

APPENDIX 12F

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**Relevant Marine  
Geophysical Charts**

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(The above are seabed features)

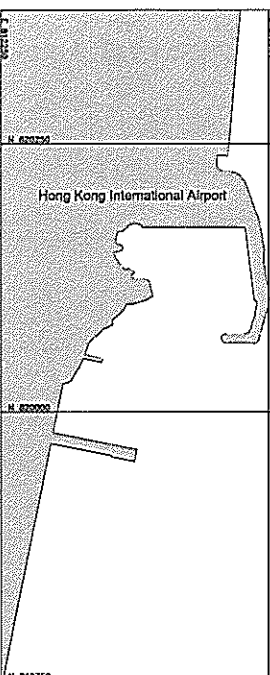
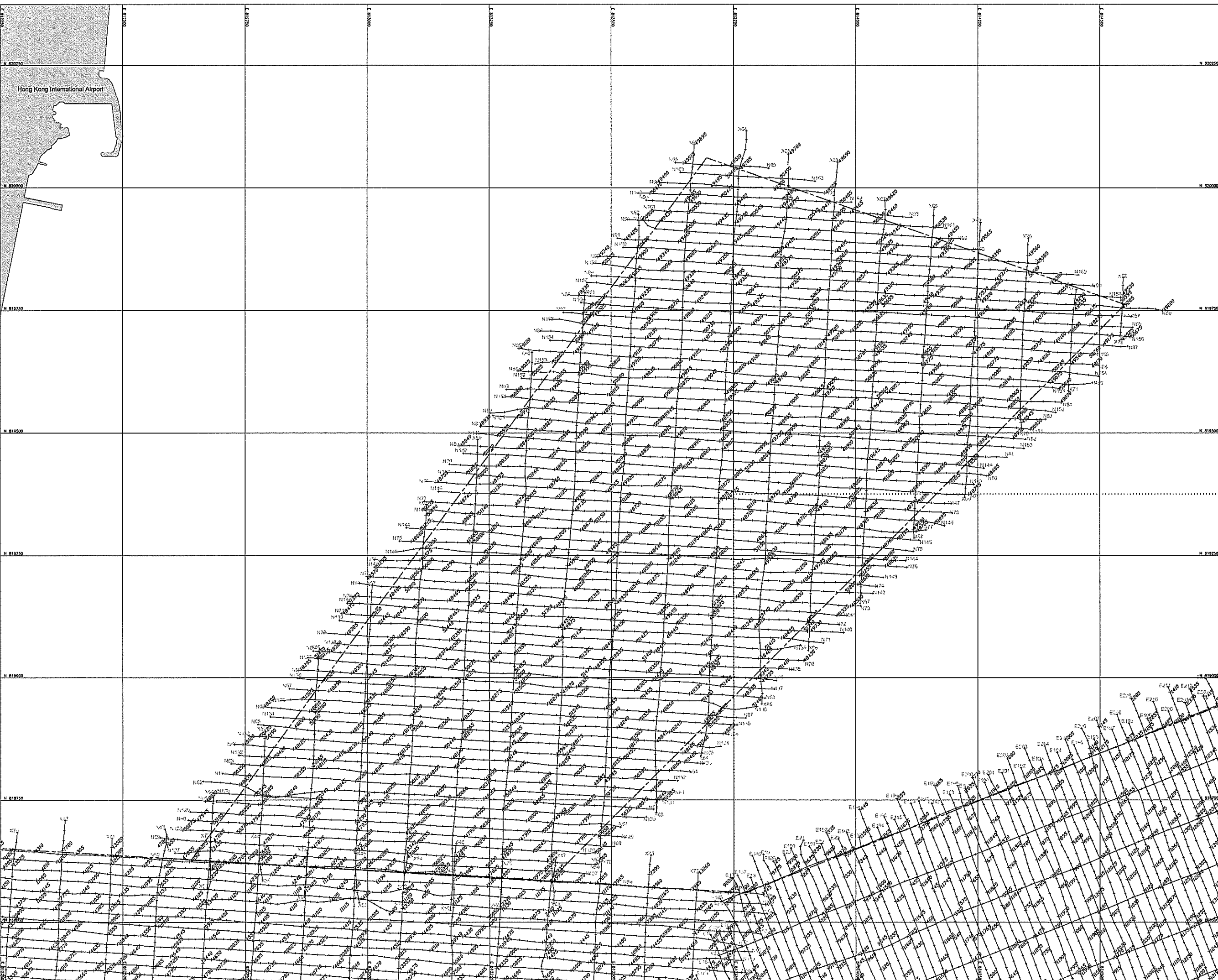
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(The above are combined seabed contours)

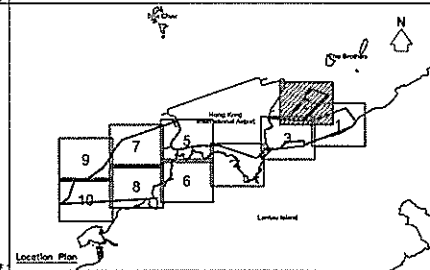
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- Legend :
- Vessel track with fix positions
  - Survey boundary
  - Chart overlap
  - Existing drillhole location
  - Drillhole location (2004)



Project : WORKS ORDER NO. GE/2003/18.24  
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 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
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 MARINE GEOPHYSICAL SURVEYS

AREA : NORTH OF TUNG CHUNG      FIGURE NUMBER : 1.2

Drawing Title :

### VESSEL TRACK PLOTS

- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8  
You Sampan
  5. Equipment : C-Nav GPS System
  6. Coastline taken from 1:1000 Survey Sheets, SMO,LD.

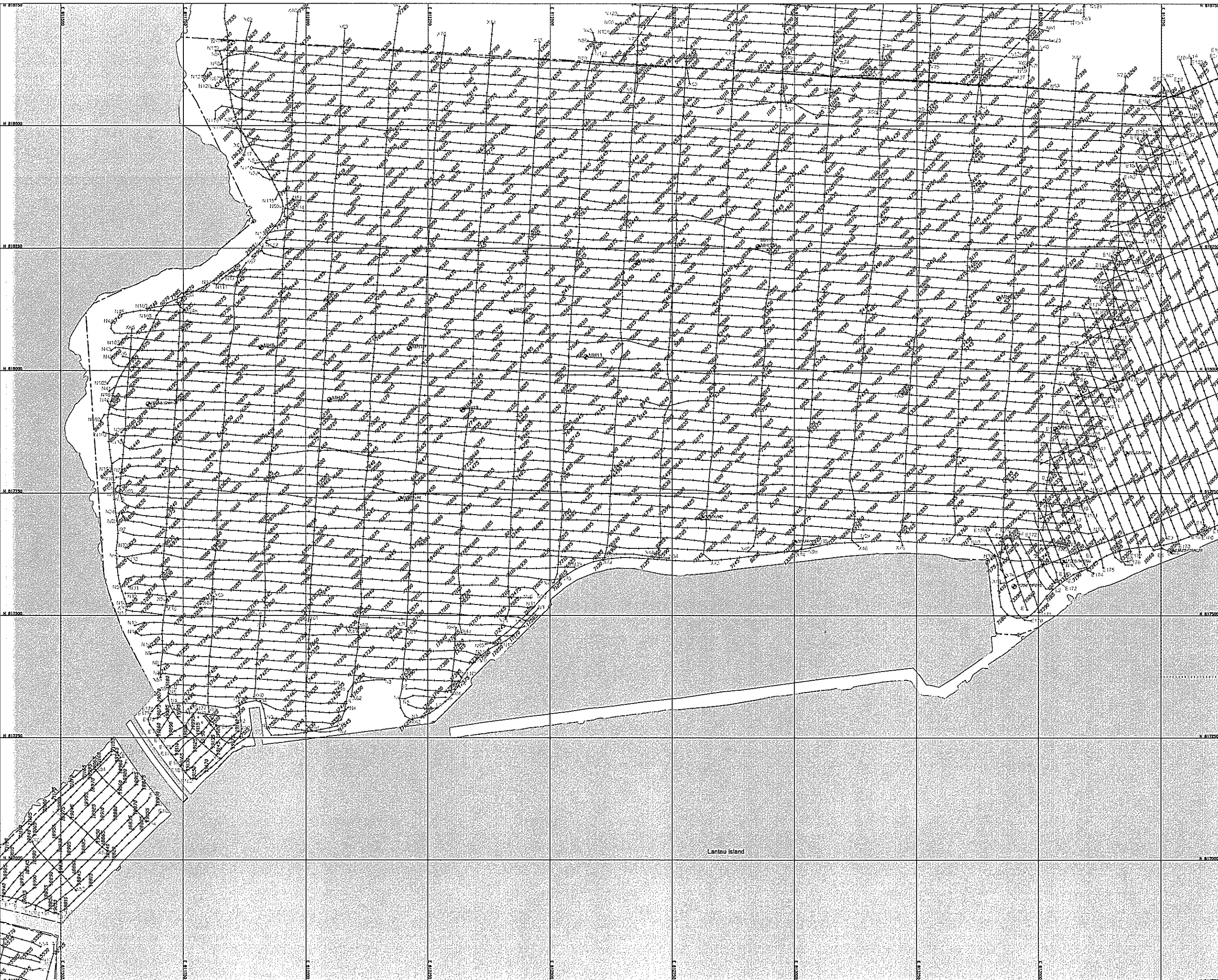
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0	21/07/2004	Clarence Siu	Matthew Lai	WIRT	Preliminary
1	16/09/2004	Clarence Siu	Matthew Lai	WIRT	Final

METRIC SCALE 1:2,500

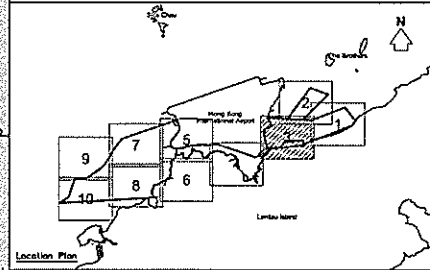
Client : Civil Engineering and Development Department

Surveyor : EGS (ENGINEERING & GEOPHYSICAL SERVICES) LIMITED  
 10/F, 100, Queen's Road East, Hong Kong  
 Tel: 2522 2222 Fax: 2522 2222  
 Email: info@egs.com.hk  
 Website: www.egs.com.hk

JOB NO. : HK168804



- Legend :
- Vessel track with fix positions
  - Survey boundary
  - Chart overlap
  - Existing drillhole location
  - Drillhole location (2004)



Project : WORKS ORDER NO. GE/2003/18.24  
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 MARINE GEOPHYSICAL SURVEYS

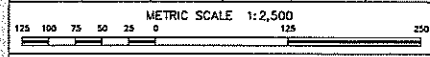
AREA : NORTH OF TUNG CHUNG      FIGURE NUMBER : 1.3

Drawing Title :

### VESSEL TRACK PLOTS

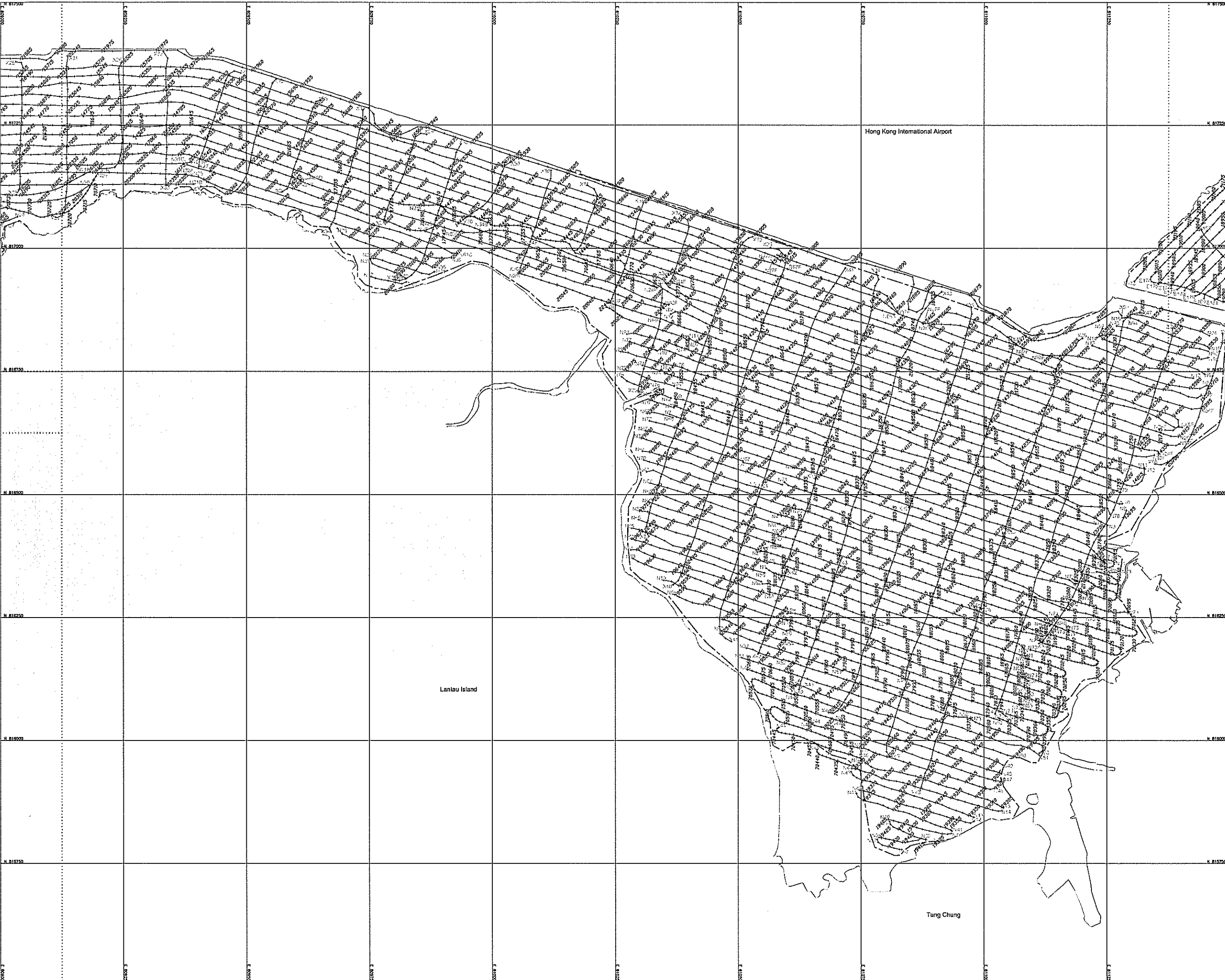
- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8  
You Sangpan
  5. Equipment : C-Nav GeGPS System
  6. Coastline taken from 1:1000 Survey Sheets, SMO,LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Siu	Matthew Lai	WERT	Preliminary
1	18/09/2004	Clarence Siu	Matthew Lai	WERT	Final

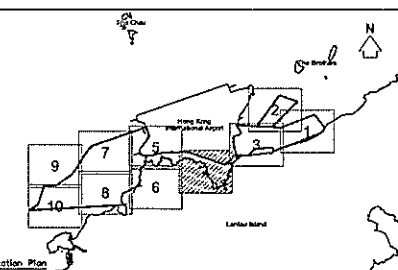


Client : Civil Engineering And Development Department

Surveyor : EGS (ENGINEERING AND DEVELOPMENT SERVICES) LIMITED  
 JOB NO. : HK166804



- Legend :
- Vessel track with fix positions
  - Survey boundary
  - Chart overlap
  - Existing drillhole location
  - Drillhole location (2004)



Project : WORKS ORDER NO. GE/2003/18.24  
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 MARINE GEOPHYSICAL SURVEYS

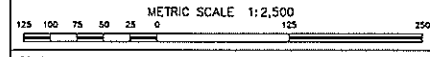
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Drawing Title :

### VESSEL TRACK PLOTS

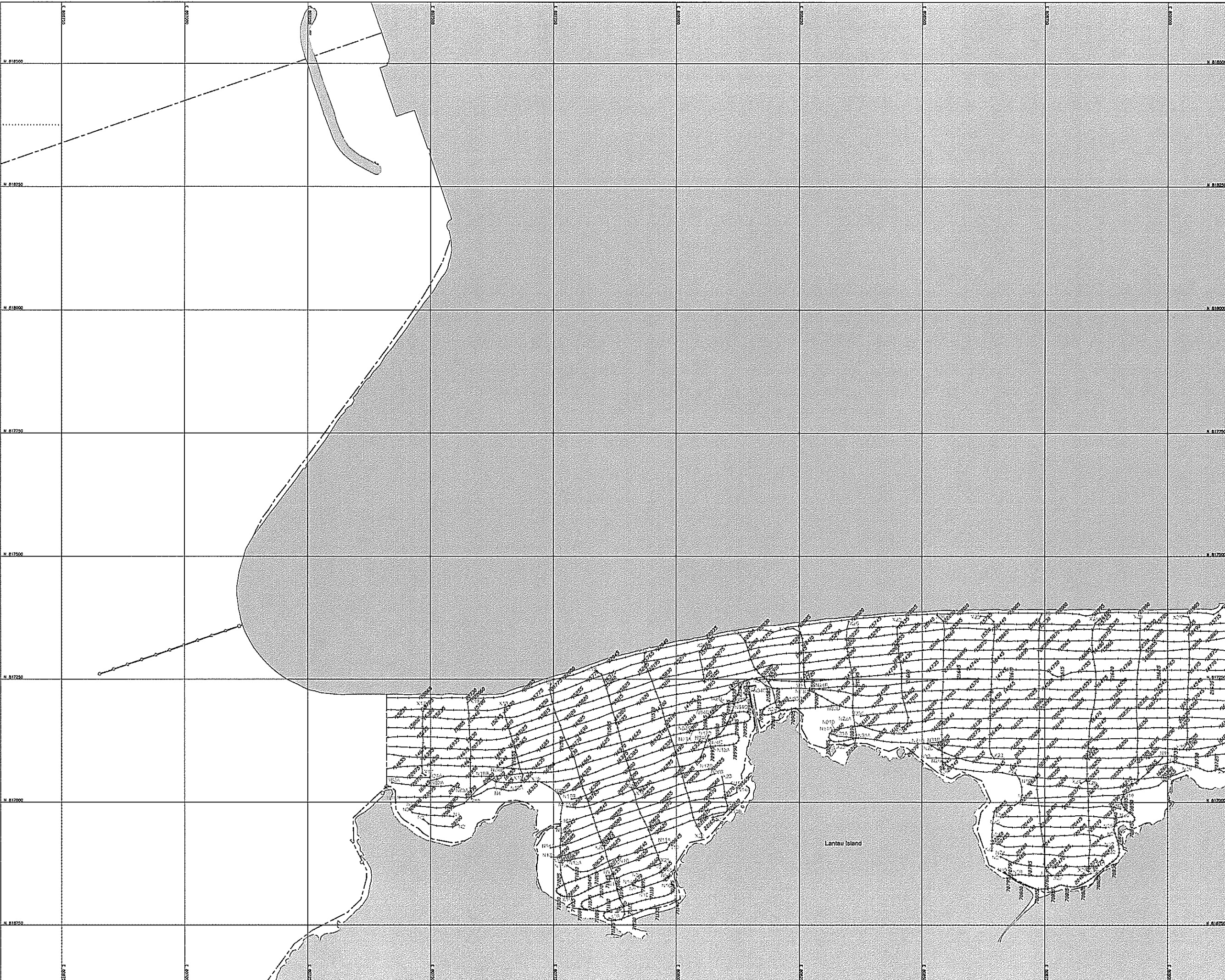
- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B
  5. Equipment : C-Star COPS System
  6. Coastline taken from 1:1000 Survey Sheets, SMO, I.D.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lai	WIRT	Preliminary
1	18/09/2004	Clarence Su	Matthew Lai	WIRT	Final

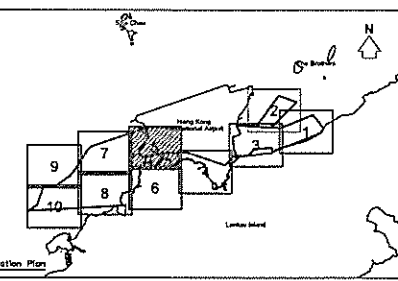


Client : Civil Engineering and Development Department

Surveyor : EGE ENGINEERS  
 10/F, 100, Des Voeux Road East, Hong Kong  
 Tel: 2522 2222 Fax: 2522 2222  
 Email: info@ege.com.hk  
 Website: www.ege.com.hk



- Legend :**
- Vessel track with fix positions
  - Survey boundary
  - Chart overlap
  - Existing drillhole location
  - Drillhole location (2004)



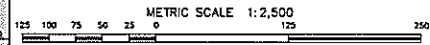
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 AGREEMENT NO. CE 26/2003 (HY)  
**HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION MARINE GEOPHYSICAL SURVEYS**

**AREA :** CHEK LAP KOK CHANNEL **FIGURE NUMBER :** 1.5

**Drawing Title :** VESSEL TRACK PLOTS

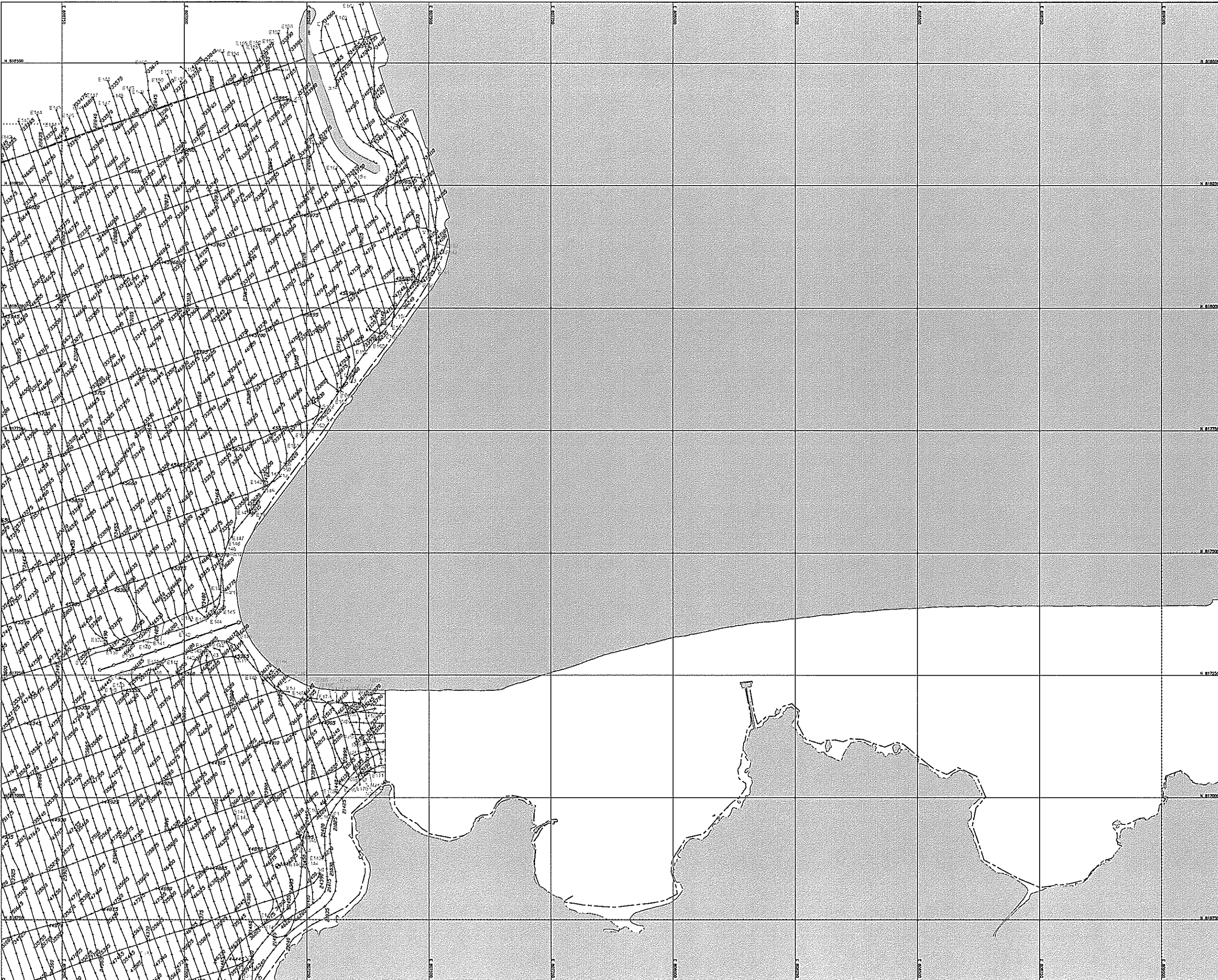
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  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B
  5. Equipment : C-Star Geopis System
  6. Coastline taken from 1:1000 Survey Sheets, SMO.LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Siu	Matthew Lai	WURT	Initial
1	18/09/2004	Clarence Siu	Matthew Lai	WURT	Final

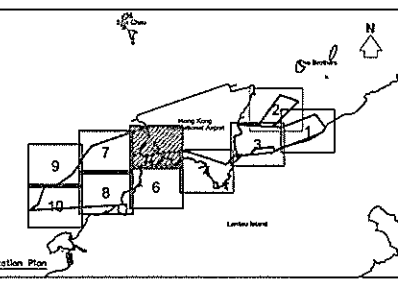


**Client :** Civil Engineering and Development Department

**Surveyor :** EGE ENGINEERING GROUP LIMITED  
 12/F, 120 Des Voeux Road West, Hong Kong  
 Tel: (852) 2522 2222 Fax: (852) 2522 2222  
 www.enge.com.hk



- Legend :
- Vessel track with fix positions
  - Survey boundary
  - Chart overlap
  - Drillhole location (2004)



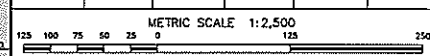
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 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : 1.5

Drawing Title :  
**VESSEL TRACK PLOTS**

- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B
  5. Equipment : Yeu Seaplan
  6. Coastline taken from 1:1000 Survey Sheets, SMO.LD.

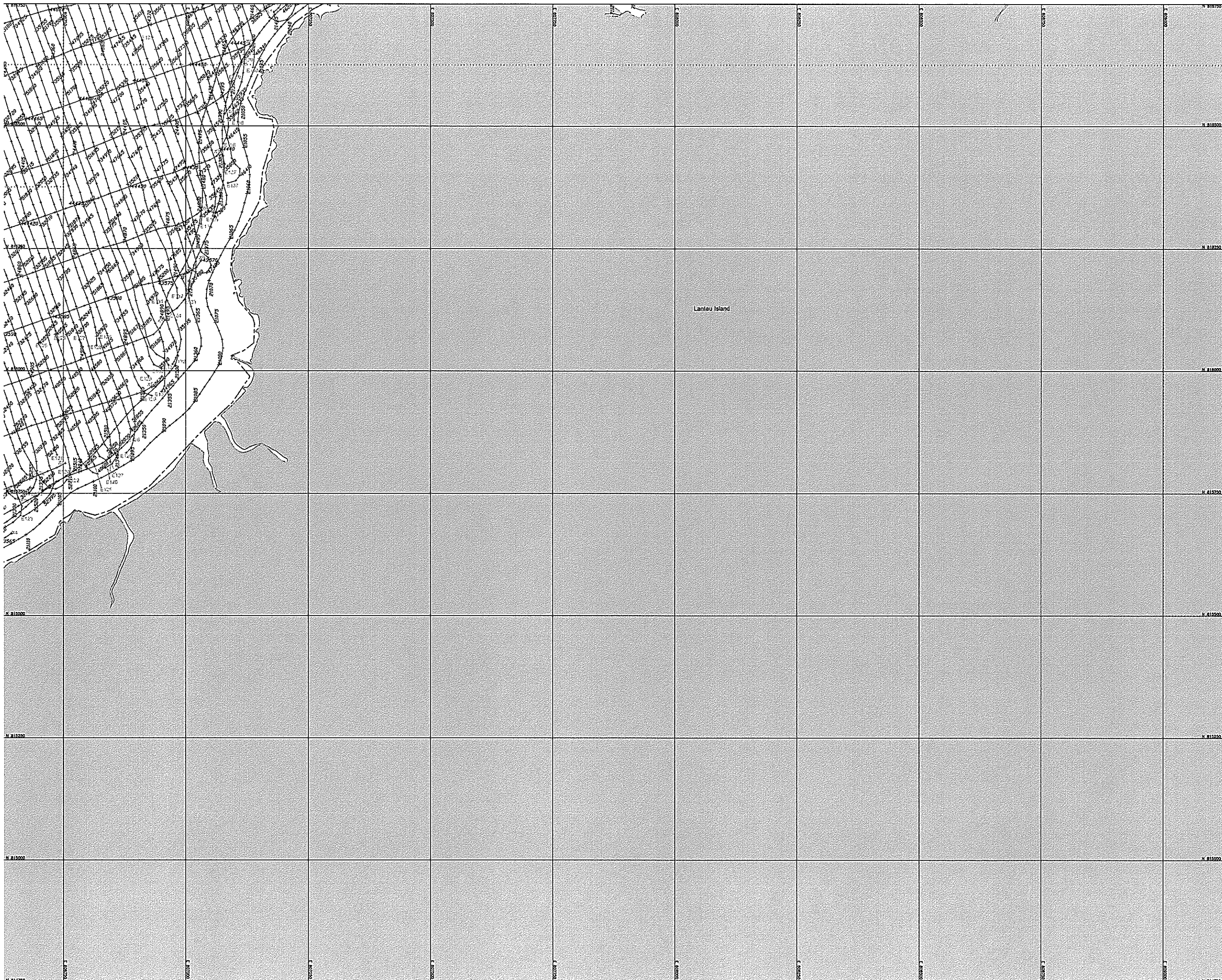
Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Siu	Matthew Lai	WIRT	Preliminary
1	05/10/2004	Clarence Siu	Matthew Lai	WIRT	Final



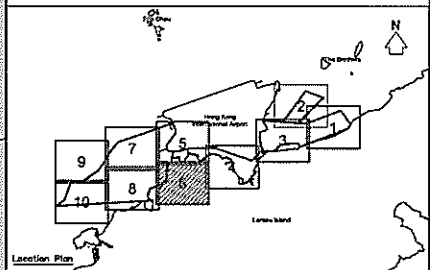
Client : Civil Engineering and Development Department

Surveyor : ECS ENGINEERING CONSULTANTS  
 JOB NO. : HK026804





- Legend :
- Vessel track with fix positions
  - Survey boundary
  - Chart overlap
  - Drillhole location (2004)



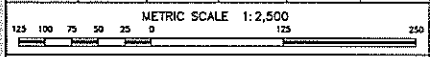
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 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : 1.6

Drawing Title :  
**VESSEL TRACK PLOTS**

- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8  
You Sampan
  5. Equipment : C-Nav GcGPS System
  6. Coastline taken from 1:1000 Survey Sheets, SAO.LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lal	WNR	Preliminary
1	05/10/2004	Clarence Su	Matthew Lal	WNR	Final







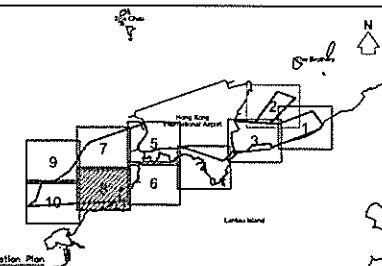
Client : Civil Engineering  
And Development Department

Surveyor : EGS (ASIA) LIMITED  
 2/F, 280 Wing Lok Street, Kowloon, Hong Kong  
 Tel: (852) 2500 8888 Fax: (852) 2500 8889  
 Email: info@egs.com.hk  
 Job No. : HK186804



Legend :

-  Vessel track with fix positions
-  Survey boundary
-  Chart overlap
-  Drillhole location (2004)



Project : WORKS ORDER NO. GE/2003/18.24  
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 MARINE GEOPHYSICAL SURVEYS


AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : 1-8

Drawing Title : **VESSEL TRACK PLOTS**

- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B  
You Sampan
  5. Equipment : G-New GeSPS System
  6. Coastline taken from 1:1000 Survey Sheets, SHO.LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lai	WURT	Preliminary
1	05/10/2004	Clarence Su	Matthew Lai	WURT	Final

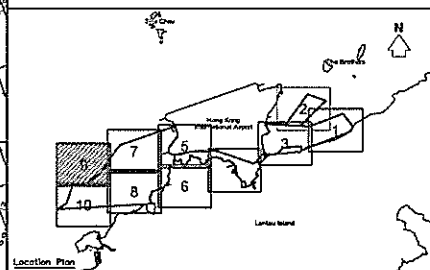
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Client :  Civil Engineering  
And Development Department

Surveyor :  EGE  
 EGGADJ LIMITED  
 11/F, 111 Des Voeux Road West, Hong Kong  
 Tel: (852) 2522 2222  
 Fax: (852) 2522 2222  
 E-mail: info@ege.com.hk



- Legend :
- Vessel track with fix positions
  - Survey boundary
  - Chart overlap
  - Drillhole location (2004)



Project : WORKS ORDER NO. GE2003/18.24  
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AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
MARINE GEOPHYSICAL SURVEYS

AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : 1.9

Drawing Title :

### VESSEL TRACK PLOTS

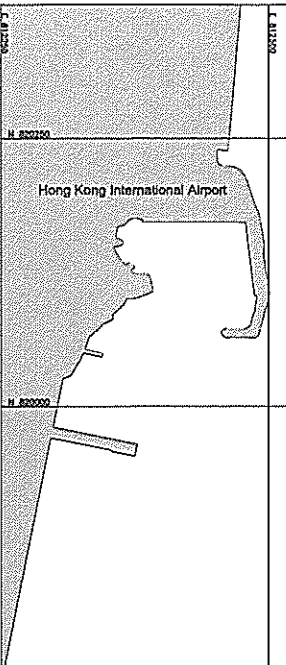
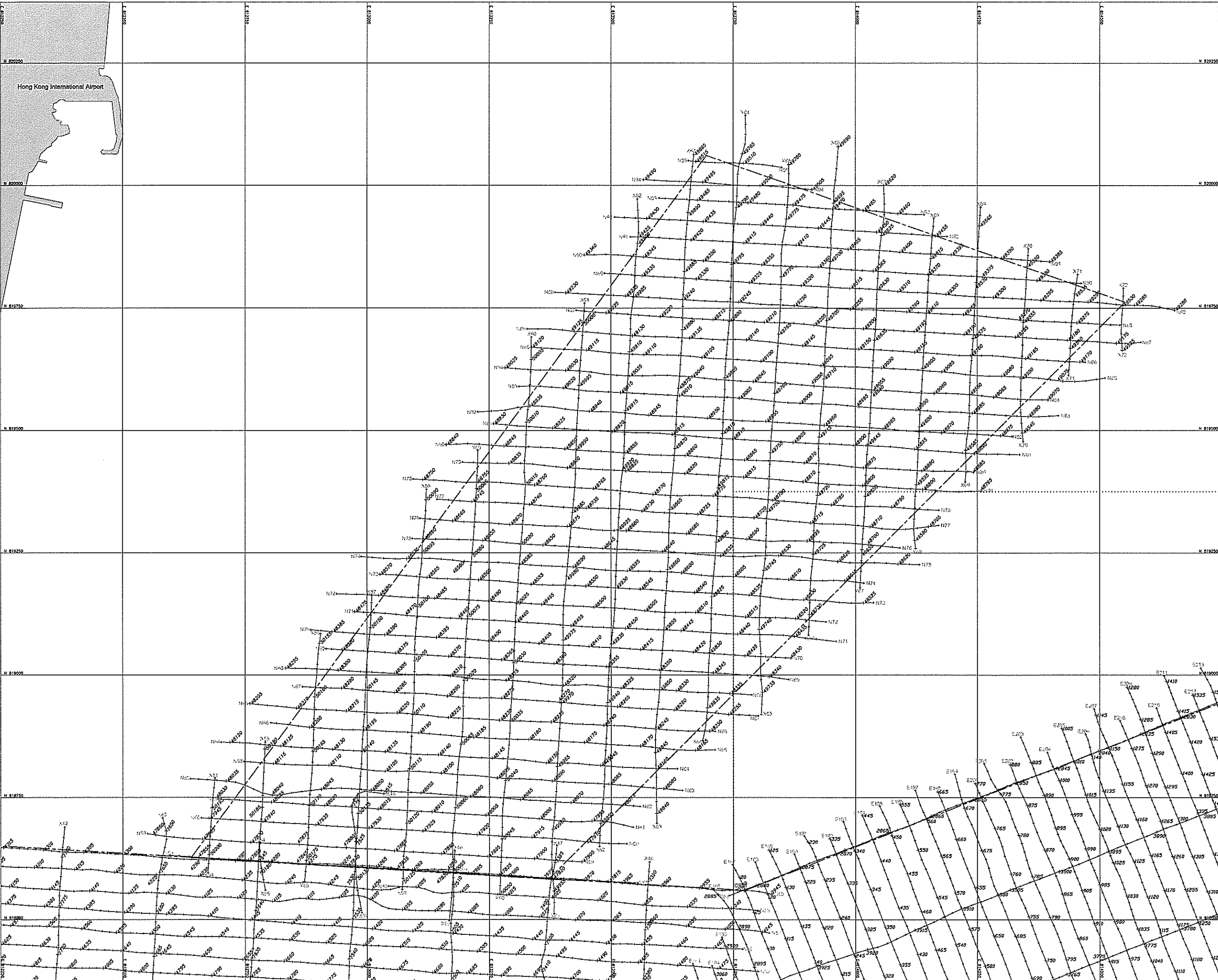
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1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8  
You Sampan
  5. Equipment : C-Nav GeoPS System
  6. Coastline taken from 1:1000 Survey Sheets, SMQ.LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lai	WIRT	Preliminary
1	05/10/2004	Clarence Su	Matthew Lai	WIRT	Final

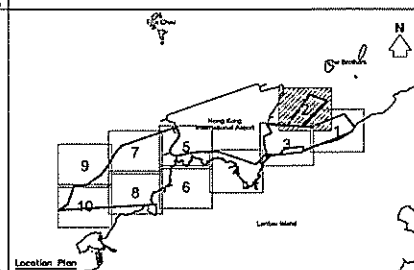
METRIC SCALE 1:2,500

Client : Civil Engineering  
And Development Department

Surveyor : EGS ENGINEERING & SURVEYING LIMITED  
10/F, 100 Des Voeux Road West, Hong Kong



- Legend :
- Hydrophone track with fix positions
  - Survey boundary
  - Chart overlap
  - Existing drillhole location
  - MH14 Drillhole location (2004)



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 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : NORTH OF TUNG CHUNG      FIGURE NUMBER : 2.2

Drawing Title : **HYDROPHONE TRACK PLOTS**

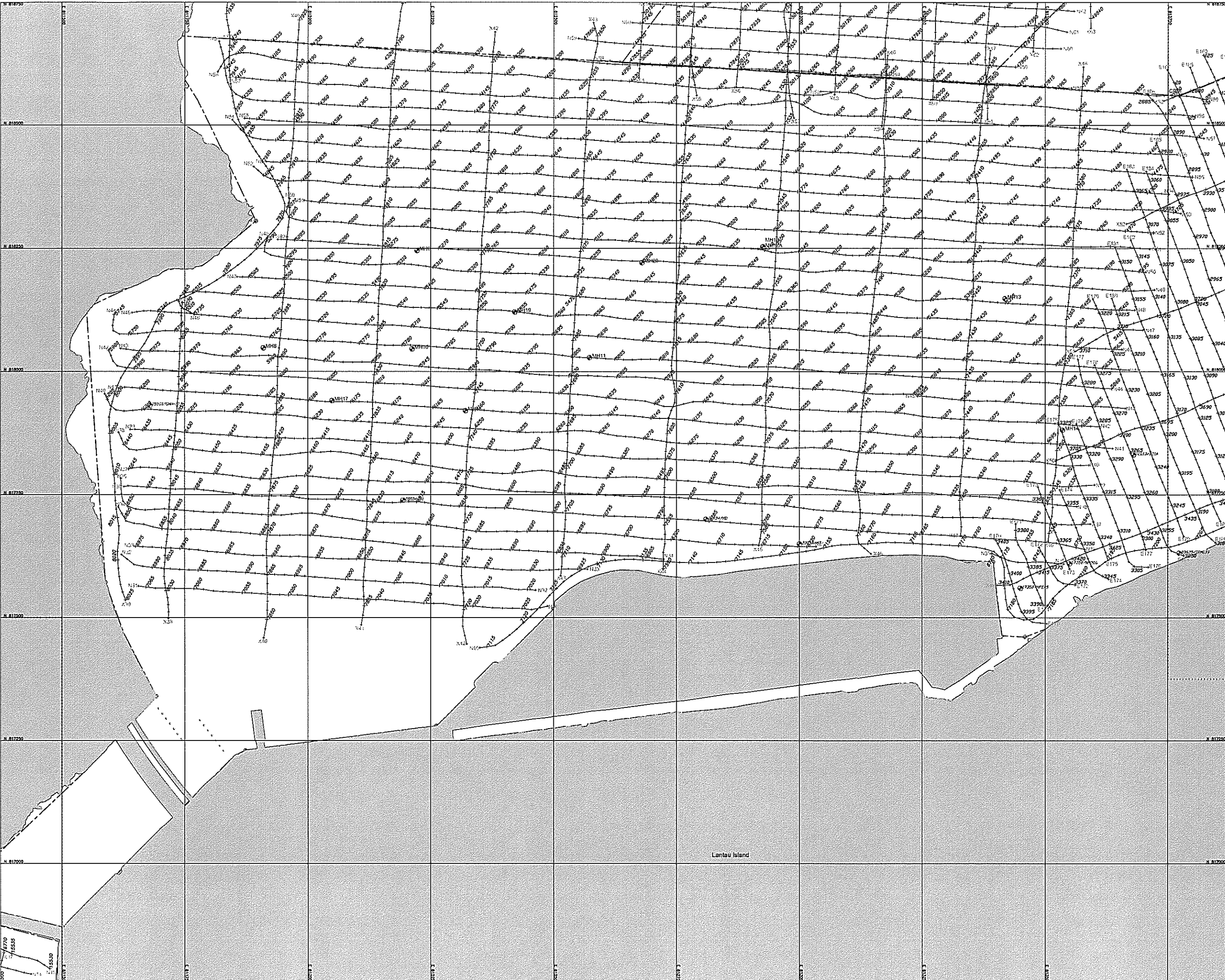
- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8
  5. Equipment :
    - C-Max GeGPS System
    - C-Boon Low Voltage Boomer and Hydrophone
  6. Coastline taken from 1:1000 Survey Sheets, SMOLD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lai	WURT	Preliminary
1	18/09/2004	Clarence Su	Matthew Lai	WURT	Final

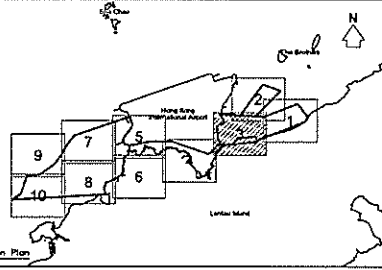
METRIC SCALE 1:2,500

Client : Civil Engineering and Development Department

Surveyor : EGE UNLIMITED  
 JOB NO. : HK180804



- Legend :
- Hydrophone track with fix positions
  - Survey boundary
  - Chart overlap
  - Existing drillhole location
  - MH14 Drillhole location (2004)



Project : WORKS ORDER NO. GE/2003/18.24  
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 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

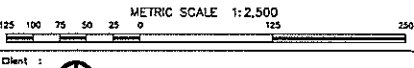
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Drawing Title :

### HYDROPHONE TRACK PLOTS

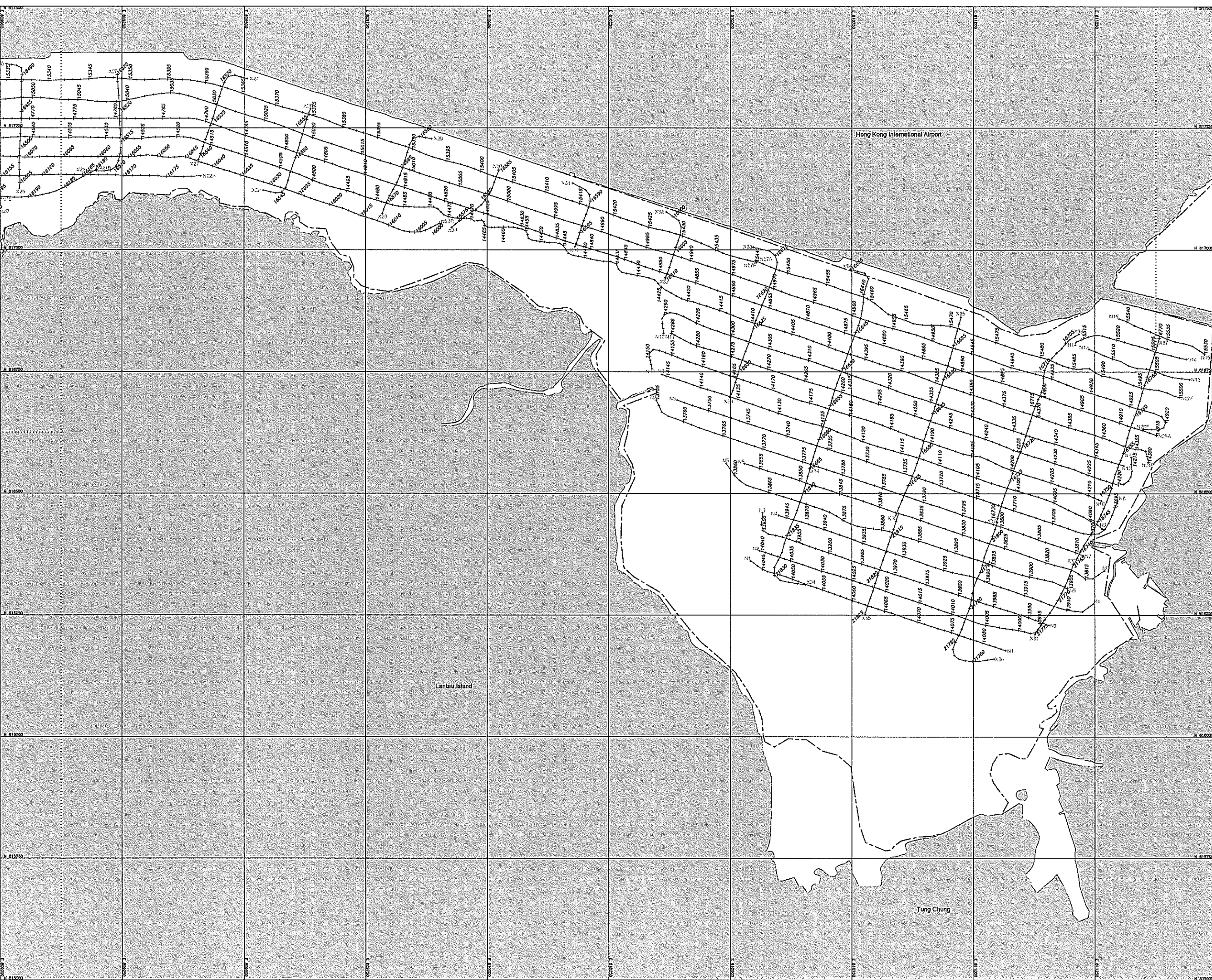
- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B  
Yau Sampan
  5. Equipment : C-Hay GeopS System  
C-Boom Low Voltage Boomer and Hydrophone
  6. Coastline taken from 1:1000 Survey Sheets, SM0,LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Claire Su	Matthew Lai	WIRT	Preliminary
1	18/09/2004	Claire Su	Matthew Lai	WIRT	Final

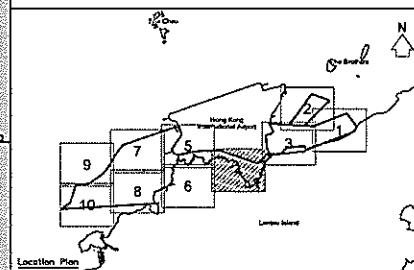


Client : Civil Engineering And Development Department

Surveyor : EGE ENGINEERING GROUP LIMITED  
 JOB NO. : HK186804



- Legend :
- Hydrophone track with fix positions
  - Survey boundary
  - Chart overlap
  - Existing drillhole location
  - 2004 Drillhole location



Project : WORKS ORDER NO. GE2003/18.24  
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 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
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 MARINE GEOPHYSICAL SURVEYS

AREA : CHEK LAP KOK CHANNEL      FIGURE NUMBER : 2.4

Drawing Title :

### HYDROPHONE TRACK PLOTS

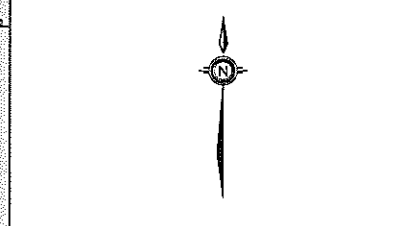
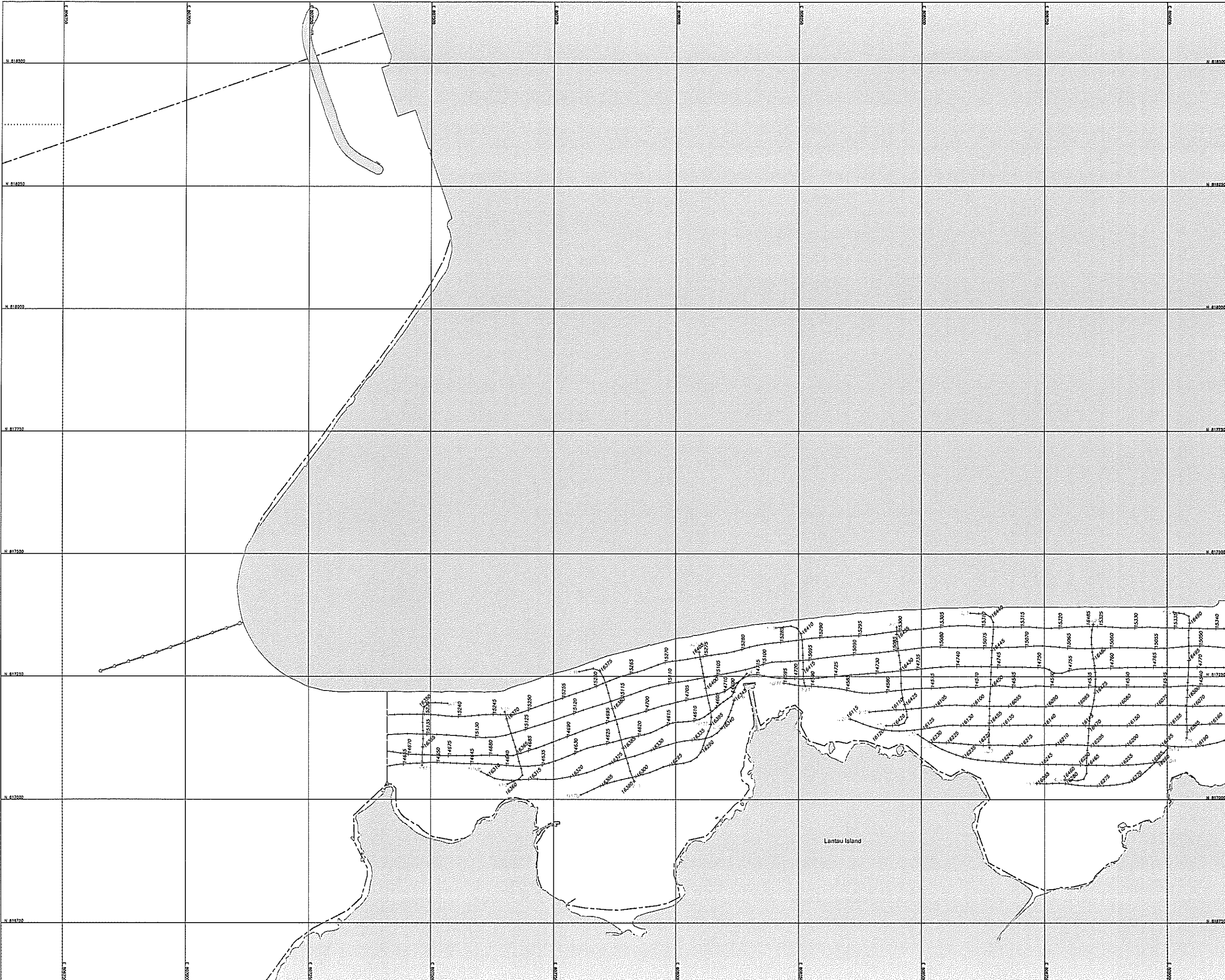
- Notes :
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  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8
  5. Equipment : You Seaplan  
C-New GeGPS System  
C-Boom Low Voltage Boomer and Hydrophone
  6. Coastline taken from 1:1000 Survey Sheets, SMOLD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lai	WIRT	Preliminary
1	18/09/2004	Clarence Su	Matthew Lai	WIRT	Final

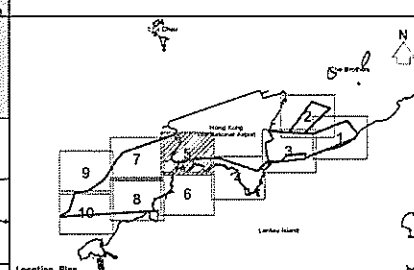
METRIC SCALE 1:2,500

Client : Civil Engineering and Development Department

Surveyor : EGS ENGINEERING LIMITED  
 10/F, 100, Queen's Road East, Hong Kong  
 Tel: (852) 2528 8888 Fax: (852) 2528 8889  
 E-mail: info@egs.com.hk  
 Job No. : HK185804



- Legend :
- Hydrophone track with fix positions
  - Survey boundary
  - Chart overlap
  - Existing drillhole location
  - Drillhole location (2004)



Project : WORKS ORDER NO. GE/2003/18.24  
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 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : CHEK LAP KOK CHANNEL      FIGURE NUMBER : 2.5

Drawing Title :  
**HYDROPHONE TRACK PLOTS**

- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 6  
You Sampan
  5. Equipment : C-Nav GcGPS System  
C-Boom Low Voltage Booter and Hydrophone
  6. Coastline taken from 1:1000 Survey Sheets, SMO,LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lai	WRRT	Preliminary
1	18/09/2004	Clarence Su	Matthew Lai	WRRT	Final

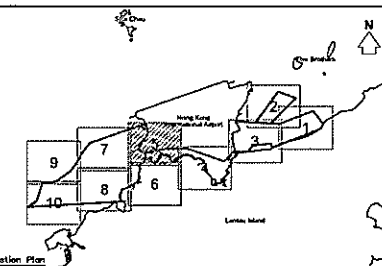
METRIC SCALE 1:2,500

Client : Civil Engineering And Development Department

Surveyor : EGS ENGINEERING & SURVEYING LIMITED  
 11/F, 110, WING LUN STREET, HONG KONG  
 11/F, 110, WING LUN STREET, HONG KONG  
 11/F, 110, WING LUN STREET, HONG KONG



- Legend :
- Hydrophone track with fix positions
  - Survey boundary
  - Chart overlap
  - MH14 Drillhole location (2004)



Project : WORKS ORDER NO. GE/2003/18.24  
AGREEMENT NO. CE 28/2003 (HY)  
HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
MARINE GEOPHYSICAL SURVEYS

AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : 2.5

Drawing Title :

### HYDROPHONE TRACK PLOTS

- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 5
  5. Equipment : You Sempson  
C-Boom Low Voltage Boomer and Hydrophone
  6. Coastline taken from 1:1000 Survey Sheets, SMO.LD.

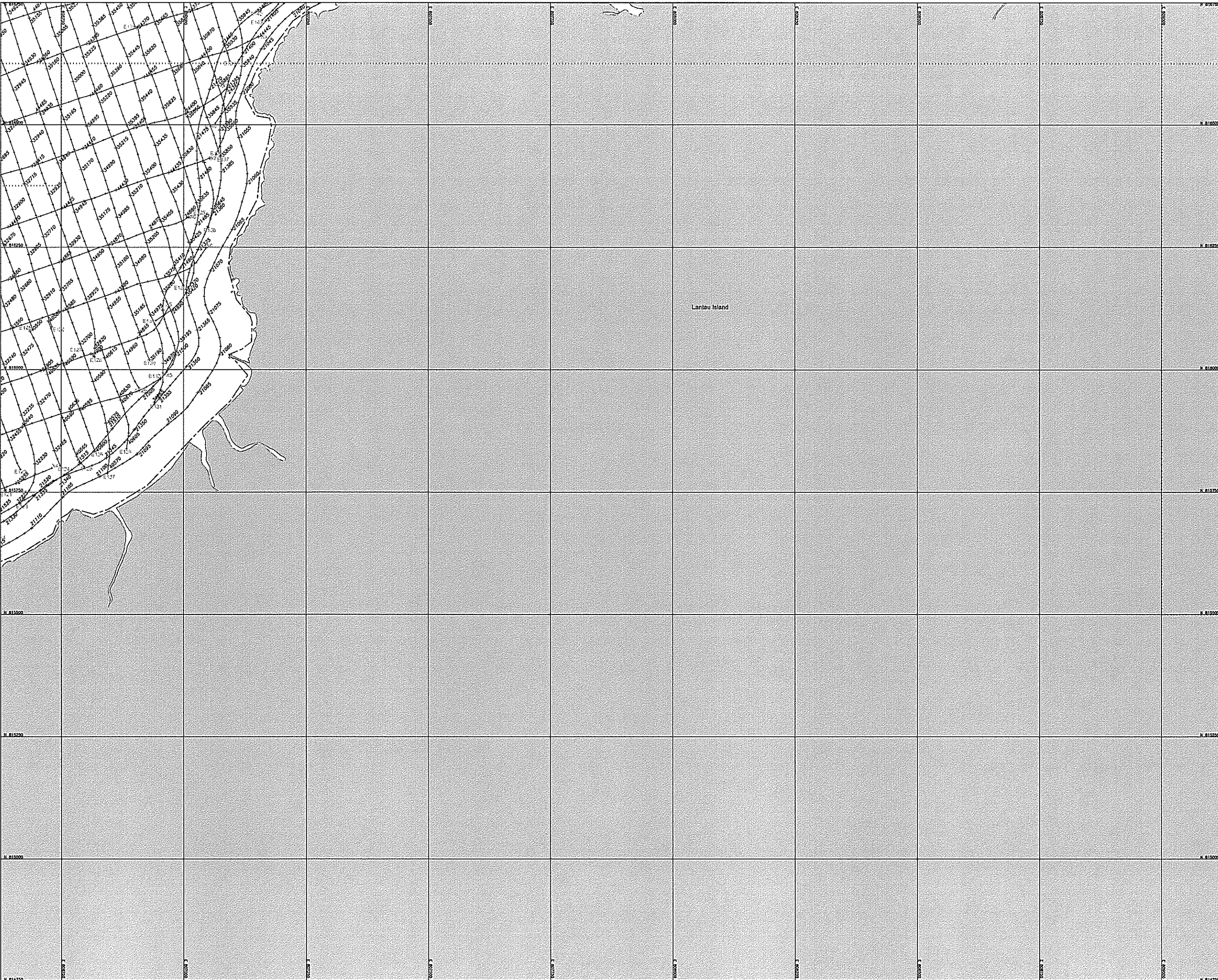
Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Siu	Matthew Lai	WURT	Preliminary
1	05/10/2004	Clarence Siu	Matthew Lai	WURT	Final

METRIC SCALE 1:2,500

Client : Civil Engineering  
And Development Department

Surveyor : EGE ENGINEERING LIMITED  
10/F, 100, Des Voeux Road East, Hong Kong  
Tel: (852) 2522 2222 Fax: (852) 2522 2222  
www.egelimited.com.hk

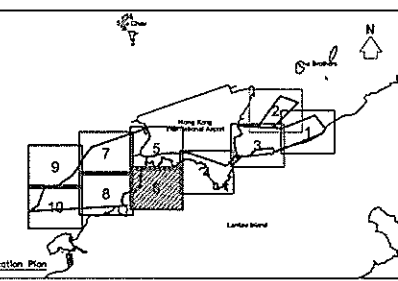




Lantau Island



- Legend :
- Hydrophone track with fix positions
  - Survey boundary
  - Chart overlap
  - MH14 Driftsite location (2004)



Project : WORKS ORDER NO. GE2003/18.24  
 AGREEMENT NO. CE 26/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

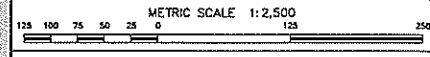
AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : 2.6

Drawing Title :

### HYDROPHONE TRACK PLOTS

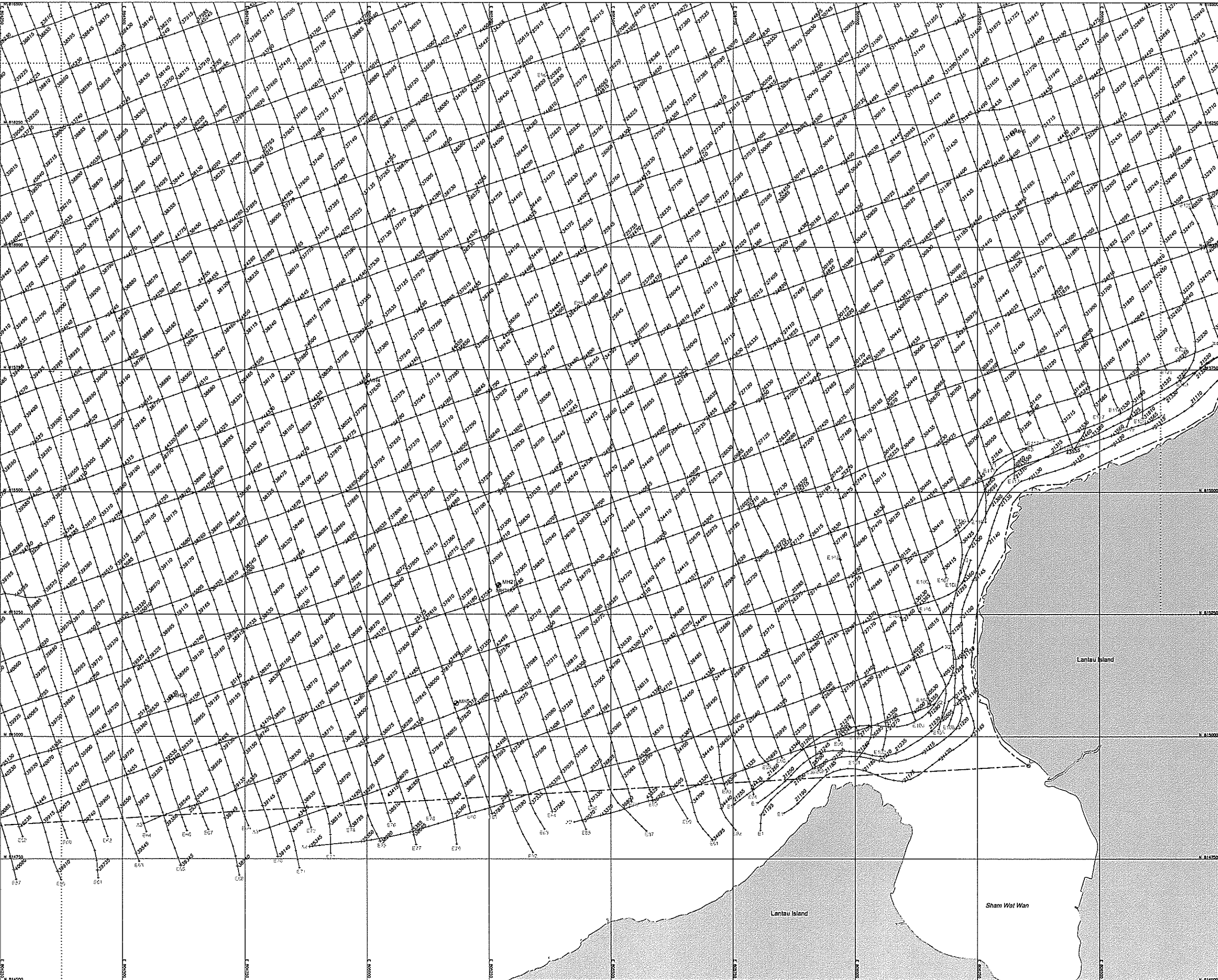
- Notes :
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  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B
  5. Equipment : You Sampson  
C-Hov GeopS System  
C-Bowm Low Voltage Broomer and Hydrophone
  6. Coastline taken from 1:1000 Survey Sheets, SMO,LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lai	WIRT	Preliminary
1	05/10/2004	Clarence Su	Matthew Lai	WIRT	Final

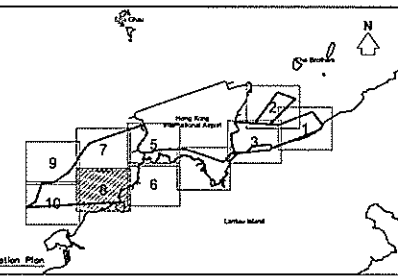


Client : Civil Engineering  
And Development Department

Surveyor : ECH/UNLIMITED  
 10/F, 100, Queen's Road East, Hong Kong  
 Tel: 2522 2222 Fax: 2522 2222  
 Email: info@ech.com.hk  
 Website: www.ech.com.hk



- Legend :
- Hydrophone track with fix positions
  - Survey boundary
  - Chart overlap
  - MH14 Drift hole location (2004)



Project : WORKS ORDER NO. GE/2003/18.24  
 AGREEMENT NO. CE 26/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : 2.8

Drawing Title :

### HYDROPHONE TRACK PLOTS

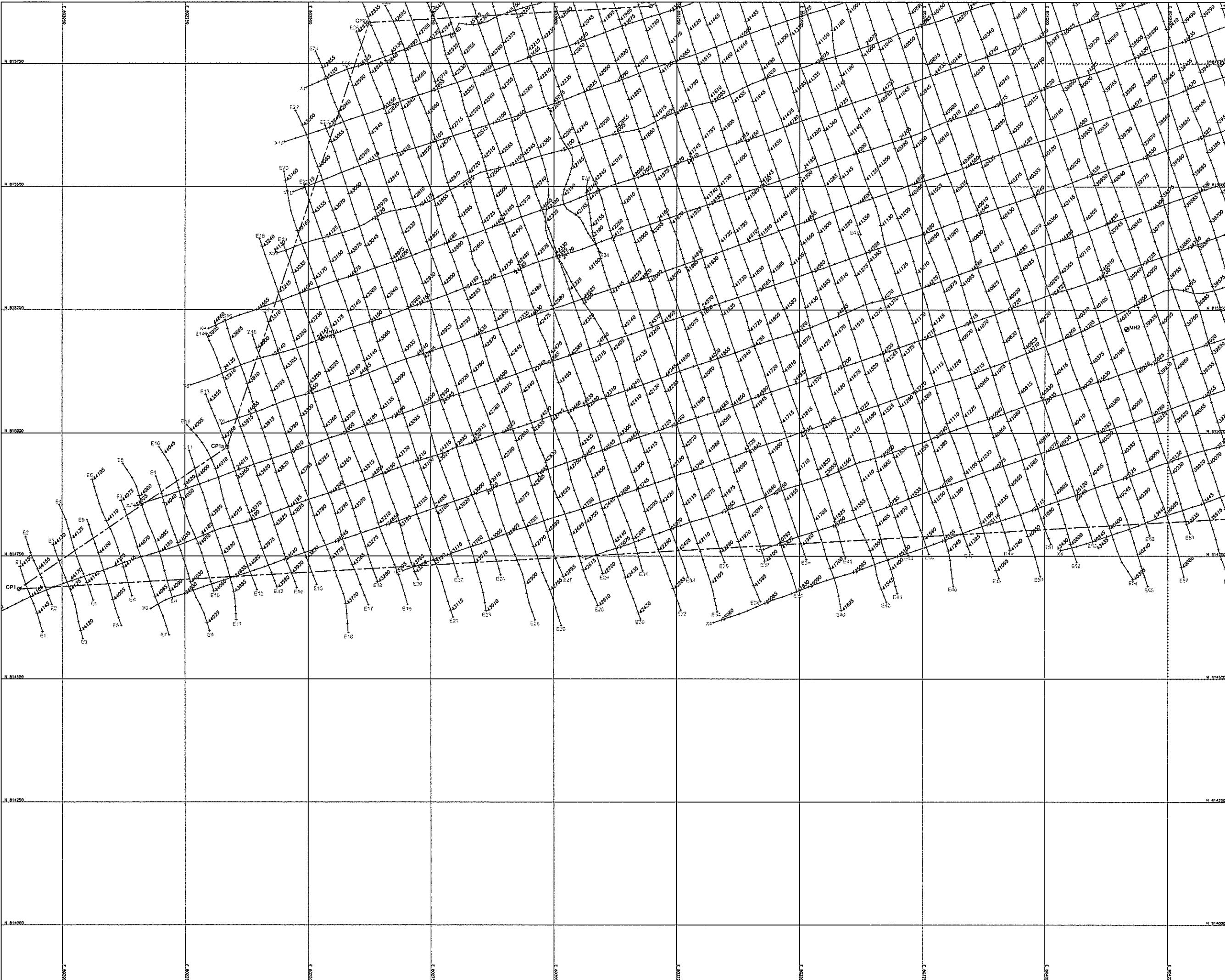
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  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B
  5. Equipment :
    - C-Hay GeGPS System
    - C-Boom Low Voltage Boomer and Hydrophone
  6. Coastline taken from 1:1000 Survey Sheets, SM0,LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lal	WIRT	Preliminary
1	05/10/2004	Clarence Su	Matthew Lal	WIRT	Final

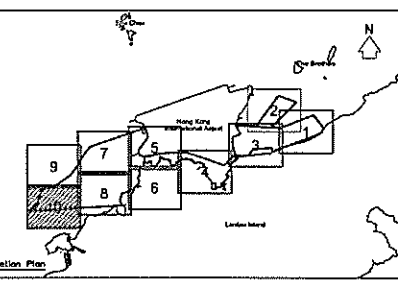
METRIC SCALE 1:2,500

Client : Civil Engineering And Development Department

Surveyor : EGE  
 JOB NO. : HK186604



- Legend :
- Hydrophone track with fix positions
  - Survey boundary
  - Chart overlap
  - MH14 Drillhole location (2004)



Project : WORKS ORDER NO. GE/2003/16.24  
 AGREEMENT NO. CE 262/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : 2.10

Drawing Title :

### HYDROPHONE TRACK PLOTS

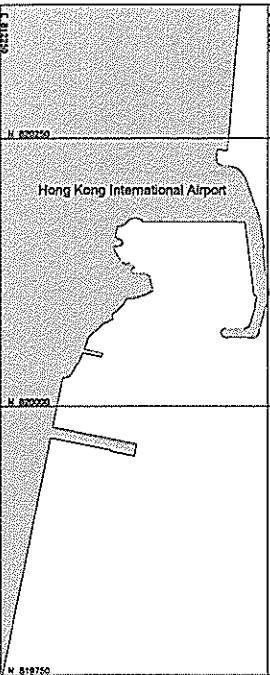
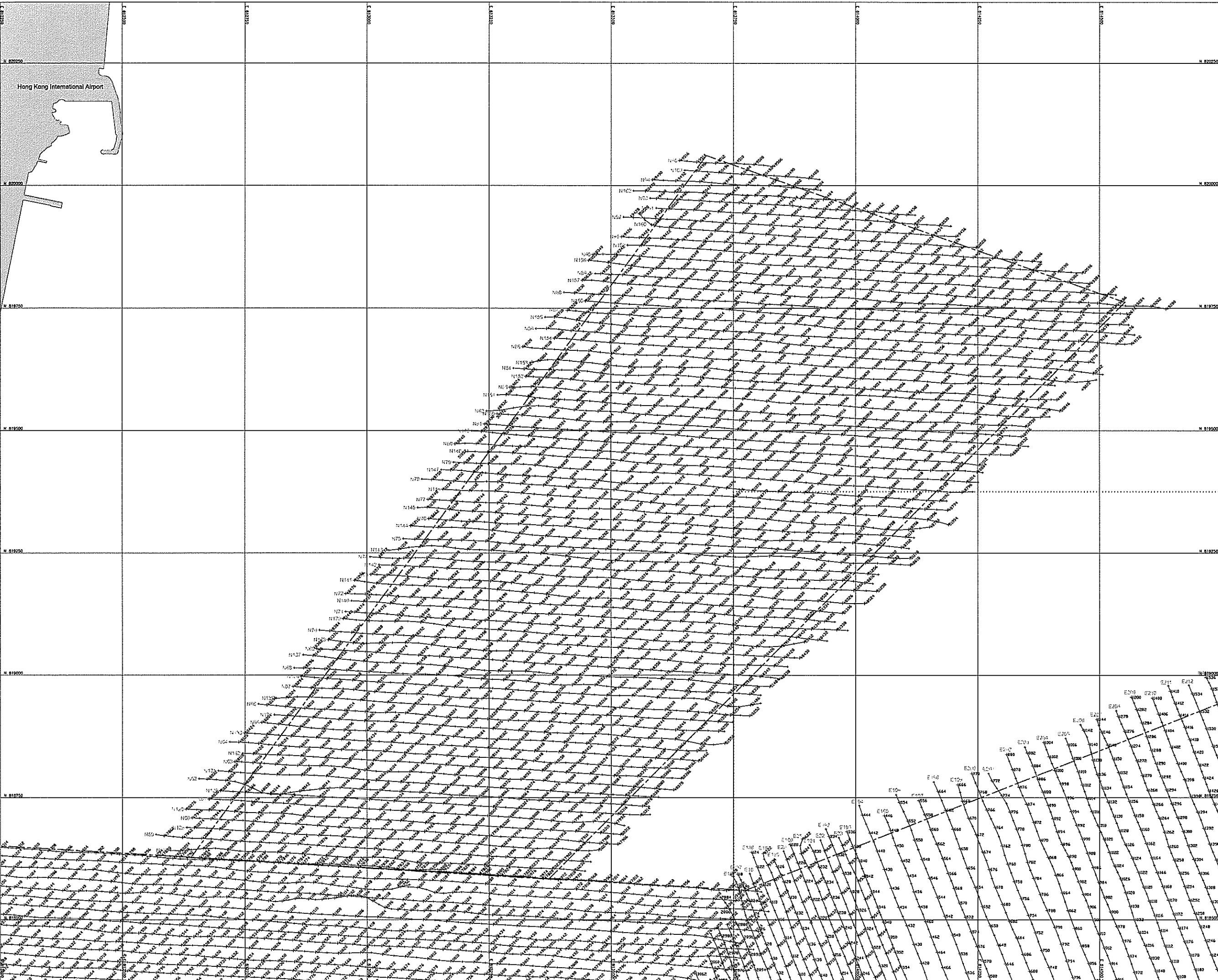
- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8
  5. Equipment :
    - Yara Sampson
    - C-Star GeopS System
    - C-Boom Low Voltage Boomer and Hydrophone
  6. Coastline taken from 1:1000 Survey Sheets, SM0,LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lai	WURT	Preliminary
1	05/10/2004	Clarence Su	Matthew Lai	WURT	Final

METRIC SCALE 1:2,500

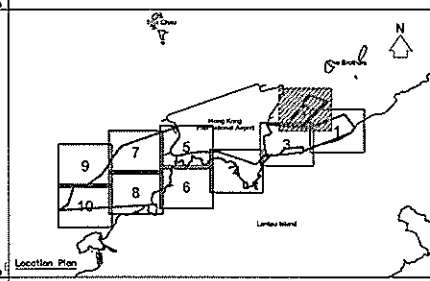
Client : Civil Engineering and Development Department

Surveyor : EGS ENGINEERING LIMITED  
 11/F, 110 Des Voeux Road West, Hong Kong  
 Tel: (852) 2522 2222 Fax: (852) 2522 2222  
 www.egs.com.hk      JOB NO. : HK186524



Legend :

- Side scan sonar track with fix positions
- Survey boundary
- Chart overlap



Project : WORKS ORDER NO. GE/2003/18.24  
 AGREEMENT NO. CE 25/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : NORTH OF TUNG CHUNG      FIGURE NUMBER : 3.2

**SIDE SCAN SONAR TRACK PLOTS**

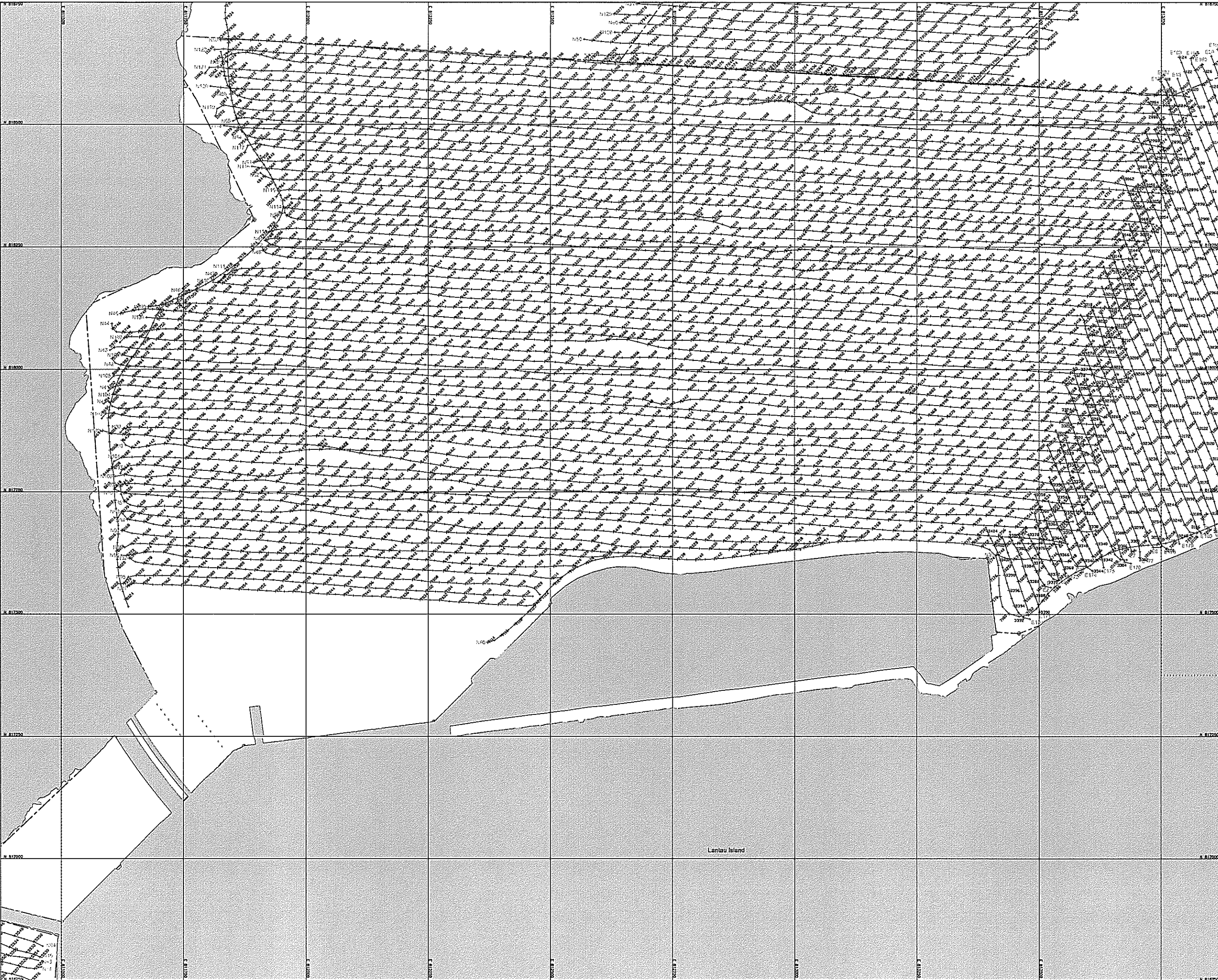
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  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B
  5. Equipment :  
 - Yau Sampson  
 - C-Star GeOPIS System  
 - Klein System 2000 Tow Fish  
 - C-view SDMP
  6. Coastline taken from 1:1000 Survey Sheets, SMOLD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lai	WURT	Prehistory
1	18/09/2004	Clarence Su	Matthew Lai	WURT	Final

METRIC SCALE 1:2,500

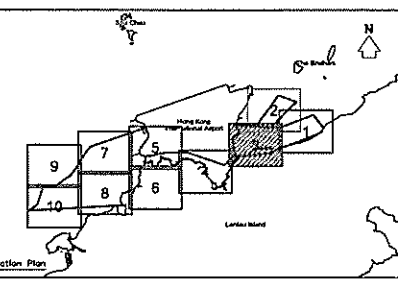
Client : Civil Engineering and Development Department

Surveyor : ECHAM LIMITED  
 11/F, 111 Des Voeux Road East, Hong Kong  
 Tel: (852) 2508 8888 Fax: (852) 2508 8889  
 E-mail: info@echam.com.hk  
 Job No. : HK185804



Legend :

- Side scan sonar track with fix positions
- Survey boundary
- Chart overlap



Project : WORKS ORDER NO. GE/2003/18.24  
 AGREEMENT NO. CE 26/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

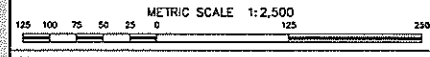
AREA : NORTH OF TUNG CHUNG      FIGURE NUMBER : 3.3

Drawing Title :

### SIDE SCAN SONAR TRACK PLOTS

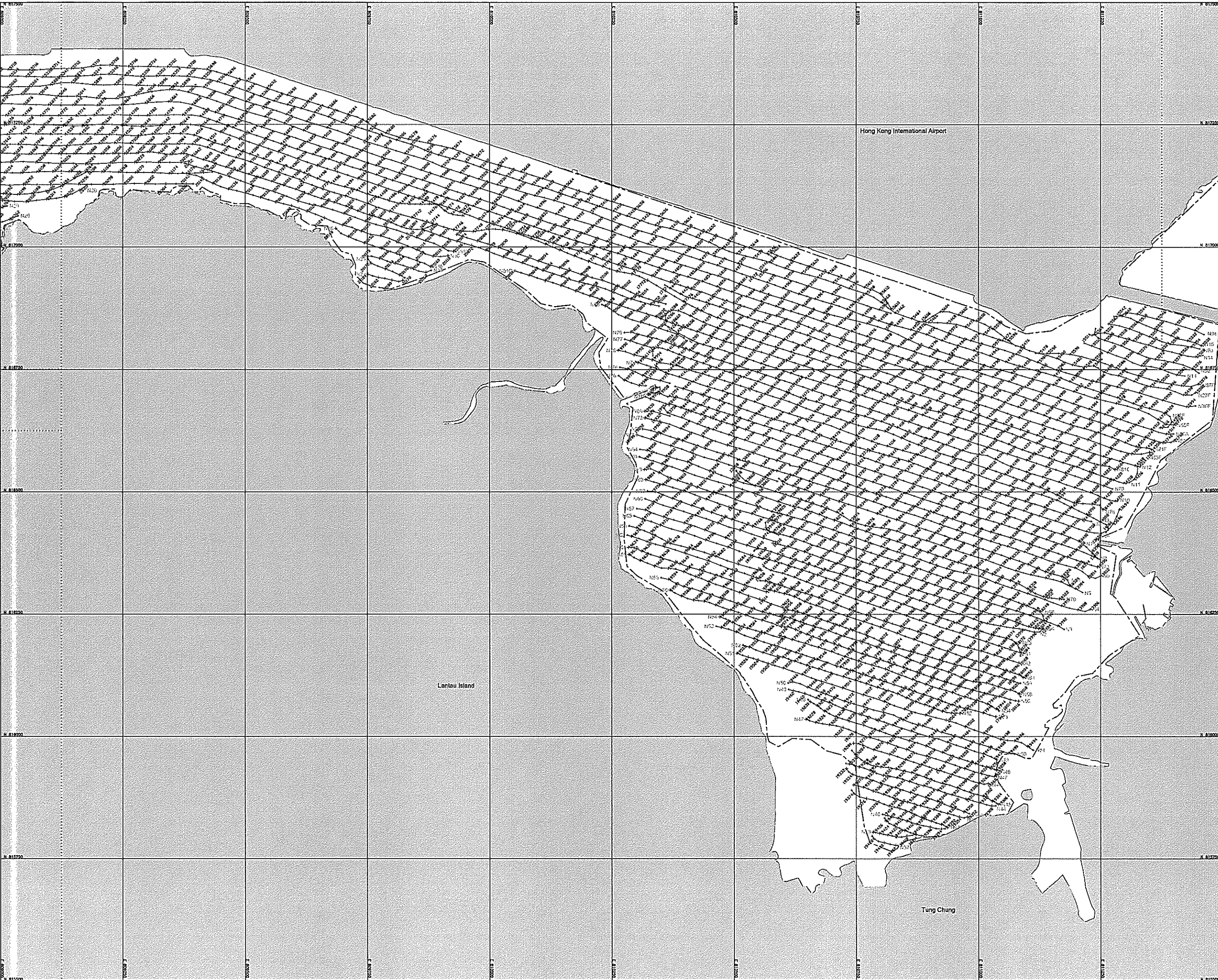
- Notes :
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  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8  
You Sempan
  5. Equipment : C-Hav SeGIS System  
Klein System 2000 Tow Fish  
C-View SDMP
  6. Coastline taken from 1:1000 Survey Sheets, SMO.LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lai	WIRT	Preliminary
1	16/09/2004	Clarence Su	Matthew Lai	WIRT	Final



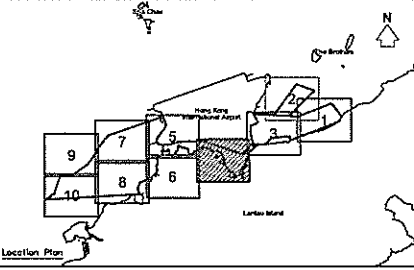
Client : Civil Engineering  
And Development Department

Surveyor : EGS FORSKALIMPTED  
 JOB NO. : HK186804



Legend :

- Side scan sonar track with fix positions
- Survey boundary
- Chart overlap



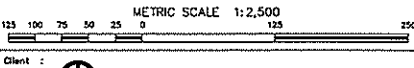
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 AGREEMENT NO. CE 26/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : CHEK LAP KOK CHANNEL      FIGURE NUMBER : 3.4

Drawing Title : **SIDE SCAN SONAR TRACK PLOTS**

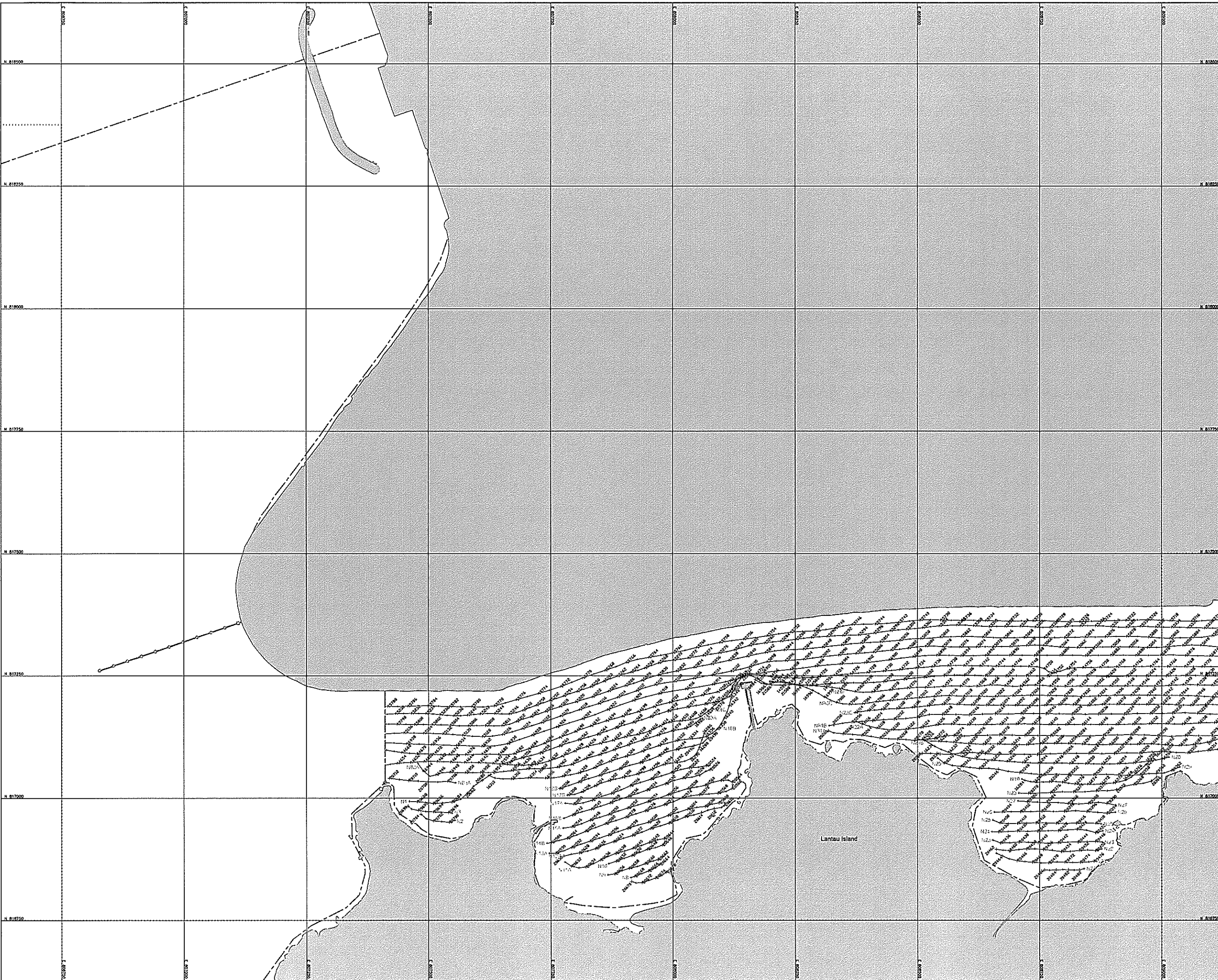
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  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8
  5. Equipment : You Sempan  
 C-New Cospas System  
 Klein System 2000 Tow Fish  
 C-View SMP
  6. Coastline taken from 1:1000 Survey Sheets, SMO.LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Siu	Matthew Lo	WIRT	Preliminary
1	18/09/2004	Clarence Siu	Matthew Lo	WIRT	Final



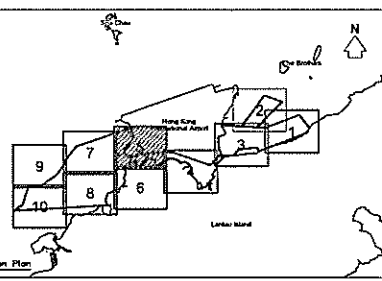
Client : Civil Engineering and Development Department

Surveyor : ECS ENGINEERING CONSULTANTS SURVEYORS  
 11/F, 110 Des Voeux Road West, Hong Kong  
 Tel: (852) 2500 8888 Fax: (852) 2500 0000  
 E-mail: info@ecs.com.hk



Legend :

- Side scan sonar track with fix positions
- Survey boundary
- Chart overlap



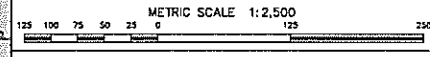
Project : WORKS ORDER NO. GE/2003/16.24  
 AGREEMENT NO. CE 26/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : CHEK LAP KOK CHANNEL      FIGURE NUMBER : 3.5

Drawing Title : **SIDE SCAN SONAR TRACK PLOTS**

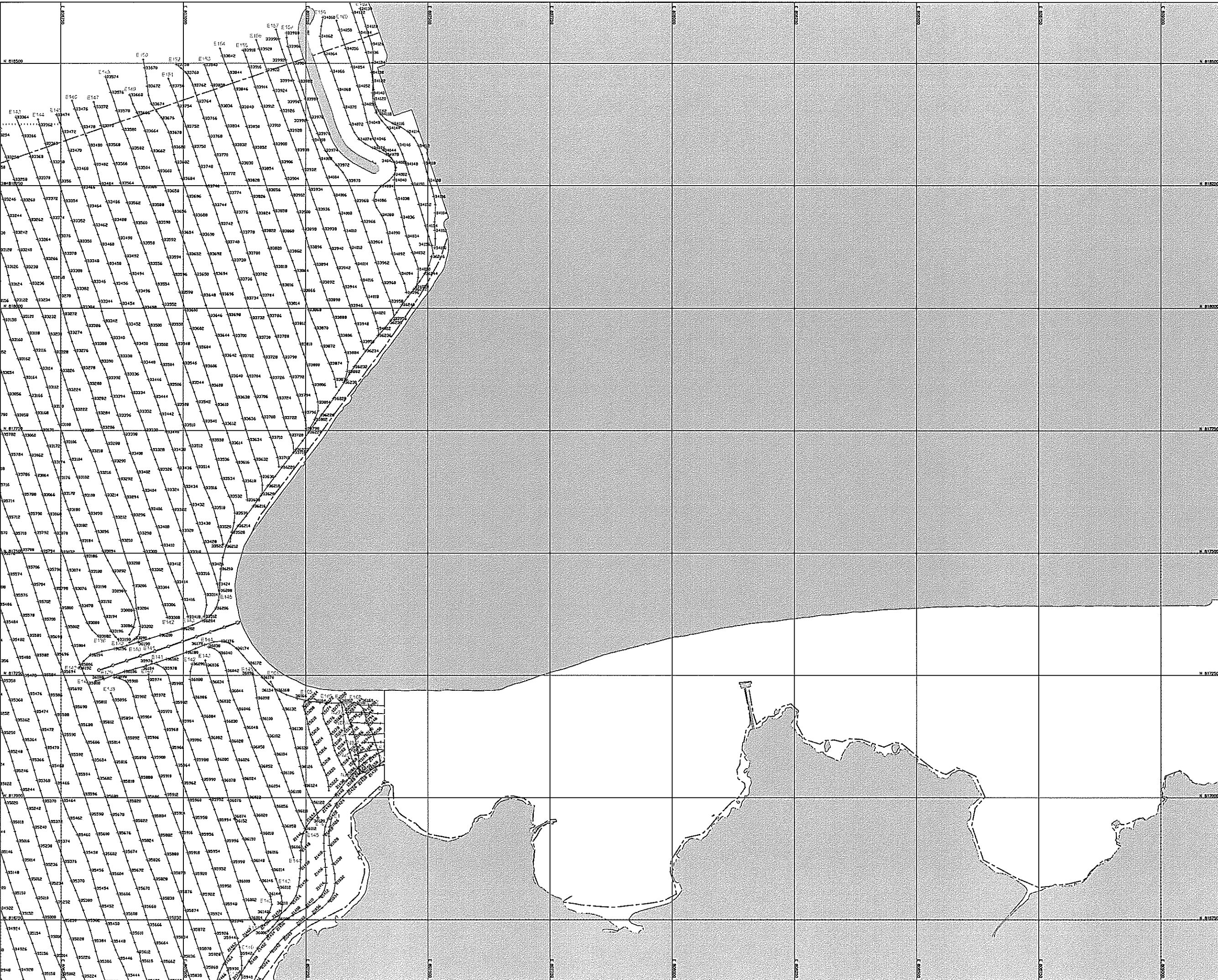
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  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8
  5. Equipment : You Sonpar  
C-Hov GCP'S System  
Klein System 2000 Tow Fish  
C-View SCMP
  6. Coastline taken from 1:1000 Survey Sheets, SMO,LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Siu	Matthew Lal	WJRT	Preliminary
1	18/09/2004	Clarence Siu	Matthew Lal	WJRT	Final



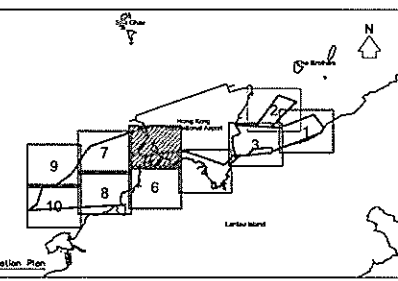
Client : Civil Engineering and Development Department

Surveyor : EGS (AM) LIMITED  
 11/F, 118 Des Voeux Road West, Hong Kong  
 Tel: 2828 8888 Fax: 2828 8889  
 E-mail: info@egs.com.hk  
 Job No. : HK166504



Legend :

- Side scan sonar track with fix positions
- Survey boundary
- Chart overlap



Project : WORKS ORDER NO. GE/2003/16.24  
 AGREEMENT NO. CE 26/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : 3.5

Drawing Title : **SIDE SCAN SONAR TRACK PLOTS**

- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8
  5. Equipment : You Seaplan  
Klein System 2000 Tow Fish  
C-view SDMP
  6. Coastline taken from 1:1000 Survey Sheets, SMO.I.D.

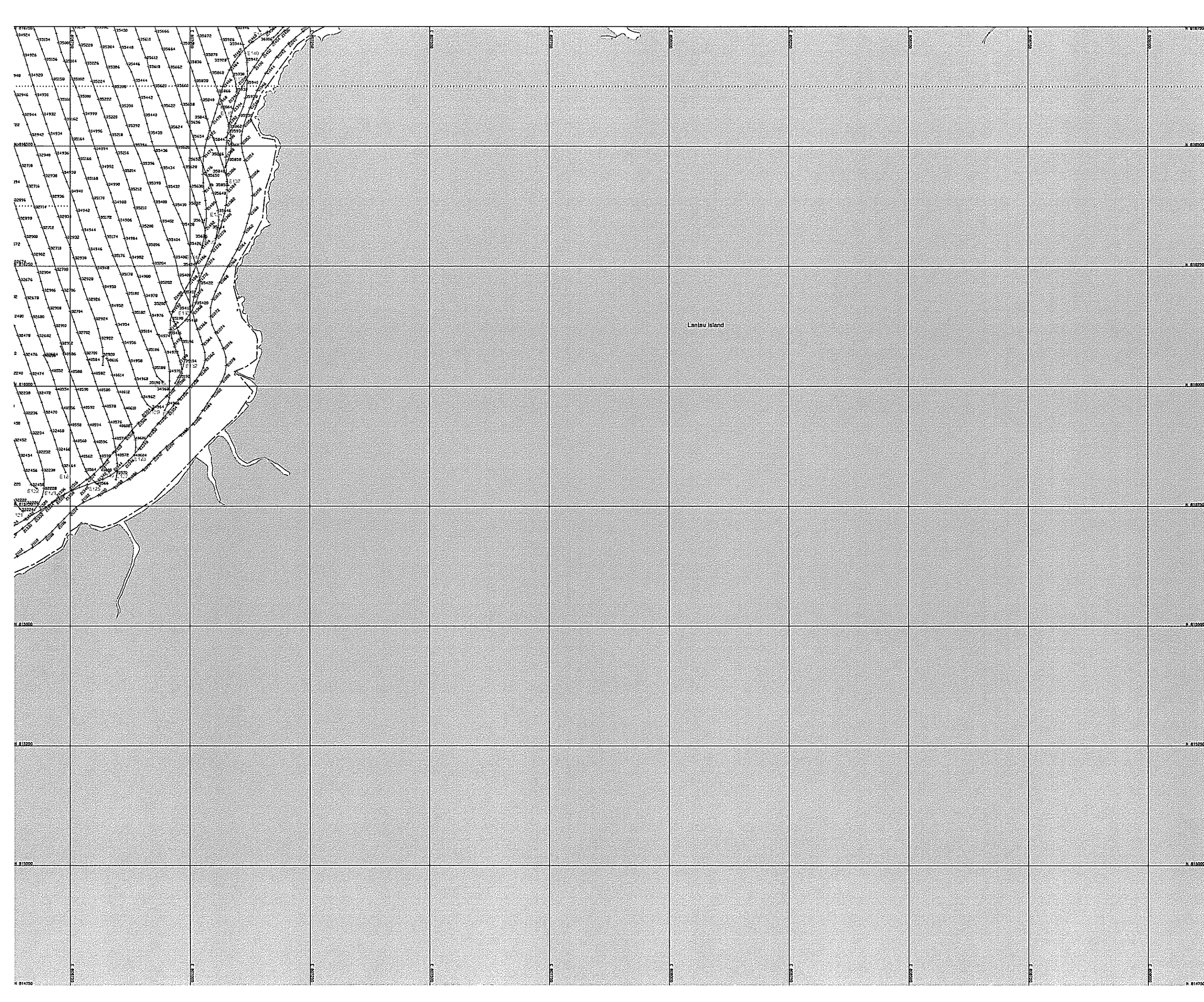
Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Caroline Su	Matthew Lai	WIRT	Preliminary
1	05/10/2004	Caroline Su	Matthew Lai	WIRT	Final

METRIC SCALE 1:2,500  
 125 100 75 50 25 0 125 250

Client : Civil Engineering  
And Development Department

Surveyor : EGS LIMITED  
 10/F, 100 Des Voeux Road East, Hong Kong  
 Tel: 2522 2222 Fax: 2522 2222  
 E-mail: info@egs.com.hk  
 JOB NO. : HKT6504



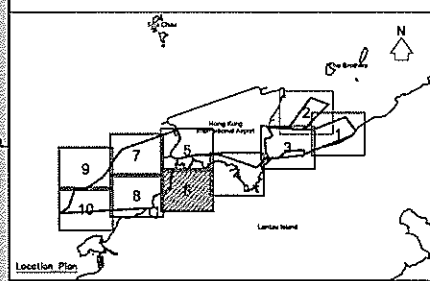


Lantau Island



Legend :

- Side scan sonar track with fix positions
- Survey boundary
- Chart overlap



Project : WORKS ORDER NO. GE/2003/18.24  
 AGREEMENT NO. CE 26/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : 3.6

Drawing Title :

### SIDE SCAN SONAR TRACK PLOTS

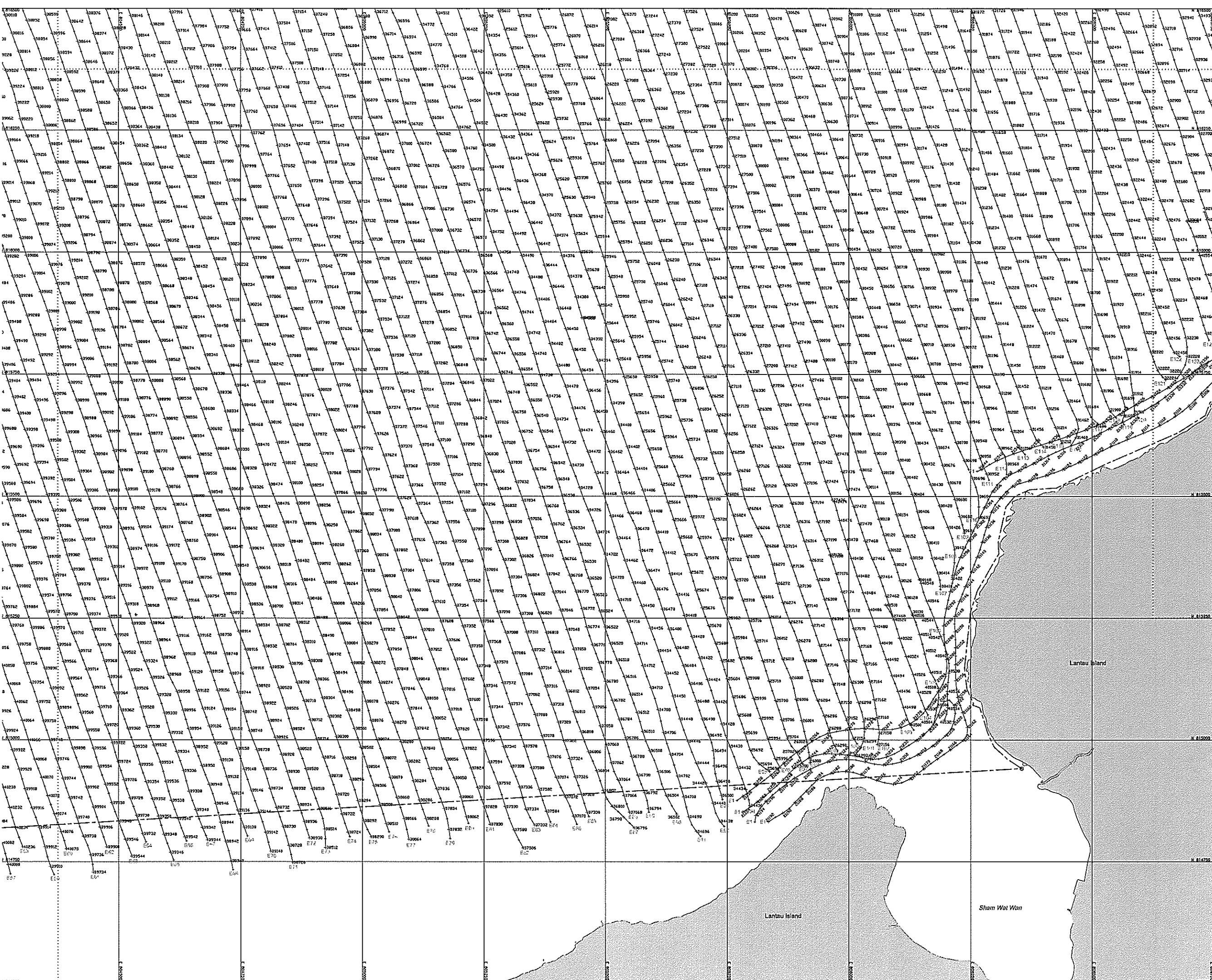
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  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 6  
You Sampon
  5. Equipment : C-Hav GeoPS System  
Klein System 2000 Tow Fish  
C-View SQMP
  6. Coastline taken from 1:1000 Survey Sheets, SHO.LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Corence Su	Matthew Lai	MRRT	Preliminary
1	05/10/2004	Corence Su	Matthew Lai	MRRT	Final

METRIC SCALE 1:2,500

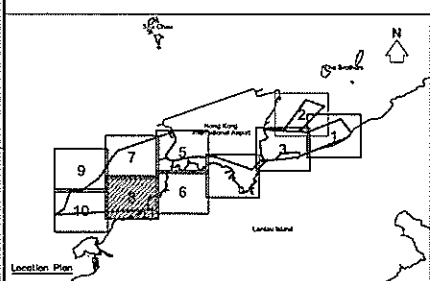
Client : Civil Engineering And Development Department

Surveyor : EGS UNLIMITED  
 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000



Legend :

- Side scan sonar track with fix positions
- Survey boundary
- Chart overlap



Project : WORKS ORDER NO. GE2003/18.24  
 AGREEMENT NO. CE 26/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : 3.8

Drawing Title : **SIDE SCAN SONAR TRACK PLOTS**

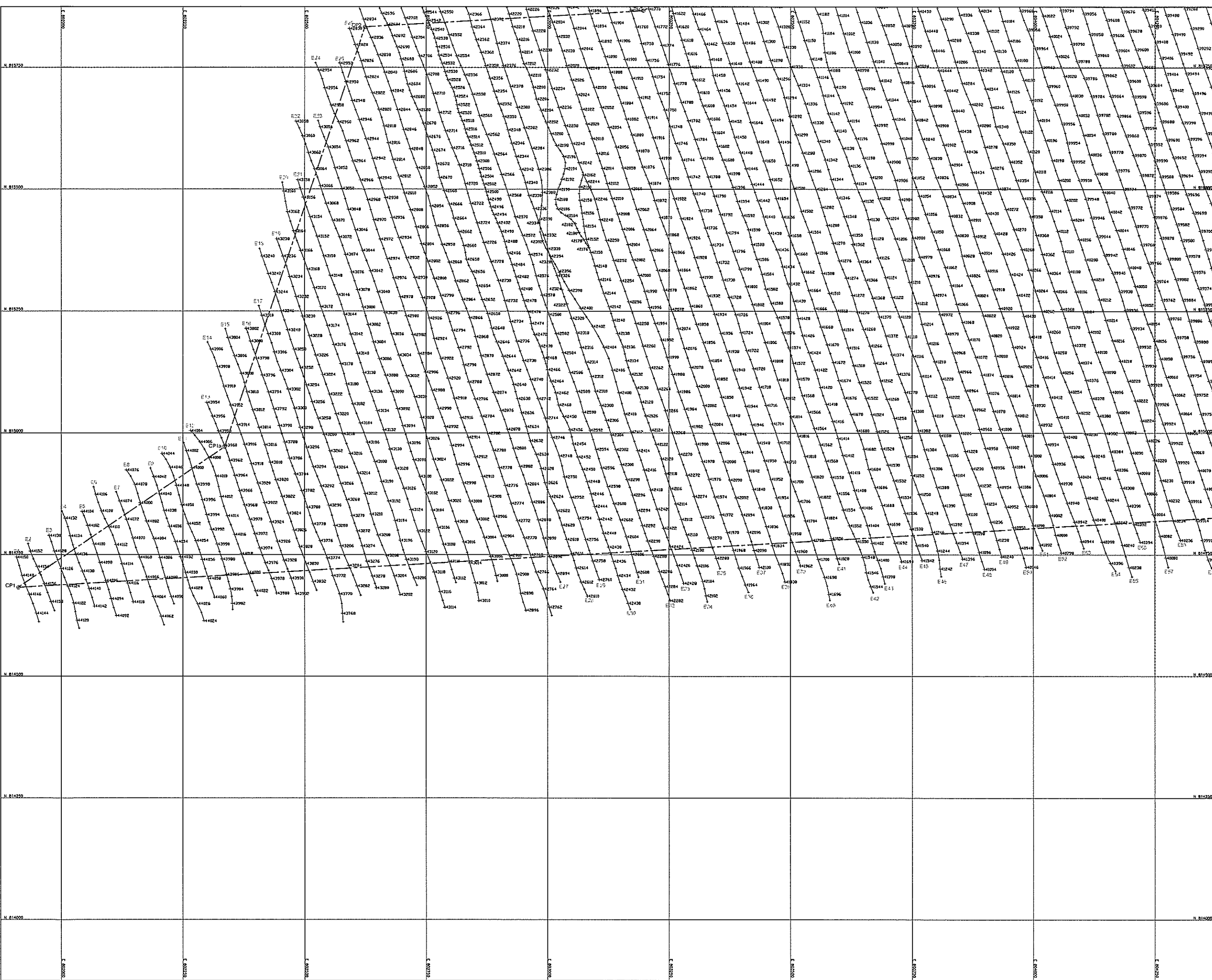
- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B  
You Sampon
  5. Equipment : D-Nav GeoPS System  
Klein System 2000 Tow Fish  
C-view SDMP
  6. Coastline taken from 1:1000 Survey Sheets, SMDLD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence SU	Matthew Lai	WHR	Preliminary
1	05/10/2004	Clarence SU	Matthew Lai	WHR	Final

METRIC SCALE 1:2,500

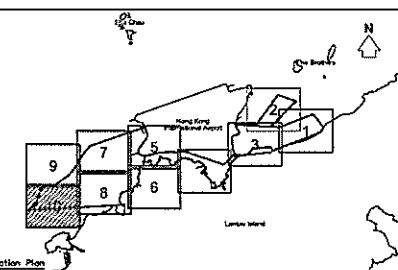
Client : Civil Engineering and Development Department

Surveyor : EGS Engineering & Geomatics Surveying Limited



Legend :

- Side scan sonar track with fix positions
- Survey boundary
- Chart overlap



Project : WORKS ORDER NO. GE/2003/18.24  
AGREEMENT NO. CE 25/2003 (HY)  
HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
MARINE GEOPHYSICAL SURVEYS

AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : 3.10

**SIDE SCAN SONAR TRACK PLOTS**

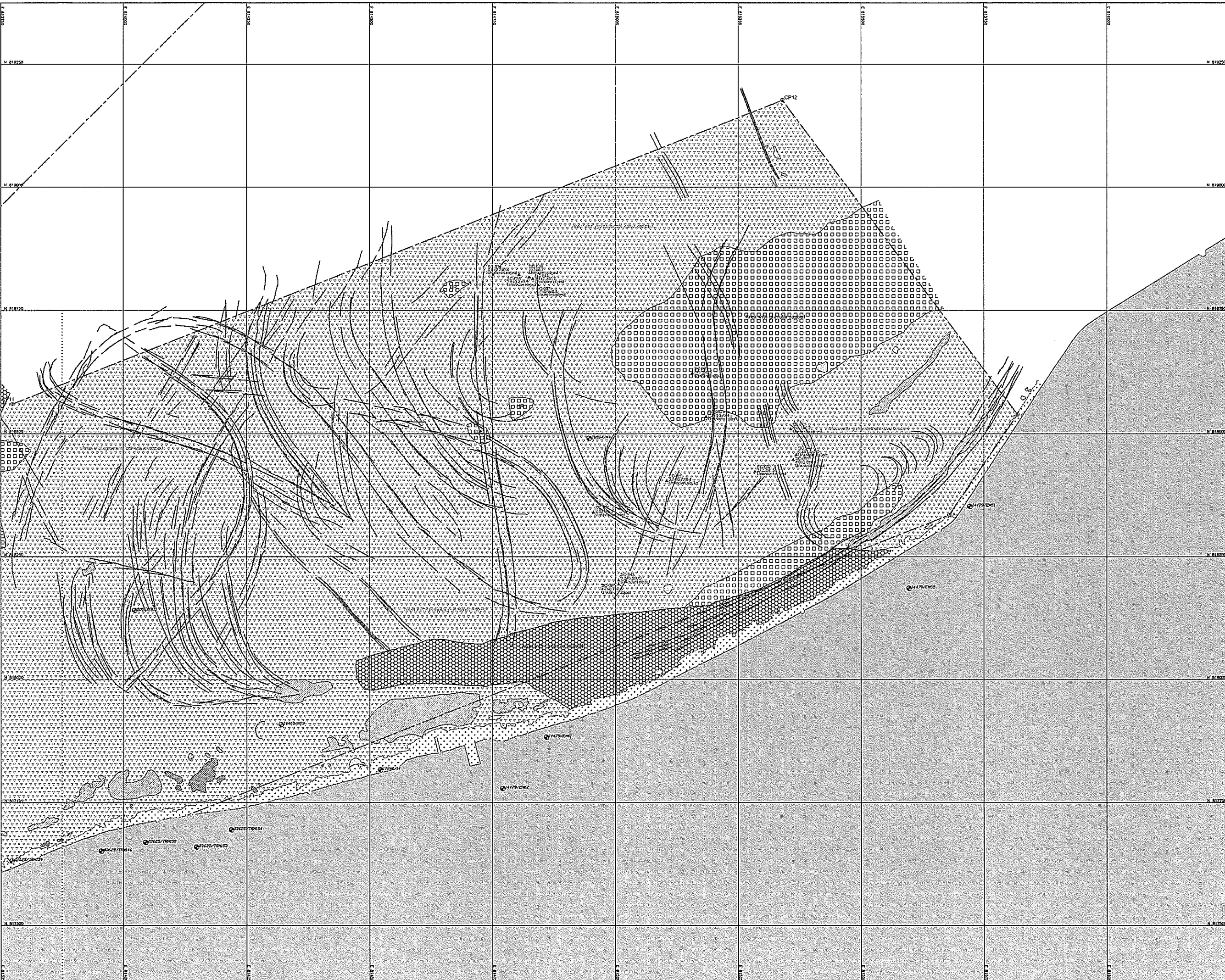
- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B
  5. Equipment :  
Yew Sampson  
C-Nav GeoPS System  
Klein System 2000 Tow Fish  
C-View SDMP
  6. Coastline taken from 1:1000 Survey Sheets, SM0.LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Su	Matthew Lal	WVRT	Preliminary
1	05/10/2004	Clarence Su	Matthew Lal	WVRT	Final

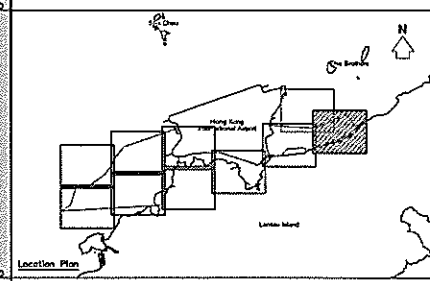
METRIC SCALE 1:2,500  
0 25 50 75 100 125 150 175 200 250

Client : Civil Engineering and Development Department

Surveyor : EGE (HONG KONG) LIMITED  
10/F, 100, Des Voeux Road West, Hong Kong  
Tel: (852) 2522 2222 Fax: (852) 2522 2222  
www.egeltd.com.hk



- Legend :
- Area with granular seabed (HR - High Reflective)
  - Area with granular/cohesive seabed (MR - Medium Reflective)
  - Area with cohesive seabed (LR - Low Reflective)
  - Dumped material
  - Debris
  - Rubble mound seabed
  - Seabed with boulders, gravels and pebbles
  - Trawl scars
  - Survey boundary
  - Chart overlap
  - Sonar Contact (LxM) (nm = non-measurable height)



Project : WORKS ORDER NO. GE2003/18.24  
 AGREEMENT NO. CE 26/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : CHEK LAP KOK CHANNEL      FIGURE NUMBER : 11.1

Drawing Title : **SEABED FEATURES**

- Notes :
1. Survey Date : 11-24/05/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8
  5. Equipment :
    - Yon Simpson
    - C-Hov GeoSys System
    - Klein System 2000 Tow Fish
    - C-View SDMP
  6. Coastline taken from 1:1000 Survey Sheets, SM0.LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	04/06/2004	Clarance Su	Wilson Wang	Matthew Lai	preliminary

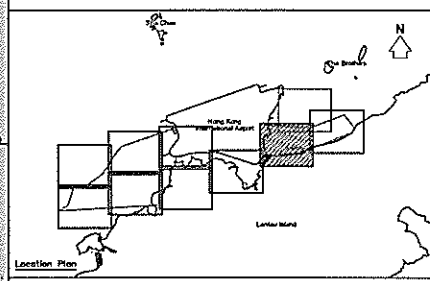
METRIC SCALE 1:2,500

Client : Civil Engineering Department  
 Hong Kong

Surveyor : ECS ENGINEERING CONSULTANTS & SURVEYORS  
 JOB NO. : HK186504



- Legend :
- Area with granular seabed (HR - High Reflective)
  - Area with granular/cohesive seabed (MR - Medium Reflective)
  - Area with cohesive seabed (LR - Low Reflective)
  - Dumped material
  - Debris
  - Rubble mound seawall
  - Seabed with boulders, gravels and pebbles
  - Trawl sores
  - Survey boundary
  - Chart overlap
  - Sonar Contact (LxM) (msh = non-measurable height)



Project : WORKS ORDER NO. GE/2003/18.24  
AGREEMENT NO. CE 26/2003 (HY)  
HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
MARINE GEOPHYSICAL SURVEYS

AREA : CHEK LAP KOK CHANNEL      FIGURE NUMBER : 11.2

### Drawing Title : SEABED FEATURES

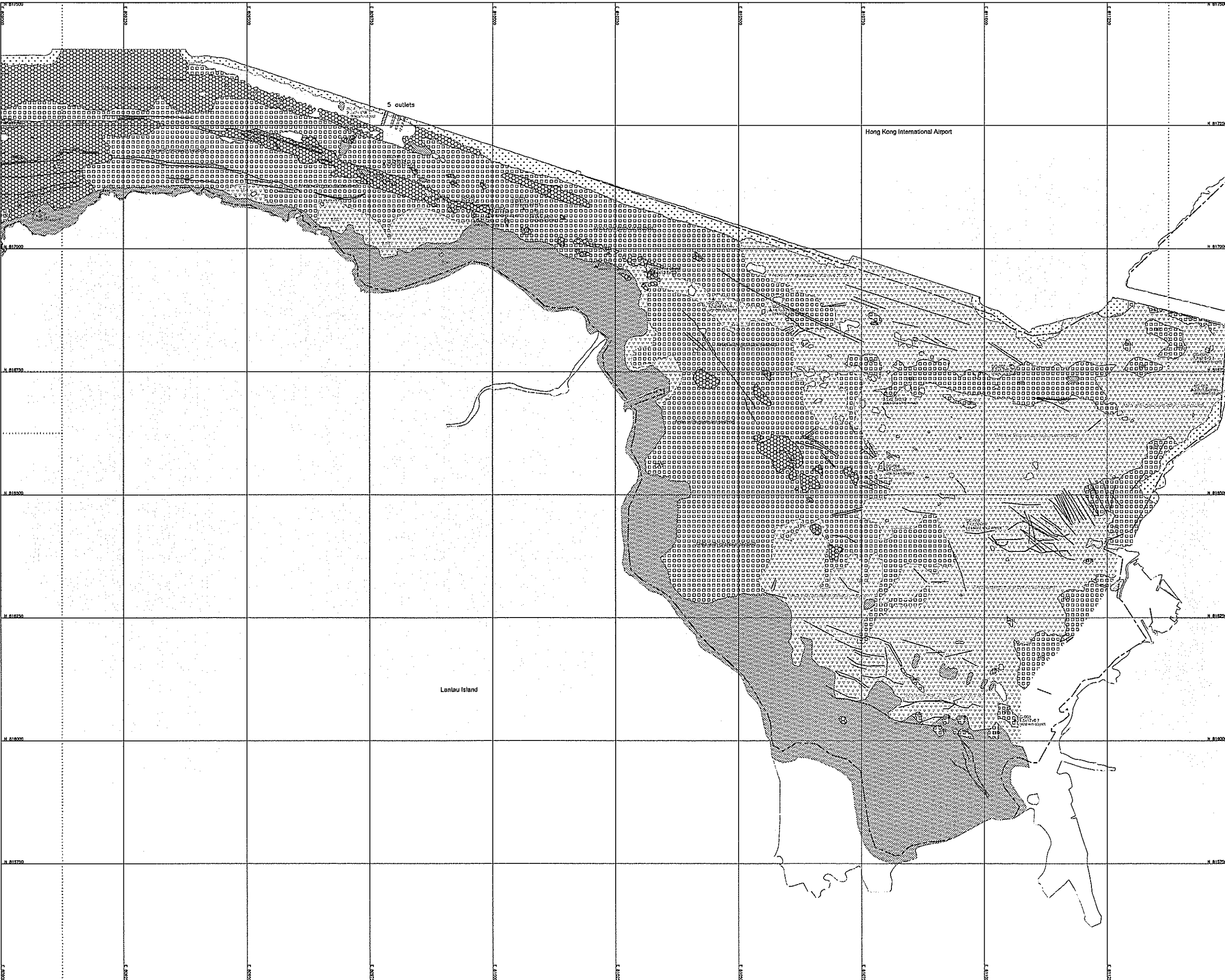
- Notes :
1. Survey Date : 11-24/05/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B  
Yau Sampan
  5. Equipment : C-Hov SeDpa System  
Klein System 2000 Tow Fish  
C-View SDMP
  6. Coastline taken from 1:1000 Survey Sheets, SM0,LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	04/05/2004	Clarence Su	Wilson Wong	Matthew Lai	Final/Issued

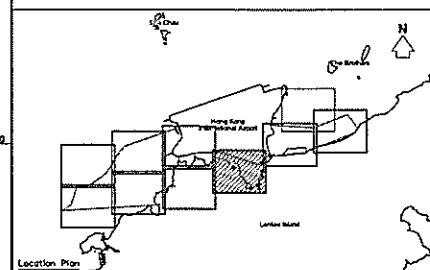
METRIC SCALE 1:2,500

Client : Civil Engineering  
Department  
Hong Kong

Surveyor : EGS ENGINEERING LIMITED  
10/F, 100, Des Voeux Road West, Hong Kong



- Legend:
- Area with granular seabed (HR - High Reflective)
  - Area with granular/cohesive seabed (MR - Medium Reflective)
  - Area with cohesive seabed (LR - Low Reflective)
  - Dumped material
  - Debris
  - Rubble mound seawall
  - Seabed with boulders, gravels and pebbles
  - Trawl scars
  - Survey boundary
  - Chart overlap
  - Sonar Contact (LxM) (msh = non-measurable height)



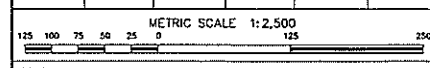
Project: WORKS ORDER NO. GE2003/18.24  
 AGREEMENT NO. CE 28/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA: CHEK LAP KOK CHANNEL      FIGURE NUMBER: 11.3

Drawing Title: **SEABED FEATURES**

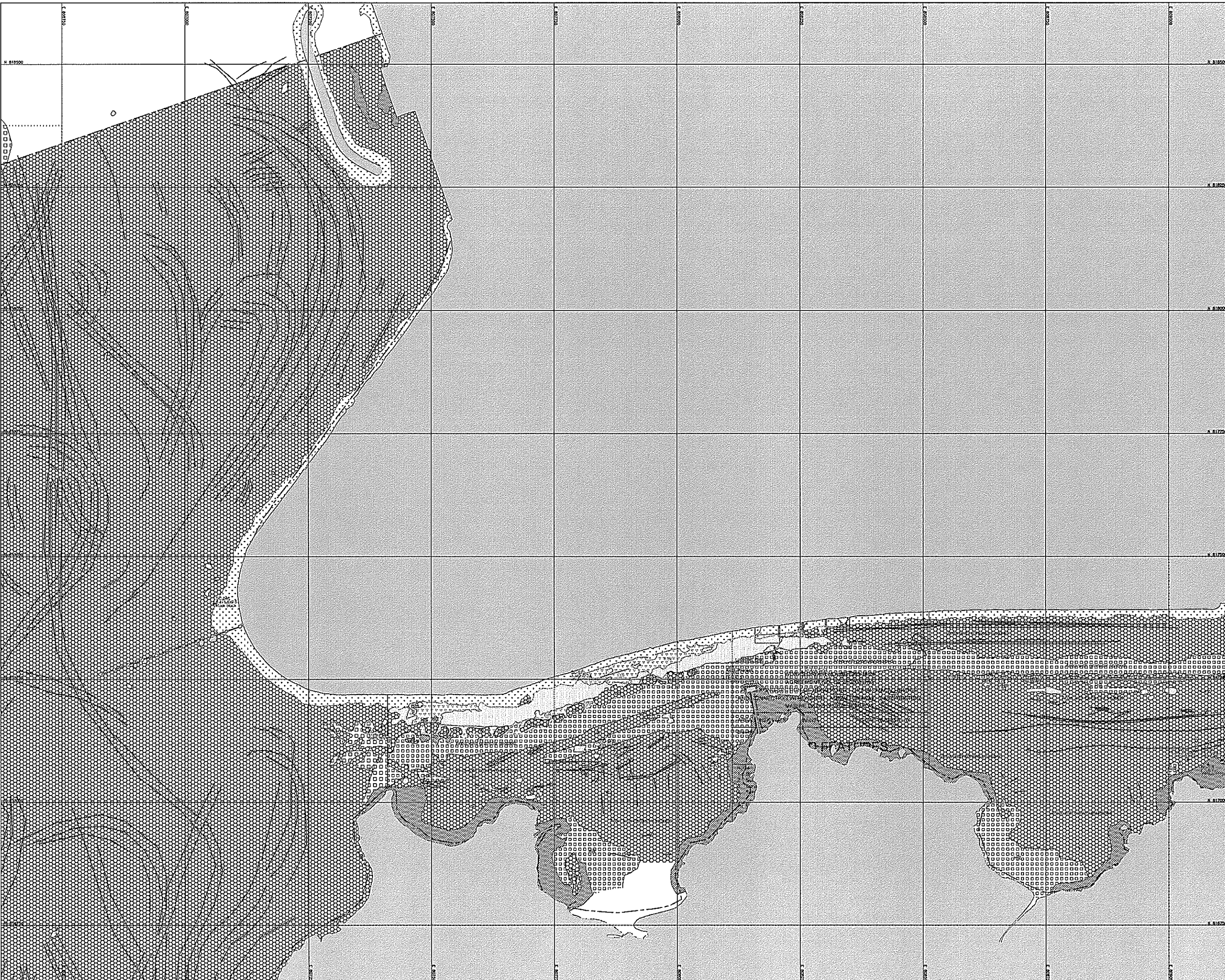
- Notes:
1. Survey Date : 11-24/05/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8
  5. Equipment : You Seaman  
C-New GoSpa System  
Klein System 2000 Tow Fish  
C-view SDMP
  6. Coastline taken from 1:1000 Survey Sheets, SMO.LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	04/05/2004	Clarence Shu	Wilson Wong	Matthew Lai	Preliminary

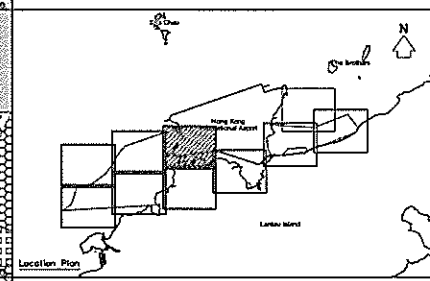


Client: Civil Engineering  
Department  
Hong Kong

Surveyor: ECS (ANNUALIZED)  
 Surveyors & Geomatics Engineers  
 10/F, 100, Nathan Road, Kowloon, Hong Kong  
 Tel: (852) 2500 8888  
 Fax: (852) 2500 8889  
 E-mail: info@ecs.com.hk  
 Website: www.ecs.com.hk



- Legend :
- Area with granular seabed (HR - High Reflective)
  - Area with granular/cohesive seabed (MR - Medium Reflective)
  - Area with cohesive seabed (LR - Low Reflective)
  - Dumped material
  - Debris
  - Rubble mound seabed
  - Seabed with boulders, gravels and pebbles
  - Trawl scars
  - Survey boundary
  - Chart overlap
  - Sonar Contact (LR) (mrh = non-measurable height)



Project : WORKS ORDER NO. GE/2003/18.24  
 AGREEMENT NO. CE 28/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

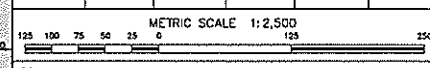
AREA : CHEK LAP KOK CHANNEL      FIGURE NUMBER : 11.4

Drawing Title :

### SEABED FEATURES

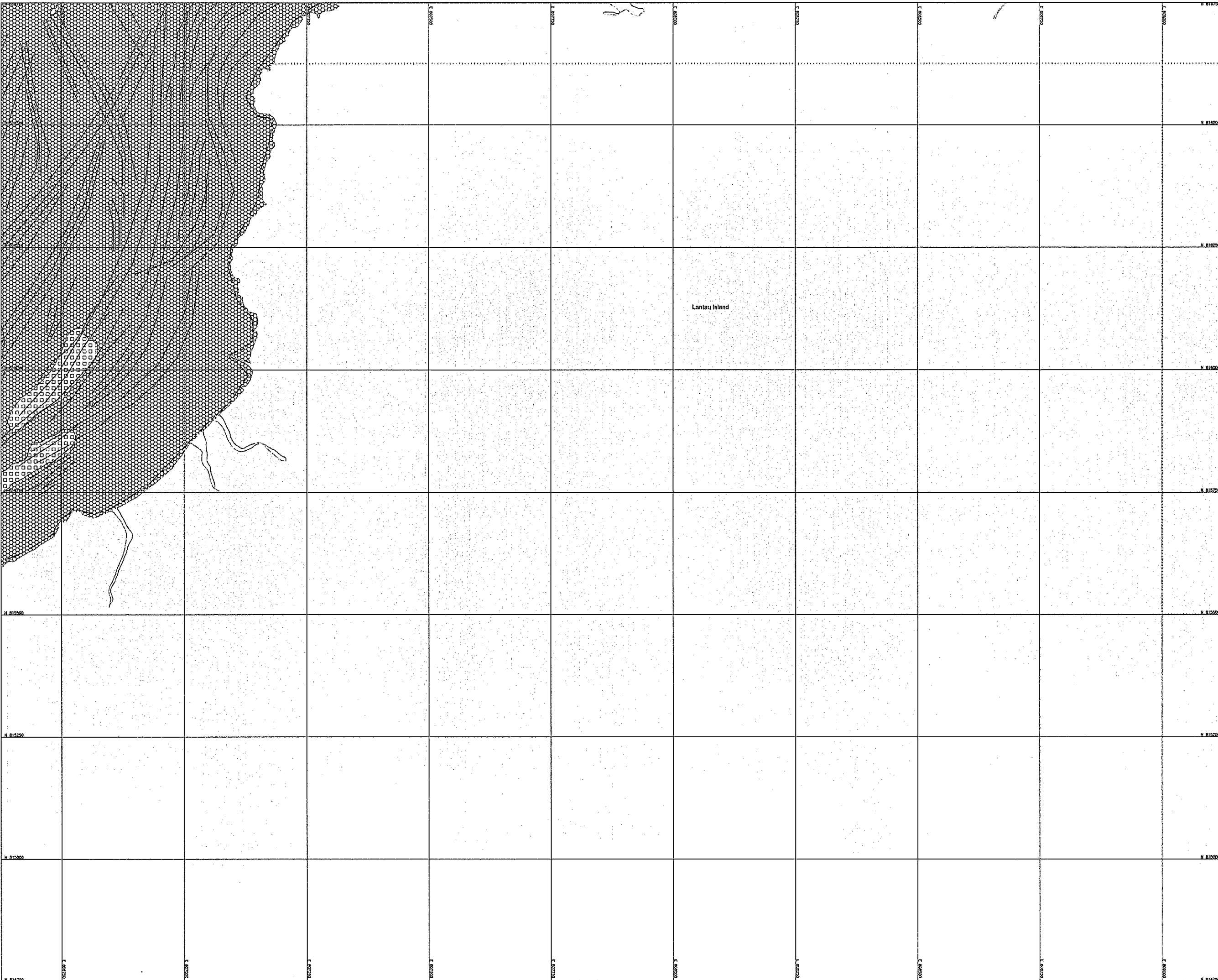
- Notes :
1. Survey Date : 11-24/05/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B
  5. Equipment : Yeu Seaman  
C-New C-Gps System  
Klein System 2000 Tow Fish  
C-view SDMP
  6. Coastline taken from 1:1000 Survey Sheets, SMO,LD.


Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	12/07/2004	Clarence Shu	Wilson Wong	Matthew Lai	Preliminary














Client : Civil Engineering  
Department  
Hong Kong

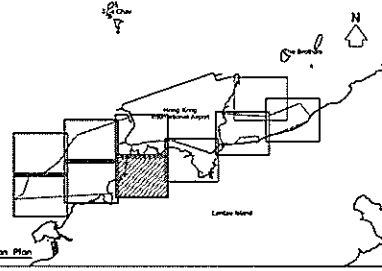
Surveyor : ECS LIMITED  
 11/F, 111 Des Voeux Road East, Hong Kong  
 Tel: 2521 8888 Fax: 2521 8889  
 www.ecs.com.hk





**Legend :**

-  Area with granular seabed (HR - High Reflective)
-  Area with granular/cohesive seabed (MR - Medium Reflective)
-  Area with cohesive seabed (LR - Low Reflective)
-  Dumped material
-  Debris
-  Rubble mound seawall
-  Seabed with boulders, gravels and pebbles
-  Trawl scars
-  Survey boundary
-  Chart overlap
-  Sonar Contact (L/W/H) (nmh = non-measurable height)



Location Plan

**Project :** WORKS ORDER NO. GE/2003/18.24  
 AGREEMENT NO. CE 28/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

**AREA :** CHEK LAP KOK CHANNEL      **FIGURE NUMBER :** 11.5

**Drawing Title :**

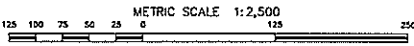
## SEABED FEATURES


**Notes :**


1. Survey Date : 11/05/2004 - 14/06/2004
2. Survey Grid : Hong Kong Metric Grid
3. Survey Datum : Hong Kong Principal Datum
4. Survey Vessel : Wing Hung B
5. Equipment :
  - Yeu Seaman
  - C-Hov GcOps System
  - Xlein System 2000 Tow Fish
  - C-view SDMP
6. Coastline taken from 1:1000 Survey Sheets, SMO,LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Dorance Su	Matthew Lai	WART	Preliminary

**METRIC SCALE 1:2,500**

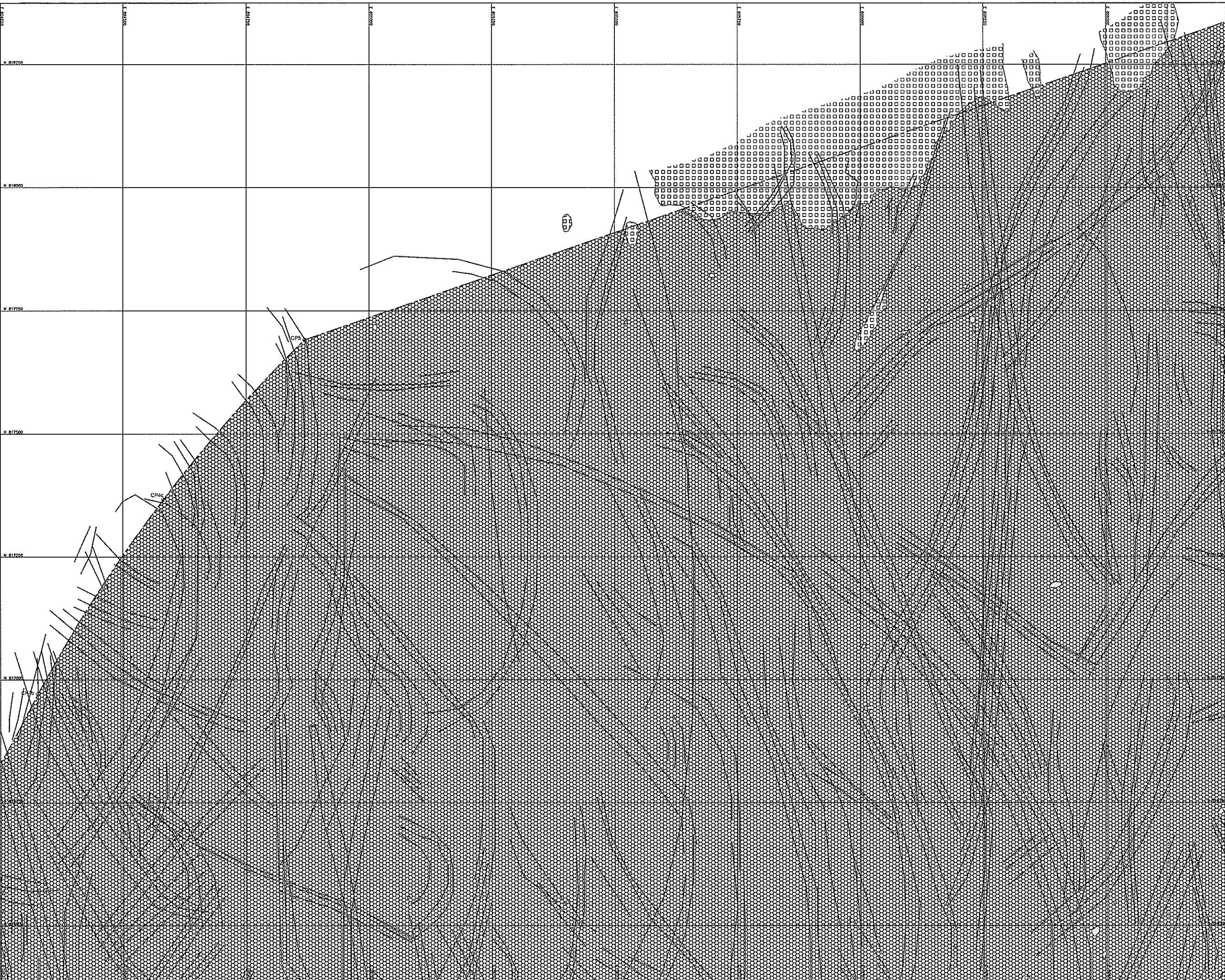


**Client :**  Civil Engineering  
Department  
Hong Kong

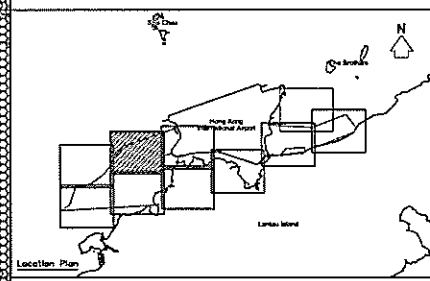
**Surveyor :**  EES ENGINEERING CONSULTANTS

JOB NO. : HK1858D4





- Legend :
- Area with granular seabed (HR - High Reflective)
  - Area with granular/cohesive seabed (MR - Medium Reflective)
  - Area with cohesive seabed (LR - Low Reflective)
  - Dumped material
  - Debris
  - Rubble mound seawall
  - Scooped with boulders, gravels and pebbles
  - Trawl bores
  - Survey boundary
  - Chart overlap
  - Sensor Contact (LxMM) (nmh = non-measurable height)



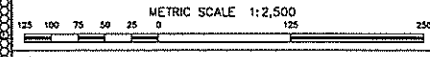
Project : WORKS ORDER NO. GE2003/18.24  
 AGREEMENT NO. CE 26/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : CHEK LAP KOK CHANNEL      FIGURE NUMBER : 11.6

Drawing Title : **SEABED FEATURES**

- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung B
  5. Equipment : Yea Seaplan  
C-New CcSps System  
Klein System 2000 Tow Fish  
C-View SDUP
  6. Coastline taken from 1:1000 Survey Sheets, SM01.D.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Shu	Matthew Lal	WIRT	Preliminary



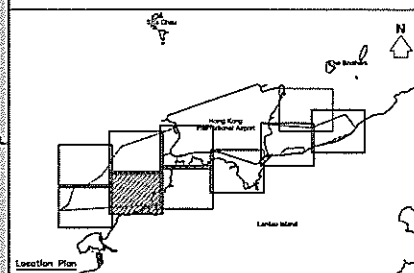
Client : Civil Engineering  
Department  
Hong Kong

Surveyor : ECS ENGINEERING CONSULTANTS  
100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000



Legend :

- Area with granular seabed (HR - High Reflective)
- Area with granular/cohesive seabed (MR - Medium Reflective)
- Area with cohesive seabed (LR - Low Reflective)
- Dumped material
- Debris
- Rubble mound seawall
- Seabed with boulders, gravel and pebbles
- Trawl scars
- Survey boundary
- Chart overlap
- A Sonar Contact (LWM) (nmh = non-measurable height)



Project : WORKS ORDER NO. GE2003/18.24  
AGREEMENT NO. CE 28/2003 (HY)  
HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
MARINE GEOPHYSICAL SURVEYS

AREA : CHEK LAP KOK CHANNEL      FIGURE NUMBER : 11.7

Drawing Title :

### SEABED FEATURES

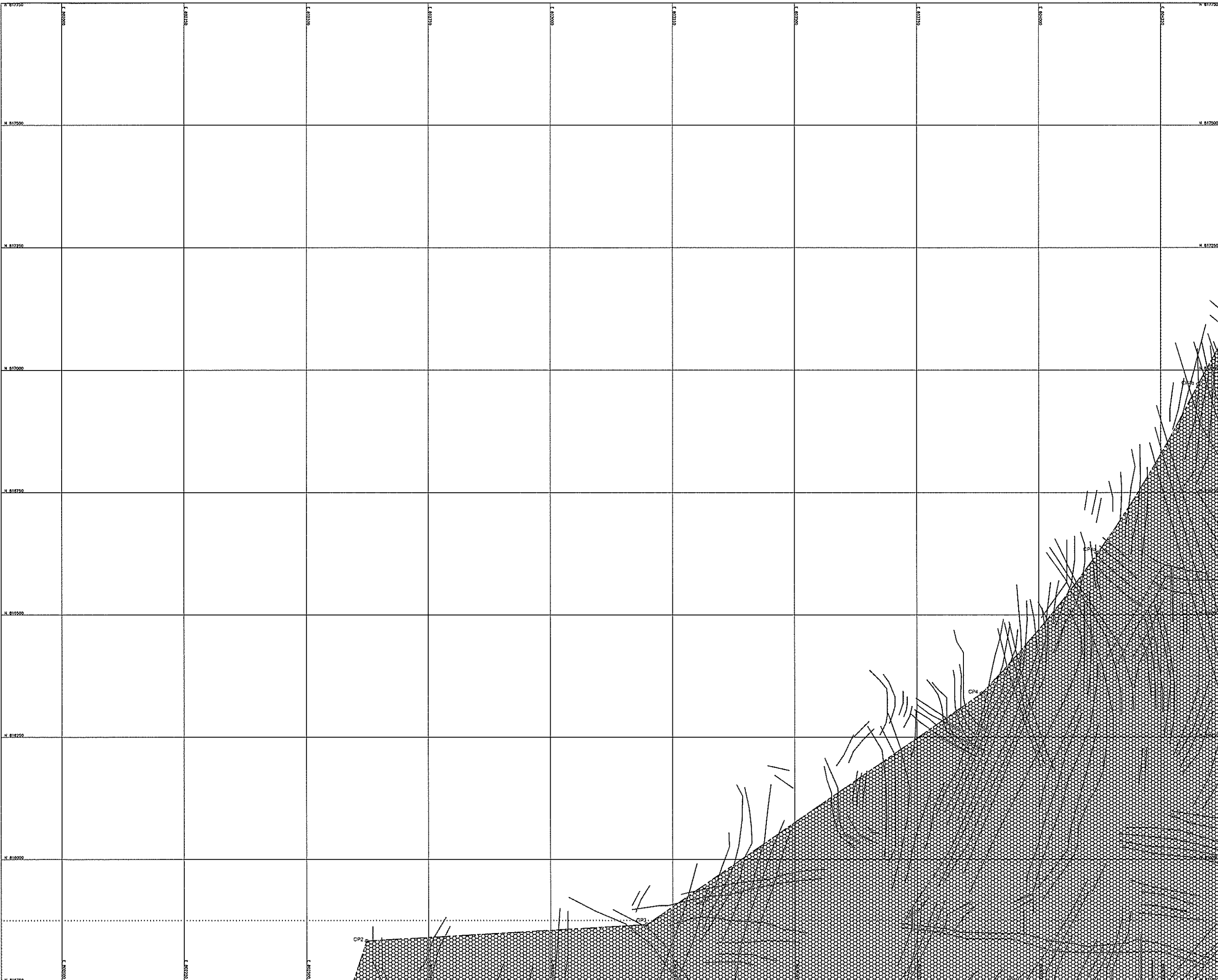
- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8  
You Sampon
  5. Equipment : C-Hov G0ops System  
Hov System 2000 Tow Fish  
C-view SDMP
  6. Coastline taken from 1:1000 Survey Sheets, SW0.LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Clarence Siu	Matthew Lai	WURT	Preliminary

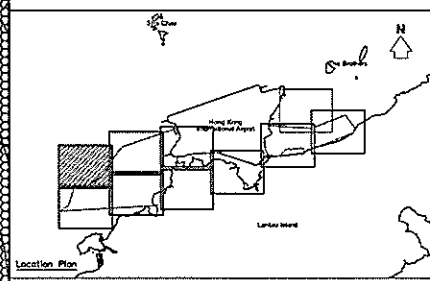
METRIC SCALE 1:2,500  
125 100 75 50 25 0 125 250

Client : Civil Engineering  
Department  
Hong Kong

Surveyor : EGS UNLIMITED  
120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000



- Legend :
- Area with granular seabed (HR - High Reflective)
  - Area with granular/cohesive seabed (MR - Medium Reflective)
  - Area with cohesive seabed (LR - Low Reflective)
  - Dumped material
  - Debris
  - Rubble mound seawall
  - Seabed with boulders, gravels and pebbles
  - Trawl scars
  - Survey boundary
  - Chart overlap
  - Sonar Contact (LxM) (nmh = non-measurable height)



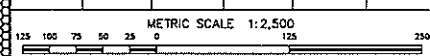
Project : WORKS ORDER NO. GE/2003/18.24  
 AGREEMENT NO. CE 26/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : CHEK LAP KOK CHANNEL      FIGURE NUMBER : 11.6

Drawing Title : **SEABED FEATURES**

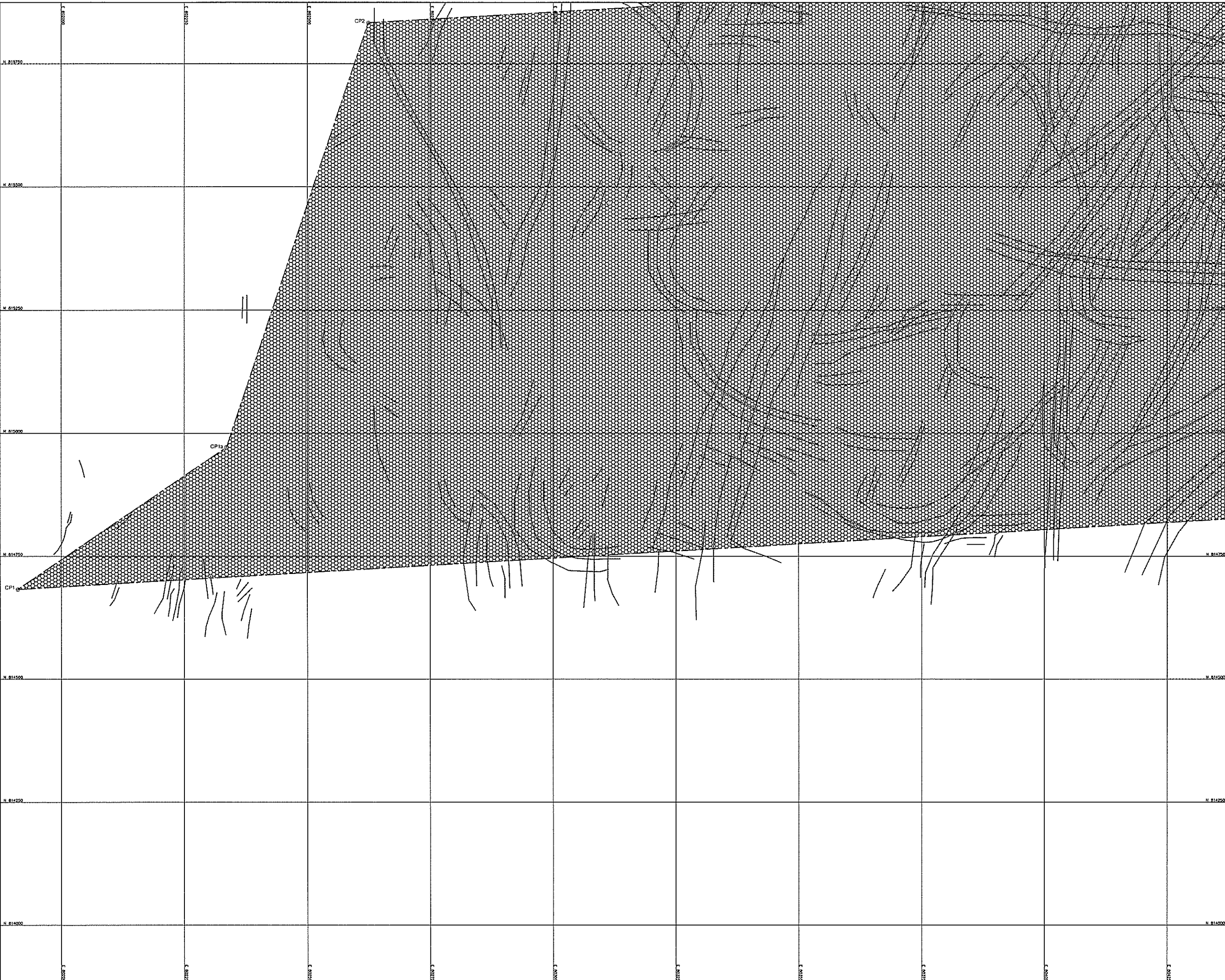
- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8
  5. Equipment :
    - Yau Seaman
    - C-Hay GeGps System
    - Klein System 2000 Tow Fish
    - C-view SDMP
  6. Coastline taken from 1:1000 Survey Sheets, SMOLD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	21/07/2004	Gorenice Su	Matthew Loi	WRT	Preliminary

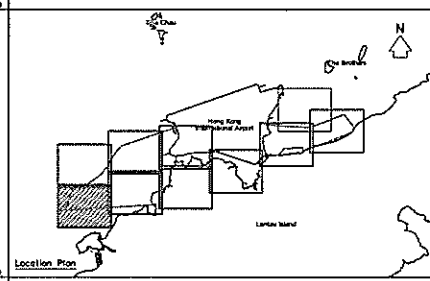


Client : Civil Engineering Department  
 Hong Kong

Surveyor : ECS ENGINEERING CONSULTANTS  
 11/F, 111 Des Voeux Road East, Hong Kong  
 Tel: 2538 8238 Fax: 2538 8239  
 www.ecs.com.hk      JOB NO. : HK166804



- Legend :
- Area with granular seabed (HR - High Reflective)
  - Area with granular/cohesive seabed (MR - Medium Reflective)
  - Area with cohesive seabed (LR - Low Reflective)
  - Dumped material
  - Debris
  - Rubble mound seawall
  - Seabed with boulders, gravels and pebbles
  - Trawl scars
  - Survey boundary
  - Chart overlap
  - Sonar Contact (LxHxH) (msh = non-measurable height)



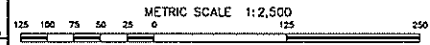
Project : WORKS ORDER NO. GE/2003/18.24  
 AGREEMENT NO. CE 25/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

AREA : CHEK LAP KOK CHANNEL      FIGURE NUMBER : 11.9

Drawing Title : **SEABED FEATURES**

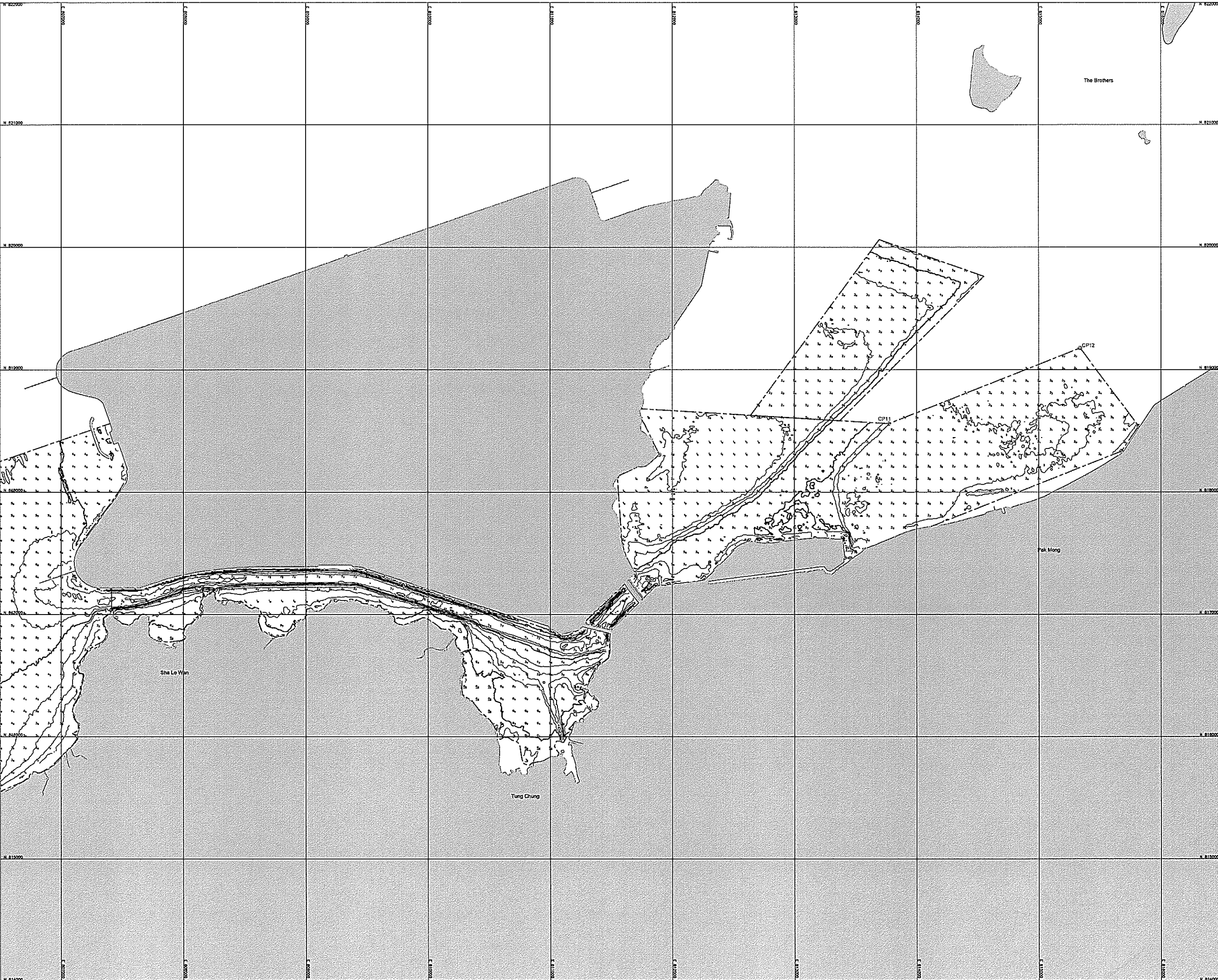
- Notes :
1. Survey Date : 11-24/05/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung II
  5. Equipment :
    - Yau Sampan
    - C-Hov G05ps System
    - Klein System 2000 Tow Fish
    - C-View SDVP
  6. Coastline taken from 1:1000 Survey Sheets, SM0,LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	12/07/2004	Clarence Siu	Wilson Wong	Matthew Lai	Preliminary



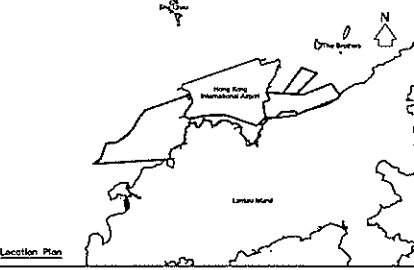
Client : Civil Engineering Department  
 Hong Kong

Surveyor : EGGANUNLIMITED  
 11/F, 111 Des Voeux Road East, Hong Kong  
 Tel: (852) 2500 8888  
 Fax: (852) 2500 8889  
 E-mail: info@ege.com.hk  
 www.ege.com.hk



Legend :

- △ Soundings value in metres above/below HK Principal Datum
- Contour at 1 metre interval
- - - Survey boundary
- Chart overlap



Project : WORKS ORDER NO. GE/2003/18.24  
 AGREEMENT NO. CE 26/2003 (HY)  
 HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
 AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
 MARINE GEOPHYSICAL SURVEYS

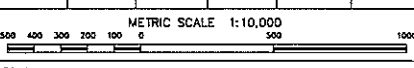
AREA : NORTH OF TUNG CHUNG AND CHEK LAP KOK CHANNEL      FIGURE NUMBER : RP2

Drawing Title :

### SOUNDING PLAN

- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 8
  5. Equipment : Yau Sangpan  
C-Hov CcGPS System  
Knudsen 320M Echo Sounder  
Alfas Deso 25 dual frequency Echo Sounder
  6. Coastline taken from 1:1000 Survey Sheets, SMO.LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	16/09/2004	Agnes Su	Matthew Lai	WRT	Final

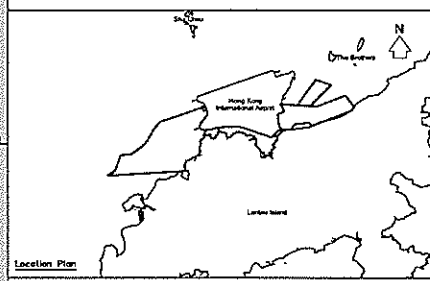


Client : Civil Engineering and Development Department

Surveyor : EGE UNLIMITED  
 10/F, 100, Des Voeux Road West, Hong Kong  
 Tel: 2538 8888 Fax: 2538 8889  
 Email: info@ege.com.hk  
 Website: www.ege.com.hk



- Legend :
- △ Sounding value in metres above/below HK Principal Datum
  - Contour at 1 metre interval
  - - - Survey boundary
  - Chart overlap



Project : WORKS ORDER NO. GE/2003/18.24  
AGREEMENT NO. CE 26/2003 (HY)  
HONG KONG SECTION OF HONG KONG - ZHUHAI - MACAO BRIDGE  
AND CONNECTION WITH NORTH LANTAU HIGHWAY - INVESTIGATION  
MARINE GEOPHYSICAL SURVEYS

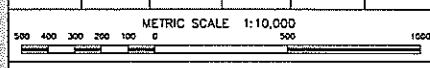
AREA : WEST OF CHEK LAP KOK      FIGURE NUMBER : RP7

### Drawing Title :

## SOUNDING PLANS

- Notes :
1. Survey Date : 11/05/2004 - 14/06/2004
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Survey Vessel : Wing Hung 5  
Yau Sonpan  
C-Hay GeoPS System
  5. Equipment : Knudsen 320M Echo Sounder  
Altes Deso 25 dual frequency Echo Sounder
  6. Coastline taken from 1:1000 Survey Sheets, SM0,LD.

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	05/10/2004	Agnes Su	Matthew Lal	WIRT	Final



Client : Civil Engineering  
And Development Department

Surveyor : EGS ENGINEERING GROUP LIMITED  
2/F, 100, Des Voeux Road West, Hong Kong  
Tel: 2521 2222 Fax: 2521 2223  
www.egs.com.hk

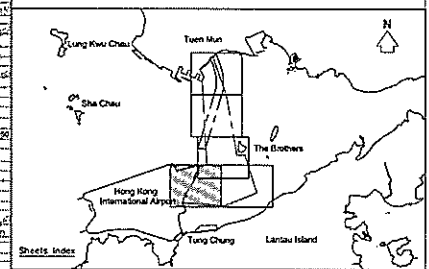
JOB NO. : HK186804

HONG KONG INTERNATIONAL AIRPORT



Legend :

- Wacore location with reference number
- Borehole location with reference number
- Echo sounding and swath bathymetry track with fix positions
- Main survey boundary
- Magnetic survey boundary
- Existing CLP cables
- Existing Hutchison cable
- Chart overlap



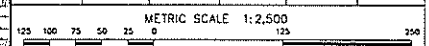
Project :  
 CONTACT NUMBER GE2007/04  
 GEOPHYSICAL SURVEY (TERM CONTRACT)  
 WORKS ORDER NUMBER GE/2007/04.20  
 AGREEMENT NO. CE 52/2007 (HY)  
 TUEN MUN - CHEK LAP KOK LINK - INVESTIGATION  
 PROPOSED MARINE GEOPHYSICAL SURVEYS

FIGURE NUMBER : 1.5

Drawing Title :  
**ECHO SOUNDING AND SWATH BATHYMETRY TRACK PLOTS**

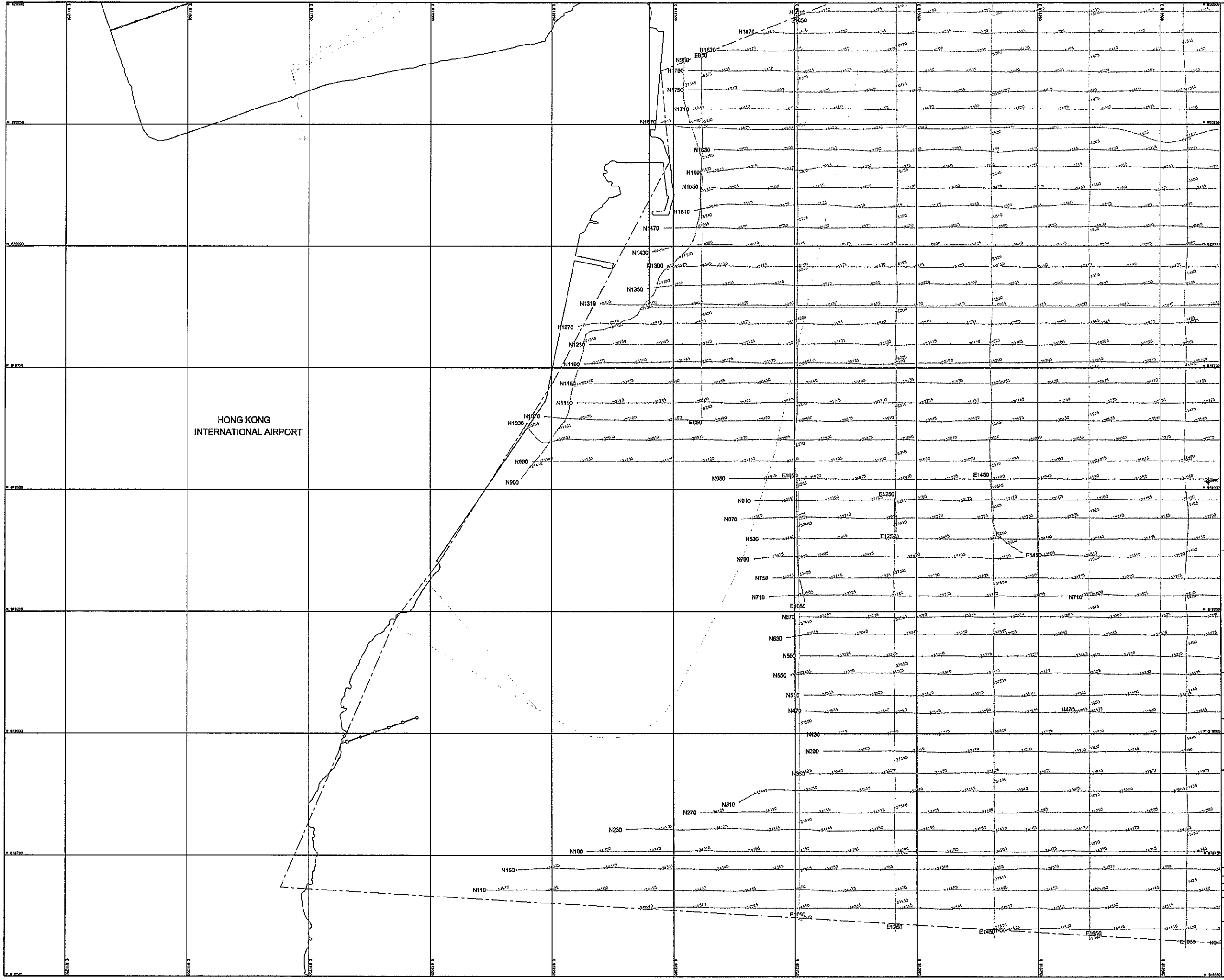
- Notes :
1. Survey Date : November - December 2008
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principle Datum
  4. Positioning : C-Nav GeGPS (Gably corrected GPS)
  5. Equipment : EDS Boomer System  
 Seapay Magnetometer  
 Reson 8125 Multibeam System  
 Knudsen 320W Dual Frequency Echo Sounder  
 DF1000 Side Scan Sonar System With Digital Tow Fish
  6. Coastline taken from 1:1,000 Survey Sheets, Survey and Mapping Office, Lands Department

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	08/01/2009	Clarence Siu	Wilson Wong	Margie Chen	Preliminary

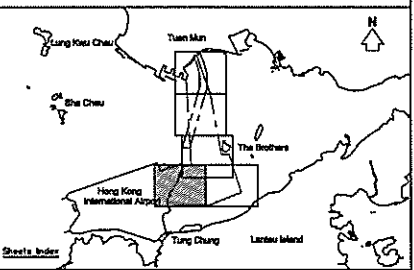


Client :  
 Civil Engineering and Development Department

Surveyor :  
 ECHING ENGINEERING SURVEYING LTD.  
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 Tel: (852) 2852 2222 Fax: (852) 2852 2221  
 E-mail: info@ees.com.hk  
 JOO NO. : HK213608



- Legend :
- Vibrocore location with reference number
  - Borehole location with reference number
  - N3000 Hydrophone and side scan sonar track with its positions and line no.
  - Main survey boundary
  - Magnetic survey boundary
  - Existing CLP cables
  - Existing Hutchison cable
  - Chart overlap



Project : CONTACT NUMBER GE/2007/04  
 GEOPHYSICAL SURVEY (TERM CONTRACT)  
 WORKS ORDER NUMBER GE/2007/04.20  
 AGREEMENT NO. CE 52/2007 (1-Y)  
 TUEN MUN - CHEK LAP KOK LINK - INVESTIGATION  
 PROPOSED MARINE GEOPHYSICAL SURVEYS

FIGURE NUMBER : 2.5

Drawing Title : SEISMIC AND SIDE SCAN SONAR TRACK PLOTS

- Notes :
1. Survey Date : November - December 2008
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Positioning : C-New GeDPS (Globally corrected GPS)
  5. Equipment :
    - EOS Boomer System
    - Seaguy Magnetometer
    - Reson 8125 Multibeam System
    - Kongsberg 3200 Dual Frequency Echo Sounder
    - OF1000 Side Scan Sonar System With Digital Tow Fish
  6. Coastline taken from 1:1,000 Survey Sheets, Survey and Mapping Office, Lands Department

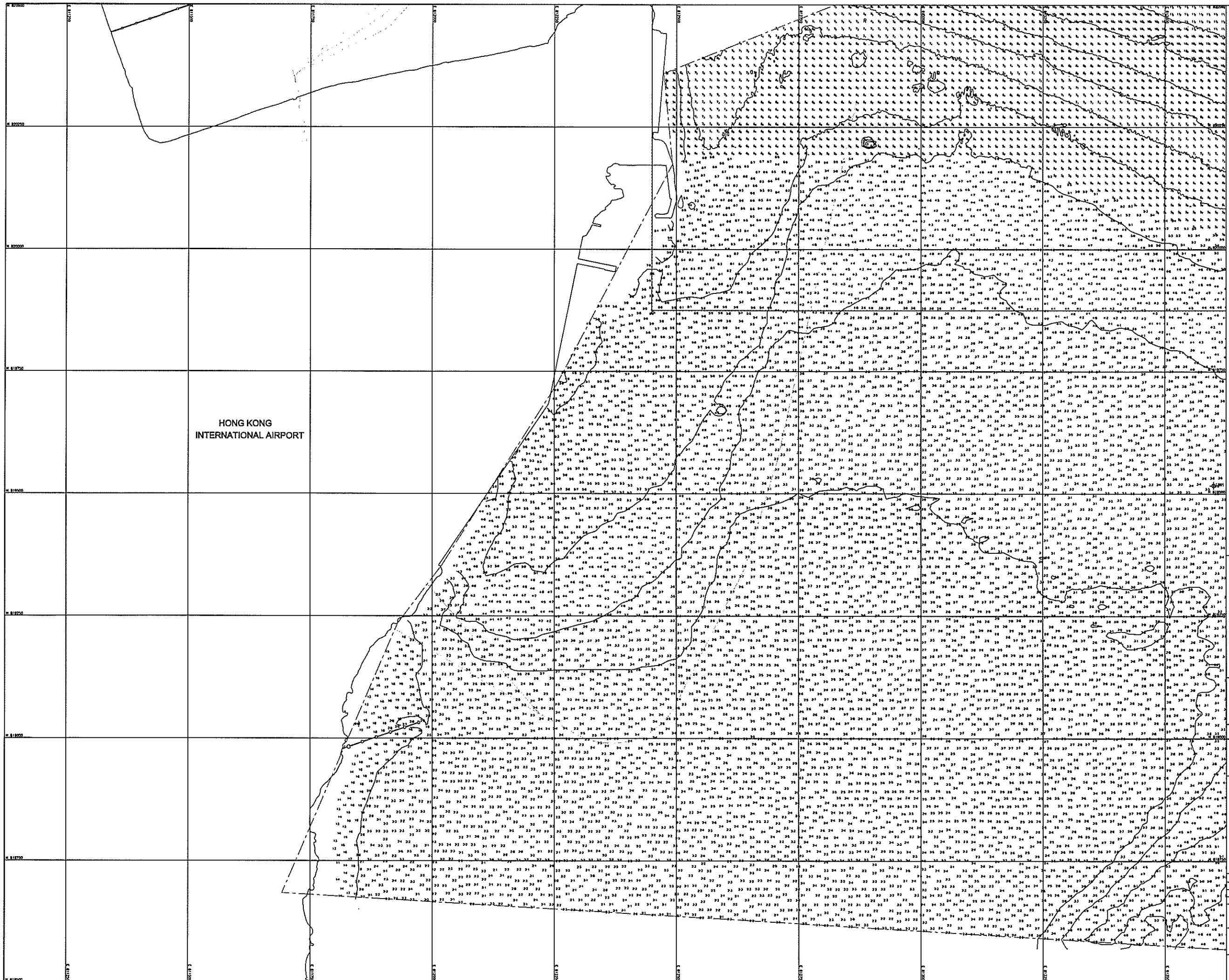
Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	08/01/2009	Charence Su	Wilson Wong	Margie Chan	Final

METRIC SCALE 1:2,500

Client : Civil Engineering and Development Department

Surveyor : EES ENGINEERING & SURVEYING



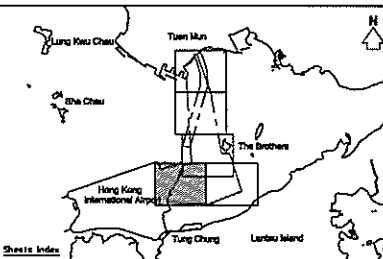


HONG KONG INTERNATIONAL AIRPORT

- Legend :
- Vibrocore location with reference number
  - Borehole location with reference number
  - Gridded data in metres below IRPD
  - Sounding data in metres above/below IRPD
  - Contour at 1 metre interval
  - Main survey boundary
  - Magnetic survey boundary
  - Existing CLP cables
  - Existing Hutchison cable
  - Chart overlap



Metres IRPD



Project : CONTACT NUMBER GE2007/04  
 GEOPHYSICAL SURVEY (TERM CONTRACT)  
 WORKS ORDER NUMBER GE2007/04.20  
 AGREEMENT NO. CE 52/2007 (HY)  
 TSIEN HUN - CHEK LAP KOK LINK - INVESTIGATION  
 PROPOSED MARINE GEOPHYSICAL SURVEYS

FIGURE NUMBER : 4.5

Drawing Title : COLOUR CONTOURED SWATH BATHYMETRY PLANS

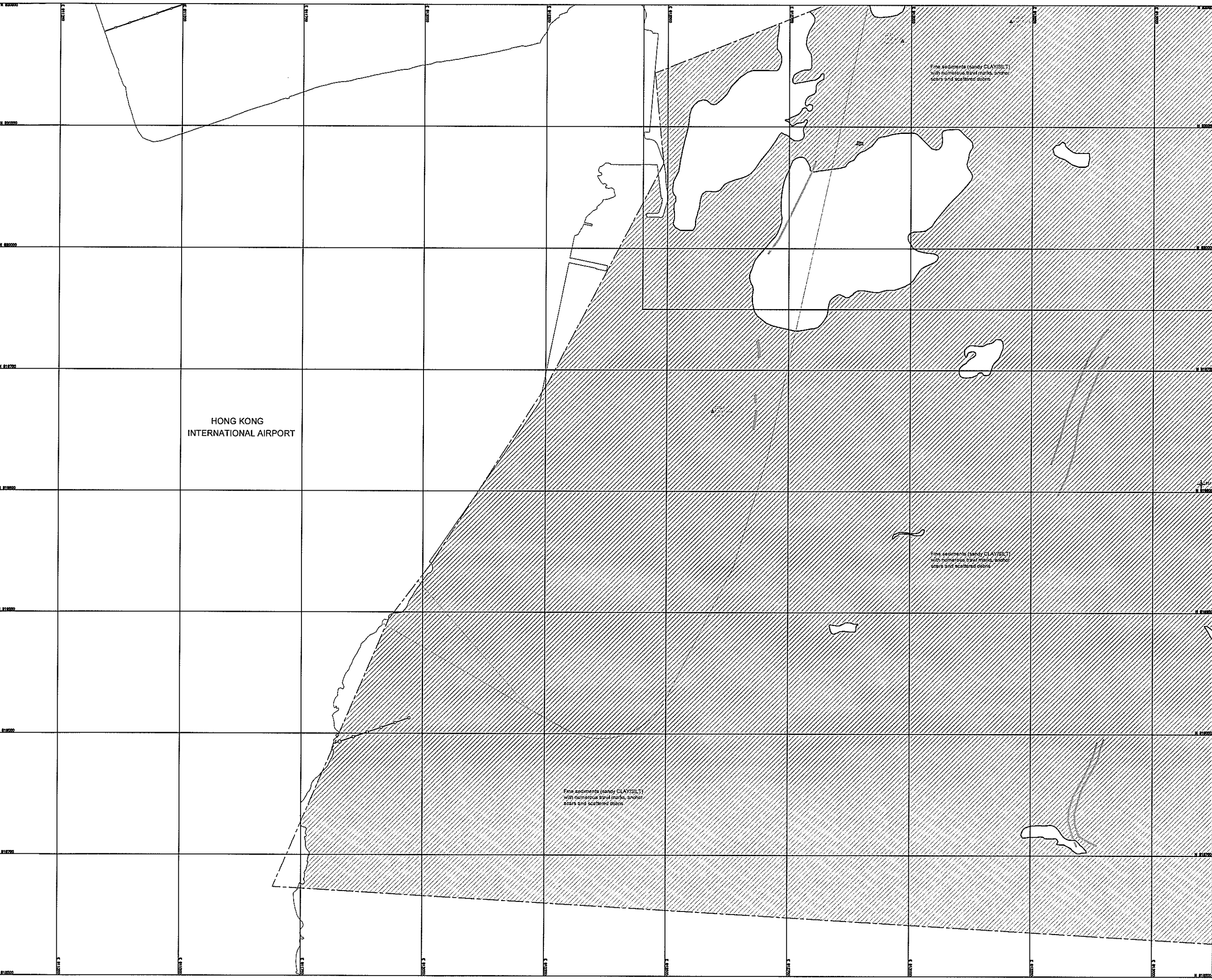
- Notes :
1. Survey Date : November - December 2008
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principal Datum
  4. Positioning : C-Nav GCPs (Gabbly corrected GPS)
  5. Equipment : EGS Boomer System  
 Seapac Magnetometer  
 Reson B125 Multibeam System  
 Knudsen 3200 Dual Frequency Echo Sounder  
 OF1000 Side Scan Sonar System With Digital Tow Fish
  6. Coastline taken from 1:1,000 Survey Sheets, Survey and Mapping Office, Lands Department

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	08/01/2009	Cherance Su	Wilson Wong	Margie Chen	Preliminary

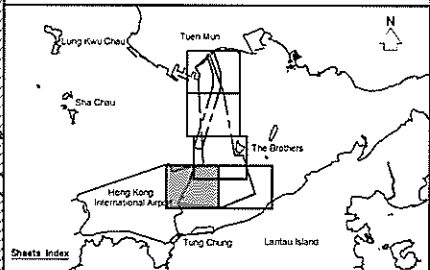
METRIC SCALE 1:2,500

Client : Civil Engineering and Development Department

Surveyor : EES Engineering & Environmental Services Ltd.  
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 Email: info@ees.com.hk



- Legend :
- Vibrocore location with reference number
  - Borehole location with reference number
  - Fine sediments (predominantly CLAY/SILT)
  - Coarse sediments (predominantly SAND and GRAVEL)
  - Rocky area
  - Sonar contact
  - Magnetic contact
  - Seismic contact
  - Echo sounding contact
  - Buoy
  - Scar/Trawl marks
  - Megaripples
  - Main survey boundary
  - Magnetic survey boundary
  - Existing CLP cables
  - Existing Hutchison cable
  - Chart overlap
  - Interpreted cables/sipatline alignments based on magnetic, seismic and echo sounding data



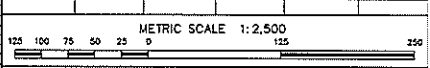
Project : CONTACT NUMBER GE/2007/04  
 GEOPHYSICAL SURVEY (TERM CONTRACT)  
 WORKS ORDER NUMBER GE/2007/04 20  
 AGREEMENT NO CE 52/2007 (H-Y)  
 TUEN MUN - CHEK LAP KOK LINK - INVESTIGATION  
 PROPOSED MARINE GEOPHYSICAL SURVEYS

FIGURE NUMBER : 11.5

Drawing Title : **SEA BED FEATURES AND CABLE ALIGNMENTS**

- Notes :
1. Survey Date : November - December 2008
  2. Survey Grid : Hong Kong Metric Grid
  3. Survey Datum : Hong Kong Principle Datum
  4. Positioning : C-Net GPS (Doubly corrected GPS)
  5. Equipment : EGS Boomer System  
 Seospy Magnetometer  
 Reson 8125 Multibeam System  
 Knudsen 320M Dual Frequency Echo Sounder  
 DT1000 Side Scan Sonar System with Digital Tow Fish
  6. Coastline taken from 1:1,000 Survey Sheets, Survey and Mapping Office, Lands Department
  7. Please refer to Appendix E for details of magnetic contacts, seismic contacts and echo sounding contacts

Revision No.	Date	Drawn by	Checked by	Approved by	Remarks
0	09/01/2009	Clarence SU	Wilson Wong	Margie Chen	Preliminary



Client : Civil Engineering and Development Department

Surveyor : EGS MARINE LIMITED  
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