

N° 2

REPUBLIQUE DU NIGER

ETUDE DE FACTIBILITE
DU PROJET D'AMENAGEMENT HYDRO-AGRIQUE
DE LA CUVETTE D'OUNA-KOUANZA

DESSIN

AOÛT 1989

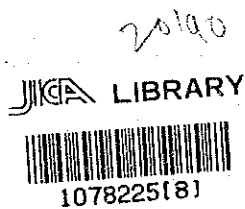
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

AFT
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REPUBLIQUE DU NIGER

**ETUDE DE FACTIBILITE
DU PROJET D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE D'OUNA-KOUANZA**

DESSIN



AOUT 1989

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

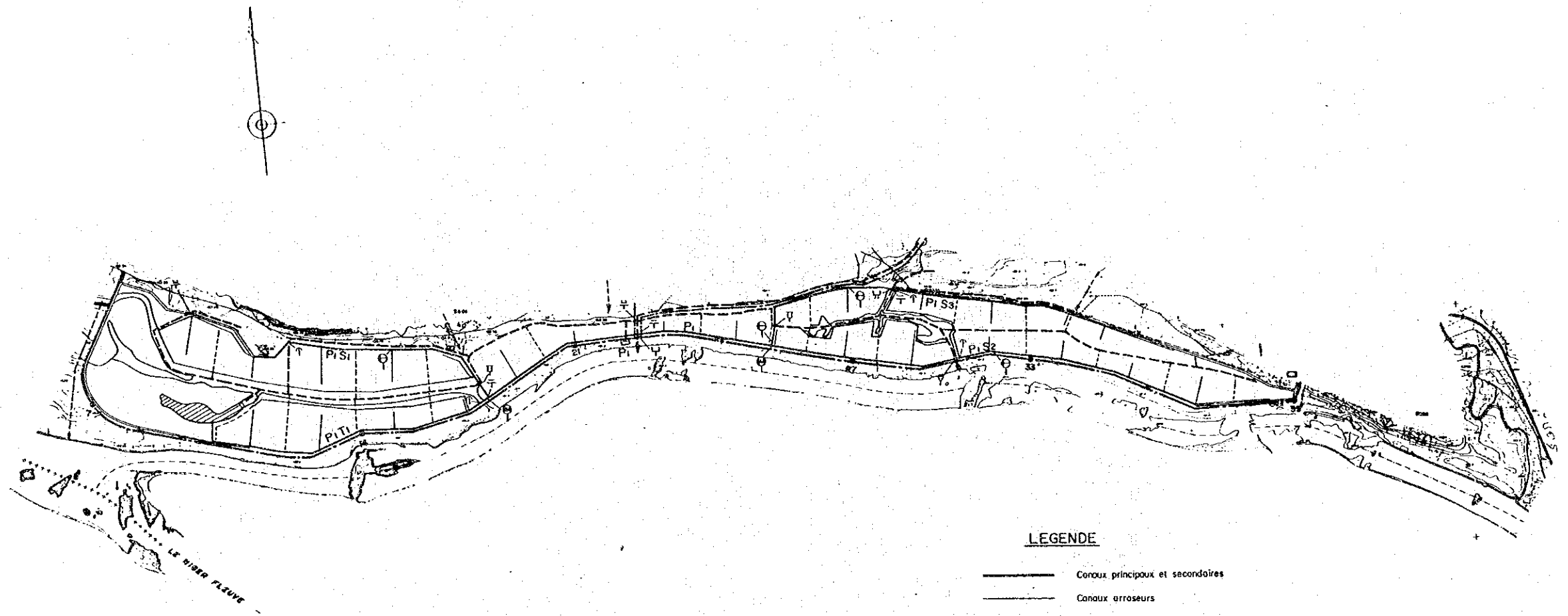


国際協力事業団

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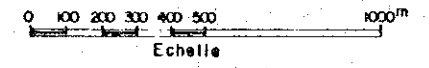
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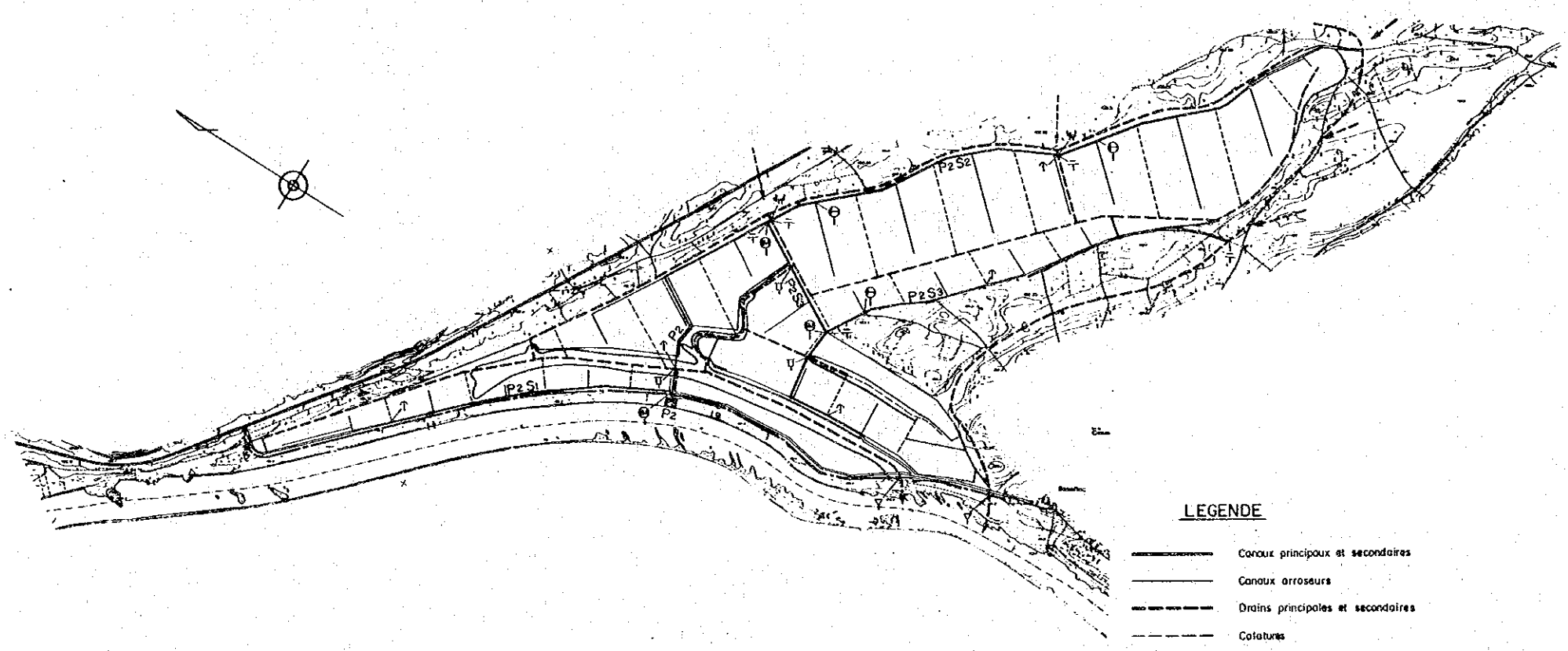


LEGENDE

- Canal principal et secondaires
- Canal arroseurs
- - - - - Drains principales et secondaires
- - - - - Colatures
- Digue
- Piste
- Limite d'emprise et diguettes
- SP Ouvrage à clapet
- ▽ Passage intérieur (eaux sauvages)
- ⊙ Prise modulée
- ⊙ Module de régulation
- ⊙ Régulateur statique
- ⊙ Déversoir de décharge
- ⊙ Passage busé
- ⊙ Ponceau
- ⊙ Siphon
- ⊙ Aqueduc

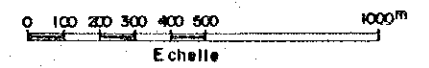


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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PLANS GENERAUX Z-1 | | | |
| DATE | JUN 1969 | PLAN N° | 1 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

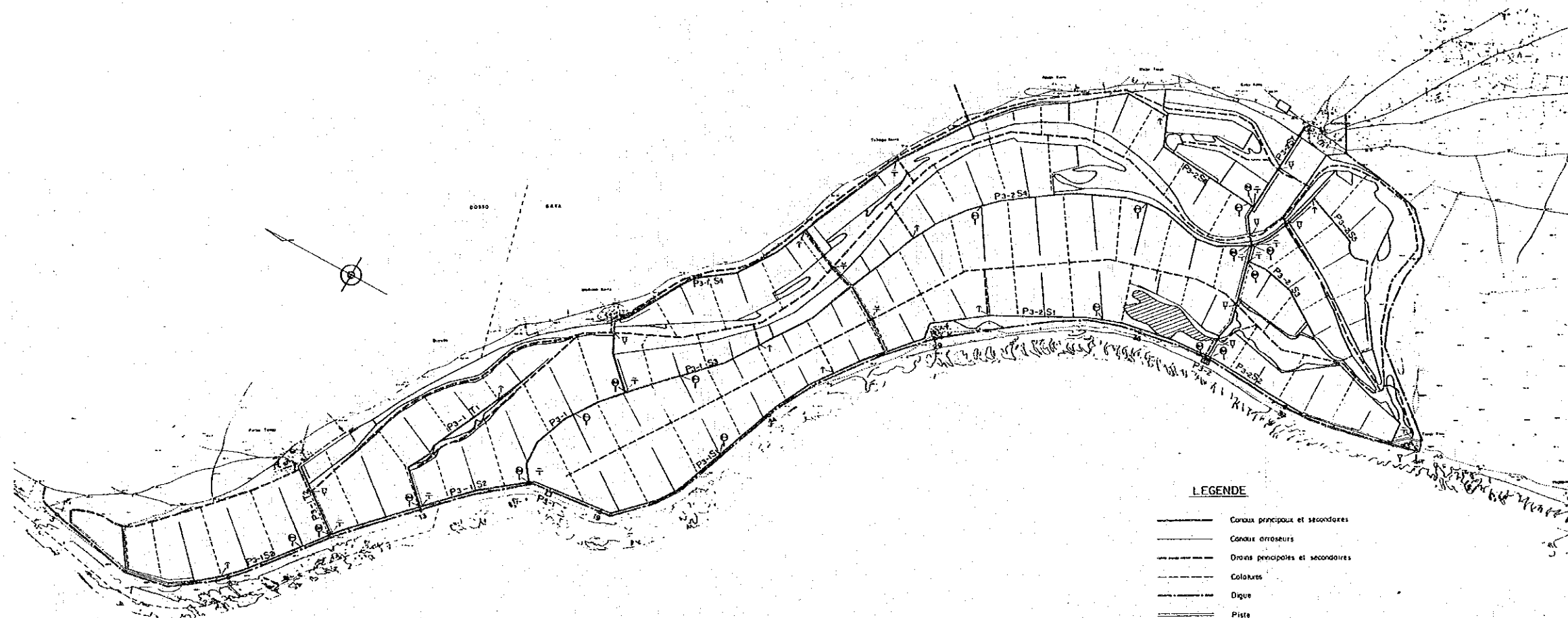


LEGENDE

- Canaux principaux et secondaires
- Canaux arroseurs
- - - Drains principales et secondaires
- - - Colatures
- - - Digue
- Piste
- Limite d'emprise et diguettes
- ⊕ Station de pompage
- ▽ Ouvrage à clapet
- Passage inférieur (eaux sauvages)
- ⊙ Prise modulée
- ⊗ Module de regulation
- ⊕ Régulateur statique
- ↑ Déversoir de décharge
- Passage busé
- Ponceau
- Siphon
- Aqueduc

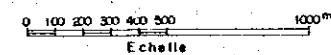


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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PLANS GENERAUX Z-2 | | | |
| DATE | JUN 1989 | PLAN N° | 2 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

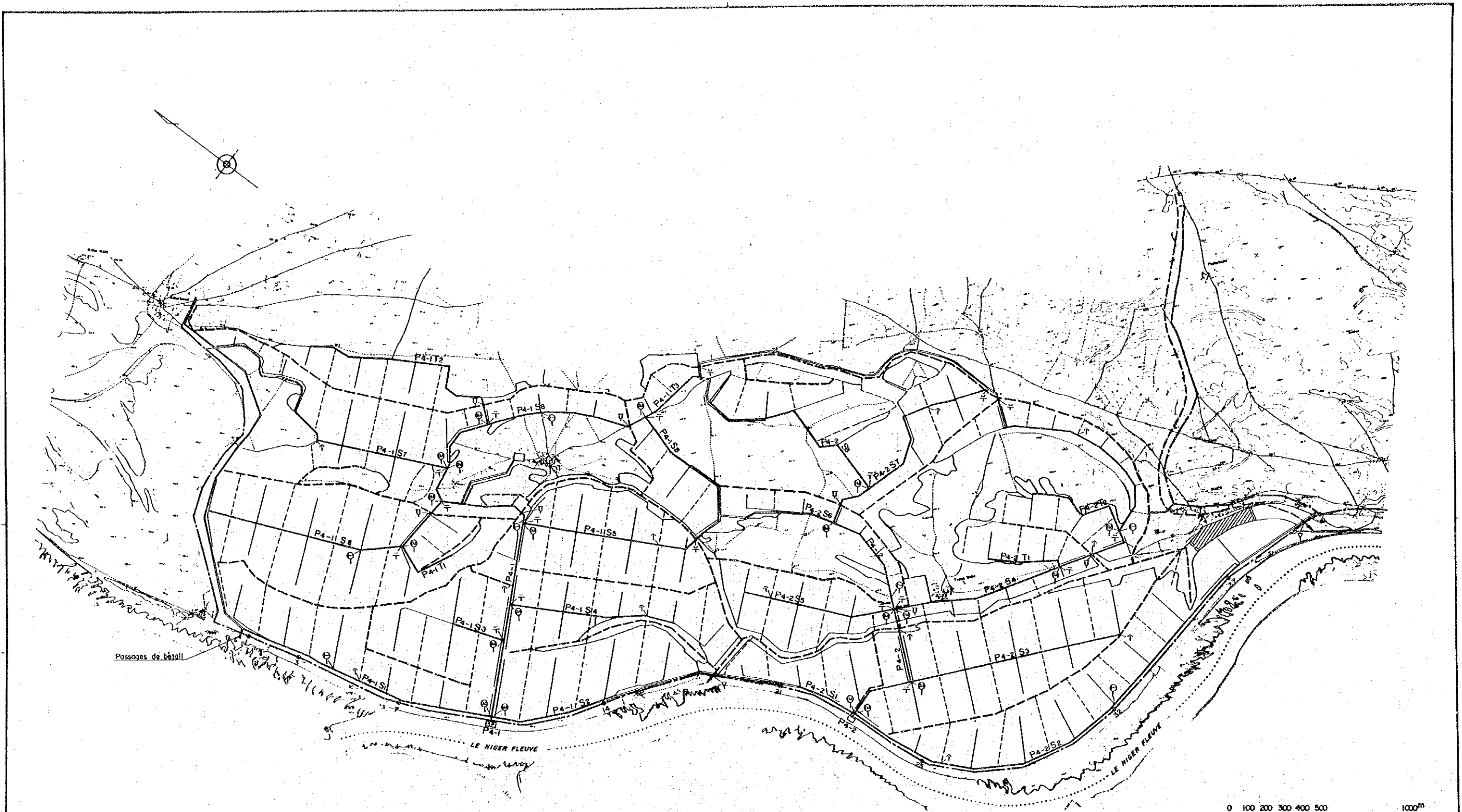


LEGENDE

- Canaux principaux et secondaires
- Canaux arroseurs
- - - - - Drains principaux et secondaires
- - - - - Colatures
- Digue
- Pista
- Limite d'emprise et arquettes
- ⊠ Station de pompage
- ▽ Ouvrage à clapet
- ⊓ Passage inférieur (sous ouvrages)
- ⊙ Prise modulée
- ⊙ Module de régulation
- ⊙ Régulateur statique
- ⊙ Déversoir de décharge
- ⊓ Passage busé
- ⊓ Ponceau
- ⊓ Siphon
- ⊓ Aqueduc



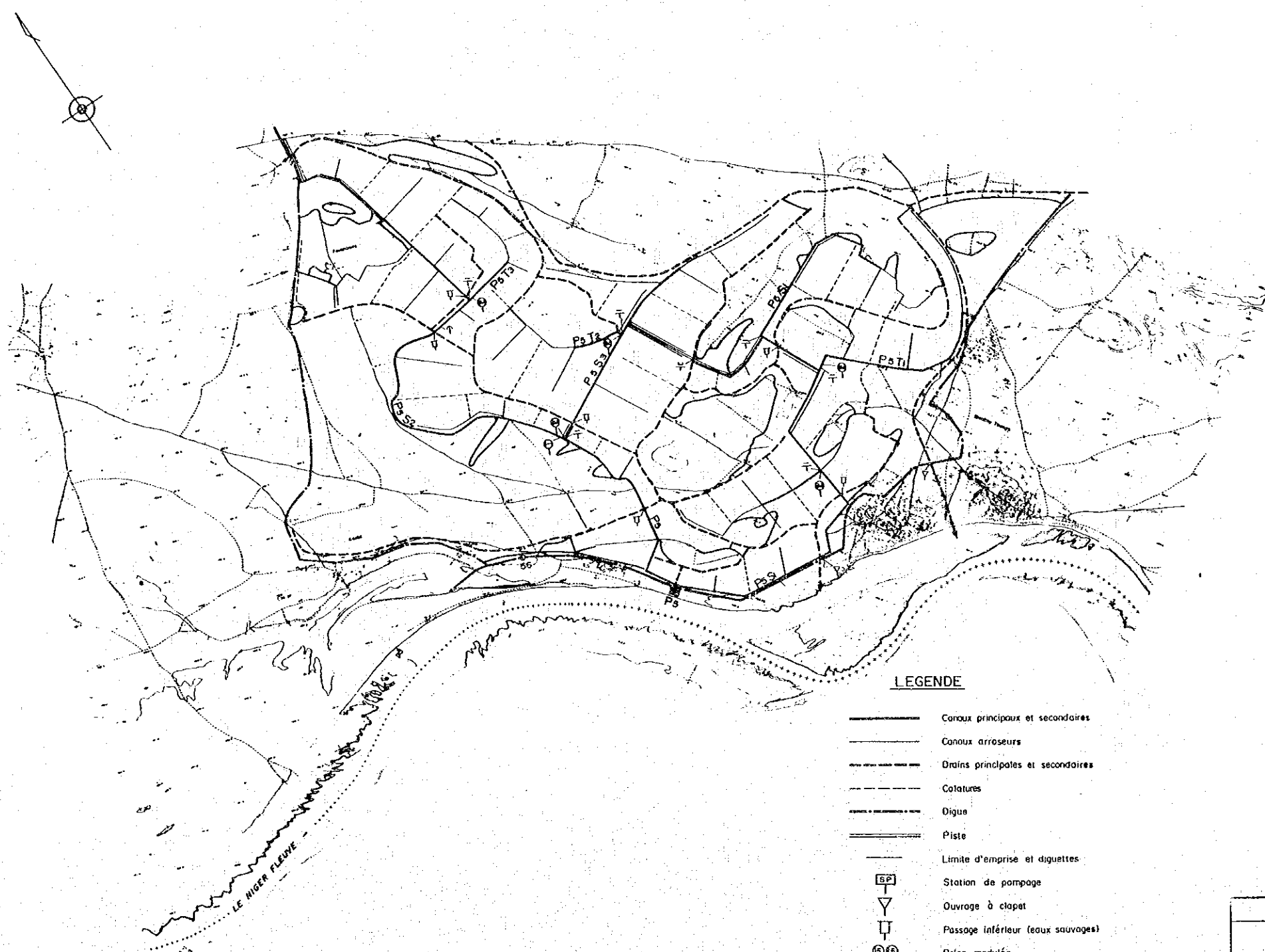
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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PLANS GENERAUX Z-3 | | | |
| DATE | JUN 1969 | PLAN N° | 3 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |



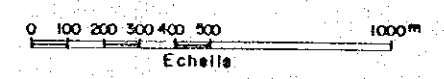
LEGENDE

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|--|-----------------------------------|--|-----------------------------------|
| | Canaux principaux et secondaires | | Ouvrage à clapet |
| | Canaux arroseurs | | Passage inférieur (eaux sauvages) |
| | Drains principales et secondaires | | Prise modulée |
| | Colatures | | Module de regulation |
| | Digue | | Régulateur statique |
| | Piste | | Déversoir de décharge |
| | Limite d'emprise et diguettes | | Passage busé |
| | Station de pompage | | Ponceau |
| | | | Siphon |
| | | | Aqueduc |

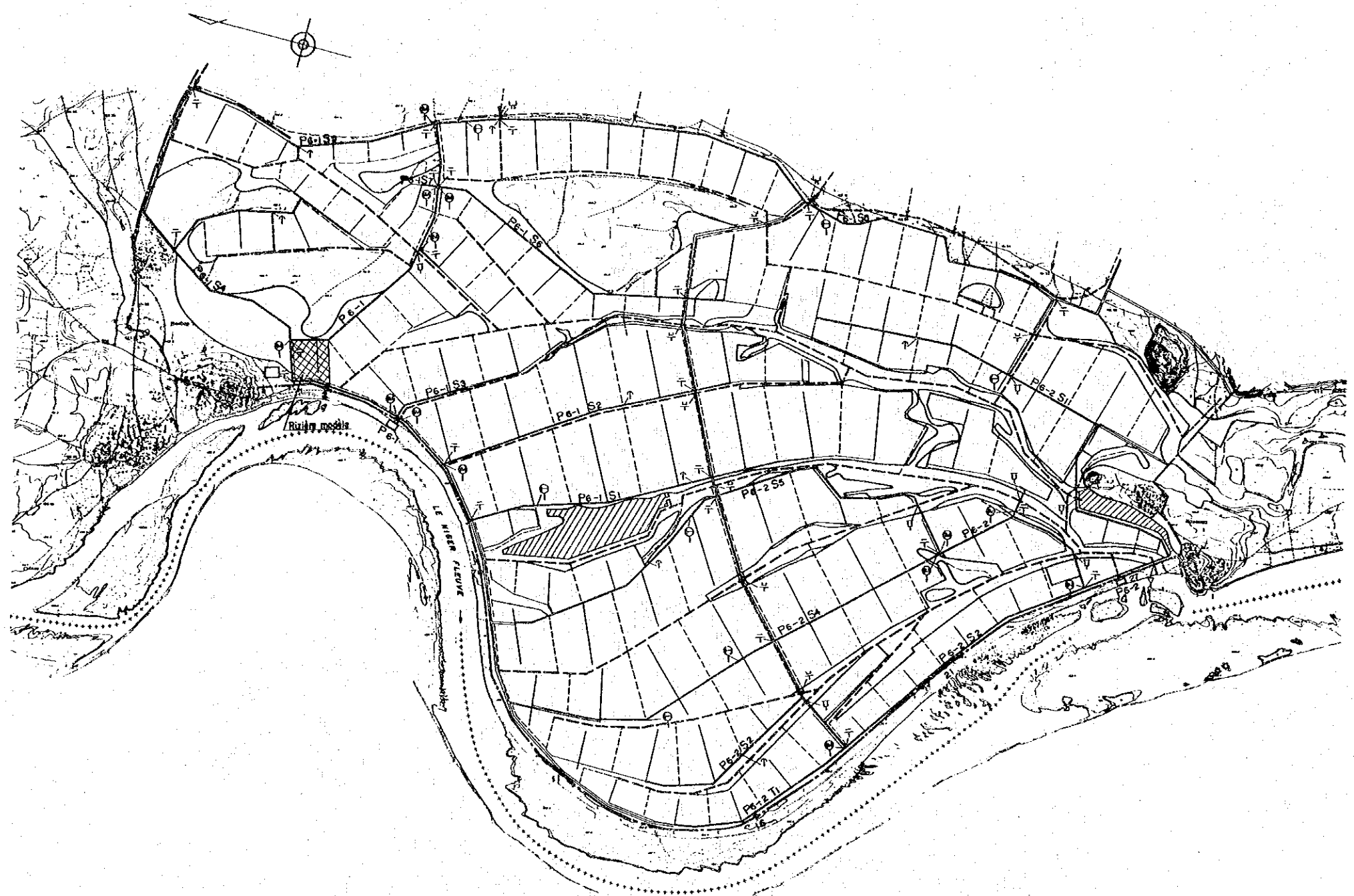
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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PLANS GENERAUX Z-4 | | | |
| DATE | JUIN 1988 | PLAN N° | 4 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |



- LEGENDE**
- Canaux principaux et secondaires
 - Canaux arroseurs
 - - - Drains principales et secondaires
 - - - Colatures
 - - - Digue
 - == Piste
 - Limite d'emprise et diguettes
 - ⊠ Station de pompage
 - ⊥ Ouvrage à clapet
 - ⊥ Passage inférieur (eaux sauvages)
 - ⊙ Prise modulée
 - ⊙ Module de régulation
 - ⊙ Régulateur statique
 - ⊙ Déversoir de décharge
 - ⊥ Passage busé
 - ⊥ Ponceau
 - ⊥ Siphon
 - ⊥ Aqueduc

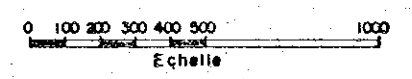


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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PLANS GENERAUX Z-5 | | | |
| DATE | JUIN 1989 | PLAN N° | 5 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

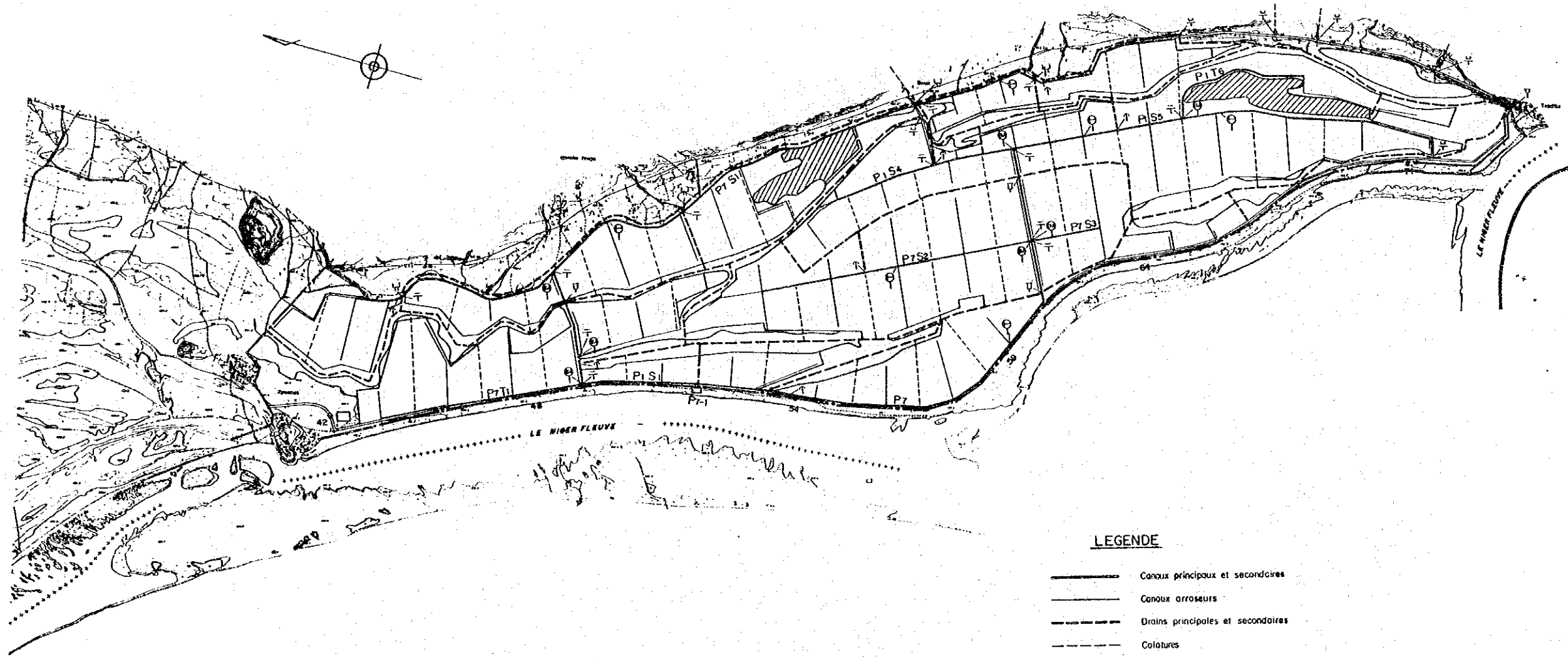


LEGENDE

- Canaux principaux et secondaires
- Canaux arroseurs
- Drains principales et secondaires
- Colatures
- Digue
- Piste
- +— Limite d'emprise et diguettes
- ⊠ Station de pompage
- ▽ Ouvrage à clapet
- ⊥ Passage inférieur (eaux sauvages)
- ⊕ Prise modulée
- ⊗ Module de regulation
- ⊖ Régulateur statique
- ↑ Déversoir de décharge
- ⊥ Passage busé
- ⊥ Ponceau
- ⊥ Siphon
- ⊥ Aqueduc

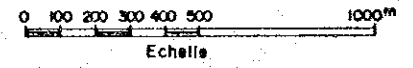


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| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PLANS GENERAUX Z-8 | | | |
| DATE | JUN 1989 | PLAN N° | 6 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

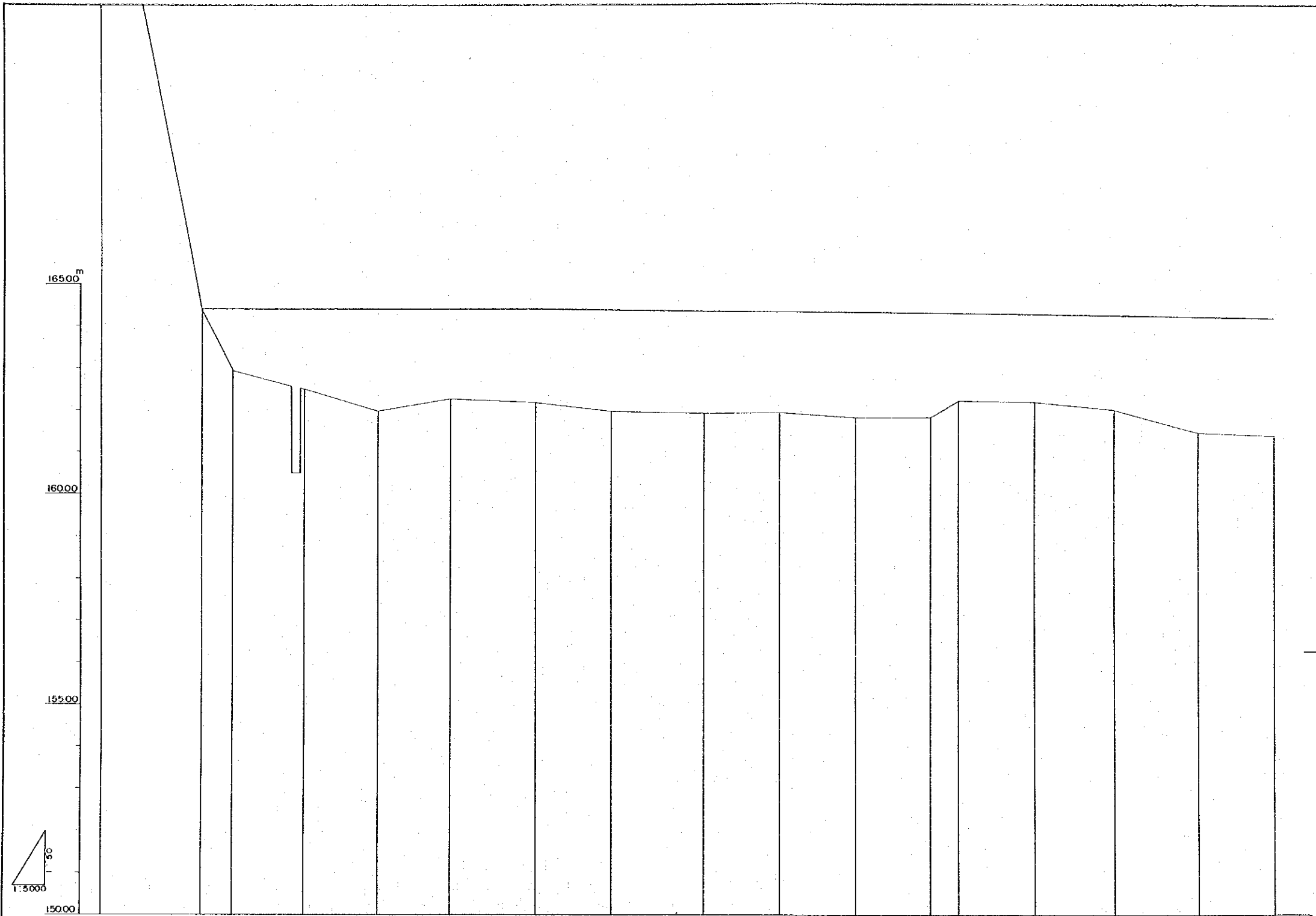


LEGENDE

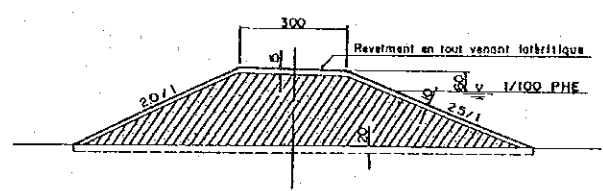
- Canaux principaux et secondaires
- Canaux arroseurs
- - - Drains principales et secondaires
- - - Colatures
- - - Digue
- == Piste
- Limite d'emprise et diguettes
- SP Station de pompage
- ▽ Ouvrage à clapet
- Passage inférieur (eaux sauvages)
- ⊙ Prise modulée
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- ⊙ Déversoir de décharge
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- Ponceau
- Siphon
- Aqueduc



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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PLANS GENERAUX Z-7 | | | |
| DATE | JUIN 1989 | PLAN N° | 7 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |



COUPE DE LA DIGUE



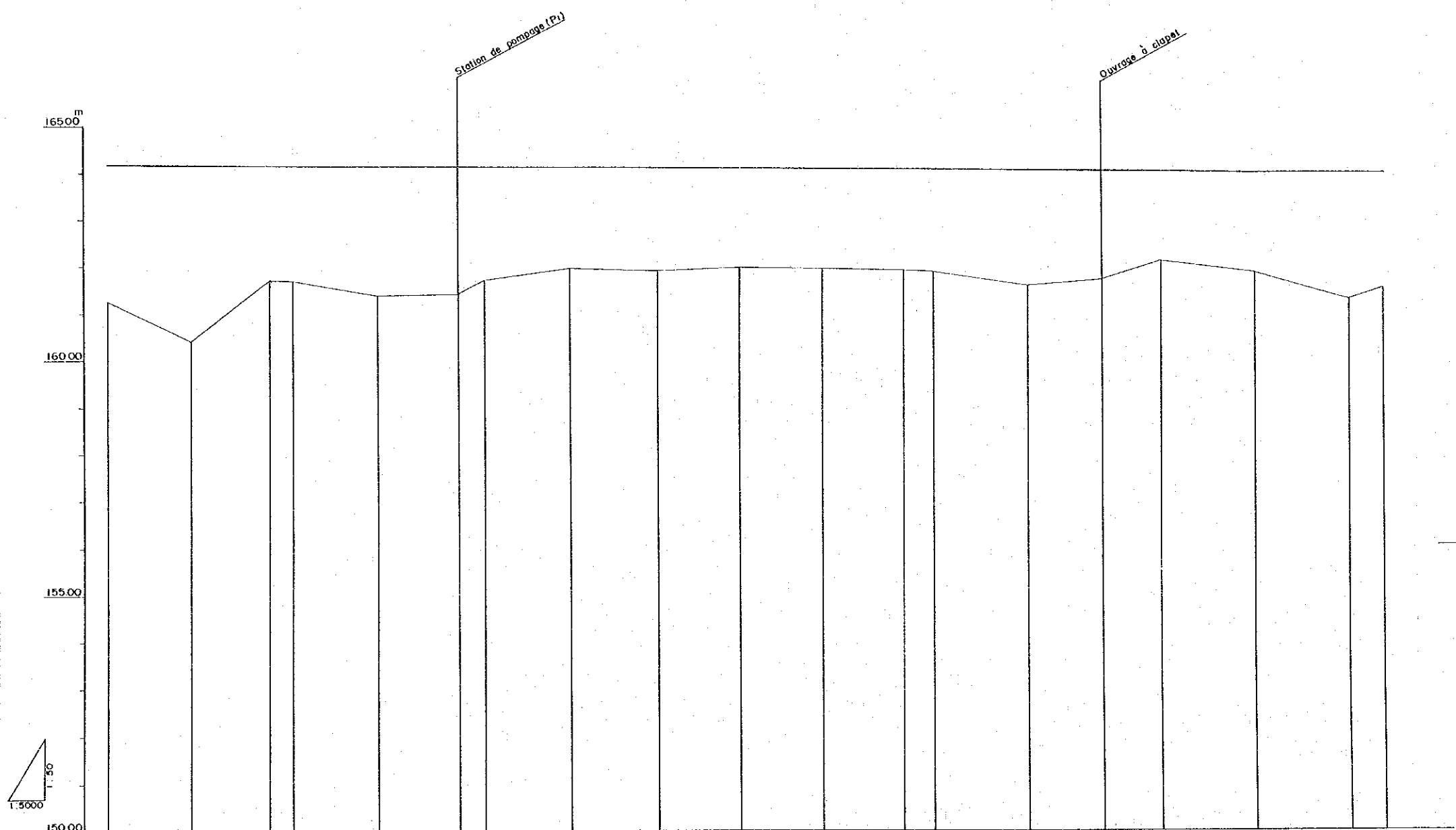
| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU PAVILLON NATUREL | COTE D'ELU D'IGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|------------------|--------------------------|-------------------|---------------------|
| NO 1 | 0 | 0.00 | 175.92 | | |
| 2 | 234.00 | 243.00 | 164.38 | 164.39 | 0.01 |
| 3 | 72.07 | 315.07 | 162.91 | 164.39 | 1.48 |
| 4 | 169.92 | 483.99 | 162.51 | 164.39 | 1.88 |
| 5 | 169.49 | 653.45 | 161.91 | 164.39 | 2.48 |
| 6 | 174.53 | 827.98 | 161.29 | 164.39 | 2.10 |
| 7 | 203.13 | 1031.11 | 162.23 | 164.39 | 2.16 |
| 8 | 179.92 | 1211.03 | 161.92 | 164.37 | 2.45 |
| 9 | 218.76 | 1429.81 | 161.93 | 164.35 | 2.42 |
| 10 | 181.15 | 1610.96 | 161.94 | 164.33 | 2.39 |
| 11 | 178.68 | 1789.64 | 161.80 | 164.31 | 2.51 |
| 12 | 175.21 | 1964.85 | 161.80 | 164.29 | 2.49 |
| 13 | 67.15 | 2032.00 | 162.20 | 164.28 | 2.08 |
| 14 | 179.45 | 2211.45 | 162.16 | 164.26 | 2.10 |
| 15 | 183.36 | 2394.81 | 161.99 | 164.24 | 2.25 |
| 16 | 198.18 | 2592.99 | 161.44 | 164.22 | 2.78 |
| 17 | 178.85 | 2771.84 | 161.30 | 164.20 | 2.90 |

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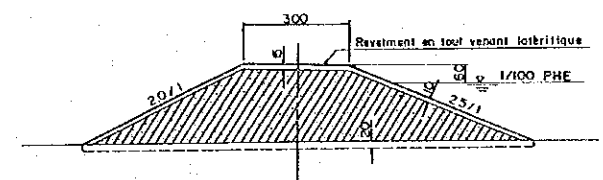
**PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA**

PROFILS EN LONG DE DIGUE Z-1 (1)

| | | | |
|--|-----------|---------|---|
| DATE | JUIN 1989 | PLAN N° | 8 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |



COUPE DE LA DIGUE



| NUMERO DE PONT | DISTANCE PONTIELLE | DISTANCE CUNULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| 17 | 178.85 | 277.84 | 161.36 | 164.20 | 2.90 |
| 18 | 172.99 | 294.83 | 160.38 | 164.18 | 3.80 |
| 19 | 168.21 | 313.04 | 161.76 | 164.16 | 2.40 |
| 20 | 51.30 | 3164.34 | 161.72 | 164.15 | 2.44 |
| 21 | 177.63 | 3342.17 | 161.38 | 164.14 | 2.76 |
| 22 | 182.17 | 3524.34 | 161.44 | 164.12 | 2.68 |
| 23 | 56.98 | 3695.72 | 161.70 | 164.11 | 2.41 |
| 24 | 177.73 | 3758.45 | 161.99 | 164.09 | 2.10 |
| 25 | 182.90 | 3941.35 | 161.90 | 164.07 | 2.17 |
| 26 | 172.97 | 4114.32 | 161.98 | 164.06 | 2.08 |
| 27 | 173.97 | 4289.29 | 161.95 | 164.04 | 2.11 |
| 28 | 171.18 | 4469.47 | 161.90 | 164.02 | 2.12 |
| 29 | 68.20 | 4627.67 | 161.88 | 164.01 | 2.13 |
| 30 | 201.29 | 4729.96 | 161.52 | 163.99 | 2.47 |
| 31 | 155.69 | 4884.65 | 161.68 | 163.96 | 1.87 |
| 32 | 123.34 | 5007.99 | 162.09 | 163.94 | 2.13 |
| 33 | 204.02 | 5212.01 | 161.81 | 163.91 | 2.66 |
| 34 | 211.16 | 5423.17 | 161.25 | 163.91 | 2.66 |
| 35 | 70.69 | 5493.86 | 161.50 | 163.91 | 2.41 |

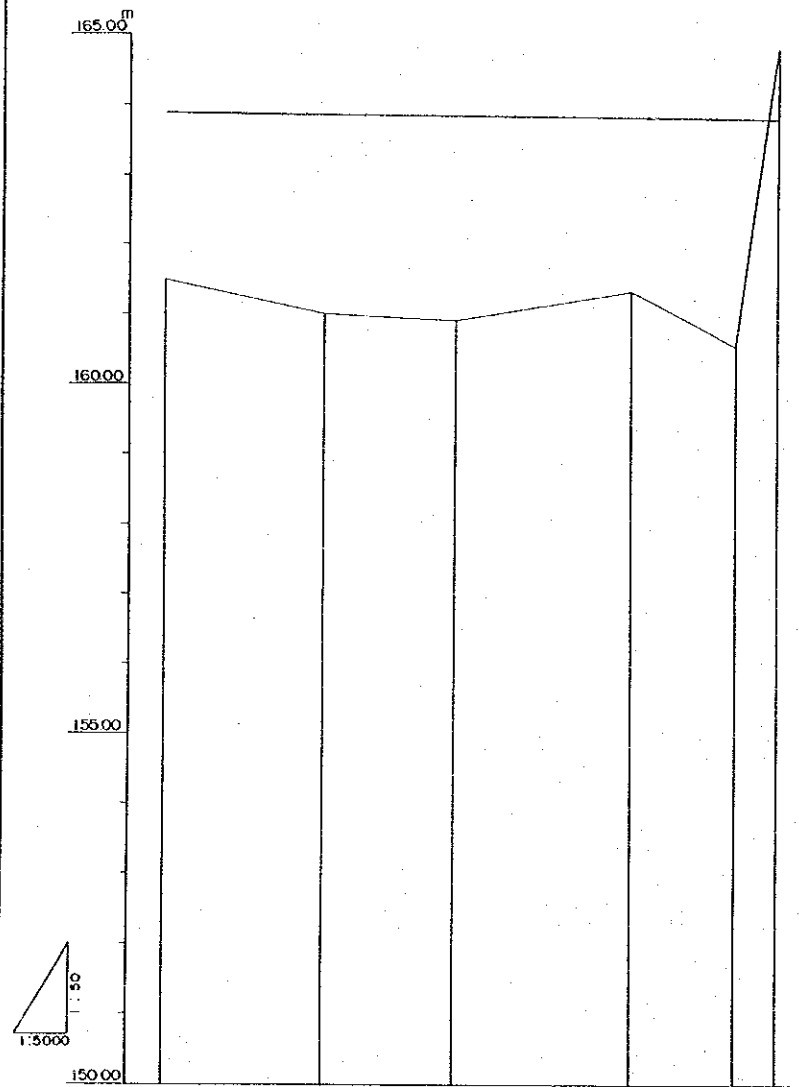
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**PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA**

PROFILS EN LONG DE DIGUE Z-1 (2)

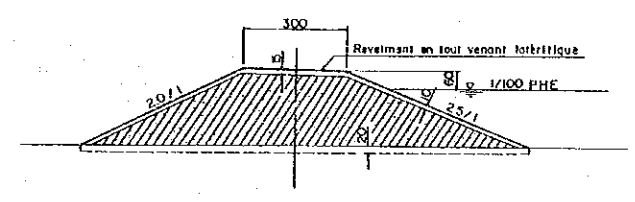
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| DATE | JUIN 1989 | PLAN N° | 9 |
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AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE TERRAIN QUILISEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|---------------------------|-------------------------|------------------|---------------------|
| NO 35 | 70.69 | 5493.86 | 161.50 | 163.91 | 2.41 |
| 36 | 229.68 | 5723.54 | 161.03 | 163.88 | 2.85 |
| 37 | 190.95 | 5914.49 | 160.91 | 163.86 | 2.95 |
| 38 | 243.97 | 6158.46 | 161.35 | 163.83 | 2.48 |
| 39 | 173.36 | 6331.82 | 160.54 | 163.82 | 3.28 |
| 40 | 52.69 | 6384.51 | 164.79 | 163.81 | 0.00 |

COUPE DE LA DIGUE



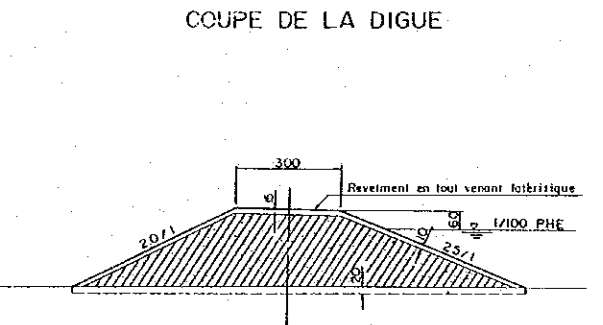
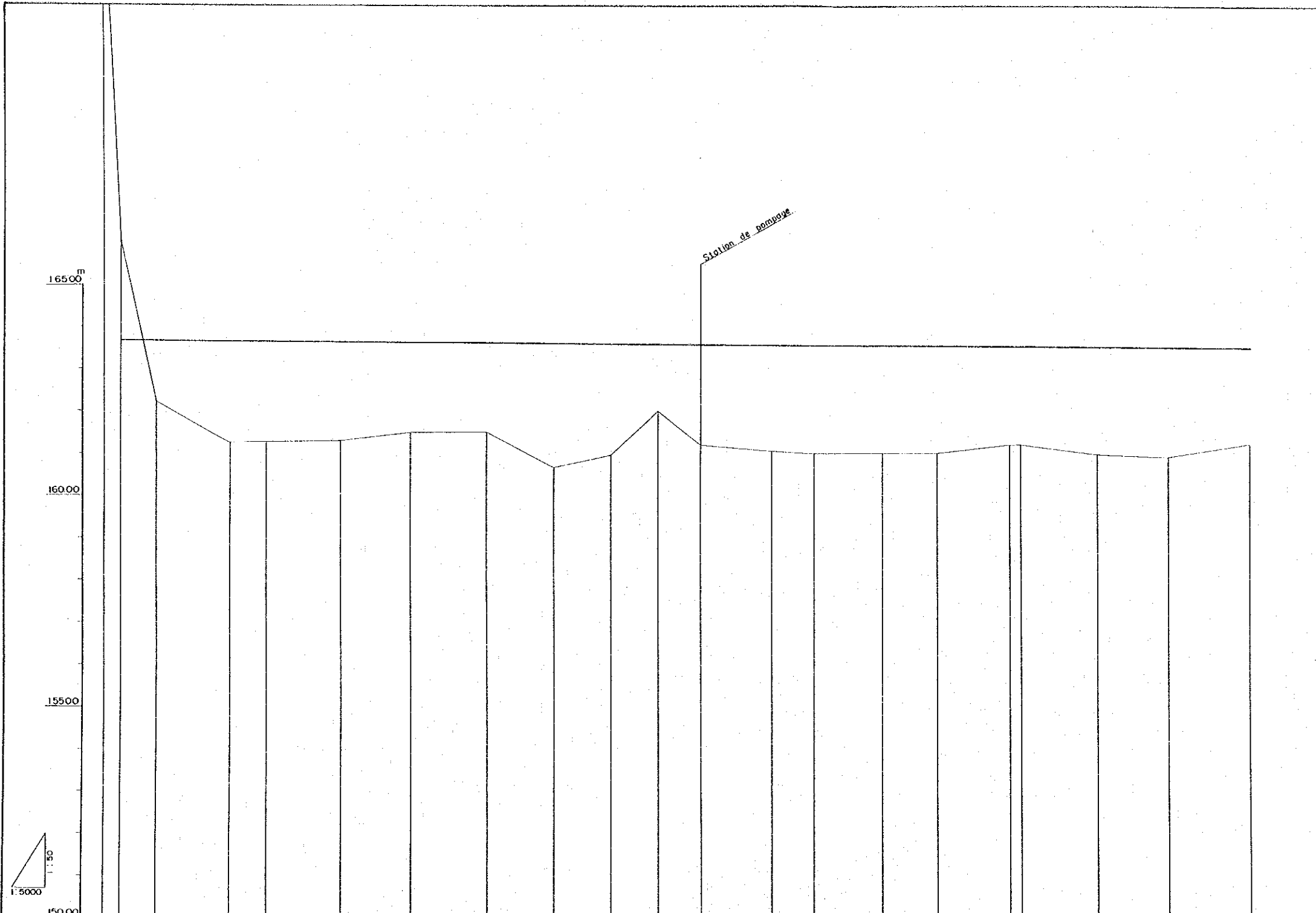
REPUBLIQUE DU NIGER

**PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA**

PROFILS EN LONG DE DIGUE Z-1 (3)

| | | | |
|------|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 10 |
|------|-----------|---------|----|

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| 1 | 0 | 0.00 | 174.94 | 163.70 | 0.00 |
| 2 | 43.86 | 43.86 | 165.15 | 163.70 | 0.00 |
| 3 | 81.22 | 125.08 | 162.23 | 163.70 | 1.47 |
| 4 | 176.18 | 301.26 | 161.28 | 163.69 | 2.41 |
| 5 | 86.27 | 387.53 | 161.29 | 163.68 | 2.40 |
| 8 | 174.81 | 562.34 | 161.29 | 163.67 | 2.38 |
| 9 | 68.57 | 730.91 | 161.48 | 163.66 | 2.18 |
| 10 | 179.20 | 910.11 | 181.47 | 163.65 | 2.18 |
| 11 | 159.60 | 1069.71 | 160.65 | 163.64 | 2.99 |
| 12 | 137.51 | 1207.22 | 160.86 | 163.63 | 2.77 |
| 13 | 113.12 | 1320.34 | 161.94 | 163.63 | 1.69 |
| 14 | 100.92 | 1421.26 | 161.18 | 163.62 | 2.44 |
| 15 | 168.71 | 1590.97 | 161.03 | 163.61 | 2.58 |
| 16 | 100.10 | 1691.07 | 160.94 | 163.60 | 2.66 |
| 17 | 156.48 | 1847.55 | 160.98 | 163.59 | 2.61 |
| 18 | 132.38 | 1979.93 | 160.97 | 163.59 | 2.62 |
| 19 | 170.45 | 2150.38 | 161.17 | 163.58 | 2.41 |
| 20 | 23.98 | 2174.36 | 161.16 | 163.57 | 2.41 |
| 21 | 170.69 | 2345.05 | 160.93 | 163.56 | 2.63 |
| 22 | 174.60 | 2519.65 | 160.84 | 163.55 | 2.71 |
| 23 | 194.25 | 2713.94 | 161.17 | 163.54 | 2.37 |

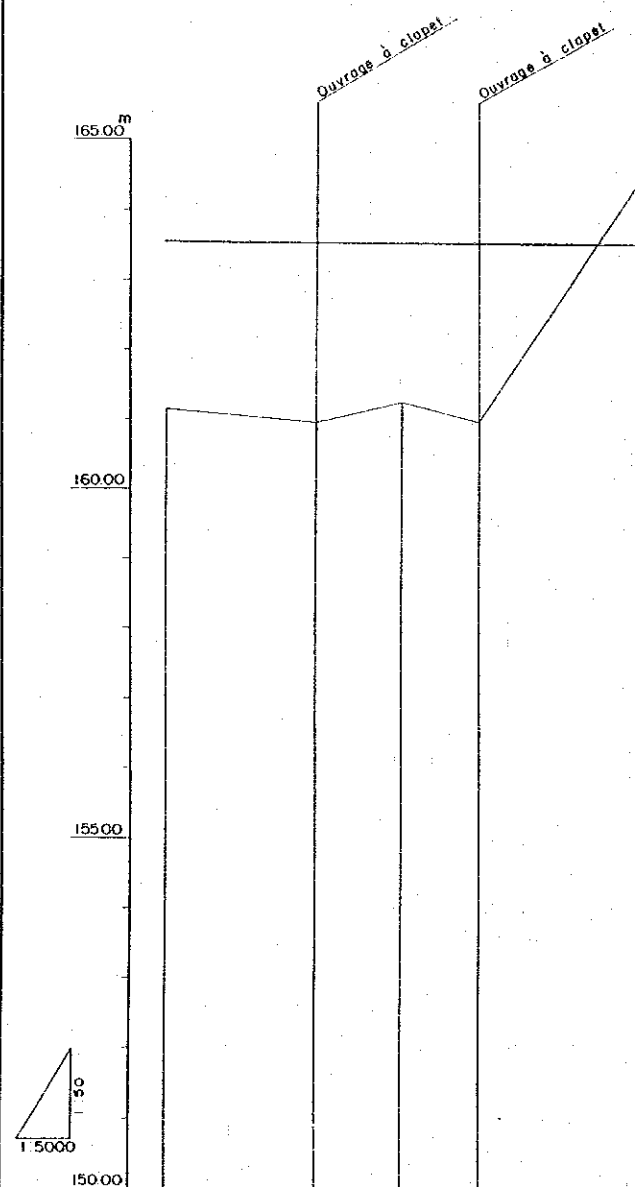
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PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA

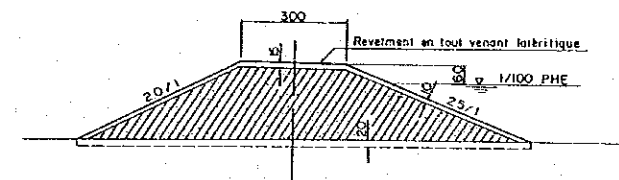
PROFILS EN LONG DE DIGUE Z-2 (1)

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|------|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 11 |
|------|-----------|---------|----|

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



COUPE DE LA DIGUE



| NUMERO DE PONT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| 23 | 194.29 | 273.94 | 161.17 | 163.54 | 2.37 |
| 24 | 214.26 | 295.20 | 160.98 | 163.53 | 2.55 |
| 25 | 124.62 | 305.82 | 161.26 | 163.52 | 2.26 |
| 26 | 108.69 | 316.51 | 159.59 | 163.51 | 3.92 |
| 27 | 242.28 | 3403.79 | 164.61 | 163.50 | 0.00 |

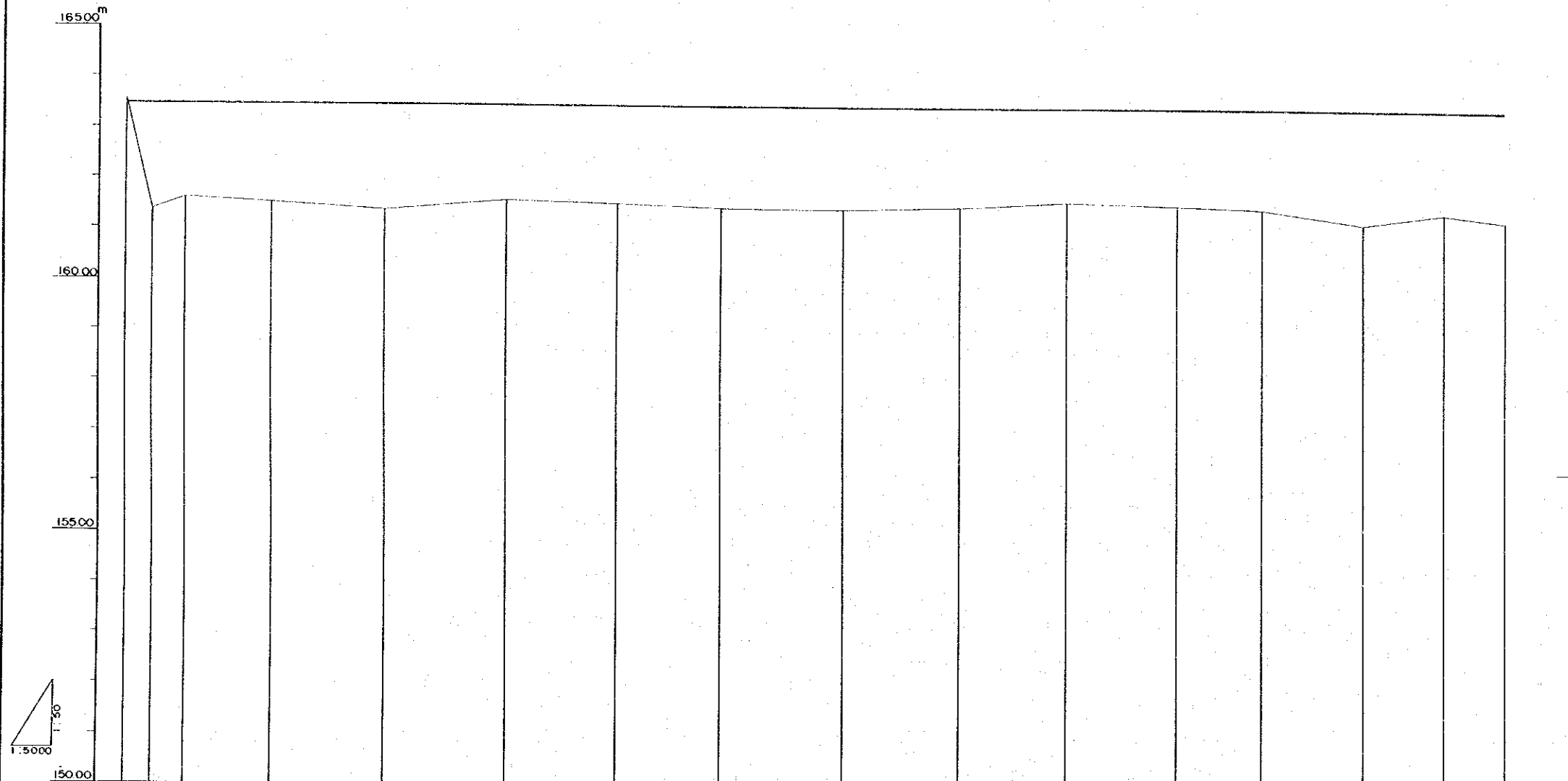
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PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA

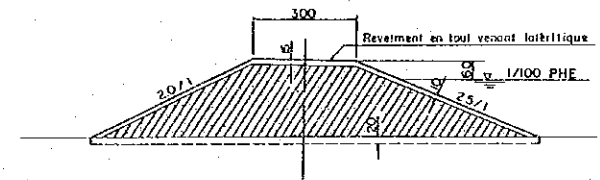
PROFILS EN LONG DE DIGUE Z-2 (2)

| | | | |
|------|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 12 |
|------|-----------|---------|----|

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



COUPE DE LA DIGUE



| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| 1 | 0.00 | 0.00 | 163.57 | 163.47 | 0.00 |
| 2 | 54.92 | 54.92 | 161.37 | 163.47 | 2.10 |
| 3 | 53.35 | 108.27 | 161.61 | 163.47 | 1.86 |
| 4 | 169.01 | 277.28 | 161.51 | 163.46 | 1.95 |
| 5 | 219.93 | 507.21 | 161.37 | 163.45 | 2.08 |
| 6 | 242.40 | 749.61 | 161.56 | 163.44 | 1.88 |
| 7 | 215.46 | 965.07 | 161.51 | 163.43 | 1.92 |
| 8 | 206.85 | 1171.92 | 161.41 | 163.42 | 2.01 |
| 9 | 235.30 | 1407.22 | 161.38 | 163.41 | 2.03 |
| 10 | 230.27 | 1637.49 | 161.42 | 163.40 | 1.98 |
| 11 | 209.85 | 1847.34 | 161.51 | 163.39 | 1.88 |
| 12 | 217.97 | 2065.31 | 161.47 | 163.38 | 1.91 |
| 13 | 164.85 | 2230.16 | 161.40 | 163.38 | 1.98 |
| 14 | 201.33 | 2431.49 | 161.07 | 163.37 | 2.30 |
| 15 | 157.47 | 2588.96 | 161.28 | 163.36 | 2.08 |
| 16 | 121.76 | 2710.72 | 161.06 | 163.36 | 2.30 |

REPUBLIQUE DU NIGER

PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA

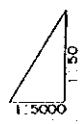
PROFILS EN LONG DE DIGUE Z-3 (1)

| | | | |
|------|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 13 |
|------|-----------|---------|----|

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

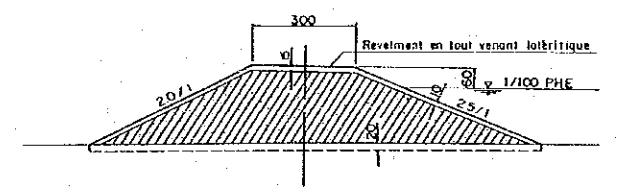
Station de pompage (P3-1)

165.00 m
160.00
155.00
150.00



| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| 16 | 121.76 | 2710.72 | 161.06 | 163.36 | 2.30 |
| 17 | 223.17 | 2933.89 | 161.00 | 163.35 | 2.35 |
| 18 | 150.32 | 3084.21 | 161.25 | 163.34 | 2.09 |
| 19 | 136.20 | 3220.41 | 161.40 | 163.33 | 1.93 |
| 20 | 168.60 | 3389.01 | 160.62 | 163.33 | 2.71 |
| 21 | 225.71 | 3614.72 | 161.13 | 163.32 | 2.19 |
| 22 | 194.77 | 3810.49 | 161.07 | 163.3 | 2.24 |
| 23 | 191.47 | 4001.96 | 161.09 | 163.30 | 2.21 |
| 24 | 165.82 | 4167.78 | 161.21 | 163.30 | 2.09 |
| 25 | 192.29 | 4360.07 | 161.26 | 163.29 | 2.03 |
| 26 | 222.79 | 4582.86 | 161.32 | 163.28 | 1.96 |
| 27 | 176.47 | 4759.33 | 160.92 | 163.27 | 2.35 |
| 28 | 184.73 | 4944.06 | 160.88 | 163.26 | 2.38 |
| 29 | 196.87 | 5140.93 | 162.61 | 163.25 | 0.64 |
| 30 | 158.78 | 5299.71 | 161.0 | 163.25 | 2.24 |
| 31 | 107.79 | 5407.50 | 164.03 | 163.24 | 0.00 |

COUPE DE LA DIGUE



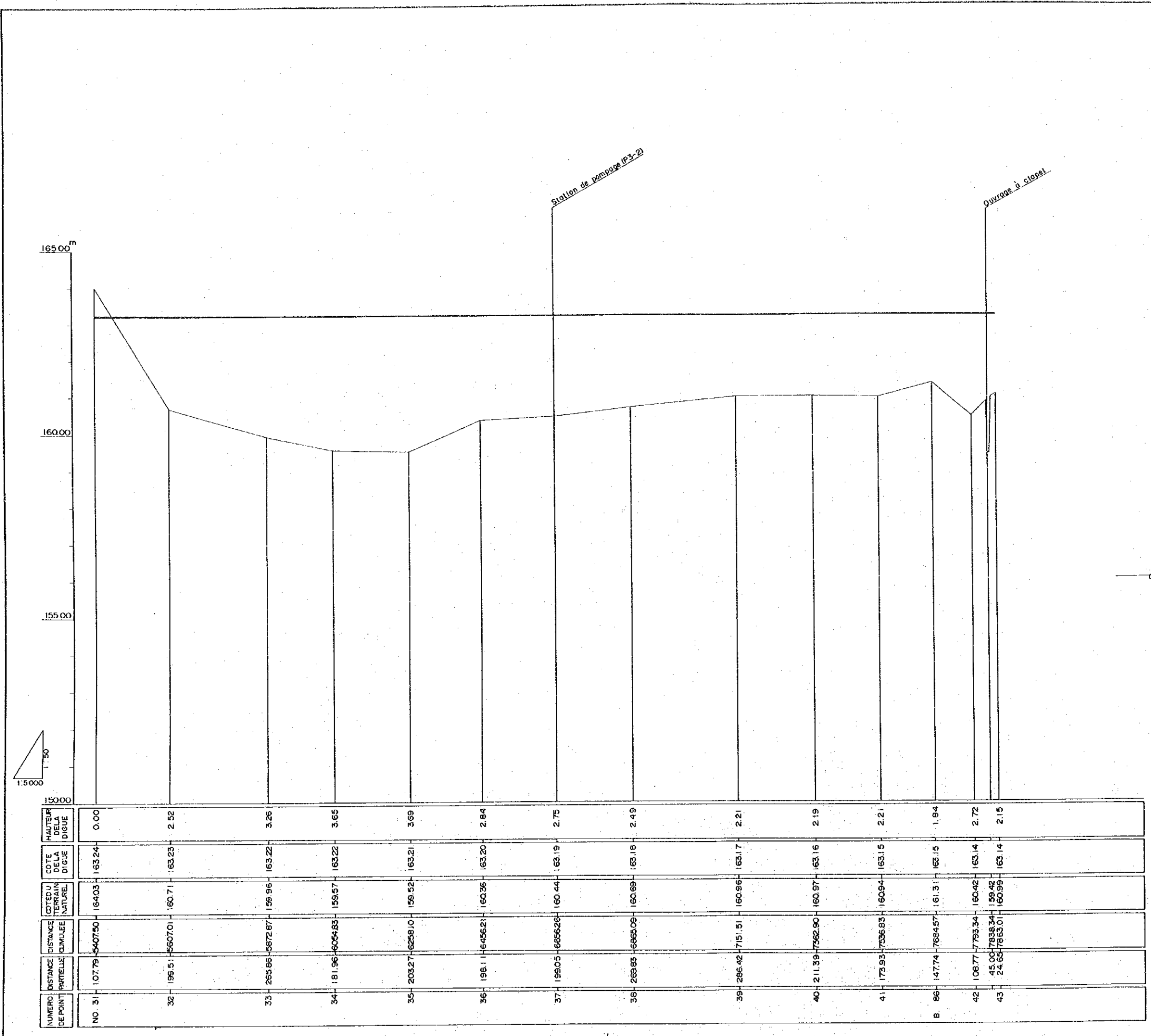
REPUBLIQUE DU NIGER

PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA

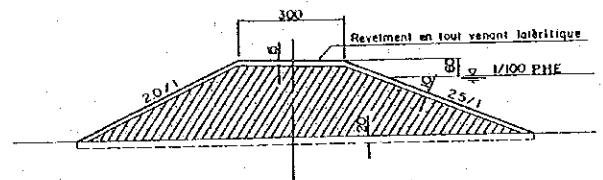
PROFILS EN LONG DE DIGUE Z-3 (2)

| | | | |
|------|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 14 |
|------|-----------|---------|----|

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



COUPE DE LA DIGUE

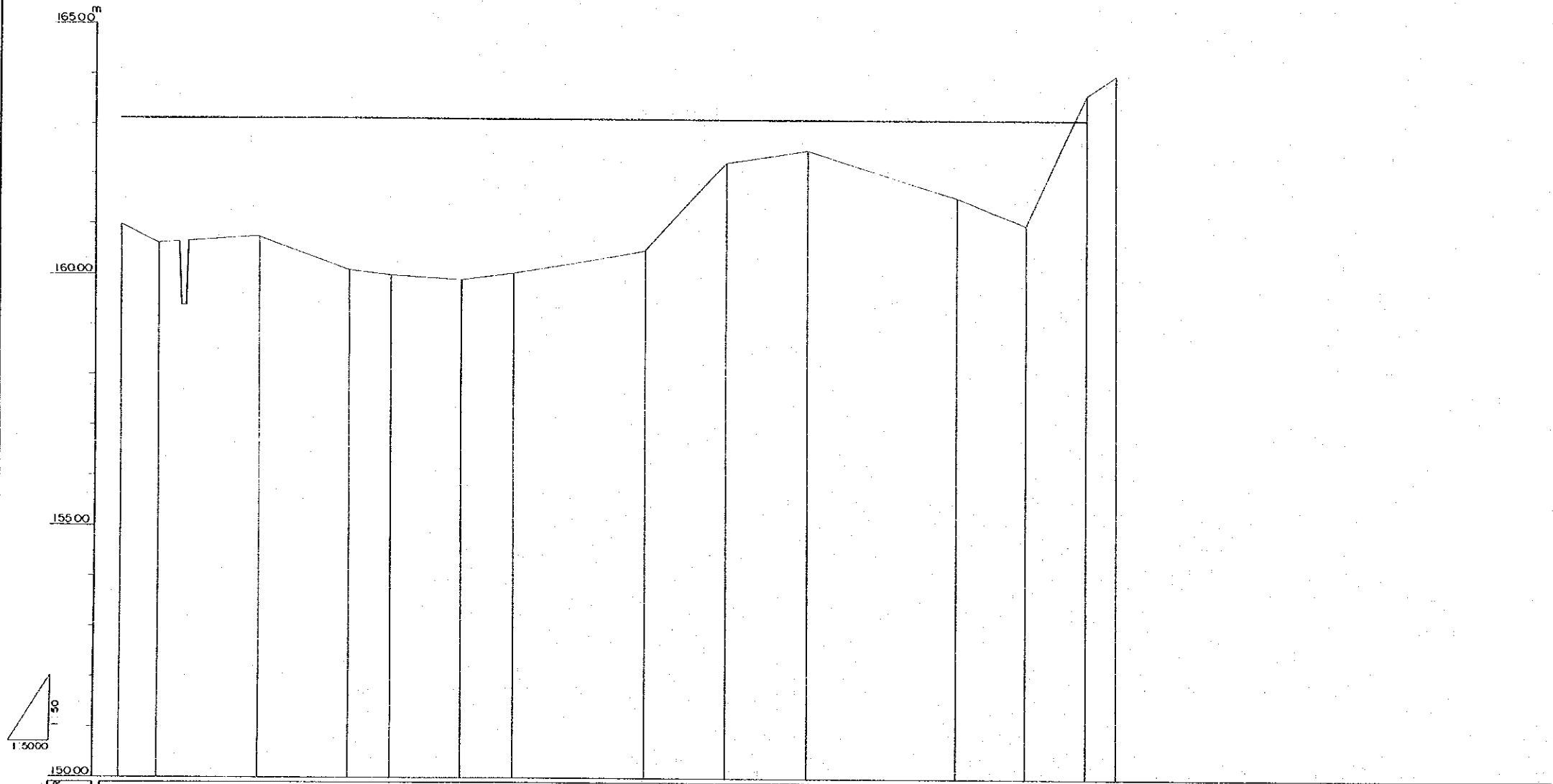


REPUBLIQUE DU NIGER

**PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA**

PROFILS EN LONG DE DIGUE Z-3 (3)

| | | | |
|--|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 15 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |



| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| NO 43 | 69.67 | 7863.01 | 160.99 | 163.14 | 2.15 |
| 44 | 71.02 | 7934.03 | 160.64 | 163.14 | 2.50 |
| 45 | 20.193 | 8135.96 | 160.77 | 163.14 | 2.37 |
| 46 | 179.58 | 8315.54 | 160.09 | 163.14 | 3.05 |
| 47 | 85.21 | 8400.74 | 160.00 | 163.14 | 3.14 |
| 48 | 135.97 | 8536.72 | 159.91 | 163.14 | 3.23 |
| 49 | 108.81 | 8645.53 | 160.01 | 163.14 | 3.13 |
| 50 | 259.86 | 8905.39 | 160.44 | 163.14 | 2.70 |
| 51 | 162.03 | 9067.42 | 162.20 | 163.14 | 0.94 |
| 52 | 162.30 | 9229.72 | 162.45 | 163.14 | 0.69 |
| 53 | 296.96 | 9526.68 | 161.51 | 163.14 | 1.63 |
| 54 | 143.33 | 9670.01 | 160.98 | 163.14 | 2.16 |
| 55 | 118.85 | 9788.86 | 163.57 | 163.14 | 0.00 |
| 56 | 62.12 | 7851.02 | 164.30 | | |

REPUBLIQUE DU NIGER

**PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA**

PROFILS EN LONG DE DIGUE
TEMPORAIRE (1)

| | | | |
|------|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 16 |
|------|-----------|---------|----|

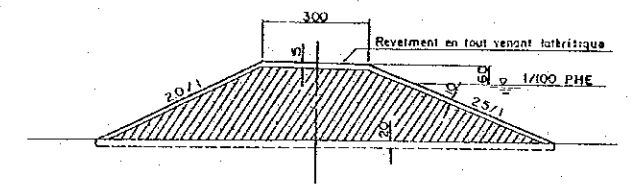
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

Station de pompage (PA-1)



| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| NO. 43 | 0 | 0.00 | 150.99 | 163.14 | 2.15 |
| 1 | 141.99 | 141.99 | 159.16 | 163.14 | 3.98 |
| 2 | 135.95 | 277.94 | 160.25 | 163.13 | 2.88 |
| 3 | 161.99 | 439.93 | 160.01 | 163.13 | 3.12 |
| 4 | 156.16 | 596.09 | 160.68 | 163.12 | 2.44 |
| 5 | 111.38 | 707.47 | 161.30 | 163.12 | 1.82 |
| 6 | 161.12 | 868.59 | 160.99 | 163.11 | 2.12 |
| 7 | 169.21 | 1037.80 | 161.06 | 163.11 | 2.05 |
| 8 | 96.15 | 1134.75 | 160.92 | 163.10 | 2.18 |
| 9 | 174.62 | 1309.37 | 160.82 | 163.10 | 2.28 |
| 10 | 250.37 | 1559.74 | 160.69 | 163.09 | 2.40 |
| 11 | 122.15 | 1681.89 | 160.70 | 163.08 | 2.38 |
| 12 | 210.25 | 1892.14 | 160.02 | 163.08 | 2.46 |
| 13 | 171.31 | 2063.45 | 160.62 | 163.07 | 2.45 |
| 14 | 182.44 | 2245.89 | 160.64 | 163.06 | 2.42 |
| 15 | 162.48 | 2408.37 | 160.57 | 163.06 | 2.49 |
| 16 | 149.68 | 2558.05 | 160.57 | 163.05 | 2.48 |
| 17 | 155.03 | 2713.08 | 160.90 | 163.05 | 2.25 |

COUPE DE LA DIGUE



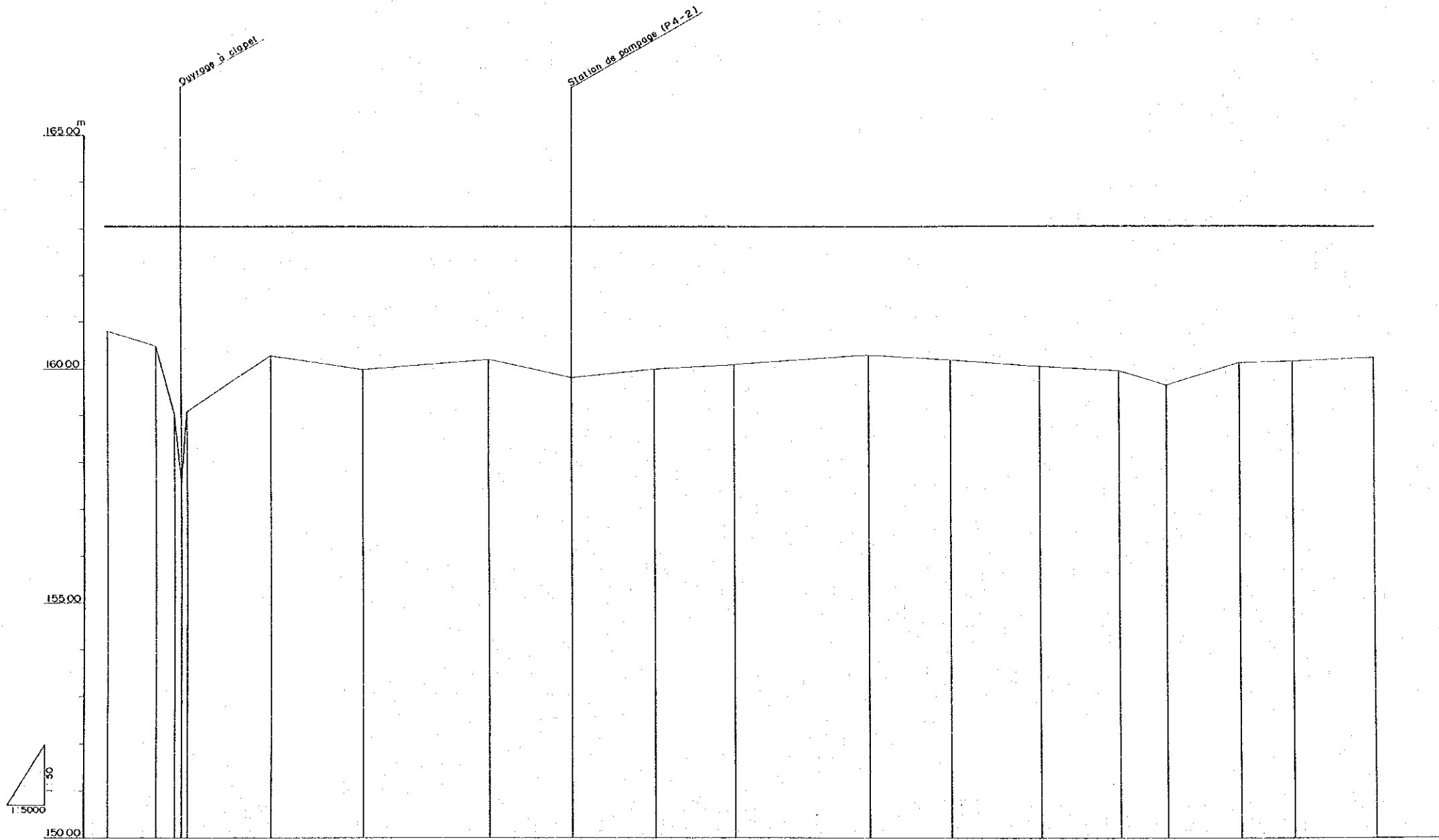
REPUBLIQUE DU NIGER

PROJET
D'AMENAGEMENT HYDRO-AGRIQUE
DE LA CUVETTE DE OUNA-KOUANZA

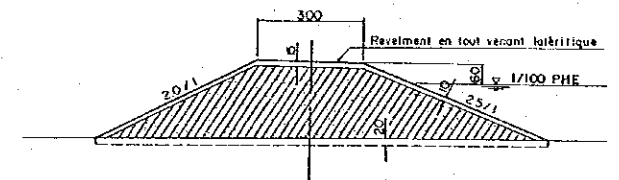
PROFILS EN LONG DE DIGUE Z-4 (1)

| | | | |
|------|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 17 |
|------|-----------|---------|----|

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



COUPE DE LA DIGUE



| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| NO 17 | 155.03 | 2713.08 | 160.80 | 163.05 | 2.25 |
| 18 | 106.33 | 2819.41 | 160.47 | 163.05 | 2.59 |
| 19 | 56.35 | 2875.76 | 157.59 | 163.04 | 5.45 |
| 20 | 193.21 | 3068.97 | 160.26 | 163.04 | 2.78 |
| 21 | 200.89 | 3269.86 | 159.97 | 163.03 | 3.06 |
| 22 | 269.23 | 3539.09 | 160.17 | 163.02 | 2.85 |
| 23 | 169.65 | 3708.74 | 158.79 | 163.02 | 3.23 |
| 24 | 186.20 | 3894.94 | 159.97 | 163.01 | 3.04 |
| 25 | 168.65 | 4063.59 | 160.35 | 163.00 | 2.65 |
| 26 | 286.59 | 4350.18 | 160.23 | 162.99 | 2.76 |
| 27 | 178.64 | 4528.82 | 160.13 | 162.99 | 2.86 |
| 28 | 187.14 | 4715.96 | 159.96 | 162.98 | 3.02 |
| 29 | 163.05 | 4879.01 | 159.87 | 162.98 | 3.11 |
| 30 | 100.22 | 4979.23 | 159.55 | 162.97 | 3.42 |
| 31 | 156.83 | 5136.06 | 160.02 | 162.97 | 2.95 |
| 32 | 160.08 | 5296.14 | 160.08 | 162.96 | 2.88 |
| 33 | 176.70 | 5472.84 | 160.14 | 162.96 | 2.82 |

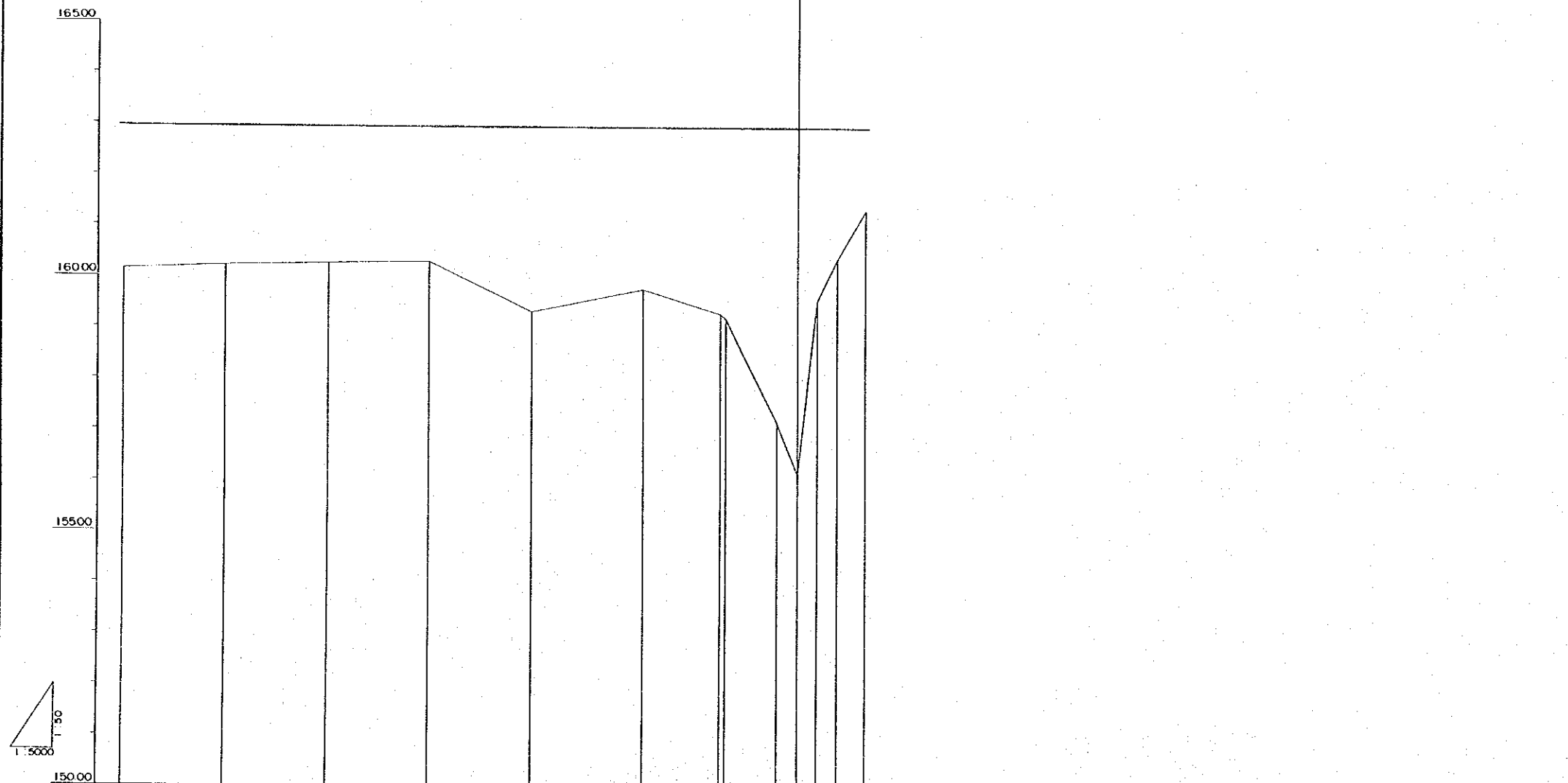
REPUBLIQUE DU NIGER

PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA

PROFILS EN LONG DE DIGUE Z-4 (2)

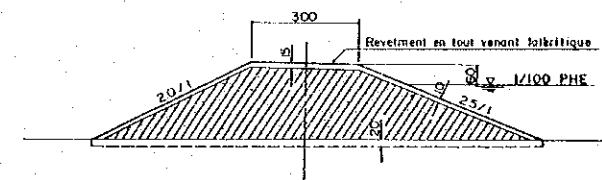
| | | | |
|------|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 18 |
|------|-----------|---------|----|

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

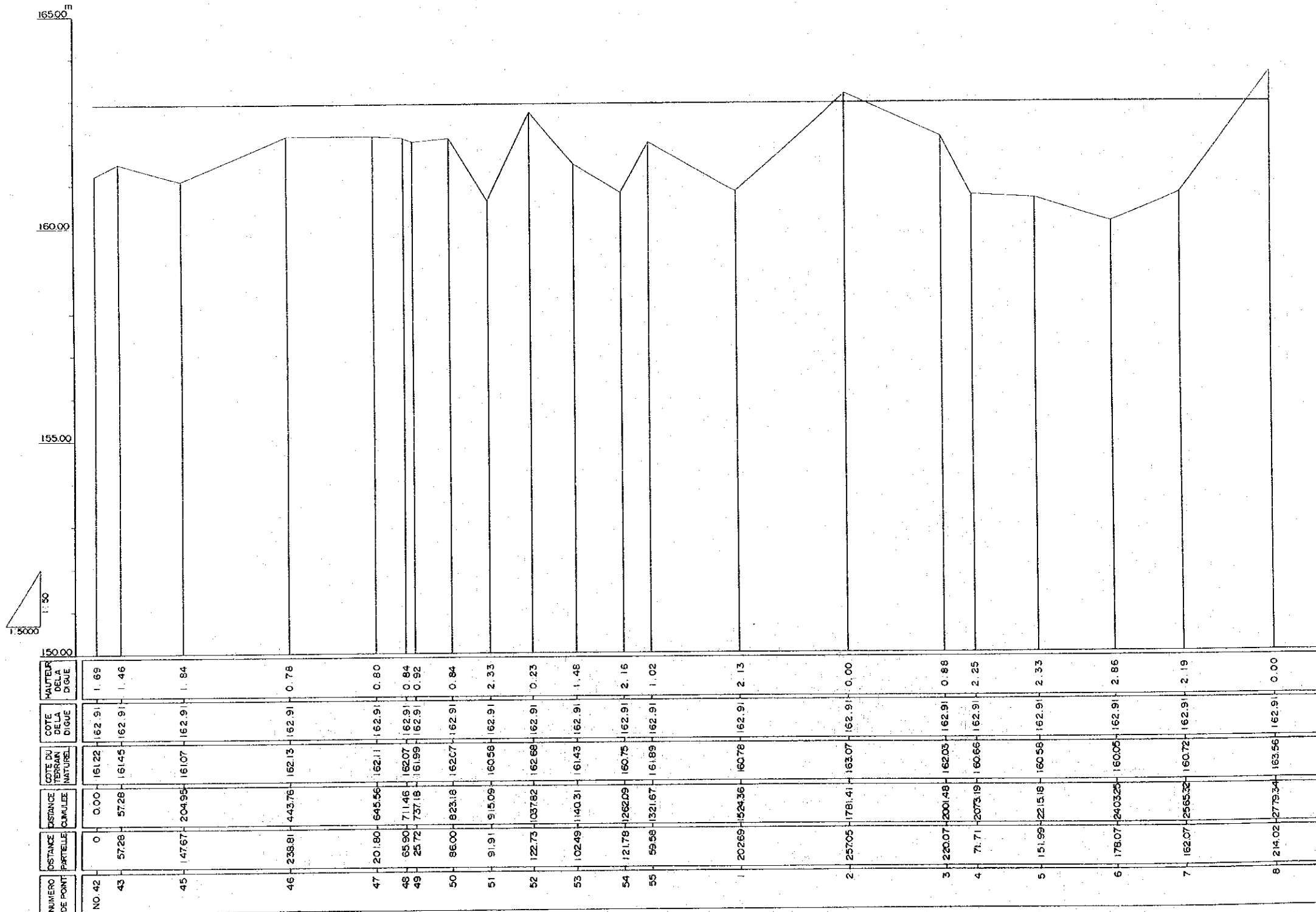


| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| 33 | 175.70 | 5423.82 | 160.14 | 162.96 | 2.82 |
| 34 | 197.66 | 5623.28 | 160.20 | 162.95 | 2.75 |
| 35 | 198.72 | 5822.00 | 160.26 | 162.95 | 2.69 |
| 36 | 197.82 | 6019.82 | 160.26 | 162.94 | 2.68 |
| 37 | 198.90 | 6218.72 | 159.28 | 162.93 | 3.65 |
| 38 | 219.11 | 6437.83 | 158.69 | 162.92 | 3.23 |
| 39 | 147.80 | 6585.63 | 159.23 | 162.92 | 3.69 |
| 40 | 113.50 | 6699.13 | 157.11 | 162.92 | 5.81 |
| | 40.50 | 6739.13 | 156.10 | | |
| 41 | 129.78 | 6868.92 | 160.28 | 162.91 | 2.63 |
| 42 | 55.31 | 6884.23 | 161.22 | 162.91 | 1.69 |

COUPE DE LA DIGUE



| | | | |
|---|-----------|---------|----|
| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PROFILS EN LONG DE DIGUE Z-4 (3) | | | |
| DATE | JUIN 1989 | PLAN N° | 19 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

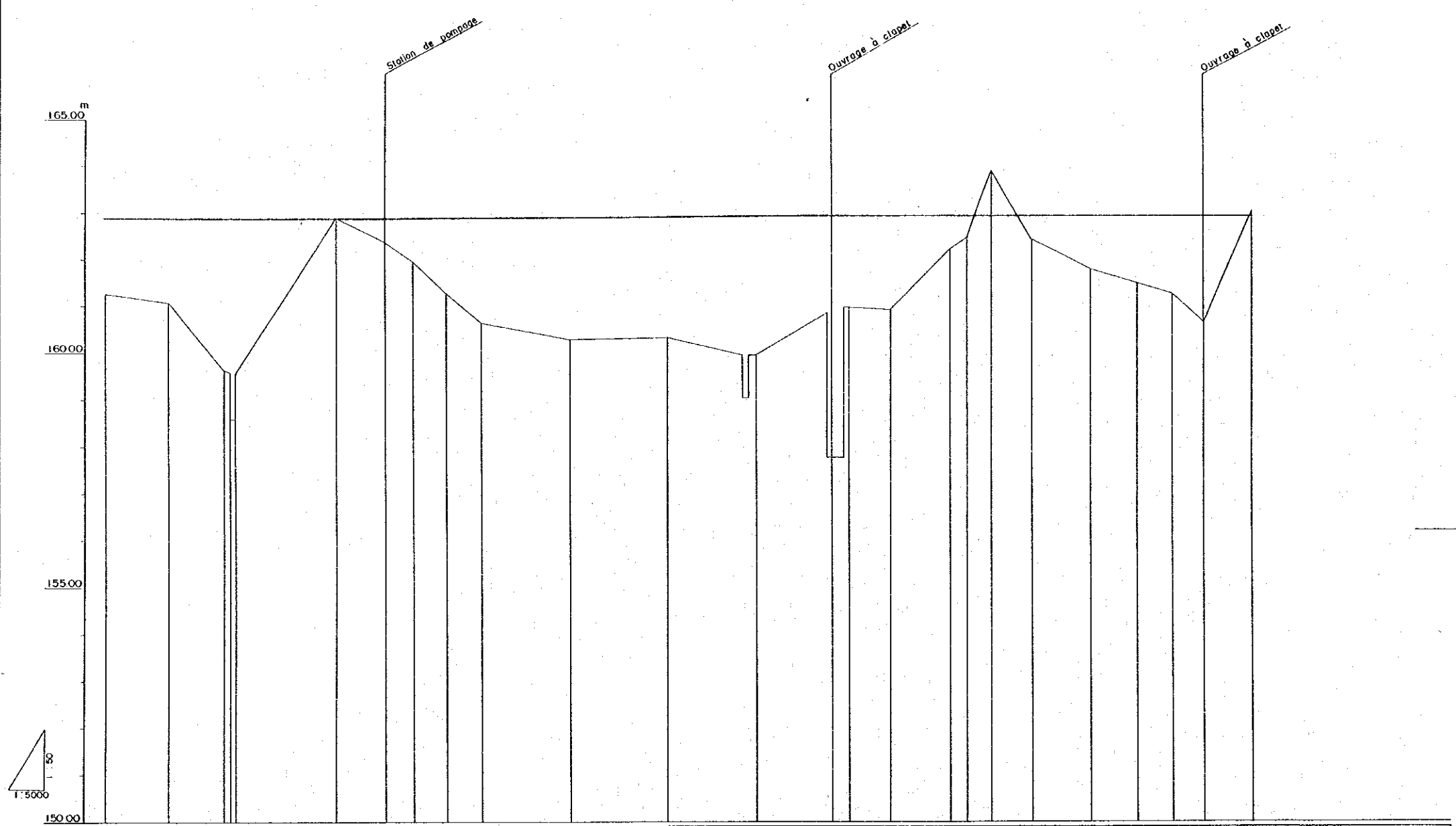


REPUBLIQUE DU NIGER

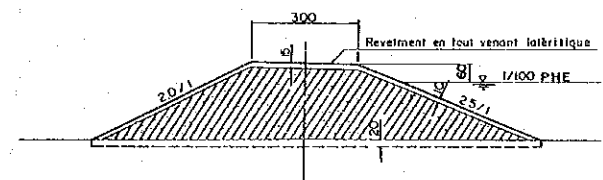
**PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA**

PROFILS EN LONG DE DIGUE
TEMPORAIRE (2)

| | | | |
|--|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 20 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |



COUPE DE LA DIGUE



| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| NO 42 | 53.1 | 16864.23 | 161.22 | 162.91 | 1.69 |
| 44 | 13.98 | 13.98 | 161.07 | 162.91 | 1.84 |
| 56 | 120.88 | 252.86 | 159.63 | 162.90 | 3.27 |
| 57 | 216.73 | 649.59 | 162.87 | 162.90 | 0.03 |
| 58 | 104.95 | 574.54 | 162.50 | 162.89 | 0.59 |
| 59 | 60.81 | 635.35 | 161.94 | 162.89 | 0.95 |
| 60 | 75.44 | 710.79 | 161.23 | 162.89 | 1.66 |
| 61 | 75.44 | 786.23 | 160.57 | 162.89 | 2.32 |
| 62 | 187.24 | 973.47 | 160.22 | 162.89 | 2.66 |
| 63 | 209.85 | 1183.32 | 160.32 | 162.88 | 2.56 |
| 64 | 191.83 | 1375.15 | 159.94 | 162.87 | 2.93 |
| 65 | 150.00 | 1525.15 | 157.75 | 162.87 | 1.94 |
| 66 | 87.81 | 1612.96 | 160.90 | 162.86 | 1.96 |
| 67 | 131.83 | 1744.79 | 162.18 | 162.86 | 0.68 |
| 68 | 41.10 | 1785.89 | 162.43 | 162.86 | 0.43 |
| 69 | 61.88 | 1847.77 | 163.07 | 162.86 | 0.45 |
| 70 | 86.92 | 1934.69 | 162.40 | 162.85 | 0.45 |
| 71 | 120.89 | 2055.58 | 161.27 | 162.85 | 1.58 |
| 72 | 102.57 | 2158.15 | 160.98 | 162.85 | 1.87 |
| 73 | 78.12 | 2236.27 | 161.24 | 162.84 | 1.60 |
| 74 | 64.03 | 2300.30 | 160.62 | 162.84 | 2.22 |
| 75 | 101.61 | 2401.91 | 163.00 | 162.84 | 0.00 |

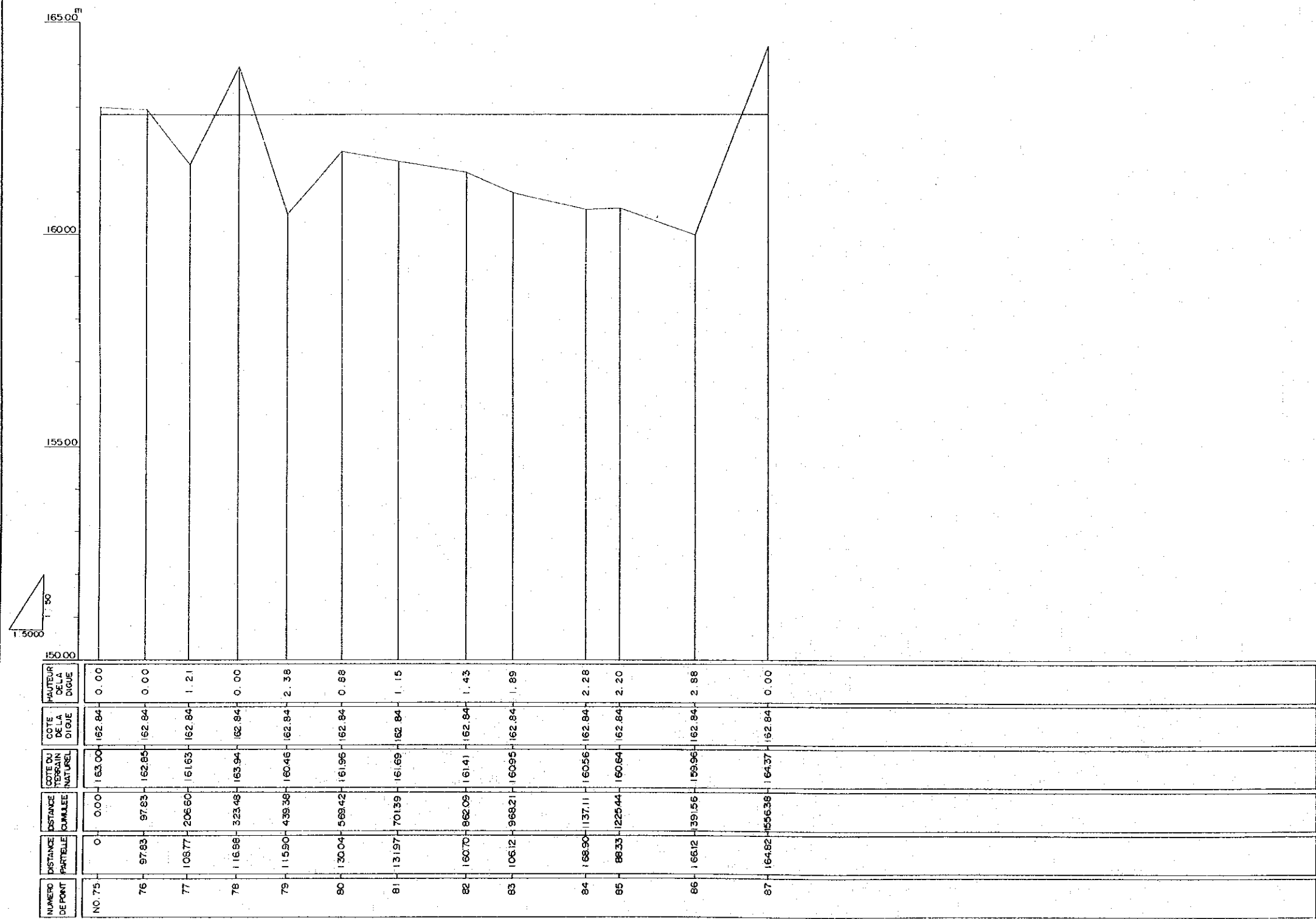
REPUBLIQUE DU NIGER

**PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA**

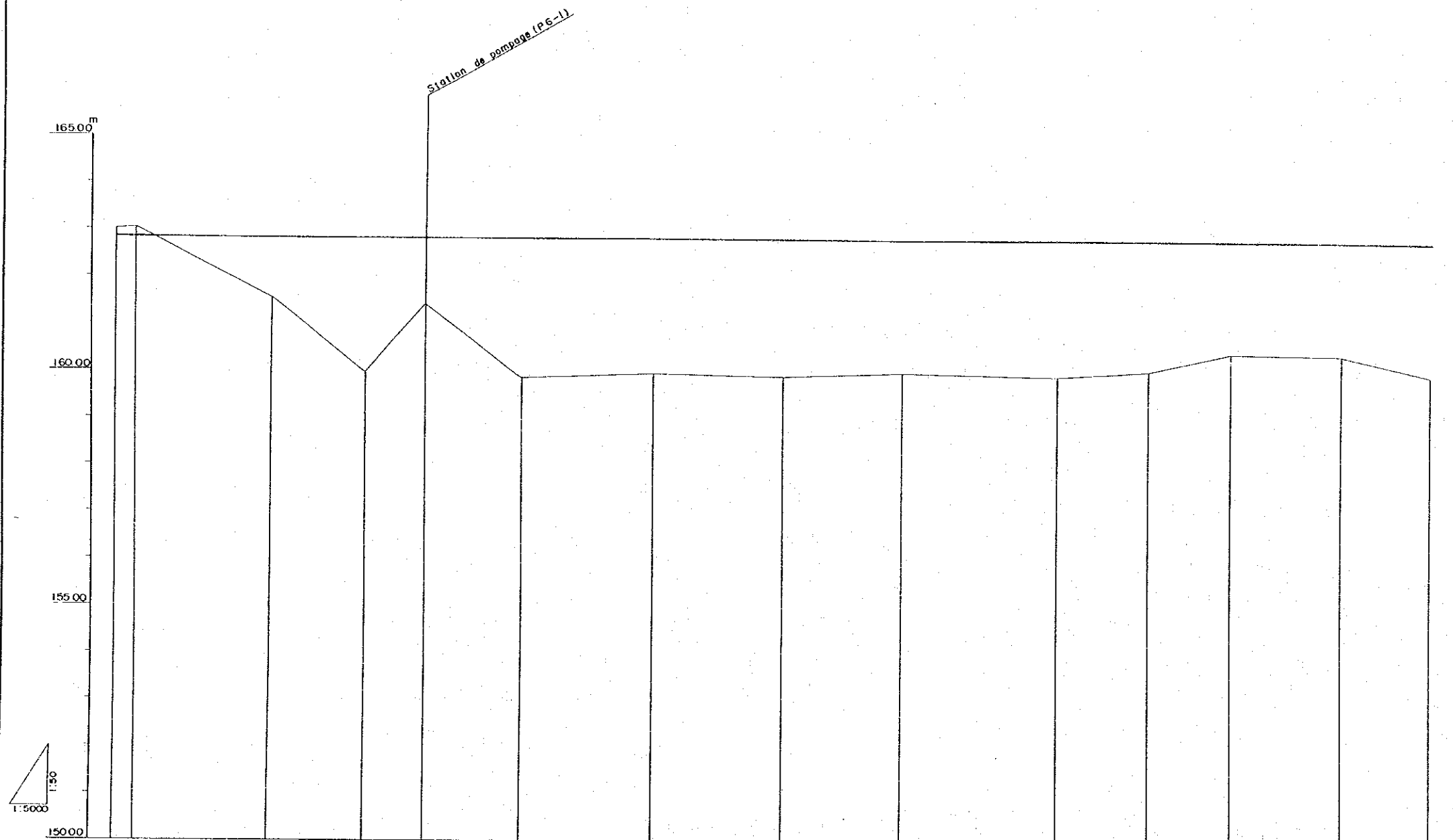
PROFILS EN LONG DE DIGUE Z-5

| | | | |
|------|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 21 |
|------|-----------|---------|----|

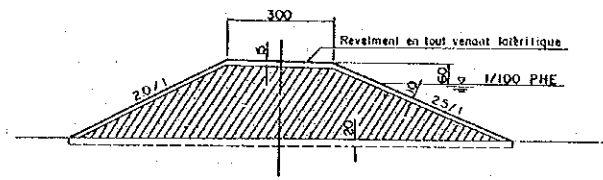
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



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|---|-----------|---------|----|
| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PROFILS EN LONG DE DIGUE TEMPORAIRE (3) | | | |
| DATE | JUIN 1989 | PLAN N° | 22 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |



COUPE DE LA DIGUE



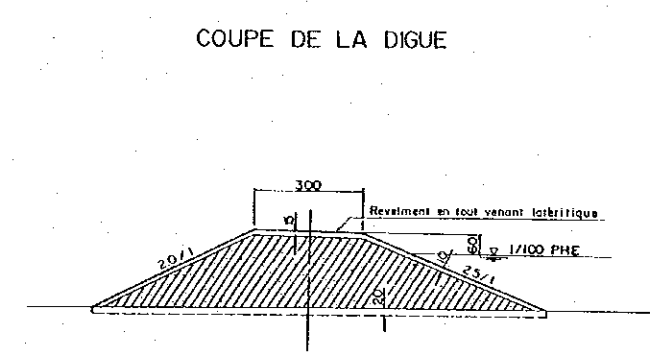
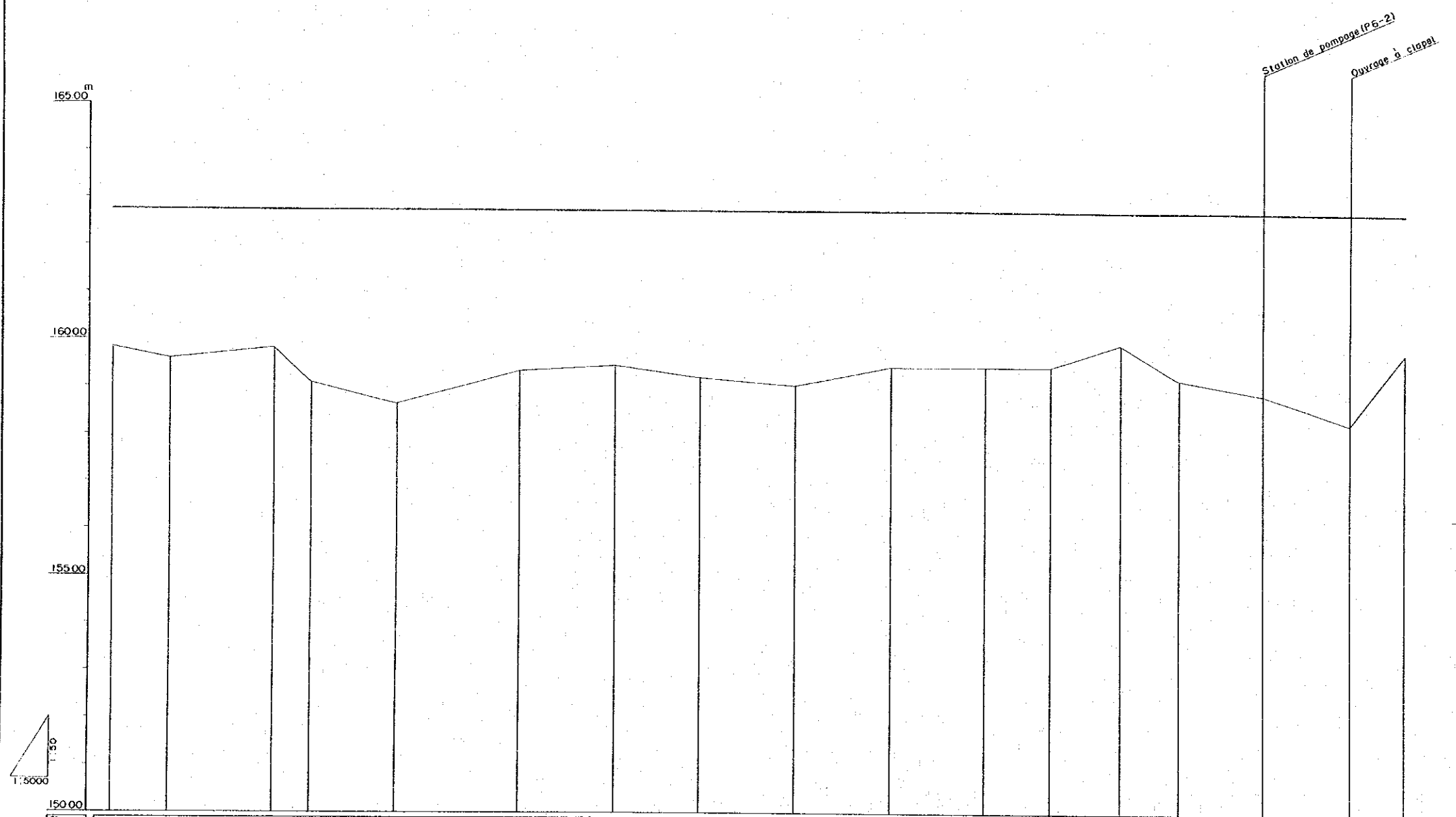
| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| 1 | 0.00 | 0.00 | 163.00 | 162.84 | 0.00 |
| 2 | 276.91 | 316.69 | 161.57 | 162.83 | 1.26 |
| 3 | 204.13 | 521.02 | 159.99 | 162.82 | 2.84 |
| 4 | 128.31 | 649.33 | 161.44 | 162.82 | 1.38 |
| 5 | 201.12 | 850.45 | 159.88 | 162.82 | 2.94 |
| 6 | 273.77 | 1124.22 | 159.96 | 162.81 | 2.83 |
| 7 | 272.85 | 1397.07 | 159.90 | 162.81 | 2.91 |
| 8 | 252.33 | 1649.40 | 159.99 | 162.80 | 2.81 |
| 9 | 335.42 | 1984.82 | 159.90 | 162.79 | 2.89 |
| 10 | 186.67 | 2171.49 | 160.04 | 162.79 | 2.75 |
| 11 | 175.70 | 2350.19 | 160.42 | 162.78 | 2.36 |
| 12 | 235.10 | 2585.29 | 160.34 | 162.78 | 2.44 |
| 13 | 196.49 | 2781.78 | 159.86 | 162.77 | 2.91 |

REPUBLIQUE DU NIGER

**PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA**

PROFILS EN LONG DE DIGUE Z-6 (1)

| | | | |
|--|----------|---------|----|
| DATE | JUN 1989 | PLAN N° | 23 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |



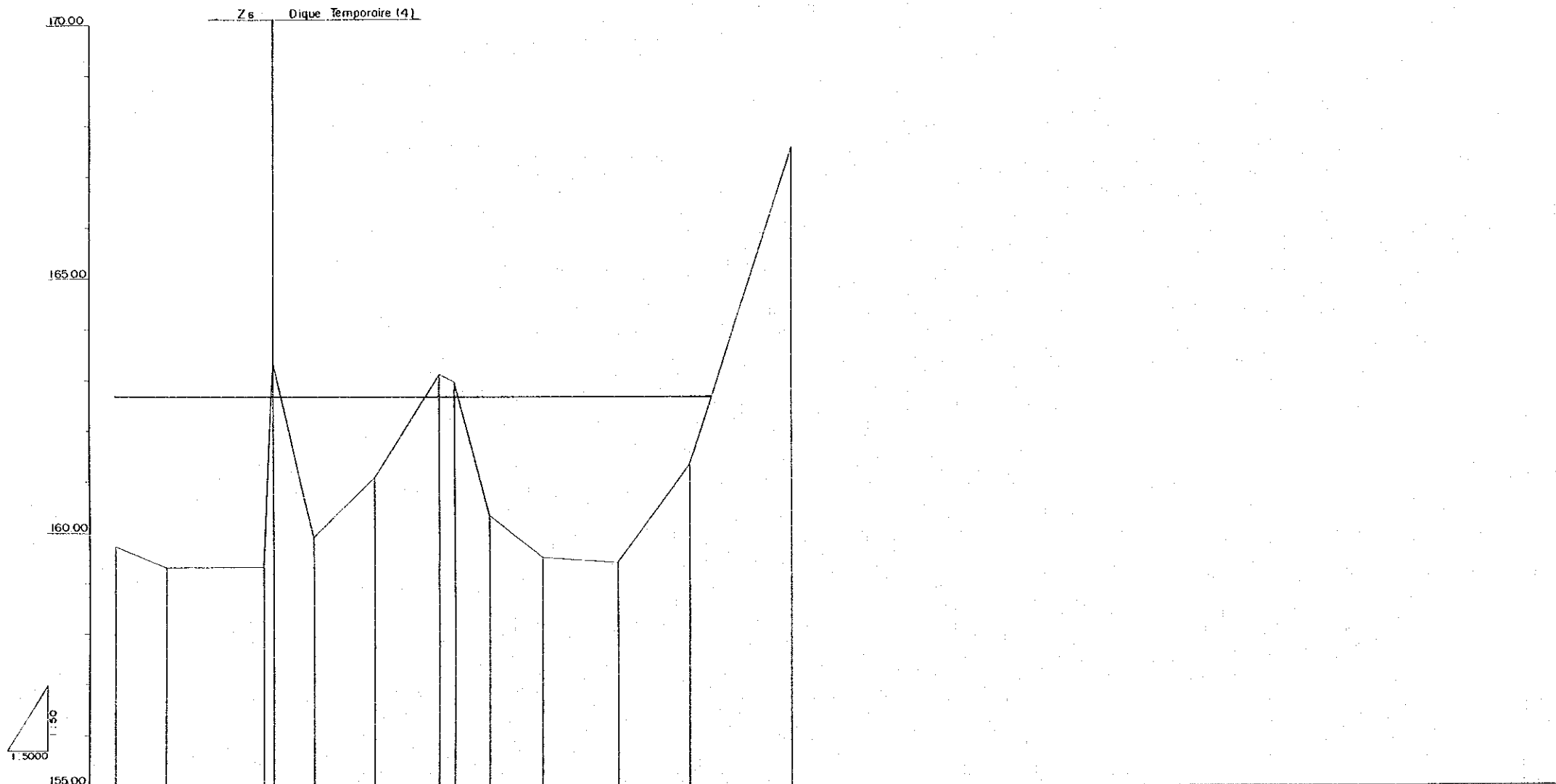
| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| 13 | 196.49 | 279.178 | 159.96 | 162.77 | 2.91 |
| 14 | 170.00 | 295.194 | 159.64 | 162.77 | 3.13 |
| 15 | 227.92 | 3179.66 | 159.85 | 162.76 | 2.91 |
| 16 | 77.94 | 3257.60 | 159.13 | 162.76 | 3.63 |
| 17 | 190.08 | 3447.68 | 158.67 | 162.76 | 4.09 |
| 18 | 257.64 | 3705.32 | 159.35 | 162.75 | 3.40 |
| 19 | 203.97 | 3909.29 | 159.48 | 162.75 | 3.27 |
| 20 | 176.63 | 4085.92 | 159.23 | 162.74 | 3.51 |
| 21 | 202.82 | 4288.74 | 159.10 | 162.74 | 3.64 |
| 22 | 201.45 | 4490.19 | 159.44 | 162.73 | 3.29 |
| 23 | 197.12 | 4687.31 | 159.40 | 162.73 | 3.33 |
| 24 | 132.42 | 4819.73 | 159.44 | 162.73 | 3.29 |
| 25 | 154.23 | 4973.96 | 159.93 | 162.72 | 2.79 |
| 26 | 121.31 | 5095.27 | 159.15 | 162.72 | 3.57 |
| 27 | 179.15 | 5274.42 | 158.85 | 162.71 | 3.86 |
| 28 | 185.92 | 5460.34 | 158.42 | 162.71 | 4.29 |
| 29 | 108.05 | 5568.39 | 159.73 | 162.71 | 2.98 |

REPUBLIQUE DU NIGER

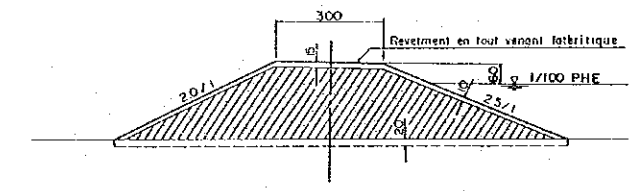
PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA

PROFILS EN LONG DE DIGUE Z-6 (2)

| | | | |
|--|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 24 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

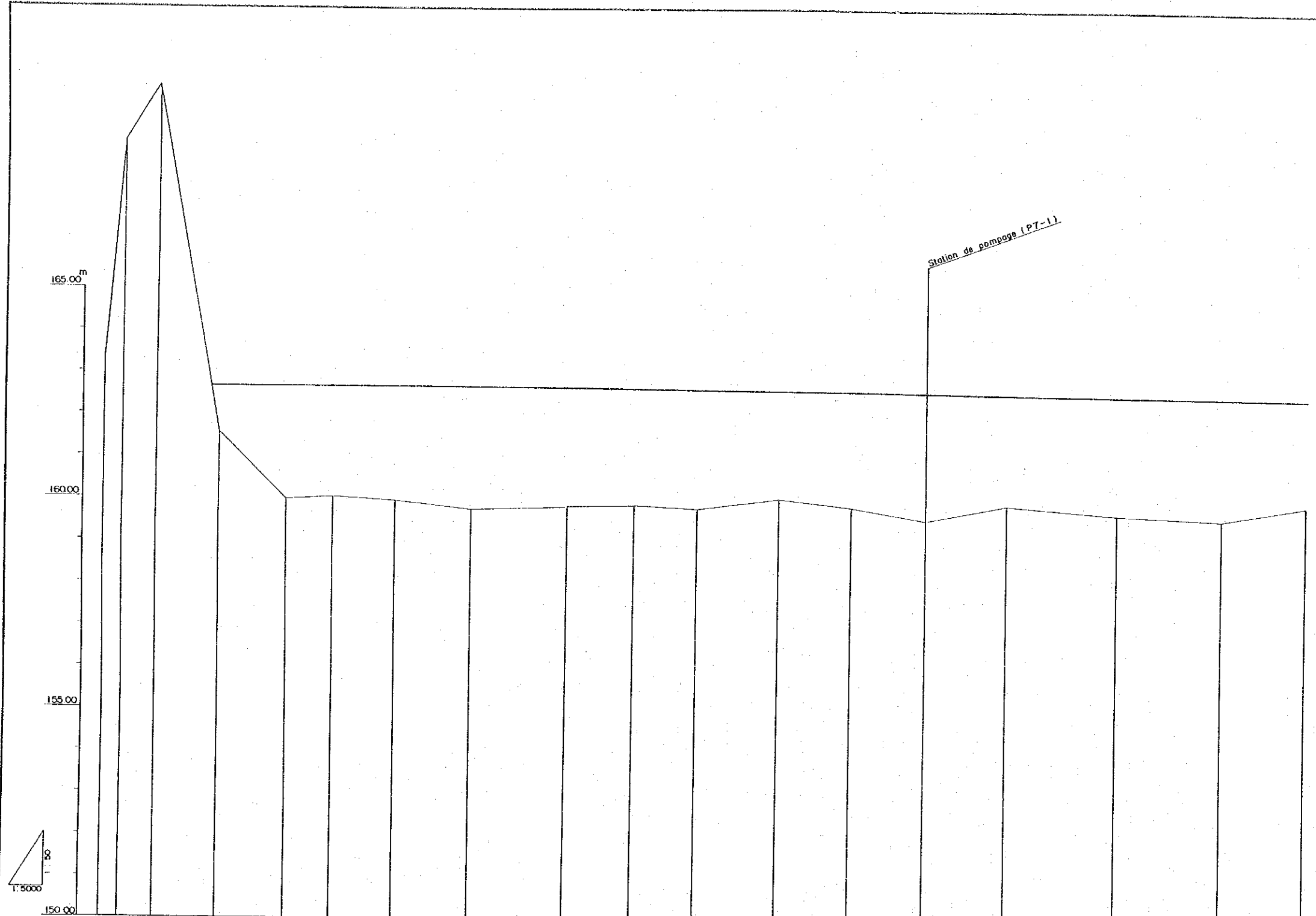


COUPE DE LA DIGUE

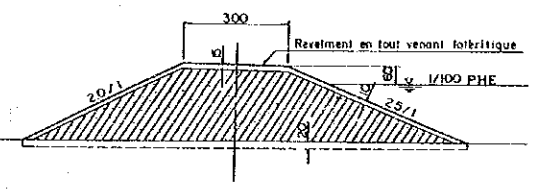


| N° POINT | DISTANCE POTELLE | DISTANCE CLAUDEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|----------|---------------------|---------------------|-------------------------------|---------------------|---------------------------|
| NC. 29 | 108.05 | 5666.99 | 159.73 | 162.71 | 2.98 |
| 30 | 101.25 | 5669.64 | 159.33 | 162.71 | 3.38 |
| 31 | 191.66 | 5681.50 | 159.33 | 162.70 | 3.37 |
| 32 | 206.9 | 5682.19 | 163.39 | 162.70 | 0.00 |
| 33 | 80.65 | 5662.84 | 159.92 | 162.70 | 2.78 |
| 34 | 121.74 | 6084.96 | 161.08 | 162.70 | 1.62 |
| 35 | 125.89 | 620.46 | 163.11 | 162.70 | 0.00 |
| 36 | 29.61 | 6240.07 | 162.99 | 162.70 | 0.00 |
| 37 | 67.96 | 6308.03 | 160.35 | 162.70 | 2.35 |
| 38 | 105.75 | 6413.76 | 159.50 | 162.70 | 3.20 |
| 39 | 149.89 | 6563.56 | 159.40 | 162.70 | 3.30 |
| 40 | 136.93 | 6700.51 | 161.31 | 162.70 | 1.39 |
| 41 | 207.42 | 6907.93 | 167.33 | 162.70 | 0.00 |

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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PROFILS EN LONG DE DIGUE Z-6 (3) | | | |
| DATE | JUIN 1989 | PLAN N° | 25 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |



COUPE DE LA DIGUE



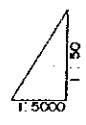
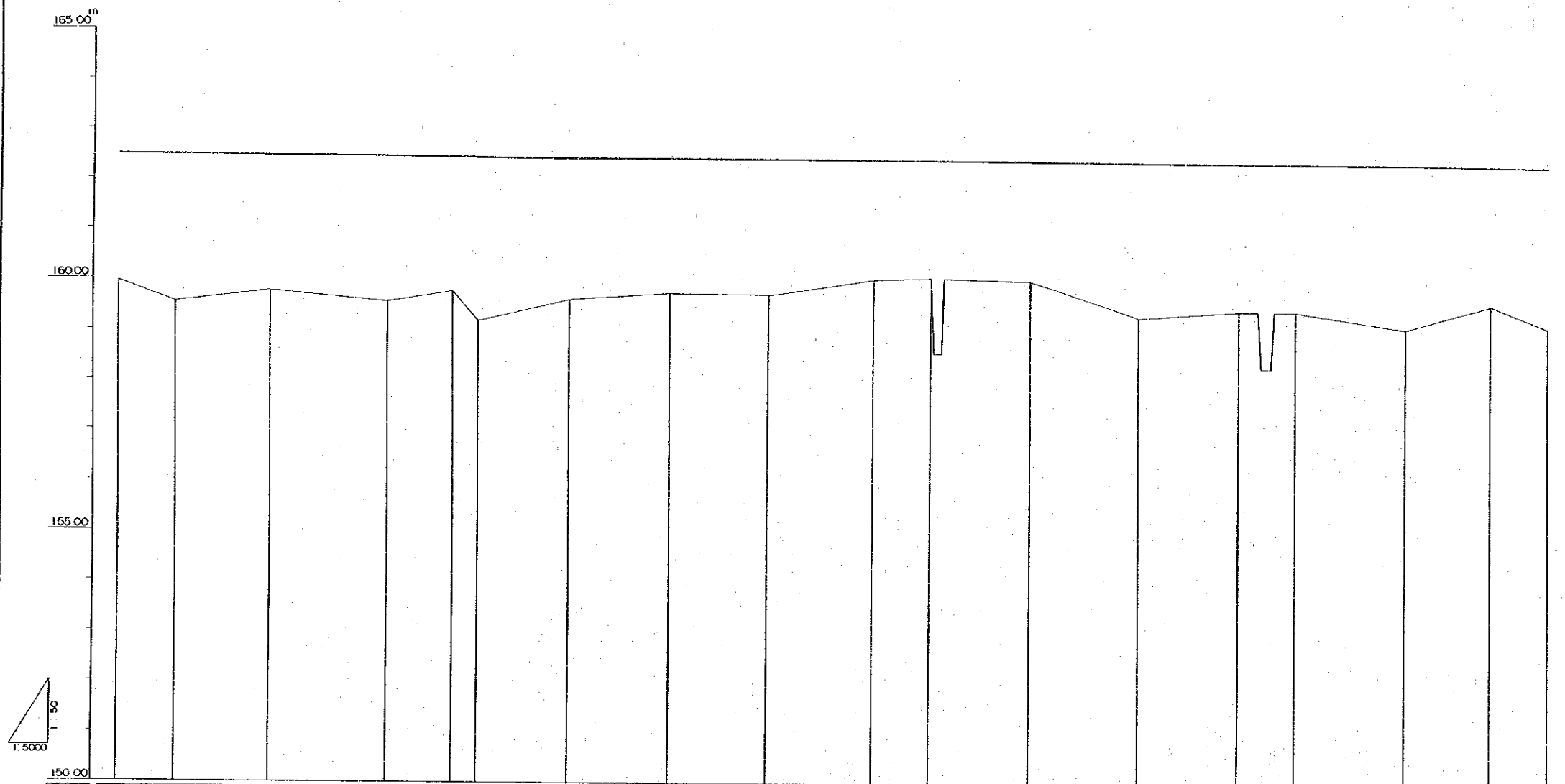
| NUMERO DE PONT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| NO. 32 | 20.69 | 0.00 | 163.39 | 162.70 | 0.00 |
| R | 48.77 | 48.77 | 168.50 | 162.70 | 0.00 |
| PO | 77.21 | 125.98 | 169.82 | 162.69 | 0.00 |
| 42 | 145.77 | 271.75 | 161.54 | 162.68 | 1.14 |
| 43 | 163.32 | 435.07 | 159.99 | 162.67 | 2.72 |
| 44 | 111.77 | 546.84 | 160.00 | 162.66 | 2.66 |
| 45 | 145.30 | 692.14 | 159.92 | 162.65 | 2.73 |
| 46 | 183.48 | 875.62 | 159.74 | 162.64 | 2.90 |
| 47 | 215.51 | 1091.13 | 159.80 | 162.63 | 2.83 |
| 48 | 156.63 | 1247.76 | 159.62 | 162.61 | 2.79 |
| 49 | 154.18 | 1402.14 | 159.76 | 162.60 | 2.84 |
| 50 | 184.72 | 1586.86 | 160.02 | 162.59 | 2.57 |
| 51 | 181.67 | 1768.53 | 159.81 | 162.58 | 2.77 |
| 52 | 182.03 | 1950.56 | 158.56 | 162.57 | 3.01 |
| 53 | 186.43 | 2139.01 | 159.91 | 162.55 | 2.64 |
| 54 | 255.76 | 2394.77 | 159.71 | 162.54 | 2.83 |
| 55 | 243.30 | 2638.07 | 159.63 | 162.52 | 2.89 |
| 56 | 208.48 | 2844.55 | 159.98 | 162.51 | 2.53 |

REPUBLIQUE DU NIGER

**PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA**

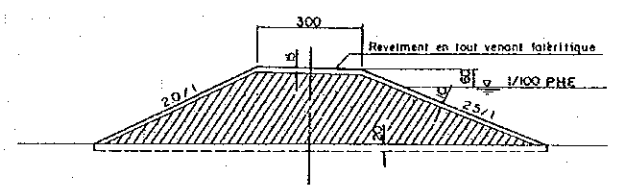
PROFILS EN LONG DE DIGUE Z-7 (1)

| | | | |
|--|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 26 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |



| NUMERO DE POINT | DISTANCE PARTIELLE | DISTANCE TERRAIN NATUREL | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|-----------------|--------------------|--------------------------|-------------------------|------------------|---------------------|
| 56 | 206.48 | 294.45 | 159.98 | 162.51 | 2.53 |
| 57 | 1086.4 | 293.19 | 159.54 | 162.50 | 2.96 |
| 58 | 192.81 | 3146.00 | 156.78 | 162.49 | 2.71 |
| 59 | 228.31 | 3374.31 | 159.54 | 162.47 | 2.93 |
| 60 | 128.72 | 3503.03 | 159.79 | 162.46 | 2.67 |
| 61 | 48.68 | 3551.71 | 159.23 | 162.46 | 3.23 |
| 62 | 180.22 | 3731.93 | 159.64 | 162.44 | 2.80 |
| 63 | 197.91 | 3929.84 | 159.78 | 162.43 | 2.65 |
| 64 | 191.24 | 4121.08 | 159.71 | 162.42 | 2.71 |
| 65 | 201.26 | 4322.34 | 160.02 | 162.40 | 2.38 |
| 66 | 114.77 | 4437.11 | 160.06 | 162.40 | 2.34 |
| 67 | 199.51 | 4636.62 | 160.00 | 162.38 | 2.38 |
| 68 | 211.96 | 4848.60 | 159.28 | 162.37 | 3.09 |
| 69 | 198.91 | 5047.51 | 159.31 | 162.36 | 3.05 |
| 70 | 111.59 | 5159.10 | 159.40 | 162.35 | 2.95 |
| 71 | 215.62 | 5374.72 | 159.08 | 162.33 | 3.25 |
| 72 | 169.21 | 5543.93 | 159.53 | 162.32 | 2.79 |
| 73 | 113.89 | 5657.82 | 159.10 | 162.31 | 3.21 |

COUPE DE LA DIGUE



REPUBLIQUE DU NIGER

**PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA**

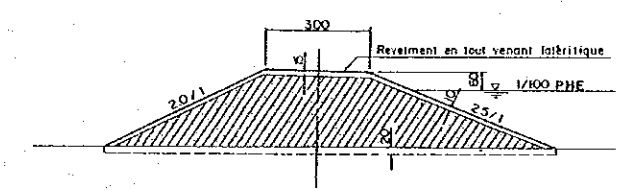
PROFILS EN LONG DE DIGUE Z-7 (2)

| | | | |
|--|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 27 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |



| NUMERO DE PONT | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DE LA DIGUE | HAUTEUR DE LA DIGUE |
|----------------|--------------------|------------------|-------------------------|------------------|---------------------|
| NO. 73 | 113.69 | 5657.62 | 159.10 | 162.31 | 3.21 |
| 74 | 147.01 | 5804.63 | 159.11 | 162.29 | 3.18 |
| 78 | 194.83 | 5999.46 | 160.75 | 162.28 | 1.54 |
| 75 | 84.35 | 6083.81 | 202.72 | | |

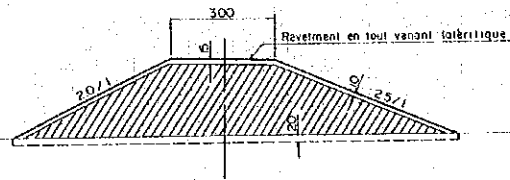
COUPE DE LA DIGUE



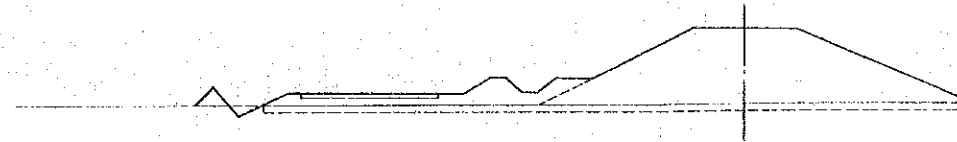
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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PROFILS EN LONG DE DIGUE Z-7 (3) | | | |
| DATE | JUIN 1989 | PLAN N° | 28 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

No. 7

Cote de la digue 164.39
Hauteur de la digue 2.16

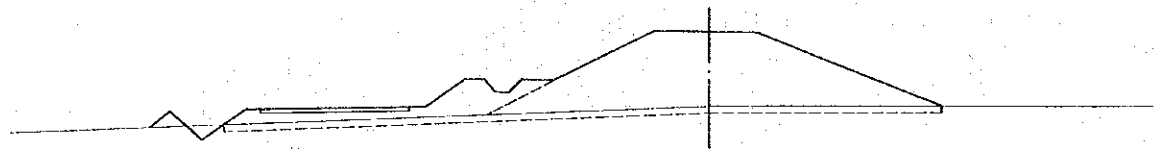


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Hauteur de la digue 2.13

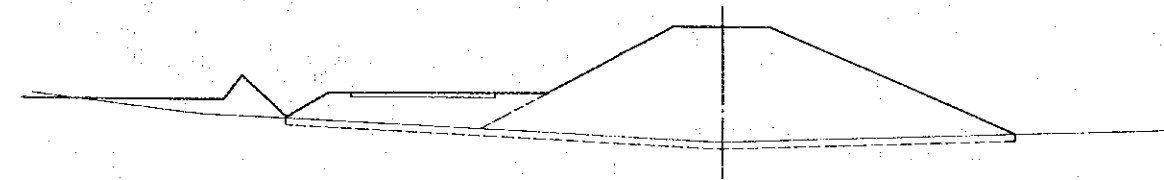


No. 14

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Hauteur de la digue 2.10

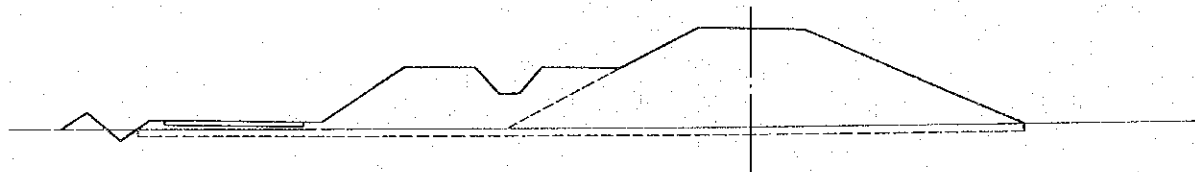


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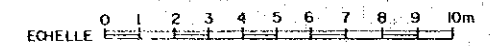
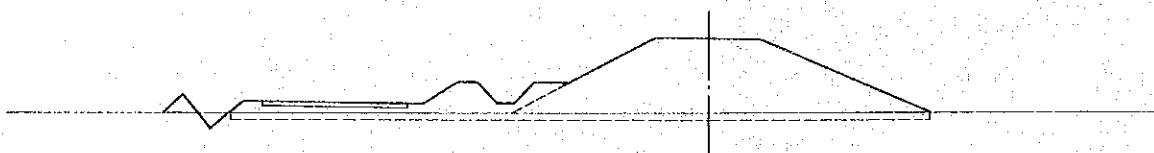
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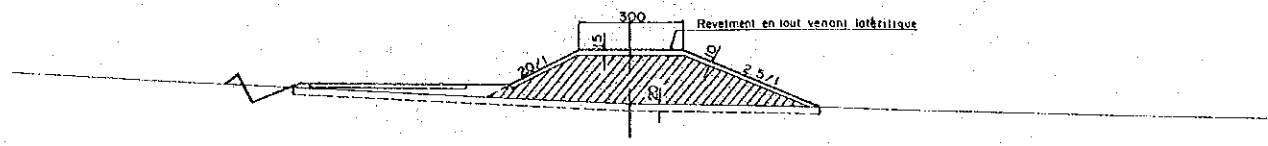
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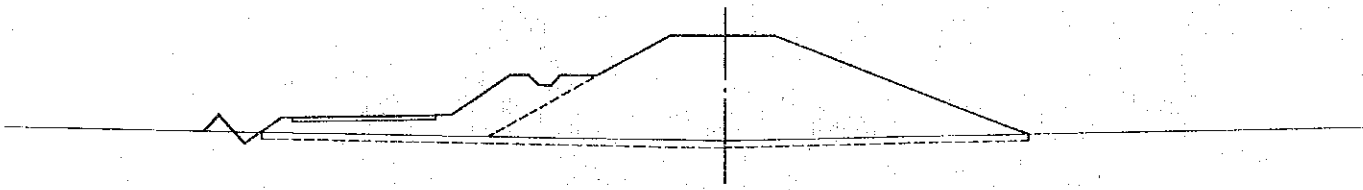


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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PROFILS EN TRAVERS DE DIGUE Z-1 | | | |
| DATE | JUIN 1989 | PLAN N° | 29 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

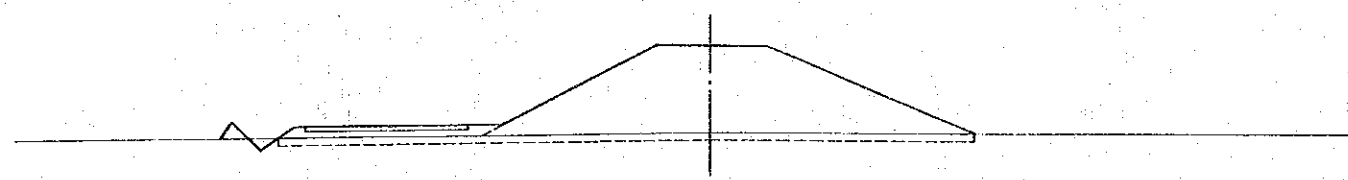
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Cote de la digue 163.70
Hauteur de la digue 1.47



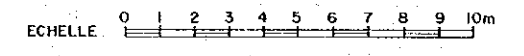
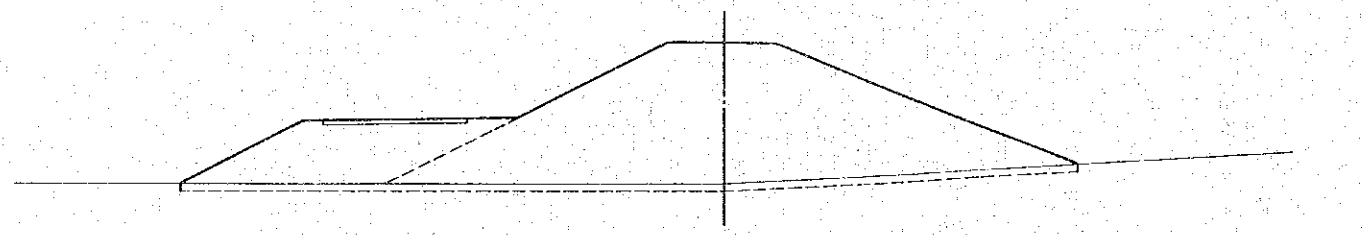
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Hauteur de la digue 2.99



No. 19
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Hauteur de la digue 2.41



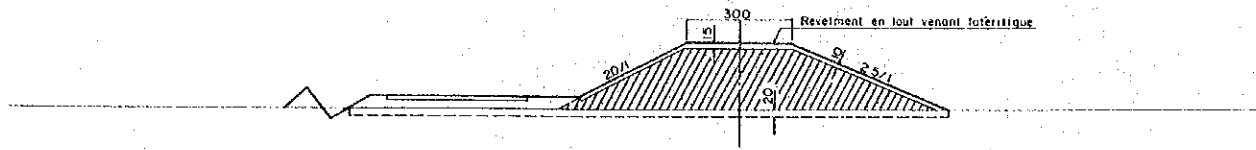
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Cote de la digue 163.51
Hauteur de la digue 3.92



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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PROFILS EN TRAVERS DE DIGUE Z-2 | | | |
| DATE | JUIN 1989 | PLAN N° | 30 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

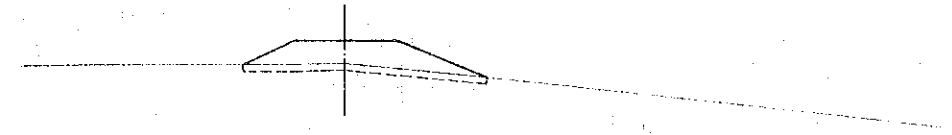
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Hauteur de la digue 1.86



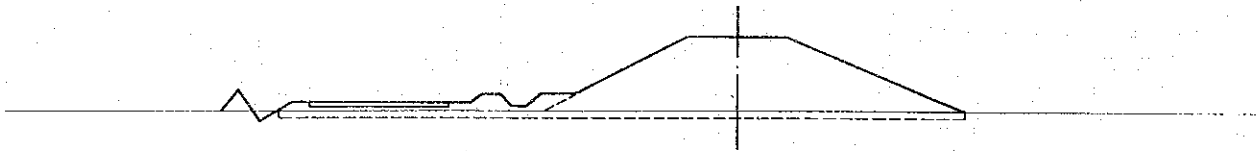
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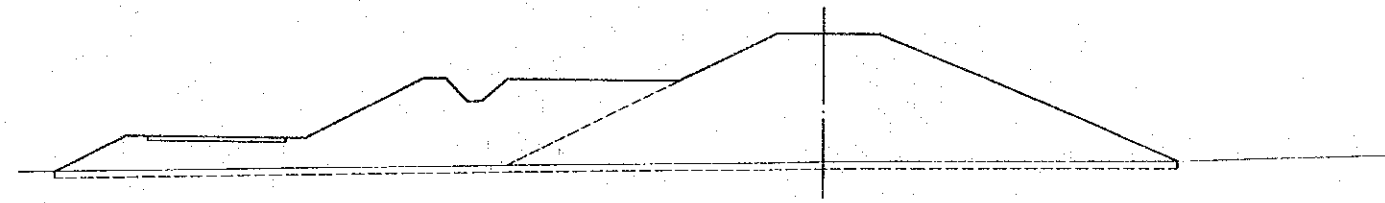
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Hauteur de la digue 2.01



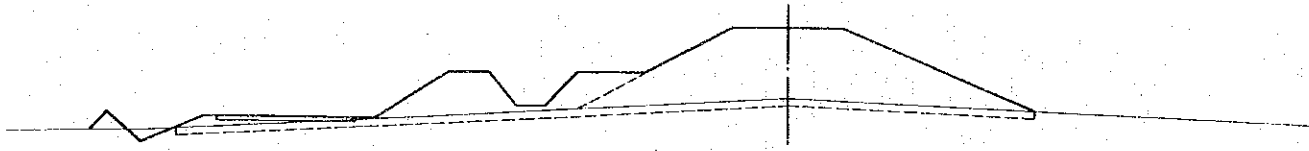
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Hauteur de la digue 3.69



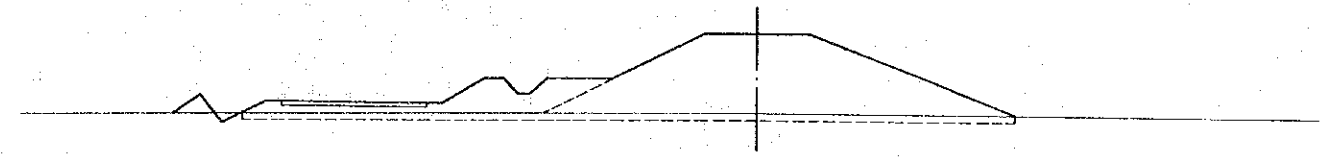
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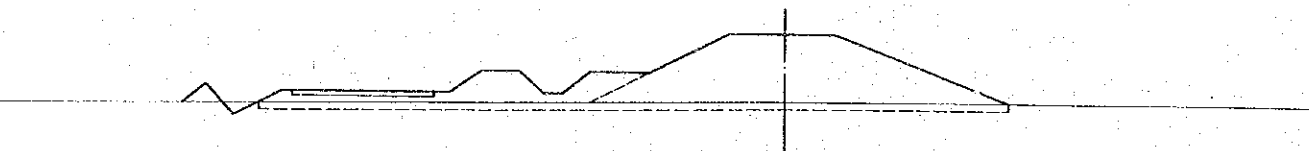
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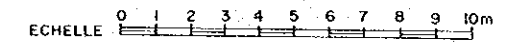
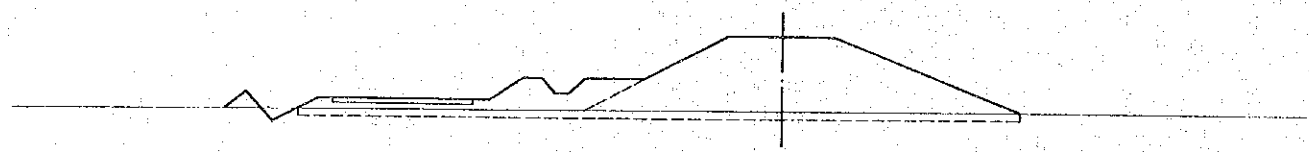
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Hauteur de la digue 1.93



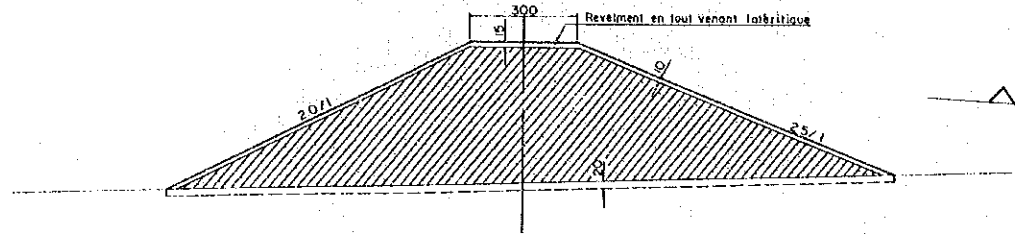
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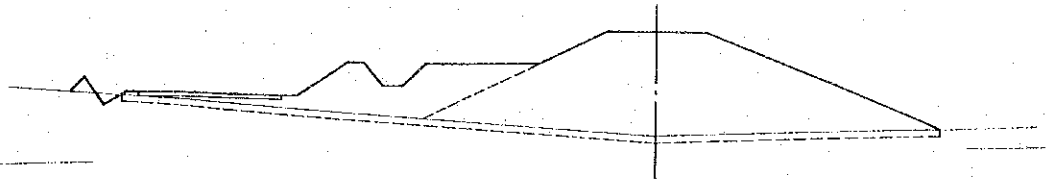


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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PROFILS EN TRAVERS DE DIGUE Z-3 | | | |
| DATE | JUIN 1989 | PLAN N° | 31 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

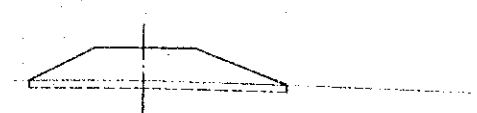
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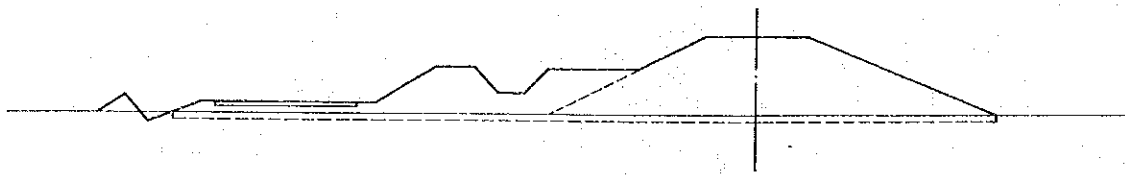
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Hauteur de la digue 2.88



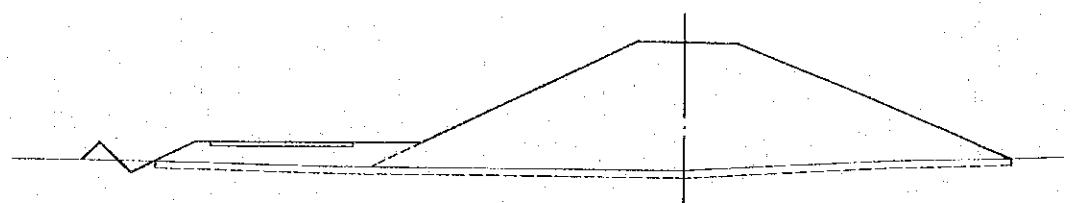
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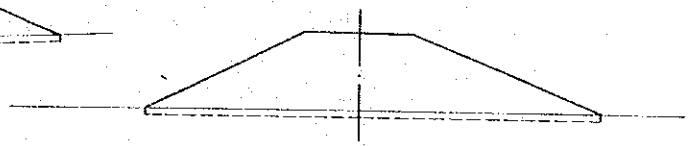
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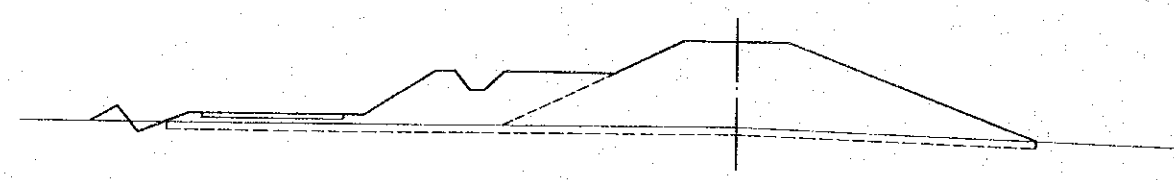
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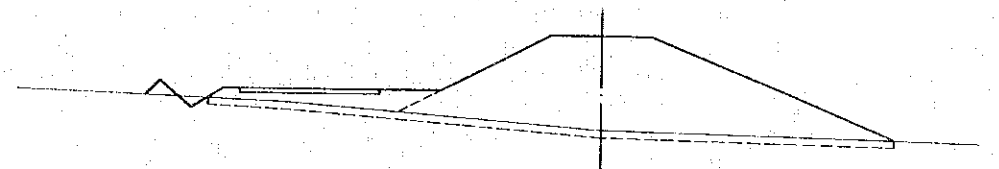
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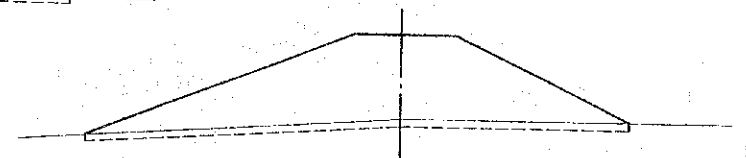
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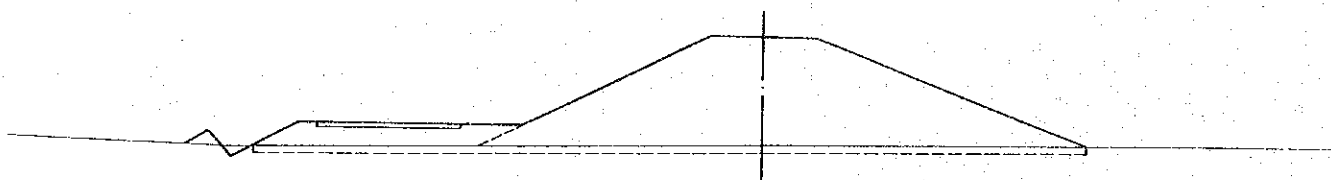
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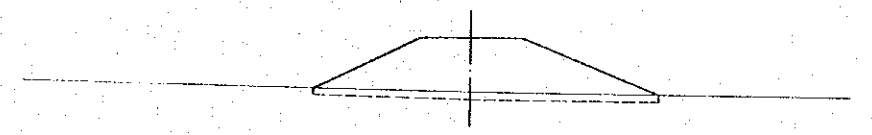
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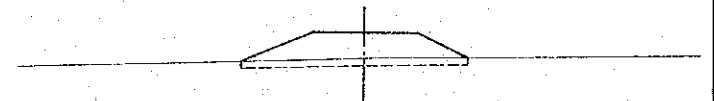
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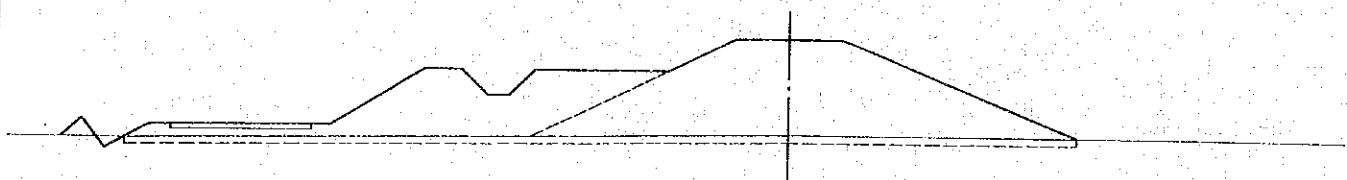
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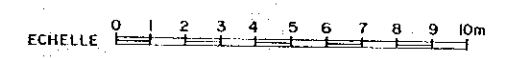
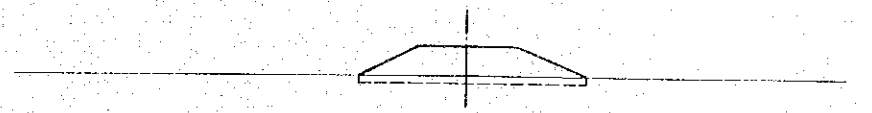
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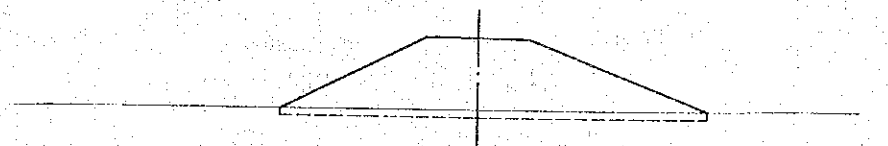
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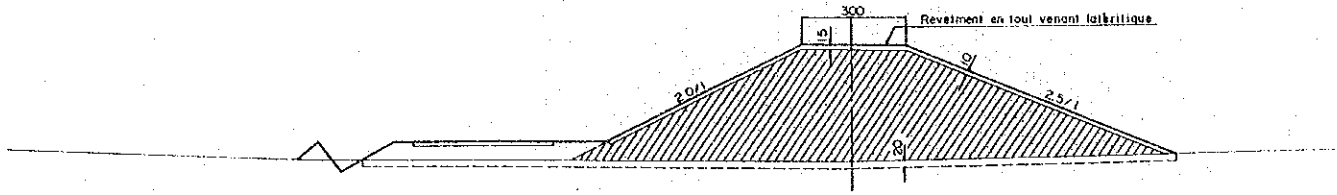
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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PROFILS EN TRAVERS DE DIGUE Z-4 | | | |
| DATE | JUIN 1989 | PLAN N° | 32 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

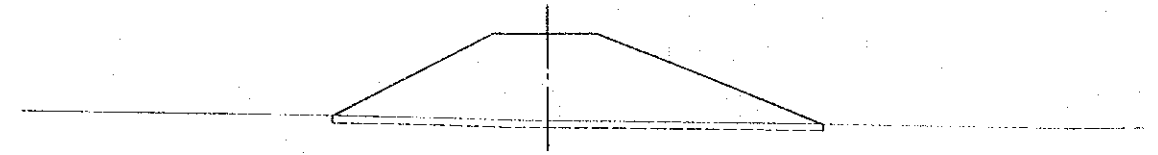
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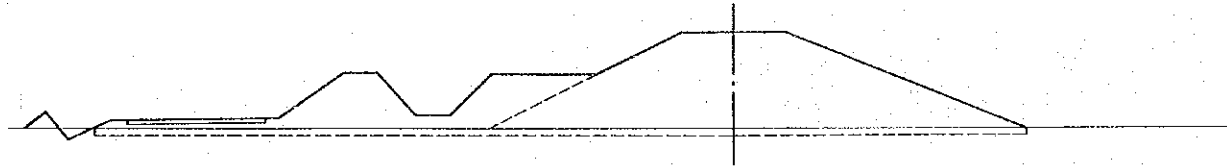
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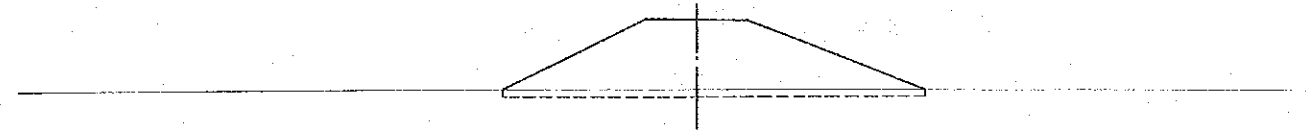
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Hauteur de la digue 2 66



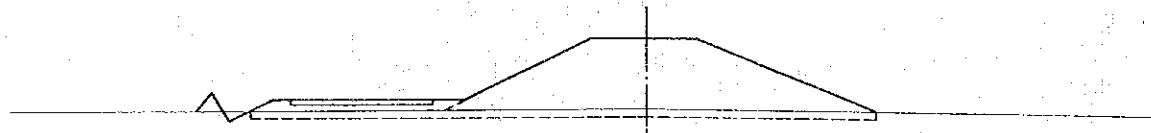
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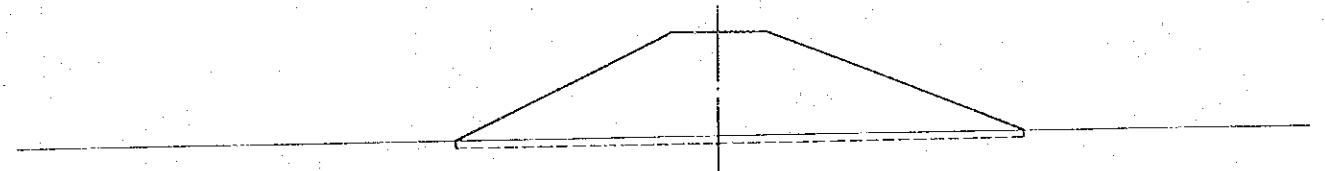
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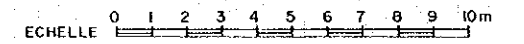
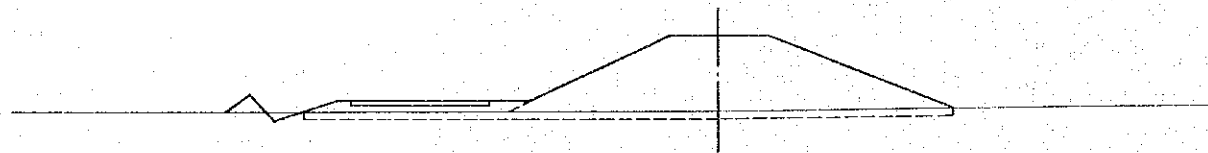
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Hauteur de la digue 2 88



No. 74

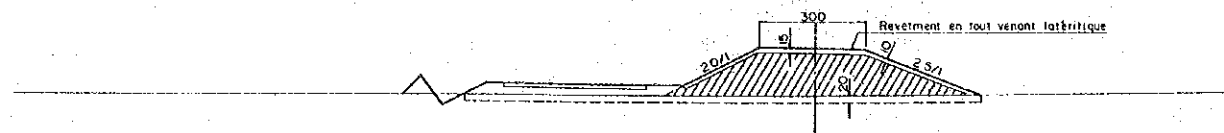
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Hauteur de la digue 2 22



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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PROFILS EN TRAVERS DE DIGUE Z-5 | | | |
| DATE | JUIN 1989 | PLAN N° | 33 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

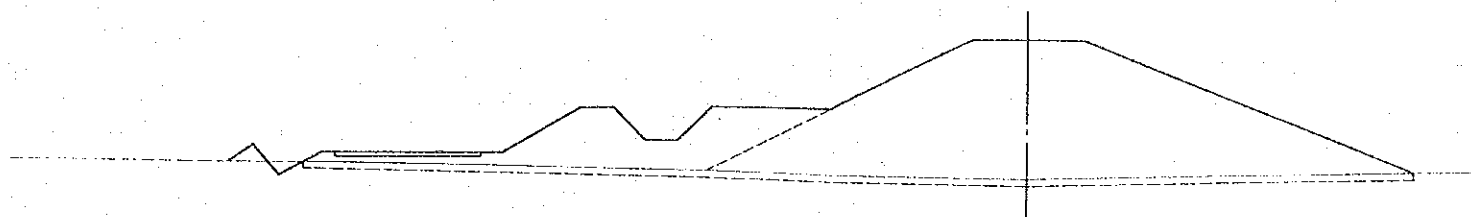
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Cote de la digue 162.83
Hauteur de la digue 1.26



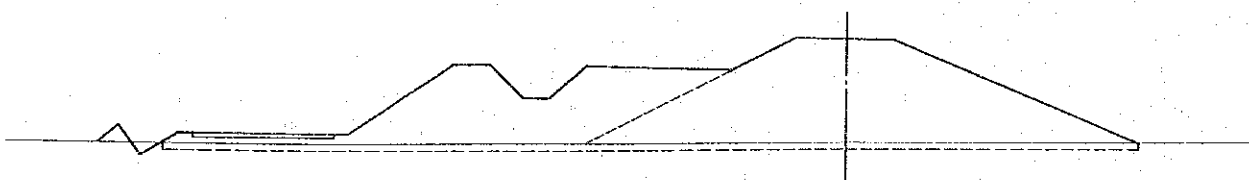
No. 27

Cote de la digue 162.71
Hauteur de la digue 3.86



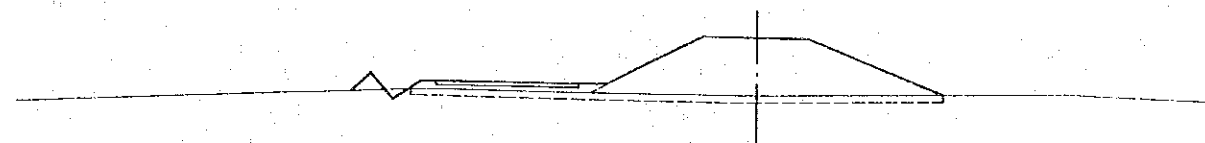
No. 7

Cote de la digue 162.81
Hauteur de la digue 2.91



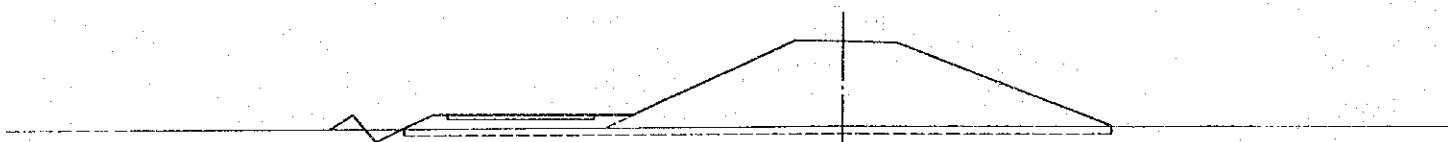
No. 34

Cote de la digue 162.70
Hauteur de la digue 1.62



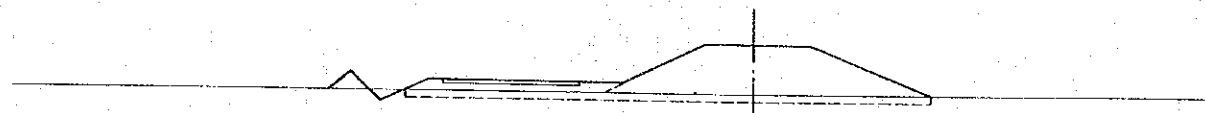
No. 11

Cote de la digue 162.78
Hauteur de la digue 2.36



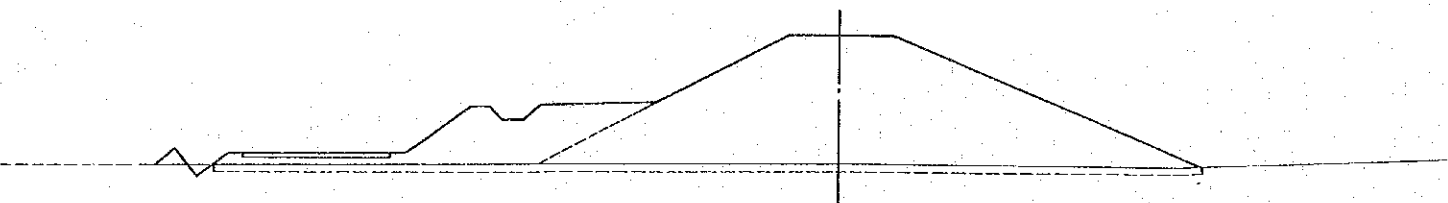
No. 40

Cote de la digue 162.70
Hauteur de la digue 1.39



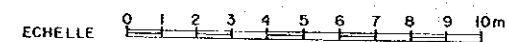
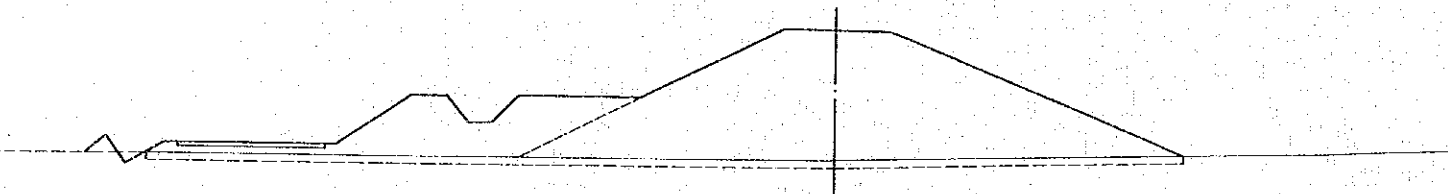
No. 16

Cote de la digue 162.76
Hauteur de la digue 3.63



No. 21

Cote de la digue 162.74
Hauteur de la digue 3.64



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| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PROFILS EN TRAVERS DE DIGUE Z-6 | | | |
| DATE | JUIN 1989 | PLAN N° | 34 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

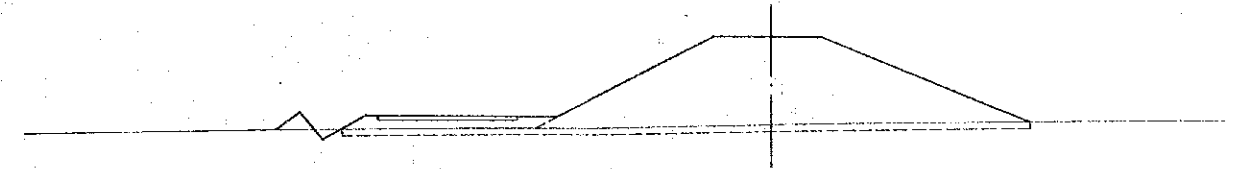
No. 42

Cote de la digue 162.68
Hauteur de la digue 1.14



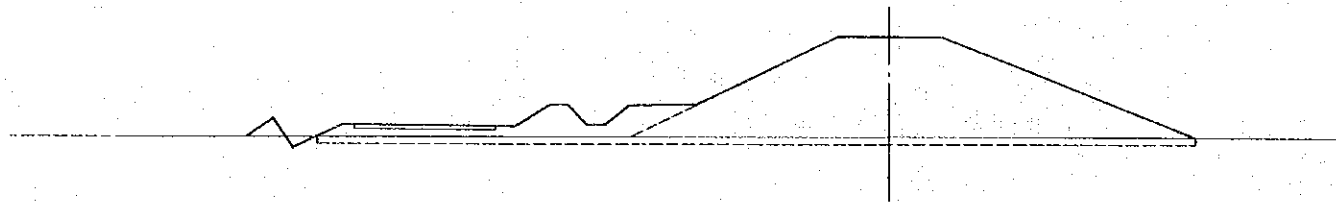
No. 64

Cote de la digue 162.40
Hauteur de la digue 2.38



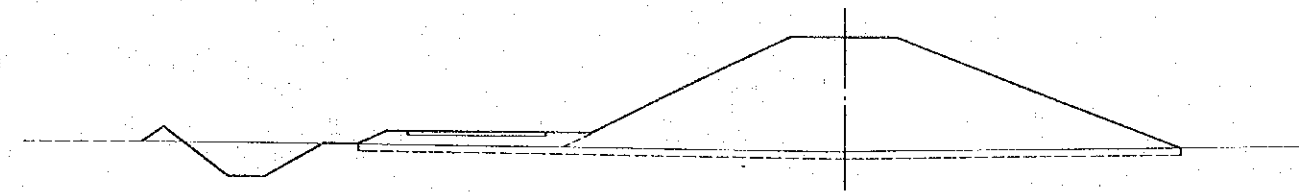
No. 48

Cote de la digue 162.61
Hauteur de la digue 2.79



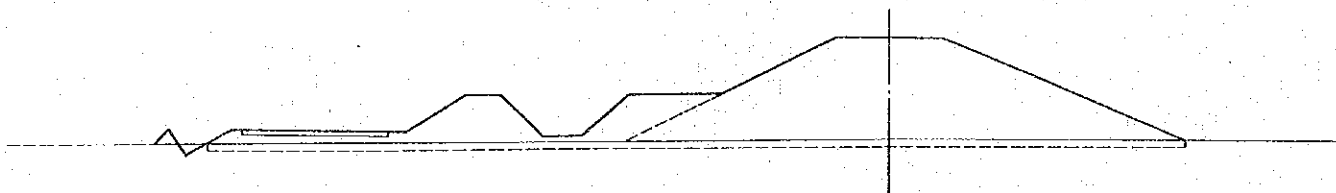
No. 71

Cote de la digue 162.33
Hauteur de la digue 3.25



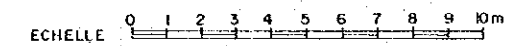
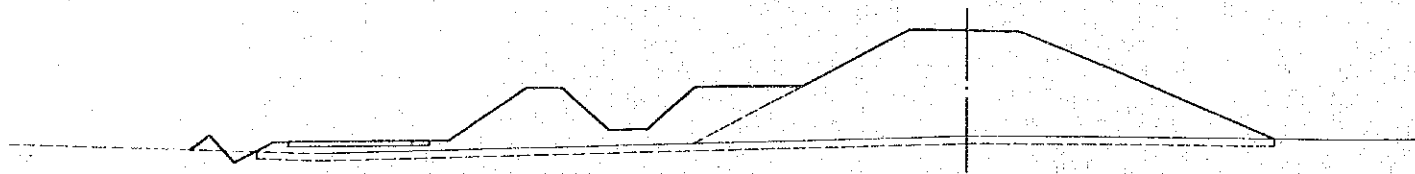
No. 54

Cote de la digue 162.54
Hauteur de la digue 2.83



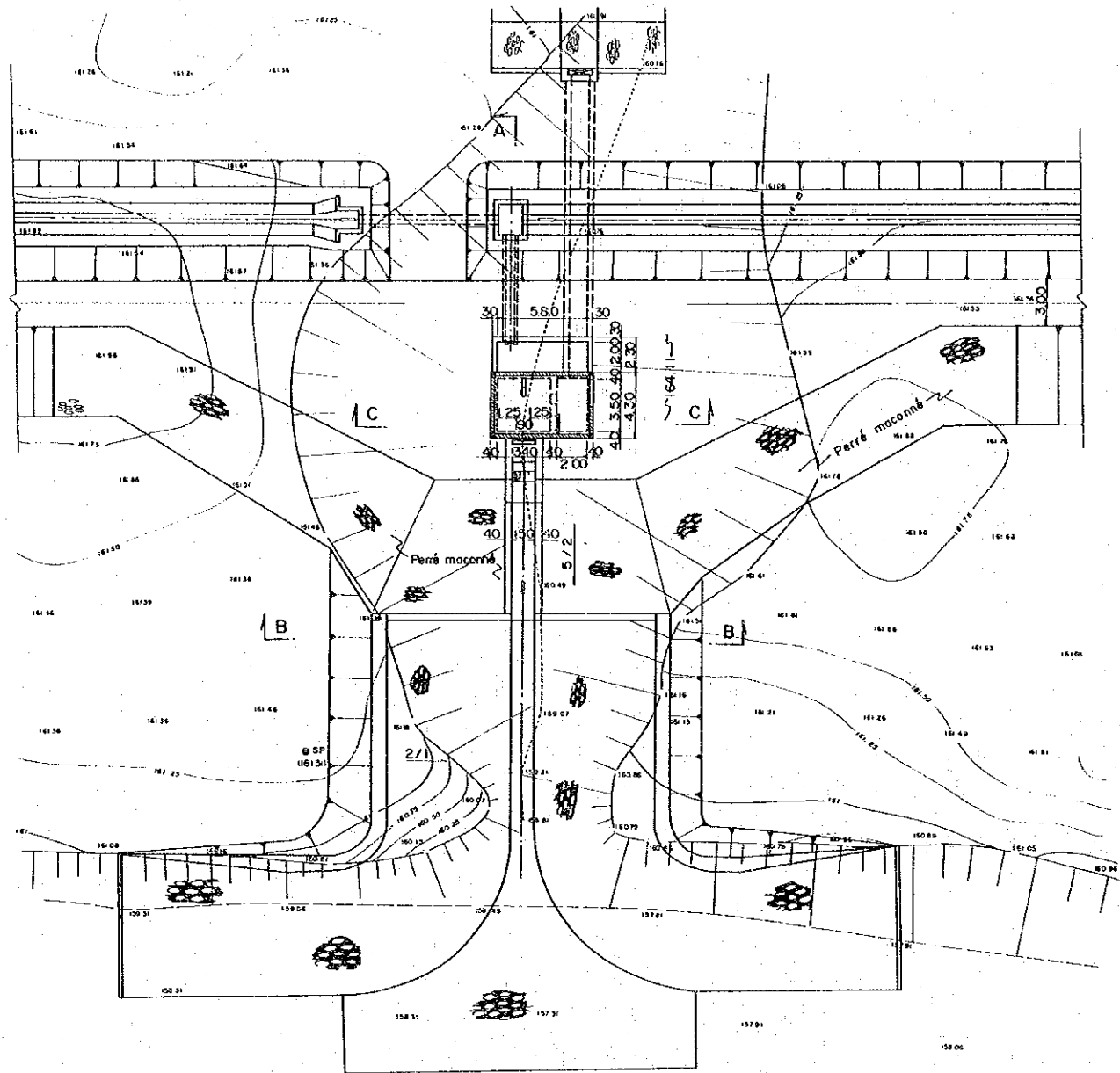
No. 59

Cote de la digue 162.47
Hauteur de la digue 2.93

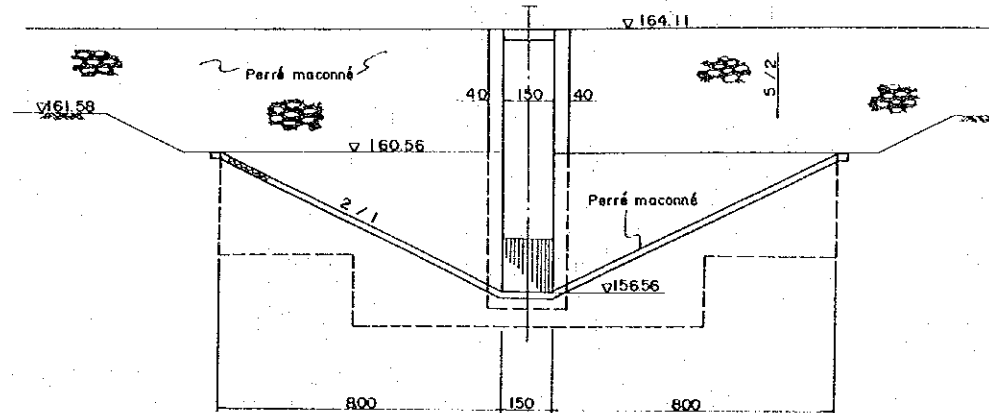


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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| PROFILS EN TRAVERS DE DIGUE Z-7 | | | |
| DATE | JUIN 1989 | PLAN N° | 35 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

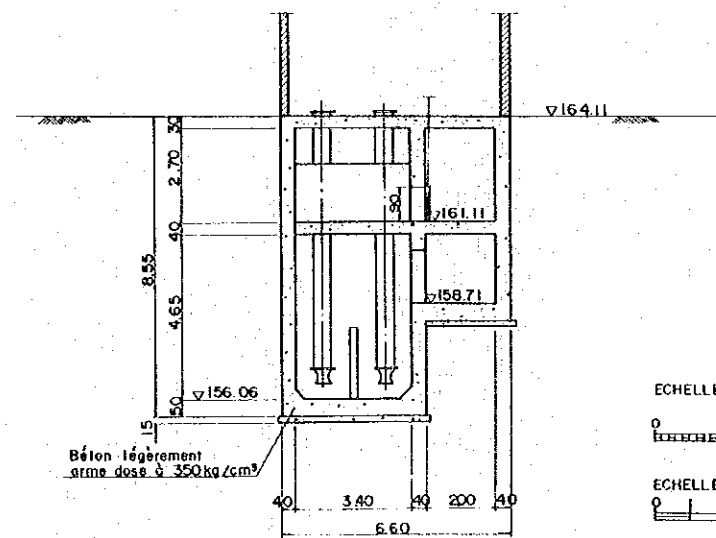
PLANS Echelles A



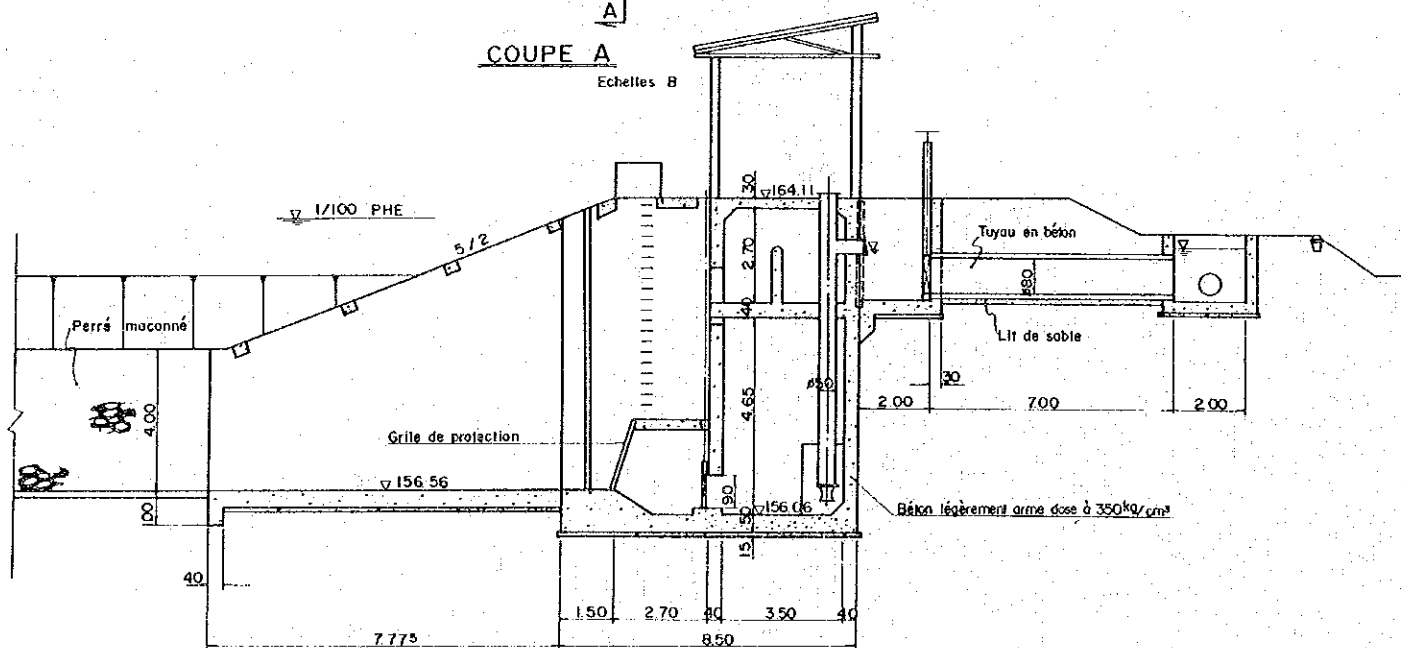
COUPE B Echelles B



COUPE C Echelles B

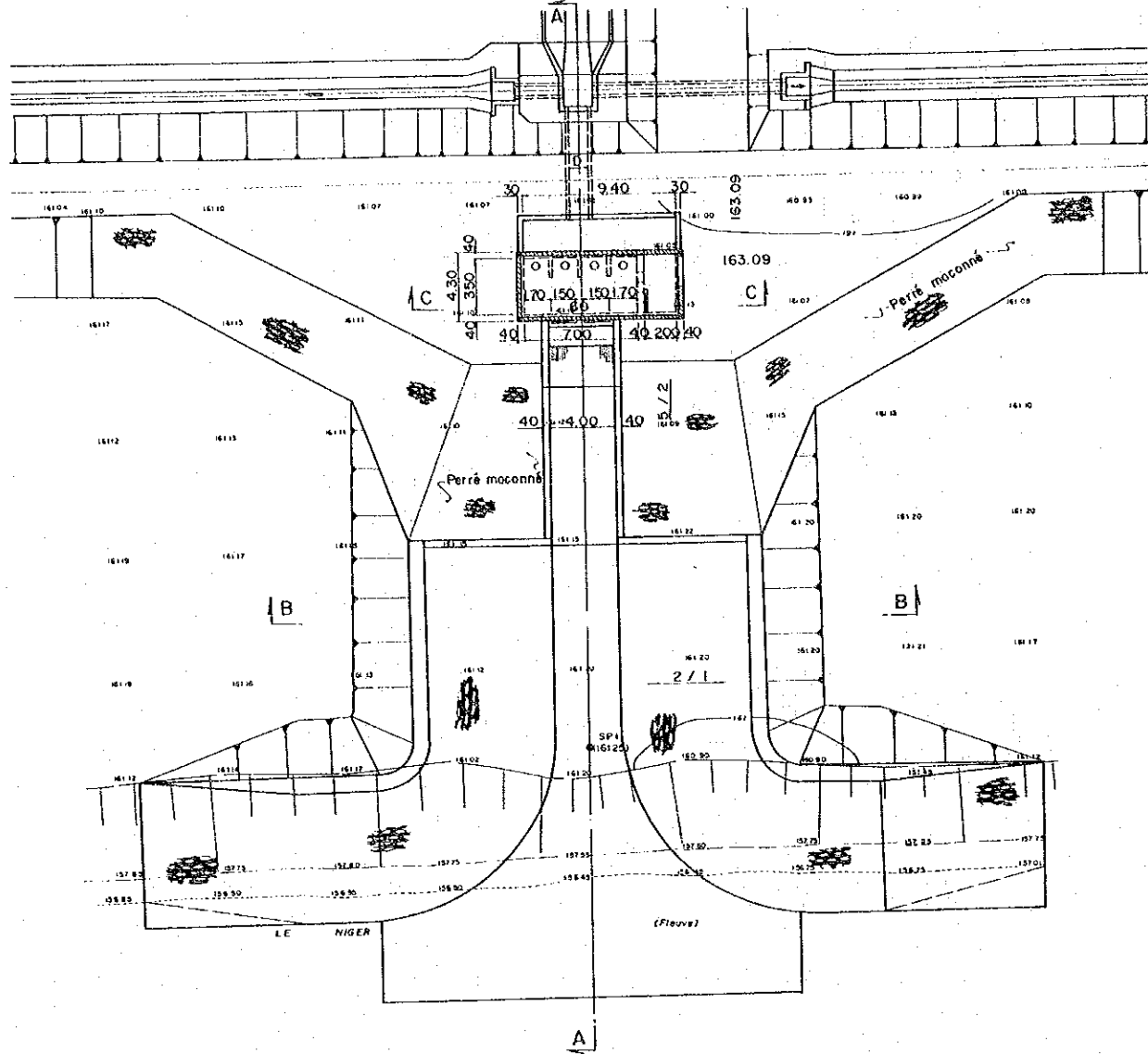


COUPE A Echelles B

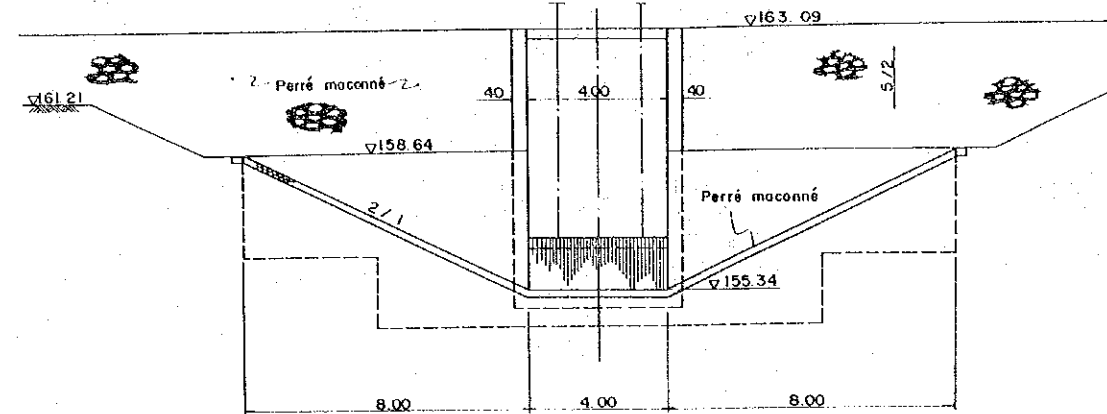


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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| STATION DE POMPAGE P1 | | | |
| DATE | JUN 1989 | PLAN N° | 36 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

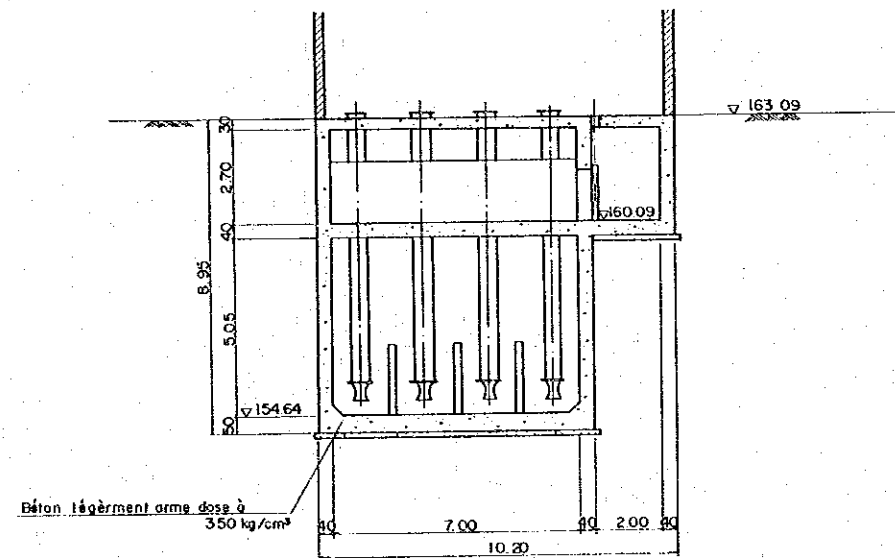
PLANS Echelles A



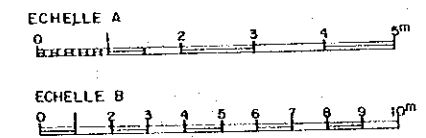
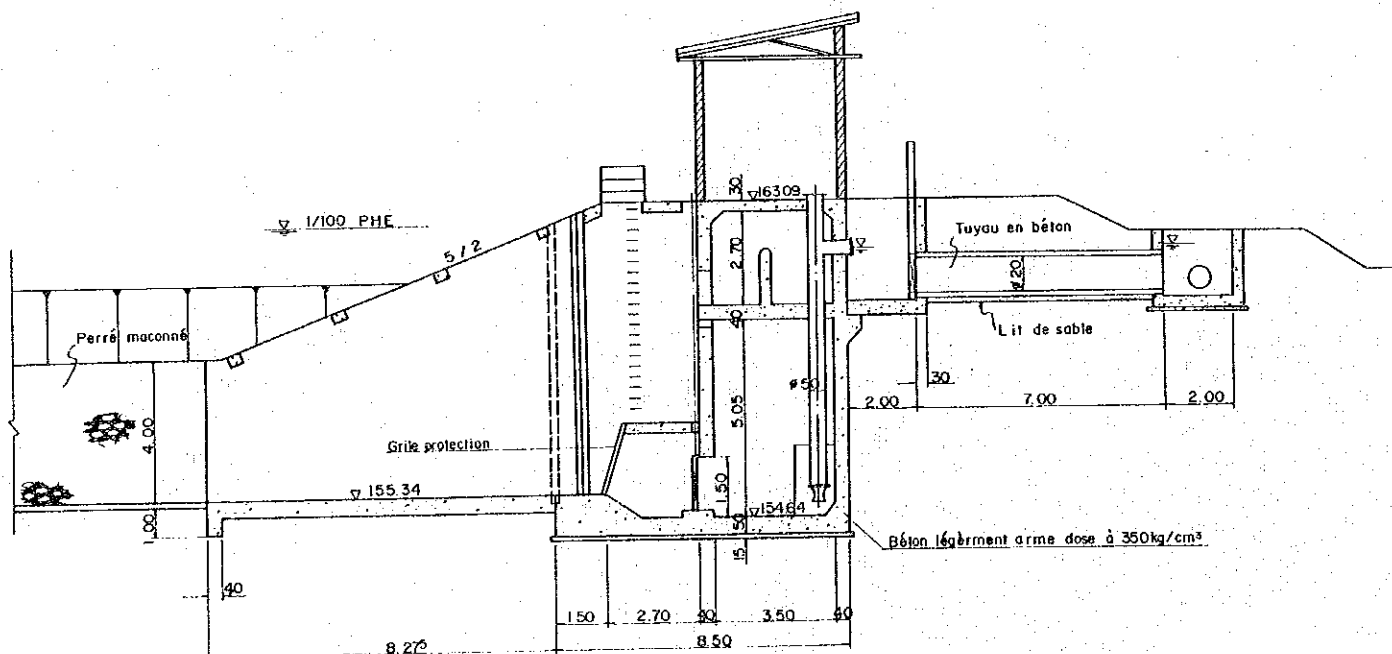
COUPE B Echelles B



COUPE C Echelles B

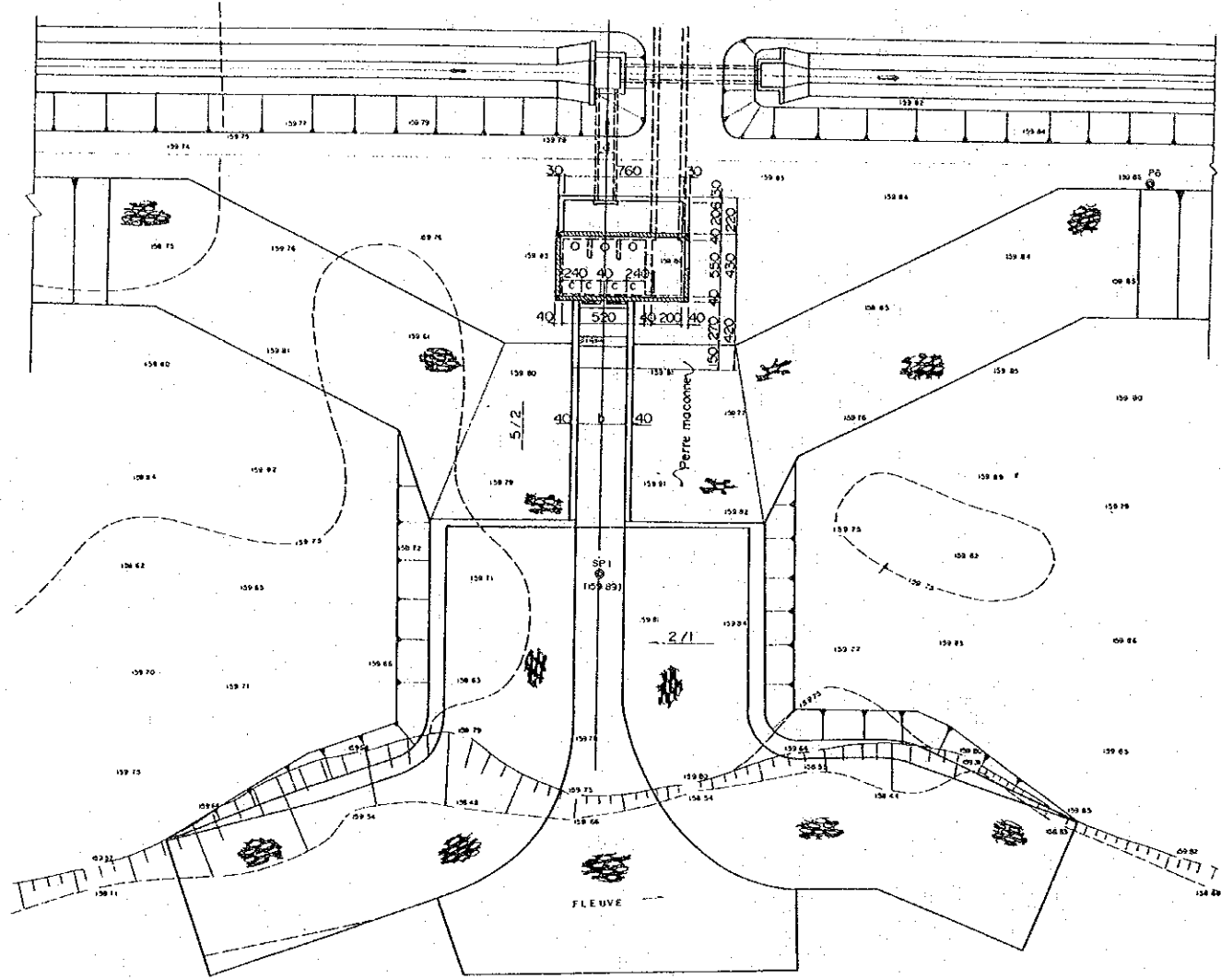


COUPE A Echelles B

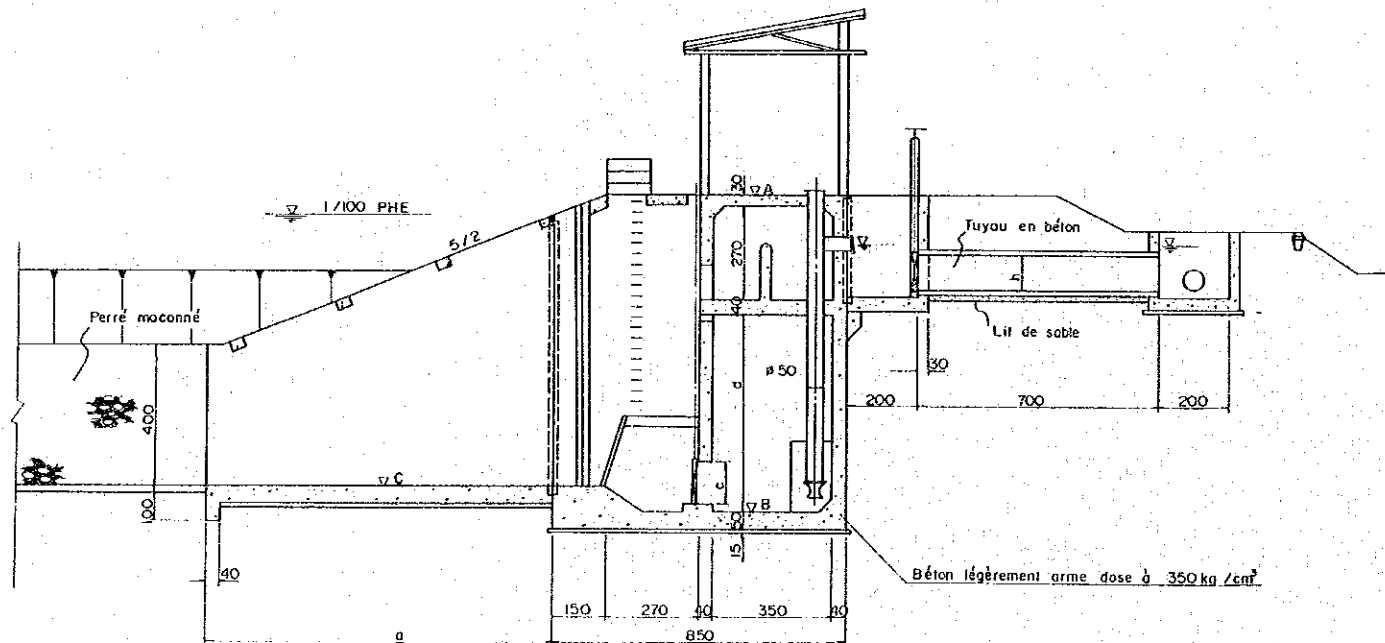


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| REPUBLIQUE DU NIGER | | | |
| PROJET D'AMENAGEMENT HYDRO-AGRICOLE DE LA CUVETTE DE OUNA-KOUANZA | | | |
| STATION DE POMPAGE P4-1 | | | |
| DATE | JUN 1989 | PLAN N° | 37 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |

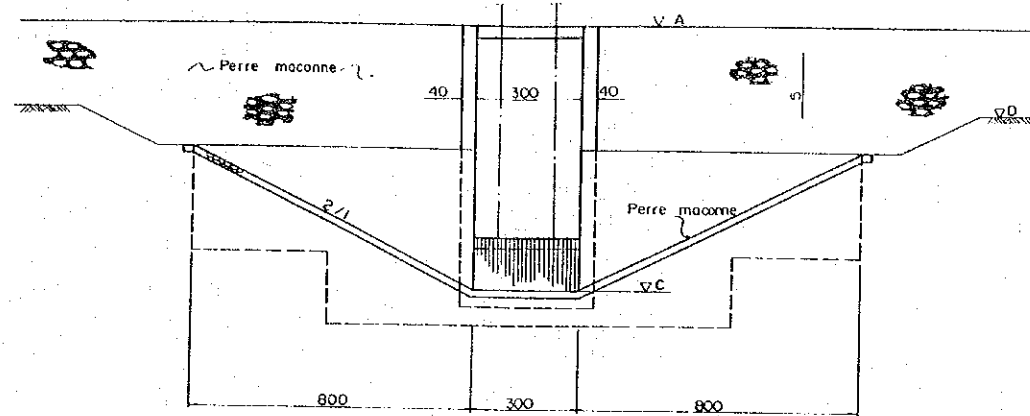
PLANS Echelles A



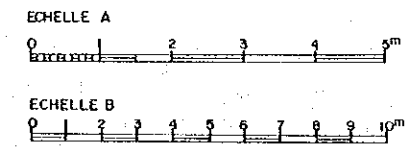
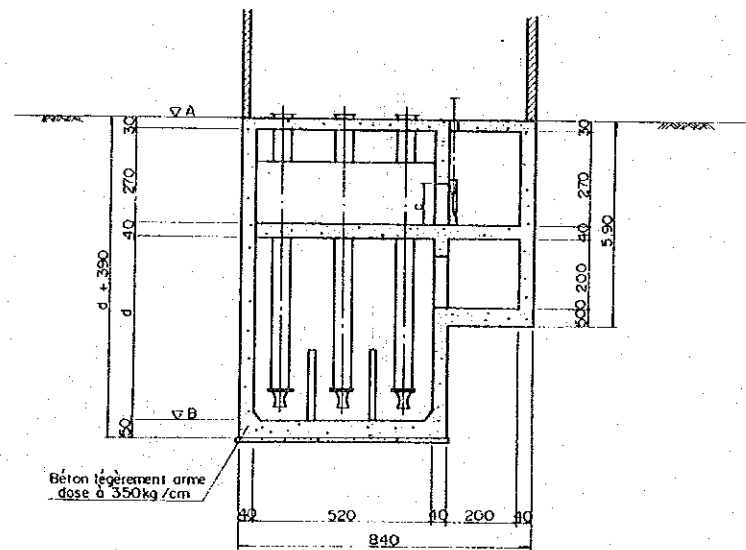
COUPE A Echelles B



COUPE B Echelles B



COUPE C Echelles B



| Nom de zone | Nom de station de pompage | A | B | C | a | b | c | d |
|-------------|---------------------------|--------|--------|--------|-------|-----|-----|-----|
| Z2 | P2 | 163.58 | 155.13 | 156.13 | 7275 | 240 | 90 | 455 |
| Z3 | P3-1 | 163.34 | 155.19 | 155.79 | 7775 | 260 | 100 | 475 |
| | P3-2 | 163.15 | 159.95 | 155.56 | 790 | 260 | 100 | 480 |
| Z4 | P4-2 | 163.02 | 154.47 | 155.17 | 8525 | 300 | 120 | 515 |
| Z5 | P5 | 162.88 | 154.23 | 154.83 | 9025 | 260 | 100 | 525 |
| Z6 | P6-1 | 162.83 | 154.03 | 154.73 | 915 | 300 | 120 | 540 |
| | P6-2 | 162.71 | 153.66 | 154.36 | 9775 | 300 | 120 | 565 |
| Z7 | P7 | 162.58 | 153.43 | 154.13 | 10025 | 300 | 120 | 575 |

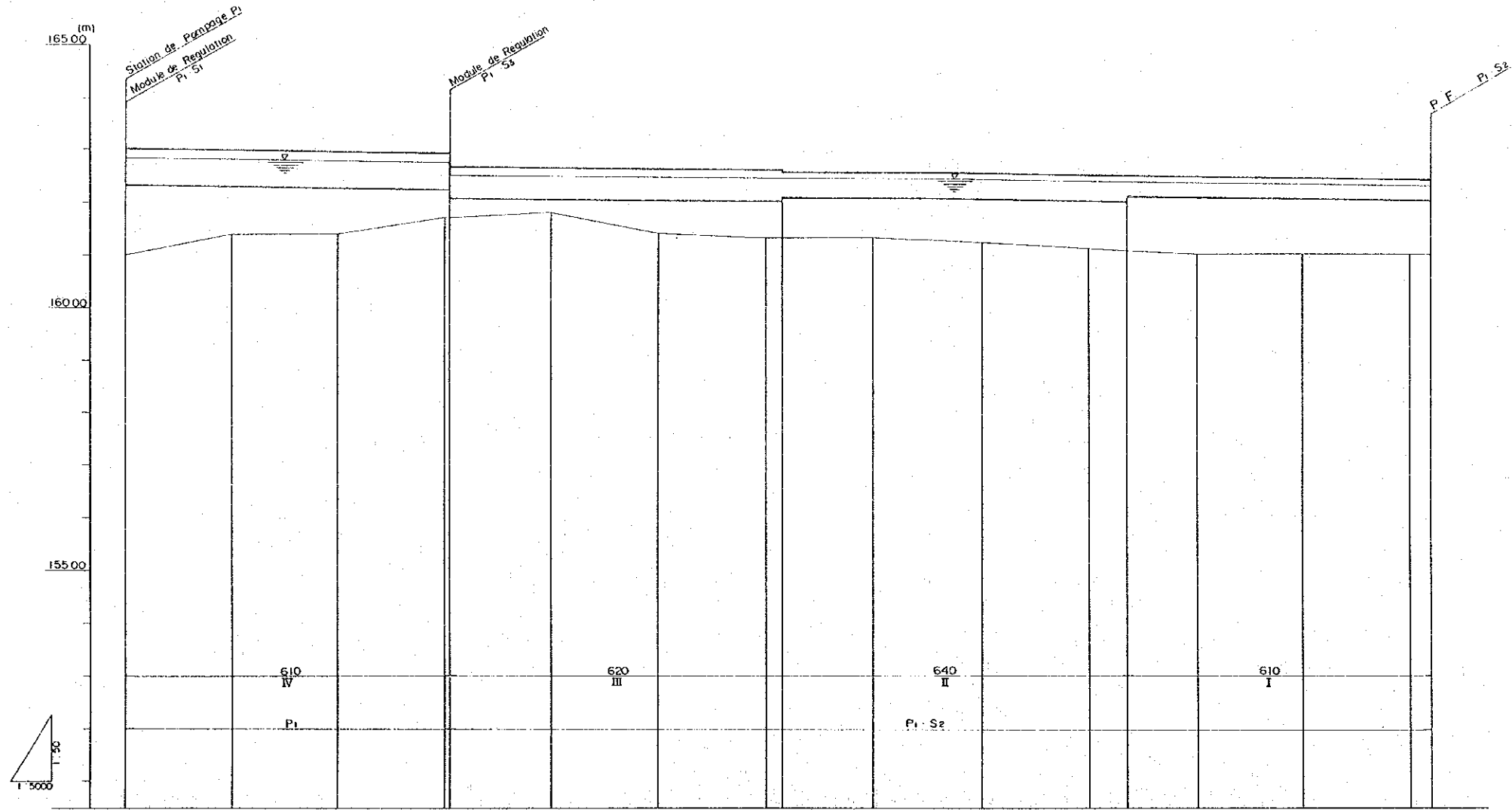
REPUBLIQUE DU NIGER

**PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA**

STATION DE POMPAGE P2-P7
(À L'EXCEPTION DE P4-1)

| | | | |
|------|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 38 |
|------|-----------|---------|----|

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



| No | DISTANCE PARTIELLE | DISTANCE CUMULEE | COTE DU TERRAIN NATUREL | COTE DU RADIER | COTE DU PLAN D'EAU | COTE DE LA CRETTE | HAUTEUR DE DEBLAI | LARGEUR DE FOND | PENTE |
|----|--------------------|------------------|-------------------------|----------------|--------------------|-------------------|-------------------|-----------------|-------|
| | | | | | | | | | |
| 2 | 200 | 200 | 161.4 | 162.30 | 162.82 | 163.00 | | 1.60 | |
| 3 | 200 | 400 | 161.4 | 162.28 | 162.80 | 162.98 | | 1.58 | |
| 4 | 200 | 600 | 161.7 | 162.26 | 162.78 | 162.96 | 1.26 | 1.32 | |
| | | 810 | 161.7 | 162.28 | 162.76 | 162.96 | 0.98 | 1.29 | |
| 5 | 200 | 800 | 161.8 | 162.08 | 162.50 | 162.66 | | 0.86 | |
| 6 | 200 | 1000 | 161.4 | 162.04 | 162.48 | 162.64 | | 1.24 | |
| 7 | 200 | 1200 | 161.3 | 162.02 | 162.46 | 162.62 | | 1.32 | |
| | | 1230 | 161.3 | 162.02 | 162.46 | 162.62 | | 1.27 | |
| 8 | 200 | 1400 | 161.3 | 162.07 | 162.44 | 162.57 | | 1.27 | |
| 9 | 200 | 1600 | 161.2 | 162.05 | 162.42 | 162.55 | | 1.35 | |
| 10 | 200 | 1800 | 161.1 | 162.03 | 162.40 | 162.53 | | 1.43 | |
| | | 1870 | 161.1 | 162.02 | 162.39 | 162.52 | | 1.42 | |
| | | | | 162.11 | 162.51 | 162.51 | | 1.47 | |
| 11 | 200 | 2000 | 161.0 | 162.10 | 162.38 | 162.50 | | 1.50 | |
| 12 | 200 | 2200 | 161.0 | 162.08 | 162.36 | 162.48 | | 1.48 | |
| 13 | | 2400 | 161.0 | 162.06 | 162.34 | 162.46 | | 1.46 | |
| | | 2480 | 161.0 | 162.04 | 162.32 | 162.44 | | 1.44 | |

REPUBLIQUE DU NIGER

**PROJET
D'AMENAGEMENT HYDRO-AGRICOLE
DE LA CUVETTE DE OUNA-KOUANZA**

PROFILS EN LONG DES CANAUX P1, P1S2

| | | | |
|--|-----------|---------|----|
| DATE | JUIN 1989 | PLAN N° | 39 |
| AGENCE JAPONAISE DE COOPERATION INTERNATIONALE | | | |