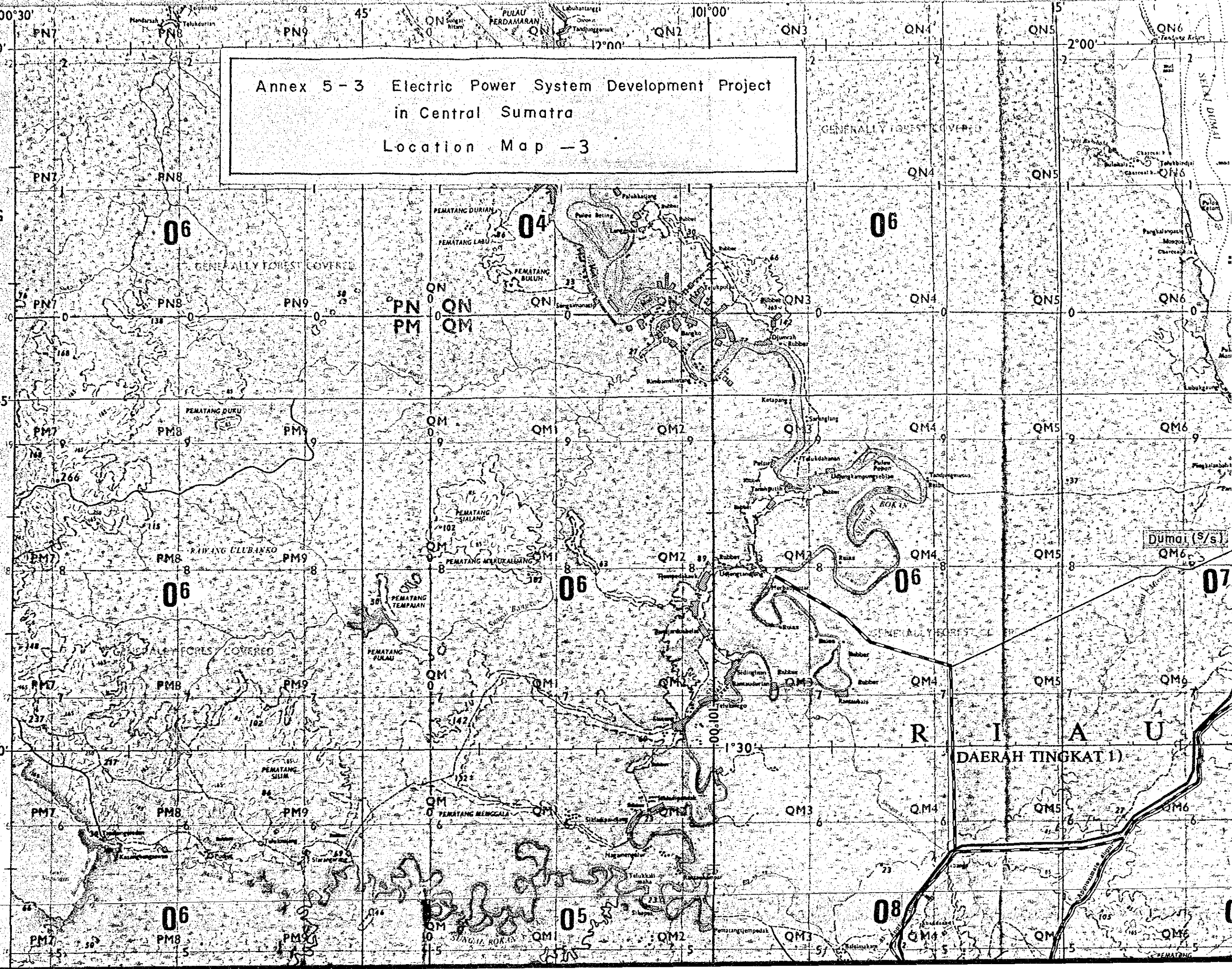


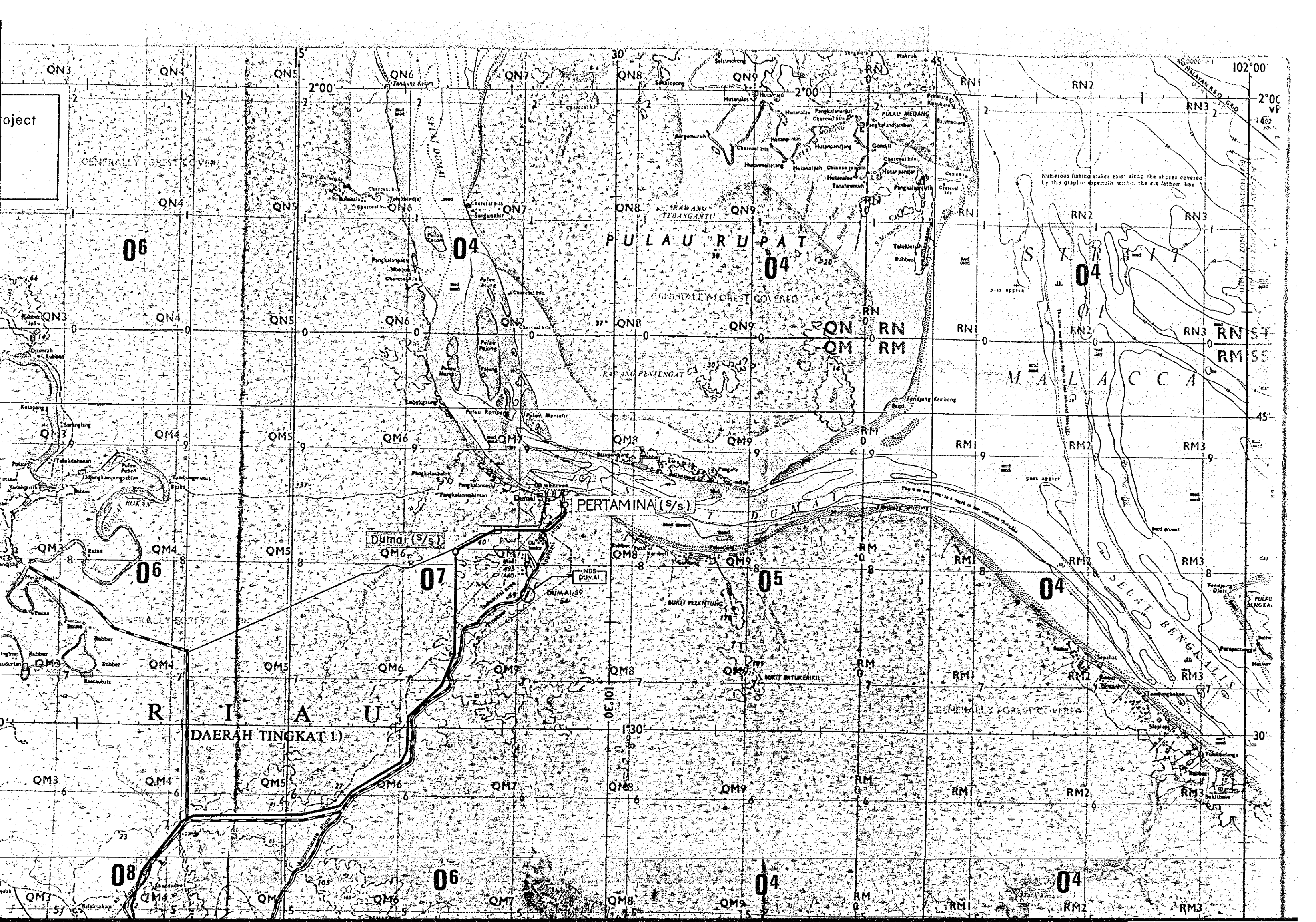
SERIES 1501 (A)
SHEET NA 47-12
EDITION 3 GSGS

1:250,000 JOG (A)
DUMAI
INDONESIA
NA 47-12

Annex 5-3 Electric Power System Development Project
in Central Sumatra
Location Map - 3

- LEGEND**
- POPULATED PLACES**
Towns
Villages
1st importance: PALEMBANG
2nd importance: DJAMBI
3rd importance: SEKAU
4th importance: Dumai
5th importance: Pangkajene
- ROADS**
All weather, hard surface
Two or more lanes wide
Less than two lanes wide
All weather, loose or light surface
Two or more lanes wide
Less than two lanes wide
Fair or dry weather loose surface, dirt road
Cartpath
Trail (footpath)
- RAILROADS**
Normal gauge (1 metre)
Narrow gauge
- BOUNDARIES**
International
Daerah Tingkat I
Daerah Tingkat II
Kotabatalaya
Spot elevation, normal
Spot elevation, critical
Horizontal control point; Trig. Astro. & G.
Levee; Escarpments
Woodland
Savanna
Tropical grass
Swamp or marsh
Mangrove Nipa
Reef limit of danger
Rocks, punan, break, Sand
Foreshore flat
- AERODROMES (Military or Civil)**
Field limits with runway pattern
EDNA: 50/100
EDNA: 50/100
50: Length of longest runway to nearest hundreds of feet
100: Width of unpaved surface
725: Elevation
Field limits with runway pattern
Field limits unknown with runway pattern
Field limits and runway pattern unknown
- REPORT**
- RADIO FACILITIES**
Radio range limits
Multiple radio facilities
- CONTROLLED AIRSPACE**
ATLANTIC ADIZ
MONTREAL SIZ
- MAGNETIC VARIATION**





ject

GENERALLY FOREST COVERED

Numerous fishing stakes exist along the shores covered by this graphic especially within the six fathom line

06

04

PULAU RUPAT

04

GENERALLY FOREST COVERED

QN QM RN RM

M A L A C C A

PERTAMINA (S/S)

DUMAI (S/S)

07

05

04

R I A U

DAERAH TINGKAT 1

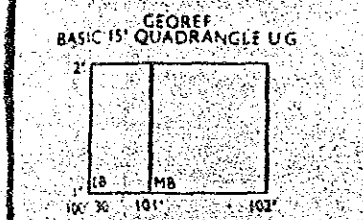
08

06

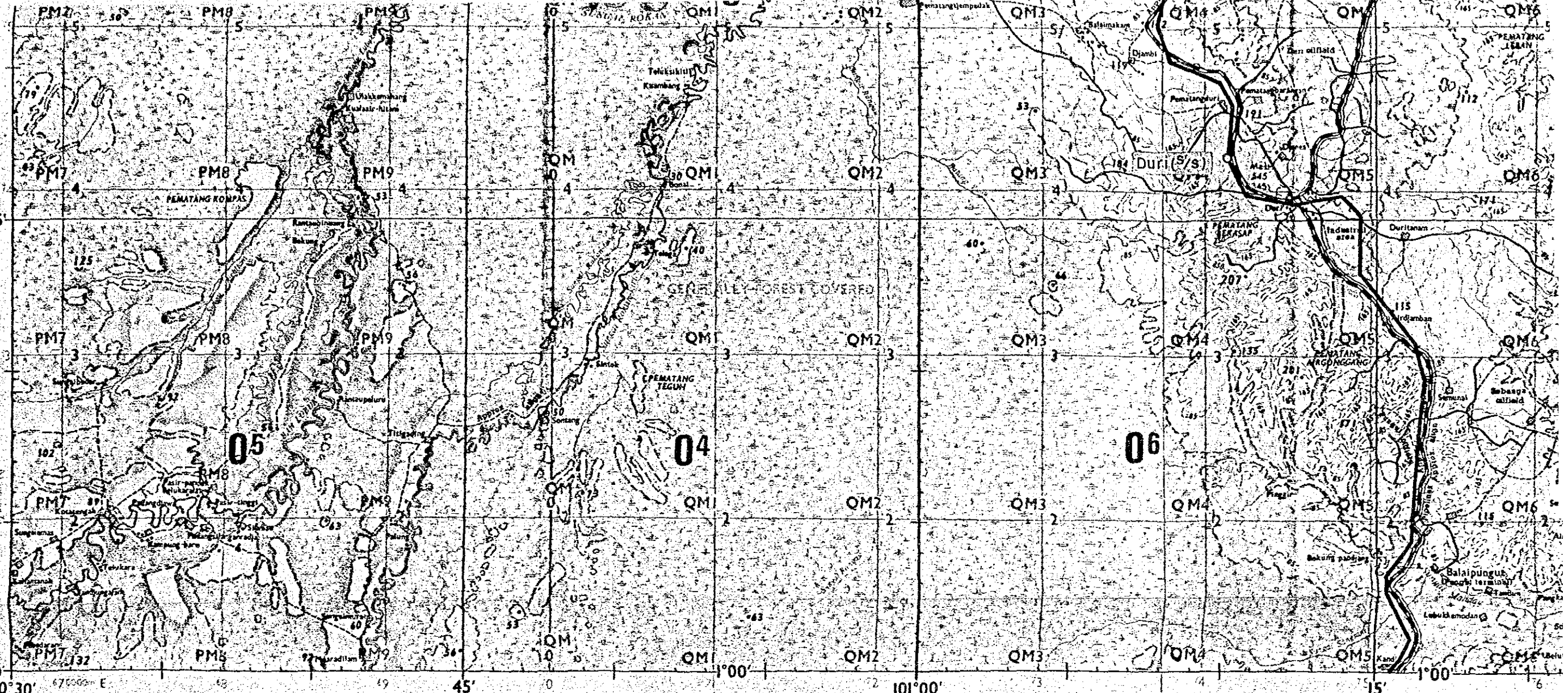
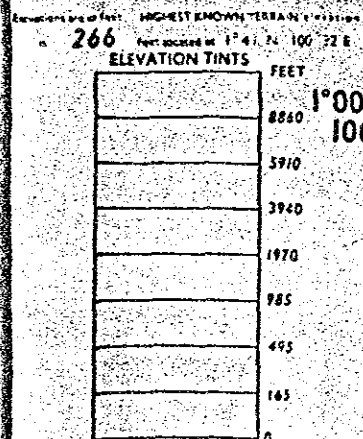
04

04

MONTREAL 512
 MAGNETIC VARIATION
 Isogonic line $-7^{\circ}E$
 VISUAL AIDS AND OBSTRUCTIONS:
 Obstruction \triangle
 1108 (259)
 1108 - Elevation of obstruction top above sea level
 (259) - Elevation of obstruction top above ground level
 Group obstruction ∇
 Radio facility obstruction \square
 Obstacle (Normal position)
 Visual ground sign \star
 Aerial light Marine light \star



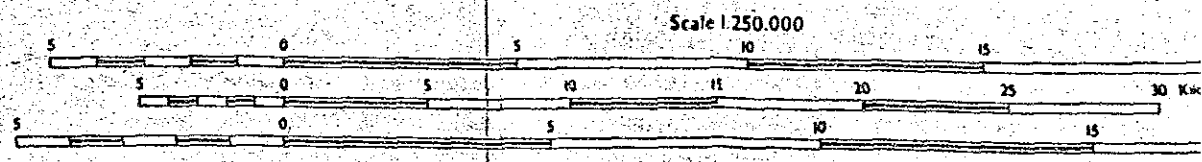
CAUTION
 AIR INFORMATION CURRENT
 15 JANUARY 1975
 Consult NOTAMS and RAF Flight Information Publications for the latest air information



Published by D Survey, Ministry of Defence, United Kingdom, 1967
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ELEVATIONS IN FEET

JOINT OPERATIONS GRAPHIC - A



1:250,000 JOG (A)
 DUMAI
 INDONESIA
 NA 47-12
 SERIES 1501 (A)
 SHEET NA 47-12
 EDITION 3 GSGS

**DISTRIBUTION LIMITED-DESTROY
 WHEN NO LONGER NEEDED**

ATTENTION
 THIS CHART CONTAINS
 MAXIMUM ELEVATION FIGURES (MEF)
 The Maximum Elevation Figures shown in quadrangles bounded by dotted lines of latitude and longitude are represented in THOUSANDS and HUNDREDS of feet above mean sea level. The MEF is based on information available concerning the highest known features in each quadrangle, including terrain and obstructions (towers, towers, etc.). In areas of extensive available relief the MEF is shown by a note spaced across the area.

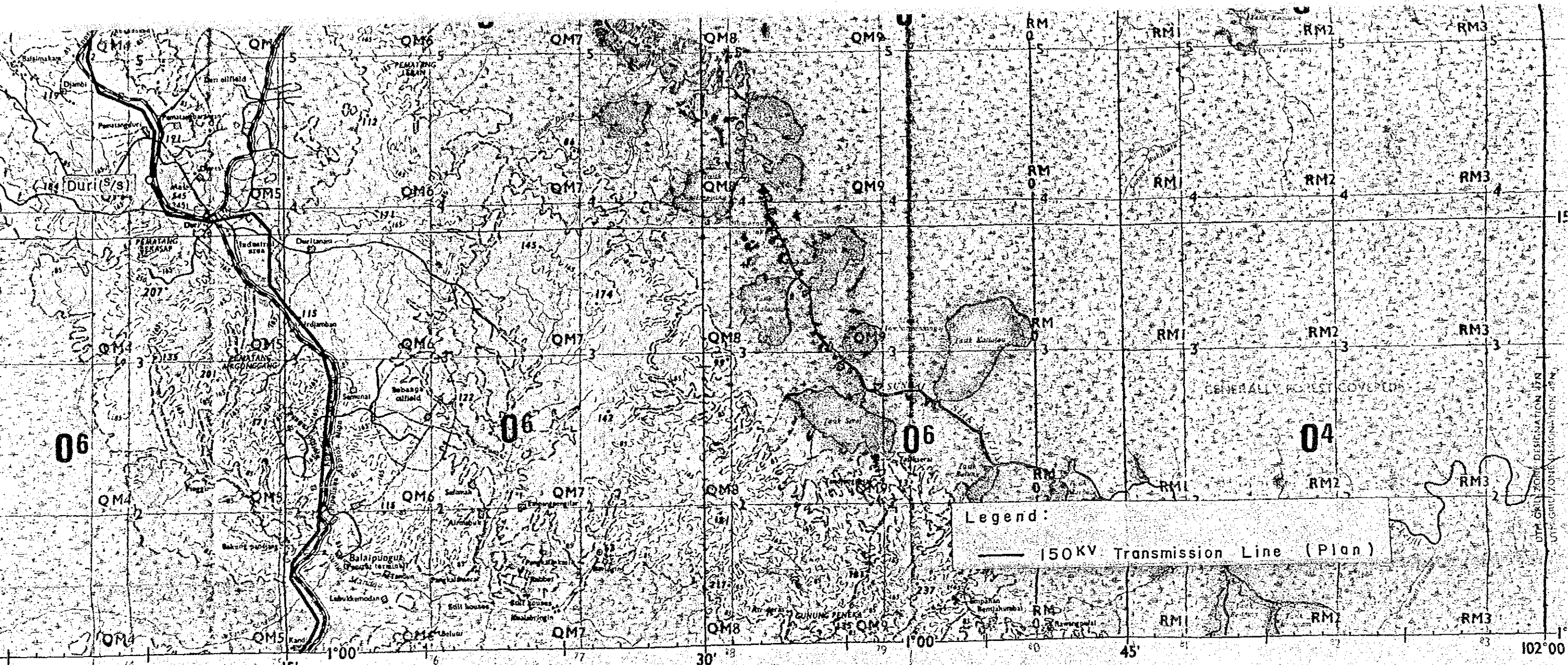
EXAMPLE 12,600 feet **125**



QUADRANGLE	MEF
PM 7	125
PM 8	125
PM 9	125
QM 1	125
QM 2	125
QM 3	125
QM 4	125
QM 5	125
QM 6	125

NOTES
 1. Contours are shown at 100-foot intervals above 100 feet and at 20-foot intervals below 100 feet.
 2. Contours are shown at 100-foot intervals above 100 feet and at 20-foot intervals below 100 feet.
 3. The chart is not an authority on international boundaries.

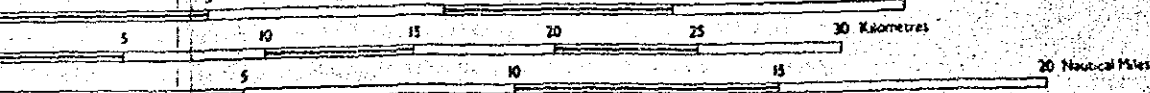
SUPPLEMENTARY CONTOURS AT INTERVALS OF APPROXIMATELY 85 FEET (25 METRES)
 Supplementary contour \sim
 TRANSVERSE MERCATOR PROJECTION
 USERS SHOULD REFER CORRECTIONS, ADDITIONS AND COMMENTS FOR IMPROVING THIS PRODUCT TO:
 IUS (Army) Director, Defence Mapping Agency Aeronautical Center, St. Louis AFB, Missouri 63116 ATTN: PP
 UK Users: Director of Military Survey, Ministry of Defence, London.



Legend:
 ——— 150KV Transmission Line (Plan)

NT OPERATIONS GRAPHIC - AIR

Scale 1:250,000



ELEVATIONS IN FEET



PRINTED BY DEFENSE MAPPING AGENCY HYDROGRAPHIC/TOPOGRAPHIC CENTER 579

GLOSSARY

Air	River	Pegunungan	Mountain
-barat	-west	Pematang	P.
Batang	River	Pulau	P.
Batu	Rock	Punjak	
Bukit	Hill	Rawa, Rawang	Marsh, S.
Daerah Tingkat	Administrative Division	Selat	S.
Danau	Lake	Sungai	River, S.
Dolak	Mountain	Talang	T.
Gunung	Mountain	Tanjung	Capo, Hea
Kepulauan	Archipelago	Teluk	Bay
Kuala	Estuary, River mouth	Teluk	Bay
Laut	Sea	Tengah (-engah)	Central (-m)
Lubuk	Deep pool	Terusan	Channel, c
Muara	Estuary	Utara (-utara)	N

STOCK NO. 1501ANA47

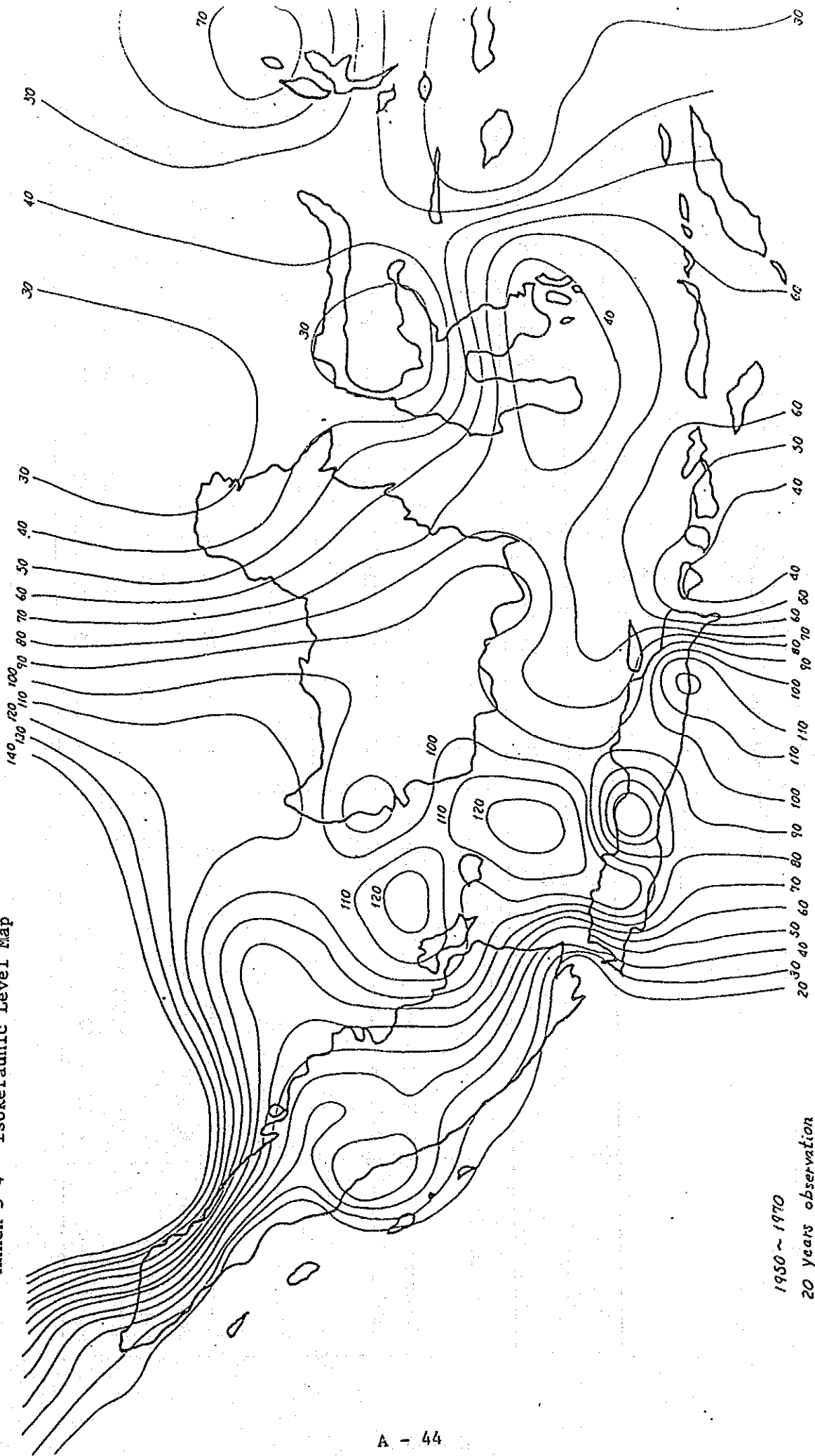
A-43

SERIES 1501 (A)
 SHEET NA 47-
 EDITION 3 GSGS

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USERS SHOULD REFER CORRECTIONS, ADDITIONS AND COMMENTS FOR IMPROVING THIS PRODUCT TO:
 US Users, Director, Defense Mapping Agency Aerospace Center, St. Louis AFS, Missouri 63118, ATTN: PP
 UK Users, Directorate of Military Survey, Ministry of Defence, London.

Annex 5-4 Isokeraunic Level Map



Annex 5-6 Monthly Mean Daily Temperature

(Unit: °C)

Month	Pekanbaru (1961-1979)			Pasar Kampar (1976-1981)			Japura-Rengat (1961-1979)			Tanjung Pati- Payakumbuh (1975-1982)			Tabing-Padang (1971-1979)		
	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.
Jan.	24.4	32.7	20.7	26.8	34.5	19.4	25.9	32.1	20.9	24.1	34.0	12.5	26.0	31.1	21.0
Feb.	26.1	33.2	20.6	27.3	35.3	18.7	26.2	31.5	20.5	24.1	33.5	15.5	25.9	31.5	21.9
Mar.	26.6	34.0	20.8	27.8	35.7	18.1	26.6	33.8	21.2	25.2	34.5	16.5	26.1	31.1	20.5
Apr.	26.9	33.7	21.2	28.0	36.0	19.1	27.0	33.0	21.8	25.2	33.5	16.0	26.3	31.2	21.7
May	27.1	34.1	21.6	28.2	36.7	19.0	27.3	33.7	21.6	25.6	37.7	13.3	26.4	31.2	22.2
Jun.	26.8	33.5	21.4	27.6	39.5	18.6	27.1	33.7	21.1	24.6	35.5	15.3	26.0	30.8	22.0
Jul.	26.4	33.1	20.7	27.4	35.8	18.2	26.8	32.9	21.2	24.3	40.2	15.1	25.6	30.6	21.4
Aug.	26.2	33.0	20.6	27.7	39.4	16.2	26.6	32.2	21.1	24.3	32.7	15.5	25.6	30.4	21.4
Sept.	26.4	33.0	21.0	27.4	36.2	19.0	26.7	32.6	21.5	24.3	33.5	14.7	25.6	30.3	21.9
Oct.	26.2	33.5	21.4	28.0	37.0	19.0	26.7	32.0	21.6	24.8	39.1	13.2	25.6	30.3	21.1
Nov.	26.1	32.8	21.2	27.5	35.5	20.2	26.4	33.2	21.6	24.6	31.4	18.8	25.6	30.1	21.9
Dec.	25.8	32.8	21.2	27.2	35.3	21.4	26.0	31.7	21.4	24.4	39.5	15.6	25.8	31.1	21.4

Note: Maximum and Minimum show the instantaneous temperature.

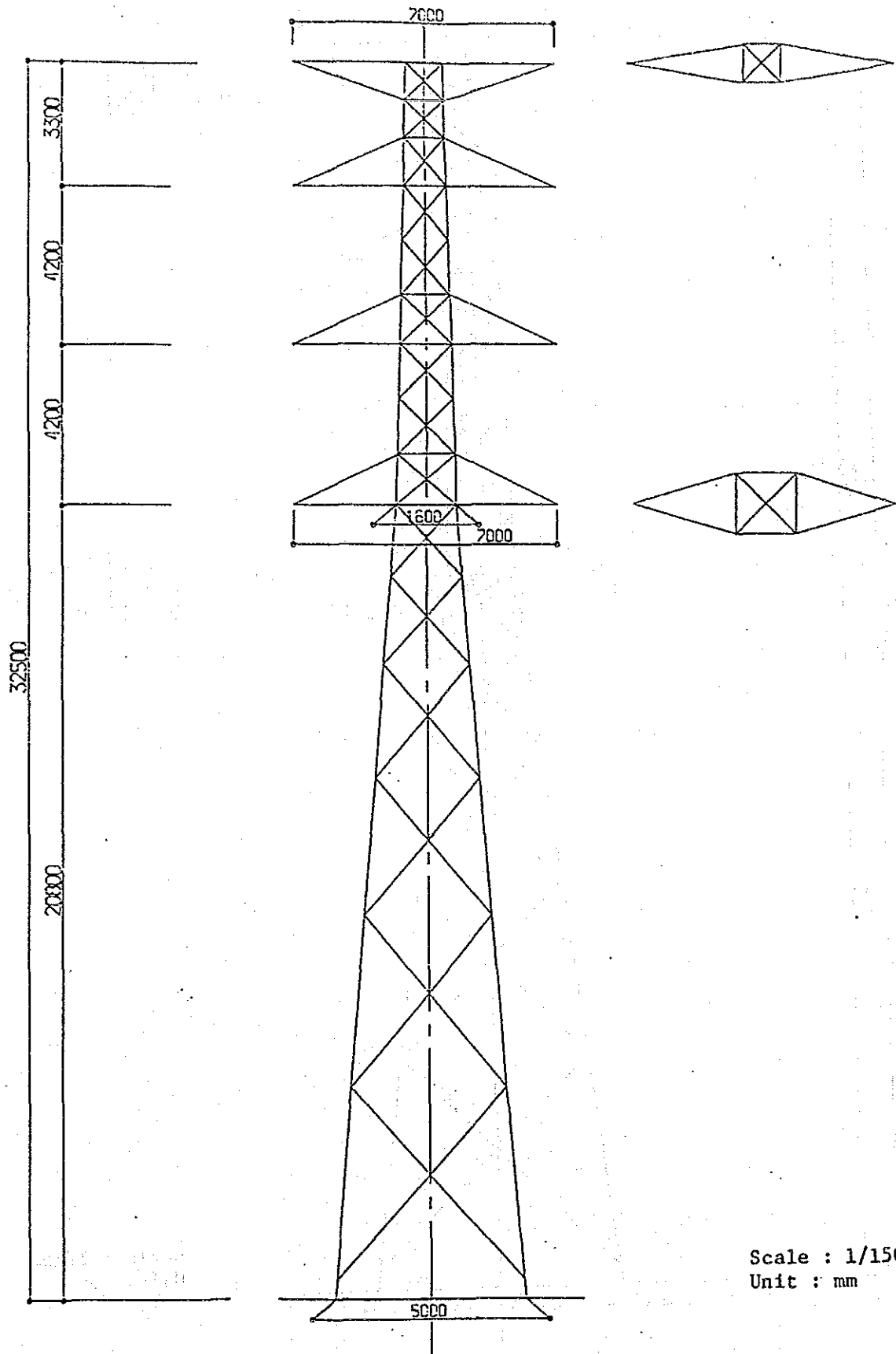
Annex 5-7 Monthly Mean Max. and Min. Daily Atmospheric Pressure

Pekanbaru

(Unit: mb)

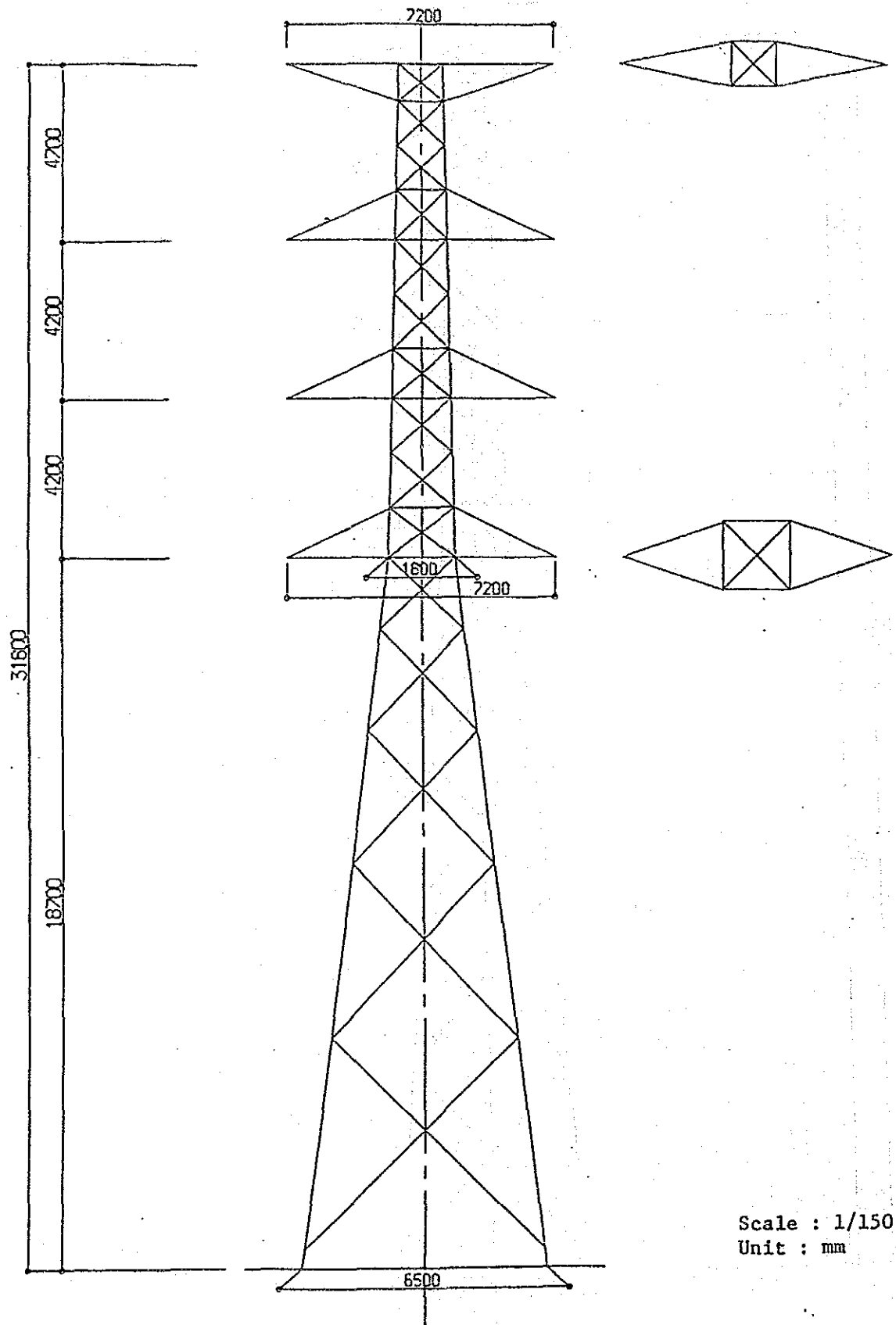
Year Month	1982			1983			1984			1985		
	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.
Jan.	1011.0	1013.4	1009.0	1011.9	1014.4	1010.2	1010.0	1012.9	1007.3	1011.0	1012.3	1008.6
Feb.	1010.1	1011.9	1008.8	1011.4	1013.0	1008.8	1008.9	1010.8	1006.7	1007.0	1010.7	1004.1
Mar.	1009.7	1012.2	1007.7	1010.3	1013.1	1007.2	1010.1	1011.4	1008.8	1009.8	1011.4	1007.5
Apr.	1009.3	1012.6	1007.6	1009.2	1012.3	1007.0	1008.9	1011.0	1007.4	1008.1	1011.2	1004.8
May	1007.1	1011.7	1006.1	1009.1	1010.5	1007.4	1009.0	1010.5	1007.8	1008.0	1010.1	1006.1
Jun.	1009.6	1012.7	1007.8	1009.5	1010.8	1007.8	1009.0	1010.6	1007.7	1009.4	1011.7	1006.5
Jul.	1009.7	1012.1	1006.9	1009.6	1012.3	1006.8	1009.1	1010.8	1007.2	-	-	-
Aug.	1010.1	1011.9	1009.1	1009.8	1011.4	1008.3	1009.4	1011.1	1007.8	-	-	-
Sept.	1010.7	1013.2	1008.6	1010.2	1012.1	1008.4	1009.7	1013.1	1007.1	-	-	-
Oct.	1009.3	1012.5	1008.3	1009.7	1011.4	1008.1	1011.0	1013.2	1008.5	-	-	-
Nov.	1009.1	1011.4	1006.5	1011.1	1012.9	1009.1	1010.2	1011.4	1008.6	-	-	-
Dec.	1009.7	1011.9	1008.4	1010.5	1012.5	1007.3	1009.3	1012.8	1007.0	-	-	-

Annex 5-8. A Type Tower



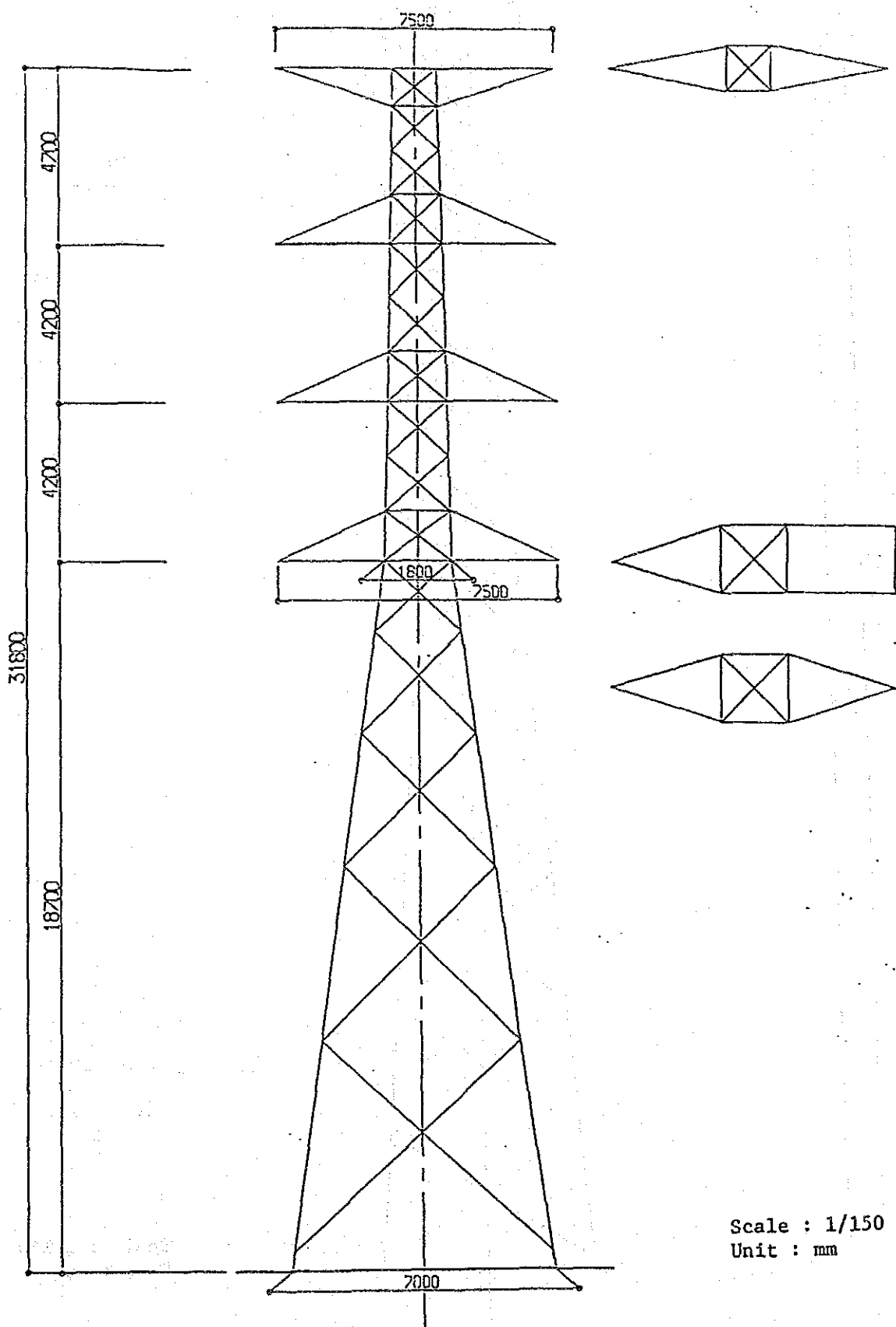
Scale : 1/150
Unit : mm

Annex 5-9 B Type Tower



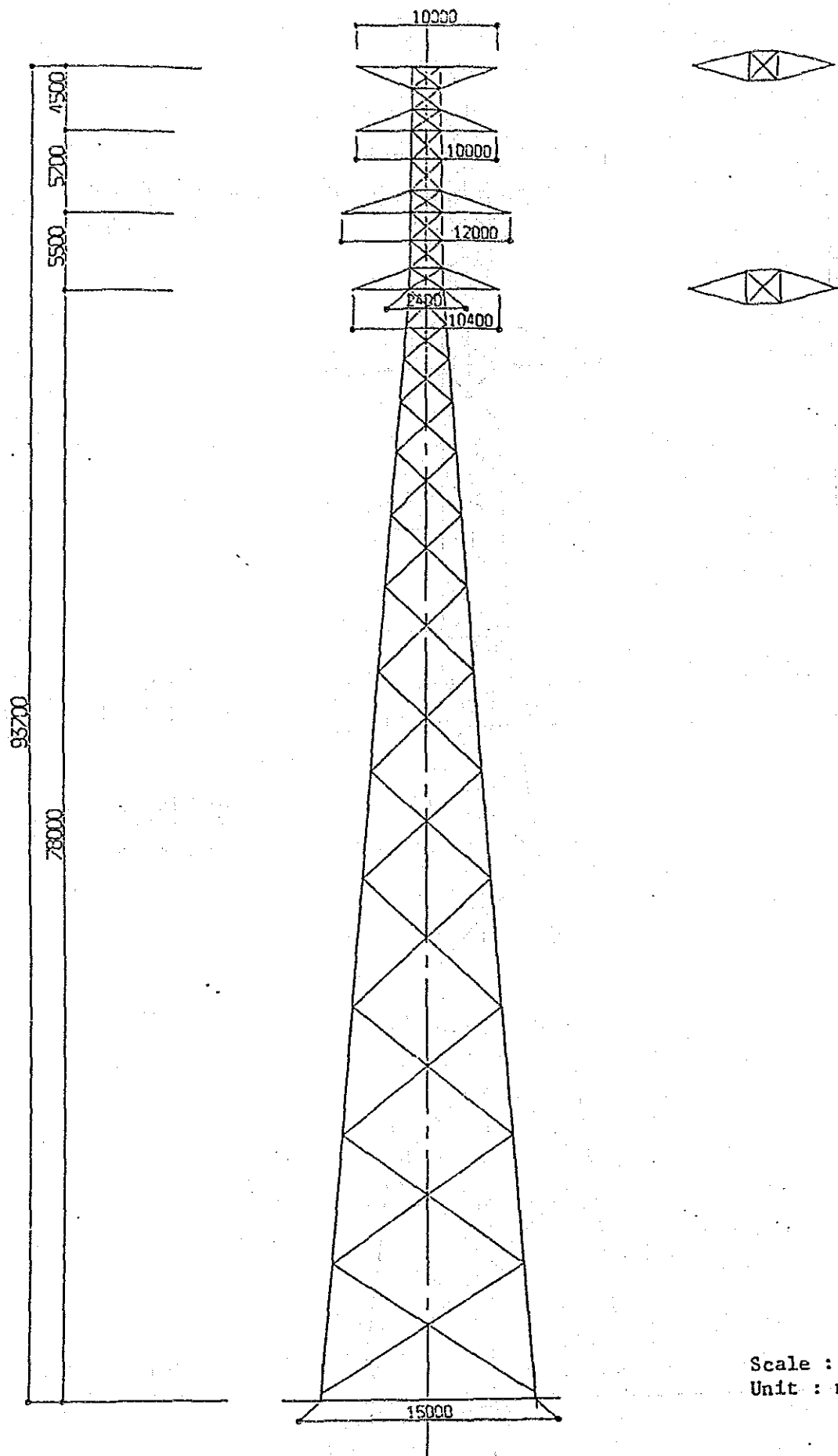
Scale : 1/150
Unit : mm

Annex 5-10 D(K) Type Tower



Scale : 1/150
Unit : mm

Annex 5-11 S Type Tower



Scale : 1/150
Unit : mm

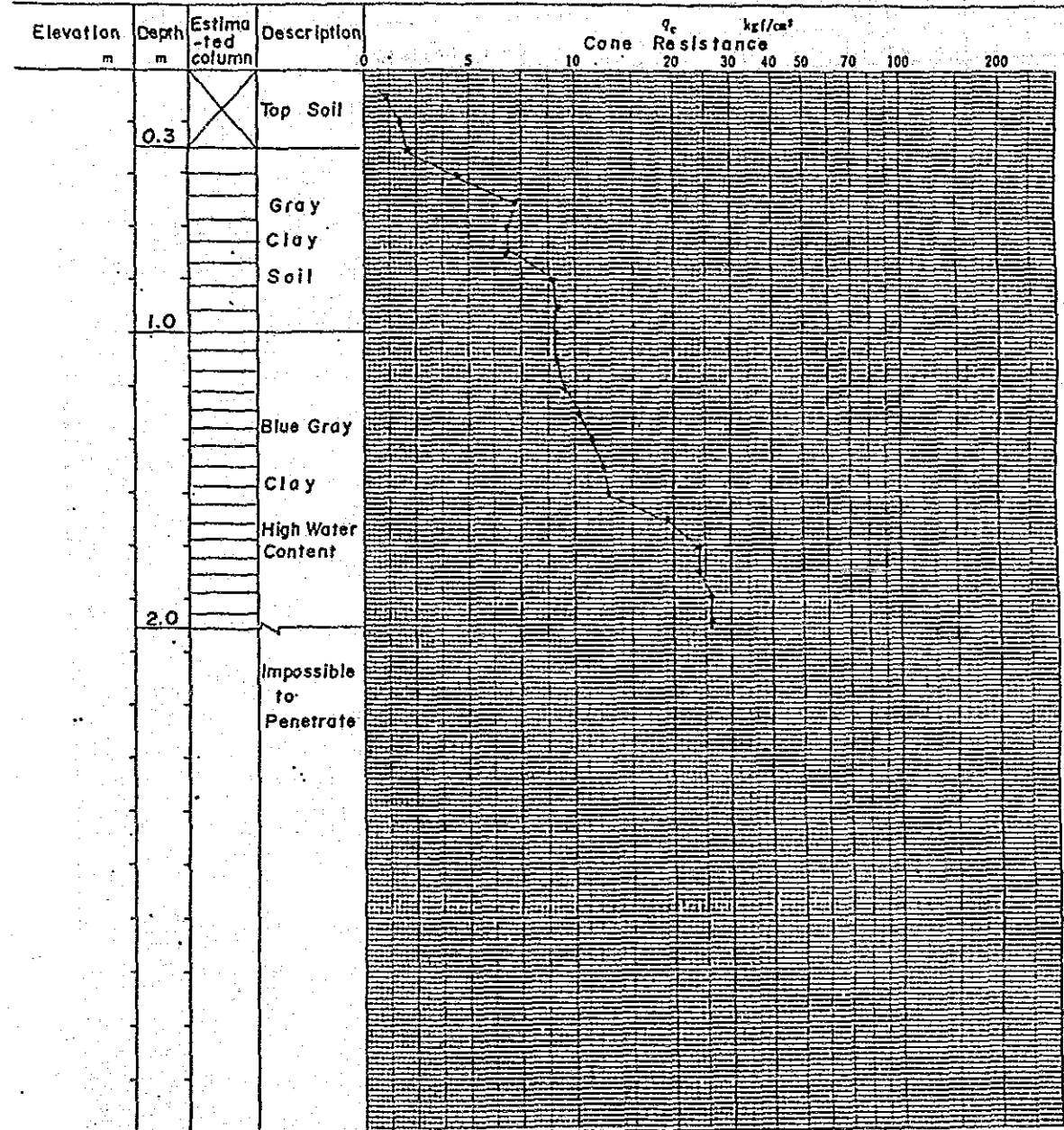
Annex 5-12 Ground Test by Cone Penetration at Payakumbuh

JIS A 1220	Cone Penetration Log test	Report
------------	---------------------------	--------

Investigation site Payakumbuh North Rice Field Date 12 Sep 1985

Test No. NO. 1 Elevation 450 m Investigator Kimura

Weather Fine Final Depth 2.10 m



Legend

Gravel	Clay	Top Soil
Sand	Peat	

Annex 5-13 Ground Test by Cone Penetration at Pekanbaru

JIS A 1220	Cone Penetration Log test	Report
------------	---------------------------	--------

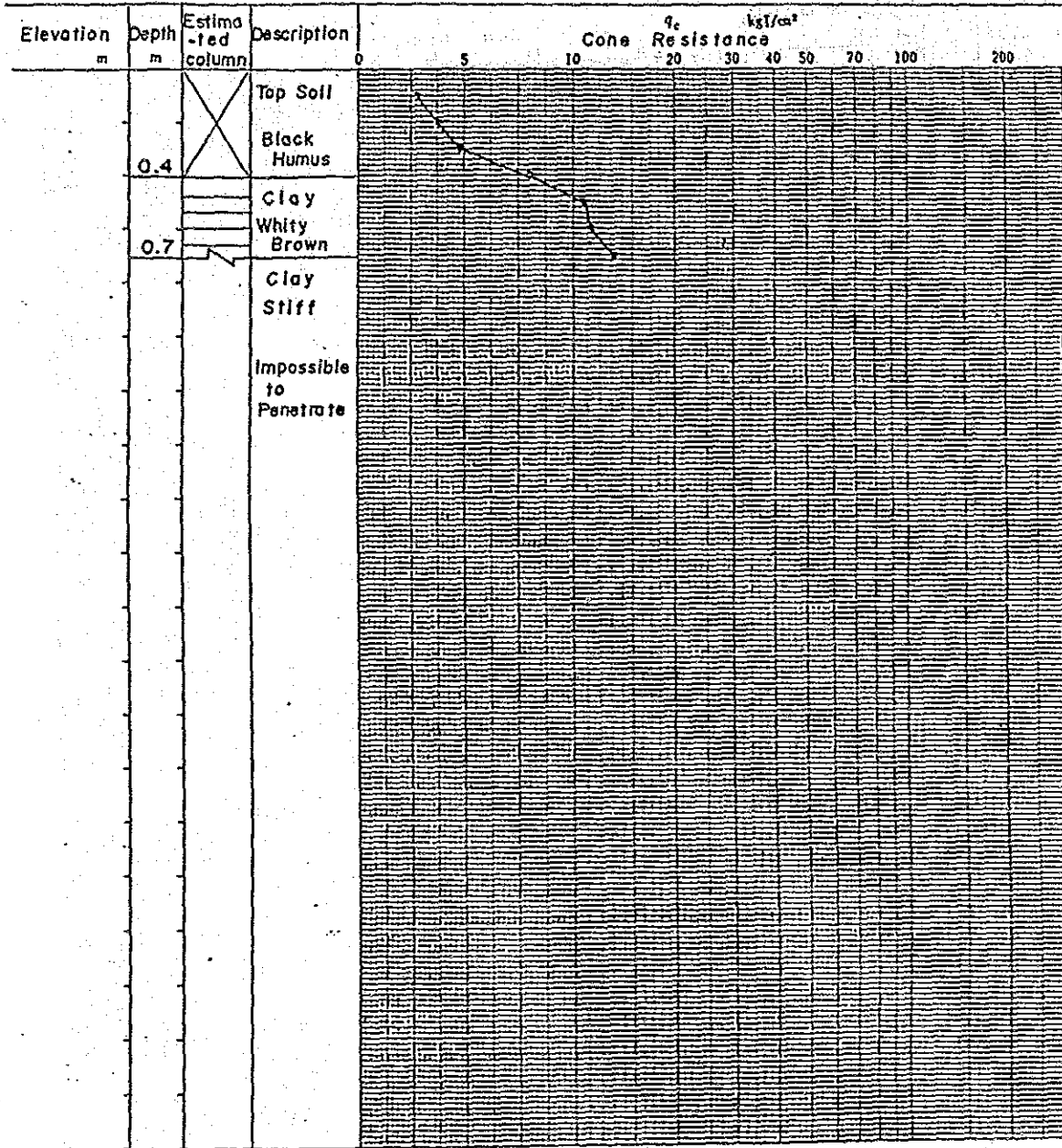
Investigation site 16 km West to Pekanbaru Date 13 Sept. 1985

Test No. NO. 4

Investigator Kimura

Weather Cloudy

Final Depth 0.7 m



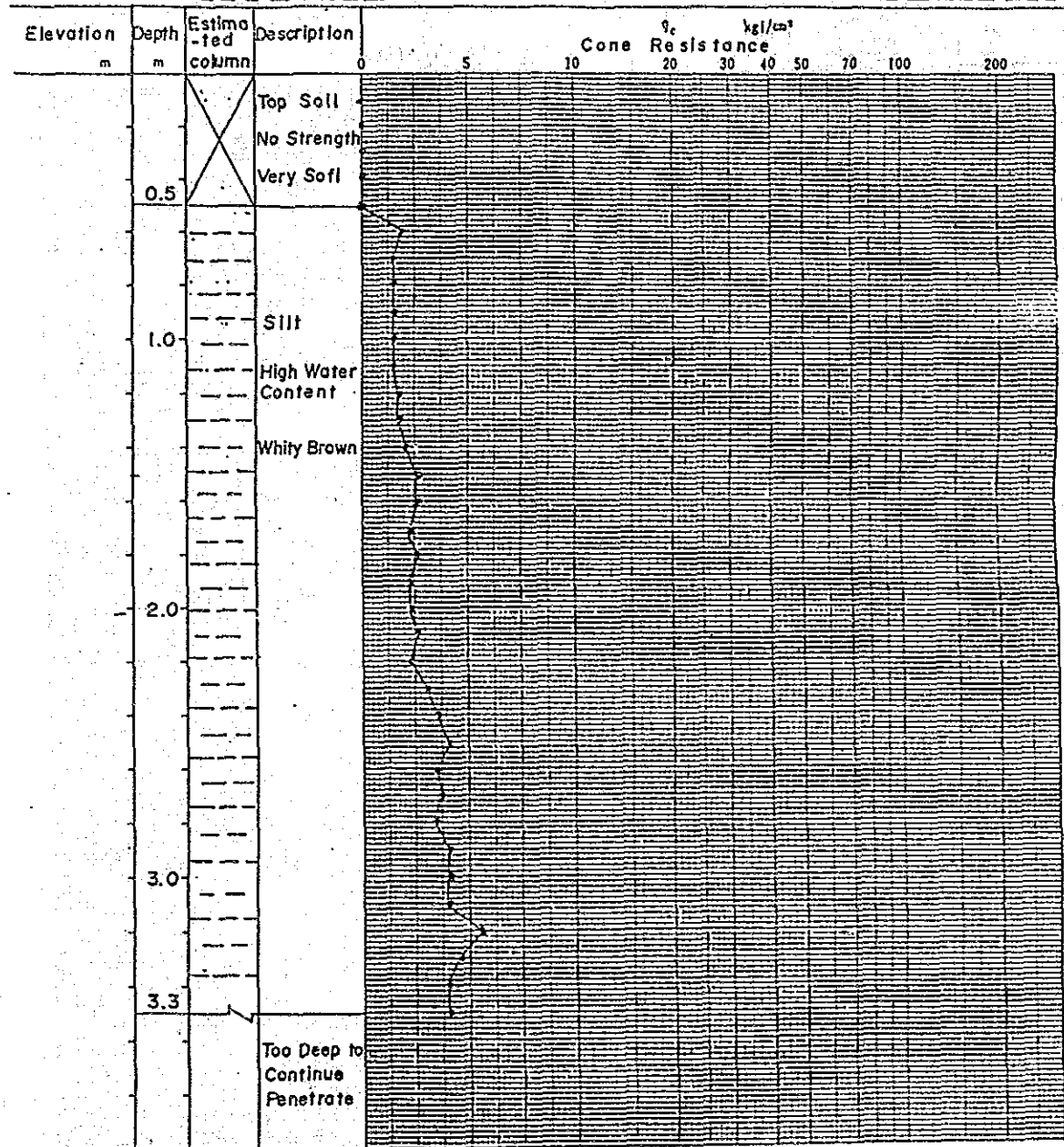
Legend

-  Gravel
-  Clay
-  Top Soil
-  Sand
-  Peat
- 

Annex 5-14 Ground Test by Cone Penetration at Bangkinang

JIS A 1220	Cone Penetration Log test	Report
------------	---------------------------	--------

Investigation site Pekanbaru ~ Bangkinang Date 14 Sept. 1985
 Test No. NO. 3 Elevation _____ Investigator Kimuro
 Weather Fine Final Depth 3.50 m



- Legend
- Gravel
 - Clay
 - Top Soil
 - Sand
 - Peat
 - Silt

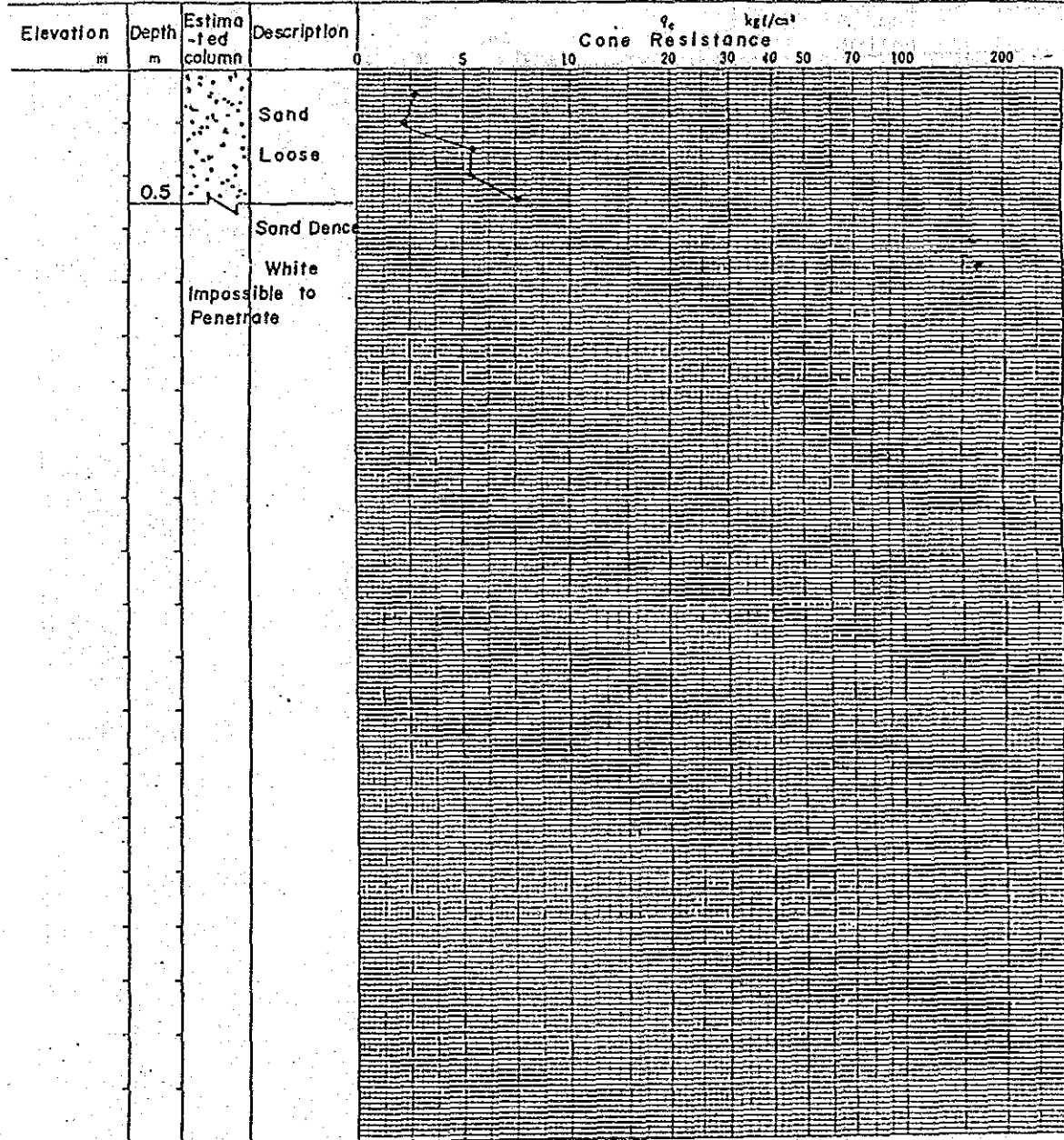
Annex 5-15 Ground Test by Cone Penetration at Dumai

JIS A 1220	Cone Penetration Log test	Report
------------	---------------------------	--------

Investigation site 16 km North to Dumai Date 17 Sept. 1985

Test No. NO. 2 Elevation _____ Investigator Kimura

Weather Fine Final Depth 0.5 m



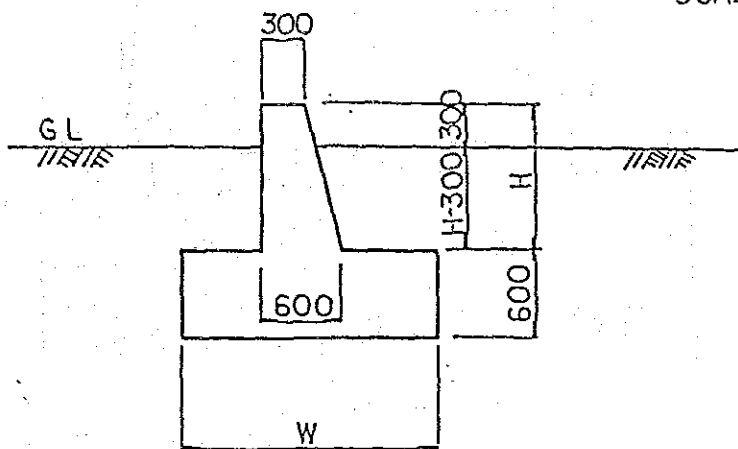
Legend

 Gravel	 Clay	
 Sand	 Peat	

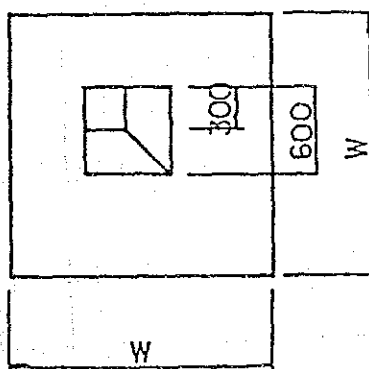
Annex 5-16 Tower Foundation Type 1

UNIT: mm

SCALE 1/50

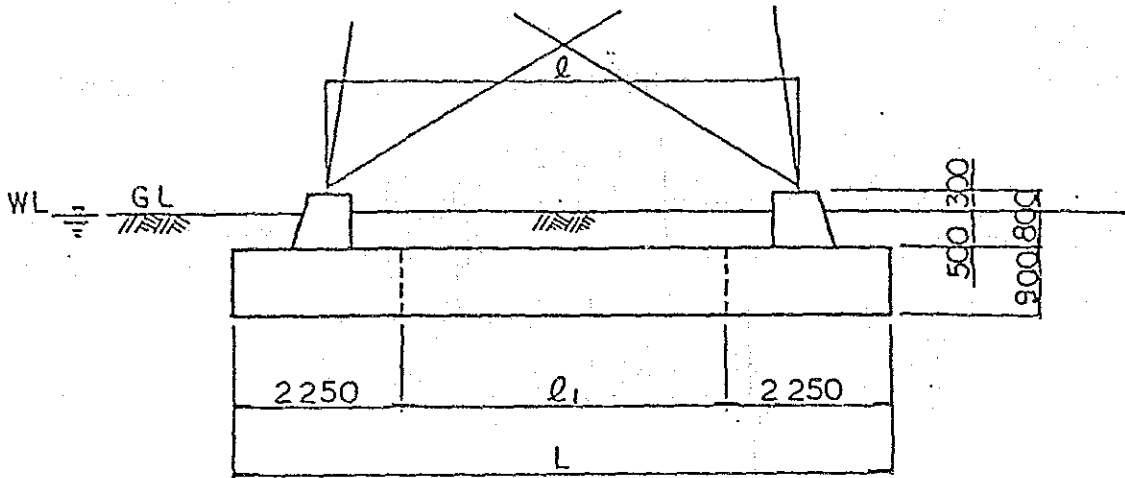


Dimension	TOWER TYPE		
	B	K	D
W	1800	2600	3400
H	1000	1800	2400

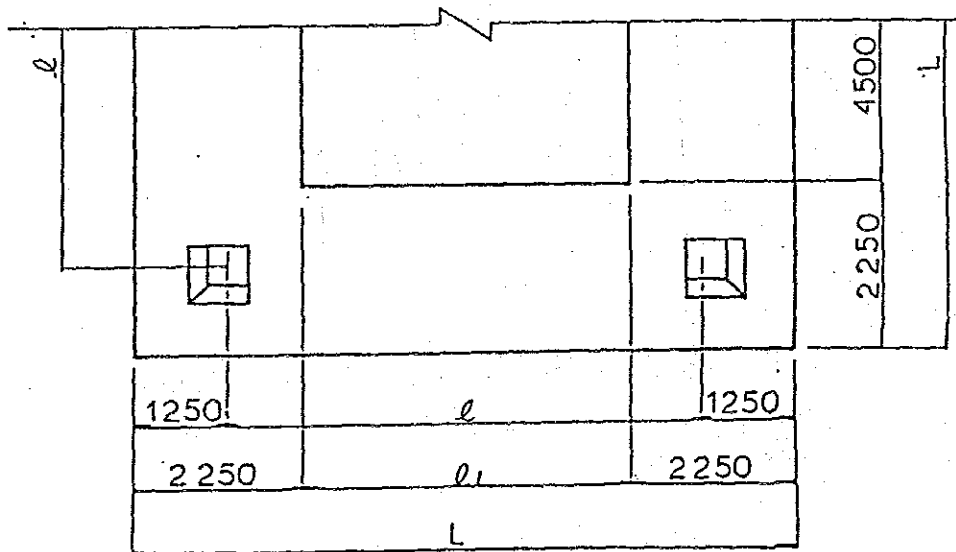


UNIT: mm

SCALE 1/100



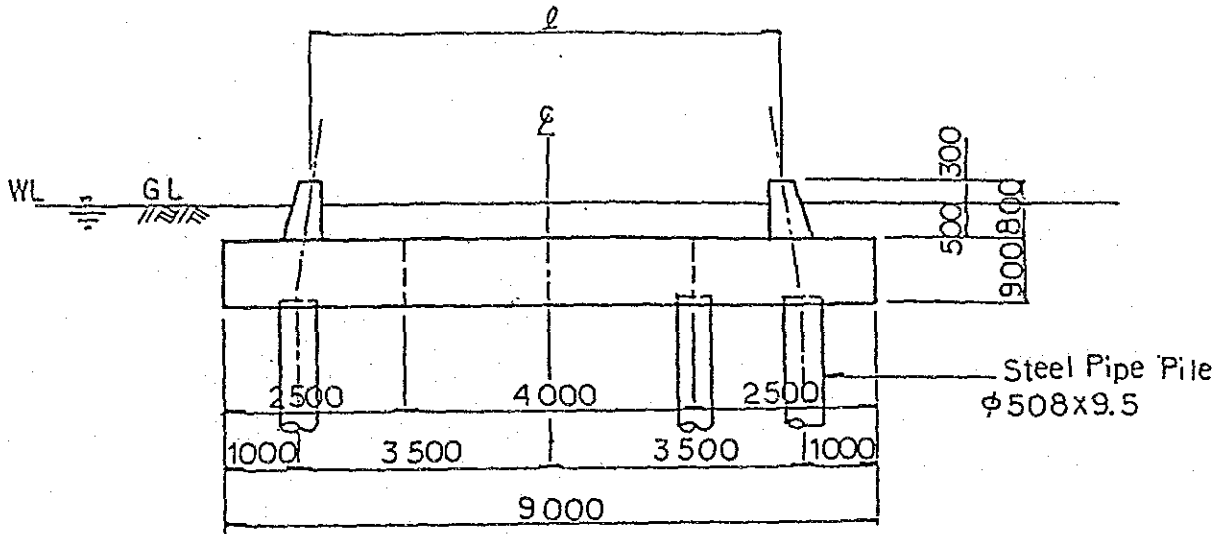
Dimension	TOWER TYPE		
	B	K	D
L	9000	10600	13000
l_1	4500	0	0
l	6500	7000	7000



UNIT: mm

SCALE 1/100

corresponding tower type
 B Type ← → K, D Type



	TOWER TYPE		
	B	K	D
Pile No.	1	2, 3	1, 2, 3
Number (Pile Towers)	4	8	12
l	6500	7000	7000

Symmetry

