

REPUBLIQUE DU SENEGAL
MINISTERE DU DEVELOPPEMENT RURAL

INSTITUT DE RECHERCHES
AGRONOMIQUES TROPICALES ET DES CULTURES
VIVRIERES

16.100 GUI

150

COMPTE RENDU DE L'ETUDE DES "SOL GRIS"
DE CASAMANCE (Sénégal)
Campagne 1972-1973
par S. GUILLOBEZ

A N N E X E S : Figures et schémas

16-100 GUI

octobre 1973

Centre National de Recherches Agronomiques
BAMBEY

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: I 50

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4.

Compte rendu de
l'étude des "sols gris" de Casamance
(Sénégal)

ANNEXES

Figure 1	:	Carte de situation. Localisation géographique des toposéquences	
Figure 2	:	Mode d'implantation des piézomètres	
Figure A	:	Schéma géomorphologique. Toposéquence	x DJEGOUNE
Figure B	:	" " "	BALINGOR-TENDIAME
" C	:	" " "	DIOUROU
" D	:	" " "	DIANA-BA
" E	:	" " "	KARCIA
" F	:	" " "	SARE-BAKARY
" G	:	" " "	SARE-MANSALY
" H	:	" " "	MALPATIM-MAOUNDE
" I	:	" " "	DIALLI-KOUNDA
" J	:	" " "	TAKOUDIALLA
" K	:	" " "	KABENDOU-KOUNKANE
Figure 3	:	Pluviométrie Journalière en 1972	x BALINGOR-TENDIMANE
Figure 4	:	" toutes les toposéquences suivantes	DIOUROU
Figure 5	:	" " "	INOR
Figure 6	:	" " "	KANDIADIOU
Figure 7	:	" " "	DIANA-BA
Figure 8	:	" " "	KARCIA
Figure 9	:	" " "	SARE-BAKARY
Figure 10	:	" " "	SARE MANSALY
Figure 11	:	" " "	MALPATIM-MAOUNDE
Figure 12	:	" " "	DIALLI-KOUNDA
Figure 13	:	" " "	TAKOUDIALLA
Figure 14	:	" " "	KABENDOU-KOUNKANE
Figure 15	:	Besoins en eau du riz IKP (ETM)	

Figure 16.	:	Bilan hydrique du riz toposéquence	BALINGOR-TENDIMANE
" 17.	:	" "	DIOUROU
" 18.	:	" "	INOR
" 19.	:	" "	KANDIADIOU
" 20.	:	" "	DIANA-BA
" 21.	:	" "	KARCIA
" 22.	:	" "	SARE-BAKARY
" 23.	:	" "	SARE-MANSALY
" 24.	:	" "	MALPATIM-MAOUNDE
" 25.	:	" "	DIALLI-KOUNDA
" 26.	:	" "	TAKOUDIALLA
" 27.	:	" "	KABENDOU-KOUNKANE

Figure 28.	:	Evolution du niveau piézométrique. Toposéquence DJEGOUNE	
" 29.	:	" "	" BALINGOR-TENDIMANE
" 30.	:	" "	" DIOUROU
" 31.	:	" "	" INOR
" 32.	:	" "	" KANDIADIOU
" 33.	:	" "	" DIANA-BA
" 34.	:	" "	" KARCIA
" 35.	:	" "	" SARE-BAKARY
" 36.	:	" "	" SARE-MANSALY
" 37.	:	" "	" MAMPATIM-MAOUNDE
" 38.	:	" "	" DIALLI-KOUNDA
" 39.	:	" "	" TAKOUDIALLA
" 40.	:	" "	" KABENDOU-KOUNKANE
" 41	:	Evolution du niveau piézométrique le long de la toposéquence	DJEGOUNE
" 42	:	" "	" BALINGOR-TENDIMANE
" 43	:	" "	" DIOUROU
" 44 et 45:	:	" "	" INOR

Figure 46 et 47	:	Evolution du niveau piézométrique le long de la toposéquence	KANDIADIOU
" 48	:	" " " "	DIANA-BA
" 49	:	" " " "	KARCIA
" 50	:	" " " "	SARE-BAKARY
" 51	:	" " " "	SARE-MANSALY
" 52	:	" " " "	MAMPATIM-MAOUNDE
" 53	:	" " " "	DIALLI-KOUNDA
" 54	:	" " " "	TAKOUDIALLA
" 55	:	" " " "	KABENDOU-KOUNKANE

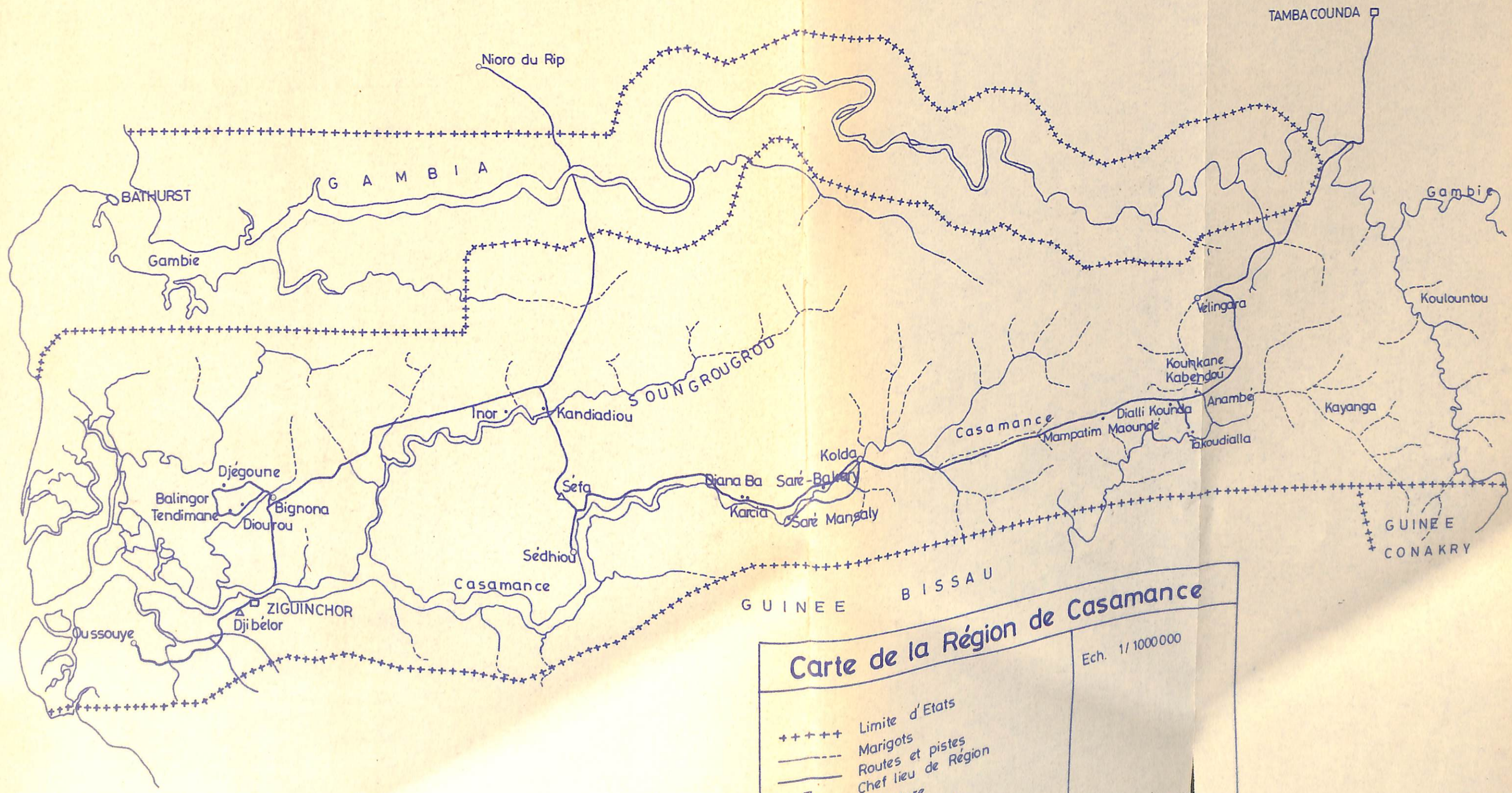
Figures 56 à 98 : Profils hydriques - humectation, assèchement

Figure 99	:	Conductivité électrique Toposéquence	BALINGOR-TENDIMAN
" 100	:	" " " "	DIOUROU
" 101	:	" " " "	INOR
" 102	:	" " " "	KANDIADIOU

Figure 103	:	Influence de la nappe sur les rendements. Toposéquence	BALINGOR-TENDIMAN
" 104	:	" " " "	DIOUROU
" 105	:	" " " "	INOR
" 106	:	" " " "	KANDIADIOU
" 107	:	" " " "	DIANA-BA
" 108	:	" " " "	KARCIA
" 109	:	" " " "	SARE-BAKARY
" 110	:	" " " "	SARE-MANSALY
" 111	:	" " " "	MAMPATIM-MAOUNDE
" 112	:	" " " "	DIALLI-KOUNDA
" 113	:	" " " "	TAKOUDIALLA
" 114	:	" " " "	KABENDOU-KOUNKANE

Figure 115 : Variation de la nappe dans le puits de Saré-Bakary en 1972 et 1973

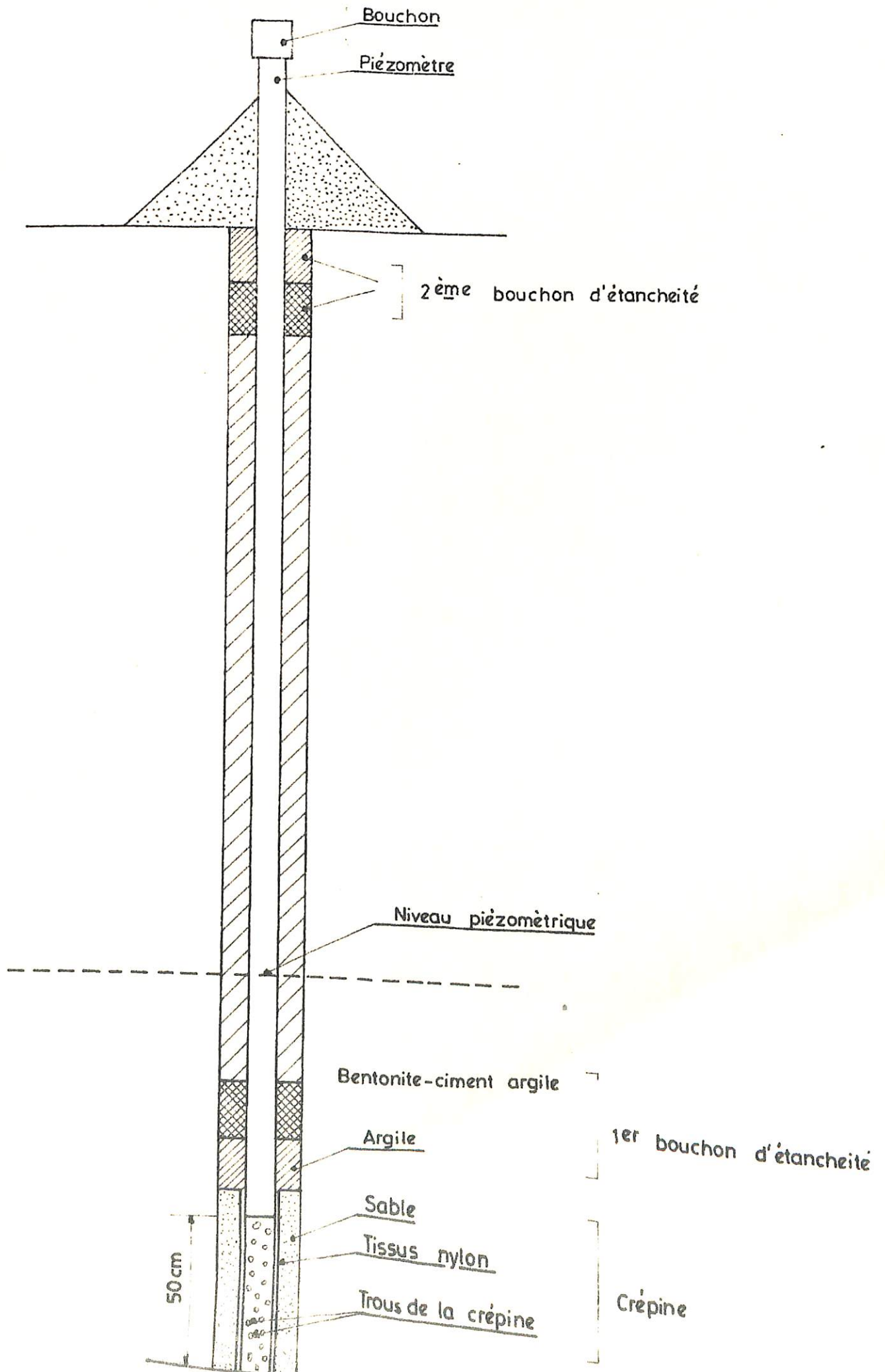
Figure 116	:	Esquisse morphopédologique	:	BALINGOR-TENDIMANE-DIOUROU-DJEGOUNE
" 117	:	"	"	SARE-BAKARY - SARE-MANSALY
" 118	:	"	"	MAMPATIM-MAOUNDE
" 119	:	"	"	DIALLI-KOUNDA
" 120	:	"	"	TAKOUDIALLA
" 121	:	"	"	KABENDOU-KOUNKANE

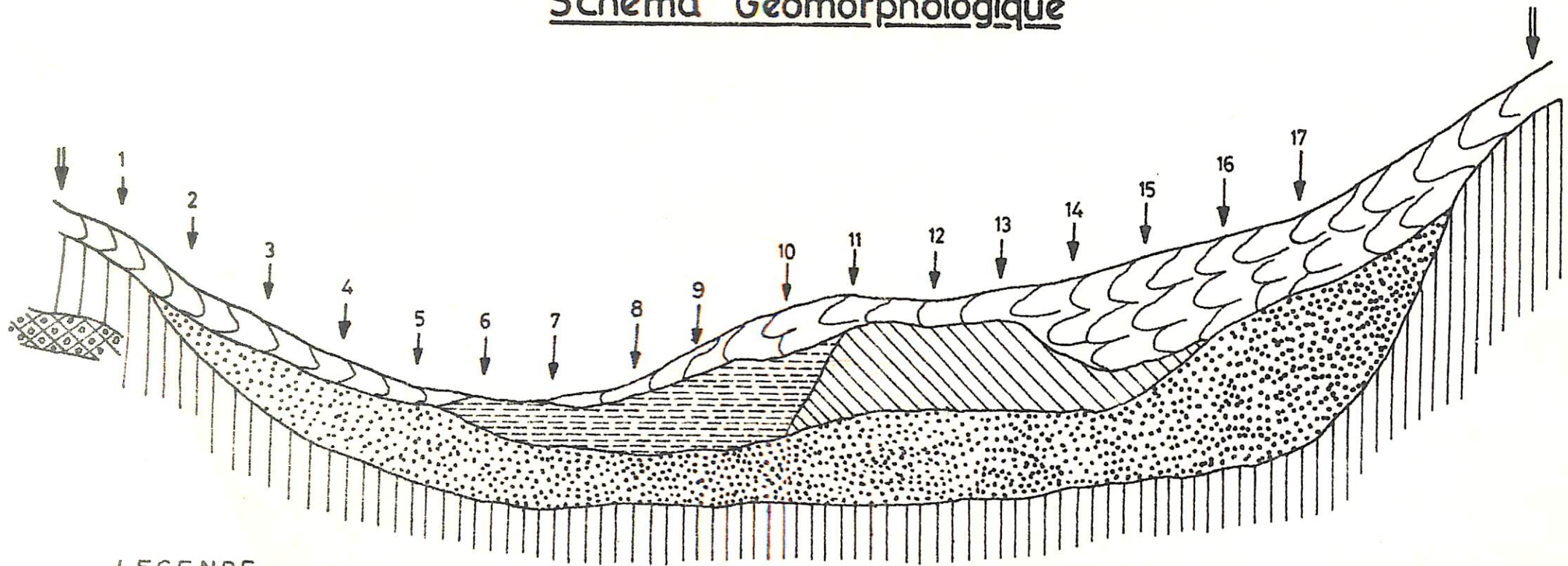



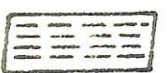




Carte de la Région de Casamance
 Ech. 1/1000000

- +++++ Limite d'Etats
- Marigots
- Routes et pistes
- Chef lieu de Région
- Préfecture
- △ Station I.R.A.T.
- Toposequence

Mode d'implantation des piézomètres



DJEGOUNESchéma GéomorphologiqueLEGENDE

-  Colluvion récent (sableux)
-  Nouakchottien récent (argileux)
-  Glacis terrasse ancien (limono-argileux)
-  Nouakchottien ancien (sableux)
-  Continental terminal
-  Cuirasse

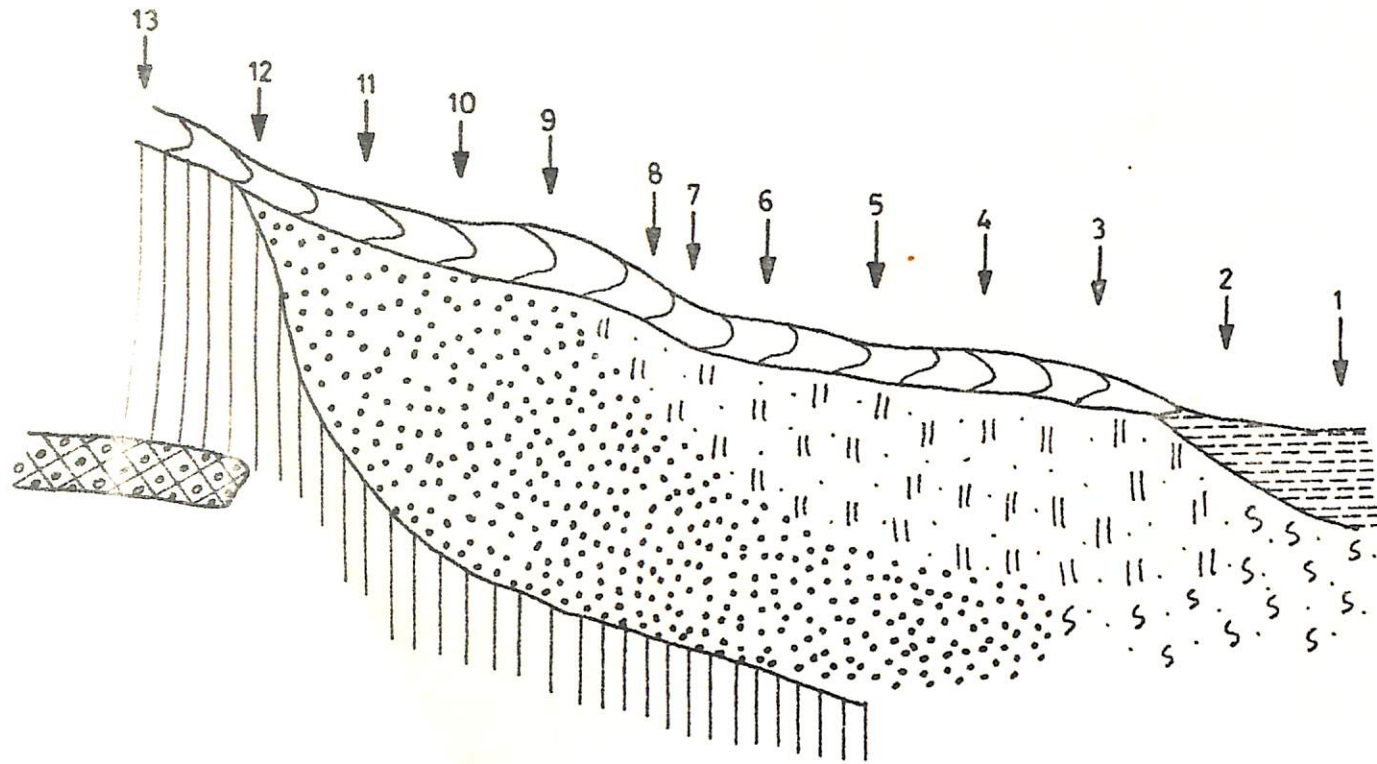
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H = 1/100

↓ Emplacement Piézomètre



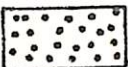
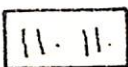
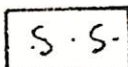


↓ Puits

BALINGOR - TENDIMANE

Schéma Géomorphologique



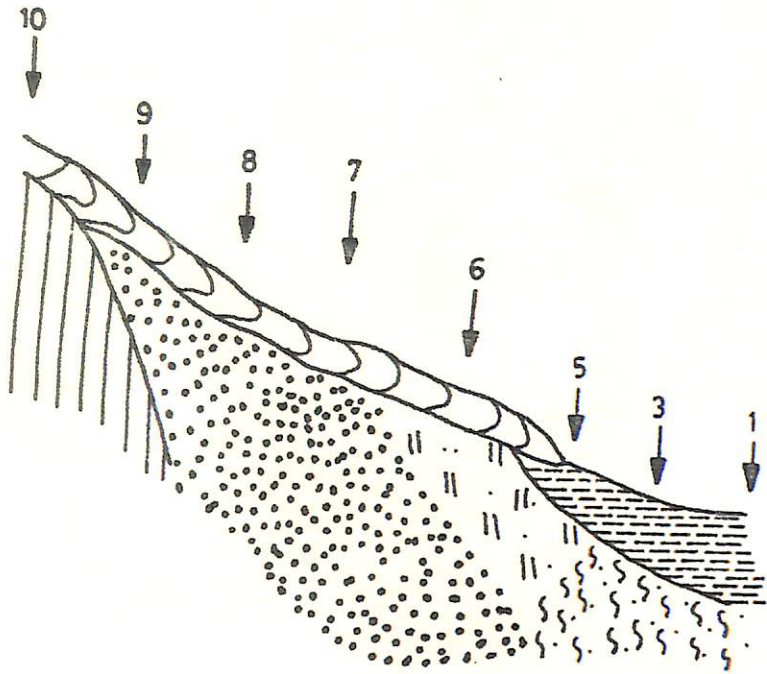
LEGENDE

-  Colluvion récent (sableux)
-  Nouakchottien (argileux)
-  Nouakchottien ancien (sableux)
-  Nouakchottien (ancien sol de mangrove)
-  Nouakchottien tourbeux et gley
-  Continental-terminal
-  Cuirasse

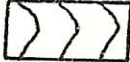


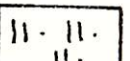
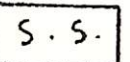

L = 1/4 000
 ECH. H = 1/100

↓ Emplacement piézomètre

Schéma Géomorphologique



LEGENDE

-  Colluvion récent
-  Nouakchottien récent (argileux et sale)
-  Nouakchottien ancien (sableux)
-  Nouakchottien (ancien sol de mangrove)
-  Nouakchottien (gley, tourbe, très salé)
-  Continental-terminal

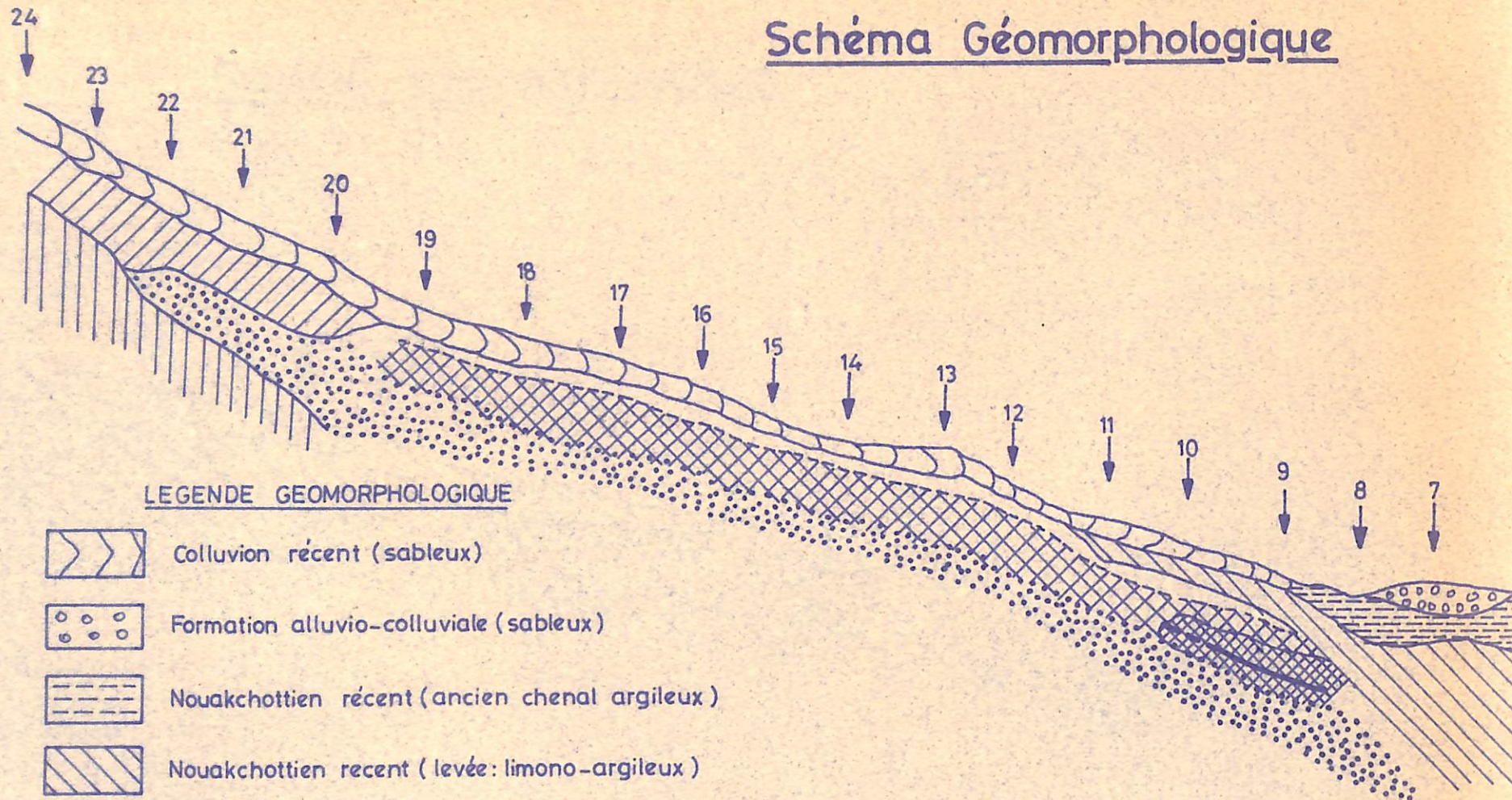
L = 1/4 000

ECH.


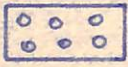





H = 1/100

↓ Emplacement piézomètre

Schéma Géomorphologique



LEGENDE GEOMORPHOLOGIQUE

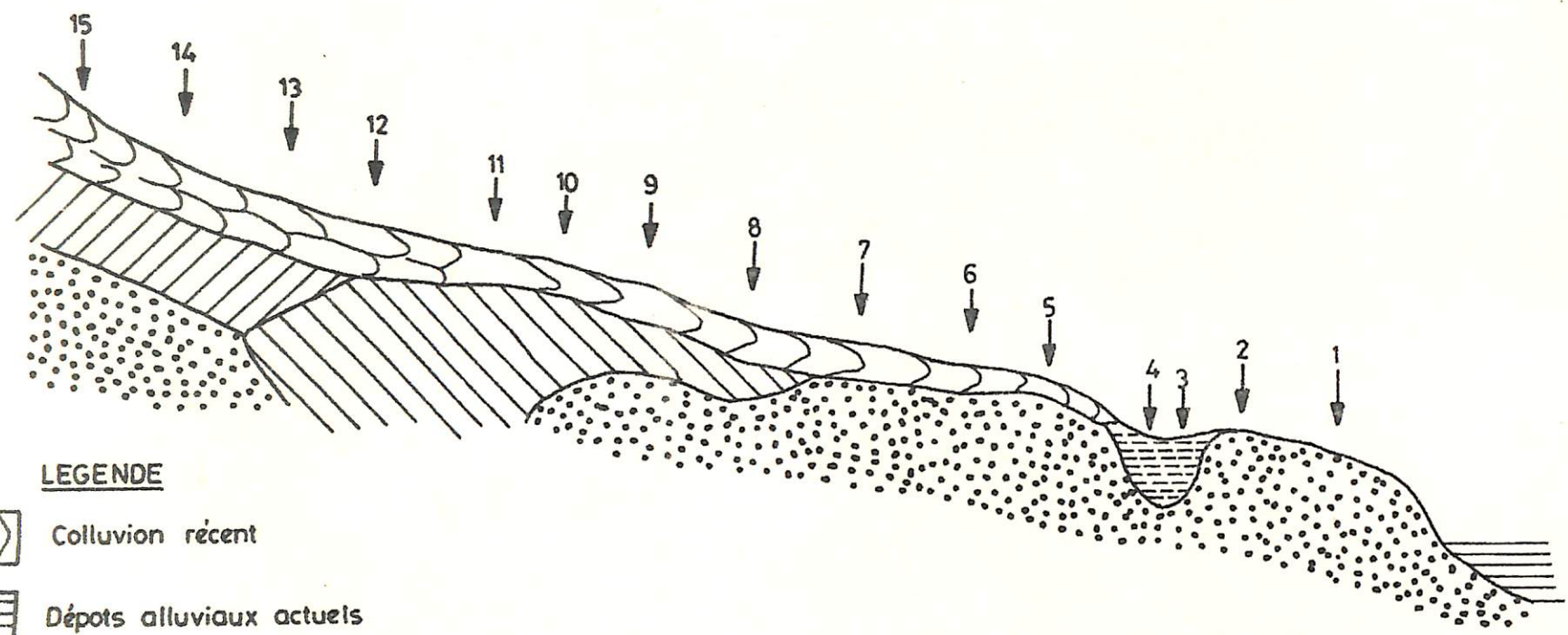
-  Colluvion récent (sableux)
-  Formation alluvio-colluviale (sableux)
-  Nouakchottien récent (ancien chenal argileux)
-  Nouakchottien recent (levée: limono-argileux)
-  Colluvion ancien (sablo-limoneux)
-  Nouakchottien ancien (sableux)
-  Continental terminal

ECH. L = 1/4 000
H = 1/100







↓ Emplacement Piézomètre

KARCIA

Schéma Géomorphologique



LEGENDE

-  Colluvion récent
-  Dépôts alluviaux actuels
-  Nouakchottien récent (ancien chenal argileux)
-  Nouakchottien (glacis terrasse limono-argileux)
-  Colluvion ancien (sable limoneux)
-  Nouakchottien ancien (sableux)

ECH L = 1 / 4 000
H = 1 / 100

↓ Emplacement piézomètre

SARE BAKARY

Schéma Géomorphologique

LEGENDE



Colluvion récent



Nouakchottien récent (ancien chenal argileux basse te)



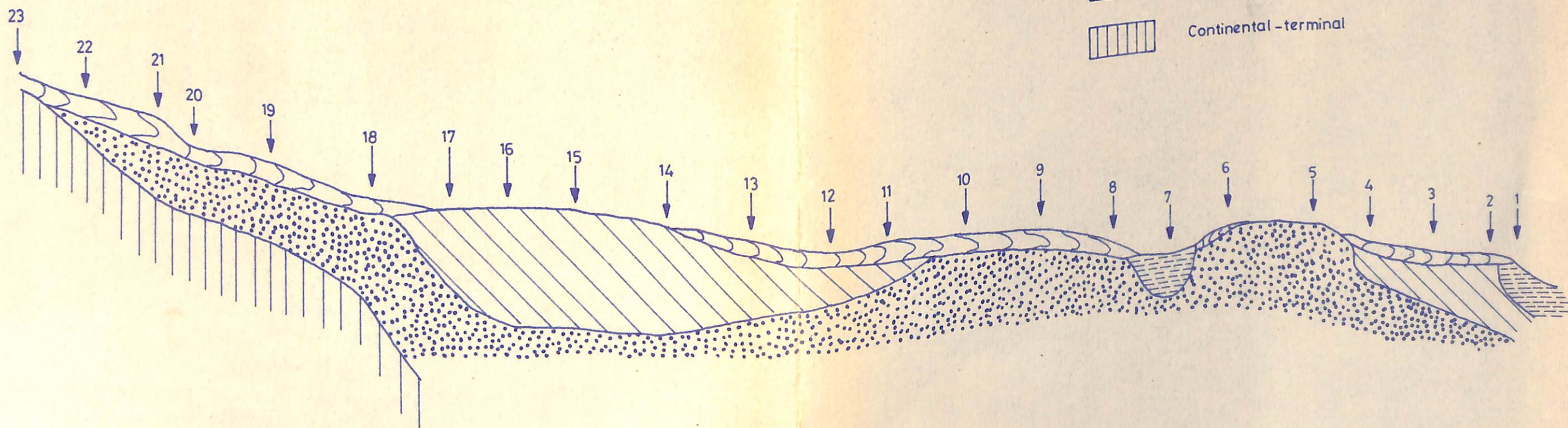
Nouakchottien récent (glacis - terrasse limono-argileux)



Nouakchottien ancien (sableux)



Continental-terminal

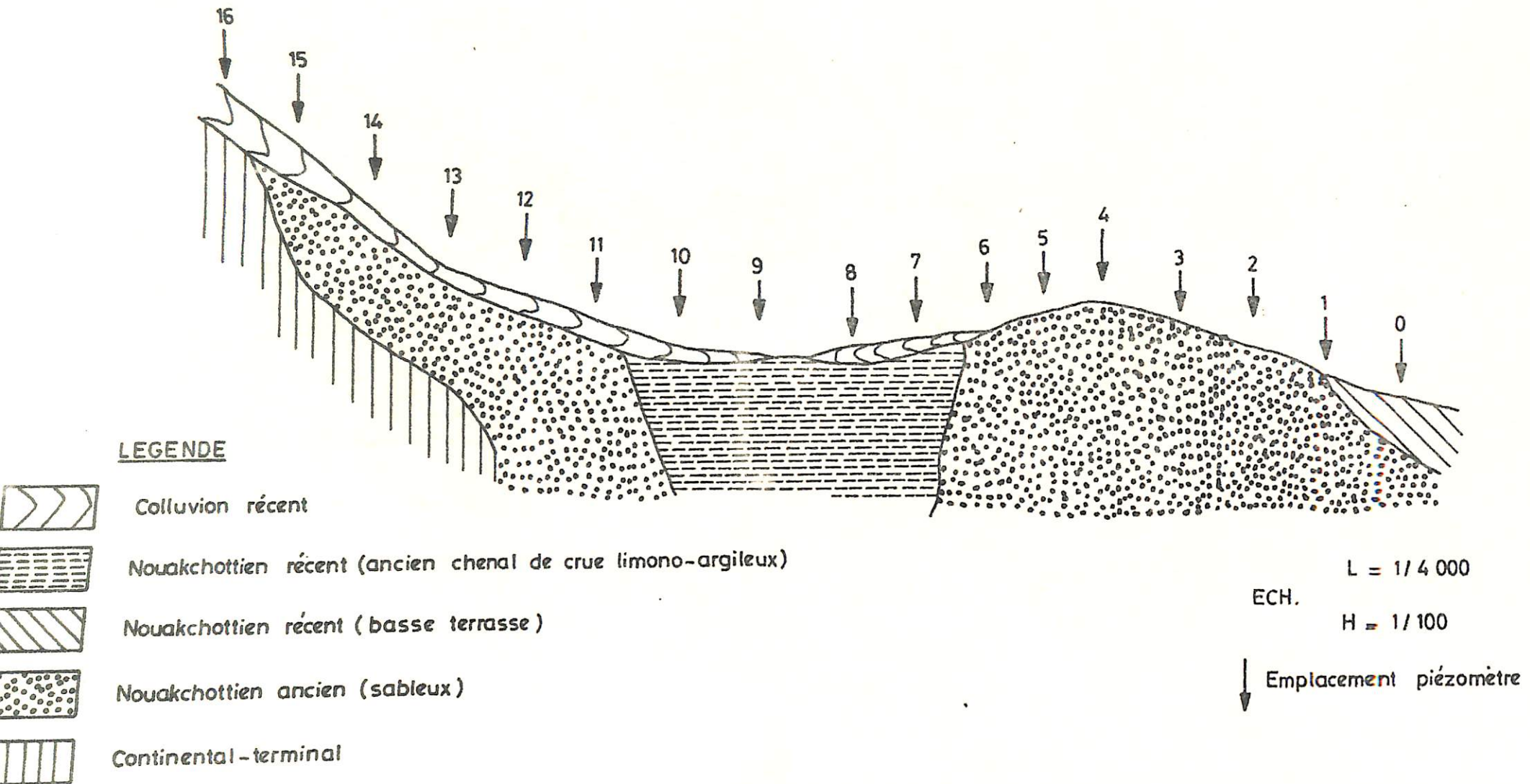


L = 1 / 4 000
ECH. H = 1 / 100

↓ Emplacement piézomètre

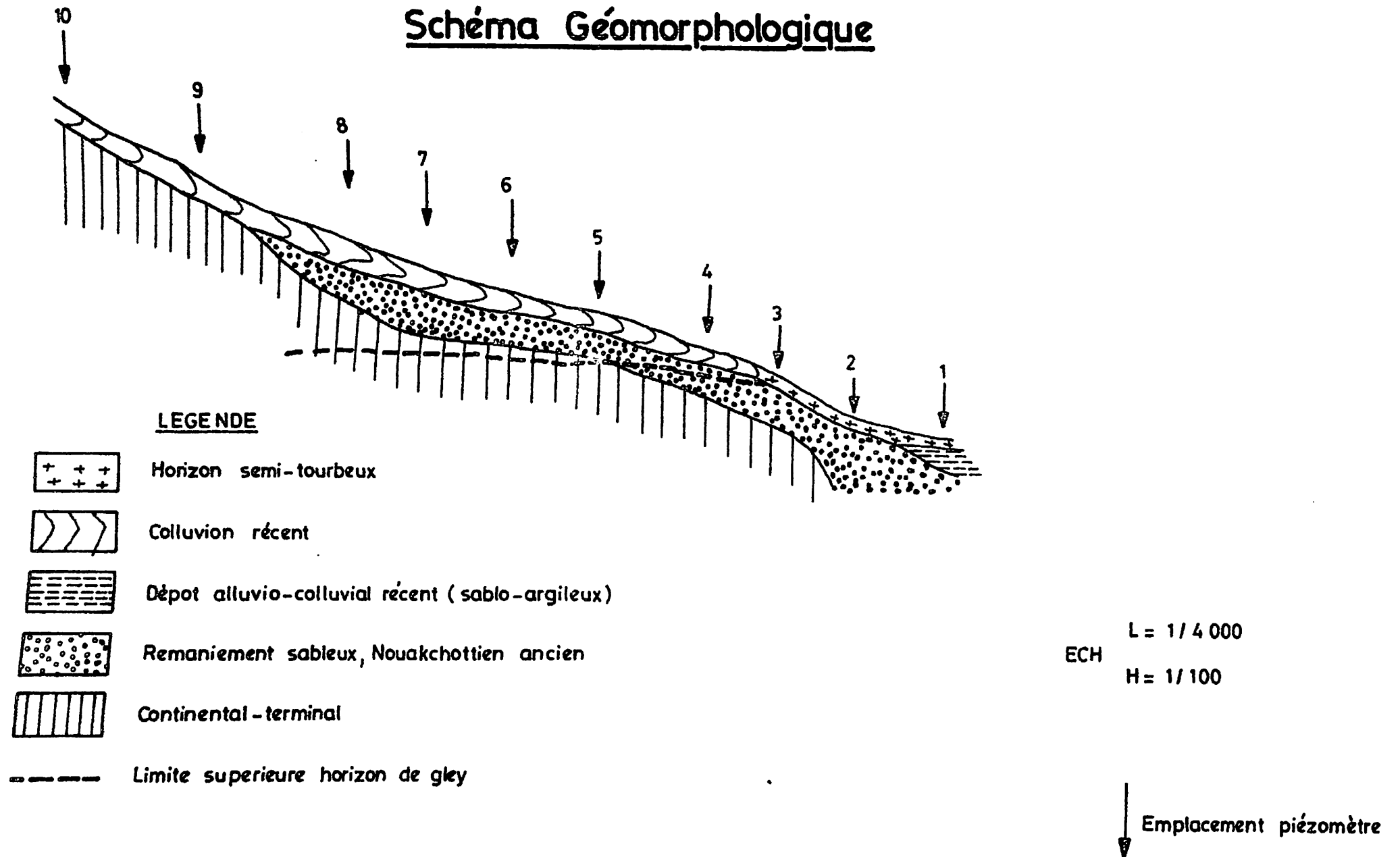
SARE MANSALY

Schéma Géomorphologique



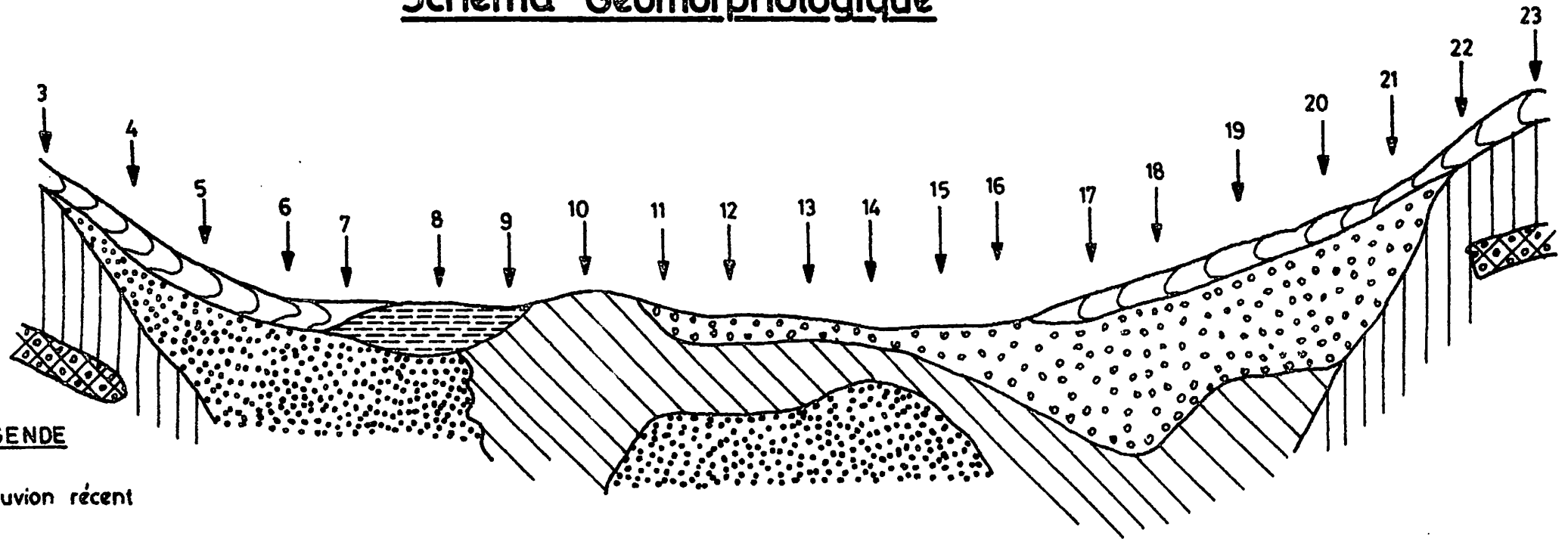
MAMPATIM MAOUNDE

Schéma Géomorphologique










DIALLI-KOUNDA

Schéma Géomorphologique



LEGENDE

-  Colluvion récent
-  Dépot alluvial récent (limono-argileux)
-  Remaniement alluvio-colluvial récent (sableux)
-  Dépot ancien (limono-argileux)
-  Remaniement sableux Nouakchottien ancien
-  Continental-terminal
-  Cuirasse





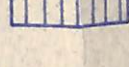
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 H = 1 / 100

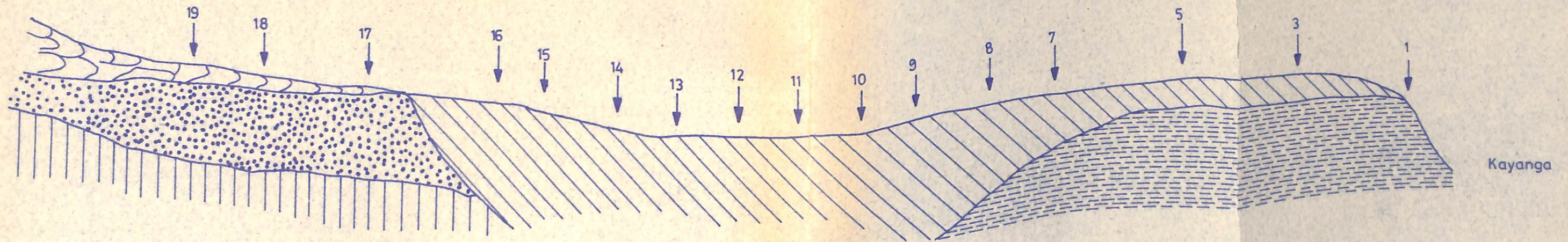
↓
 Emplacement piézomètre

TAKOUDIALLA

Schéma Géomorphologique

LEGENDE

-  Colluvion récent
-  Dépôt limono-argileux récent
-  Bourrelet de berge argileux ancien
-  Colluvion sableux ancien
-  Continental terminal

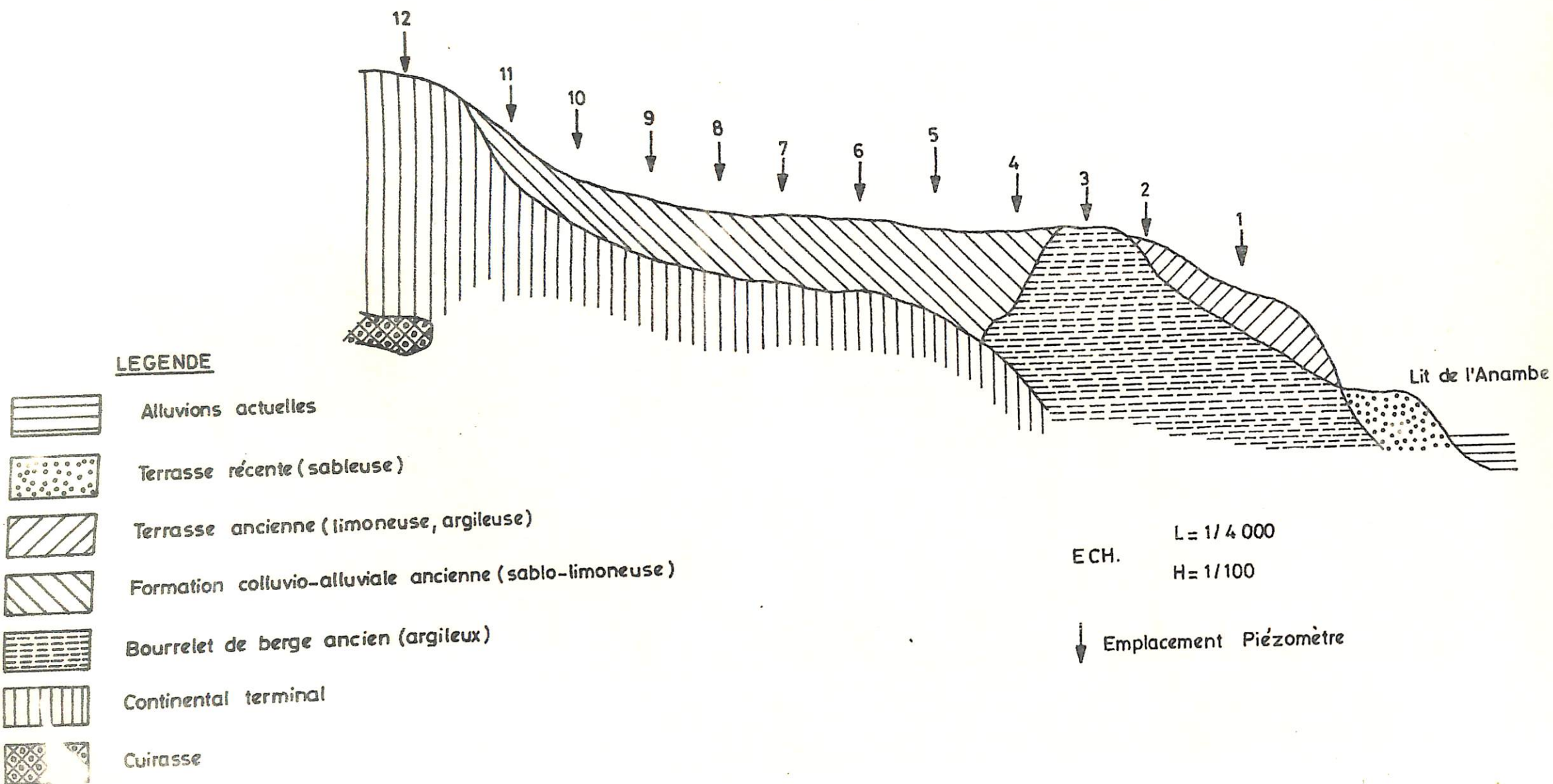


ECH L = 1/4 000
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↓ Emplacement piézomètre

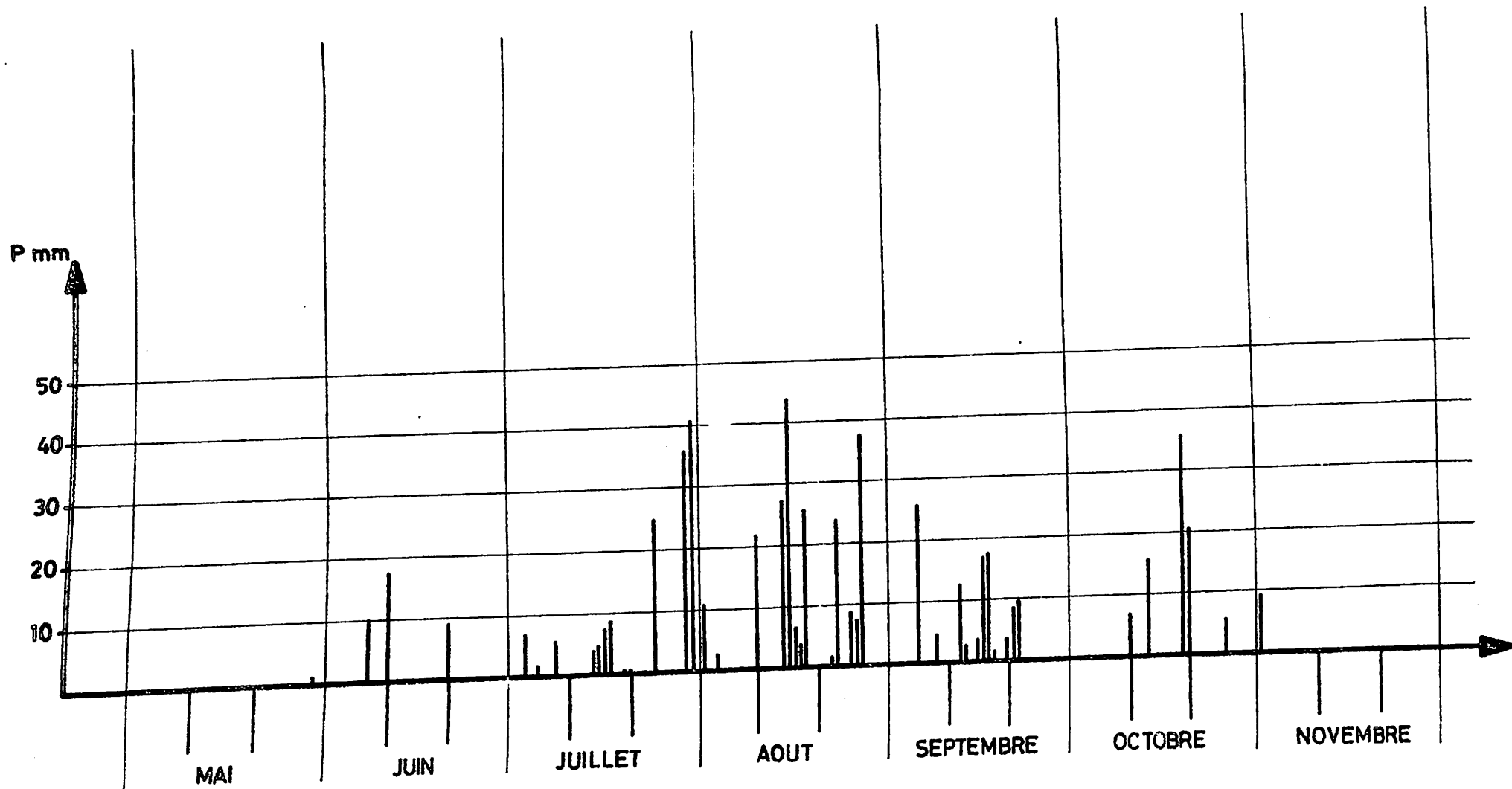
KABENDOU KOUNKANE

Schéma Géomorphologique



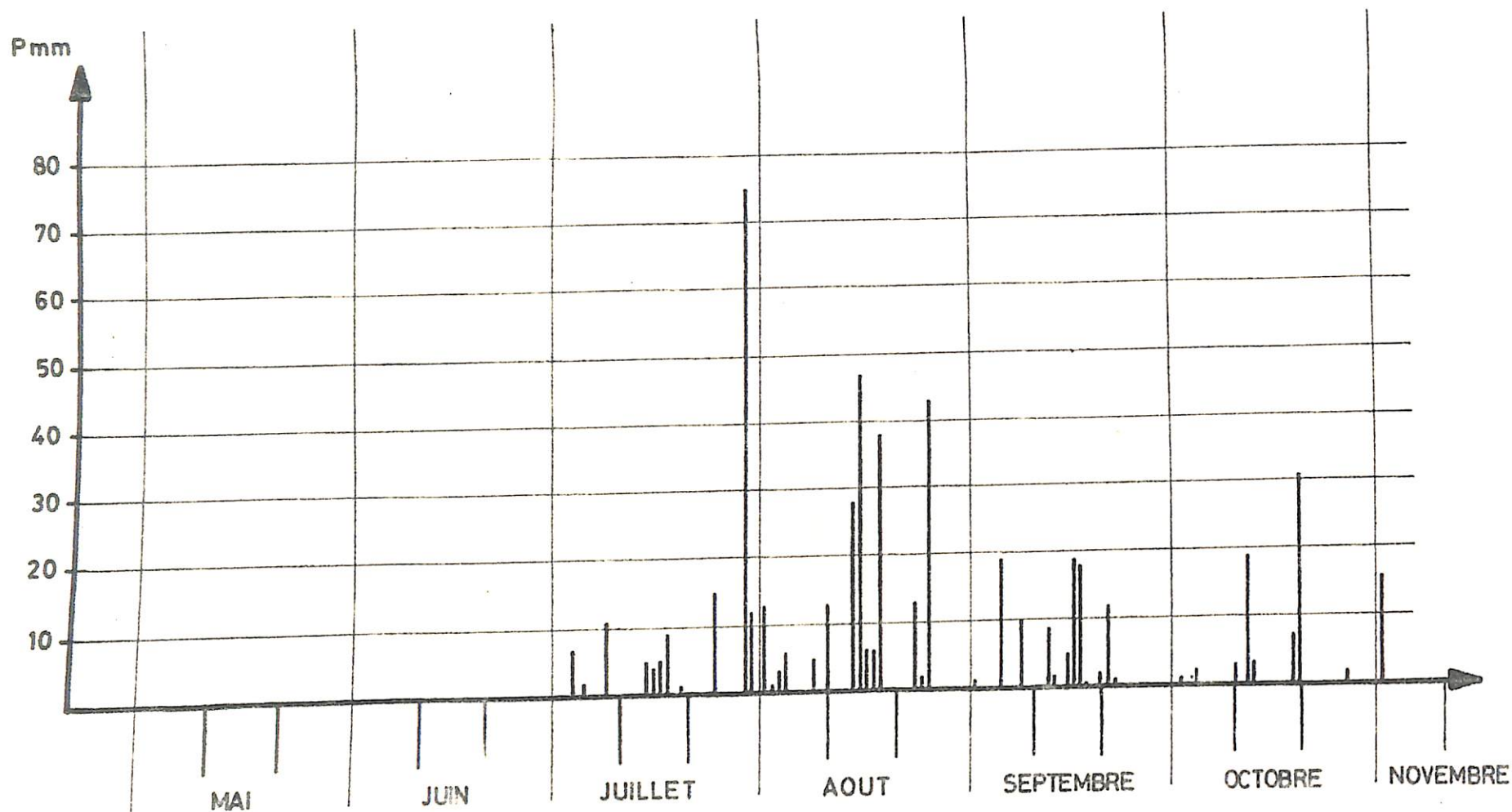
PLUVIOMETRIE JOURNALIERE A BALINGOR-TENDIMANE 1972

Total des pluies : 610mm



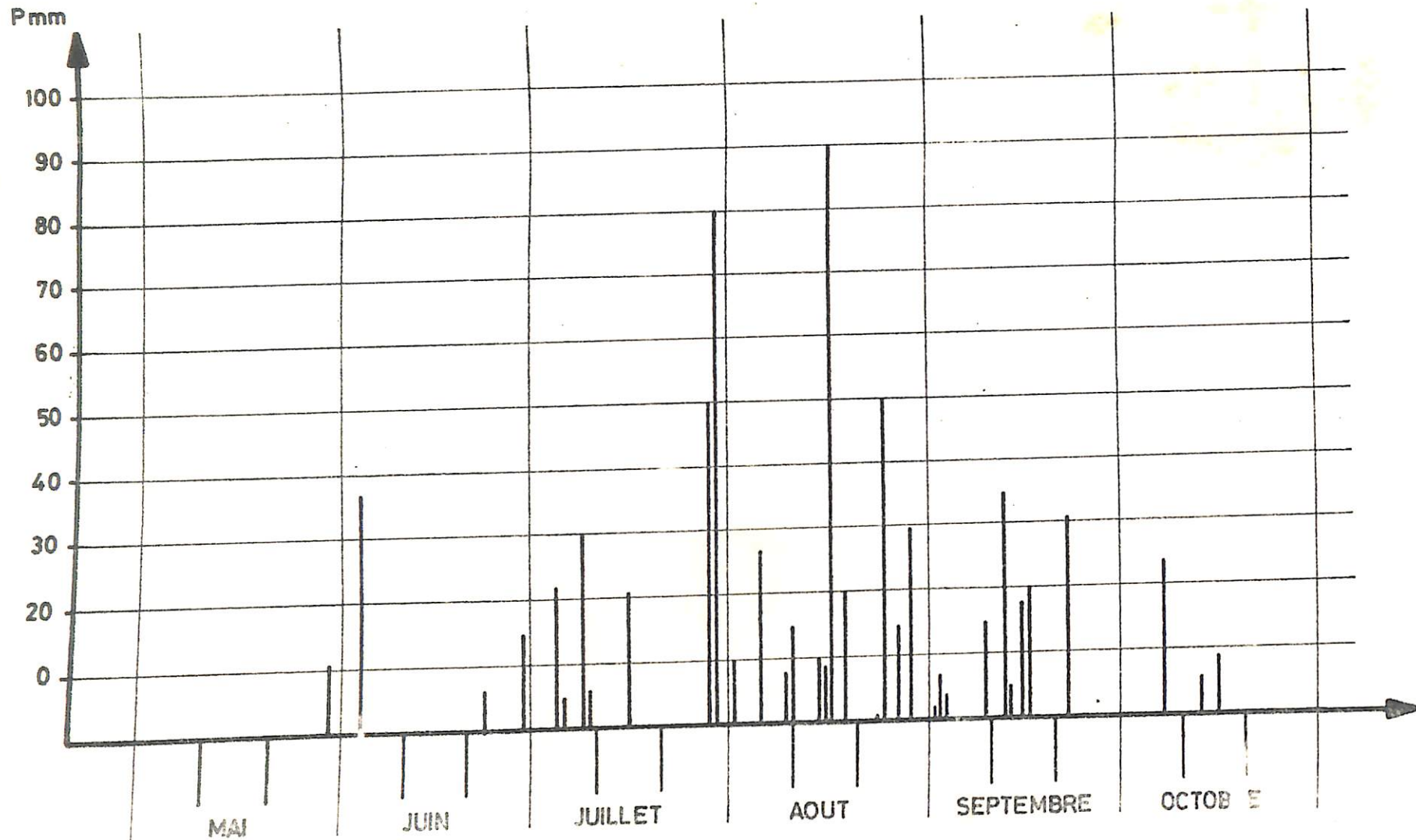
PLUVIOMETRIE JOURNALIERE A DIOUROU 1972

Total des pluies : 595mm



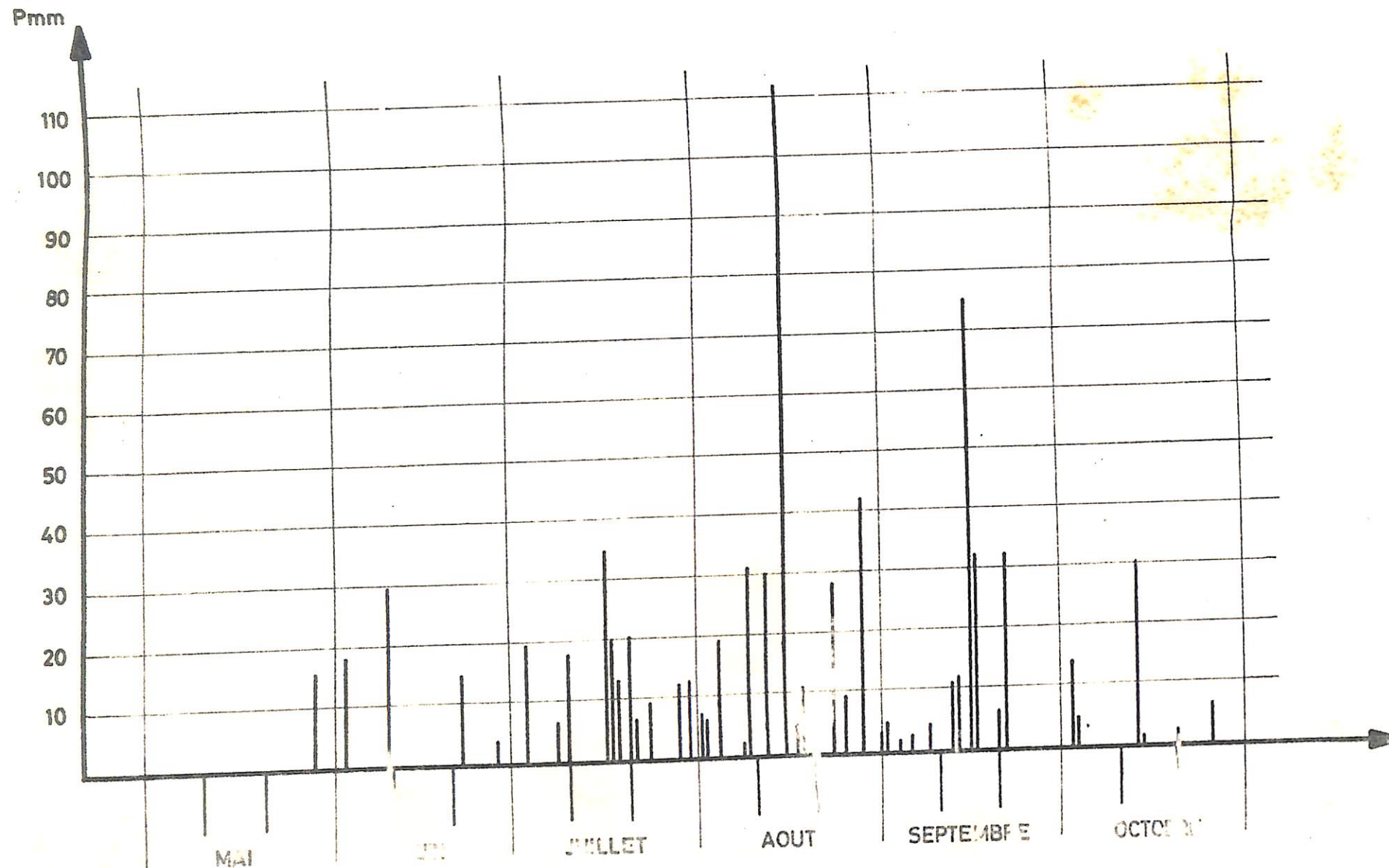
PLUVIOMETRIE JOURNALIERE A KANDIADIOU 1972

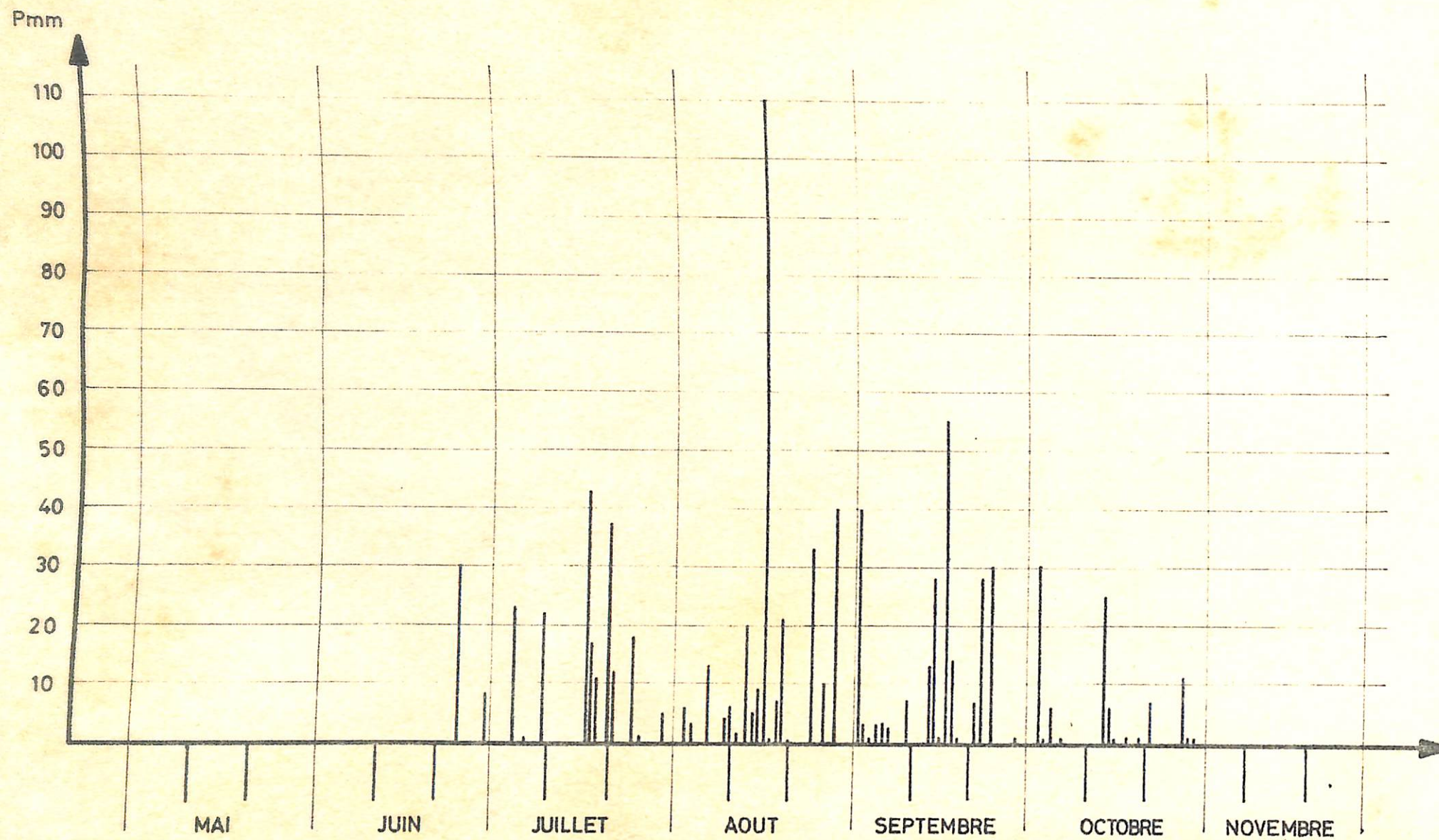
Total des pluies: 789 mm



PLUVIOMETRIE JOURNALIERE A DIANA-BA 1972

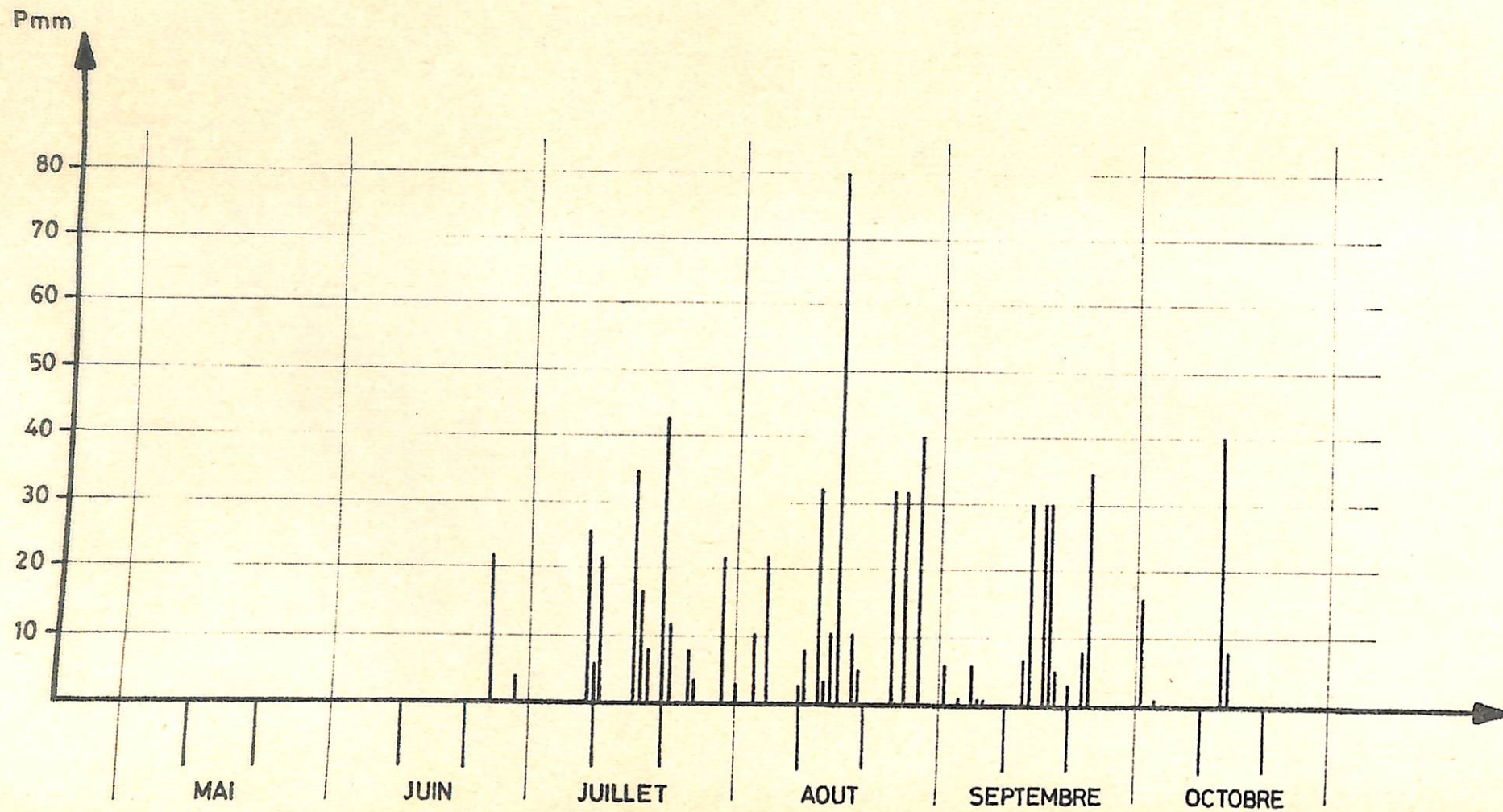
Total des pluies : 822mm



PLUVIOMETRIE JOURNALIERE A KARCIA 1972Total des pluies : 863mm

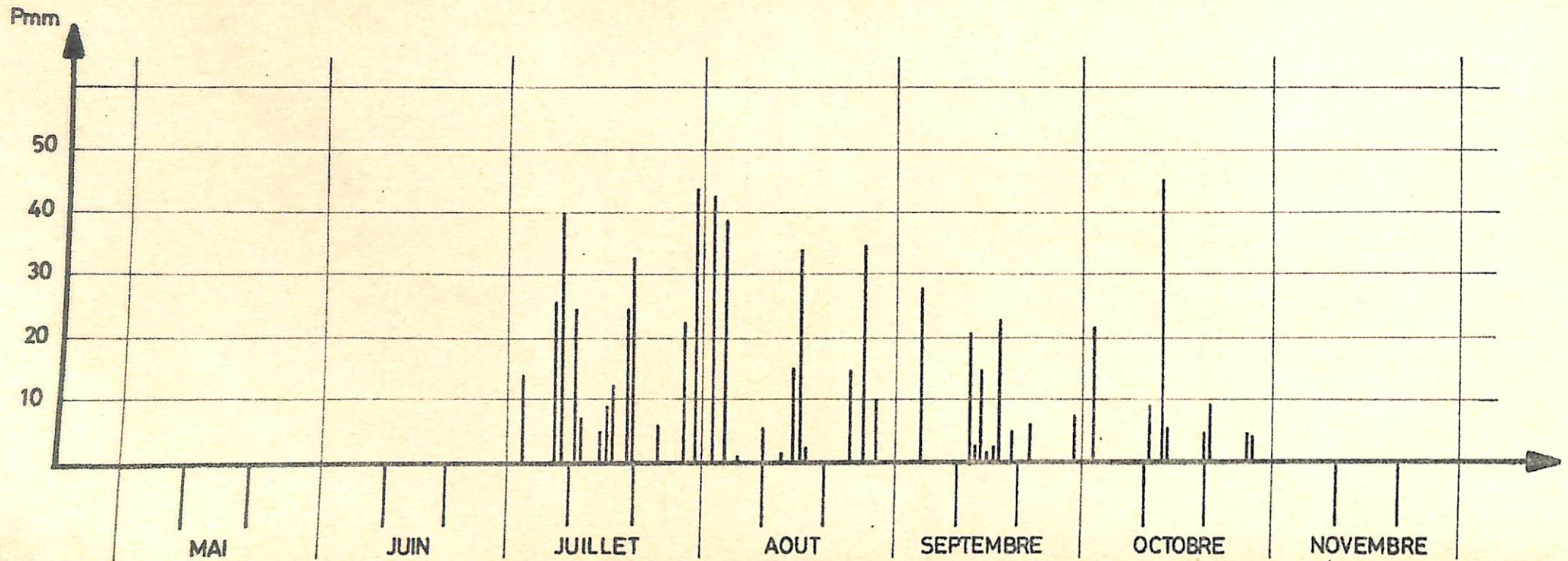
PLUVIOMETRIE JOURNALIERE A SARE MANSALY 1972

Total des pluies : 752mm



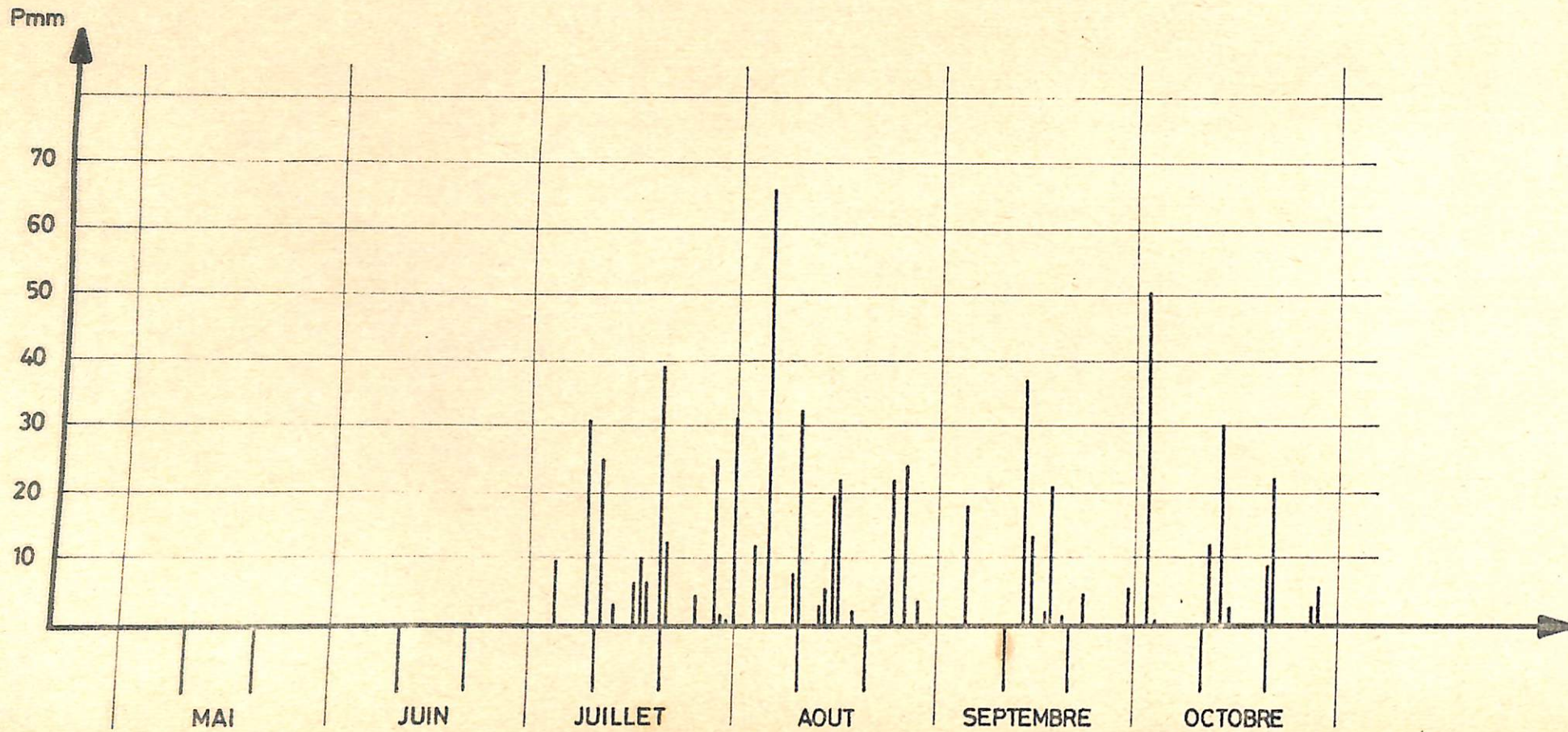
PLUVIOMETRIE JOURNALIERE A DIALLI-KOUNDA 1972

Total des pluies: 694 mm



PLUVIOMETRIE JOURNALIERE A KABENDOU-KOUNKANE 1972

Total des pluies : 668mm

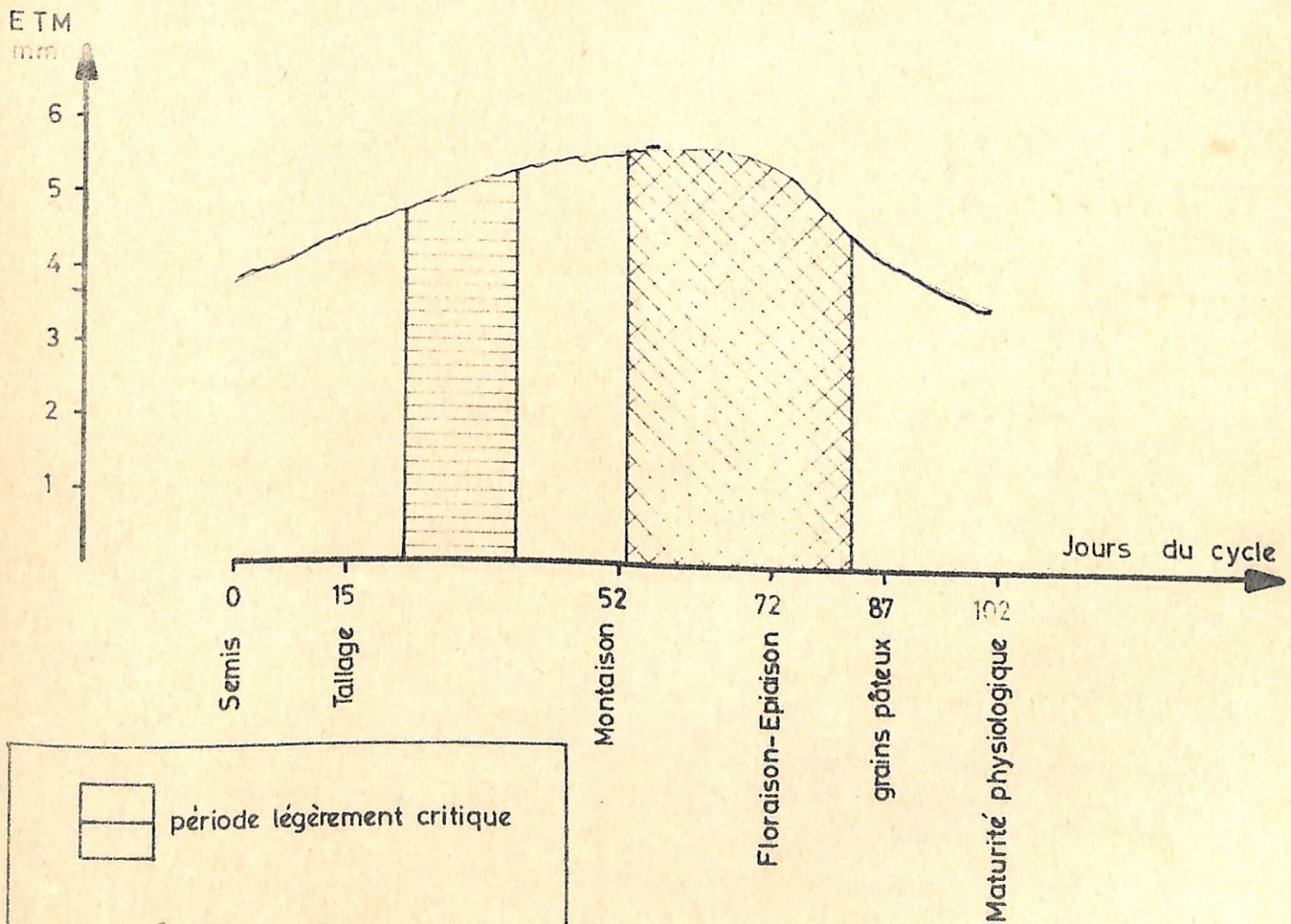




EVAPOTRANSPIRATION MAXIMALE

JOURNALIERE A KOLDA EN 1970

DU RIZ IKP

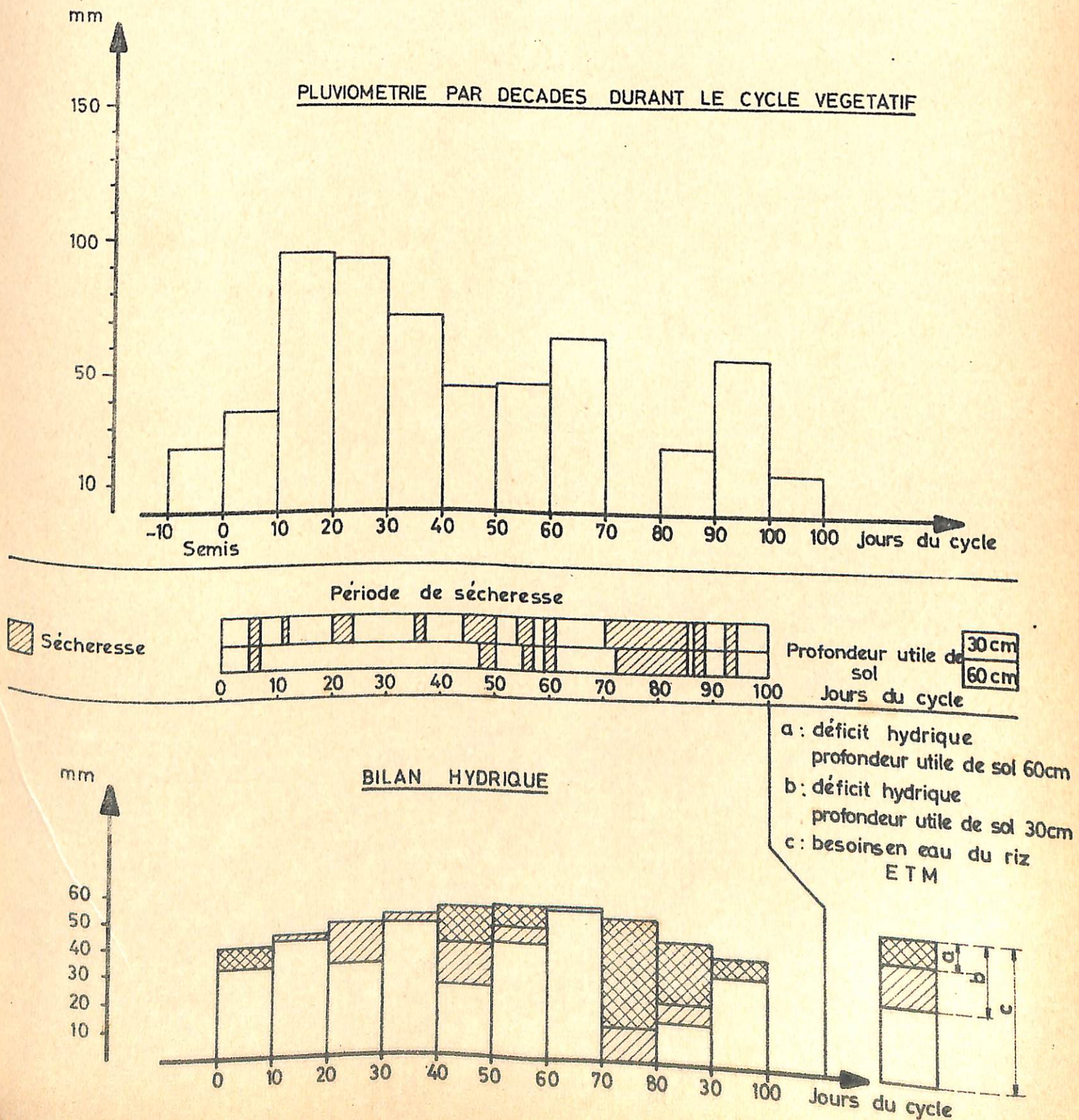
(D'apres VINH)



 p riode l g rement critique
 p riode tr s critique
 (d'apr s Dancette 1972)

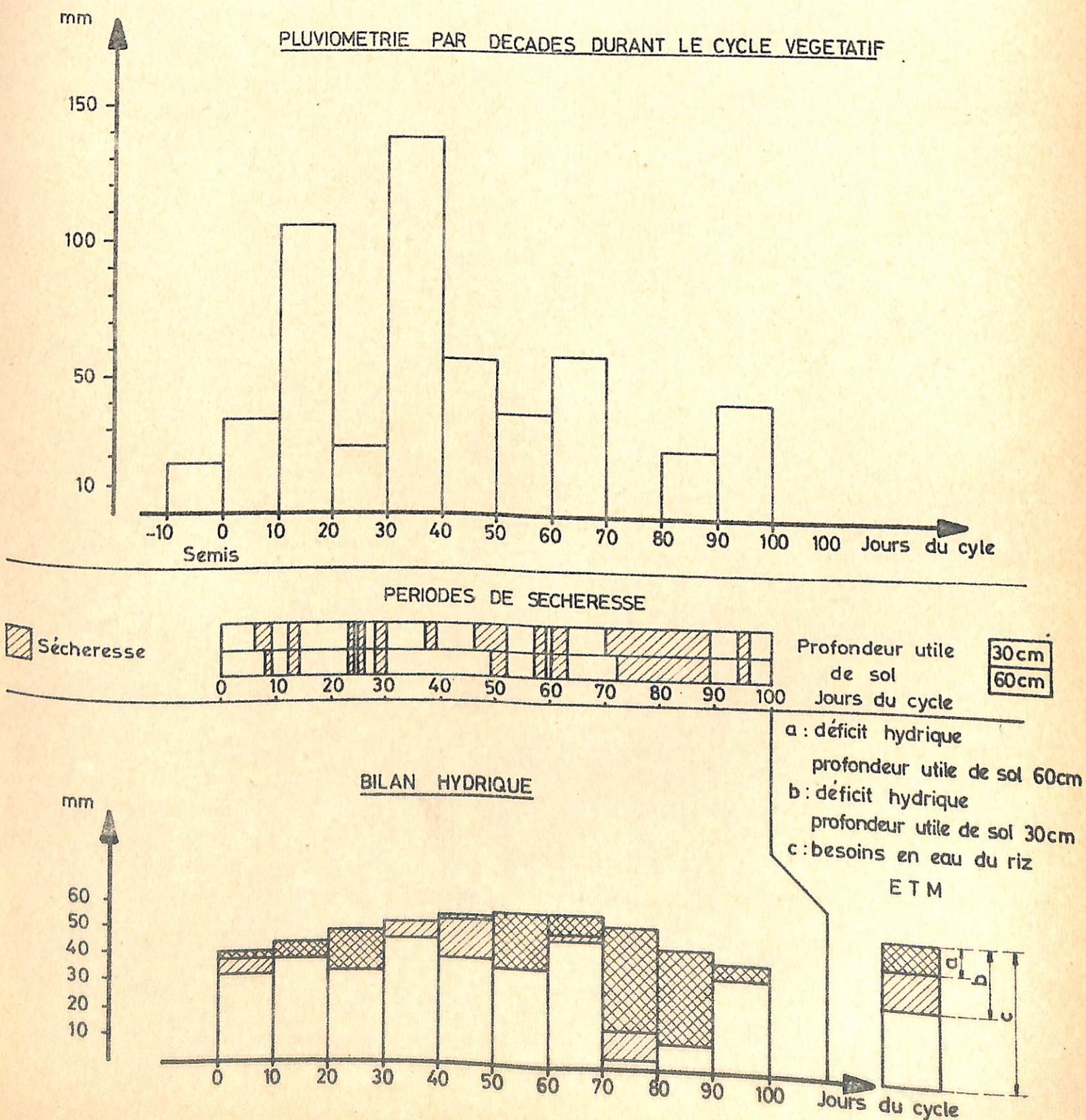
SUR L'ALIMENTATION EN EAU DU RIZ

A BALINGOR-TENDIMANE 1972



SUR L'ALIMENTATION EN EAU DU RIZ

A DIOUROU 1972

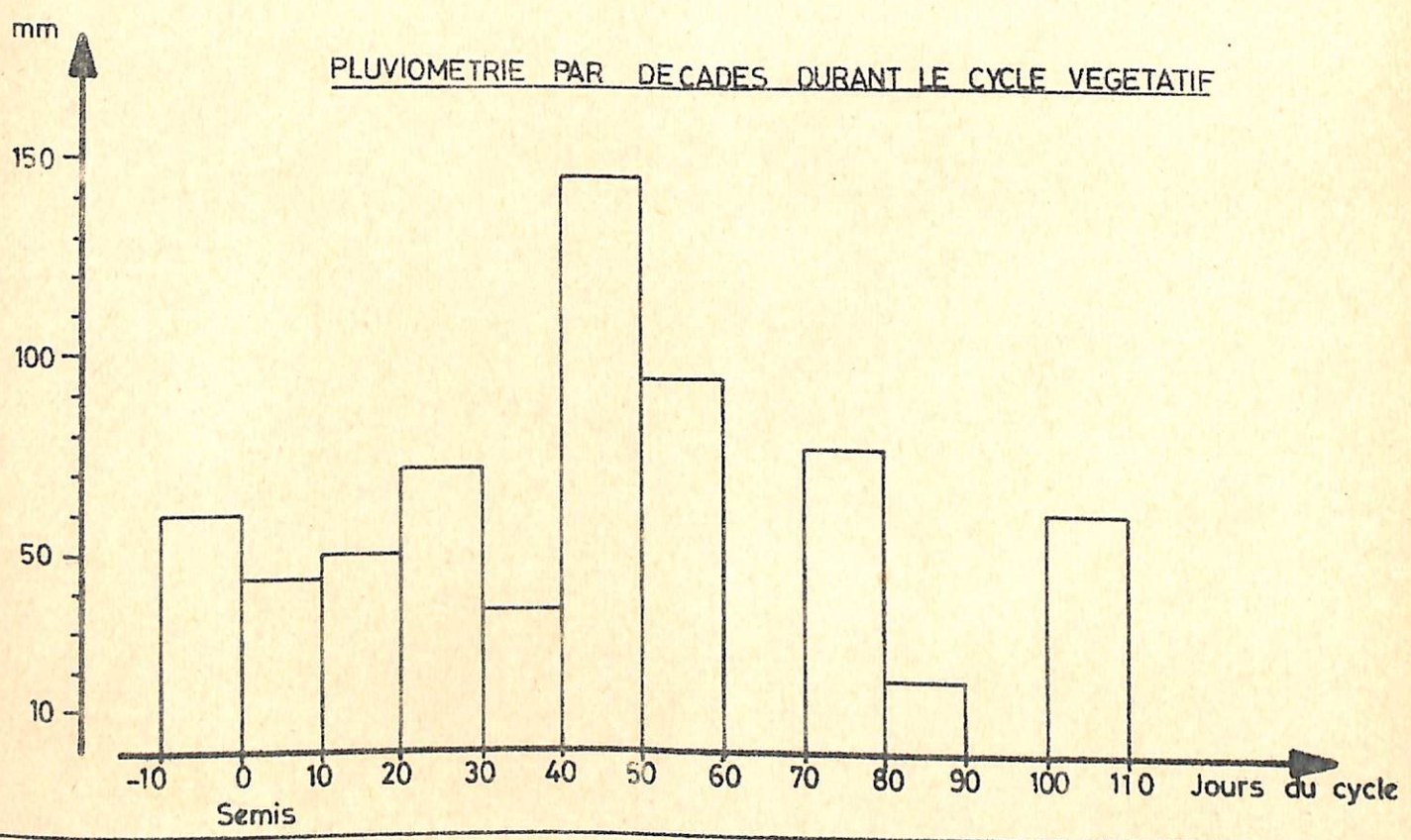


ETUDE DES CONDITIONS PLUVIALES

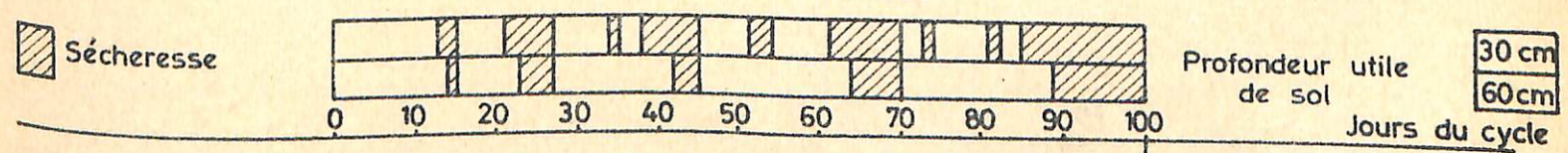
SUR L'ALIMENTATION EN EAU DU RIZ

A INOR 1972

PLUVIOMETRIE PAR DECADES DURANT LE CYCLE VEGETATIF

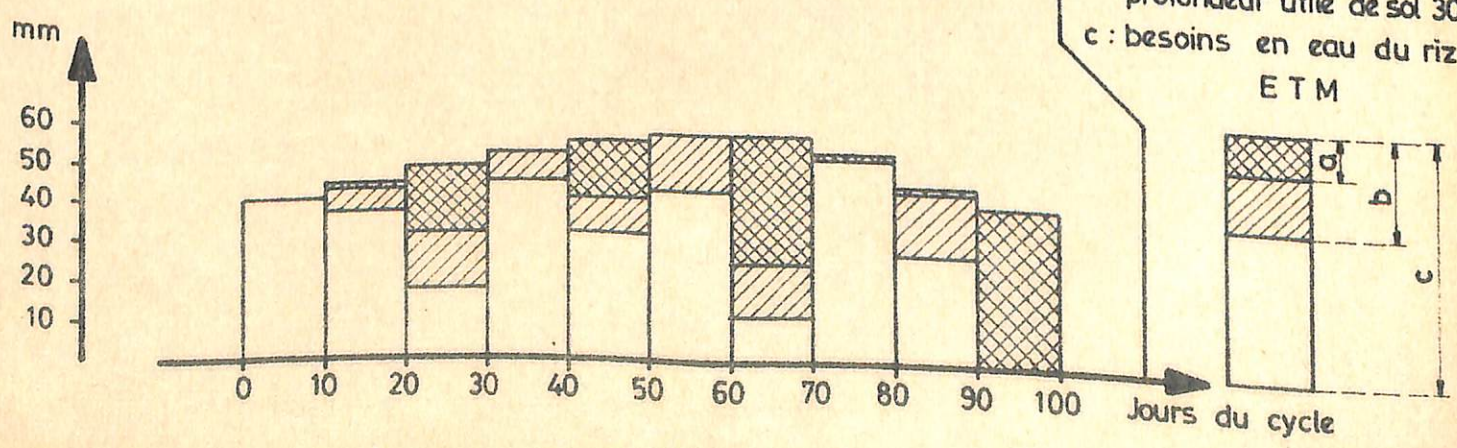


Périodes de sécheresse



BILAN HYDRIQUE

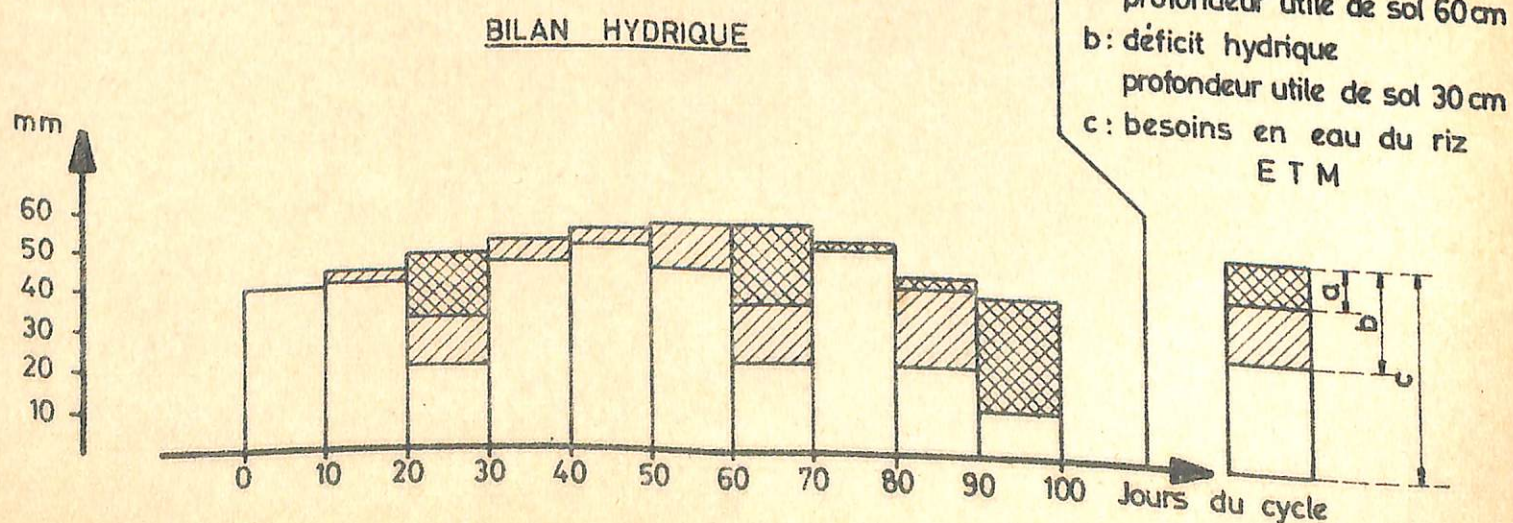
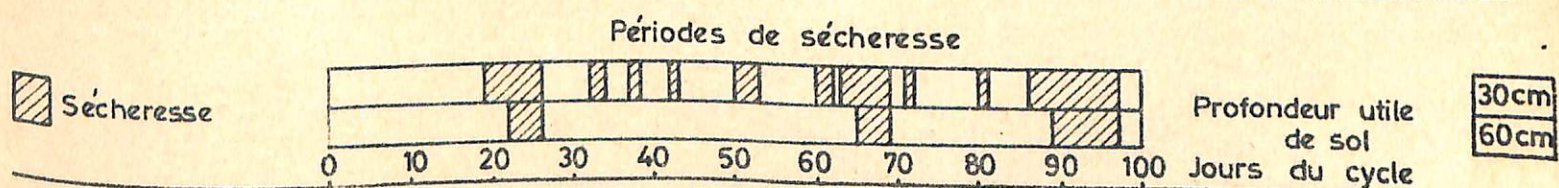
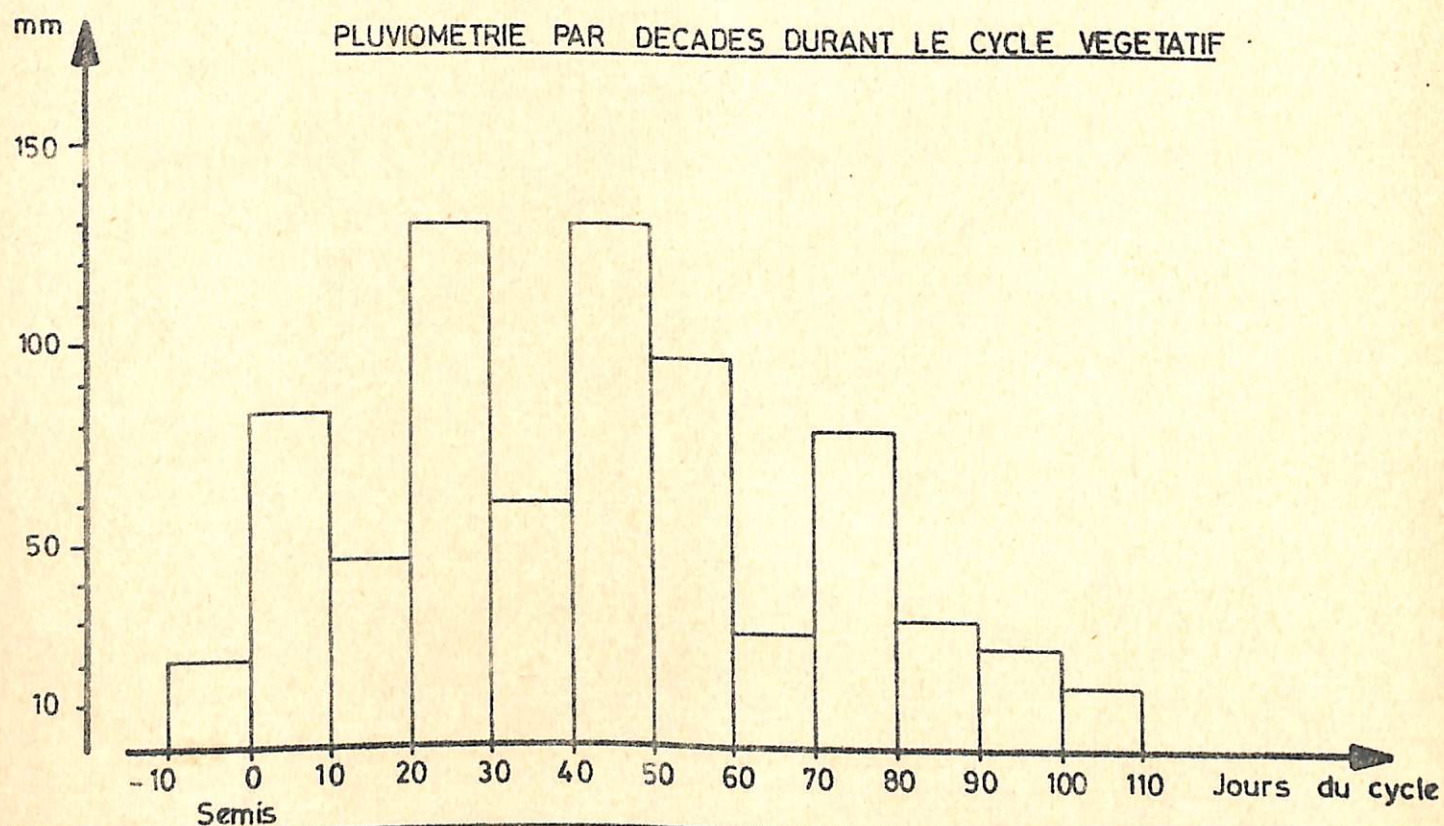
a : déficit hydrique
profondeur utile de sol 60cm
b : déficit hydrique
profondeur utile de sol 30cm
c : besoins en eau du riz
ETM



ETUDE DES CONDITIONS PLUVIALES

SUR L'ALIMENTATION EN EAU DU RIZ

A KANDIADIOU 1972

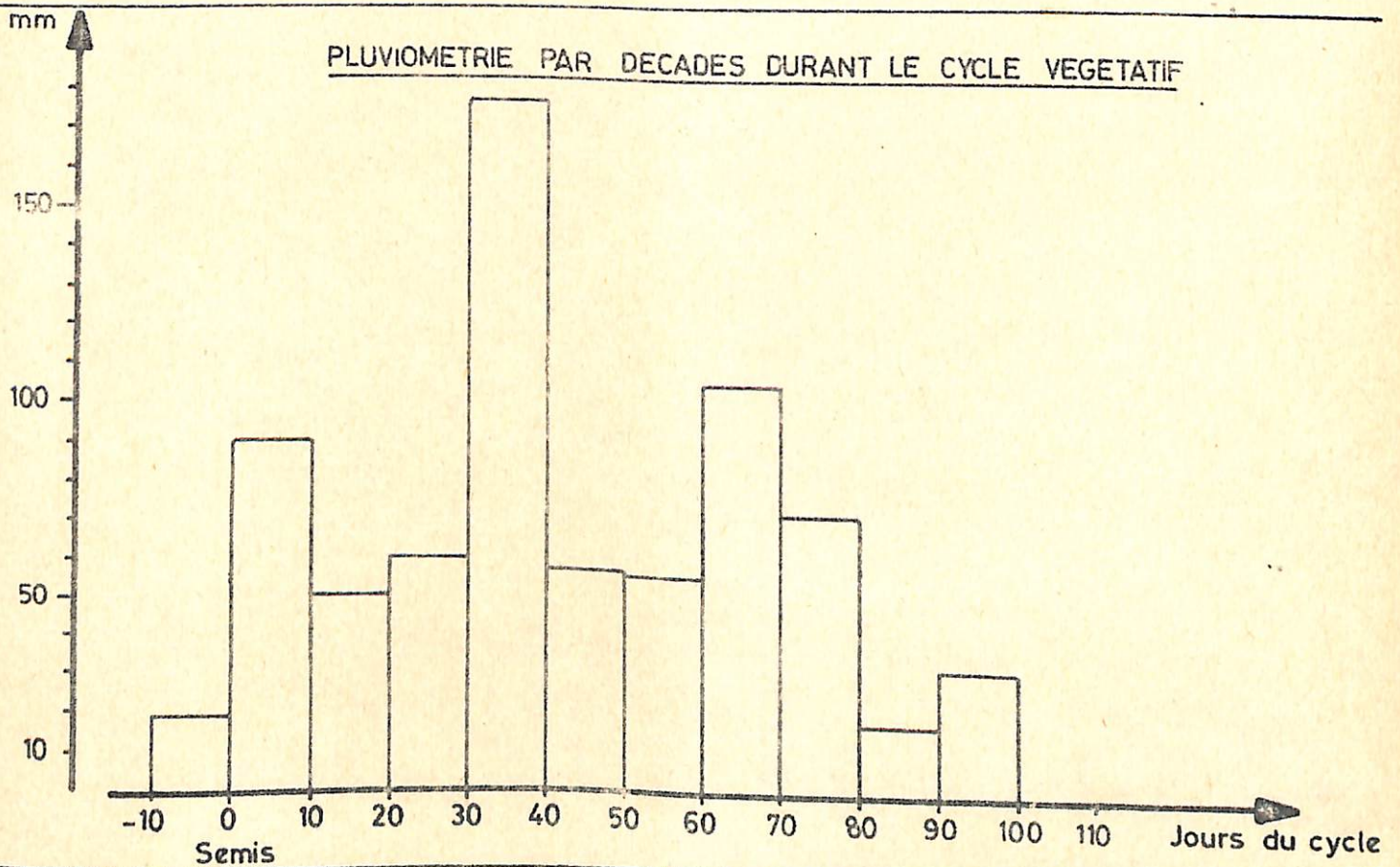


ETUDE DES CONDITIONS PLUVIALES

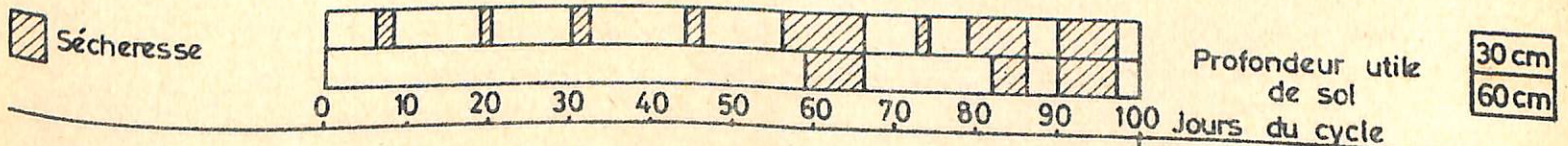
SUR L'ALIMENTATION EN EAU DU RIZ

A DIANA-BA 1972

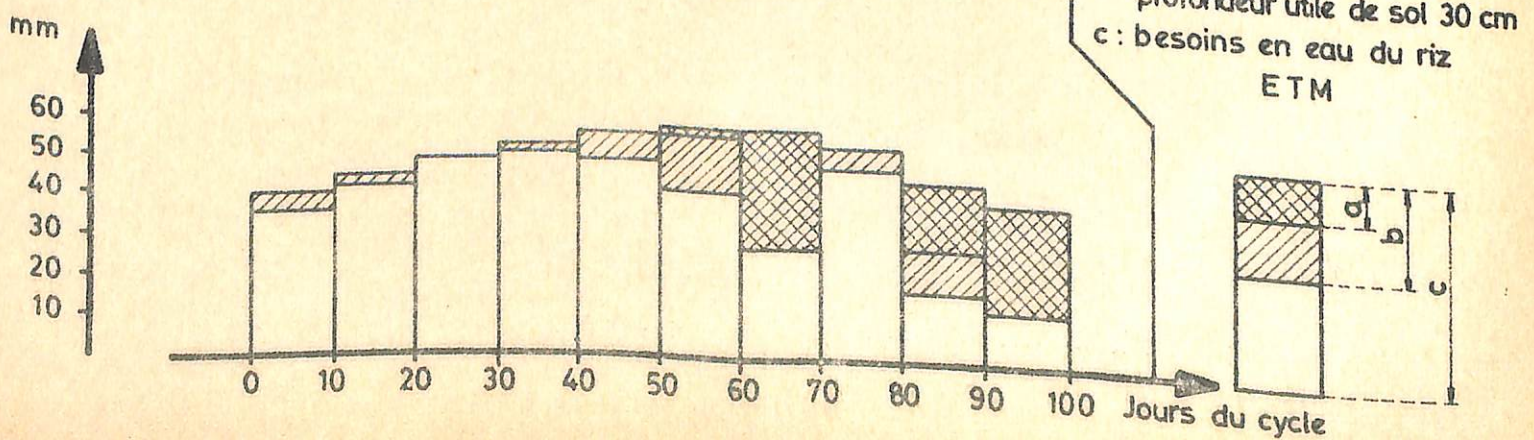
PLUVIOMETRIE PAR DECADES DURANT LE CYCLE VEGETATIF



Périodes de sécheresse



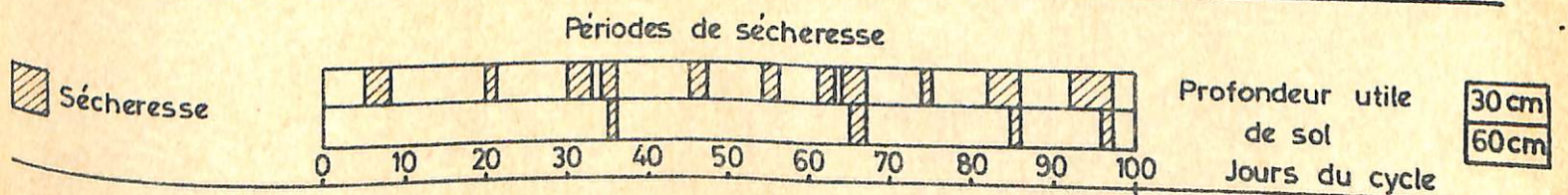
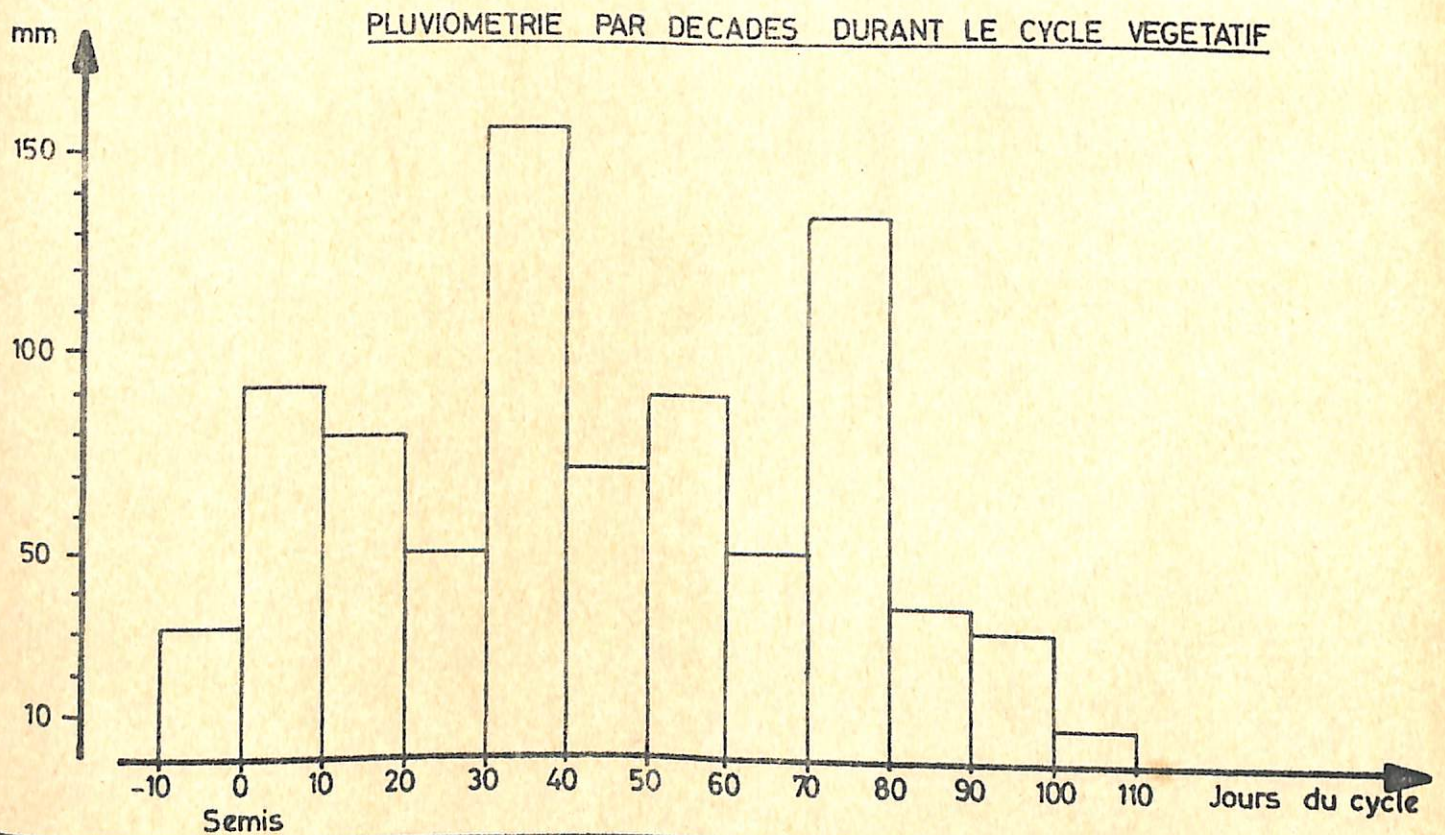
BILAN HYDRIQUE



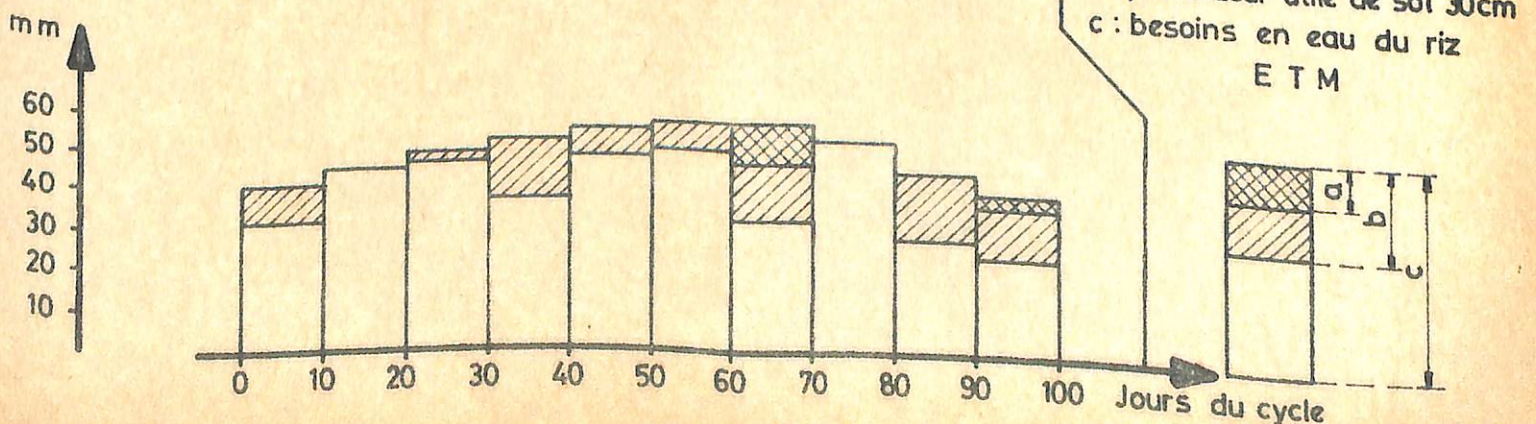
ETUDE DES CONDITIONS PLUVIALES

SUR L'ALIMENTATION EN EAU DU RIZ

A KARCIA 1972



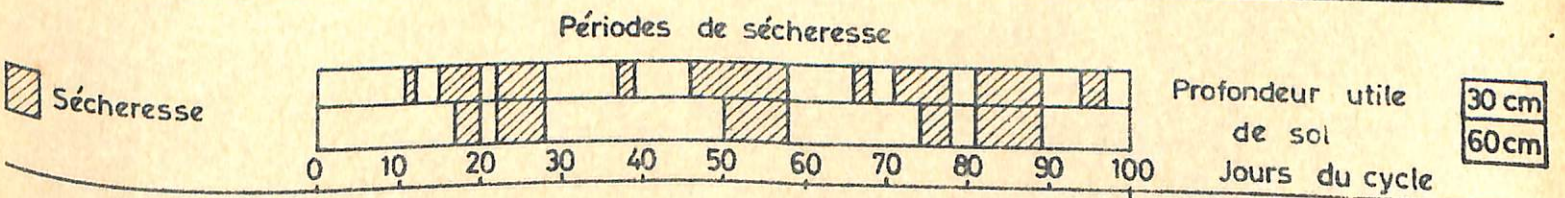
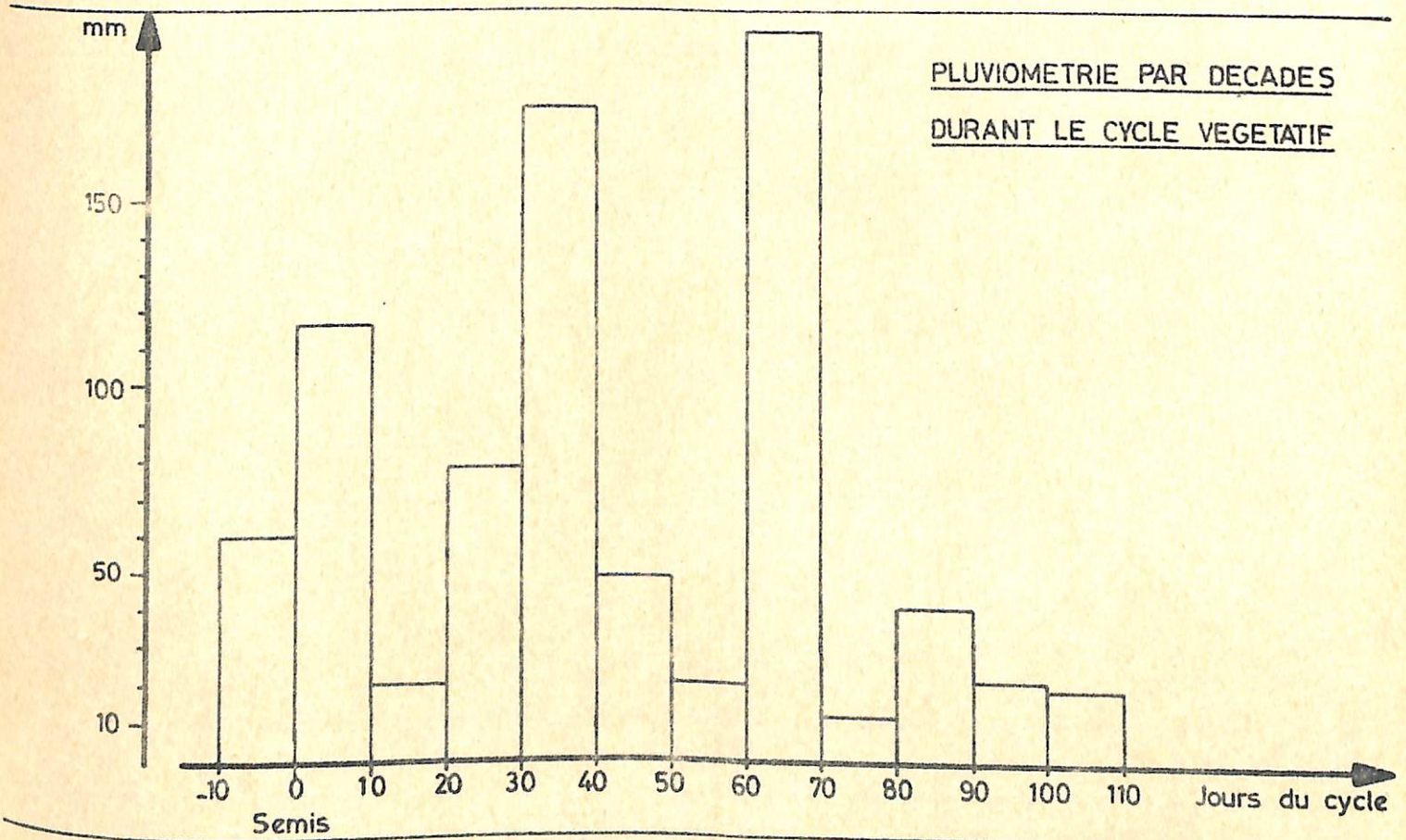
BILAN HYDRIQUE



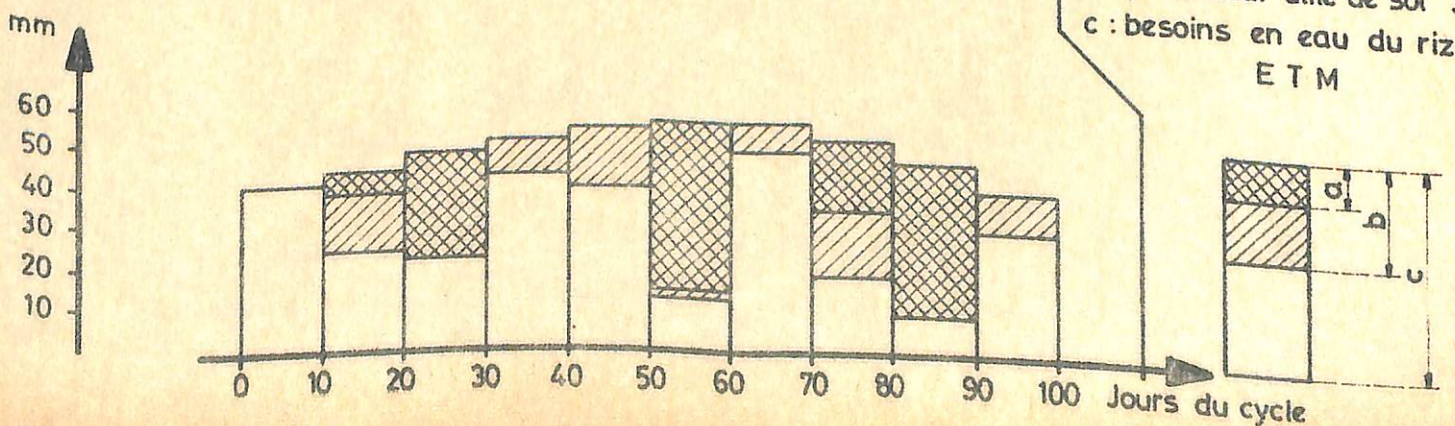
ETUDE DES CONDITIONS PLUVIALES

SUR L'ALIMENTATION EN EAU DU RIZ

A SARE - BAKARY 1972



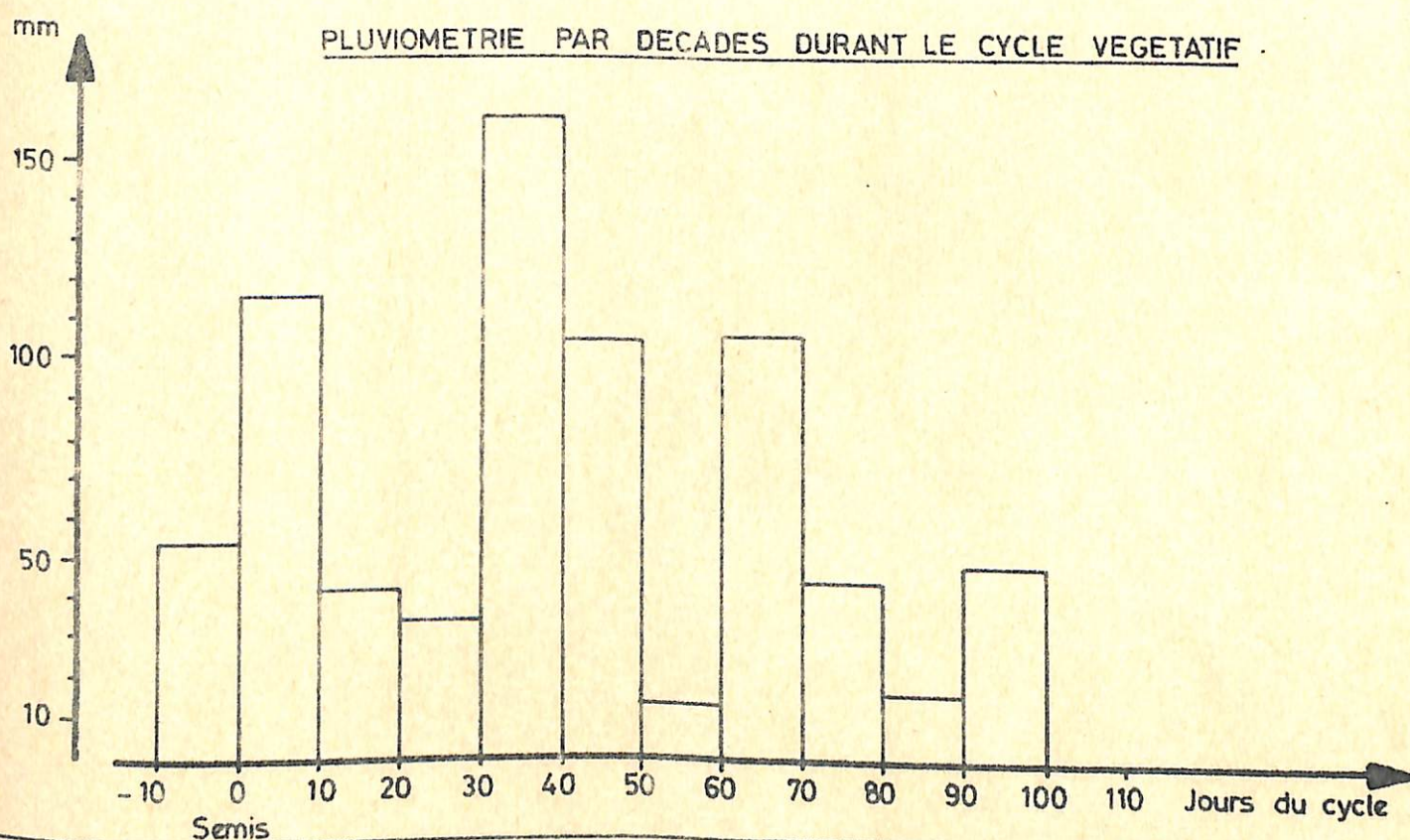
BILAN HYDRIQUE



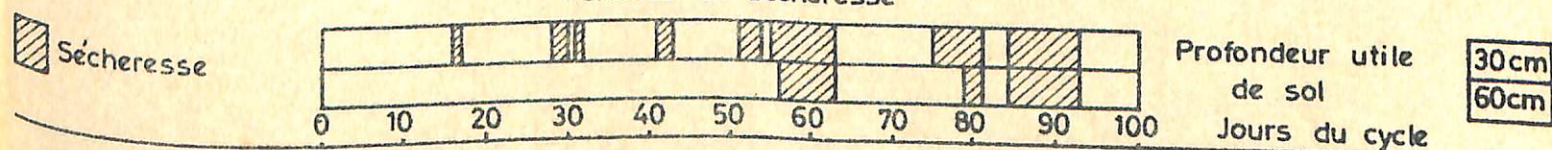
ETUDE DES CONDITIONS PLUVIALES

SUR L'ALIMENTATION EN EAU DU RIZ

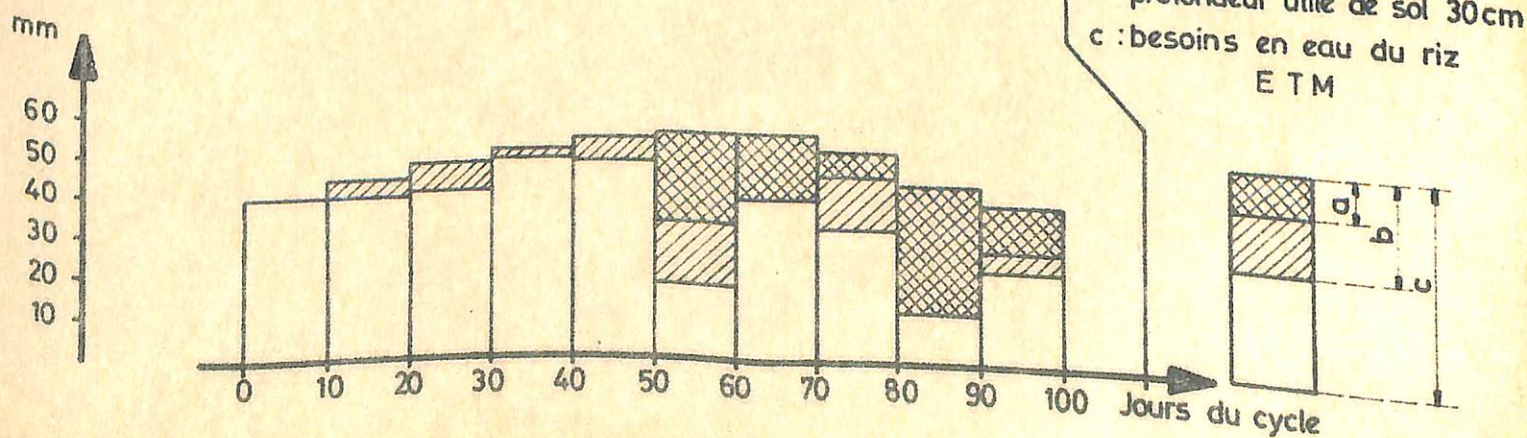
A SARE-MANSALY 1972



Périodes de sécheresse



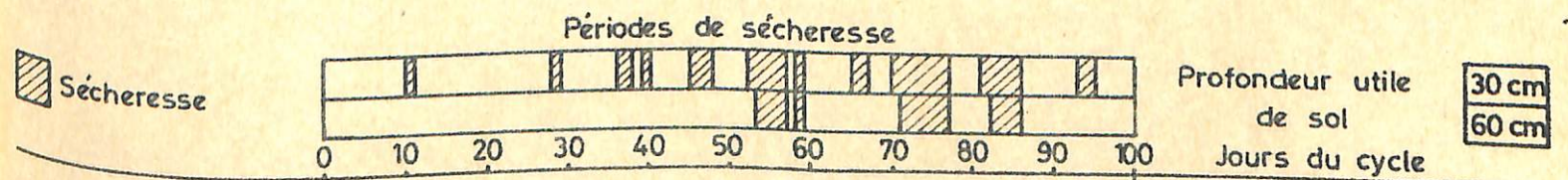
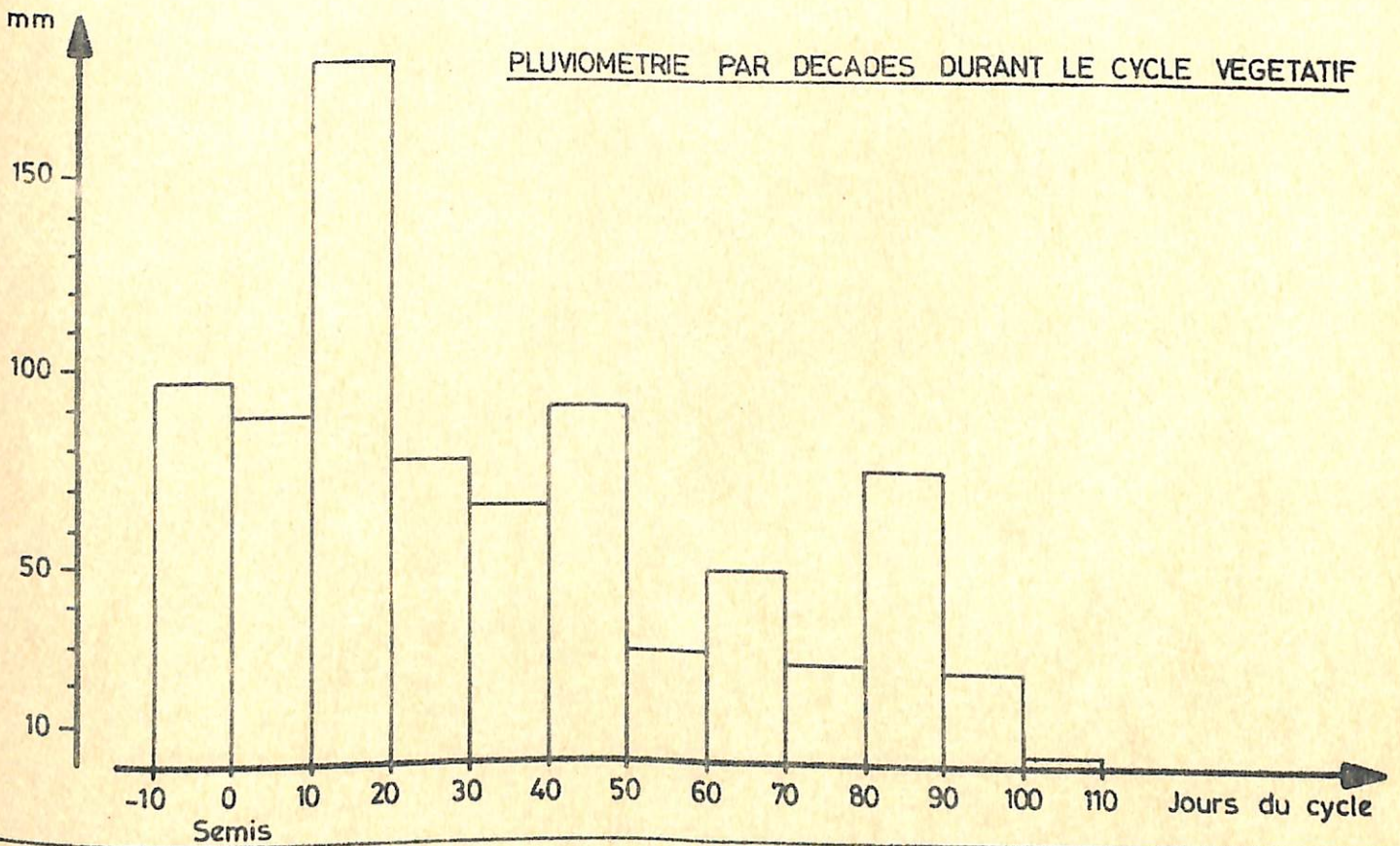
BILAN HYDRIQUE



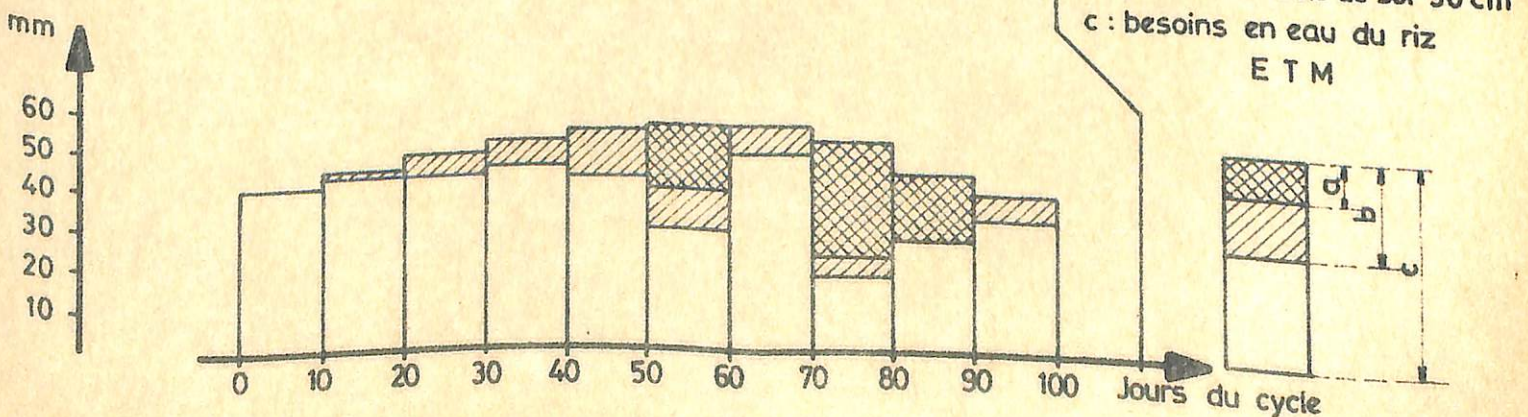
ETUDE DES CONDITIONS PLUVIALES

SUR L'ALIMENTATION EN EAU DU RIZ

A MAMPATIM - MAOUNDE 1972



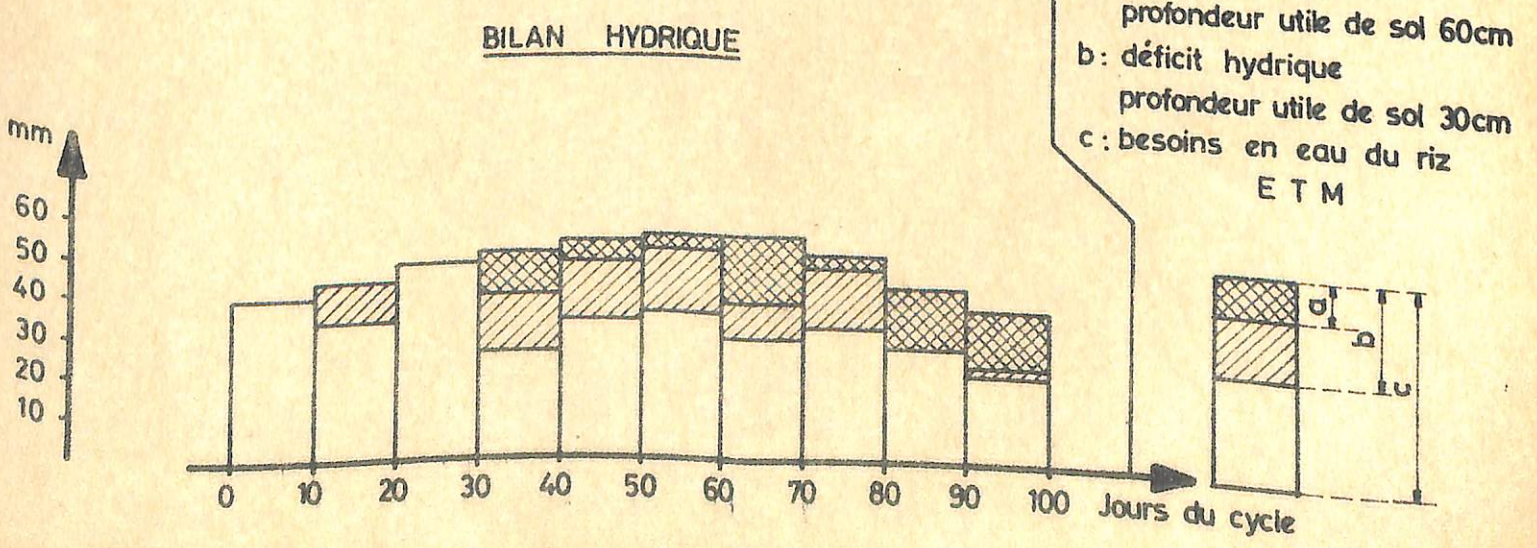
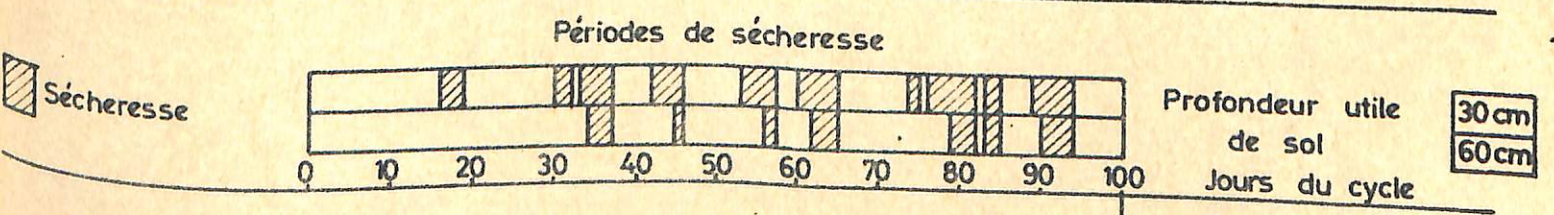
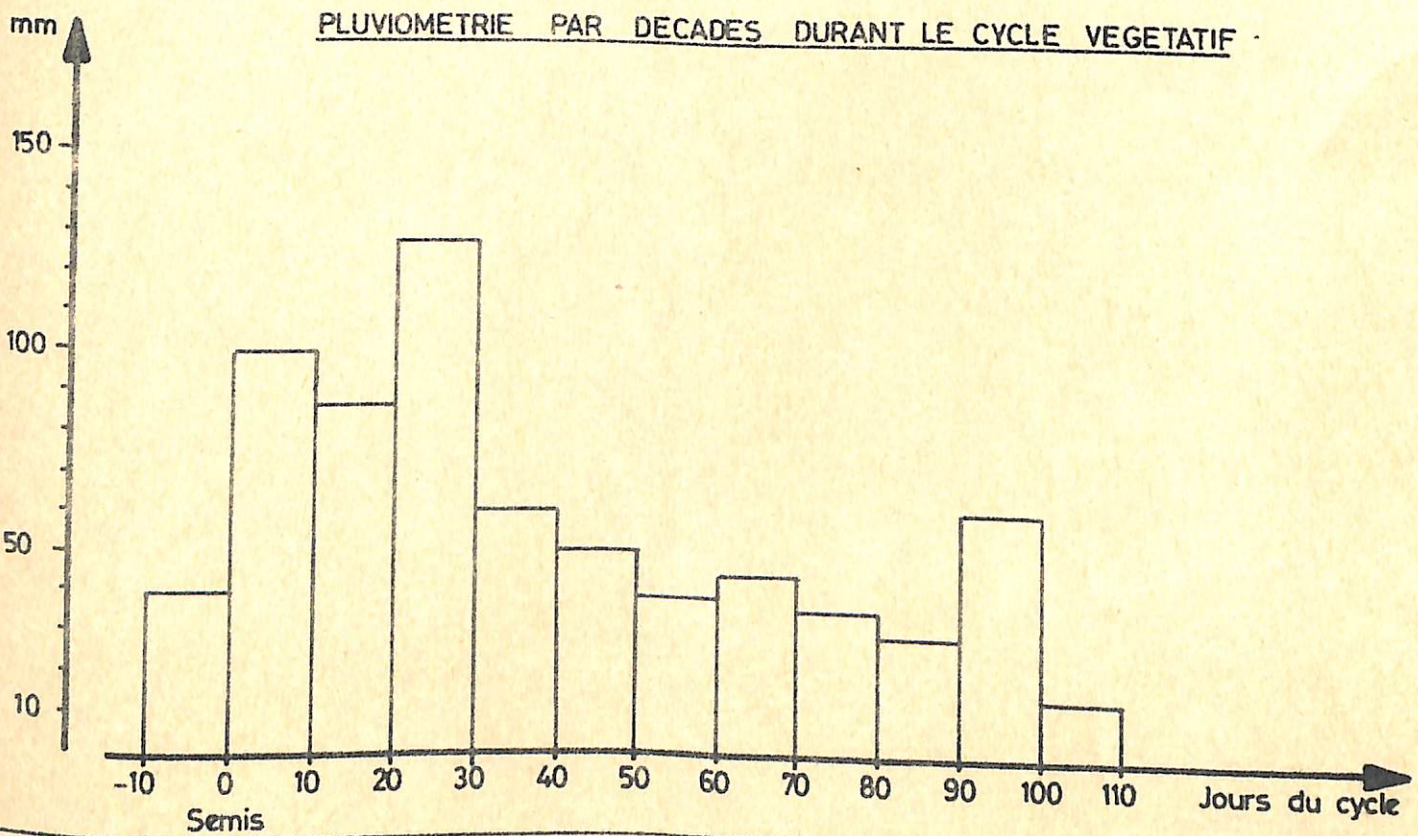
BILAN HYDRIQUE



ETUDE DES CONDITIONS PLUVIALES

SUR L'ALIMENTATION EN EAU DU RIZ

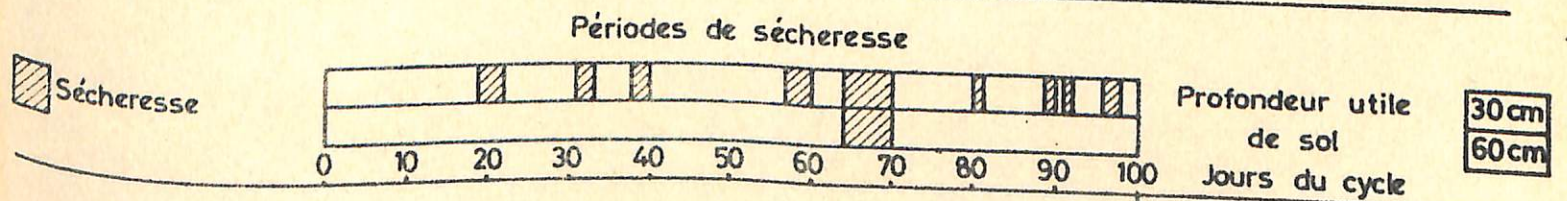
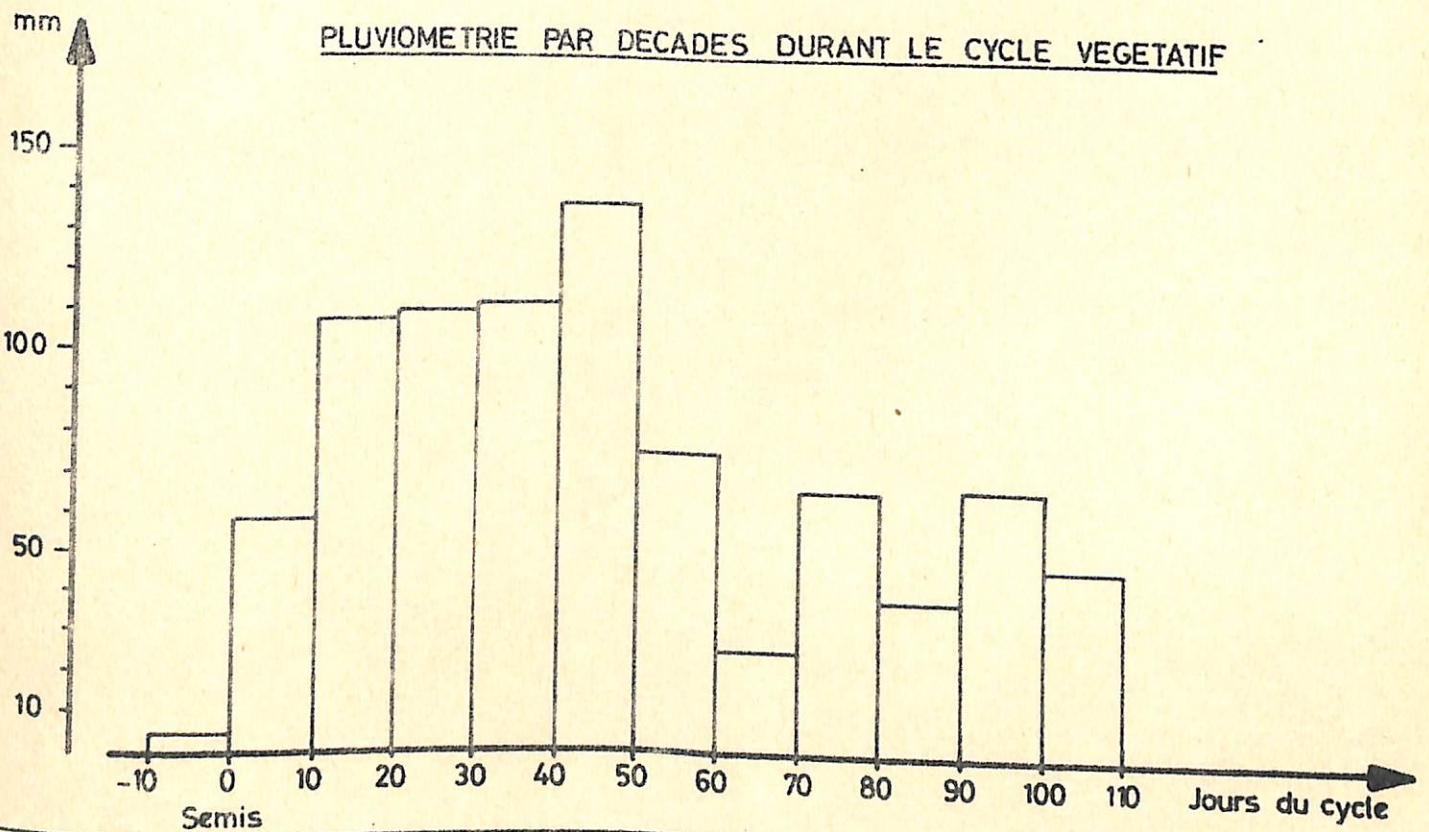
A DIALLI-KOUNDA 1972



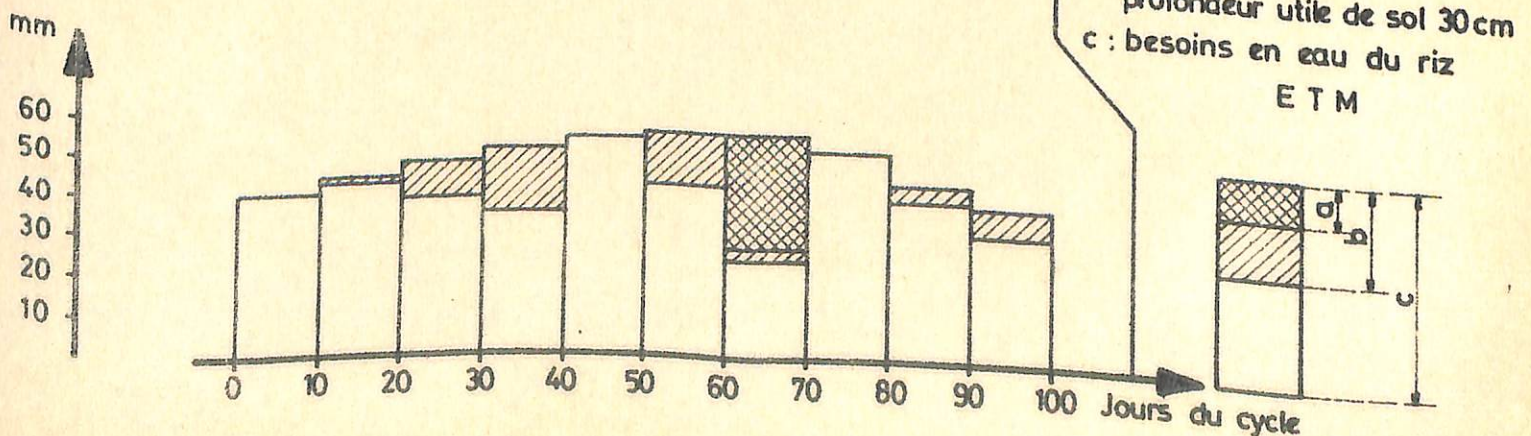
ETUDE DES CONDITIONS PLUVIALES

SUR L'ALIMENTATION EN EAU DU RIZ

A TAKOUDIALLA 1972



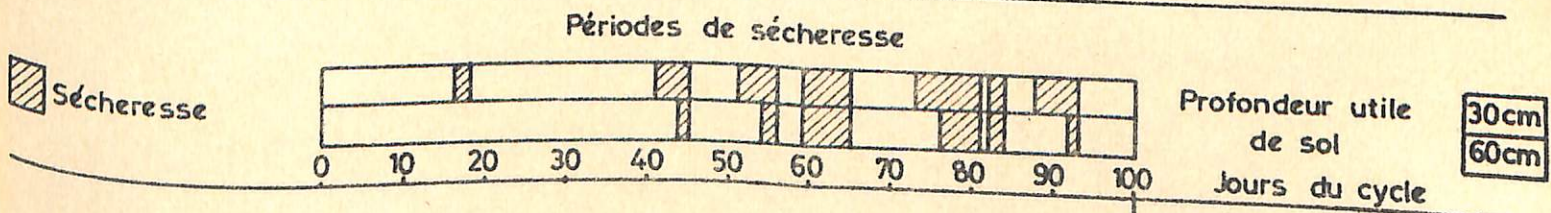
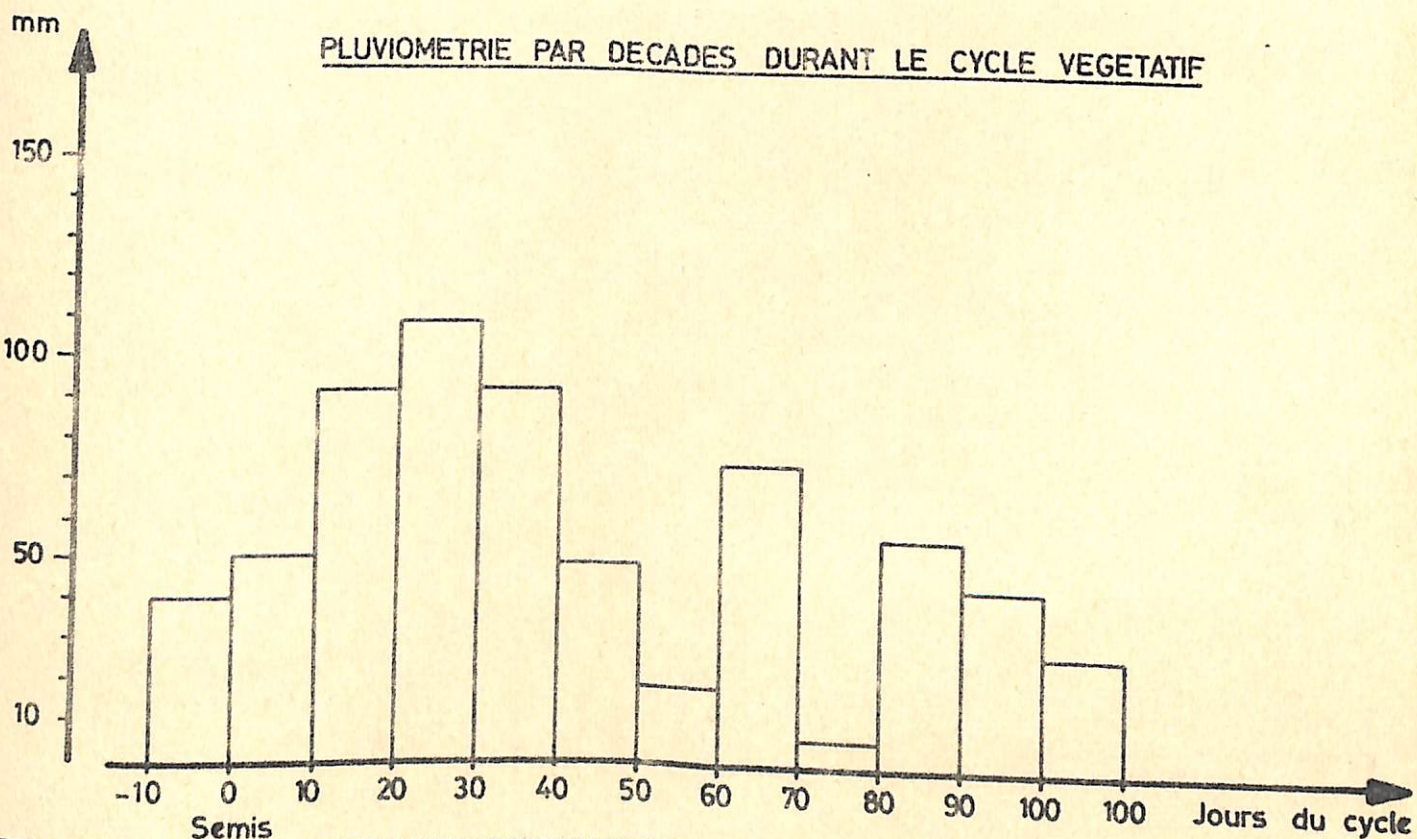
BILAN HYDRIQUE



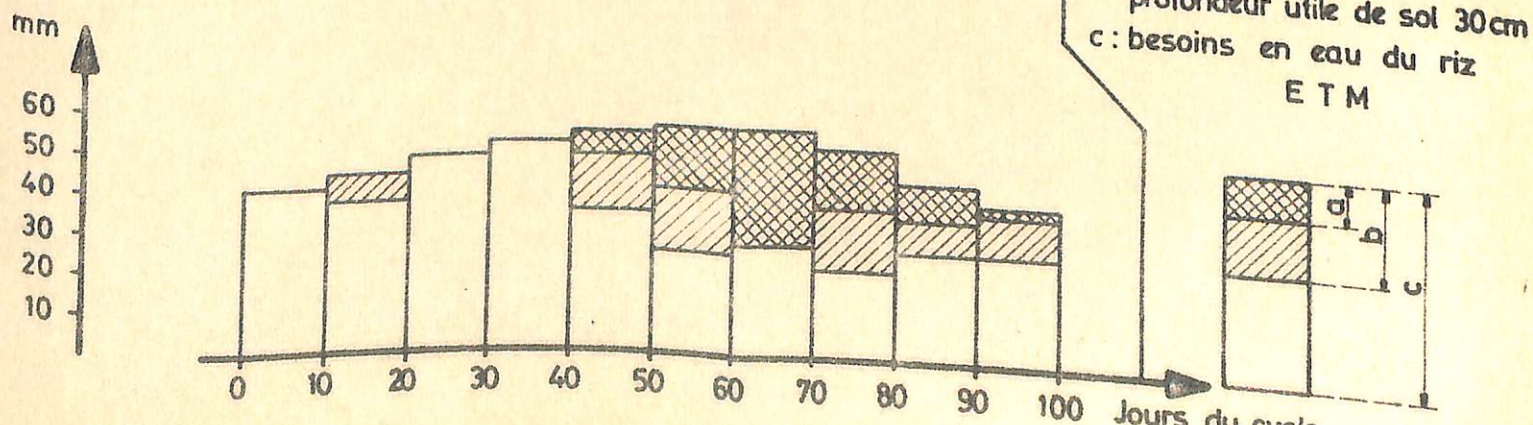
ETUDE DES CONDITIONS PLUVIALES

SUR L'ALIMENTATION EN EAU DU RIZ

A KOUNKANE - KABENDOU 1972

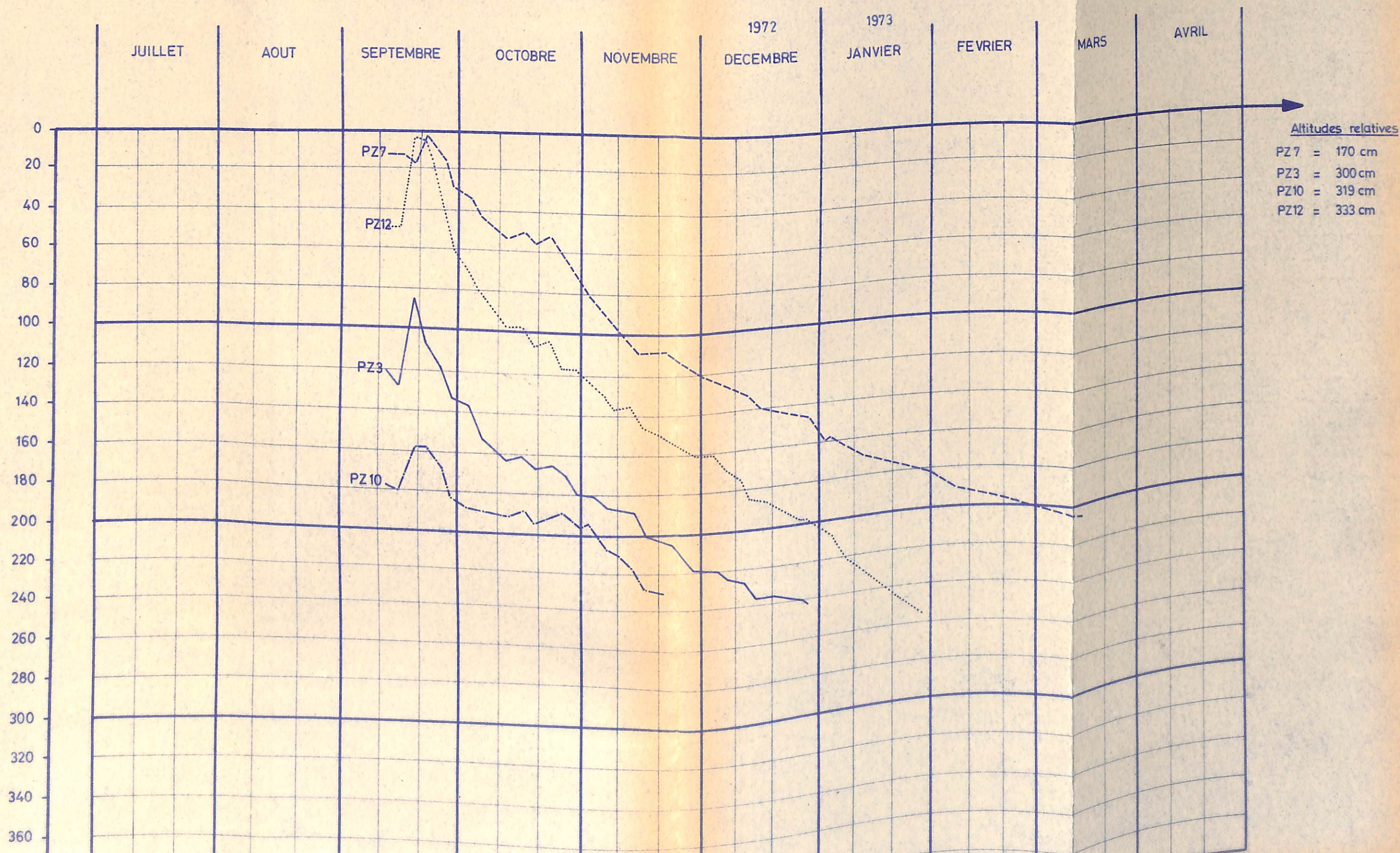


BILAN HYDRIQUE



Evolution du niveau piézométrique

Chaîne de Djegoune

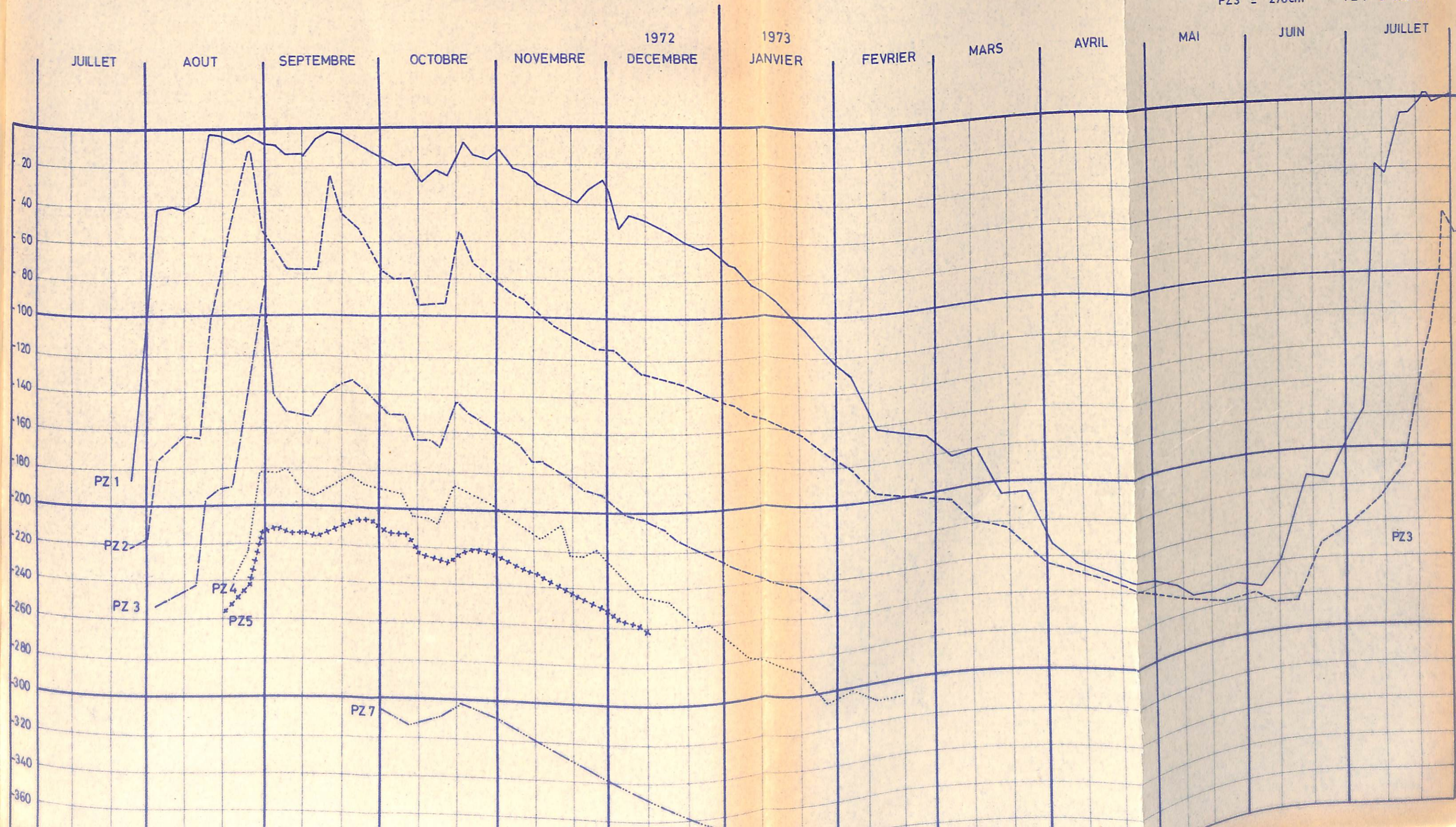


Evolution du niveau piézométrique

Chaîne de Balingor-Tendimane

Altitudes relatives

PZ1 = 200 cm	PZ4 = 304 cm
PZ2 = 206 cm	PZ5 = 315 cm
PZ3 = 270 cm	PZ7 = 358 cm



Evolution du niveau piézométrique

Chaîne de Diourou

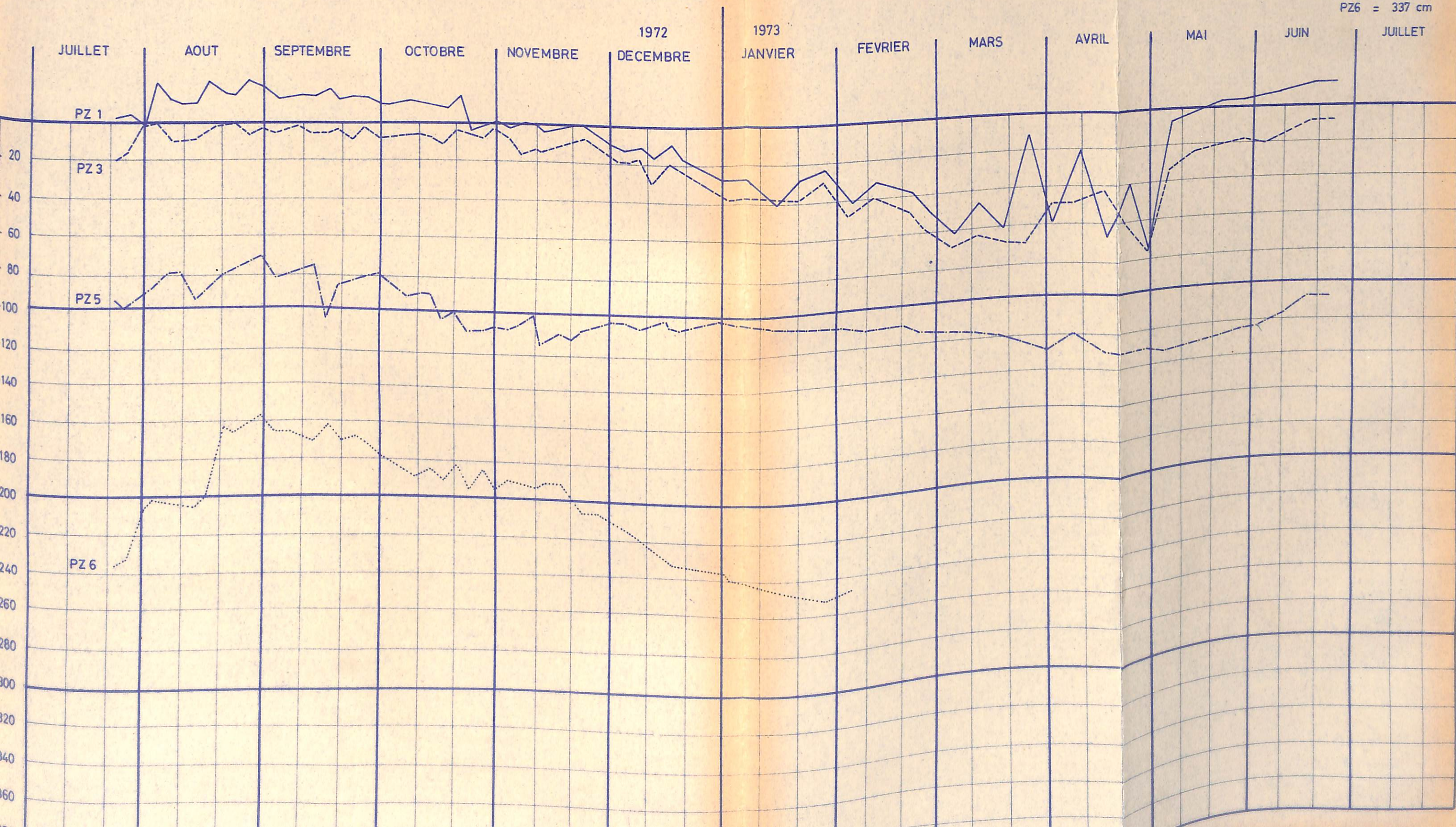
Altitudes relatives

PZ1 = 200 cm

PZ3 = 208 cm

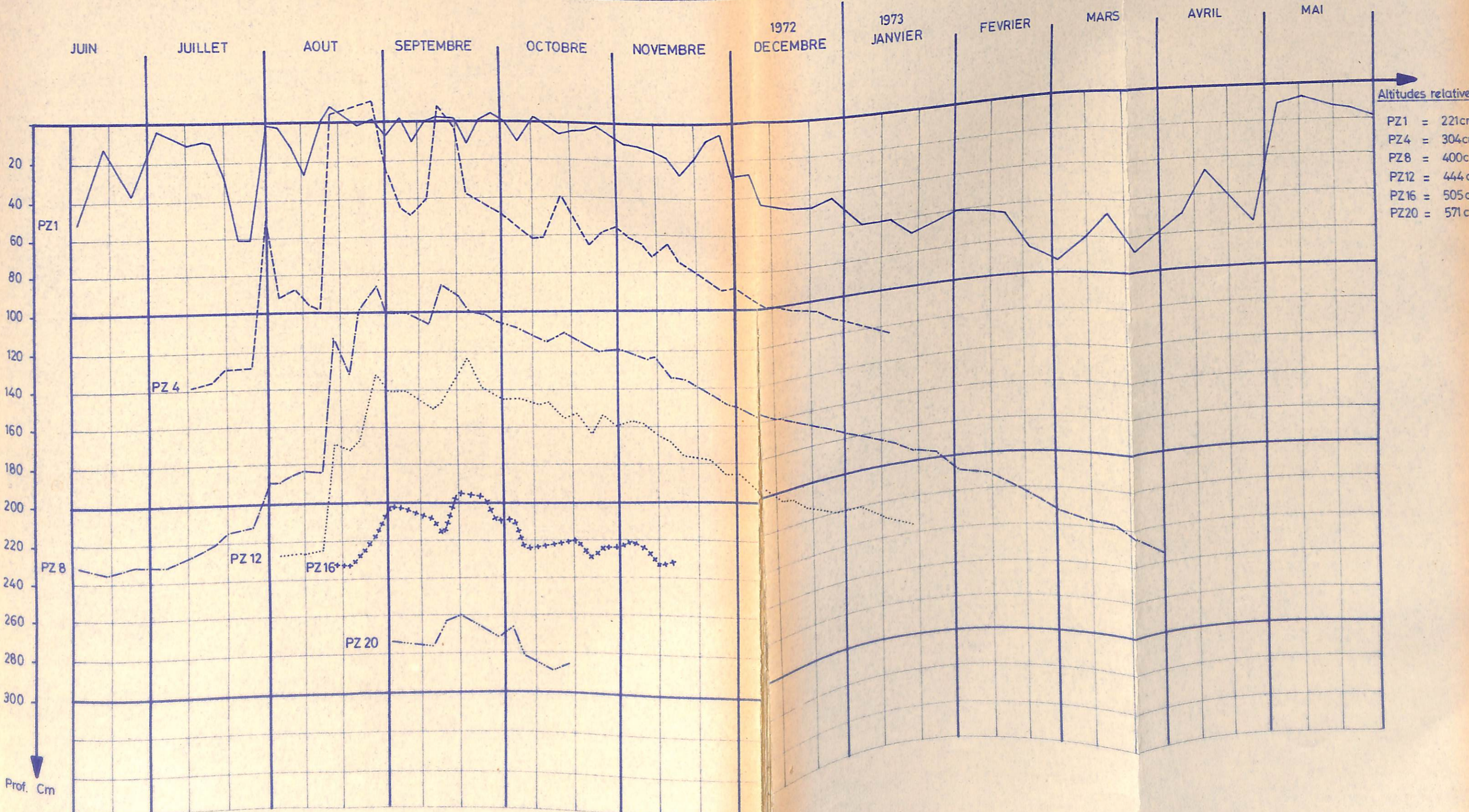
PZ5 = 246 cm

PZ6 = 337 cm



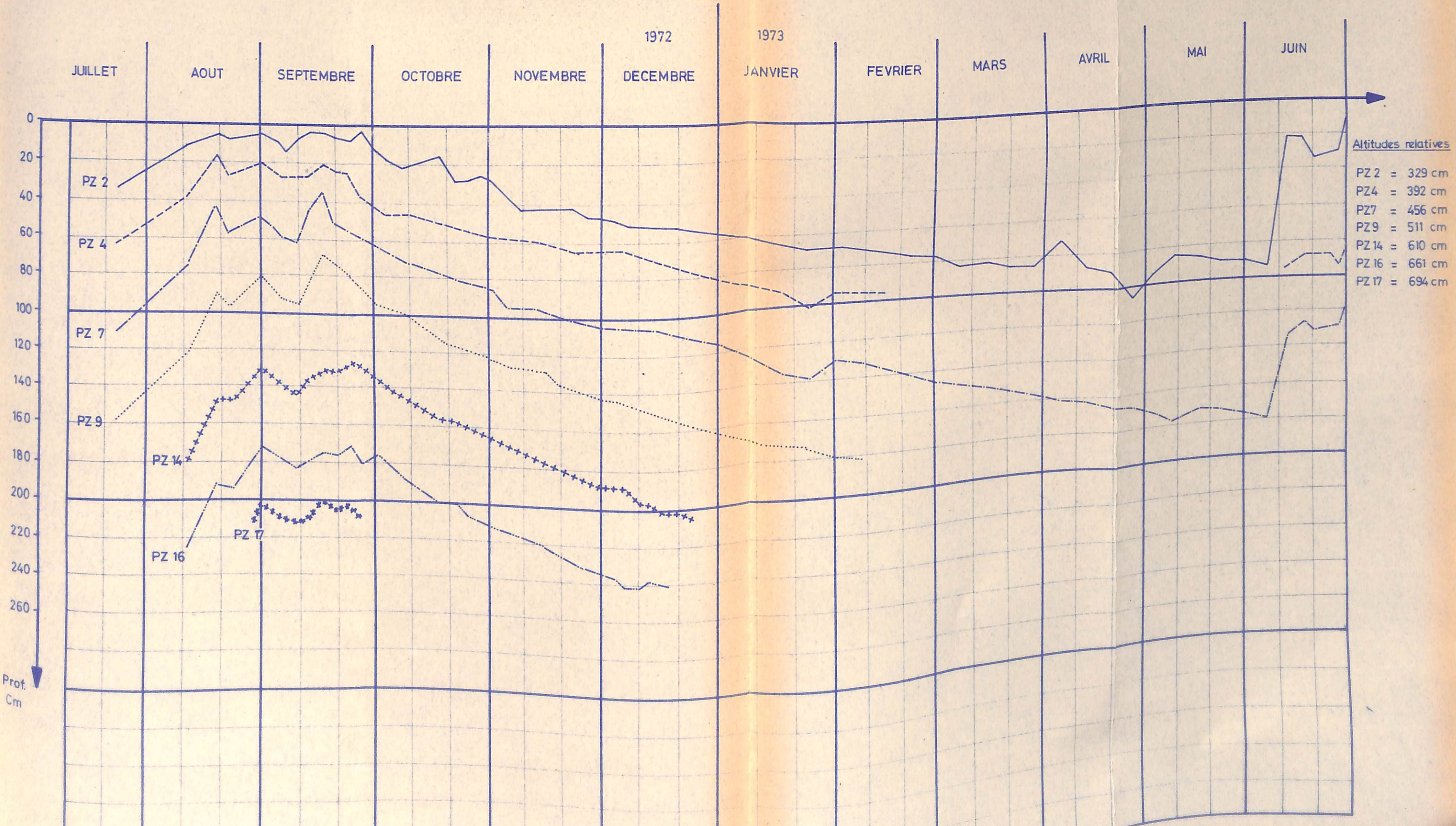
Evolution du niveau piézométrique

Chaîne de Inor



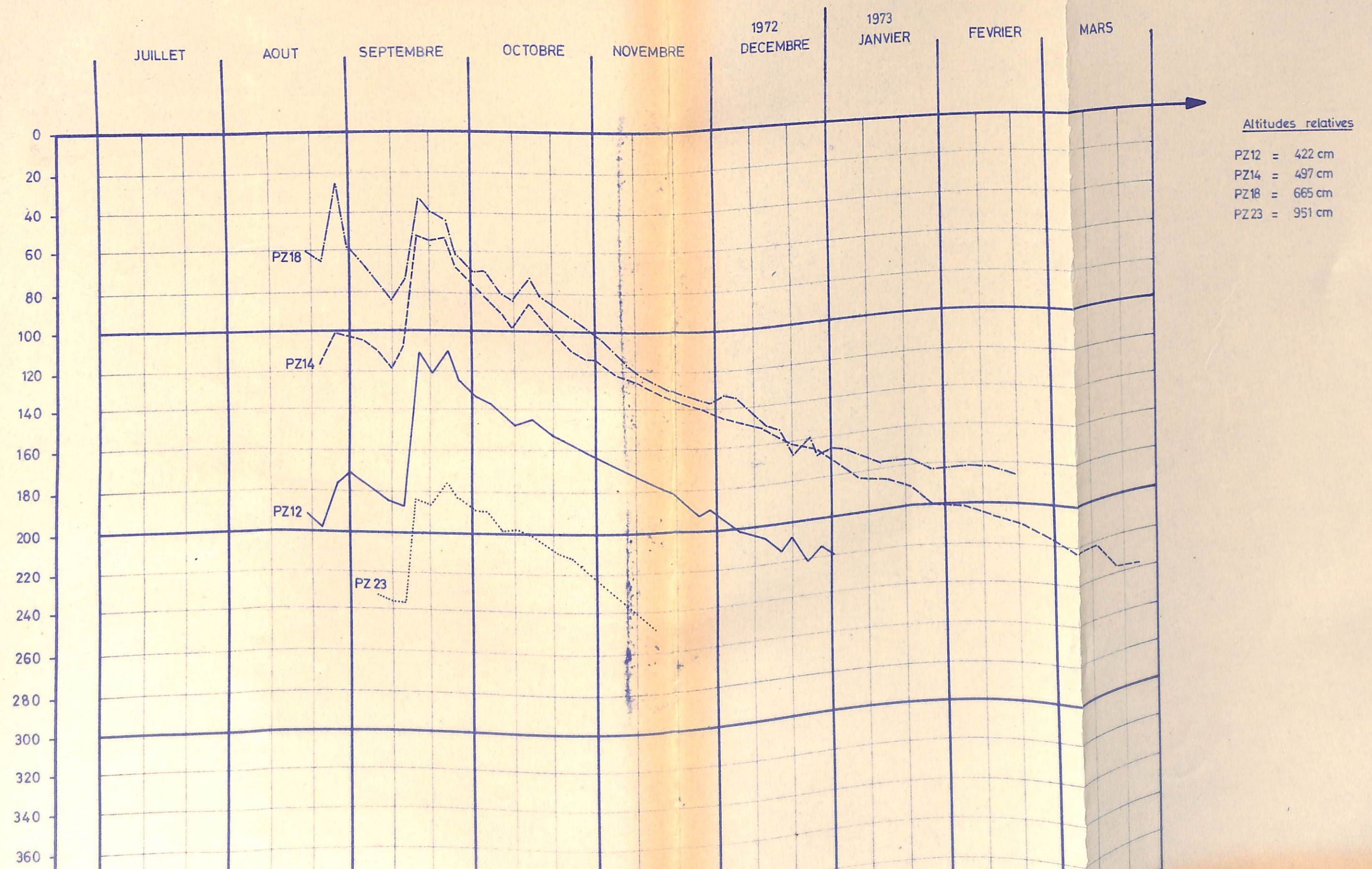
Evolution du niveau piézométrique

Chaîne de Kandadiou



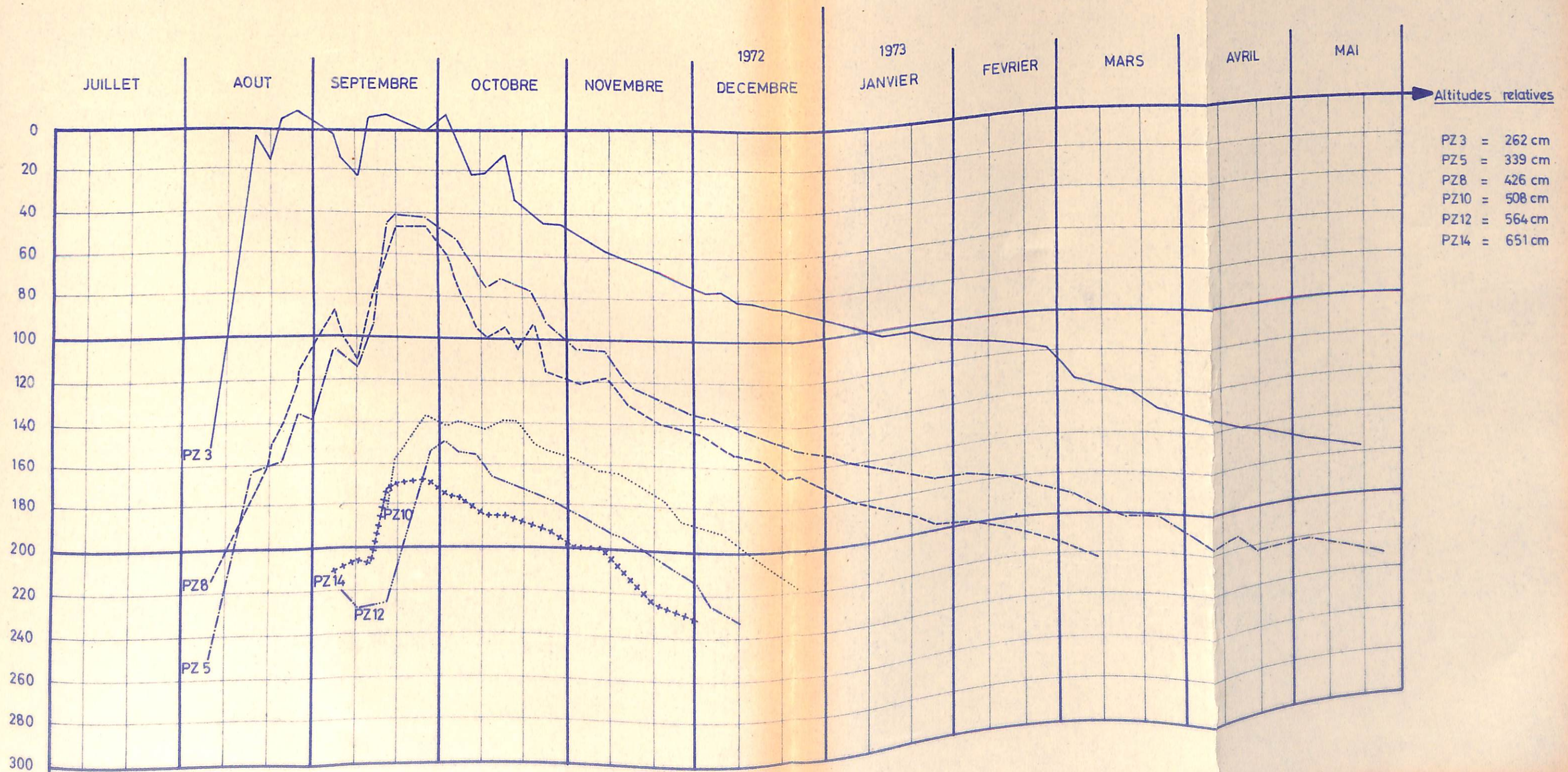
Evolution du niveau piézométrique

Chaîne de Diana-Ba



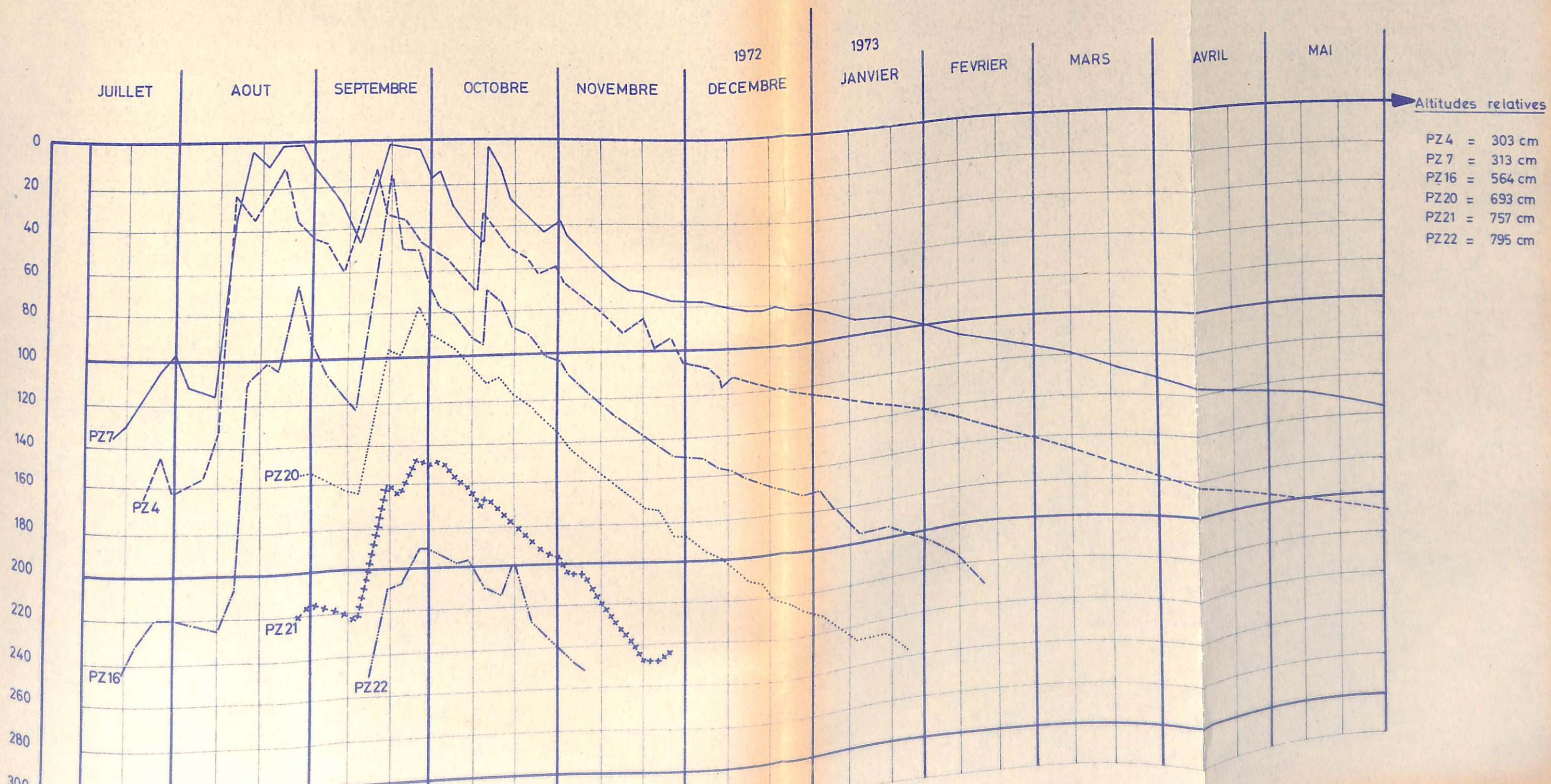
Evolution du niveau piézométrique

Chaîne de Karcia



Evolution du niveau piézométrique

Chaîne de Saré Bakary

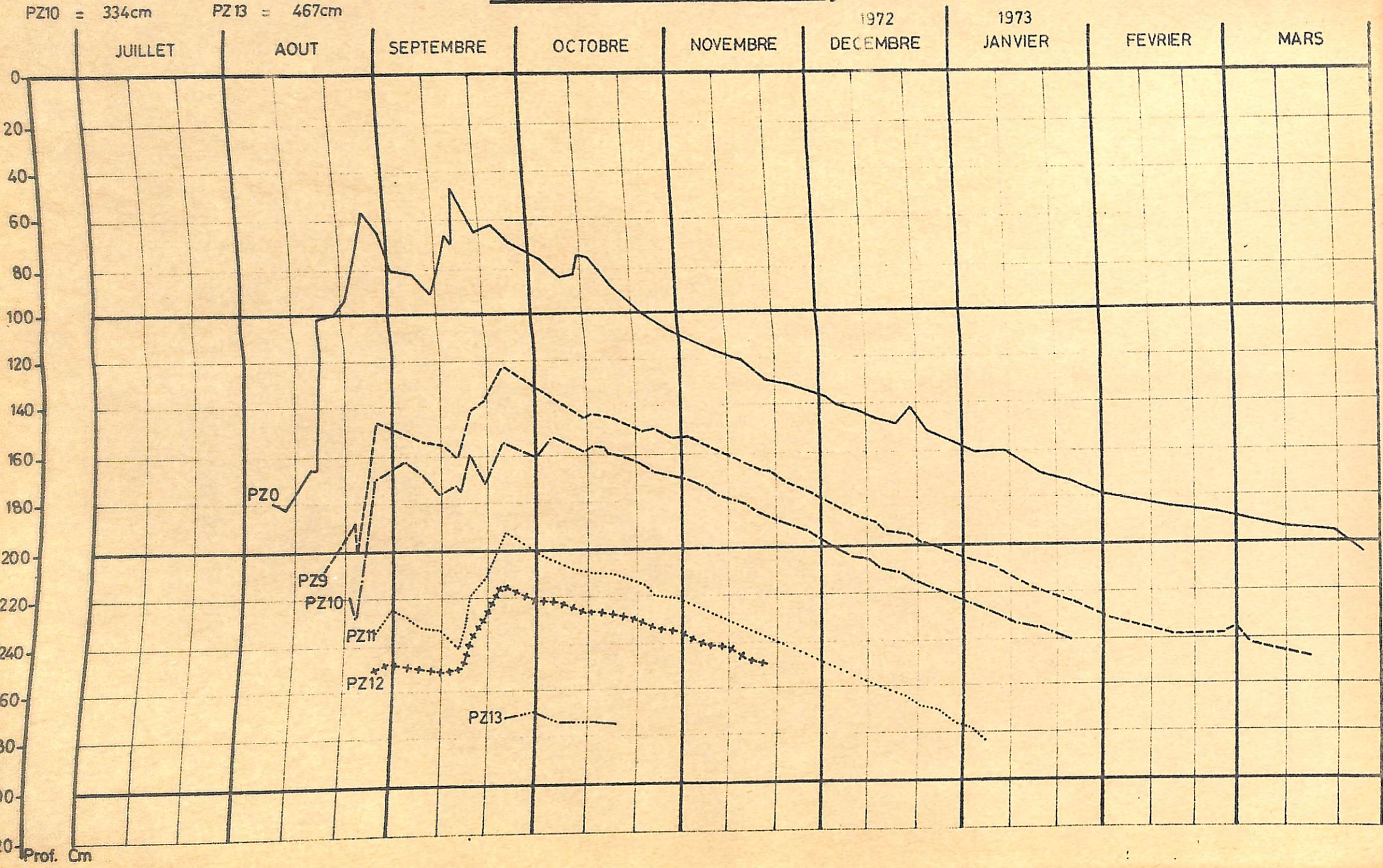


Evolution du niveau piézométrique

Altitudes relatives

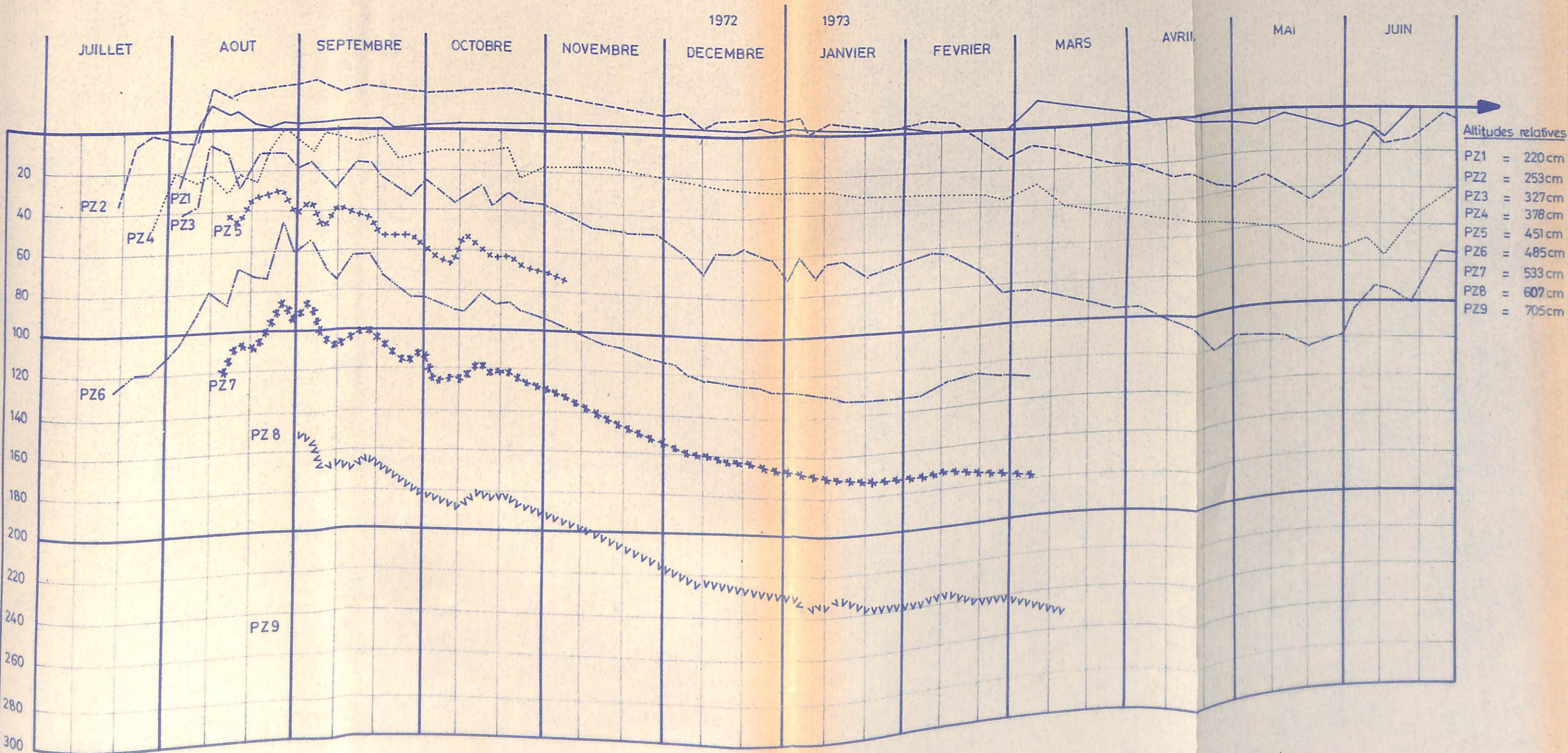
- PZ0 = 220cm PZ11 = 367cm
- PZ9 = 334cm PZ12 = 415cm
- PZ10 = 334cm PZ13 = 467cm

Chaîne de Saré Mansaly

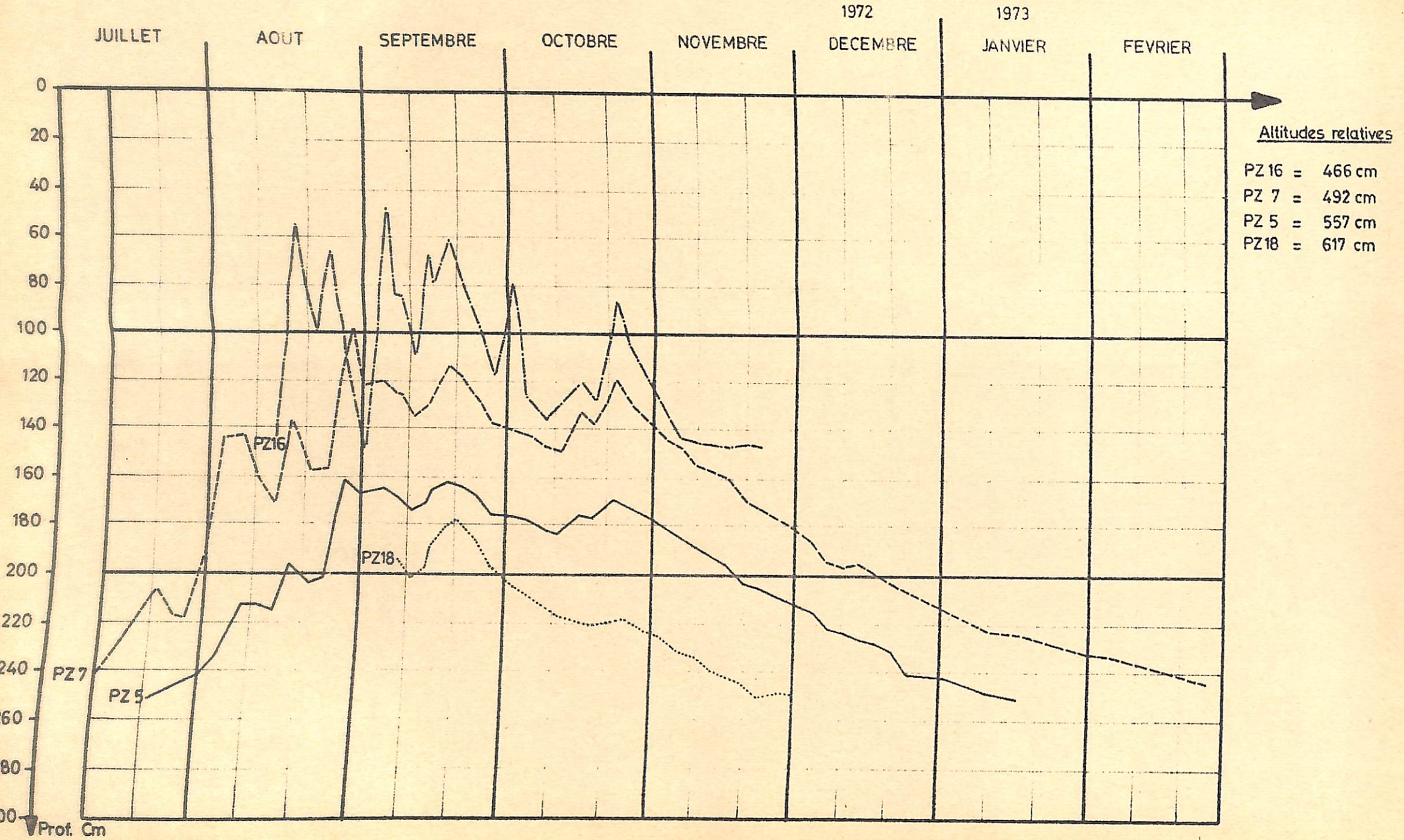


Evolution du niveau piézométrique

Chaîne de Mampatim Maoundé

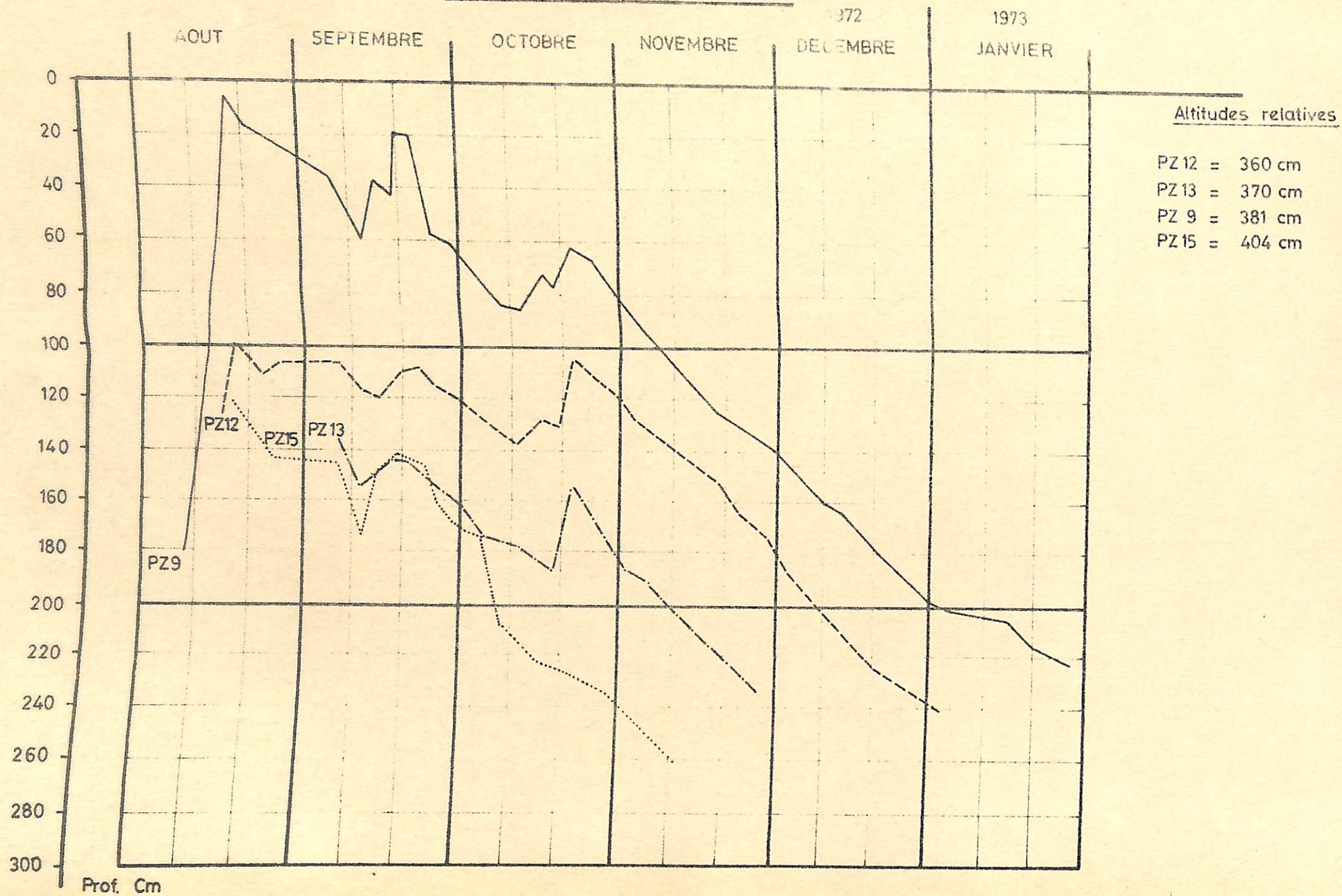


Chaîne de Dialli-Kounda



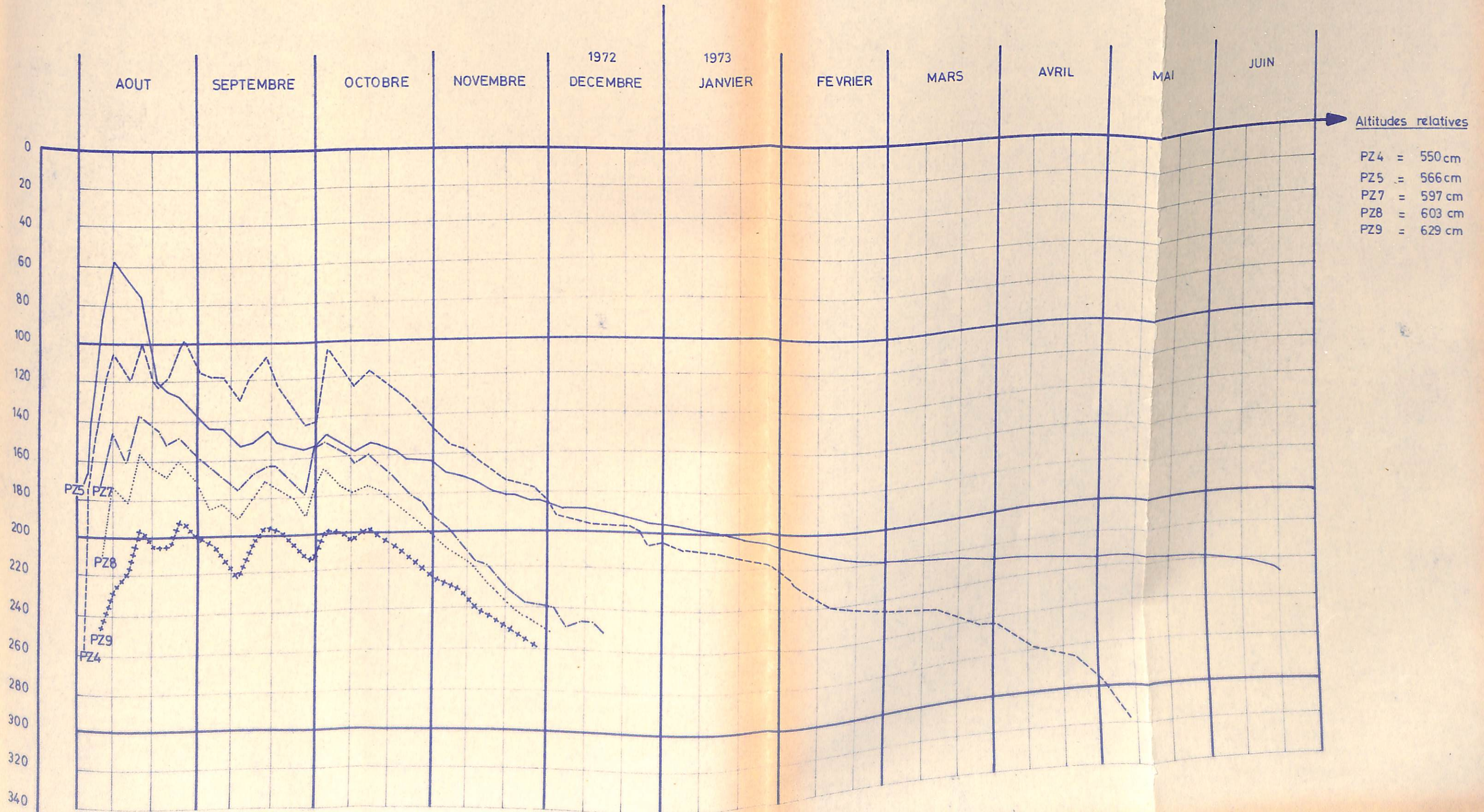
Evolution du niveau piézométrique

Chaîne de Takoudialla



Evolution du niveau piézométrique

Chaîne de Kounkane-Kabendou



Evolution du niveau piézométrique

Djégoune

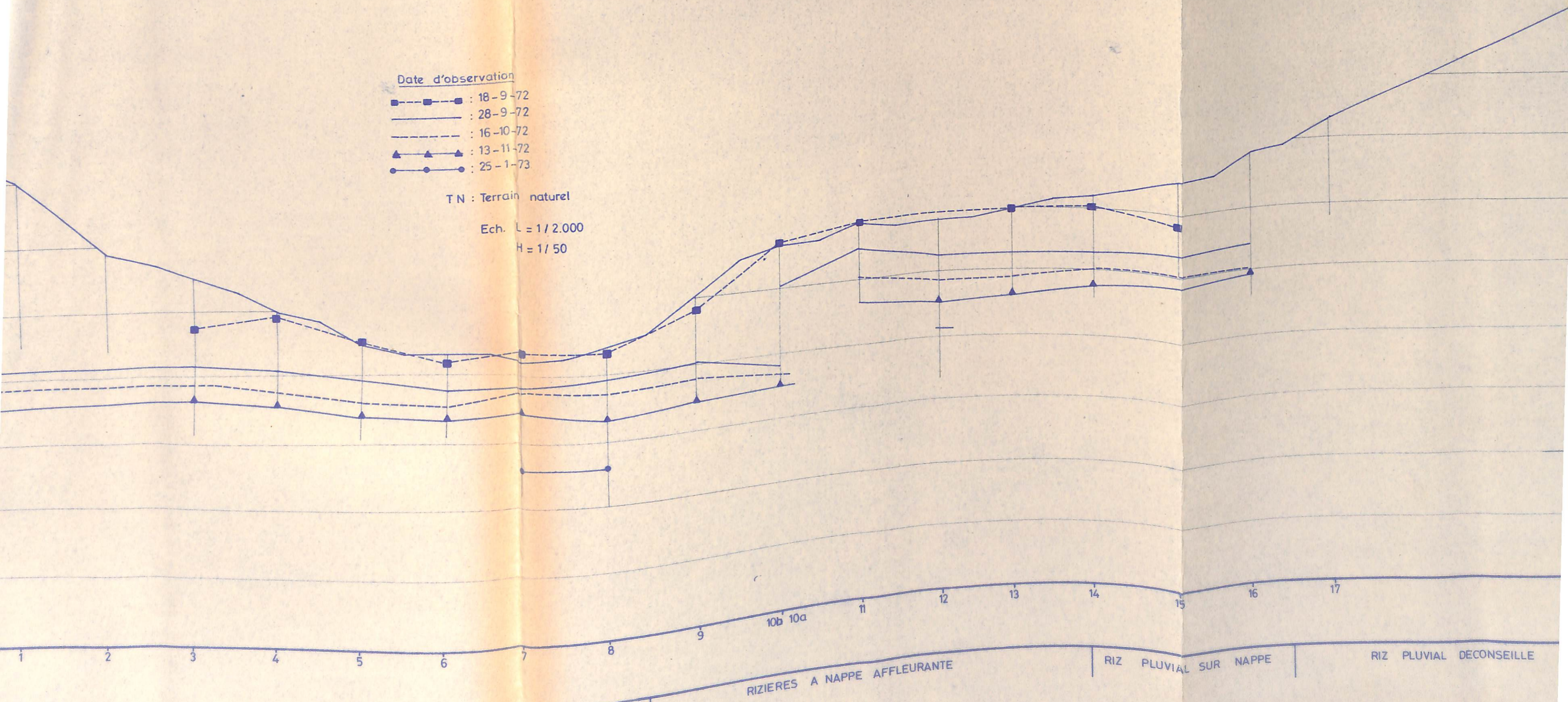
Date d'observation

- : 18-9-72
- : 28-9-72
- - - : 16-10-72
- ▲ : 13-11-72
- : 25-1-73

TN : Terrain naturel

Ech. L = 1 / 2.000

H = 1 / 50



1 2 3 4 5 6 7 8 9 10b 10a 11 12 13 14 15 16 17

RIZIERES A NAPPE AFFLEURANTE

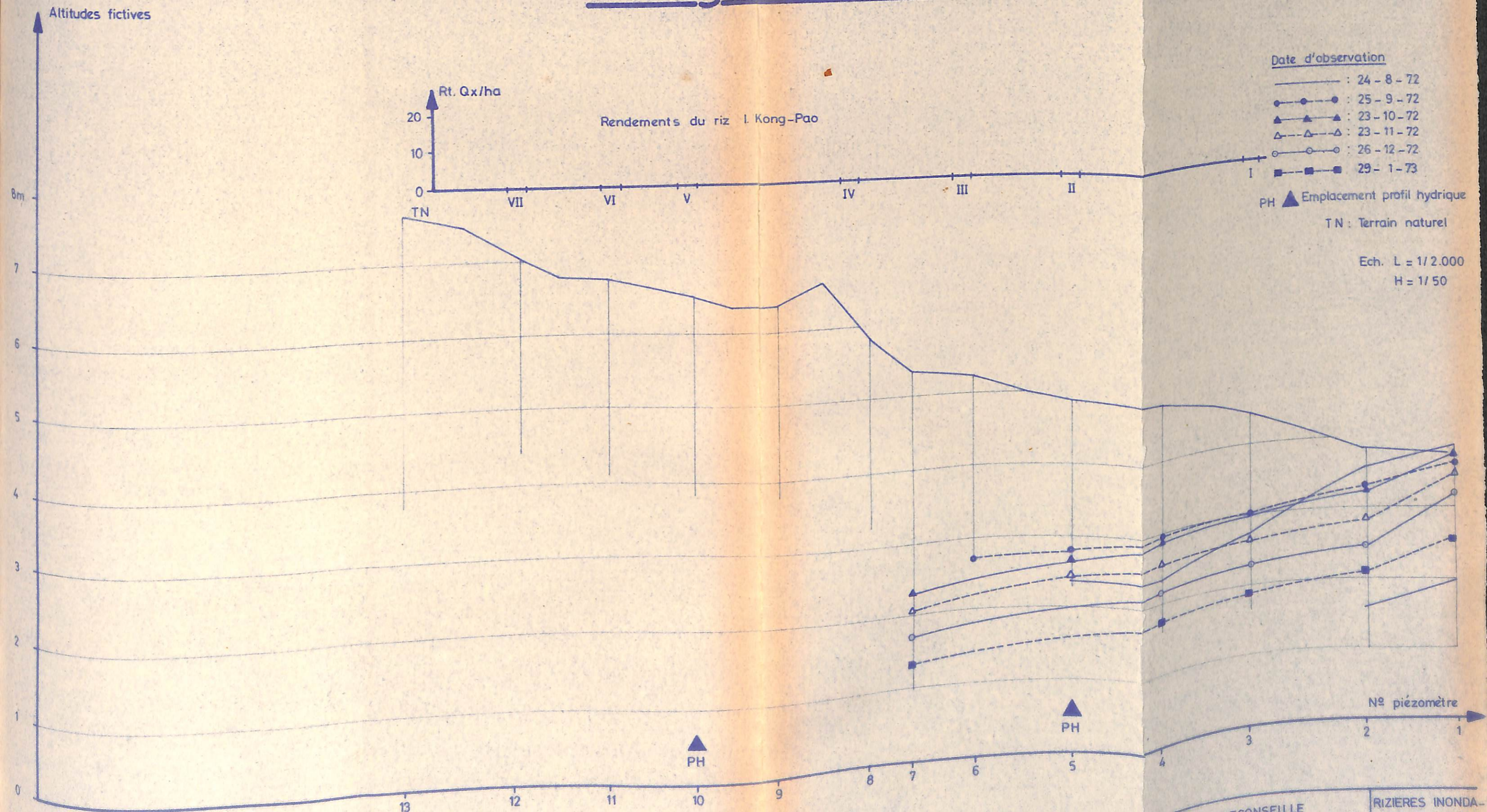
RIZ PLUVIAL SUR NAPPE

RIZ PLUVIAL DECONSEILLE

DECONSEILLE | RIZIERES A NAPPE AFFLEURANTE | RIZIERES INONDABLES

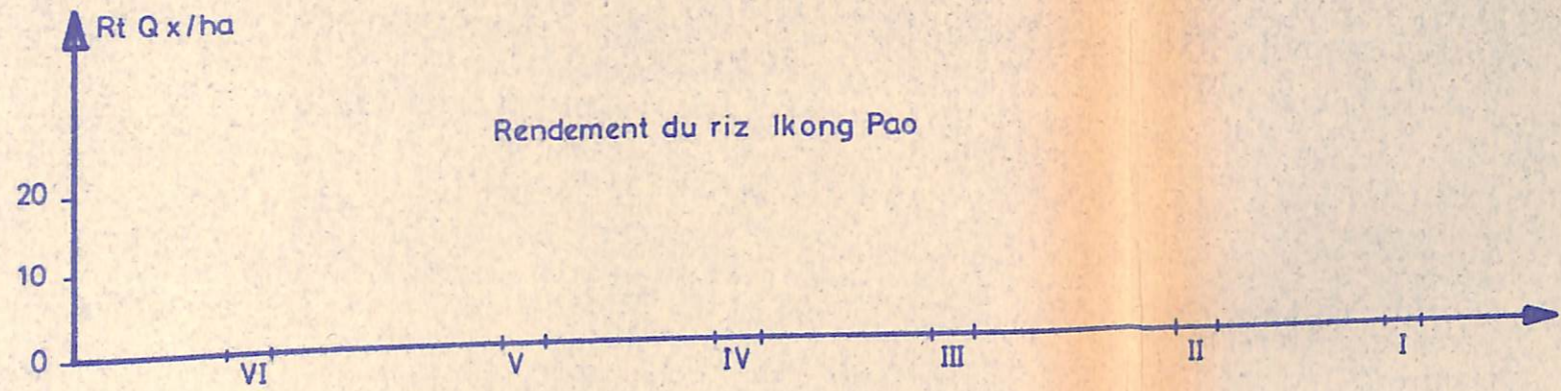
Evolution du niveau piézométrique

Balingor-Tendimane



Evolution du niveau piézométrique

Diourou



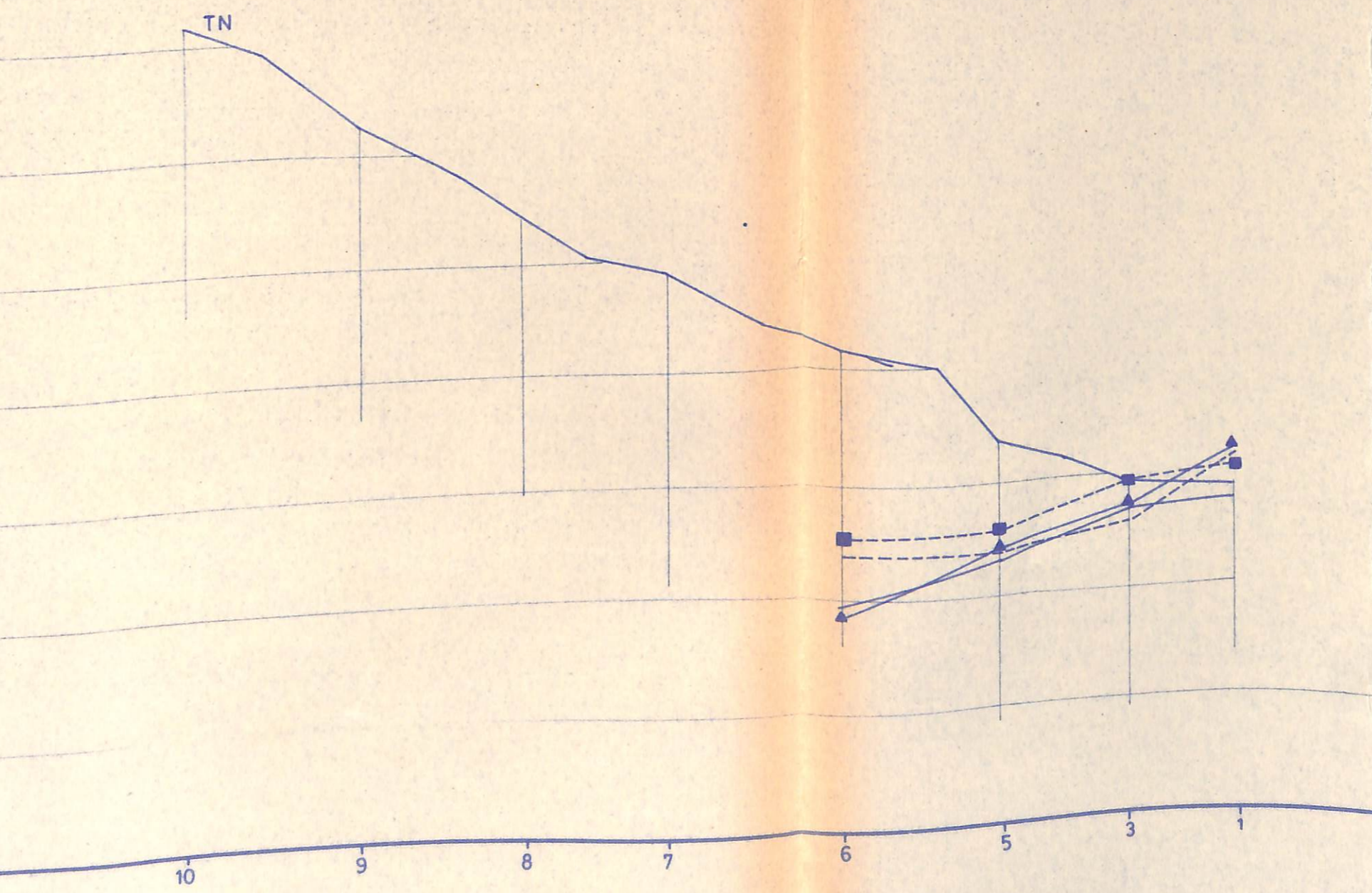
Date d'observation

- ▲ 24-7-72
- 24-8-72
- - - 23-10-72
- 21-12-72

PH ▲ Emplacement profil hydrique
TN Terrain naturel

Ech. L = 1 / 2.000
H = 1 / 50

Altitudes fictives



N° piézomètre

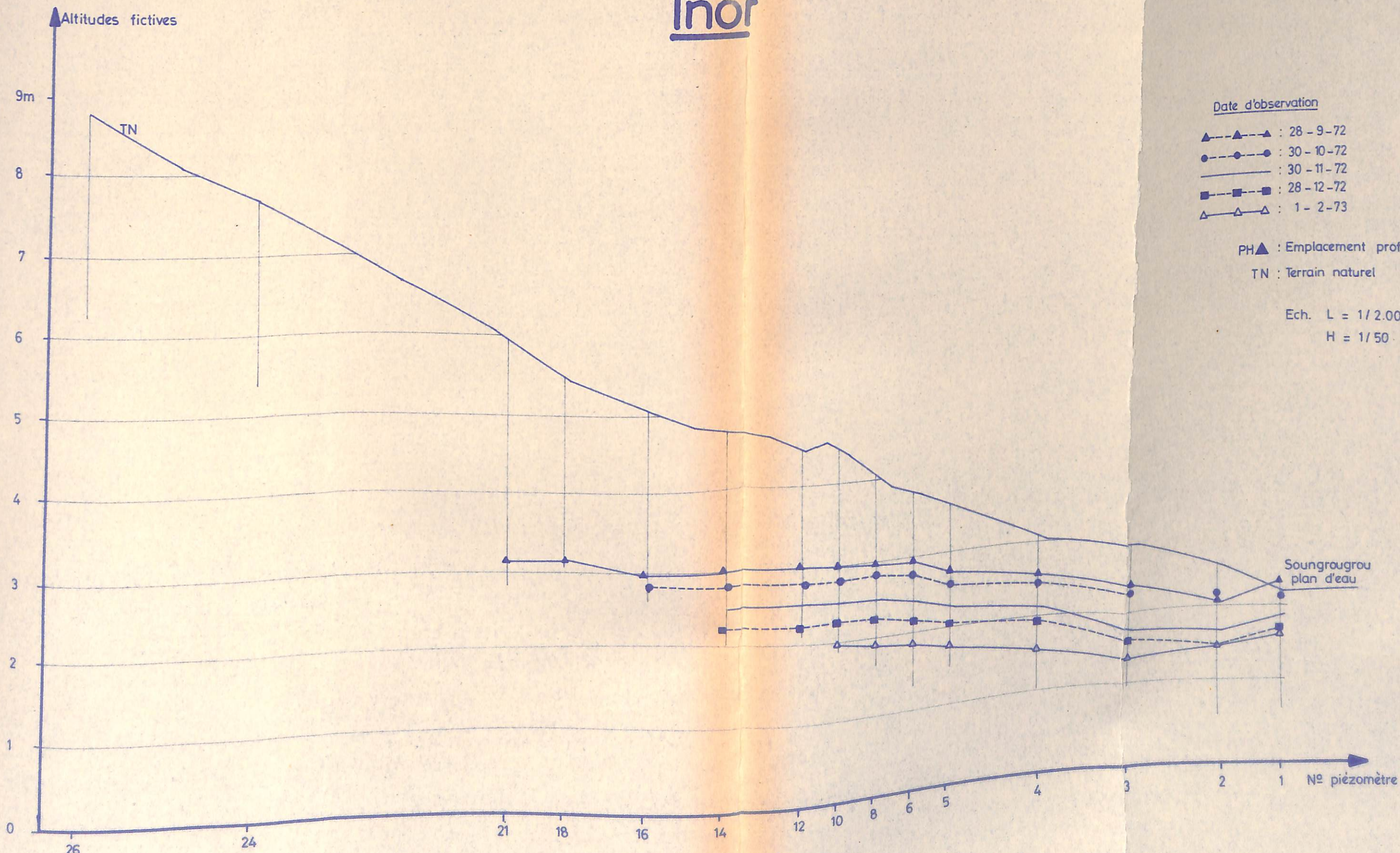
PH

PH

EN ANNÉE FAVORABLE RIZICULTURE RIZIÈRES INONDABLES SALEES

Evolution du niveau piézométrique

Inor



Date d'observation

- ▲-▲-▲ : 28-9-72
- : 30-10-72
- : 30-11-72
- : 28-12-72
- △-△-△ : 1-2-73

PH▲ : Emplacement profil hydrique
 TN : Terrain naturel

Ech. L = 1/2.000
 H = 1/50

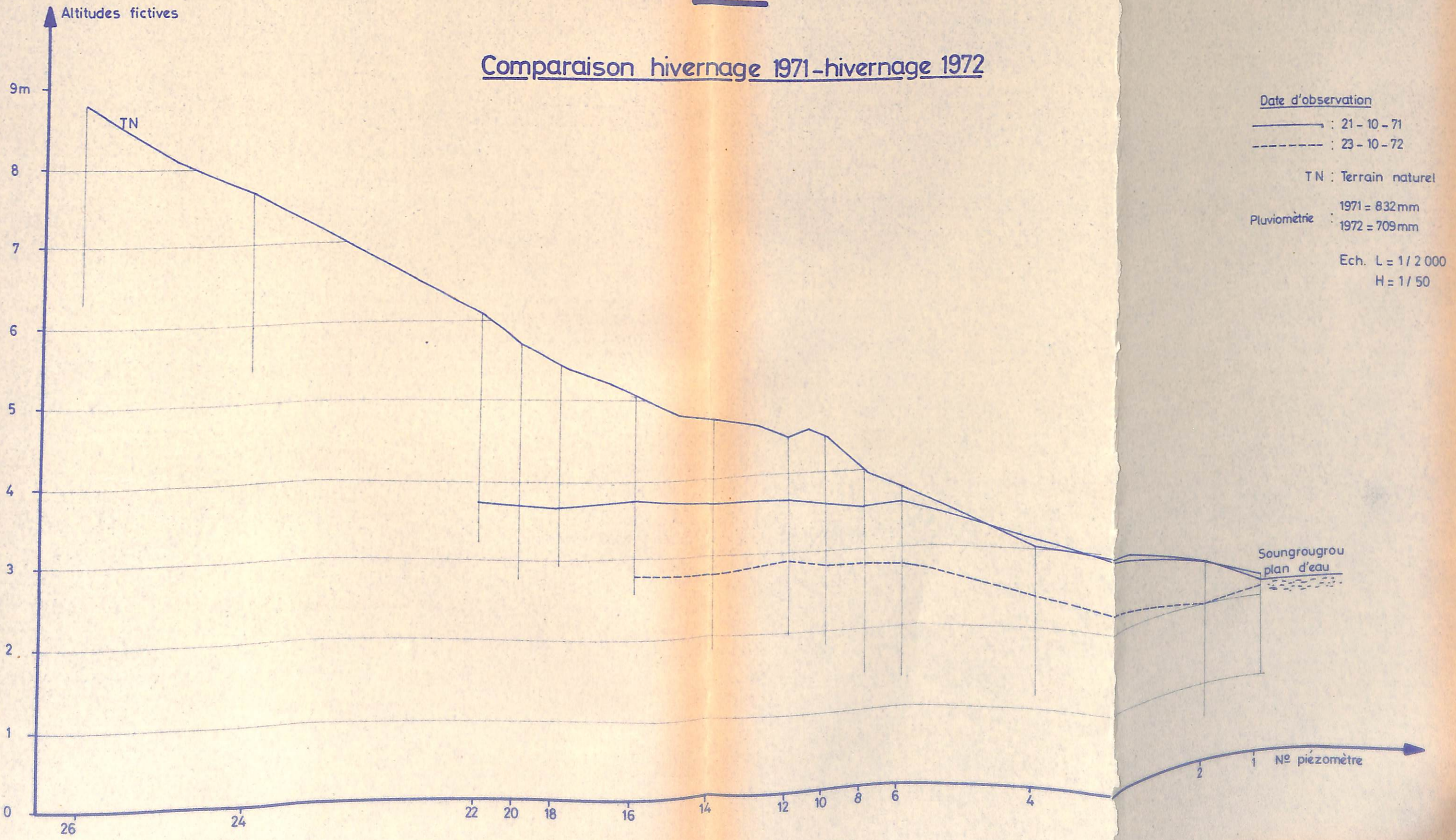
RIZIERES A NAPPE AFFLEURANTE
 (forte salinité)

SUR NAPPE

Evolution du niveau piézométrique

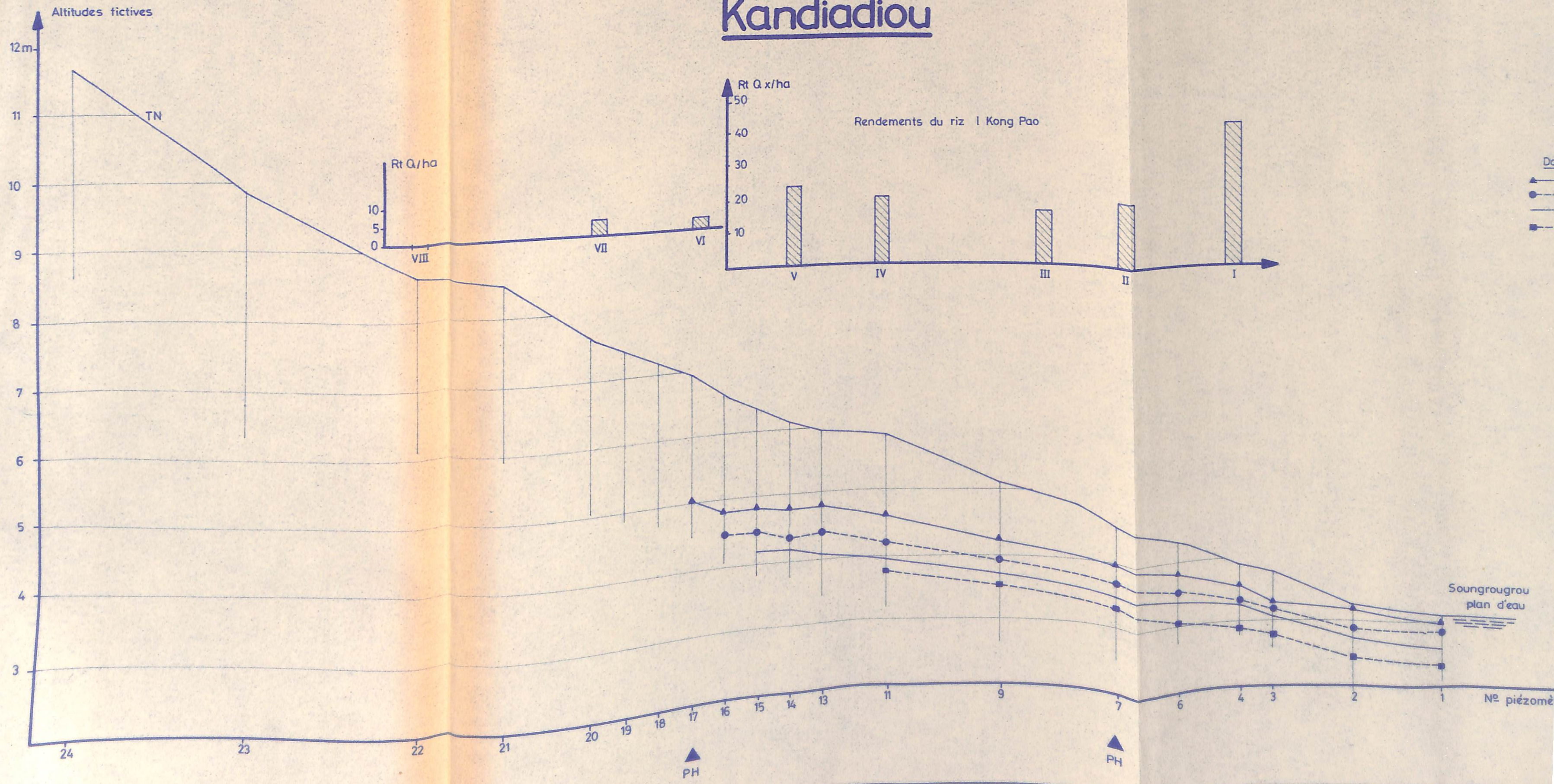
Inor

Comparaison hivernage 1971-hivernage 1972



Evolution du niveau piézométrique

Kandiadiou

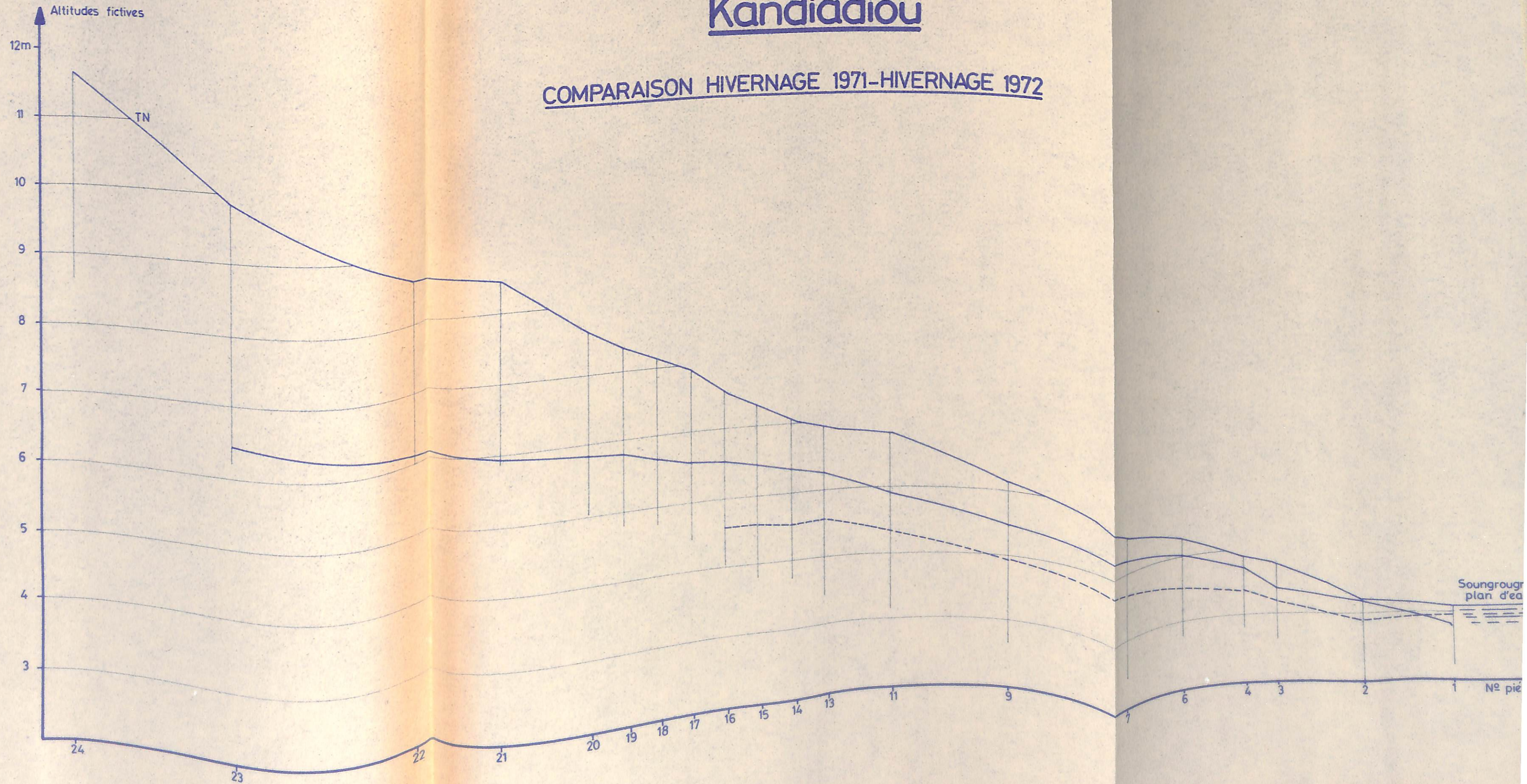


RIZ PLUVIAL SUR NAPPE RIZIÈRES A NAPPE AFFLEURANTE RIZIÈRES INONDABLES

Evolution du niveau piézométrique

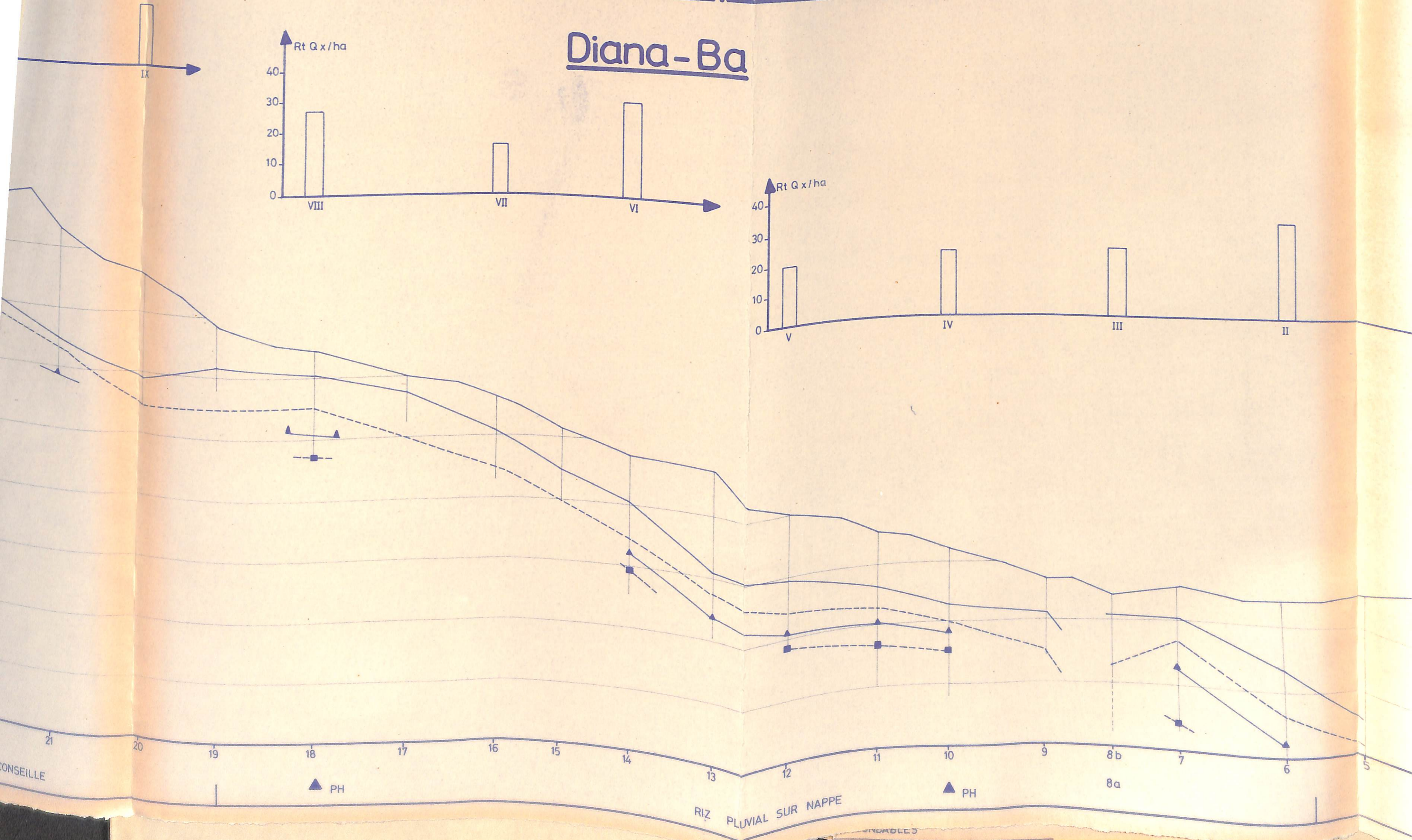
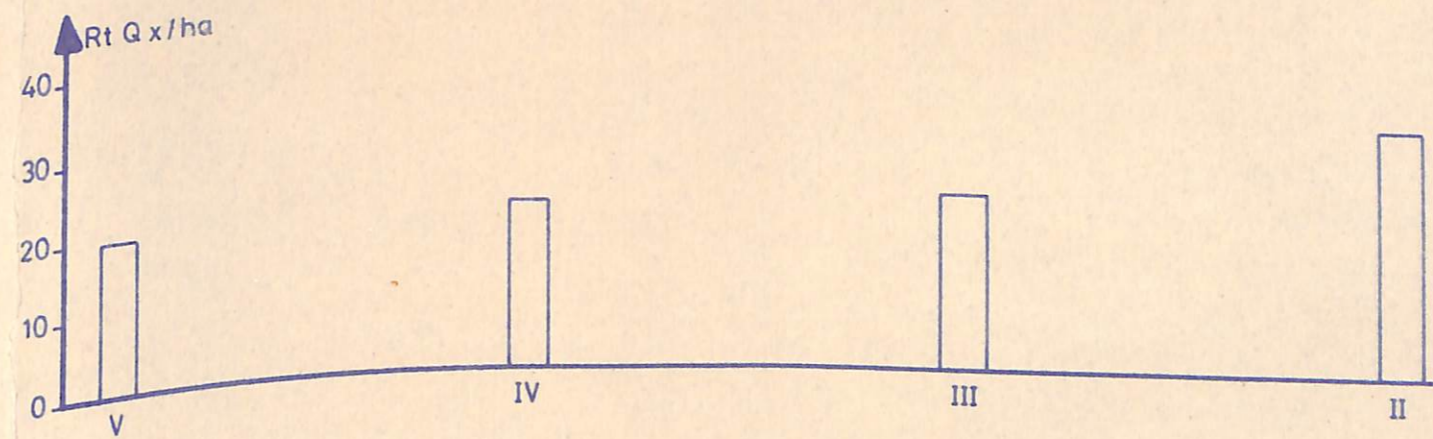
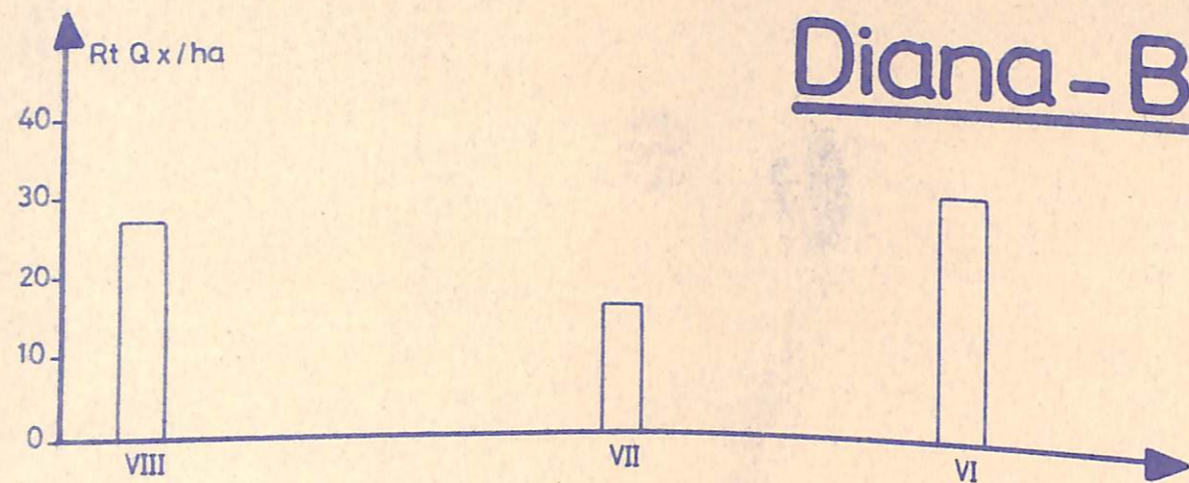
Kandiadiou

COMPARAISON HIVERNAGE 1971-HIVERNAGE 1972



Evolution du niveau piézométrique

Diana-Ba

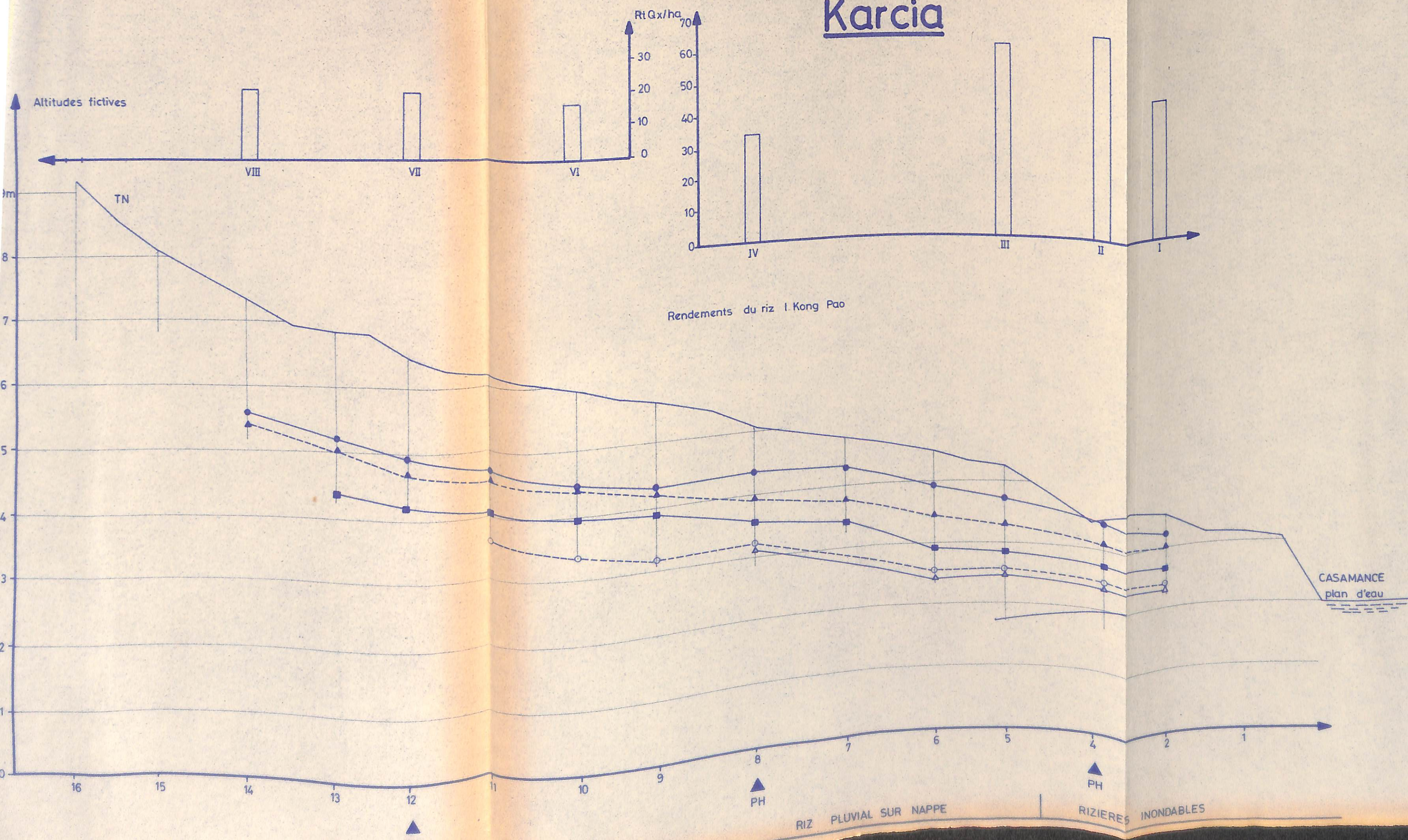


CONSEILLE

RIZ PLUVIAL SUR NAPPE

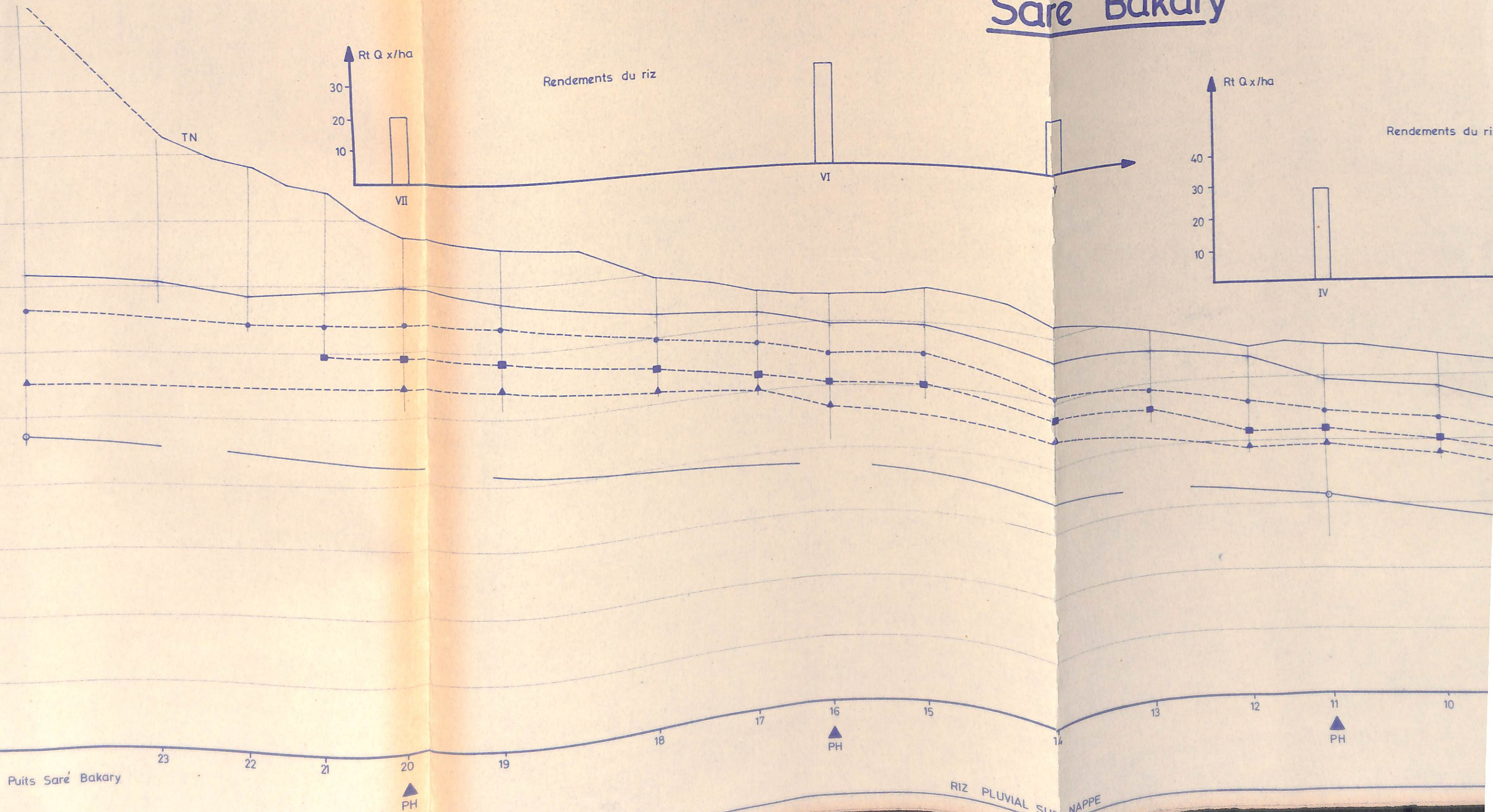
Evolution du niveau piézométrique

Karcia



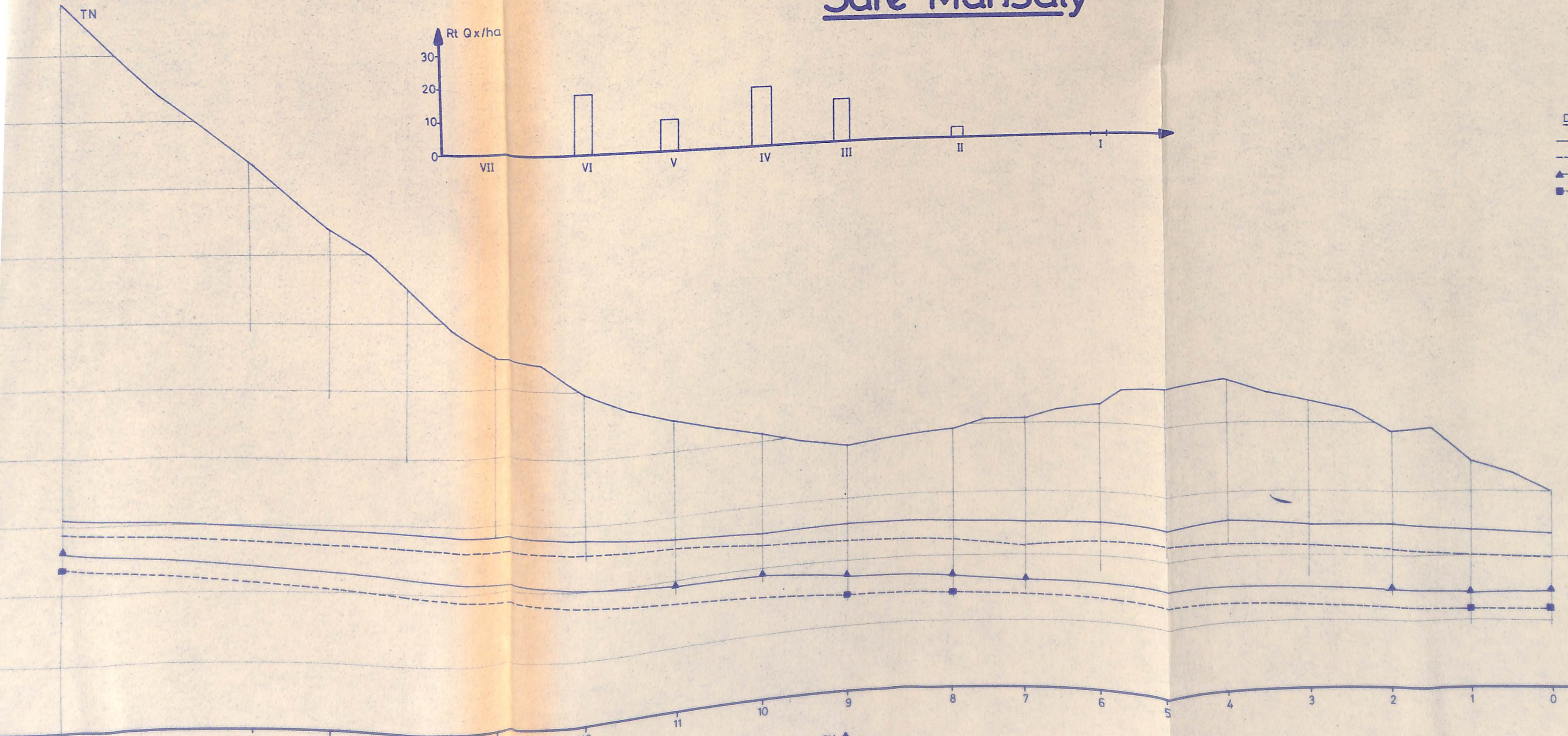
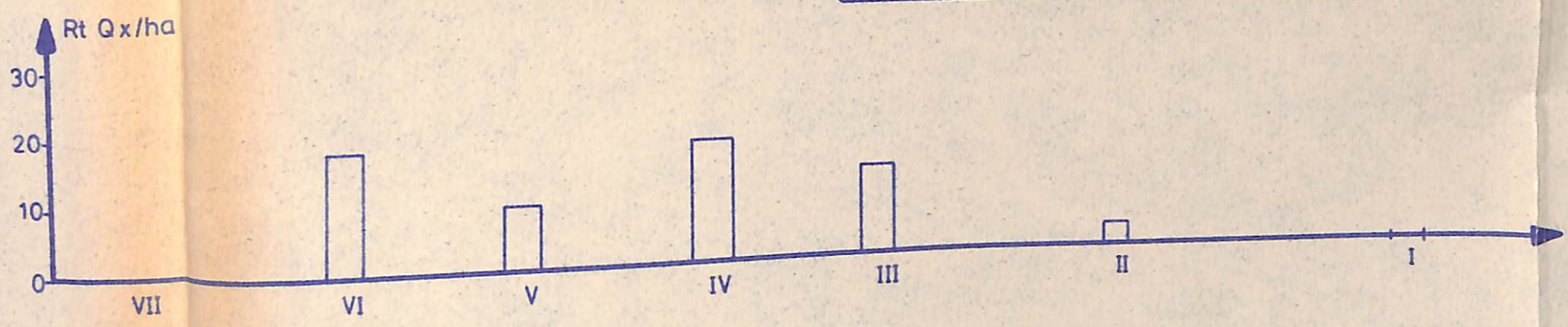
Evolution du niveau piézométrique

Saré Bakary



Evolution du niveau piézométrique

Saré Mansaly



Puits Saré Mansaly

16

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

0

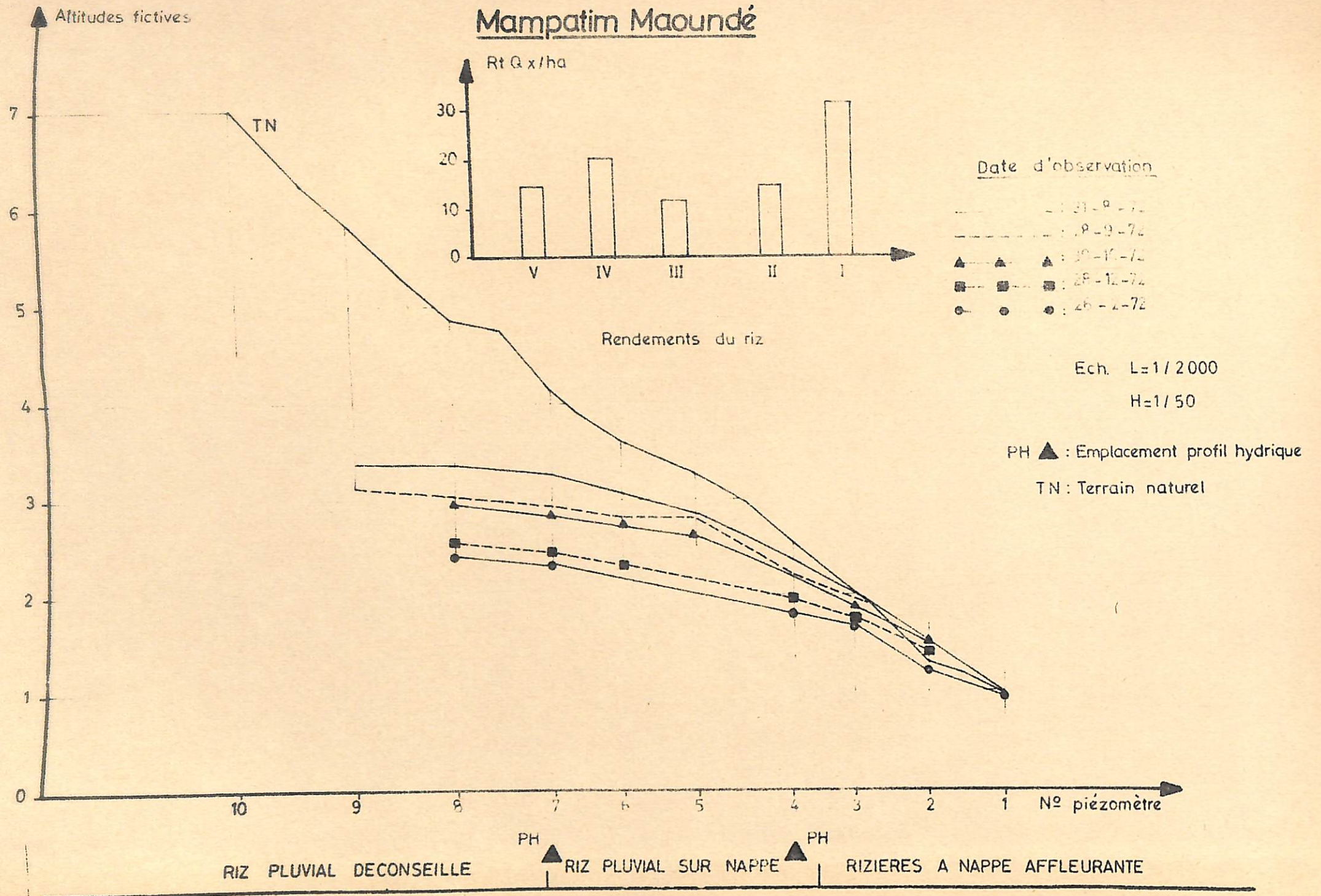
PH ▲

PH ▲

PLUVIAL ENVISAGEABLE

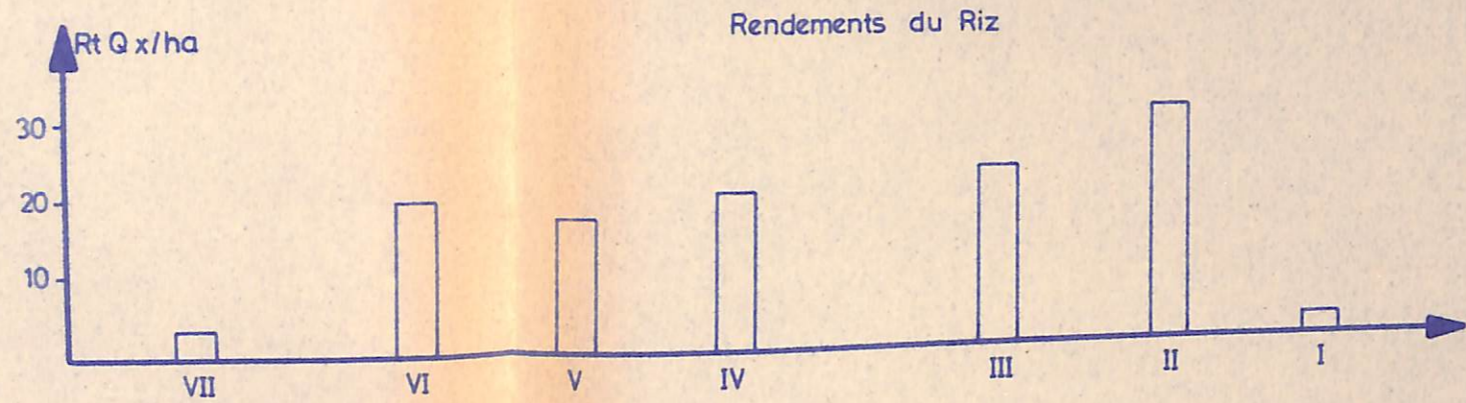
RIZ PLUVIAL DECONSEILLE

RIZ PLUVIAL SUR

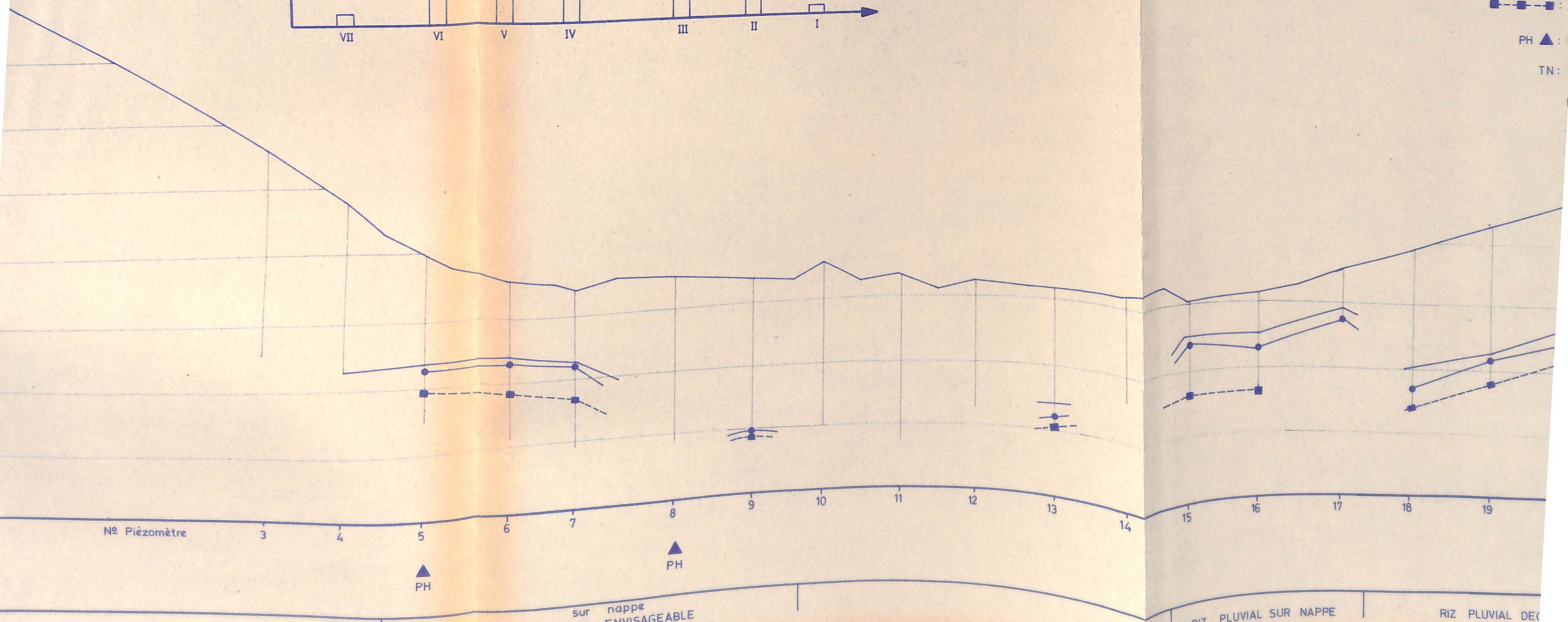


Evolution du niveau piézométrique

Diallicounda

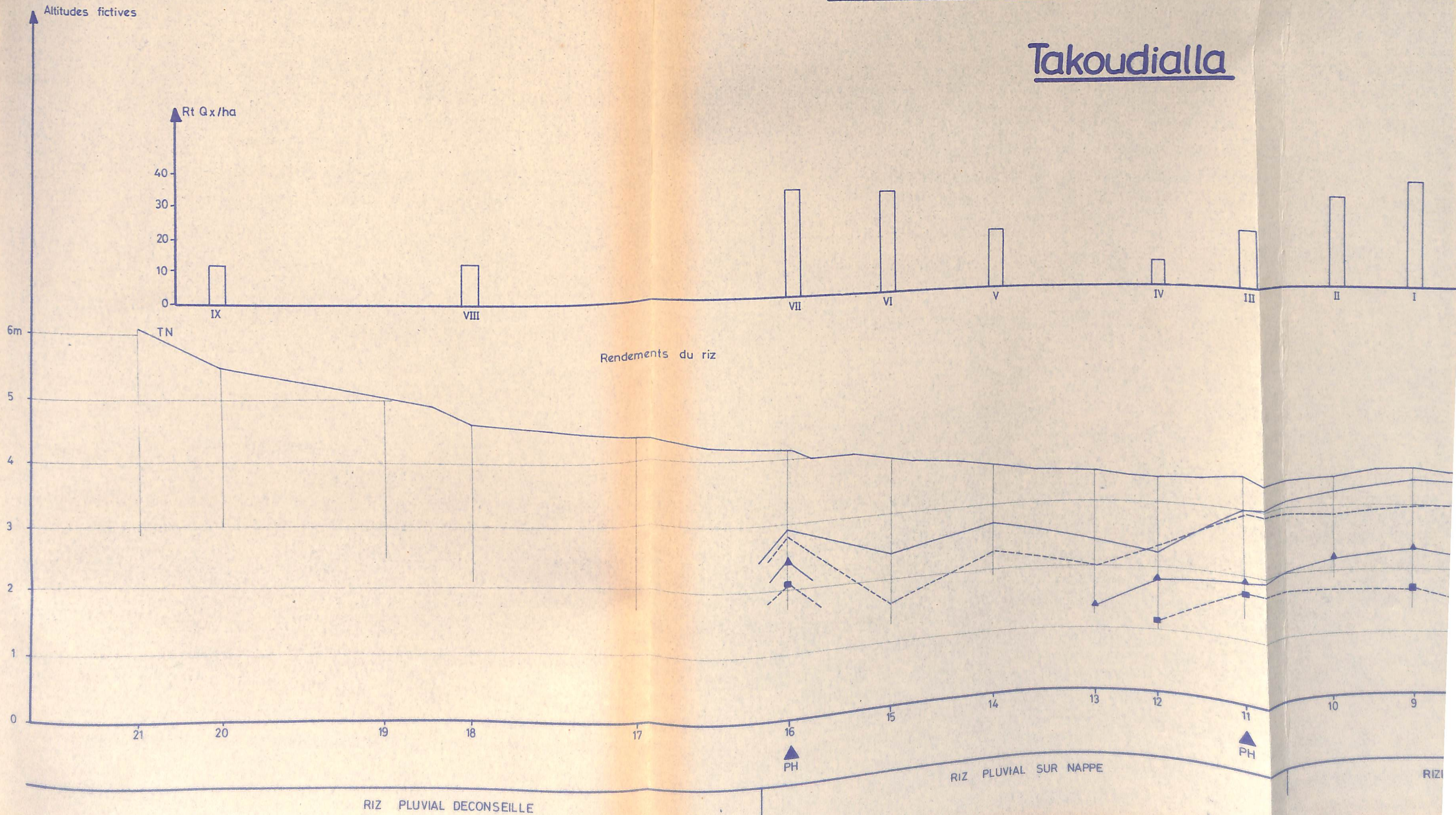


Date d'obse
 :
 :
 :
 PH ▲ :
 TN :



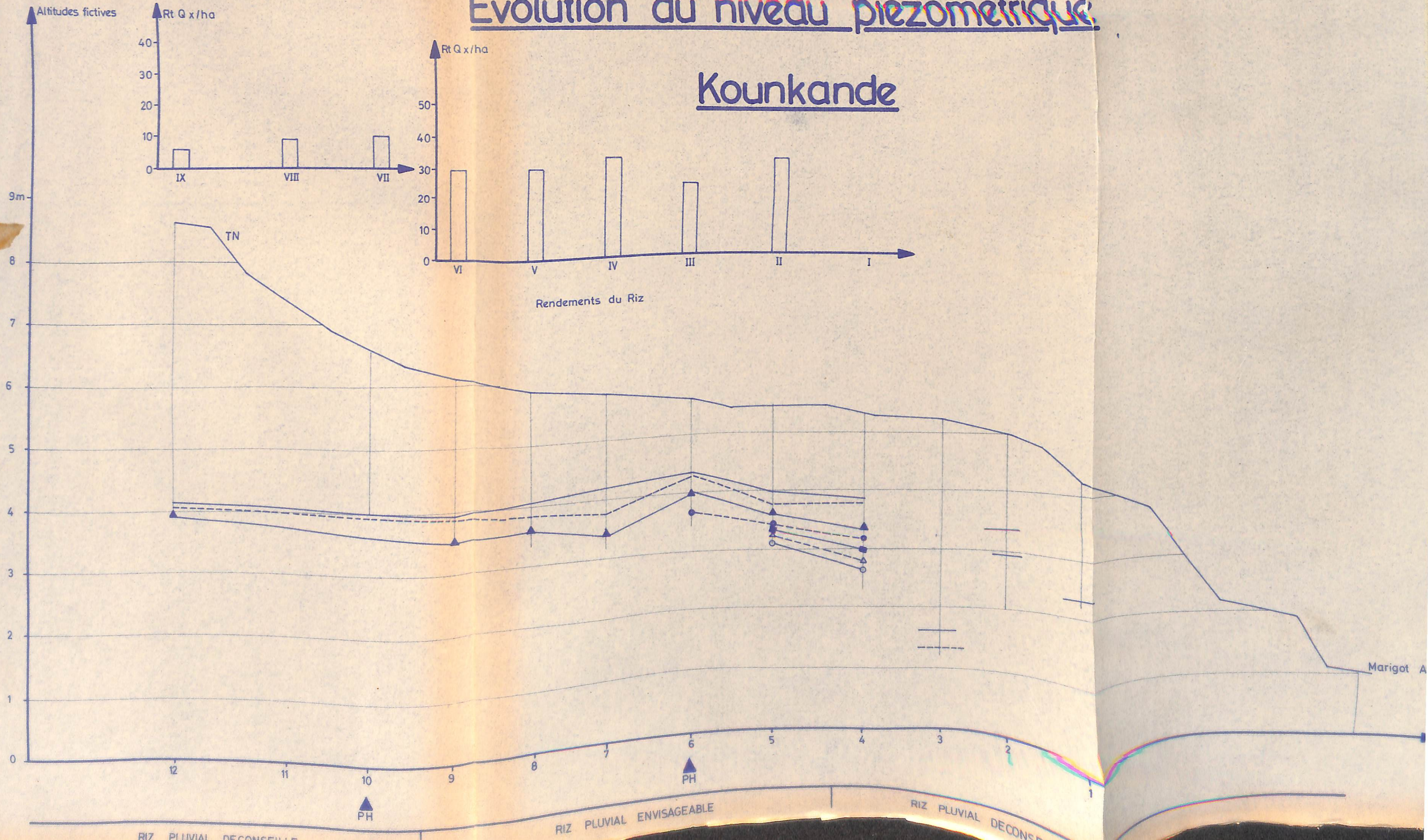
Evolution du niveau piézométrique

Takoudialla



Evolution du niveau piézométrique

Koukande



Humectation du profil 1972

FIG. 56

BALINGOR TENDIMANE
PH II 5

Date	Profondeur Nappe
10 - 8 - 72	—●—●—●—
18 - 8 - 72	—■—■—■—
4 - 9 - 72	—*—*—*—
PF : 4,2	

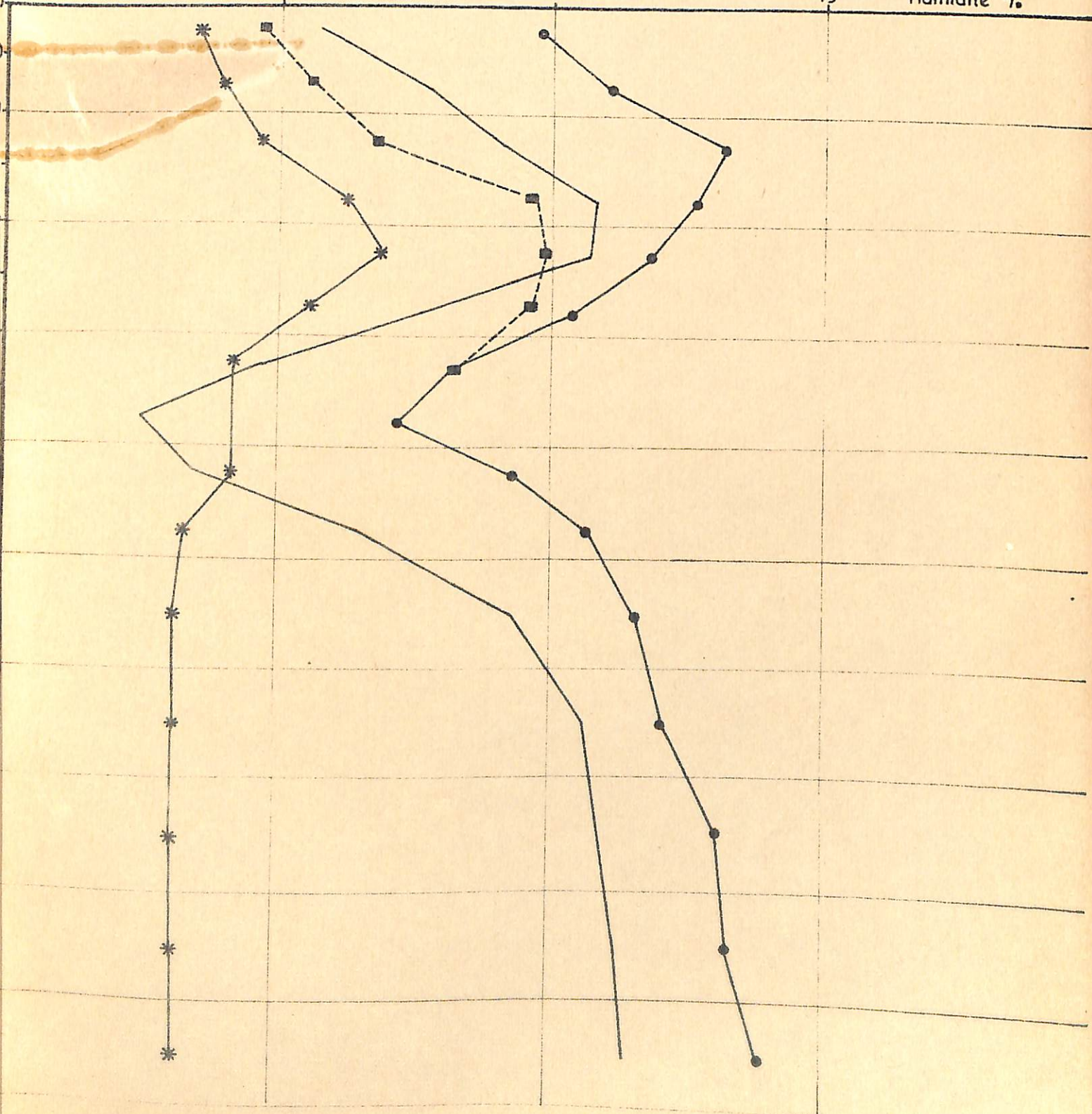
Profondeur cm

5

10

15

Humidité %

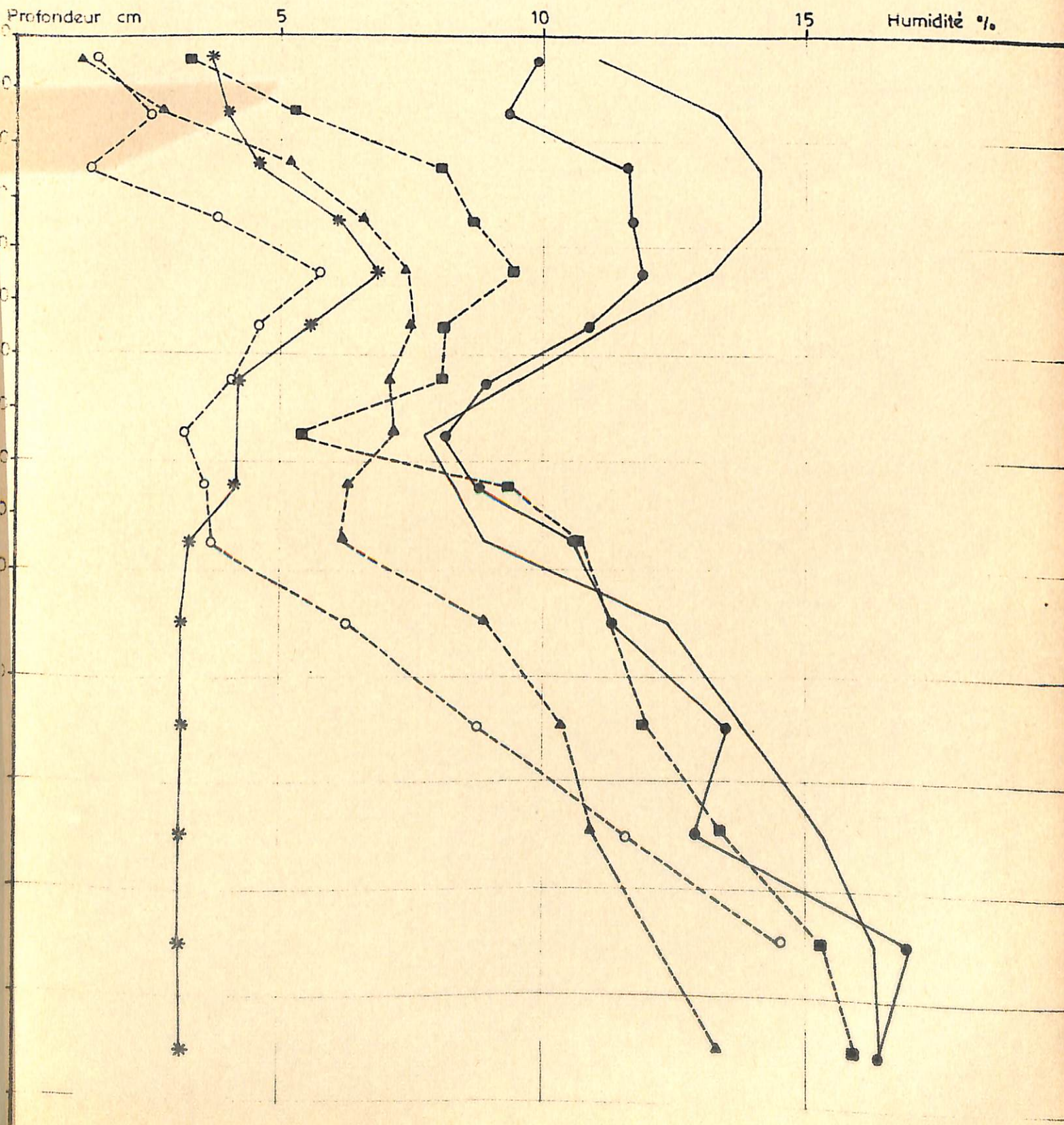


Assèchement du profil 1972-1973

FIG. 57

BALINGOR TENDIMANE
PH II 5

Date	Profondeur Nappe
18 9 72	— 243 cm
25- 9 - 72	●—●—● 207 cm
9-10- 72	■-■-■ 217 cm
25- 1 - 73	▲-▲-▲
23- 5 - 73	○-○-○
PF: 4,2	*-*-*



Humectation du profil 1973

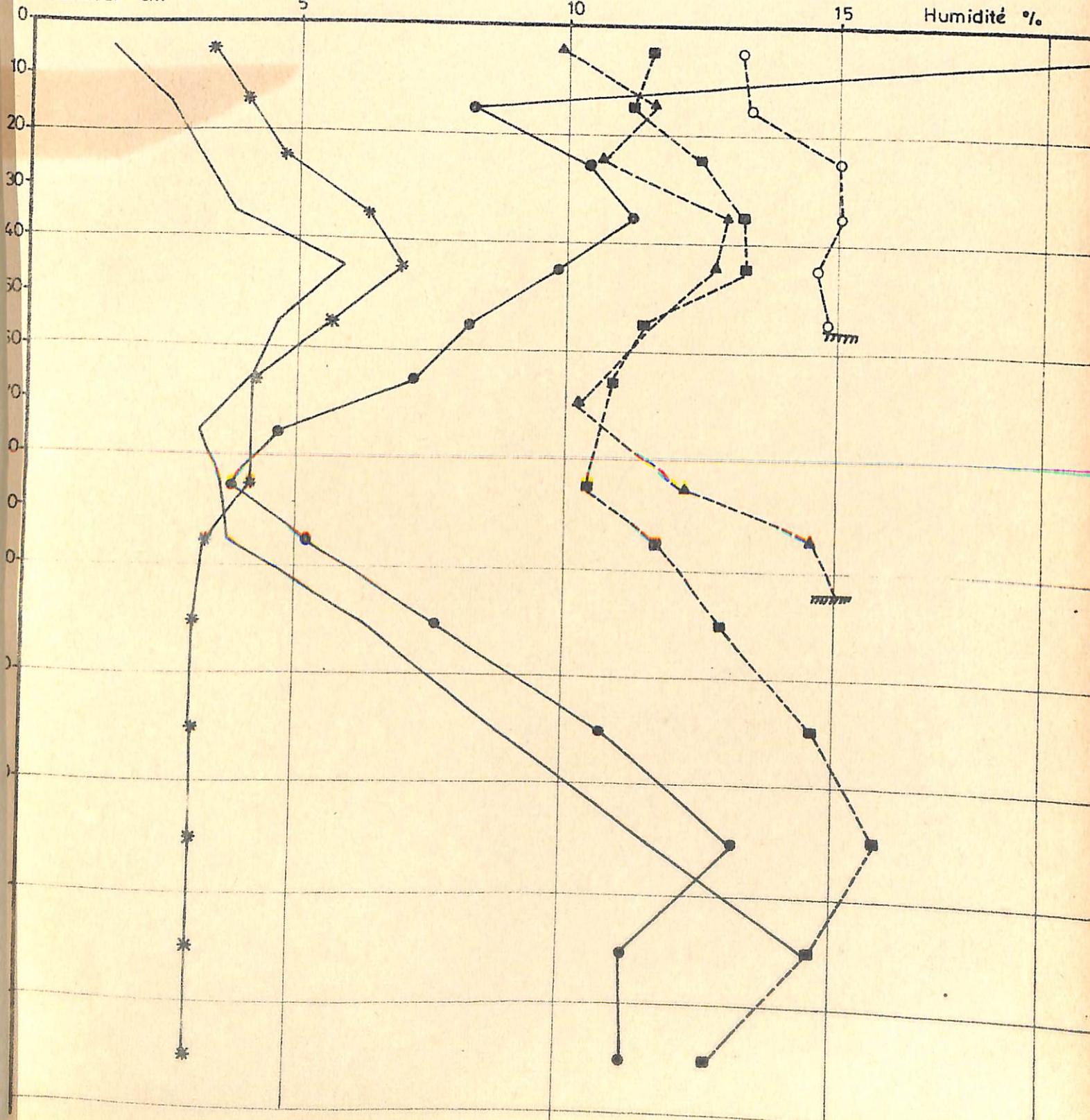
FIG. 58

BALINGOR TENDIMANE
PH II 5

Date	Profondeur Nappe
23-5-73	—
22-6-73	●—●
18-7-73	■—■
21-8-73	▲—▲ 104cm
5-9-73	○—○ 56cm
PF 4,2	*—*

Profondeur cm

Humidité %

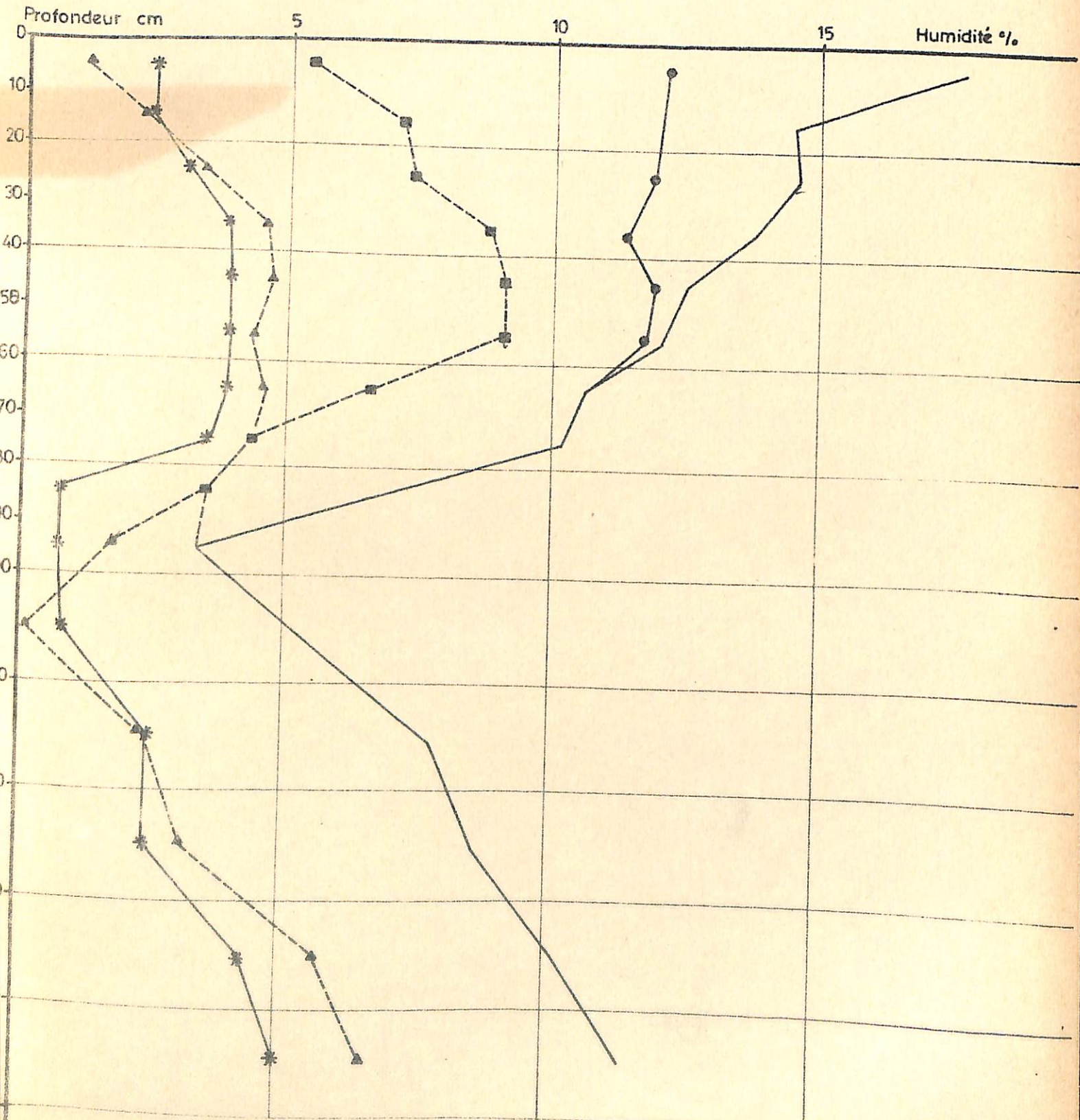


Assèchement du profil 1972-1973

FIG. 59

BALINGOR TENDIMANE
PH V10

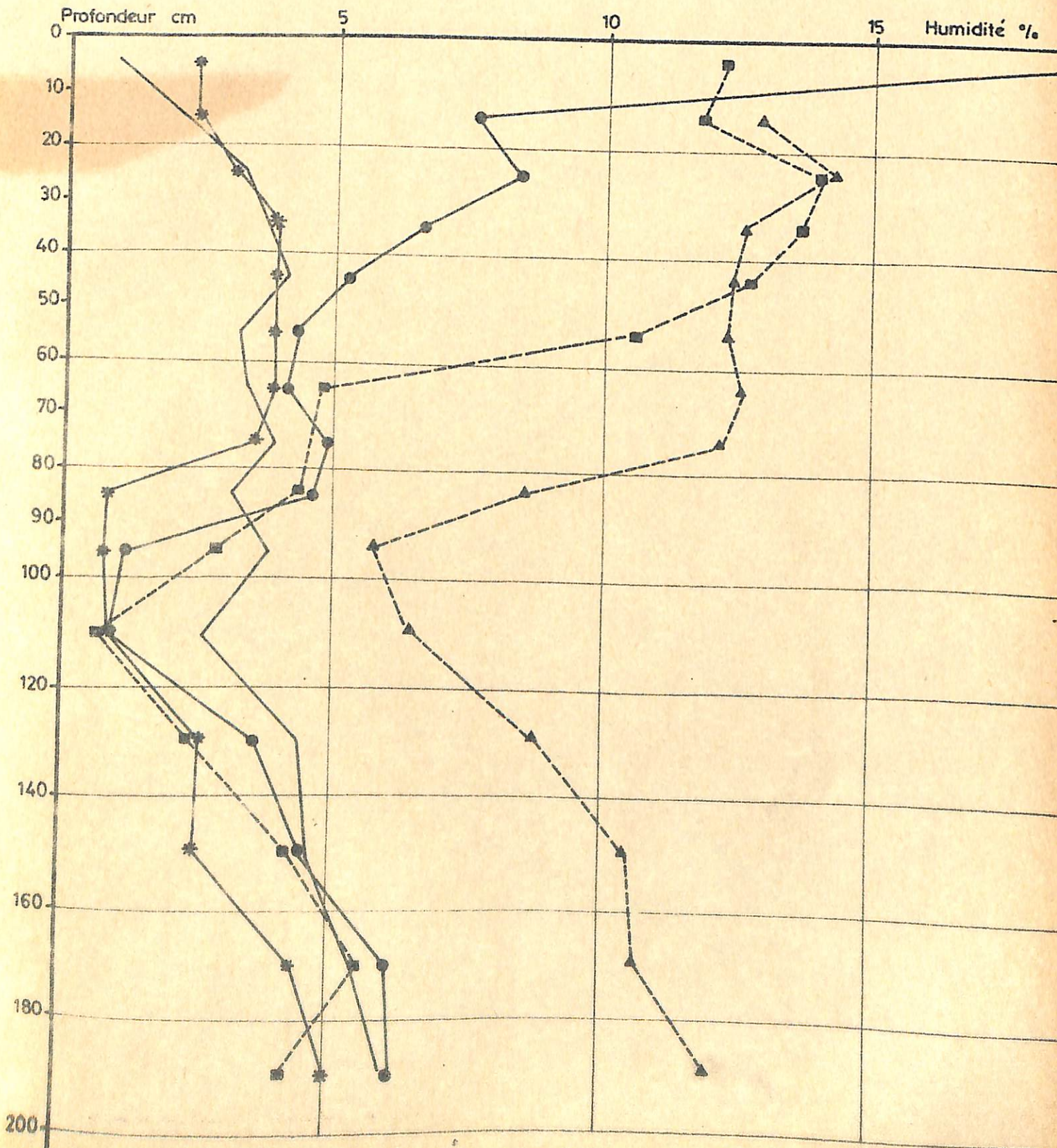
Date	Profondeur Nappe
18 - 9 - 72	—
25 - 9 - 72	●—●—●
9 - 10 - 72	■—■—■
25 - 11 - 73	▲—▲—▲
PF 4,2	*—*—*



Humectation du profil 1973

BALINGOR TENDIMANE
PH V 10

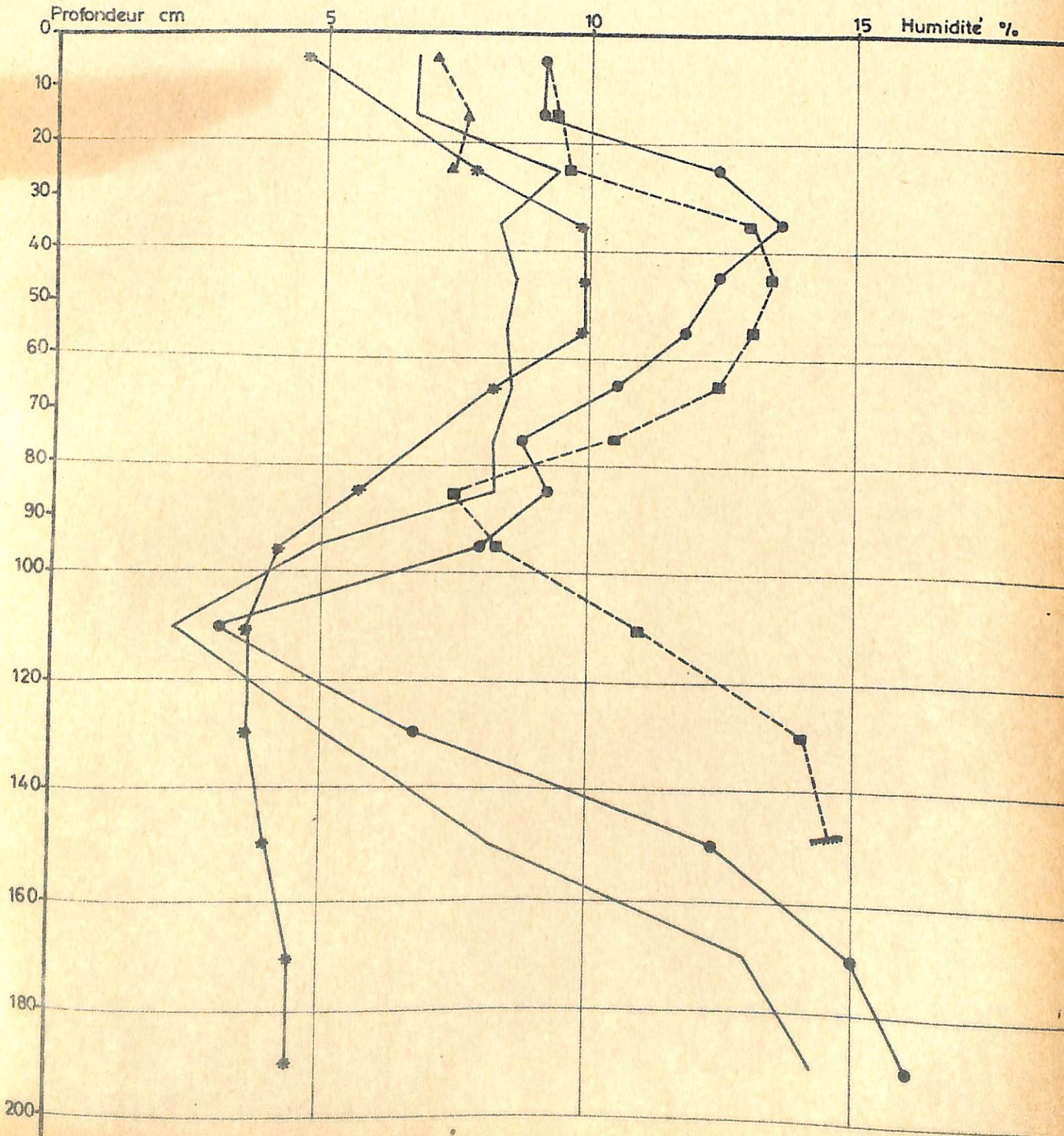
Date
 23 - 5 - 73 ———
 22 - 6 - 73 ●—●
 18 - 7 - 73 ■—■
 2 - 8 - 73 ▲—▲
 PF 4,2 *—*



Humectation du profil 1972

DIOUROU
PH II 6

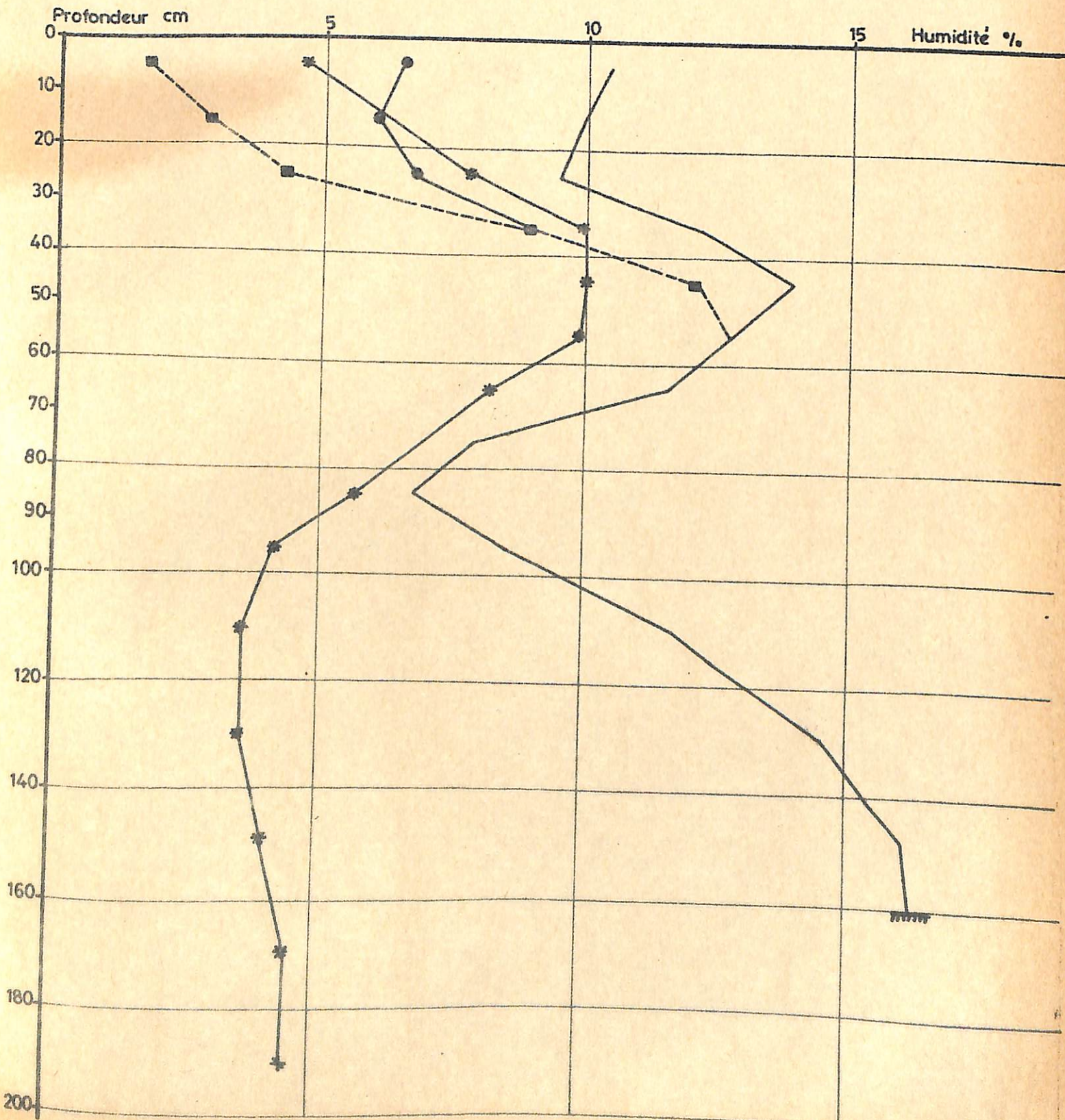
Date	Profondeur Nappe
29 - 7 - 72	219 cm
10 - 8 - 72	203 cm
30 - 8 - 72	158 cm
4 - 9 - 72	165 cm
PF 4,2	



Assèchement du profil 1972

DIUROU
PH II 6

Date	Profondeur Nappe
18 - 9 - 72	161cm
25 - 9 - 72	167cm
9 - 10 - 72	185cm
PF 4,2	

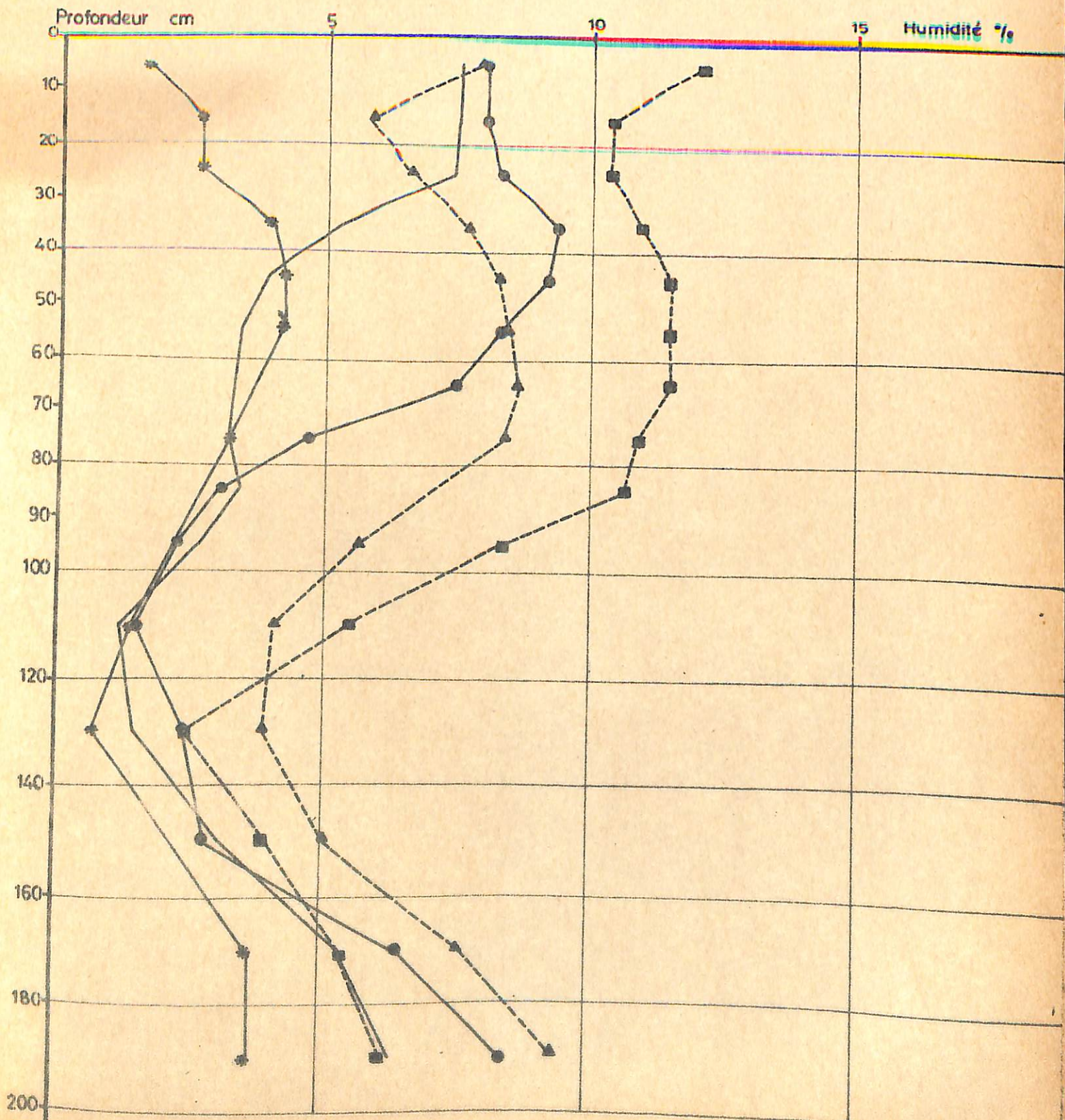


Humectation du profil 1972

DIOROU
PH IV 8

Date

- 29 - 7 - 72 —————
- 10 - 8 - 72 ●—●—●
- 18 - 8 - 72 ■—■—■
- 11 - 9 - 72 ▲—▲—▲
- PF 4,2 *—*—*

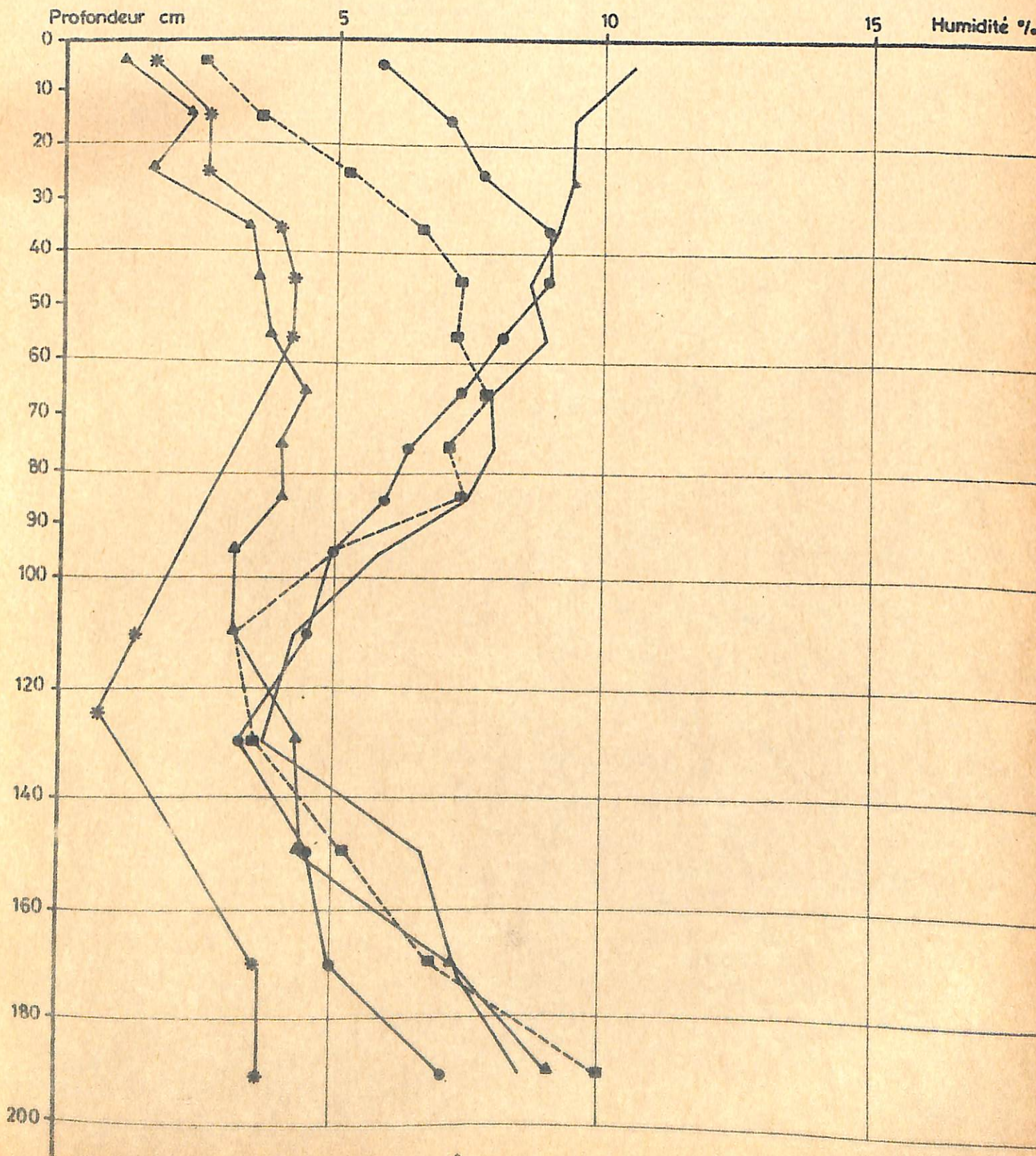


Assèchement du profil 1972-1973

DIOUROU
PH IV 8

Date

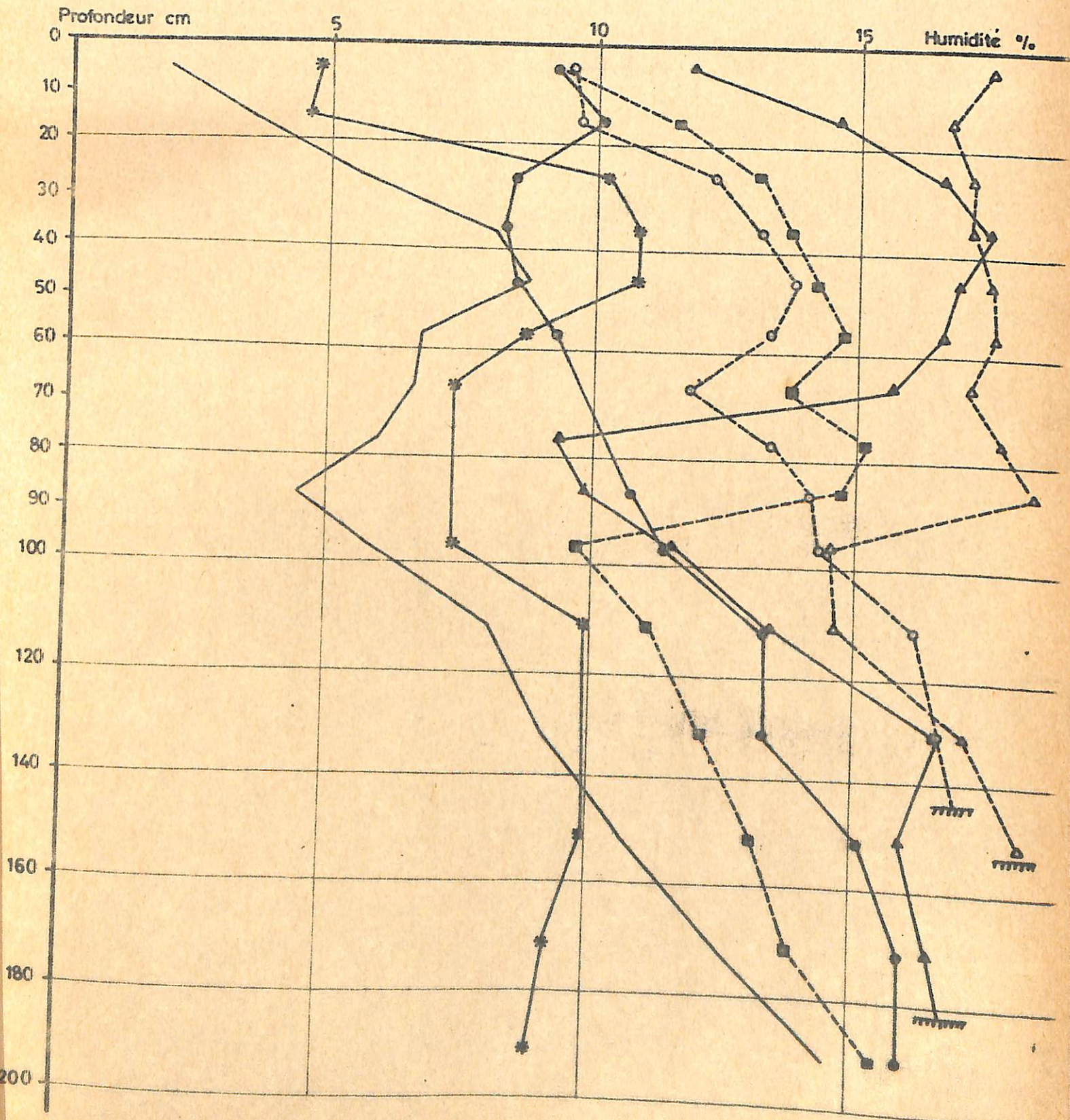
- 18 - 9 - 72 ————
- 25 - 9 - 72 ●——●
- 9 - 10 - 72 ■——■
- 25 - 1 - 73 ▲——▲
- PF 4,2 *——*



Humectation du profil 1972

INOR
PH V 12-13

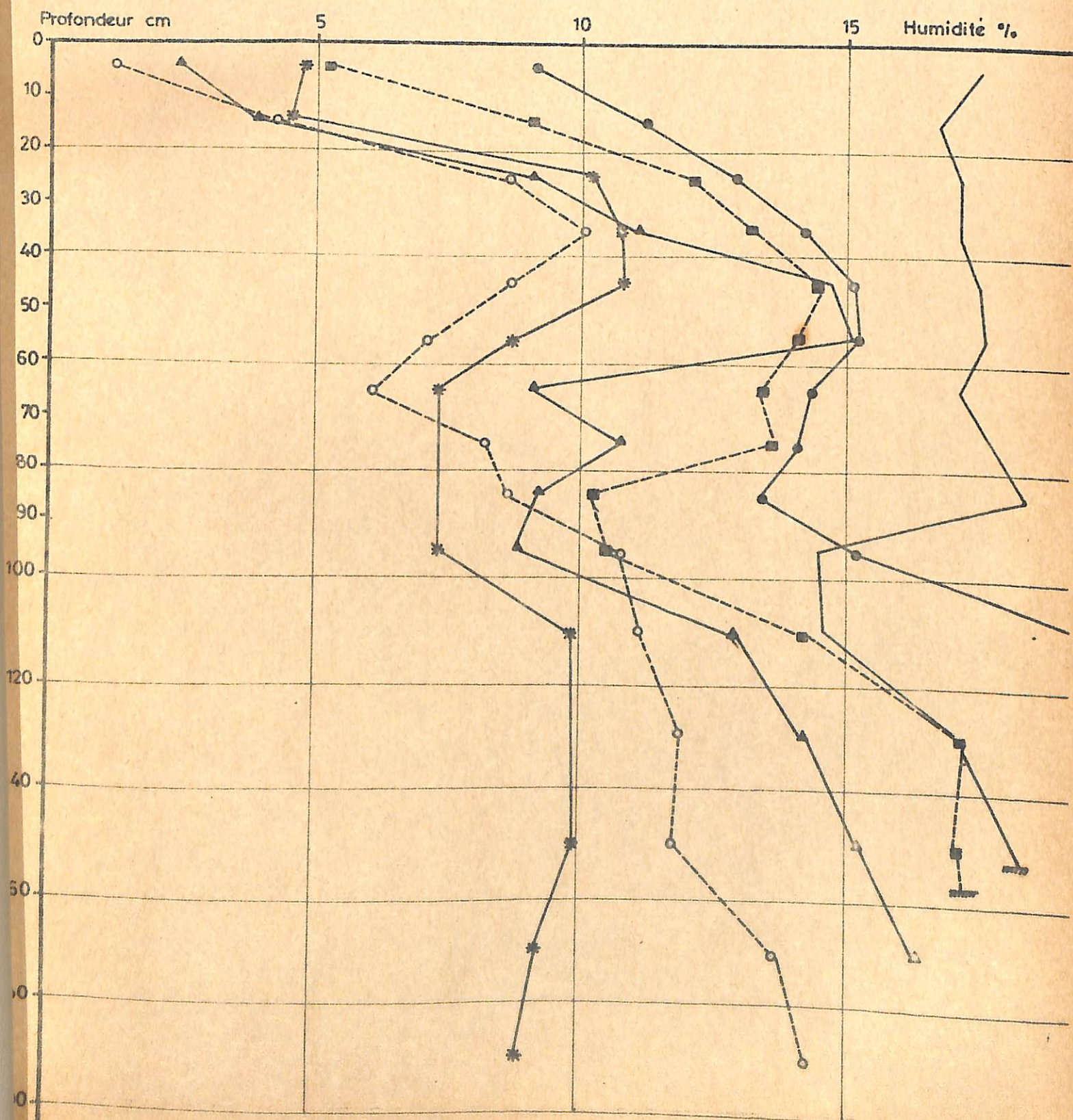
Date	Profondeur Nappe	
26 - 6 - 72	—	
27 - 7 - 72	●—●—●—●—	
11 - 8 - 72	■—■—■—■—	230 cm
19 - 8 - 72	▲—▲—▲—▲—	181cm
4 - 9 - 72	○—○—○—○—	143cm
12 - 9 - 72	△—△—△—△—	152cm
PF 4,2	*—*—*—*—	



Assèchement du profil 1972-1973

INOR
PH V 12-13

Date	Profondeur Nappe
12 - 9 - 72	152 cm
25 - 9 - 72	148 cm
10 - 10 - 72	157 cm
25 - 1 - 73	
9 - 5 - 73	
PF 4,2	



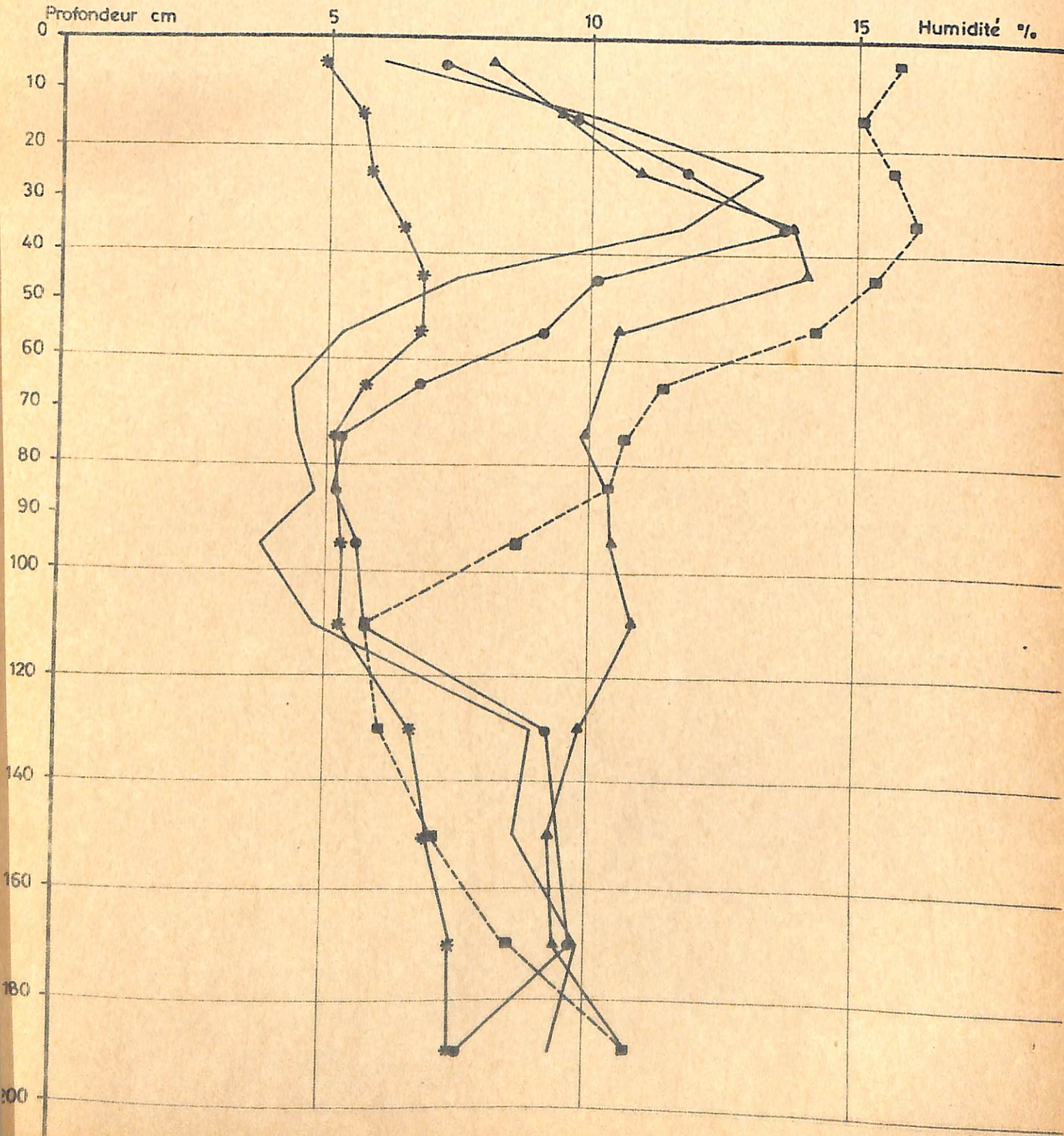
Humectation du profil 1972

FIG. 67

INOR
PH XI 20

Date	Profondeur Nappes
27 - 7 - 72	—
11 - 8 - 72	●—●—●
19 - 8 - 72	■—■—■
4 - 9 - 72	▲—▲—▲
PF 4,2	*—*—*

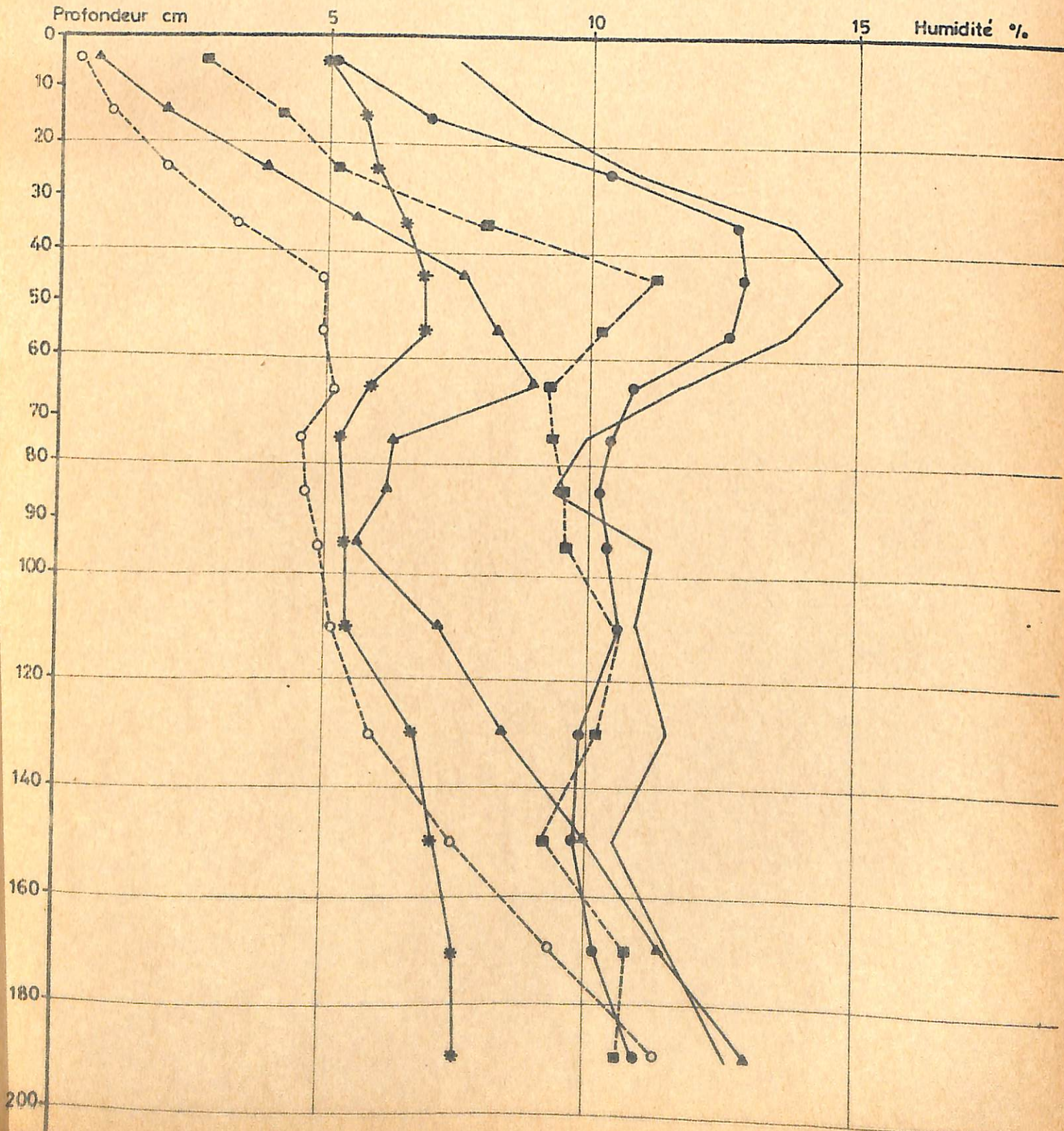
275 cm



Assèchement du profil 1972-1973

INOR
PH XI 20

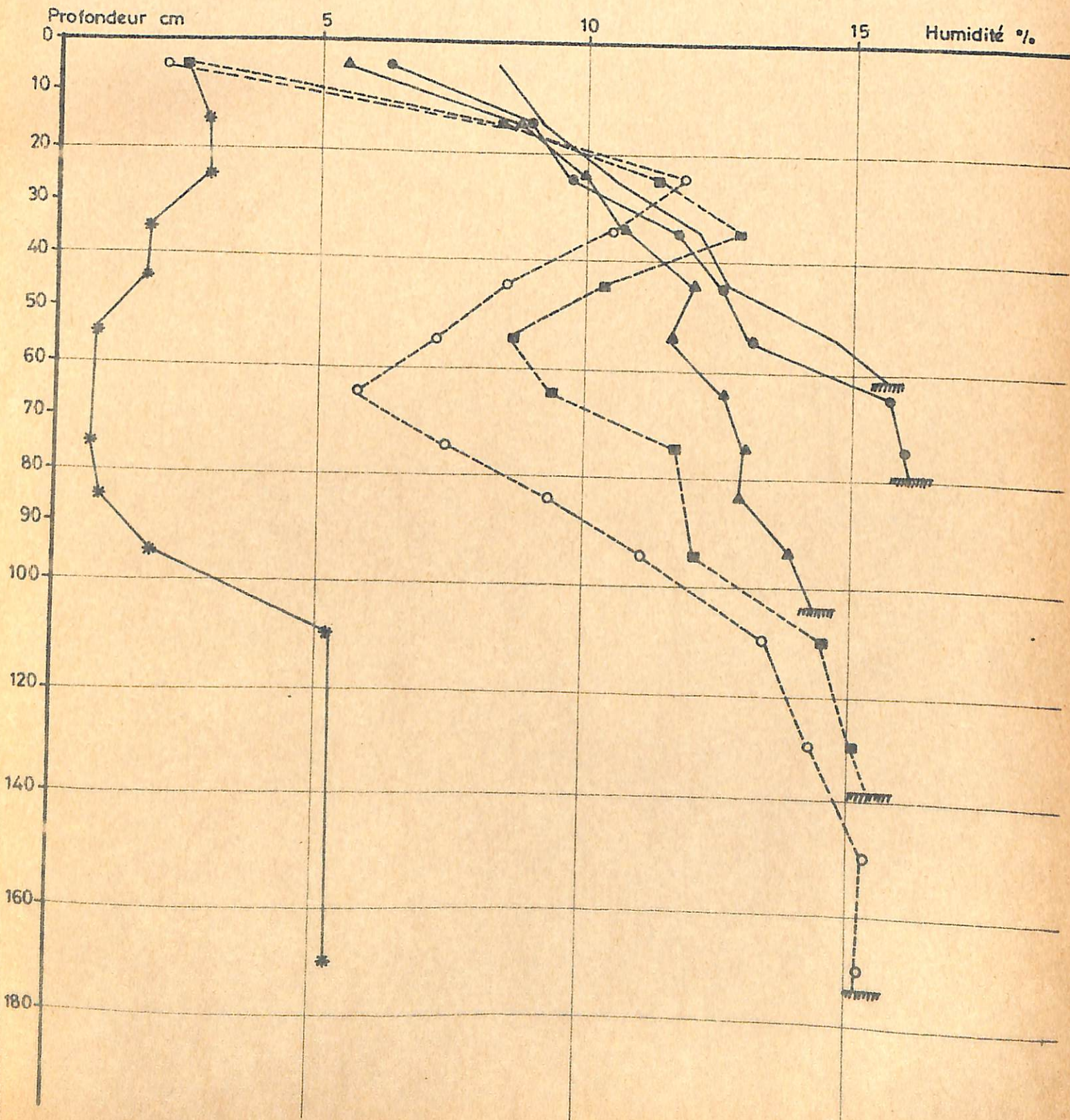
Date	Profondeur Nappe
25 - 9 - 72	270 cm
3 - 10 - 72	275 cm
10 - 12 - 72	275 cm
25 - 1 - 73	275 cm
9 - 5 - 73	275 cm
PF 4,2	



Assèchement du profil 1972-1973

KANDIADIOU
PH II 7

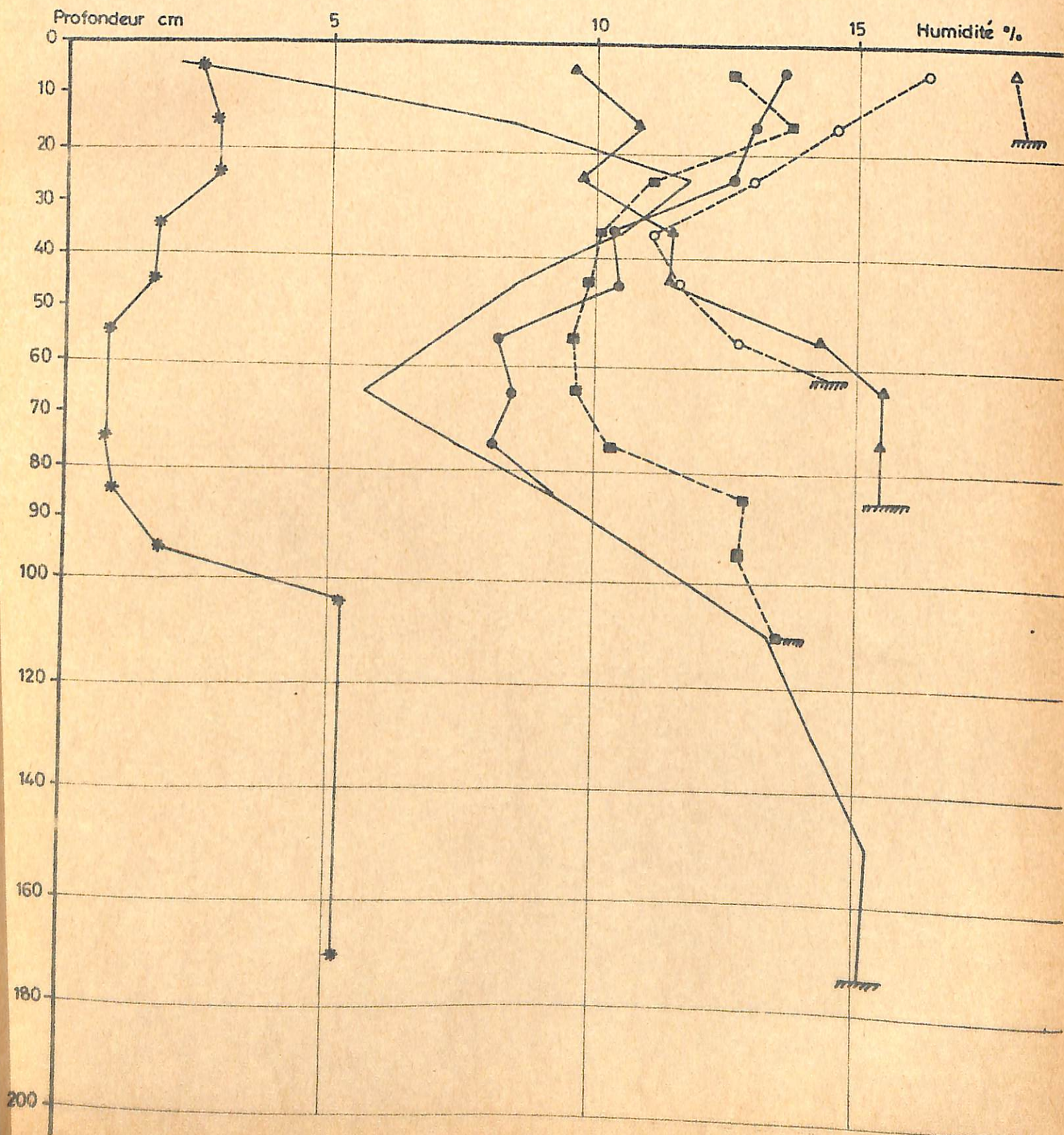
Date	Profondeur Nappe
3 - 10 - 72	62 cm
23 - 10 - 72	80 cm
6 - 12 - 72	104 cm
25 - 1 - 73	138 cm
9 - 5 - 73	173 cm
PF 4,2	*



Humectation du profil 1973

KANDIADIOU
PH II 7

Date	Profondeur Nappe
9 - 5 - 73	173 cm
14 - 6 - 73	134 cm
5 - 7 - 73	110 cm
25 - 7 - 73	85 cm
7 - 8 - 73	62 cm
23 - 8 - 73	16 cm
PF 4,2	



Humectation - Assèchement du profil 1972-73

FIG 71

KANDIADICOU
PH VI 17

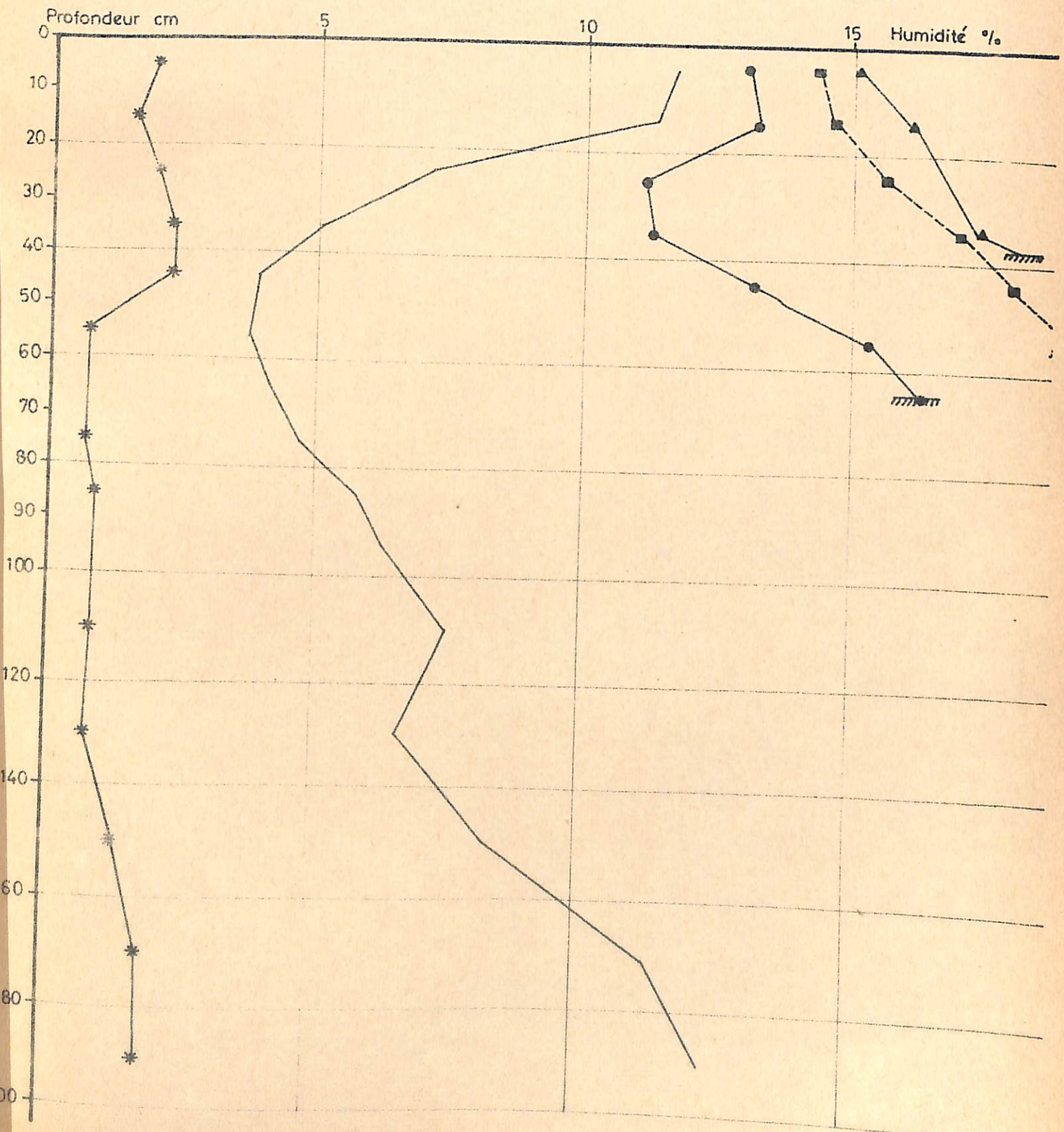
Date	Profondeur Nappe
12 - 8 - 72	205 cm
19 - 9 - 72	200 cm
25 - 11 - 72	200 cm
9 - 5 - 73	200 cm
PF 4,2	*



Humectation du profil 1972

DIANA BA
PH VIII 18

Date	Profondeur Nappe
5 - 8 - 72	—————
20 - 8 - 72	●—●—● 65 cm
29 - 8 - 72	■—■—■ 55 cm
20 - 9 - 72	▲—▲—▲ 38 cm
PF 4,2	*—*—*

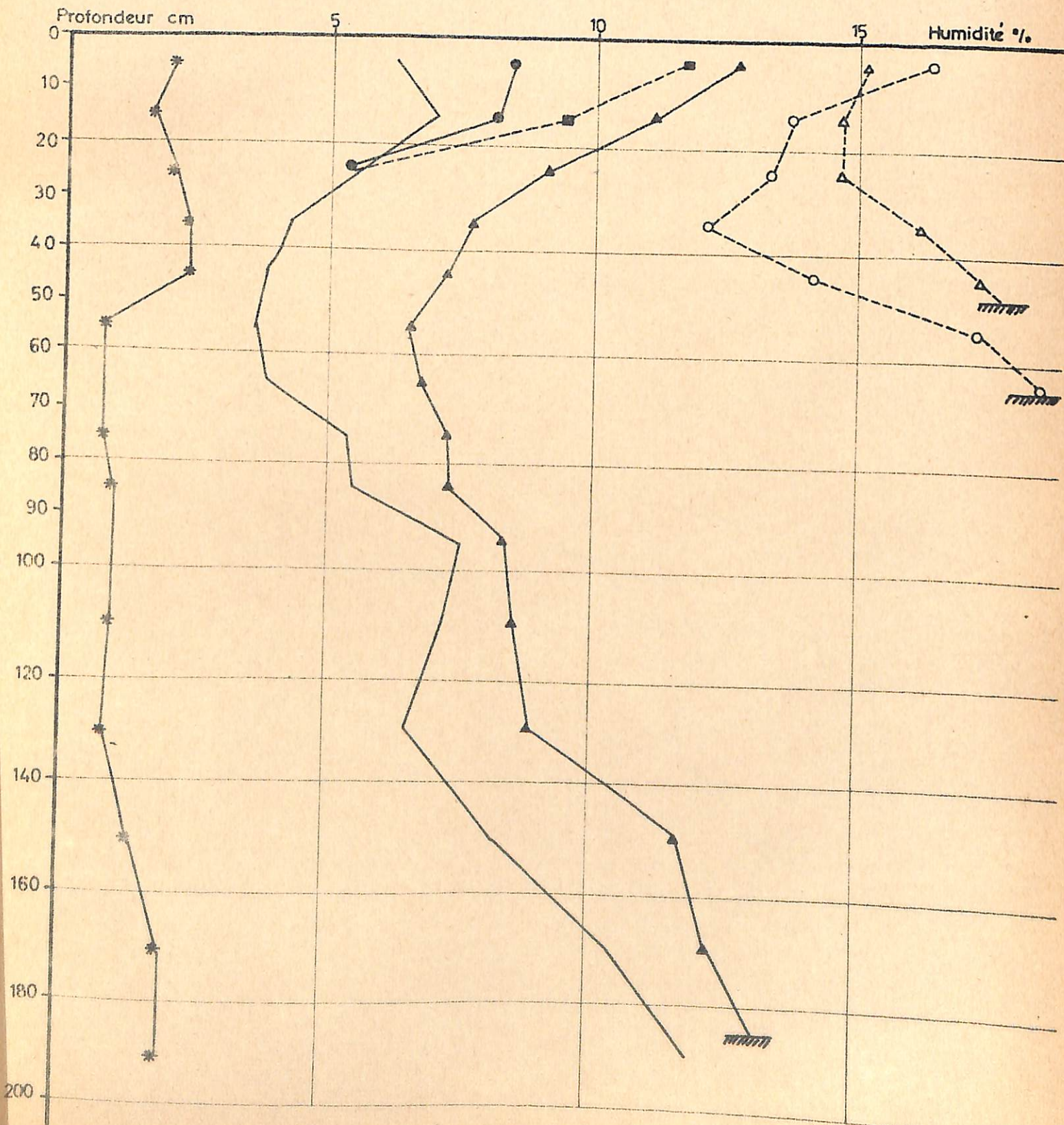


Humectation du profil 1973

FIG. 74

DIANA BA
PH VIII 18

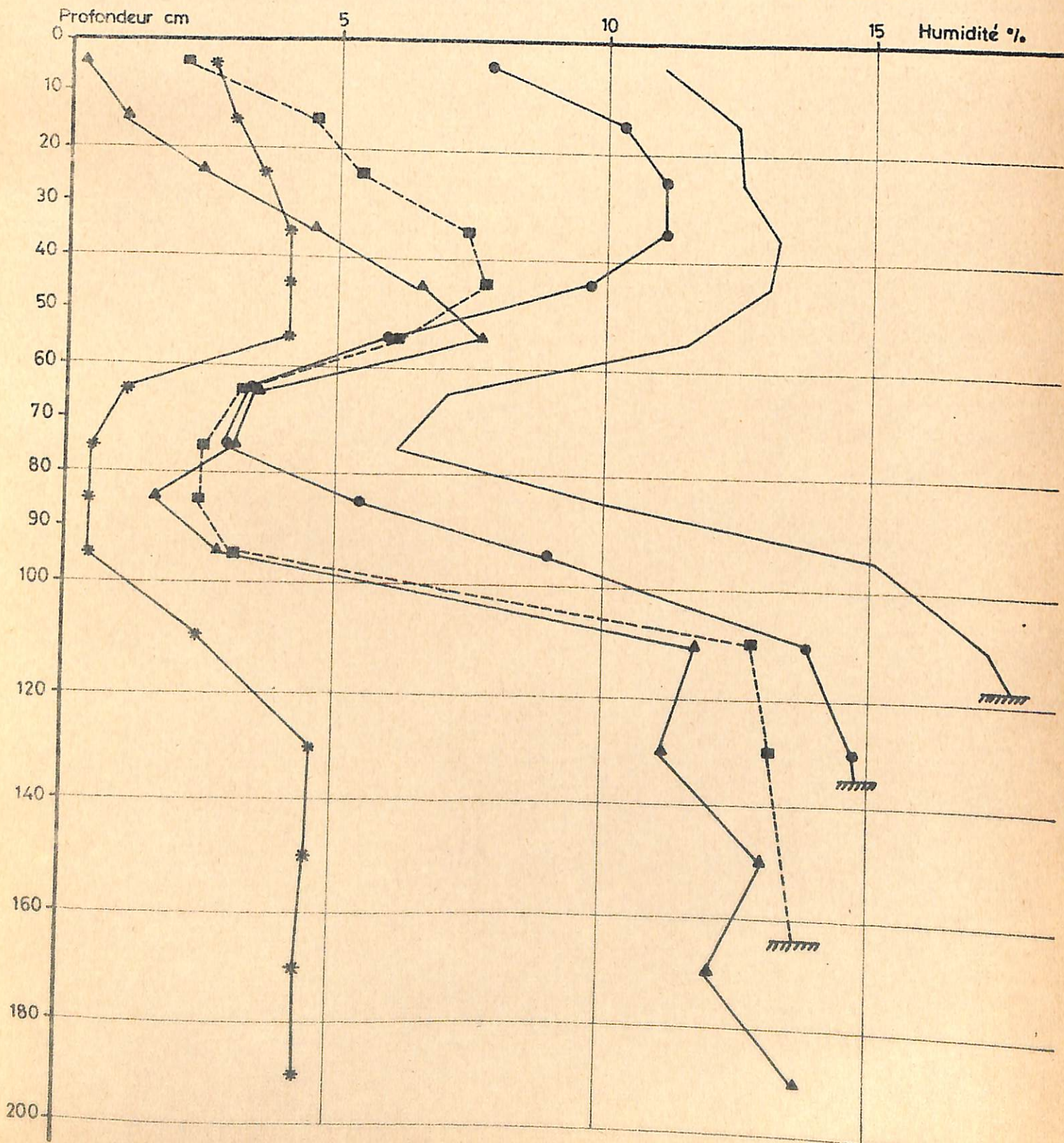
Date	Profondeur Nappe
20 - 6 - 73	237 cm
5 - 7 - 73	>250 cm
20 - 7 - 73	247 cm
27 - 7 - 73	185 cm
3 - 8 - 73	65 cm
16 - 8 - 73	49 cm
PF 4,2	*



Assèchement du profil 1972-1973

DIANA BA
PH IV 10

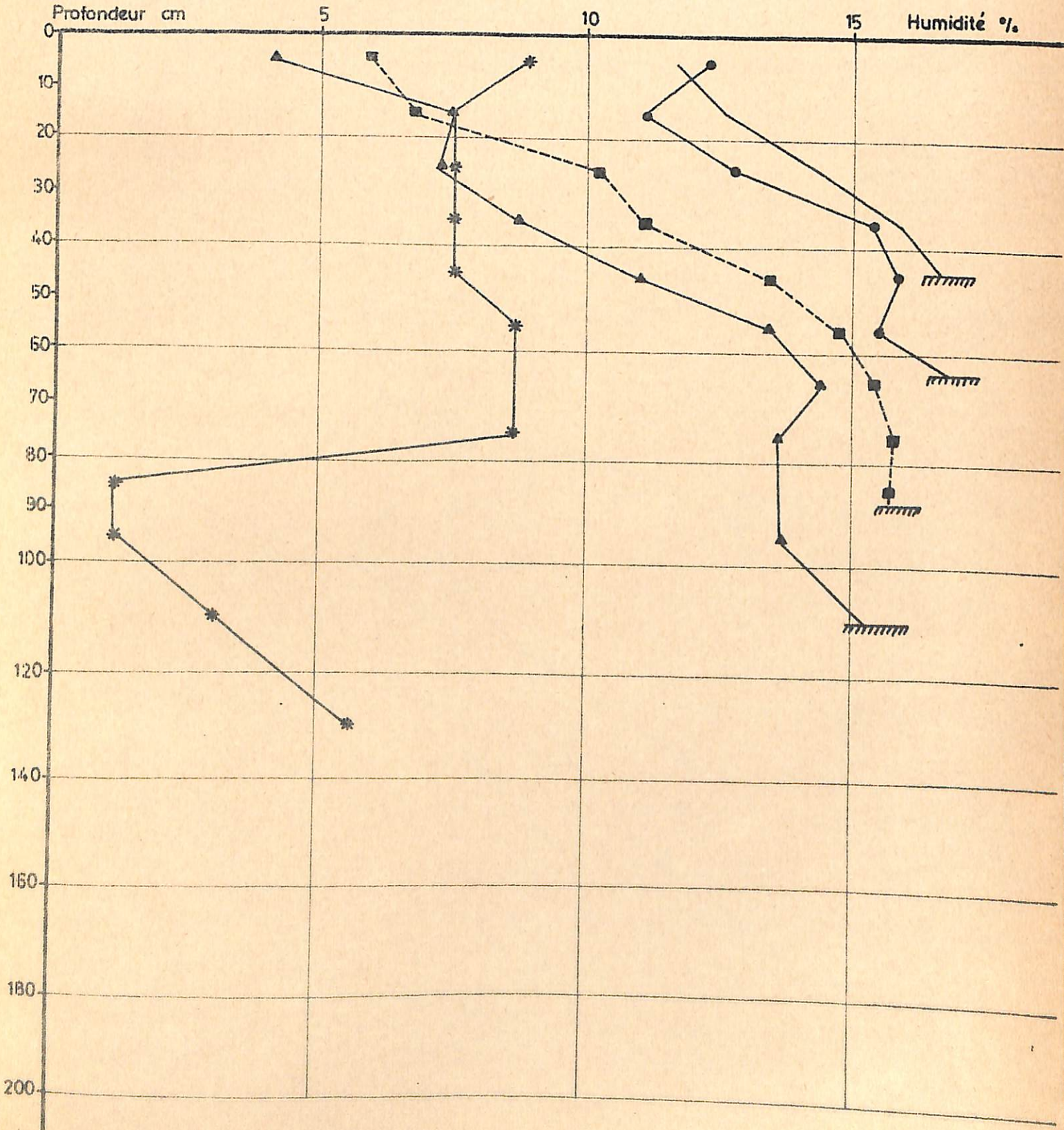
Date	Profondeur Nappe
26 - 10 - 72	117 cm
22 - 11 - 72	135 cm
27 - 12 - 72	167 cm
7 - 2 - 73	203 cm
PF 4,2	*



Assèchement du profil 1972-1973

KARCIA
PH II 3

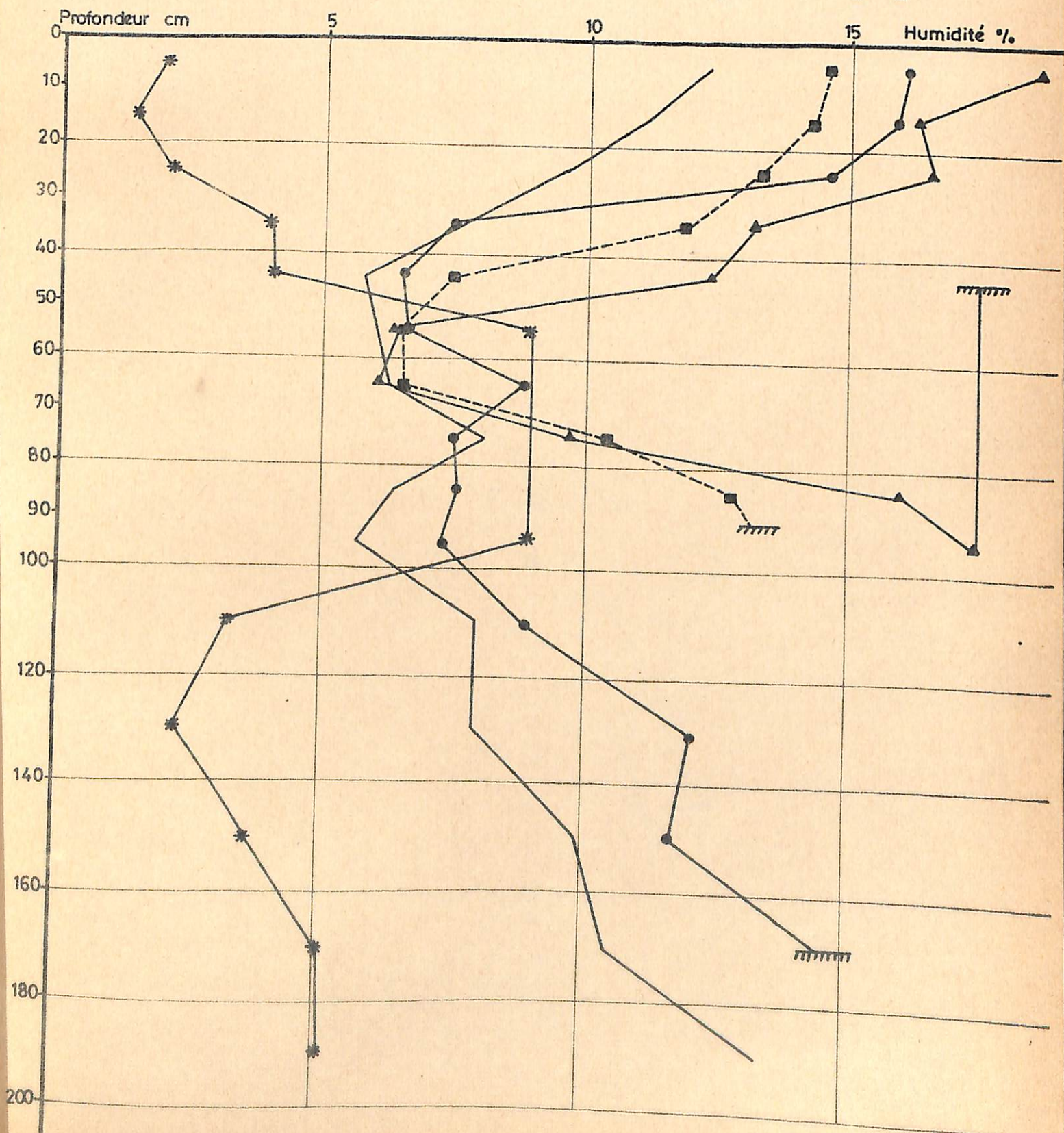
Date	Profondeur Nappe
26 - 10 - 72	44cm
22 - 11 - 72	63cm
27 - 12 - 72	88cm
7 - 2 - 73	110cm
PF 4,2	



Humectation du profil 1972

KARCIA
PH IV 8

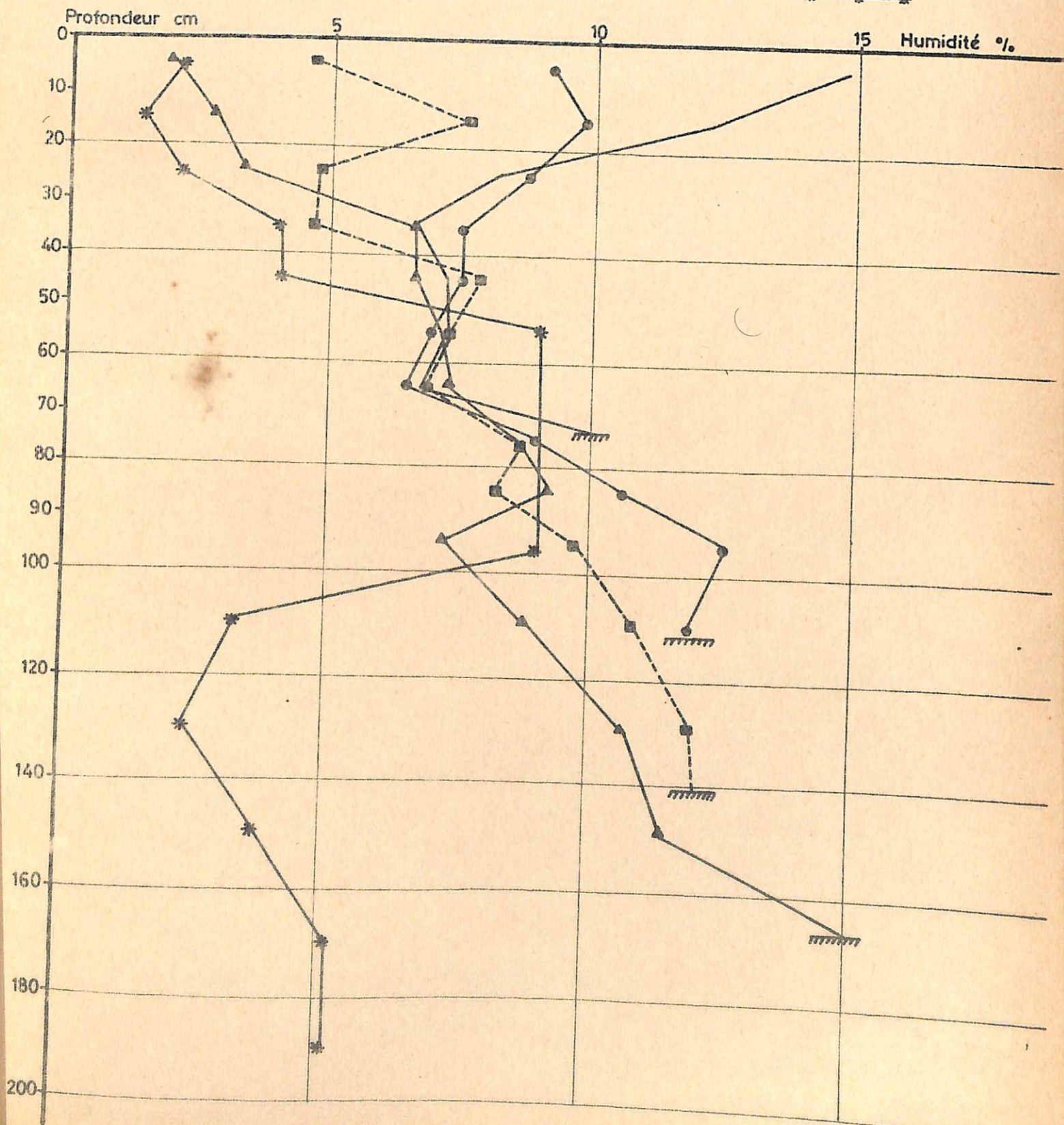
Date	Profondeur Nappe
7 - 8 - 72	217 cm
21 - 8 - 72	170 cm
6 - 9 - 72	91 cm
20 - 9 - 72	45 cm
PF 4,2	*



Assèchement du profil 1972

KARCIA
PH IV 8

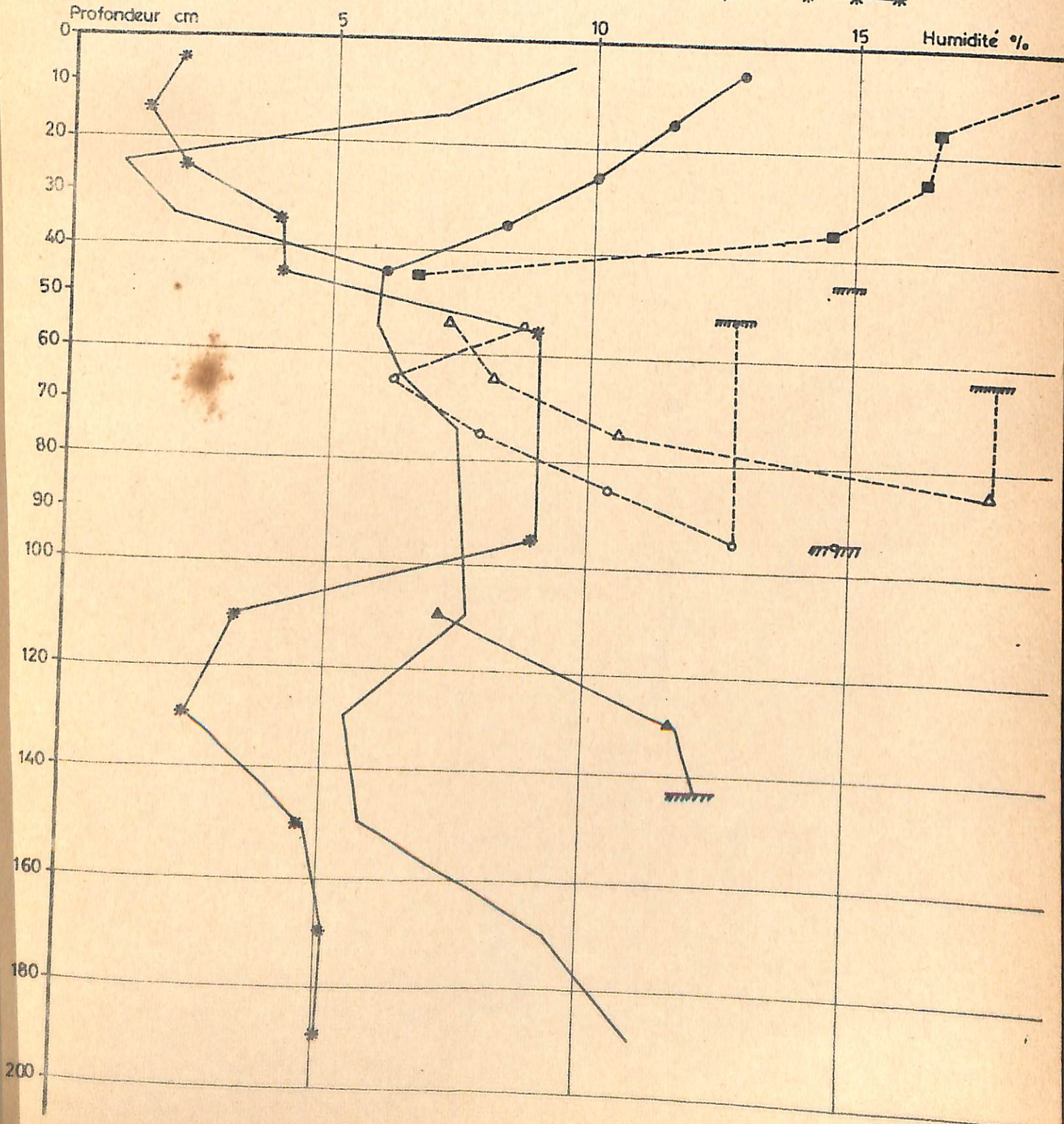
Date	Profondeur Nappe
5 - 10 - 72	73 cm
26 - 10 - 72	112 cm
22 - 11 - 72	141 cm
27 - 12 - 72	166 cm
PF 4,2	*



Humectation du profil 1973

KARCIA
PHIV 8

Date	Profondeur Nappe	profonde: de sur
7 - 6 - 73	—	
20 - 6 - 73	●—●—●	
27 - 7 - 73	■—■—■	204 cm
3 - 8 - 73	▲—▲—▲	143 cm
10 - 8 - 73	○	93 cm
16 - 8 - 73	△—△—△	52 cm
23 - 8 - 73	○—○—○	63 cm
PF 4,2	*—*—*	

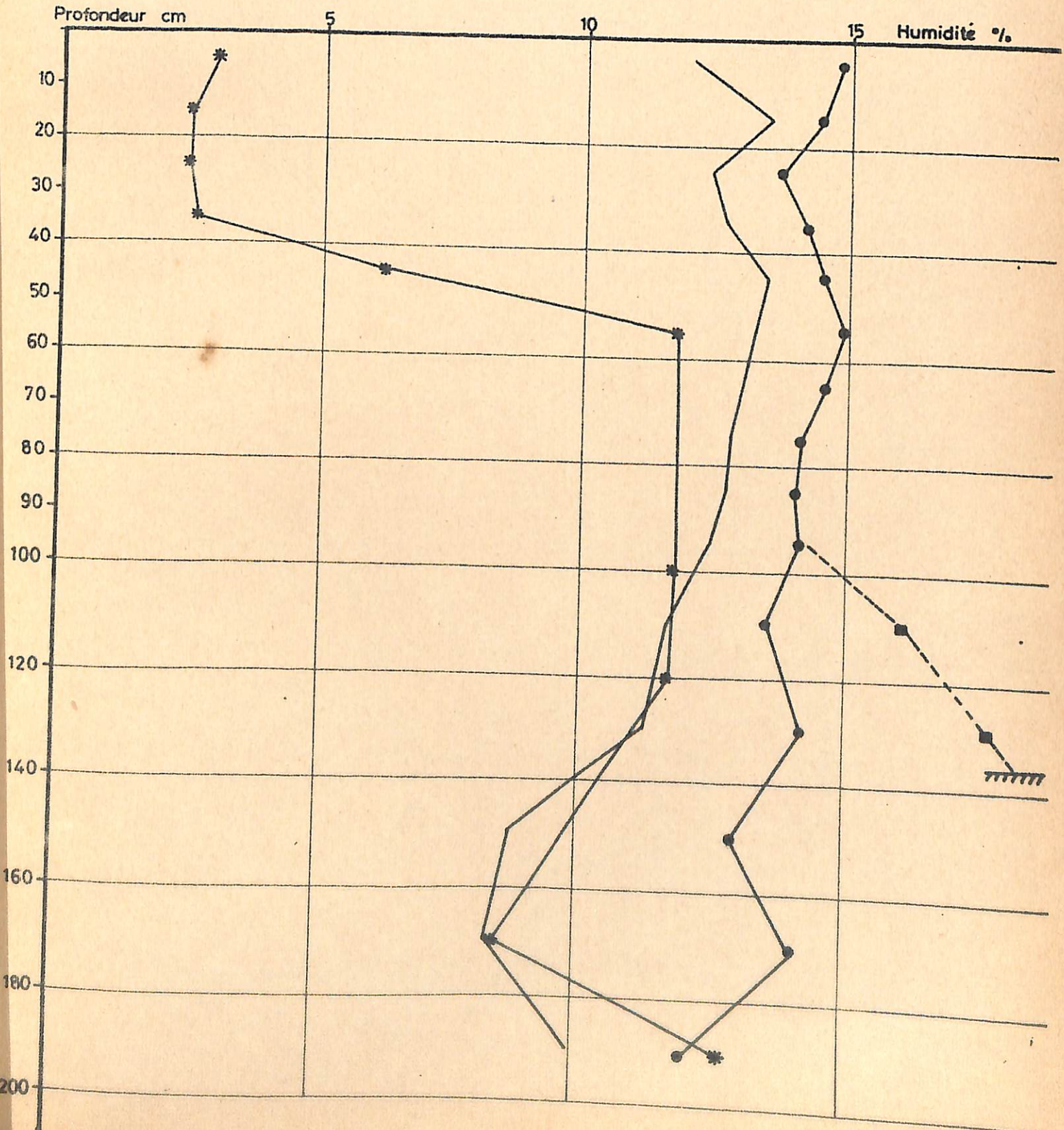


Humectation du profil 1972

KARCIA
PH VI 12

Date
 7 - 8 - 72 ————
 21 - 8 - 72 ●—●—●—
 20 - 9 - 72 ■-■-■- 136 cm
 PF 4,2 *—*—*

Profondeur Nappe



Humectation du profil 1972

SARE BAKARY
PH VI 16

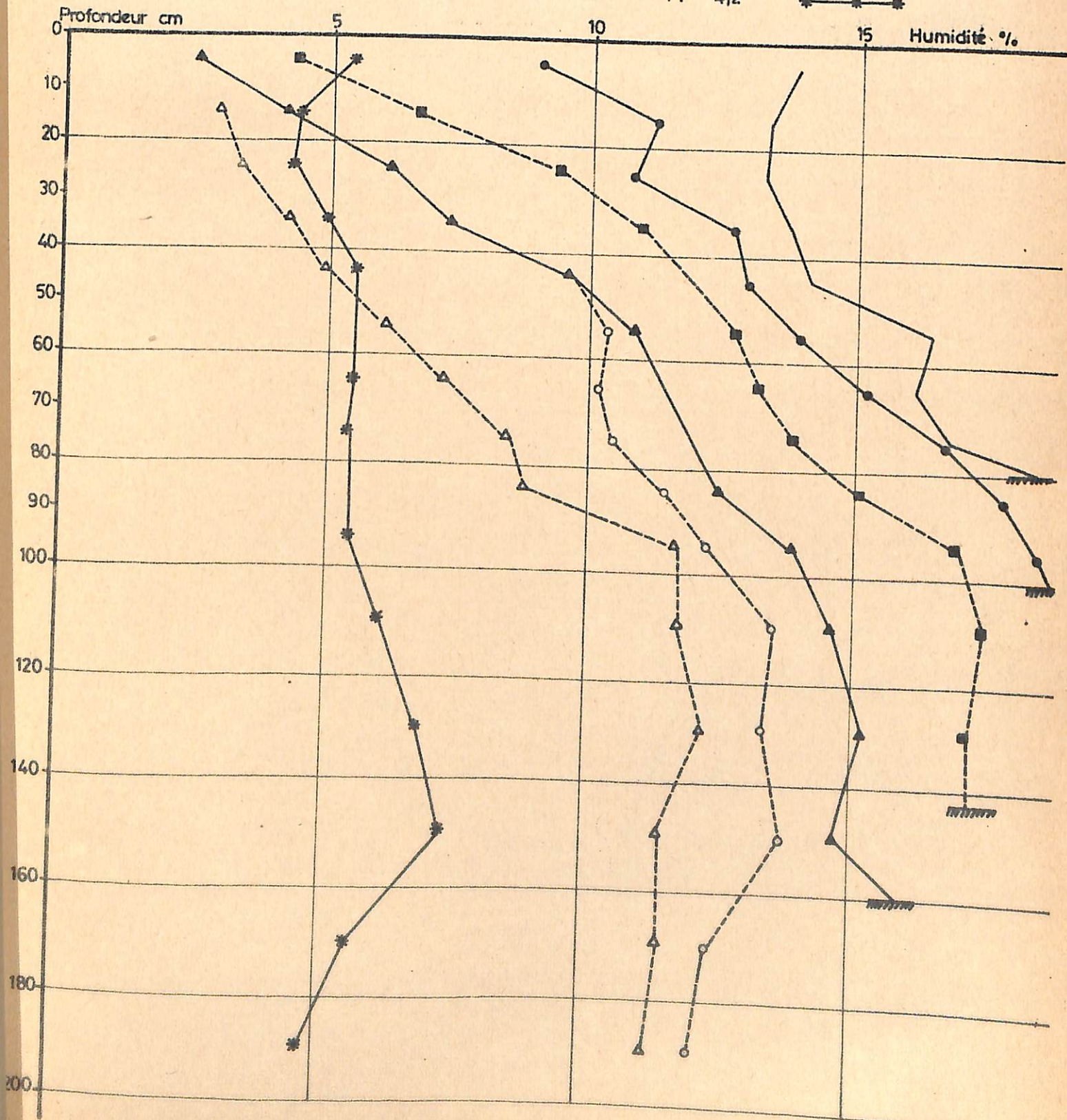
Date	Profondeur Nappe
7 - 8 - 72	220 cm
18 - 8 - 72	110 cm
6 - 9 - 72	109 cm
21 - 9 - 72	51 cm
PF 3,0	
PF 4,2	



Assèchement du profil 1972-1973

SARE BAKARY
PH VI 16

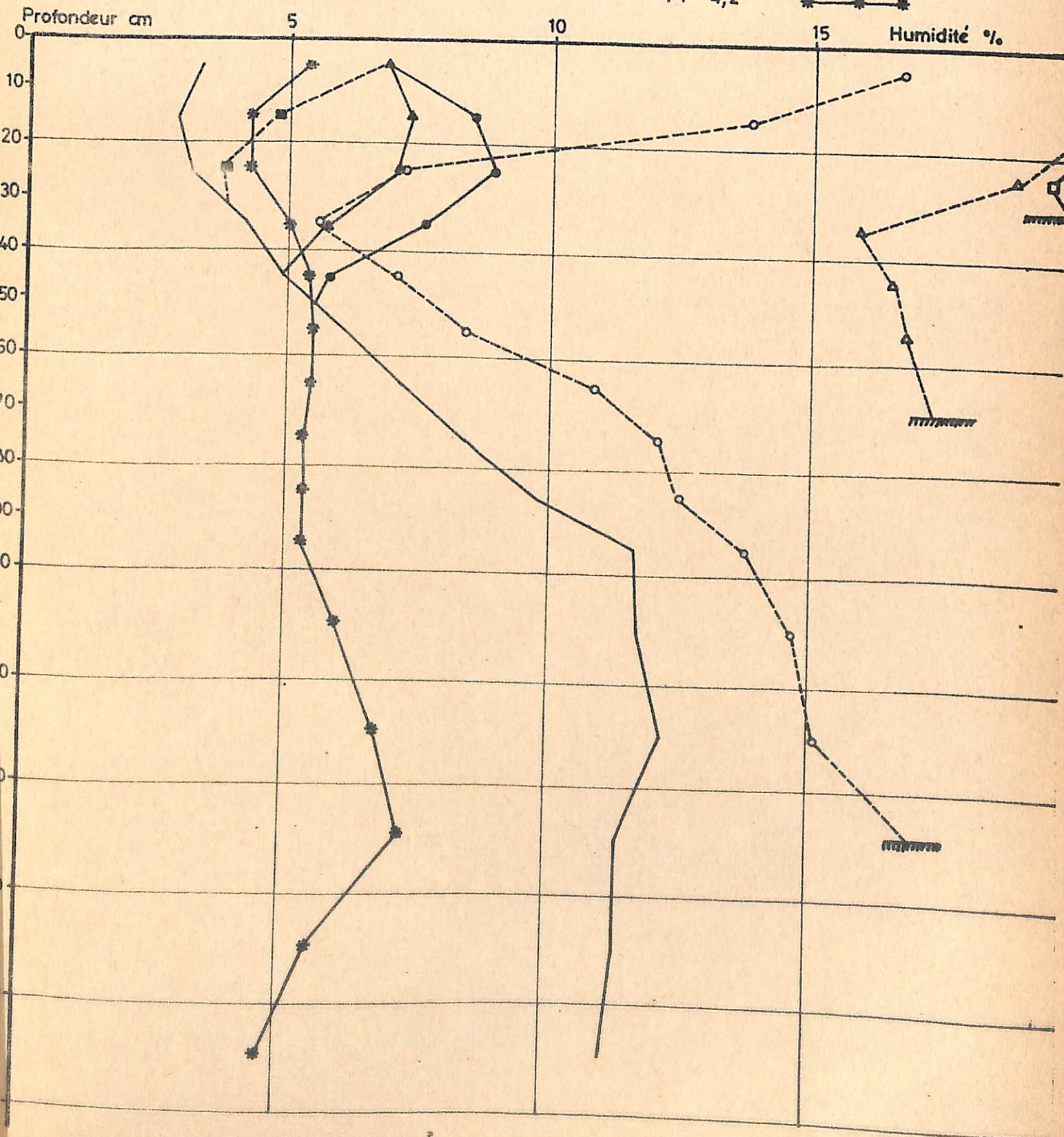
Date	Profondeur Nappe
4 - 10 - 72	80 cm
26 - 10 - 72	101 cm
22 - 11 - 72	143 cm
27 - 12 - 72	162 cm
7 - 2 - 73	215 cm
8 - 6 - 73	PF 4,2



Humectation du profil 1973

SARE BAKARY
PH VI 16

Date	Profondeur Nappe	
8 - 6 - 73	—	
21 - 6 - 73	●—●—●	
5 - 7 - 73	■—■—■	
20 - 7 - 73	▲—▲—▲	
27 - 7 - 73	○—○—○	148 cm
3 - 8 - 73	△—△—△	69 cm
10 - 8 - 73	□—□—□	30 cm
PF 4,2	*—*—*	

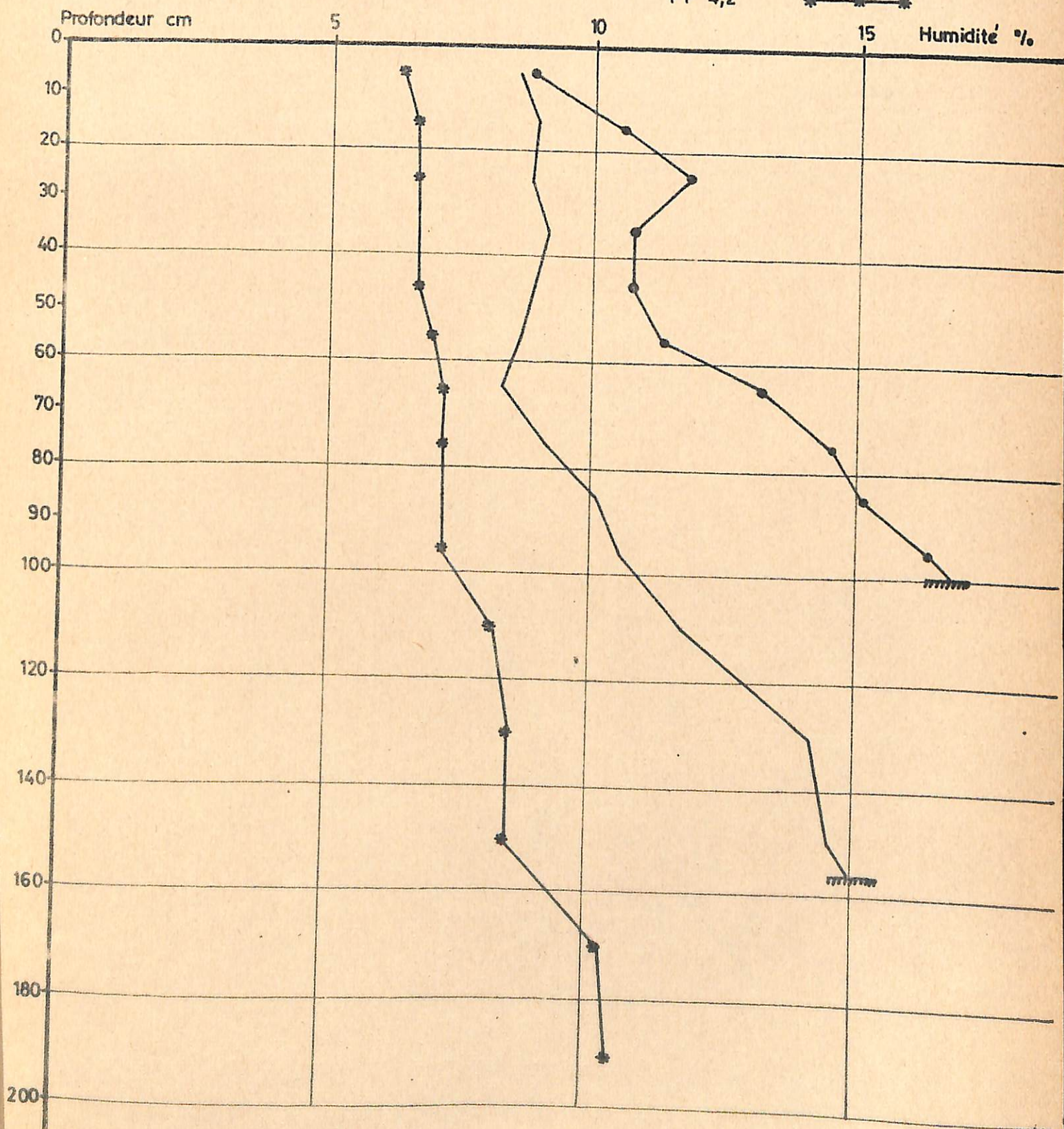


Humectation du profil 1972

FIG. 84

SARE BAKARY
PH VII 20

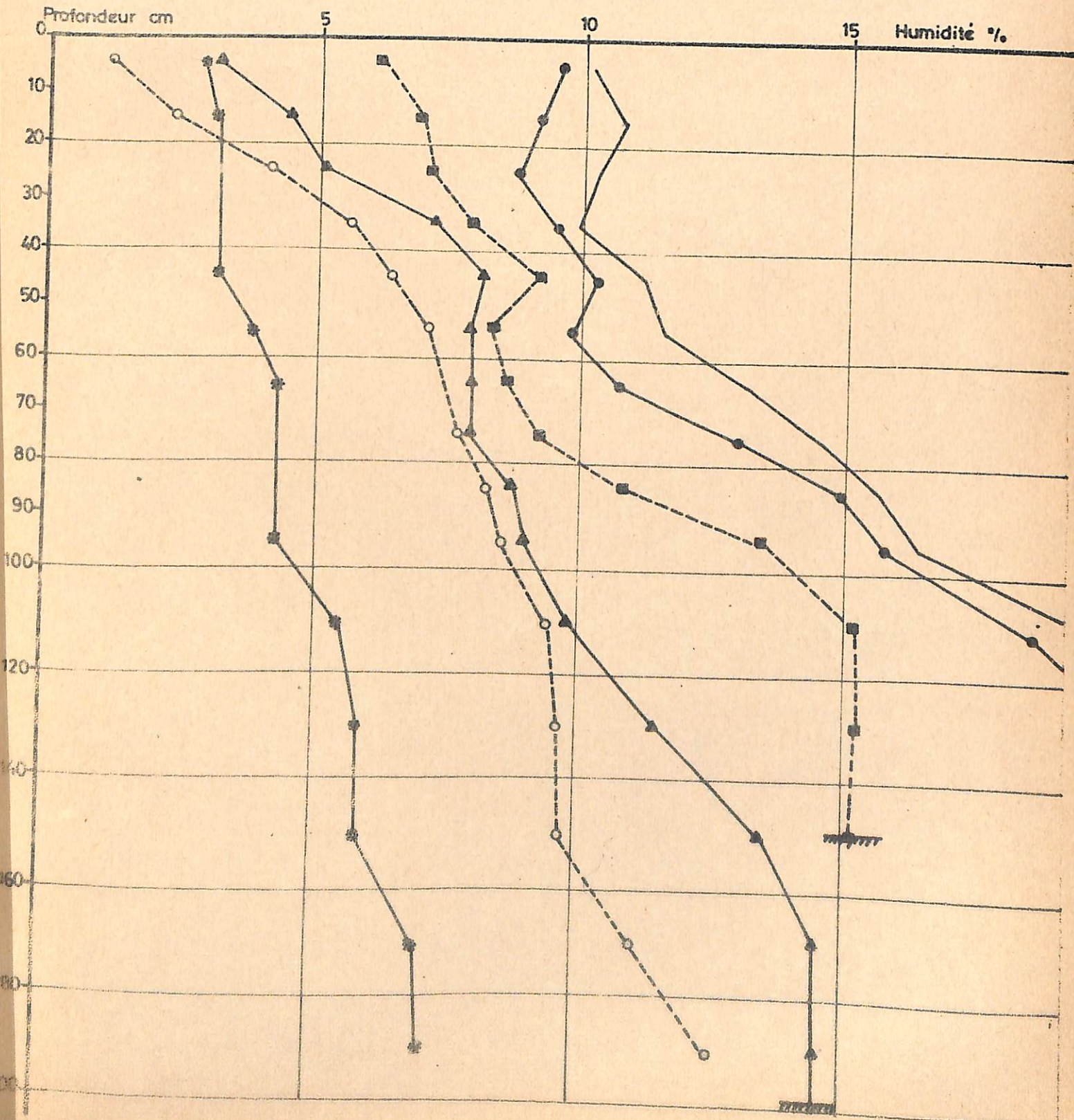
Date
 26 - 8 - 72 ——— Profondeur Nappe 156 cm
 21 - 9 - 72 ●—●—●—● 99 cm
 PF 4,2 *—*—*—* ———



Assèchement du profil 1972-1973

SARE BAKARY
PH VII 20

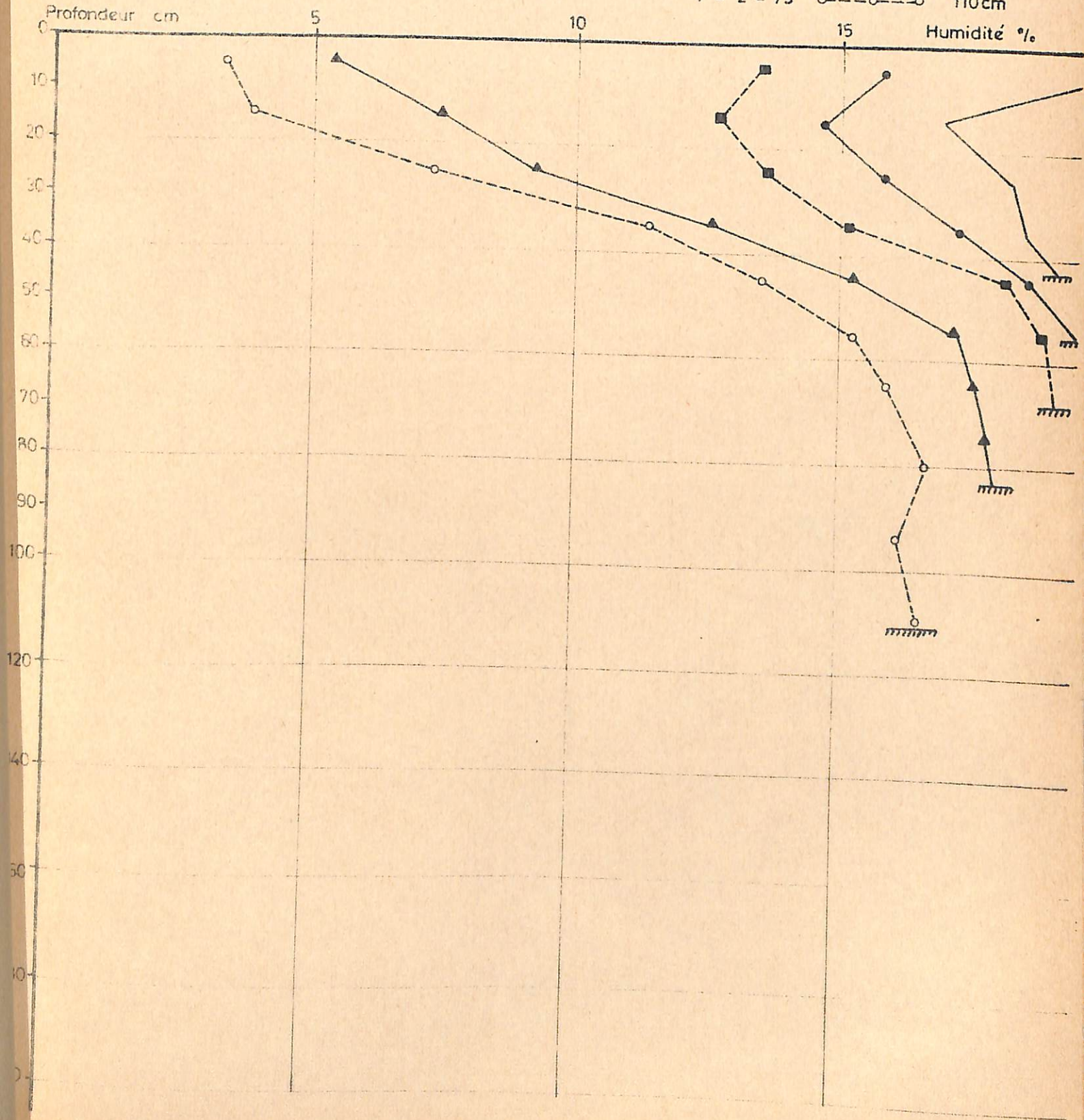
Date	Profondeur Nappe
11 - 10 - 72	108 cm
26 - 10 - 72	129 cm
7 - 11 - 72	149 cm
8 - 12 - 72	198 cm
7 - 2 - 73	
PF 4,2	



Assèchement du profil 1972-1973

SARE BAKARY
PH II 4 -

Date	Profondeur Nappe
26 - 10 - 72	43 cm
7 - 11 - 72	55 cm
22 - 11 - 72	68 cm
27 - 12 - 72	83 cm
7 - 2 - 73	110 cm

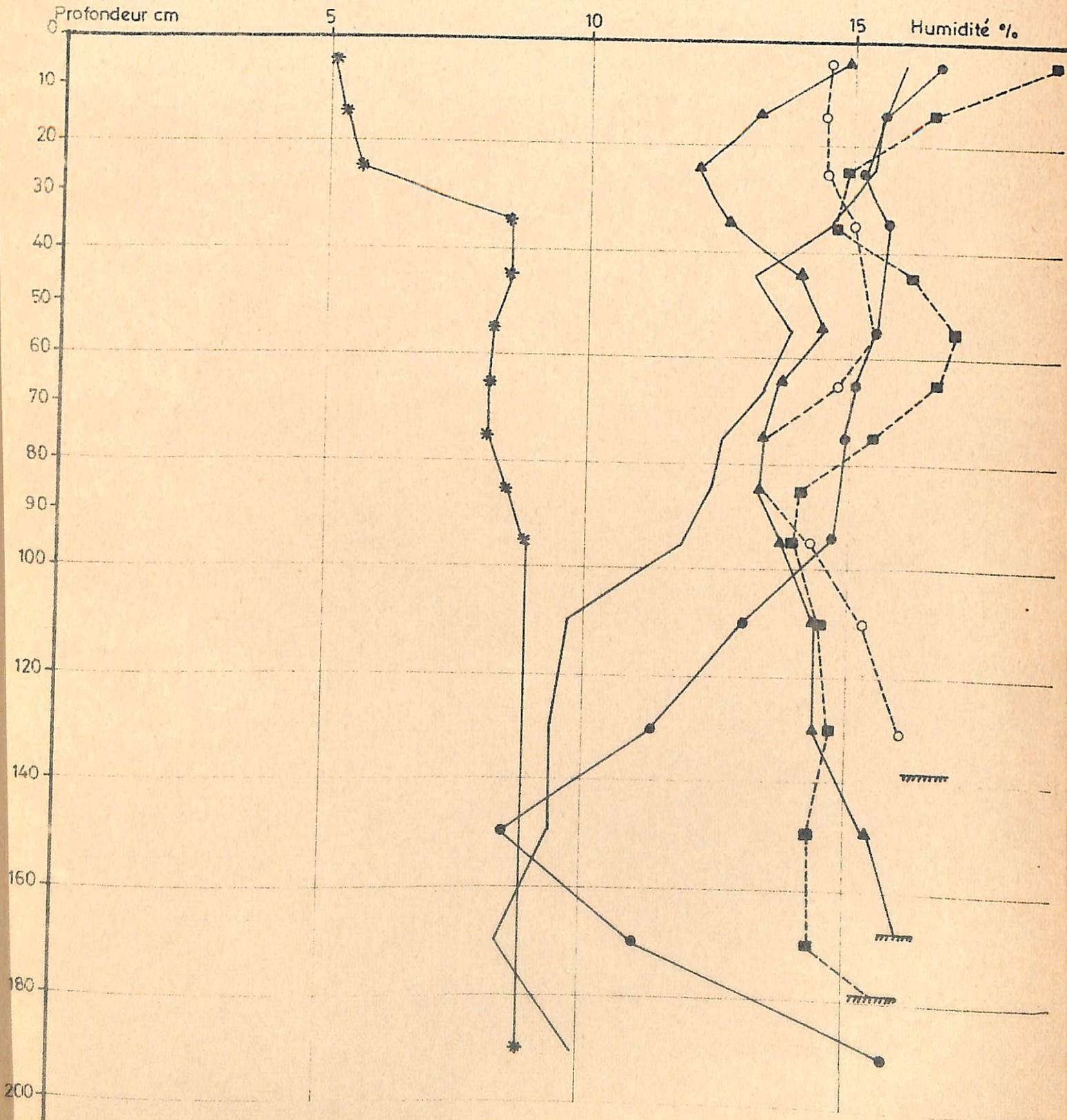


Humectation du profil 1972

FIG. 87

SARE MANSALY
PH III 9

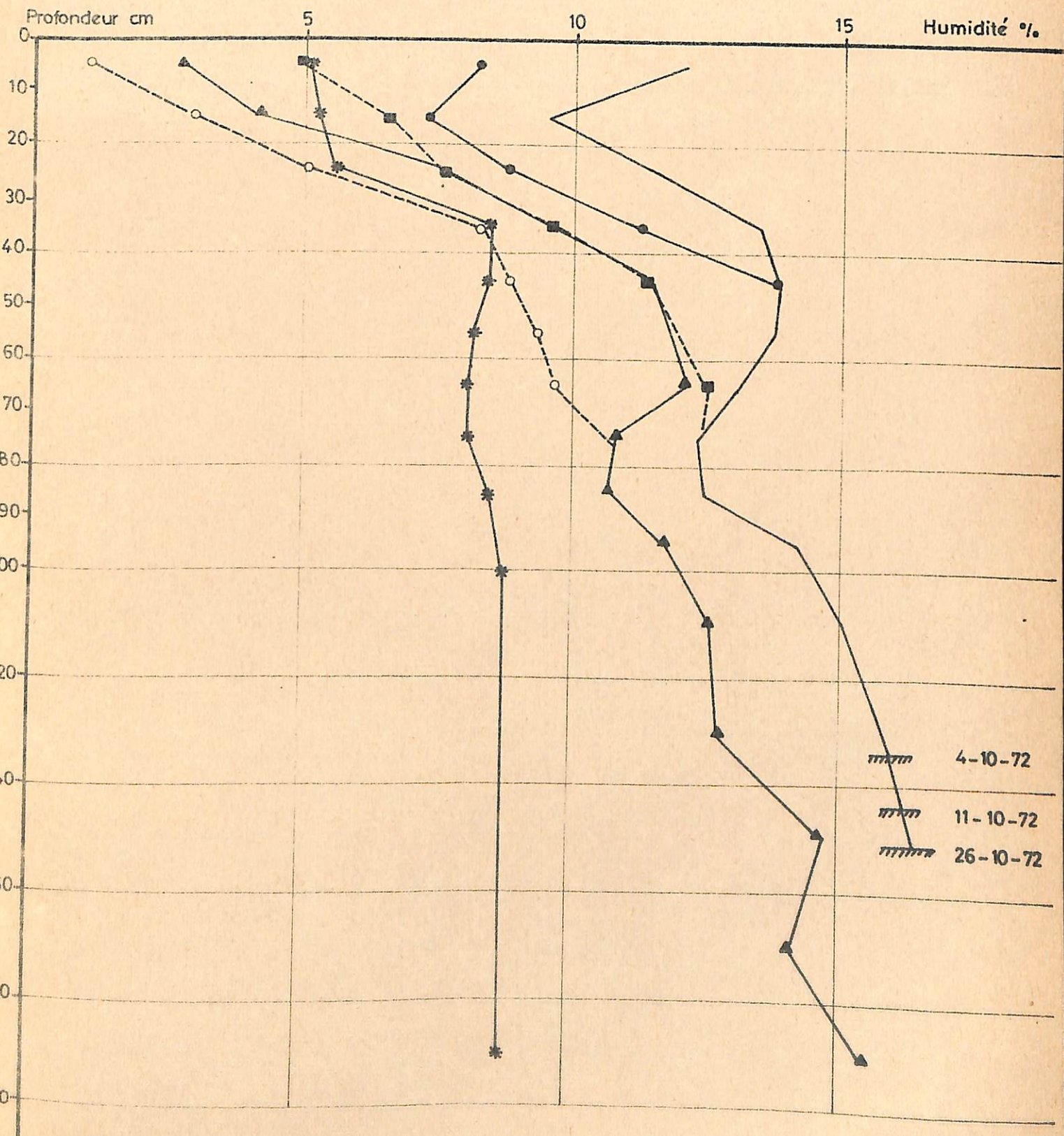
Date	Profondeur Nappe
6 - 8 - 72	210 cm
18 - 8 - 72	179 cm
26 - 8 - 72	167 cm
6 - 9 - 72	138 cm
20 - 9 - 72	PF 4,2



Assèchement du profil 1972-1973

SARE MANSALY
PH III 9

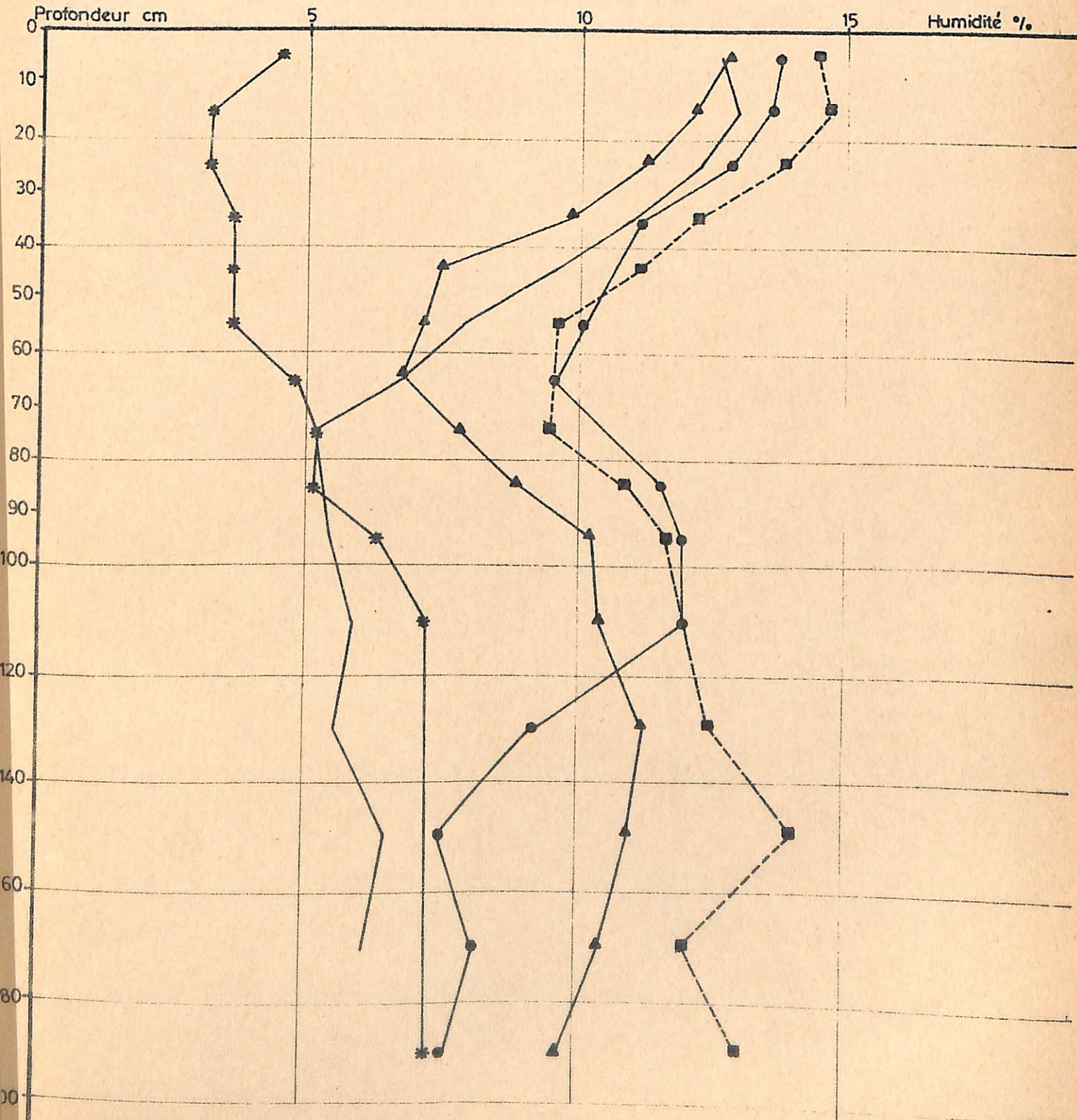
Date	Profondeur Nappe
4 - 10 - 72	133 cm
11 - 10 - 72	144 cm
26 - 10 - 72	152 cm
29 - 12 - 72	206 cm
7 - 2 - 73	
PF 4,2	



Humectation du profil 1972

SARE MANSALY
PH VI 12

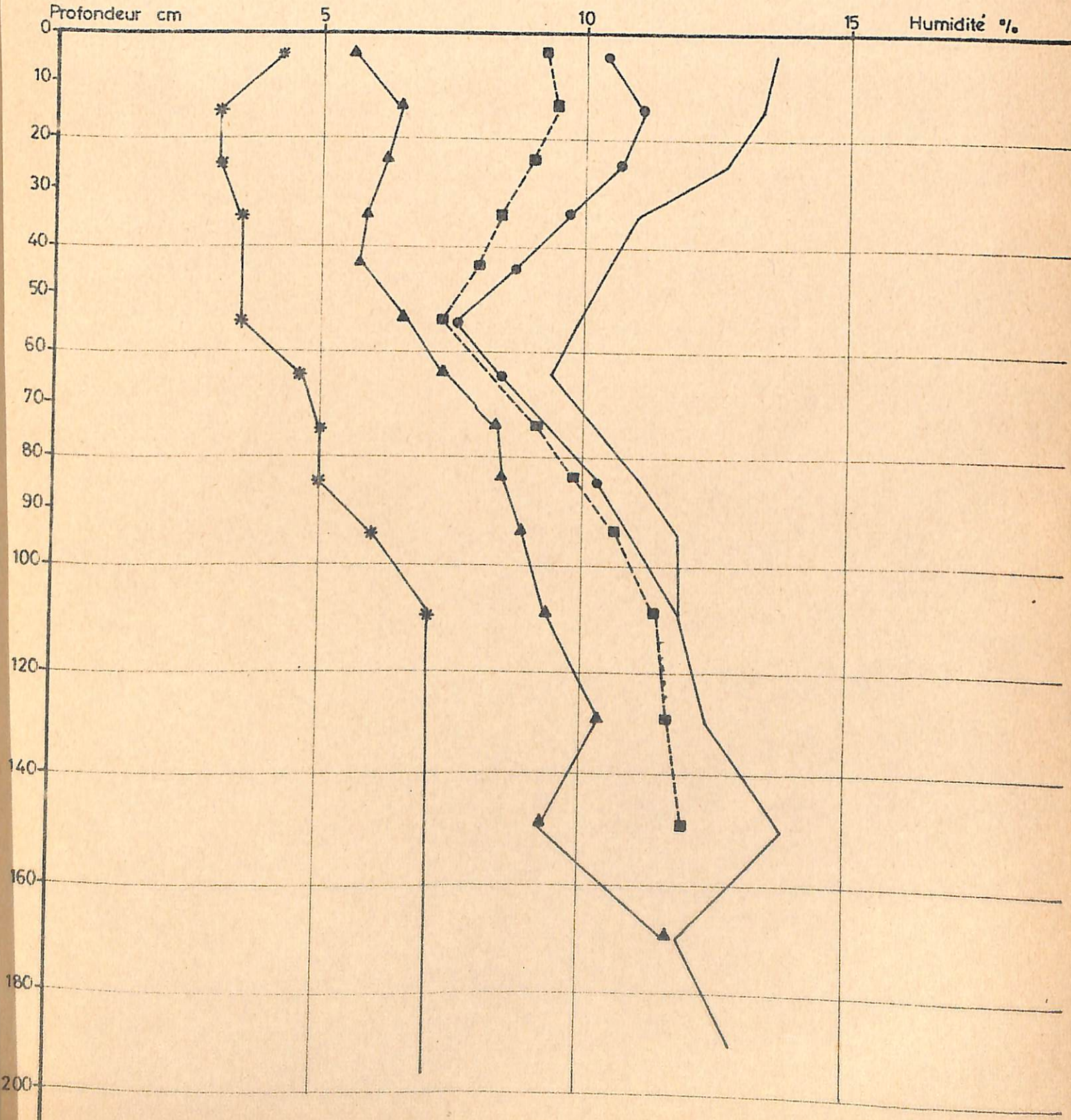
Date	Profondeur Nappe
6 - 8 - 72	—
26 - 8 - 72	●—●—●
14 - 9 - 72	■—■—■ 252 cm
20 - 9 - 72	▲—▲—▲ 233 cm
PF 4,2	*—*—*



Assèchement du profil 1972

SARE MANSALY
PH VI 12

Date	Profondeur Nappe
20 - 9 - 72	233 cm
27 - 9 - 72	218 cm
4 - 10 - 72	220 cm
11 - 10 - 72	228 cm
PF 4,2	

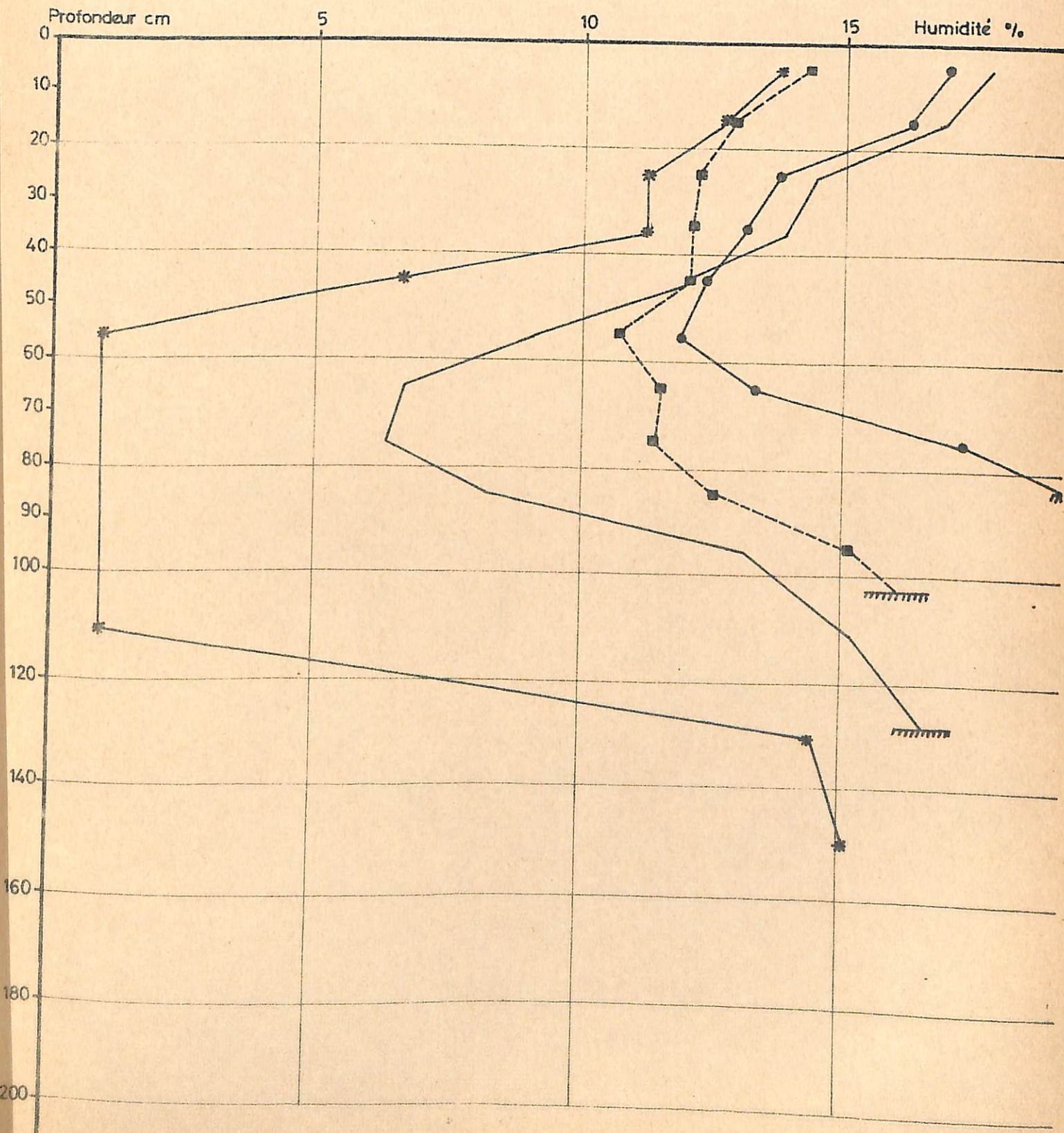


Humectation du profil 1972

FIG. 91

MAMPATIM MAOUNDE
PH V 7

Date	Profondeur Nappe
16 - 8 - 72	— 128cm
29 - 8 - 72	●—● 84cm
8 - 9 - 72	■—■ 102cm
PF 2,5	*—*—*

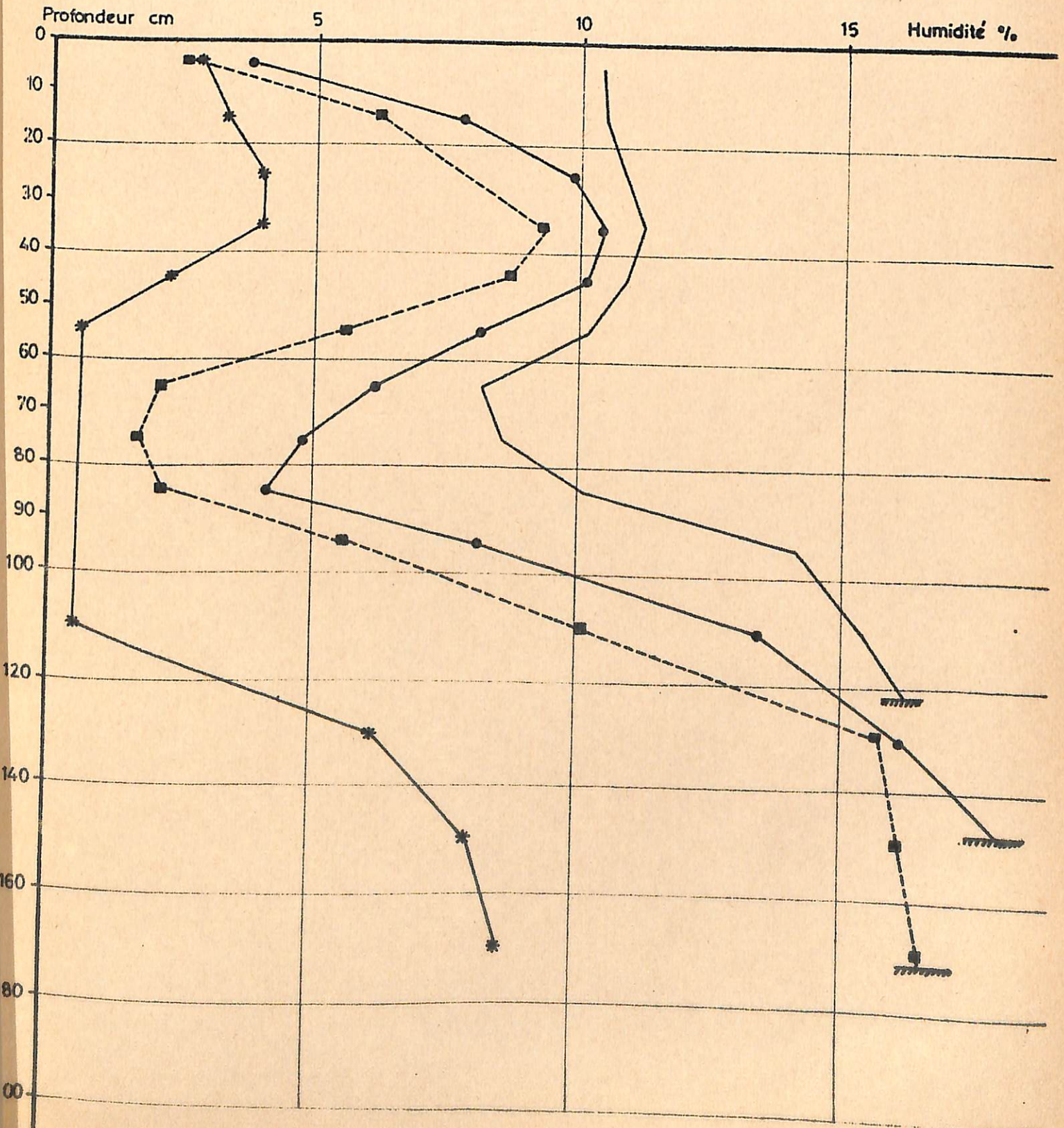


Assèchement du profil 1972-1973

FIG. 92

MAMPATIM MAOUNDE
PH V 7

Date	Profondeur Nappe
19 - 10 - 72	122 cm
23 - 11 - 72	148 cm
6 - 2 - 73	171 cm
PF 4,2	*

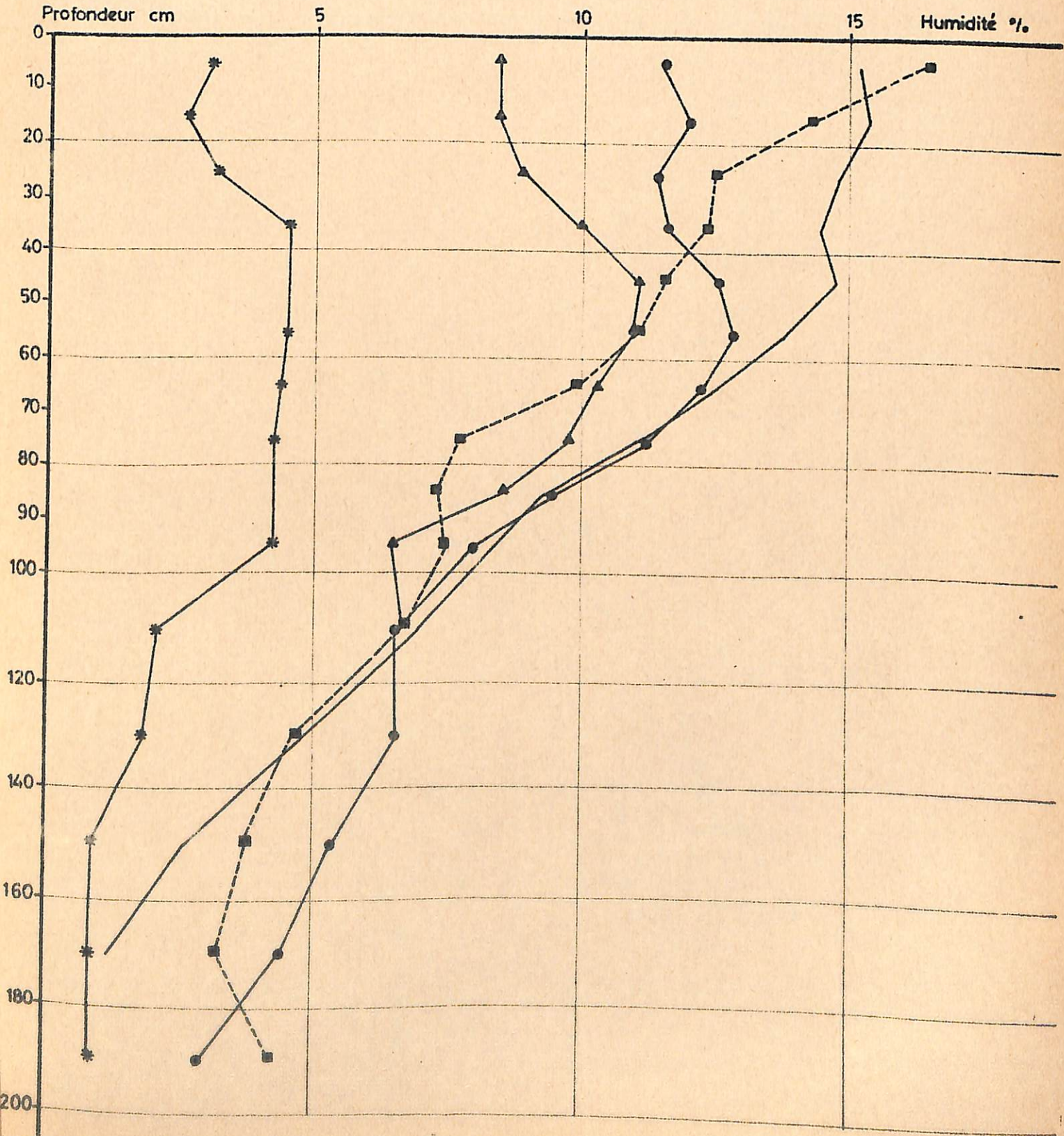


Humectation du profil 1972

DIALLI-KOUNDA
PH III 8

Date

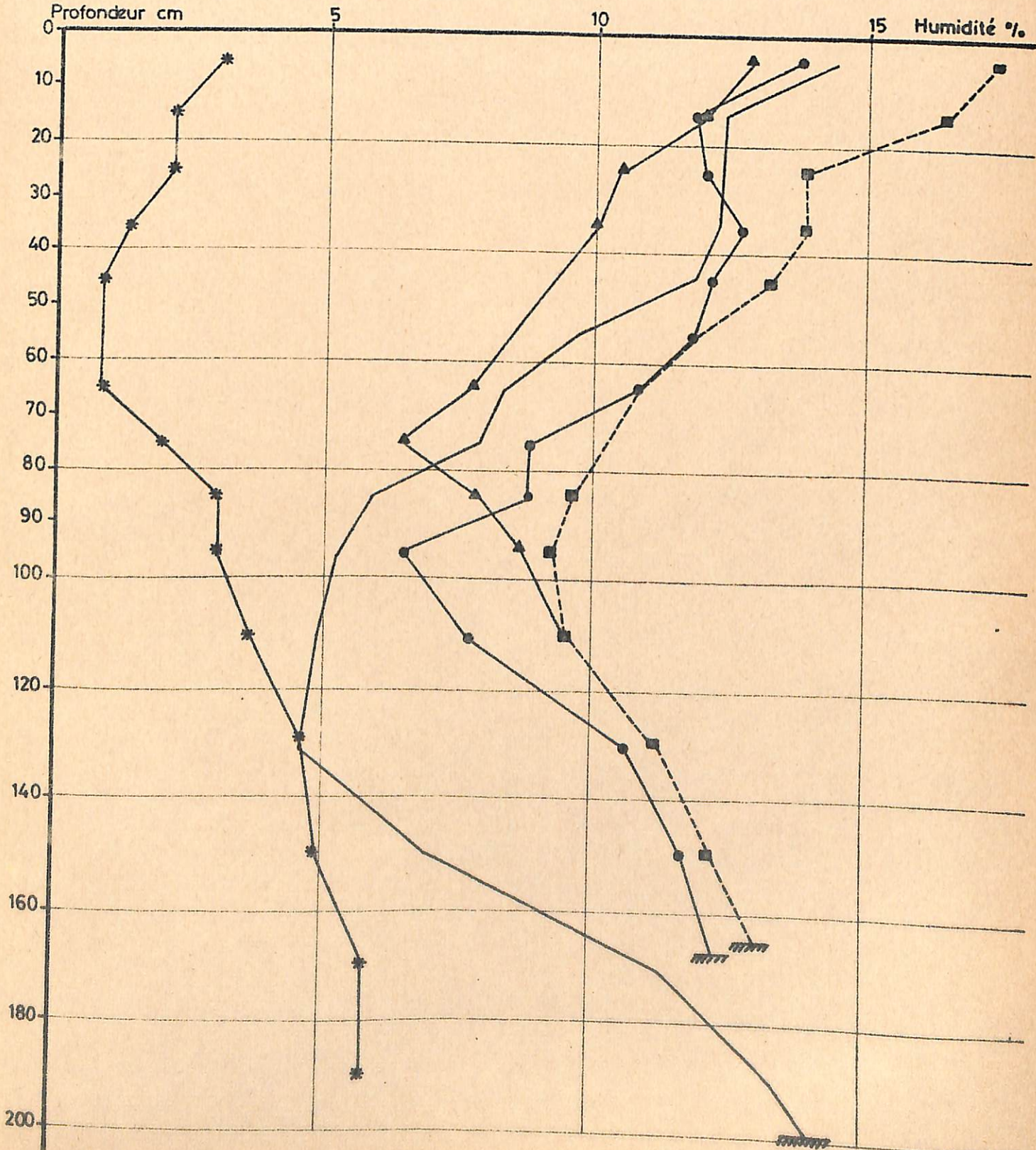
16 - 8 - 72	—
25 - 8 - 72	●—●—●
22 - 9 - 72	■—■—■
4 - 10 - 72	▲—▲—▲
PF 4,2	*—*—*



Humectation du profil 1972

DIALLI - KOUNDA
PH VI 5

Date	Profondeur Nappe
25 - 8 - 72	199 cm
7 - 9 - 72	167 cm
22 - 9 - 72	165 cm
28 - 9 - 72	175 cm
PF 4,2	*



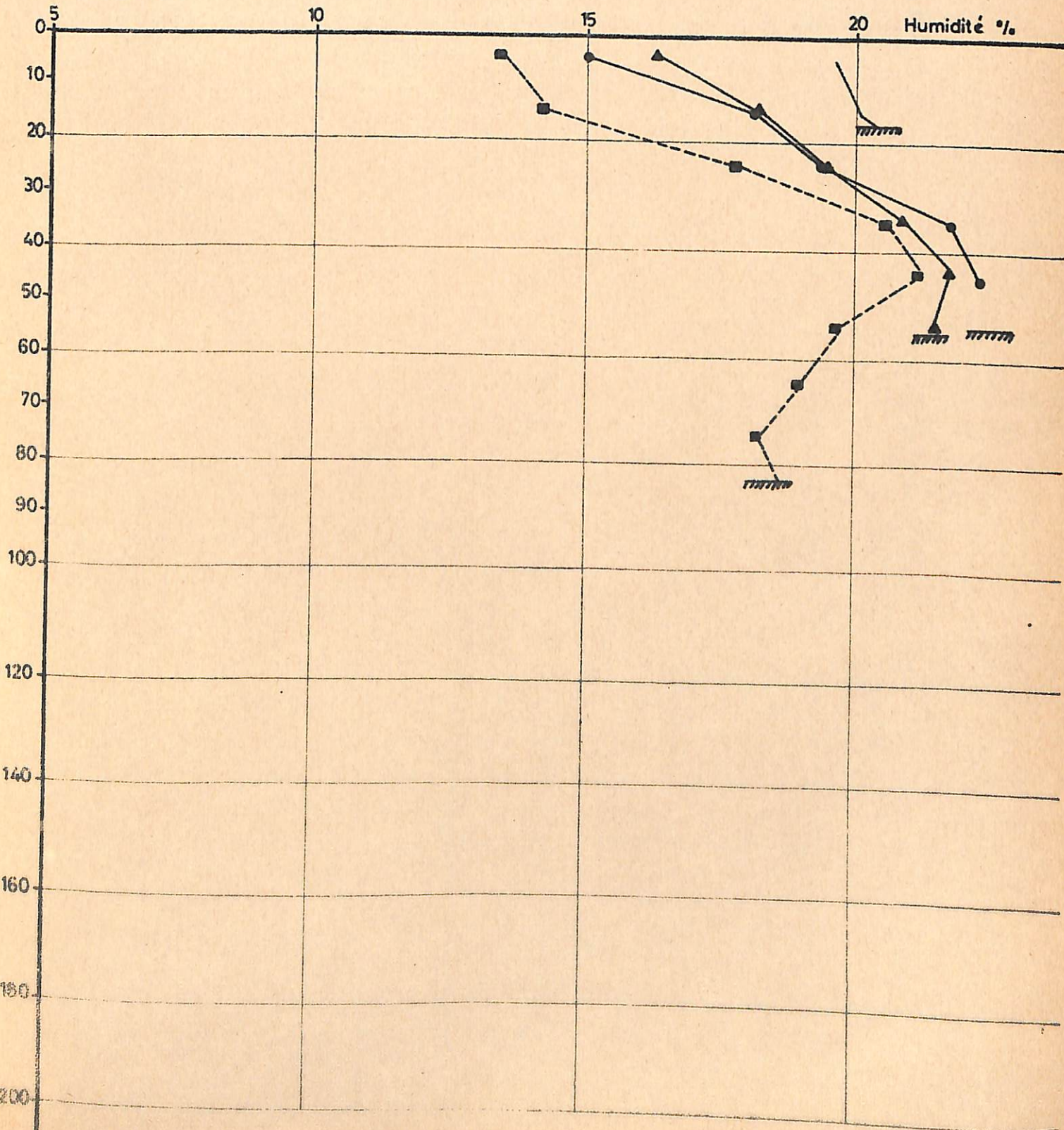
Variation-Humidité 1972

TAKOUDIALLA
PH III 11

Date	Profondeur Nappe
17 - 8 - 72	17 cm
7 - 9 - 72	54 cm
4 - 10 - 72	82 cm
25 - 10 - 72	55 cm

Profondeur cm

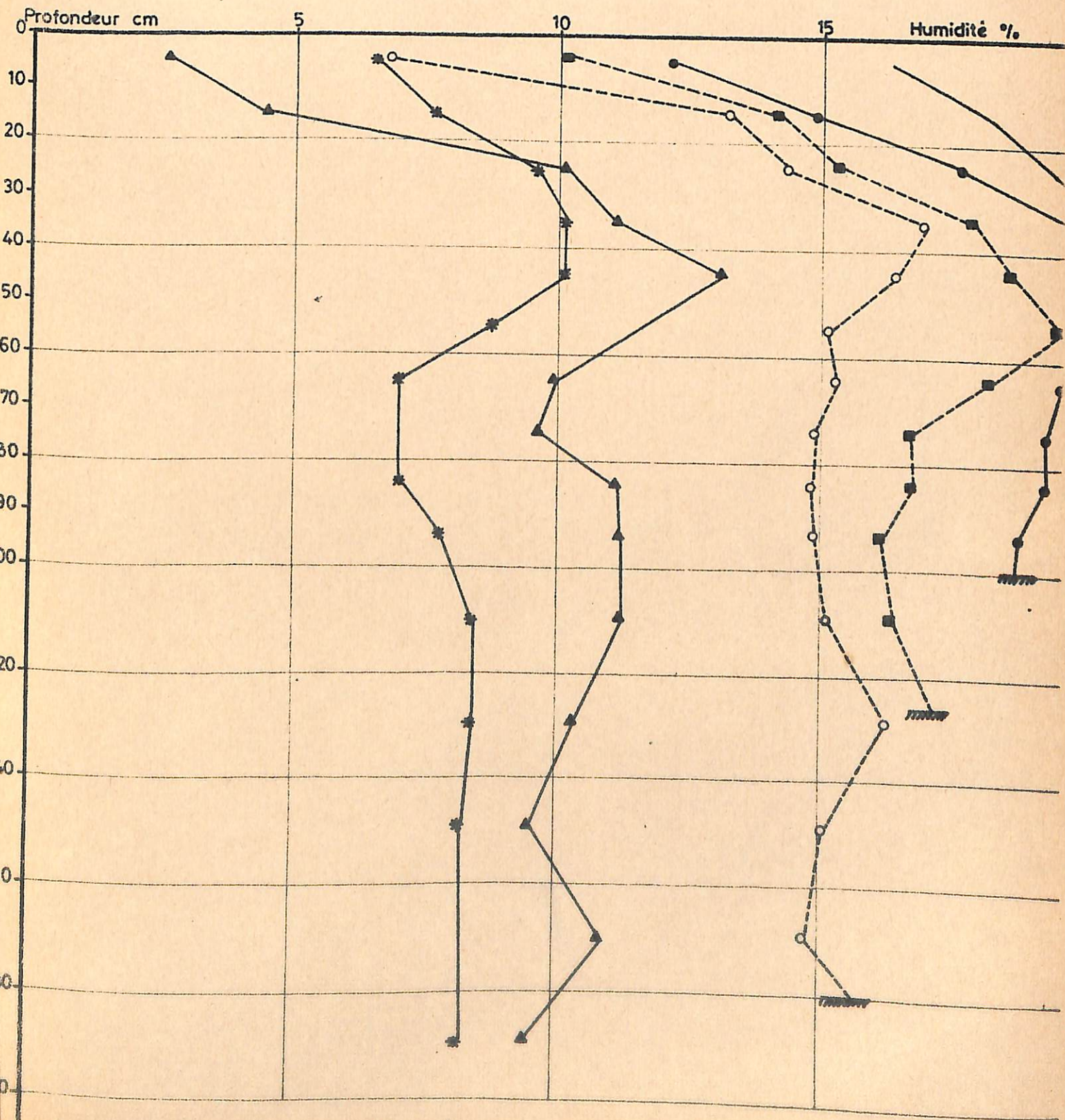
Humidité %



Assèchement du profil 1972 1973

TAKOUDIALLA
PH III 11

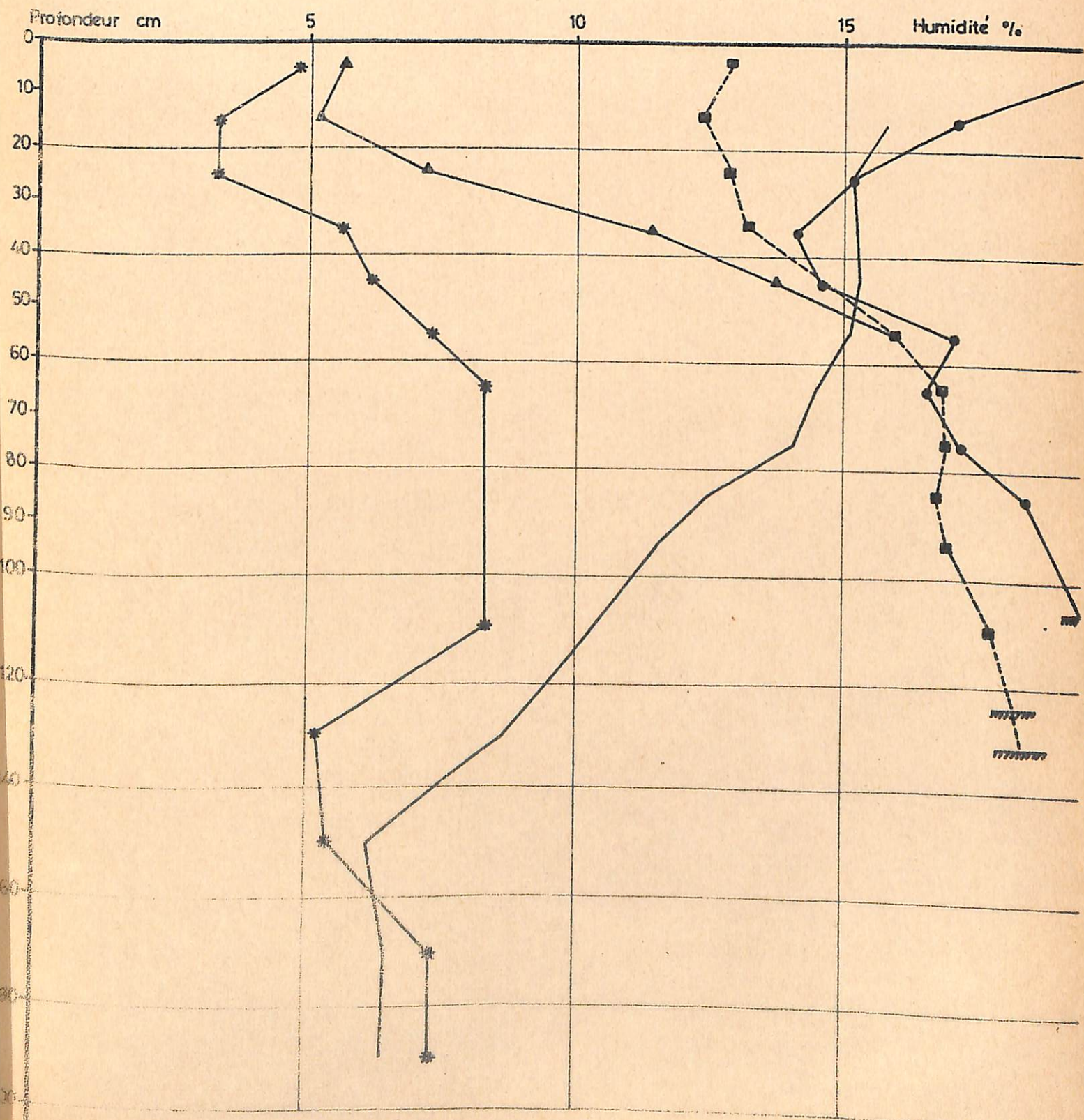
Date	Profondeur Nappe
25 - 10 - 72	55cm
9 - 11 - 72	100cm
23 - 11 - 72	127cm
28 - 12 - 72	180cm
6 - 2 - 73	
PF 4,2	



Humectation du profil 1972

KOUINKANE KABENDOU
PH III 6

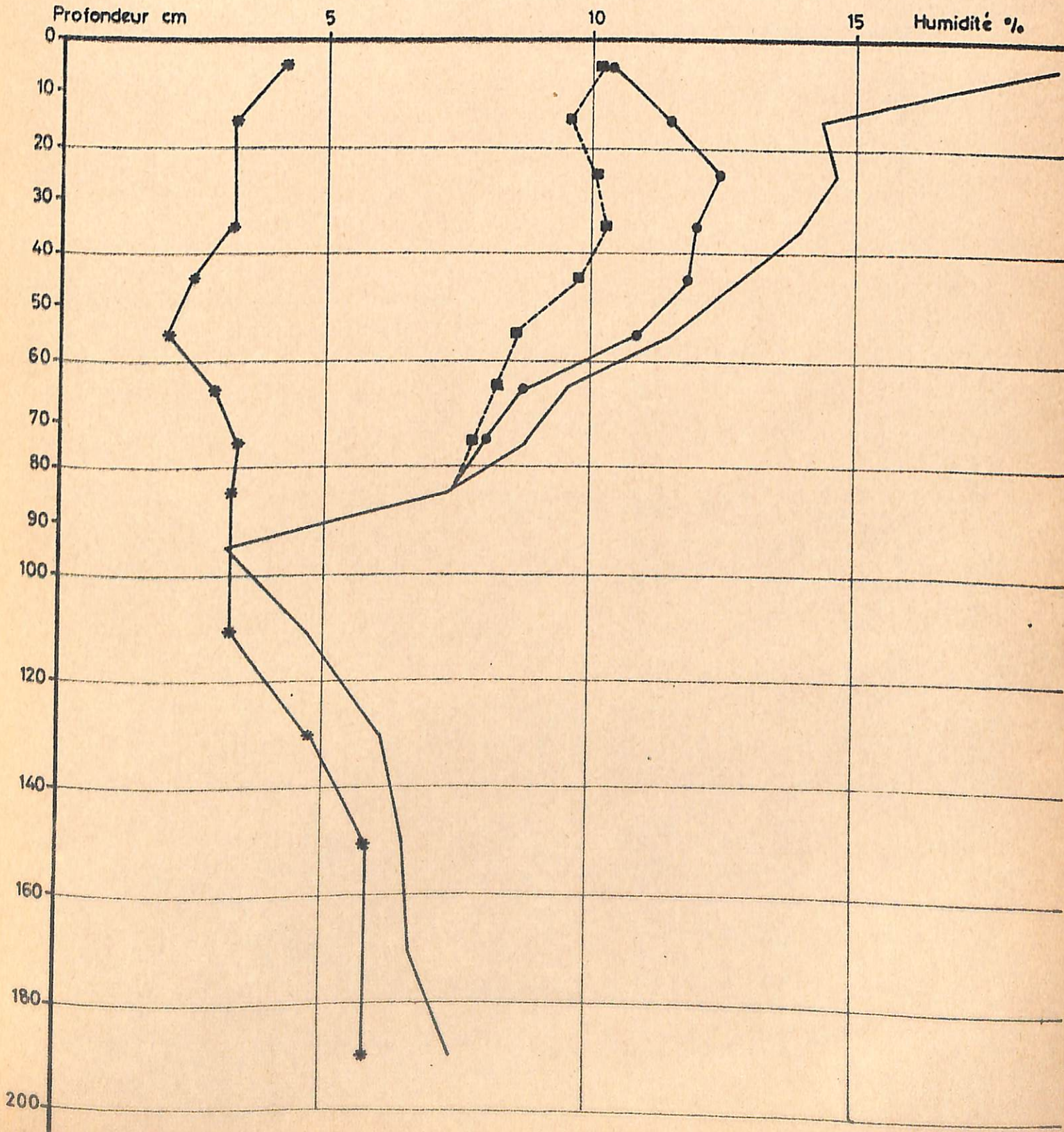
Date	Profondeur Nappe
16 - 8 - 72	— 232 cm
28 - 8 - 72	●—● 106 cm
22 - 9 - 72	■- - - ■ 125 cm
29 - 9 - 72	▲—▲ 132 cm
PF 4,2	*—*—*



Variation en hivernage de l'humidité 1972

KOUNKANE KABENDOU
PH VII 10

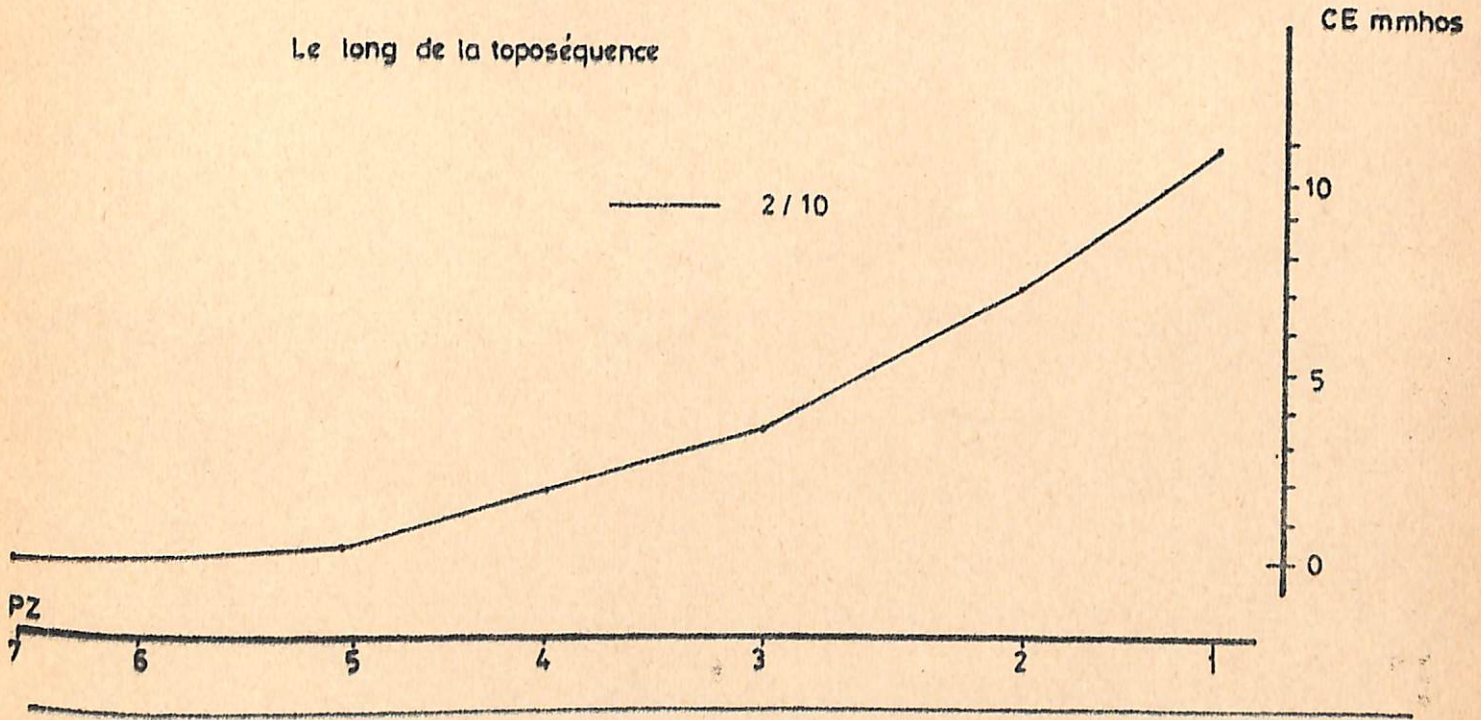
Date	Profondeur Nappe
16 - 8 - 72	—
8 - 9 - 72	●—●—●
29 - 9 - 72	■- - -■- - -■ 253 cm
PF 4,2	*—*—*



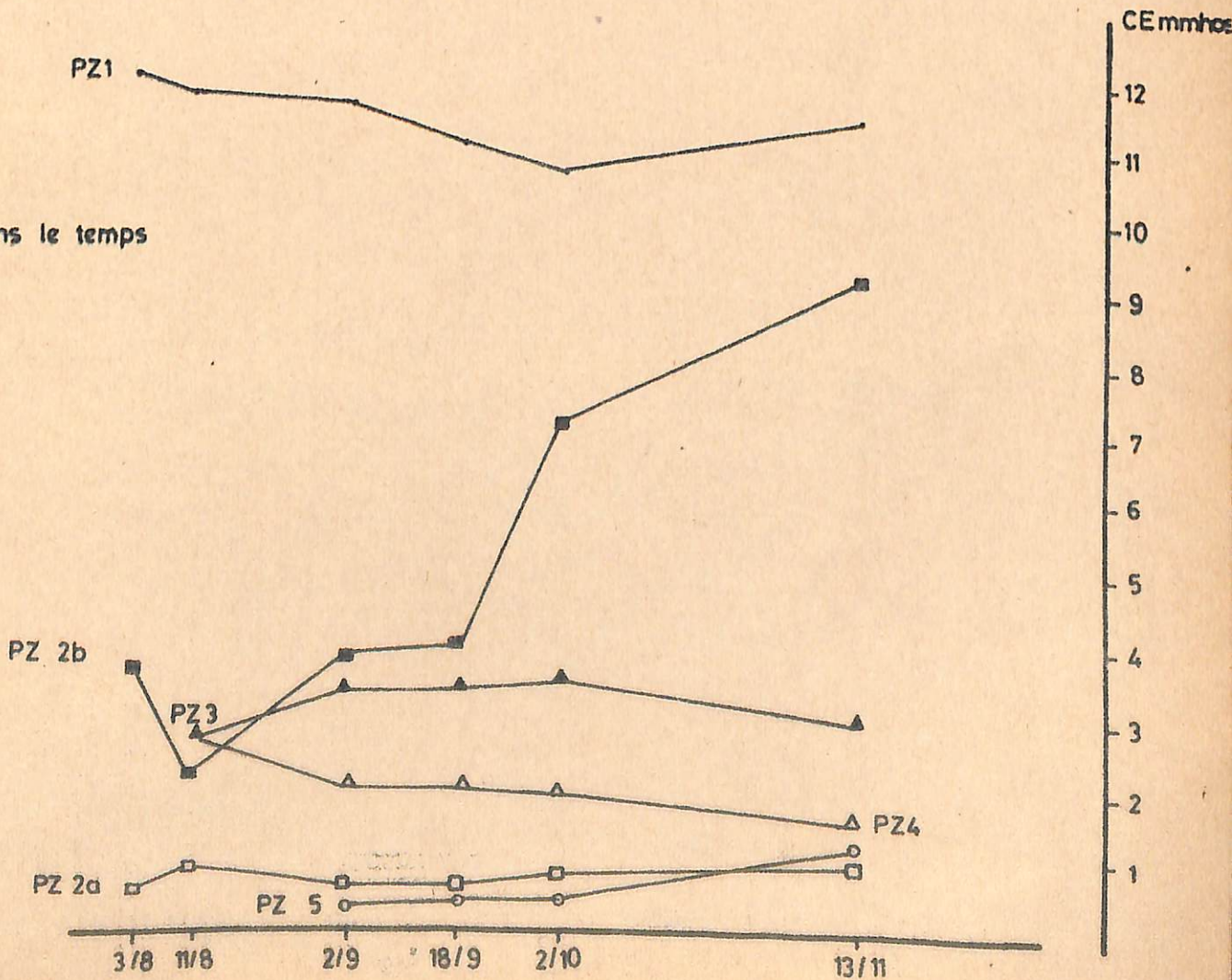
Conductivité électrique de l'eau des piézomètres

BALINGOR TENDIMANE

Le long de la toposéquence

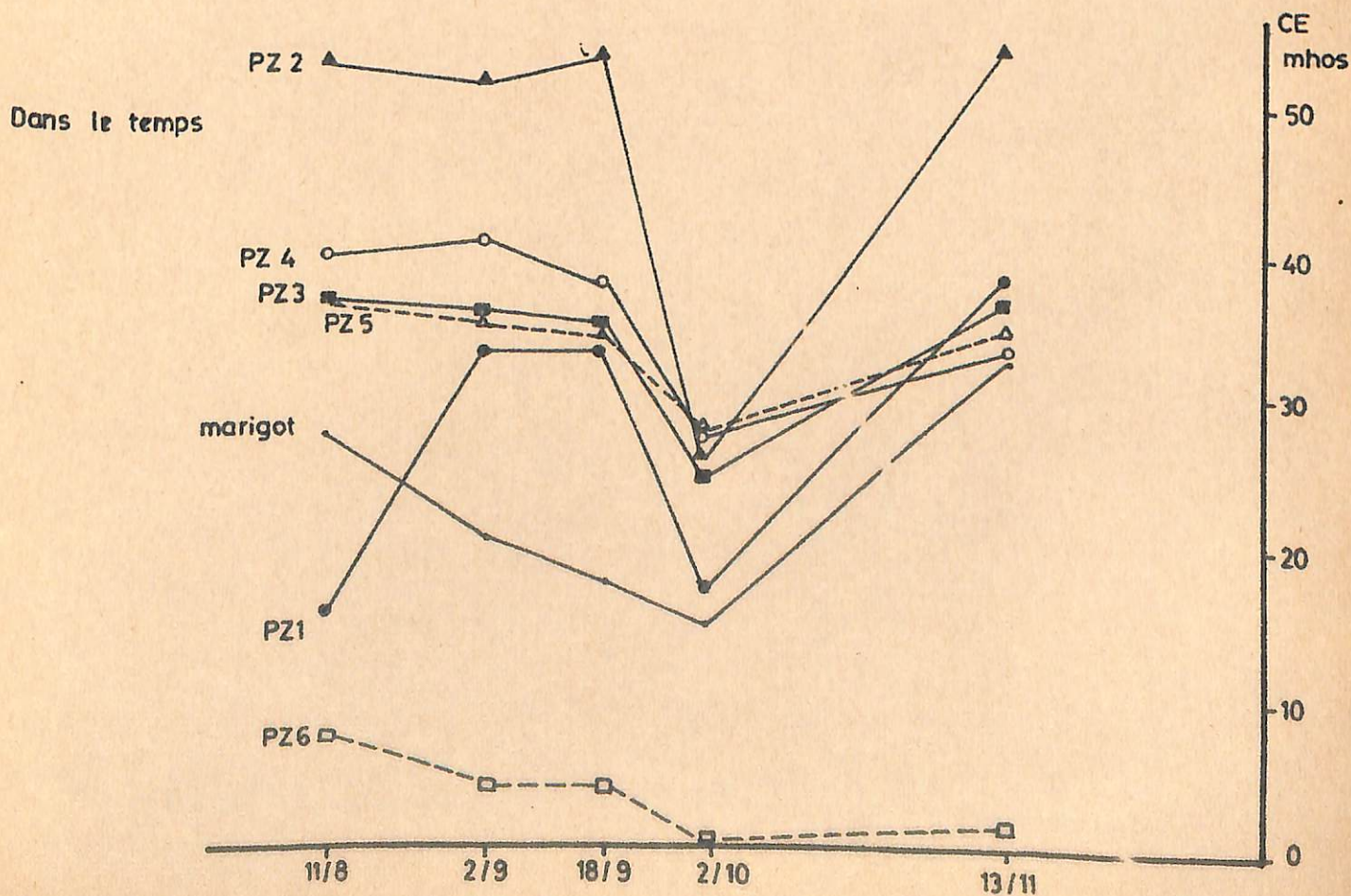
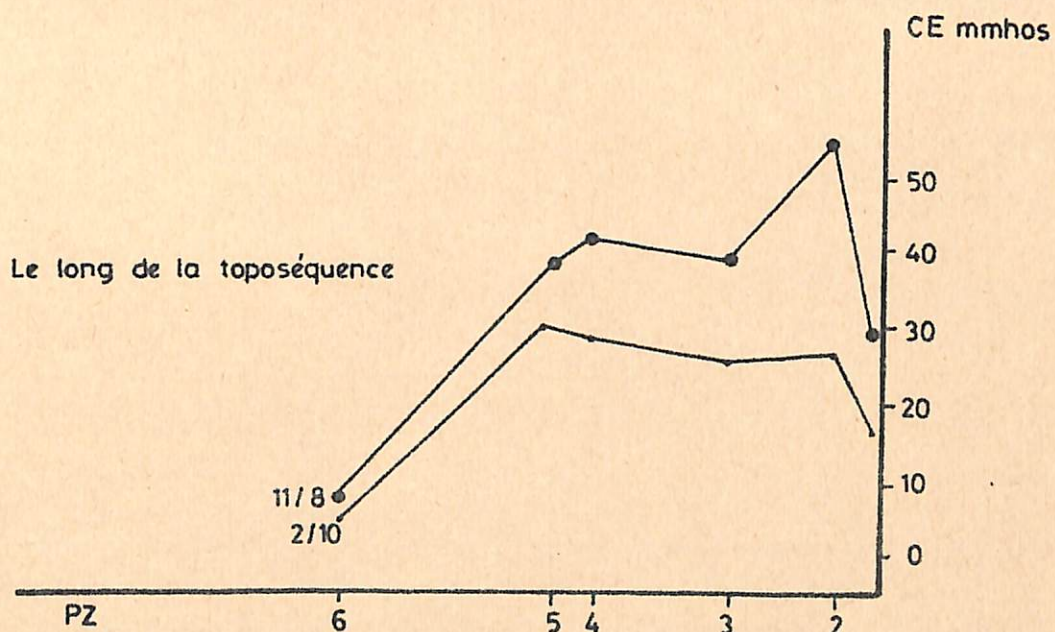


Dans le temps



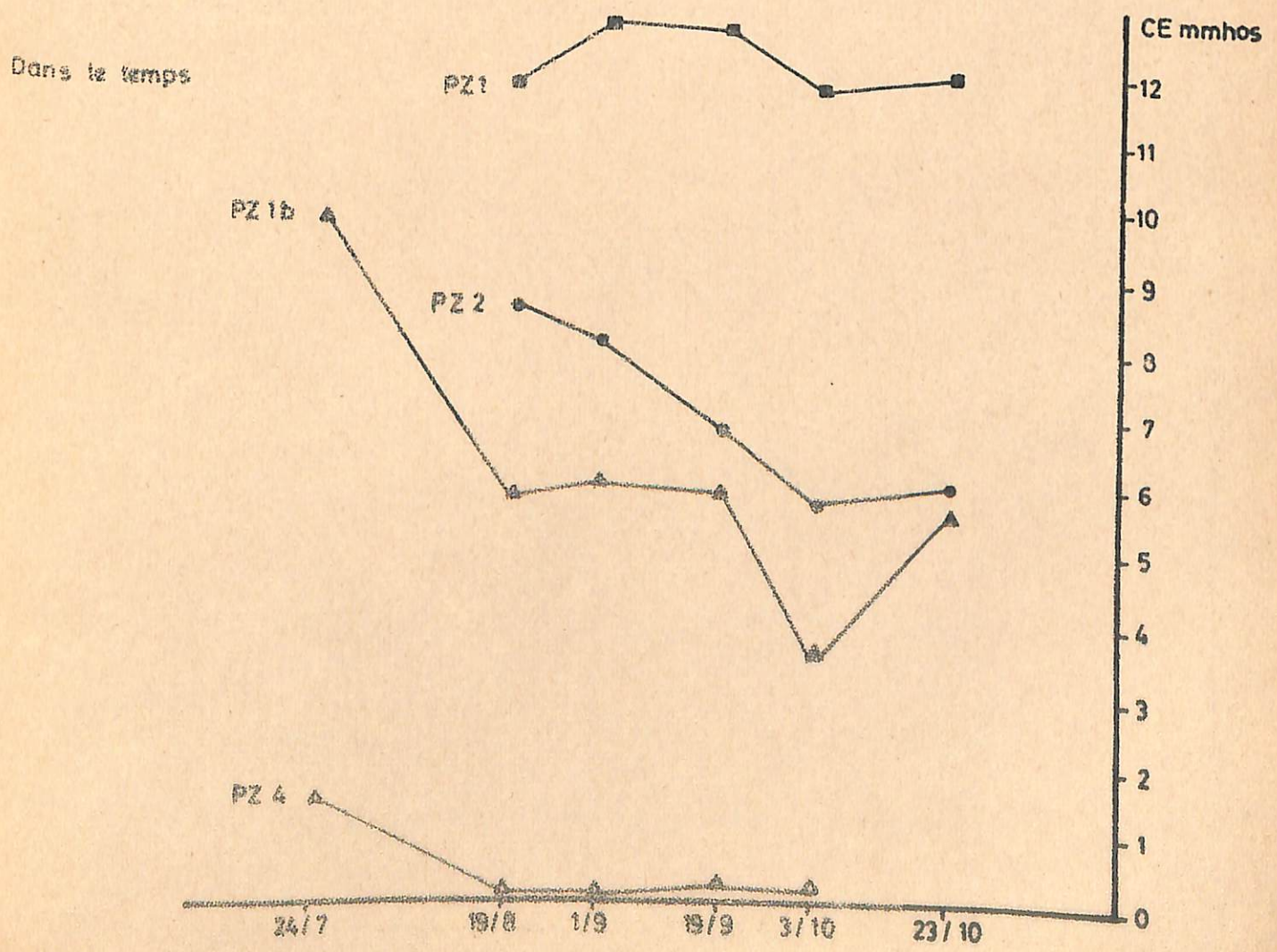
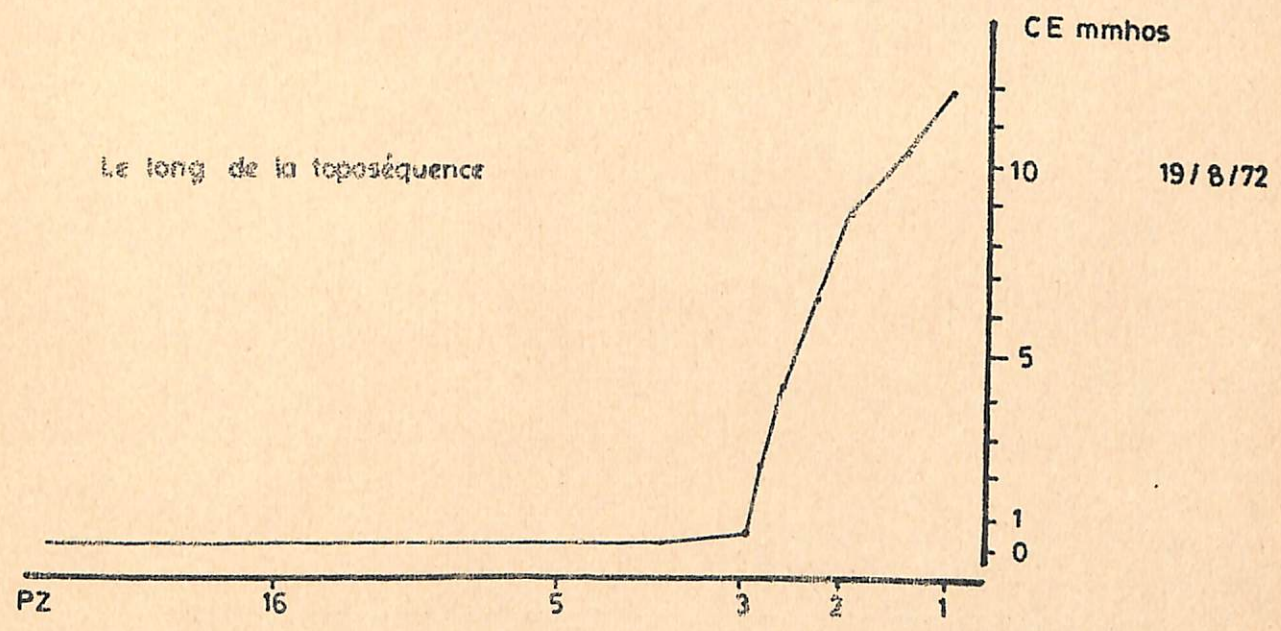
Conductivité électrique de l'eau des piézomètres

DIOUROU



Conductivité électrique de l'eau des piézomètres

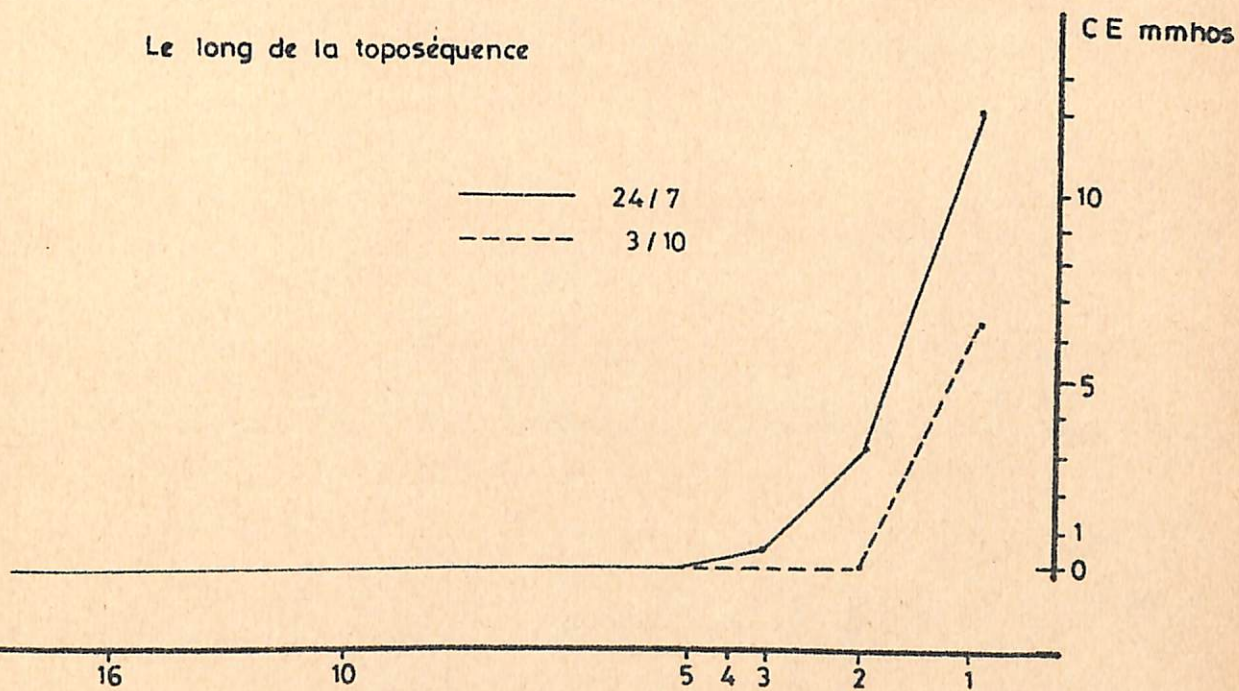
INOR



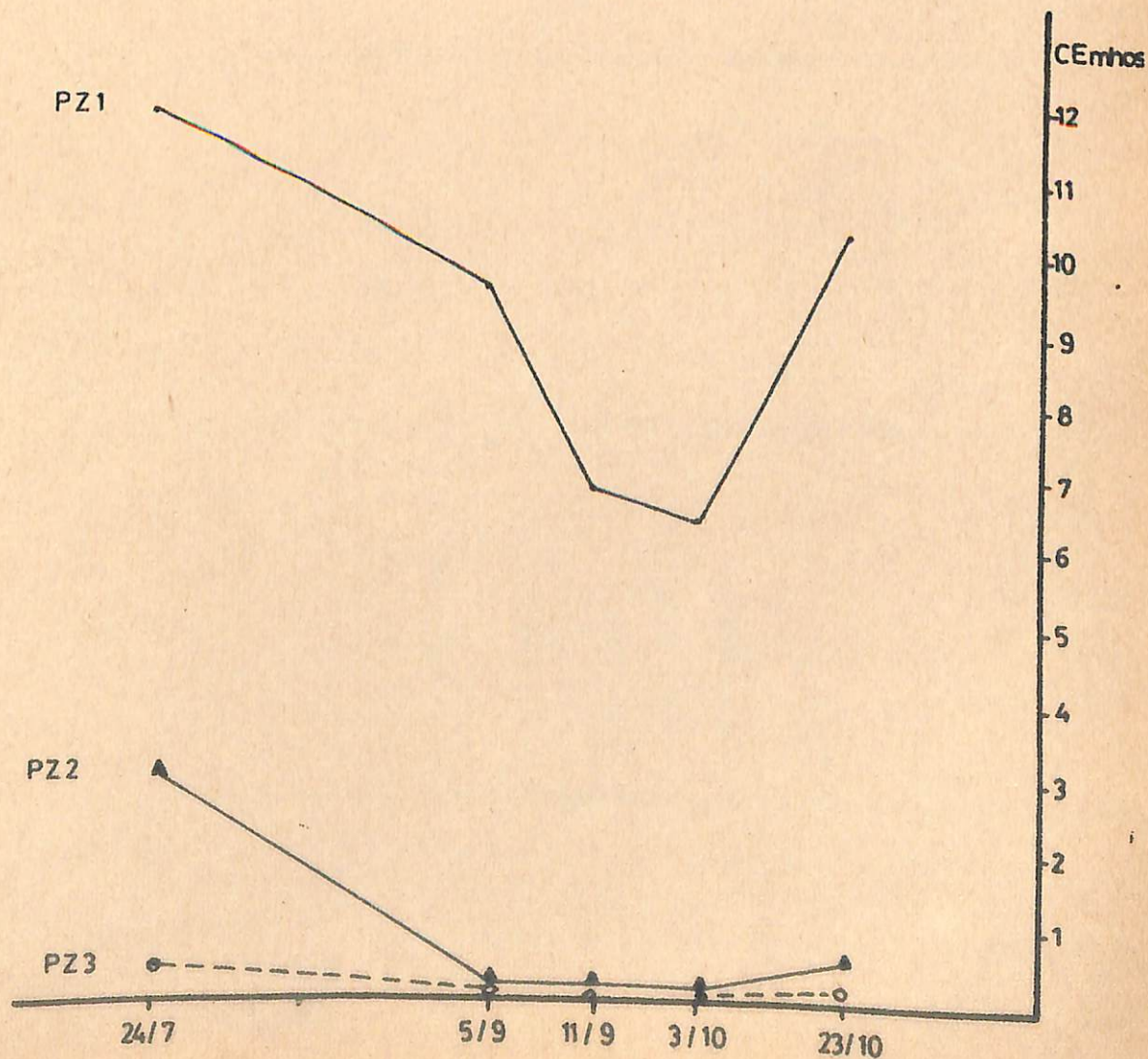
Conductivité électrique de l'eau des piézomètres

KANDIADIU 1972

Le long de la toposéquence



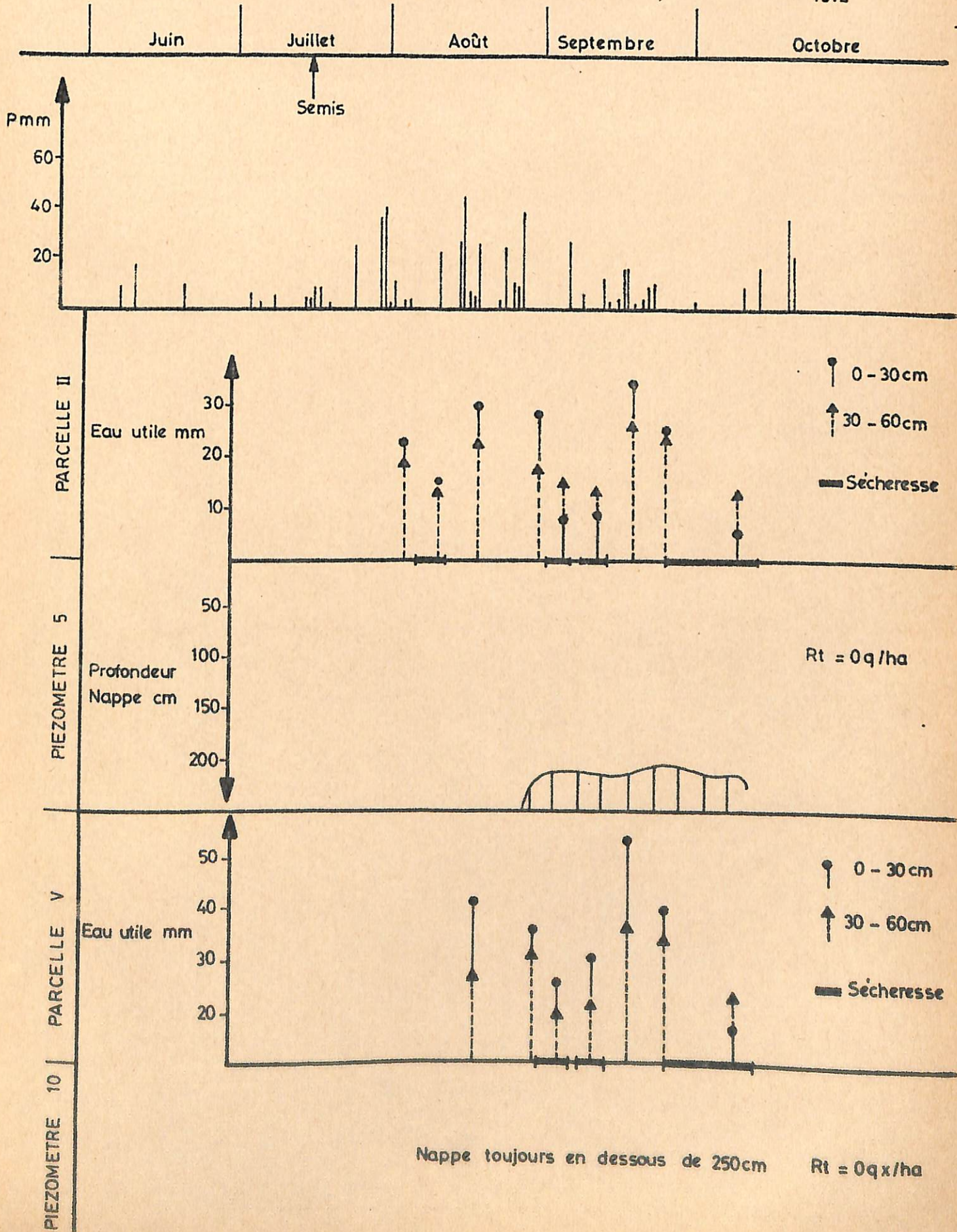
Dans le temps



Influence de la nappe sur les rendements en riz I K P

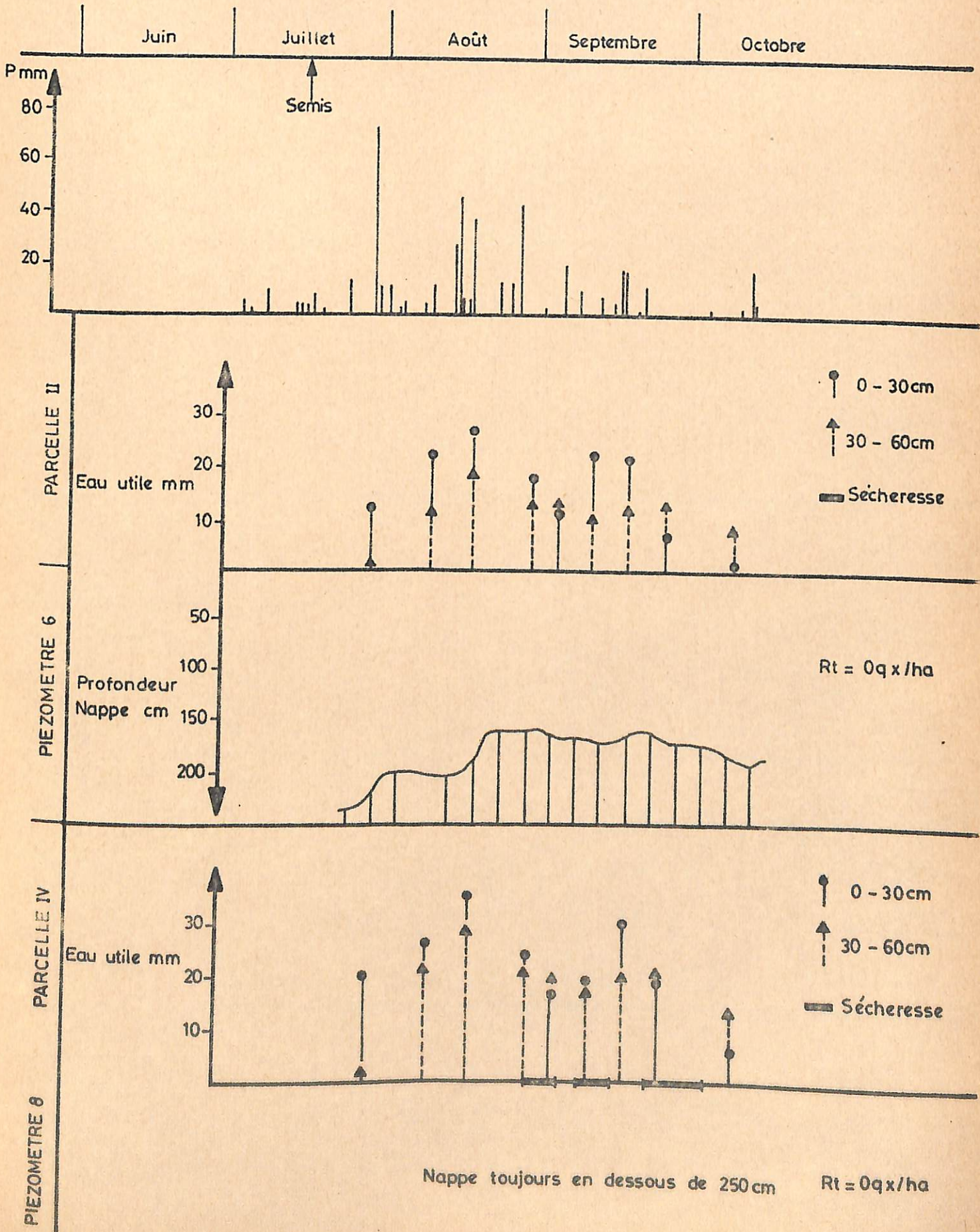
BALINGOR TENDIMANE

1972



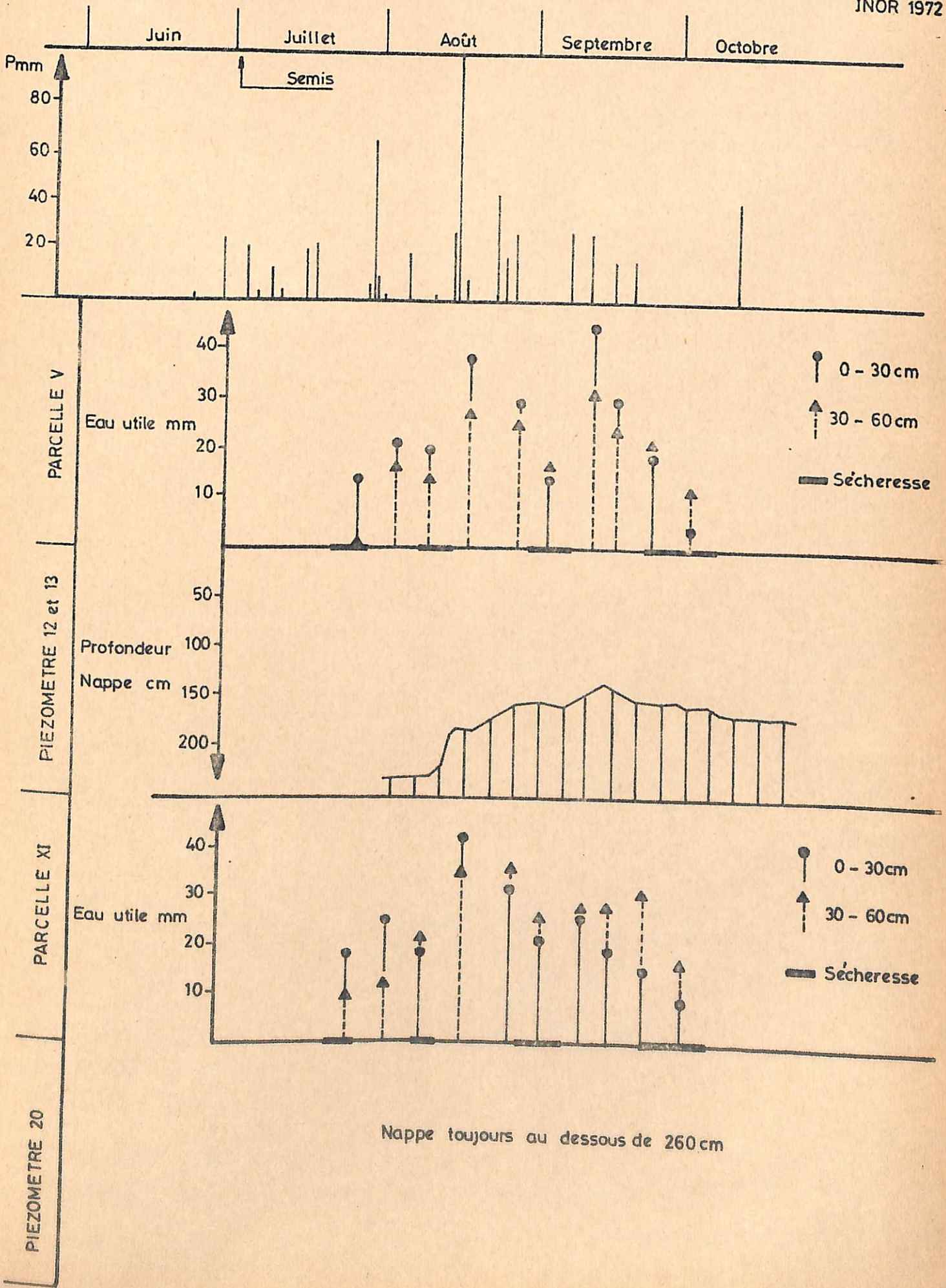
Influence de la nappe sur les rendements en riz IKP

DIOUROU 1972



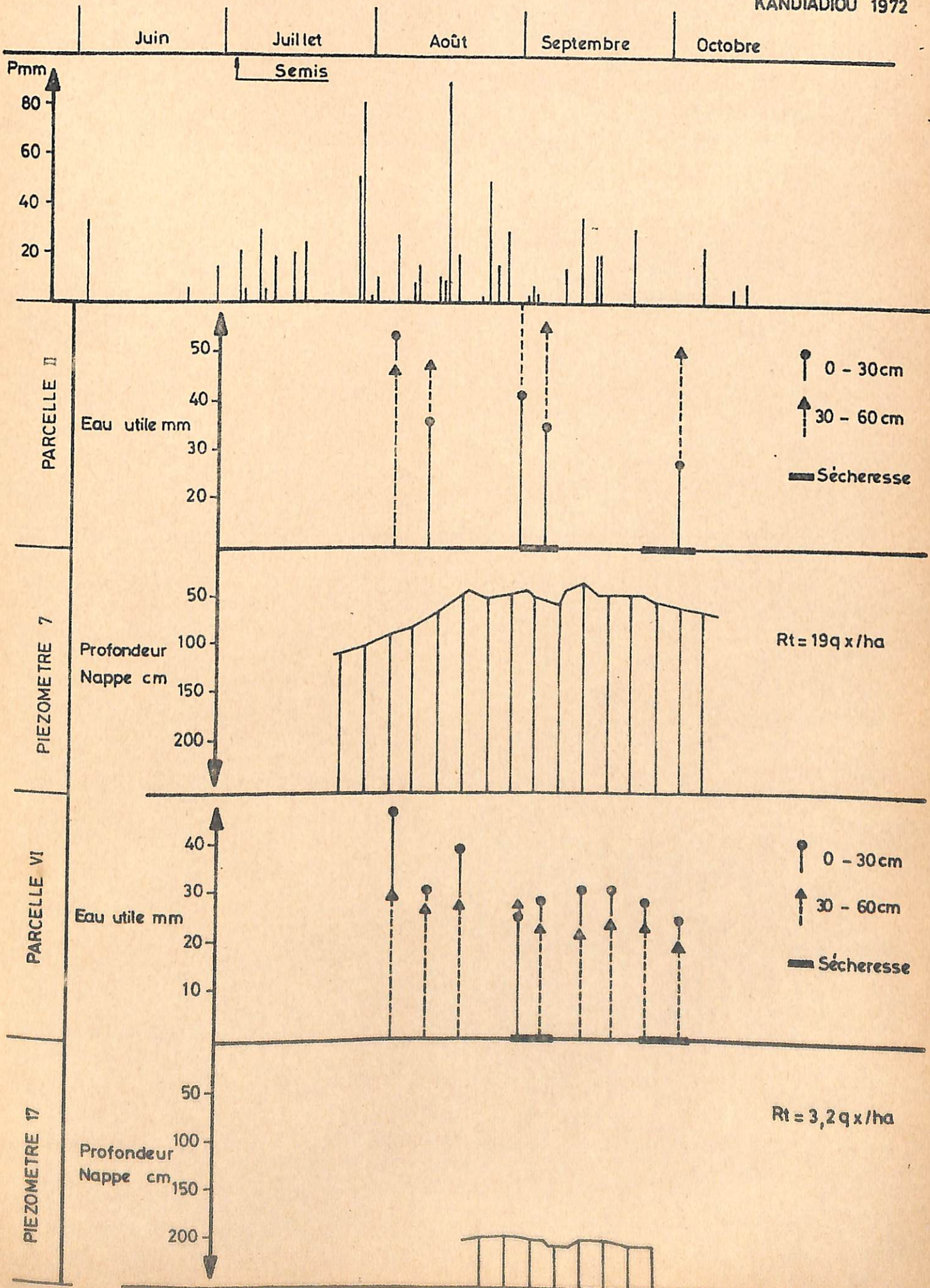
Influence de la nappe sur les rendements en riz I K P

INOR 1972



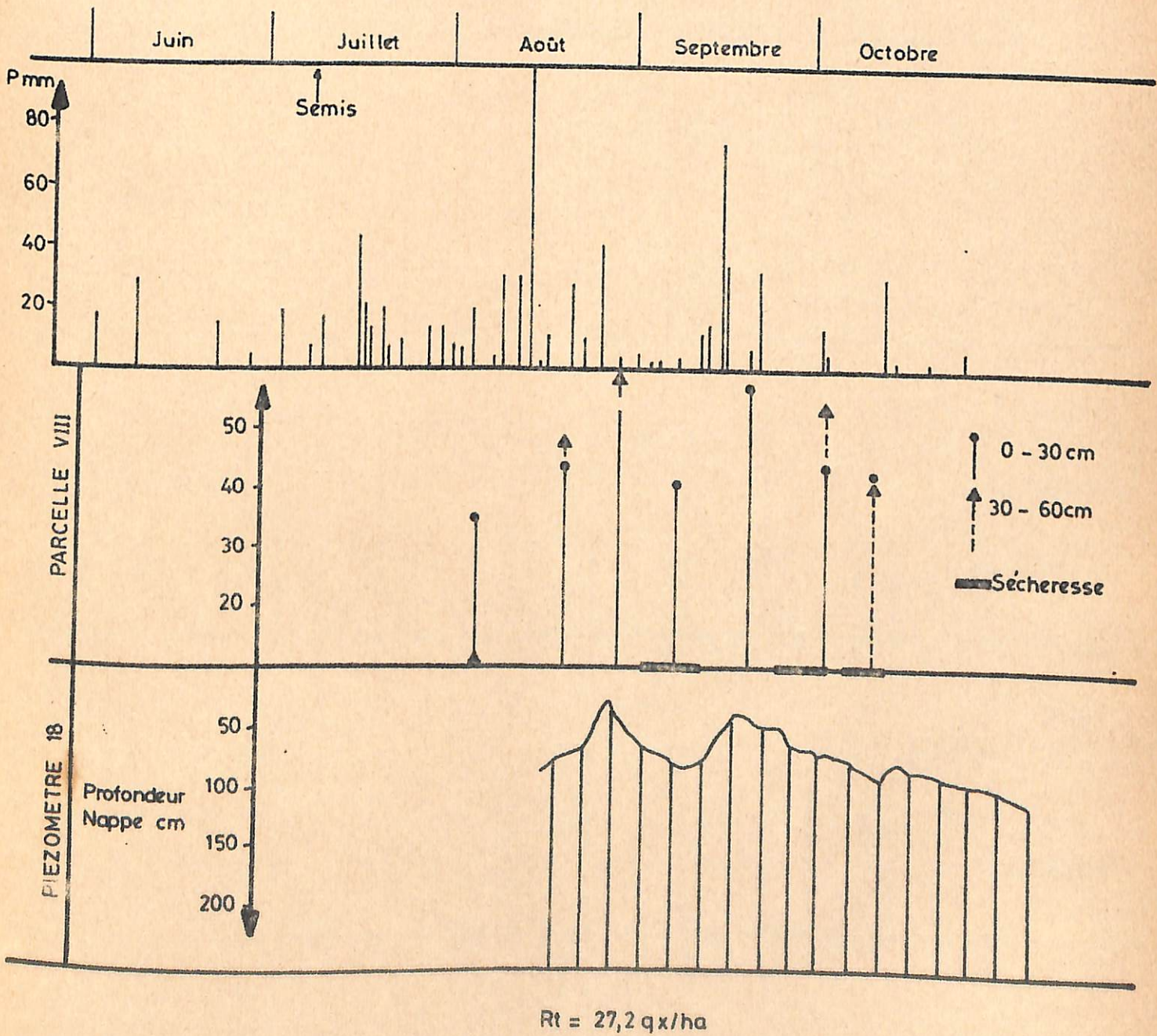
Influence de la nappe sur les rendements en riz I K P

KANDIADIYOU 1972



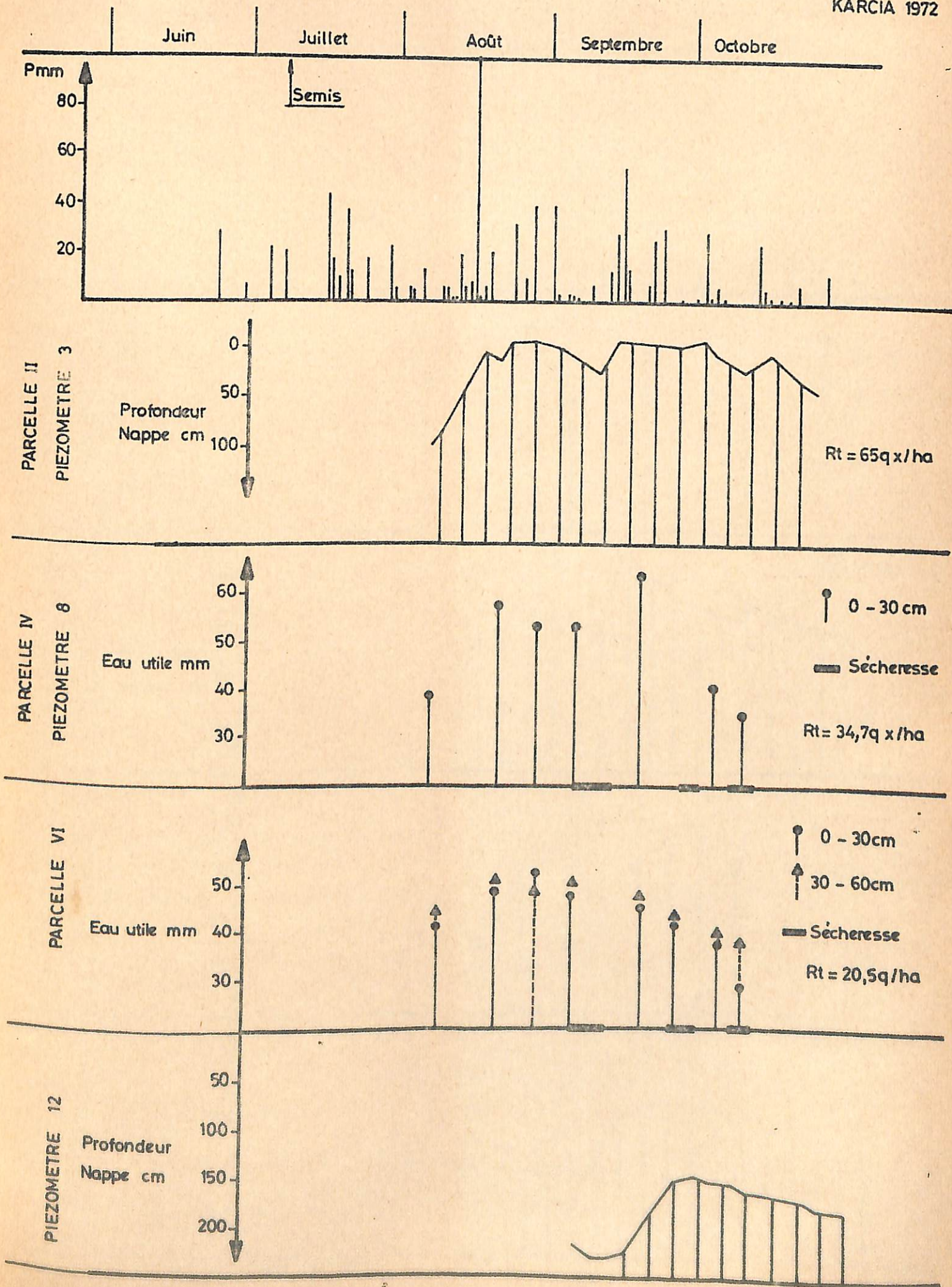
Influence de la nappe sur les rendements en riz IKP

DIANA BA 1972



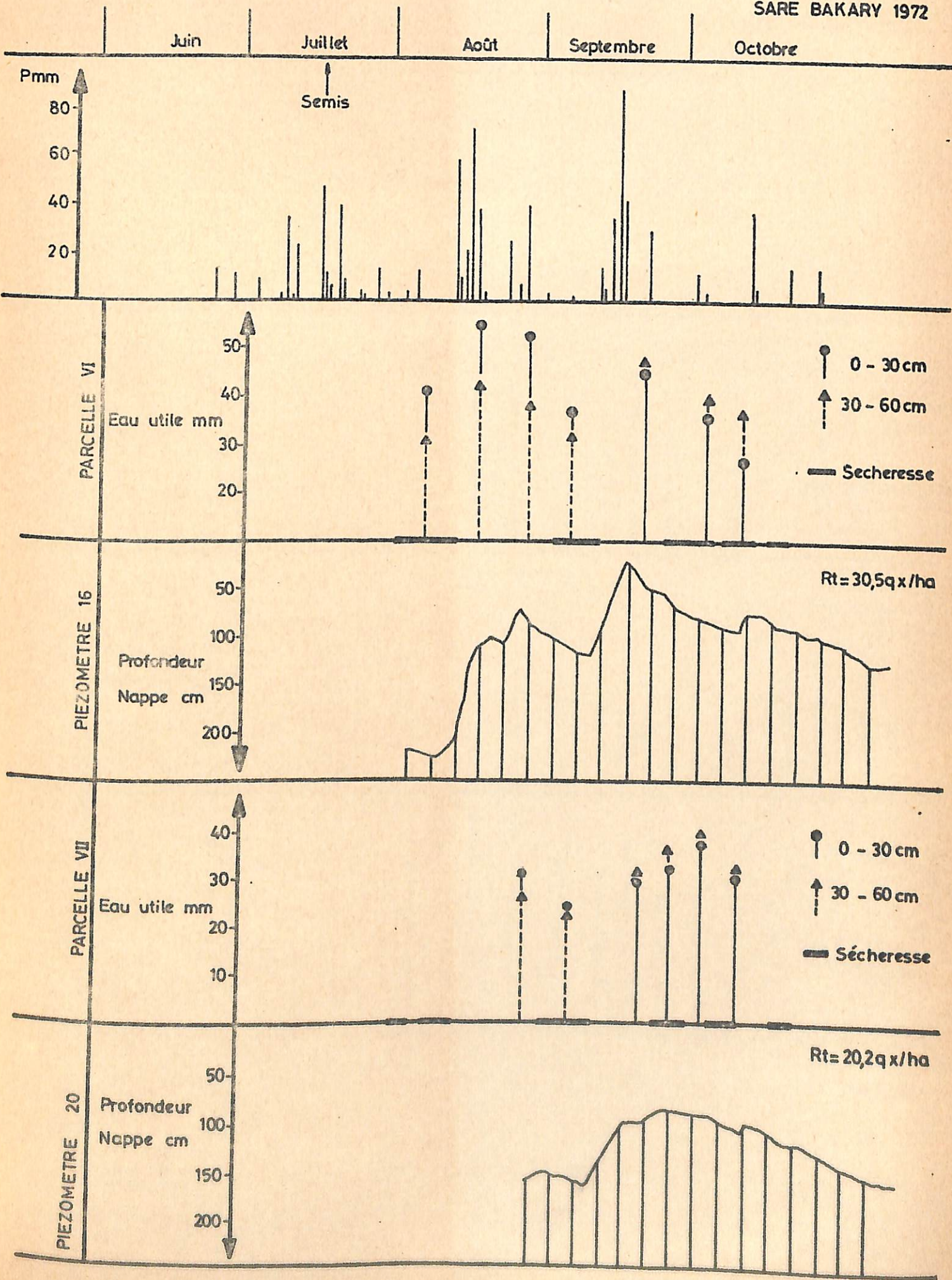
Influence de la nappe sur les rendements en riz IKP

KARCIA 1972



Influence de la nappe sur les rendements en riz I K P

SARE BAKARY 1972



Influence de la nappe sur les rendements en riz 1 KP

SARE MANSALY 1972

Juin

Juillet

Août

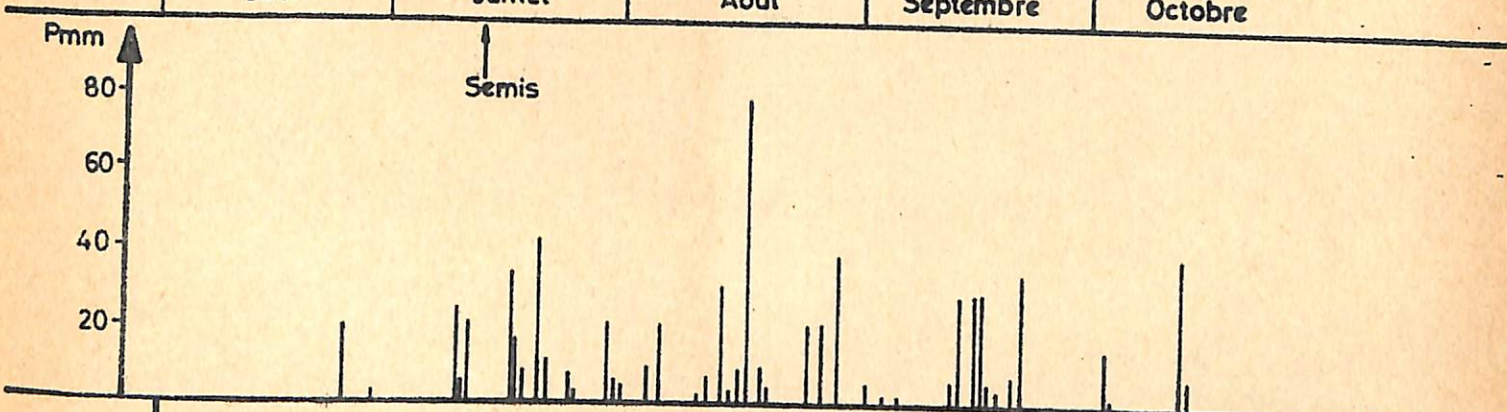
Septembre

Octobre

Pmm

Semis

80
60
40
20

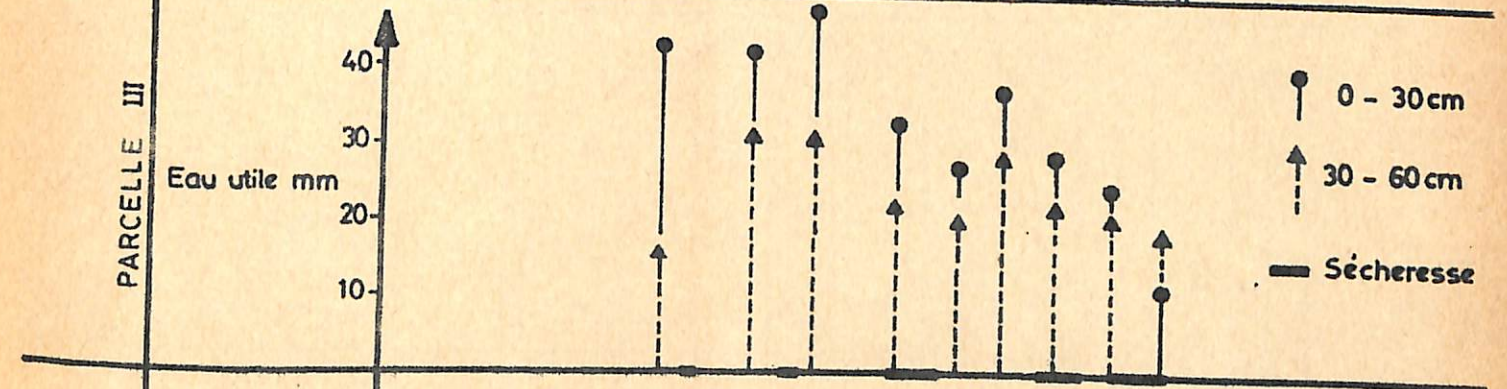


PARCELLE III

Eau utile mm

40
30
20
10

● 0 - 30 cm
▲ 30 - 60 cm
— Sécheresse

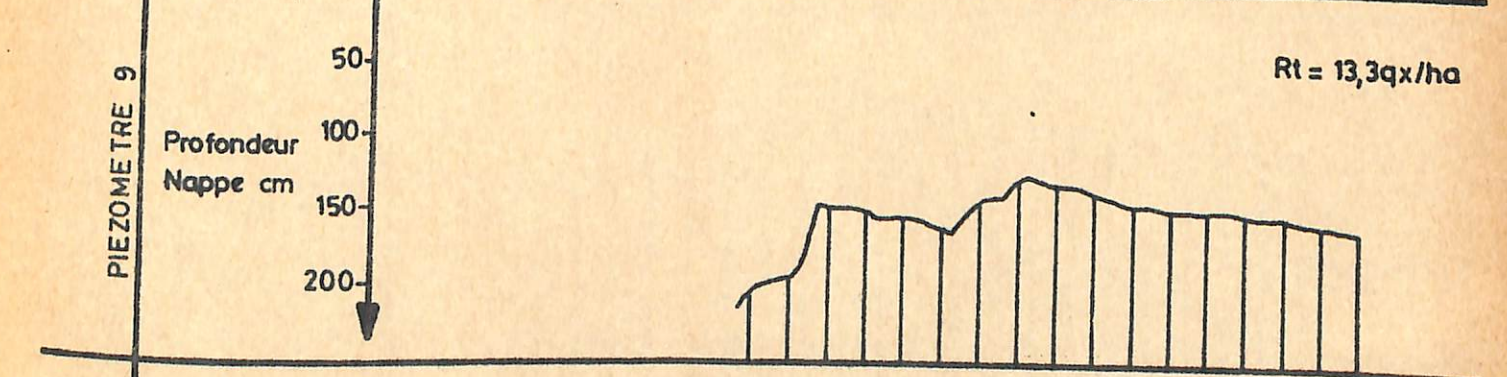


PIEZOMETRE 9

Profondeur Nappe cm

50
100
150
200

Rt = 13,3qx/ha

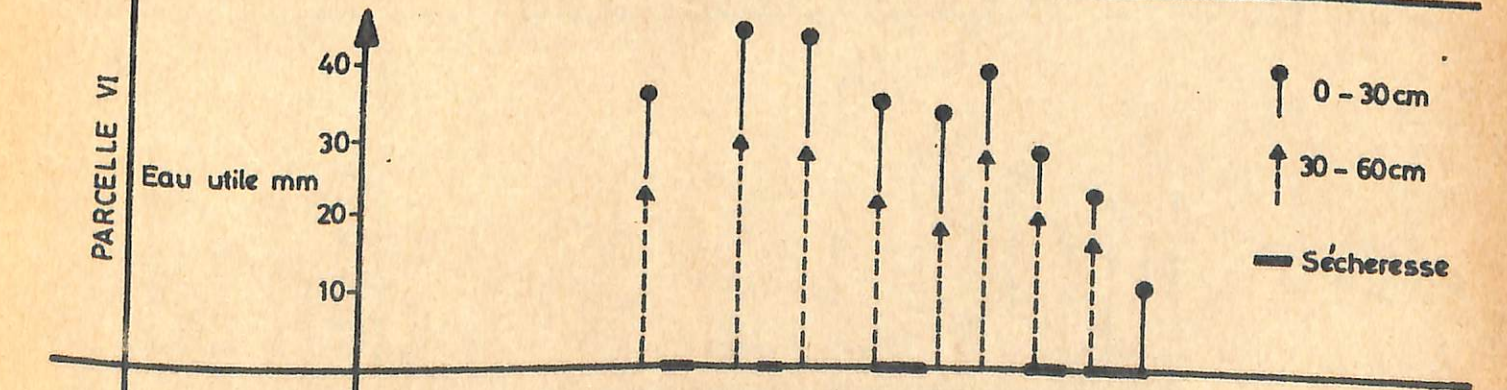


PARCELLE VI

Eau utile mm

40
30
20
10

● 0 - 30 cm
▲ 30 - 60 cm
— Sécheresse

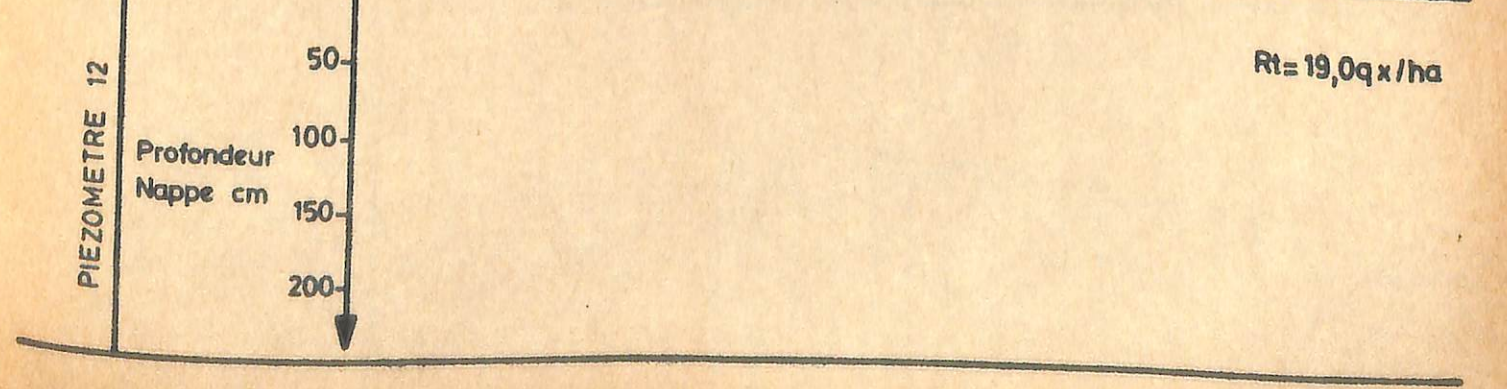


PIEZOMETRE 12

Profondeur Nappe cm

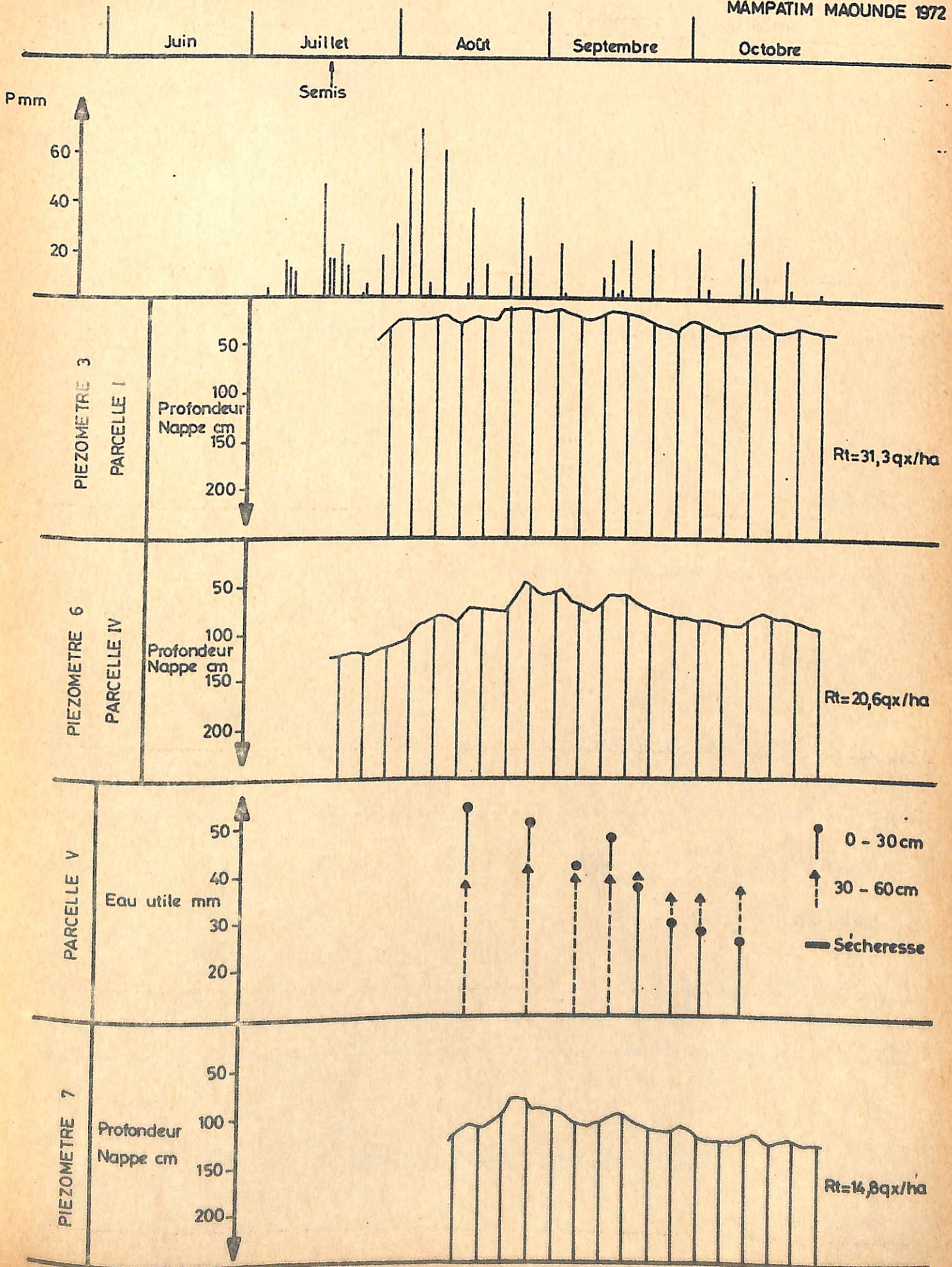
50
100
150
200

Rt = 19,0qx/ha



Influence de la nappe sur les rendements en riz I K P

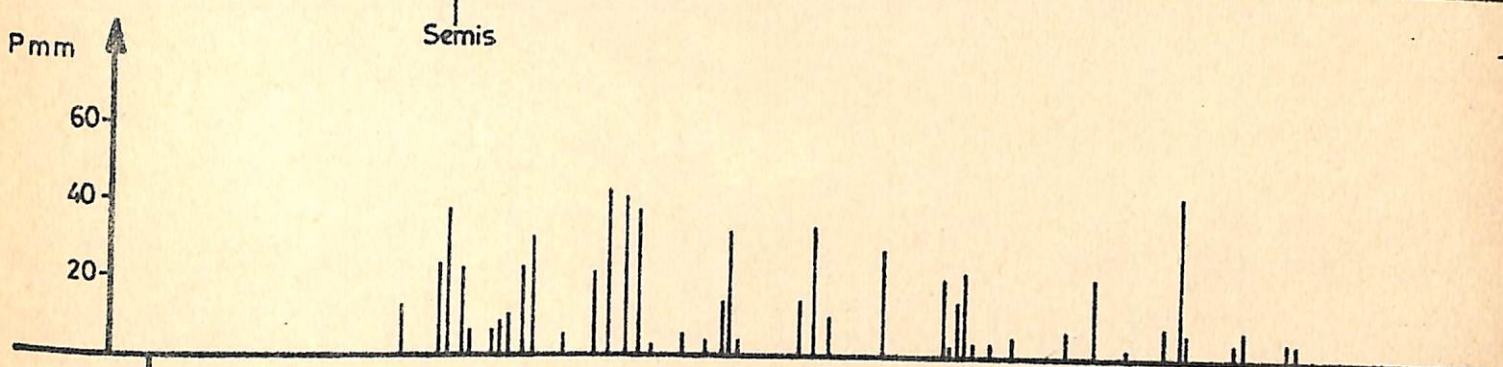
MAMPATIM MAOUNDE 1972



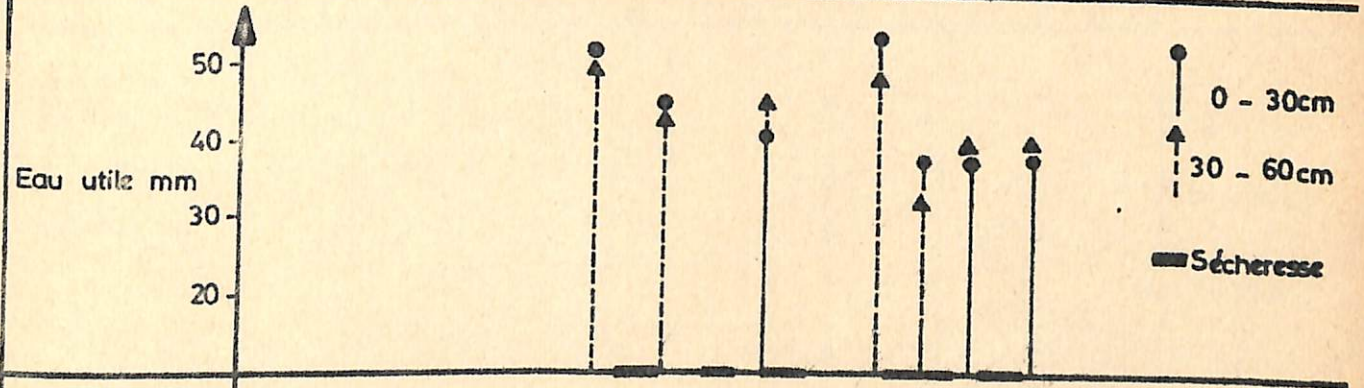
Influence de la nappe sur les rendements en riz I KP

DIALLY-KOUNDA 1972

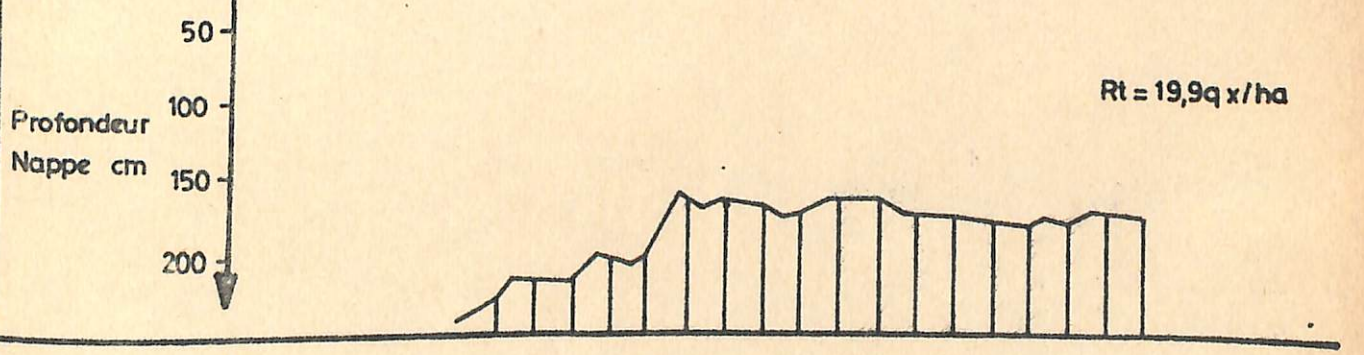
Jun Juillet Août Septembre Octobre



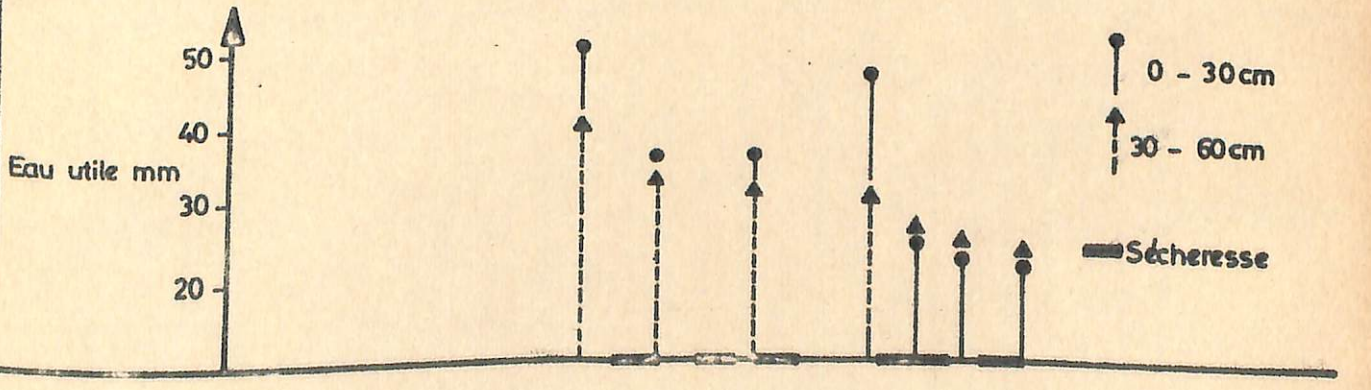
PARCELLE VI



PIEZOMETRE 5



PARCELLE III



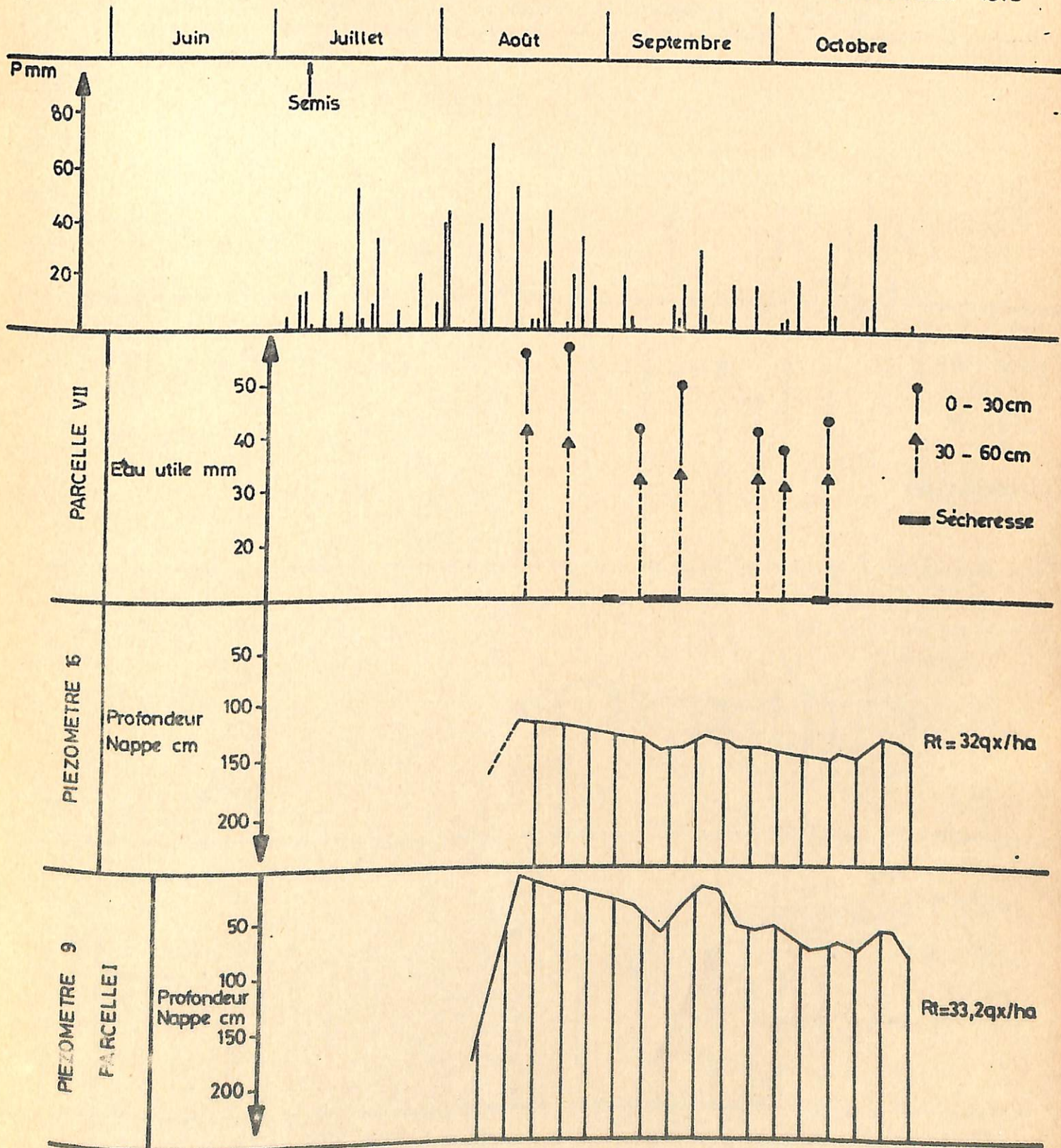
PIEZOMETRE 8

NAPPE TOUJOURS EN DESSOUS DE 250cm

Rt = 22,5qx/ha

Influence de la nappe sur les rendements en riz I K P

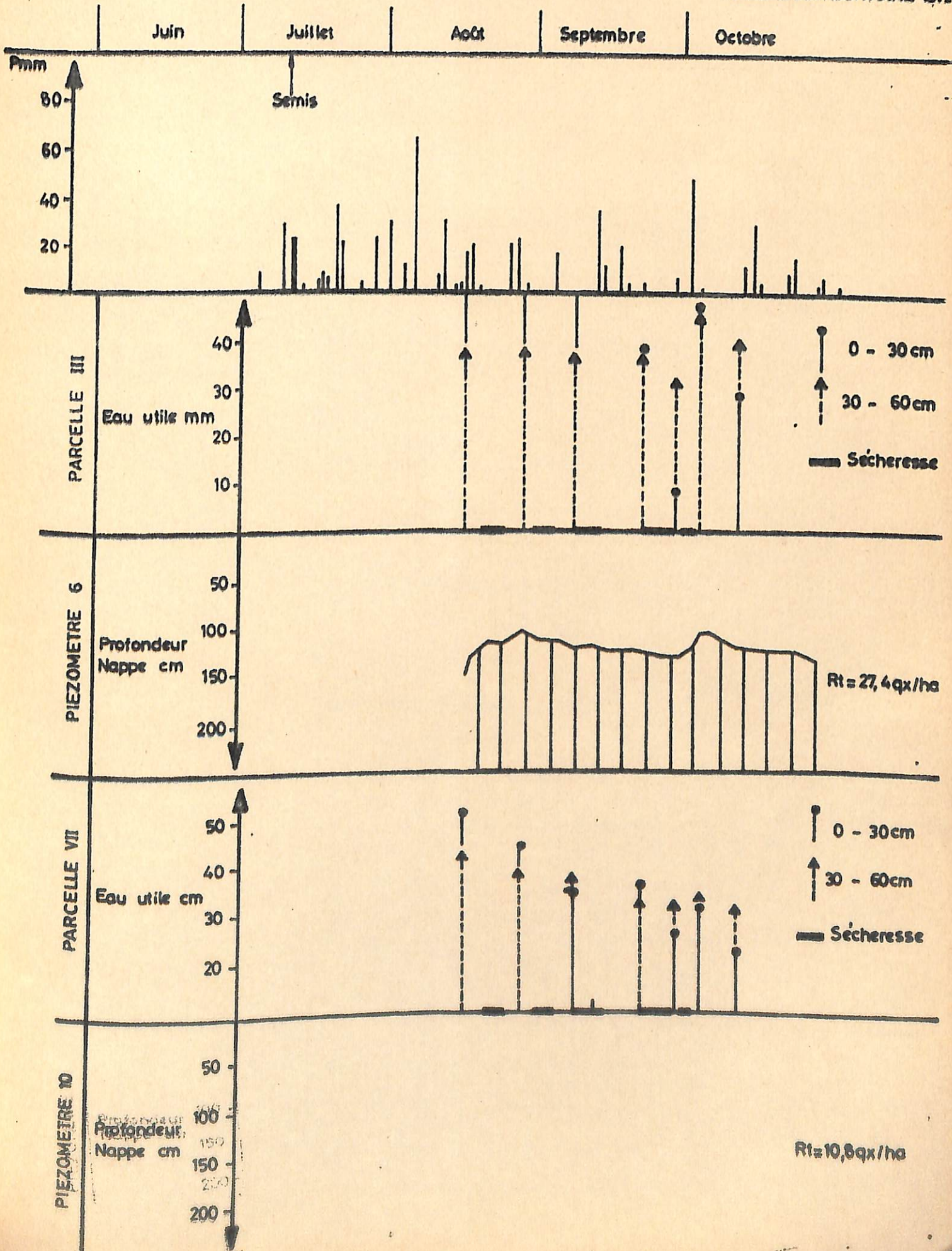
TAKOUDIALLA 1972



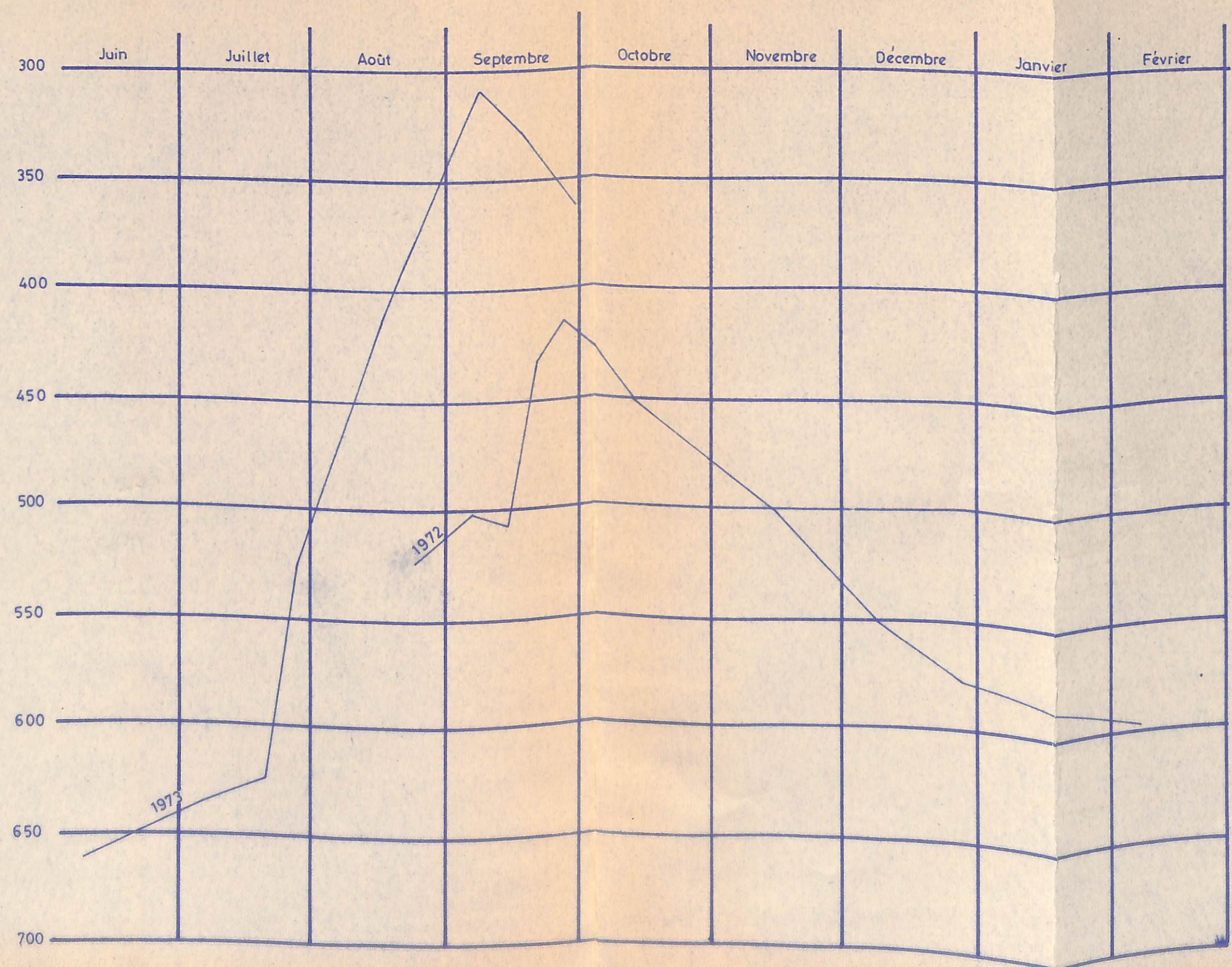
Influence de la nappe sur les rendements en riz I KP

FIG. 114

KABENDOU-KOUNKANE 1972



PUITS DE SARE BAKARY

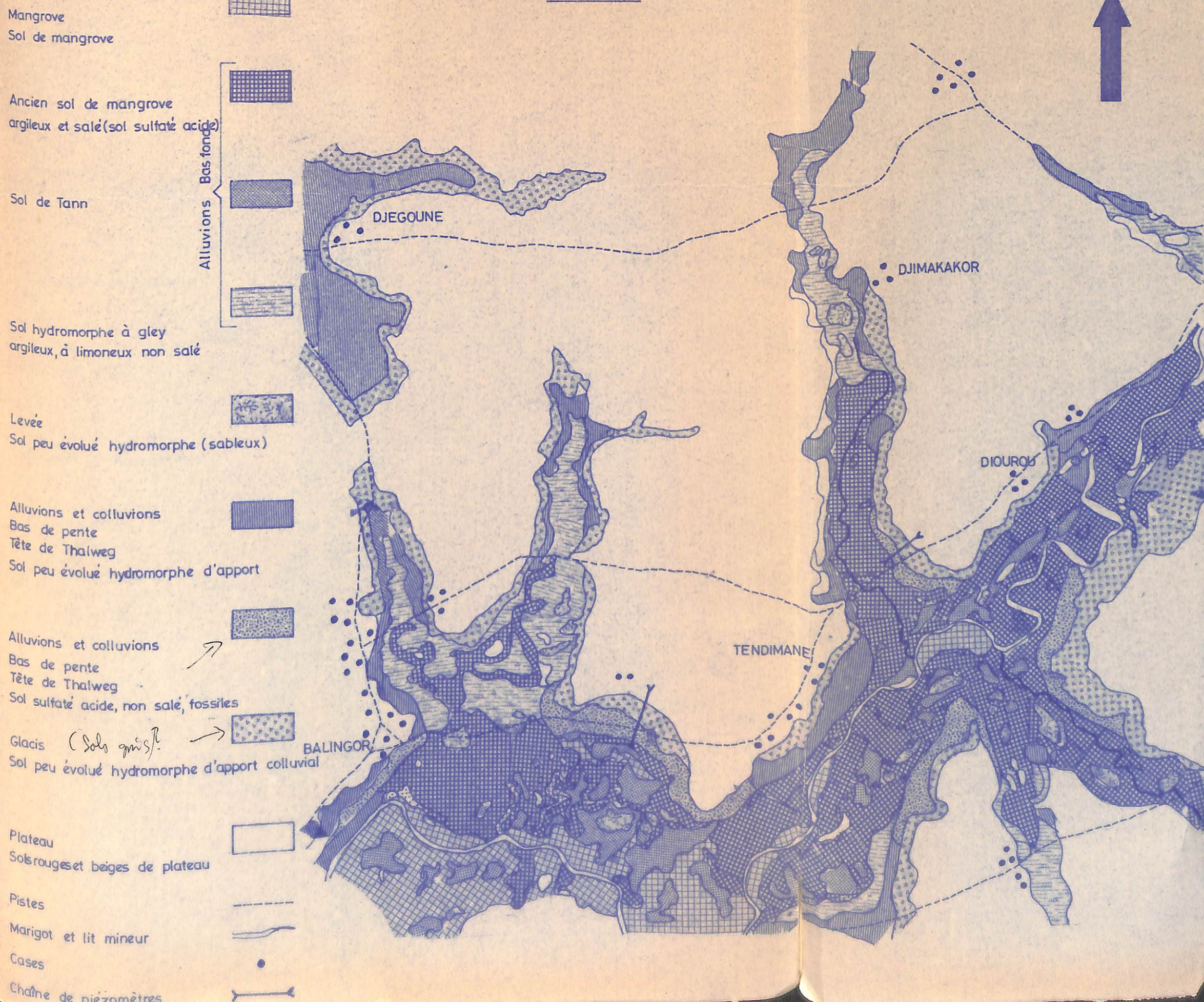


ESQUISSE MORPHOPÉDOLOGIQUE, RÉGION DE BALINGOR DIOUROU

FIG. 116

LEGENDE

ECH. 1/50.000












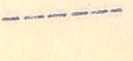


ESQUISSE MORPHOPEDOLOGIQUE, REGION DE SARE YOBA-SARE BAKARY

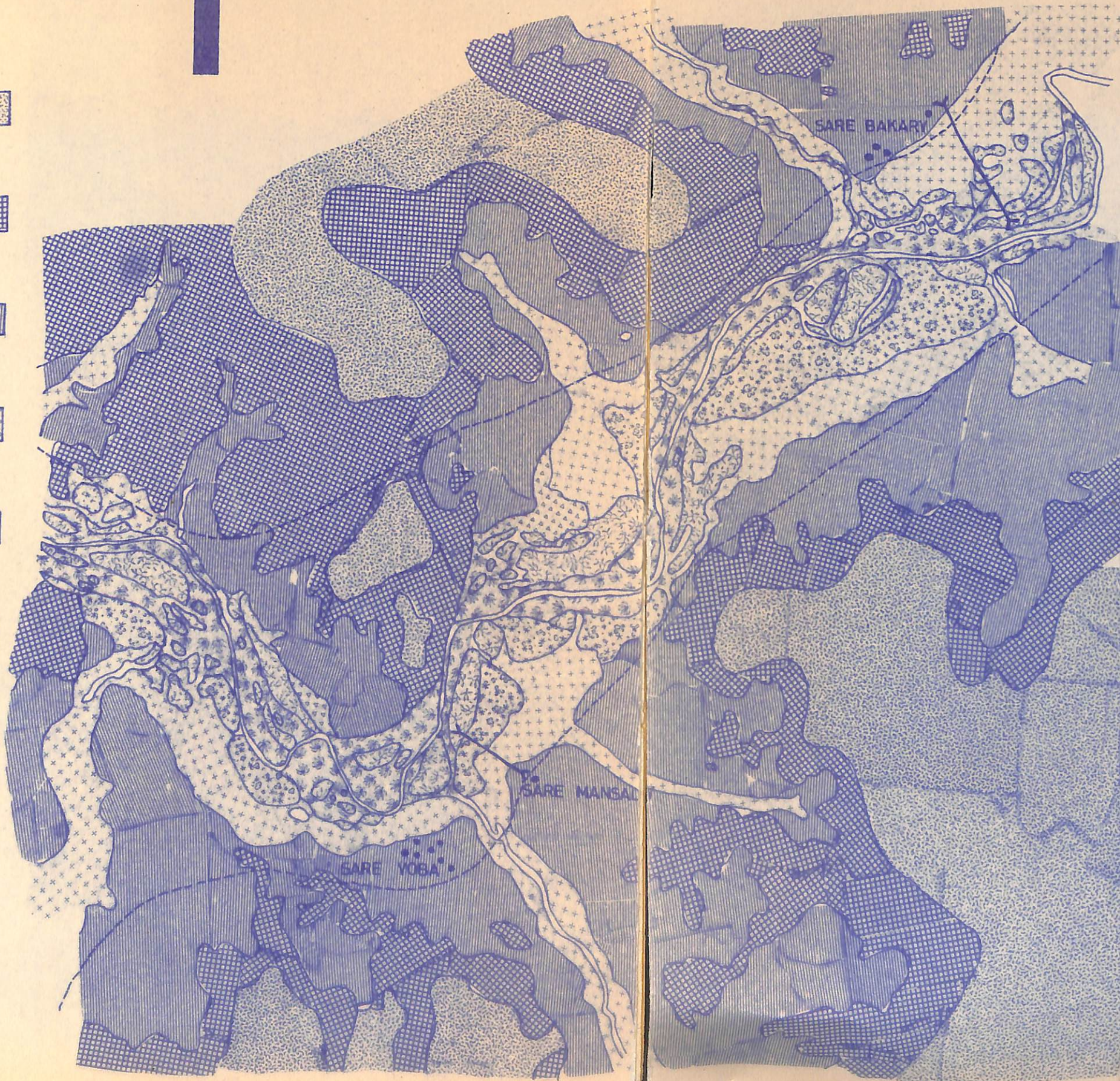
FIG. 117

ECH. 1/50.000



LEGENDE

- 
 Plateau
Sol rouge et Sol beige
- 
 Cuirasse
Cuirasse subaffleurante
- 
 Versant
Sol ocre de pente
- 
 Glacis
Sol peu évolué hydromorphe
- 
 Alluvions QII
Glacis terrasse
Sol gris
- 
 Haute levée QI
Sol peu évolué d'apport alluvial
- 
 Basse levée Q0
Basse terrasse
Sol gris
- 
 Alluvions Q0
Lit majeur
Sol hydromorphe à gley
- 
 Lit mineur
- 
 Routes
- 
 Cases
- 
 Chaîne de piézomètre

















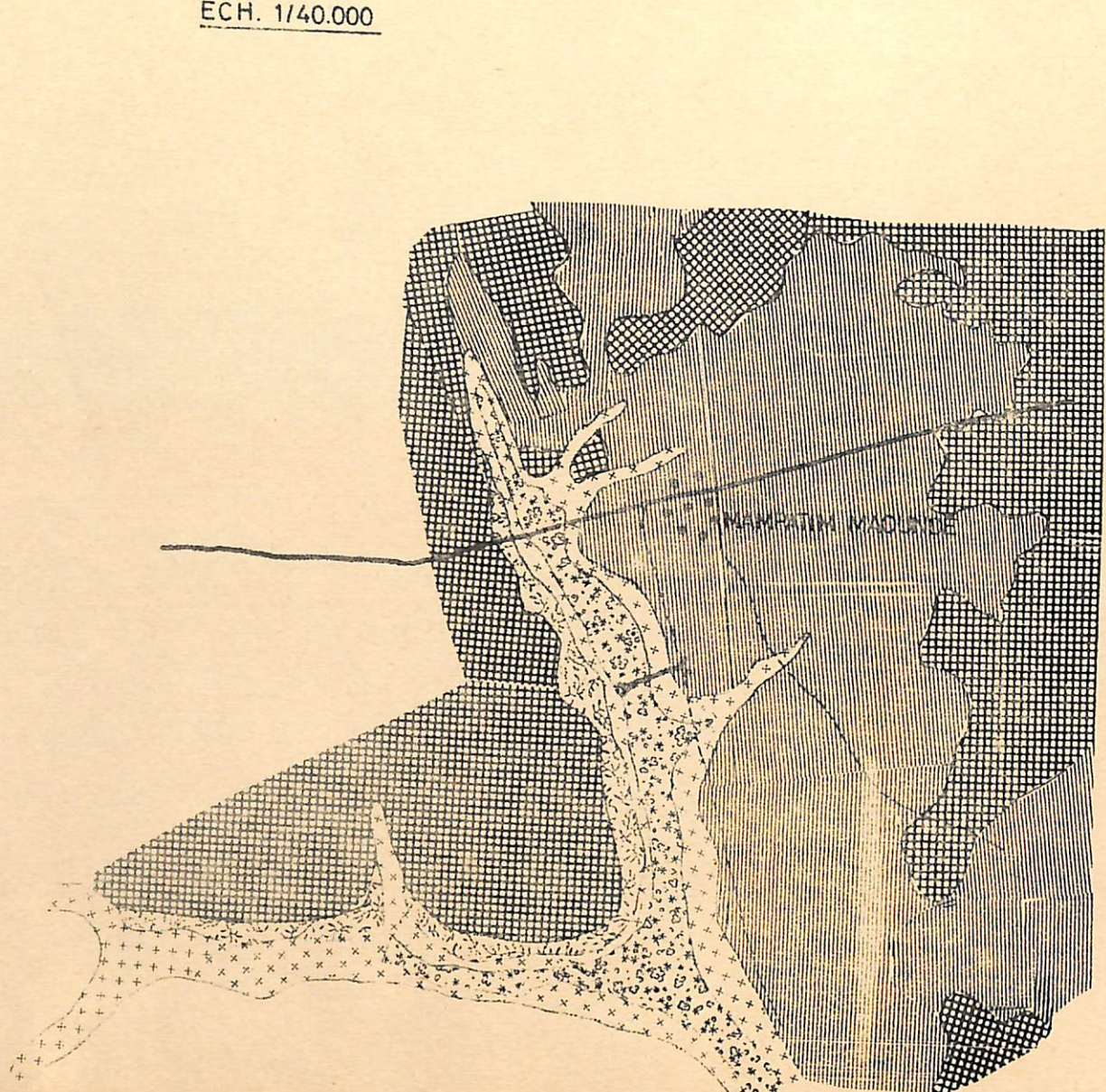
ESQUISSE MORPHOPÉDOLOGIQUE, RÉGION DE MAMPATIM MAOUNDE

FIG. 118

ECH. 1/40.000

LEGENDE

- Cuirasse 
- Cuirasse subaffleurante 
- Versant 
- Sol ocre de pente 
- Glacis 
- Sol peu évolué hydromorphe 
- Alluvions QII 
- Colluvions QII 
- Sol gris 
- Alluvions Q0 
- Sol humique à gley 
- Pistes 
- Cases 
- Chaîne de piézomètres 



ESQUISSE MORPHOPÉDOLOGIQUE, RÉGION DE DIALI-KOUNDA, DIAOBE

FIG. 119

ECH. 1/40.000



LEGENDE

Plateau
Sol rouge et Sol beige



Cuirasse
Cuirasse subaffleurante



Versant
Sol ocre de versant



Alluvions
Colluvions Q II
Sol gris



Levée Q I
Sol peu évolué hydromorphe d'apport



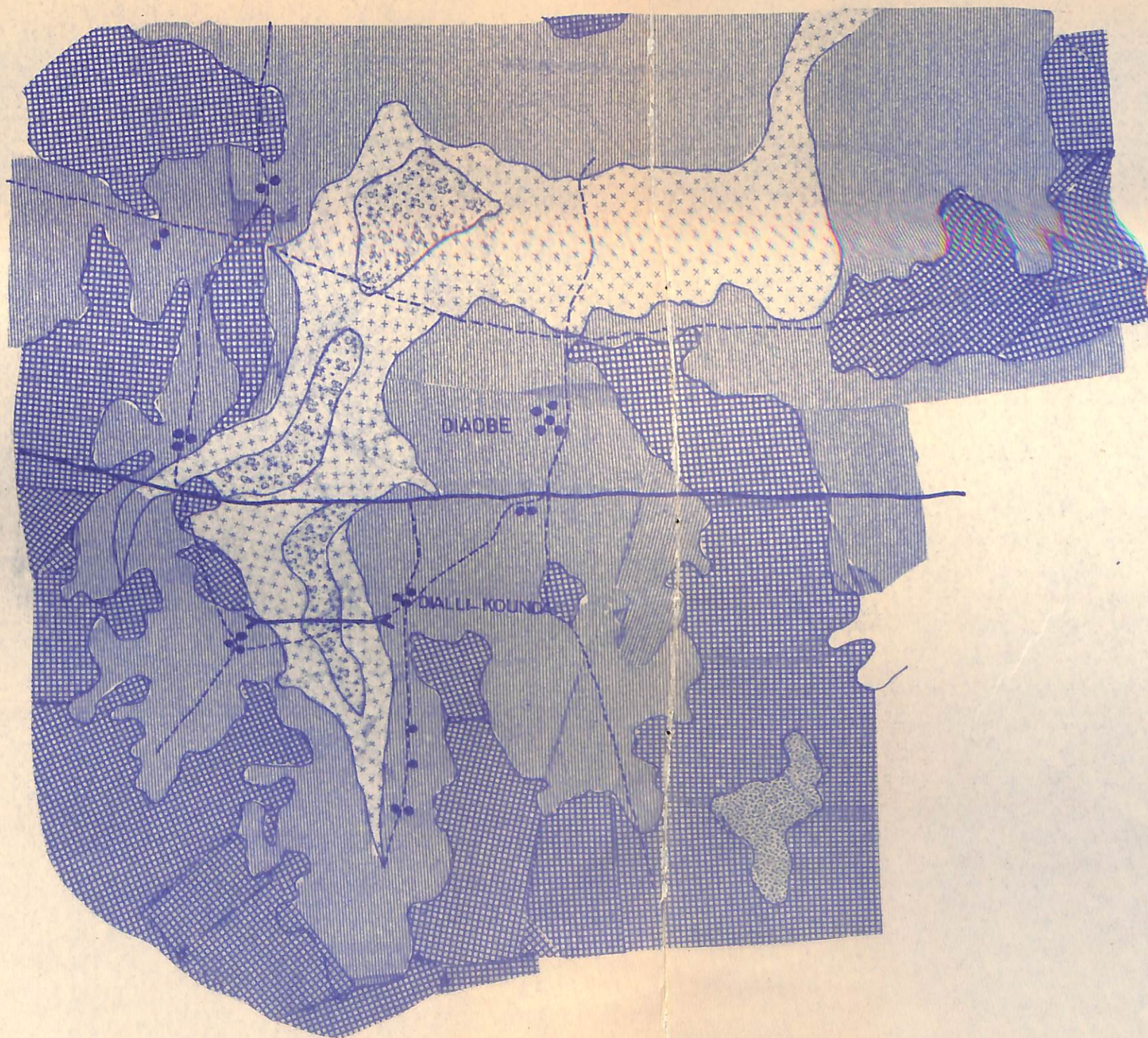
Pistes



Cases



Chaîne de piézomètres







ESQUISSE MORPHOPÉDOLOGIQUE, RÉGION DE TAKOUDIALLA (KAYANGA)



FIG. 120




ECH: 1/40.000



LEGENDE

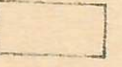
- Cuirasse 
- Cuirasse subaffleurante 


- Versant 
- Sol ocre de versant 


- Glacis 
- Sol peu évolué hydromorphe d'apport 

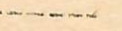
- Berge 
- Bourrelet 
- Sol hydromorphe à pseudogley 



- Alluvions anciennes 
- Sol hydromorphe à gley 

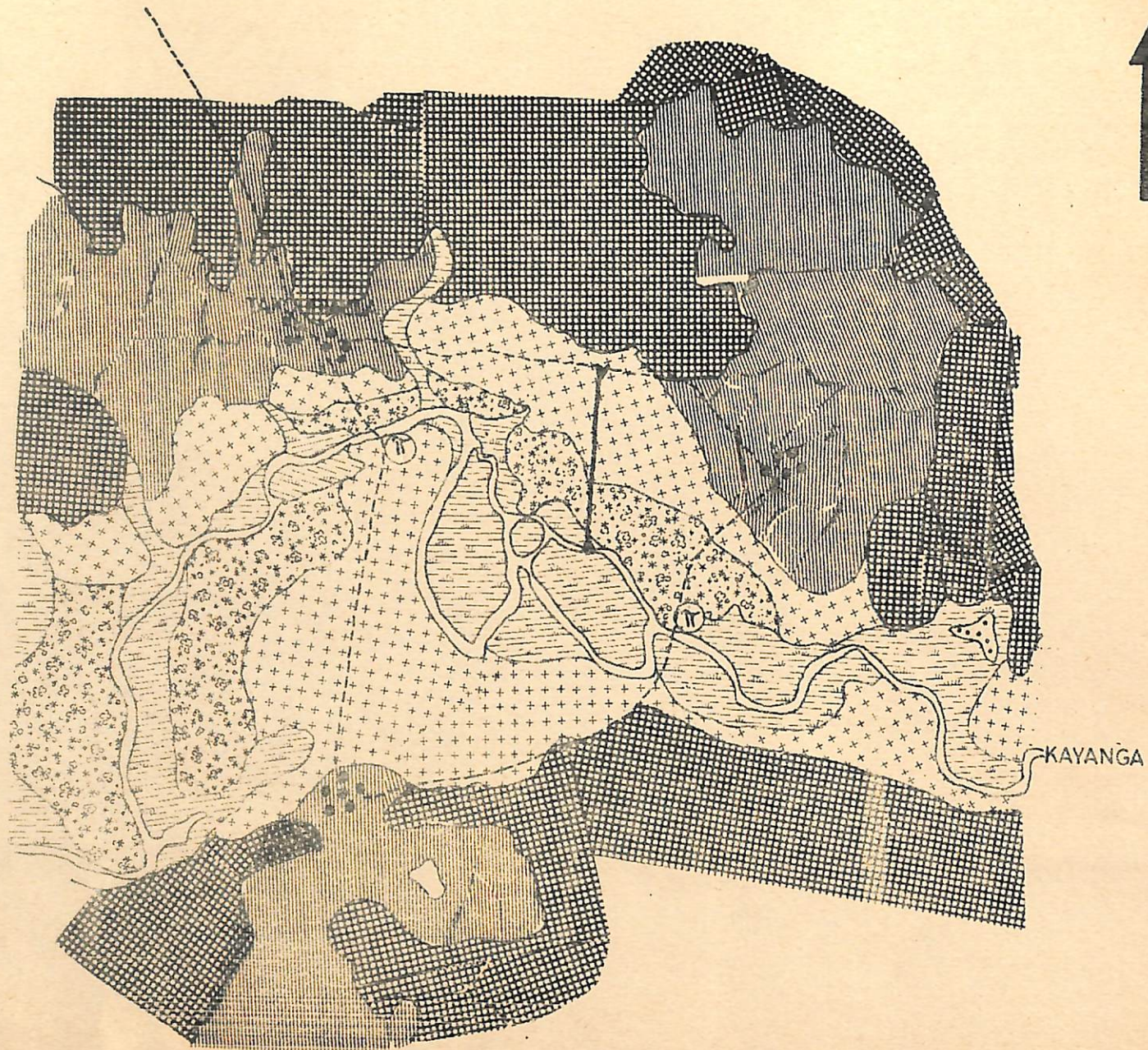
- Lit mineur de la Kayanga 

- Cuvette de décantation 

- Pirogue 

- Pistes 

- Cases 
- Chaîne de nézomètres 






ESQUISSE MORPHOPÉDOLOGIQUE, RÉGION DE KABENDOU-KOUNKANE

FIG 121

ECH. 1/40.000



LEGENDE

- 
 Plateau
 Sol rouge, Sol Beige
- 
 Cuirasse
 Cuirasse subaffleurante
- 
 Versant
 Sol ocre de pente
- 
 Alluvions
 Colluvions Q I-II
 Sol gris
- 
 Berge Q1
 Sol peu évolué d'apport alluvial
- 
 Alluvions Q0
 Sol hydromorphe à gley
- 
 Pistes
- 
 Cases
- 
 Chaîne de piézomètres

