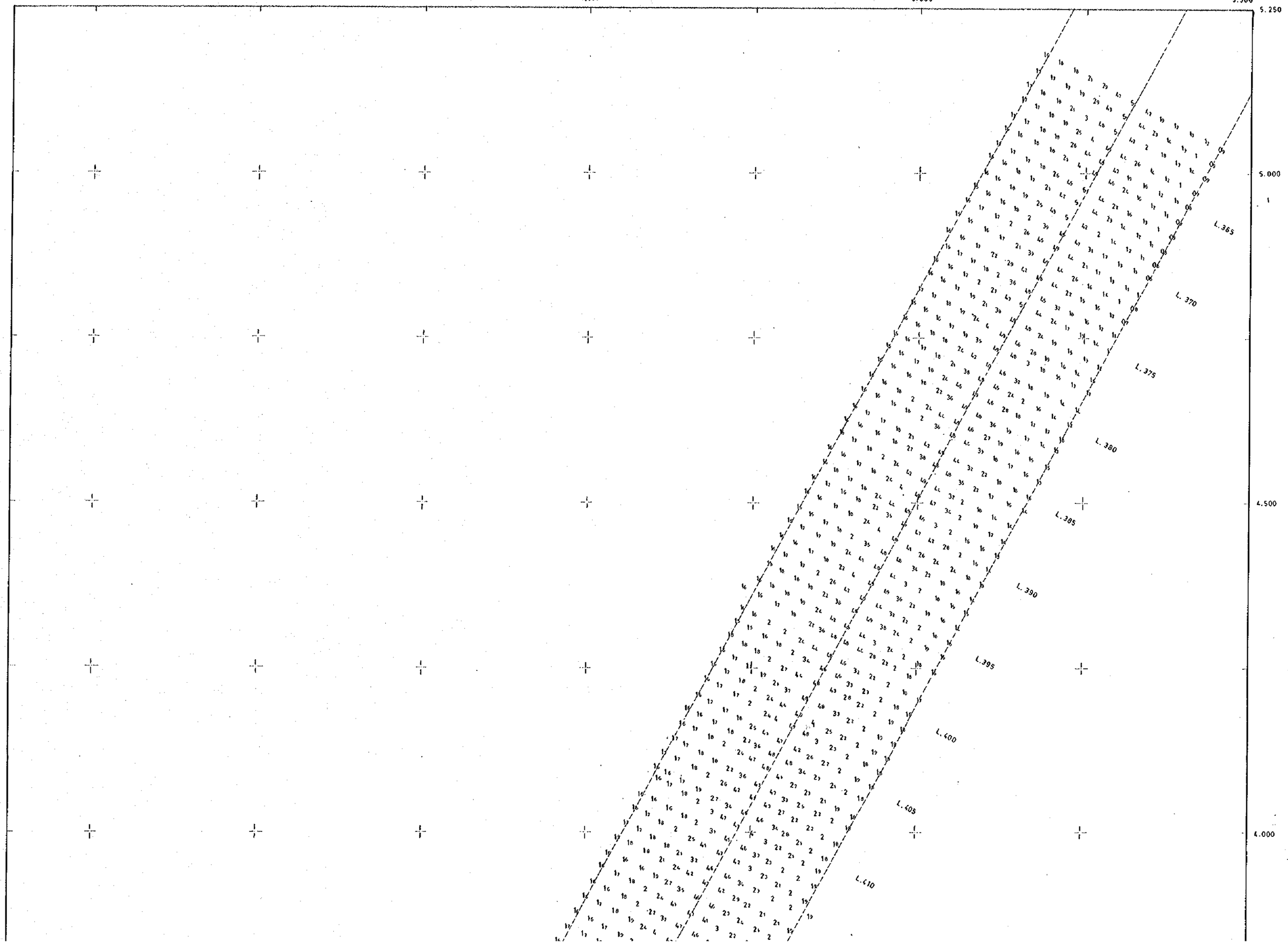
L.300

L.305

L.310



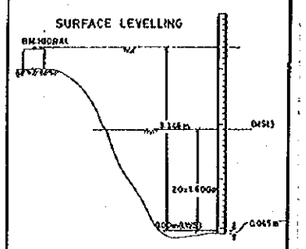
L.305
L.310
L.315
L.320
L.325
L.330
L.335
L.340
L.345
L.350
L.355
L.360
208° 13' 33" 06
6,000
5,500
5,000
SURFACE LEVELLING
BM HIDRAL
INDEX MAP
Line No.1
Line No.21
Line A-F
Line No.0
Line No.65
Line No.165
Line No.265
Line No.361
Line No.463
Line No.580
N
REV.
DESCRIPTION
BY
DATE
JICA
JAPAN INTERNATIONAL 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
0 25 50 75 150 M
DRAWN BY : Imam Purnomo
CHECKED BY :
DESIGN BY :
APPROVED BY :
STAGE : 12th (07 - 13 AUGUST 1989)
DATE : 10 - 11 AUGUST 1989
DRAWING NO. 04 FROM 6
REV.
BATHYMETRIC MAP


4.000
4.500
5.000
5.500
5.250
5.000
4.500
4.000
L. 365
L. 370
L. 375
L. 380
L. 385
L. 390
L. 395
L. 400
L. 405
L. 410

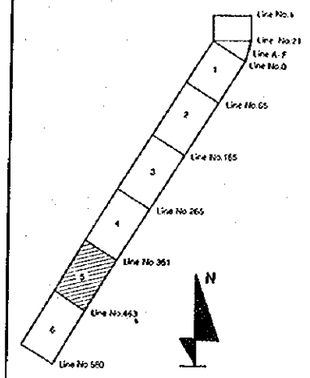
L.405
L.410
L.415
L.420
L.425
L.430
L.435
L.440
L.445
L.450
L.455
L.460
20°13 33'05

4.000
3.500
3.000

SURFACE LEVELLING



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 PORT

DRAWING TITLE :
ECHO SOUNDING
NARROW AREA

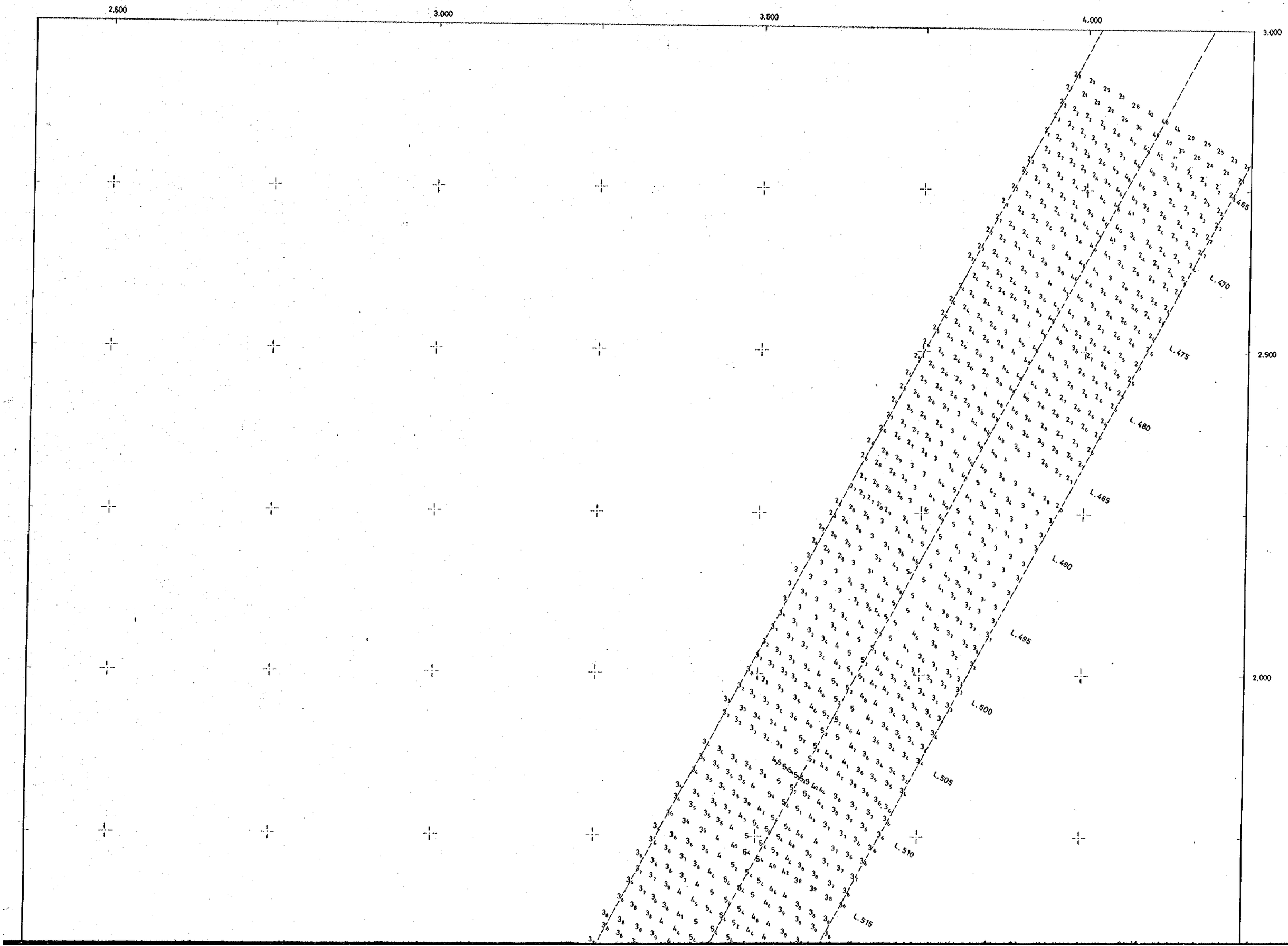
SCALE 1 : 2.500
0 25 50 75 150 M

DRAWN BY: IRES ARYANTI	CHECKED BY :
DESIGN BY :	APPROVED BY :

STAGE : 12th (2 - 13 AGUSTUS 1989)
DATE : 8,9 AGUSTUS 1989

DRAWING NO. 05 FROM 6 | REV.

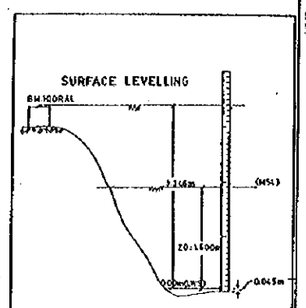
BATHYMETRIC MAP


2.500
3.000
3.500
4.000
3.000
2.500
2.000
L.465
L.470
L.475
L.480
L.485
L.490
L.495
L.500
L.505
L.510
L.515

L.505
L.510
L.515
L.520
L.525
L.530
L.535
L.540
L.545
L.550
L.555
L.560
L.565

1.500
1.000
500

SURFACE LEVELLING



INDEX MAP

REV.	DESCRIPTION	BY	DATE

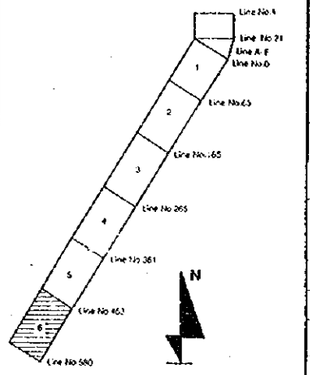
L.530
L.535
L.540
L.545
L.550
L.555
L.560
L.565
L.570
L.575
L.580
208° 13' 33" 06-

1.000

500

SURFACE LEVELLING

INDEX MAP



REV.	DESCRIPTION	BY	DATE

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

GEODATA GERLIAN CENTRE p.t.

OCEANOGRAPHIC SURVEYS IN THE COAST AND HARBOUR AREAS OF BANJARMASIN PORT

DRAWING TITLE
ECHO SOUNDING
NARROW AREA

SCALE 1 : 2.500
0 25 50 75 100(m)

DRAWN BY : M. GHOLIB
CHECKED BY :
APPROVED BY :

STAGE : 12th (7 - 13 AUGUST 1989)
DATE : 7, 8 AUGUST 1989

DRAWING NO 06 FROM 6 REV.

BATHYMETRIC MAP
(210 Khz)