

JAPAN INTERNATIONAL COOPERATION AGENCY
THE GOVERNMENT OF JAPAN
MINISTRY OF FOREIGN AFFAIRS AND COOPERATION

REPORT
ON
WATER SUPPLY PROJECTS IN BELGIUM
IN
1973

IN AID OF

VON DER

DAIWA BRÜCKEN

JUNE 1974

NO. 100-1001/1002

THE ECONOMIC COMMISSION FOR AFRICA, INTERNATIONAL

100-1001/1002

JAPAN INTERNATIONAL COOPERATION AGENCY
THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF WATER , ENERGY AND MINERALS

STUDY
ON
WATER RESOURCES DEVELOPMENT
IN
THE RUVU RIVER BASIN

FINAL REPORT

VOLUME IV
DATA BOOK

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DATA BOOK

- I TOPOGRAPHIC DATA
- II METEO-HYDROLOGICAL DATA
- III DATA ON FLOOD DAMAGE
- IV DATA ON SOIL ANALYSIS

DATA BOOK

I. TOPOGRAPHIC DATA

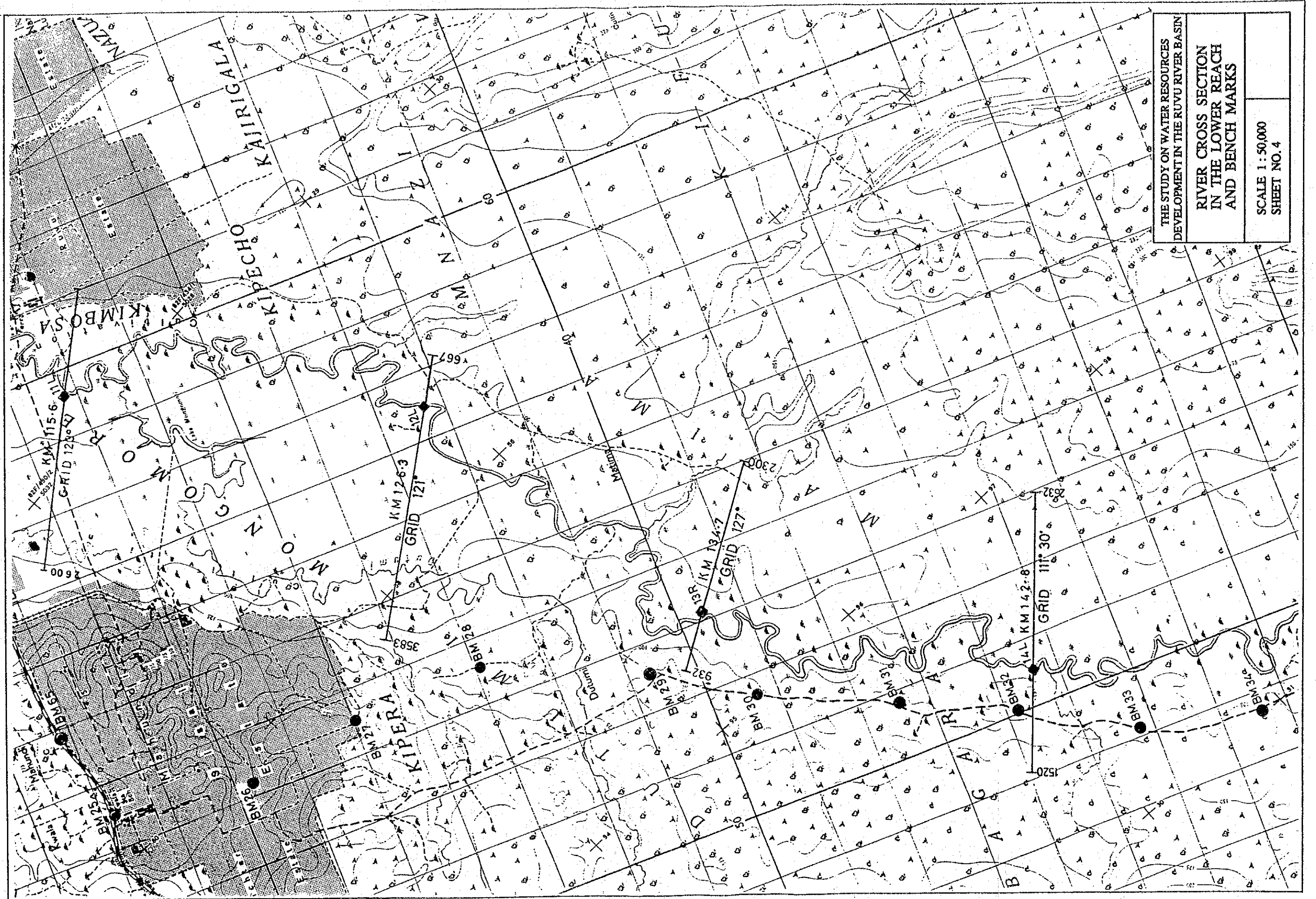
I. TOPOGRAPHIC DATA

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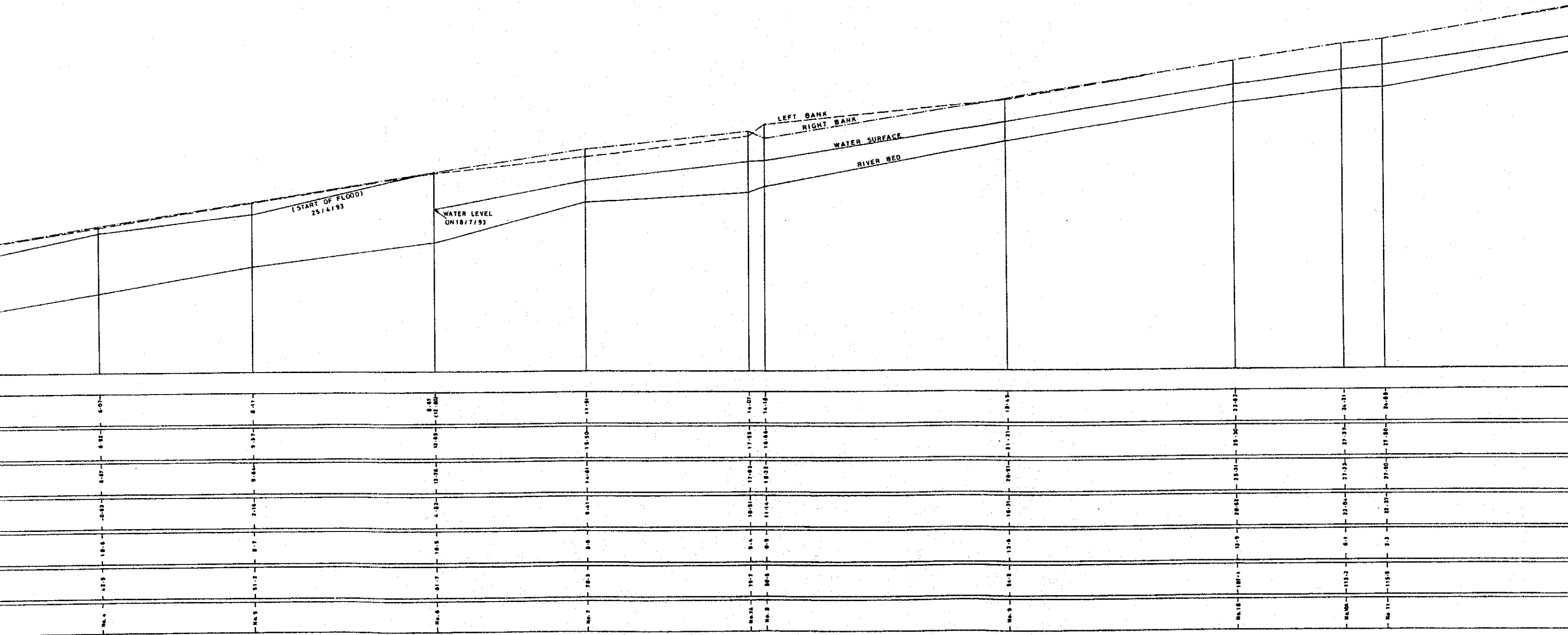
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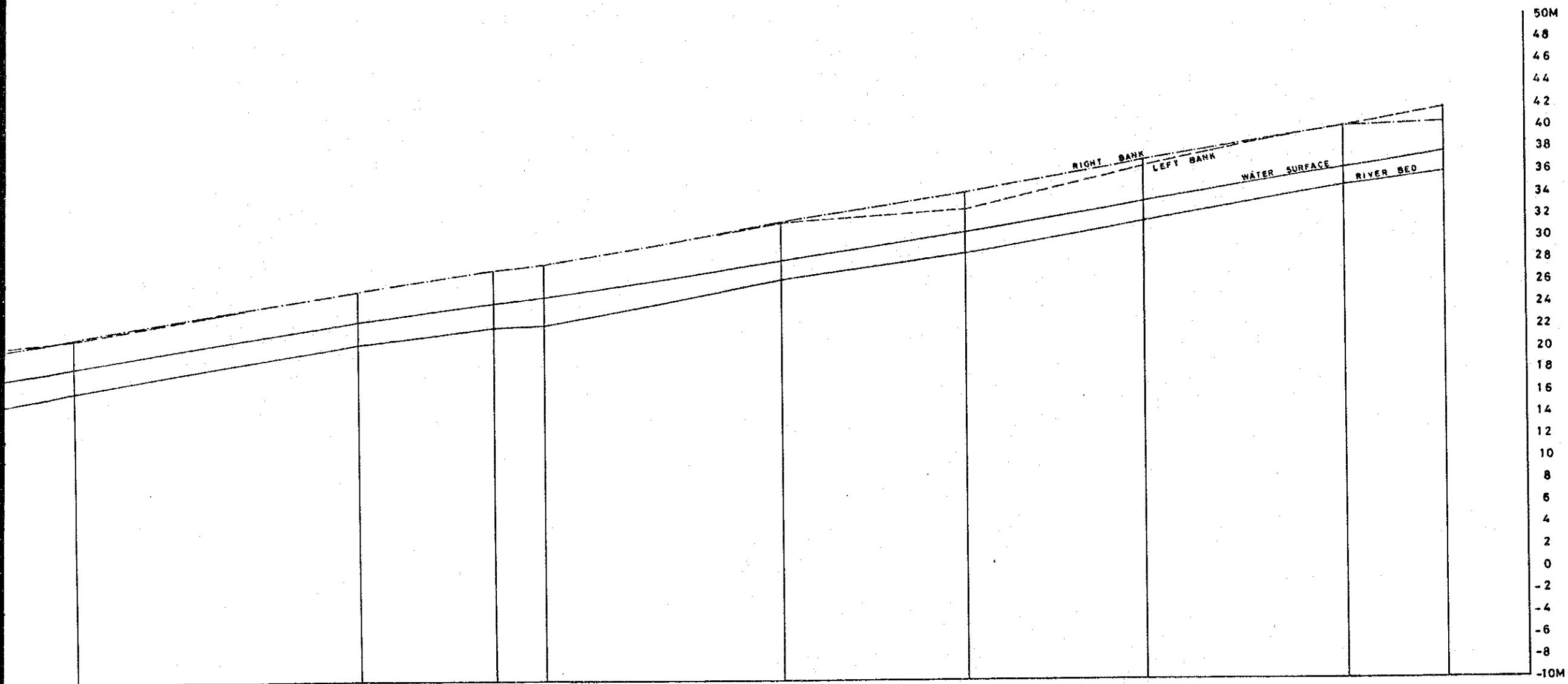
1. RUVU VALLEY CROSS SECTIONS





THE STUDY ON WATER RESOURCES
 DEVELOPMENT IN THE RUVU RIVER BASIN
 RIVER CROSS SECTION
 IN THE LOWER REACH
 AND BENCH MARKS
 SCALE 1:50,000
 SHEET NO.5





50M
48
46
44
42
40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10M

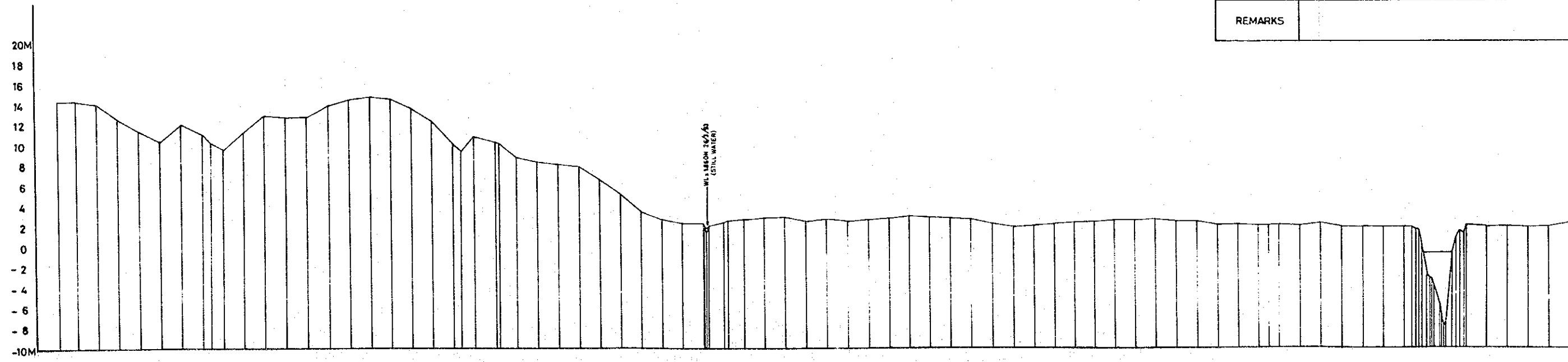
10.53	22.03	26.21	26.88	27.83	30.41	33.20	36.11	37.83
01.27	25.30	27.34	27.80	31.35	34.87	38.07	38.8	40.38
20.01	25.31	27.23	27.50	31.76	32.58	36.33	39.98	41.54
18.81	28.85	22.84	22.71	26.11	28.89	31.47	34.47	35.80
13.9	13.9	6.1	2.3	10.8	8.4	8.1	8.8	4.8
94.9	107.1	118.2	118.8	118.9	124.7	142.8	151.8	156.2
No. 9	No. 10	No. 10A	No. 11	No. 12	No. 13	No. 14	No. 15	No. 15

THE STUDY ON WATER RESOURCES
DEVELOPMENT IN THE RUVU RIVER BASIN

RIVER PROFILE SECTION
IN THE LOWER REACH

SCALE: 1:100,000 V = 1:200

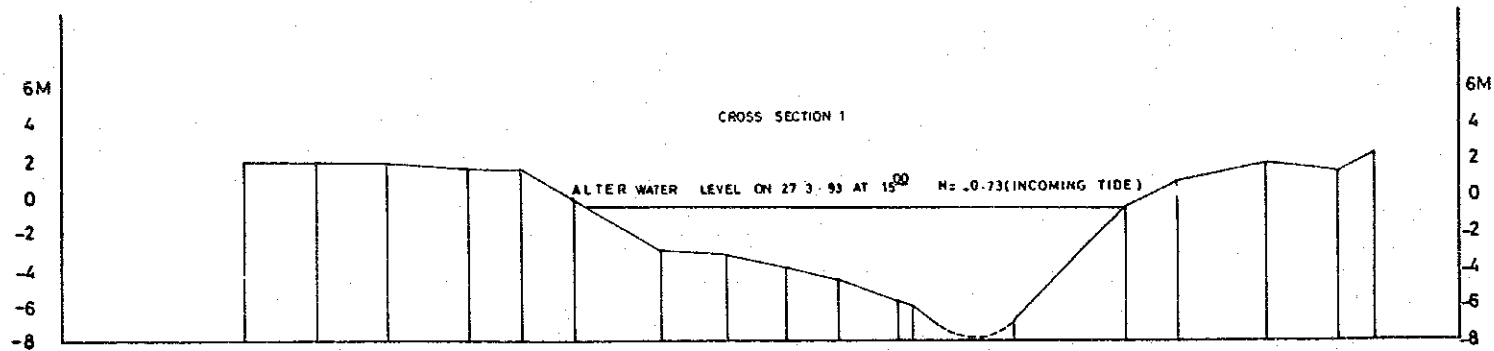
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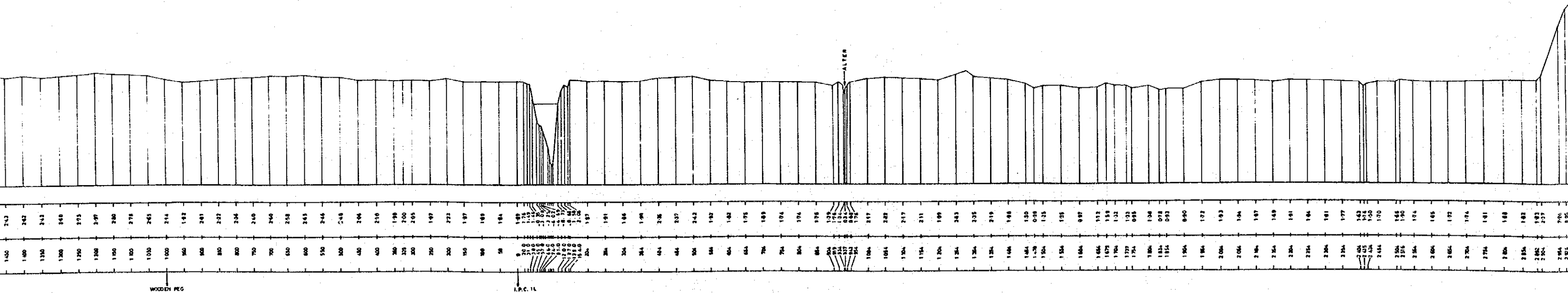
6M
4
2
0
-2
-4
-6
-8

GROUND HEIGHT	1.8	1.3	1.7	1.5	2.1
ACCUMULATED DISTANCE	0	10.0	20.0	31.0	40.0
REMARKS					

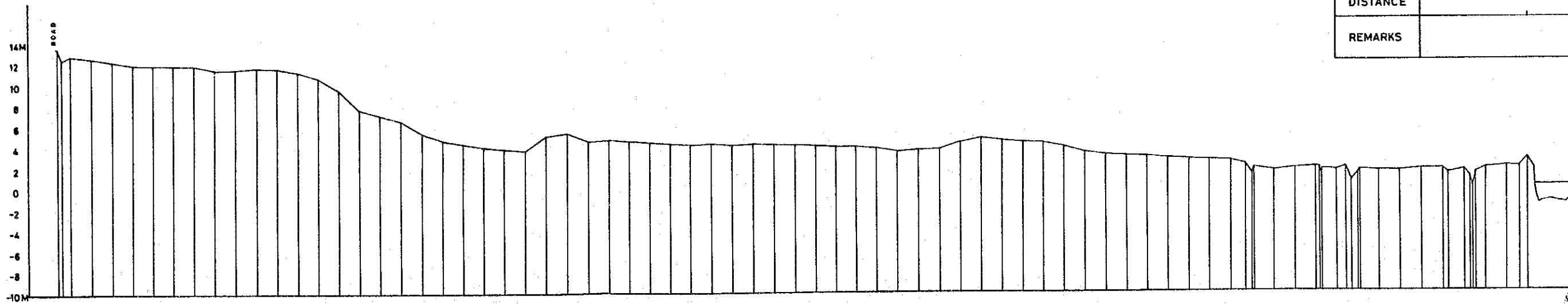
GROUND HEIGHT	14.22	14.30	13.98	12.48	11.32	10.36	11.98	11.05	10.74	9.46	11.27	12.96	12.44	12.65	13.89	15.44	14.48	14.44	13.48	12.85	10.48	9.34	10.32	10.06	9.78	9.28	8.44	7.94	6.68	5.04	3.30	2.43	2.15	2.21	2.27	2.32	2.38	2.44	2.50	2.56	2.62	2.68	2.74	2.80	2.86	2.92	2.98	3.04	3.10	3.16	3.22	3.28	3.34	3.40	3.46	3.52	3.58	3.64	3.70	3.76	3.82	3.88	3.94	4.00	4.06	4.12	4.18	4.24	4.30	4.36	4.42	4.48	4.54	4.60	4.66	4.72	4.78	4.84	4.90	4.96	5.02	5.08	5.14	5.20	5.26	5.32	5.38	5.44	5.50	5.56	5.62	5.68	5.74	5.80	5.86	5.92	5.98	6.04	6.10	6.16	6.22	6.28	6.34	6.40	6.46	6.52	6.58	6.64	6.70	6.76	6.82	6.88	6.94	7.00	7.06	7.12	7.18	7.24	7.30	7.36	7.42	7.48	7.54	7.60	7.66	7.72	7.78	7.84	7.90	7.96	8.02	8.08	8.14	8.20	8.26	8.32	8.38	8.44	8.50	8.56	8.62	8.68	8.74	8.80	8.86	8.92	8.98	9.04	9.10	9.16	9.22	9.28	9.34	9.40	9.46	9.52	9.58	9.64	9.70	9.76	9.82	9.88	9.94	10.00	10.06	10.12	10.18	10.24	10.30	10.36	10.42	10.48	10.54	10.60	10.66	10.72	10.78	10.84	10.90	10.96	11.02	11.08	11.14	11.20	11.26	11.32	11.38	11.44	11.50	11.56	11.62	11.68	11.74	11.80	11.86	11.92	11.98	12.04	12.10	12.16	12.22	12.28	12.34	12.40	12.46	12.52	12.58	12.64	12.70	12.76	12.82	12.88	12.94	13.00	13.06	13.12	13.18	13.24	13.30	13.36	13.42	13.48	13.54	13.60	13.66	13.72	13.78	13.84	13.90	13.96	14.02	14.08	14.14	14.20	14.26	14.32	14.38	14.44	14.50	14.56	14.62	14.68	14.74	14.80	14.86	14.92	14.98	15.04	15.10	15.16	15.22	15.28	15.34	15.40	15.46	15.52	15.58	15.64	15.70	15.76	15.82	15.88	15.94	16.00	16.06	16.12	16.18	16.24	16.30	16.36	16.42	16.48	16.54	16.60	16.66	16.72	16.78	16.84	16.90	16.96	17.02	17.08	17.14	17.20	17.26	17.32	17.38	17.44	17.50	17.56	17.62	17.68	17.74	17.80	17.86	17.92	17.98	18.04	18.10	18.16	18.22	18.28	18.34	18.40	18.46	18.52	18.58	18.64	18.70	18.76	18.82	18.88	18.94	19.00	19.06	19.12	19.18	19.24	19.30	19.36	19.42	19.48	19.54	19.60	19.66	19.72	19.78	19.84	19.90	19.96	20.02	20.08	20.14	20.20	20.26	20.32	20.38	20.44	20.50	20.56	20.62	20.68	20.74	20.80	20.86	20.92	20.98	21.04	21.10	21.16	21.22	21.28	21.34	21.40	21.46	21.52	21.58	21.64	21.70	21.76	21.82	21.88	21.94	22.00	22.06	22.12	22.18	22.24	22.30	22.36	22.42	22.48	22.54	22.60	22.66	22.72	22.78	22.84	22.90	22.96	23.02	23.08	23.14	23.20	23.26	23.32	23.38	23.44	23.50	23.56	23.62	23.68	23.74	23.80	23.86	23.92	23.98	24.04	24.10	24.16	24.22	24.28	24.34	24.40	24.46	24.52	24.58	24.64	24.70	24.76	24.82	24.88	24.94	25.00	25.06	25.12	25.18	25.24	25.30	25.36	25.42	25.48	25.54	25.60	25.66	25.72	25.78	25.84	25.90	25.96	26.02	26.08	26.14	26.20	26.26	26.32	26.38	26.44	26.50	26.56	26.62	26.68	26.74	26.80	26.86	26.92	26.98	27.04	27.10	27.16	27.22	27.28	27.34	27.40	27.46	27.52	27.58	27.64	27.70	27.76	27.82	27.88	27.94	28.00	28.06	28.12	28.18	28.24	28.30	28.36	28.42	28.48	28.54	28.60	28.66	28.72	28.78	28.84	28.90	28.96	29.02	29.08	29.14	29.20	29.26	29.32	29.38	29.44	29.50	29.56	29.62	29.68	29.74	29.80	29.86	29.92	29.98	30.04	30.10	30.16	30.22	30.28	30.34	30.40	30.46	30.52	30.58	30.64	30.70	30.76	30.82	30.88	30.94	31.00	31.06	31.12	31.18	31.24	31.30	31.36	31.42	31.48	31.54	31.60	31.66	31.72	31.78	31.84	31.90	31.96	32.02	32.08	32.14	32.20	32.26	32.32	32.38	32.44	32.50	32.56	32.62	32.68	32.74	32.80	32.86	32.92	32.98	33.04	33.10	33.16	33.22	33.28	33.34	33.40	33.46	33.52	33.58	33.64	33.70	33.76	33.82	33.88	33.94	34.00	34.06	34.12	34.18	34.24	34.30	34.36	34.42	34.48	34.54	34.60	34.66	34.72	34.78	34.84	34.90	34.96	35.02	35.08	35.14	35.20	35.26	35.32	35.38	35.44	35.50	35.56	35.62	35.68	35.74	35.80	35.86	35.92	35.98	36.04	36.10	36.16	36.22	36.28	36.34	36.40	36.46	36.52	36.58	36.64	36.70	36.76	36.82	36.88	36.94	37.00	37.06	37.12	37.18	37.24	37.30	37.36	37.42	37.48	37.54	37.60	37.66	37.72	37.78	37.84	37.90	37.96	38.02	38.08	38.14	38.20	38.26	38.32	38.38	38.44	38.50	38.56	38.62	38.68	38.74	38.80	38.86	38.92	38.98	39.04	39.10	39.16	39.22	39.28	39.34	39.40	39.46	39.52	39.58	39.64	39.70	39.76	39.82	39.88	39.94	40.00	40.06	40.12	40.18	40.24	40.30	40.36	40.42	40.48	40.54	40.60	40.66	40.72	40.78	40.84	40.90	40.96	41.02	41.08	41.14	41.20	41.26	41.32	41.38	41.44	41.50	41.56	41.62	41.68	41.74	41.80	41.86	41.92	41.98	42.04	42.10	42.16	42.22	42.28	42.34	42.40	42.46	42.52	42.58	42.64	42.70	42.76	42.82	42.88	42.94	43.00	43.06	43.12	43.18	43.24	43.30	43.36	43.42	43.48	43.54	43.60	43.66	43.72	43.78	43.84	43.90	43.96	44.02	44.08	44.14	44.20	44.26	44.32	44.38	44.44	44.50	44.56	44.62	44.68	44.74	44.80	44.86	44.92	44.98	45.04	45.10	45.16	45.22	45.28	45.34	45.40	45.46	45.52	45.58	45.64	45.70	45.76	45.82	45.88	45.94	46.00	46.06	46.12	46.18	46.24	46.30	46.36	46.42	46.48	46.54	46.60	46.66	46.72	46.78	46.84	46.90	46.96	47.02	47.08	47.14	47.20	47.26	47.32	47.38	47.44	47.50	47.56	47.62	47.68	47.74	47.80	47.86	47.92	47.98	48.04	48.10	48.16	48.22	48.28	48.34	48.40	48.46	48.52	48.58	48.64	48.70	48.76	48.82	48.88	48.94	49.00	49.06	49.12	49.18	49.24	49.30	49.36	49.42	49.48	49.54	49.60	49.66	49.72	49.78	49.84	49.90	49.96	50.02	50.08	50.14	50.20	50.26	50.32	50.38	50.44	50.50	50.56	50.62	50.68	50.74	50.80	50.86	50.92	50.98	51.04	51.10	51.16	51.22	51.28	51.34	51.40	51.46	51.52	51.58	51.64	51.70	51.76	51.82	51.88	51.94	52.00	52.06	52.12	52.18	52.24	52.30	52.36	52.42	52.48	52.54	52.60	52.66	52.72	52.78	52.84	52.90	52.96	53.02	53.08	53.14	53.20	53.26	53.32	53.38	53.44	53.50	53.56	53.62	53.68	53.74	53.80	53.86	53.92	53.98	54.04	54.10	54.16	54.22	54.28	54.34	54.40	54.46	54.52	54.58	54.64	54.70	54.76	54.82	54.88	54.94	55.00	55.06	55.12	55.18	55.24	55.30	55.36	55.42	55.48	55.54	55.60	55.66	55.72	55.78	55.84	55.90	55.96	56.02	56.08	56.14	56.20	56.26	56.32	56.38	56.44	56.50	56.56	56.62	56.68	56.74	56.80	56.86	56.92	56.98	57.04	57.10	57.16	57.22	57.28	57.34	57.40	57.46	57.52	57.58	57.64	57.70	57.76	57.82	57.88	57.94	58.00	58.06	58.12	58.18	58.24	58.30	58.36	58.42	58.48	58.54	58.60	58.66	58.72	58.78	58.84	58.90	58.96	59.02	59.08	59.14	59.20	59.26	59.32	59.38	59.44	59.50	59.56	59.62	59.68	59.74	59.80	59.86	59.92	59.98	60.04	60.10	60.16	60.22	60.28	60.34	60.40	60.46	60.52	60.58	60.64	60.70	60.76	60.82	60.88	60.94	61.00	61.06	61.12	61.18	61.24	61.30	61.36	61.42	61.48	61.54	61.60	61.66	61.72	61.78	61.84	61.90	61.96	62.02	62.08	62.14	62.20	62.26	62.32	62.38	62.44	62.50	62.56	62.62	62.68	62.74	62.80	62.86	62.92	62.98	63.04	63.10	63.16	63.22	63.28	63.34	63.40	63.46	63.52	63.58	63.64	63.70	63.76	63.82	63.88	63.94	64.00	64.06	64.12	64.18	64.24	64.30	64.36	64.42	64.48	64.54	64.60	64.66	64.72	64.78	64.84	64.90	64.96	65.02	65.08	65.14	65.20	65.26	65.32	65.38	65.44	65.50	65.56	65.62	65.68	65.74	65.80	65.86	65.92	65.98	66.04	66.10</
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GROUND HEIGHT	1.88	1.83	1.76	1.53	1.46	-0.25	-2.88	-2.25	-4.92	-4.89	-4.68	-6.13	-7.32	-7.7	-6.96	-0.72	-6.48	1.38	1.43	2.04
ACCUMULATED DISTANCE	0	10.0	20.0	31.0	36.0	45.8	57.0	65.0	75.6	81.0	86.0	91.0	95.0	98.0	105.0	120.0	127.0	139.0	149.8	151.8
REMARKS																				



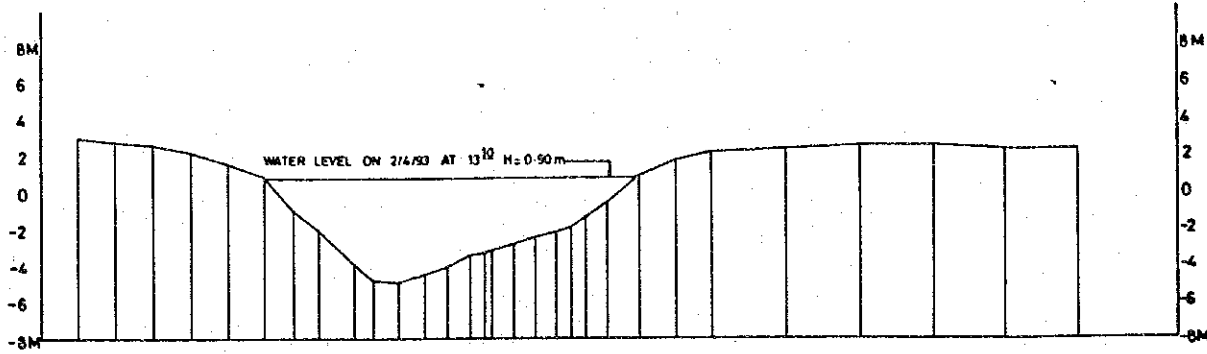
SCALE HORIZONTAL = 1:5000
VERTICAL = 1:200



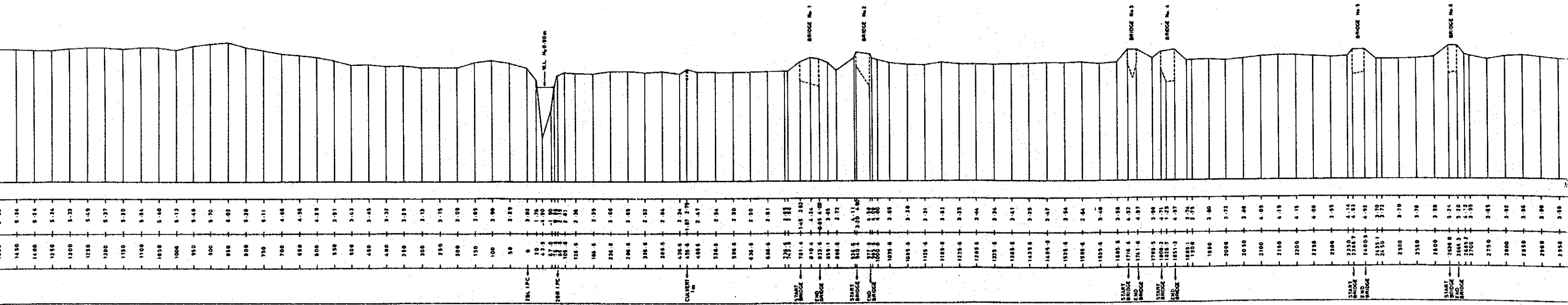
GROUND HEIGHT	ACCUMULATED DISTANCE	REMARKS
13.00	0.00	
12.87	0.50	
12.83	1.00	
12.33	1.50	
11.98	2.00	
11.98	2.50	
11.91	3.00	
11.87	3.50	
11.48	4.00	
11.51	4.50	
11.43	5.00	
11.99	5.50	
11.25	6.00	
10.79	6.50	
9.56	7.00	
7.87	7.50	
7.06	8.00	
5.95	8.50	
5.33	9.00	
4.83	9.50	
4.31	10.00	
4.00	10.50	
3.80	11.00	
3.69	11.50	
5.03	12.00	
5.30	12.50	
4.45	13.00	
4.42	13.50	
4.83	14.00	
4.45	14.50	
4.24	15.00	
4.34	15.50	
4.30	16.00	
4.18	16.50	
4.30	17.00	
4.25	17.50	
4.14	18.00	
4.11	18.50	
3.94	19.00	
3.94	19.50	
3.79	20.00	
3.94	20.50	
3.83	21.00	
3.77	21.50	
4.39	22.00	
4.76	22.50	
4.48	23.00	
4.48	23.50	
4.31	24.00	
3.95	24.50	
3.37	25.00	
3.31	25.50	
3.03	26.00	
2.99	26.50	
2.79	27.00	
2.75	27.50	
2.65	28.00	
2.57	28.50	
2.47	29.00	
2.47	29.50	
2.45	30.00	
2.30	30.50	
2.20	31.00	
2.11	31.50	
2.00	32.00	
1.92	32.50	
1.90	33.00	
2.05	33.50	

GROUND HEIGHT	1.70	1.70	1.81
ACCUMULATED DISTANCE	0	1.5	3.5
REMARKS			

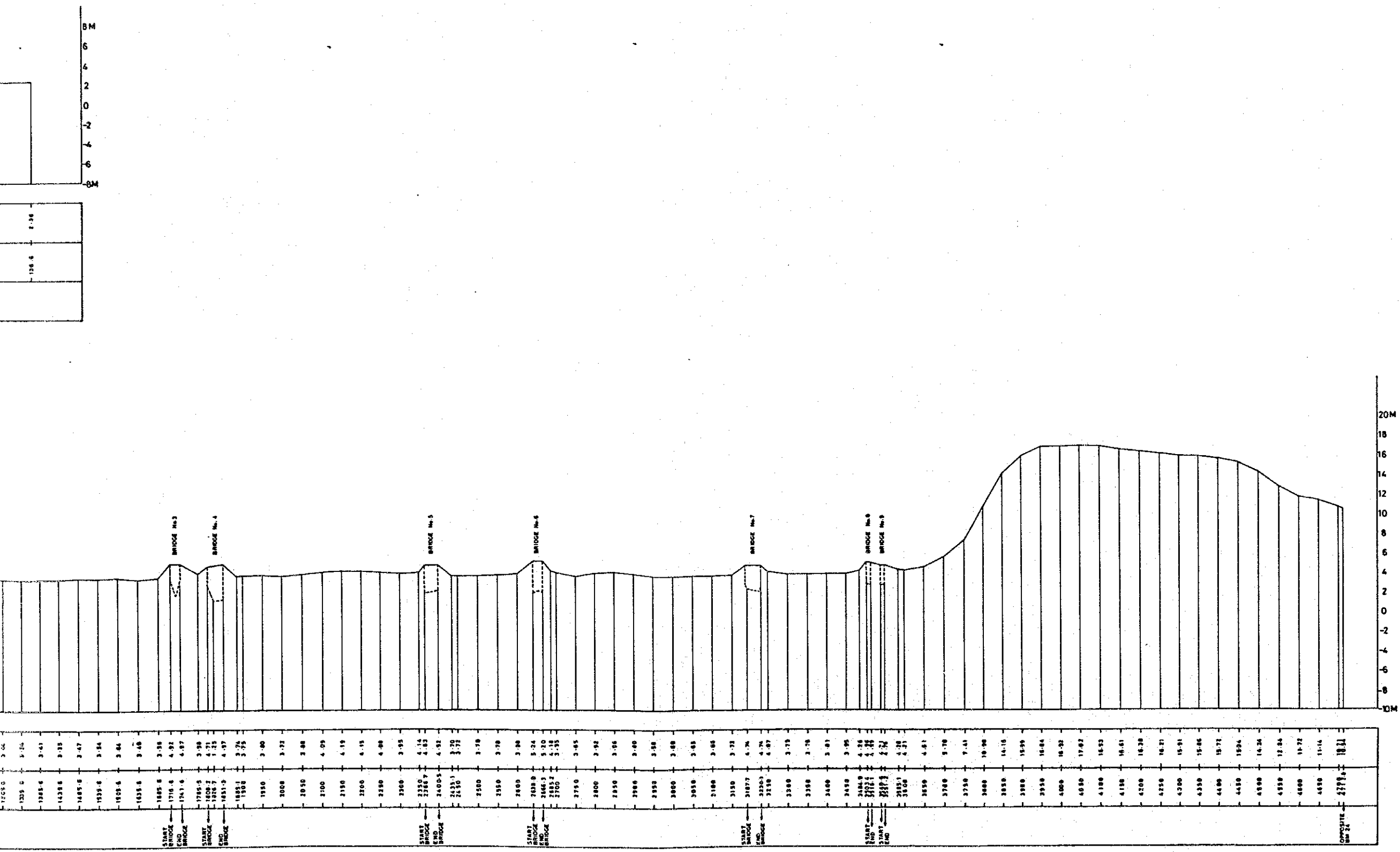
GROUND HEIGHT	1.65
ACCUMULATED DISTANCE	0
REMARKS	



GROUND HEIGHT	ACCUMULATED DISTANCE	REMARKS
5.02	0	12M IPC
2.81	5.0	
2.81	10.0	
2.24	15.8	
1.70	20.0	
0.81	25.0	
-1.05	29.0	
-2.05	32.5	
-3.80	37.2	
-4.70	40.0	
-4.90	43.5	
-4.50	47.0	
-4.10	50.5	
-3.50	53.0	
-3.10	55.0	
-2.90	57.2	
-2.45	62.1	
-2.18	65.0	
-1.90	67.5	
-1.20	69.1	
-0.80	72.0	
0.46	75.6	
1.77	81.6	
2.18	86.5	20M IPC
2.48	95.5	
2.81	106.8	
2.82	116.5	
2.44	126.5	
2.38	136.5	

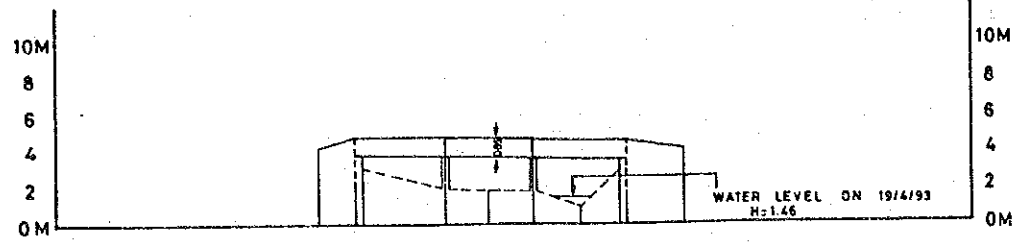


SCALE : HORIZONTAL 1:500
VERTICAL 1:200



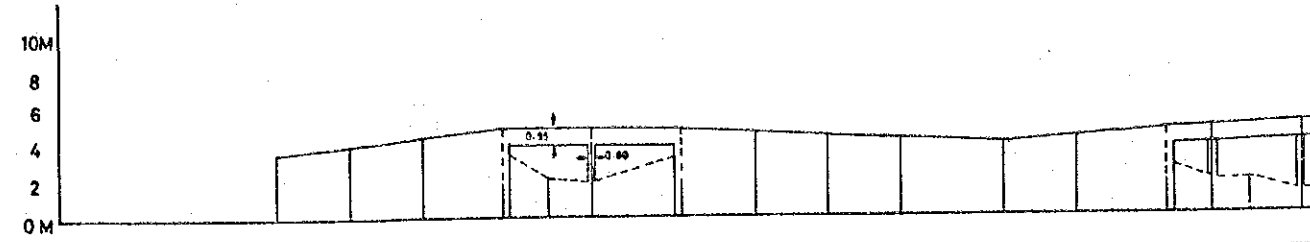
THE STUDY ON WATER RESOURCES
 DEVELOPMENT IN THE RUVU RIVER BASIN
 RIVER CROSS SECTION
 IN THE LOWER REACH
 SECTION No.2B (28th)
 SCALE: H=1:5000 V=1:200
 H=1:500 V=1:200

CROSS SECTION 1B
BRIDGE No 2



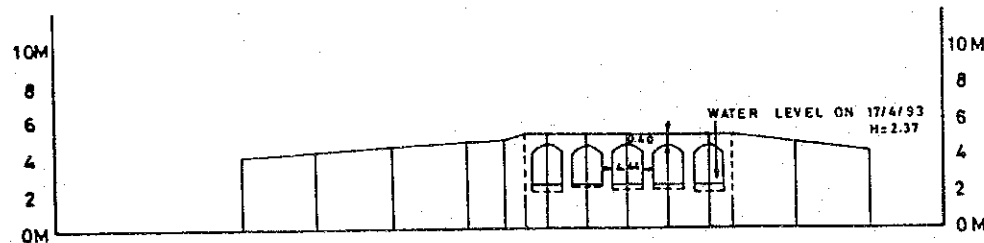
GROUND HEIGHT		6.19	4.80	4.76	4.70	4.50	4.00
ACCUMULATED DISTANCE		935.4	940.4	941.2	950.0	965.1	985.6
REMARKS		START BRIDGE	PILLAR	PILLAR	END BRIDGE		

BRIDGE No 3



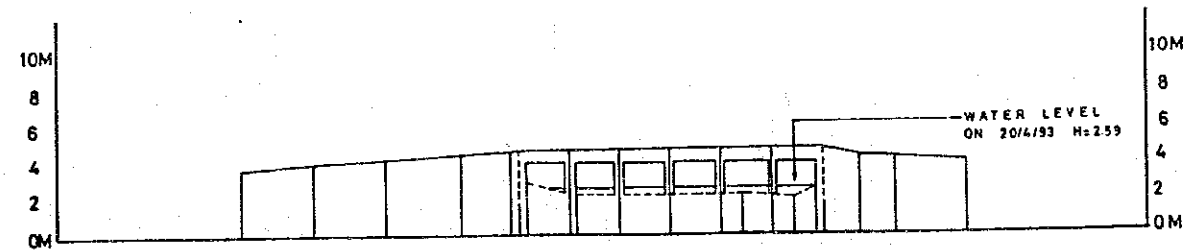
GROUND HEIGHT		3.50	4.00	4.46	4.57	4.82	4.53	4.44	4.23	3.28	4.20	4.71	4.77	4.90	4.95		
ACCUMULATED DISTANCE		1685.6	1695.6	1705.6	1716.6	1723.0	1739.1	1740.5	1741.5	1751.5	1761.5	1771.5	1786.5	1795.5	1802.2	1816.3	1818.7
REMARKS					START BRIDGE			END BRIDGE					START BRIDGE	PILLAR	PILLAR		

BRIDGE No 6



GROUND HEIGHT		3.26	4.22	4.48	4.73	4.86	5.24	5.22	5.31	5.22	5.24	5.20	4.73	4.16	
ACCUMULATED DISTANCE		2600.0	2606.6	2630.0	2635.0	2635.1	2636.0	2641.0	2646.5	2651.8	2655.22	2655.24	2665.20	2675.8	2685.2
REMARKS						START BRIDGE						END BRIDGE			

BRIDGE No 7

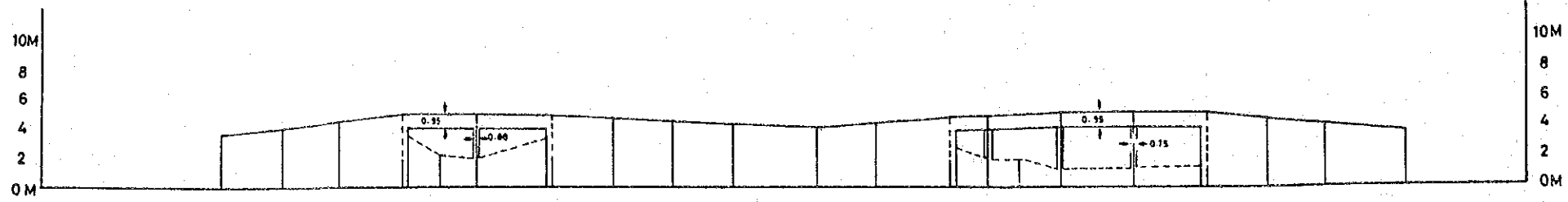


GROUND HEIGHT		3.77	3.95	4.10	4.41	4.57	4.74	4.85	4.76	4.79	4.74	4.60	4.72	4.70	4.20	4.07	
ACCUMULATED DISTANCE		3190.0	3190.9	3196.0	3198.8	3198.7	3199.7	3199.9	3199.9	3201.8	3201.8	3215.6	3218.8	3222.8	3225.8	3230.1	3235.1
REMARKS						START BRIDGE								END BRIDGE			

GROUND HEIGHT	
ACCUMULATED DISTANCE	
REMARKS	

BRIDGE No 3

BRIDGE No 4

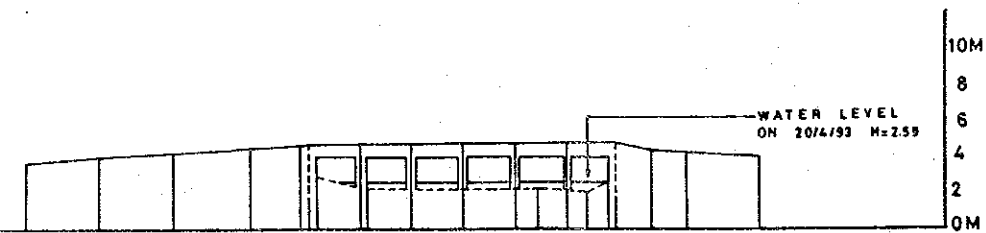


GROUND HEIGHT	ACCUMULATED DISTANCE	REMARKS
3.52	1685.8	
4.01	1685.4	
4.44	1705.6	
4.83	1715.6	START BRIDGE
3.42	1717.6	
2.15	1722.0	
1.88	1728.1	
4.82	1740.5	END BRIDGE
4.63	1751.5	
4.44	1761.5	
4.33	1771.5	
2.30	1781.5	
4.30	1795.5	
4.71	1805.2	START BRIDGE PILLAR
2.75	1809.2	
4.77	1816.3	
1.00	1819.6	
1.25	1826.7	PILLAR
4.25	1836.0	
4.37	1850.3	
1.33	1851.3	END BRIDGE
4.61	1861.3	
4.24	1871.3	
3.74	1881.3	

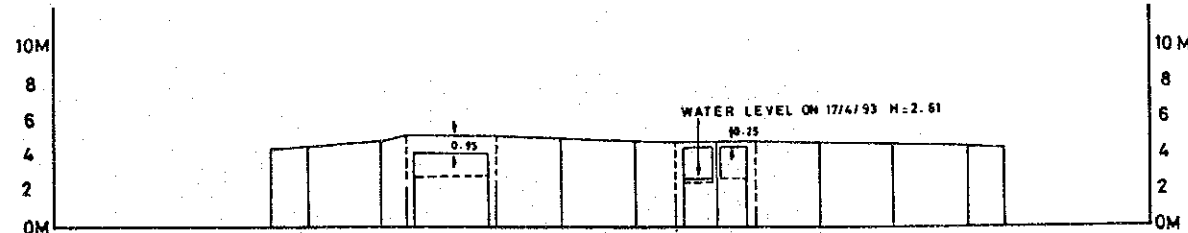
BRIDGE No 7

BRIDGE No 8

BRIDGE No 9



GROUND HEIGHT	ACCUMULATED DISTANCE	REMARKS
3.71	3184.0	
3.95	3180.0	
4.18	3170.0	
4.41	3160.0	
4.57	3155.7	
4.74	3151.7	
3.38	3155.8	
4.71	3144.8	
2.30	3145.8	
6.74	3201.0	
6.74	3208.0	
6.58	3215.0	
2.27	3219.8	
0.75	3222.0	
0.75	3224.0	
0.74	3226.0	
6.74	3230.1	
4.40	3235.1	
6.74	3240.0	
6.07	3250.0	



GROUND HEIGHT	ACCUMULATED DISTANCE	REMARKS
4.24	2481.9	
4.29	2490.0	
4.08	2500.0	
4.14	2503.4	
2.75	2506.2	START BRIDGE
4.89	2516.0	
2.84	2516.1	END BRIDGE
6.04	2525.6	
4.71	2533.0	
6.71	2540.8	
2.45	2541.0	
4.78	2544.1	START BRIDGE
1.88	2550.3	
4.78	2551.2	END BRIDGE
4.44	2558.0	
6.59	2570.0	
4.76	2160.9	
4.78	2165.1	

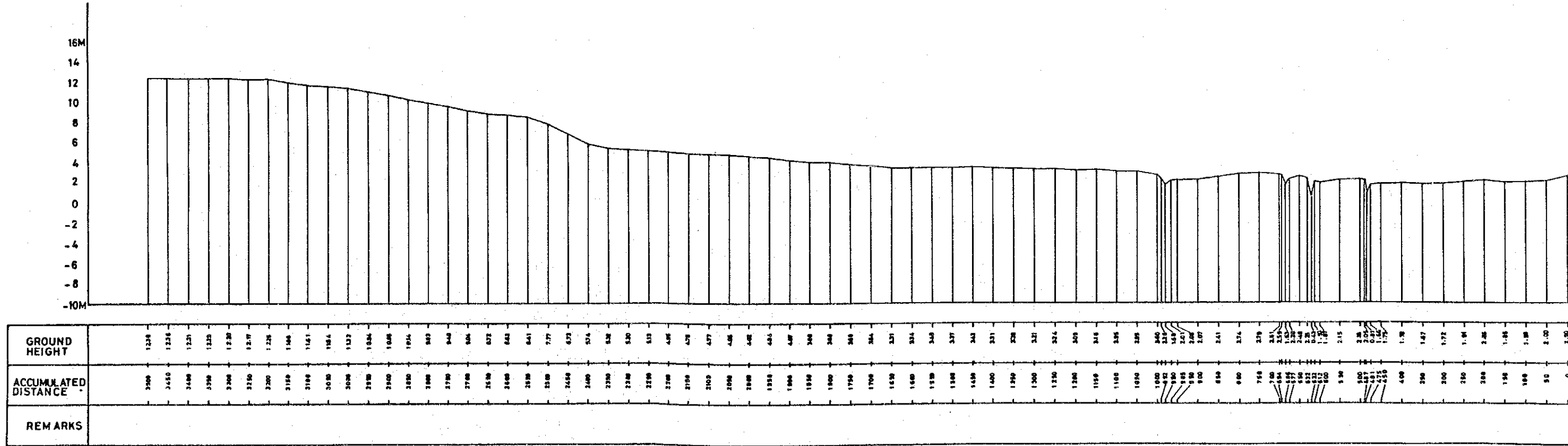
THE STUDY ON WATER RESOURCES DEVELOPMENT IN THE RUVU RIVERBASIN

RIVER CROSS SECTION IN THE LOWER REACH SECTION No 2B (2B/25)

SCALE H=1:500 V=1:200 H=1:500 V=1:200

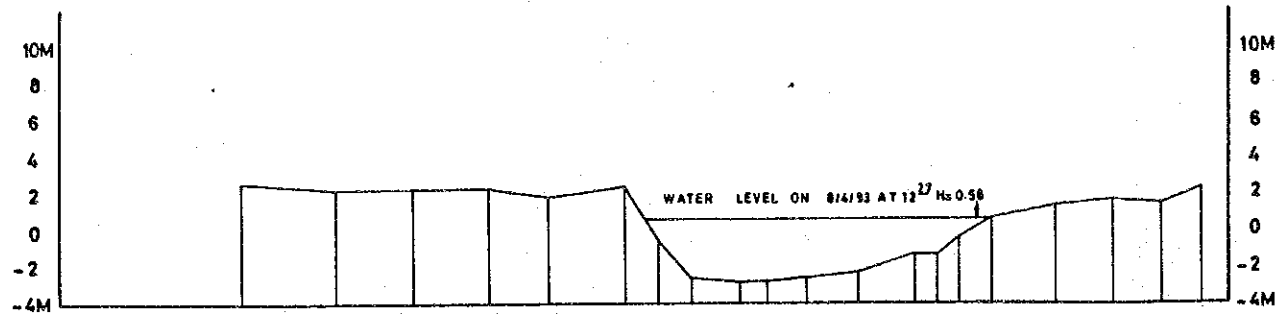
MARCH 1993 JICA

16M
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10M

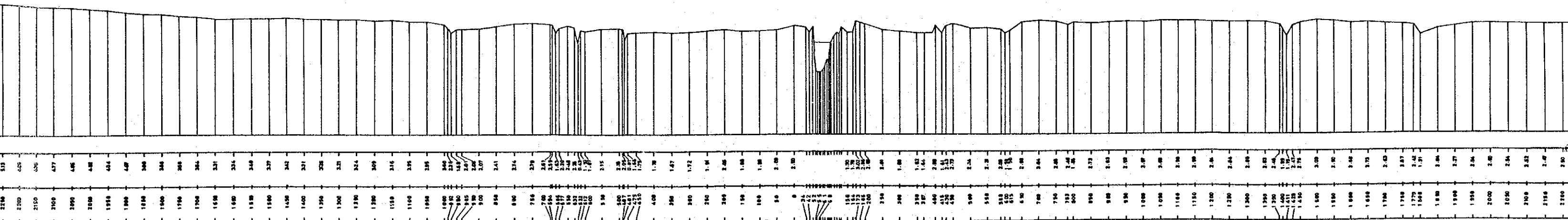


10M
8
6
4
2
0
-2
-4M

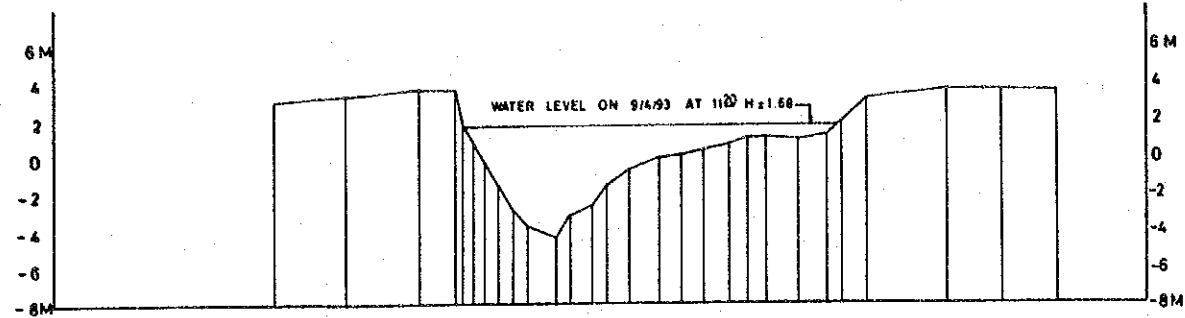
GROUND HEIGHT	ACCUMULATED DISTANCE	REMARKS



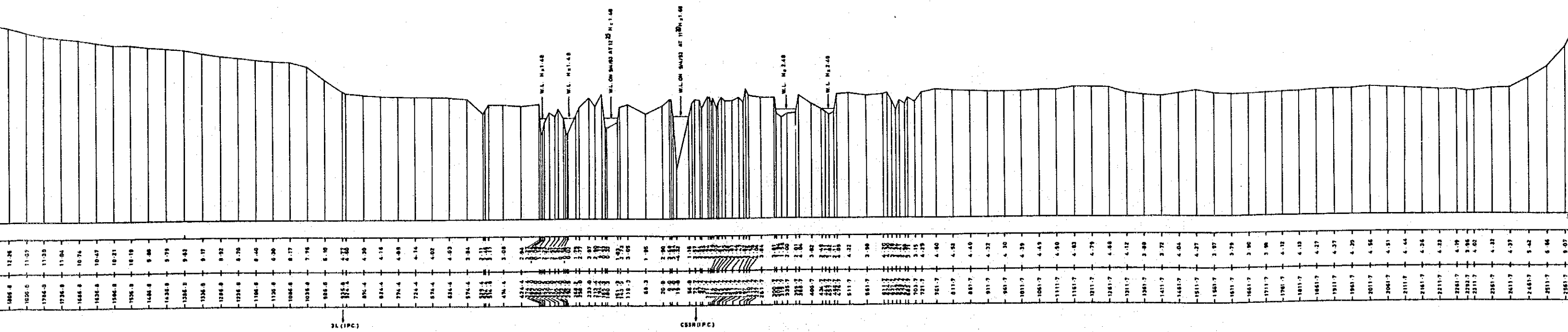
GROUND HEIGHT	ACCUMULATED DISTANCE	REMARKS
2.26	0	
2.0	15.6	
2.2	23.1	
2.25	32.6	
1.76	41.7	
2.2	52.2	
-0.50	56.4	
-2.86	61.0	
-2.09	67.8	
-2.00	71.8	
-2.04	77.2	
-3.75	84.3	
-1.42	91.5	
-1.46	94.5	
-0.52	97.5	
0.96	101.8	
1.26	111.2	
1.48	119.2	
1.47	126.2	
3.25	131.4	



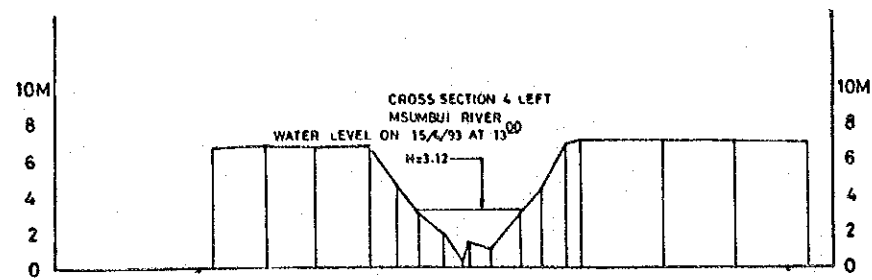
SCALE: HORIZONTAL 1:5,000
 VERTICAL 1:200



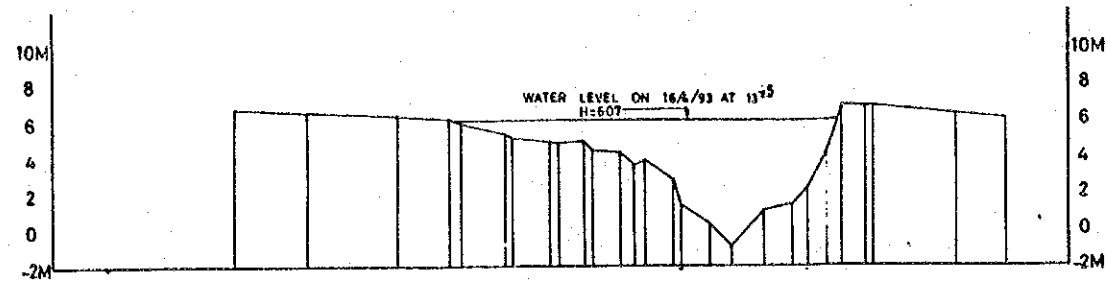
GROUND HEIGHT	ACCUMULATED DISTANCE	REMARKS
2.90	20.0	
3.25	10.0	
3.68	0.0	
2.64	5.0	
0.88	7.5	
-0.37	5.0	
-1.62	11.0	
-2.37	15.0	
-4.22	19.0	
-3.27	21.0	
-2.67	24.0	
-1.68	26.0	
-0.72	29.0	
-0.14	33.0	
0.11	36.0	
0.32	39.0	
0.65	42.5	
1.04	45.0	
1.04	48.0	
0.90	52.0	
1.18	54.0	
1.18	56.2	
3.19	61.7	
3.87	72.7	CSM(LPC)
3.95	80.2	
3.94	87.7	



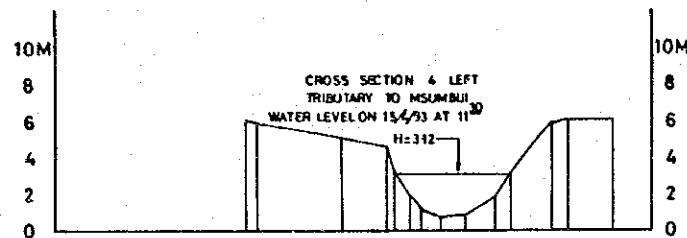
SCALE: HORIZONTAL 1:5000
VERTICAL 1:200



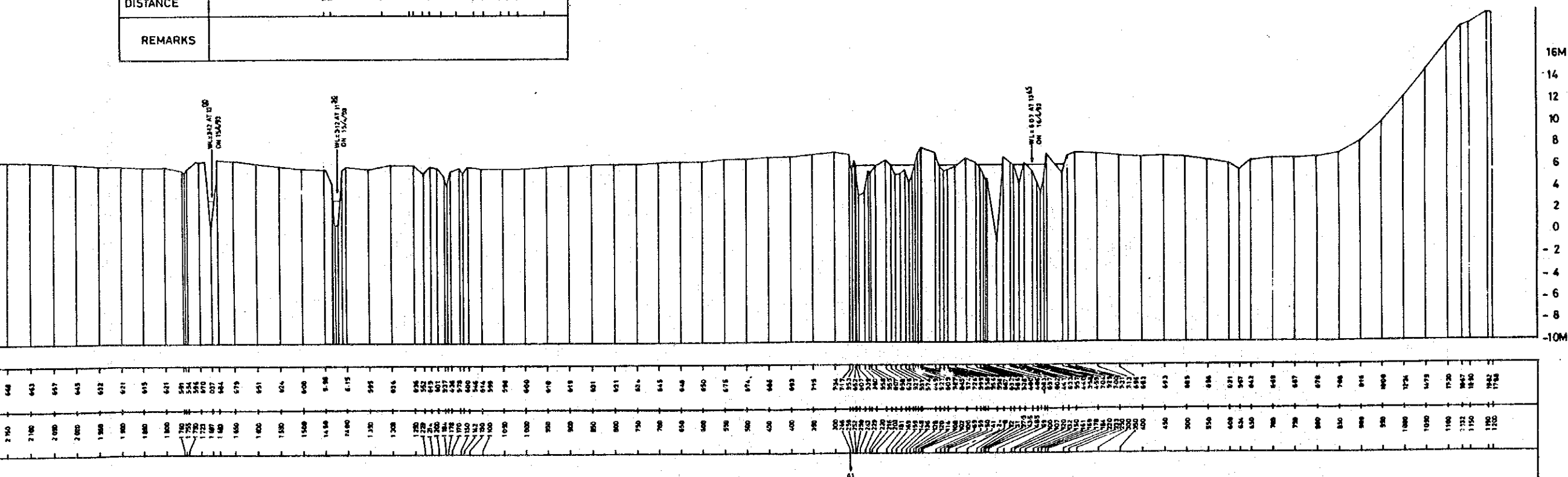
GROUND HEIGHT	643	670	646	674	653	670	647	674	650	670	645	673
ACCUMULATED DISTANCE	1790.0	1721.1	1774.5	1709.6	1765.8	1703.1	1899.5	1848.0	1835.0	1688.9	1660.0	1850.0
REMARKS												



GROUND HEIGHT	667	648	622	607	570	516	483	457	429	375	307	283	107	14.2	34.2	42.7	62	64.1	62	61	0.17	602	
ACCUMULATED DISTANCE	0	10.0	22.5	29.2	31.4	37.5	38.5	42.6	45.9	45.9	52.4	57.5	64.0	68.9	75.4	77.5	79.5	81.0	81.0	87.3	88.6	88.6	107.0
REMARKS																							



GROUND HEIGHT	628	621	606	627	619	612	600	618	610	610	602	615
ACCUMULATED DISTANCE	1450.0	1458.4	1478.9	1498.8	1490.8	1478.9	1428.4	1428.9	1418.4	1418.3	1408.3	1400.0
REMARKS												



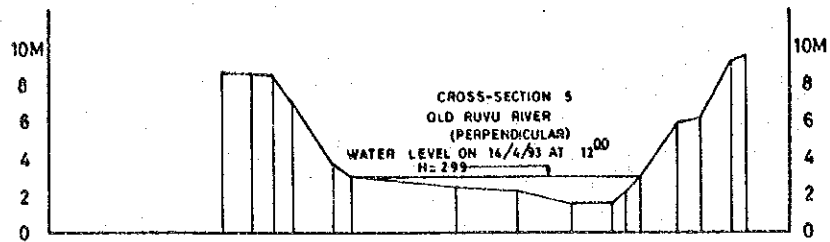
SCALE HORIZONTAL 1:5000
VERTICAL 1:200

THE STUDY ON WATER RESOURCES DEVELOPMENT IN THE RUJU RIVER BASIN

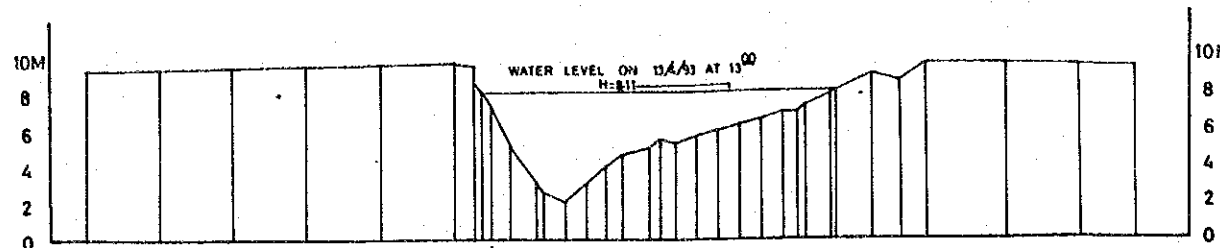
RIVER CROSS SECTION IN THE LOWER REACH SECTION No 4 (1/25)

SCALE: H: 1:5000 V: 1:200
H: 1:500 V: 1:200

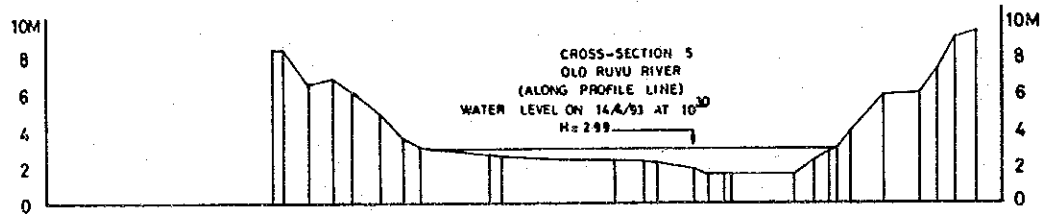
MARCH 1993 JICA



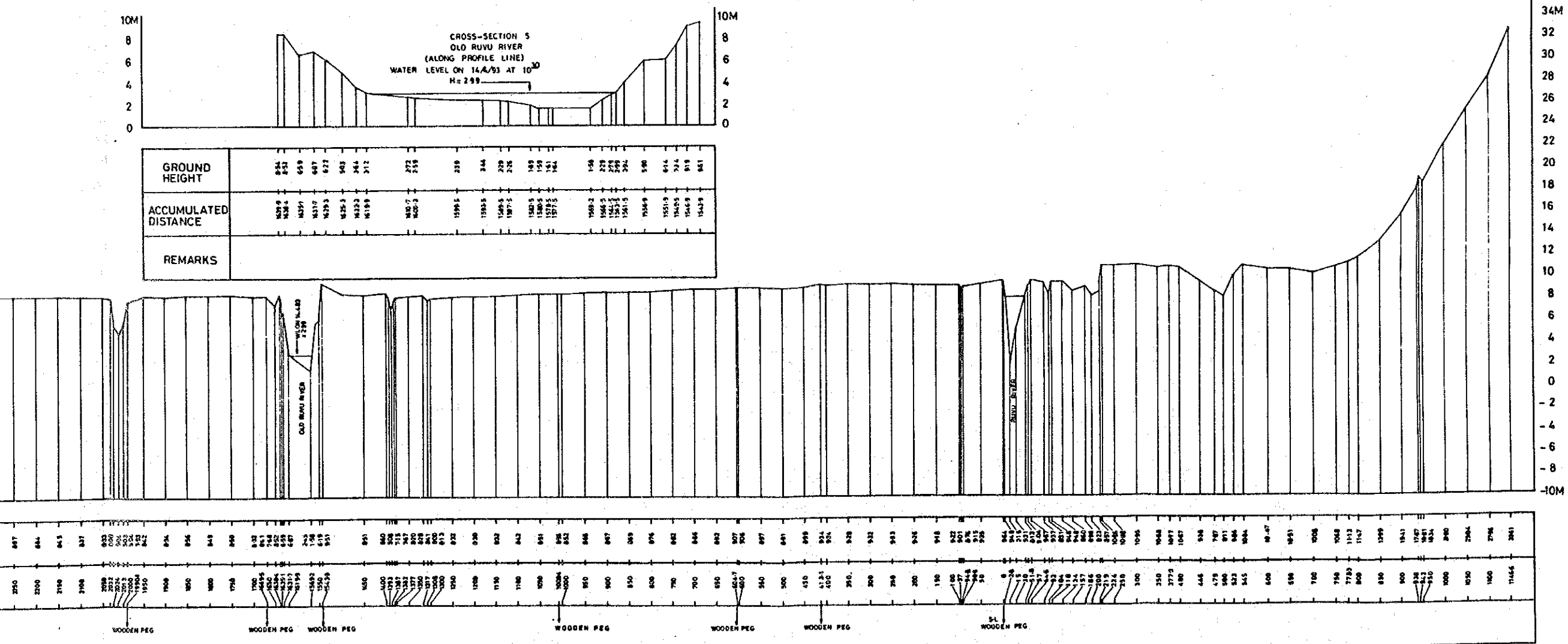
GROUND HEIGHT	ACCUMULATED DISTANCE	REMARKS
864	1514.0	
860	1517.4	
842	1523.2	
836	1525.4	
790	1589.8	
5.00	1587.6	
240	1588.5	
230	1574.8	
150	1507.5	
145	1468.0	
230	1460.8	
238	1458.2	
890	1533.2	
815	1550.0	
820	1546.2	
831	1543.9	



GROUND HEIGHT	ACCUMULATED DISTANCE	REMARKS
935	18	
940	40	
845	30	
952	20	
948	10	
864	0	
848	38	
841	74	
823	112	
810	150	
801	188	
641	226	
501	264	
518	302	
525	340	
546	378	
591	416	
618	454	
648	492	
658	530	
777	568	
791	606	
813	644	
862	682	
881	720	
937	758	
958	796	
82	834	
937	872	



GROUND HEIGHT	ACCUMULATED DISTANCE	REMARKS
851	1528.8	
851	1532.6	
659	1535.1	
687	1537.6	
622	1539.3	
543	1542.3	
344	1543.3	
312	1545.9	
272	1547.7	
255	1549.3	
239	1595.1	
244	1595.5	
229	1599.4	
226	1597.5	
158	1598.5	
158	1598.5	
151	1578.5	
164	1577.5	
158	1568.2	
225	1565.5	
228	1562.5	
295	1562.5	
294	1561.5	
530	1554.8	
614	1551.5	
734	1549.5	
819	1546.8	
841	1543.9	



SCALE HORIZONTAL 1:5000
VERTICAL 1:200

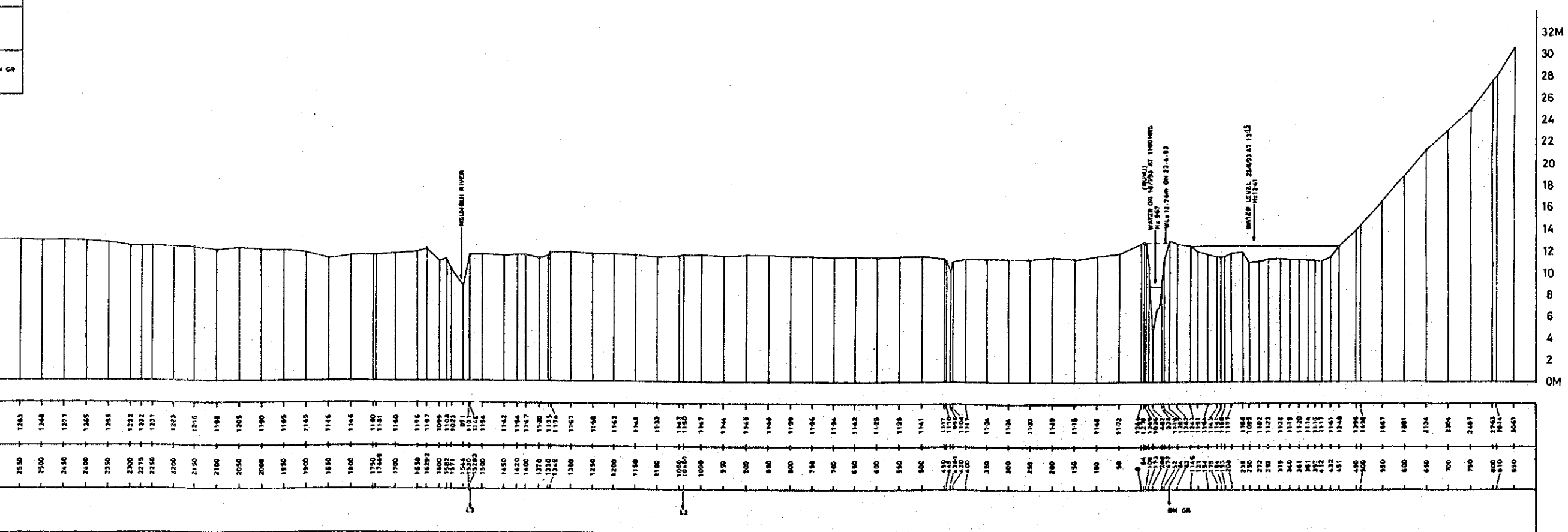
THE STUDY ON WATER RESOURCES DEVELOPMENT IN THE RUVU RIVER BASIN

RIVER CROSS SECTION IN THE LOWER REACH SECTION No 5 (5/25)

SCALE H: 1:5000 V: 1:200
H: 1:500 V: 1:200

MARCH 1993 JICA

20M
18
16
14
12
10
8
6
4
2
0M



32M
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0M

25.50	25.00	24.50	24.00	23.50	23.00	22.50	22.00	21.50	21.00	20.50	20.00	19.50	19.00	18.50	18.00	17.50	17.00	16.50	16.00	15.50	15.00	14.50	14.00	13.50	13.00	12.50	12.00	11.50	11.00	10.50	10.00	9.50	9.00	8.50	8.00	7.50	7.00	6.50	6.00	5.50	5.00	4.50	4.00	3.50	3.00	2.50	2.00	1.50	1.00	0.50	0.00
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SCALE HORIZONTAL 1:5000
VERTICAL 1:200

THE STUDY ON WATER RESOURCES DEVELOPMENT IN THE RUVU RIVER BASIN	
RIVER CROSS SECTION IN THE LOWER REACH	
SECTION No 6 (9/5)	
SCALE	H ₁ :5000 V ₁ :200 H ₂ :1500 V ₂ :200

JULY 1993 JICA

