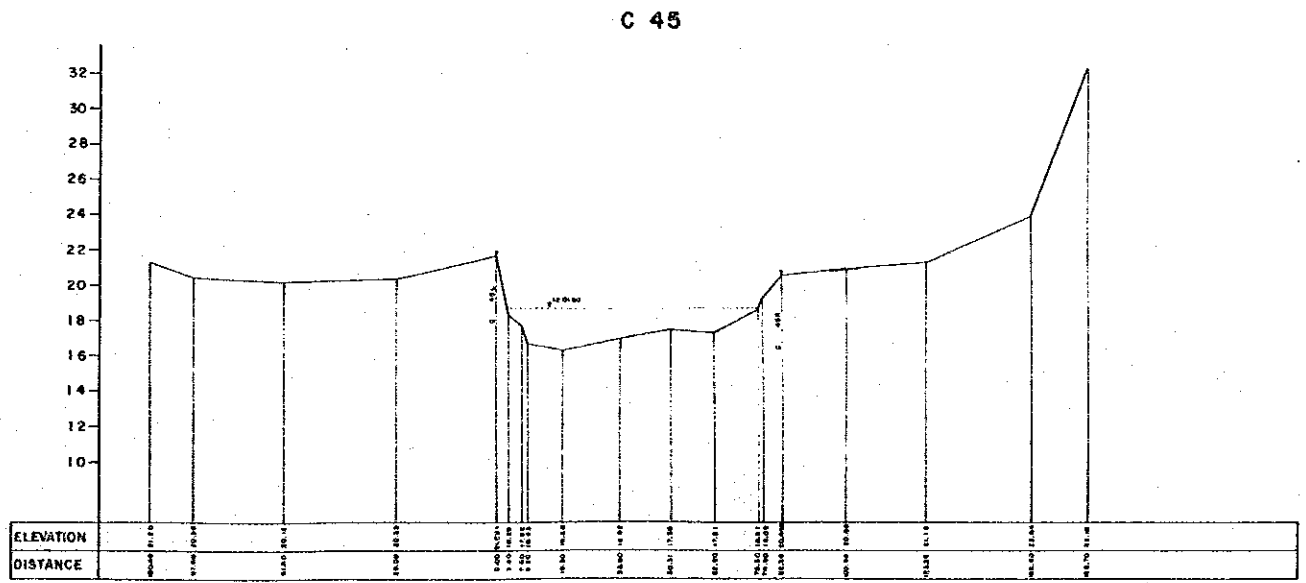
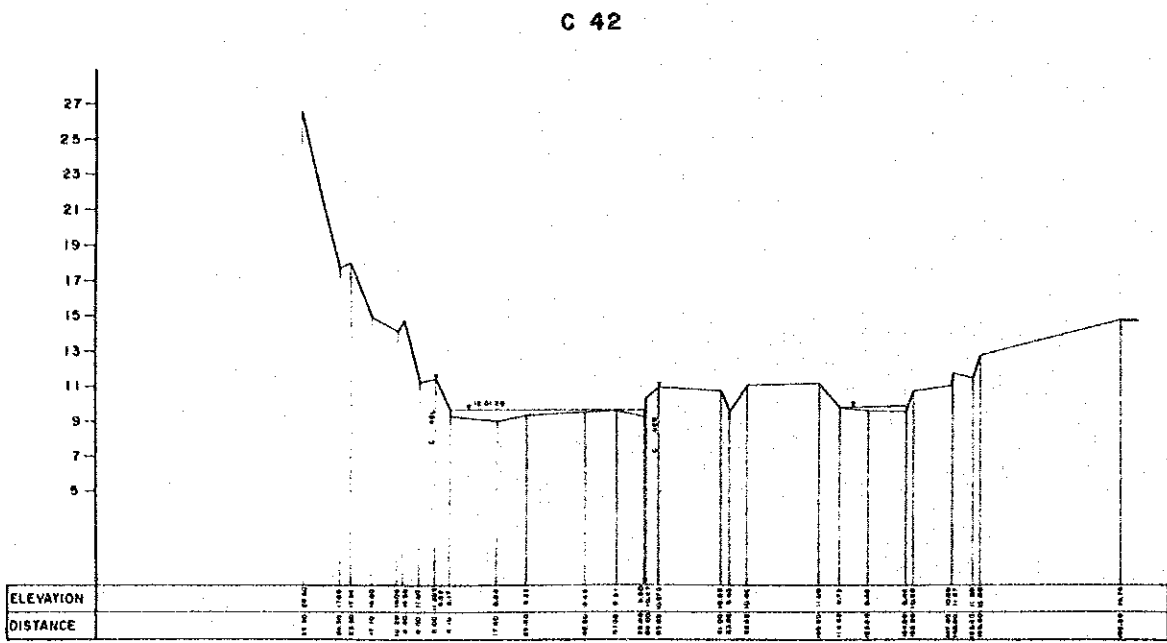
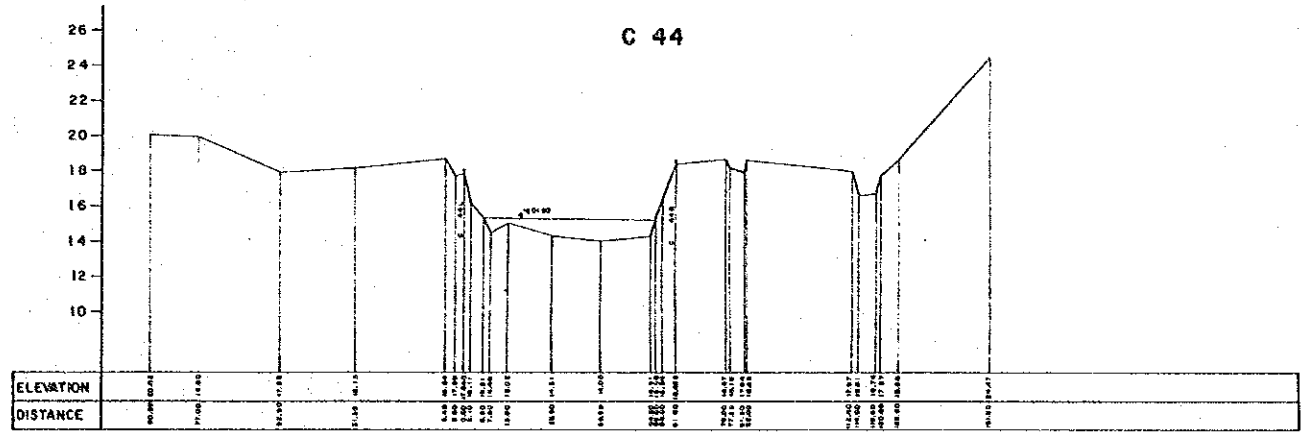
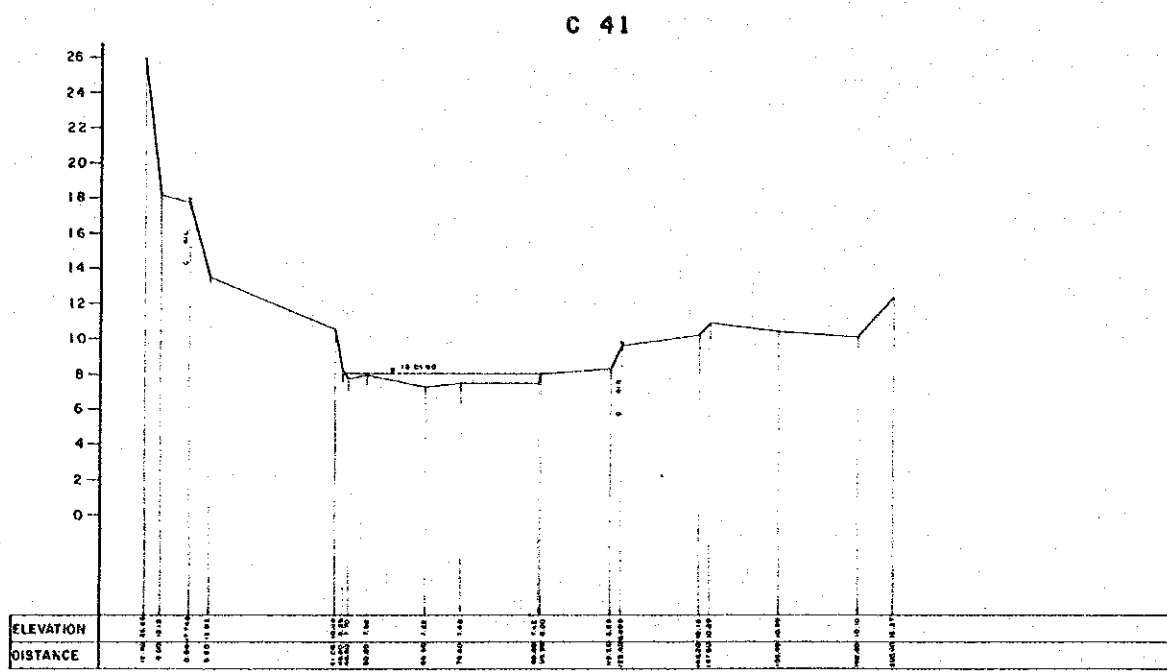
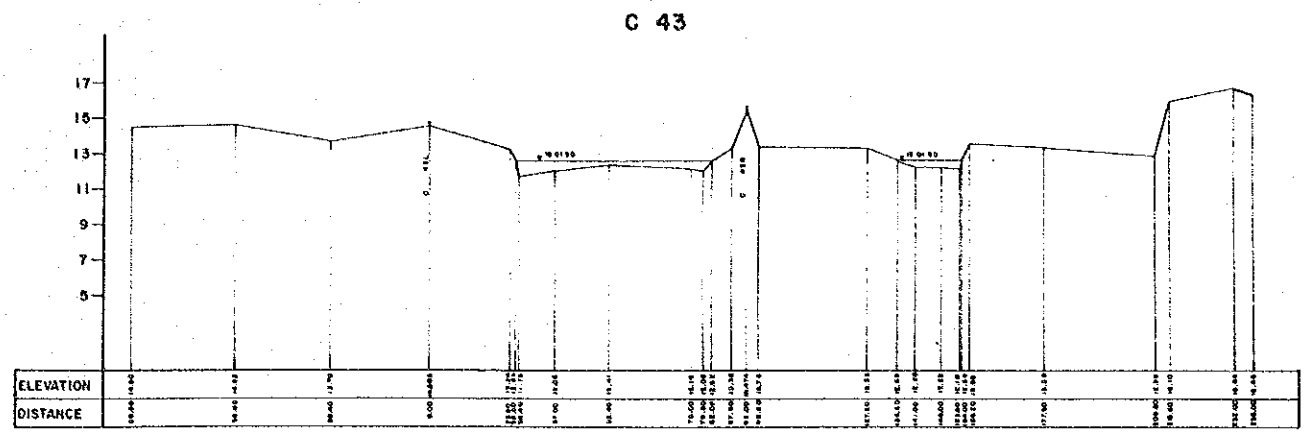
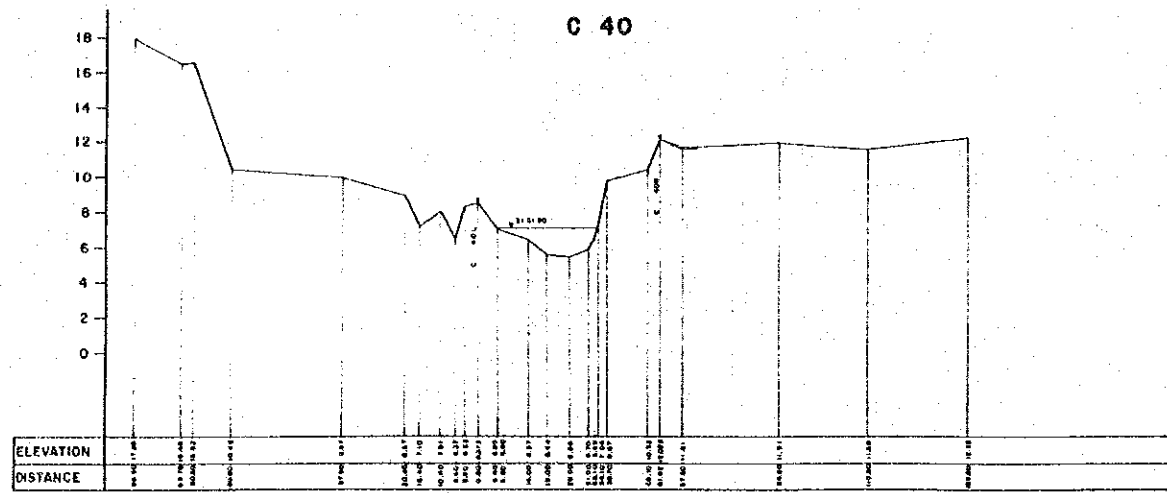


THE DISASTER PREVENTION AND RESTORATION
PROJECT IN BERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF RIO CUBATÃO

SHEET NO	5	WITHIN	7	SCALE	H=1:1000, V=1:200
SURVEYED DATE	1990.1 - 1990.2				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
BASE: AEROFOTOGRAMETRIA E PROJETOS S.A.					

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THE DISASTER PREVENTION AND RESTORATION PROJECT IN SERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF RIO CUBATÃO

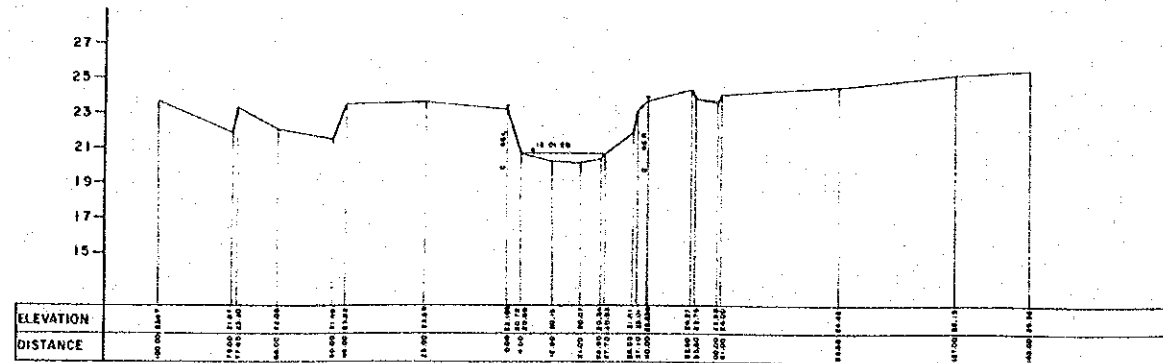
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SURVEIED DATE 1990.1 - 1990.2

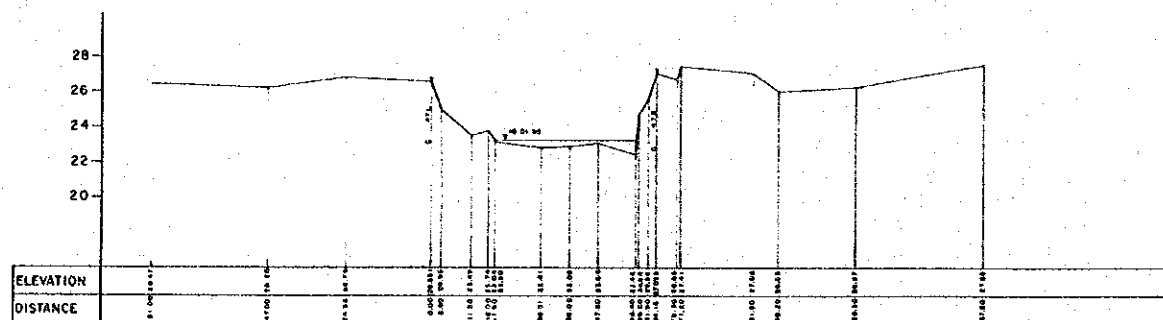
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

BASE AEROFOTOGRAFETRIA E PROJETOS S.A.

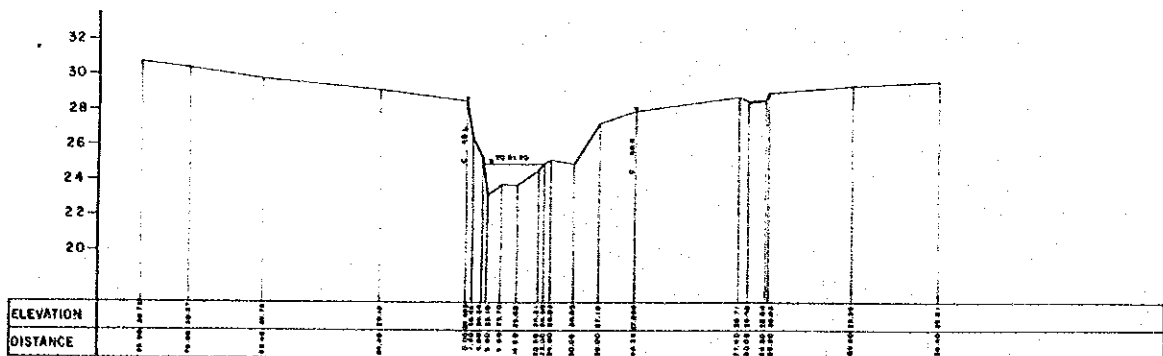
C 46



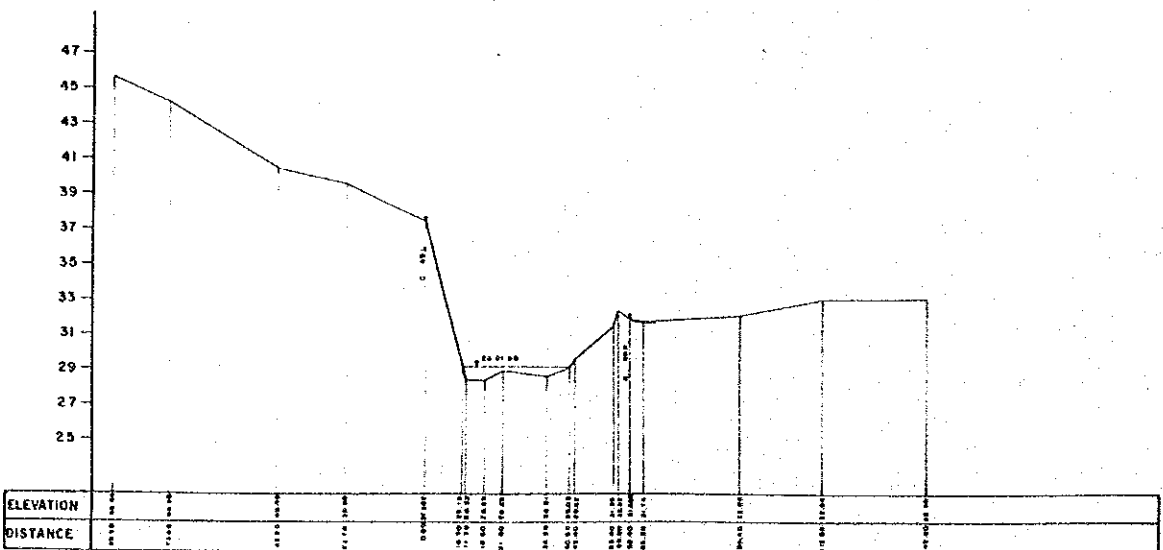
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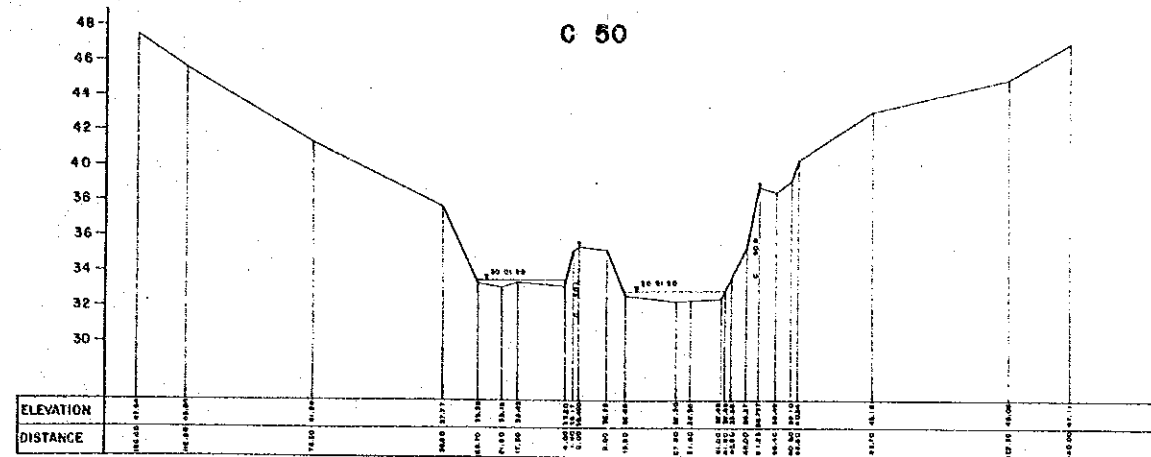
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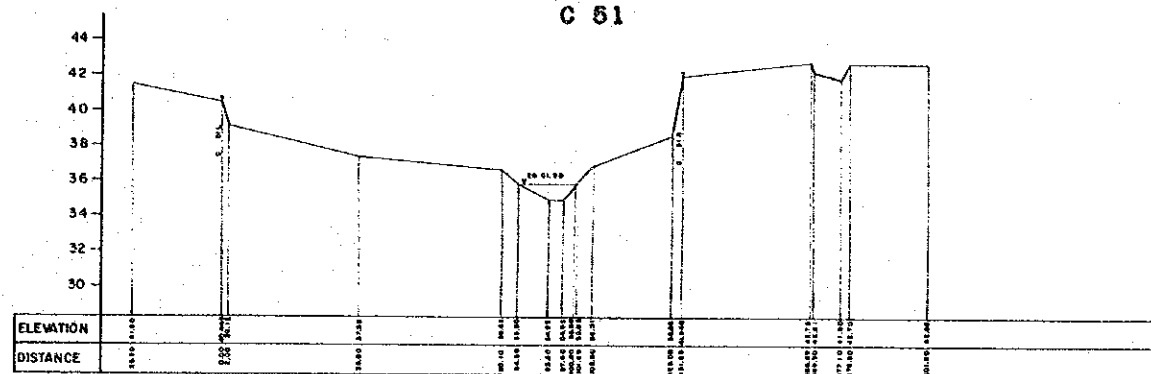
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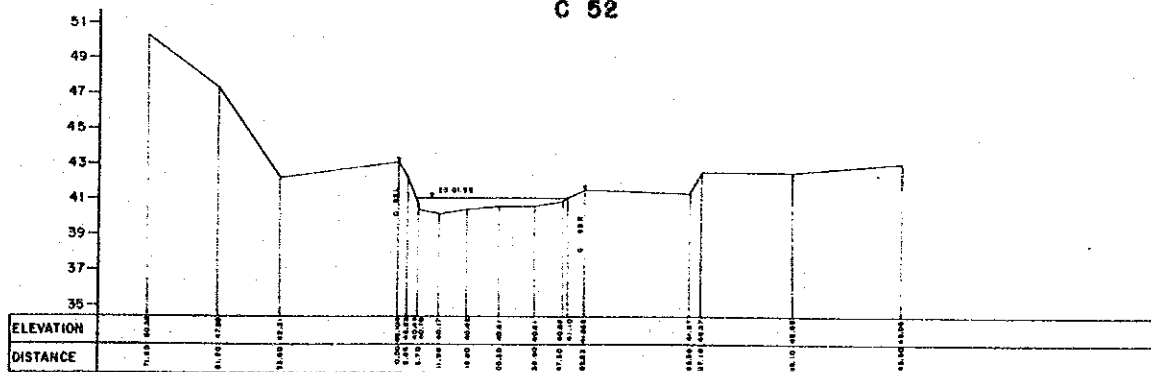
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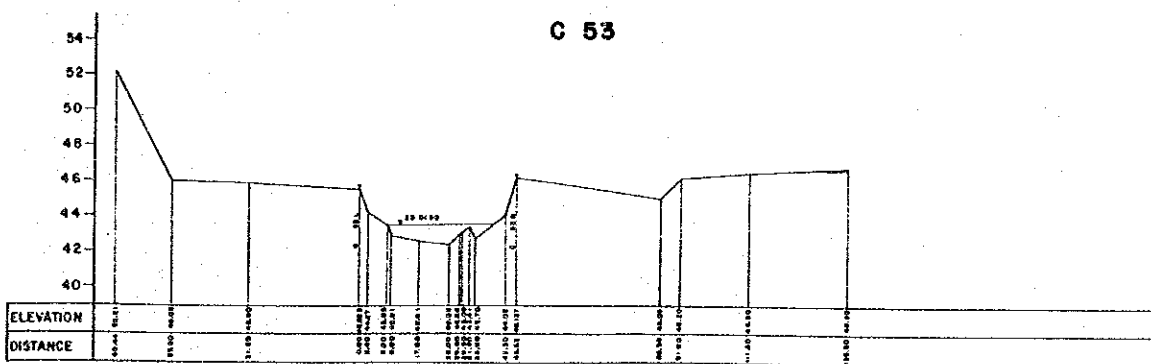
C 51



C 52



C 53



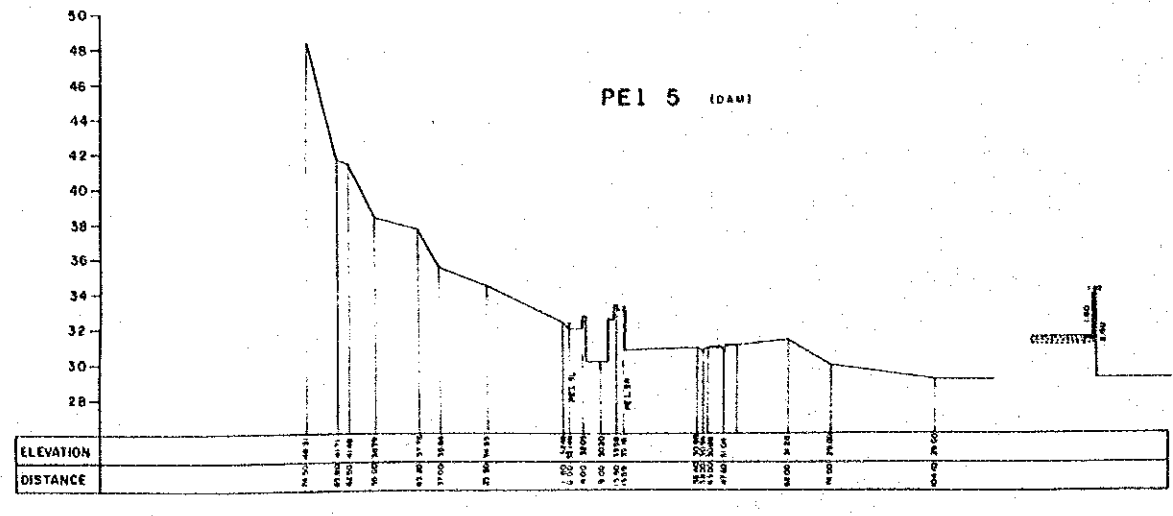
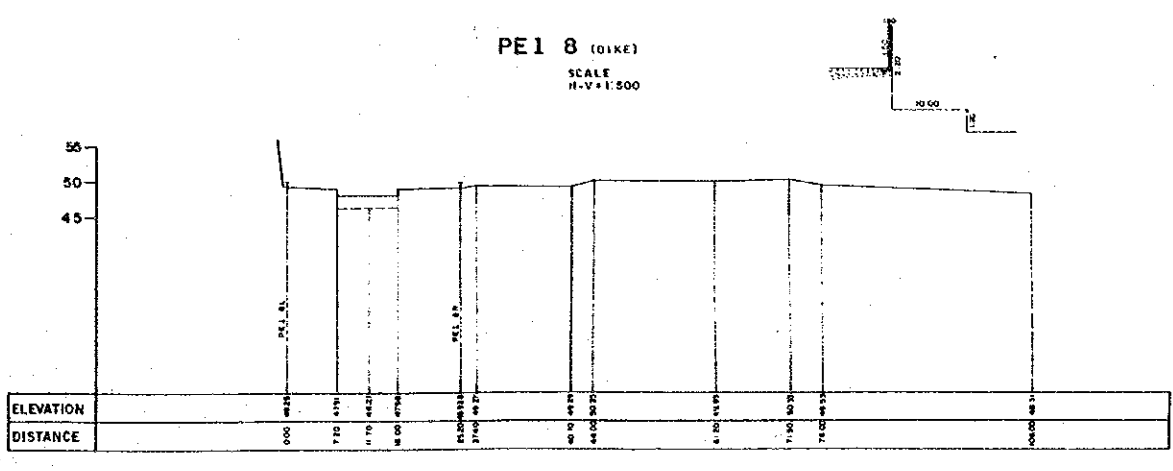
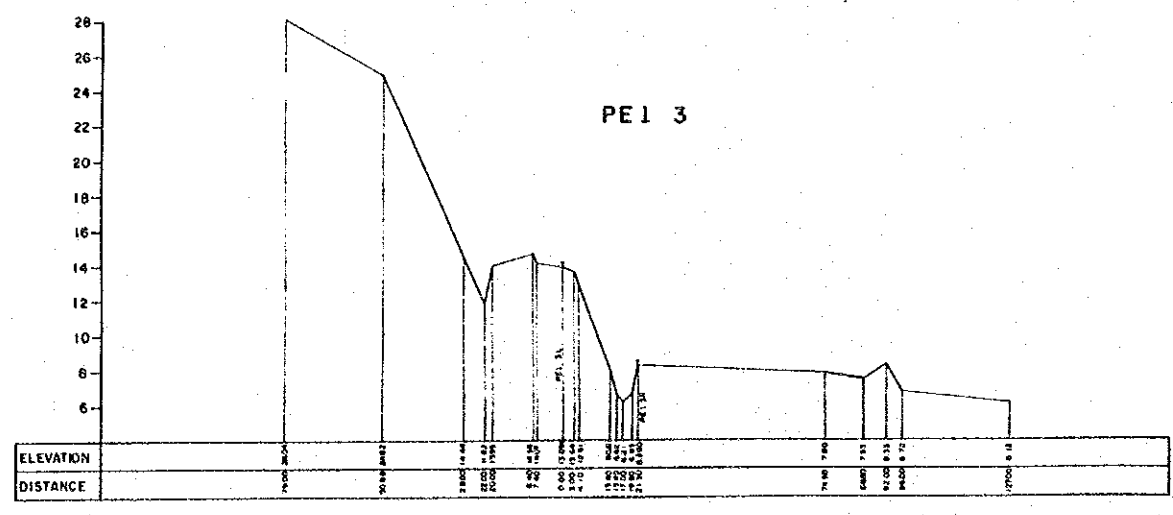
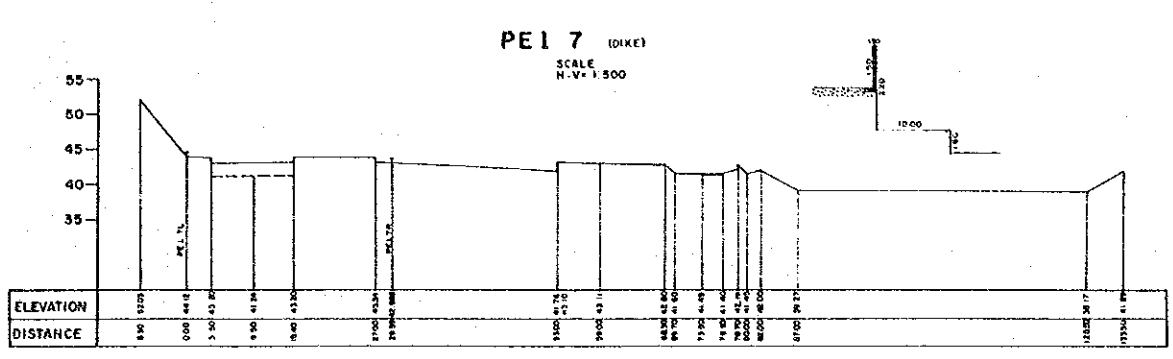
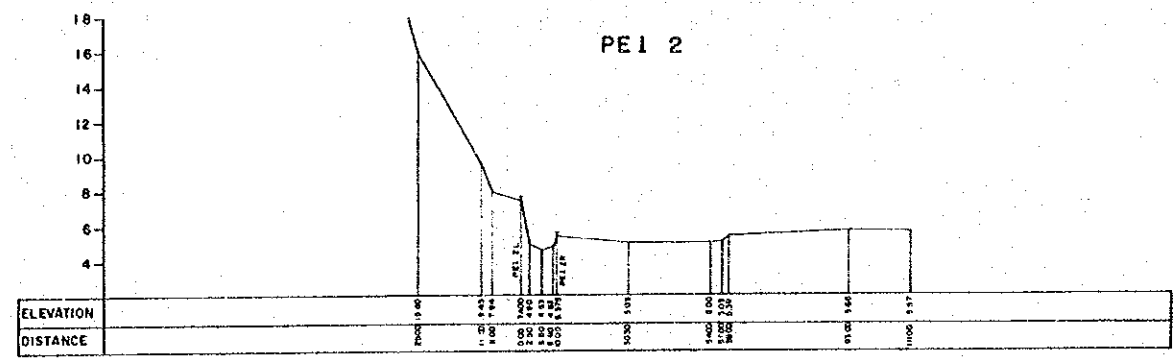
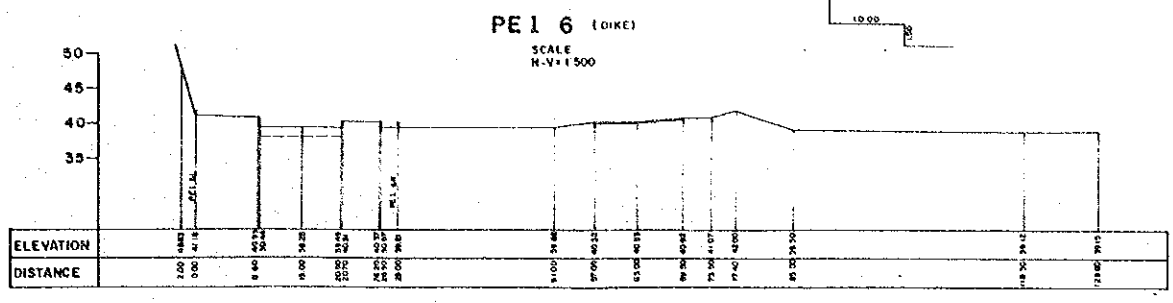
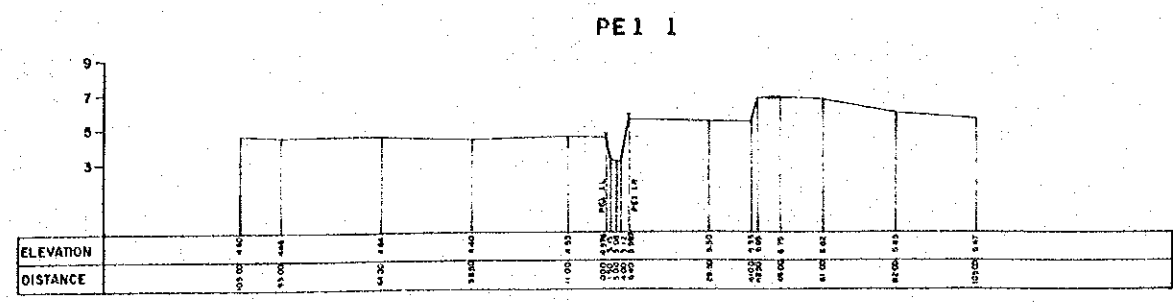
THE DISASTER PREVENTION AND RESTORATION
PROJECT IN BERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF RIO CUBATÃO

SHEET NO	7	WIKIN 7	SCALE	N 1:1,000, V 1:200
SURVEIED DATE	1990.1 - 1990.2			

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.

No. 7

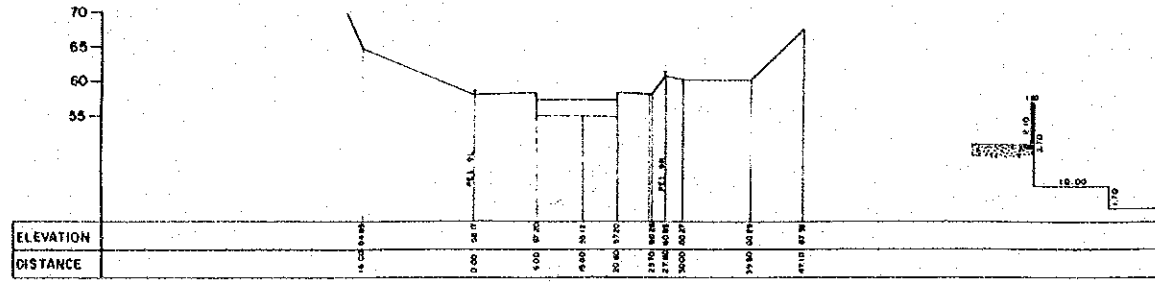


THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATAO REGION

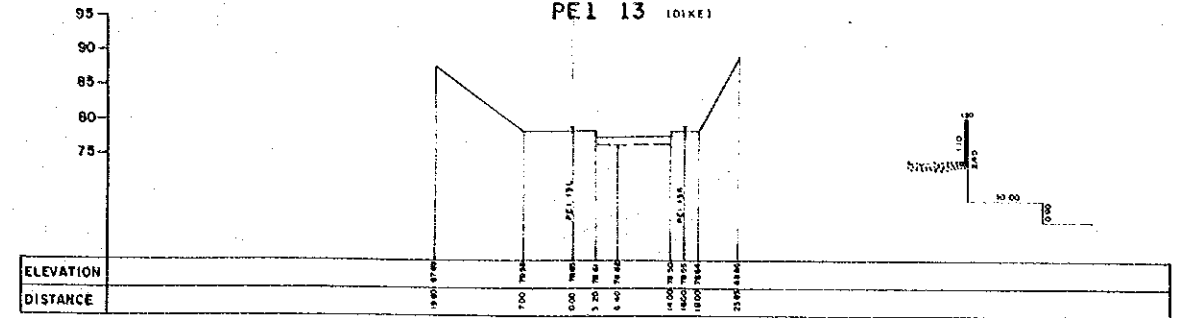
CROSS SECTION OF PE1

SHEET NO.	1	OF	2	SCALE	H:1:1000, V:1:200
SURVEYED DATE	1990.1 - 1990.2				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
BASE AEROFOTOGAMETRIA E PROJETOS S.A.					

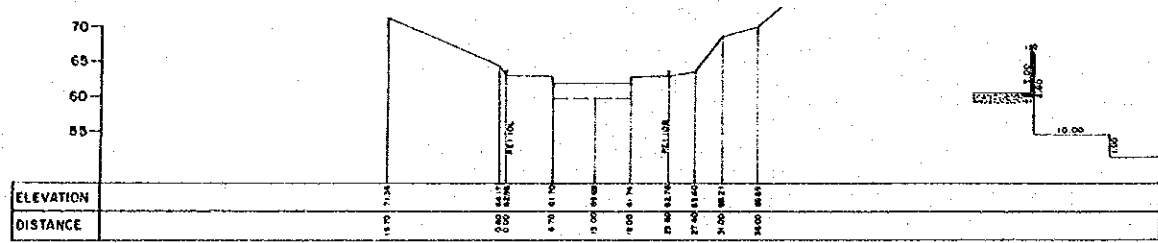
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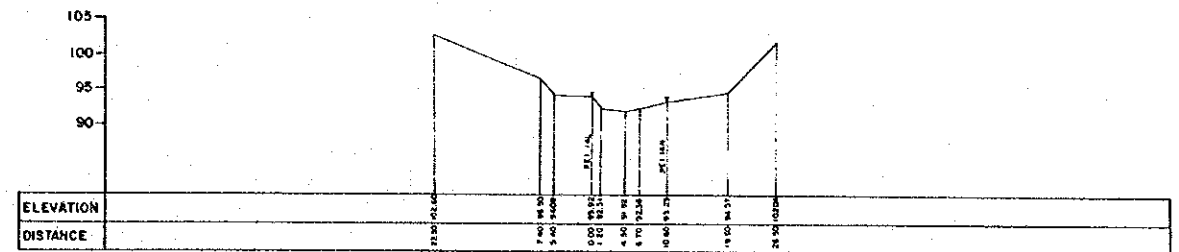
PE1 13 (DIKE)



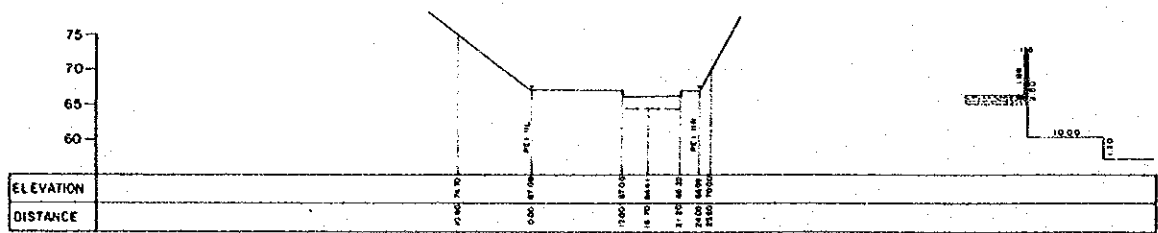
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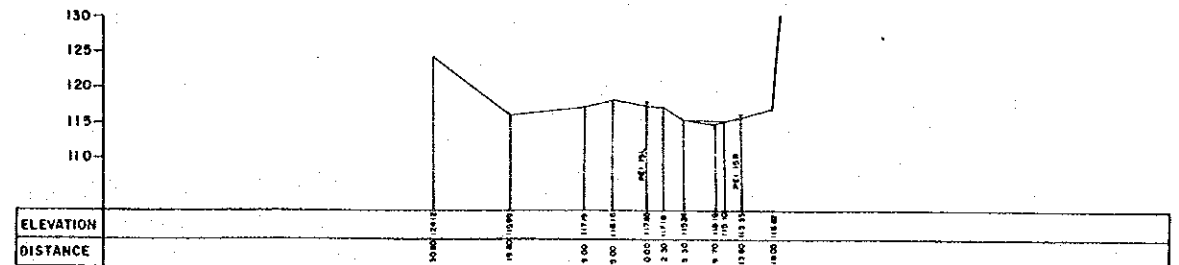
PE1 14



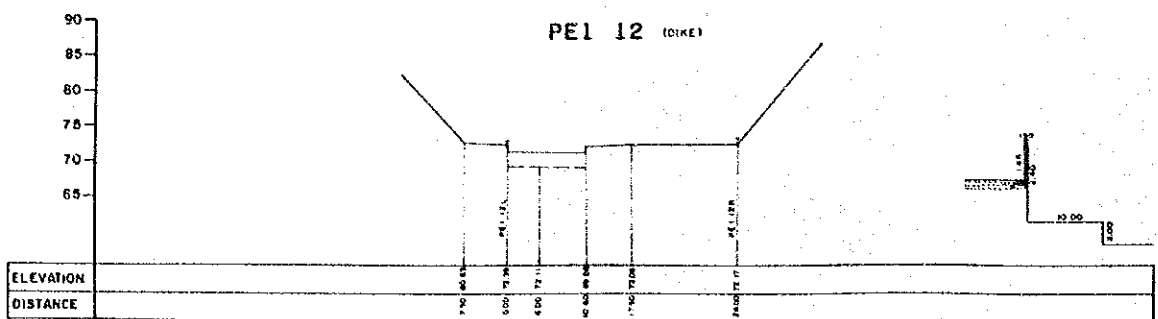
PE1 11 (DIKE)



PE1 15



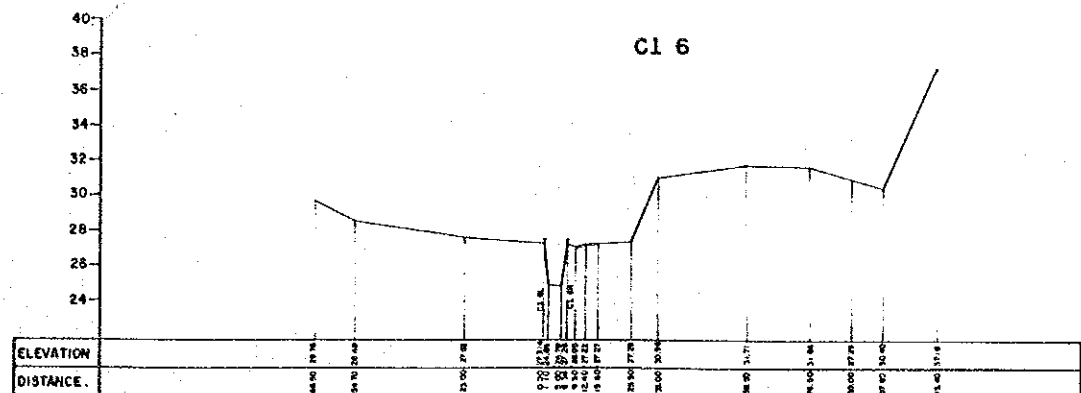
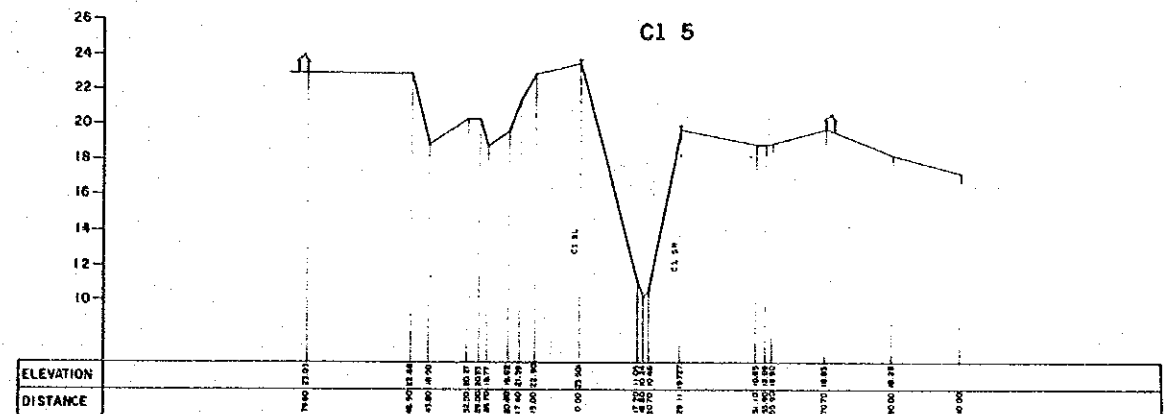
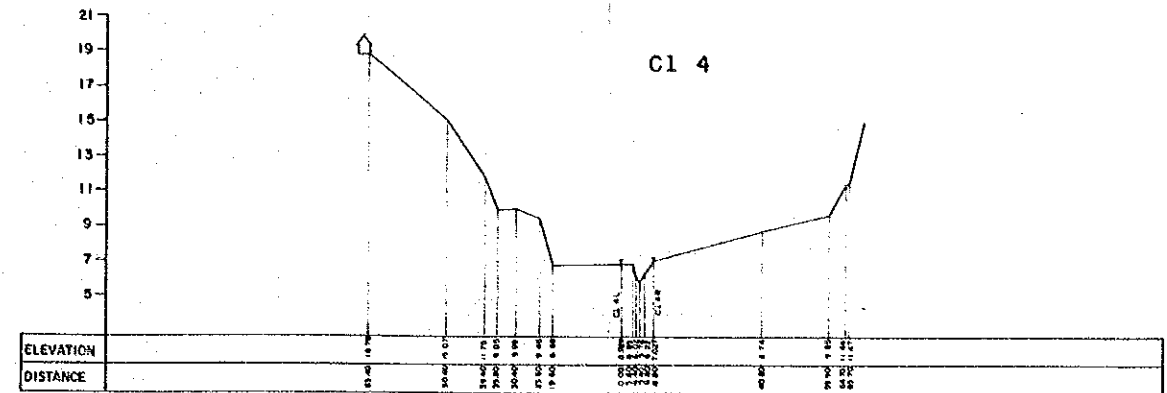
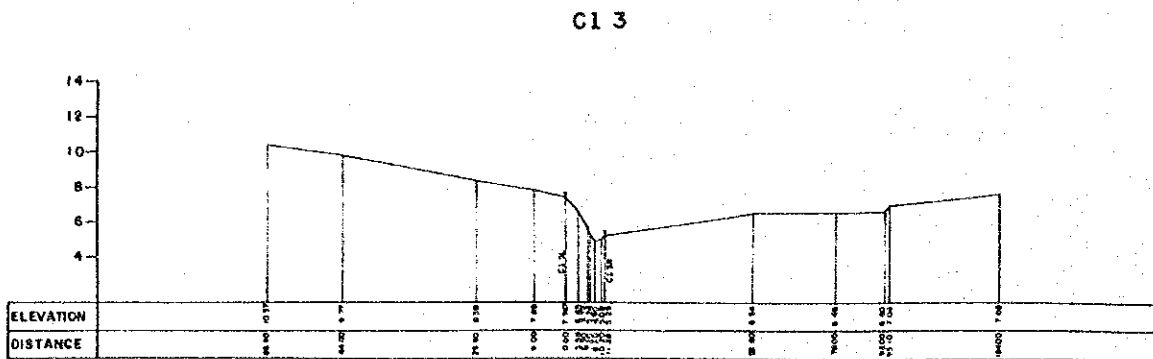
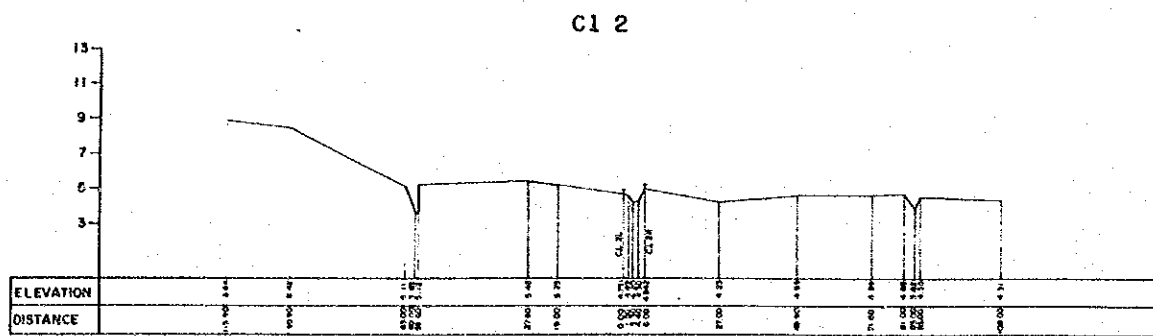
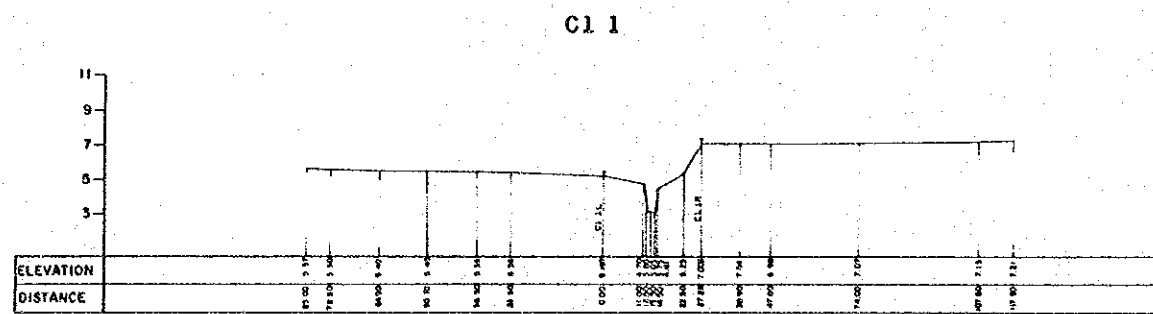
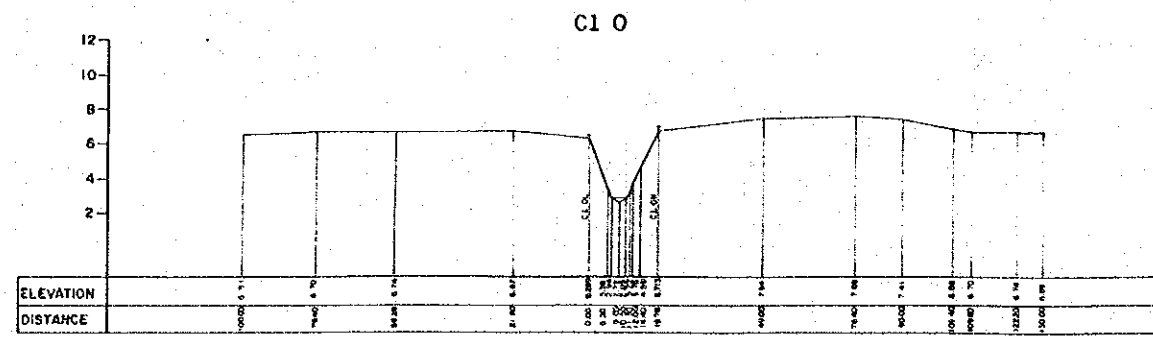
PE1 12 (DIKE)



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF PE1

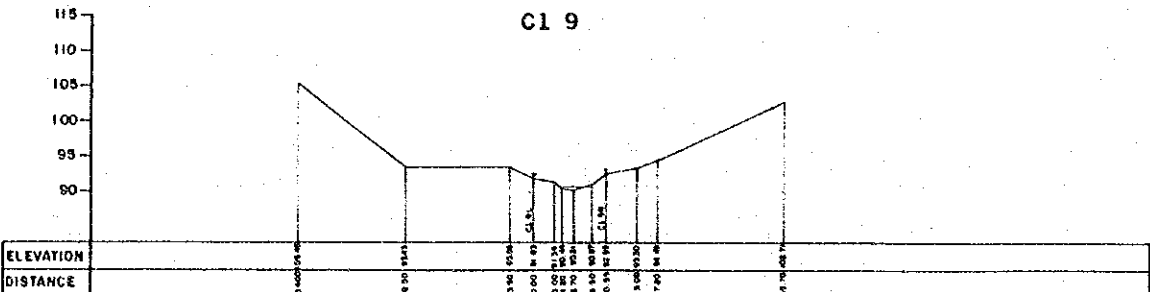
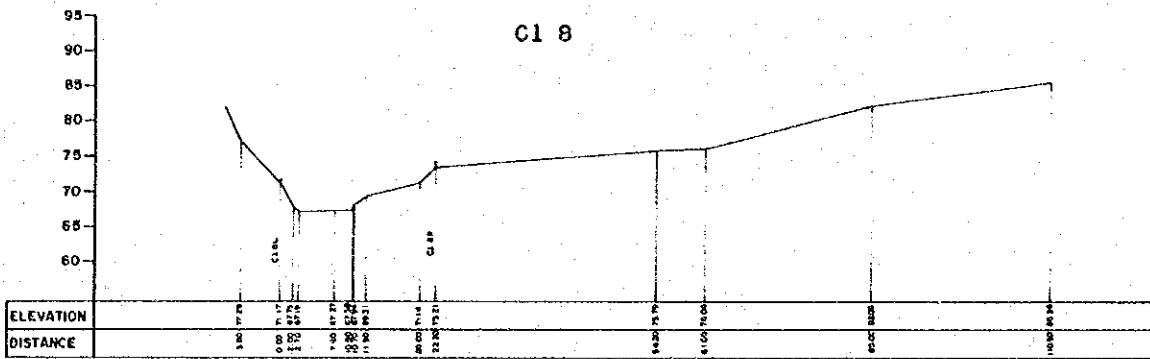
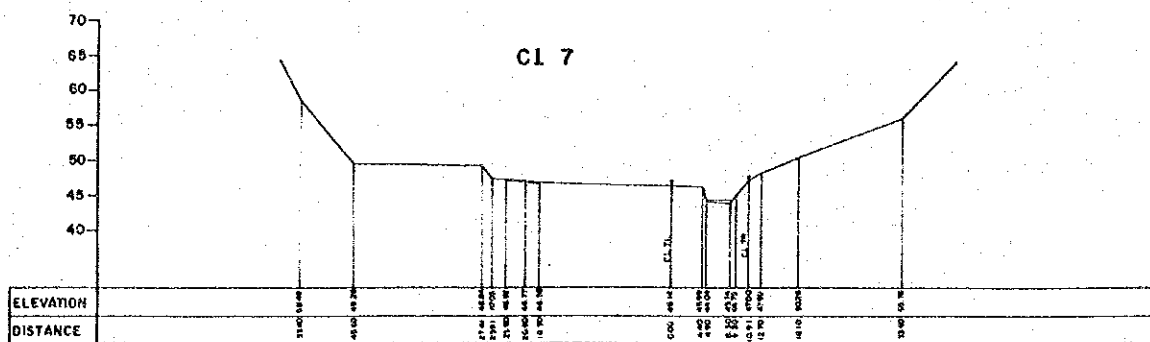
SHEET NO	2	WIMA 2	SCALE	H=1 500, V=1 500
SURVEYED DATE	1 990.1 - 1 990.2			
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
BASE AEROFOTOGRAFIA E PROJETOS S.A.				



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATAO REGION

CROSS SECTION OF C1

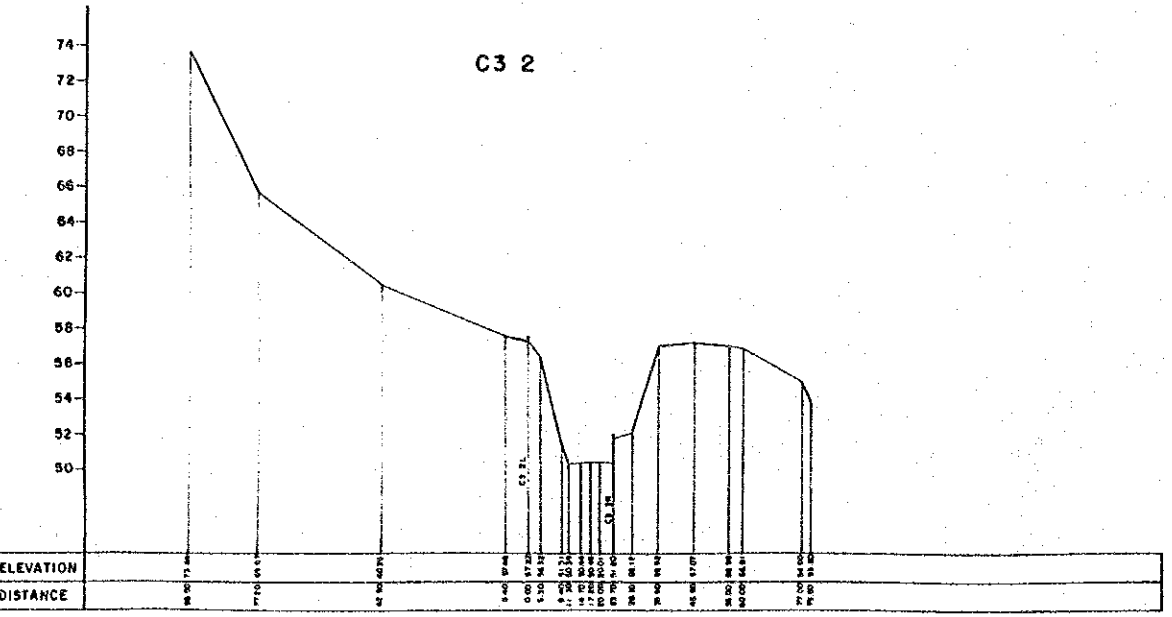
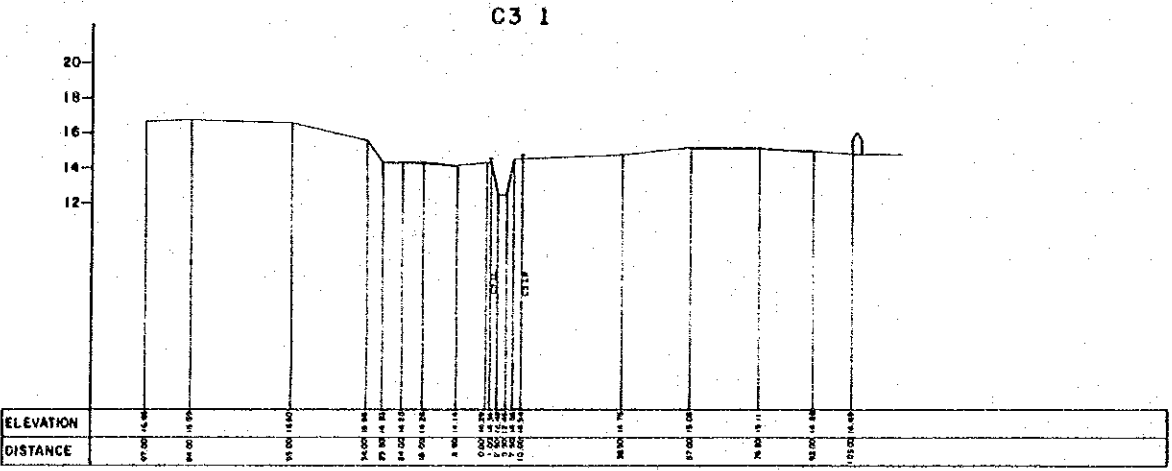
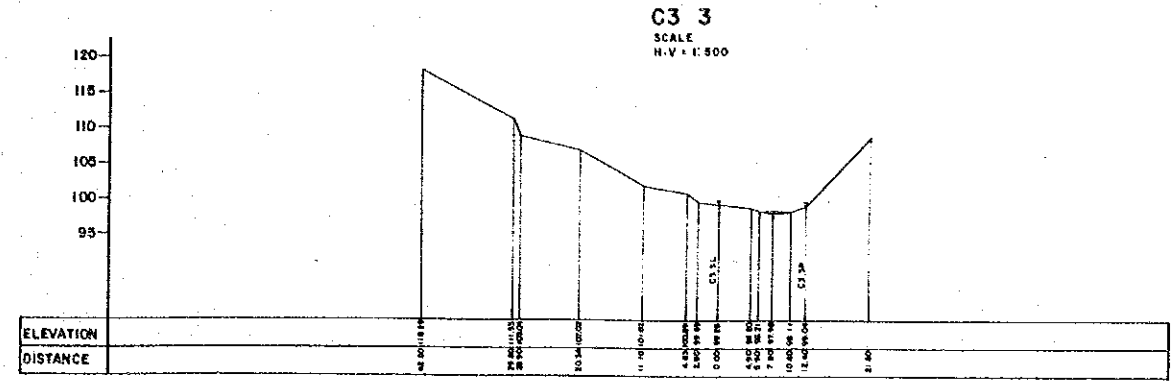
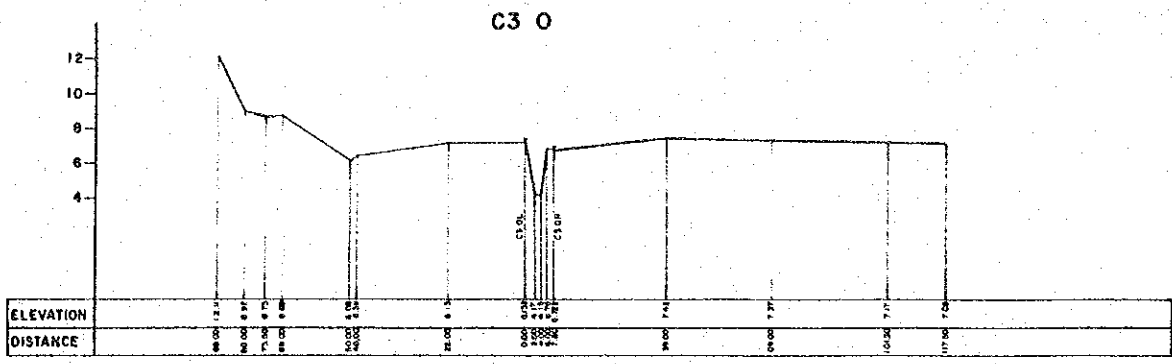
SHEET NO	1	W/TH	2	SCALE	H:1:1000, V:1:200
SURVEYED DATE	1.990.1 - 1.990.2				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.					



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATAO REGION

CROSS SECTION OF C1

SHEET NO	2	WHICH	2	SCALE	H=1:500, V=1:500
SURVEIED DATE	1.990.1 - 1.990.2				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.					

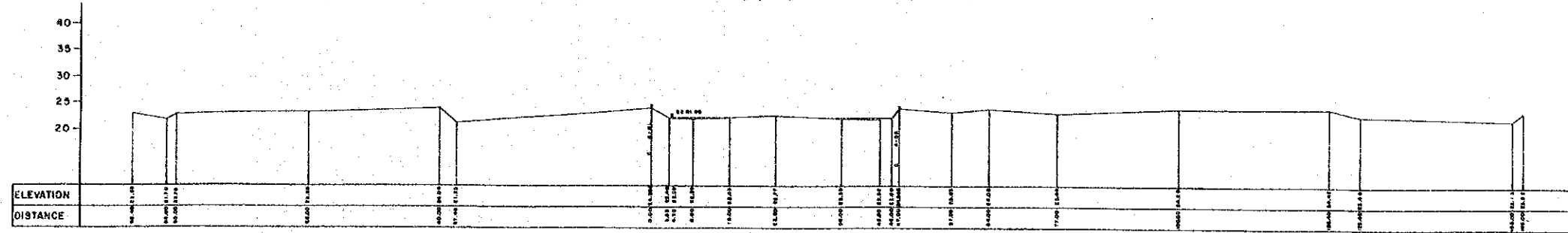


THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

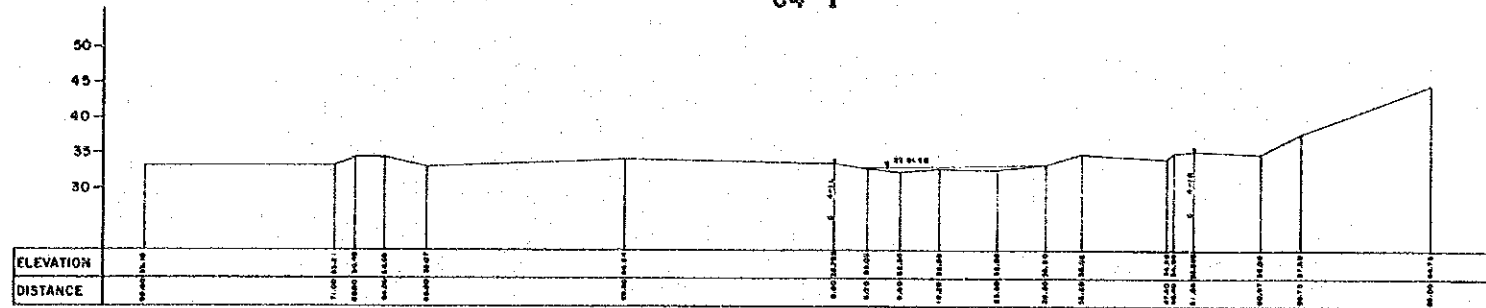
CROSS SECTION OF RIO DAS PEDRAS C3

SHEET NO	1	OF	1	SCALE	H:1:1000, V:1:200
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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
BASE AEROFOTOGAMETRIA E PROJETOS S.A.					

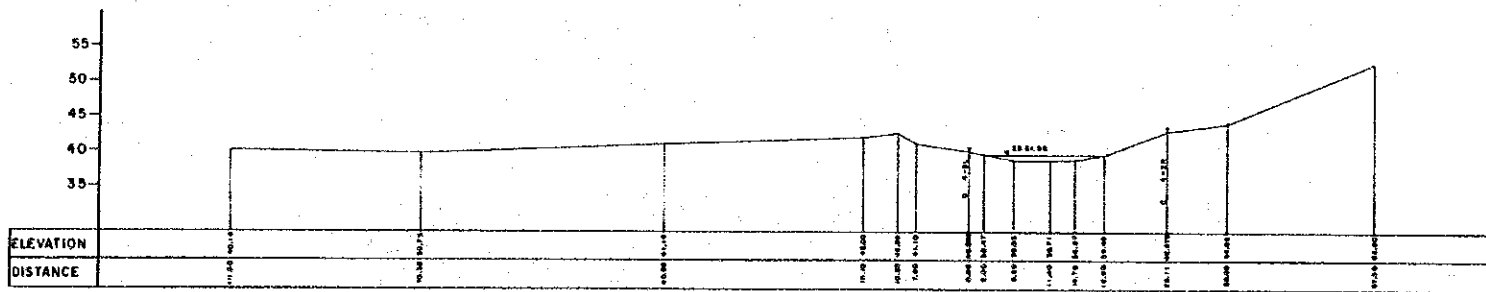
C4 0



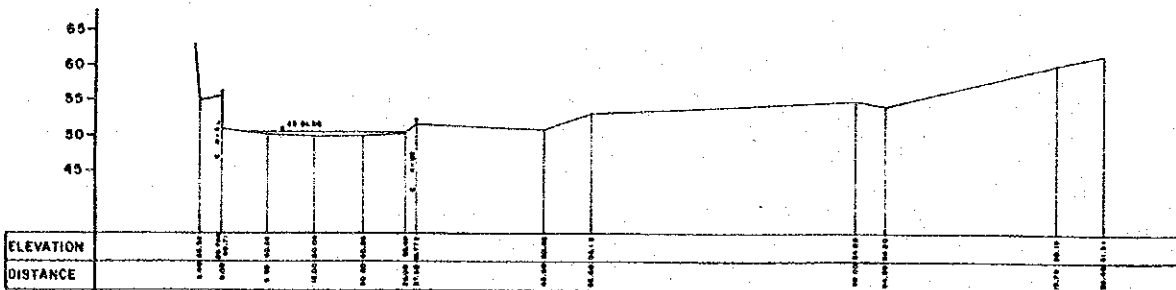
C4 1



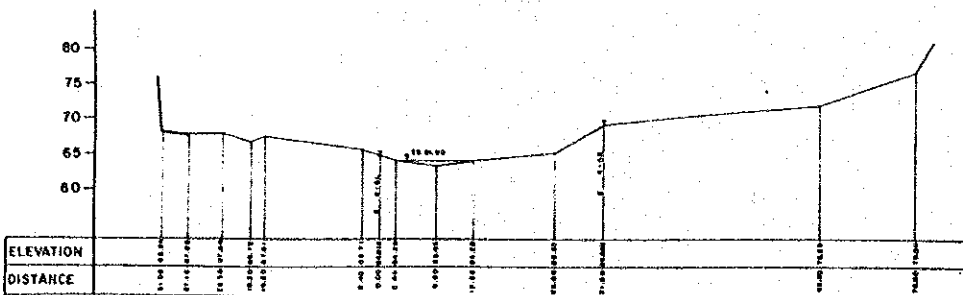
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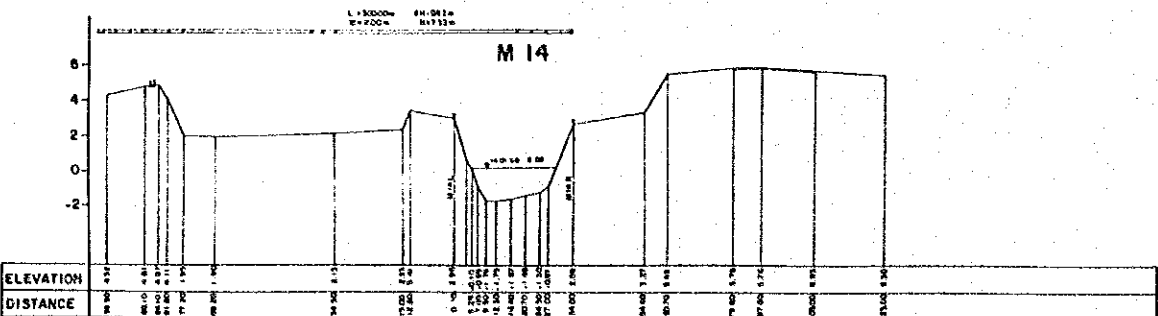
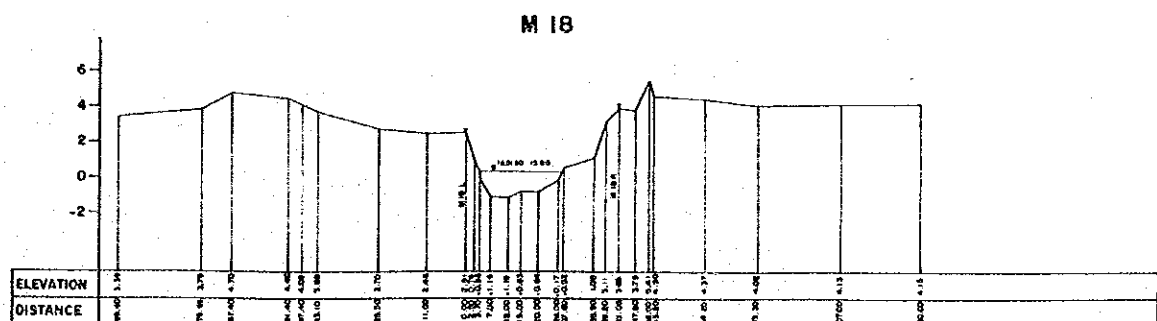
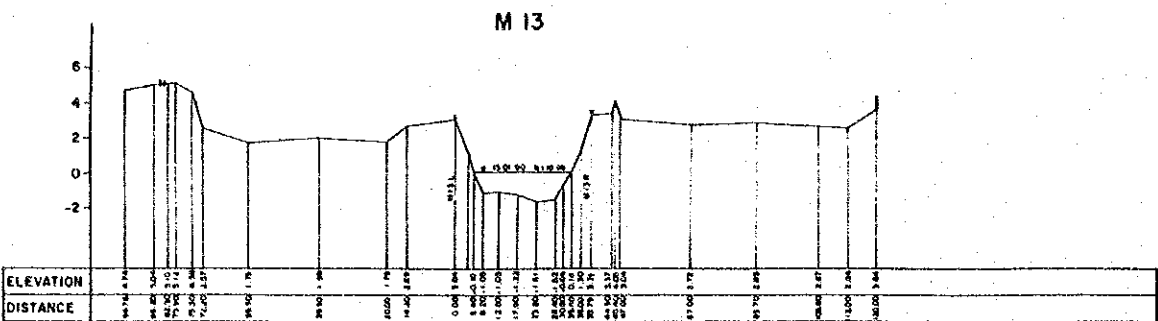
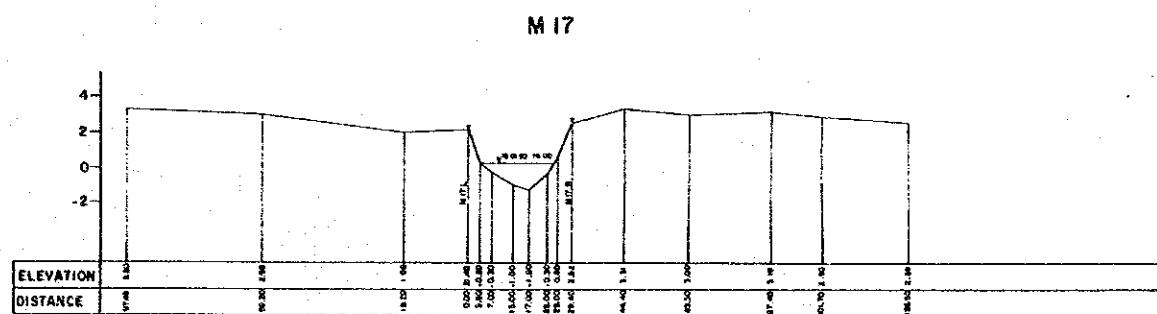
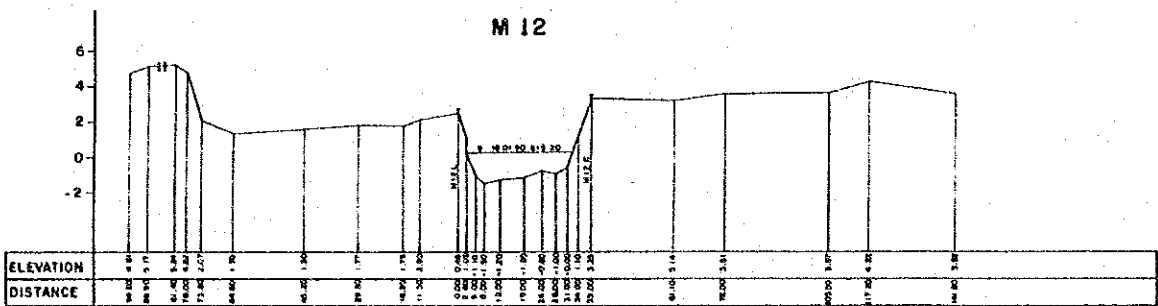
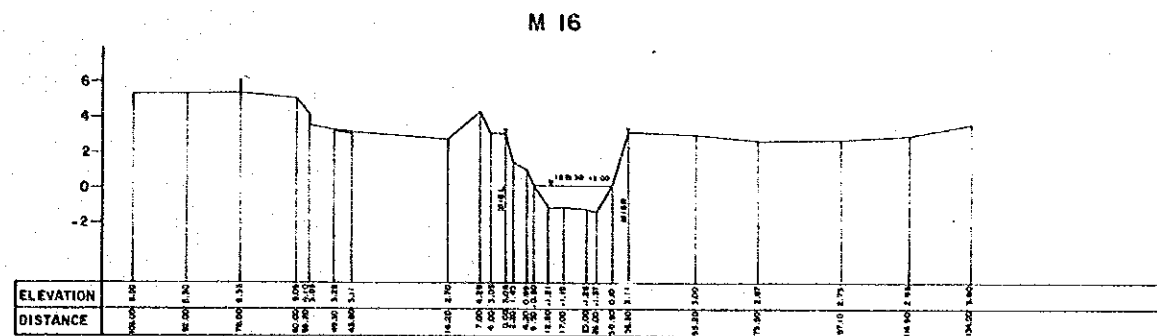
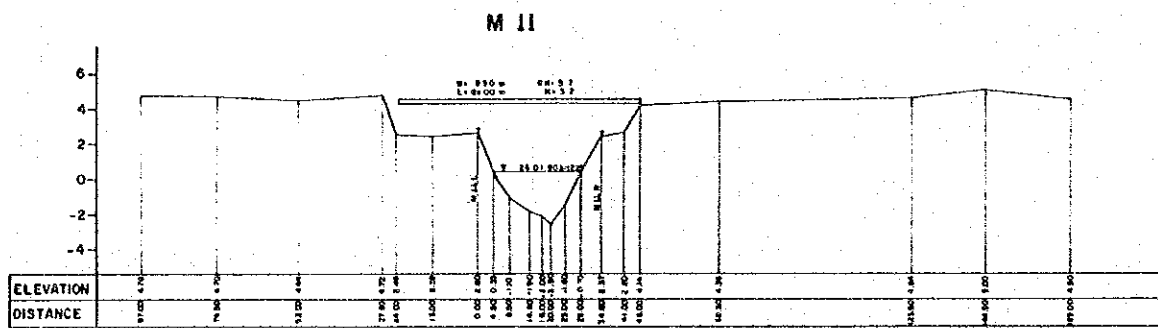
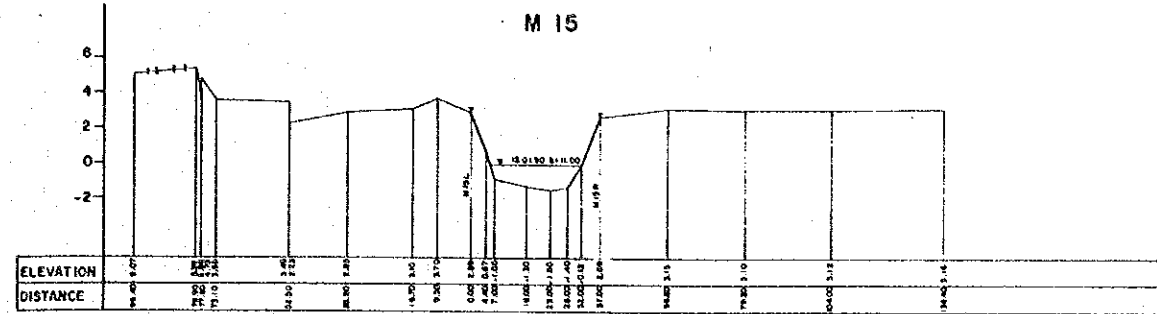
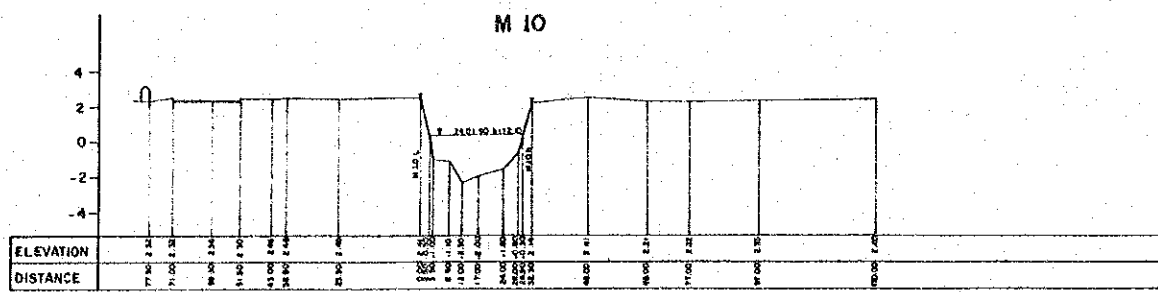
C4 3



C4 4



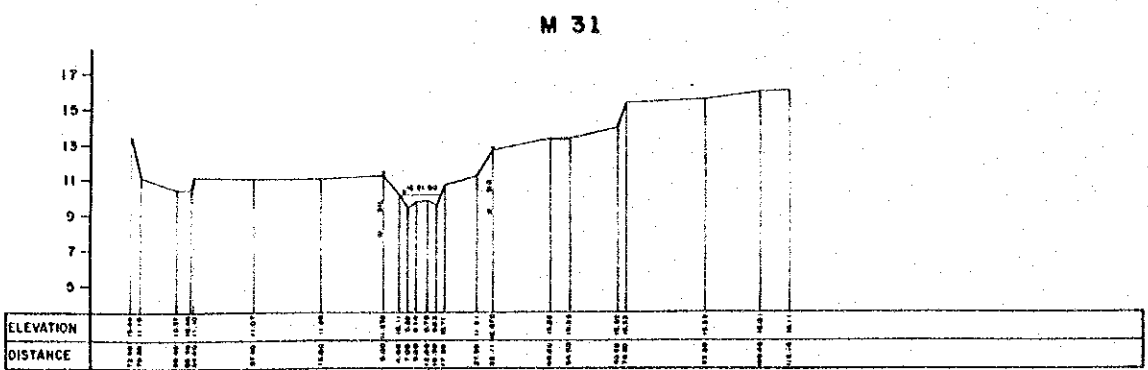
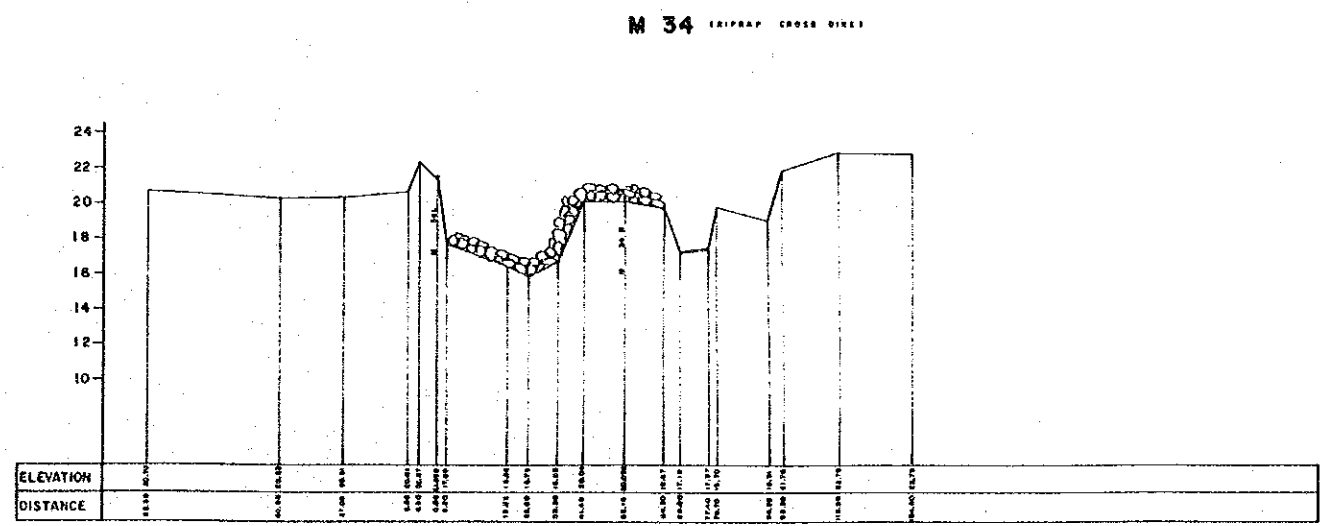
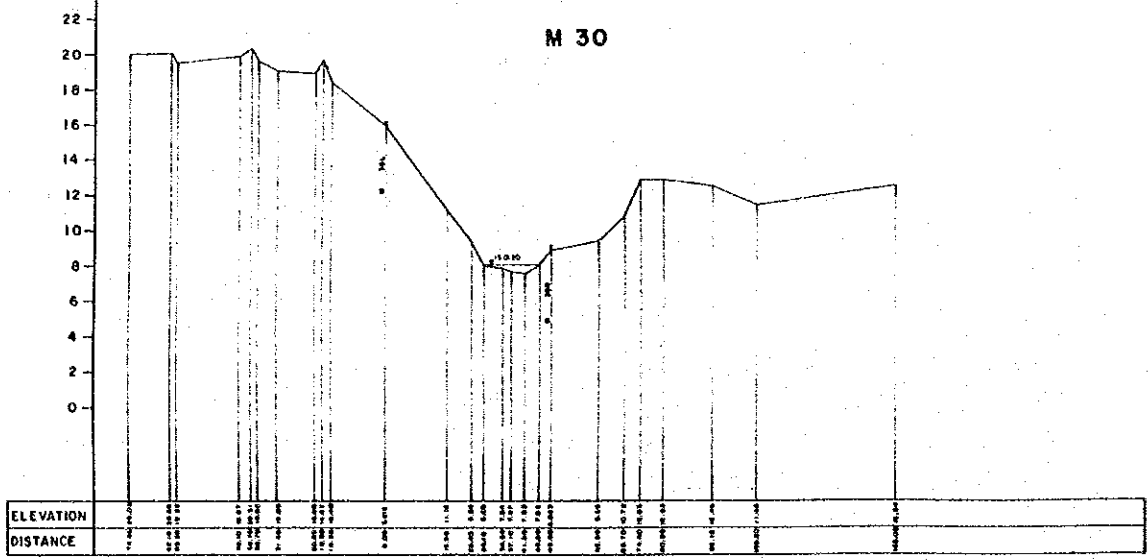
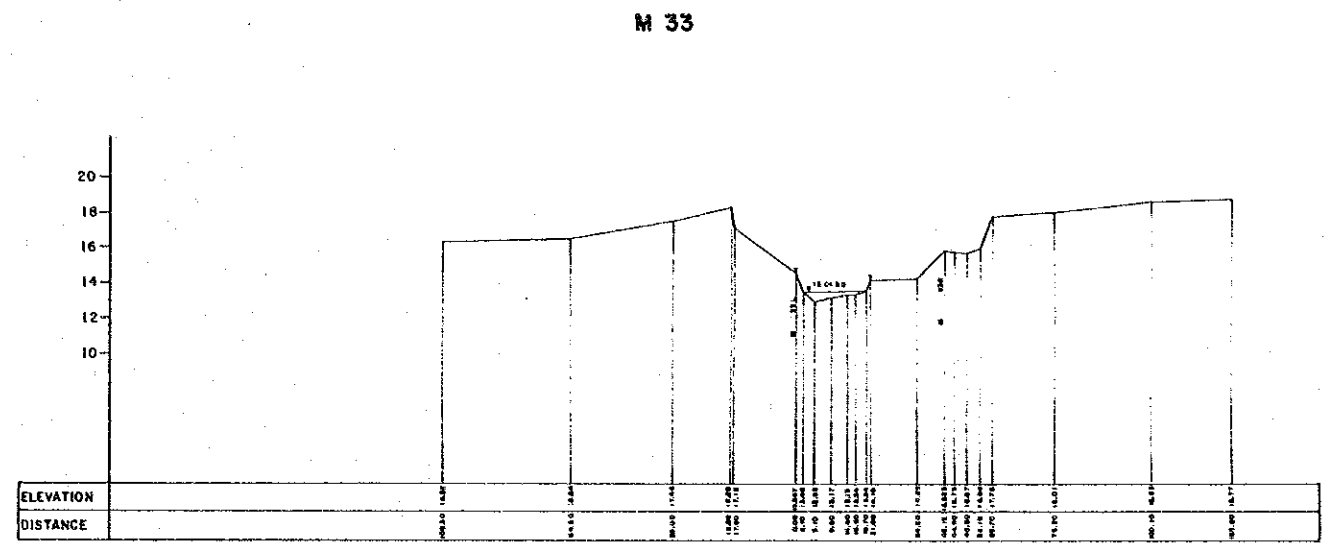
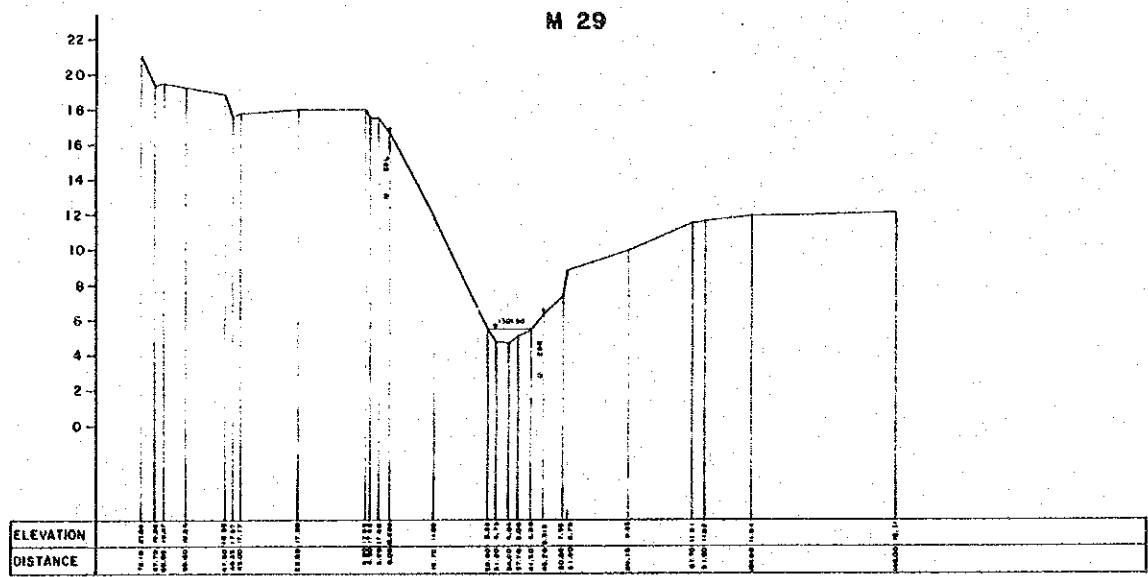
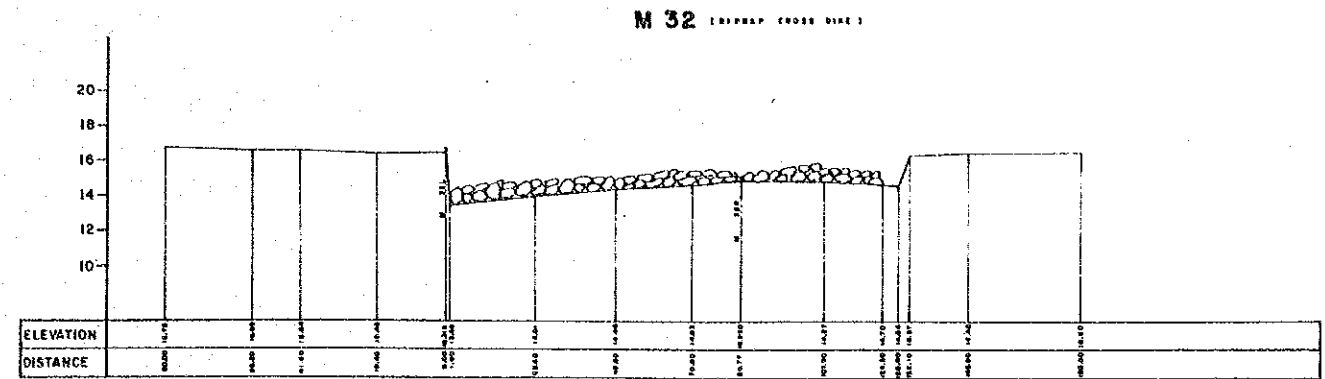
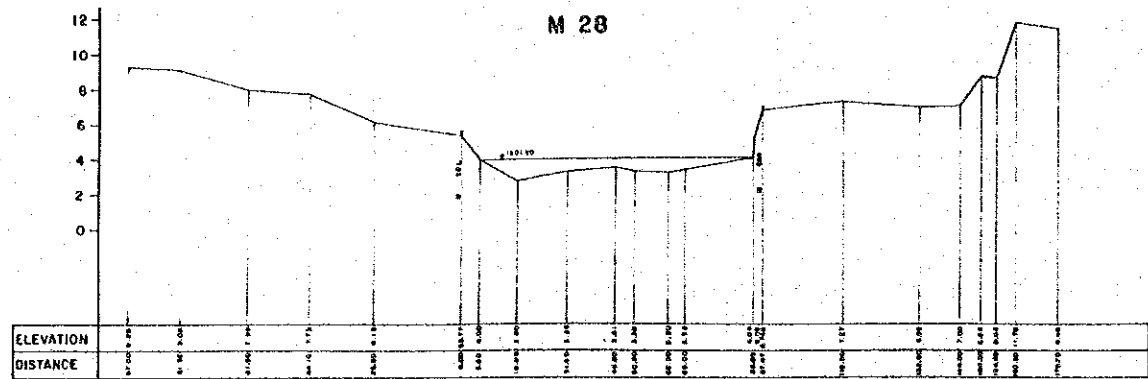
THE DISASTER PREVENTION AND RESTORATION PROJECT IN SERRA DO MAR, CUBATÃO REGION			
CROSS SECTION OF PILÕES C4			
SHEET Nº	1 WINDIA 1	SCALE	H 1:500, V 1:500
SURVEIED DATE	1990.1 - 1990.2		
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.			



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF RIO MOGI

SHEET NO	2	W/14	6	SCALE	H=1:1000, V=1:200	
SURVEYED DATE	1990.1 - 1990.2					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.						



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF RIO MOGI

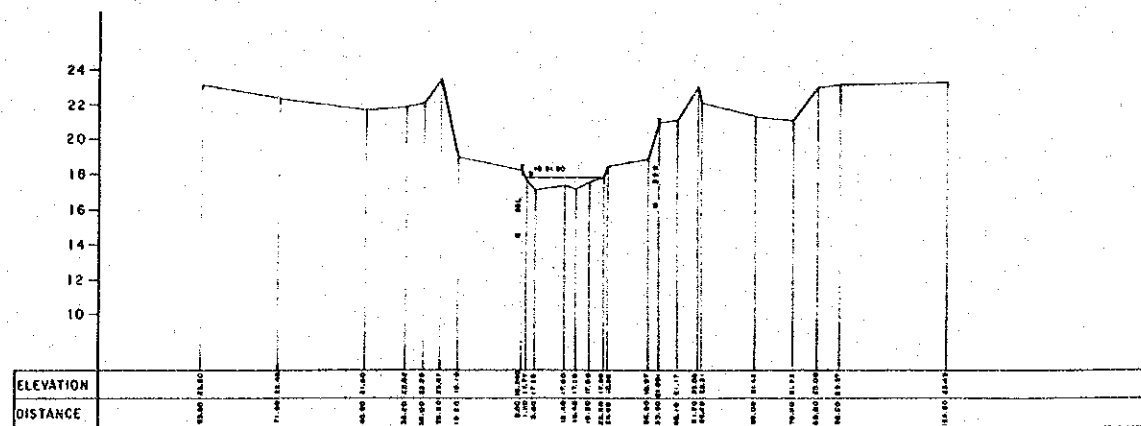
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SURVEYED DATE 1990.1 - 1990.2

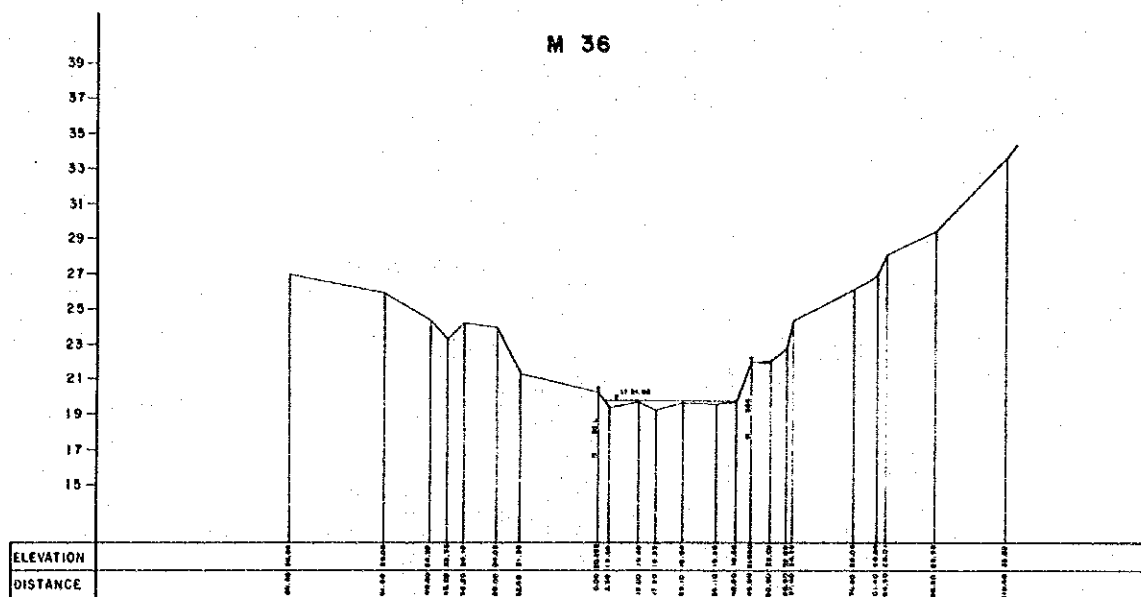
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

BASE AEROFOTOGAMETRIA E PROJETOS S.A.

M 35



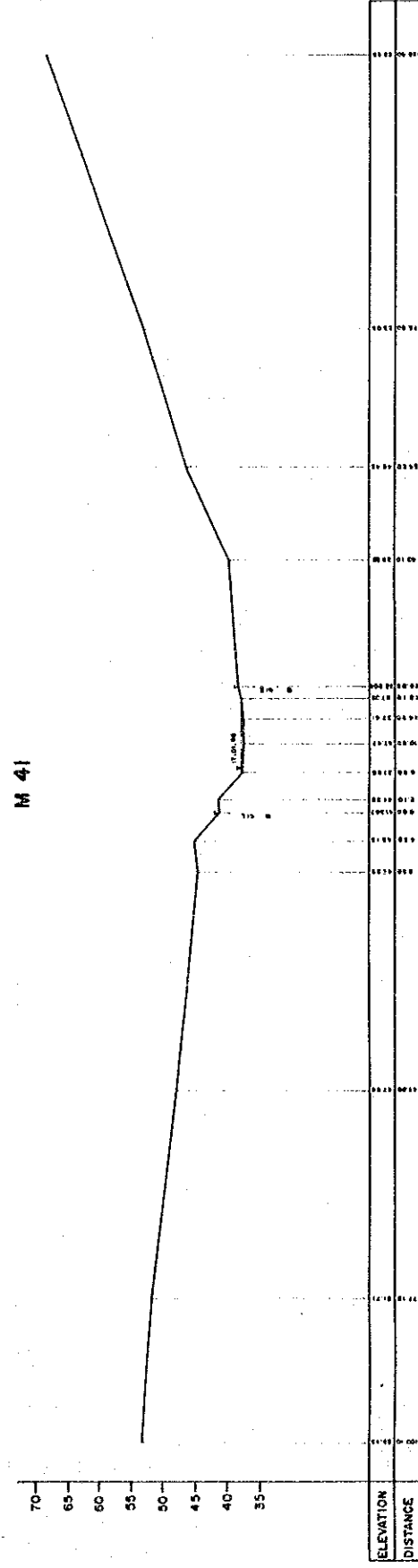
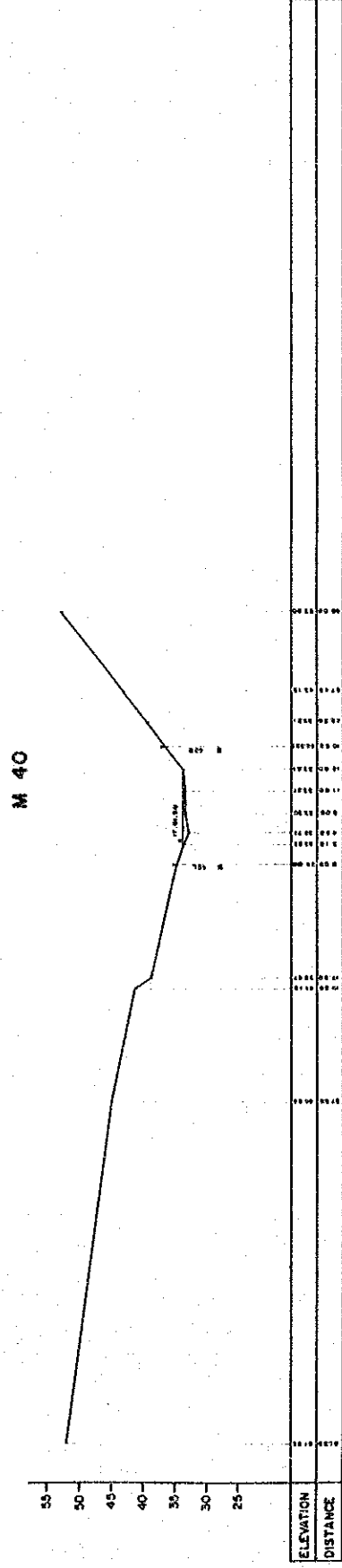
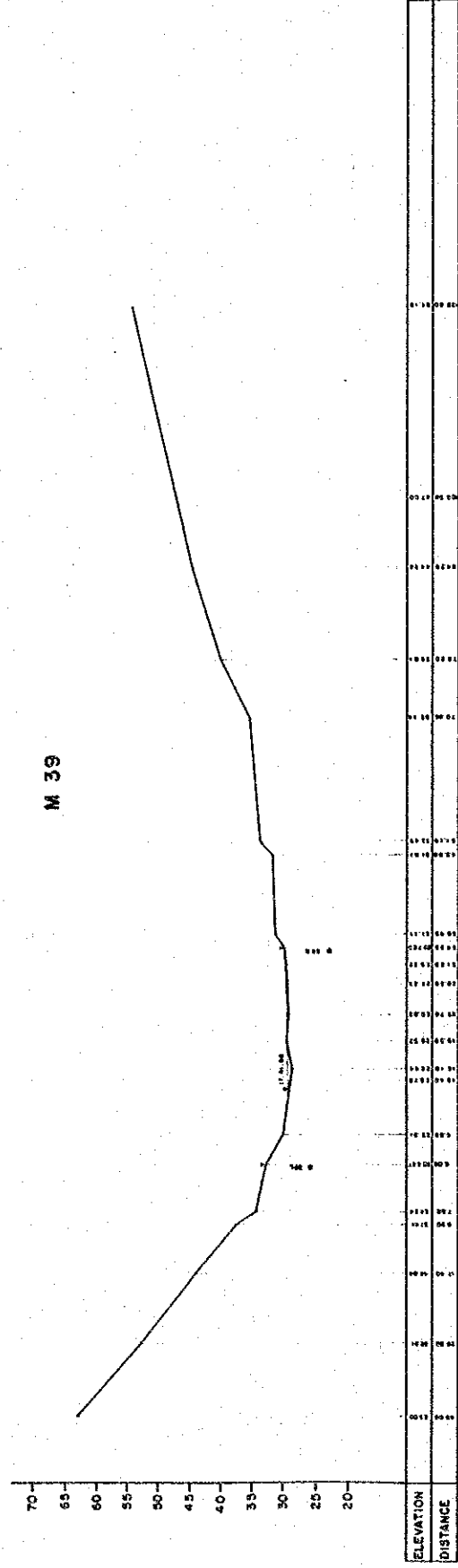
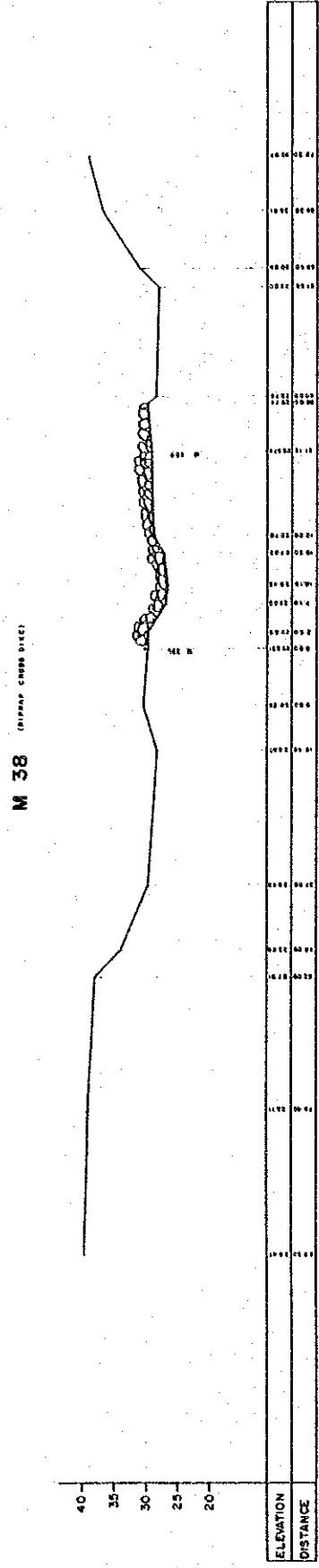
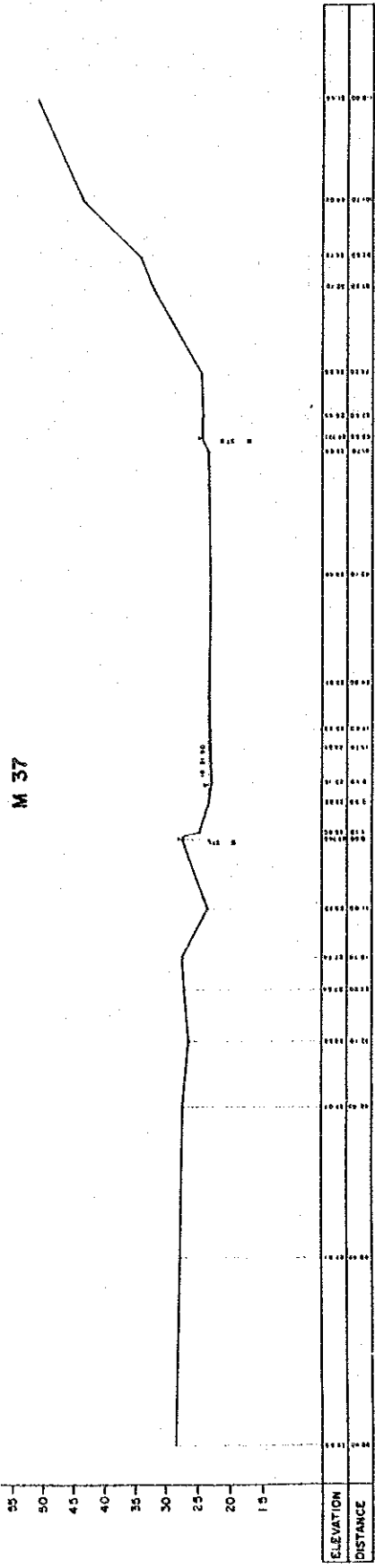
M 36



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF RIO MOGI

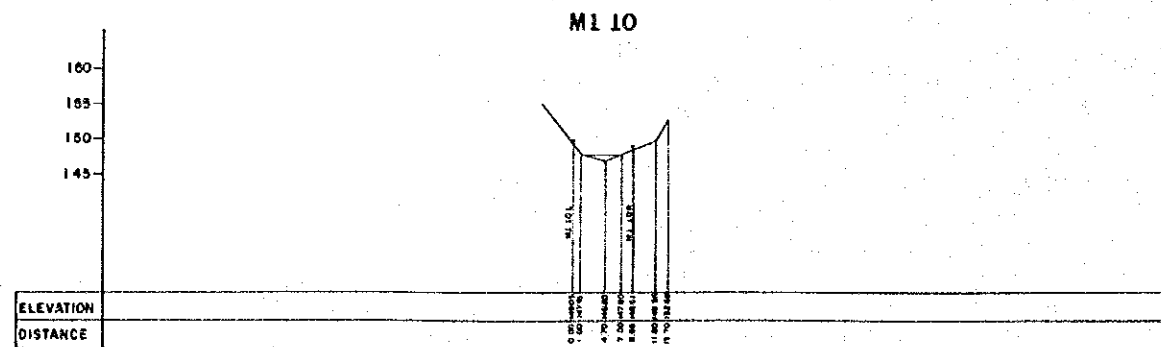
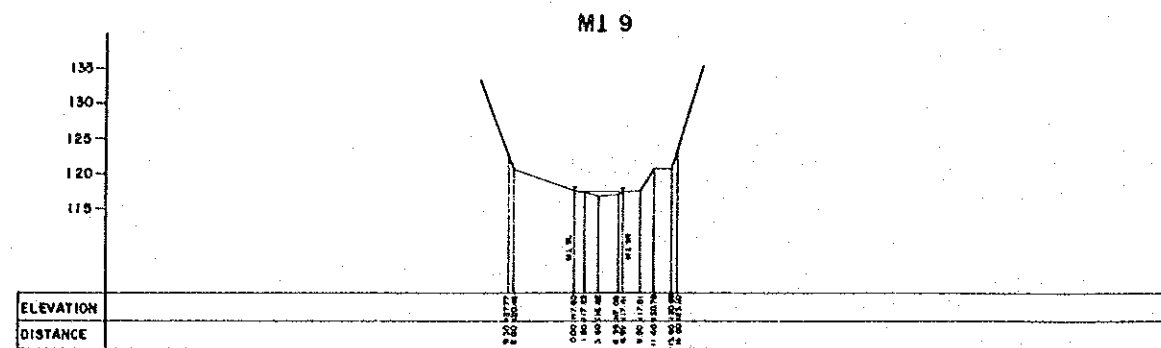
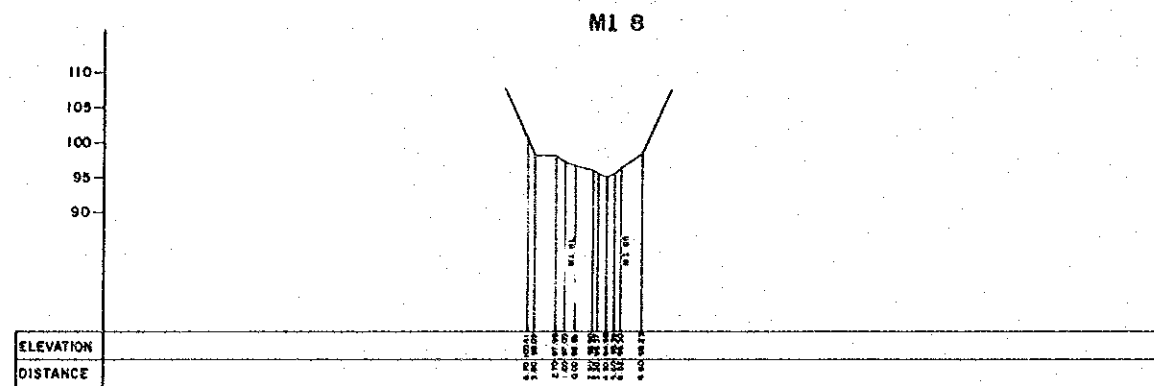
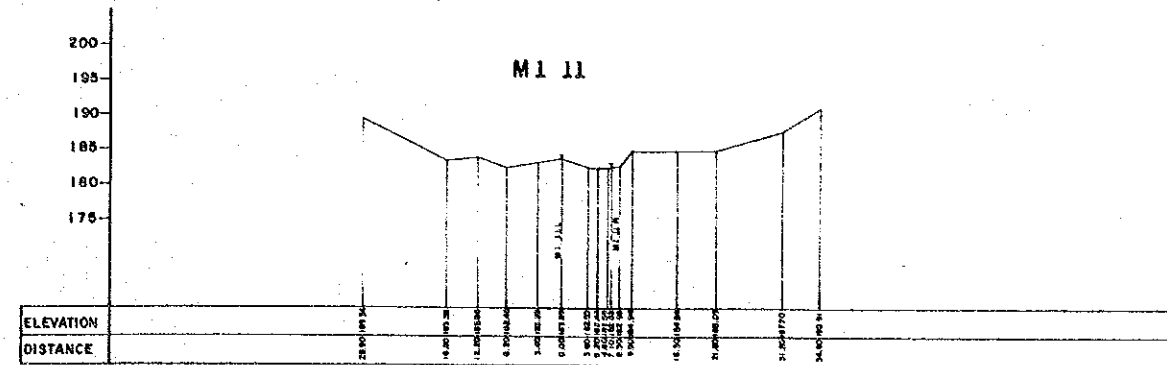
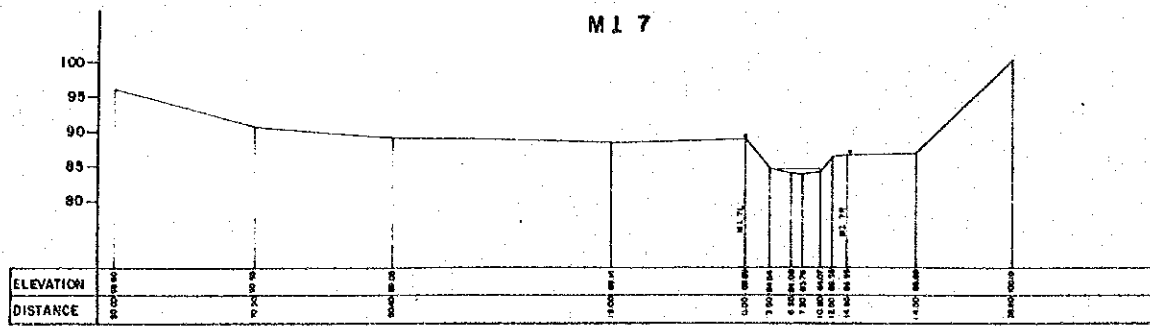
SHEET Nº	5	WIMB 6	SCALE	H=1:1000, V=1:200
SURVEIED DATE	1990.1 - 1990.2			
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.				



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF RIO MOGI

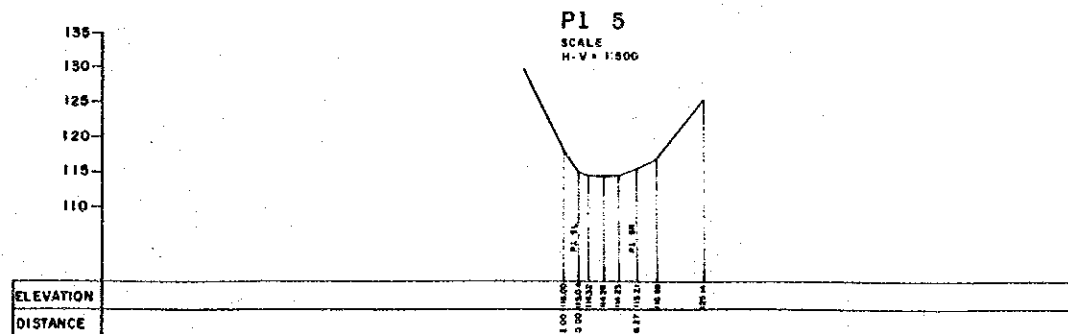
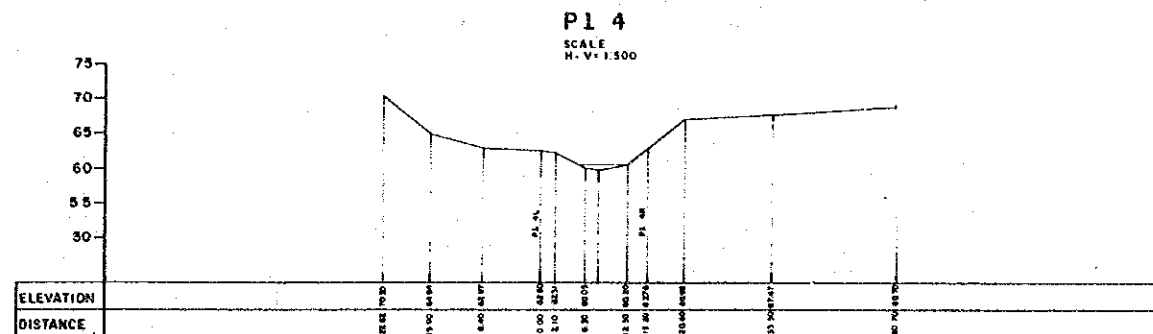
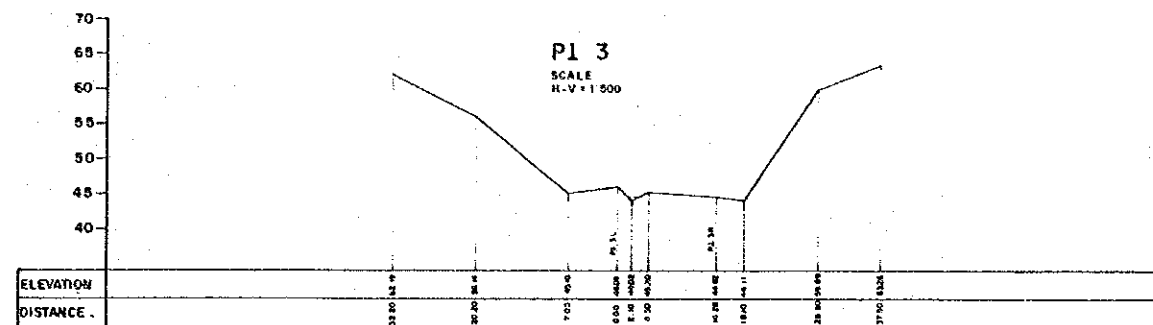
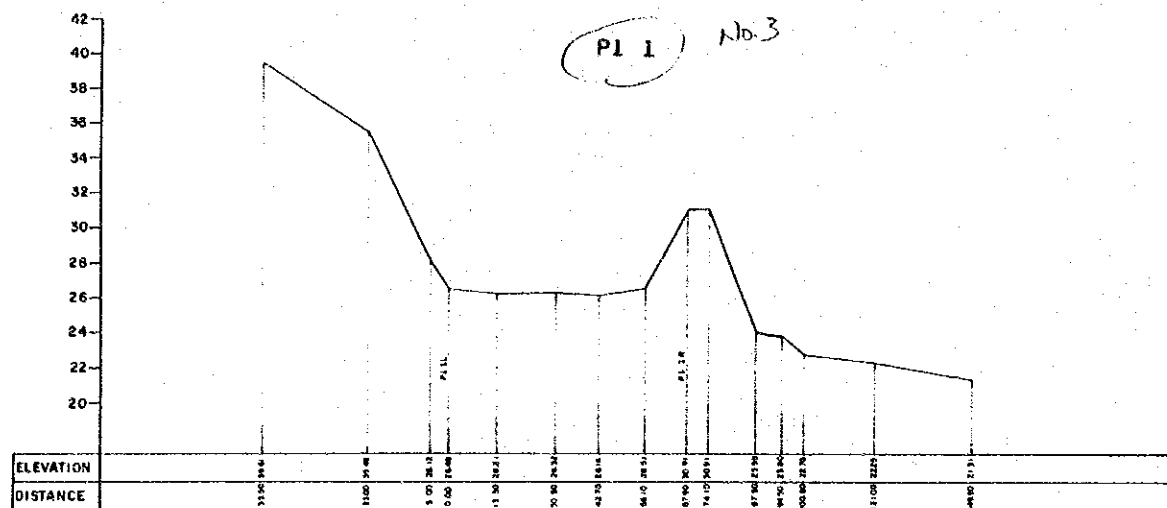
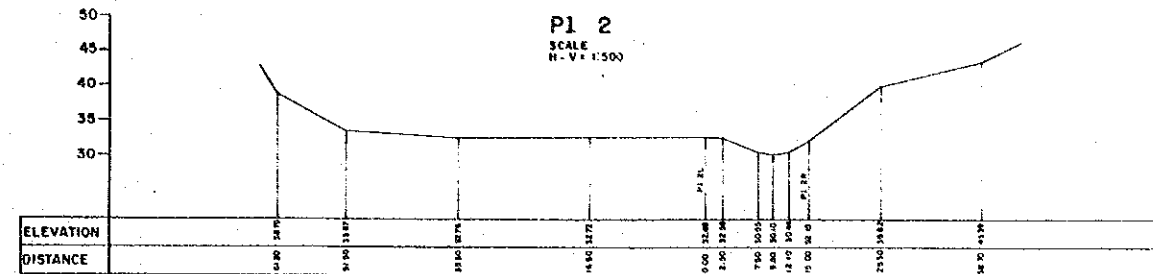
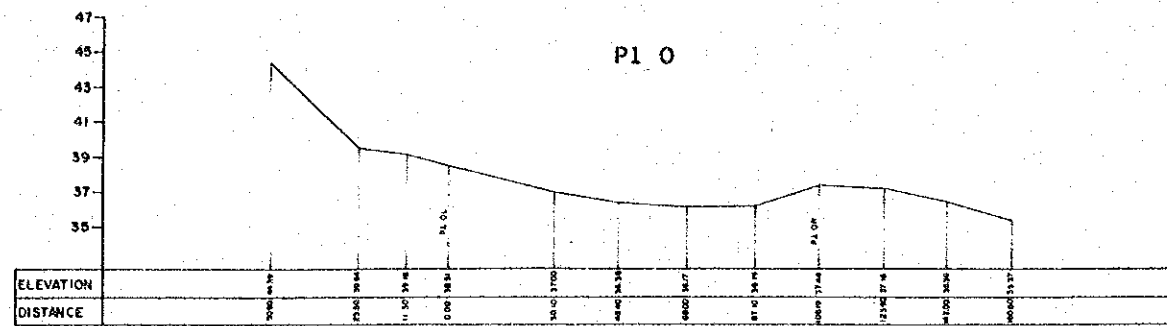
SHEET NO. 5 WITHIN 6 SCALE 1:1,500 V.I.1500
SURVEYED DATE 1990.1 - 1990.2
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF M1

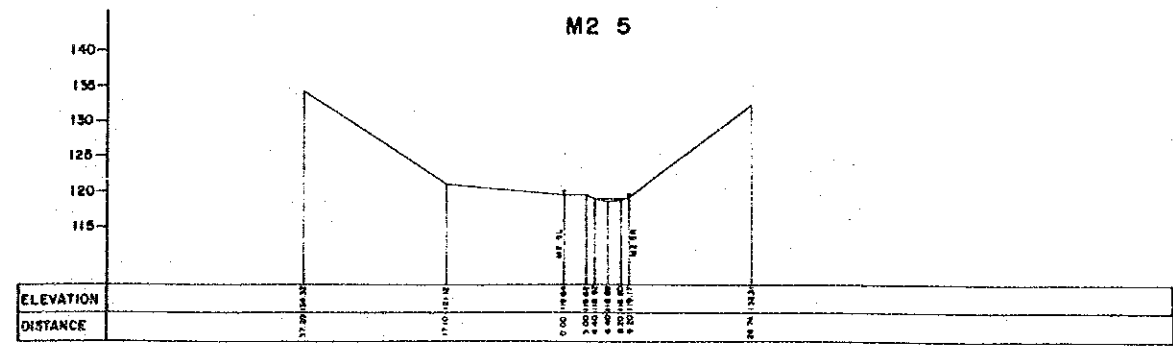
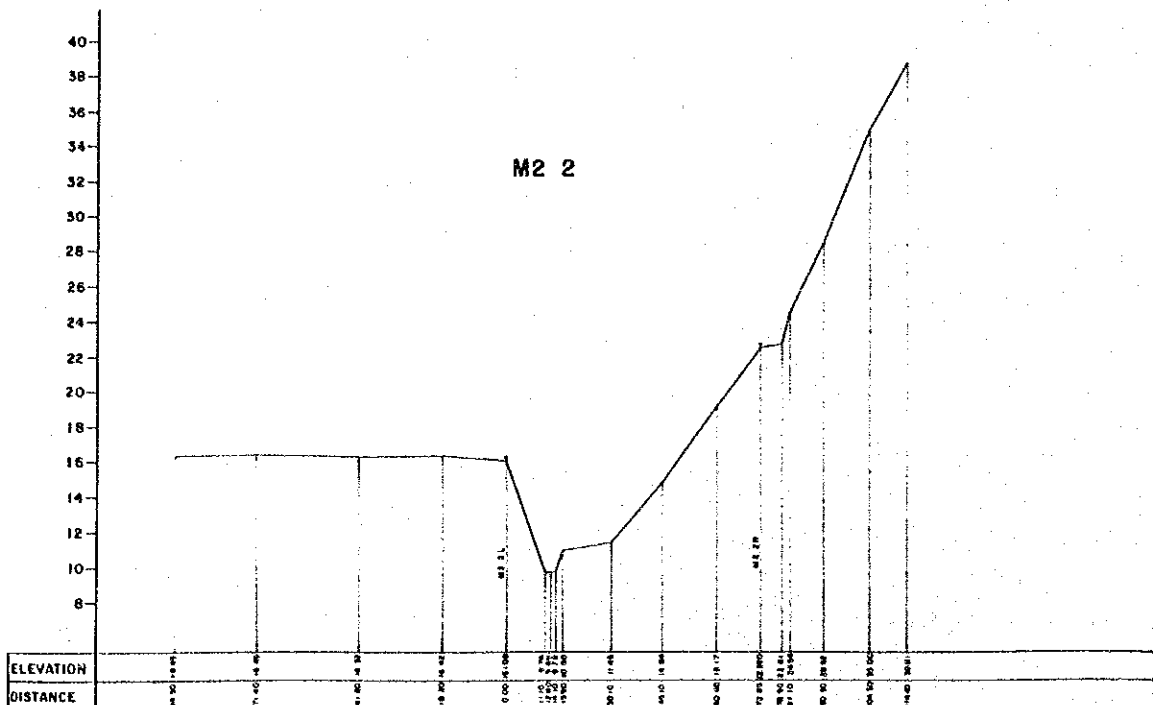
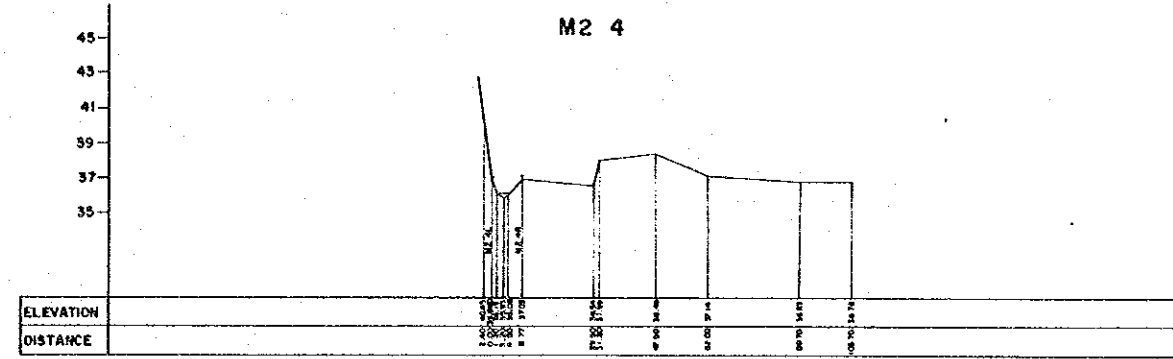
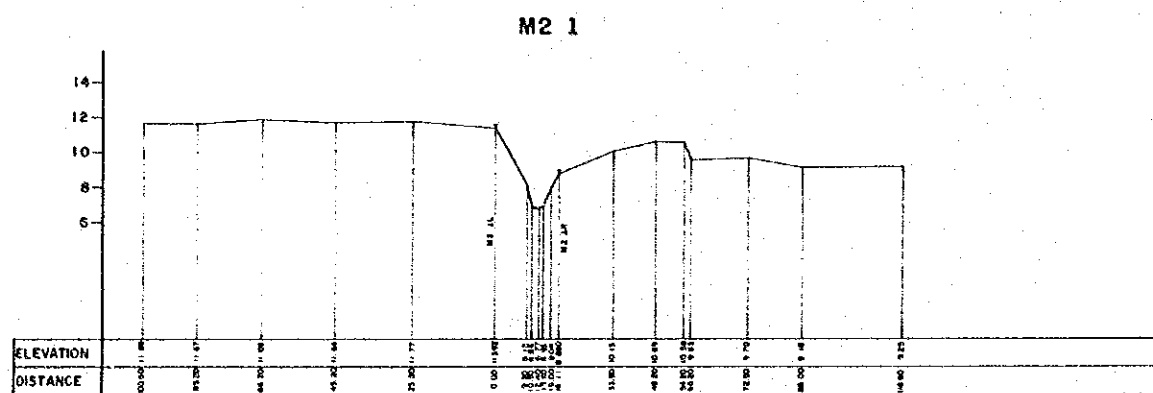
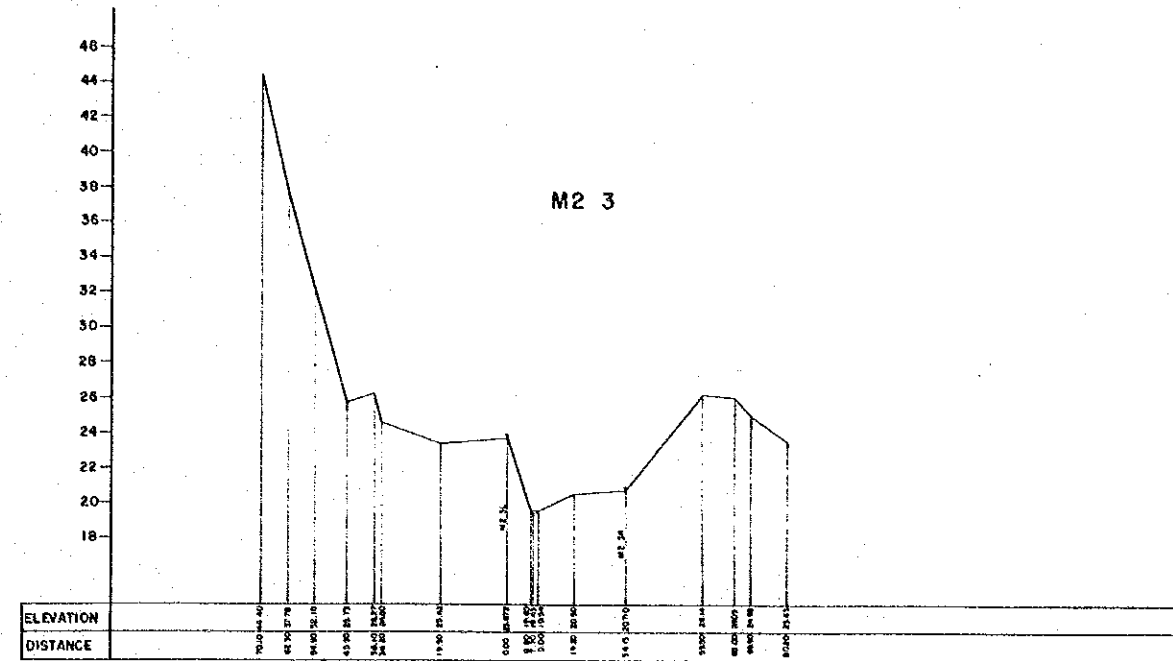
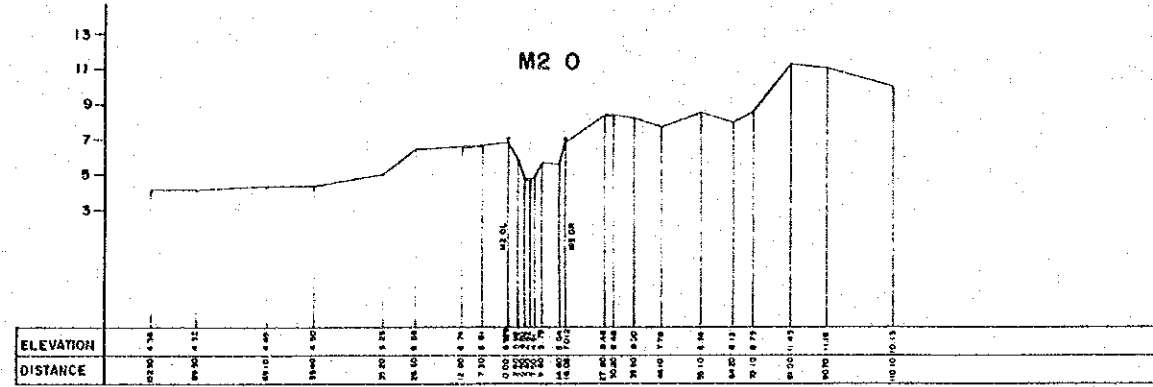
SHEET NO	2	WIPPA	2	SCALE	H:1:500, V:1:500
SURVEIED DATE	1990.1 - 1990.2				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.					



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF P1

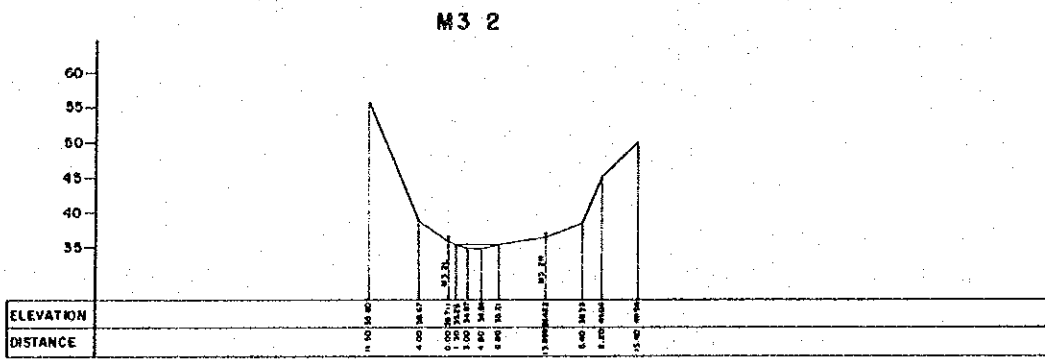
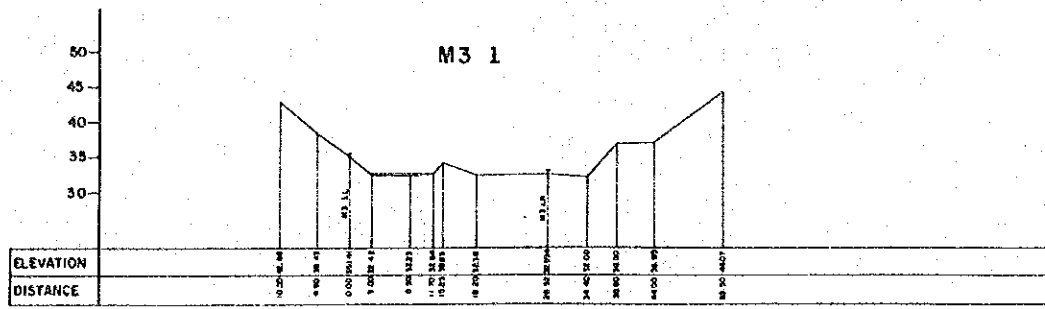
SHEET NO	1	Within	1	SCALE	H.V. 1:1000, V.V. 1:200
SURVEIED DATE	1.990.1 - 1.990.2				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.					



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF M2

SHEET NO.	1	WITHIN	1	SCALE	H:1:1000, V:1:200
SURVEIED DATE	1.990.1 - 1.990.2				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
BASE AEROFOTOGRAFIA E PROJETOS S.A.					

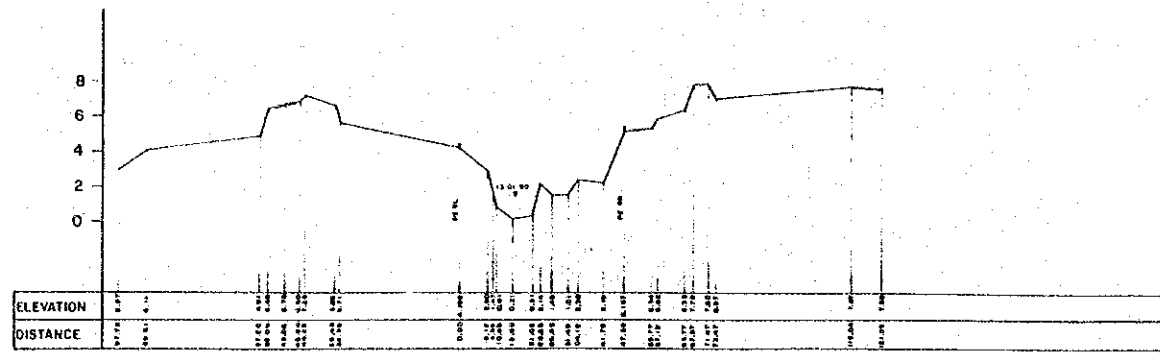


THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

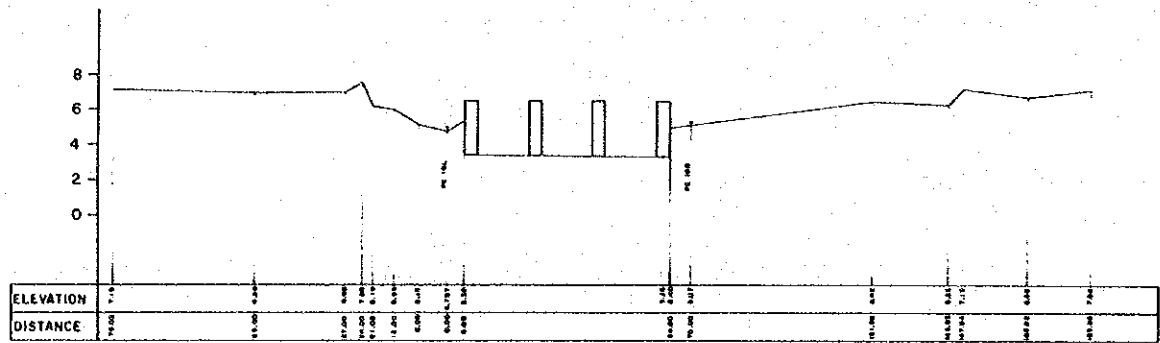
CROSS SECTION OF M3

SHEET NO	1	OF	2	SCALE	H=1:500, V=1:500
SURVEIED DATE	1990.1 - 1990.2				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.					

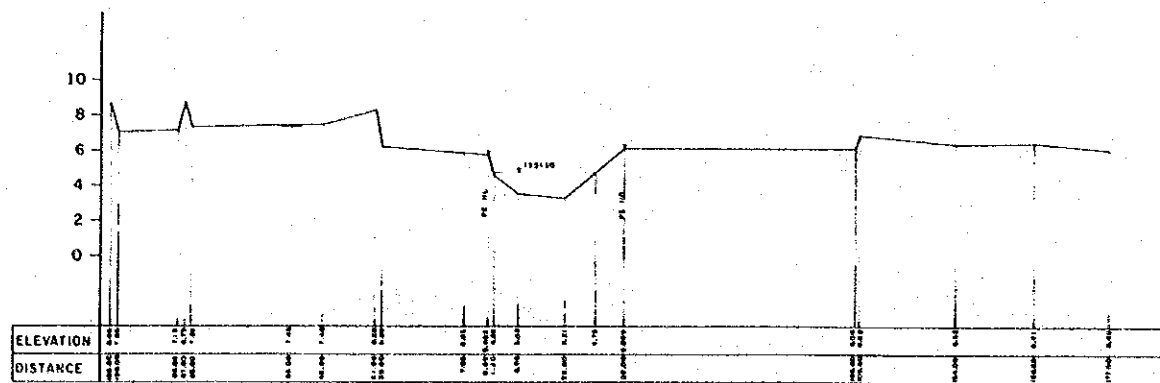
PE 9



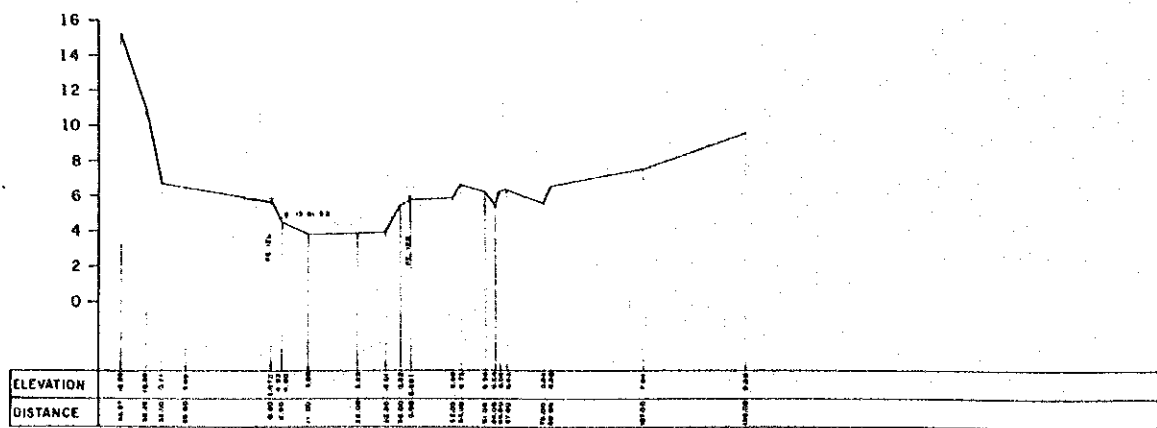
PE 10



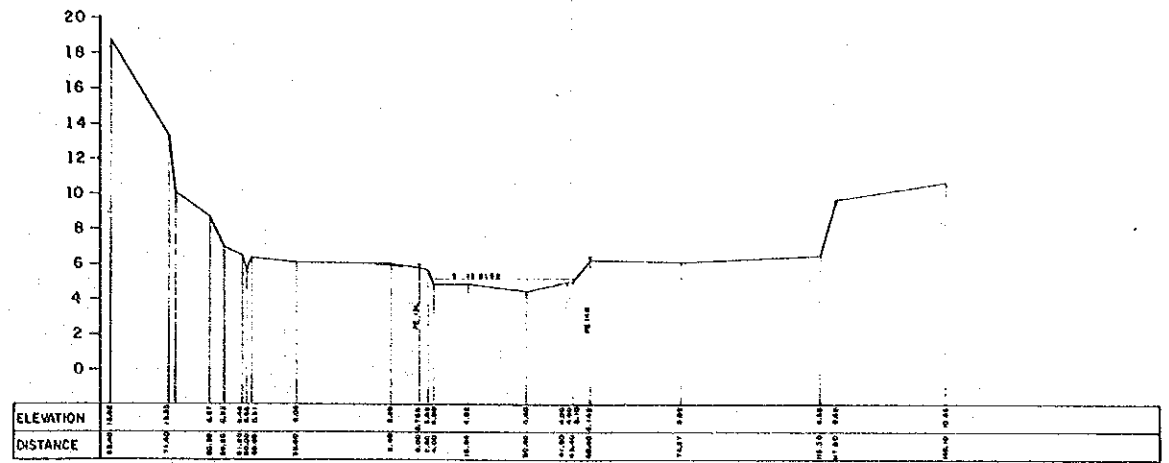
PE 11



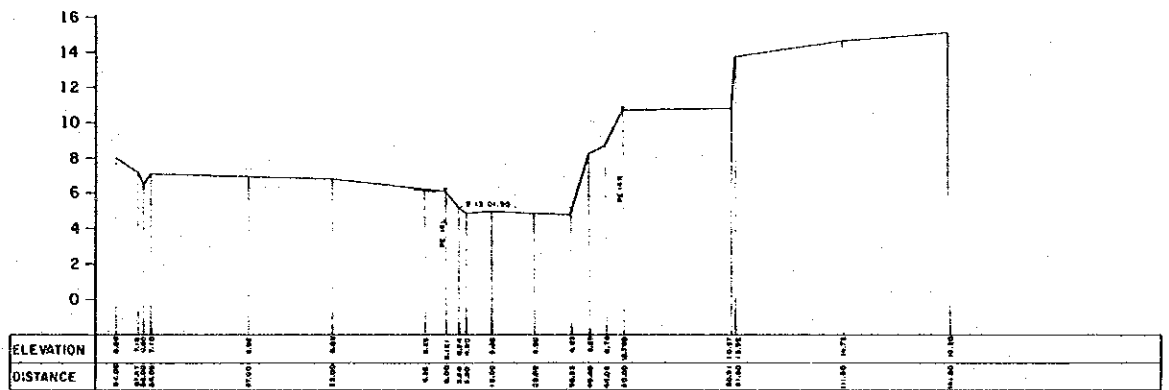
PE 12



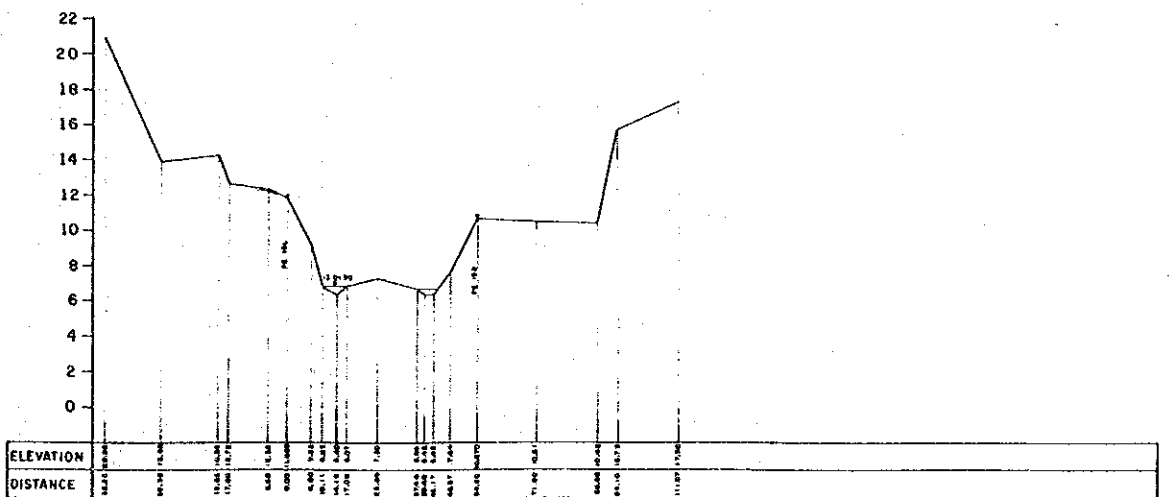
PE 13



PE 14



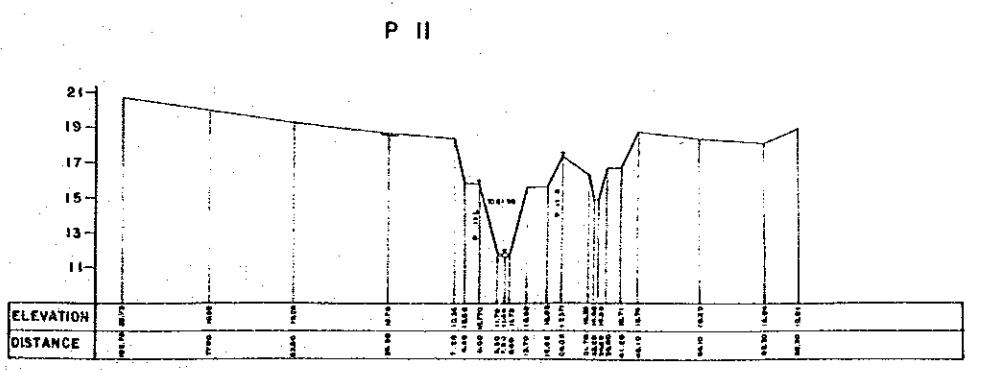
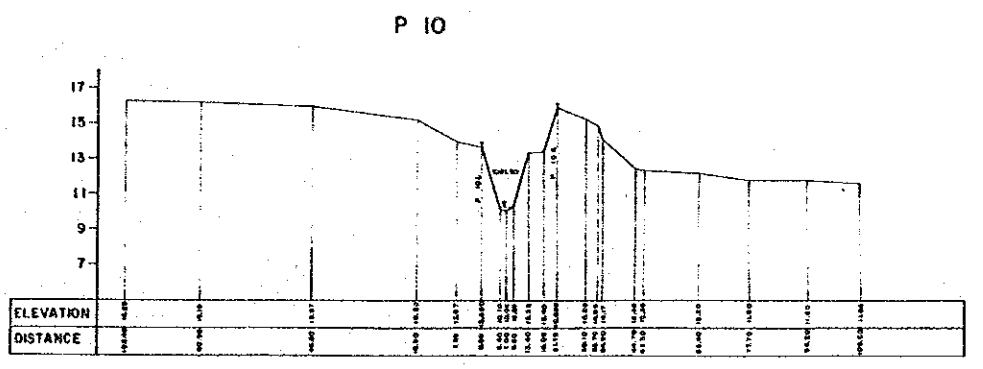
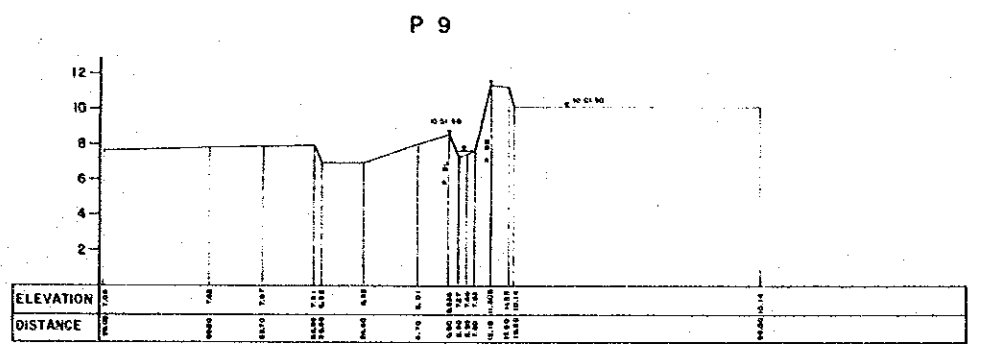
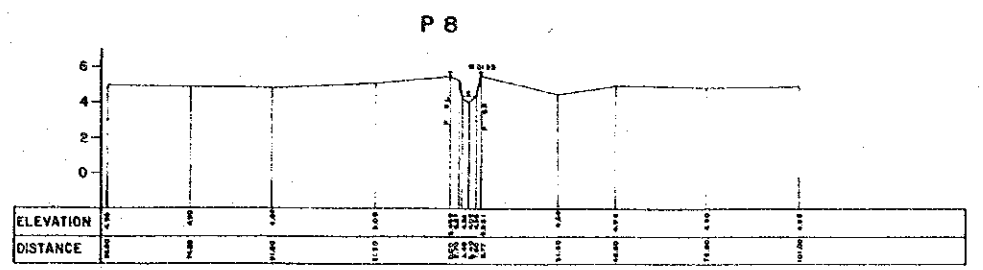
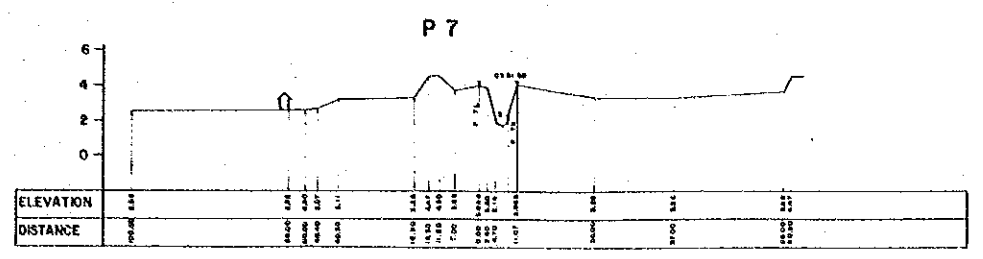
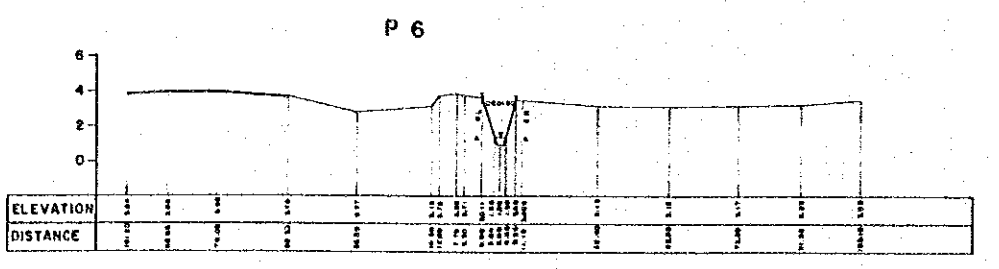
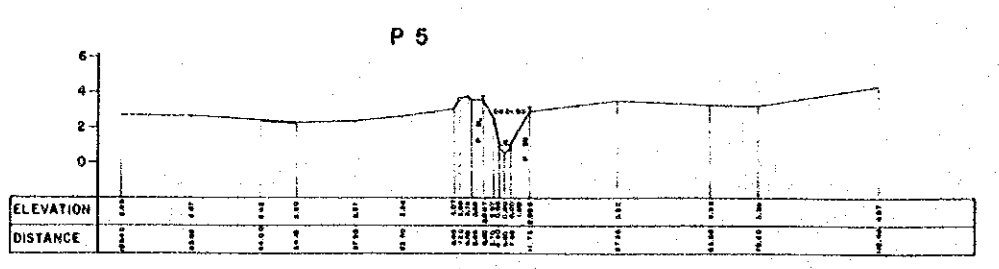
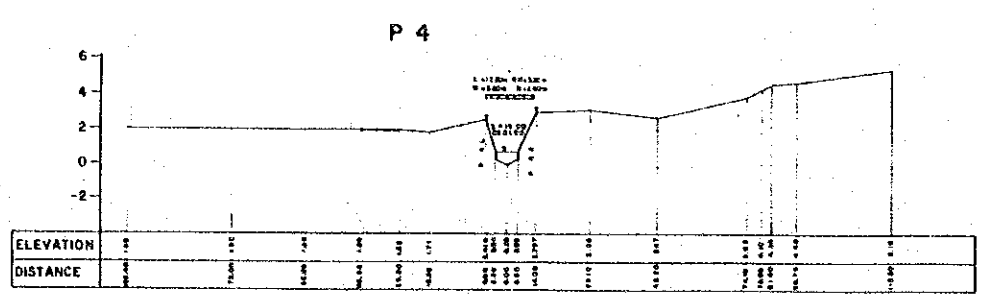
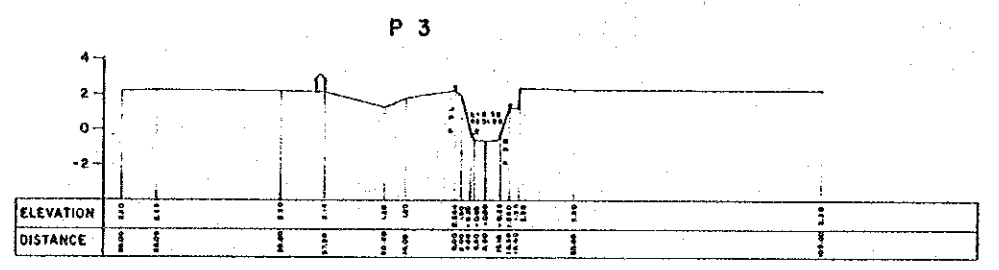
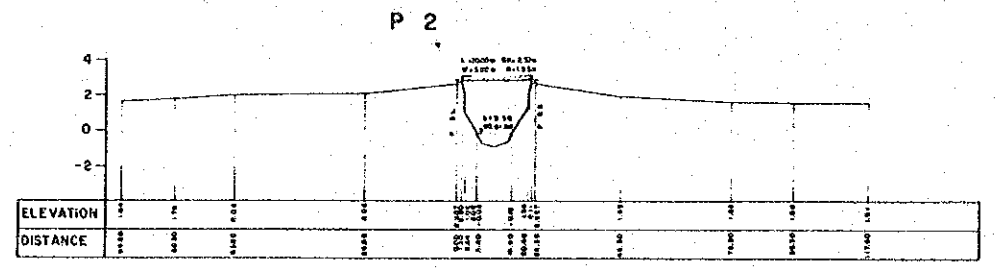
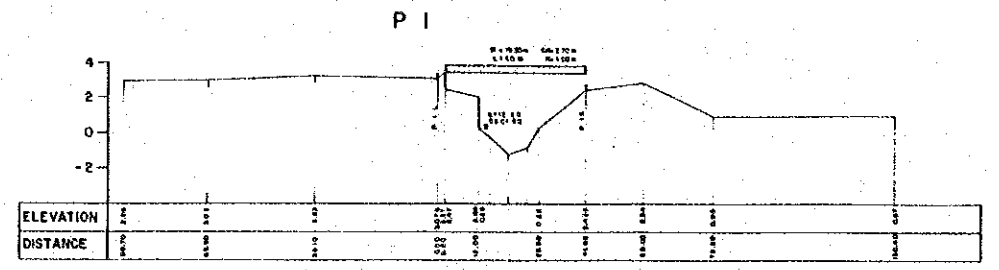
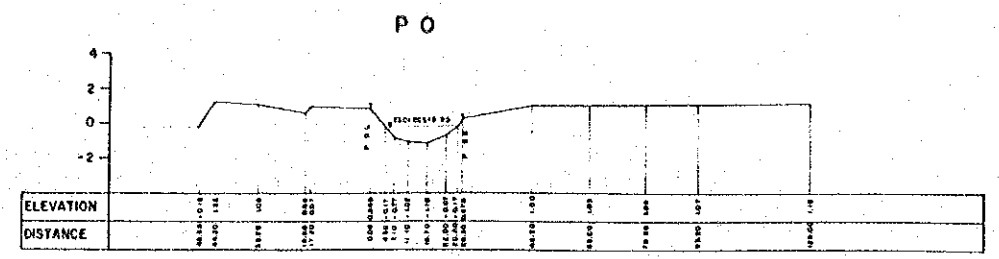
PE 15



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN BERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF RIO PEREQUÊ

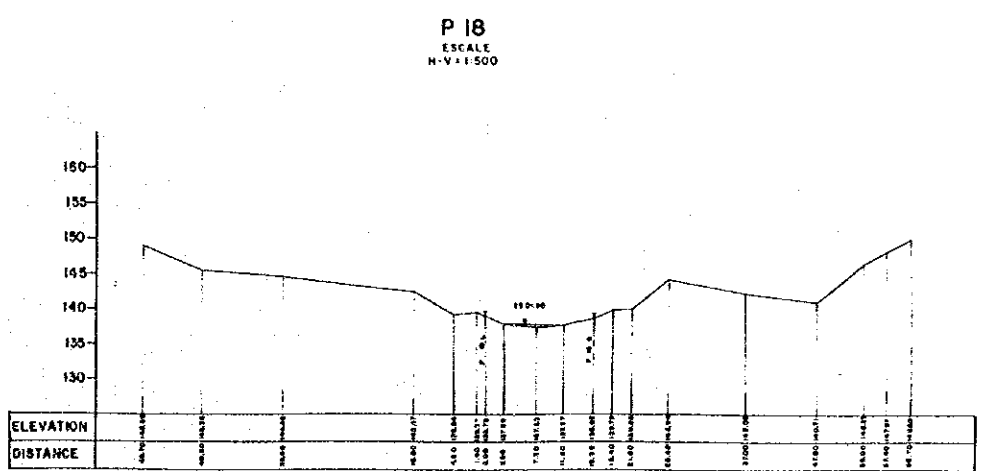
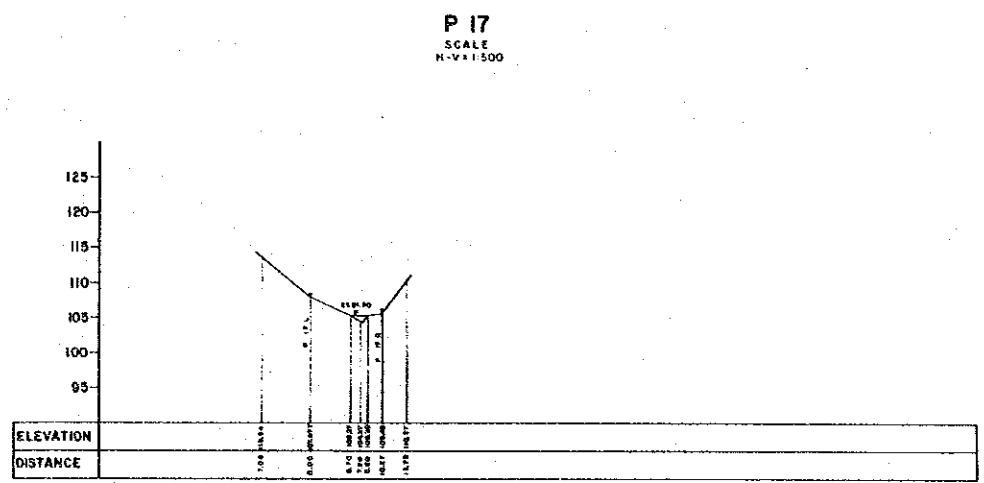
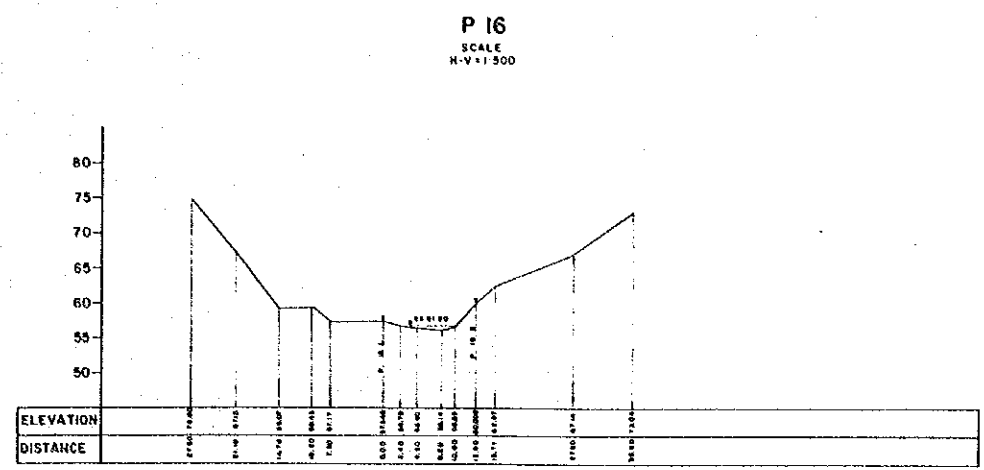
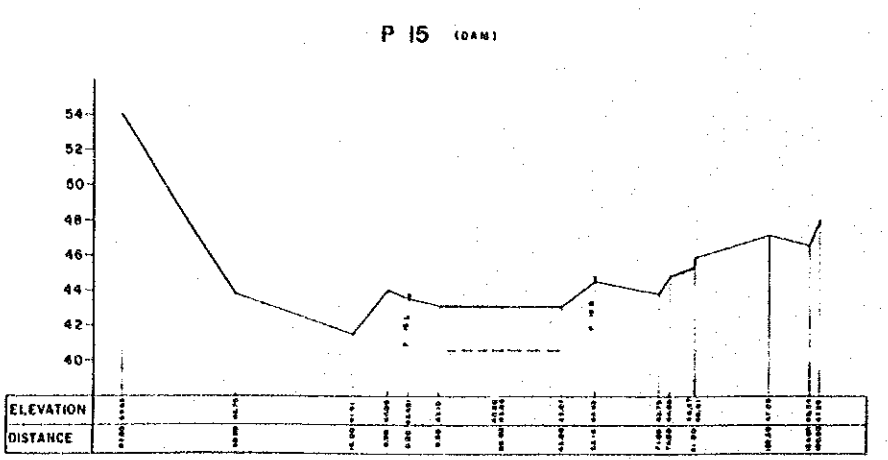
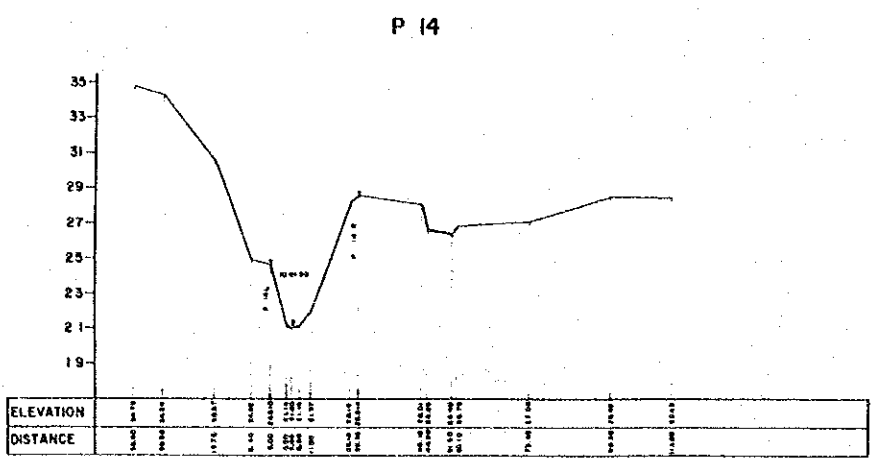
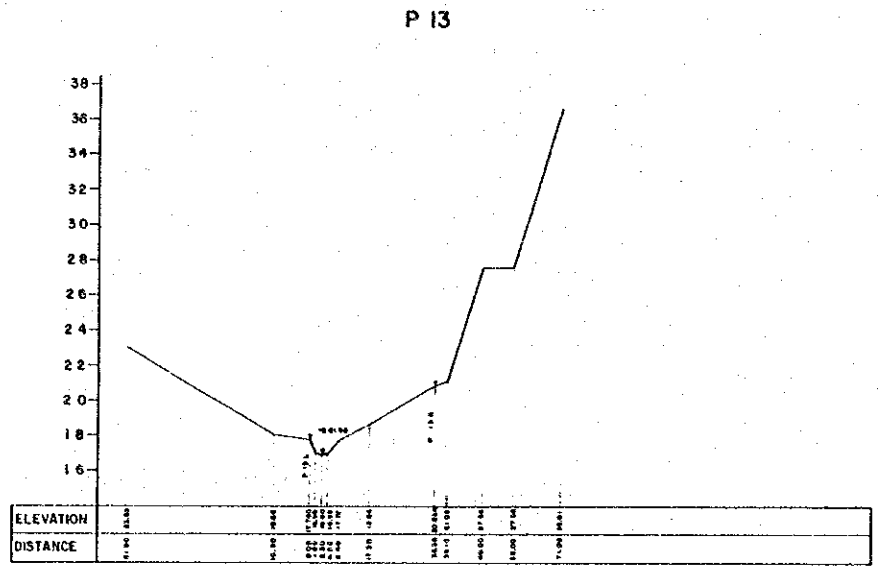
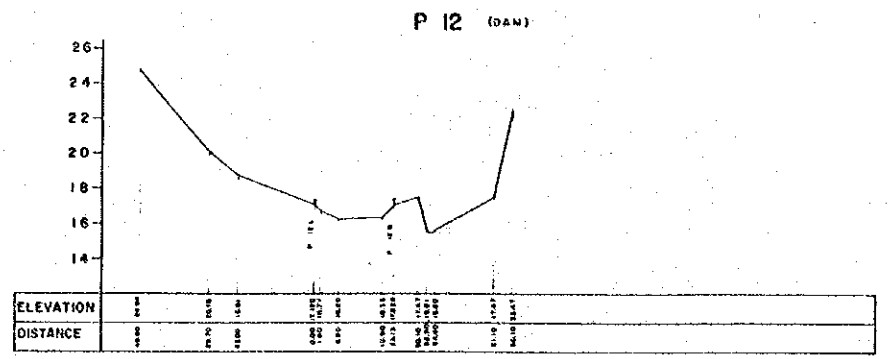
SHEET Nº	2	WIKIN 3	SCALE	H:1:1000, V:1:200
SURVEIED DATE	1990.1 - 1990.2			
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
BASE AEROFOTOGAMETRIA E PROJETOS S.A.				



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF RIO PIAÇAGUERA

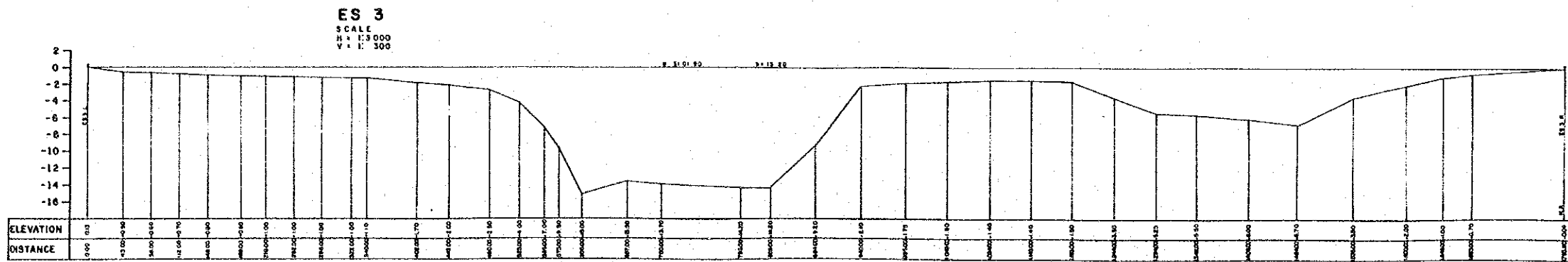
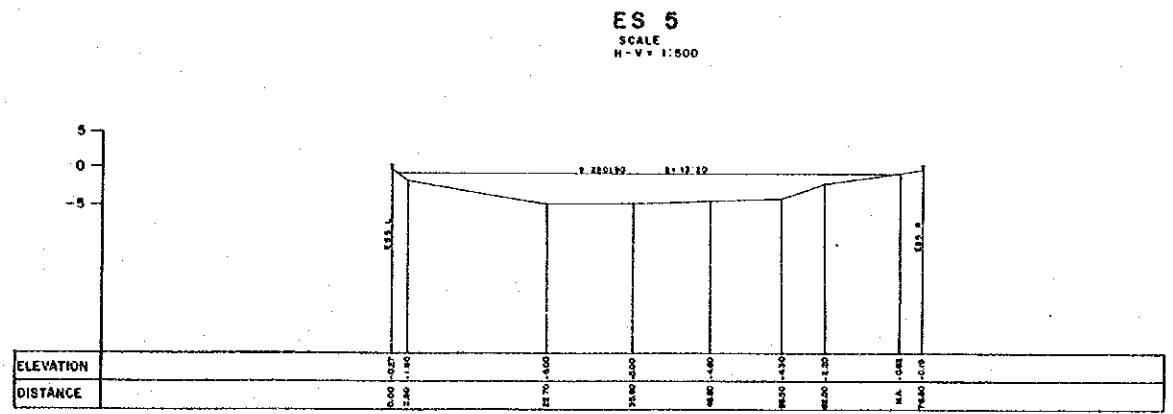
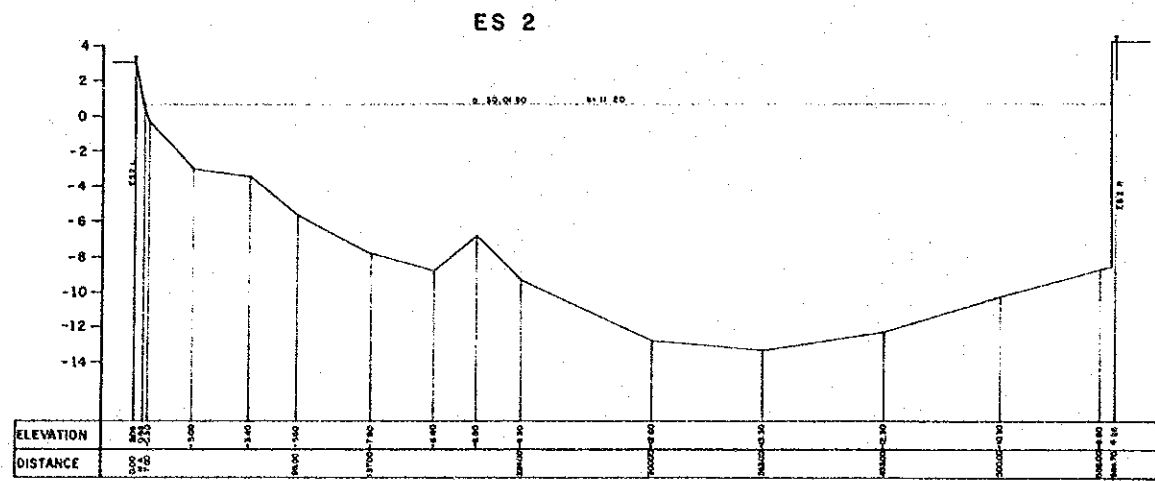
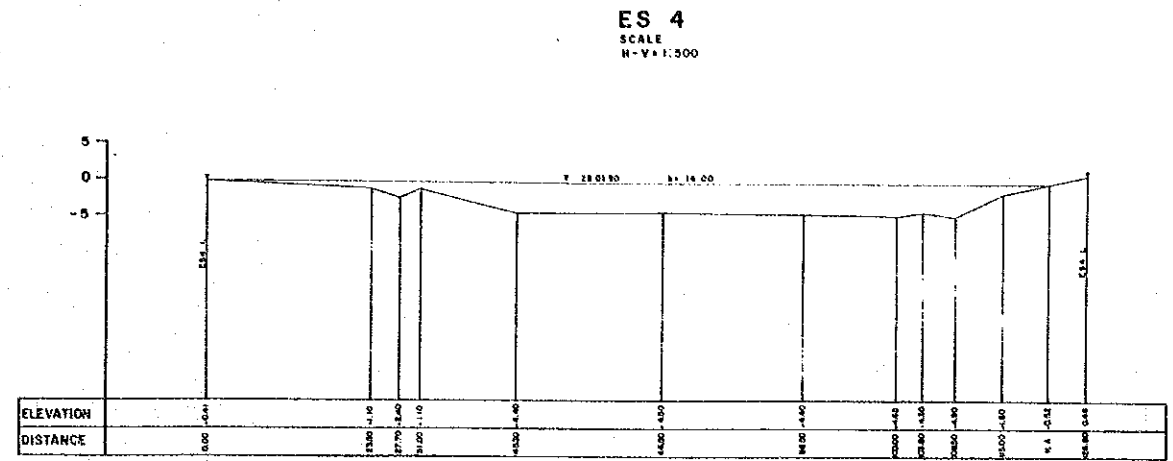
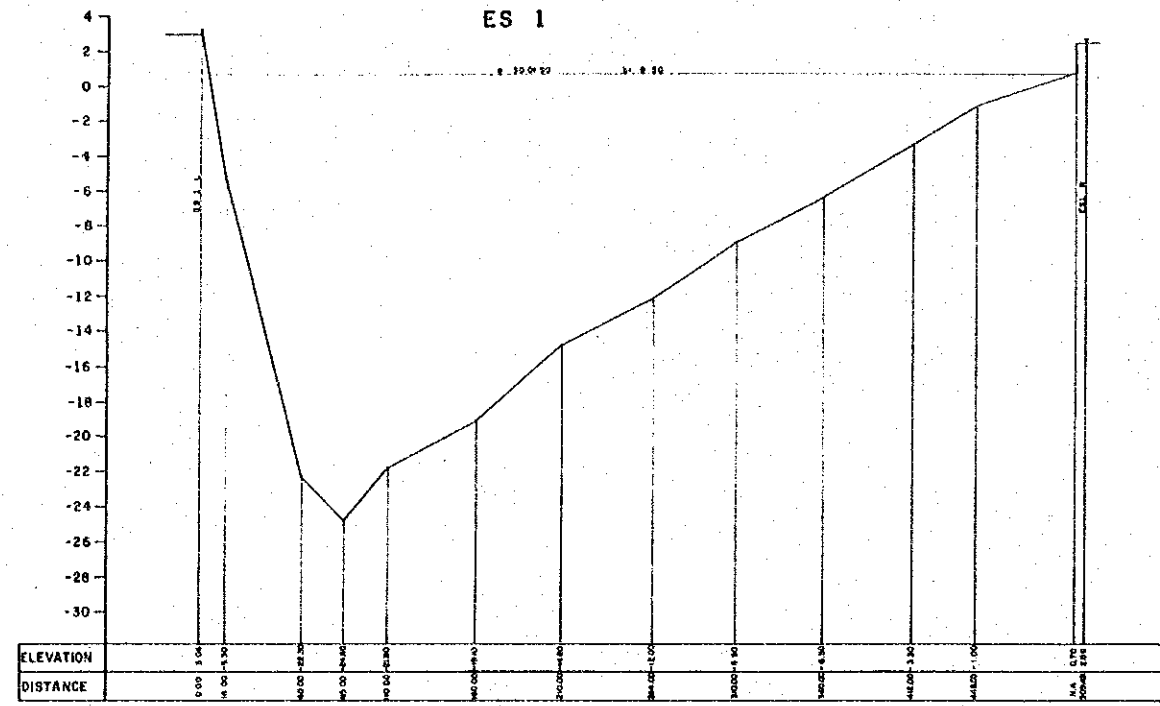
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SURVEYED DATE	1990.1 - 1990.2			
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.				



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF RIO PIAÇAQUERA

SHEET Nº	2	WIENIA 2	SCALE	H:1:1000, V:1:200
SURVEIED DATE	1990.1 - 1990.2			
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.				



THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

CROSS SECTION OF ES

SHEET No	1 WITHIN 1	SCALE	H=1:2000, V=1:200
SURVEIED DATE	1990.1 - 1990.2		
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.			

THE DISASTER PREVENTION AND RESTORATION
PROJECT IN SERRA DO MAR, CUBATÃO REGION

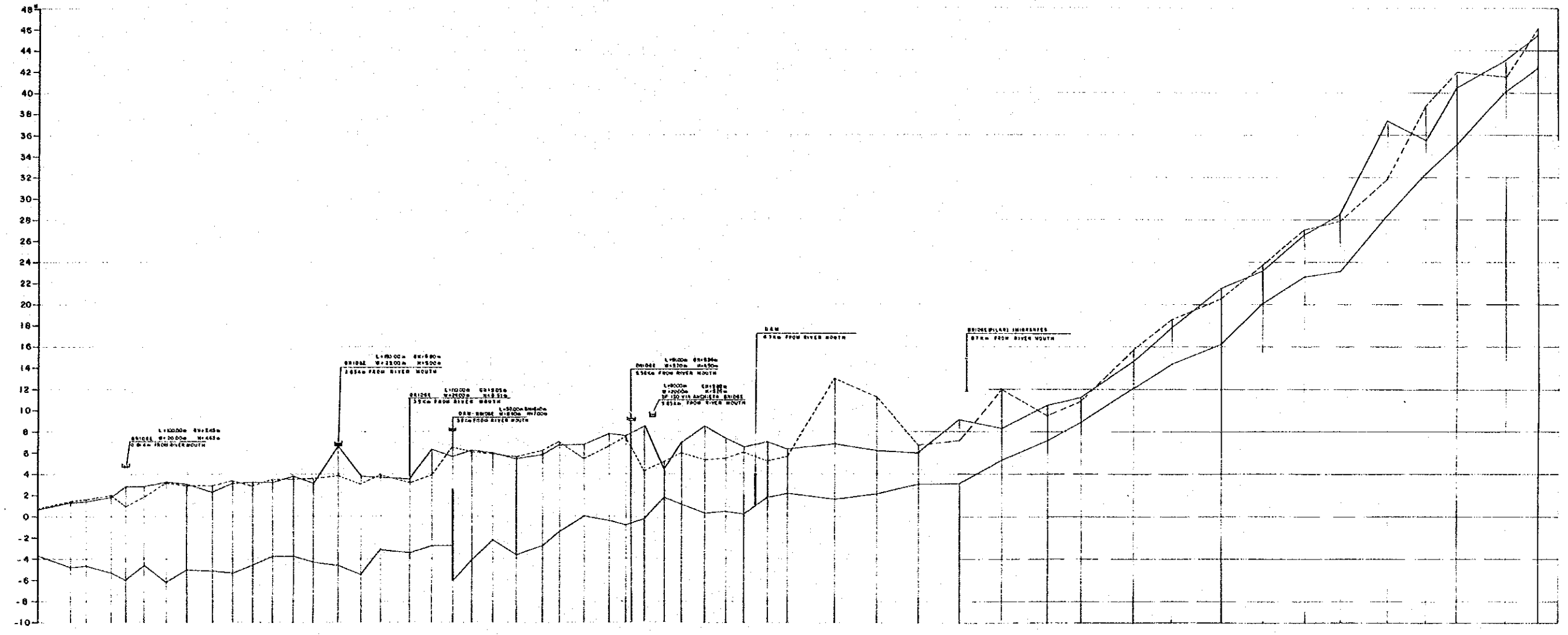
PROFILE OF THE RIO CUBATÃO

SHEET NO. 1 WITHIN 1 SCALE V=1:200 H=1:20000

SURVEID DATE 1990.1-1990.2

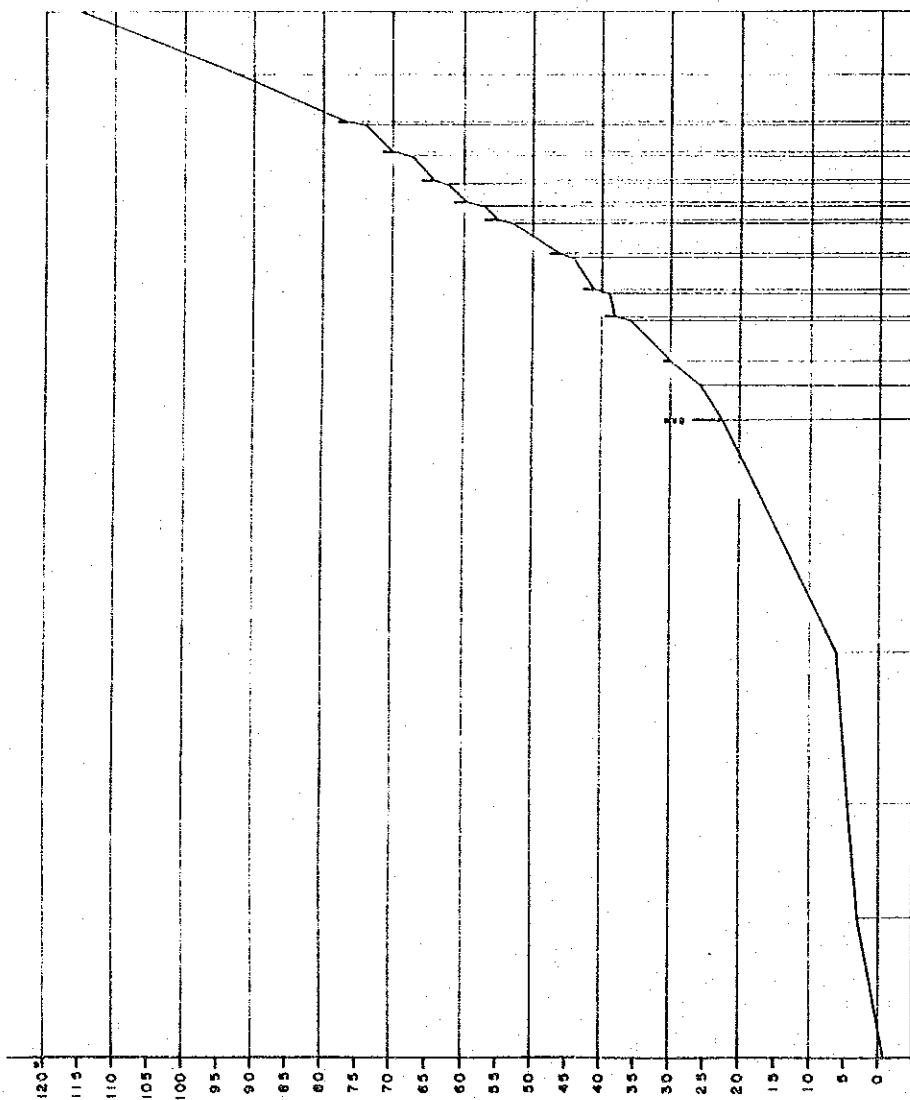
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

BASE AEROFOTOGAMETRIA E PROJETOS S.A.

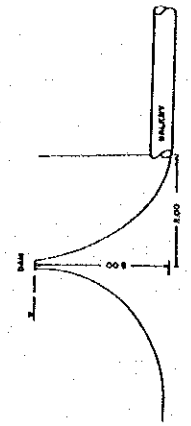


RIGHT BANK OH	LEFT BANK OH	LOWEST RIVER BED OH	DISTANCE FROM RIVER MOUTH	SINGLE DISTANCE	NO OF CROSS SECTION
0.75	0.51	-7.75			0
1.20	0.96	-7.30	44.5	51.4	C1
1.70	1.46	-6.80	89.0	112	C2
2.20	1.96	-6.30	133.5	235	C3
2.70	2.46	-5.80	178.0	138	C4
3.20	2.96	-5.30	222.5	172	C5
3.70	3.46	-4.80	267.0	217	C6
4.20	3.96	-4.30	311.5	190	C7
4.70	4.46	-3.80	356.0	235	C8
5.20	4.96	-3.30	400.5	190	C9
5.70	5.46	-2.80	445.0	157	C10
6.20	5.96	-2.30	489.5	150	C11
6.70	6.46	-1.80	534.0	187	C12
7.20	6.96	-1.30	578.5	150	C13
7.70	7.46	-0.80	623.0	265	C14
8.20	7.96	-0.30	667.5	210	C15
8.70	8.46	0.20	712.0	180	C16
9.20	8.96	0.70	756.5	194	C17
9.70	9.46	1.20	801.0	218	C18
10.20	9.96	1.70	845.5	243	C19
10.70	10.46	2.20	890.0	184	C20
11.20	10.96	2.70	934.5	220	C21
11.70	11.46	3.20	979.0	184	C22
12.20	11.96	3.70	1023.5	184	C23
12.70	12.46	4.20	1068.0	176	C24
13.20	12.96	4.70	1112.5	193	C25
13.70	13.46	5.20	1157.0	170	C26
14.20	13.96	5.70	1201.5	215	C27
14.70	14.46	6.20	1246.0	204	C28
15.20	14.96	6.70	1290.5	181	C29
15.70	15.46	7.20	1335.0	217	C30
16.20	15.96	7.70	1379.5	186	C31
16.70	16.46	8.20	1424.0	450	C32
17.20	16.96	8.70	1468.5	357	C33
17.70	17.46	9.20	1513.0	390	C34
18.20	17.96	9.70	1557.5	280	C35
18.70	18.46	10.20	1602.0	406	C36
19.20	18.96	10.70	1646.5	448	C37
19.70	19.46	11.20	1691.0	313	C38
20.20	19.96	11.70	1735.5	560	C39
20.70	20.46	12.20	1780.0	380	C40
21.20	20.96	12.70	1824.5	400	C41
21.70	21.46	13.20	1869.0	400	C42
22.20	21.96	13.70	1913.5	400	C43
22.70	22.46	14.20	1958.0	400	C44
23.20	22.96	14.70	2002.5	350	C45
23.70	23.46	15.20	2047.0	400	C46
24.20	23.96	15.70	2091.5	350	C47
24.70	24.46	16.20	2136.0	400	C48
25.20	24.96	16.70	2180.5	400	C49
25.70	25.46	17.20	2225.0	400	C50
26.20	25.96	17.70	2269.5	400	C51
26.70	26.46	18.20	2314.0	400	C52
27.20	26.96	18.70	2358.5	400	C53

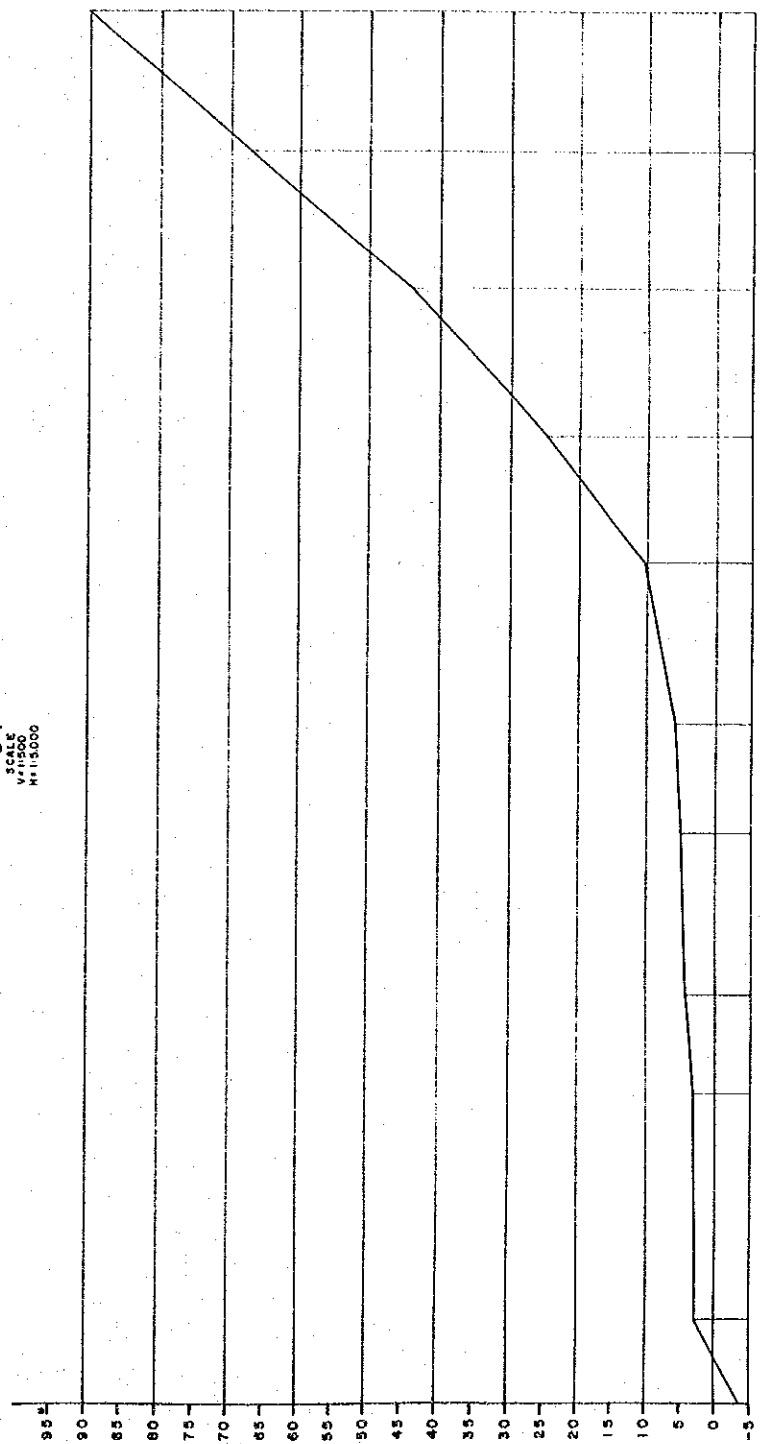
PE I



LOWEST RIVER BED (M)	DISTANCE FROM RIVER MOUTH	SINGLE DISTANCE	NO OF CROSS SECTION
02.00	00.0	00.0	1-12
08.9	00.4	00.4	2-12
12.8	00.11	00.9	3-12
16.22	00.1	00.6	4-12
18.19	00.118	00.1	5-12
18.29	00.118	00.1	6-12
18.39	00.118	00.1	7-12
18.49	00.118	00.1	8-12
18.59	00.118	00.1	9-12
18.69	00.118	00.1	10-12
18.79	00.118	00.1	11-12
18.89	00.118	00.1	12-12
18.99	00.118	00.1	13-12
19.09	00.118	00.1	14-12
19.19	00.118	00.1	15-12
19.29	00.118	00.1	16-12
19.39	00.118	00.1	17-12
19.49	00.118	00.1	18-12
19.59	00.118	00.1	19-12
19.69	00.118	00.1	20-12
19.79	00.118	00.1	21-12
19.89	00.118	00.1	22-12
19.99	00.118	00.1	23-12
20.09	00.118	00.1	24-12
20.19	00.118	00.1	25-12
20.29	00.118	00.1	26-12
20.39	00.118	00.1	27-12
20.49	00.118	00.1	28-12
20.59	00.118	00.1	29-12
20.69	00.118	00.1	30-12
20.79	00.118	00.1	31-12
20.89	00.118	00.1	32-12
20.99	00.118	00.1	33-12
21.09	00.118	00.1	34-12
21.19	00.118	00.1	35-12
21.29	00.118	00.1	36-12
21.39	00.118	00.1	37-12
21.49	00.118	00.1	38-12
21.59	00.118	00.1	39-12
21.69	00.118	00.1	40-12
21.79	00.118	00.1	41-12
21.89	00.118	00.1	42-12
21.99	00.118	00.1	43-12
22.09	00.118	00.1	44-12
22.19	00.118	00.1	45-12
22.29	00.118	00.1	46-12
22.39	00.118	00.1	47-12
22.49	00.118	00.1	48-12
22.59	00.118	00.1	49-12
22.69	00.118	00.1	50-12
22.79	00.118	00.1	51-12
22.89	00.118	00.1	52-12
22.99	00.118	00.1	53-12
23.09	00.118	00.1	54-12
23.19	00.118	00.1	55-12
23.29	00.118	00.1	56-12
23.39	00.118	00.1	57-12
23.49	00.118	00.1	58-12
23.59	00.118	00.1	59-12
23.69	00.118	00.1	60-12
23.79	00.118	00.1	61-12
23.89	00.118	00.1	62-12
23.99	00.118	00.1	63-12
24.09	00.118	00.1	64-12
24.19	00.118	00.1	65-12
24.29	00.118	00.1	66-12
24.39	00.118	00.1	67-12
24.49	00.118	00.1	68-12
24.59	00.118	00.1	69-12
24.69	00.118	00.1	70-12
24.79	00.118	00.1	71-12
24.89	00.118	00.1	72-12
24.99	00.118	00.1	73-12
25.09	00.118	00.1	74-12
25.19	00.118	00.1	75-12
25.29	00.118	00.1	76-12
25.39	00.118	00.1	77-12
25.49	00.118	00.1	78-12
25.59	00.118	00.1	79-12
25.69	00.118	00.1	80-12
25.79	00.118	00.1	81-12
25.89	00.118	00.1	82-12
25.99	00.118	00.1	83-12
26.09	00.118	00.1	84-12
26.19	00.118	00.1	85-12
26.29	00.118	00.1	86-12
26.39	00.118	00.1	87-12
26.49	00.118	00.1	88-12
26.59	00.118	00.1	89-12
26.69	00.118	00.1	90-12
26.79	00.118	00.1	91-12
26.89	00.118	00.1	92-12
26.99	00.118	00.1	93-12
27.09	00.118	00.1	94-12
27.19	00.118	00.1	95-12
27.29	00.118	00.1	96-12
27.39	00.118	00.1	97-12
27.49	00.118	00.1	98-12
27.59	00.118	00.1	99-12
27.69	00.118	00.1	100-12



C1
SCALE
V:1/500
H:1/10000



LOWEST RIVER BED (M)	DISTANCE FROM RIVER MOUTH	SINGLE DISTANCE	NO OF CROSS SECTION
00.0	00.0	00.0	1-15
00.8	00.8	00.8	2-15
01.6	01.6	00.8	3-15
02.4	02.4	00.8	4-15
03.2	03.2	00.8	5-15
04.0	04.0	00.8	6-15
04.8	04.8	00.8	7-15
05.6	05.6	00.8	8-15
06.4	06.4	00.8	9-15
07.2	07.2	00.8	10-15
08.0	08.0	00.8	11-15
08.8	08.8	00.8	12-15
09.6	09.6	00.8	13-15
10.4	10.4	00.8	14-15
11.2	11.2	00.8	15-15

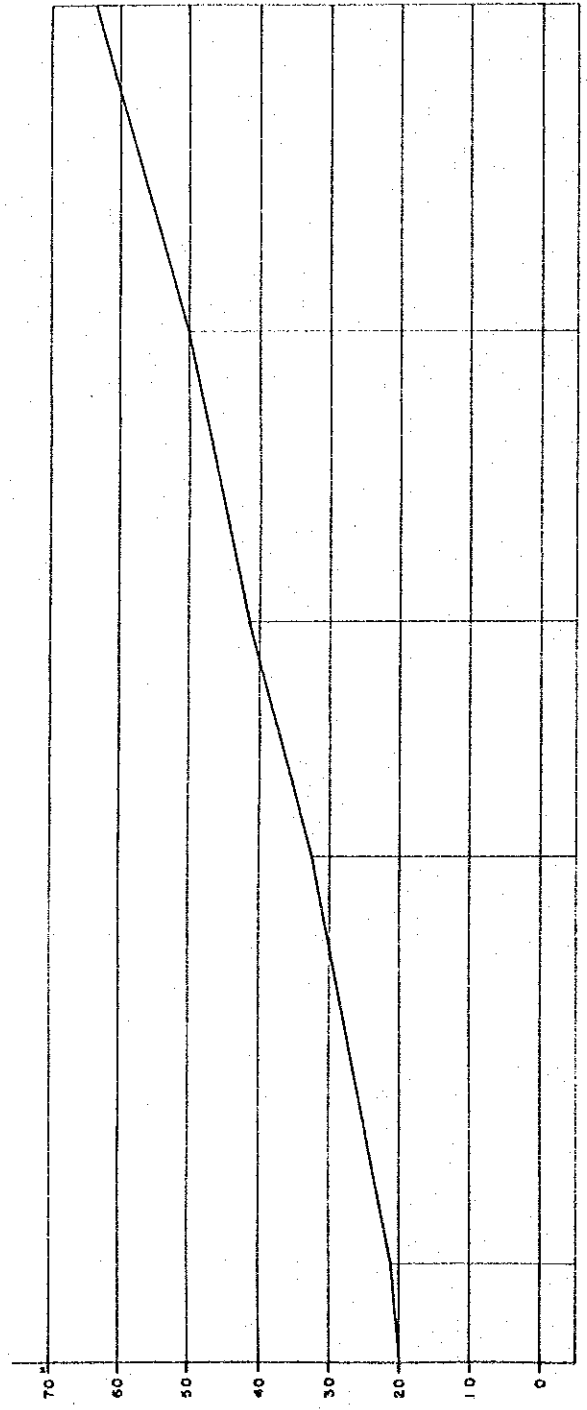
THE DISASTER PREVENTION AND RESTORATION PROJECT IN SERRA DO MAR, CUBATÃO REGION

PROFILE OF THE PEI.C1

SHEET NO	1	WITHIN 1	SCALE	V:1/500, H:1/10000
SURVEIED DATE	1990.1 - 1990.2			

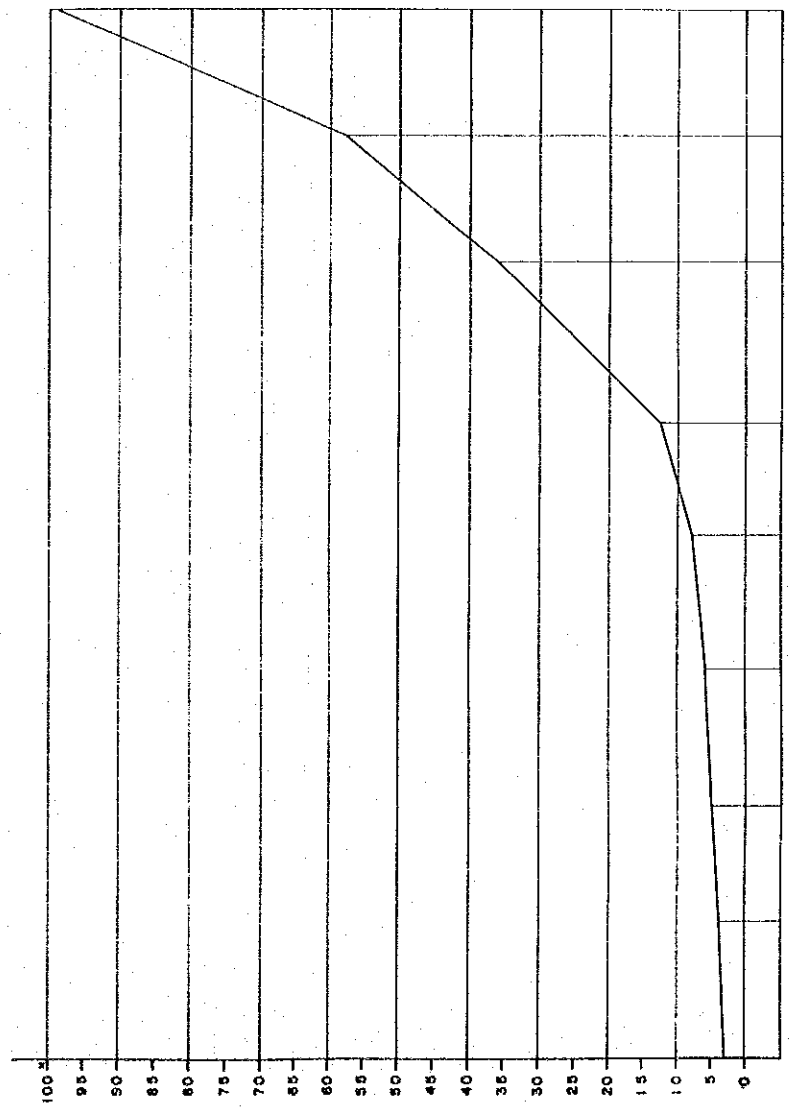
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
BASE AEROFOTOGRAMETRIA E PROJETOS S.A.

C 4 (RIO PILÕES)



LOWEST RIVER BED (M)	DISTANCE FROM RIVER MOUTH	SINGLE DISTANCE	NO OF CROSS SECTION
62.0	0.0	0.0	0-0
32.0	25.0	25.0	0-1
20.0	50.0	50.0	0-2
15.0	75.0	75.0	0-3
10.0	100.0	100.0	0-4

C II



LOWEST RIVER BED (M)	DISTANCE FROM RIVER MOUTH	SINGLE DISTANCE	NO OF CROSS SECTION
90.0	0.0	0.0	0-10
85.0	25.0	25.0	0-11
80.0	50.0	50.0	0-12
75.0	75.0	75.0	0-13
70.0	100.0	100.0	0-14

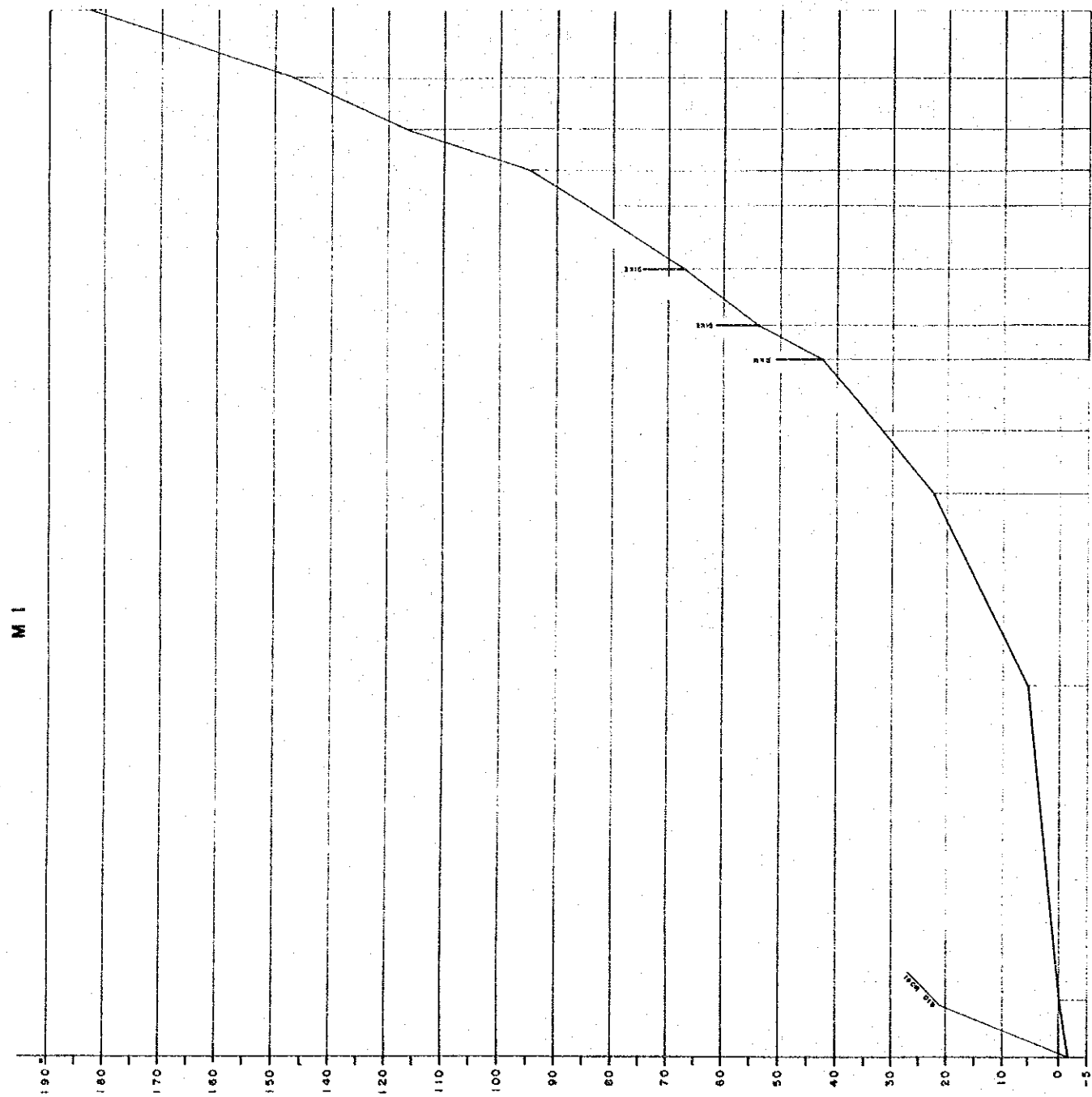
THE DISASTER PREVENTION AND RESTORATION PROJECT IN SERRA DO MAR, CUBATÃO REGION

PROFILE OF THE C 4 . C II

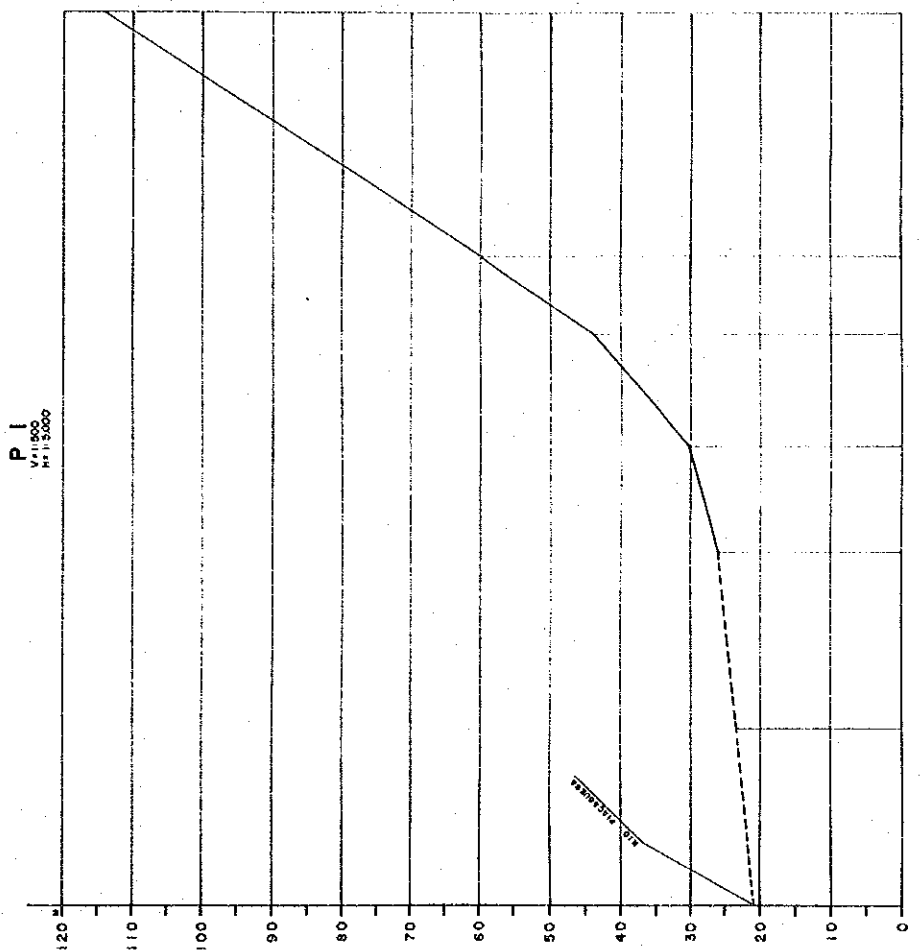
SHEET NO	1	WITHIN	1	SCALE	V:1:500, H:1:5000
SURVEIED DATE	1990.1 - 1990.2				

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

BASE AEROFOTOGRAFETRIA E PROJETOS S.A.



LOWEST RIVER BED GN	DISTANCE FROM RIVER MOUTH	SINGLE DISTANCE	NO OF CROSS SECTION
00'28"	00'00"	00'00"	11-18
00'30"	00'00"	00'00"	01-18
00'32"	00'00"	00'00"	2-18
00'34"	00'00"	00'00"	3-18
00'36"	00'00"	00'00"	4-18
00'38"	00'00"	00'00"	5-18
00'40"	00'00"	00'00"	6-18
00'42"	00'00"	00'00"	7-18
00'44"	00'00"	00'00"	8-18
00'46"	00'00"	00'00"	9-18
00'48"	00'00"	00'00"	10-18
00'50"	00'00"	00'00"	11-18
00'52"	00'00"	00'00"	12-18
00'54"	00'00"	00'00"	13-18
00'56"	00'00"	00'00"	14-18
00'58"	00'00"	00'00"	15-18
00'60"	00'00"	00'00"	16-18
00'62"	00'00"	00'00"	17-18
00'64"	00'00"	00'00"	18-18
00'66"	00'00"	00'00"	19-18
00'68"	00'00"	00'00"	20-18
00'70"	00'00"	00'00"	21-18
00'72"	00'00"	00'00"	22-18
00'74"	00'00"	00'00"	23-18
00'76"	00'00"	00'00"	24-18
00'78"	00'00"	00'00"	25-18
00'80"	00'00"	00'00"	26-18
00'82"	00'00"	00'00"	27-18
00'84"	00'00"	00'00"	28-18
00'86"	00'00"	00'00"	29-18
00'88"	00'00"	00'00"	30-18
00'90"	00'00"	00'00"	31-18
00'92"	00'00"	00'00"	32-18
00'94"	00'00"	00'00"	33-18
00'96"	00'00"	00'00"	34-18
00'98"	00'00"	00'00"	35-18
01'00"	00'00"	00'00"	36-18
01'02"	00'00"	00'00"	37-18
01'04"	00'00"	00'00"	38-18
01'06"	00'00"	00'00"	39-18
01'08"	00'00"	00'00"	40-18
01'10"	00'00"	00'00"	41-18
01'12"	00'00"	00'00"	42-18
01'14"	00'00"	00'00"	43-18
01'16"	00'00"	00'00"	44-18
01'18"	00'00"	00'00"	45-18
01'20"	00'00"	00'00"	46-18
01'22"	00'00"	00'00"	47-18
01'24"	00'00"	00'00"	48-18
01'26"	00'00"	00'00"	49-18
01'28"	00'00"	00'00"	50-18
01'30"	00'00"	00'00"	51-18
01'32"	00'00"	00'00"	52-18
01'34"	00'00"	00'00"	53-18
01'36"	00'00"	00'00"	54-18
01'38"	00'00"	00'00"	55-18
01'40"	00'00"	00'00"	56-18
01'42"	00'00"	00'00"	57-18
01'44"	00'00"	00'00"	58-18
01'46"	00'00"	00'00"	59-18
01'48"	00'00"	00'00"	60-18
01'50"	00'00"	00'00"	61-18
01'52"	00'00"	00'00"	62-18
01'54"	00'00"	00'00"	63-18
01'56"	00'00"	00'00"	64-18
01'58"	00'00"	00'00"	65-18
02'00"	00'00"	00'00"	66-18
02'02"	00'00"	00'00"	67-18
02'04"	00'00"	00'00"	68-18
02'06"	00'00"	00'00"	69-18
02'08"	00'00"	00'00"	70-18
02'10"	00'00"	00'00"	71-18
02'12"	00'00"	00'00"	72-18
02'14"	00'00"	00'00"	73-18
02'16"	00'00"	00'00"	74-18
02'18"	00'00"	00'00"	75-18
02'20"	00'00"	00'00"	76-18
02'22"	00'00"	00'00"	77-18
02'24"	00'00"	00'00"	78-18
02'26"	00'00"	00'00"	79-18
02'28"	00'00"	00'00"	80-18
02'30"	00'00"	00'00"	81-18
02'32"	00'00"	00'00"	82-18
02'34"	00'00"	00'00"	83-18
02'36"	00'00"	00'00"	84-18
02'38"	00'00"	00'00"	85-18
02'40"	00'00"	00'00"	86-18
02'42"	00'00"	00'00"	87-18
02'44"	00'00"	00'00"	88-18
02'46"	00'00"	00'00"	89-18
02'48"	00'00"	00'00"	90-18
02'50"	00'00"	00'00"	91-18
02'52"	00'00"	00'00"	92-18
02'54"	00'00"	00'00"	93-18
02'56"	00'00"	00'00"	94-18
02'58"	00'00"	00'00"	95-18
03'00"	00'00"	00'00"	96-18
03'02"	00'00"	00'00"	97-18
03'04"	00'00"	00'00"	98-18
03'06"	00'00"	00'00"	99-18
03'08"	00'00"	00'00"	100-18



PI
V:1:500
H:1:10000

LOWEST RIVER BED GN	DISTANCE FROM RIVER MOUTH	SINGLE DISTANCE	NO OF CROSS SECTION
00'12"	00'00"	00'00"	1-12
00'14"	00'00"	00'00"	2-12
00'16"	00'00"	00'00"	3-12
00'18"	00'00"	00'00"	4-12
00'20"	00'00"	00'00"	5-12
00'22"	00'00"	00'00"	6-12
00'24"	00'00"	00'00"	7-12
00'26"	00'00"	00'00"	8-12
00'28"	00'00"	00'00"	9-12
00'30"	00'00"	00'00"	10-12
00'32"	00'00"	00'00"	11-12
00'34"	00'00"	00'00"	12-12
00'36"	00'00"	00'00"	13-12
00'38"	00'00"	00'00"	14-12
00'40"	00'00"	00'00"	15-12
00'42"	00'00"	00'00"	16-12
00'44"	00'00"	00'00"	17-12
00'46"	00'00"	00'00"	18-12
00'48"	00'00"	00'00"	19-12
00'50"	00'00"	00'00"	20-12
00'52"	00'00"	00'00"	21-12
00'54"	00'00"	00'00"	22-12
00'56"	00'00"	00'00"	23-12
00'58"	00'00"	00'00"	24-12
01'00"	00'00"	00'00"	25-12
01'02"	00'00"	00'00"	26-12
01'04"	00'00"	00'00"	27-12
01'06"	00'00"	00'00"	28-12
01'08"	00'00"	00'00"	29-12
01'10"	00'00"	00'00"	30-12
01'12"	00'00"	00'00"	31-12
01'14"	00'00"	00'00"	32-12
01'16"	00'00"	00'00"	33-12
01'18"	00'00"	00'00"	34-12
01'20"	00'00"	00'00"	35-12
01'22"	00'00"	00'00"	36-12
01'24"	00'00"	00'00"	37-12
01'26"	00'00"	00'00"	38-12
01'28"	00'00"	00'00"	39-12
01'30"	00'00"	00'00"	40-12
01'32"	00'00"	00'00"	41-12
01'34"	00'00"	00'00"	42-12
01'36"	00'00"	00'00"	43-12
01'38"	00'00"	00'00"	44-12
01'40"	00'00"	00'00"	45-12
01'42"	00'00"	00'00"	46-12
01'44"	00'00"	00'00"	47-12
01'46"	00'00"	00'00"	48-12
01'48"	00'00"	00'00"	49-12
01'50"	00'00"	00'00"	50-12
01'52"	00'00"	00'00"	51-12
01'54"	00'00"	00'00"	52-12
01'56"	00'00"	00'00"	53-12
01'58"	00'00"	00'00"	54-12
02'00"	00'00"	00'00"	55-12
02'02"	00'00"	00'00"	56-12
02'04"	00'00"	00'00"	57-12
02'06"	00'00"	00'00"	58-12
02'08"	00'00"	00'00"	59-12
02'10"	00'00"	00'00"	60-12
02'12"	00'00"	00'00"	61-12
02'14"	00'00"	00'00"	62-12
02'16"	00'00"	00'00"	63-12
02'18"	00'00"	00'00"	64-12
02'20"	00'00"	00'00"	65-12
02'22"	00'00"	00'00"	66-12
02'24"	00'00"	00'00"	67-12
02'26"	00'00"	00'00"	68-12
02'28"	00'00"	00'00"	69-12
02'30"	00'00"	00'00"	70-12
02'32"	00'00"	00'00"	71-12
02'34"	00'00"	00'00"	72-12
02'36"	00'00"	00'00"	73-12
02'38"	00'00"	00'00"	74-12
02'40"	00'00"	00'00"	75-12
02'42"	00'00"	00'00"	76-12
02'44"	00'00"	00'00"	77-12
02'46"	00'00"	00'00"	78-12
02'48"	00'00"	00'00"	79-12
02'50"	00'00"	00'00"	80-12
02'52"	00'00"	00'00"	81-12
02'54"	00'00"	00'00"	82-12
02'56"	00'00"	00'00"	83-12
02'58"	00'00"	00'00"	84-12
03'00"	00'00"	00'00"	85-12
03'02"	00'00"	00'00"	86-12
03'04"	00'00"	00'00"	87-12
03'06"	00'00"	00'00"	88-12
03'08"	00'00"	00'00"	89-12
03'10"	00'00"	00'00"	90-12
03'12"	00'00"	00'00"	91-12
03'14"	00'00"	00'00"	92-12
03'16"	00'00"	00'00"	93-12
03'18"	00'00"	00'00"	94-12
03'20"	00'00"	00'00"	95-12
03'22"	00'00"	00'00"	96-12
03'24"	00'00"	00'00"	97-12
03'26"	00'00"	00'00"	98-12
03'28"	00'00"	00'00"	99-12
03'30"	00'00"	00'00"	100-12

NOTE: P10 DAM IS CONSTRUCTION

THE DISASTER PREVENTION AND RESTORATION PROJECT IN SERRA DO MAR, CUBATÃO REGION

PROFILE OF THE MI, PI

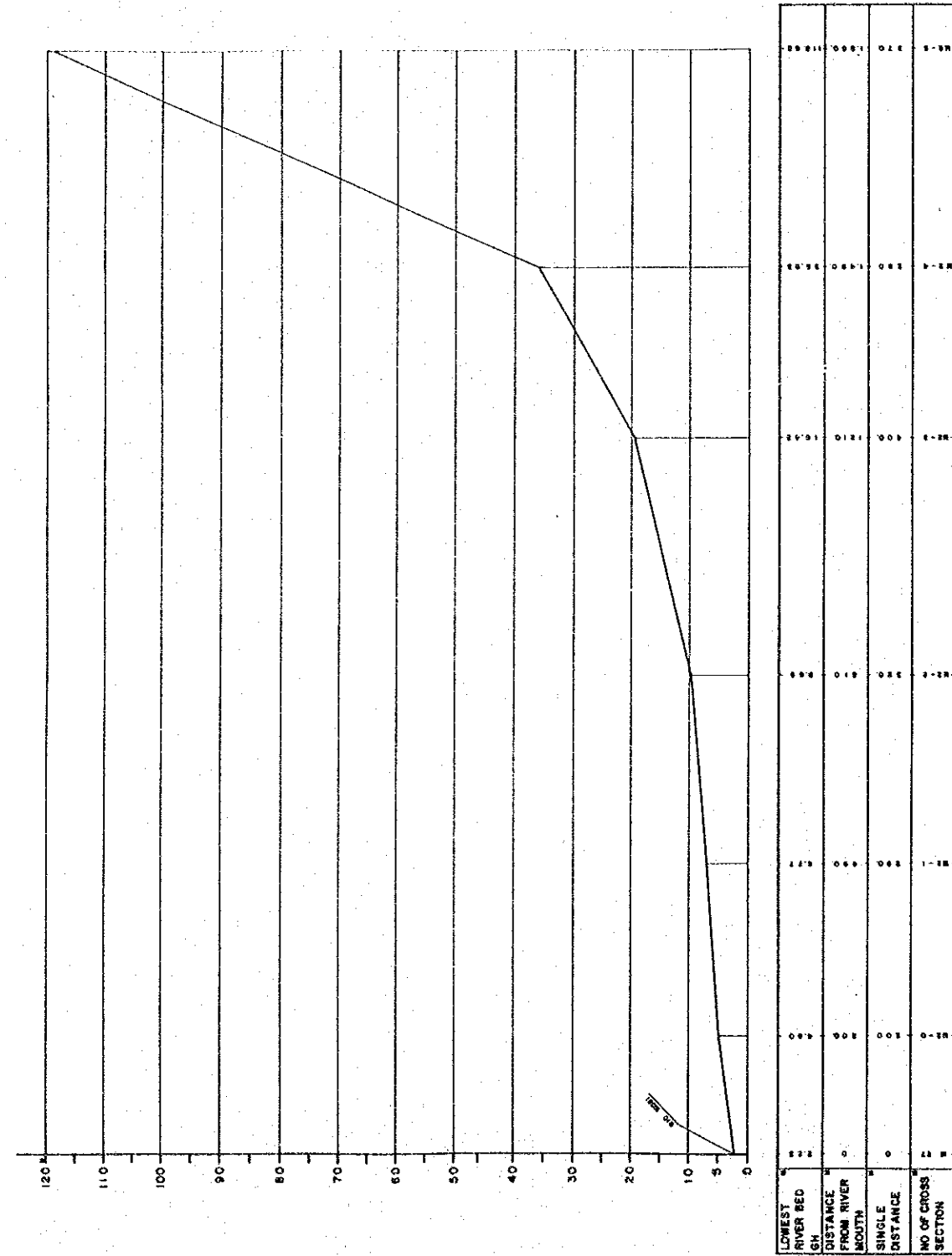
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SURVEIED DATE 1990.1 - 1990.2

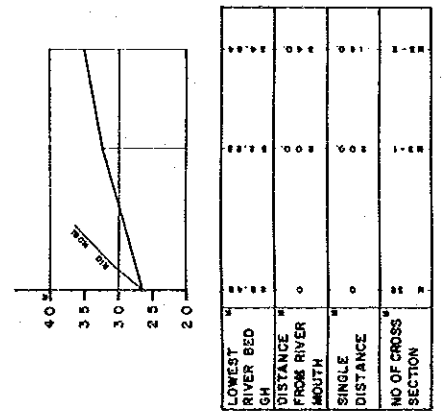
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

BASE AEROFOTOGRAMETRIA E PROJETOS S.A.

M 2



M 3

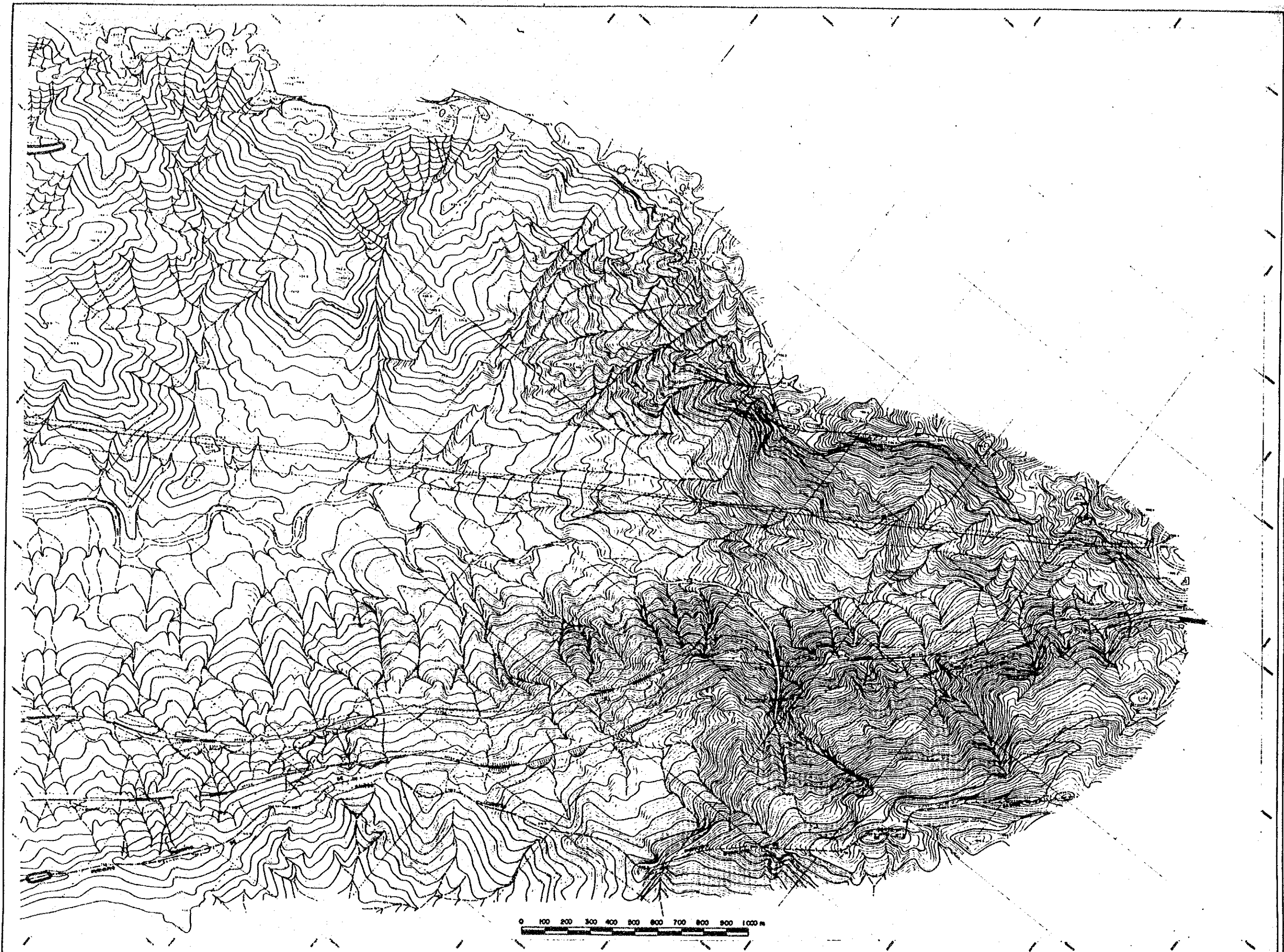


THE DISASTER PREVENTION AND RESTORATION PROJECT IN SERRA DO MAR, CUBATÃO REGION

PROFILE OF THE M2. M3

SHEET NO	1	WIRING 1	SCALE	V+1 500, H+1: 5000
SURVEIED DATE	1990.1 - 1990.2			

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
 BASE AEROFOTOGRAMETRIA E PROJETOS S.A.



0 100 200 300 400 500 600 700 800 900 1000 m