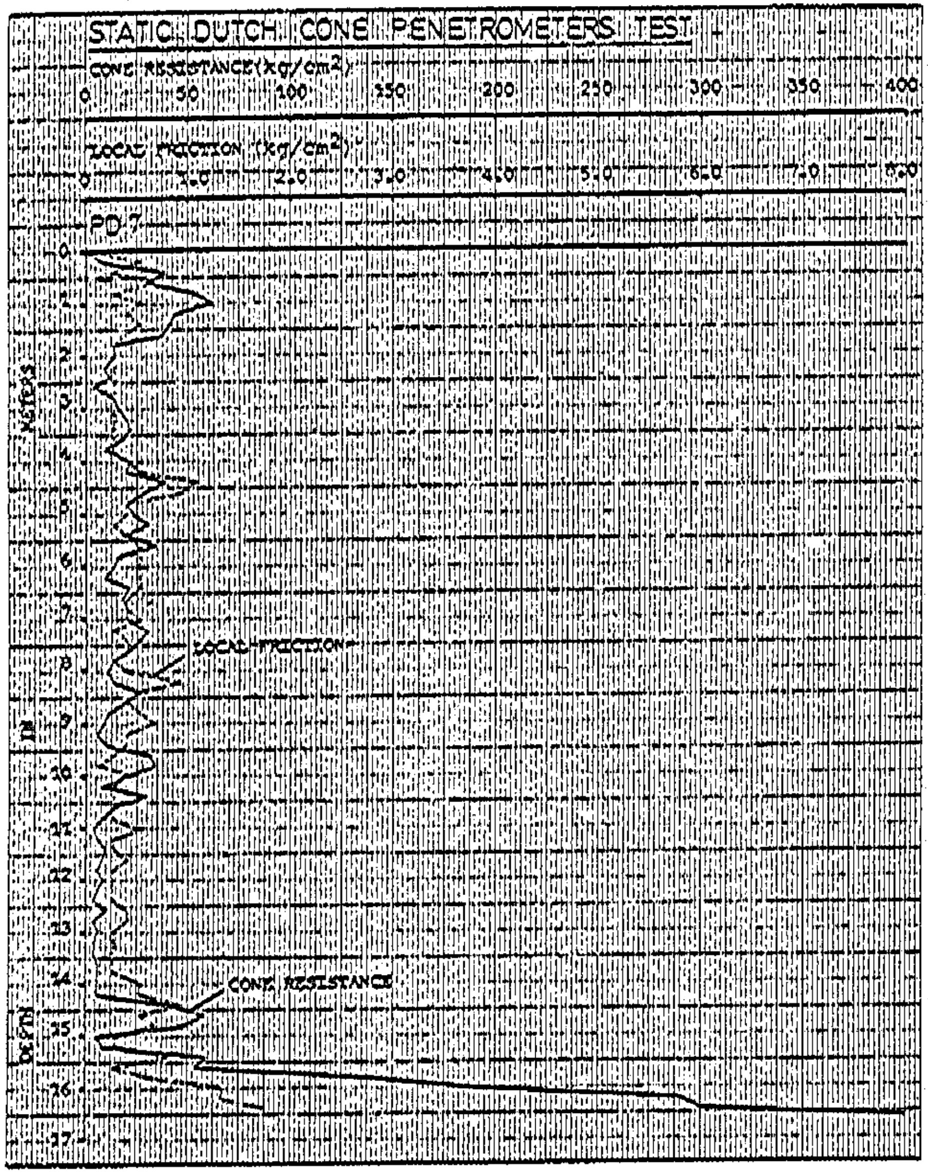
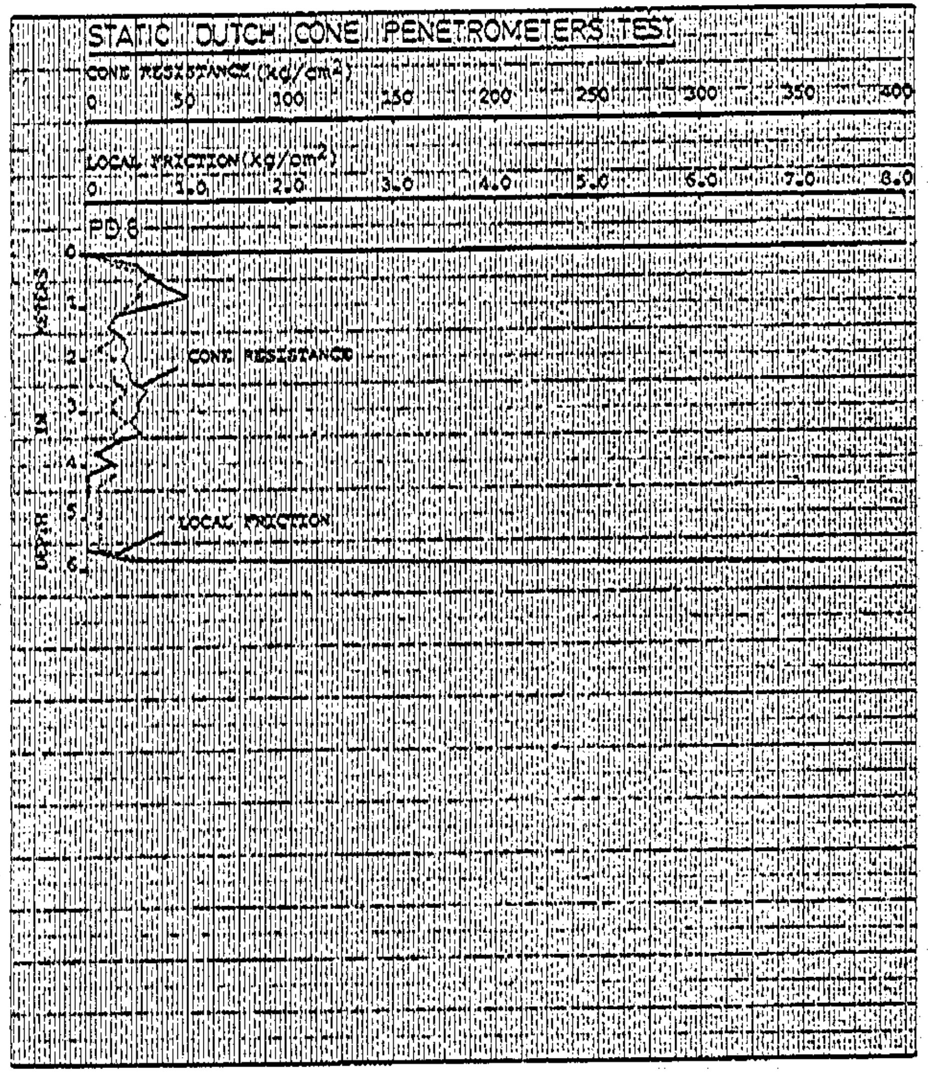
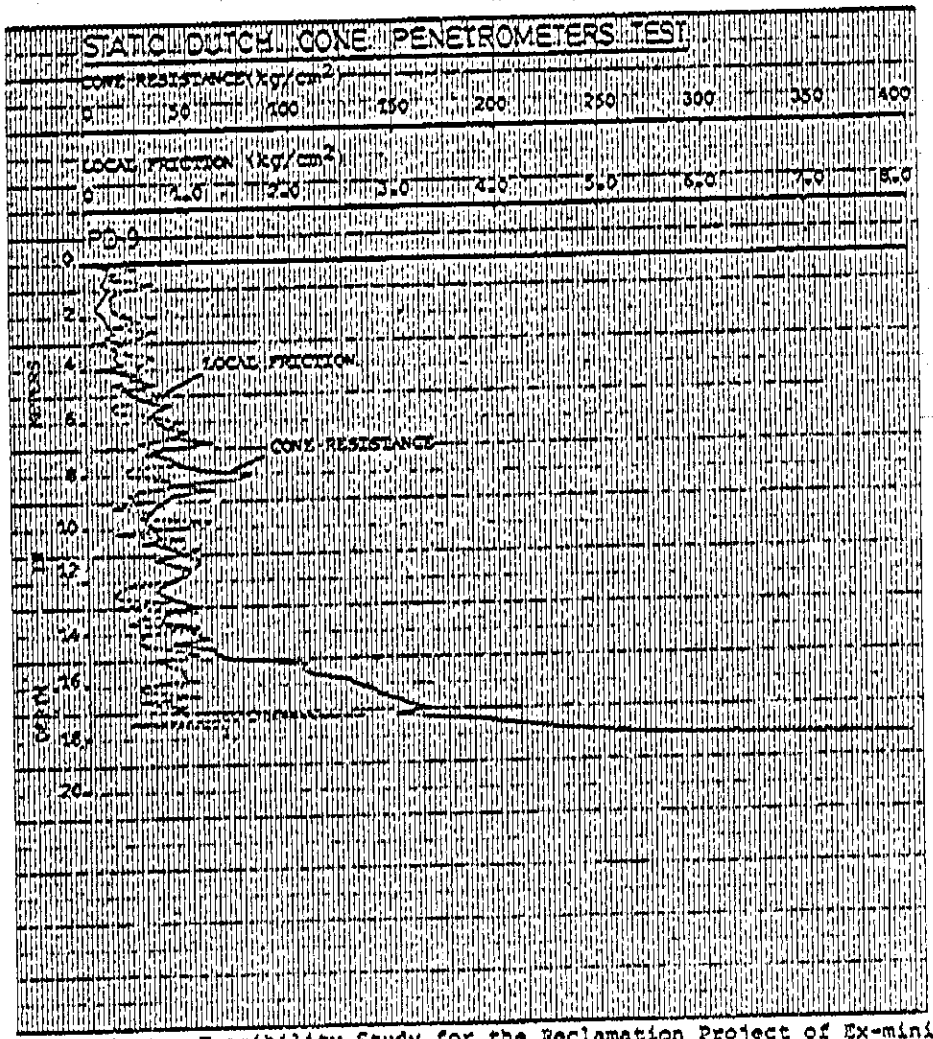




Project: Feasibility Study for the Reclamation Project of Ex-mining Land for Housing Development and Other Purposes-Phase I at Kampong Pandan, Kuala Lumpur - MJ/003/80/



Project: Feasibility Study for the Reclamation Project of Ex-mining Land for Housing Development and Other Purposes-Phase I at Kampong Pandan, Kuala Lumpur - MJ/003/80/

FIG. DRILLING LOG

Name of Project: Feasibility Study for the Reclamation Project of Ex-mining Land for Housing Development and Other Purposes - Phase I

Type of Drilling: Percussion

Hole Number: No. PB-1

Elevation: FL +43.4 m.

Date: 30/1/80 to 2/2/80

Site: Kampong Pandan

Water Table: CL -3.60 m.

Driller: Geotechnique (H) (Kiso-Jiban)

Remarks

Elevation in m.	Depth in m.	Thickness	Type of Soil	Colour	Relative Density or Consistency	General Remarks
43.40						
43.00	0.40	0.40	Sand	Light grey		Top soil. Sand is fine grained with gravel
					Very loose to loose	Sand is medium to coarse grained with mica-fragments. With some gravel (25-7mm)
33.80	9.60	9.20	Sand	Light grey		
31.60	11.80	2.20	Sandy Silt	Brownish grey	Soft to medium	With mica-fragments. With some coarse sand
28.65	14.75	2.95	Silty Clay	Grey	Soft	With sand and mica-fragments
26.83	16.57	1.82	Clayey Silt	Light grey	Medium	With pockets of sand and mica-fragments
25.90	17.50	0.93	Silt	Light grey	Stiff	With traces of fine sand
24.70	18.70	1.20	Clayey Silt	Grey	Stiff	With coarse sand
23.50	19.90	1.20	Sand and Gravel	Light grey	Loose	Sand is medium to coarse. Weathered limestone
23.00	20.40	0.50	Gravel	Light grey		Limestone
21.70	21.70	1.30	Sand with Gravel	Light grey		Weathered limestone.
21.60	21.80	0.10	Limestone	Grey white		
			End of Drilling			

Standard Penetration Test or Core Recovery

Depth in m.	Sampling or Lab.	SPT Value	Blows Per Each 10cm
1.15 / 1.45	P-1	3	0 2 1
2.15 / 2.45	P-2	4	1 2 1
3.15 / 3.45	P-3	4	1 2 1
4.15 / 4.45	P-4	5	2 1 2
5.15 / 5.45	P-5	7	3 2 2
6.15 / 6.45	P-6	8	3 2 3
7.15 / 7.45	P-7	6	2 2 2
8.15 / 8.45	P-8	3	1 0 2
9.15 / 9.45	P-9	8	3 2 3
10.15 / 10.45	P-10	8	3 3 2
11.15 / 11.45	P-11	3	0 2 1
12.15 / 12.45	P-12	1	0 0 1
13.15 / 13.45	P-13	3	0 1 2
14.15 / 14.45	P-14	11	4 3 4
15.15 / 15.45	P-15	11	5 3 3
16.15 / 16.45	P-16	5	2 1 2
17.15 / 17.45	P-17	11	3 4 4
18.15 / 18.45	P-18	10	4 2 4
19.15 / 19.45	P-19	10	2 3 5
20.15 / 20.25	P-20	50/10	50/10 - -
21.15 / 21.45	P-21	28	7 6 15
21.70 / 21.80	P-22	50/10	50/10 - -

(N—Value)

Core Recovery

50 blows/10cm

50 blows/10cm

FIG. DRILLING LOG

Remarks

Name of Project: Feasibility Study for the Reclamation Project of Ex-mining Land for Housing Development and Other Purposes - Phase I

Type of Drilling: Percussion

Hole Number: No. PB-2 | Elevation: RL +43.7 m | Date: 11/1/80 to 14/1/80

Site: Kampong Pandan | Water Table: GL -2.20 m | Driller: Geotechnique (M) (Kiso-Jiban)

Scale in m.	Elevation in m.	Depth in m.	Thickness	Legend	Type of Soil	Colour	Relative Density or Consistency	General Remarks
	43.70							
1	42.90	0.80	0.80		Sandy Silt	Light grayish brown		Top soil
2	41.85	1.85	1.05		Sandy Silt	Light brown	Medium	With some gravels
	41.10	2.60	0.75		Clayey Sand	Light brownish grey	Loose	Sand is medium to coarse grained
3	40.20	3.50	0.90		Sandy Silt	Light brownish pink	Medium	With medium sand
4	39.10	4.60	1.10		Clayey Silt	Light brownish pink	Soft	With traces of sand
5								With coarse sand
6								
7	36.50	7.20	2.60		Sandy Silt	Light whitish grey	Medium	With mica-fragment
	36.45	7.25	0.05		limestone?			
8					End of Drilling			

Standard Penetration Test or Core Recovery

Depth in m.	Sampling No.	Type	N-Value	Blows Per Each 10cm	
1.15	P-1		5	1	3 1
1.45					
2.15	P-2		5	1	2 2
2.45					
3.15	P-3		6	1	3 2
3.45					
4.15	P-4		3	1	0 2
4.45					
5.15	P-5		4	1	1 2
5.45					
6.15	P-6		7	3	2 2
6.45					
7.20	P-7		50/5	50/5	- -
7.25					

(N—Value) 10 20 30 40 50

Core Recovery

50 blows/5cm

FIG. DRILLING LOG

Remarks

Name of Project: Feasibility Study for the Reclamation Project of Ex-mining Land for Housing Development and Other Purposes - Phase I — Type of Drilling: Percussion

Hole Number: No. P8-3 — Elevation: RL +44.2 m. — Date: 26/1/80 to 28/1/80

Site: Kampong Pandan — Water Table: GL -3.25 m. — Driller: Geotechnique (P) (Kiso-Jiban)

Scale in m.	Elevation in m.	Depth in m.	Thickness	Legend	Type of Soil	Colour	Relative Density or Consistency	General Remarks
	44.20							
1	44.10	0.10	0.10		Coarse Sand	Light grey		Top soil: Coarse to medium
2	41.45	2.75	2.65		Clayey Silt	Light brownish grey	Very soft	With medium sand
3								With silt and gravels
4								Gravel is ø5-10cm
5	39.20	5.00	2.25		Sand	Light grey	Very loose	
6	37.70	6.50	1.50		Silty Sand	Light grey	Very loose	Sand is medium to coarse grained with gravels. Gravel is ø5-10cm
7								Sand is coarse grained with gravels
8								
9								Gravel is ø10cm
10	33.65	10.55	4.05		Silty Sand	Light grey	Very loose	
11	32.30	11.90	1.35		Clayey Silt	Light brownish grey	Soft	With sand pocket
12	31.35	12.85	0.95		Sandy Clay	Dark brownish grey	Medium	With medium sand
13	30.55	13.65	0.80		Clayey Silt	Brownish grey	Stiff	With medium sand
14	29.80	14.40	0.75		Sandy Silt	Light grey	Hard	Weathered lime-stone
15	29.45	14.75	0.35		Gravel	Light grey		Limestone
16					End of Drilling			

Standard Penetration Test or Core Recovery

Depth in m.	Sampling or Lab.	SPT-Value	Blows Per Each 10cm	(N—Value)
1.15	P-1		2 0 1 1	Core Recovery
2.15	P-2		1 0 0 1	
3.15	P-3		1 0 1 0	
4.15	P-4		2 0 1 1	
5.15	P-5		2 0 1 1	
6.15	P-6		1 0 1 0	
7.15	P-7		3 1 1 1	
8.15	P-8		4 1 2 1	
9.15	P-9		2 1 0 1	
10.15	P-10		1 0 1 0	
11.15	P-11		4 1 1 2	
12.15	P-12		8 2 2 4	
13.15	P-13		10 3 2 5	
14.00	P-14		50/31 50/3 - -	50 blows/8cm
14.70	P-15		50/5 50/5 - -	50 blows/5cm

FIG. DRILLING LOG

Name of Project: Feasibility Study for the Reclamation Project of Ex-mining Land for Housing Development and Other Purposes - Phase 1

Type of Drilling: Percussion

Hole Number: No. PB-4 | Elevation: RL +43.0 m. | Date: 23/1/80 to 24/1/80

Site: Kampong Pandan | Water Table: GL -2.45 m. | Driller: Geotechnique (M) (Kiso-Jiban)

Remarks:

Scale in m.	Elevation in m.	Depth in m.	Thickness	Legend	Type of Soil	Colour	Relative Density or Consistancy	General Remarks
	43.00							
	42.90	0.10	0.10		Sand	Light grey		Top soil with mica-fragment
1					Sandy Silt	Light grey	Medium	With mica-fragment
	41.20	1.80	1.70					
2								Sand is fine to medium grained
3								
	37.30	5.70	3.90		Sand	Light grey	Loose	
6								With few gravel.
7								Sand is fine to coarse grained
8						Light grey	Very loose	
	34.20	8.80	3.10		Sand			
9	33.35	9.65	0.85		Silty Sand	Light brown	Medium	Heavily weathered limestone
10					Sandy Silt	Dark brown	Stiff	Heavily weathered limestone
	32.15	10.85	1.20					
11					Clayey Silt		Stiff	Heavily weathered limestone
	31.45	11.55	0.70					
12								End of Drilling

Standard Penetration Test or Core Recovery

Depth in m.	Sampling No.	N-Value	Blows Per Each 10cm	(N-Value) 10 20 30 40 50
1.15 / 1.45	P-1	5	1 2 2	
2.15 / 2.45	P-2	5	3 2 3	
3.15 / 3.45	P-3	5	2 3 3	
4.15 / 4.45	P-4	7	1 2 4	
5.15 / 5.45	P-5	10	3 4 3	
6.15 / 6.45	P-6	2	0 1 1	
7.15 / 7.45	P-7	5	1 2 2	
8.15 / 8.45	P-8	4	0 2 2	
9.15 / 9.45	P-9	20	9 6 5	
10.15 / 10.45	P-10	13	5 4 4	
11.15 / 11.45	P-11	13	7 2 4	

Core Recovery

Hard rock formation SPT rebounded

FIG. DRILLING LOG

Name of Project: Feasibility Study for the Reclamation Project of Ex-aining Land for Housing Development and Other Purposes - Phase I

Type of Drilling: Percussion

Hole Number: No. PB-5

Elevation: RL +48.3 m

Date: 17/1/80 to 21/1/80

Site: Kampong Pandan

Water Table: GL -3.20 m

Order: Geotechnique (II) (Kiso-Jibun

Remarks

Elevation in m.	Depth in m.	Thickness	Type of Soil	Colour	Relative Density or Consistency	General Remarks
+48.30	0.10	0.10	Sand	Light greyish brown		Top soil. Sand is medium grained
						Sand is fine to coarse grained
				Dark greyish brown		
+33.30	15.00	14.90	Sand	Brown		
+33.20	15.10	0.10	Gravels	Brown		With sand
						End of Drilling

Standard Penetration Test or Core Recovery

Depth in m.	Sampling No.	N-Value	Blows Per Each 10cm	
1.15-1.45	P-1	4	1	2 1
2.15-2.45	P-2	4	2	1 1
3.15-3.45	P-3	1	0	1 0
4.15-4.45	P-4	1	0	1 0
5.15-5.45	P-5	2	0	1 1
6.15-6.45	P-6	2	0	1 1
7.15-7.45	P-7	1	0	1 0
8.15-8.45	P-8	3	2	1 0
9.15-9.45	P-9	2	0	1 1
10.15-10.45	P-10	4	3	1 0
11.15-11.45	P-11	15	5	5 5
12.15-12.45	P-12	16	6	5 5
13.15-13.45	P-13	33	6	4 3
14.15-14.45	P-14	10	3	4 3
15.00-15.10	P-15	50/10	50/0	- -

(N-Value) 10 20 30 40 50

Core Recovery

50 blows/10cm

E.2 Results of Field Ground Investigation
- Sentul -

Details of Field Ground Investigation Performed (1)

- Sentul -

		Geophysical Survey		Soundings													Disturbed Soil Sampling (Nos.)
				Dutch Cone Penetrometer Test		Dynamic Cone Test		Pore Pressure Sounding			Swedish Sounding	Mackintosh Probe Sounding					
		Electrical Sounding	Micro-gravity Measurement	Test No./ Location	Sounding Depth (m)	Test No./ Location	Sounding Depth (m)	Location	Test No.	Sounding Depth (m)		Sub-Area	Test No./ Location	Sounding Depth (m)		
Pilot Test Area		25 Locations	121 Locations	A'	7.8	-	-	A"	1	2.69	Refer to next page.					
				A"	12.8	A"	19.2		2	2.68						
				B	16.0	B	14.2	B	1	11.50						
									2	11.60						
	Sub Total	25 Locations	121 Locations	3 Locations	36.0m	2 Locations	33.4m	2 Locations	4 Tests	28.47m	96 Locations					
Entire Area	On Land	5 Locations	9 Locations	SD-1	28.8											
				SD-2	17.2											
				SD-3	18.6											
				SD-4	17.4											
				SD-5	20.2											
				SD-6	27.4											
				SD-8	12.6											
				SD-9	15.4											
				SD-10	22.0											
				SD-11	20.2											
				SD-12	19.4											
				SD-13	19.6											
				SD-15	13.8											
				SD-16	17.8											
				SD-17	15.0											
				SD-18	7.4											
	In Pond											Pond No.1	MS-1	10.9	5	
													MS-2	8.8	5	
													MS-3	10.6	5	
													MS-4	10.6	9	
													MS-5	9.7	9	
	Sub Total	5 Locations	9 Locations	16 Locations	292.8m	0 Location	0 m	0 Location	0 Tests	0 m	0 Location 0 m	-	5 Locations	50.6m	33 Nos.	
Total		30 Locations	130 Locations	19 Locations	328.8m	2 Locations	33.4m	2 Locations	4 Tests	28.47m	96 Locations 1179 m	-	5 Locations	50.6m	33 Nos.	

Details of Field Ground Investigation Performed (2)
- Sentul -

Type of Boring	Area	Sub-section	Boring No.	Boring Length			Undisturbed Sampling (Nos)	In-Situ Tests in Boreholes			
				Soil Boring (m)	Rock Boring (m)	Total (m)		Standard Penetration Test (Nos)	Vane Test (Nos)	Pressuremeter Test (Nos)	In-Situ Permeability Test (Nos)
Percussion Boring	Pilot Test Area	A		10.80	0	10.80	0	11	0	0	1
		A'		10.03	0	10.03	0	10	0	0	1
		A"		19.20	0	19.20	0	19	0	0	4
		B		26.00	0	26.00	0	26	0	0	0
		Sub-Total		66.03	0	66.03	0	66	0	0	6
	Entire Area on Land		SB-1	13.05	0	13.05	0	13	0	0	0
			SB-2	8.70	0	8.70	0	9	0	0	0
			SB-3	10.52	0	10.52	0	11	0	0	0
			SB-4	20.01	0	20.01	0	20	0	0	0
			SB-5	17.02	0	17.02	0	17	0	0	0
			SB-6	36.10	0	36.10	0	36	0	0	0
			SB-7	10.10	0	10.10	0	10	0	0	0
			SB-8	12.03	0	12.03	0	12	0	0	0
			SB-9	16.80	0	16.80	0	17	0	0	0
		Sub-Total		144.33	0	144.33	0	145	0	0	0
Total				210.36	0	210.36	0	211	0	0	9
Rotary Drilling	Pilot Test Area	A"	A	21.25	8.20	29.45	3	7	0	1	0
			B	14.15	5.55	19.70	0	0	2	5	0
		B	A	29.00	7.00	36.00	9	14	0	5	0
			B	26.00	7.50	33.50	0	1	11	0	3
		Sub-Total		90.40	28.25	118.65	12	22	13	11	3
		Test Embankment	SBH-1*1	18.11	0	18.11	8	10	27	0	0
			SBH-2*1	20.15	0	20.15	8	12	23	0	0
			SBH-3*2	25.00	0.50	24.50	17	9	36	0	0
			SBH-4*2	23.06	0	23.06	9	7	17	0	0
			SBH-5*3	24.20	0	24.20	11	7	11	0	0
			SBH-6*3	26.17	0	26.17	10	11	12	0	0
		Sub-Total		136.69	0.50	136.19	63	56	126	0	0
	Total			227.09	28.75	254.84	75	78	139	11	3
Grand Total				437.45	28.75	465.20	75	289	139	11	12

Notes: *1 SBH-1 and SBH-2 were performed before trial embankment.
*2 SBH-3 and SBH-4 were performed after 1st stage embankment.
*3 SBH-5 and SBH-6 were performed after 2nd stage embankment.

Microgravity Survey

Gravity survey

The Bouguer anomaly map (Plate 1) shows the raw results of the survey - Interpretative maps are :

- Residual anomaly (Plate 2)
- Seconde derivative (Plate 3).

Bouguer anomaly (Plate 1)

This map shows important gravity variations.

A gravimetrical depression, perfectly closed, is located in the central part of the survey. It is bounded by an important gradient on its northern limb and by a dome on its southern limb.

The gravimetrical depression axis is approximately located N.E. - S.W. The dome axis is arch shaped.

These first elements show principal features of the limestone substratum morphology.

Anyway, through some irregular isogams, secondary events appear, their origin being deep or near surface, but showed off by variations of the gravimetrical gradient.

Residual anomaly (Plate 2)

The determination of a regional anomaly is always difficult considering the small perimeter of the surveyed area. The problem is to define large variations of the Bouguer anomaly, generated by the deep geological context.

Bouguer anomaly values decrease from North to South of the survey. In the Northern part, they reach 1741 hundredths of milligal, then 1736 in the Southern part and 1695 hundredths in the SB 9 drill hole zone.

In a first approximation, the regional anomaly can be represented as a inclined plane from N. E. to S.W. Its isogams are showed in dash lines on the plate 2 and its gradient is about 0.09 mgal/100 m. Anyway, this regional anomaly is approximate and its shape could be more complex.

Residual anomalies show :

- A very important negative anomaly (-23,0 hundredths of milligal) in the Northern centre of the survey, characterized by its axis N.E - S.W.
- An important positive anomaly (+ 5.3 hundredths), with its axis, arch shaped towards the North, from East to West.
- The presence of an important gradient to the North, bounding the negative anomaly extension.

These gravimetrical structures define the limestone top morphology :

- A closed depression exists in the central part, bounded by a relief characterized by a small depth top.
- A calcareous edge, in relief, rather strait, (10 m to 15 m) is located in the Southern part. It is arch shaped and the relief decreases to the West.
- In the extreme Southern, depressions are located in KO and in the S.W. angle of the survey, in DO and EO.

Second derivative (Plate 3)

This interpretative map displays small variations in curves or gradients observed in the above maps, able to bring more information concerning the limestones morphology.

Calculated residual values indicate the presence of positive or negative anomalies.

What are their significations ?

Anomalies of this type correspond to a dicrease or to an increase of gradients i.e. to a lack or an excess of mass.

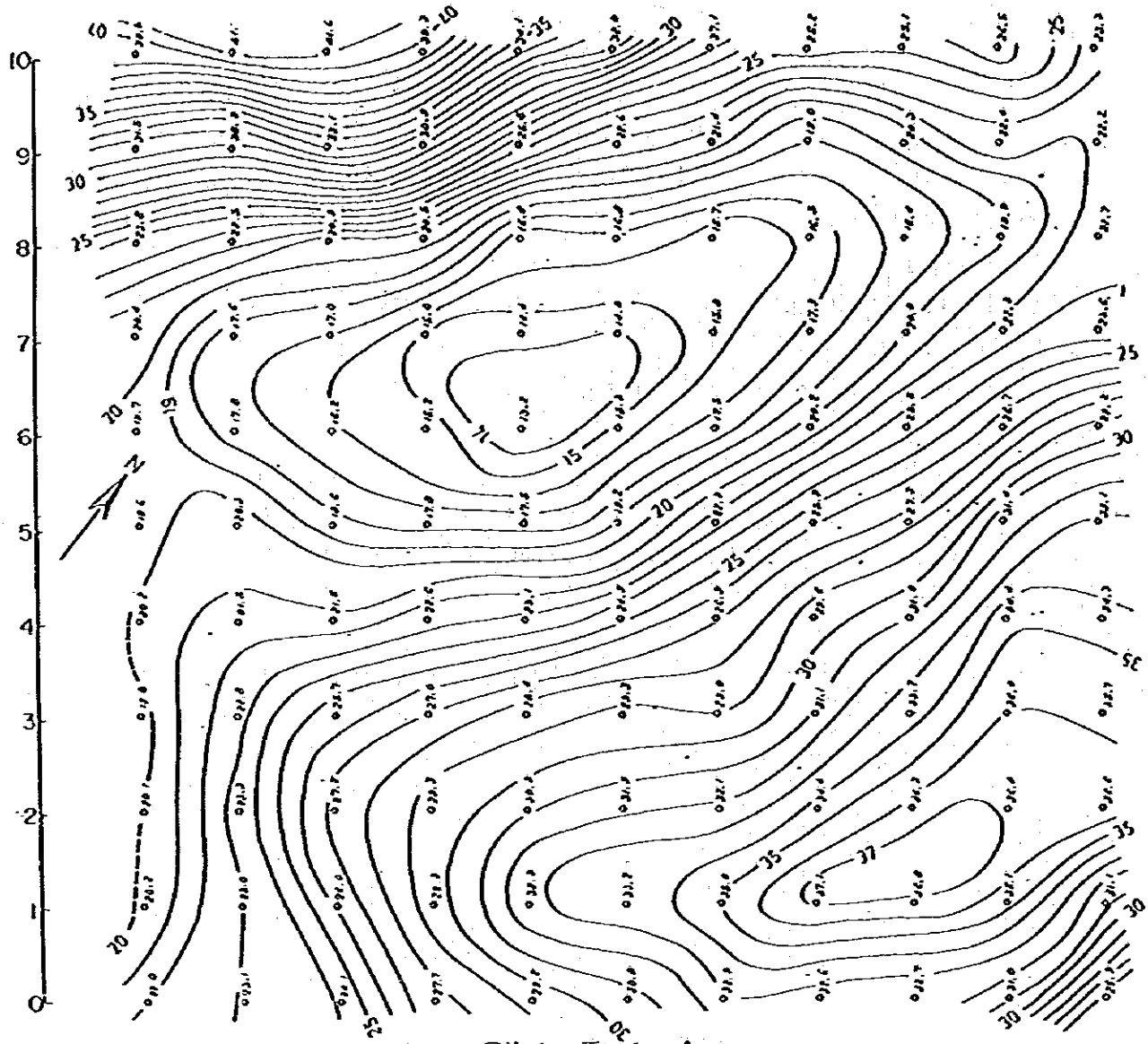
Considering that the sandy argillaceous covering is homogeneous in density, this information completes results obtained previously.

Positive anomalies could define calcareous outcrops to the following gravity stations :

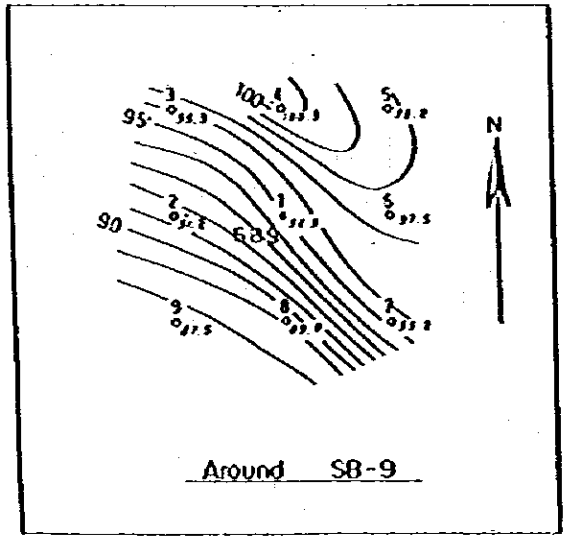
- J0, J1, I1, N1, G1, E1, C2, C3, B5, B10, C9, D10, F10, J9, K2, K8, J4, J5, K5 and H4, H5, also deep depressions along two axis staked by H9, E6 and F9, D6 and also to stations C8, B8, J8, K0, C0 and A8.

The disadvantage of this procedure is a lack of information around the perimeter of the survey coming from the interpolation of the g values.

Fictitions residual values are underlined in the plate 3.



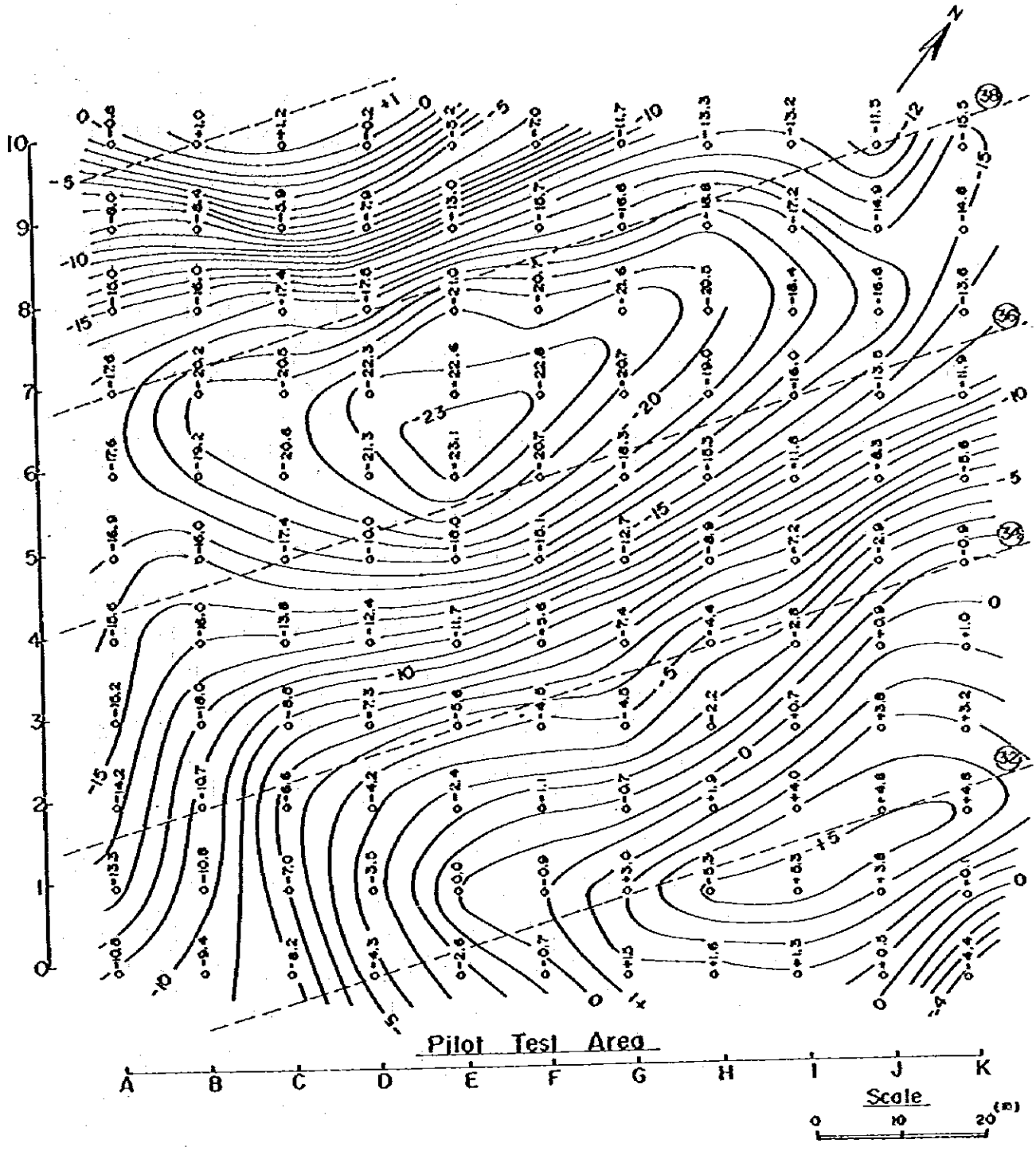
Scale : 0 10 20 (m)

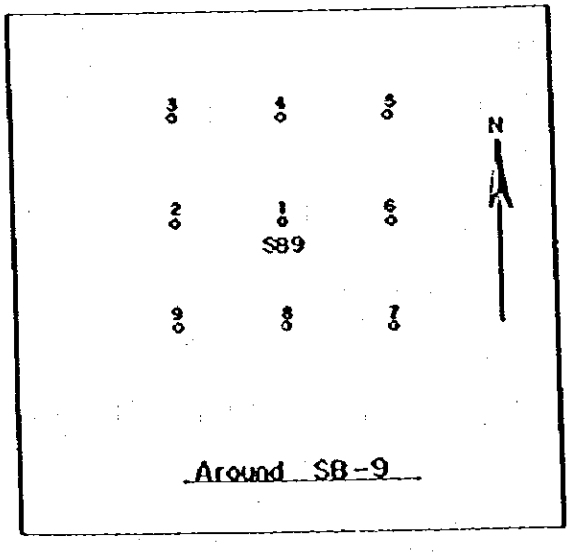


Density : 2.0

Contour interval : 0.01mgal

Result of Microgravity Survey
— Sentul —
I Borguer Anomaly





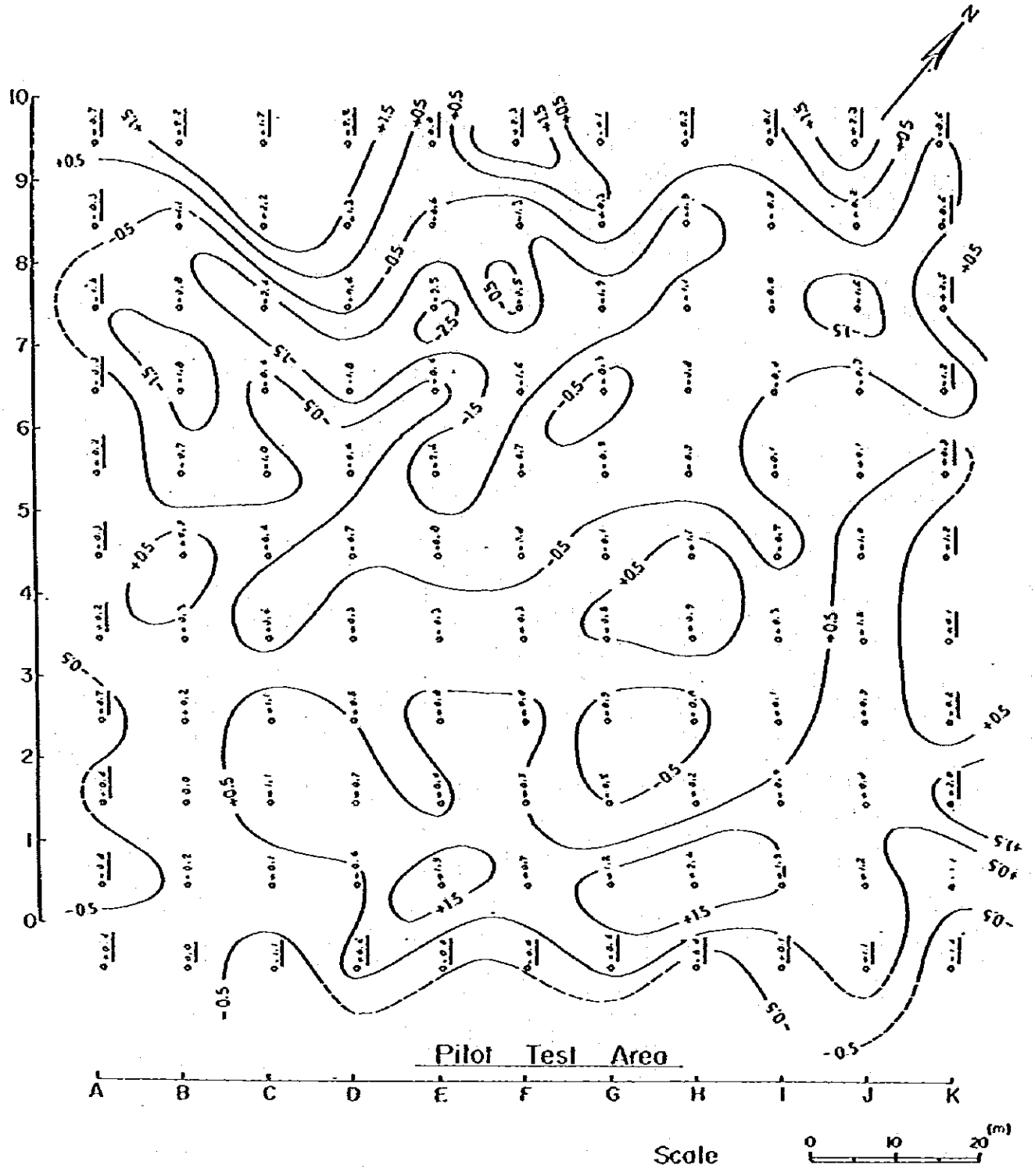
Regional Anomaly : (34)-----

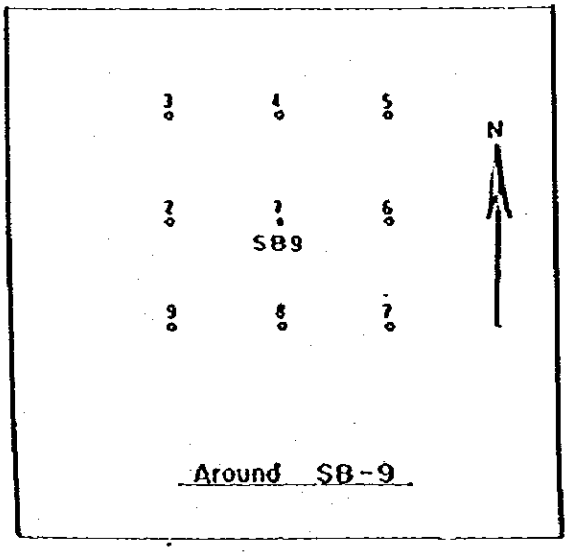
Contour Interval : 0.01mgal

Resul of Microgravity Survey

– Sentul –

2. Residual Anomaly





Interpolated Value : +0.4mgal

Contour Interval : 0.01mgal

Result of Microgravity Survey
– Sentul –
3. Second Derivative

Electrical Survey

Electrical sounding interpretation

Electrical soundings diagrams confirm that the sandy argillaceous covering is principally formed by conducting layers with resistivities between 15 and 80 ohm.meter and that the limestones present resistivities superior to 300 ohm.meter.

All diagrams were analysed using processing programs and a checking shows that all electrical sections were consistent with theorical electrical soundings superimposable to soundings realized in the field (with a 3 % exceptions).

As hypothesis, we admit, in this interpretation, that the undersoil corresponds to an horizontal stratification, that is not exact in the present context. The effect of the irregular structure of the limestone is showed on certain diagrams where we can see grades superior to 45° which are unacceptable in an horizontal structure hypothesis.

This approximation certainly causes errors concerning depths of the calcareous basement. In fact, this estimation is more or less rigorous. Thus, on the drill hole B near the drill hole SE 19, the depth determined by the electrical sounding is different from the depth given by the drilling. On the other hand, the depth given by the drilling SB 9 coincides with the electrical sounding depth.

Map of limestone tops (Pl. 5)

This test only gives the general aspect of the morphology. This aim is to allow a better comparison between gravimetrical and electrical results, as described in the following paragraph.

Map of apparent resistivities (AB = 50 m) (Plate 6)

The length of the utilized line is too short to define lateral variations of the calcareous structure. Resistivity values are still partially influenced by variations of the covering resistivity.

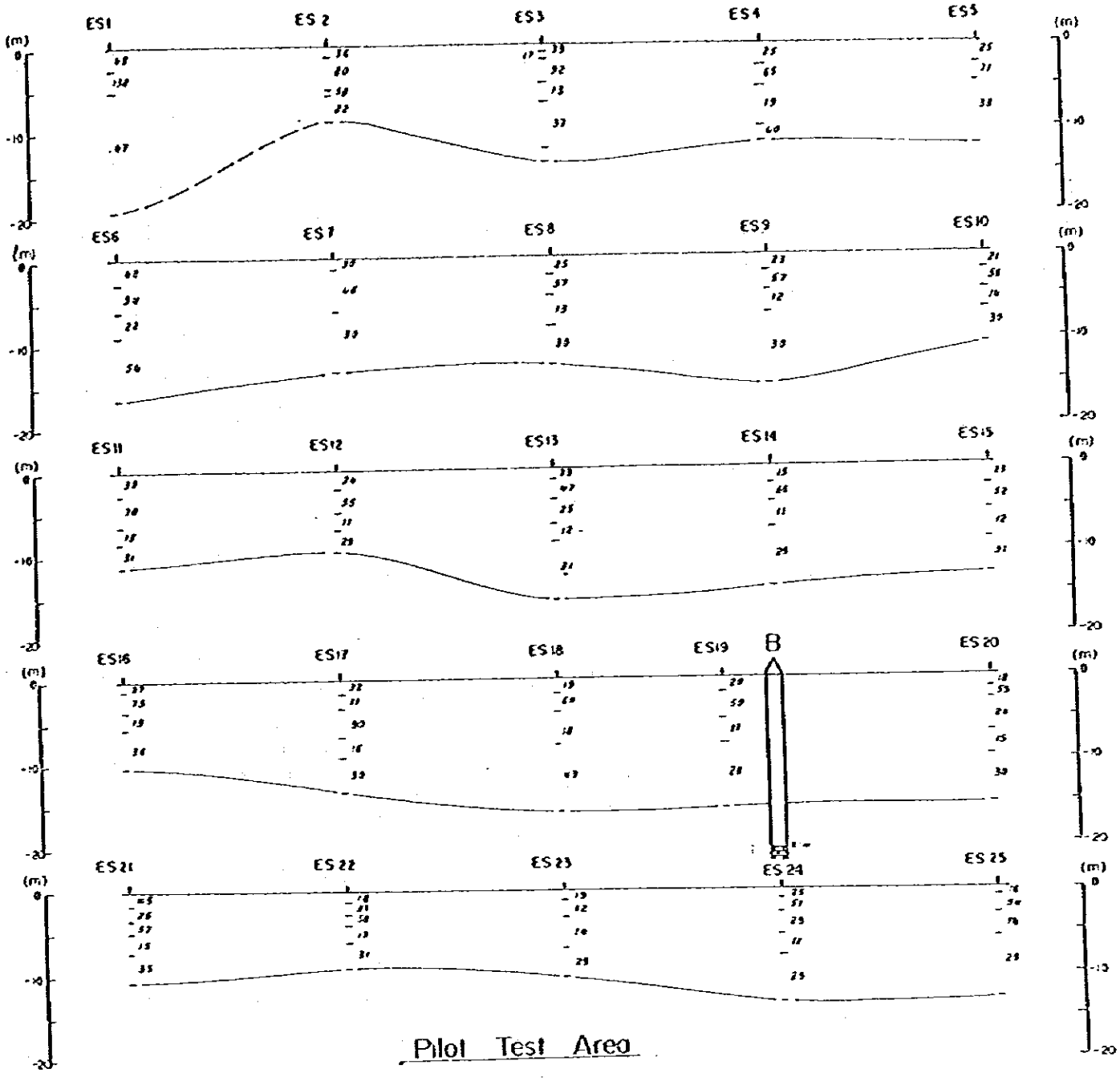
Map of apparent resistivities (AB = 140 m) (Plate 7)

In this case, resistivities principally show depths variations of the calcareous undersoil. But, the influence of the covering resistivities must be also taken into consideration.

The map shows :

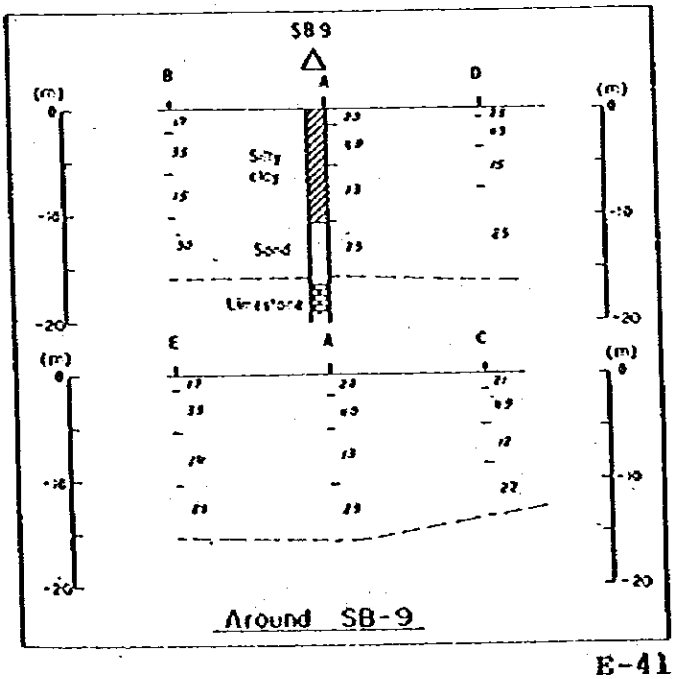
- In the Central part, a low resistivity zone where the conductor is consistent with the residual negative anomaly observed in gravity.
- In the Northern part, the conducting zone is bounded by a gradient of resistivity, showing an important decrease of the covering thickness.
- In the Southern part, it appears a zone of high resistivity, equivalent but not superimposible to the positive anomaly observed in gravity.

Note the presence in H5 of a small anomaly comparable to the positive anomaly observed on the second derivative map (Plate 3).



Pilot Test Area

Scale : 0 10 20 (m)

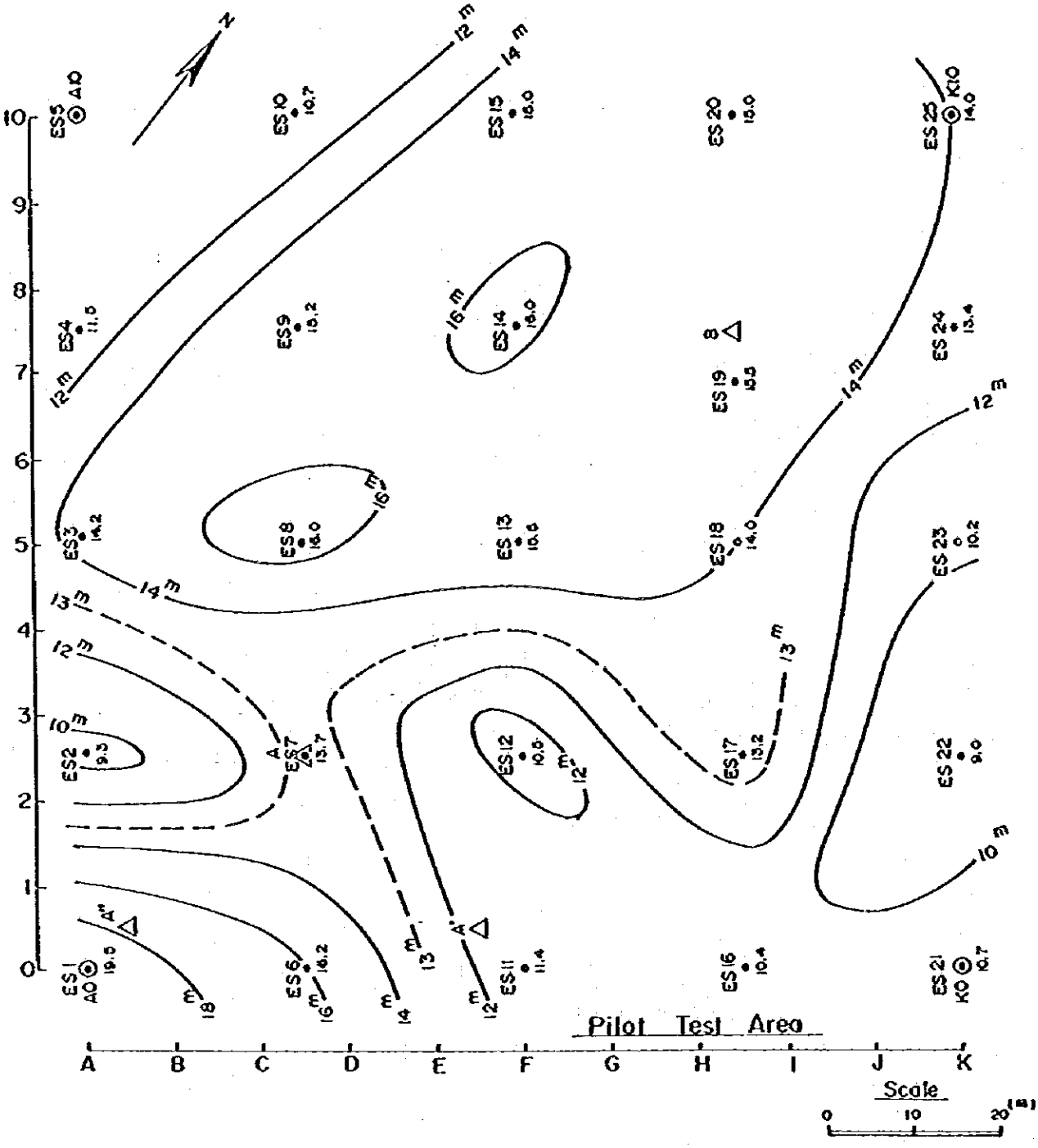


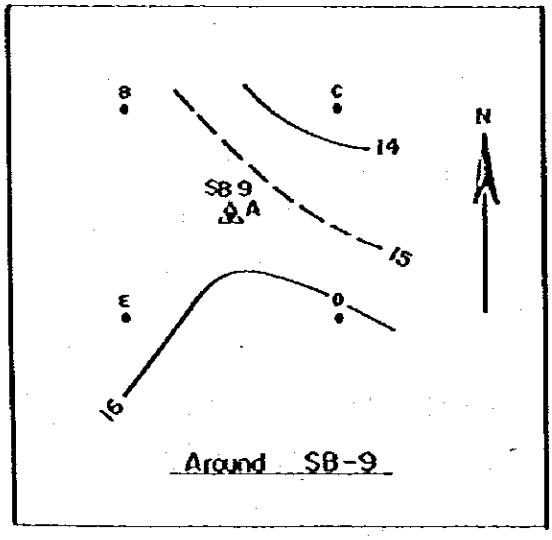
Around SB-9

Result of Electrical Survey

– Sentul –

1. Electrical Cross-Sections





Sounding No. ES16

Location of Electrical sounding

Depth of Limestone (m) 10.4

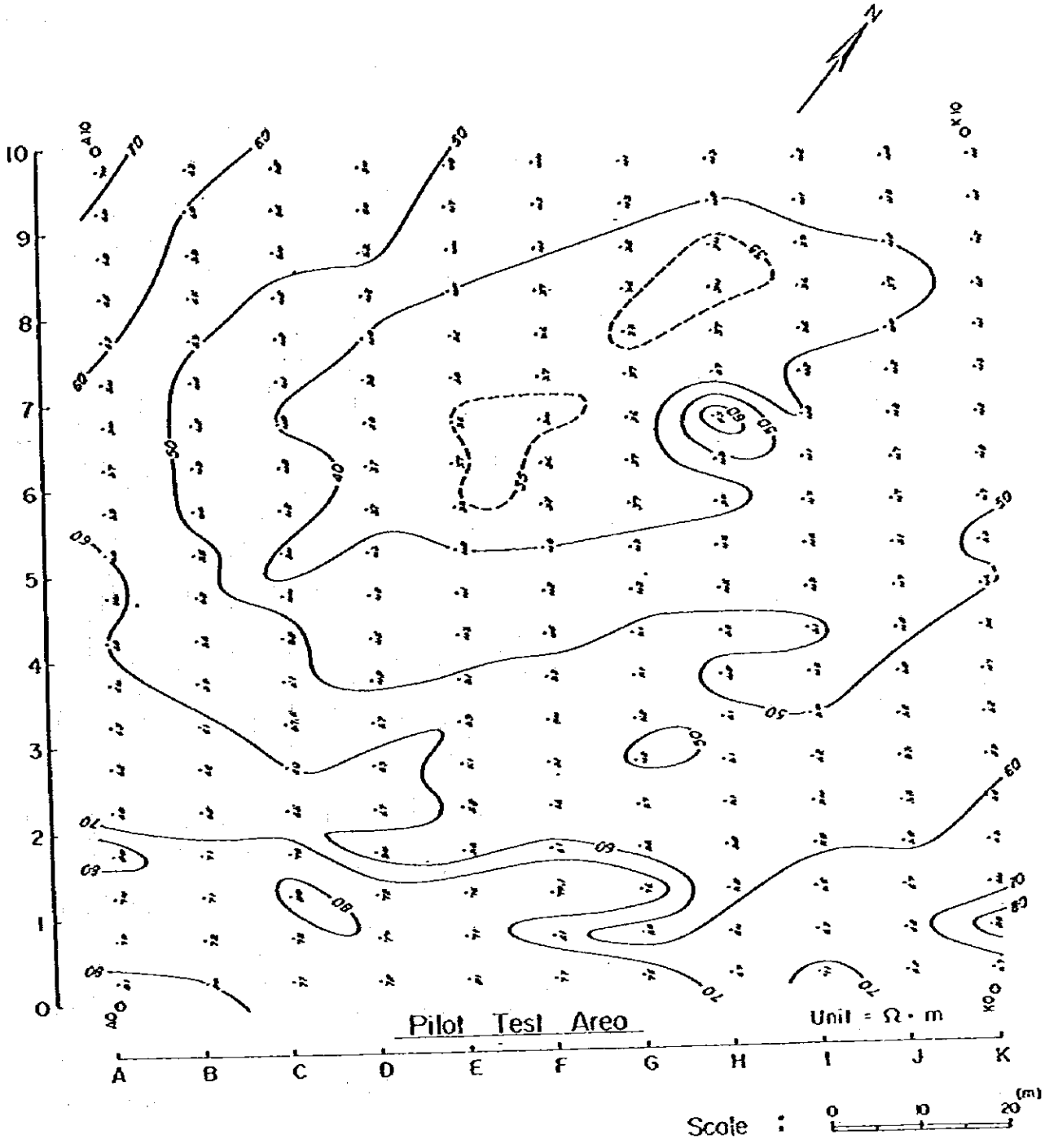
Gravimetric station K0

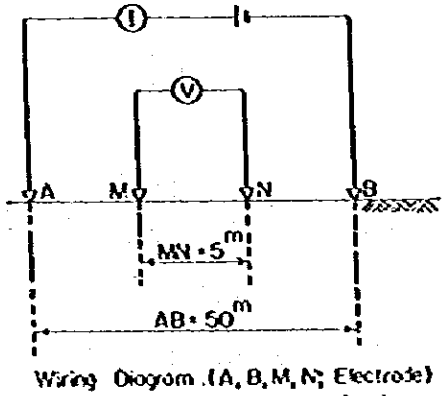
Drill hole A'

Result of Electrical Survey

— Sentul —

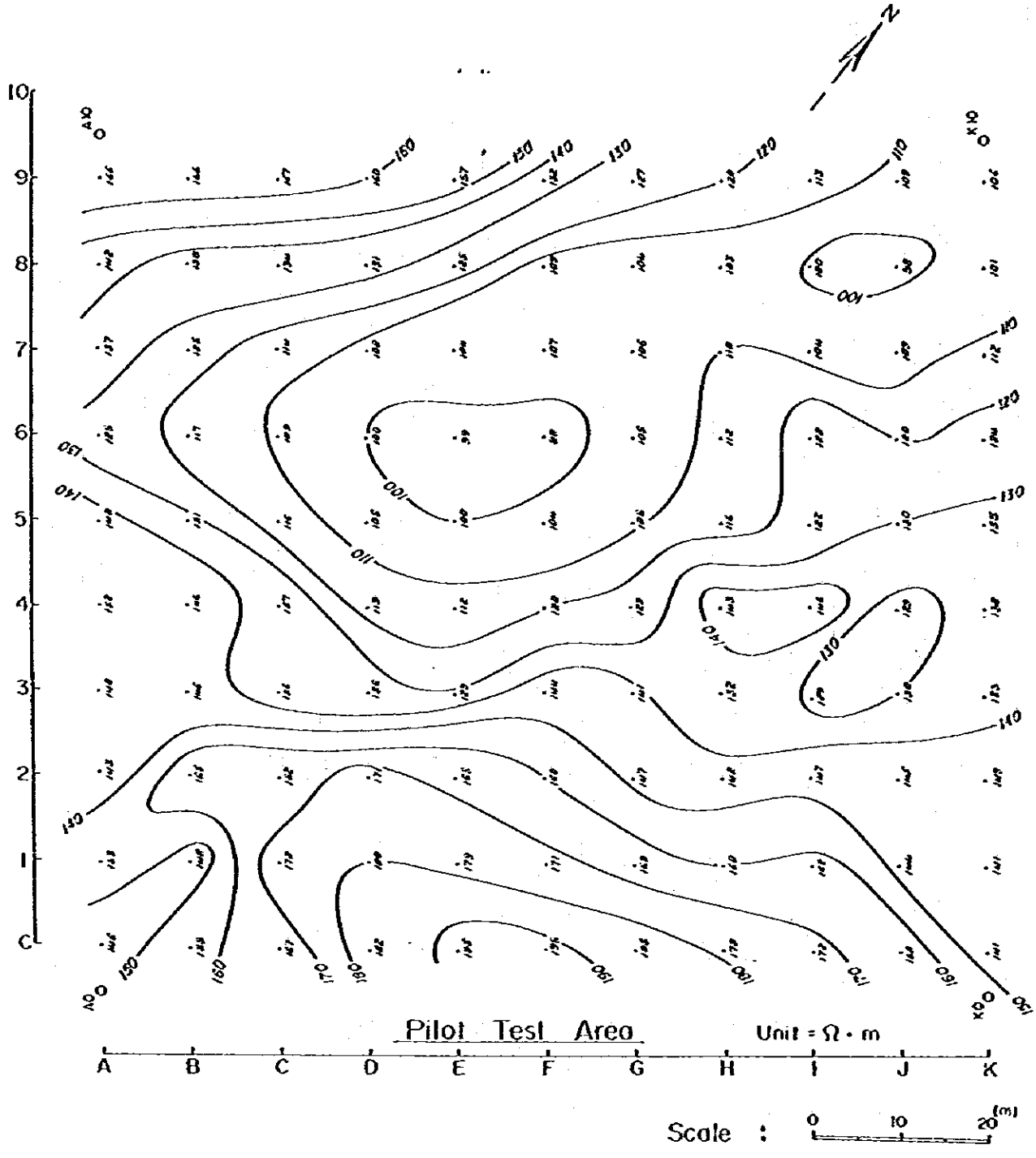
2. Limeston Top

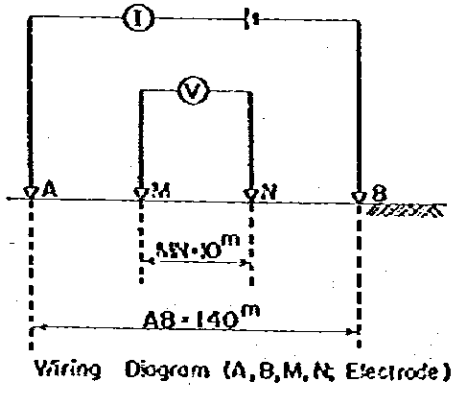




Wiring Diagram (A, B, M, N; Electrode)

Result of Electrical Survey
— Sentul —
3. Resistivity Map (I)
— Apparent Resistivities —





Wiring Diagram (A, B, M, N Electrode)

Result of Electrical Survey

-- Sentul --

4. Resistivity Map (2)

— Apparent Resistivities —

MACKINTOSH PROBE TEST

Project: Feasibility Study for the Reclamation Project of Ex-mining Land for Housing Development and Other Purposes - Phase I

Location: Sentul

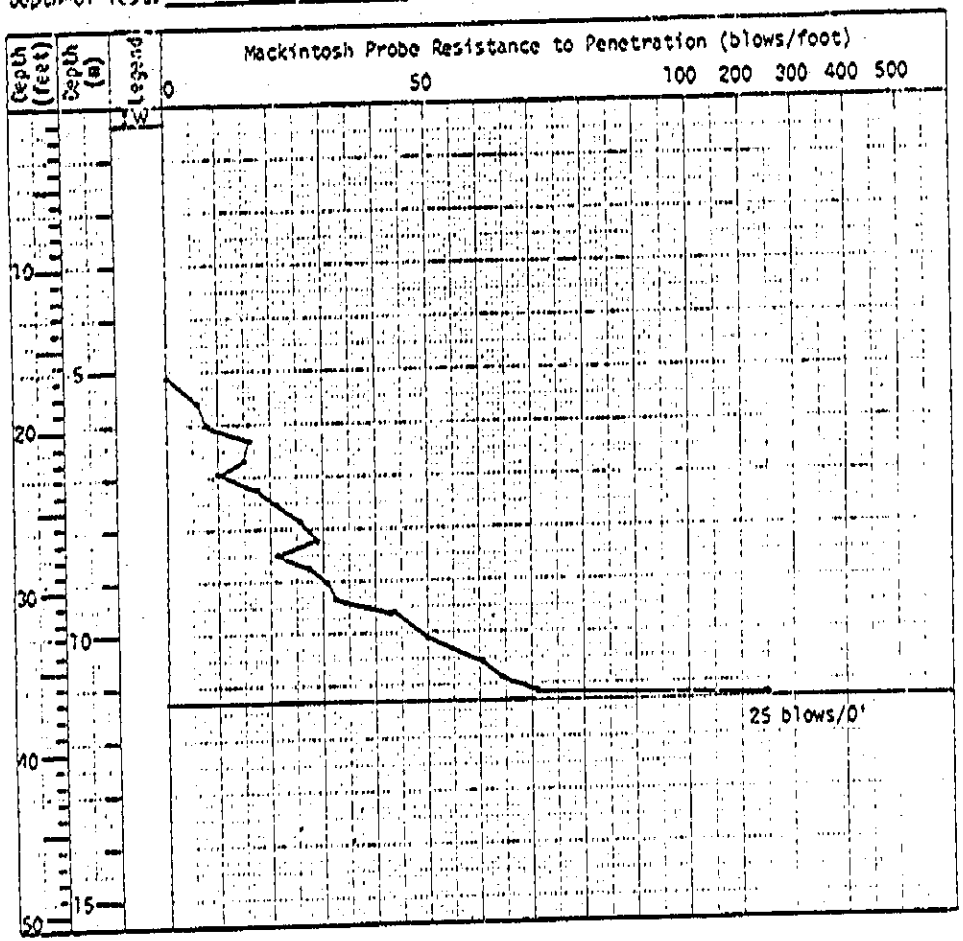
Date: 24/1/80

Depth of Test: 0' 0" - 37' 0"

Test No.: MS-1

Water Depth: 0' 0" - 1' 0"

Elevation: -



MACKINTOSH PROBE TEST

Project: Feasibility Study for the Reclamation Project of Ex-mining Land for Housing Development and Other Purposes - Phase I

Location: Sentul

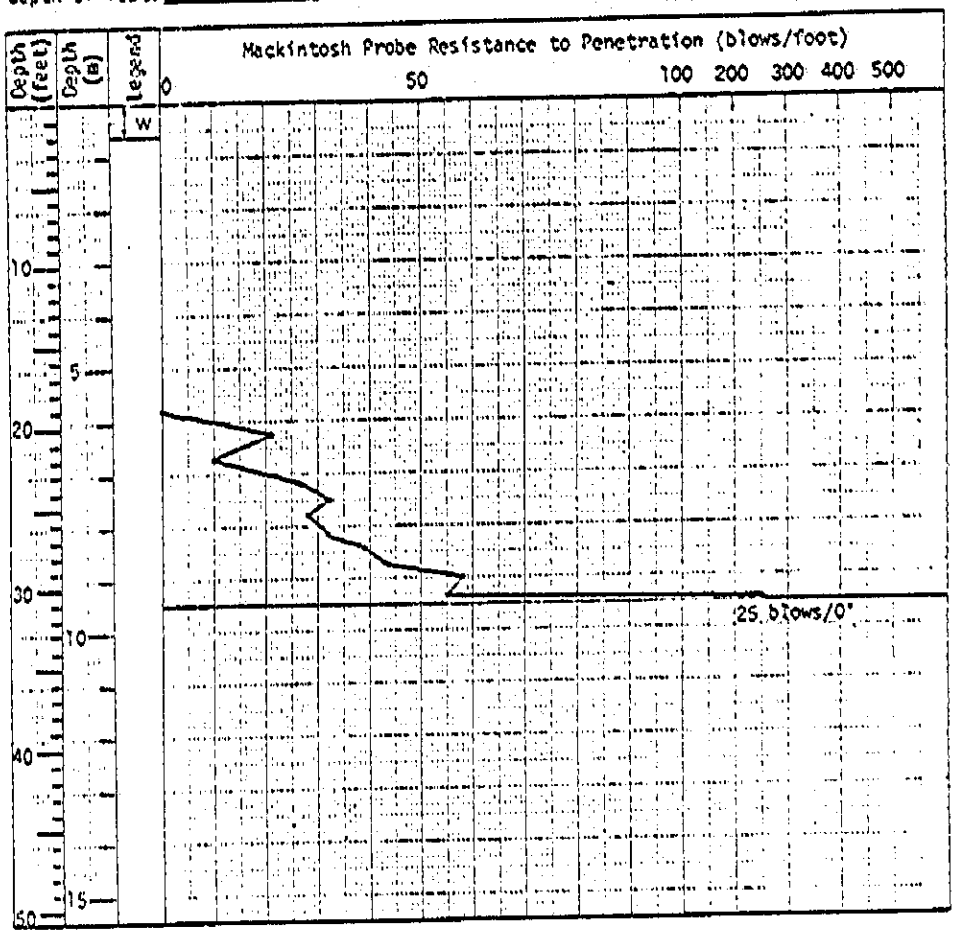
Date: 24/1/80

Depth of Test: 0' 0" - 31' 0"

Test No.: MS-2

Water Depth: 0' 0" - 2' 0"

Elevation: -



MACKINTOSH PROBE TEST

Project: Feasibility Study for the Reclamation Project of Ex-mining Land for Housing Development and Other Purposes - Phase I

Location: Sentul

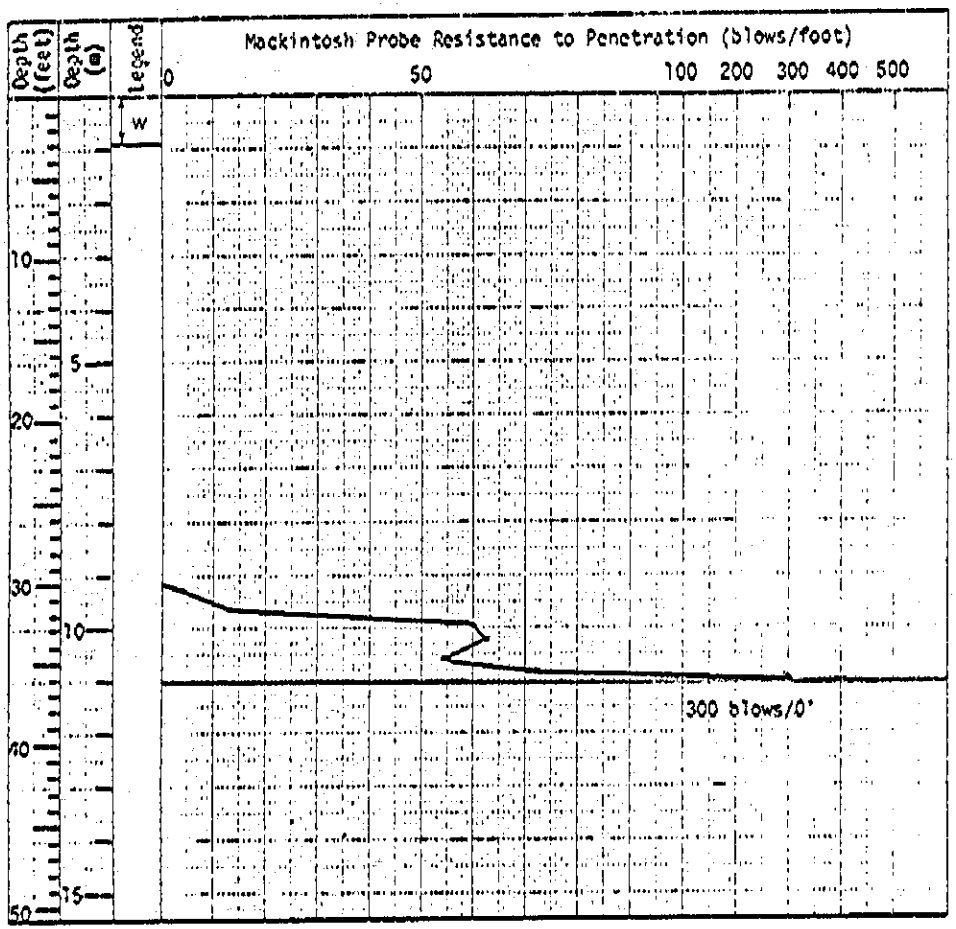
Test No.: MS-3

Date: 24/1/80

Water Depth: 0' 0" - 3' 0"

Depth of Test: 0' 0" - 36' 0"

Elevation: -



MACKINTOSH PROBE TEST

Project: Feasibility Study for the Reclamation Project of Ex-mining Land for Housing Development and Other Purposes - Phase I

Location: Sentul

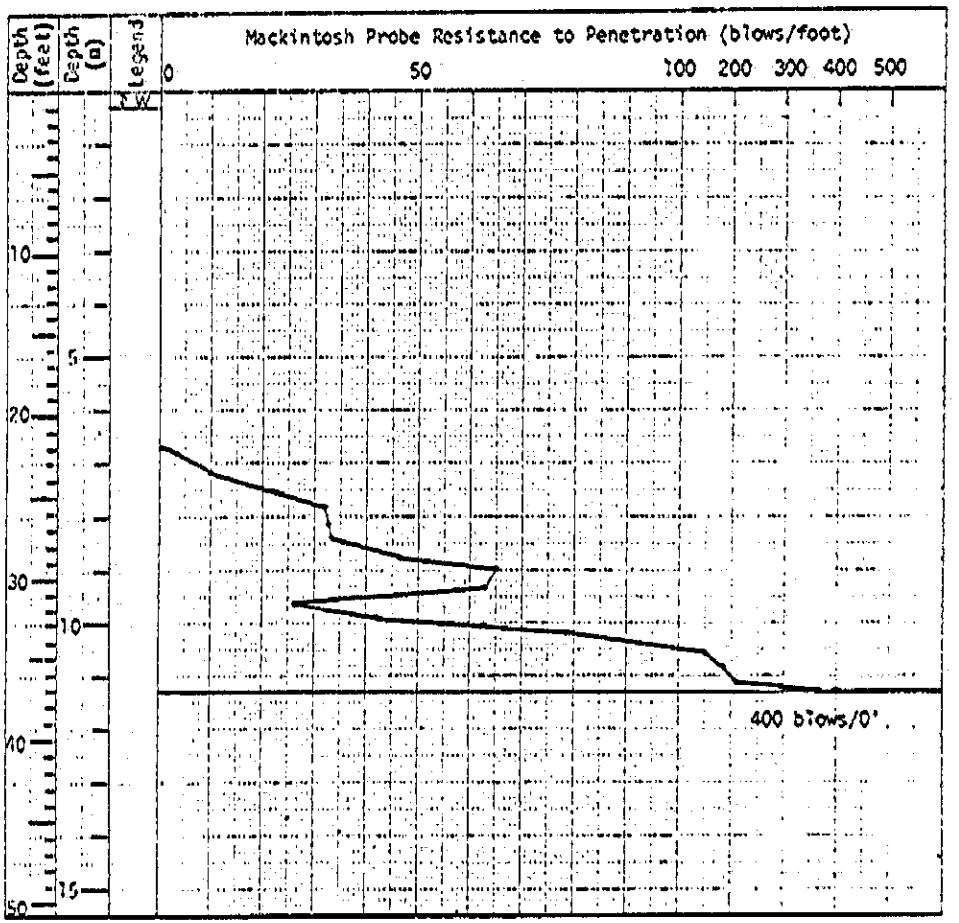
Test No.: MS-4

Date: 24/1/80

Water Depth: 0' 0" - 1' 0"

Depth of Test: 0' 0" - 37' 0"

Elevation: -



MACKINTOSH PROBE TEST

Project: Feasibility Study for the Reclamation Project of Ex-mining Land for Housing Development and Other Purposes - Phase I

Location: Sentul

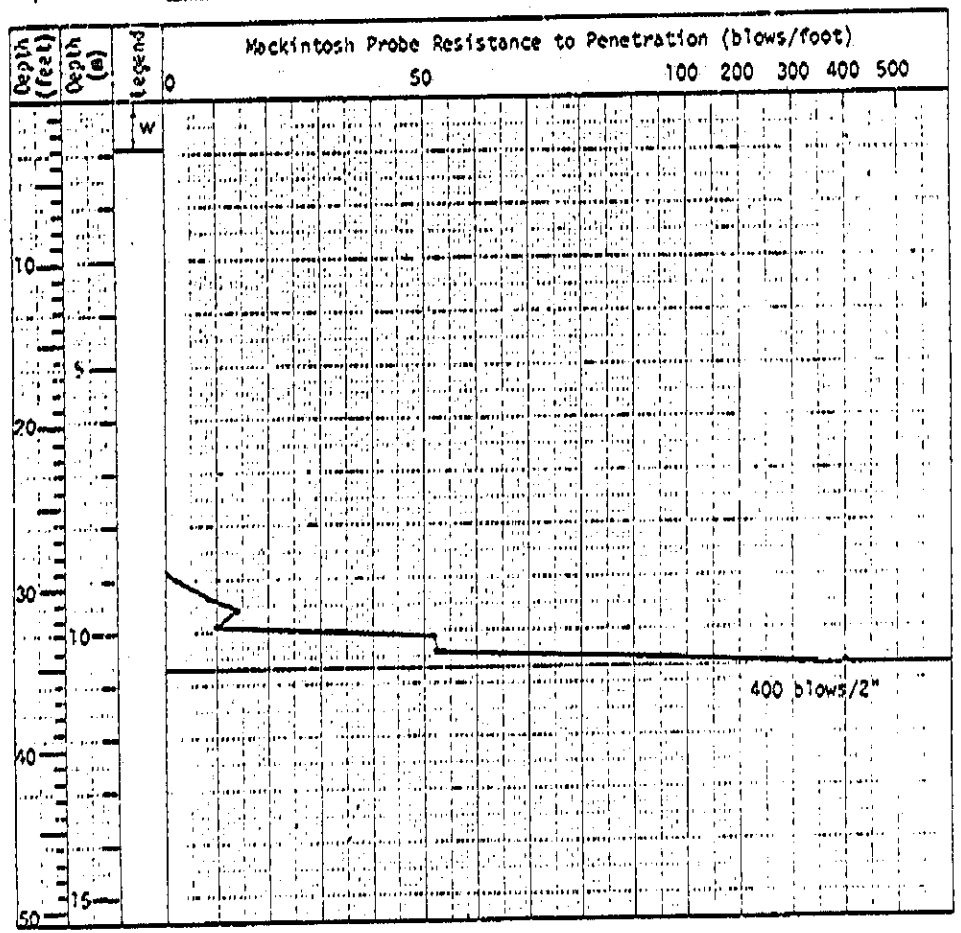
Test No.: MS-5

Date: 24/1/80

Water Depth: 0' 0" - 3' 0"

Depth of Test: 0' 0" - 35' 0"

Elevation: -



DYNAMIC CONE TEST

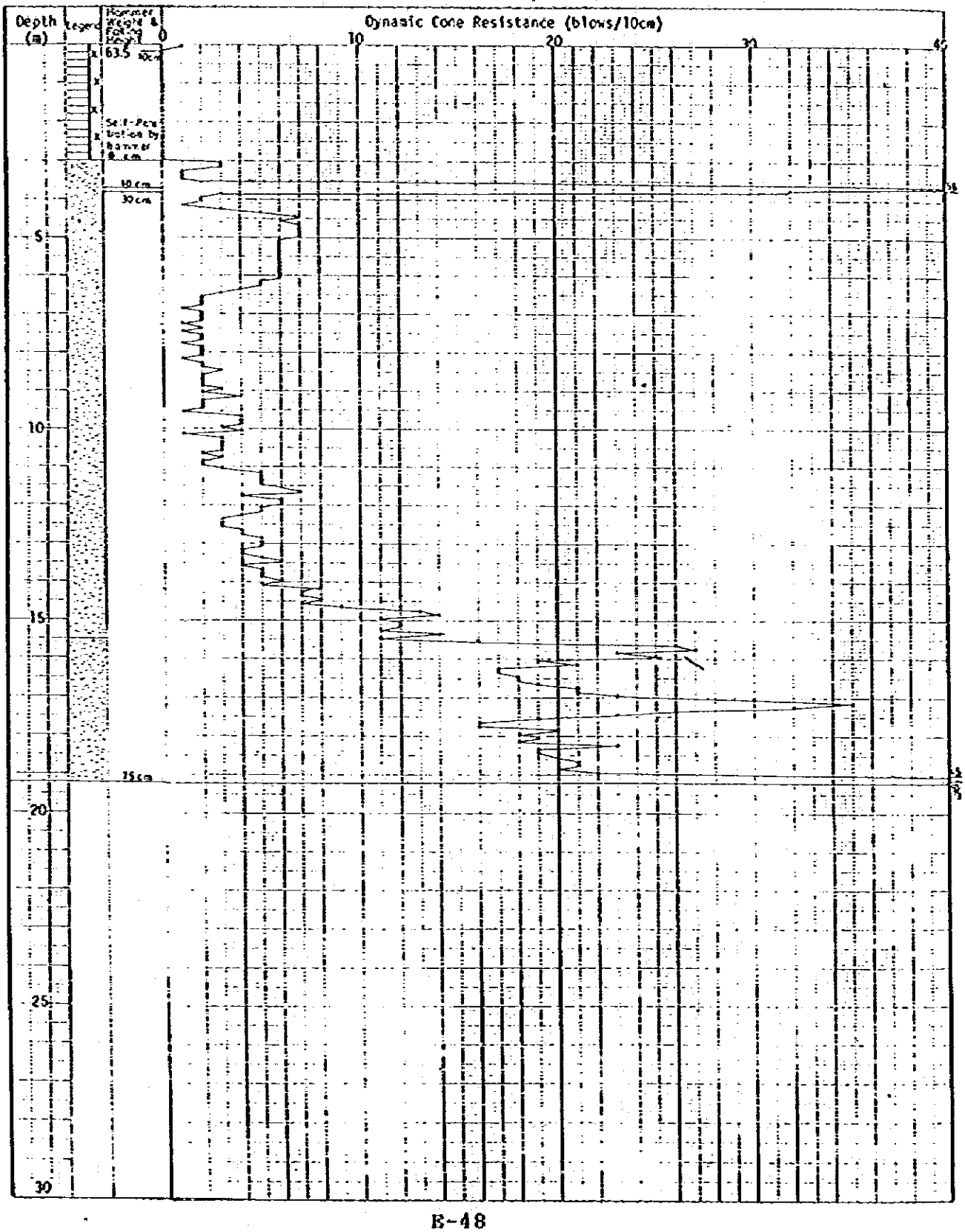
Project : Feasibility Study for the Reclamation Project of Ex-mining Land for Housing Development and Other Purposes - Phase I

Test No.: A" Date: 21.1.80 Depth of Test 19.2m Elevation: _____ Ground Water Table: _____

Hammer Weight (kg)	Falling Height (cm)	Depth (m)
63.5	10	0.0 ~ 0.1
63.5	Self penetration by hammer	0.1 ~ 3.0
63.5	10	3.0 ~ 3.7
63.5	30	3.7 ~ 3.8
63.5	75	3.8 ~ 19.2

Cone Type

Rod Diameter: 38mm Cone Angle: 60° Imprint Area: 10 sq.cm



DYNAMIC CONE TEST

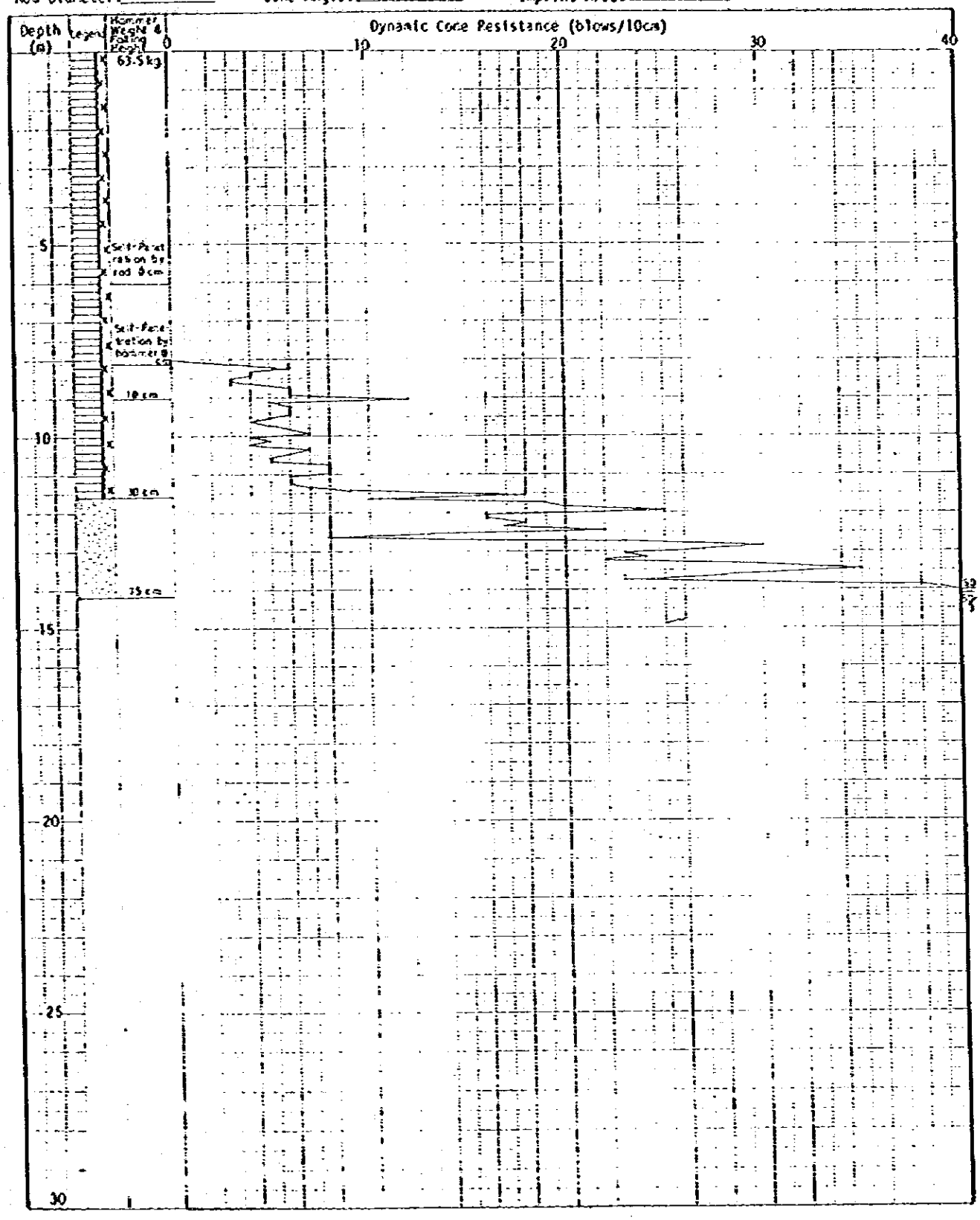
Project : Feasibility Study for the Peclamation Project of Ex-mining Land for Housing Development and Other Purposes - Phase I

Test No.: 8 Date: 12.2.80 Depth of Test 14.2 m Elevation: _____ Ground Water Table: _____

Hammer Weight (kg)	Falling Height (cm)	Depth (m)
63.5	Self penetration by rod	0.0 ~ 6.0
63.5	Self penetration by hammer	6.0 ~ 8.1
63.5	10	8.1 ~ 9.1
63.5	30	9.1 ~ 11.6
63.5	75	11.6 ~ 14.2

Core Type

Rod Diameter: 40.5mm Cone Angle: 60° Imprint Area: 10 sq. cm.



Summary of Swedish Sounding Carried out at the Pilot Test Area
- Sentul -

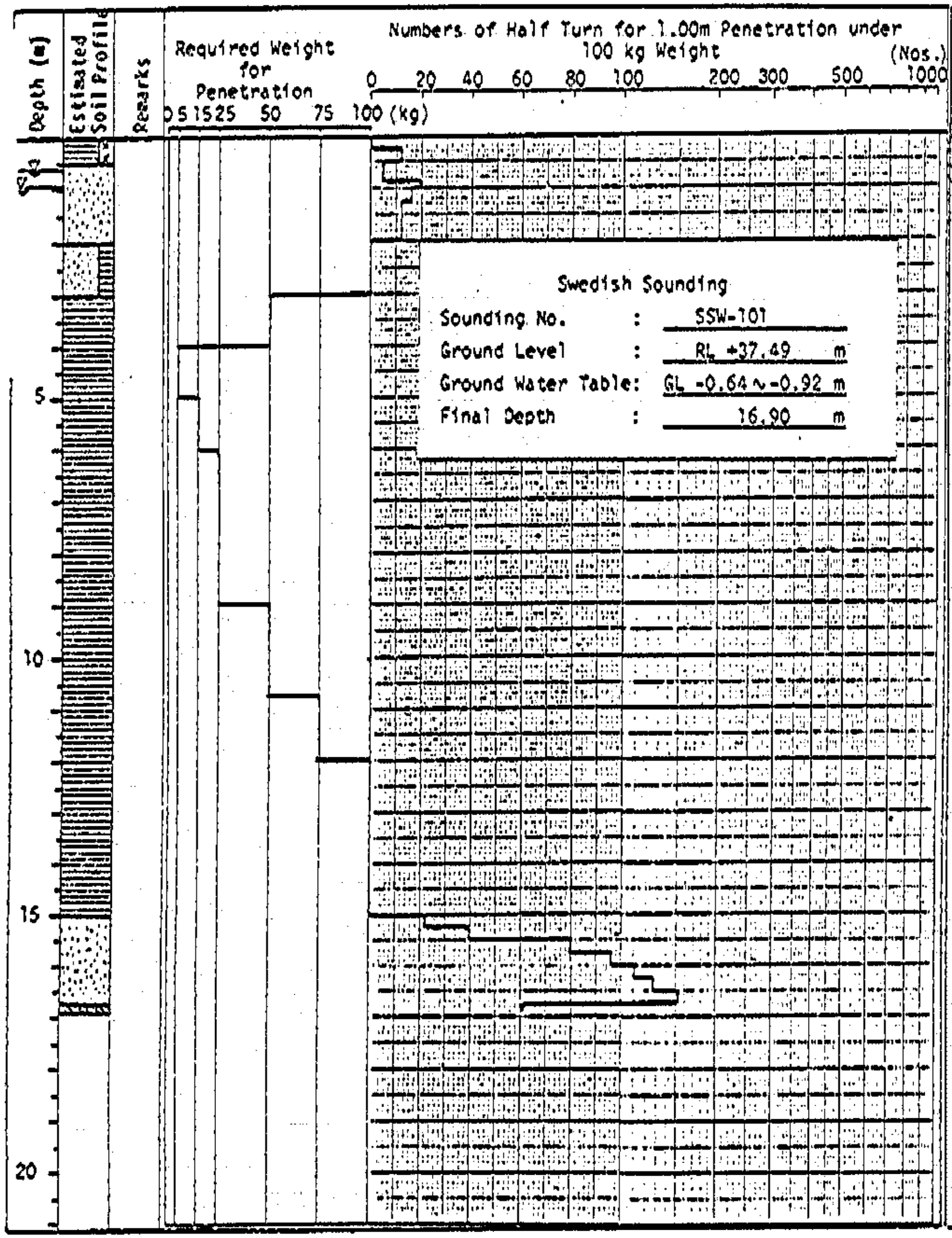
Point No.	Ground Level (RL+m)	Depth of Water (m)	Penetration Depth under 100 kg Weight (m)	Penetration by the Last 10 Nos. of Half Turn (m)	Sounding Depth (m)	Materials at The Final Depth
B5	36.469	0.02	5.34	0.08	5.52	Sand
B6	36.387	0.07	5.45	0.46	5.91	Sand
B7	36.317	0.15	9.78	0.08	9.86	Sand
B8	36.347	0.13	8.07	0.32	8.39	Sand
B9	36.299	0.15	8.44	0.31	8.75	Sand
C5	36.430	0.30	5.43	0.28	5.71	Sand
C6	36.338	0.90	11.11	0.12	11.63	
C7	36.338	0.10	12.69	0.32	13.01	Sand
C8	36.317	0.19	12.55	0.13	12.68	Sand
C9	36.366	0.12	8.26	0.05	8.31	
C10	36.347	0.08	7.31	0.02	7.51	Limestone?
D5	36.427	0.08	15.40	0.04	15.44	
D6	36.350	0.13	11.49	0.46	11.95	Sand
D7	36.332	0.19	14.36	0.07	14.43	
D8	36.317	0.15	15.33	0.09	15.42	
D8.5	-	0.17	7.44	0.03	7.47	
D9	36.369	0.07	7.87	0.01	7.88	Limestone?
D10	36.427	0.11	6.88	0.01	6.89	Limestone?
E6	36.378	0.50	15.20	0.19	15.39	
F10	36.457	0.10	10.70	0.01	10.71	Limestone?
K10	36.536	0.10	9.00	0.09	9.09	
K8	36.399	0.10	8.35	0.14	8.49	
K6	36.436	0	8.22	0.20	8.42	
J7	36.427	0.10	9.44	0.08	9.52	
J9	36.384	0.15	11.12	0.17	11.29	
J11	-	0.05	8.72	0.03	8.75	
H10	36.405	0.15	14.09	0.04	14.13	
H8	36.338	0.15	15.34	0.09	15.43	
H6	36.418	0.05	12.09	0.07	12.16	
F7	36.366	0.10	15.44	0.03	15.47	
F9	36.357	0.15	15.49	0.22	15.71	
J5	36.448	0.05	10.32	0.09	10.41	
J10	36.443	0.10	12.73	0.06	12.79	
H12	-	0.10	12.24	0.05	12.29	
F12	-	0.15	9.23	0.10	9.33	
J6	36.460	0.05	8.15	0.16	8.31	
K5	36.521	0.10	7.80	-	7.80	
J4	36.454	0.10	8.89	-	8.89	
I4	36.485	0.10	7.48	-	7.48	
H4	36.457	0.10	8.78	-	8.78	
G4	36.418	0.10	8.61	-	8.61	
F4	36.408	0.10	7.66	-	7.66	
E4	36.393	0.10	9.23	-	9.23	
E5	36.399	0.10	11.97	-	11.97	
F5	36.369	0.10	12.34	-	12.34	
G5	36.396	0.10	11.27	-	11.27	
H5	36.408	0.10	11.38	-	11.38	
I5	36.433	0.10	9.05	-	9.05	
J8	36.360	0.10	11.02	-	11.02	
I11	-	0.10	12.65	-	12.65	
I10	36.424	0.10	11.78	-	11.78	
I9	36.369	0.10	12.23	-	12.23	
I7	36.384	0.10	10.61	-	10.61	
H7	36.332	0.10	10.45	-	10.45	
H9	36.366	0.10	14.58	-	14.58	
H11	-	0.10	10.78	-	10.78	
G10	36.375	0.10	13.67	-	13.67	
G9	36.341	0.10	12.61	-	12.61	
G8	36.305	0.10	14.48	-	14.48	
G7	36.338	0.10	11.20	-	11.20	
G6	36.399	0.10	11.77	-	11.77	
E12	-	0.10	7.60	-	7.60	
E10	36.418	0.10	9.00	-	9.00	
E8	36.353	0.10	14.25	-	14.25	
E7	36.369	0.10	13.25	-	13.25	
E9	36.363	0.10	12.72	-	12.72	
K11	-	0.10	10.80	-	10.80	
K9	36.347	0.10	10.82	-	10.82	
K7	36.430	0.10	8.93	-	8.93	
F6	36.262	0.10	11.80	-	11.80	
F8	36.341	0.10	14.40	-	14.40	
Total	71 locs.	-	-	-	770.31 m	

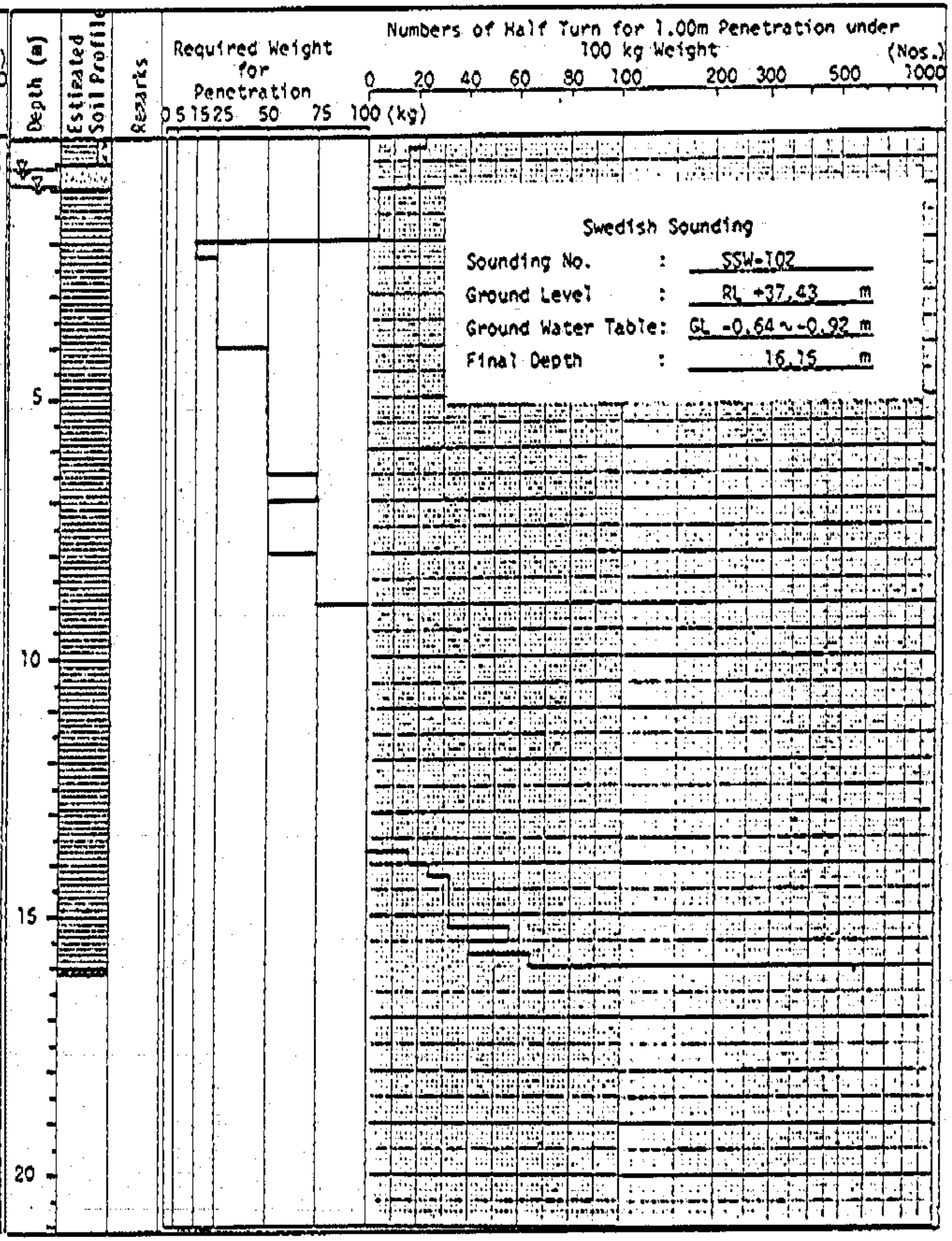
Summary of Swedish Sounding Carried out
at the Test Embankment Area

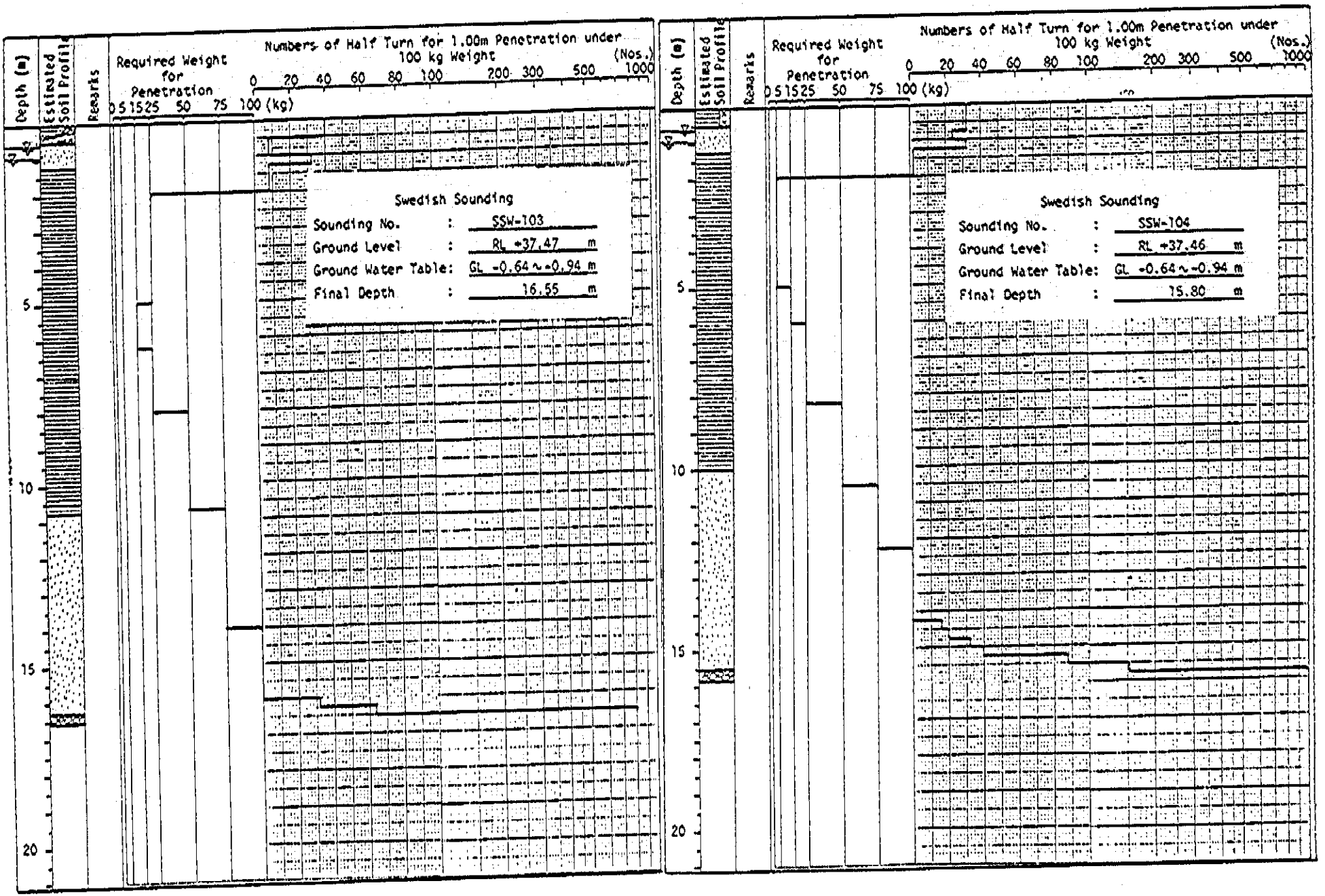
- Sentul-

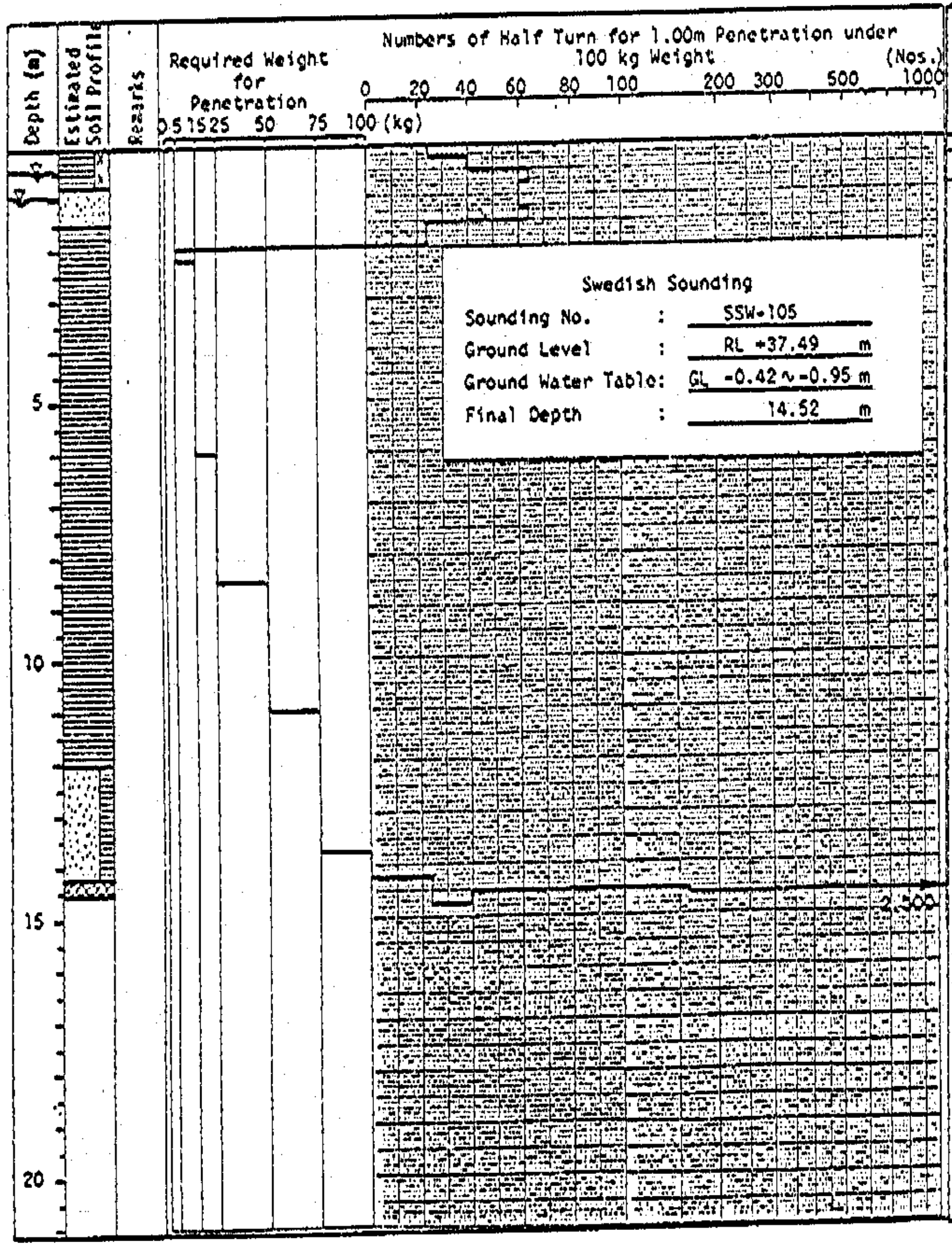
Swedish Sounding No.	Ground Level (RL + m)	Water Table* (GL ± m)	Water Table (16/1/81) (GL ± m)	Sounding Depth (m)	Remarks
SSW-101	37.49	-0.92	-0.64	16.90	
SSW-102	37.43	-0.92	-0.64	16.15	
SSW-103	37.47	-0.94	-0.64	16.55	
SSW-104	37.46	-0.94	-0.64	15.80	
SSW-105	37.49	-0.95	-0.42	14.52	
SSW-106	37.31	-0.90	-0.32	15.80	
SSW-107	37.41	-0.90	-0.27	14.40	
SSW-108	37.28	-0.40	-0.32	17.35	
SSW-109	37.23	-0.40	-0.36	15.60	
SSW-110	37.23	+0.10	-0.30	18.85	Sand Drain Area
SSW-111	37.39	+0.06	-0.42	17.70	
SSW-112	37.32	+0.04	-0.25	15.50	
SSW-113	37.42	-0.96	-0.56	16.70	
SSW-114	37.67	-0.96	-0.49	16.15	
SSW-115	37.43	-0.86	-0.60	16.90	
SSW-116	37.43	-0.44	-0.35	15.75	
SSW-117	37.41	-0.40	-0.45	15.70	Sand Drain Area
SSW-118	37.39	-0.40	-0.45	18.40	
SSW-119	37.50	-0.40	-0.32	16.40	
SSW-120	37.44	-0.86	-0.40	14.90	
SSW-121	37.43	-0.86	-0.32	15.20	
SSW-122	37.39	-0.86	-0.52	13.70	
SSW-123	37.23	-0.36	-0.36	21.50	
SSW-124	37.26	-0.44	-0.44	16.50	
SSW-125	37.26	-0.60	-0.60	16.55	
Total	25 locations	-	-	409.47	

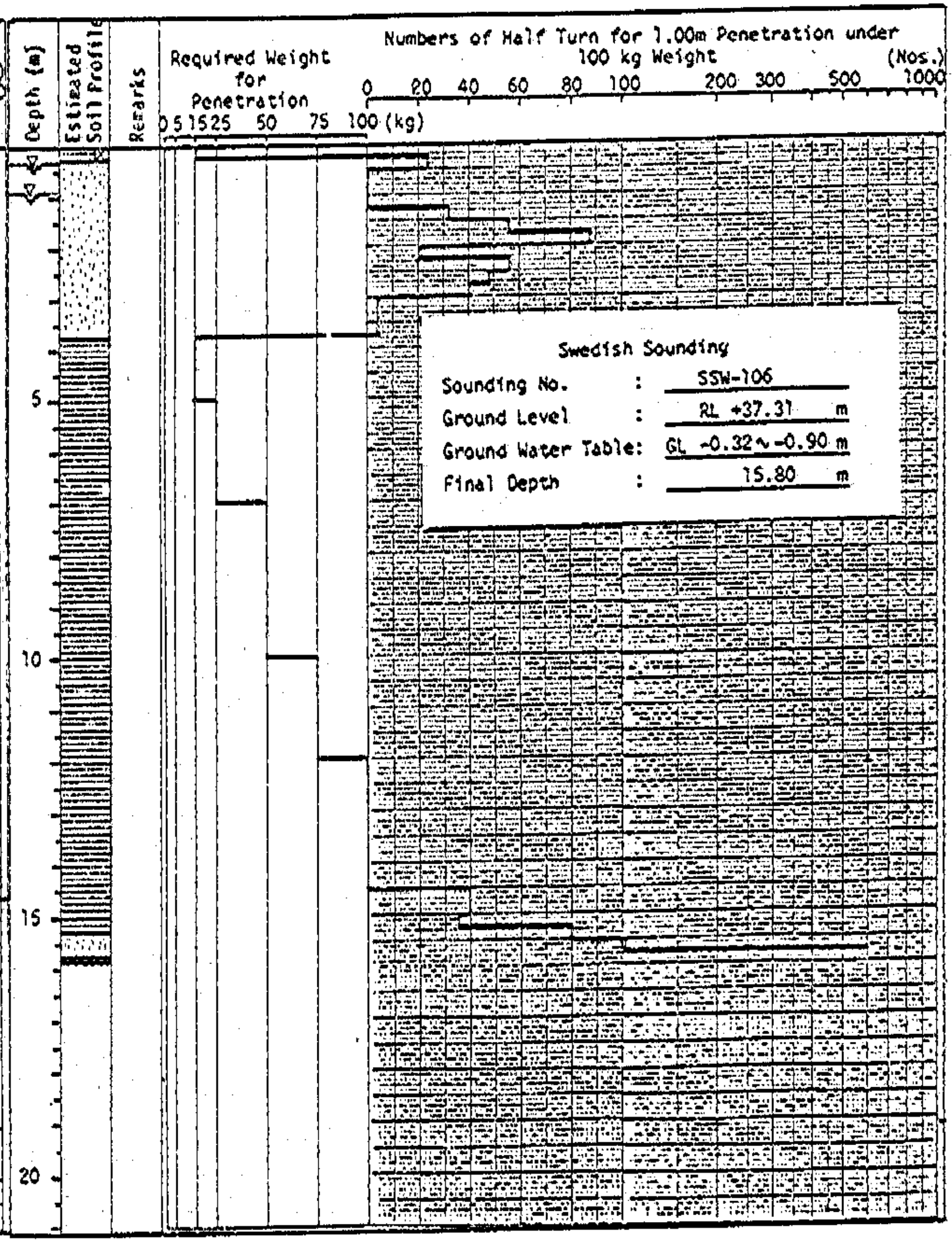
* At the time at which Swedish Sounding was performed.

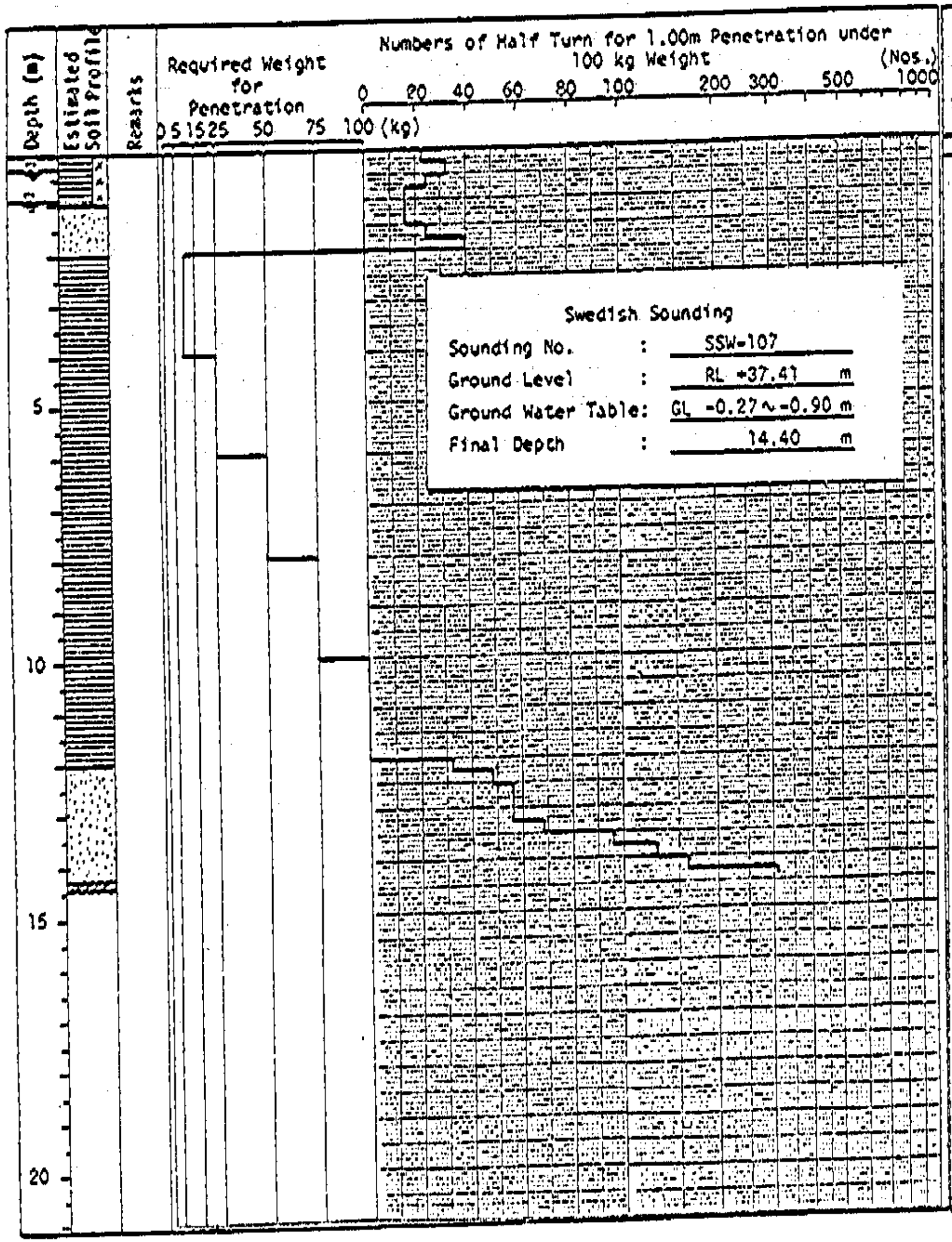

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
(Nos.)
0 20 40 60 80 100 200 300 500 1000
5
10
15
20
Swedish Sounding
Sounding No. : SSW-101
Ground Level : RL +37.49 m
Ground Water Table: GL -0.64 ~ -0.92 m
Final Depth : 16.90 m

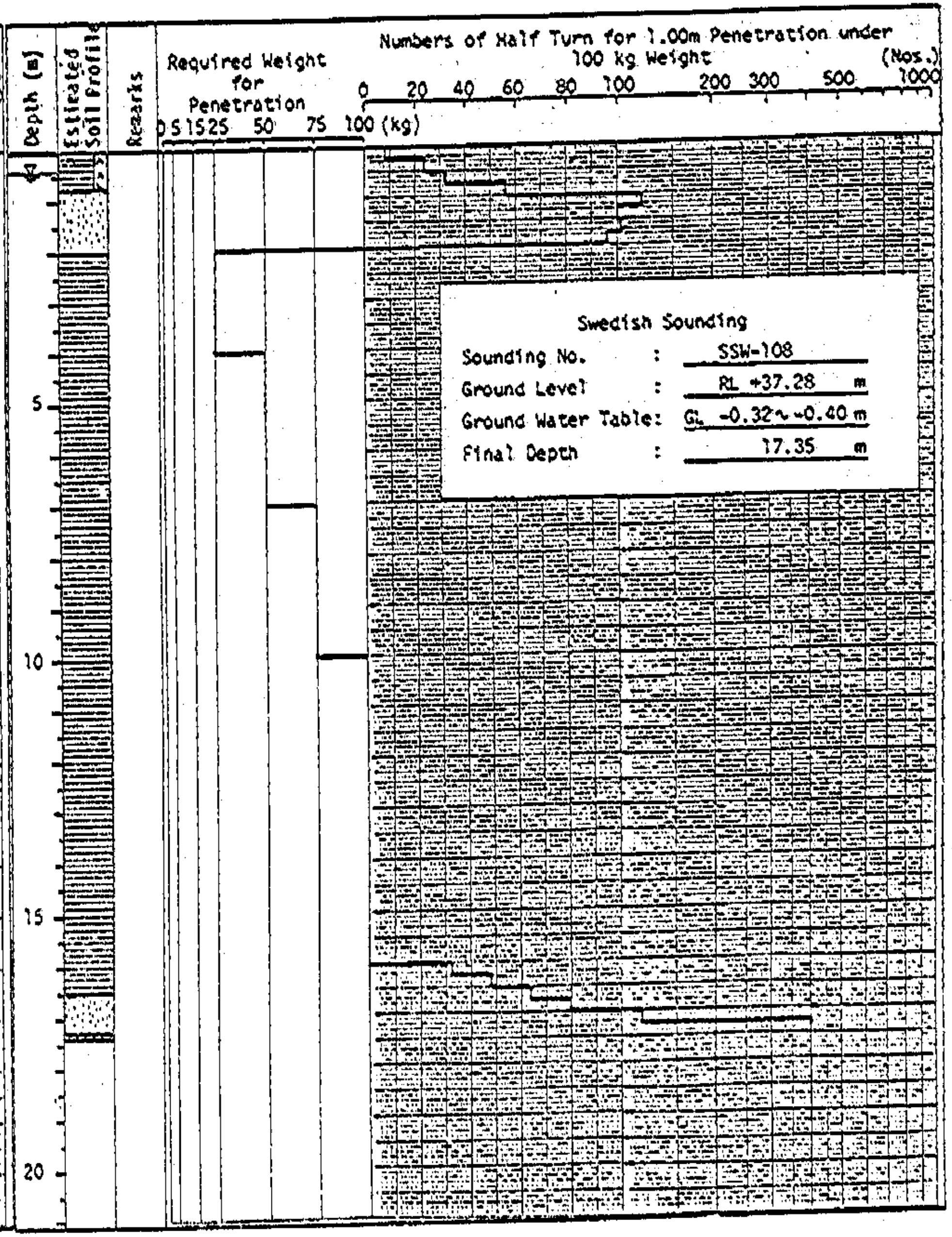

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
(Nos.)
0 20 40 60 80 100 200 300 500 1000
5
10
15
20
Swedish Sounding
Sounding No. : SSW-102
Ground Level : RL +37.43 m
Ground Water Table: GL -0.64 ~ -0.92 m
Final Depth : 16.15 m

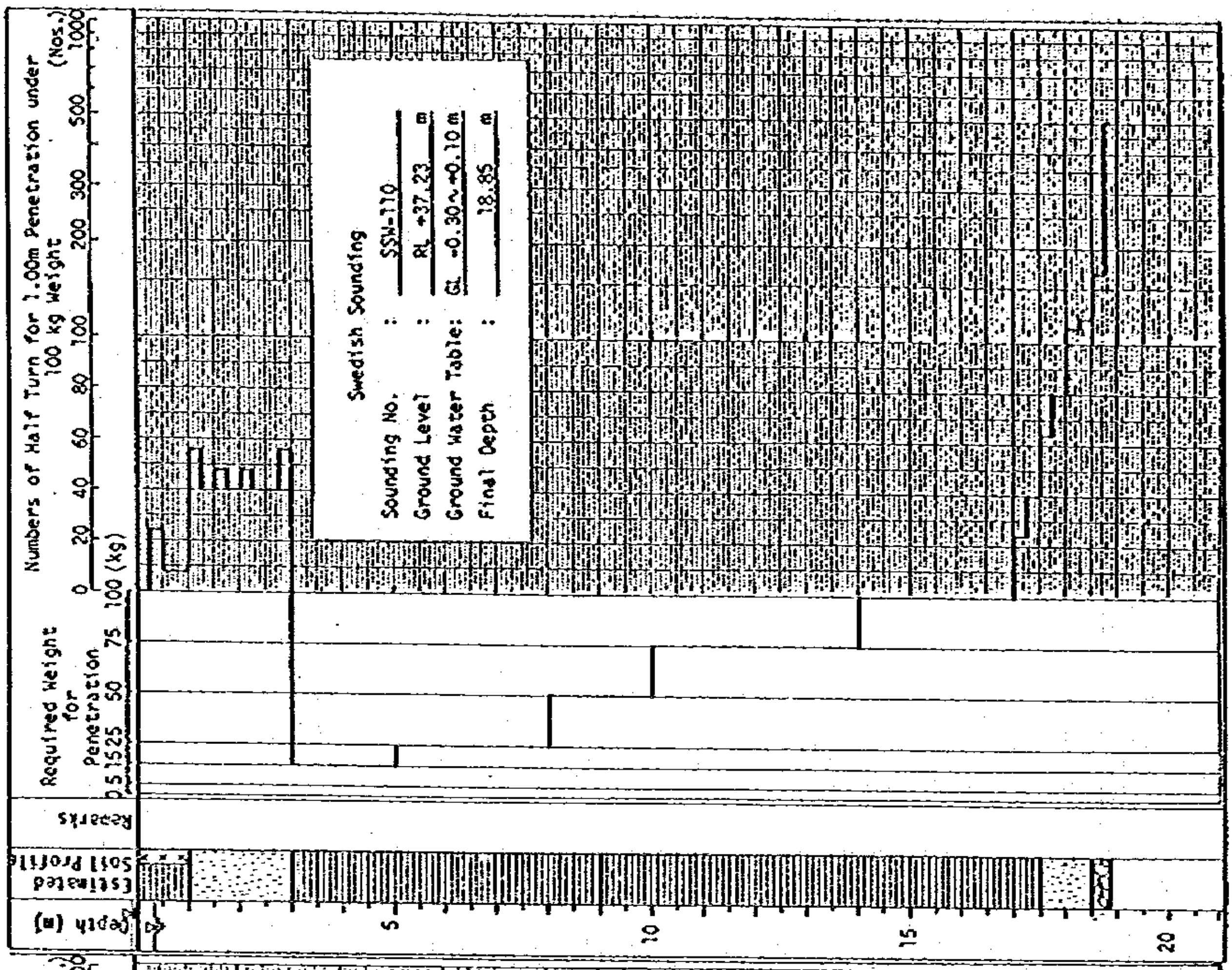

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
Swedish Sounding
Sounding No. : SSW-103
Ground Level : RL +37.47 m
Ground Water Table: GL -0.64 ~ -0.94 m
Final Depth : 16.55 m
Swedish Sounding
Sounding No. : SSW-104
Ground Level : RL +37.46 m
Ground Water Table: GL -0.64 ~ -0.94 m
Final Depth : 15.80 m

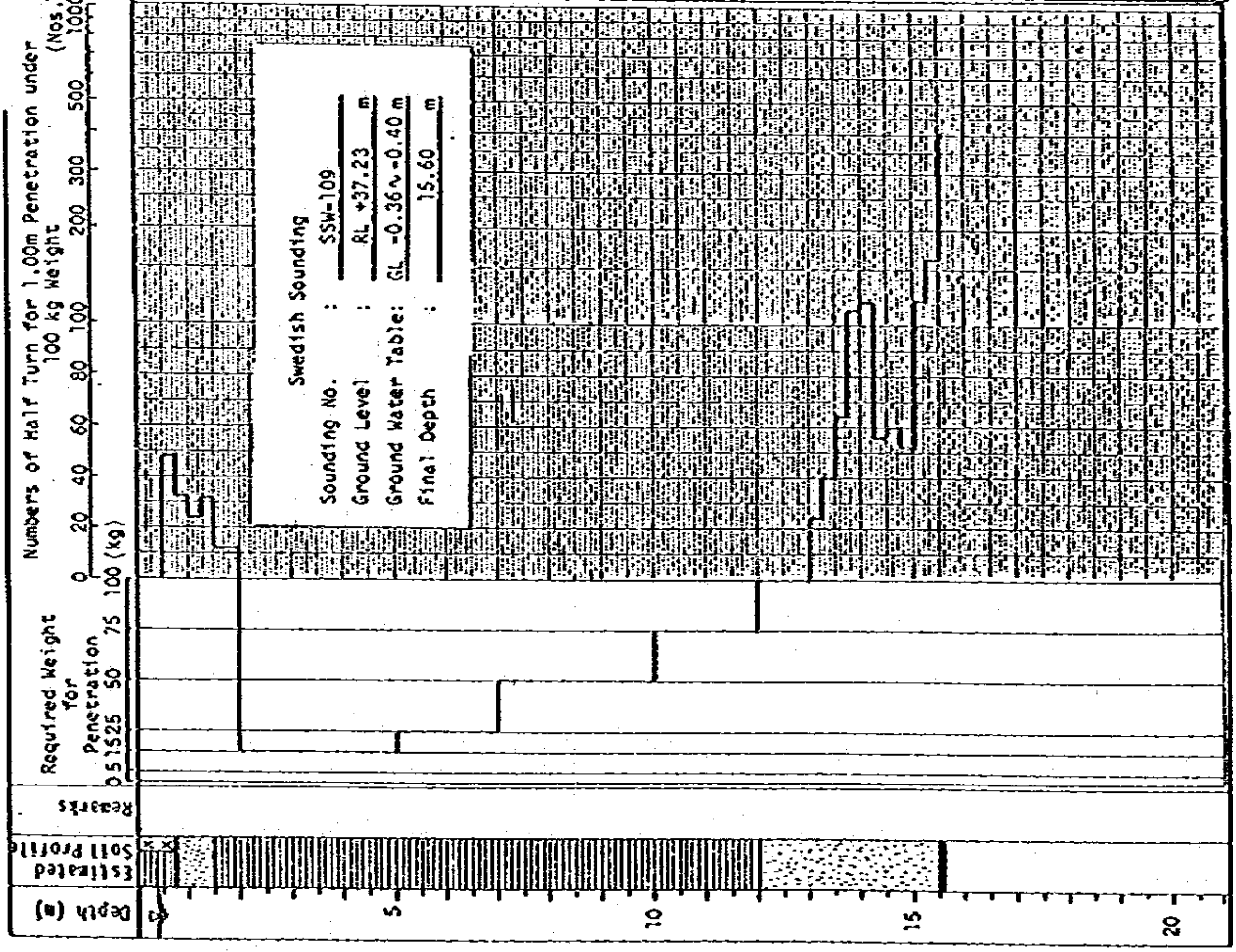

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0.5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight (Nos.)
0 20 40 60 80 100 200 300 500 1000
Swedish Sounding
Sounding No. : SSW-105
Ground Level : RL +37.49 m
Ground Water Table: GL -0.42 ~ -0.95 m
Final Depth : 14.52 m
2,500
5
10
15
20

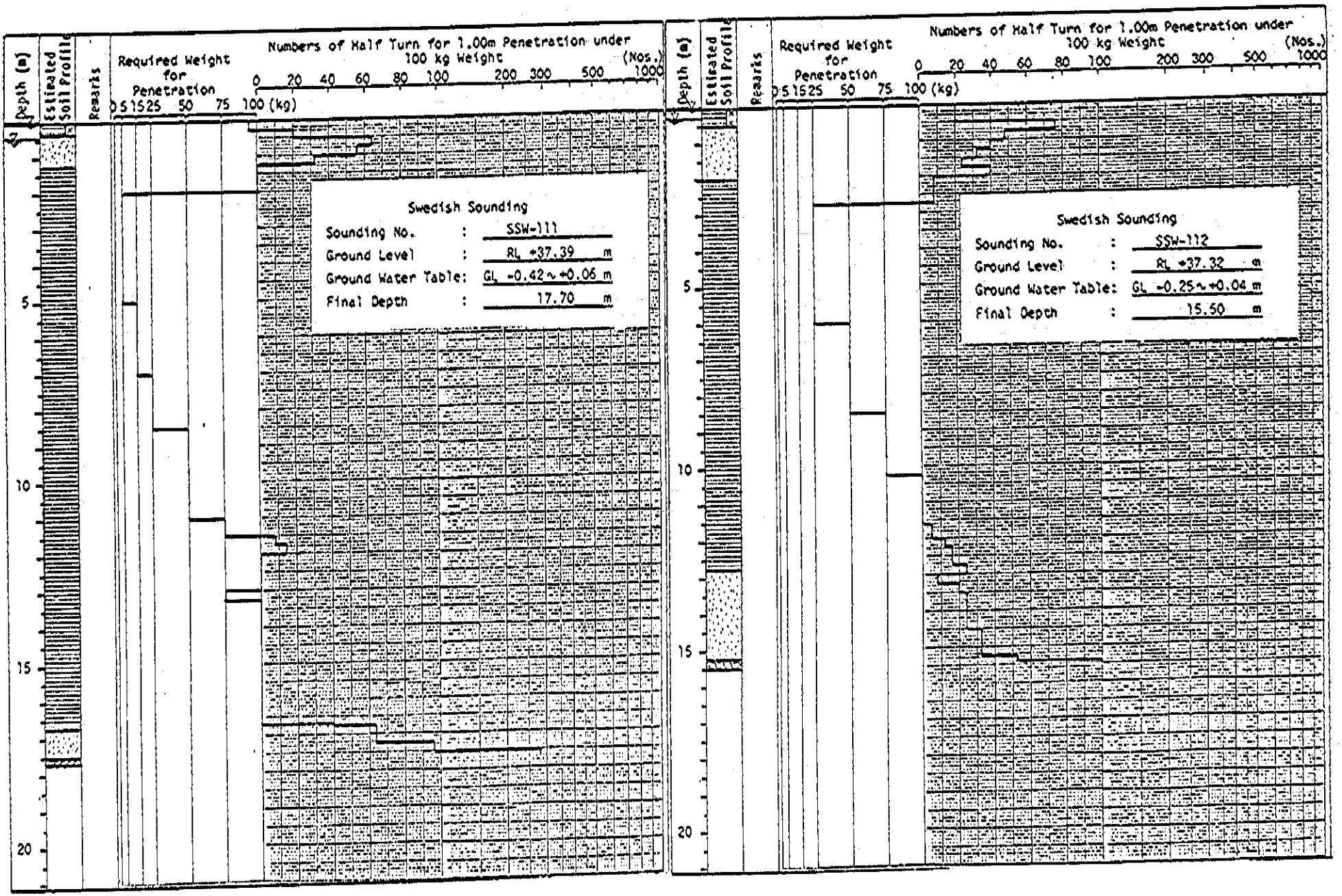

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0.5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight (Nos.)
0 20 40 60 80 100 200 300 500 1000
Swedish Sounding
Sounding No. : SSW-106
Ground Level : RL +37.31 m
Ground Water Table: GL -0.32 ~ -0.90 m
Final Depth : 15.80 m
5
10
15
20

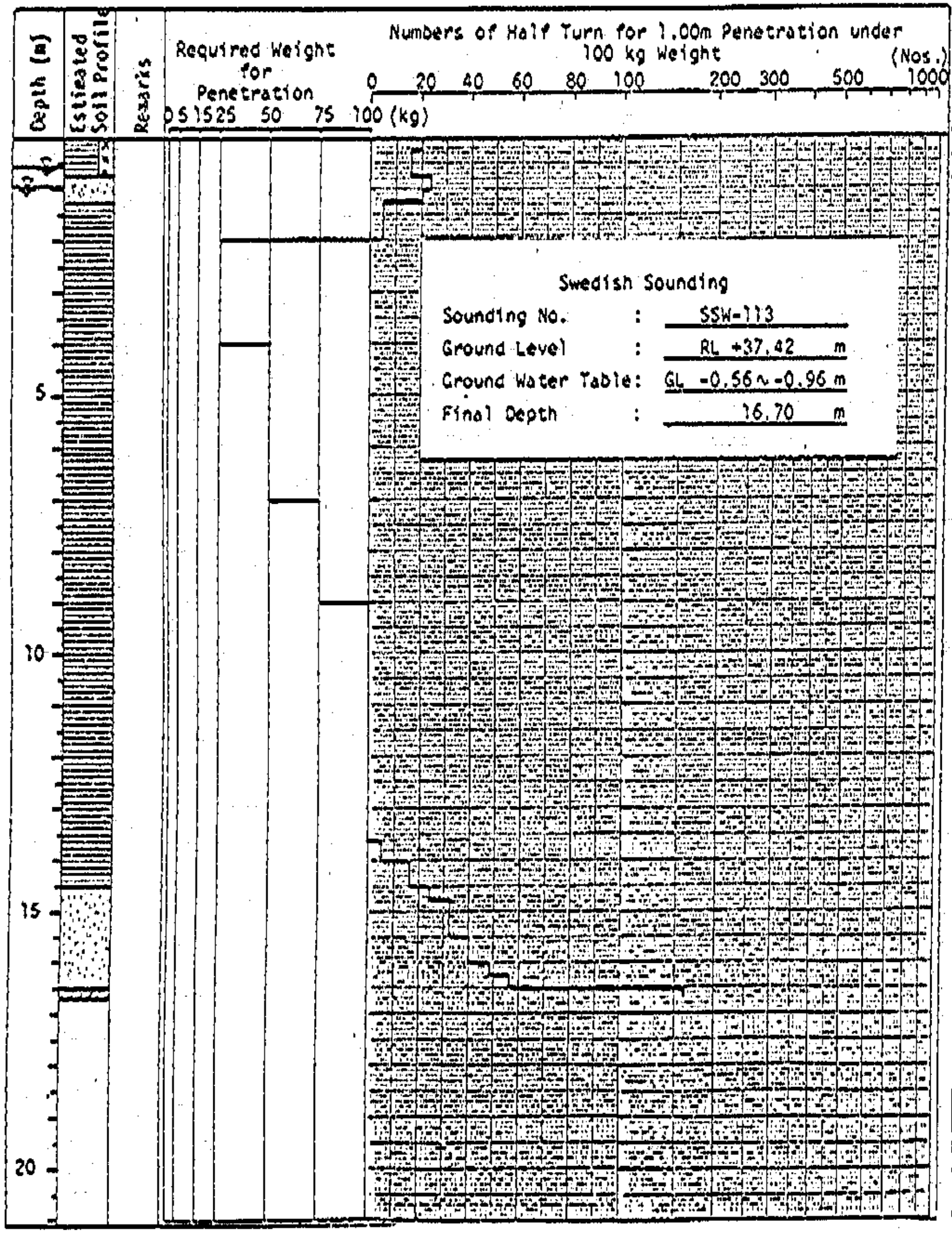

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
Swedish Sounding
Sounding No. : SSW-107
Ground Level : RL +37.41 m
Ground Water Table: GL -0.27～-0.90 m
Final Depth : 14.40 m
5
10
15
20


Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
Swedish Sounding
Sounding No. : SSW-108
Ground Level : RL +37.28 m
Ground Water Table: GL -0.32～-0.40 m
Final Depth : 17.35 m
5
10
15
20

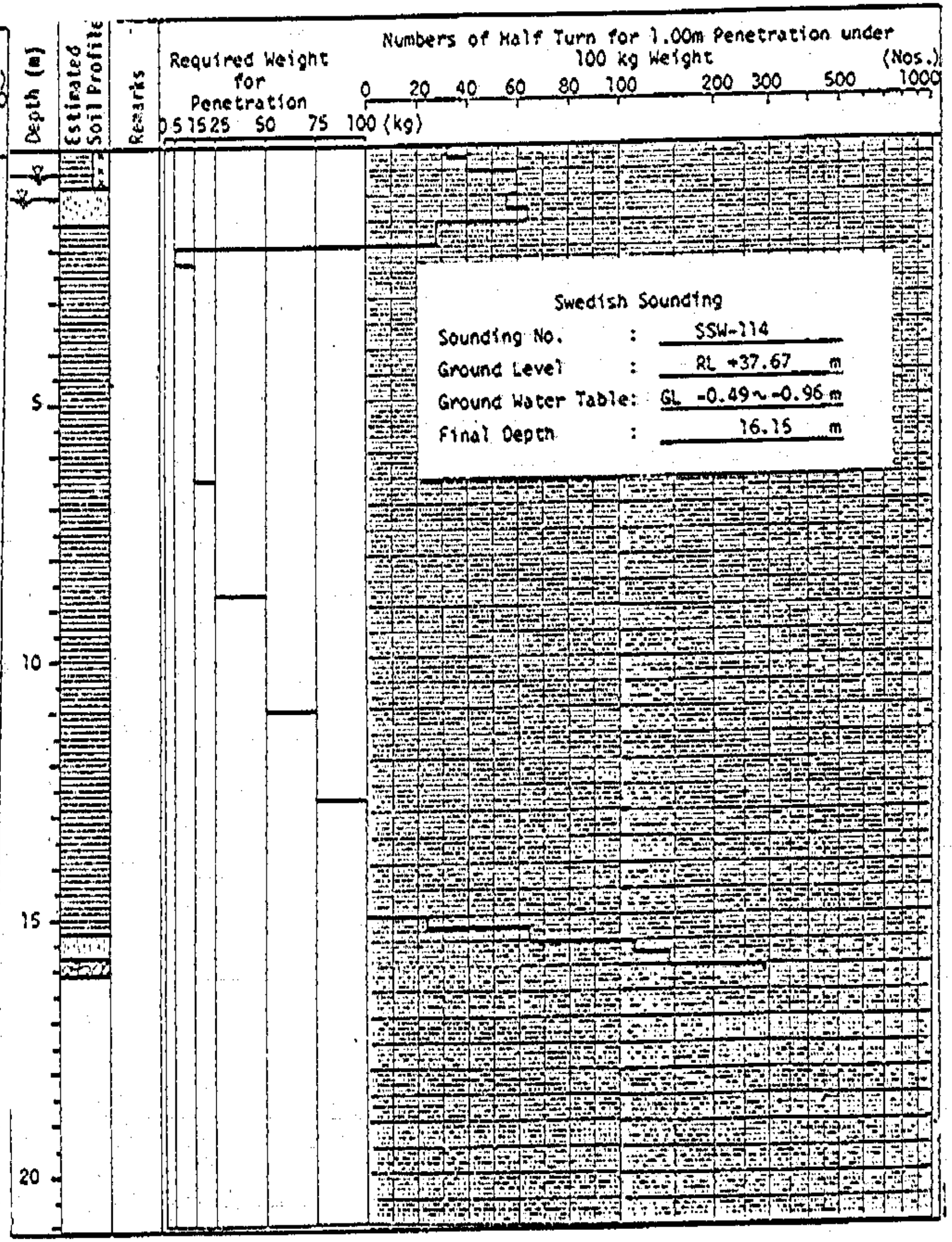

Swedish Sounding
Sounding No. : SSW-110
Ground Level : RL +37.23 m
Ground Water Table: GL -0.30~-0.10 m
Final Depth : 18.85 m
Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight (Nos.)
100 (kg)


Swedish Sounding
Sounding No. : SSW-109
Ground Level : RL +37.23 m
Ground Water Table: GL -0.36~-0.40 m
Final Depth : 15.60 m
Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight (Nos.)
100 (kg)

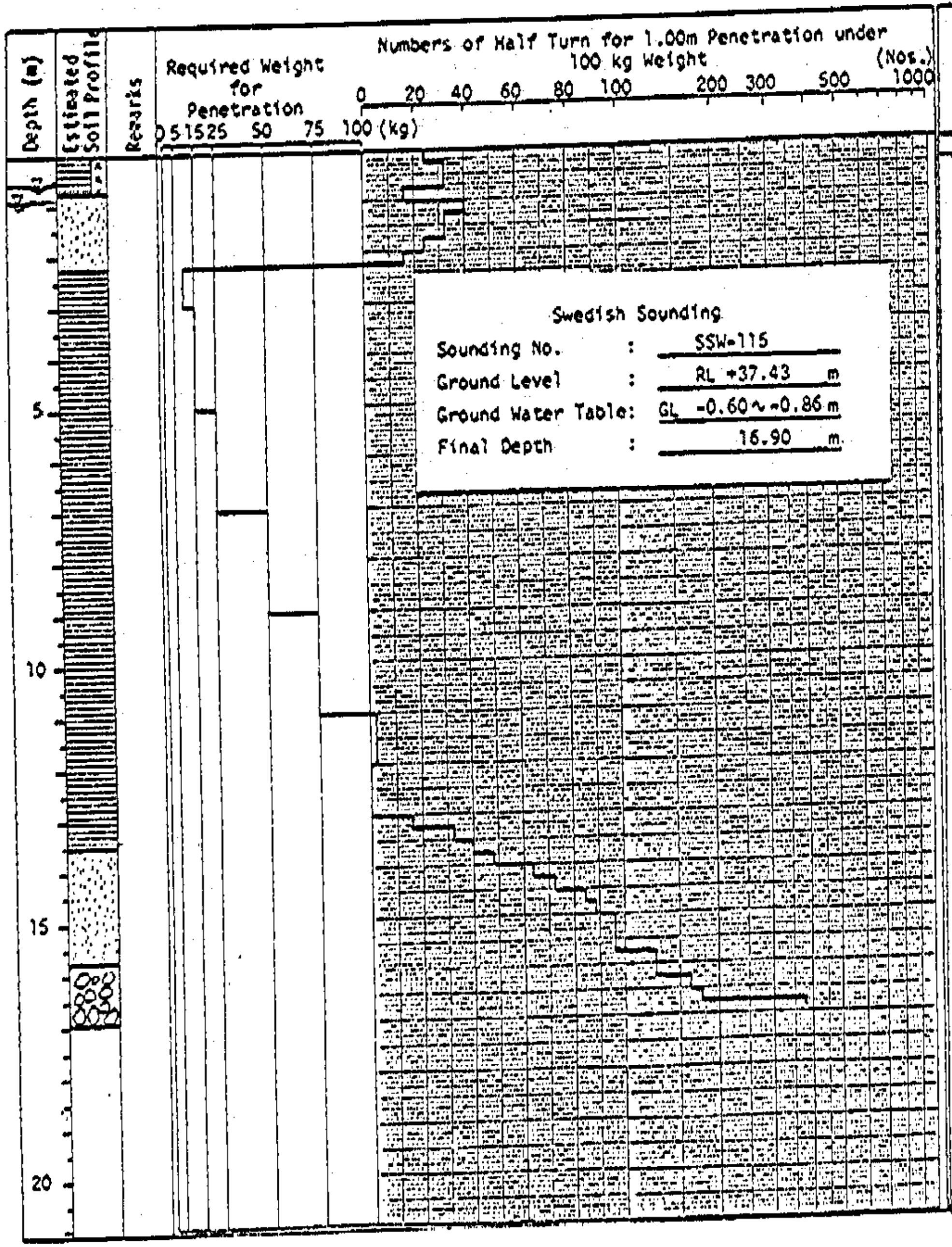

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
(Nos.)
0 20 40 60 80 100 200 300 500 1000
Swedish Sounding
Sounding No. : SSW-111
Ground Level : RL +37.39 m
Ground Water Table: GL -0.42 ~ +0.06 m
Final Depth : 17.70 m
Swedish Sounding
Sounding No. : SSW-112
Ground Level : RL +37.32 m
Ground Water Table: GL -0.25 ~ +0.04 m
Final Depth : 15.50 m

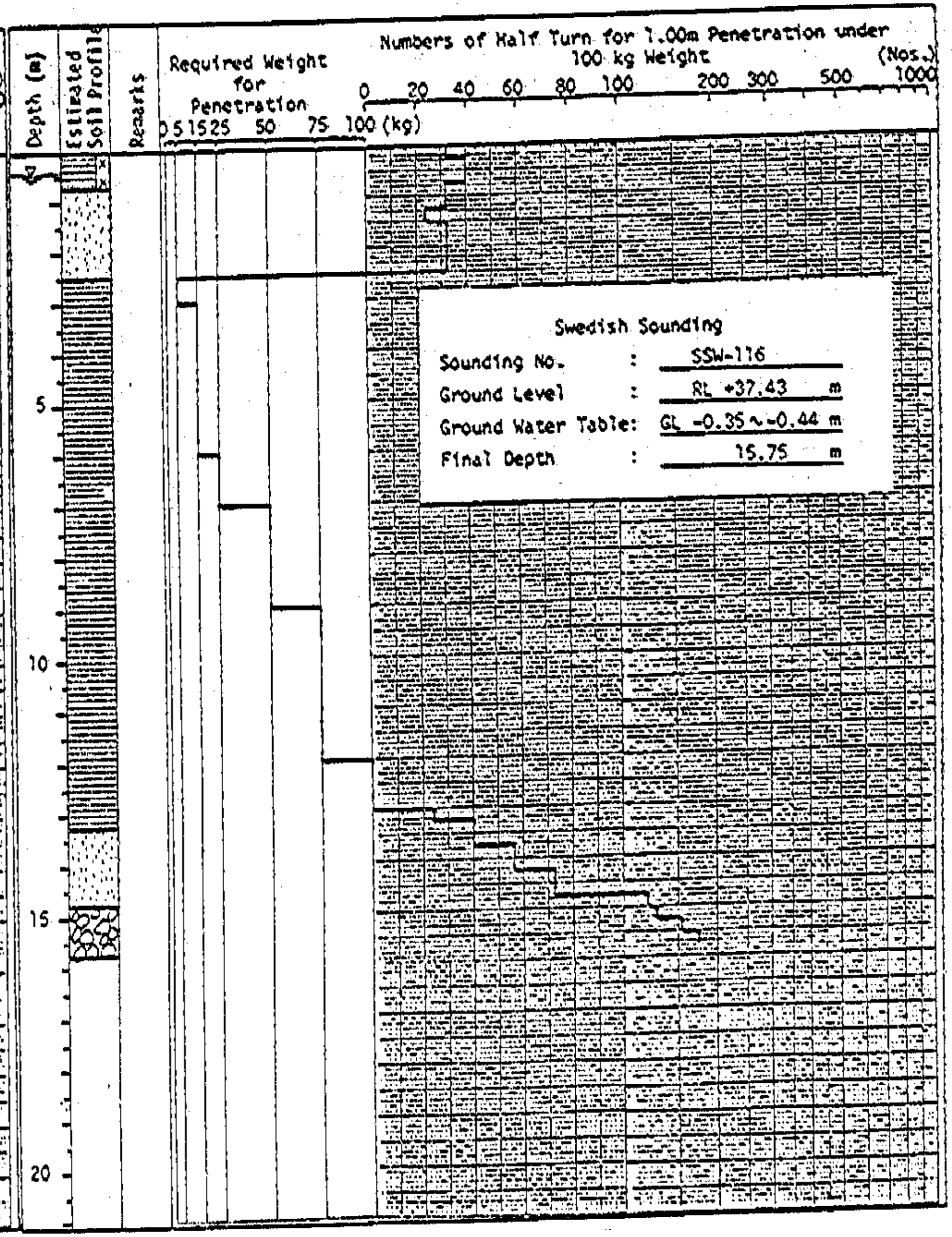


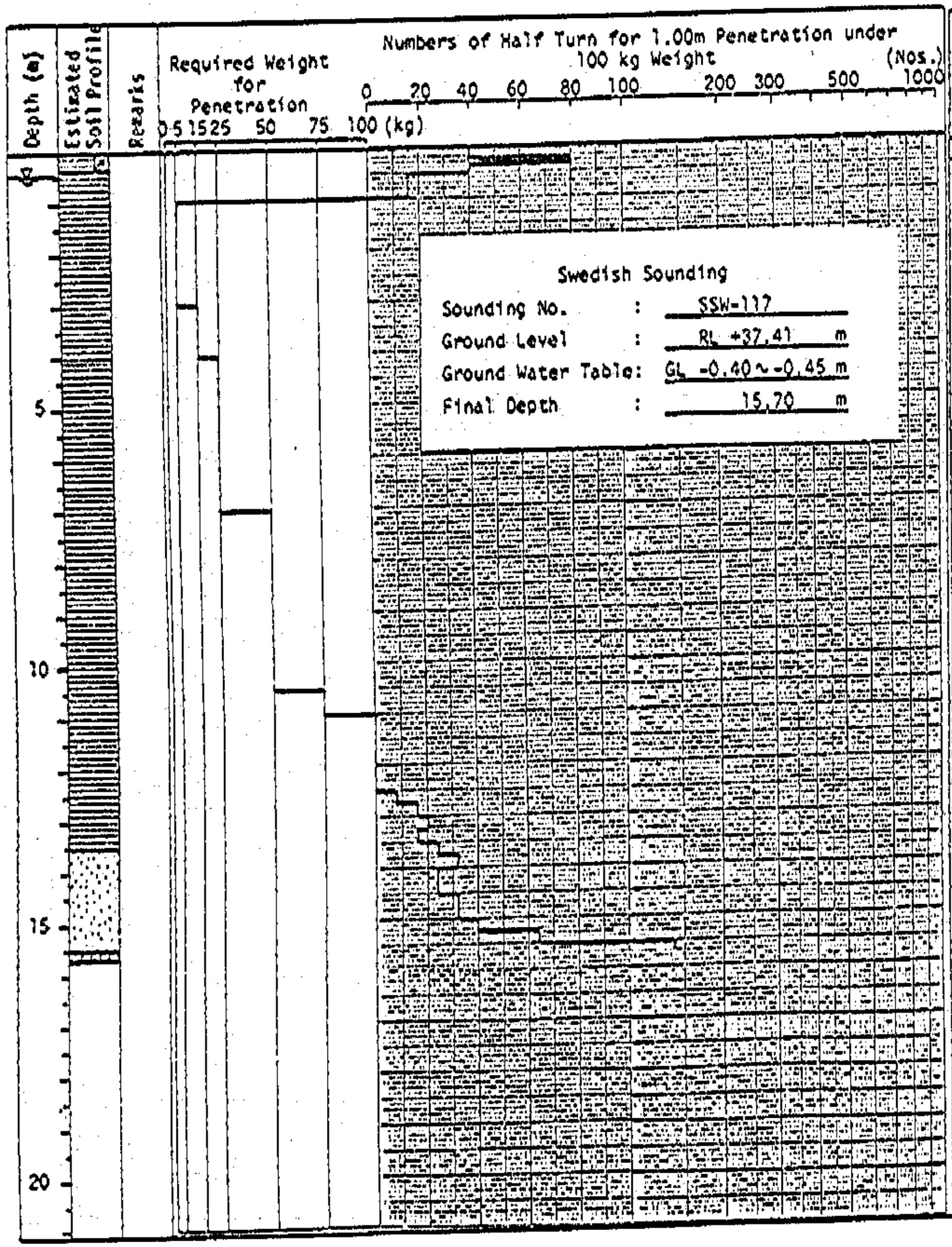
Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
Swedish Sounding
Sounding No. : SSW-113
Ground Level : RL +37.42 m
Ground Water Table: GL -0.56~-0.96 m
Final Depth : 16.70 m
5
10
15
20

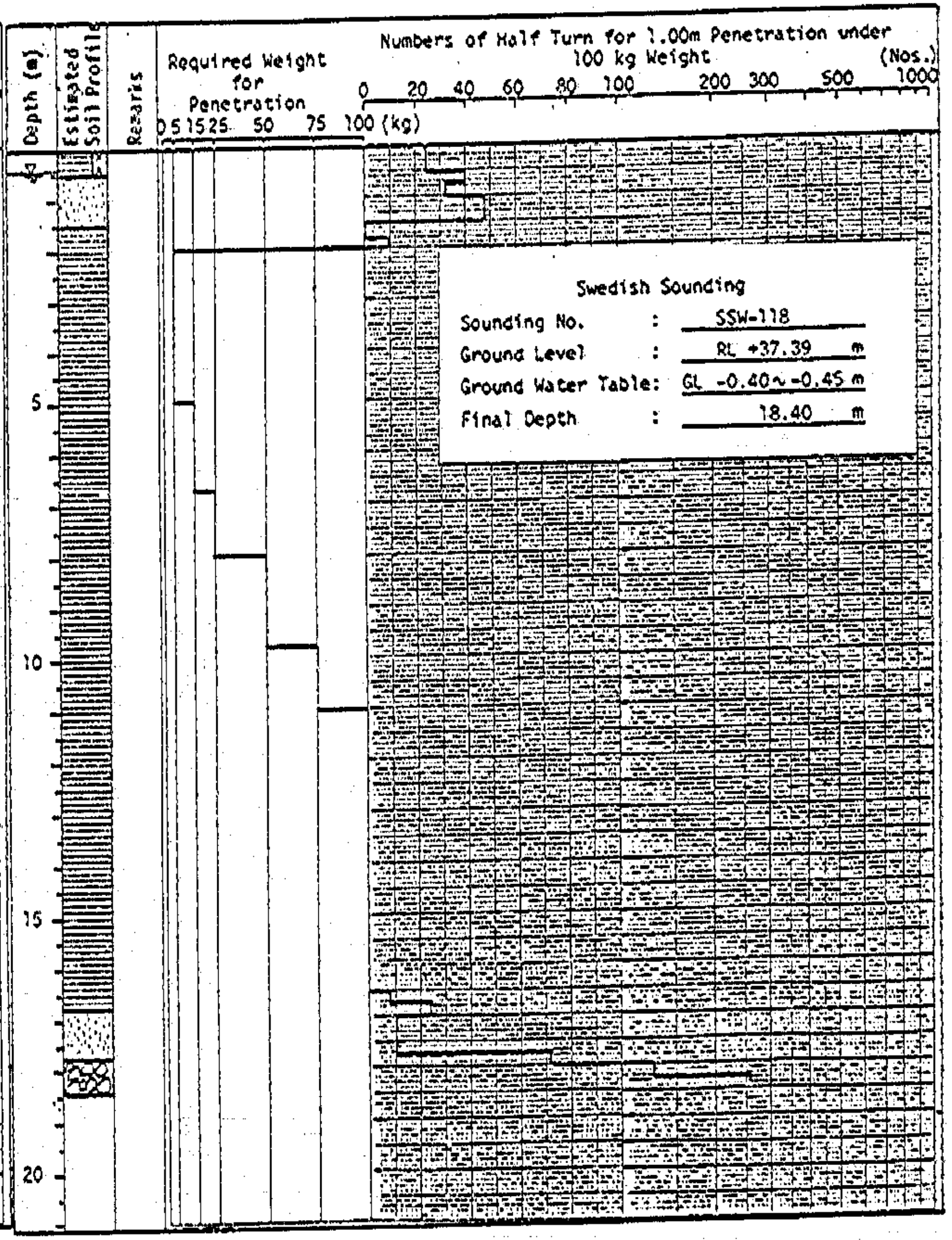


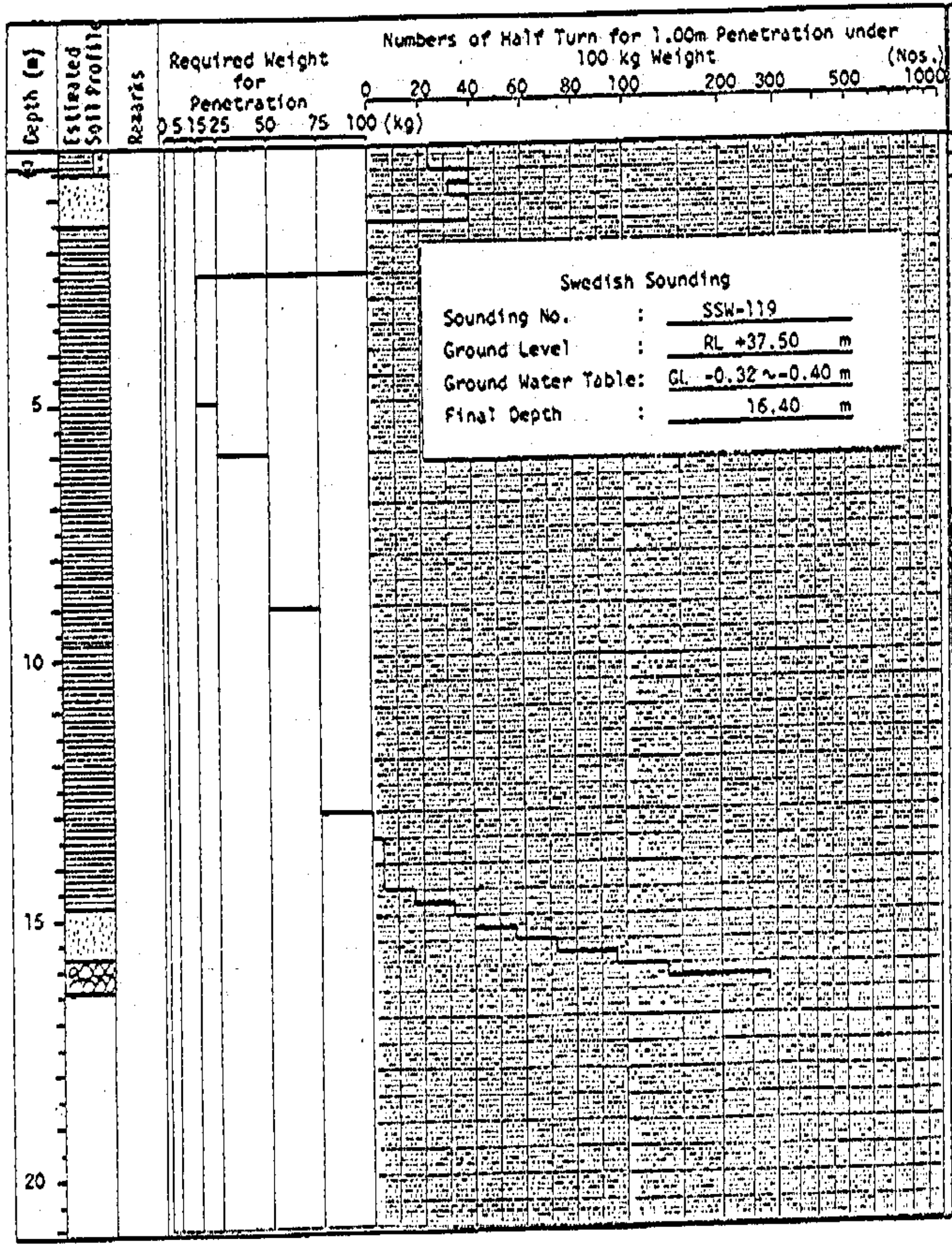
Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
Swedish Sounding
Sounding No. : SSW-114
Ground Level : RL +37.67 m
Ground Water Table: GL -0.49~-0.96 m
Final Depth : 16.15 m
5
10
15
20

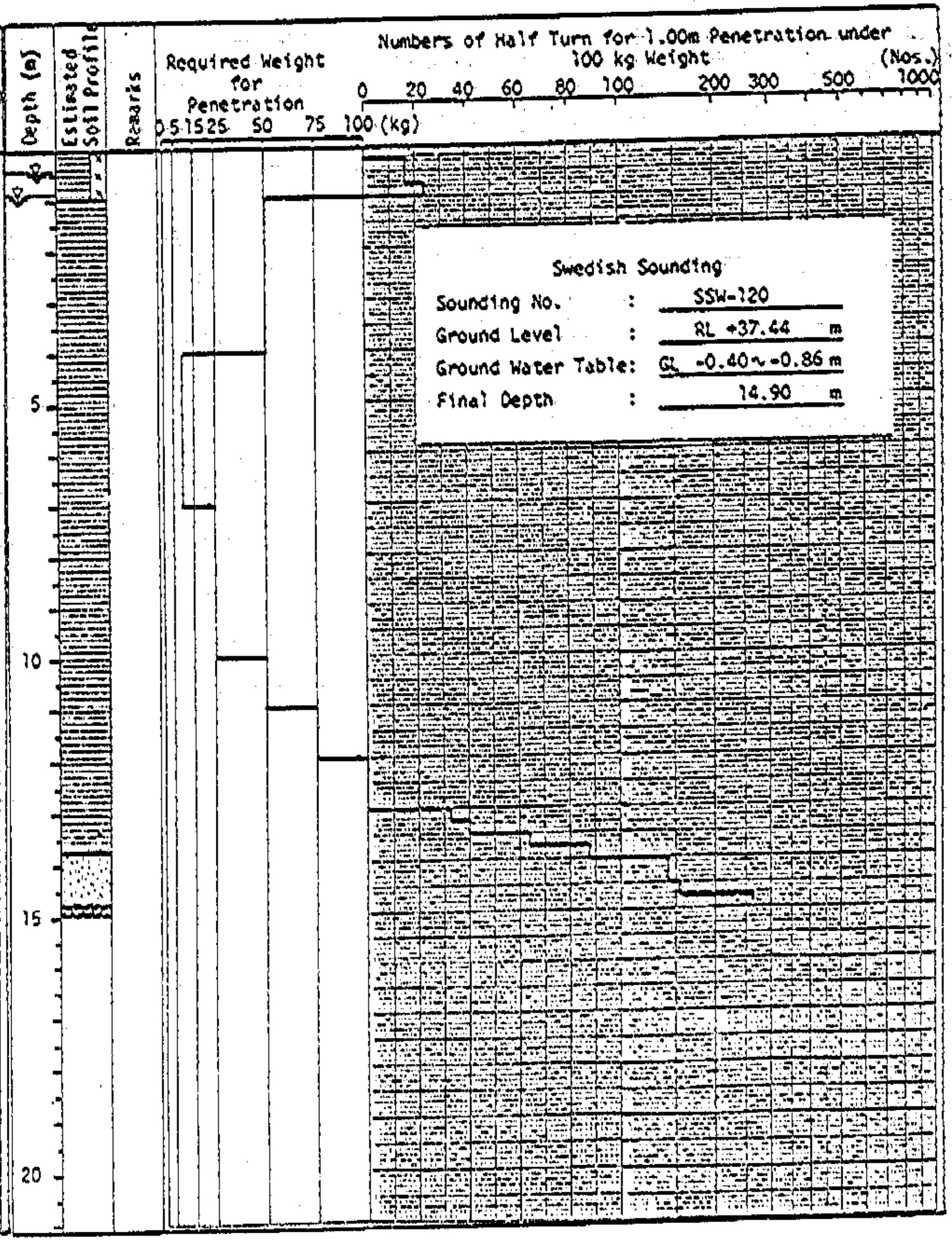

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
Swedish Sounding
Sounding No. : SSW-115
Ground Level : RL +37.43 m
Ground Water Table: GL -0.60 ~ -0.86 m
Final Depth : 16.90 m
5
10
15
20

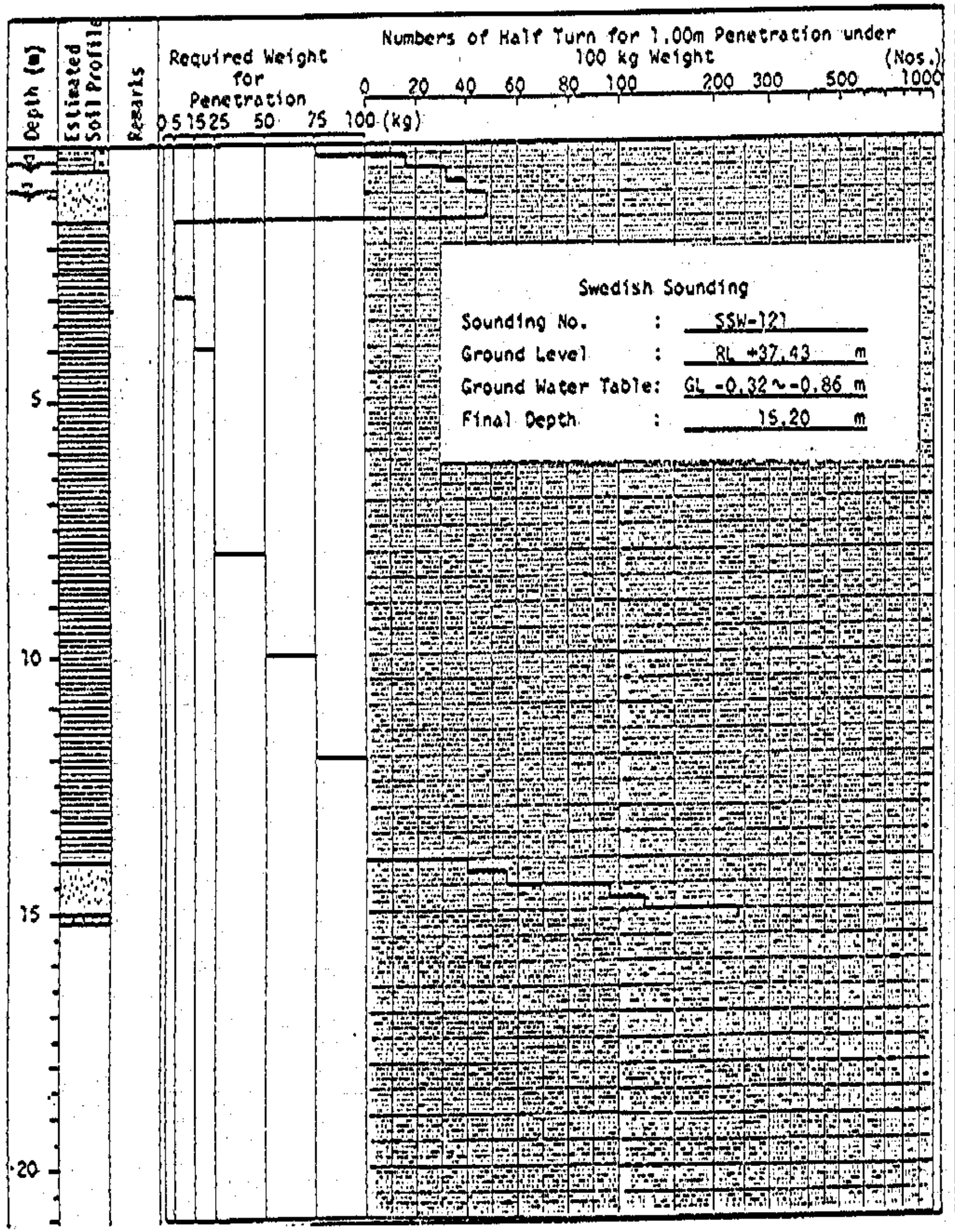

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
Swedish Sounding
Sounding No. : SSW-116
Ground Level : RL +37.43 m
Ground Water Table: GL -0.35 ~ -0.44 m
Final Depth : 15.75 m
5
10
15
20

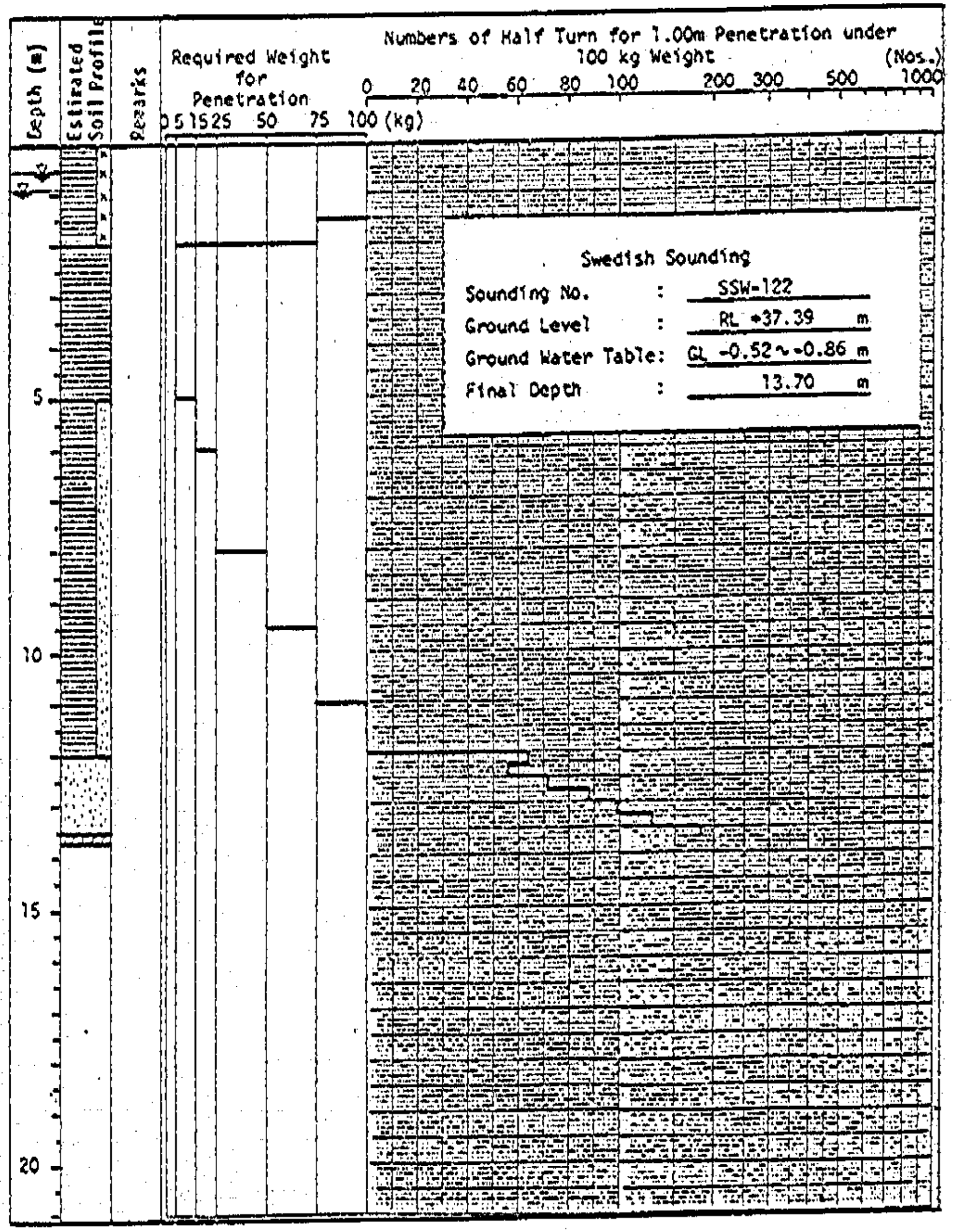

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
(Nos.)
0 20 40 60 80 100 200 300 500 1000
Swedish Sounding
Sounding No. : SSW-117
Ground Level : RL +37.41 m
Ground Water Table: GL -0.40~-0.45 m
Final Depth : 15.70 m
5
10
15
20

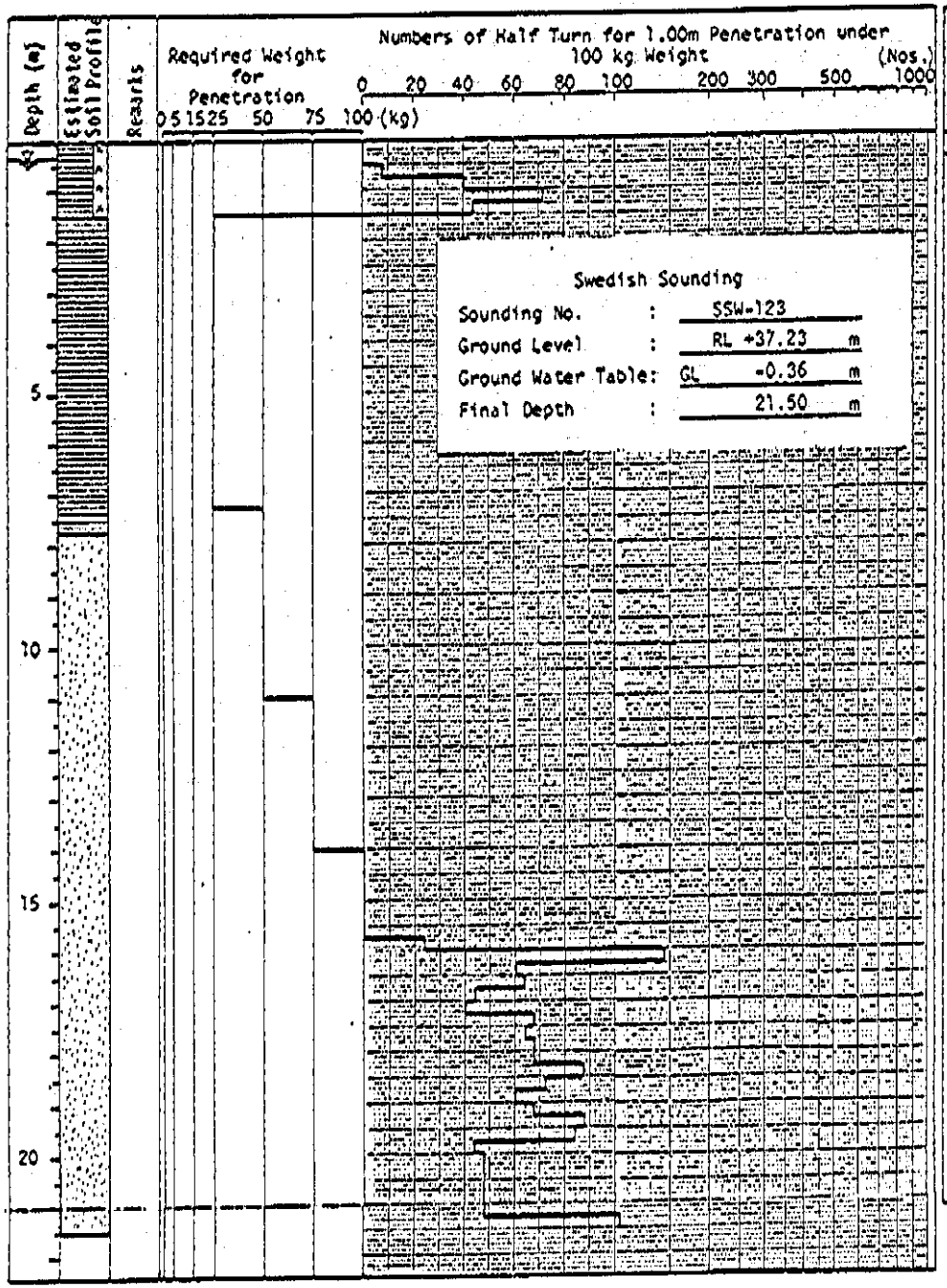

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
(Nos.)
0 20 40 60 80 100 200 300 500 1000
Swedish Sounding
Sounding No. : SSW-118
Ground Level : RL +37.39 m
Ground Water Table: GL -0.40~-0.45 m
Final Depth : 18.40 m
5
10
15
20

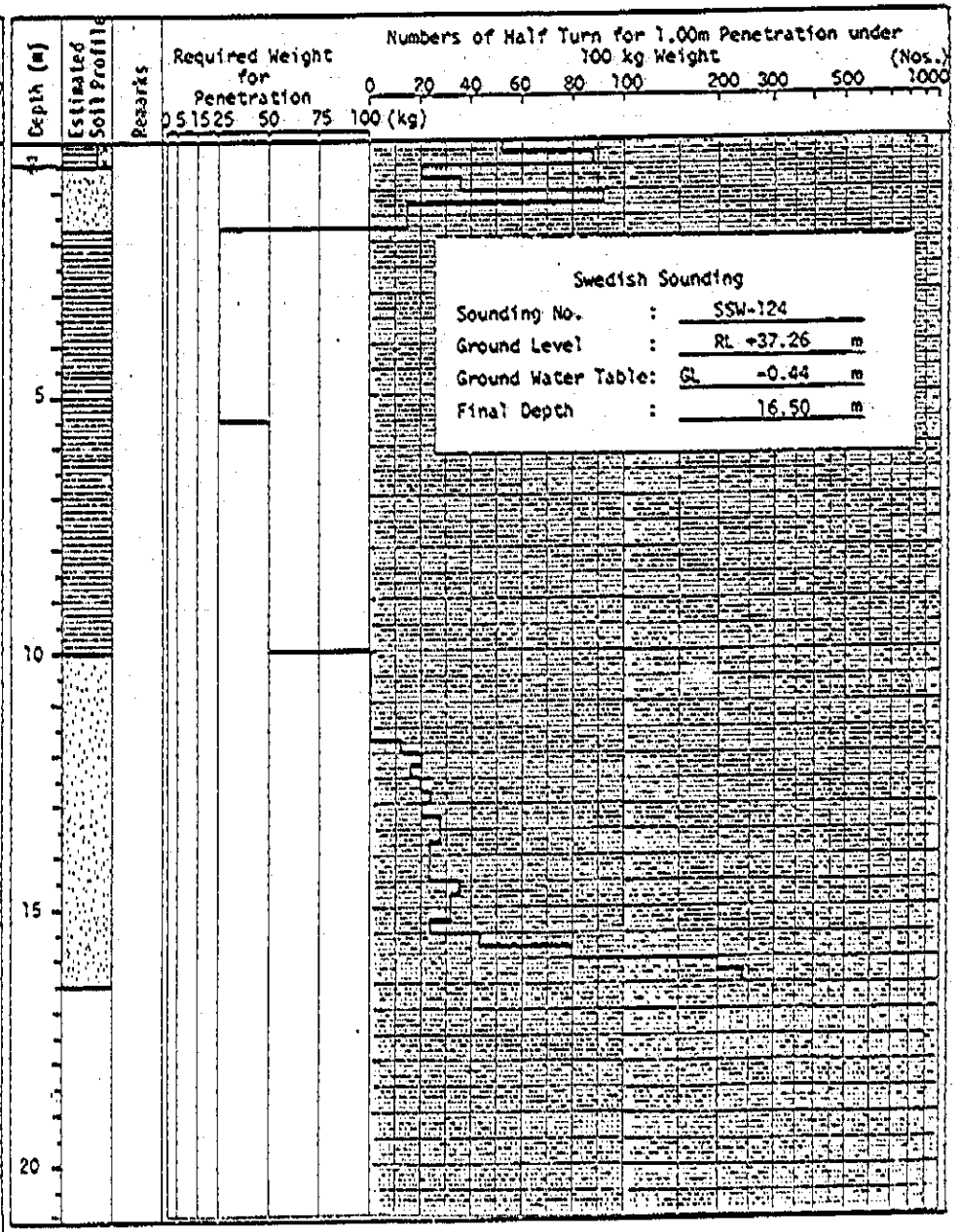

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0.5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
Swedish Sounding
Sounding No. : SSW-119
Ground Level : RL +37.50 m
Ground Water Table: GL -0.32 ~ -0.40 m
Final Depth : 16.40 m
5
10
15
20

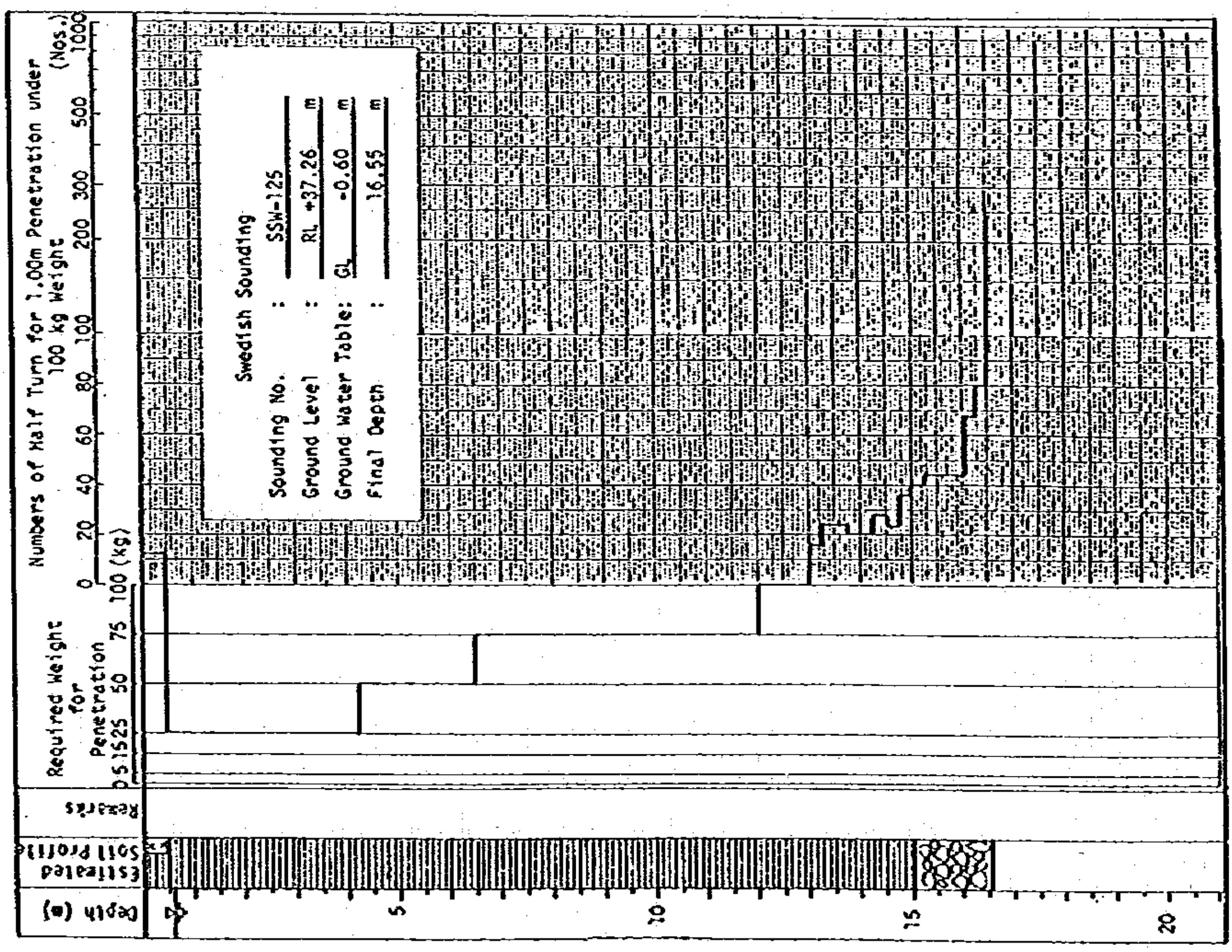

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0.5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
Swedish Sounding
Sounding No. : SSW-120
Ground Level : RL +37.44 m
Ground Water Table: GL -0.40 ~ -0.86 m
Final Depth : 14.90 m
5
10
15
20


Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
5
10
15
20
Swedish Sounding
Sounding No. : SSW-121
Ground Level : RL +37.43 m
Ground Water Table: GL -0.32 ~ -0.86 m
Final Depth : 15.20 m

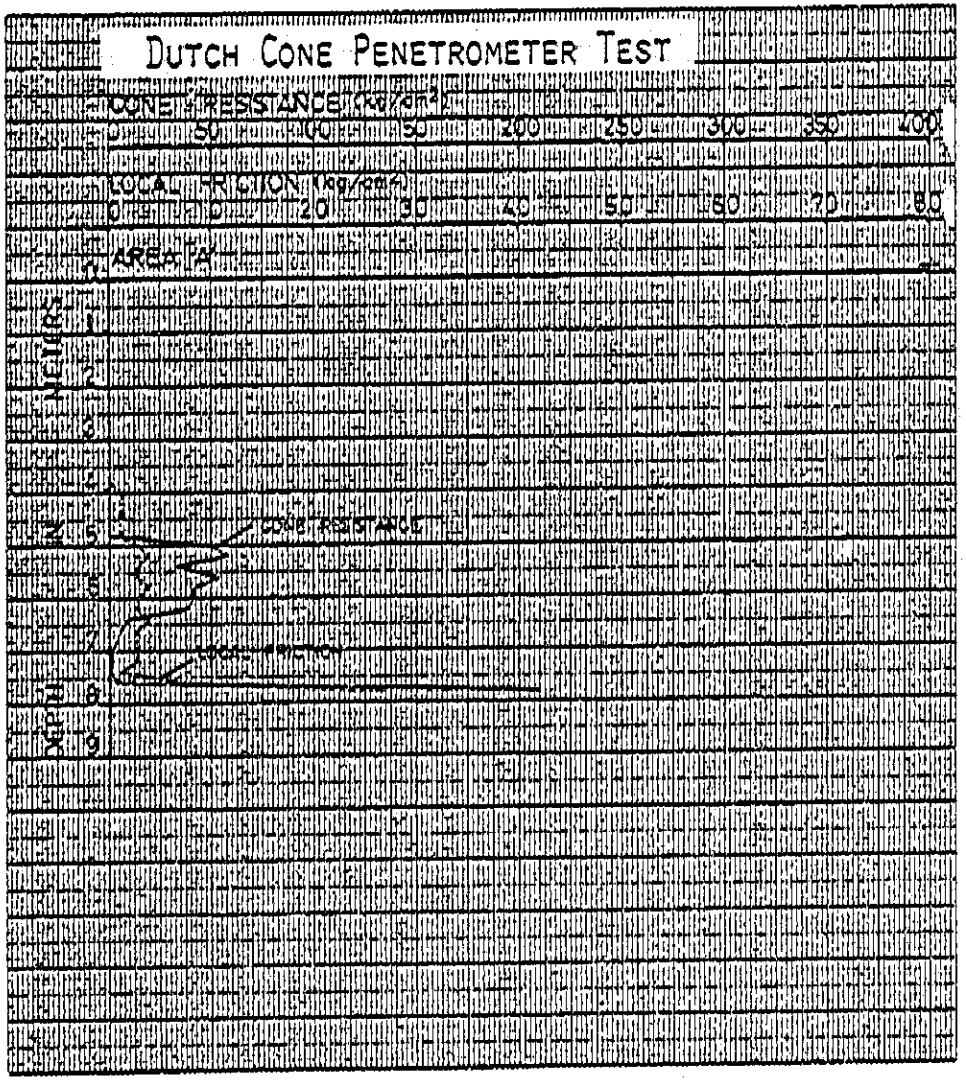

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
5
10
15
20
Swedish Sounding
Sounding No. : SSW-122
Ground Level : RL +37.39 m
Ground Water Table: GL -0.52 ~ -0.86 m
Final Depth : 13.70 m

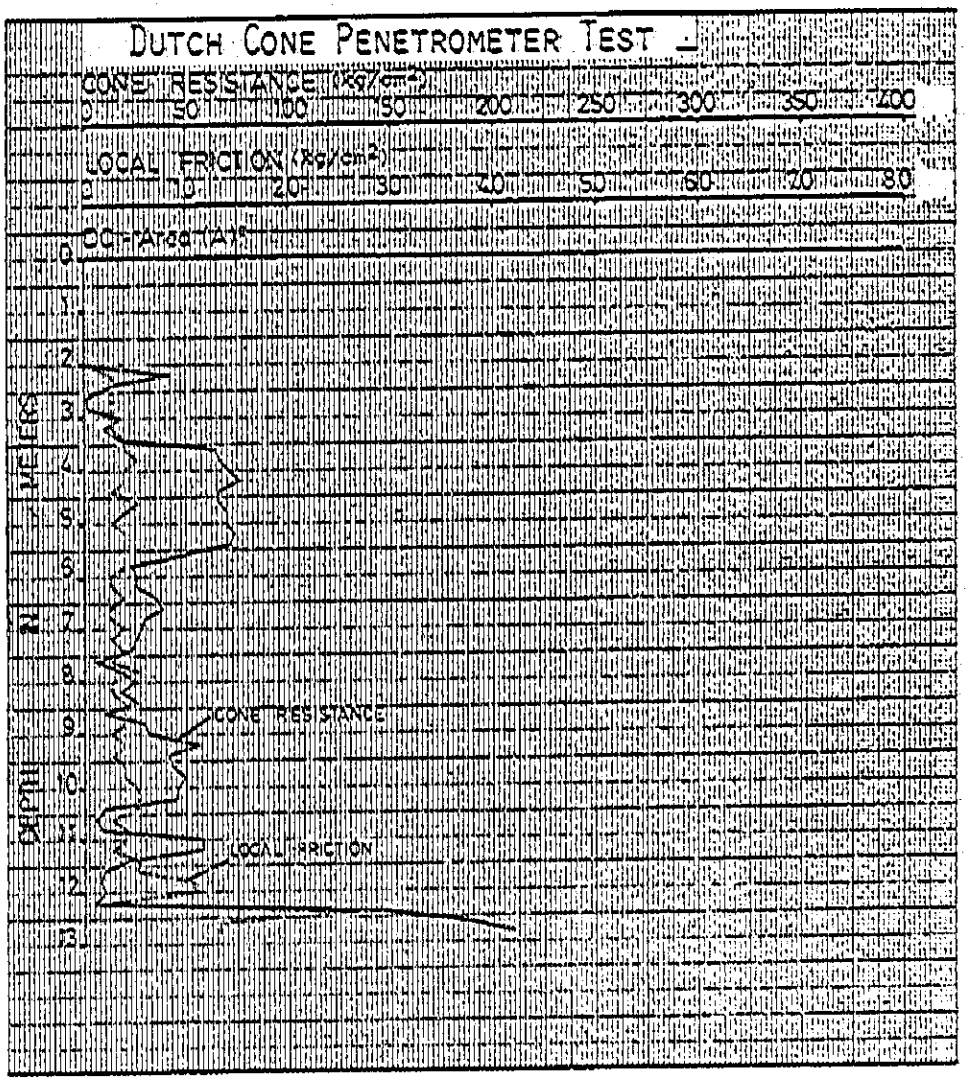

Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
Swedish Sounding
Sounding No. : SSW-123
Ground Level : RL +37.23 m
Ground Water Table: GL -0.36 m
Final Depth : 21.50 m
5
10
15
20


Depth (m)
Estimated Soil Profile
Remarks
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Numbers of Half Turn for 1.00m Penetration under 100 kg Weight
0 20 40 60 80 100 200 300 500 1000 (Nos.)
Swedish Sounding
Sounding No. : SSW-124
Ground Level : RL +37.26 m
Ground Water Table: GL -0.44 m
Final Depth : 16.50 m
5
10
15
20



Numbers of Half Turn for 1.00m Penetration under 100 kg Weight (Nos.)
0 20 40 60 80 100 200 300 500 1000
Swedish Sounding
Sounding No. : SSW-125
Ground Level : RL +37.26 m
Ground Water Table: GL -0.60 m
Final Depth : 16.55 m
Required Weight for Penetration
0 5 15 25 50 75 100 (kg)
Remarks
Estimated Soil Profile
Depth (m)
5
10
15
20





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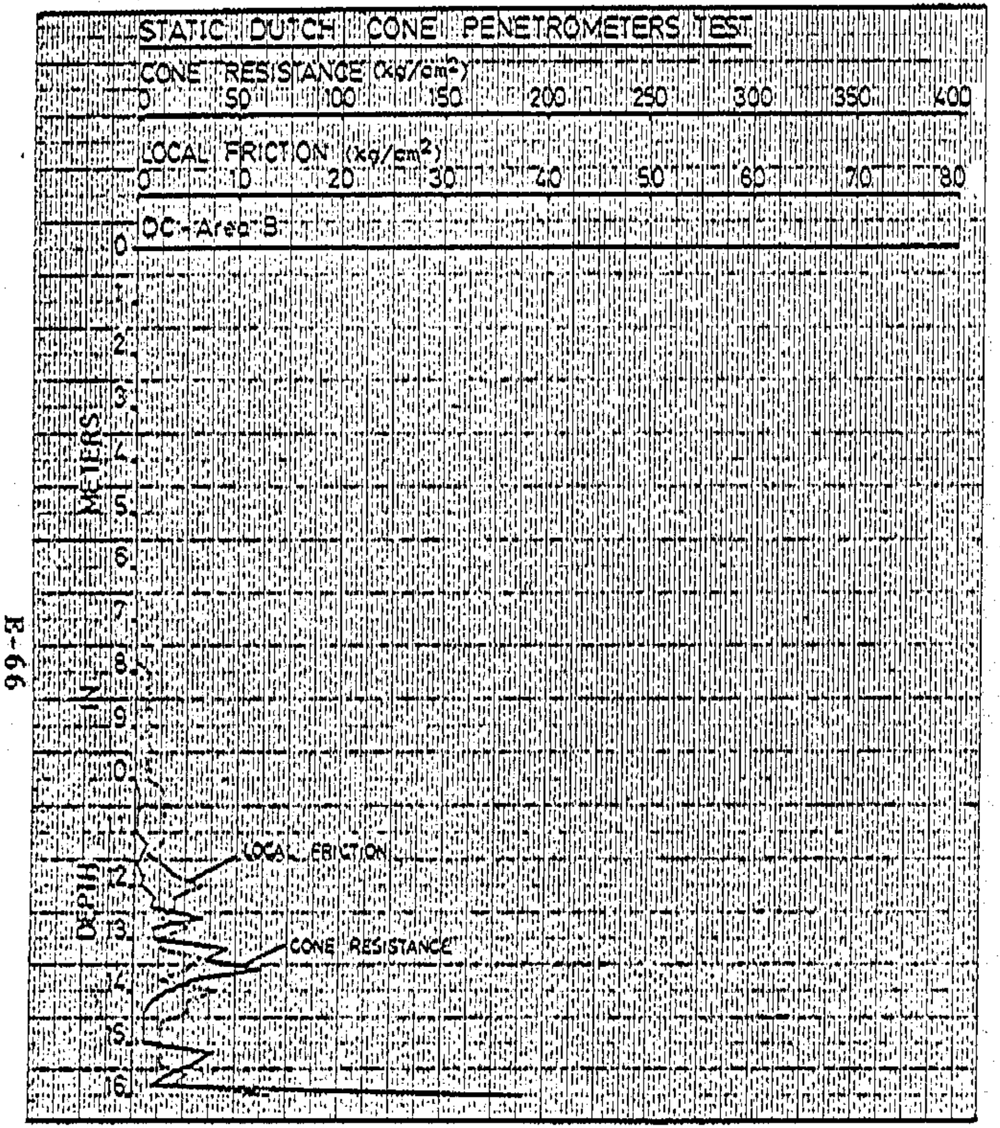

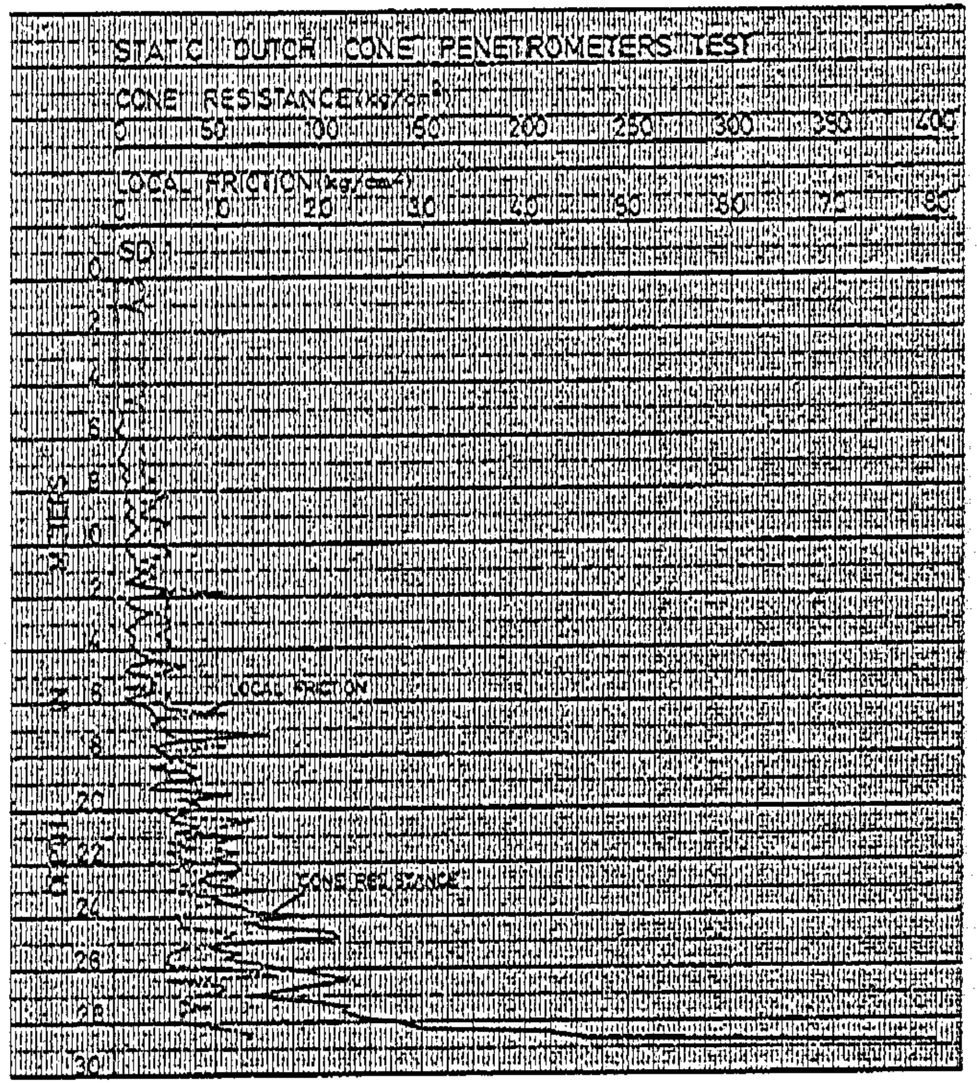

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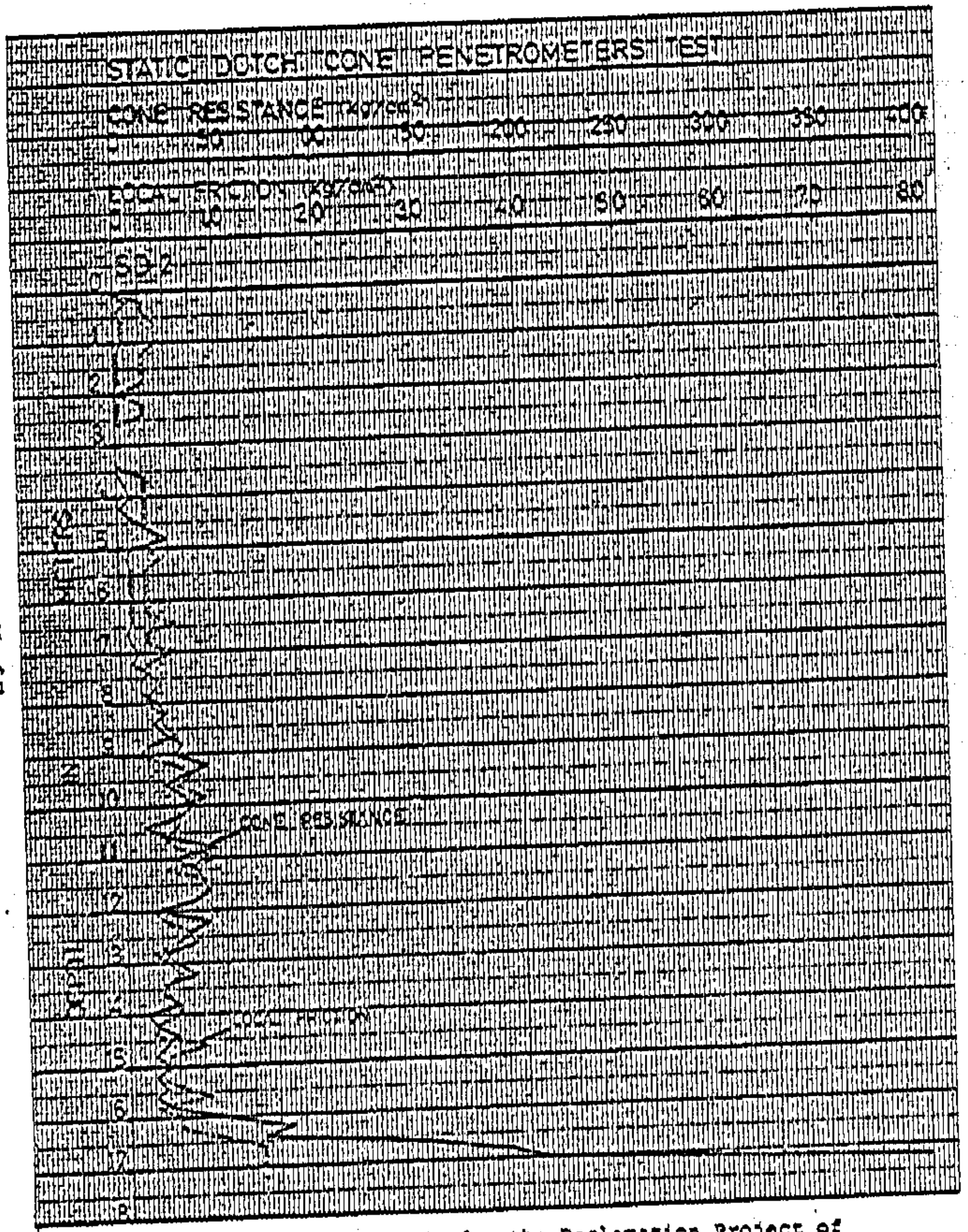

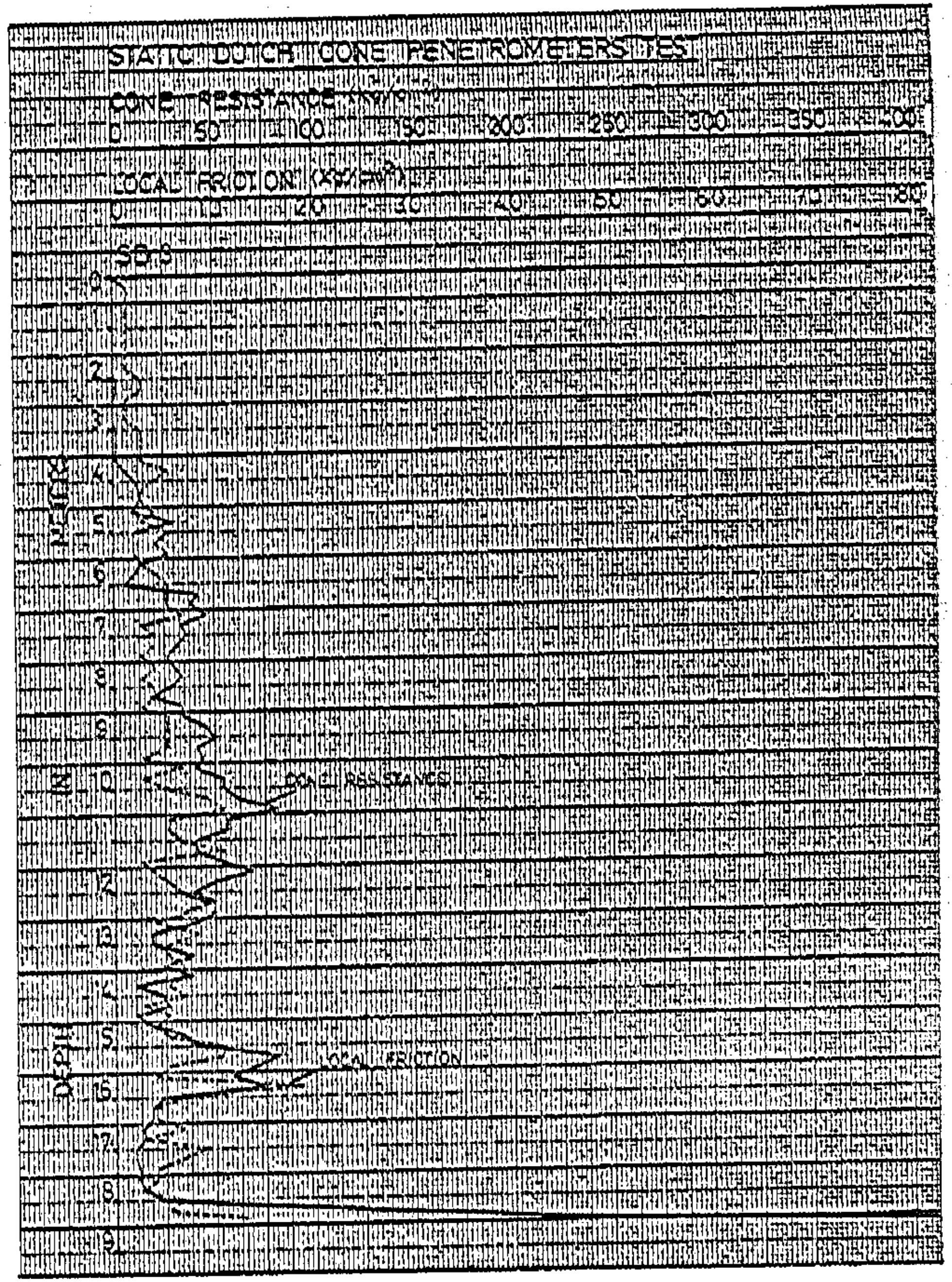

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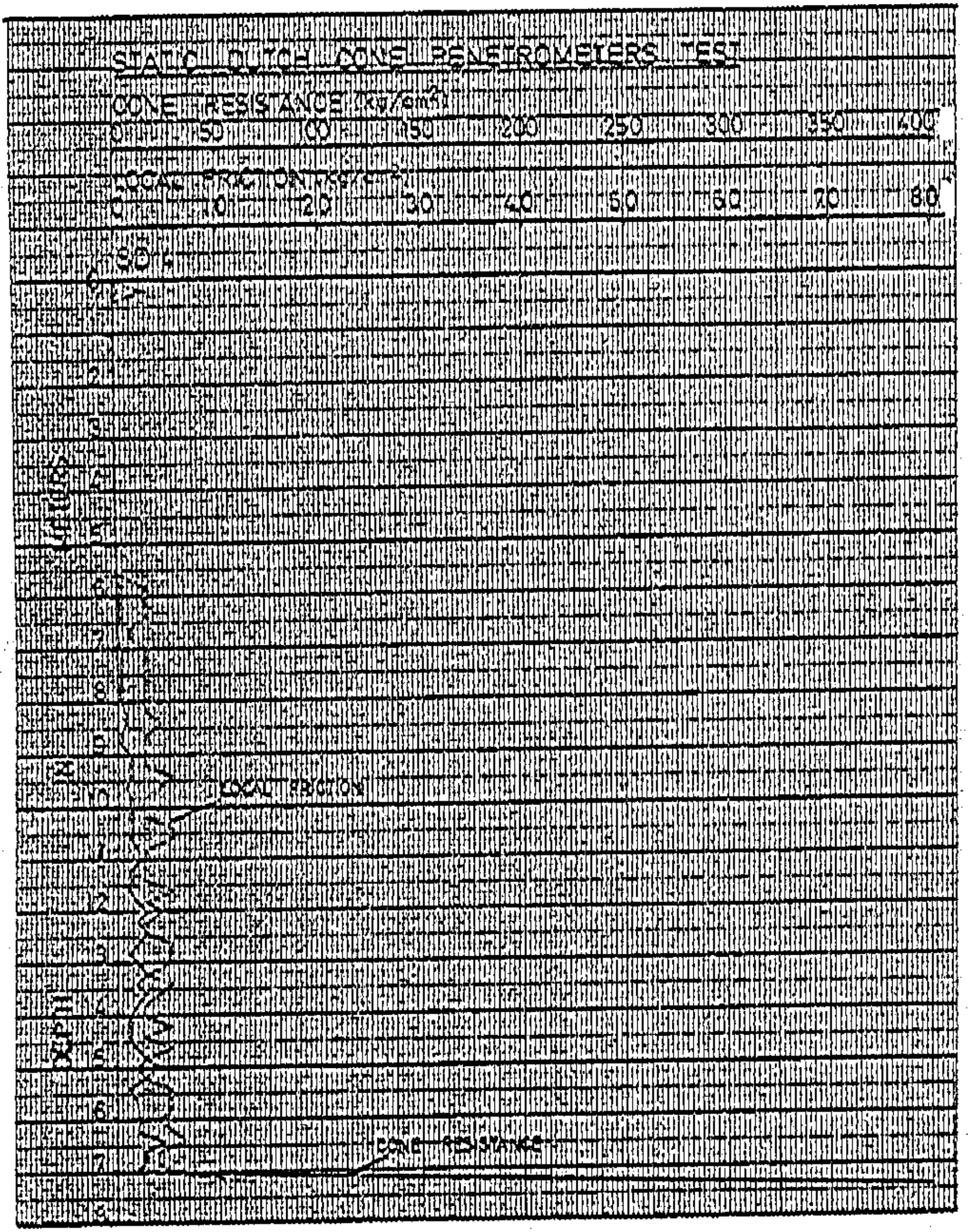

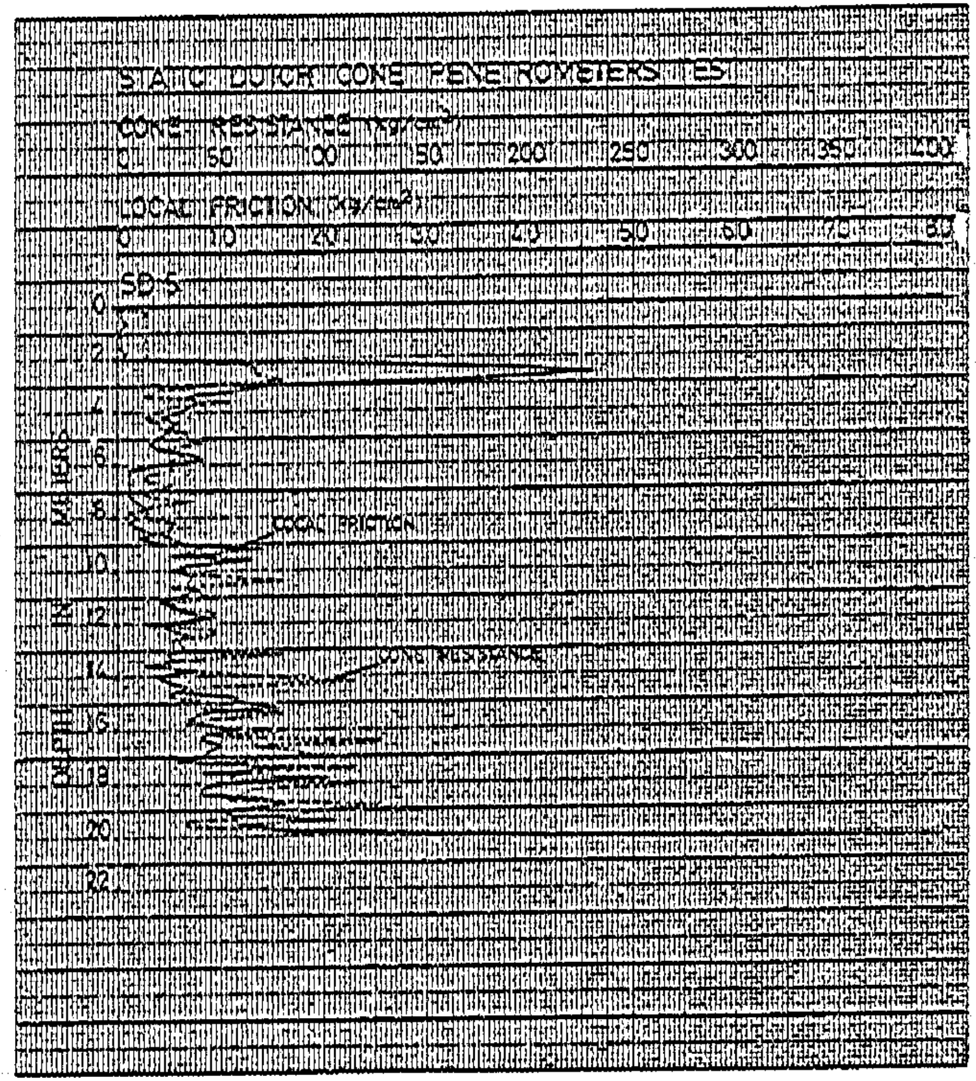

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