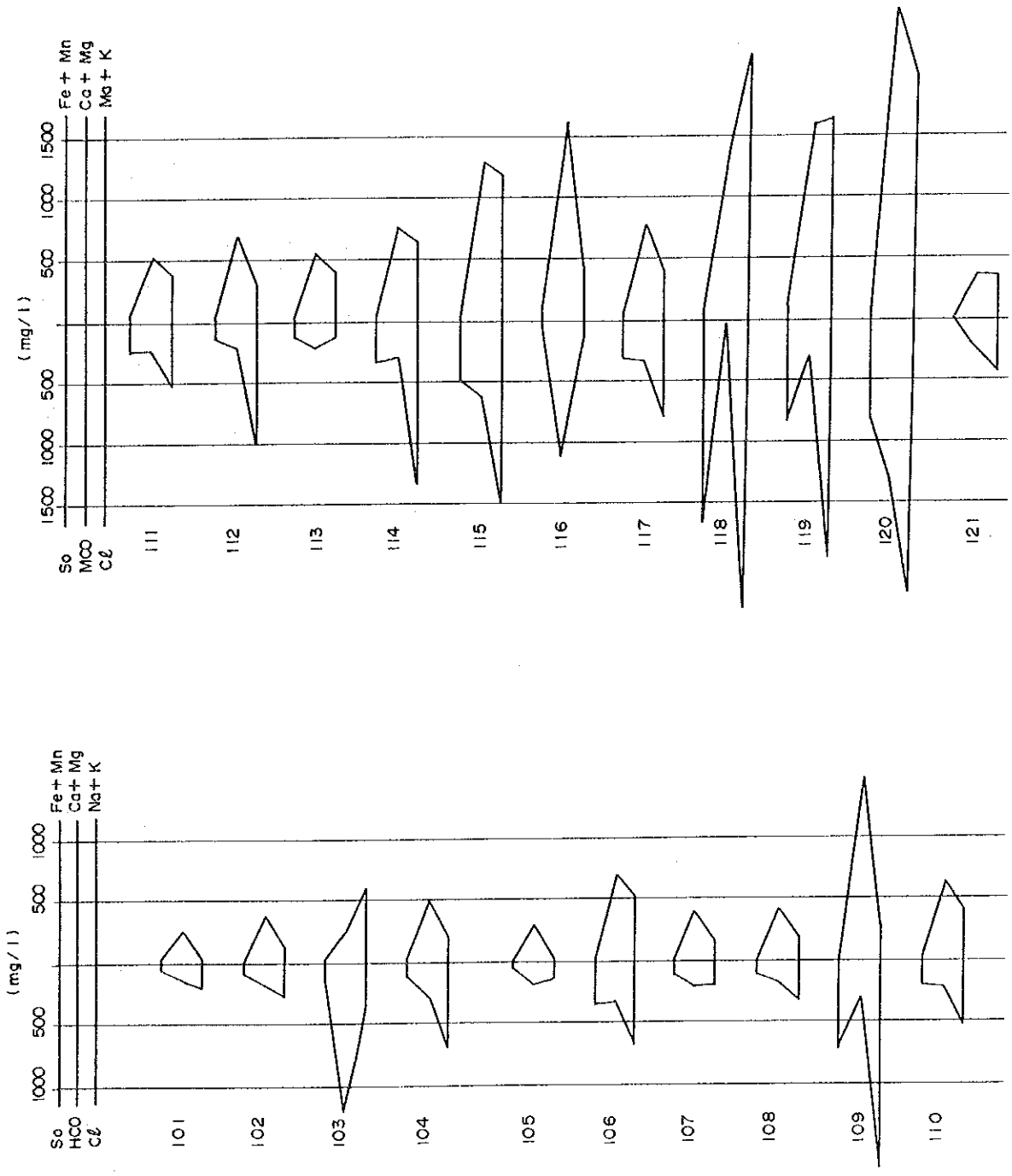


図6.10 ヘキサダイヤグラム

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

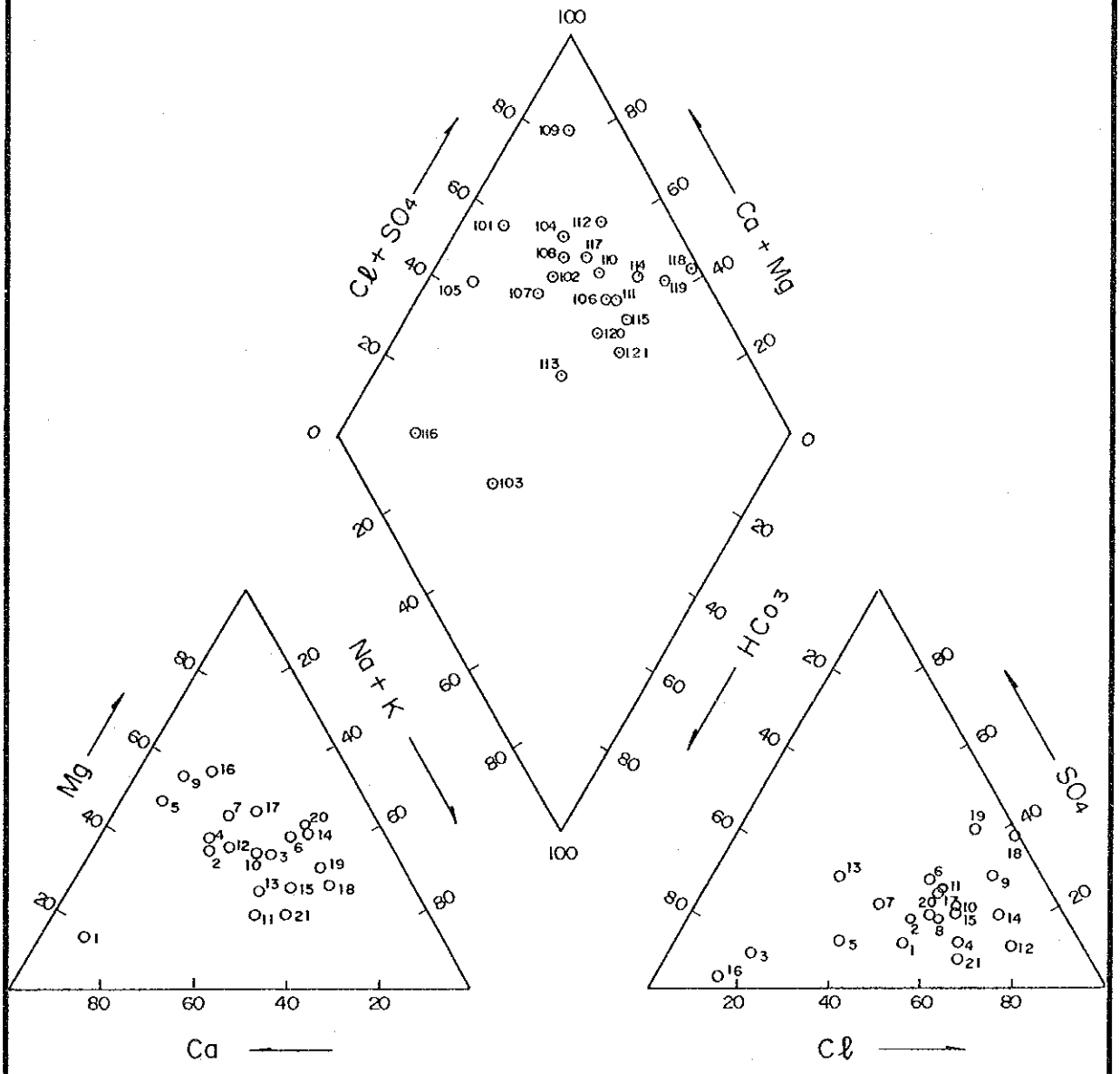


図6.11　パイパアダイヤグラム

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

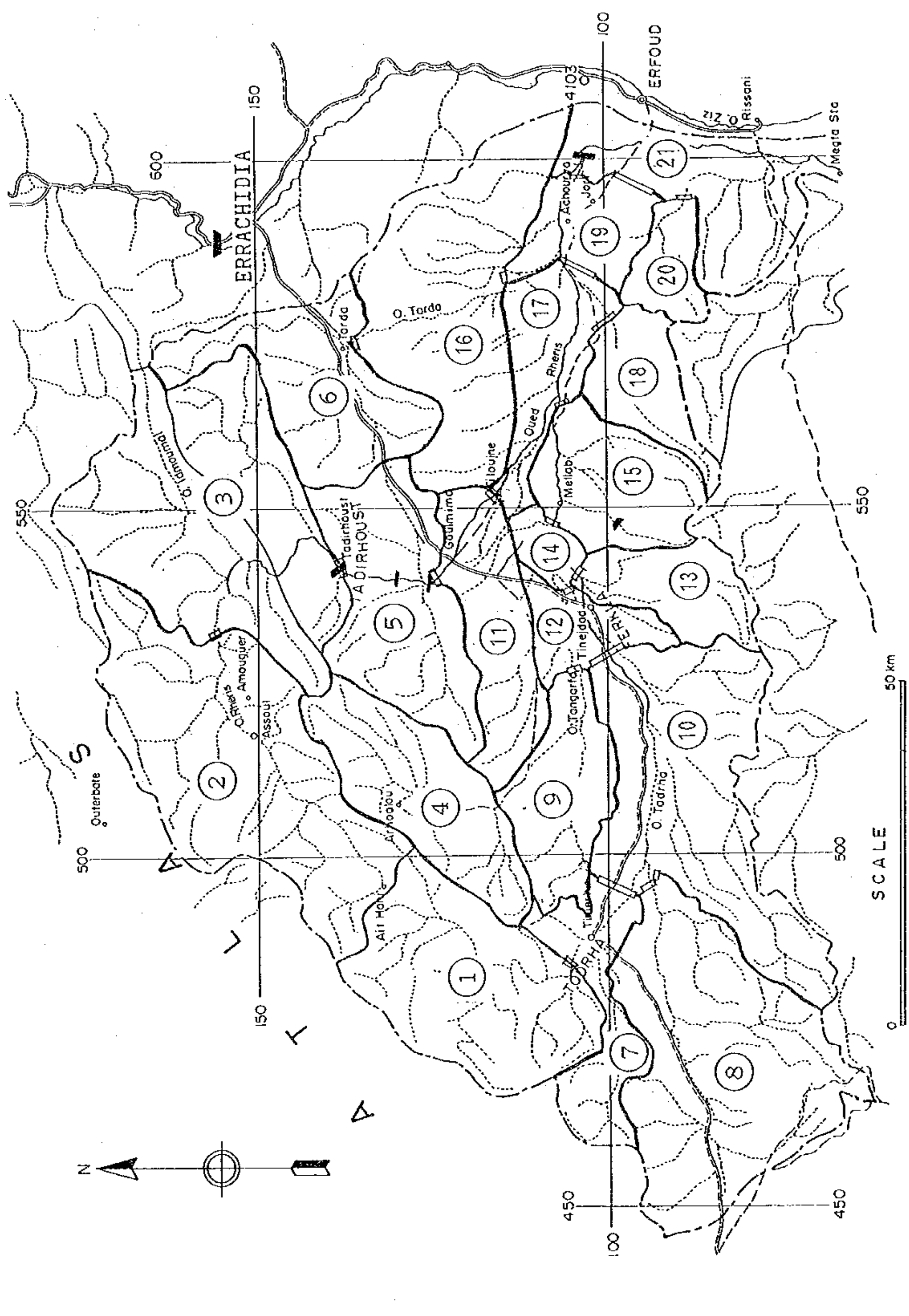
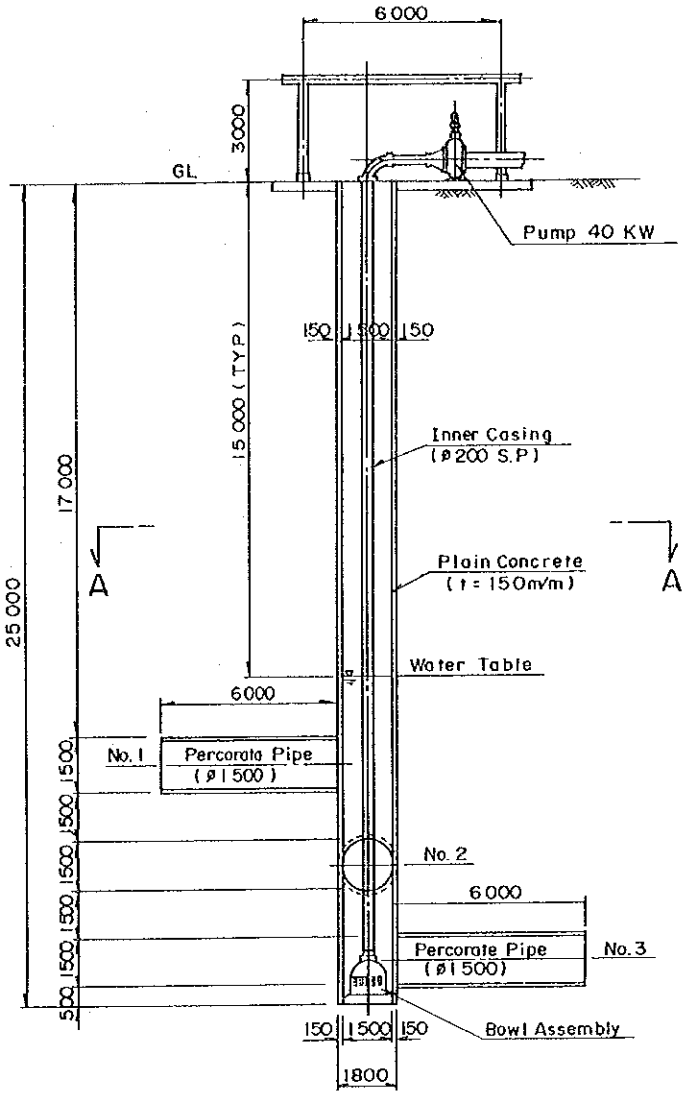


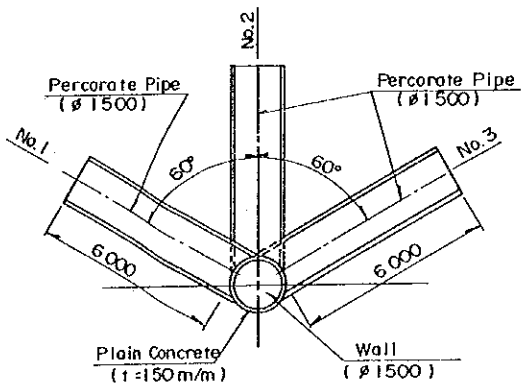
図6.12 水 理 地 質 区 分 図

ADMINISTRATION DE L'HYDRAULIQUE

ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES
DANS LE BASSIN VERSANT DU RHERIS

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



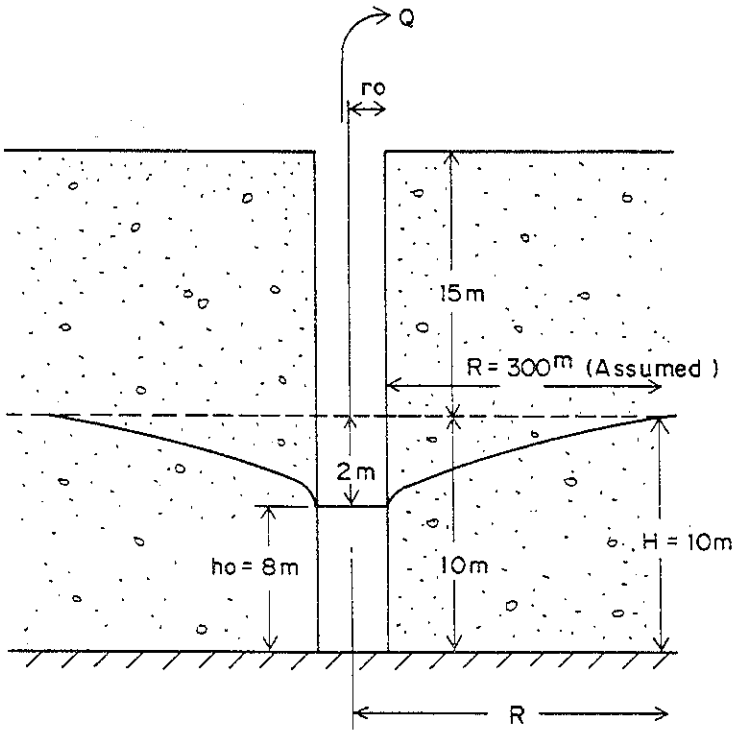


SECTION A-A

図 6.13 井 戸 構 造 図

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

図 6.14　一本当りの井戸の揚水量（定常流）



$$Q = \frac{\pi K (H^2 - ho^2)}{\log_e (R / ro)}$$

Q : discharge of well (ℓ/sec)

K : coefficient of permeability (2.4×10^{-1} cm/sec)

H and ho: saturated thickness of the aquifer at R and ro, respectively

ro : radius of well (0.75m)

R : radius of influence (300m)

S : drawdown in the well (2m)

$$Q = \frac{\pi K (H^2 - ho^2)}{\log_e (R/ro)} = \frac{3.14 \times 0.0024 (100-64)}{\log_e (300/0.75)} \fallingdotseq 0.045 m^3/sec$$

$$= 45 \ell/sec$$

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES
DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

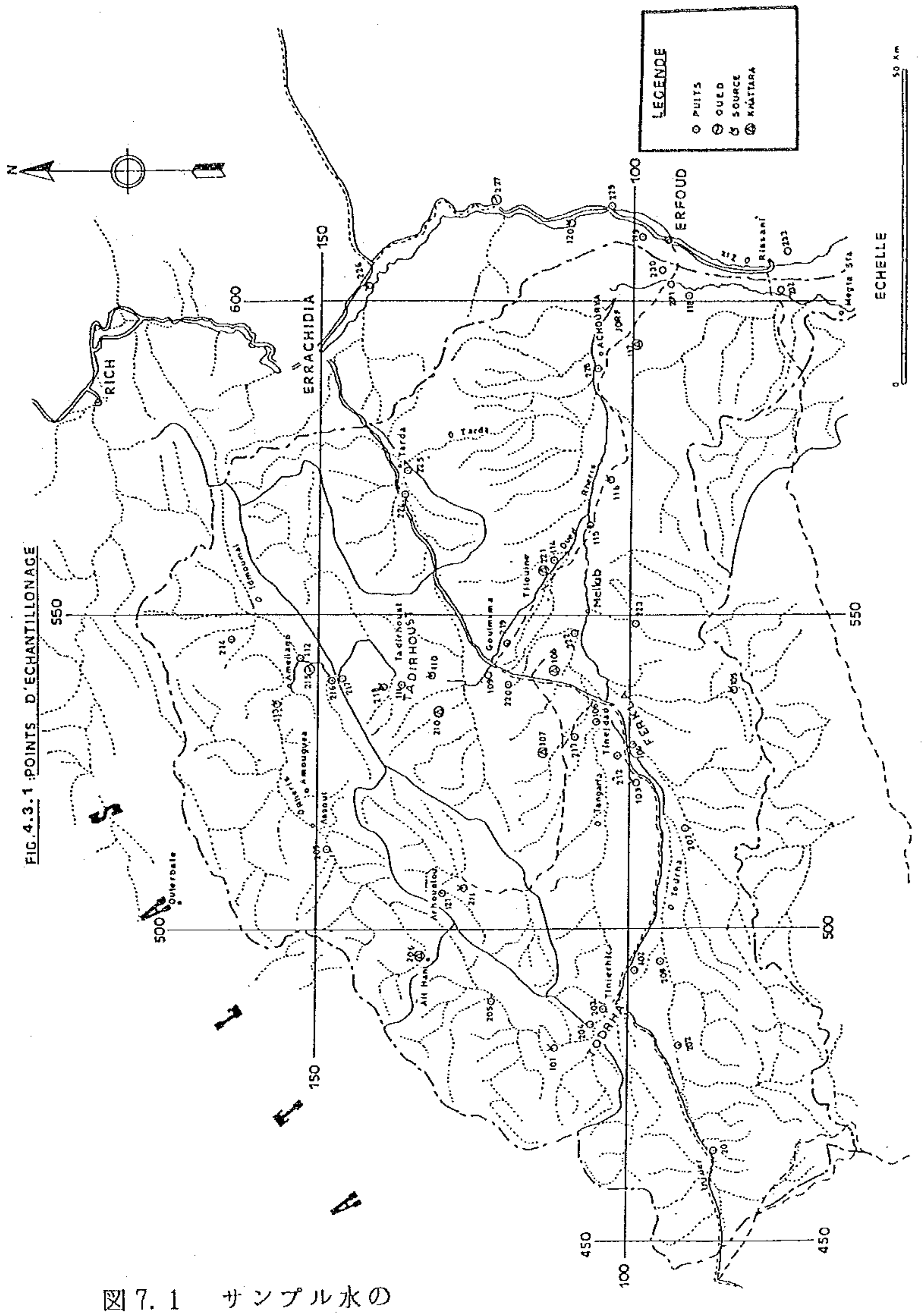


図7. 1　サンプル水の
採水地点位置図

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

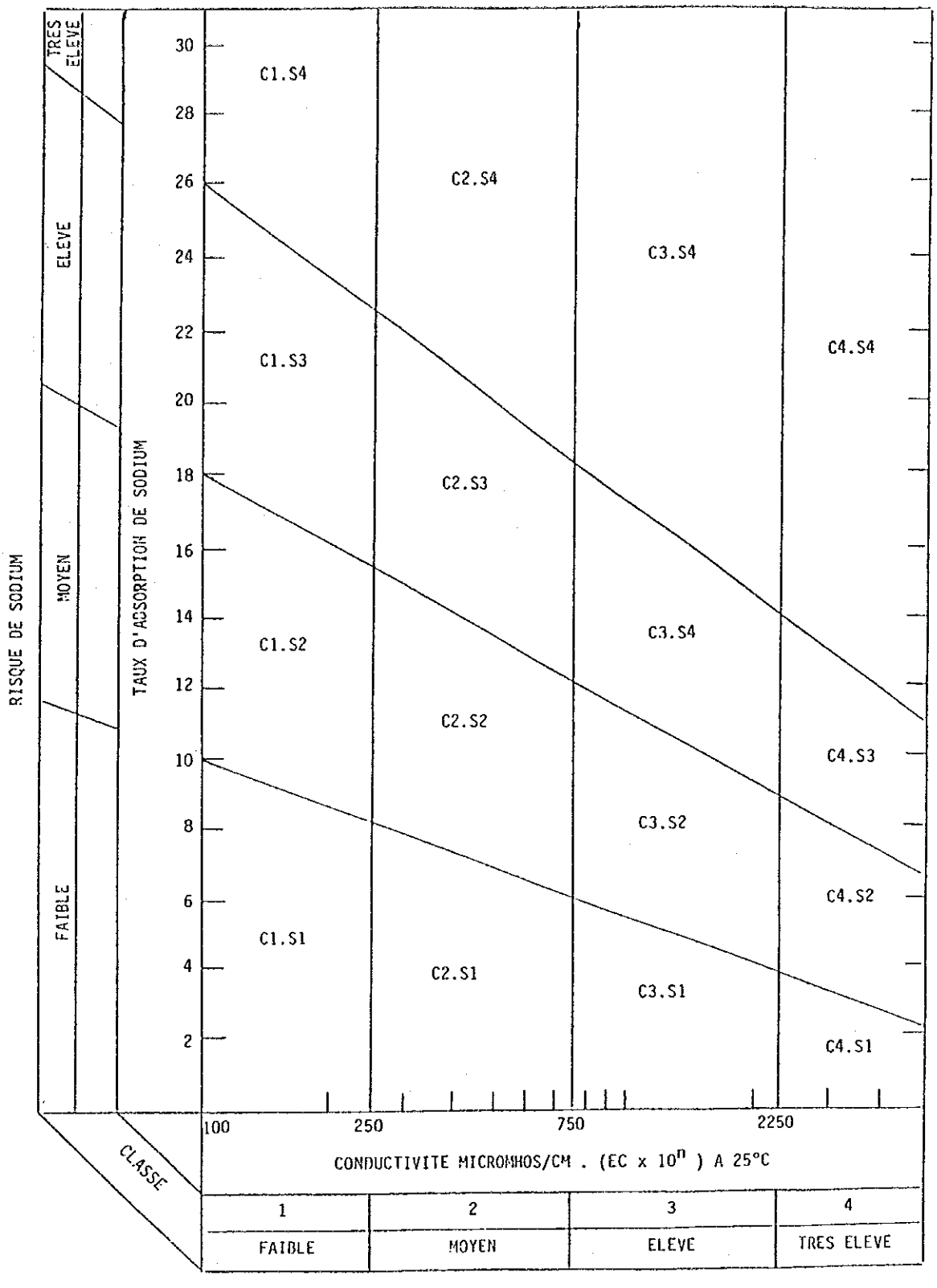


図 7. 2　灌漑用水の適性区分図

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

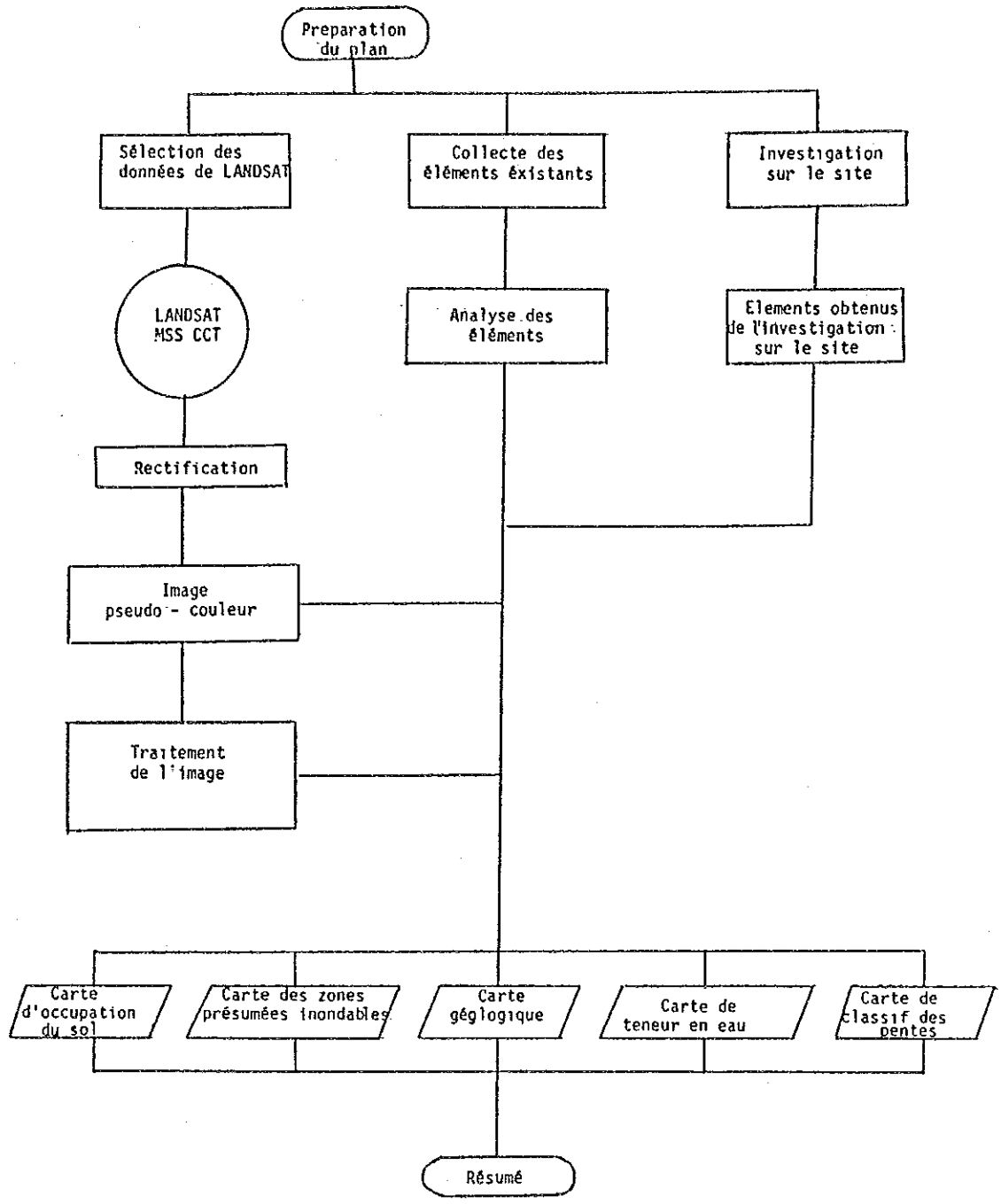


図8.1　ランドサット(LANDSAT)データ解析フローチャート

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

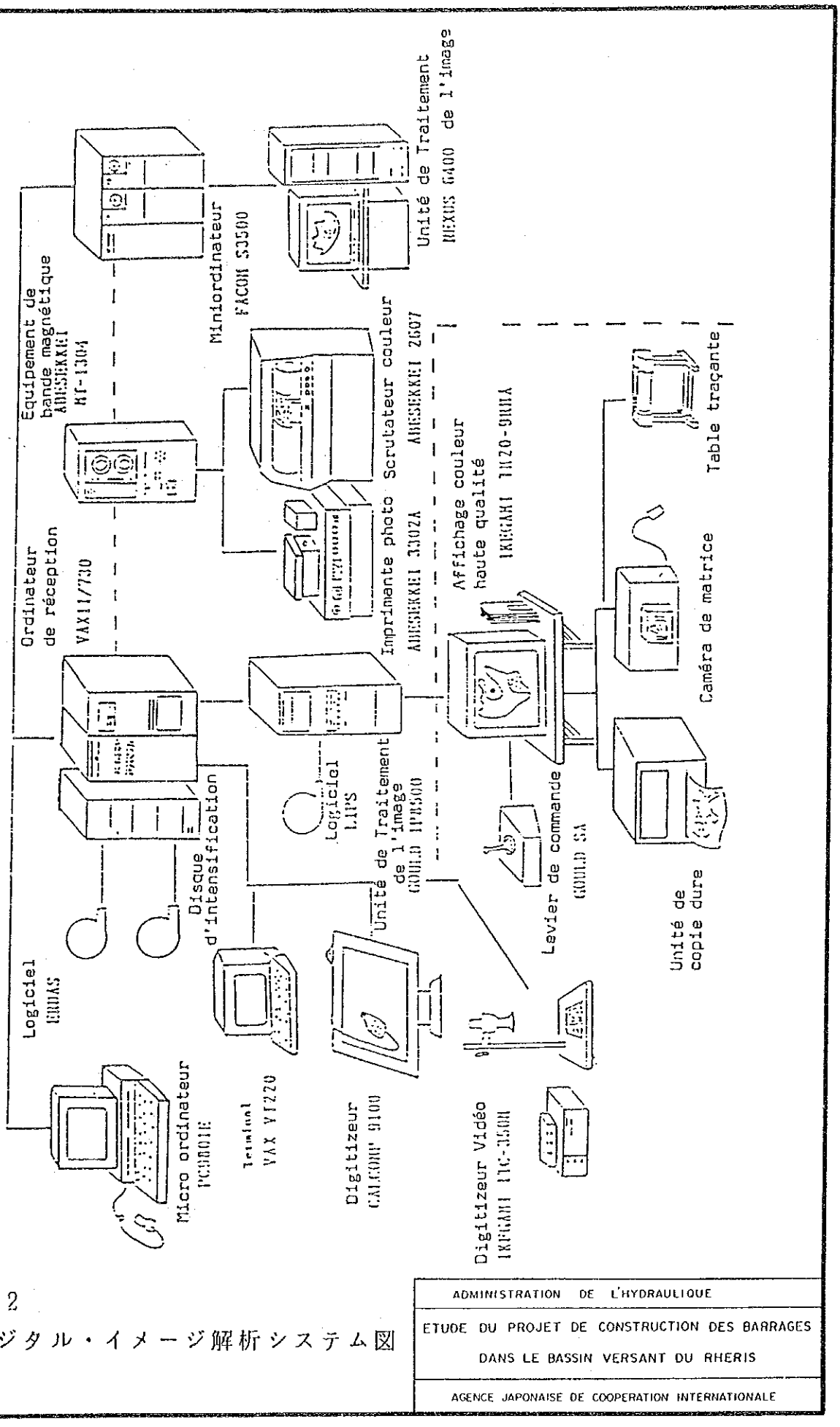
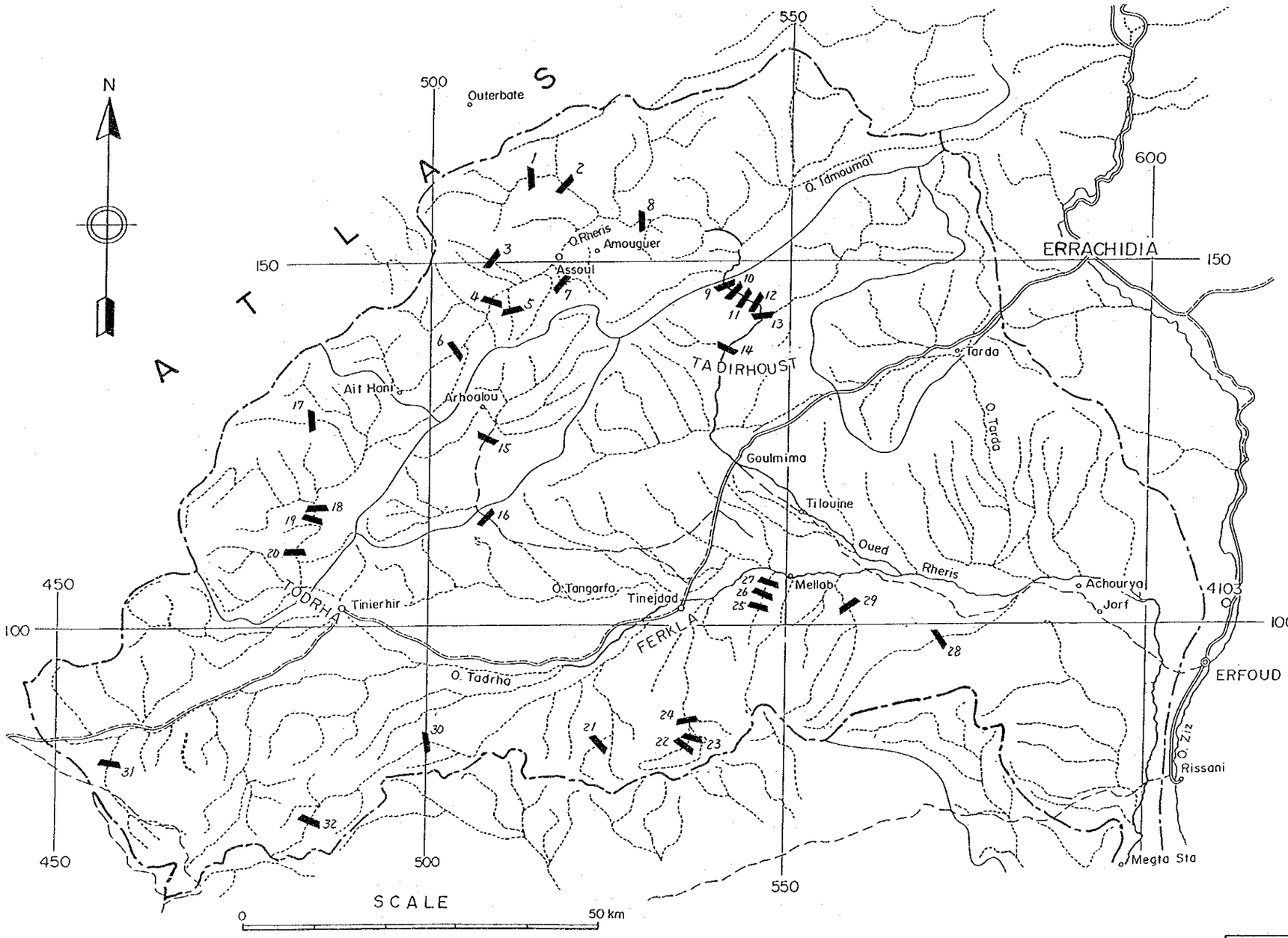


図8. 2

ディジタル・イメージ解析システム図

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



No.	Name of Damsite
1	Hoh Ou Yousef Amont(Up)
2	Hou Ou Yousef Aval(Down)
3	Ouzirham
4	Akdim
5	N'ouamane
6	Bou-Oudad
7	Aniraram
8	Imider(Rheris)
9	Tahamdount Amont(Up)
10	Tahamdount Aval(Down)
11	Ait Brahim
12	Timizgulyt Amont(Up)
13	Timizgulyt Aval(Down)
14	Tadighoust
15	Taergufout
16	Timkit
17	n'Ouaouelzi
18	n'Irhenjaoune Amont(Up)
19	n'Irhenjaoune Aval(Down)
20	Todrha
21	Ifni
22	Tarhoucht Amont(Up)
23	Tarhoucht Hoyen(middle)
24	Tarhoucht Aval(Down)
25	n'Herroutcha Amont(Up)
26	n'Herroutcha Hoyen(Hiddle)
27	n'Herroutcha Aval(Down)
28	Oukhit
29	Oulhou
30	Sarhro
31	Imider
32	Iknioun

図10.1 ダ ム サ イ ト 位 置 図

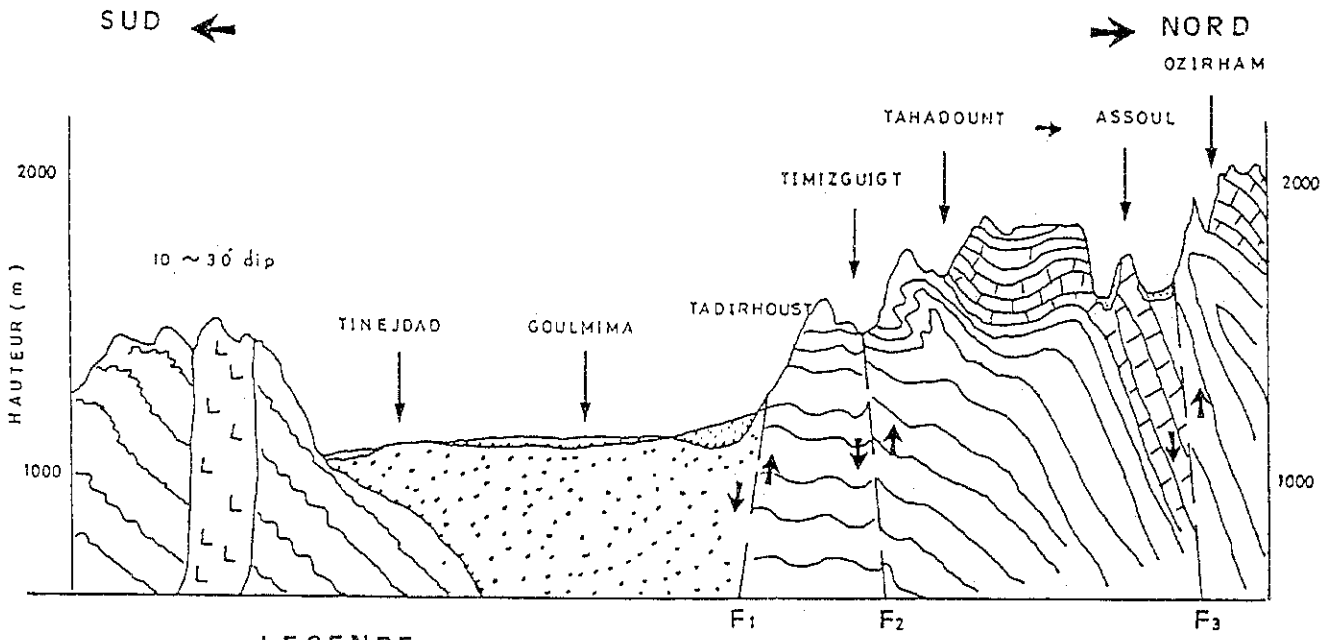
ADMINISTRATION DE L'HYDRAULIQUE

ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

図10.2 レリス盆地の横式的な地質構造図

FIG.6.2.2 :PROFIL GEOLOGIQUE SCHEMATIQUE DU BASSIN



NOTE

F1, F2 et F3 sont les principales failles du bassin. Il est présumé que l'existence entre l'oued Tanguarfa et l'oued Rheris (près de Tadirhoust) de nombreuses mines de plomb et de fer est en liaison étroite avec l'existence de la faille F2

LEGENDE

- Roches sédimentaires du Pliocène et Alluviales
- Conglomérats marneux calcaire et argileux du Crétacé
- Grès schisteux schiste argileux du Paléozoïque
- Roches sédimentaires du Jurassique
- Massif calcaire du Jurassique
- Rhyolite du Paléozoique
- Limite de non conformité
- Faille principale (mouvement relatif)

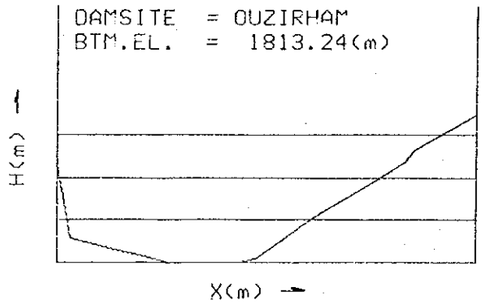
ADMINISTRATION DE L'HYDRAULIQUE

ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

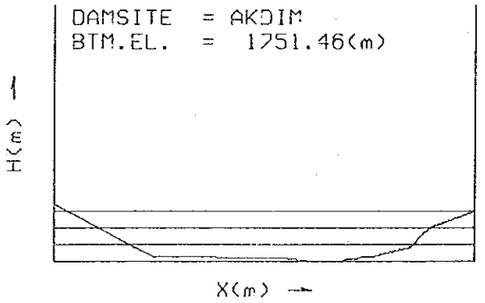
ID NO. = 3
DAMSITE = OUZIRHAM

N	X(m)	EL(m)	H(m)
1	0.00	1835.34	22.10
2	1.48	1828.88	15.64
3	3.11	1819.08	5.76
4	25.68	1813.43	0.19
5	37.22	1813.50	0.26
6	42.17	1813.24	0.00
7	46.02	1814.35	1.11
8	60.80	1824.46	11.22
9	80.50	1836.78	23.54
10	82.83	1839.56	26.32
11	97.44	1847.91	34.67



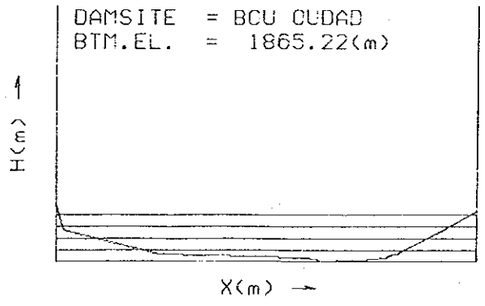
ID NO. = 4
DAMSITE = AKDIM

N	X(m)	EL(m)	H(m)
1	0.00	1785.79	34.33
2	24.73	1772.49	21.03
3	46.67	1760.47	9.01
4	58.58	1754.21	3.25
5	134.58	1753.67	2.71
6	151.15	1751.46	0.00
7	169.56	1751.88	0.34
8	173.46	1753.05	1.59
9	178.09	1753.39	1.93
10	182.49	1755.00	3.54
11	188.27	1754.98	3.53
12	218.22	1760.02	8.56
13	217.85	1768.32	16.86
14	222.15	1771.37	19.91
15	248.21	1781.72	30.26



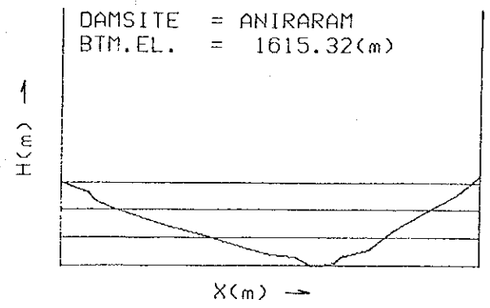
ID NO. = 6
DAMSITE = BOU OUDAD

N	X(m)	EL(m)	H(m)
1	0.00	1912.89	47.67
2	6.46	1892.25	27.03
3	85.00	1871.46	6.24
4	218.07	1869.03	3.81
5	221.23	1867.65	2.43
6	223.55	1865.68	0.46
7	229.68	1865.22	0.00
8	245.57	1867.18	1.96
9	258.78	1867.16	1.94
10	279.63	1869.24	4.02
11	285.00	1871.00	5.78
12	286.52	1872.28	6.98
13	291.00	1872.88	6.86
14	293.00	1873.88	8.66
15	324.04	1889.51	24.29
16	358.30	1908.49	43.27



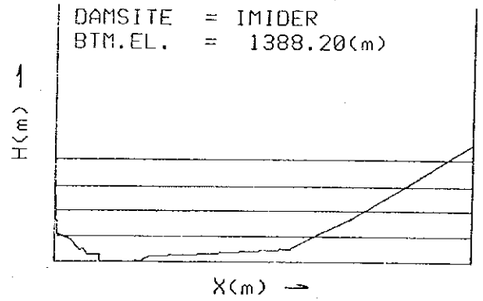
ID NO. = 7
DAMSITE = ANIRARAM

N	X(m)	EL(m)	H(m)
1	0.00	1645.21	29.89
2	9.02	1641.80	26.48
3	12.18	1638.95	23.63
4	19.03	1636.81	20.69
5	37.47	1629.68	14.38
6	50.78	1626.13	10.81
7	65.82	1622.00	6.68
8	74.81	1619.42	4.10
9	83.02	1618.68	3.36
10	88.52	1615.32	0.00
11	92.52	1615.32	0.00
12	97.18	1616.36	1.04
13	99.41	1618.35	3.03
14	108.92	1620.88	5.56
15	117.52	1627.57	12.25
16	140.57	1640.78	25.46
17	148.79	1647.25	32.43



ID NO. = 8
DAMSITE = IMIDER

N	X(m)	EL(m)	H(m)
1	0.00	1420.00	31.80
2	1.00	1398.31	11.11
3	6.45	1397.06	9.86
4	10.15	1393.14	4.94
5	11.45	1393.48	5.28
6	13.02	1391.05	2.85
7	16.78	1391.00	2.80
8	17.68	1391.00	2.80
9	18.01	1388.20	0.00
10	29.45	1388.56	0.36
11	34.28	1388.86	0.66
12	37.32	1390.91	2.71
13	51.27	1391.12	2.92
14	98.76	1393.35	5.15
15	108.25	1398.15	9.95
16	114.53	1404.75	16.55
17	162.64	1434.40	46.20



ID NO. = 9
DAMSITE = TAHAMDOUNT

N	X(m)	EL(m)	H(m)
1	0.00	1317.60	42.70
2	23.34	1298.81	15.91
3	32.25	1288.20	13.10
4	49.68	1277.00	2.10
5	68.28	1277.22	2.32
6	91.51	1274.90	0.00
7	113.07	1275.04	0.14
8	128.07	1275.04	0.14
9	129.07	1285.56	10.66
10	142.26	1291.47	16.57
11	149.37	1295.13	20.23
12	151.68	1299.13	24.23
13	165.88	1309.97	35.07

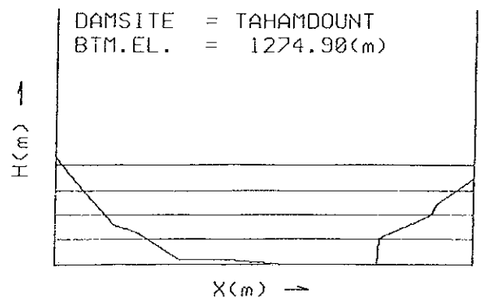
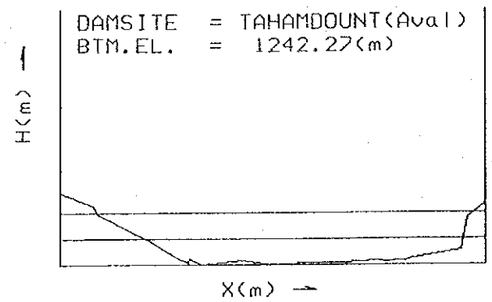


図10.3 各ダムサイトの横断図（1/4）

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

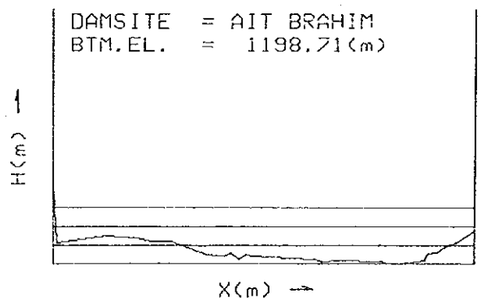
ID NO. = 10
DAMSITE = TAHAMDOUNT(Aval)

N	X(m)	EL(m)	H(m)
1	0.00	1220.33	20.06
2	12.42	1264.92	22.65
3	14.29	1261.80	19.59
4	33.78	1251.58	9.23
5	44.14	1244.98	2.71
6	47.62	1243.18	0.91
7	48.12	1244.78	2.51
8	53.20	1242.27	0.00
9	67.21	1244.38	2.11
10	75.18	1242.93	0.66
11	101.14	1243.26	0.99
12	106.71	1243.62	1.35
13	110.12	1244.88	1.73
14	119.58	1244.19	1.92
15	121.18	1243.88	1.61
16	128.92	1244.15	1.88
17	129.71	1244.75	2.48
18	149.71	1248.33	6.06
19	151.73	1260.73	18.46
20	158.46	1266.04	23.77



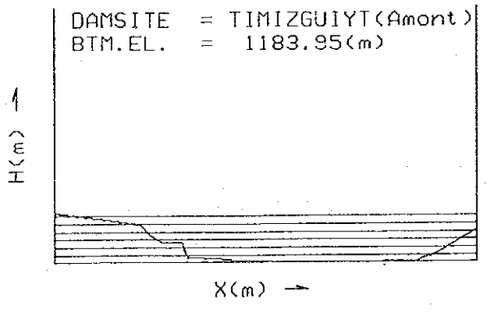
ID NO. = 11
DAMSITE = AIT BRAHIM

N	X(m)	EL(m)	H(m)
1	0.00	1236.92	38.21
2	2.25	1203.96	11.25
3	20.24	1213.66	14.95
4	43.84	1212.46	13.75
5	50.83	1210.85	12.14
6	60.84	1210.56	11.85
7	78.91	1204.15	5.44
8	83.85	1203.59	4.88
9	88.24	1203.41	4.70
10	91.89	1204.31	5.60
11	95.20	1201.26	2.55
12	98.86	1204.04	5.33
13	101.78	1203.29	4.58
14	121.78	1202.00	3.29
15	134.52	1201.38	2.67
16	138.68	1200.24	1.53
17	142.25	1200.65	1.95
18	168.58	1199.35	1.24
19	171.52	1199.20	0.57
20	179.58	1198.71	0.00
21	191.24	1208.93	2.22
22	193.22	1204.66	5.95
23	197.69	1205.14	6.43
24	203.26	1208.01	10.30
25	207.63	1210.46	11.75
26	216.78	1216.29	17.58



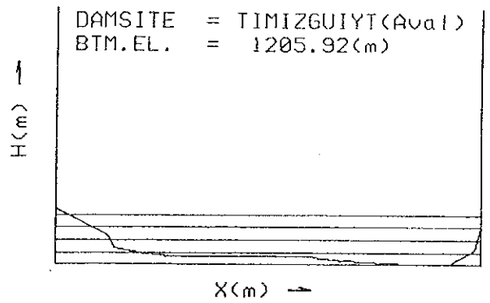
ID NO. = 12
DAMSITE = TIMIZGUIYT(Amont)

N	X(m)	EL(m)	H(m)
1	0.00	1247.40	63.45
2	106.98	1232.70	48.83
3	118.32	1219.50	35.55
4	133.78	1209.60	25.65
5	157.25	1209.61	25.66
6	160.98	1208.25	24.30
7	161.92	1200.45	16.50
8	166.34	1191.31	7.36
9	207.32	1189.76	5.81
10	211.27	1187.33	3.38
11	231.27	1185.76	1.81
12	239.27	1185.60	1.65
13	242.27	1186.32	2.37
14	269.22	1185.73	1.78
15	279.31	1183.95	0.00
16	283.32	1184.04	0.09
17	342.31	1184.67	0.72
18	382.33	1184.73	0.78
19	391.33	1185.39	1.44
20	429.27	1186.00	2.05
21	433.82	1185.96	1.95
22	453.27	1186.46	2.51
23	468.31	1190.15	6.20
24	471.32	1194.07	10.12
25	488.59	1204.83	20.88
26	506.54	1215.26	31.31
27	523.84	1224.67	40.72



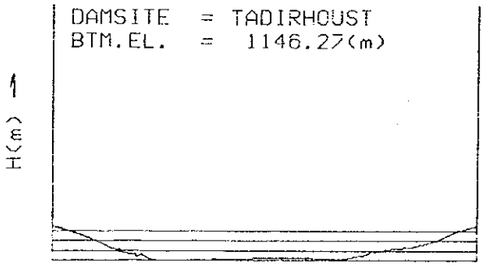
ID NO. = 13
DAMSITE = TIMIZGUIYT(Aval)

N	X(m)	EL(m)	H(m)
1	0.00	1250.48	44.48
2	39.58	1229.34	23.42
3	41.34	1228.85	22.13
4	46.24	1219.94	14.02
5	69.97	1214.49	8.57
6	81.96	1213.64	7.72
7	82.97	1212.65	6.73
8	153.97	1212.68	6.76
9	169.97	1213.85	7.13
10	195.96	1213.88	7.88
11	204.12	1211.38	5.38
12	216.83	1210.24	4.32
13	222.32	1208.80	2.88
14	257.41	1207.59	1.67
15	273.39	1206.79	0.87
16	278.36	1206.13	0.21
17	295.11	1205.92	0.00
18	305.53	1206.59	0.67
19	309.88	1210.34	4.42
20	314.96	1213.07	7.15
21	321.87	1216.38	10.38
22	323.77	1218.37	12.45
23	327.67	1235.36	29.44



ID NO. = 14
DAMSITE = TADIRHOUST

N	X(m)	EL(m)	H(m)
1	0.00	1180.93	34.72
2	2.32	1178.75	32.48
3	28.69	1171.28	24.93
4	52.14	1161.68	15.33
5	57.78	1158.12	11.85
6	65.92	1157.78	11.43
7	66.94	1155.41	9.14
8	77.22	1152.91	6.64
9	81.31	1152.53	6.26
10	83.14	1150.88	4.53
11	87.21	1153.03	6.73
12	95.56	1147.29	1.52
13	100.53	1146.53	0.26
14	117.68	1146.48	0.21
15	143.33	1146.27	0.00
16	168.87	1148.06	1.79
17	222.08	1149.18	2.83
18	285.86	1147.92	1.65
19	307.21	1152.72	6.45
20	313.18	1156.84	9.77
21	314.18	1154.54	8.27
22	335.18	1158.65	12.38
23	351.25	1160.13	13.86
24	376.65	1166.44	20.17
25	391.72	1175.13	28.86
26	411.67	1180.49	34.22



ID NO. = 15
DAMSITE = TAERGUIOUT

N	X(m)	EL(m)	H(m)
1	0.00	1421.98	46.98
2	2.18	1405.27	30.27
3	6.81	1393.56	18.56
4	22.54	1386.42	11.42
5	34.24	1375.37	0.37
6	48.24	1375.00	0.00
7	53.23	1375.10	0.10
8	73.29	1388.94	13.94
9	78.48	1390.07	15.07
10	115.20	1421.05	46.05

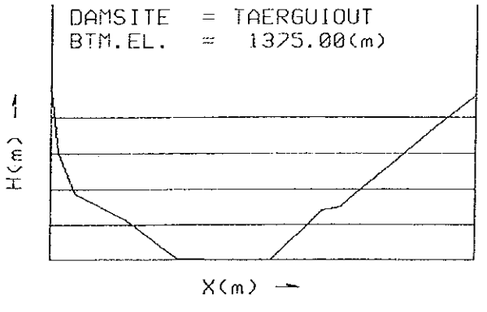


図10.3 各ダムサイトの横断図 (2/4)

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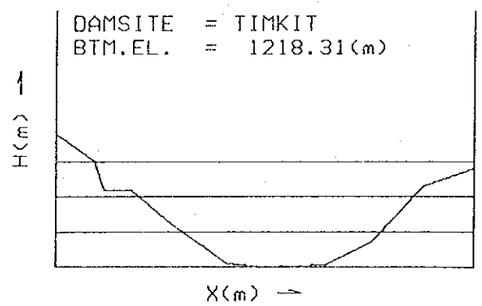
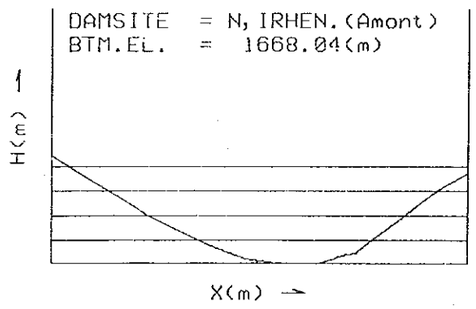
ID NO. = 16
DAMSITE = TIMKIT

N	X(m)	EL(m)	H(m)
1	0.00	1255.90	37.59
2	10.82	1240.28	29.97
3	13.57	1240.02	21.76
4	20.77	1240.00	21.69
5	30.59	1231.74	13.43
6	42.25	1219.48	1.17
7	52.24	1218.31	0.00
8	74.54	1218.22	0.91
9	87.69	1225.90	7.59
10	102.76	1241.34	23.03
11	116.45	1246.45	28.14



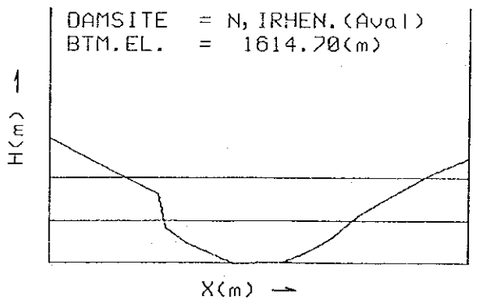
ID NO. = 18
DAMSITE = N, IRHEN.(Amont)

N	X(m)	EL(m)	H(m)
1	0.00	1712.13	44.09
2	36.35	1689.00	20.96
3	61.53	1675.70	7.66
4	72.12	1670.09	2.05
5	89.23	1668.04	0.00
6	105.61	1668.42	0.38
7	109.12	1669.00	0.96
8	117.26	1672.15	4.11
9	121.25	1672.34	4.30
10	124.70	1675.64	7.60
11	136.76	1684.71	16.67
12	154.18	1692.13	29.09
13	166.77	1705.08	37.04



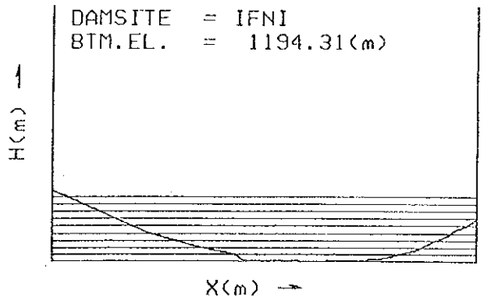
ID NO. = 19
DAMSITE = N, IRHEN.(Aval)

N	X(m)	EL(m)	H(m)
1	0.00	1643.77	29.07
2	9.33	1638.77	24.07
3	24.64	1630.78	16.08
4	26.29	1623.02	8.32
5	31.18	1619.57	4.87
6	41.56	1614.70	0.00
7	52.08	1615.08	0.38
8	53.48	1615.15	0.45
9	58.17	1616.92	2.22
10	62.45	1619.55	4.85
11	64.53	1620.90	6.20
12	78.22	1625.74	11.04
13	79.26	1631.03	16.38
14	80.81	1635.25	20.55
15	95.68	1639.31	24.31



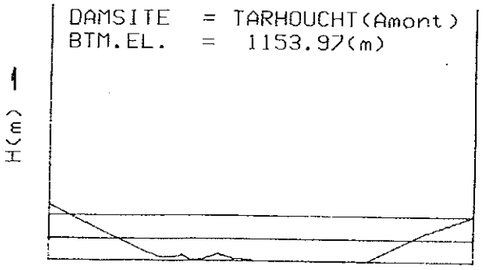
ID NO. = 21
DAMSITE = IFNI

N	X(m)	EL(m)	H(m)
1	0.00	1292.33	98.02
2	113.25	1241.35	47.04
3	131.67	1233.28	38.95
4	158.18	1225.68	31.37
5	179.16	1219.99	25.68
6	203.87	1212.34	18.03
7	240.93	1204.21	9.90
8	252.60	1197.36	3.05
9	268.60	1196.58	2.27
10	300.60	1197.49	3.18
11	322.60	1197.16	2.85
12	329.67	1195.60	1.37
13	352.83	1194.31	0.00
14	372.80	1196.20	1.89
15	376.60	1197.00	2.69
16	382.29	1197.23	2.92
17	403.48	1197.24	2.93
18	435.58	1198.47	4.16
19	452.38	1202.26	7.95
20	486.73	1211.87	17.56
21	501.81	1218.63	24.32
22	522.21	1238.87	36.56
23	534.80	1236.27	41.96
24	558.31	1243.21	49.48
25	563.47	1252.47	58.16



ID NO. = 22
DAMSITE = TARHOUCHT(Amont)

N	X(m)	EL(m)	H(m)
1	0.00	1178.06	24.09
2	16.03	1170.58	16.61
3	39.88	1158.00	4.03
4	46.89	1155.84	1.87
5	52.30	1155.79	1.82
6	55.74	1156.97	3.00
7	58.63	1154.70	0.73
8	63.43	1154.70	0.73
9	69.83	1157.25	3.28
10	75.73	1155.31	1.34
11	82.88	1154.75	0.78
12	83.88	1154.15	0.18
13	114.61	1153.97	0.00
14	132.67	1154.86	0.89
15	155.44	1165.63	11.66
16	176.28	1174.11	20.14



ID NO. = 24
DAMSITE = TARHOUCHT(Aval)

N	X(m)	EL(m)	H(m)
1	0.00	1179.93	38.42
2	15.82	1169.99	28.48
3	25.97	1159.22	9.71
4	32.60	1152.08	2.57
5	41.57	1149.89	0.38
6	60.02	1150.34	0.83
7	62.72	1151.83	2.32
8	74.18	1150.63	1.12
9	82.29	1151.06	1.55
10	98.67	1149.51	0.00
11	108.72	1149.83	0.32
12	123.67	1155.53	6.02
13	124.69	1156.22	6.71
14	128.78	1156.62	7.11
15	134.97	1159.58	9.99
16	140.23	1161.84	12.33
17	153.68	1165.33	15.82
18	165.53	1170.06	20.55
19	172.62	1173.83	23.52
20	188.98	1175.72	26.21

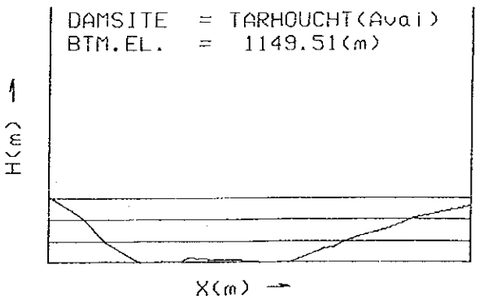


図10.3 各ダムサイトの横断図（3/4）

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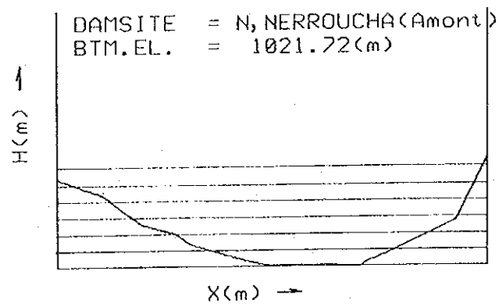
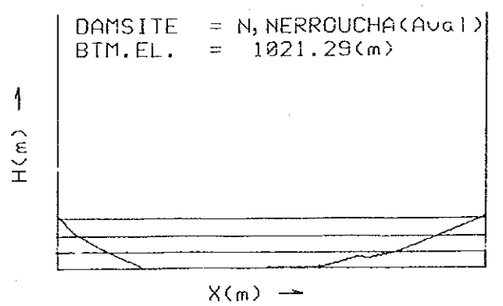
ID NO. = 25
DAMSITE = N, NERROUCHA(Amont)

N	X(m)	EL(m)	H(m)
1	0.00	1074.79	53.07
2	25.79	1064.79	43.07
3	37.89	1055.84	33.32
4	47.24	1047.32	25.60
5	52.10	1041.60	19.88
6	75.83	1035.10	13.46
7	98.00	1028.82	7.10
8	111.27	1024.90	3.10
9	120.20	1022.45	0.73
10	128.39	1022.68	0.96
11	152.29	1022.58	0.78
12	171.61	1021.72	0.00
13	175.40	1022.40	0.68
14	177.68	1024.85	2.33
15	184.13	1030.89	9.17
16	214.32	1041.90	20.18
17	229.43	1048.60	26.88
18	248.55	1085.86	64.14



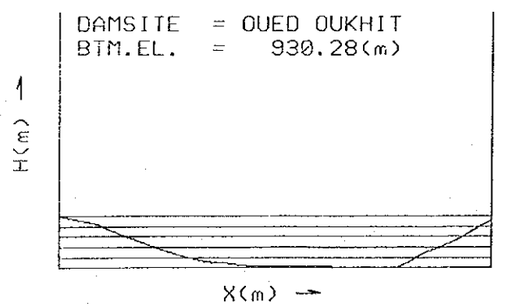
ID NO. = 27
DAMSITE = N, NERROUCHA(Aval)

N	X(m)	EL(m)	H(m)
1	0.00	1052.53	31.24
2	9.70	1042.74	21.45
3	25.68	1032.99	11.70
4	40.51	1025.58	4.21
5	46.83	1023.06	1.77
6	47.38	1021.29	0.00
7	71.78	1021.94	0.65
8	102.24	1021.81	0.52
9	112.27	1021.74	0.45
10	126.36	1022.35	1.06
11	146.37	1022.83	0.74
12	154.47	1023.69	2.40
13	170.46	1028.35	7.06
14	178.46	1028.15	6.86
15	194.25	1032.21	10.92
16	219.85	1042.87	20.78
17	242.38	1052.33	31.04



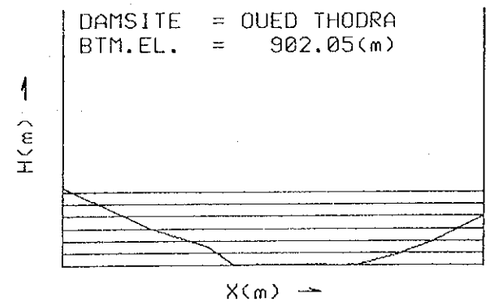
ID NO. = 28
DAMSITE = OUED OUKHIT

N	X(m)	EL(m)	H(m)
1	0.00	980.38	50.10
2	13.77	972.03	41.75
3	25.64	974.38	44.10
4	34.07	971.77	41.49
5	43.65	967.11	36.83
6	63.17	959.76	29.48
7	72.00	955.46	25.18
8	90.93	949.33	19.05
9	112.58	942.02	11.74
10	133.92	936.91	6.63
11	143.58	935.01	4.73
12	152.10	935.17	4.89
13	167.77	932.69	2.41
14	177.88	932.15	1.87
15	192.71	931.66	1.38
16	208.20	931.92	1.64
17	218.36	931.97	1.69
18	234.69	931.87	1.59
19	245.14	931.92	1.64
20	260.56	931.19	0.91
21	273.95	930.28	0.00
22	281.28	930.35	0.07
23	286.17	930.79	0.51
24	302.06	930.98	0.70
25	313.87	930.89	0.61
26	324.98	936.60	6.32
27	337.04	944.72	14.43
28	351.93	950.47	20.19
29	367.41	952.51	22.23
30	381.41	965.66	35.38
31	400.54	976.76	46.48



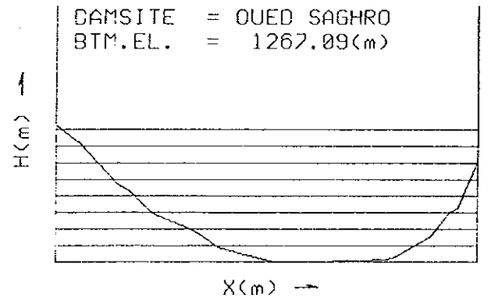
ID NO. = 29
DAMSITE = OUED THODRA

N	X(m)	EL(m)	H(m)
1	0.00	965.41	63.36
2	21.27	931.76	29.71
3	116.14	917.34	15.29
4	136.26	902.05	0.00
5	171.23	903.04	0.99
6	203.55	903.48	1.43
7	219.76	902.87	0.82
8	238.36	903.62	1.57
9	289.13	911.57	9.52
10	298.22	920.06	18.01
11	315.39	930.18	28.13
12	339.68	942.05	40.00



ID NO. = 38
DAMSITE = OUED SAGHRO

N	X(m)	EL(m)	H(m)
1	0.00	1348.64	81.55
2	14.19	1338.92	71.83
3	35.83	1313.92	46.83
4	42.92	1309.66	42.57
5	49.50	1303.20	36.11
6	56.71	1296.48	29.31
7	73.83	1288.62	21.53
8	83.84	1283.97	16.88
9	95.40	1276.21	9.12
10	110.20	1271.40	4.31
11	118.38	1269.47	2.38
12	122.42	1267.19	0.10
13	133.24	1267.09	0.00
14	152.83	1267.12	0.03
15	156.68	1267.72	0.63
16	170.96	1268.05	0.96
17	178.79	1268.27	1.18
18	197.84	1268.82	1.73
19	202.01	1270.13	3.04
20	222.92	1282.67	15.58
21	233.58	1296.26	29.17
22	239.15	1299.71	32.62
23	258.34	1328.39	61.30



ID NO. = 31
DAMSITE = IMIDER

N	X(m)	EL(m)	H(m)
1	0.00	1571.69	30.59
2	18.00	1548.53	7.43
3	56.38	1548.64	5.54
4	68.15	1544.48	3.38
5	69.28	1543.33	2.23
6	185.22	1543.32	2.22
7	187.24	1543.55	2.45
8	117.33	1542.38	1.48
9	129.32	1542.87	1.27
10	131.53	1542.82	0.92
11	135.48	1542.47	1.37
12	142.11	1541.31	0.21
13	152.92	1541.10	0.00
14	161.82	1543.68	2.58
15	163.86	1543.39	2.29
16	169.18	1548.88	4.58
17	171.22	1546.13	5.83
18	172.94	1545.23	4.13
19	182.30	1547.15	6.05
20	201.52	1551.91	10.81
21	222.22	1552.21	10.61
22	247.14	1564.12	23.82

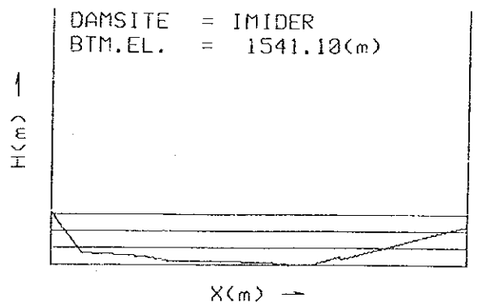


図10.3 各ダムサイトの横断図（4/4）

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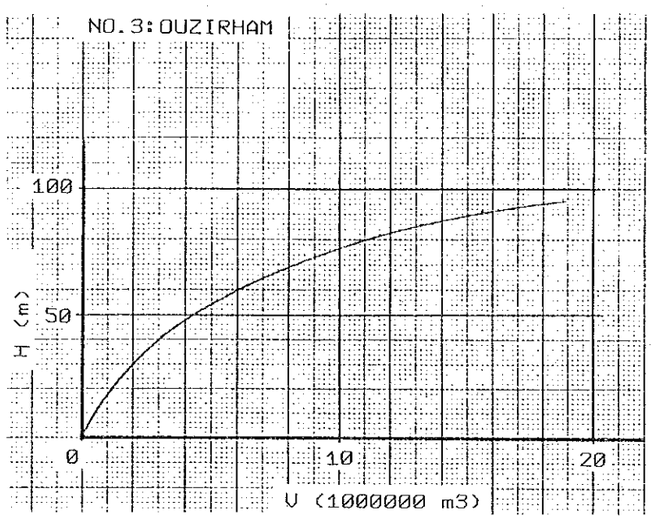
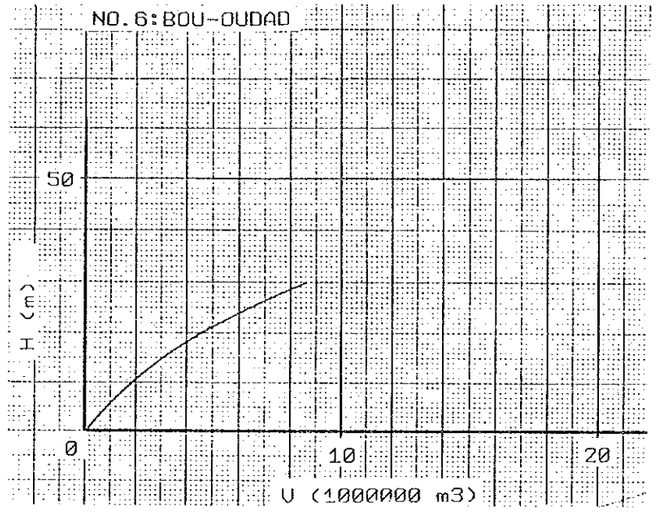
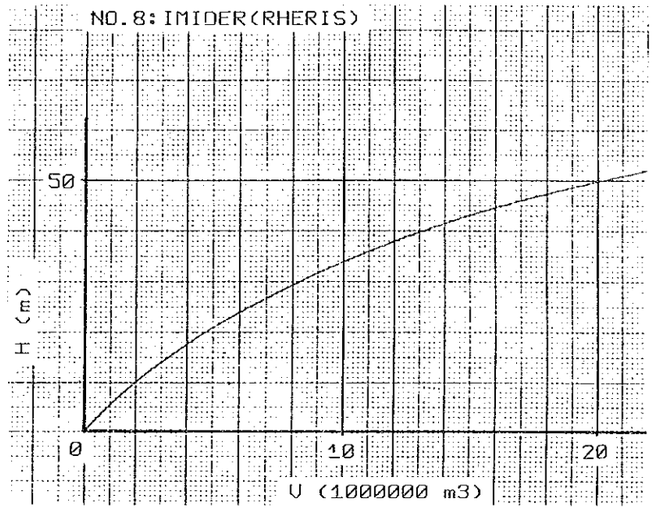
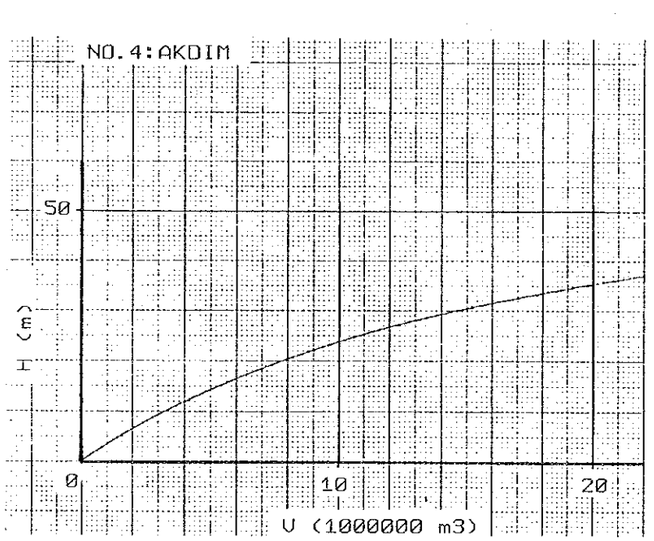
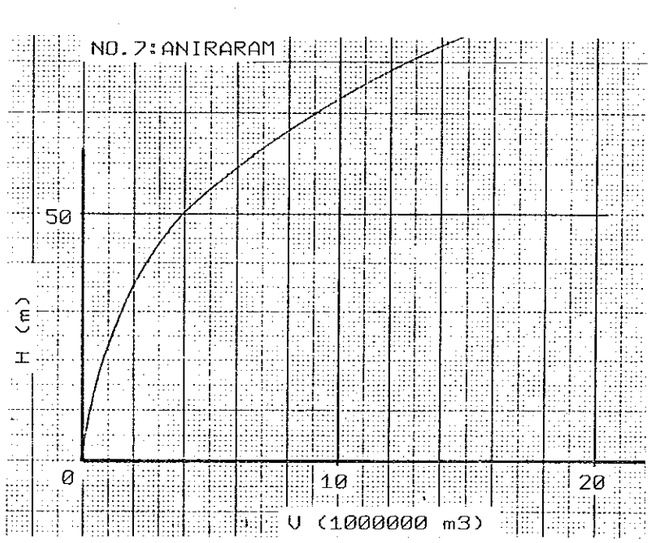










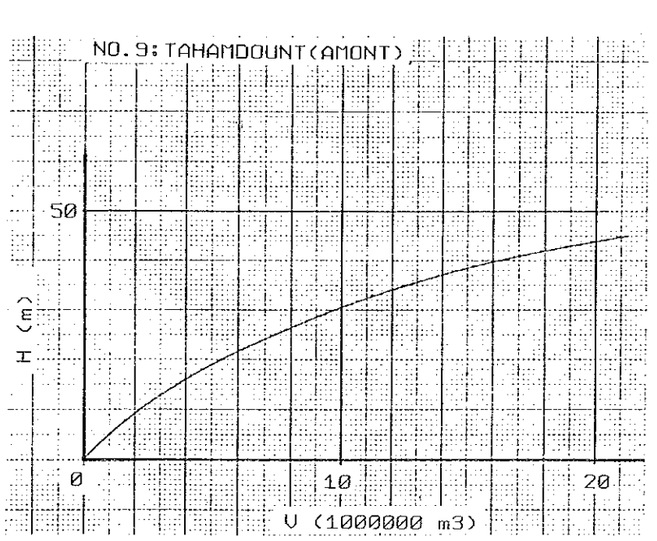
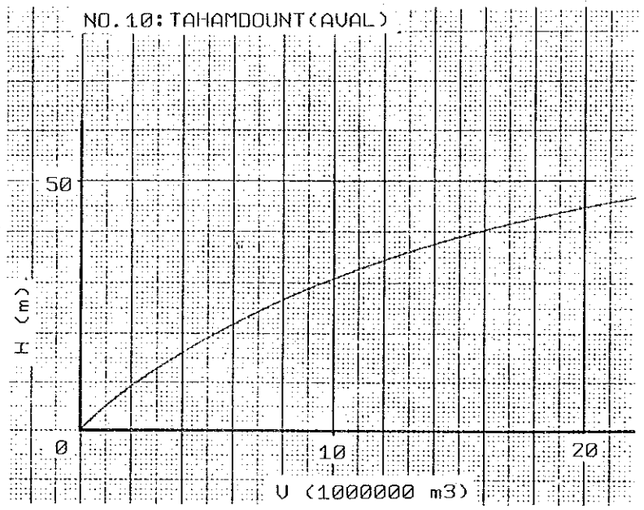
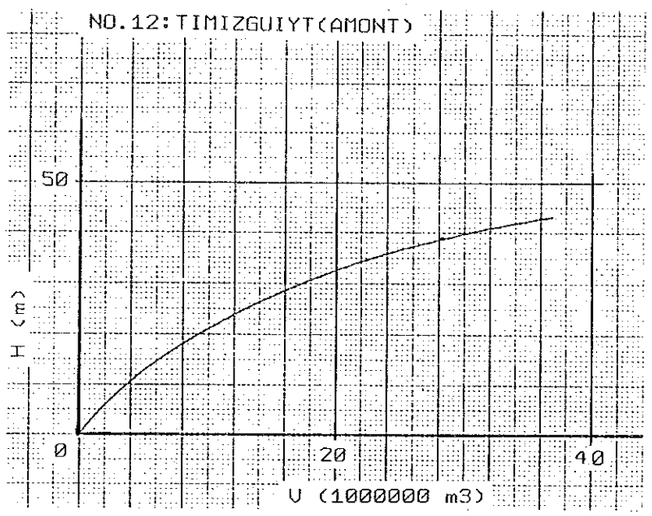
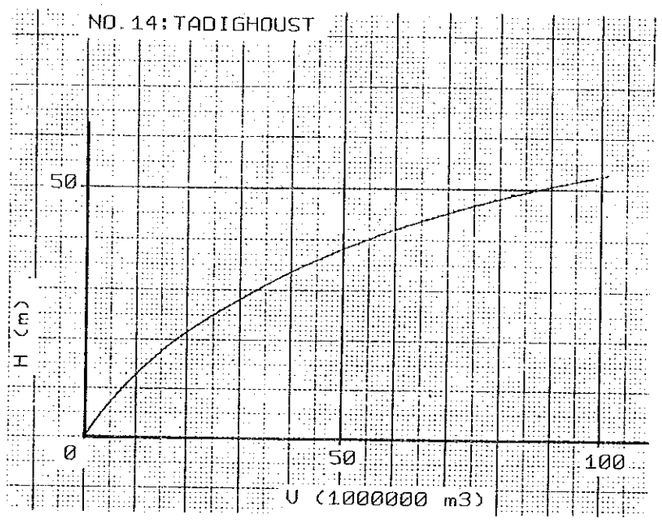


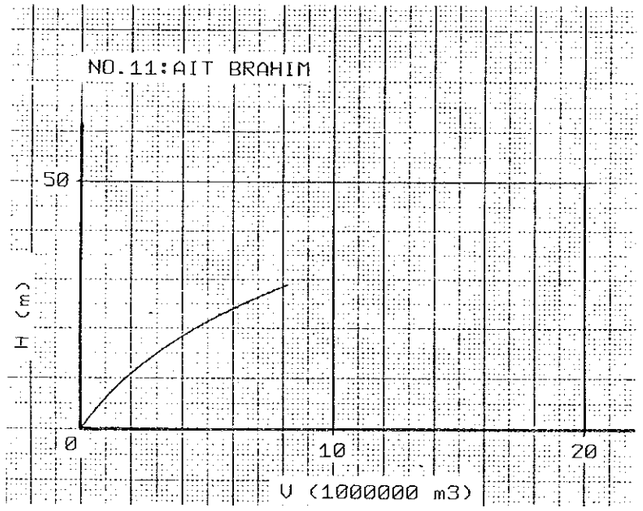
図10.4 各ダムの貯水池容量曲線（1/4）

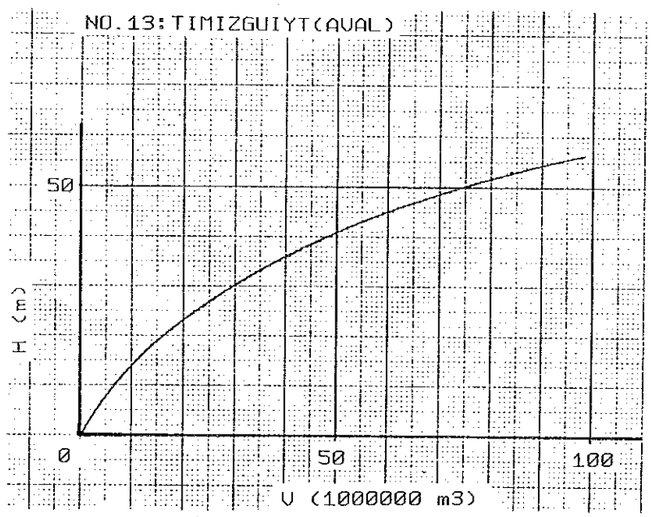
ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE











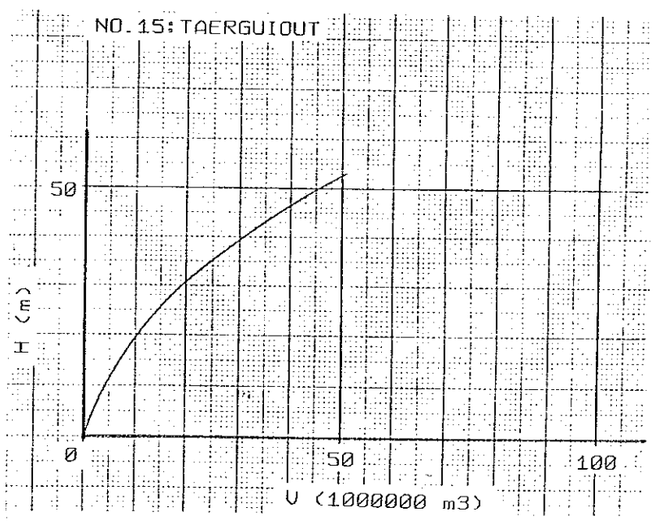
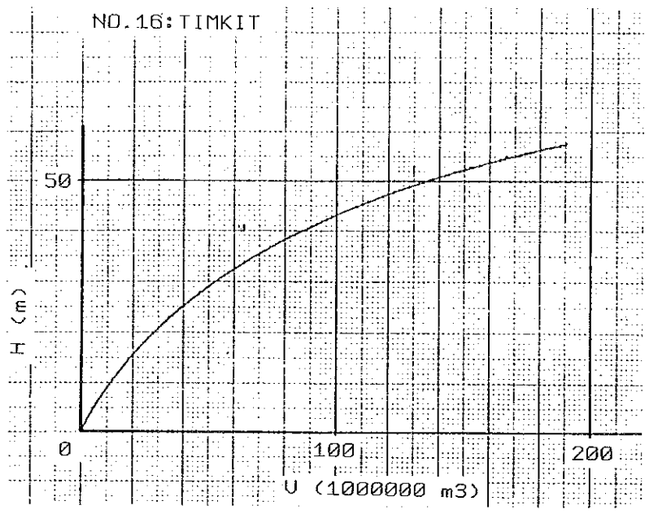
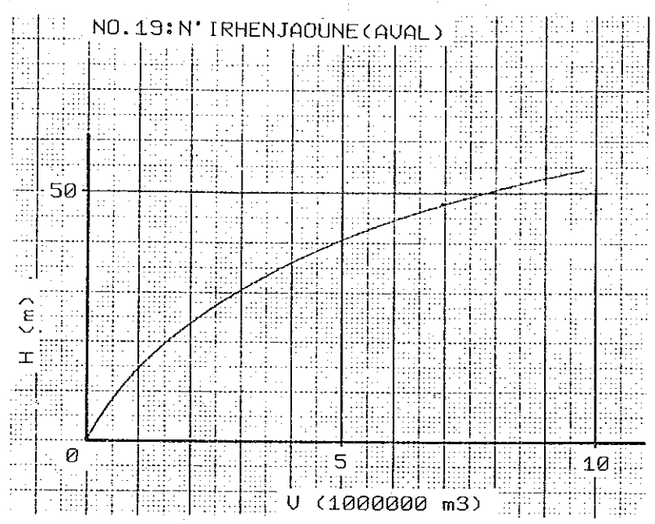
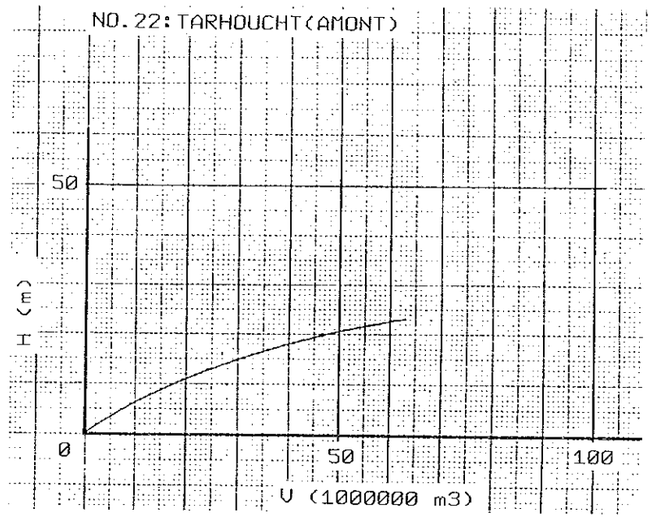


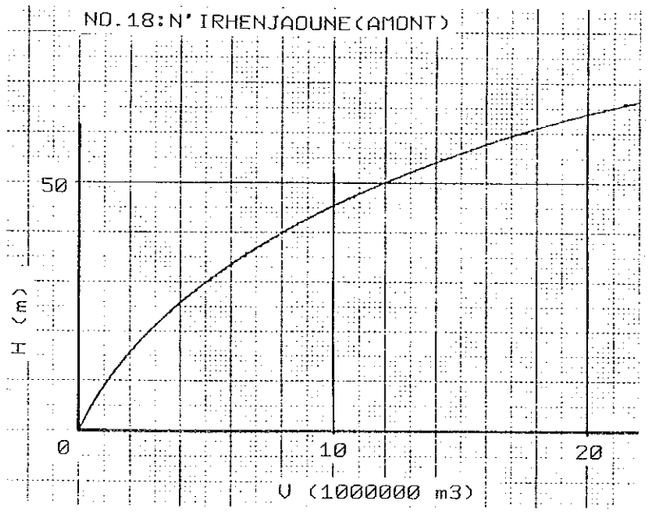
図10.4 各ダムの貯水池容量曲線（2/4）

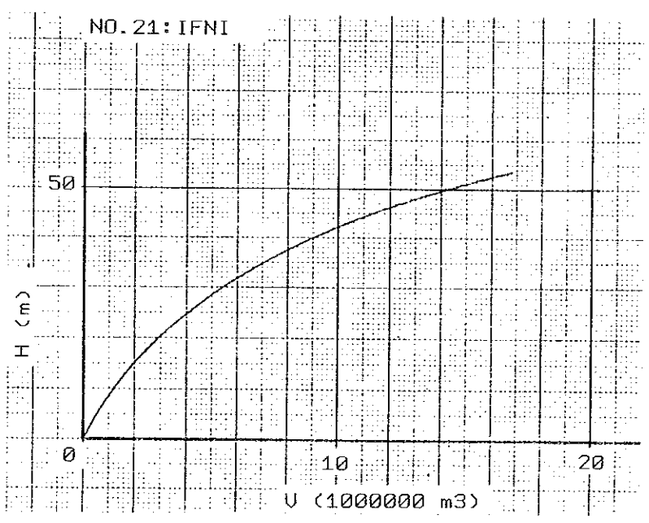
ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE











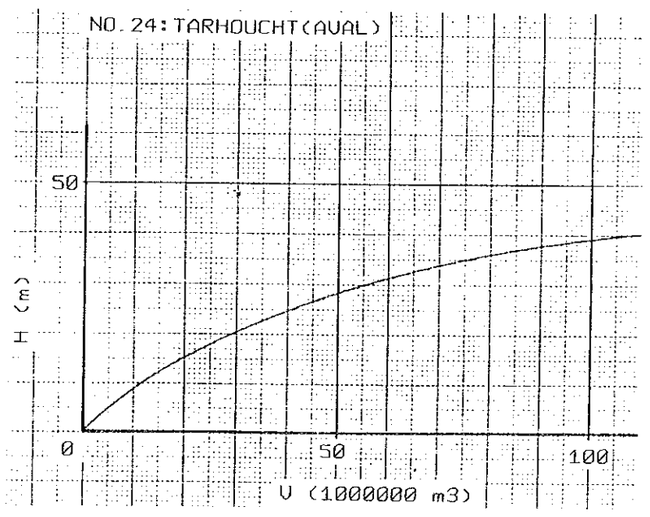
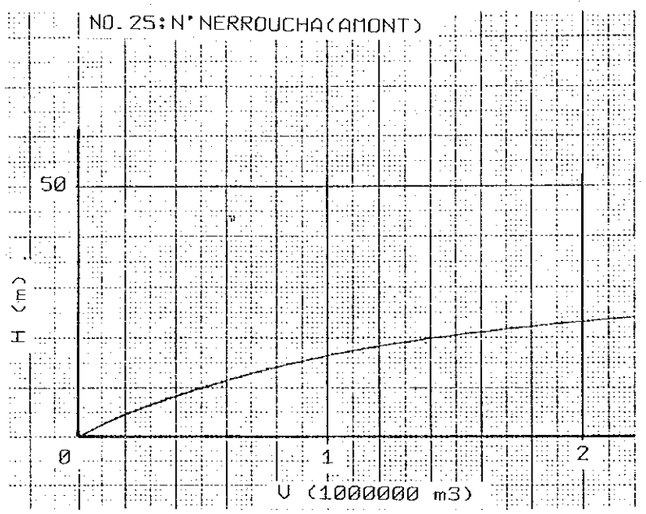
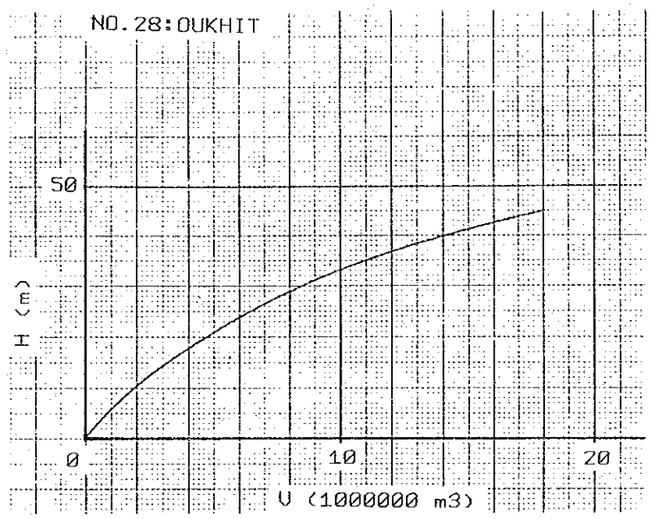
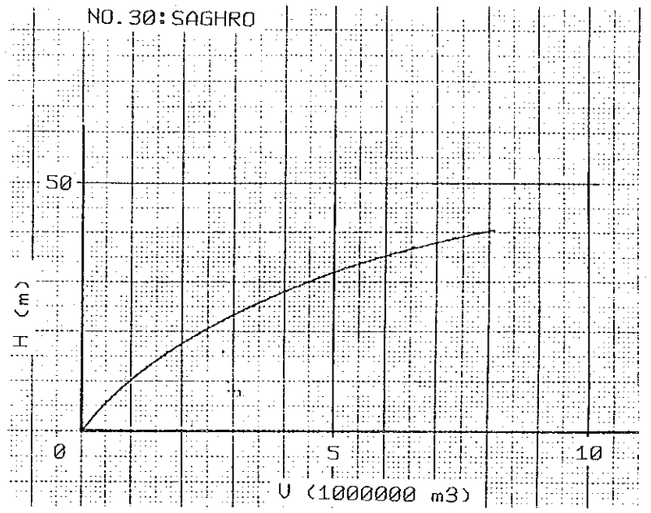


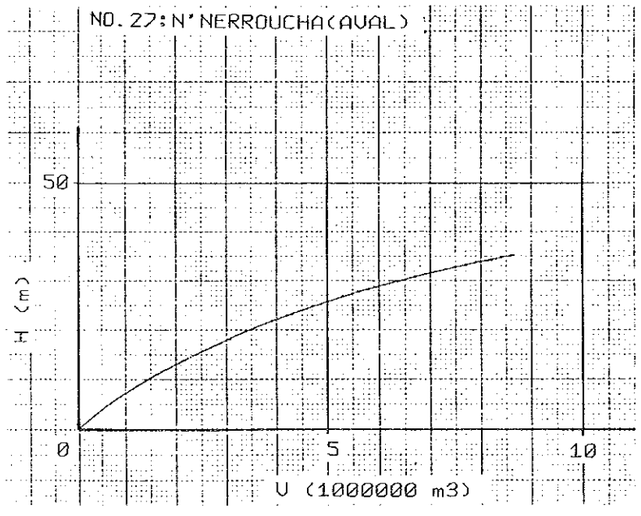
図10.4 各ダムの貯水池容量曲線（3/4）

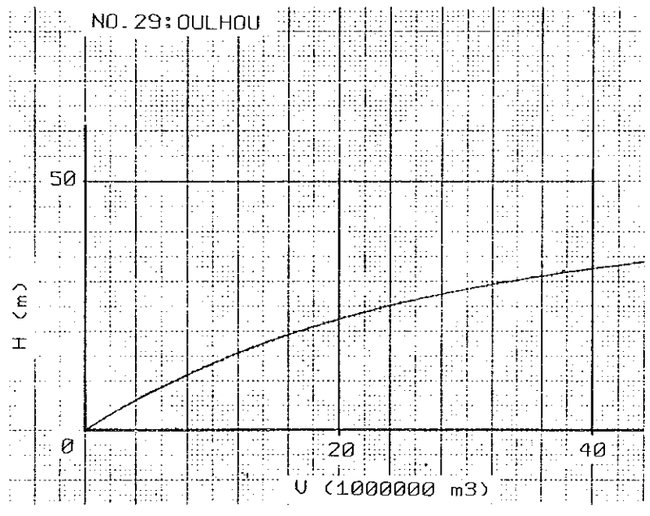
ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE











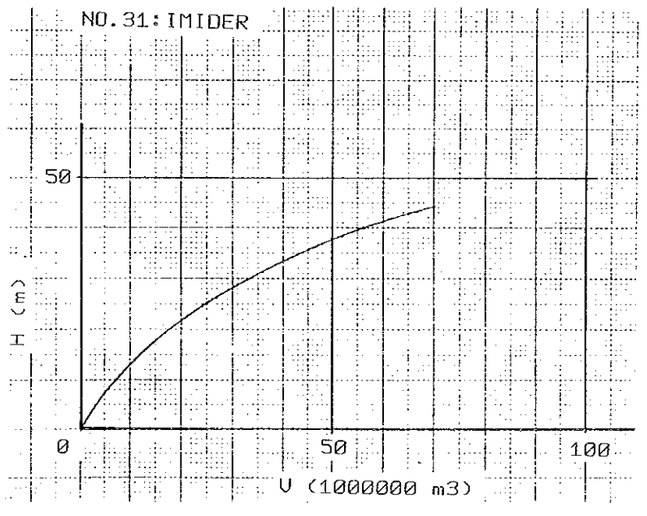
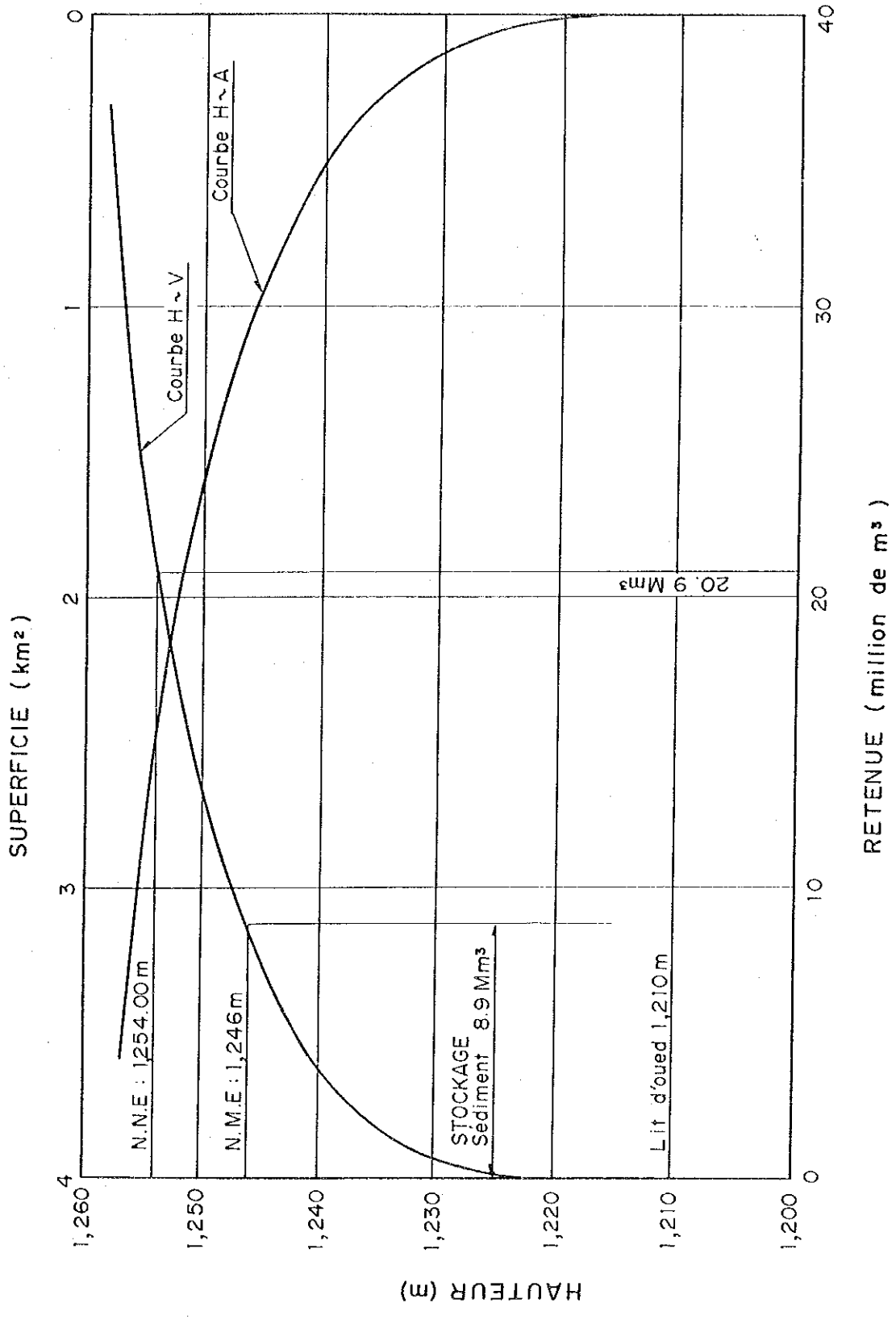


図10.4 各ダムの貯水池容量曲線（4/4）

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



ADMINISTRATION DE L'HYDRAULIQUE

ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

図11.1
Timkitダムの貯水池容量曲線

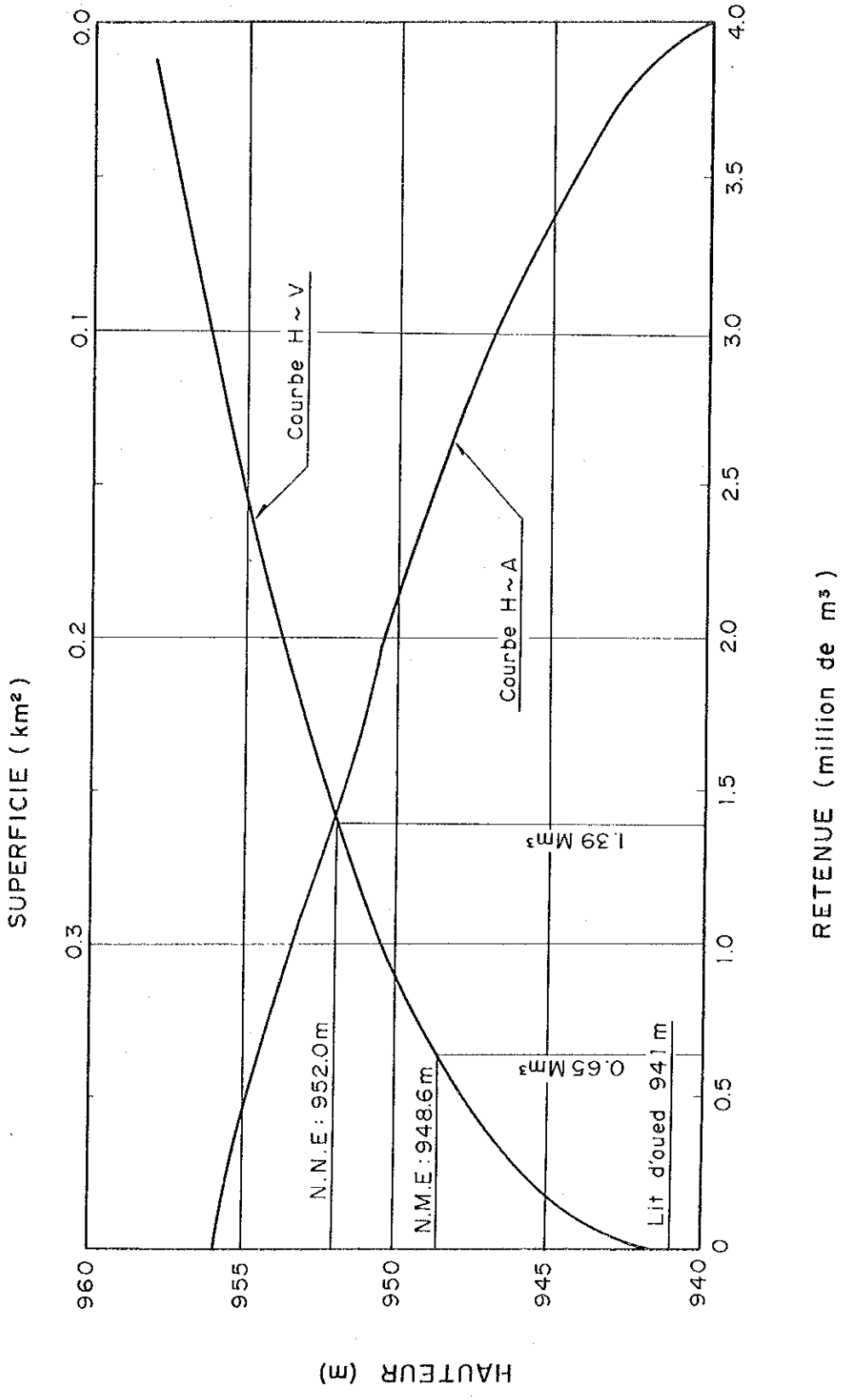


図11.2
Oukhitダムの貯水池容量曲線

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

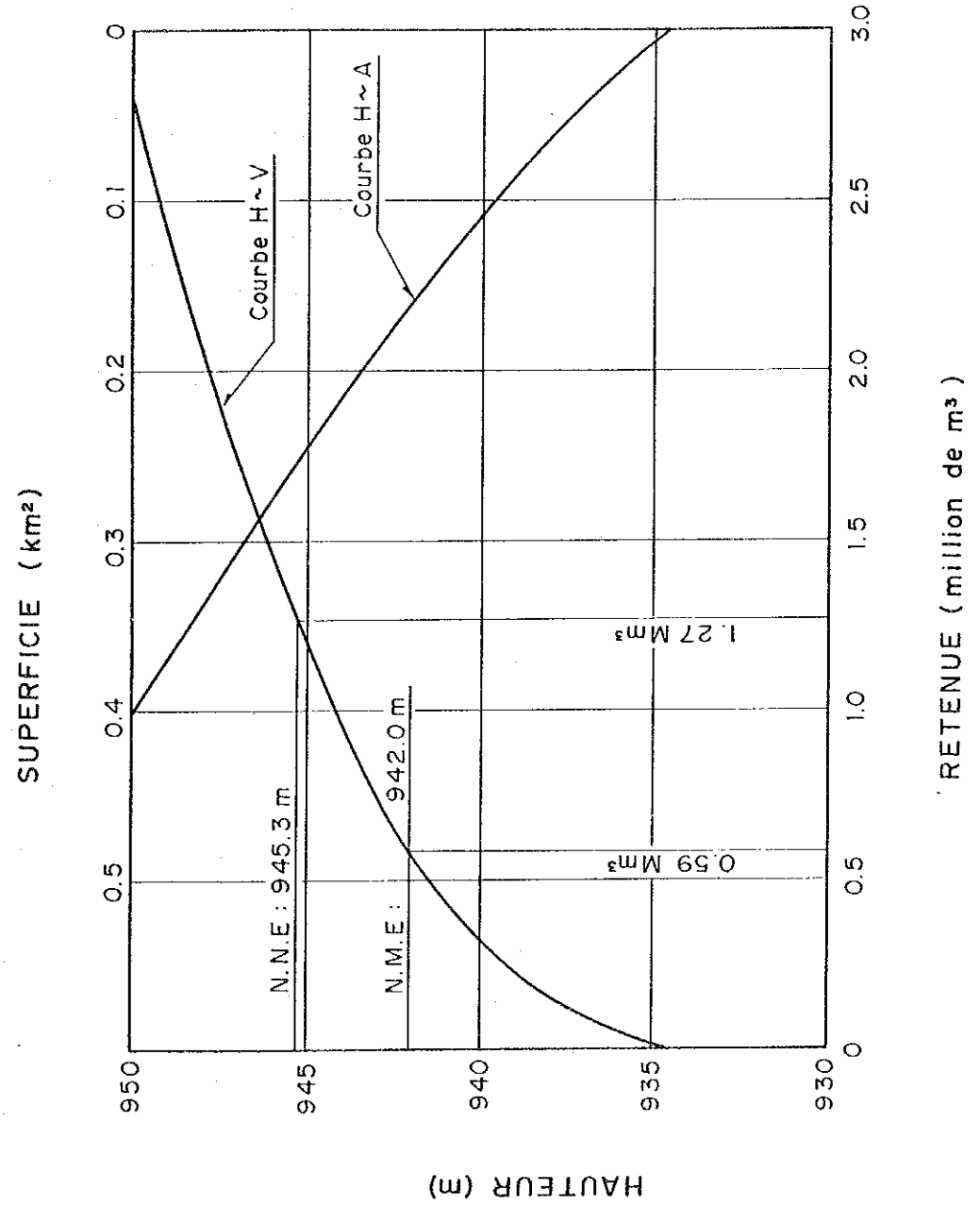


図11.3
Oulhouダムの貯水池容量曲線

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

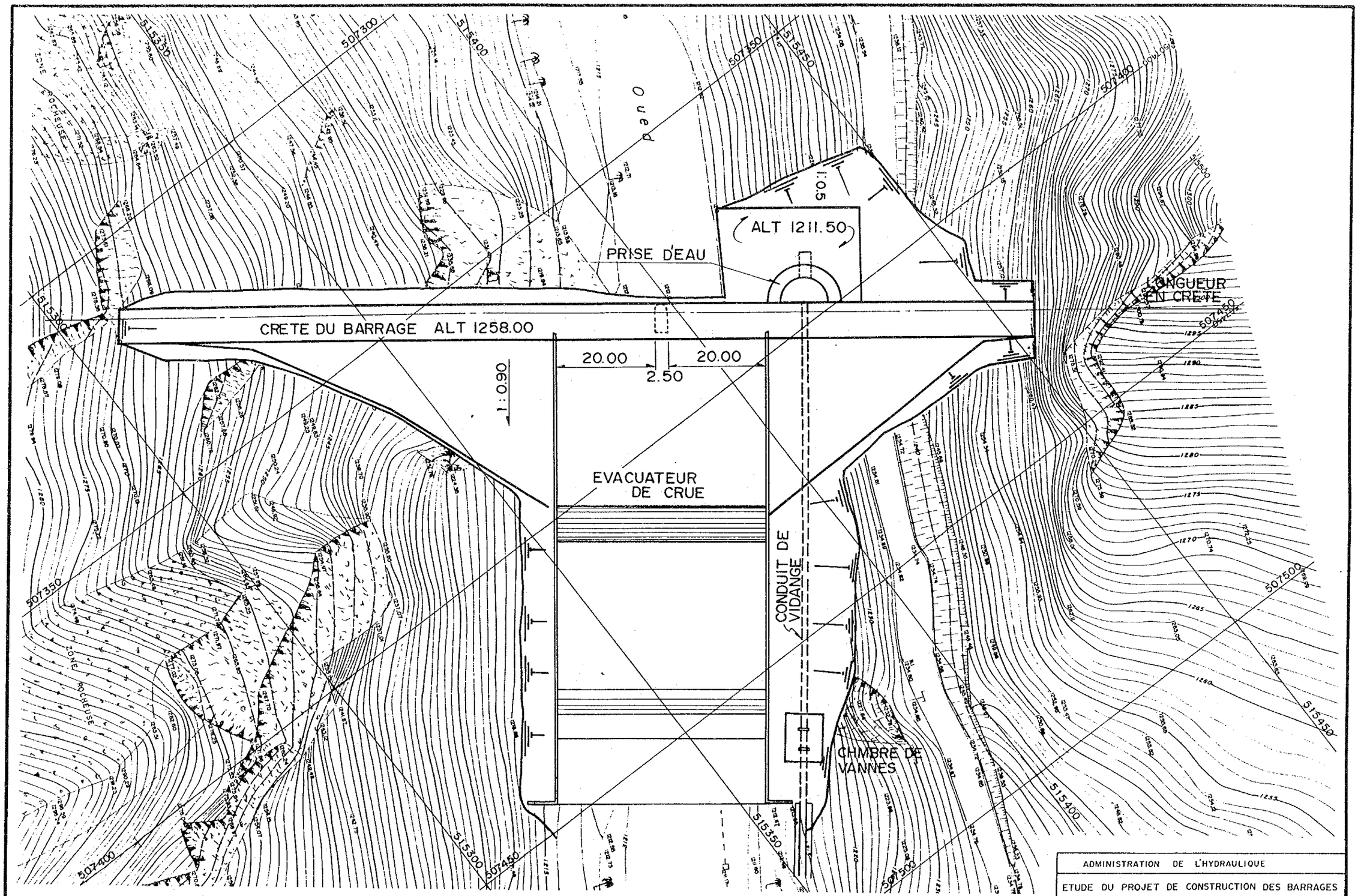


図11.4 Timkitダム(No.16)一般平面図

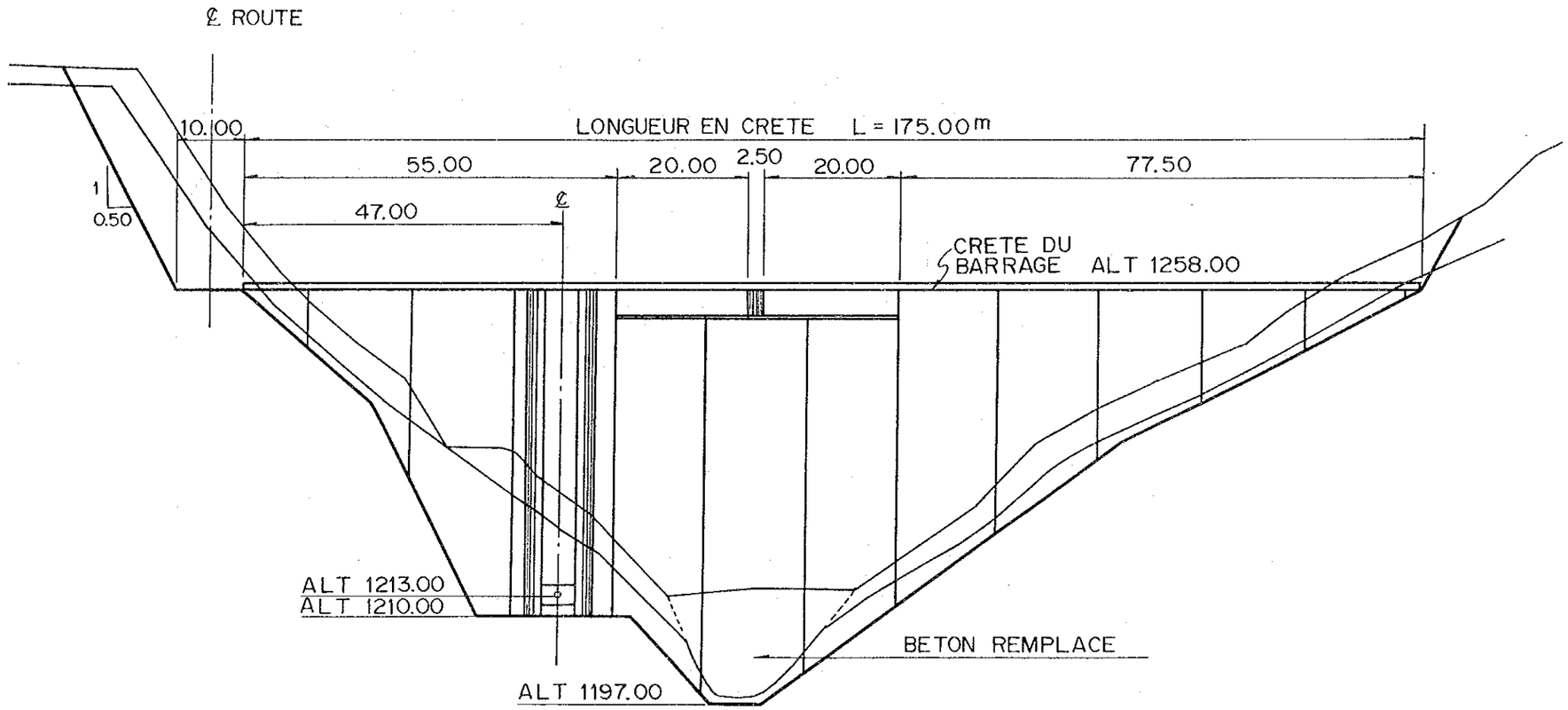


図11.5 Timkitダム(No.16)立面図（上流面）

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

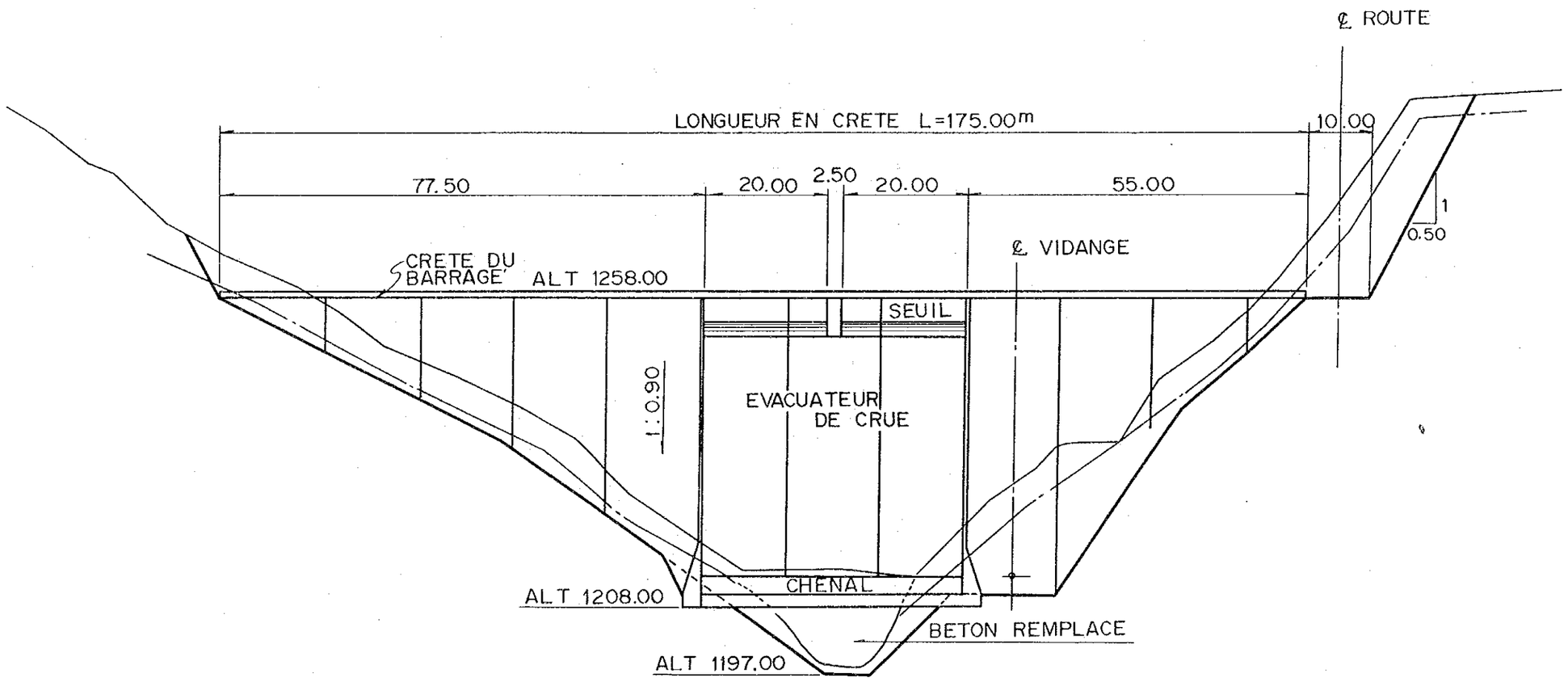


図11.6　Timkitダム(No.16)立面図（下流面）

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

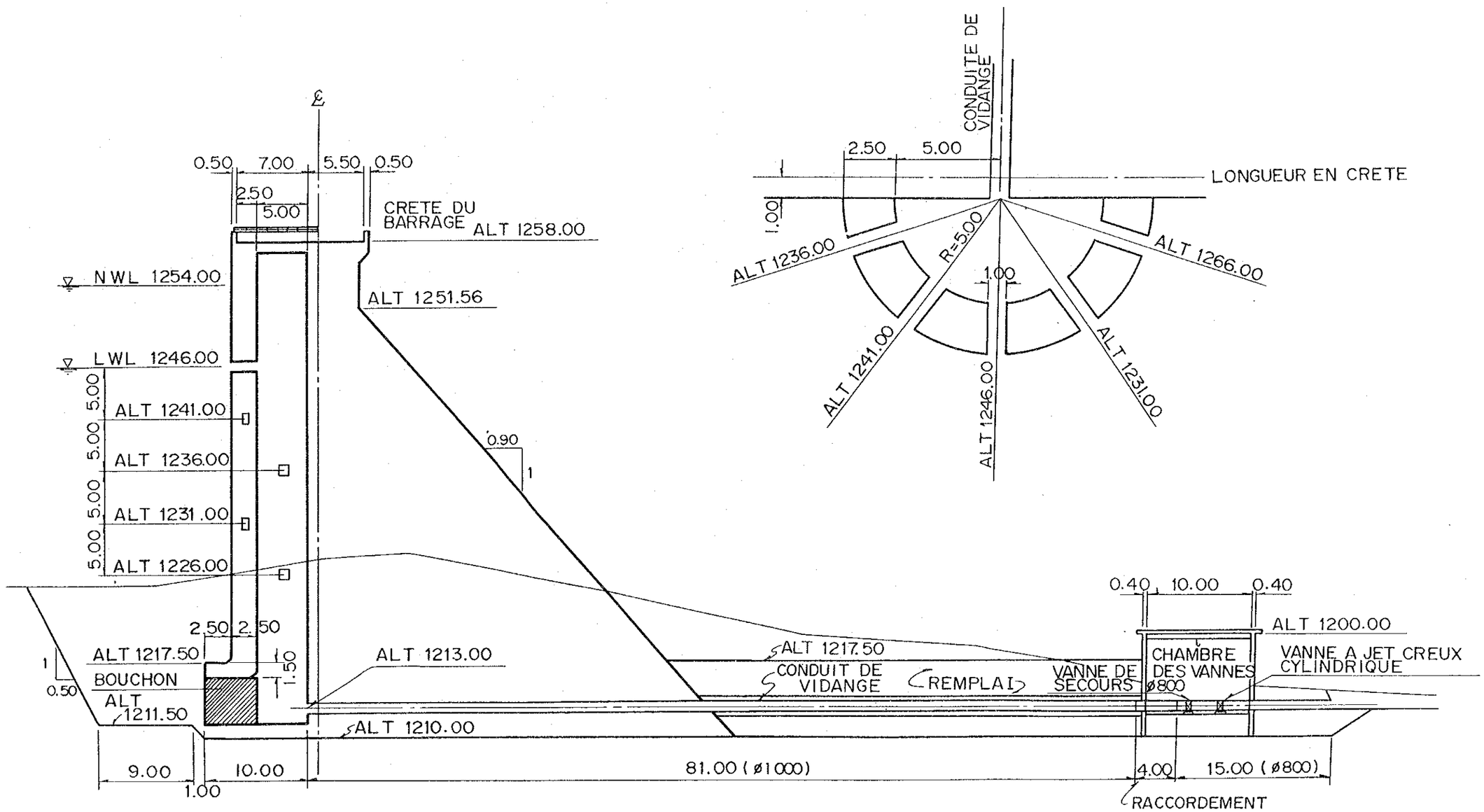


図11.7　Timkitダム(No.16)一般構造図（非越流部）

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

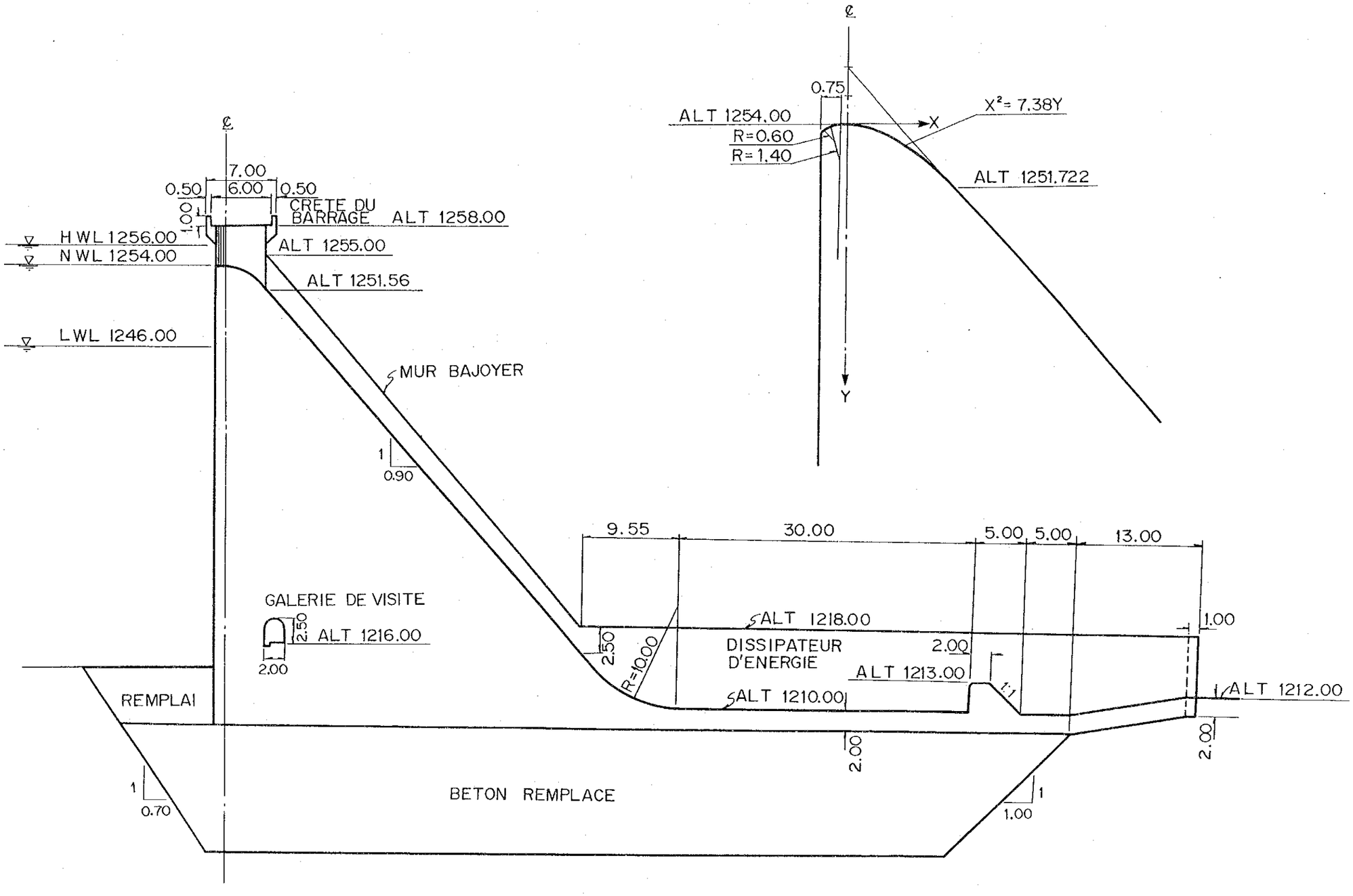


図11.8　Timkitダム(No.16)一般構造図（越流部）

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

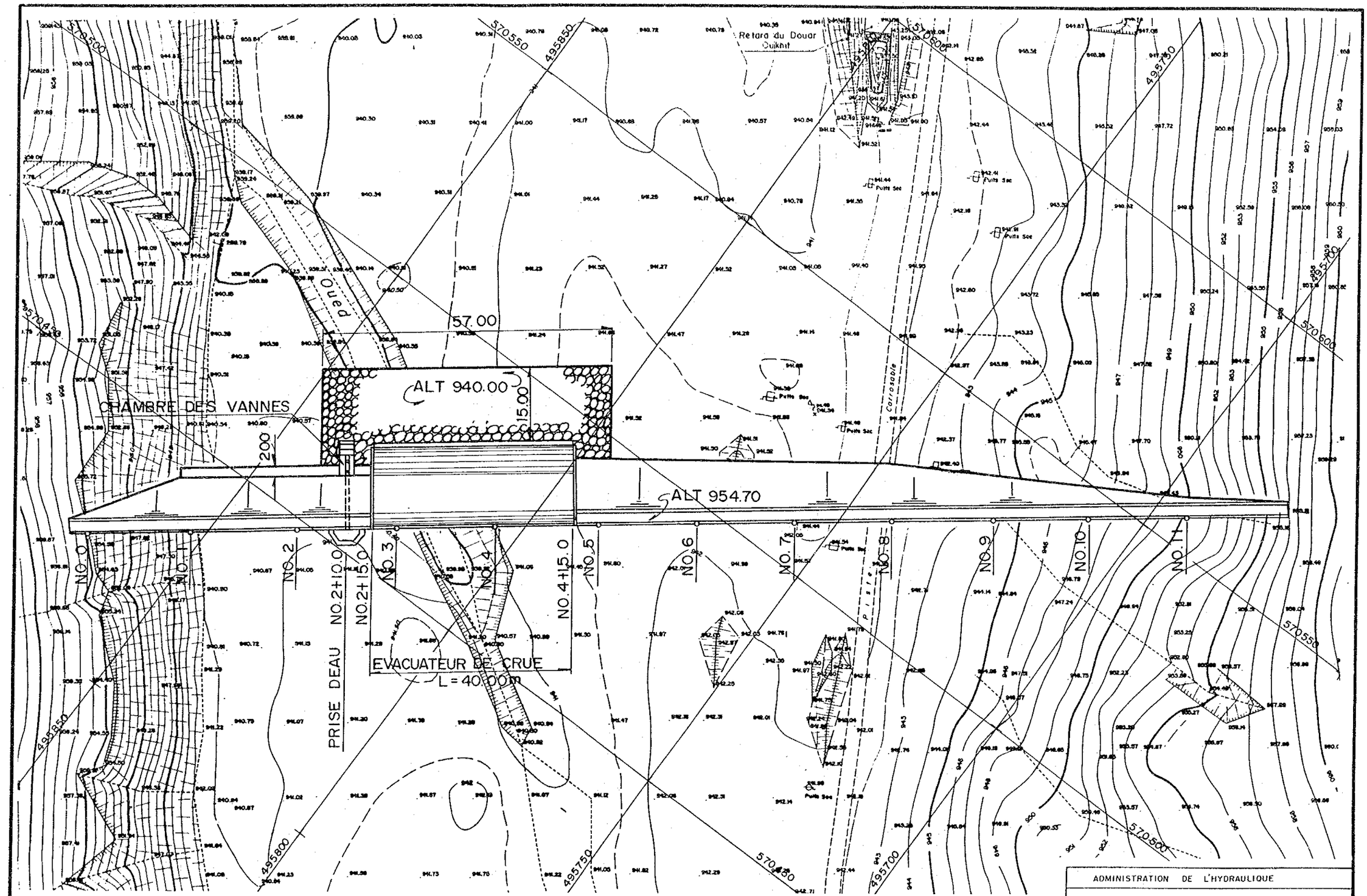
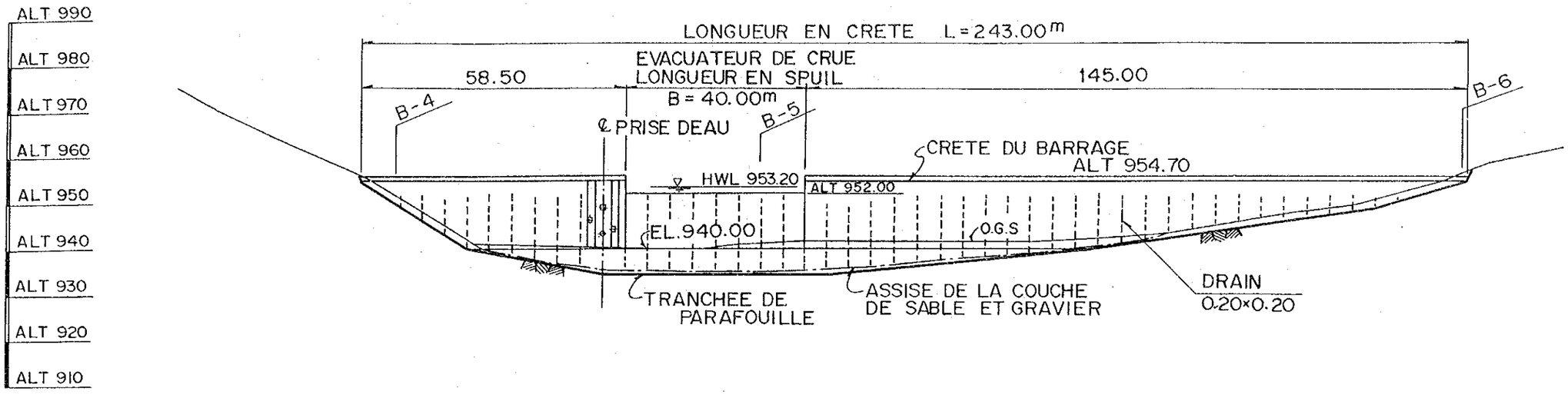


図11.9　Oukhitダム(No.28)一般平面図

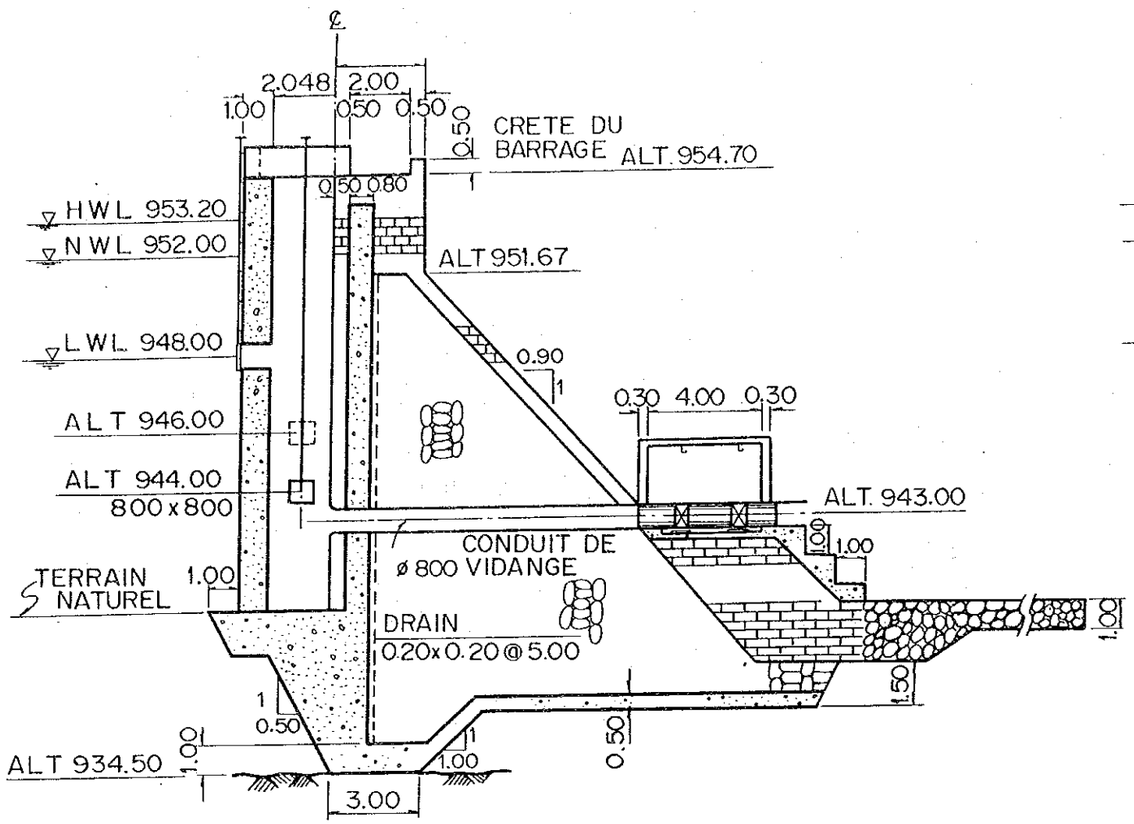
ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



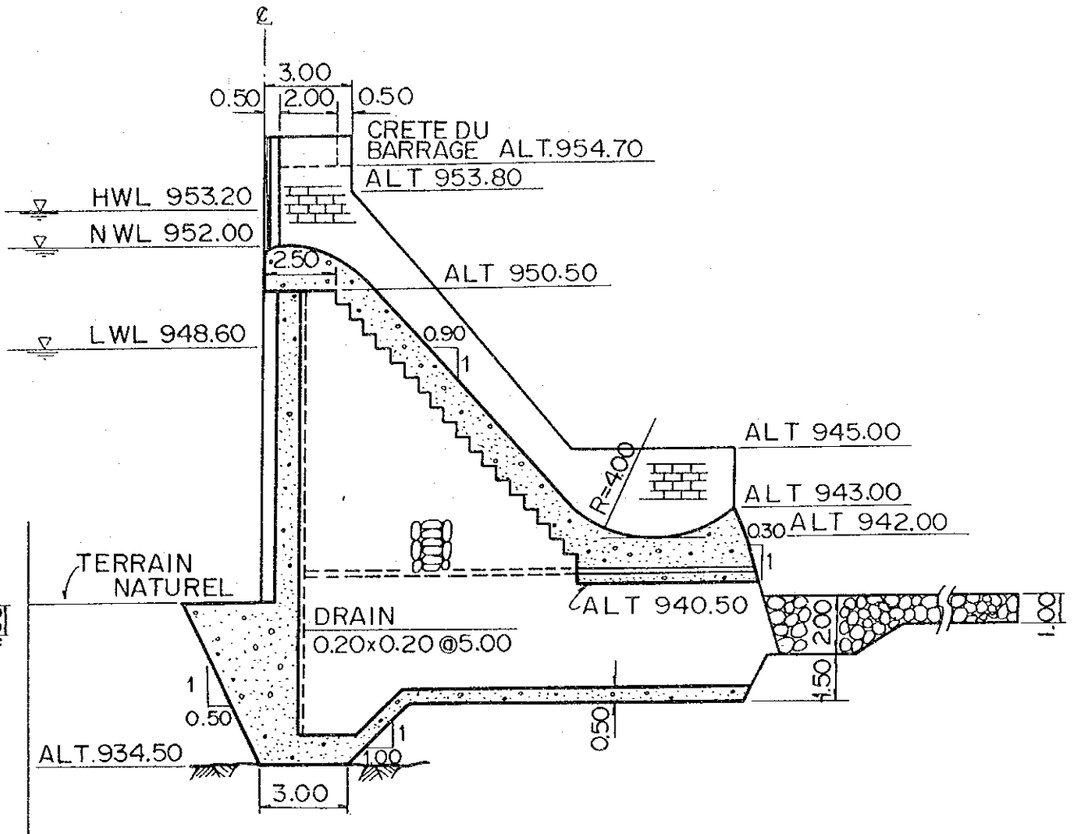
COTE DE LA CRETE DU BARRAGE	954.7	954.7	954.7	954.7	954.7	952.0	952.0	952.0	952.0	954.7	954.7	954.7	954.7	954.7	954.7	954.7	954.7	954.7	954.7	954.7	954.7	954.7	954.7
COTE DE TRANCHEE DE PARAFOUILLE	954.7	952.5	940.0	936.5	934.5	934.5	934.5	934.5	934.5	934.5	934.5	934.5	936.5	938.3	940.0	943.0	946.0	948.7	954.7				
TERRAIN NATUREL	956.0	954.2	941.8	940.5	940.2	940.2	940.0	940.9	941.5	941.5	941.5	941.5	941.5	941.5	942.0	944.0	947.3	950.5	957.0				
DISTANCE CUMULEE	0.00	3.50	23.50	43.50	53.50	58.50	63.50	83.50	98.50	103.50	123.50	143.50	163.50	183.50	203.50	223.50	243.50						
DISTANCE	0.00	3.50	20.00	20.00	10.00	5.00	5.00	20.00	15.00	5.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00						
STATION	+3.50	NO.0	NO.1	NO.2	+10.00	+15.00	NO.3	NO.4	+15.00	NO.5	NO.6	NO.7	NO.8	NO.9	NO.10	NO.11	NO.12						

図11.10　Oukhitダム(No.28)立面図

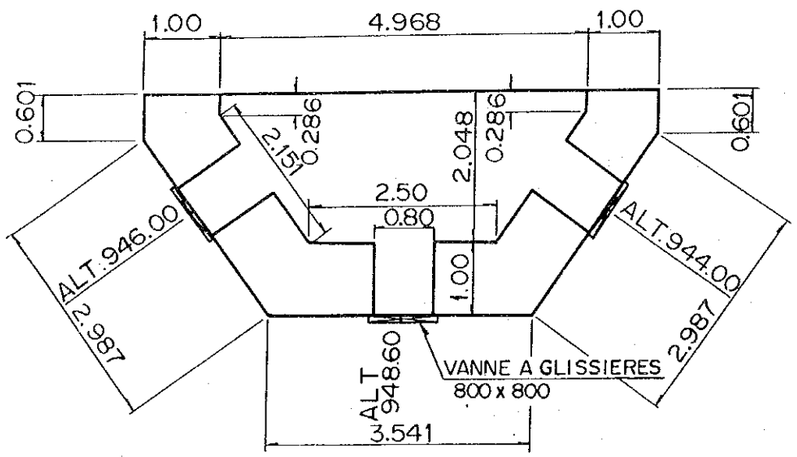
ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



VIDANGE OUVRAGE DE PRISE



COUPE TYPE



PLAN DE PRISE D'EAU

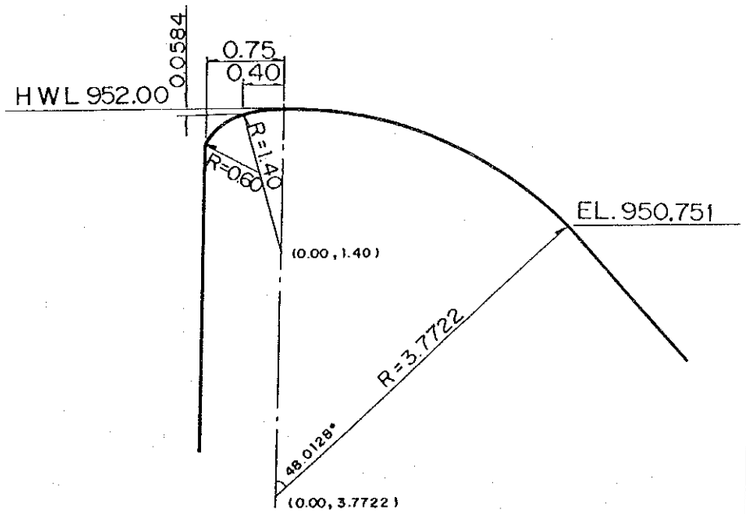
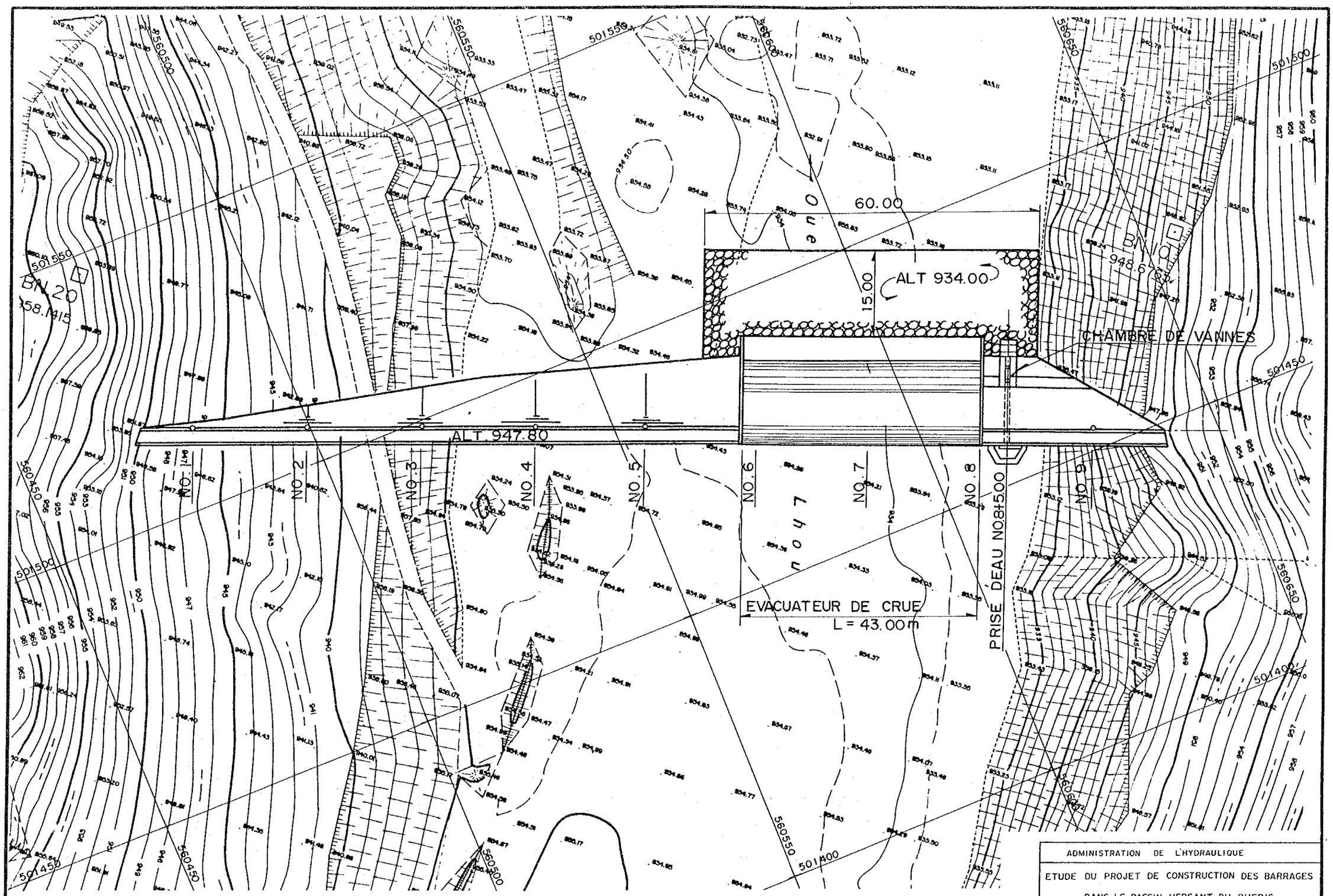


図11.11 Oukhitダム(No.28)一般構造図

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

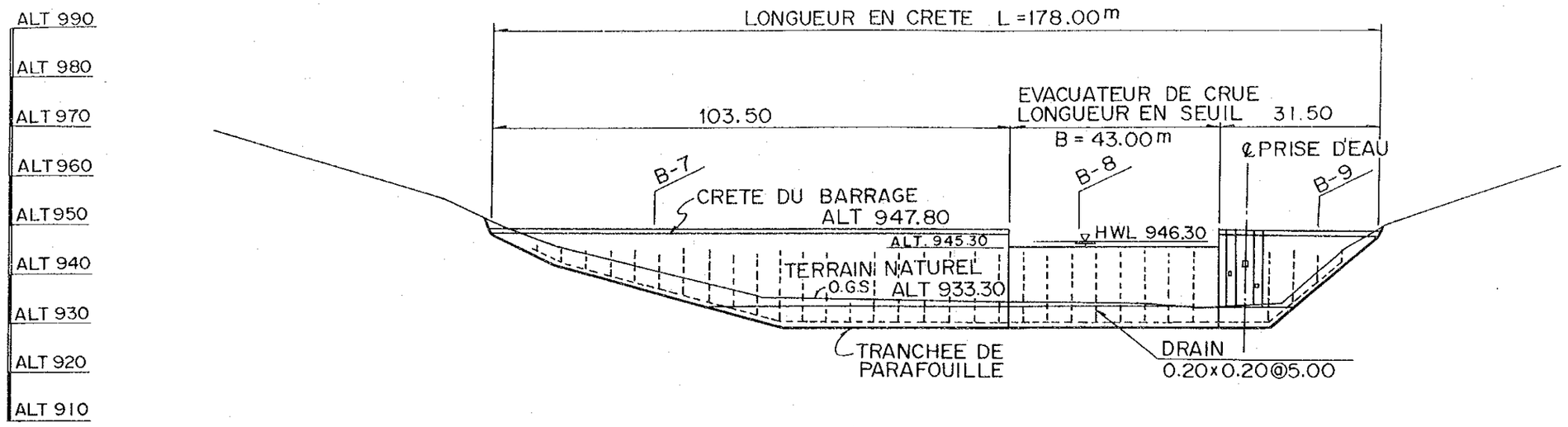


ADMINISTRATION DE L'HYDRAULIQUE

ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS

AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

図11.12 Oulhouダム(No.29)一般平面図



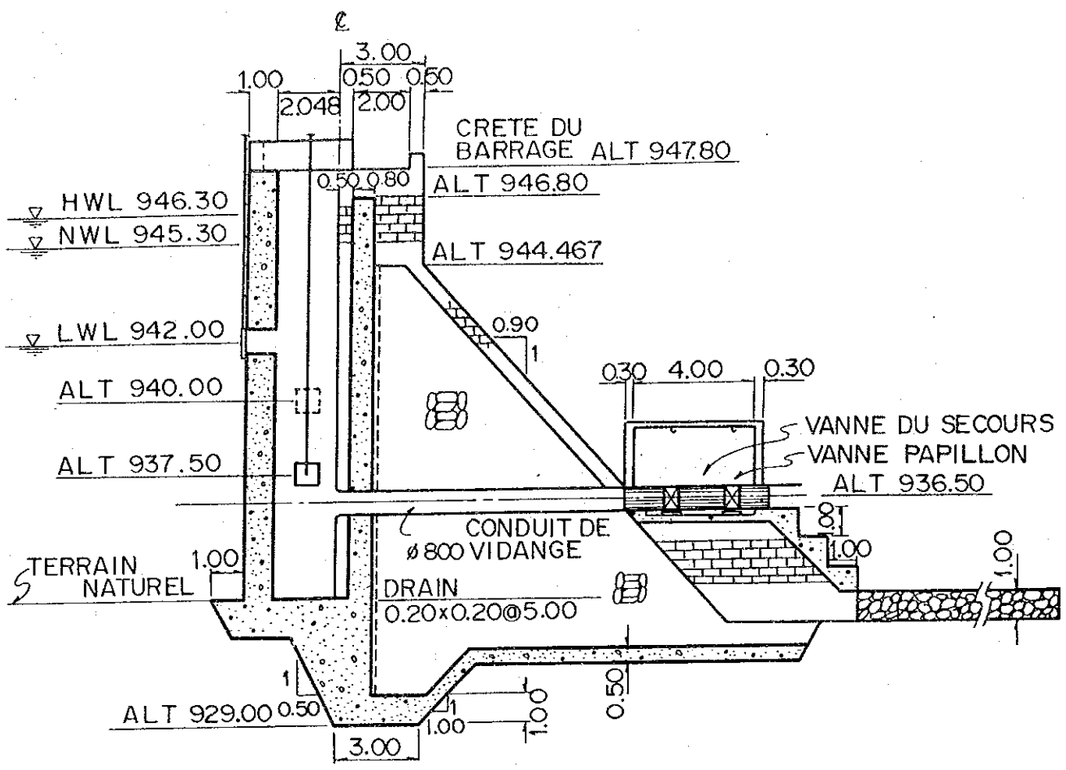
STATION	NO.0	+11.00	NO.1	+ 5.00	NO.2	NO.3	5.00	+10.00	NO.4	NO.5	NO.6	NO.7	NO.8	+10.00	+12.50	NO.9	+12.5	NO.10
COTE DE LA CRETE DU BARRAGE	—	947.8	947.8	947.8	947.8	947.8	947.8	947.8	947.8	947.8	945.3	945.3	945.3	947.8	947.8	947.8	947.8	—
COTE DE TRANCHEE DE PARAFOUILLE	—	947.8	943.3	941.0	937.0	931.7	930.0	929.0	929.0	929.0	929.0	929.0	929.0	929.0	931.0	937.5	947.8	—
TERRAIN NATUREL	955.3	950.0	946.8	945.0	941.4	936.3	935.0	935.0	934.7	934.5	934.2	934.0	933.3	933.8	934.0	940.5	949.3	952.3
DISTANCE CUMULEE	0.00	11.00	20.00	25.00	40.00	60.00	65.00	70.00	80.00	100.00	120.00	140.00	160.00	170.00	172.50	180.00	192.50	200.00
DISTANCE	0.00	11.00	9.00	5.00	15.00	20.00	5.00	5.00	10.00	20.00	20.00	20.00	20.00	10.00	2.50	7.50	12.50	7.50

図11.13 Oulhouダム(No.29)立面図

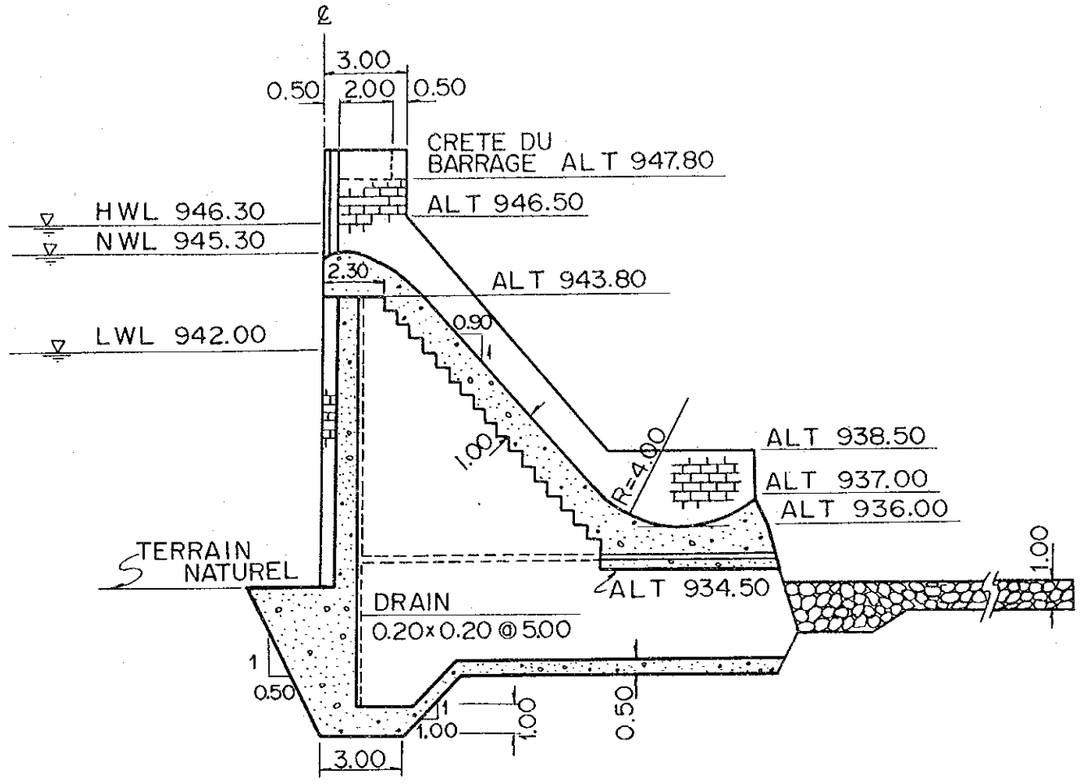
ADMINISTRATION DE L'HYDRAULIQUE

ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES
DANS LE BASSIN VERSANT DU RHERIS

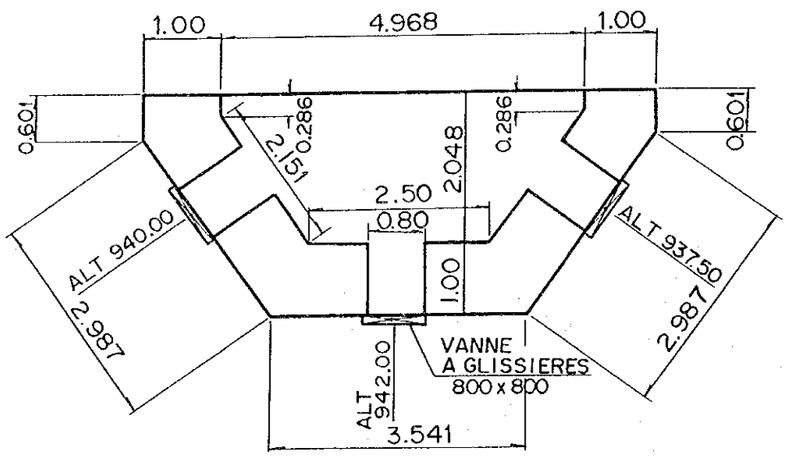
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE



VIDANGE OUVRAGE DE PRISE



COUPE TYPE



PLAN DE PRISE D'EAU

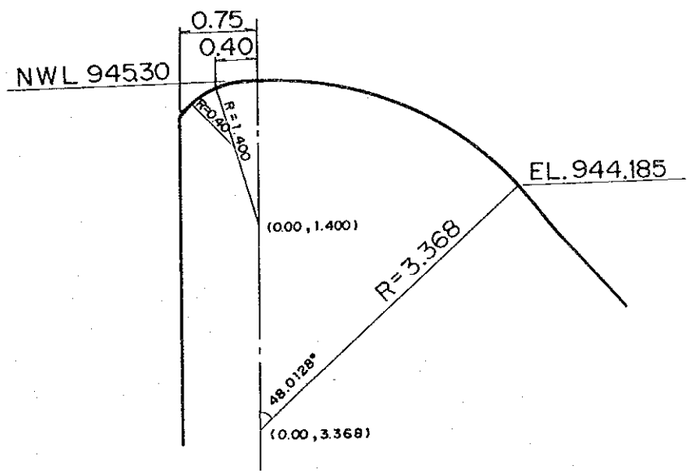


図11.14 Oulhouダム(No.29)一般構造図

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

図12.1　事業実施組織図

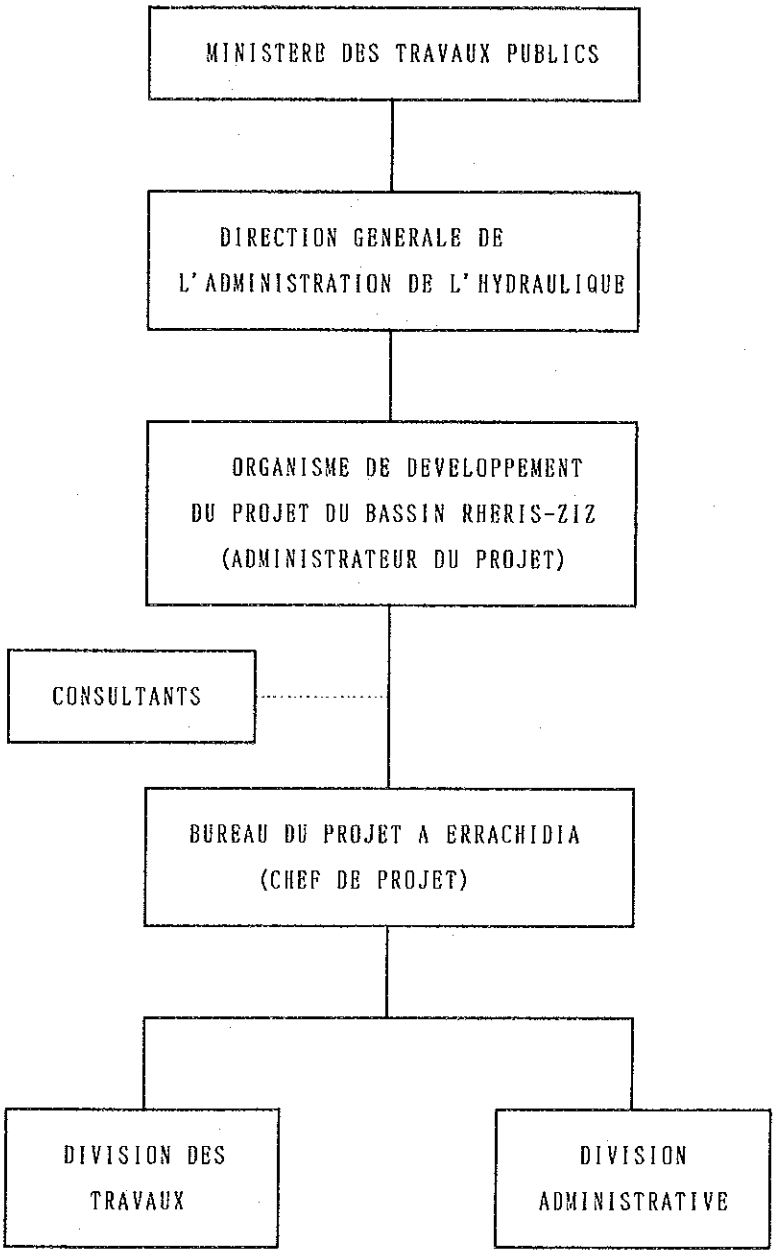


図12.2 Timkitダム (No.16) 工事実施工程表

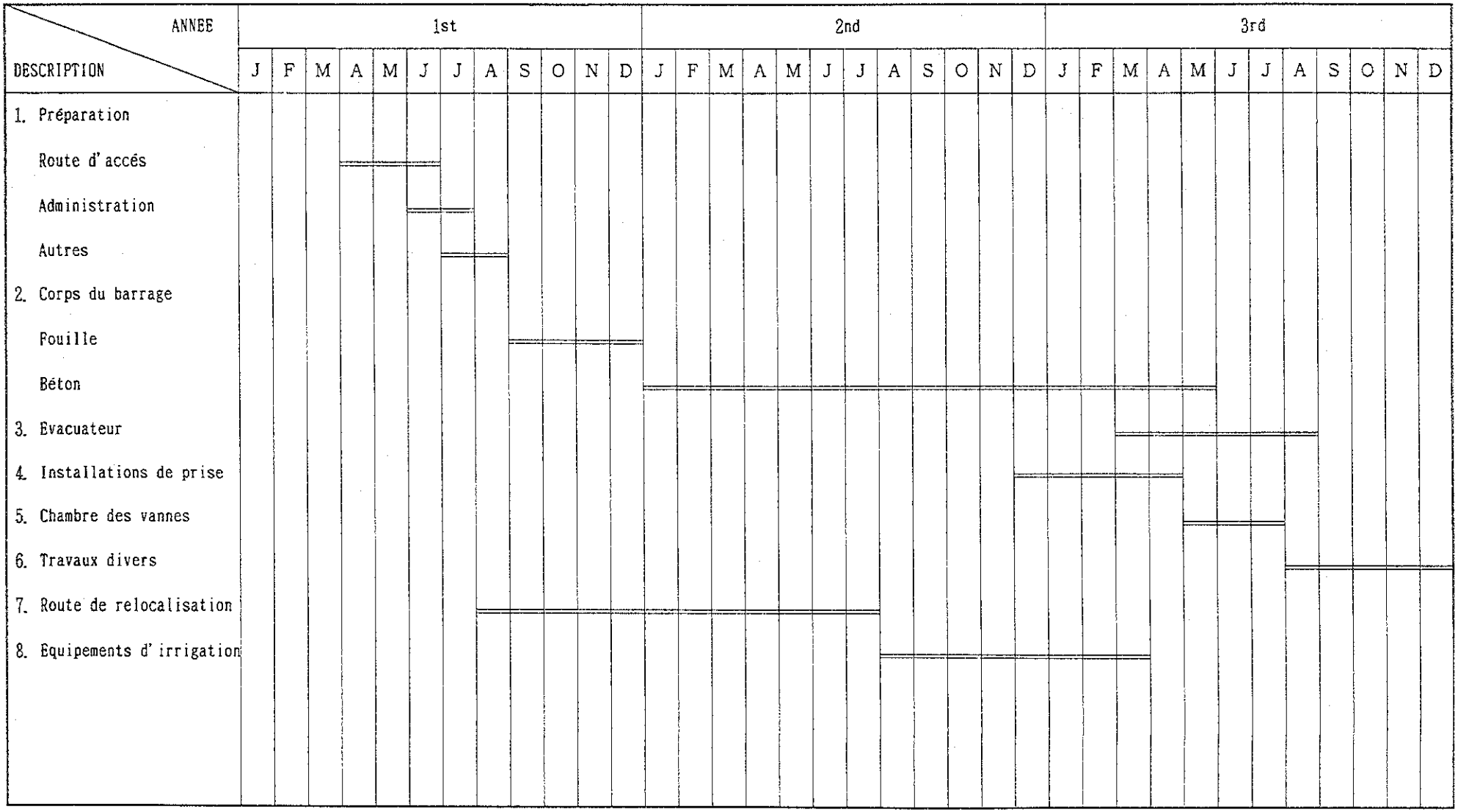


図12.3　Oukhitダム（No.28）工事実施工程表

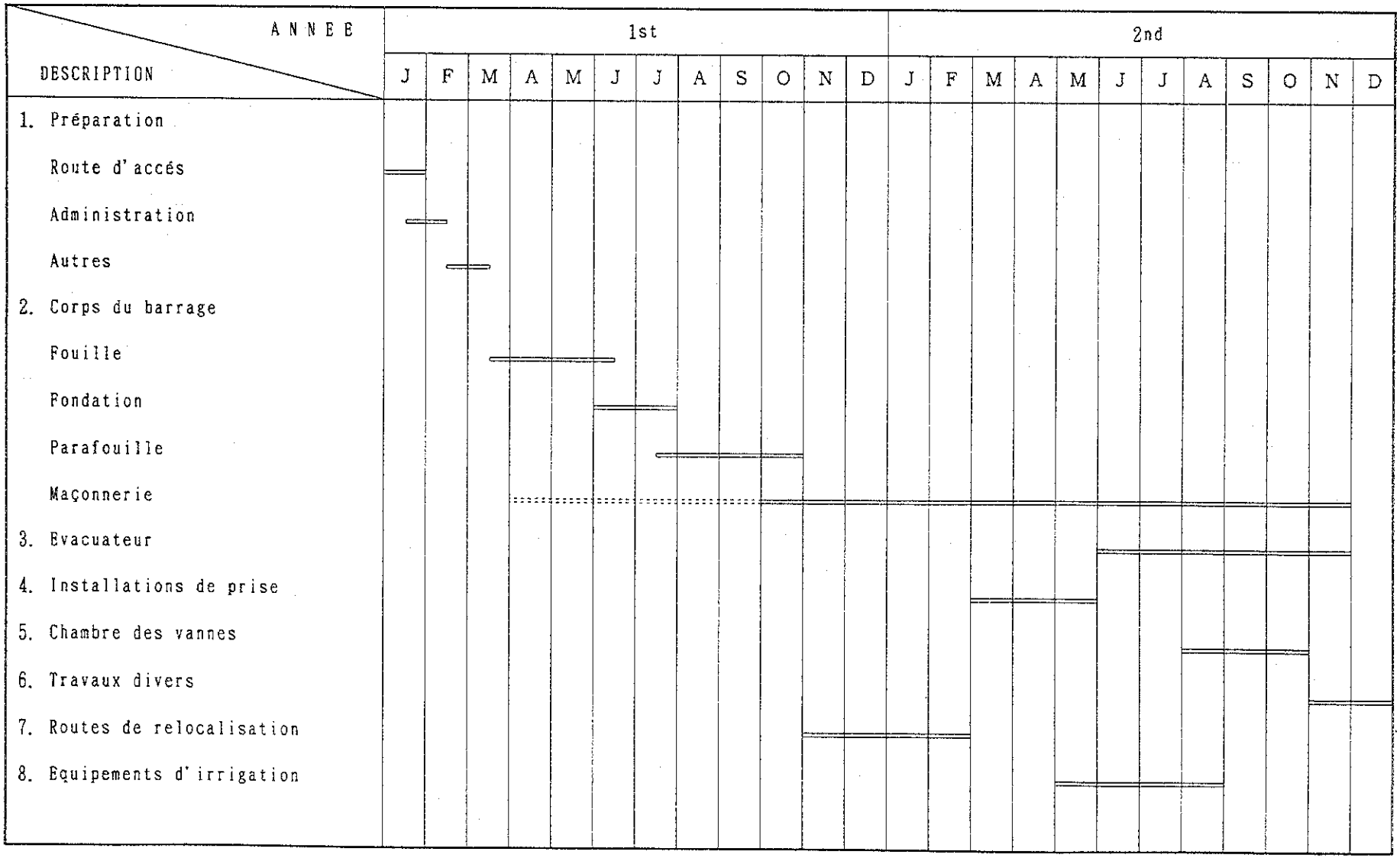
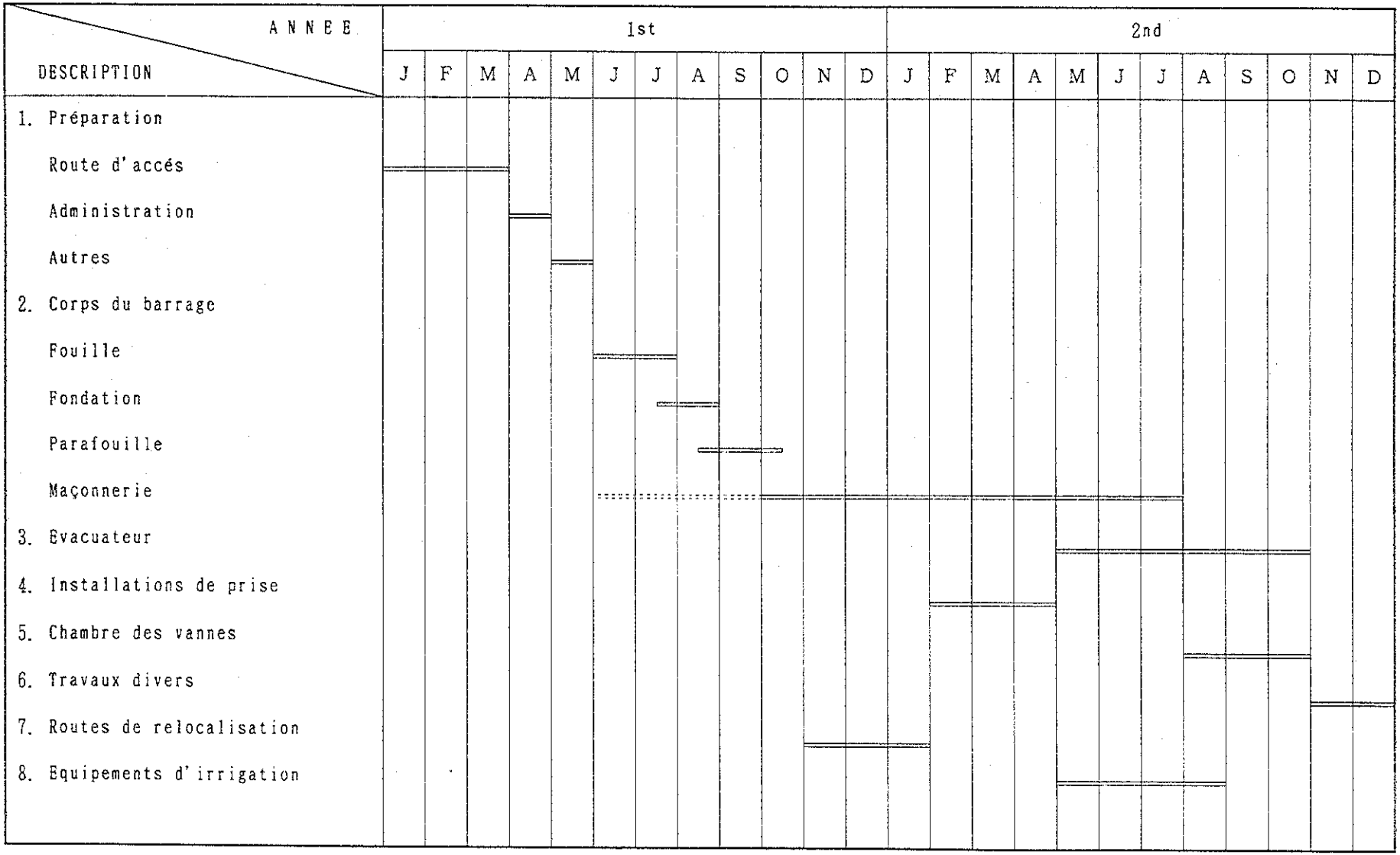


図12.4　Oulhouダム（No.29）工事実施工程表



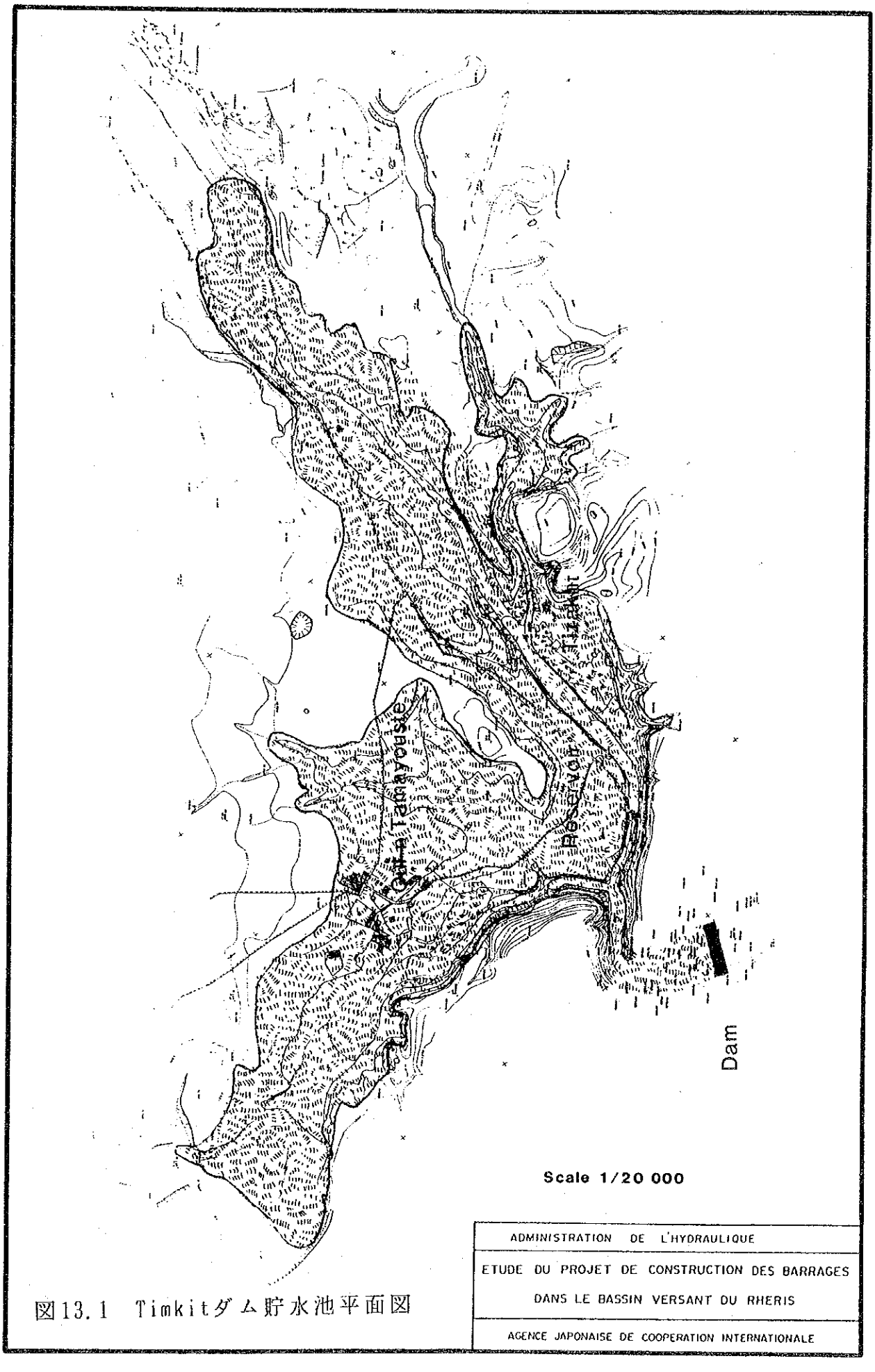


図13.1 Timkitダム貯水池平面図

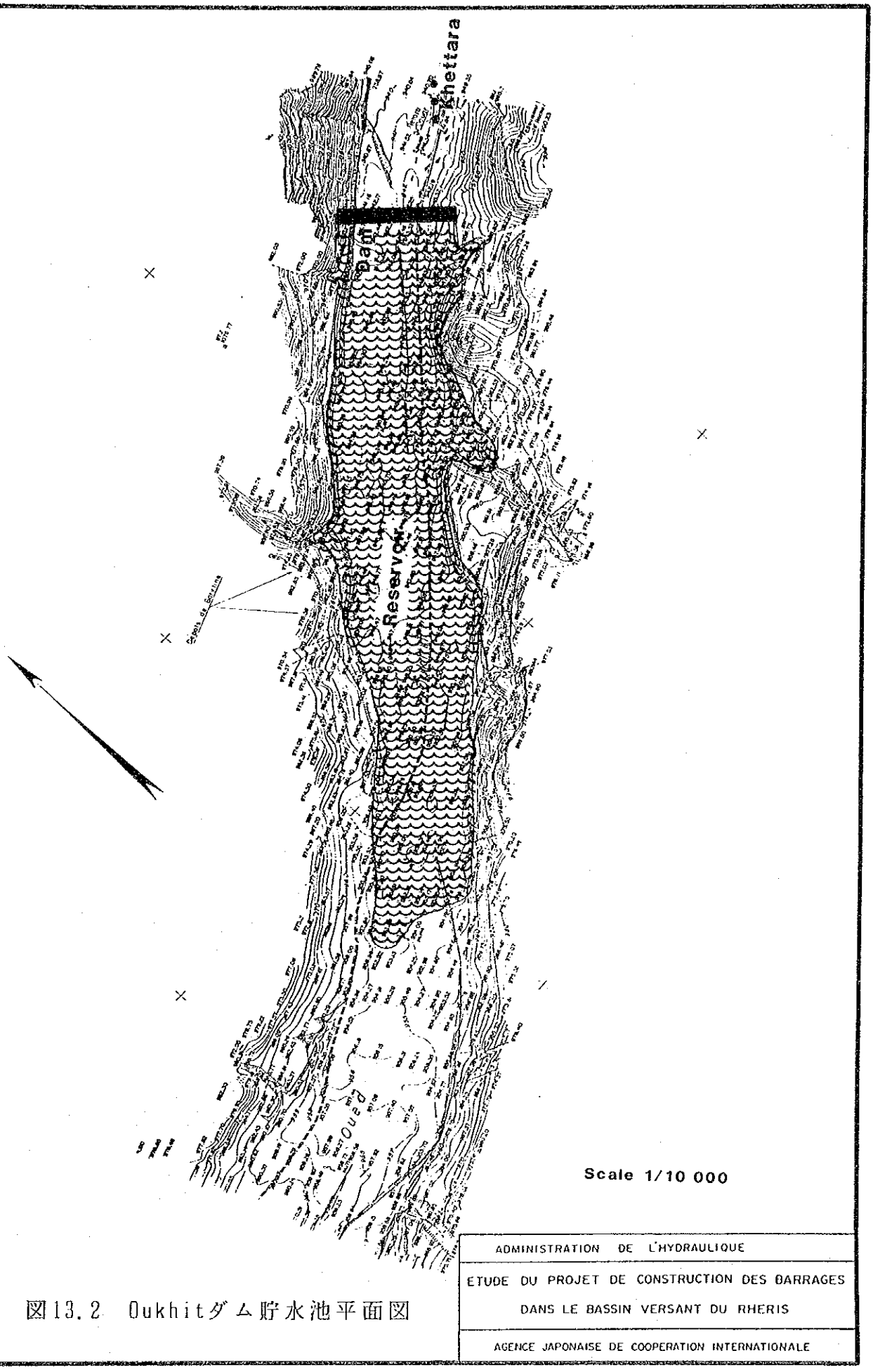


図13.2 Oukhitダム貯水池平面図

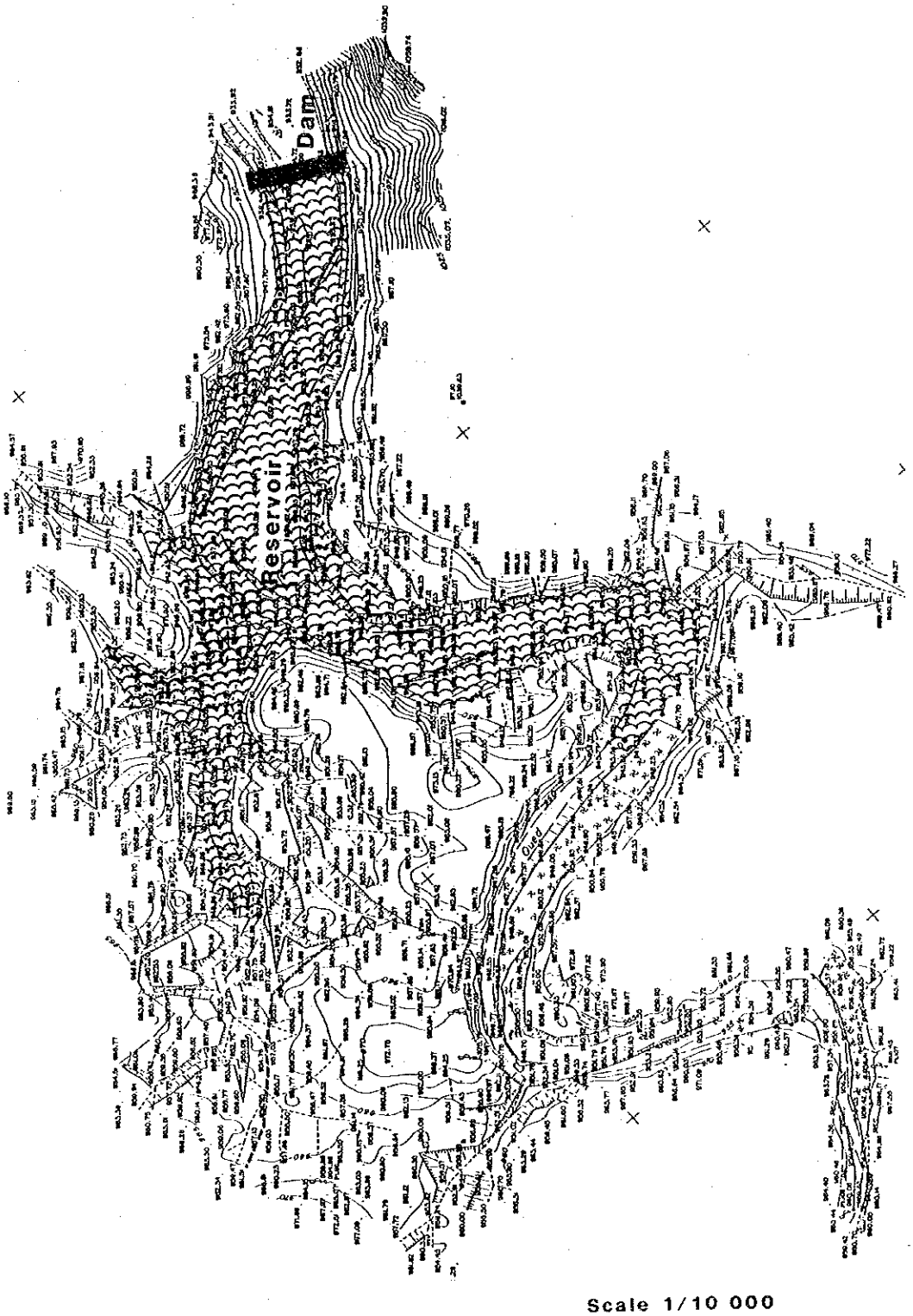


図13.3　Oulhouダム貯水池平面図

ADMINISTRATION DE L'HYDRAULIQUE
ETUDE DU PROJET DE CONSTRUCTION DES BARRAGES DANS LE BASSIN VERSANT DU RHERIS
AGENCE JAPONAISE DE COOPERATION INTERNATIONALE

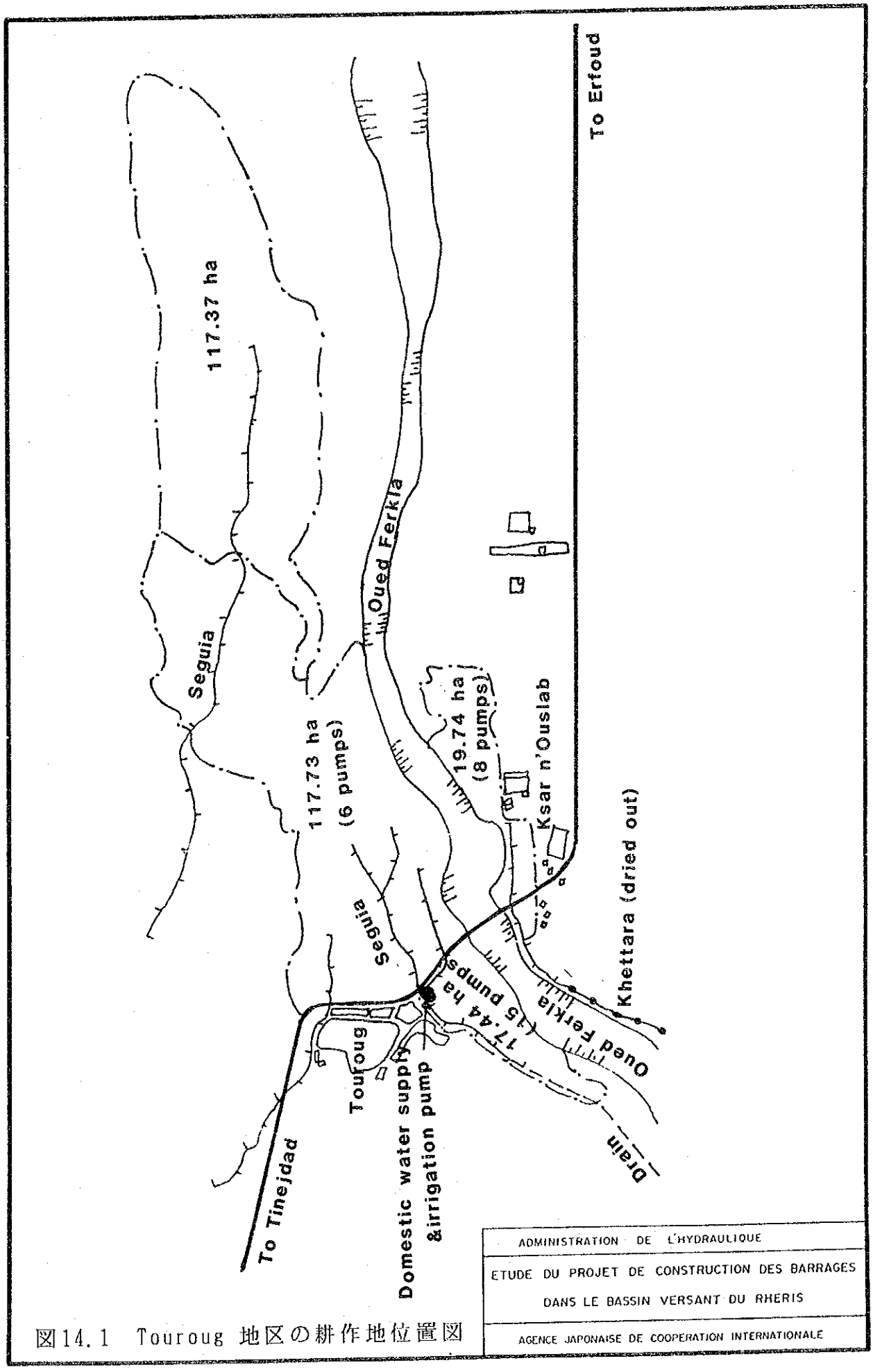


図14.1 Touroug 地区の耕作地位置図