

Table 1/5 Actually Measured Discharge at New Cableway of Bante G. S.

NO.	DATE	G.H. (m)	Q (m ³ /sec.)	A (m ²)	V (m ³ /sec.)	R (m)	I	N
1	Feb. 17 '82	2.16	17.24	13.27	1.30	0.45	1/294	0.0263
2	Feb. 18 '82	2.16	15.83	12.08	1.31	0.41	1/294	0.0246
3	Feb. 22 '82	2.17	19.30	16.47	1.25	0.49	1/294	0.0290
4	Feb. 24 '82	2.12	17.42	13.74	1.27	0.47	1/294	0.0274
5	Feb. 26 '82	2.12	16.16	12.77	1.27	0.43	1/294	0.0262
6	Mar. 02 '82	2.11	15.17	11.78	1.29	0.40	1/294	0.0245
7	Mar. 03 '82	2.10	15.21	12.03	1.26	0.41	1/294	0.0255
8	Apr. 06 '82	2.25	21.54	16.14	1.33	0.52	1/294	0.0283
9	May 05 '82	2.07	14.82	11.78	1.26	0.42	1/194	0.0260
10	Jly. 13 '82	2.30	37.93	21.60	1.76	0.58	1/385	0.0201
11	Jly. 14 '82	2.27	35.43	24.90	1.42	0.70	1/364	0.0291
12	Jly. 21 '82	2.37	63.73	34.43	1.85	1.02	1/377	0.0282
13	Jly. 23 '82	2.35	46.63	29.38	1.59	0.89	1/273	0.0352
14	Jly. 26 '82	2.32	42.40	23.95	1.77	0.73	1/286	0.0271
15	Aug. 03 '82	2.37	49.42	26.21	1.89	0.80	1/333	0.0250
16	Aug. 04 '82	2.36	48.56	32.07	1.51	0.98	1/308	0.0372
17	Sep. 14 '82	2.32	46.54	26.89	1.73	0.83	1/385	0.0260
18	Oct. 12 '82	2.37	45.88	29.40	1.56	0.85	1/389	0.0293
19	Nov. 18 '82	2.16	30.11	22.46	1.34	0.64	1/328	0.0306
20	Nov. 19 '82	2.22	32.11	22.79	1.41	0.65	1/313	0.0301
21	Nov. 19 '82	2.23	32.55	24.53	1.33	0.70	1/317	0.0333
22	Dec. 02 '82	2.17	36.96	25.23	1.46	0.72	1/313	0.0311
23	Dec. 03 '82	2.25	41.81	27.65	1.51	0.74	1/290	0.0318
24	Dec. 28 '82	2.23	42.29	27.72	1.53	0.75	1/250	0.0341

$\bar{I} = 1/315$ $\bar{N} = 0.0286$

Remarks : \bar{A} : Assumed water surface slope

G.H. = Gauge Height, A = Flow Area, R = Hydraulic Radius,

Q = Discharge, V = Discharge Velocity, I = Water surface slope,

N = Roughness coefficient

Table -/6 Number of Rainy Days at Salinas (Barat) R. S.
(more than 10 mm)

YEAR/MO.	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JULY.	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1956	1	0	0	2	1	10	6	7	7	4	10	8	56
1957	1	0	3	4	4	4	8	5	9	5	2	1	46
1958	1	1	1	2	5	4	4	10	9	9	3	0	49
1959	1	0	3	3	6	5	6	9	6	*7	4	4	54
1960	0	6	0	5	6	12	5	13	12	6	0	0	65
1961	0	0	4	3	5	6	10	5	3	9	6	1	52
1962	0	0	1	3	4	4	6	8	7	0	2	1	36
1963	0	0	2	0	2	6	11	6	6	1	1	4	39
1964	0	0	0	2	6	6	4	7	12	9	9	3	58
1965	1	0	1	3	4	2	7	6	7	3	3	1	38
1966	0	0	2	2	13	5	7	12	3	3	5	0	52
1967	1	*0	*1	2	6	4	5	13	11	5	1	0	49
1968	1	0	1	3	5	1	6	15	9	1	2	1	45
1969	0	0	1	1	1	0	13	17	*7	*7	*4	*3	54
1970	0	1	0	1	3	8	4	9	5	15	*4	8	58
1971	0	0	0	2	11	5	6	8	10	15	6	6	69
1972	2	0	2	11	5	3	23	11	12	5	5	3	82
1973	0	0	0	3	3	5	5	11	4	18	5	1	55
1974	0	0	0	3	8	0	4	5	5	7	7	6	45
1975	2	0	2	2	7	4	5	13	0	5	3	7	50
TOTAL	11	8	24	57	105	94	145	190	144	134	82	58	1,052
MEAN	1	0	1	3	5	5	7	10	7	7	4	3	52.6
													= 53/year
Provable													
Workable	30	28	30	27	26	25	24	21	23	24	26	28	
Days													
													Average = 26 days

Note : * FILL - in data using mean for the month

Table -17 Number of Rainy Days at Salinas (Barat) R. S.
(more than 1.0 mm)

YEAR/MO.	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JULY.	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1956	1	0	2	8	4	10	8	14	11	10	12	17	97
1957	2	0	5	4	4	8	11	8	17	10	2	2	73
1958	4	2	1	3	10	8	13	22	18	15	5	2	103
1959	1	3	11	5	15	7	18	14	19	*12	11	8	124
1960	6	11	2	12	9	17	9	23	15	10	3	5	122
1961	0	0	9	7	12	9	17	9	4	17	7	1	82
1962	3	0	4	7	5	11	14	18	13	5	8	3	91
1963	4	7	2	0	3	9	16	14	17	5	2	7	86
1964	2	1	6	4	11	9	9	16	17	16	19	5	119
1965	4	3	4	8	7	7	12	7	12	11	12	5	92
1966	3	0	3	2	13	5	12	18	12	8	13	11	100
1967	7	*1	*4	7	7	12	12	19	19	12	8	6	114
1968	2	0	2	4	7	1	7	23	14	5	2	1	68
1969	0	0	1	0	1	3	13	17	*12	*12	*9	*7	74
1970	3	1	4	7	12	15	7	15	6	21	*9	18	118
1971	0	0	10	4	15	7	8	11	12	15	11	6	99
1972	2	0	3	14	10	5	28	12	15	10	11	7	117
1973	0	0	0	3	6	6	10	21	10	3	12	4	95
1974	1	0	0	4	12	0	8	8	5	14	10	8	70
1975	2	0	2	2	7	5	8	14	0	5	5	13	63
TOTAL	47	29	75	105	170	154	240	303	248	236	171	136	1914
MEAN	2	1	4	5	9	8	12	15	12	12	9	7	95.7

Note : * Fill-in data using mean for the month

≅ 96/year

Table - 18 WATER LEVEL AND DISCHARGE (Original)

STATION BANTE

River system, MAGAT Name of stream : MATUNO Drainage area (Km²): 558 Year 1971

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	1.16	25.02	1.04	18.54	1.08	20.80	1.17		1.07		1.12		1
2	1.22	28.60	1.04	18.54	1.05	19.05	1.13	23.31	1.09		1.12	31.85	2
3	1.34	36.64	1.04	18.54	1.05	19.05	1.13	23.31	1.12	23.31			3
4	1.23	29.25	1.04	18.54	1.04	18.54	1.13	23.31	1.05		1.07	27.95	4
5	1.21	27.95	1.09	21.09	1.04	18.54	1.12	22.74	1.00	18.54			5
6	1.19	26.73	1.16	25.02	1.03	18.03	1.12	22.74	1.12				6
7	1.18	26.16	1.18	23.31	1.03	18.03	1.12	22.74	1.02	11.65	1.20	35.93	7
8	1.16	25.02	1.08	20.80	1.02	17.52	1.09		1.13				8
9	1.16	25.02	1.10	21.60	1.02	17.52	1.05	19.05	1.21		1.15	31.85	9
10	1.13	23.31	1.20	27.30	1.02	17.52	1.10		1.17	25.59			10
11	1.13	23.31	1.19	26.73	1.01	17.01	1.09		1.20		1.04		11
12	1.16	25.02	1.15	24.45	1.30	33.20	1.05	19.05	1.20	35.22			12
13	1.16	25.02	1.12	22.74	1.80	80.50	1.05	19.05	1.21				13
14	1.16	25.02	1.11	22.17	1.53	51.40	1.05	19.05	1.16	33.20	1.02		14
15	1.15	24.45	1.18	26.16	1.40	40.90	1.06	19.56	1.24				15
16	1.15	24.45	1.17	25.59	1.35	37.35	1.06	19.56	1.32		1.15		16
17	1.14	23.88	1.16	25.02	1.33	35.93	1.09		1.60	80.50			17
18	1.14	23.88	1.18	26.16	1.28	32.50	1.05	19.05	1.25		1.35		18
19	1.15	24.45	1.28	32.50	1.24	29.90	1.04	18.54	1.25	47.14			19
20	1.12	22.74	1.36	38.06	1.22	28.60	1.04	18.54	1.22				20
21	1.12	22.74	1.29	33.15	1.19	26.73	1.04	18.54	1.60	80.50	1.14		21
22	1.09	21.09	1.22	28.60	1.18	26.16	1.03		1.47				22
23	1.07	20.07	1.18	26.16	1.16	25.02	1.02	17.52	1.36		1.35		23
24	1.06	19.56	1.16	25.02	1.16	25.02	1.02	17.52	1.22	41.68			24
25	1.06	19.56	1.15	24.45	1.18	26.16	1.01		1.21		1.21		25
26	1.05	19.05	1.13	23.31	1.13	23.31	1.00	16.60	1.19	38.77			26
27	1.05	19.05	1.12	22.74	1.12	22.74	0.98	15.60	1.13				27
28	1.05	19.05	1.12	22.74	1.11	22.17	0.98	15.60	1.10	31.85	1.55		28
29	1.05	19.05			1.14	23.88	0.98	15.60	1.16				29
30	1.04	18.54			1.17	25.59	0.98	15.60	1.14		1.37		30
31	1.04	18.54			1.18	26.16			1.12				31
MAX		36.64		38.06		80.50							MAX
MIN		18.54		18.54		17.01							MIN
TOTAL		732.22		688.10		845.21							TOTAL
DAYS		31		28		31							DAYS
MEAN		23.62		21.03		27.27							MEAN

H : Gauge height in M, Q : Discharge in m³/sec,
 Zero point of water gauge : El. 385.27

Table - 19 WATER LEVEL AND DISCHARGE (Original)

STATION BANTE

River system: MAGAT Name of stream: MATUNO Drainage area (Km²): 558 Year 1971

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1			1.92		1.60	57.70	1.78	70.60	1.65	63.90	2.42	143.20	1
2	1.26	38.77	2.08	122.74									2
3					1.70	68.30			1.63	60.88	1.85	96.84	3
4			1.75				1.82	83.26					4
5	1.41	42.46							1.57	55.00			5
6			1.65	63.00	1.62	59.82	1.85	87.40			1.65	70.74	6
7	1.40	40.90											7
8					1.68	66.18	2.40	175.30	1.51	49.60	1.50	54.10	8
9	1.25	30.55	1.62	59.82	1.68	66.18							9
10					1.68	66.18			1.65	64.06	1.52	55.00	10
11			2.05	118.00			3.05	353.10					11
12	1.47	46.36							1.65	64.06			12
13			1.72	70.74	1.89	92.92	3.55	520.45			1.54	55.70	13
14	1.27	31.85											14
15					1.60	57.70	1.72		1.64	64.06	1.42	44.80	15
16	1.90		1.60	57.70									16
17					1.65				1.55	55.90	1.47	47.90	17
18			1.95	74.40			1.74	73.18					18
19	1.60	57.70							1.50	52.30			19
20			1.82	83.26	1.90	94.30	1.87	90.16			1.50	49.10	20
21	1.41												21
22					1.50	48.70	1.70	68.30	1.61		1.47	46.36	22
23	1.55	53.20	1.65	63.00									23
24					1.45	44.80			1.76		1.48	47.14	24
25			1.55	53.20			1.71	69.52					25
26	1.42	42.46							1.79				26
27			1.85	87.40	1.60	57.70	1.68	66.18			1.43	43.24	27
28	1.43	43.24											28
29					1.72	70.74	1.70	68.30	2.05		1.42	42.46	29
30	1.60	57.70	1.67	58.00	1.75								30
31											1.42	42.46	31
MAX													MAX
MIN													MIN
TOTAL													TOTAL
DAYS													DAYS
MEAN													MEAN

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table - 20 WATER LEVEL AND DISCHARGE (Original)

STATION BANTE

River system: MAGAT Name of stream: MATUNO Drainage area (Km²): 558 Year 1972

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1					1.98	98.94			1.01	17.01			1
2			1.33	35.93							1.32	35.20	2
3	1.40	40.90			1.00	16.50	0.95	14.25	1.03	18.03			3
4			1.26	31.20									4
5	1.42	42.46					0.96	14.27	1.01	17.01	1.47	46.36	5
6					1.02	17.52							6
7	1.40	40.90	1.28	32.50			0.96	14.70			1.44	44.62	7
8					0.97	15.15			1.02	17.52			8
9			1.28	32.50			0.90	12.00			1.32	35.20	9
10	1.42	42.46			0.98	15.60	0.92	13.80	1.00	16.50			10
11			1.26	31.20			1.04	18.54					11
12	1.42	42.46					1.03	18.03	0.99	16.05	1.25	30.55	12
13					0.93	13.35	1.22	28.60					13
14	1.41	41.68	1.10	21.60			1.28	32.50			1.20	32.50	14
15					1.05	19.05	1.18	26.16	1.10	21.60			15
16			1.10	21.60			1.22	28.60			1.22	28.60	16
17	1.35	53.20			0.95	14.25	1.18	26.16	1.12	22.74			17
18			1.05	19.05			1.07	20.07					18
19	1.41	41.68					0.97	15.15	1.10	21.60	1.18	26.16	19
20					0.94	13.80							20
21	1.42	42.46	1.02	17.52			0.92	12.90			1.18	26.16	21
22					0.90	12.00			1.18	26.16			22
23			1.00	16.50							1.14	23.88	23
24	1.40	40.90			0.93	13.35	1.05	19.05	1.19	26.75			24
25			0.97	15.15									25
26	1.40	40.90					0.97	15.15	1.25	30.55	1.33	39.48	26
27					0.94	13.80							27
28	1.39	40.19	0.98	15.60			0.97	15.15			1.37	38.77	28
29					0.95	14.25			1.28	32.50			29
30											1.21	27.95	30
31	1.38	39.48			0.94	13.80			1.59	56.80			31
MAX													MAX
MIN													MIN
TOTAL													TOTAL
DAYS													DAYS
MEAN													MEAN

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table-21 WATER LEVEL AND DISCHARGE

STATION BANTE

River system: MAGAT Name of stream: MATUNO Drainage area (Km²): 558 Year: 1972

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1					1.48	47.14			0.98	15.60	1.01	17.01	1
2			1.58	55.90			1.06	19.56					2
3	1.20	27.30							0.97	15.15	1.00	16.50	3
4			1.58	55.90	1.98	98.94	1.04	18.54					4
5	1.17	25.59									0.96	14.70	5
6					1.57	55.00	1.10	21.60	1.24	29.90			6
7	1.15	24.45	1.85	87.40							0.96	14.70	7
8					2.20	141.70			1.18	26.16			8
9			2.25	149.60					1.08	20.58			9
10	1.20	27.30							1.16	25.02			10
11			1.85	87.40	2.10	125.90	1.06	19.56			0.93	13.35	11
12	1.25	30.55											12
13					1.78	70.74	1.06	19.56	1.01	17.01	0.92	12.90	13
14	1.47	46.36	1.65	63.00									14
15					1.70	68.30			1.00	16.50	0.93	13.35	15
16			1.95	97.20			1.03	18.03					16
17	3.05	353.10							0.97	15.15			17
18			1.75	74.40	1.72	70.74	1.02	17.52			0.88	11.22	18
19	1.78	78.06											19
20					1.68	66.18	0.98	15.60	0.92	12.90			20
21	1.80	80.50	1.58	55.90									21
22					1.66	64.06			0.95	14.25	0.82	8.92	22
23			1.58	55.90					0.98	15.60			23
24	1.72	70.740							0.90	12.00	0.81	8.43	24
25			1.57	55.00	1.06	19.56	1.04	18.54					25
26	2.82	280.42											26
27					1.06	19.56	0.92	12.90	1.19	26.75	0.79	7.77	27
28	2.25	149.60	1.37	55.00									28
29					1.06	19.56			1.14	23.88	0.76	4.78	29
30			1.60	57.70					0.98	15.60			30
31	1.65	63.00											31
MAX													MAX
MIN													MIN
TOTAL													TOTAL
DAYS													DAYS
MEAN													MEAN

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table - 22 WATER LEVEL AND DISCHARGE

STATION BANIE

River system, MAGAT Name of stream : MATUNO Drainage area (Km²): 558 Year 1973

	Jan		Feb		Mar		Apr		May		June			
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q		
1	0.98	15.60									0.83	9.27	1	
2			0.95	14.25	0.94	13.90	0.90	12.00	0.76	6.78			2	
3	1.01	17.01											3	
4							0.76	6.78	0.79	7.77	1.22	28.60	4	
5	1.04	18.54	0.94	13.80	0.92	12.90							5	
6							0.76	6.78			1.02	17.52	6	
7	1.07	20.07	0.99	16.05	0.90	12.00				0.83	9.27		7	
8	1.06	19.56									0.84	9.66	8	
9			1.12	22.74	0.88	11.22	0.74	6.12	0.80	8.10			9	
10	1.05	19.05											10	
11							0.78	7.44	0.79	7.77	0.96	14.70	11	
12	1.04	18.54	0.96	14.70	0.84	9.66				0.72	5.46	1.06	19.56	12
13							0.79	7.77			0.93	13.35	13	
14			0.93	13.35	0.88	11.22				1.22	28.60		14	
15	1.03	18.03									0.84	9.66	15	
16			0.91	12.45	0.82	8.88	0.77	7.11	0.87	10.83			16	
17	1.01	17.01											17	
18							0.78	7.44	0.78	7.44	0.81	8.49	18	
19	1.01	17.01	0.91	12.45	0.80	8.10							19	
20							0.76	6.78			0.93	13.35	20	
21			0.88	11.22	0.79	7.77				0.76	6.78		21	
22	0.99	16.05									0.71	5.13	22	
23			0.88	11.22	0.80	8.10	0.77	7.11	0.79	7.77			23	
24	0.98	15.60											24	
25					0.78	7.44	0.77	7.11	0.78	7.44	1.24	29.90	25	
26	0.95	14.25	0.86	10.44	0.78	7.44							26	
27							0.78	7.44			0.74	6.12	27	
28			0.86	10.44	0.85	10.05				0.89	11.61		28	
29	1.11	22.17									0.75	6.45	29	
30					1.01	17.01	0.76	6.78	1.30	33.80			30	
31	0.98	15.60											31	
MAX													MAX	
MIN													MIN	
TOTAL													TOTAL	
DAYS													DAYS	
MEAN													MEAN	

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table - 23 WATER LEVEL AND DISCHARGE

STATION BANTE

River system MAGAT Name of stream : MATUNO Drainage area (Km²): 550 Year 1973

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1			0.98	15.60			1.44	44.02					1
2	1.04	18.54							1.50	43.20			2
3			0.97	15.15	1.00	16.50	1.42	42.46			1.42	35.68	3
4	1.02	17.52											4
5					1.03	18.03	1.41	41.68	1.40	33.80	1.43	36.62	5
6	0.90	12.00	1.02	17.52									6
7					1.03	18.03			1.40	33.80	1.40	33.80	7
8			1.04	18.54			2.22	144.86					8
9	0.94	13.80							1.37	31.42			9
10			0.98	15.60	1.20	27.30	1.54	52.30			1.40	33.80	10
11	0.96	14.70											11
12					1.31	34.51	1.38	39.48	1.42	35.68	1.40	33.80	12
13	0.94	13.80	0.96	14.70									13
14					1.48	47.14			1.38	32.24	1.42	35.68	14
15			1.06	19.56			1.39	40.19					15
16	0.82	8.88							1.60	53.90			16
17			0.98	15.60	1.25	30.55	1.44	44.02			1.41	34.74	17
18	0.86	10.44											18
19					1.10	21.60	1.78	78.06	1.92	95.26	1.38	32.24	19
20	0.89	11.61	0.99	16.05									20
21					1.08	20.58			2.31	159.28	1.38	32.24	21
22			1.06	19.56			3.30	432.10					22
23	0.93	13.35							1.74	71.02			23
24			1.08	20.58	1.10	21.60	1.80	79.00	1.64	58.62	1.36	30.68	24
25	0.96	14.70											25
26					1.46	45.58	1.64	58.62	1.55	48.55	1.32	27.56	26
27	0.98	15.60	0.98	15.60									27
28					1.24	29.90			1.52	45.34	1.32	27.56	28
29			0.90	12.00			1.60	53.90					29
30	1.01	17.01							1.48	41.32			30
31			0.98	15.60			1.65	59.80			1.30	26.00	31
MAX													MAX
MIN													MIN
TOTAL													TOTAL
DAYS													DAYS
MEAN													MEAN

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table - 21 WATER LEVEL AND DISCHARGE

STATION BANTE

River system, MAGAT Name of stream: MATUNO Drainage area (Km²): 558 Year 1974

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1			1.10	14.00	0.95	8.00	0.82	4.50	1.00	9.50			1
2	1.28	24.68							0.94	7.70			2
3							0.85	5.25	1.02	11.60	1.24	22.04	3
4	1.26	23.36	1.08	13.40	0.92	7.10							4
5							0.80	4.00			1.21	20.06	5
6			1.08	13.40	1.00	9.50			1.02	11.60			6
7											1.28	24.68	7
8			1.12	15.08	0.94	7.70	0.86	5.50	1.02	11.60			8
9	1.24	22.04											9
10							0.90	6.50	0.87	5.75	1.36	30.68	10
11	1.17	17.78	1.15	16.70	0.90	6.50							11
12							0.92	7.10			1.38	32.24	12
13			1.10	14.00	0.89	6.25			1.20	19.40			13
14	1.16	17.24									1.40	33.80	14
15			1.08	13.40	0.92	7.10	0.85	5.25	1.08	13.40			15
16													16
17							1.02	11.60	1.05	12.50	1.48	41.32	17
18	1.14	16.16	1.08	13.40	0.86	5.50							18
19							0.87	5.75			1.40	33.80	19
20			1.07	12.10	0.84	5.00			1.05	12.50			20
21	1.15	16.70									1.35	29.90	21
22			0.96	8.30	0.82	4.50	0.92	7.10	1.02	11.60			22
23	1.15	16.70											23
24							0.90	6.50	1.05	12.50	1.40	33.80	24
25	1.18	18.32	0.92	7.10	0.80	4.00							25
26							0.96	8.30	1.10	14.00	1.47	40.38	26
27			0.92	7.10	0.80	4.00							27
28	1.14	16.16									1.46	39.44	28
29					0.80	4.00	0.90	6.50	1.10	14.00			29
30	1.13	15.62											30
31													31
MAX													MAX
MIN													MIN
TOTAL													TOTAL
DAYS													DAYS
MEAN													MEAN

H : Gauge height in _____, Q : Discharge in _____
 Zero point of water gauge : El. _____

N. K. Form 1201

Table - 25 WATER LEVEL AND DISCHARGE

STATION BANTE

River system, MAGAT Name of stream : MATUNO Drainage area (Km²): 558 Year 1974

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	1.50	43.20							1.68	63.34			1
2			1.68	63.34	1.78	76.34	1.43	36.62			1.64	58.62	2
3	1.47	40.38											3
4					1.64	58.62	1.44	37.56	1.92	40.98	1.62	56.26	4
5	1.46	39.44	1.66	60.98									5
6					1.41	34.74			1.70	56.26	1.60	53.90	6
7			1.62	56.26			1.30	26.00					7
8	1.50	43.20							1.79	53.90			8
9			1.60	53.90	1.38	32.24	1.28	24.68			1.58	51.76	9
10	1.47	40.38											10
11					1.45	38.50	1.75	72.35	1.62	68.36	1.54	47.48	11
12	1.48	41.32	1.72	68.36									12
13					1.48	41.32			1.64	92.30	1.51	44.27	13
14			1.90	92.30				1.68	63.34				14
15	1.46	39.44							1.62	81.66			15
16			1.82	81.66	1.48	41.32	1.67	62.16			2.14	129.92	16
17	1.49	42.26											17
18					1.45	38.50	2.38	171.74	1.68	79.00	1.74	71.02	18
19	1.51	44.27	1.80	79.00									19
20					1.38	32.24			1.68	76.34	1.64	58.62	20
21			1.78	76.34				1.68	63.34				21
22	1.55	48.55							1.66	71.02			22
23			1.74	71.02	1.36	30.68	1.60	53.90			1.72	68.36	23
24	1.61	55.08											24
25					1.36	30.68	1.57	50.69	1.65	72.35	1.70	65.70	25
26	1.61	55.08	1.75	72.35									26
27					1.38	32.24			1.65	73.68	1.70	65.70	27
28			1.76	73.68				1.59	52.83				28
29	1.58	51.76							1.64	72.35			29
30			1.75	72.35	1.37	31.46	1.62	56.26			1.68	63.34	30
31	1.60	53.90											31
MAX													MAX
MIN													MIN
TOTAL													TOTAL
DAYS													DAYS
MEAN													MEAN

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table - 26 WATER LEVEL AND DISCHARGE

STATION BANTE

River system, MAGAT Name of stream : MATUND Drainage area (Km²): 558 Year 1975

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	1.68	63.34									1.07	13.10	1
2							1.20	14.76	1.07	13.10	1.07	13.10	2
3	1.67	62.16	1.52	45.34	1.20	10.60					1.07	13.10	3
4							1.21	16.32			1.06	12.80	4
5			1.51	48.80	1.18	6.57			1.06	12.80	1.07	13.10	5
6	1.64	58.62									1.08	13.40	6
7			1.50	48.80	1.16	5.94	1.34	25.20	1.05	12.50	1.07	13.10	7
8	1.64	58.62									1.07	13.10	8
9							1.26	21.00	1.20	19.40	1.06	12.80	9
10	1.65	59.80	1.42	34.00	1.16	5.73					1.07	13.10	10
11							1.12	14.76			1.07	13.10	11
12			1.41	32.00	1.14	5.10			1.08	13.40	1.07	13.10	12
13	1.62	59.26									1.08	13.40	13
14			1.33	24.50	1.20	8.90	1.09	14.24	1.08	13.40	1.07	13.10	14
15	1.62	59.26									1.05	12.50	15
16							1.08	14.24	1.06	12.80	1.08	13.40	16
17	1.60	53.90	1.30	21.70	1.12	6.99					1.07	13.10	17
18							1.36	30.68			1.07	13.10	18
19			1.35	24.50	1.06	8.56			1.06	12.80	1.07	13.10	19
20	1.60	53.90									1.07	13.10	20
21			1.35	23.10	1.22	11.64	1.32	27.56	1.05	12.50	1.09	13.70	21
22	1.58	53.90									1.08	13.40	22
23							1.20	19.40	1.06	12.80	1.07	13.10	23
24	1.58	51.76	1.26	16.84	1.12	8.56					1.07	13.10	24
25							1.21	20.06			1.11	14.54	25
26			1.25	15.28	1.12	9.24			1.08	13.40	1.11	14.54	26
27	1.59	52.83									1.08	13.40	27
28			1.22	12.68	1.12	9.92	1.10	14.00	1.07	13.10	1.08	13.40	28
29	1.57	50.69									1.09	13.70	29
30							1.08	13.40	1.08	13.40	1.09	13.70	30
31	1.55	48.55											31
MAX												14.54	MAX
MIN												12.10	MIN
TOTAL												397.84	TOTAL
DAYS												30	DAYS
MEAN												13.26	MEAN

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table -27 WATER LEVEL AND DISCHARGE

STATION BANTE

River system: MAGAT Name of stream: MATUNO Drainage area (Km²): 558 Year 1975

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	1.07	13.70	1.12	15.08	1.58	51.76	1.56	59.00	1.29	27.30	1.05	13.20	1
2	1.10	14.00	1.11	14.54	1.56	49.62	1.39	37.00	1.32	30.00	1.05	13.20	2
3	1.10	14.00	1.12	15.08	1.51	44.27	1.29	27.30	1.30	28.00	1.04	12.68	3
4	1.15	16.70	1.13	15.62	1.51	44.27	1.25	24.50	1.37	35.00	1.07	14.24	4
5	1.21	20.06	1.18	18.32	1.52	45.34	1.27	25.90	1.48	47.60	1.05	13.20	5
6	1.19	18.86	1.09	13.70	1.55	48.55	1.30	28.00	1.46	45.20	1.05	12.68	6
7	1.17	17.78	1.10	14.00	1.48	41.32	1.29	27.30	1.45	44.00	1.04	12.68	7
8	1.14	16.16	1.12	15.08	1.58	51.76	1.28	26.60	1.43	42.80	1.04	12.68	8
9	1.12	15.08	1.12	15.08	1.57	50.69	1.26	25.20	1.40	38.00	1.04	12.68	9
10	1.12	15.08	1.12	15.08	1.56	49.62	1.29	27.30	1.37	35.00	1.04	12.68	10
11	1.10	14.00	1.47	40.38	1.63	57.44	1.24	23.10	1.30	28.00	1.04	12.16	11
12	1.06	12.80	1.45	38.50	1.66	60.98	1.21	21.70	1.25	24.50	1.03	12.16	12
13	1.09	13.70	1.42	35.68	1.76	73.68	1.20	21.00	1.25	21.70	1.03	11.64	13
14	1.08	13.40	1.40	33.80	1.77	75.01	1.21	21.70	1.17	19.44	1.02	11.64	14
15	1.06	12.80	1.37	31.46	1.78	76.34	1.22	22.40	1.14	17.88	1.02	11.64	15
16	1.05	12.50	1.41	34.74	2.20	139.70	1.20	21.00	1.14	17.88	1.02	12.16	16
17	1.20	19.40	1.85	85.65	2.12	126.66	1.21	21.70	1.14	17.88	1.03	30.00	17
18	1.18	18.32	1.76	73.68	2.06	116.88	1.21	21.70	1.14	17.88	1.32	46.40	18
19	1.16	17.24	1.71	67.03	2.00	107.10	1.21	21.70	1.13	17.36	1.47	50.00	19
20	1.13	15.62	1.75	72.35	1.97	102.66	1.42	40.40	1.15	18.40	1.50	50.00	20
21	1.13	15.62	1.80	79.00	1.98	104.14	1.36	34.00	1.14	17.88	1.50	50.00	21
22	1.10	14.00	1.75	72.35	1.90	92.30	1.32	30.00	1.14	17.88	1.44	42.80	22
23	1.17	17.78	1.70	65.70	1.84	84.32	1.33	31.00	1.13	17.36	1.47	46.40	23
24	1.18	18.32	1.71	67.03	1.81	80.33	1.32	30.00	1.13	17.36	1.47	46.40	24
25	1.16	14.00	1.71	67.03	1.89	90.97	1.30	28.00	1.13	17.36	1.46	45.20	25
26	1.16	17.24	1.71	67.03	1.81	80.33	1.29	27.30	1.12	16.32	1.44	42.80	26
27	1.17	17.78	1.67	62.16	2.08	120.14	1.29	27.30	1.11	15.80	1.54	56.00	27
28	1.19	18.86	1.66	60.98	2.78	261.75	1.28	26.60	1.08	14.76	1.60	65.00	28
29	1.16	17.24	1.62	56.26	1.62	68.00	1.28	26.60	1.06	13.72	1.56	59.00	29
30	1.15	16.70	1.60	53.90	1.69	78.50	1.29	27.30	1.05	13.20	1.56	59.00	30
31	1.15	16.70	1.59	52.83			1.28	26.60			1.60	50.00	31
MAX		20.06		85.65		261.75		59.00		47.60		59.00	MAX
MIN		12.50		13.70		41.32		21.70		13.20		11.64	MIN
TOTAL		495.44		1369.12		2474.40		859.50		737.46		940.32	TOTAL
DAYS		31		31		30		31		30		31	DAYS
MEAN		12.83		44.17		82.50		27.74		24.62		30.33	MEAN

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table - 28 WATER LEVEL AND DISCHARGE

STATION BANSE

River system: MAGAT Name of stream: MATUNO Drainage area (Km²): 558 Year 1976

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	1.46	45.20	1.06	13.72	0.99	10.26	1.00	10.60	1.06	13.72	1.84	105.00	1
2	1.43	41.60	1.05	13.20	0.99	10.26	1.00	10.60	1.07	14.24	1.83	103.00	2
3	1.45	44.00	1.05	13.20	0.99	10.26	0.98	9.92	1.06	13.72	1.85	107.00	3
4	1.38	36.00	1.04	12.68	0.98	9.92	0.97	9.58	1.06	13.44	1.85	107.00	4
5	1.51	51.50	1.04	12.68	0.98	9.92	1.00	10.60	1.17	15.44	1.75	88.50	5
6	1.57	60.50	1.04	12.68	1.03	12.16	1.08	14.76	1.20	21.00	1.73	85.10	6
7	1.52	56.00	1.05	13.20	1.07	14.24	1.10	15.80	1.16	18.92	1.71	81.70	7
8	1.46	53.00	1.04	12.68	1.30	28.00	1.28	26.60	1.14	17.88	1.68	77.00	8
9	1.43	41.60	1.07	14.24	1.36	34.00	1.36	36.00	1.10	15.80	1.65	72.55	9
10	1.43	41.60	1.05	13.20	1.31	29.00	1.27	25.90	1.07	14.24	1.63	69.55	10
11	1.43	41.60	1.05	13.20	1.25	24.50	1.16	18.92	1.09	15.28	1.61	66.50	11
12	1.43	41.60	1.09	12.16	1.15	18.40	1.15	18.40	1.11	16.32	1.59	63.50	12
13	1.47	46.40	1.03	12.16	1.07	14.24	1.12	16.84	1.08	14.76	1.59	63.50	13
14	1.47	46.40	1.02	11.64	1.04	12.16	1.10	15.80	1.07	14.24	1.61	66.50	14
15	1.44	42.80	1.01	11.12	1.02	11.64	1.08	14.76	1.07	14.24	1.63	65.50	15
16	1.45	44.00	1.05	11.12	1.01	11.12	1.06	13.72	1.07	14.24	1.61	71.00	16
17	1.35	33.00	1.03	11.12	1.00	10.60	1.04	12.68	1.06	13.72	1.59	63.50	17
18	1.31	29.00	1.02	11.12	1.03	12.16	1.02	11.64	1.05	13.20	1.59	63.50	18
19	1.28	26.60	1.01	10.60	0.99	10.26	1.15	18.40	1.06	13.72	1.59	63.50	19
20	1.22	22.40	1.00	10.60	0.98	9.92	1.18	19.96	1.06	13.72	1.58	62.00	20
21	1.18	19.96	1.00	10.60	0.98	9.92	1.16	18.92	1.09	15.28	1.58	62.00	21
22	1.17	19.44	0.98	10.26	0.98	9.92	1.12	16.84	1.28	26.60	1.56	59.00	22
23	1.17	19.44	0.91	9.58	0.98	9.92	1.09	15.28	2.03	143.00	1.53	54.50	23
24	1.15	18.40	0.99	10.26	0.99	10.26	1.08	14.76	2.49	263.00	1.52	53.00	24
25	1.15	18.40	1.01	11.12	1.00	10.60	1.07	14.24	2.50	267.00	1.50	50.00	25
26	1.13	17.36	1.02	11.64	0.99	10.26	1.06	13.72	2.19	177.70	1.50	50.00	26
27	1.13	17.36	1.03	12.16	0.98	9.92	1.06	13.72	2.04	145.00	1.50	50.00	27
28	1.11	16.32	1.01	11.12	0.98	9.92	1.05	13.20	1.91	119.00	1.49	48.80	28
29	1.09	15.28	1.00	10.60	0.98	9.92	1.07	14.24	1.86	109.00	1.47	46.40	29
30	1.08	14.76			1.02	11.64	1.06	13.72	1.85	107.00	1.46	45.20	30
31	1.08	14.76			1.01	11.64			1.85	107.00			31
MAX		60.50		14.24		34.00		36.00		267.00		107.00	MAX
MIN		14.76		9.58		9.80		9.58		13.20		45.10	MIN
TOTAL		1,039.88		343.66		417.64		490.12		1,792.27		2,106.00	TOTAL
DAYS		31		29		31		30		31		30	DAYS
MEAN		33.54		11.85		12.03		16.00		57.81		68.93	MEAN

H : Gauge height in _____, Q : Discharge in _____
Zero point of water gauge : El. _____

N. K. Form 1201

Table - 29 WATER LEVEL AND DISCHARGE

STATION BAÑTE

River system: MAGAT Name of stream: MATUNO Drainage area (Km²): 558 Year: 1976

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	1.60	65.00	1.58	62.00	1.17	18.92	1.47	48.80	1.13	22.40	0.97	11.64	1
2	1.89	63.50	1.51	51.50	1.14	17.36	1.43	44.00	1.12	21.70	0.97	11.64	2
3	1.60	65.00	1.46	45.20	1.20	20.48	1.38	38.00	1.14	23.10	0.92	9.58	3
4	1.58	62.00	1.52	53.00	1.26	24.50	1.30	30.00	1.11	21.00	0.94	9.58	4
5	1.54	56.00	1.55	57.50	1.25	23.80	1.28	24.50	1.19	27.30	0.95	9.92	5
6	1.53	54.50	1.62	68.00	1.24	23.10	1.19	21.70	1.15	24.50	0.98	11.12	6
7	1.55	57.50	1.46	45.20	1.33	30.00	1.32	32.00	1.13	23.10	0.98	10.26	7
8	1.50	50.00	1.41	39.20	1.38	35.00	1.48	50.00	1.13	26.60	0.98	10.26	8
9	1.50	50.00	1.47	46.40	1.40	37.00	1.40	41.60	1.12	25.90	0.97	10.26	9
10	1.50	50.00	1.56	59.00	1.36	33.00	1.37	38.00	1.18	31.00	0.95	9.24	10
11	1.51	51.50	1.45	44.00	1.36	33.00	1.30	31.00	1.14	23.00	0.94	8.90	11
12	1.50	50.00	1.66	74.00	1.36	33.00	1.26	27.30	1.11	20.00	0.98	10.26	12
13	1.49	48.80	1.70	80.00	1.32	29.00	1.29	30.00	1.14	33.00	0.99	10.26	13
14	1.47	46.40	1.58	60.50	1.35	25.00	1.39	40.40	1.11	30.00	0.97	9.58	14
15	1.65	72.50	1.64	69.50	1.42	39.20	1.18	21.70	1.25	56.00	0.97	9.58	15
16	1.59	63.50	1.47	45.20	1.32	29.00	1.12	18.40	1.16	44.00	0.97	9.58	16
17	1.55	57.50	1.66	63.50	1.45	42.80	0.99	11.64	1.14	33.00	0.97	9.58	17
18	1.50	50.00	1.59	62.00	1.31	28.00	0.87	6.15	1.11	30.00	0.98	9.92	18
19	1.42	40.40	1.45	42.80	1.31	28.00	0.80	5.73	1.09	28.00	0.95	9.24	19
20	1.56	59.00	1.35	32.00	1.29	26.60	1.35	36.00	1.09	28.00	0.98	9.92	20
21	1.55	57.50	1.40	37.00	1.50	48.80	1.19	22.40	1.06	21.70	0.90	7.20	21
22	1.58	62.00	1.38	35.00	1.55	57.50	1.16	21.70	1.33	47.60	0.93	8.22	22
23	1.57	60.50	1.52	51.50	1.38	37.00	1.14	20.48	1.11	25.20	0.95	8.90	23
24	1.58	62.00	1.42	29.20	1.28	27.30	1.18	23.10	1.11	21.70	0.94	8.46	24
25	1.57	60.50	1.30	27.30	1.22	23.10	1.18	23.10	1.09	20.48	0.93	8.22	25
26	1.57	60.50	1.34	31.00	1.22	23.10	1.18	23.10	1.06	18.92	0.93	8.22	26
27	1.58	62.00	1.34	31.00	1.26	25.90	1.11	18.92	1.06	18.40	0.92	7.88	27
28	1.57	60.50	1.40	37.00	1.35	34.00	1.10	18.40	1.01	15.80	0.92	7.88	28
29	1.58	62.00	1.51	50.00	1.45	45.20	1.12	19.40	1.02	16.32	0.92	7.88	29
30	1.55	63.50	1.29	26.60	1.36	35.00	1.10	18.40	1.02	16.32	0.91	7.54	30
31	1.61	66.50	1.24	23.10			1.17	22.40			0.90	7.20	31
MAX		72.50		80.00		57.50		50.00		56.00		11.64	MAX
MIN		40.40		23.10		17.36		5.73		15.80		7.20	MIN
TOTAL		1,790.60		1,489.20		943.66		828.36		822.04		12,259.02	TOTAL
DAYS		31		30		30		31		30		31	DAYS
MEAN		57.76		48.04		314.60		26.72		27.40		33.50	MEAN

H : Gauge height in _____, Q : Discharge in _____
 Zero point of water gauge : El. _____

Table - 30 WATER LEVEL AND DISCHARGE (Original)

STATION BANTE

River system: MAGAT Name of stream: MATUNO Drainage area (Km²): 558 Year 1980

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1					1.00	14.50	1.00	18.70	1.10	20.50	1.05	18.10	1
2					1.00	14.50	1.00	18.70	1.05	17.50	1.02	16.30	2
3					1.00	14.50	1.00	18.10	1.10	20.50	1.00	15.10	3
4					1.00	14.50	1.00	18.10	1.10	20.50	0.99	14.50	4
5					1.00	14.50	1.00	17.50	1.10	20.50	0.99	14.50	5
6					1.00	14.50	0.98	16.30	1.10	20.50	1.20	27.80	6
7					1.00	14.50	0.97	15.10	1.10	20.50	1.18	26.50	7
8					1.00	14.50	0.97	15.10	1.10	20.50	1.10	21.70	8
9					1.00	14.50	0.97	15.10	1.10	20.50	1.13	23.50	9
10					1.10	20.50	0.97	14.50	1.11	21.10	1.08	20.50	10
11					1.05	17.50	0.97	14.50	1.12	21.70	1.04	18.10	11
12					1.00	14.50	0.97	14.50	1.10	20.50	1.01	16.30	12
13					1.00	14.50	0.97	13.90	1.10	20.50	1.01	16.30	13
14					1.00	14.50	0.98	14.50	1.10	20.50	1.10	15.70	14
15					1.00	14.50	0.98	13.90	1.10	20.50	0.97	15.10	15
16					1.00	14.50	1.00	15.10	1.13	22.30	0.97	13.30	16
17					1.00	14.50	1.00	15.10	1.12	24.70	1.12		17
18					1.00	14.50	1.08	19.30	1.15	23.50	0.99		18
19					1.00	14.50	1.05	17.50	1.34	35.00	0.98	15.10	19
20					1.00	14.50	1.02	15.70	1.20	26.50	0.97	14.50	20
21					1.00	14.50	1.01	15.10	1.13	22.30	0.97	14.50	21
22					1.02	15.70	1.05	17.50	1.11	21.10	0.97	14.50	22
23					1.03	16.30	1.06	17.50	1.10	20.50	0.99	15.70	23
24					1.13	22.30	1.00	14.50	1.10	20.50	1.03	18.10	24
25					1.15	23.50	1.00	14.50	1.35	36.30	1.05	10.70	25
26					1.18	25.30	0.98	13.30	1.51	46.70	1.08	21.10	26
27					1.25	29.80	0.98	13.30	1.20	27.20	1.05	19.30	27
28					1.18	29.80	0.96	12.10	1.24	29.80	1.00	16.30	28
29					1.05	27.70	0.96	12.10	1.22	28.50	0.97	14.50	29
30					1.00	18.70	0.98	13.30	1.25	30.40	0.97	14.50	30
31					1.03	20.50			1.20	27.20			31
MAX						29.80		18.70		46.70		27.80	MAX
MIN						14.50		12.10		17.50		13.30	MIN
TOTAL						543.10		460.40		745.80		529.50	TOTAL
DAYS						31		30		31		30	DAYS
MEAN						17.50		15.48		24.06		17.60	MEAN

H : Gauge height in m, Q : Discharge in m³/sec.
 Zero point of water gauge : El. _____

Table -3/ WATER LEVEL AND DISCHARGE (Original)

STATION BANTE

River system: MAGAT Name of stream: MATUNIO Drainage area (Km²): 558 Year: 1980

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	0.99	15.70	1.43	41.50	1.29	32.40	1.53	28.10	2.05	81.80	2.15	43.50	1
2	1.04	18.10	1.38	38.20	1.39	38.90	1.56	49.90	1.82	66.80	2.20	49.00	2
3	0.99	15.10	1.35	36.30	1.36	36.90	1.34	35.60	1.51	46.70	2.20	49.00	3
4	1.02	16.90	1.35	36.30	1.37	36.60	1.44	42.10	3.26	248.00	2.20	49.00	4
5	1.03	17.50	1.31	33.70	1.49	45.40	1.41	40.20	4.63	609.00	2.20	49.00	5
6	1.04	18.10	1.33	35.00	1.37	37.60	1.37	37.60	4.47	561.00	2.20	49.00	6
7	0.99	15.10	1.28	31.70	1.38	38.20	1.31	33.70	3.91	401.70	2.20	49.00	7
8	0.99	15.10	1.52	47.30	1.35	36.30	1.28	31.70	3.44	283.20	2.20	49.00	8
9	1.03	17.50	1.59	51.90	1.39	38.90	1.26	30.40	3.69	344.50	2.20	49.00	9
10	1.08	20.50	1.54	48.60	1.39	38.90	1.25	29.80	3.37	267.10	2.20	49.00	10
11	1.30	33.70	1.41	40.20	1.36	36.90	1.22	27.80	3.28	246.40	2.20	49.00	11
12	1.79	65.50	1.39	38.90	1.06	36.90	1.22	27.80	3.25	239.50	2.22	51.50	12
13	1.03	16.90	1.33	35.00	1.39	38.90	1.26	30.40	3.18	223.80	2.25	55.30	13
14	1.01	15.70	1.31	33.70	1.70	59.00	1.23	28.50	2.75	134.50	2.25	55.30	14
15	1.05	18.10	1.31	33.70	1.45	42.80	1.28	36.70	2.65	116.50	2.35	68.50	15
16	1.08	19.90	1.25	29.80	1.49	45.40	1.25	29.80	2.63	113.10	2.53	76.10	16
17	1.31	34.30	1.25	29.80	1.37	37.60	1.25	29.80	2.59	106.30	2.50	92.70	17
18	1.31	22.90	1.23	28.50	1.37	37.60	1.23	28.50	2.54	97.80	2.45	84.80	18
19	1.02	16.30	1.19	25.90	1.33	35.00	1.21	27.20	2.47	86.40	2.35	69.90	19
20	1.12	22.30	1.22	27.80	1.30	33.00	1.19	25.90	2.20	59.00	2.35	69.90	20
21	3.85	385.50	1.23	28.50	1.29	32.40	1.19	25.90	2.28	59.00	2.30	62.90	21
22	3.30	256.00	1.23	28.50	1.28	31.70	1.20	26.50	2.23	52.80	2.30	62.90	22
23	2.50	118.00	1.21	27.20	1.20	26.50	1.20	26.50	2.35	68.50	2.30	62.90	23
24	2.07	83.10	1.20	26.50	1.28	31.70	1.19	25.90	2.25	55.30	2.23	54.00	24
25	2.50	118.00	1.19	25.90	1.23	28.50	1.19	25.90	2.25	55.30	2.25	56.50	25
26	2.10	85.00	1.17	24.70	1.32	28.50	1.19	25.90	2.20	49.00	2.35	69.90	26
27	1.48	44.70	1.10	20.50	1.33	35.00	1.30	33.00	2.19	47.90	2.35	69.90	27
28	1.30	33.00	1.27	31.10	1.29	32.40	1.42	40.80	3.15	43.50	2.35	69.90	28
29	1.25	29.80	1.27	31.10	1.33	35.00	2.01	74.20	2.15	43.50	2.21		29
30	1.20	26.50	1.20	26.50	1.30	33.00	2.10	85.00	2.15	43.50	2.17		30
31	1.05	17.50	1.19	25.90			1.68	57.70			2.16		31
MAX		385.50		51.90		59.00		85.00		609.90		96.80	MAX
MIN		15.10		20.50		26.50		25.90		43.50		43.50	MIN
TOTAL		1632.40		1020.20				1118.70		2852.30		1823.40	TOTAL
DAYS		31		31		30		31		30		31	DAYS
MEAN		52.70		32.90		36.76		36.09		161.70		58.80	MEAN

H : Gauge height in m, Q : Discharge in m³/sec,
Zero point of water gauge : El. _____

Table - 32 WATER LEVEL AND DISCHARGE (Original)

STATION BANTE

River system, MAGAT Name of stream : MATUNO Drainage area (Km²): 558 Year 1981

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	2.30	61.50			1.95	24.50	1.83	13.60	1.81	13.60	2.10	37.10	1
2	2.30	61.50			1.93	22.00	1.80	11.40	1.81	13.60	2.06	33.30	2
3	2.30	61.50			1.93	22.00	1.80	12.00	1.80	13.60	1.90	19.70	3
4	2.30	61.50			1.93	22.00	1.80	12.00	1.81	13.60	1.95	23.60	4
5	2.30	61.50			1.90	20.40	1.80	12.50	1.81	13.60	1.90	19.70	5
6	2.30	61.50			1.89	18.40	1.80	12.50	1.79	12.50	1.86	17.00	6
7	2.30	61.50			1.89	18.40	1.80	13.10	1.80	13.10	1.87	17.70	7
8	2.30	61.50			1.87	16.30	1.79	12.50	1.79	12.50	2.07	34.20	8
9	2.29	60.10			1.87	16.30	1.79	12.50	1.81	13.60	1.88	18.00	9
10	2.26	56.50			1.87	16.30	1.79	12.50	1.89	19.00	2.12	39.10	10
11	2.25	55.30			1.87	16.30	1.79	12.50	1.84	15.60	2.07	34.20	11
12	2.25	55.30			1.87	15.60	1.79	12.50	1.82	14.30	2.12	39.10	12
13	2.24	54.00			1.87	15.60	1.79	12.50	1.79	12.50	2.35	67.10	13
14	2.24	54.00			1.87	15.60	1.79	12.50	1.83	15.00	2.29	59.00	14
15	2.22	51.50			1.87	15.00	1.79	12.50	1.83	15.00	2.15	42.40	15
16	2.21	59.10			1.87	15.00	1.79	12.50	1.87	17.70	2.23	61.50	16
17	2.20	49.00			1.87	15.00	1.79	12.50	1.84	15.60	2.28	57.80	17
18	2.20	49.00			1.87	14.30	1.82	14.30	1.81	13.60	2.31	61.50	18
19	2.19	47.90			1.87	14.30	1.80	13.10	1.85	16.30	2.26	55.30	19
20	2.15	43.50			1.85	13.10	1.83	15.00	1.91	20.40	2.14	41.30	20
21	2.14	42.40			1.85	12.50	1.87	17.70	1.95	23.60	2.13	40.20	21
22	2.13	41.30			1.85	12.50	1.83	15.00	1.84	15.60	2.20	47.90	22
23	2.12	40.20			1.85	12.50	1.82	14.30	1.87	17.70	2.03	30.00	23
24	2.11	39.10			1.85	12.50	1.90	19.70	1.89	19.00	2.00	27.70	24
25	2.10	38.00			1.85	12.50	1.87	17.70	1.85	16.30	1.97	25.30	25
26	2.10	38.00	2.15		1.85	12.50	1.85	16.30	1.89	19.00	1.95	23.60	26
27	2.10	38.00			1.85	13.10	1.83	15.00	1.96	24.50	1.99	19.00	27
28	2.10	38.00			1.85	13.10	1.86	17.00	1.96	23.60	2.11	38.00	28
29	2.20	49.00			1.80	10.90	1.78	12.00	1.94	22.80	2.07	34.20	29
30	2.20	49.00			1.80	10.90	1.80	13.10	1.94	22.80	2.13	40.20	30
31	2.18	46.80			1.80	10.90			1.94	22.80			31
MAX		61.50				24.50		17.70		24.50		67.10	MAX
MIN		38.00				10.90		12.00		12.50		17.00	MIN
TOTAL		1578.00				480.30		411.80		521.90		1095.50	TOTAL
DAYS		31				31		30		31		30	DAYS
MEAN		50.90				15.50		13.70		16.80		36.50	MEAN

H : Gauge height in m, Q : Discharge in m³/sec,
Zero point of water gauge : El. _____

Table - 33 WATER LEVEL AND DISCHARGE (Original)

STATION BANTE

River system: MAGAT Name of stream: MATUNO Drainage area (Km²): 558 Year 1981

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	2.06	33.30	2.20	49.00	2.23	51.60	2.11	40.20	2.30		2.23		1
2	2.05	32.30	2.16	44.60	2.23	51.60	2.13	42.40	2.26		2.23		2
3	2.10	37.10	2.24	54.60	2.21	49.00	2.29	60.90	2.25		2.21		3
4	2.09	36.10	2.21	50.10	2.18	45.70	2.18	45.10	2.21		2.21		4
5	3.33	257.90	2.24	54.00	2.24	47.40	2.28	57.80	2.19		2.45		5
6	2.80	108.20	2.19	47.90	2.15	42.40	2.25	54.00	2.19		2.19		6
7	2.32	64.30	2.22	51.60	2.15	42.40	2.27	56.50	2.17		2.19		7
8	2.25	55.30	2.23	52.80	2.15	42.40	2.14	41.30	2.17		2.19		8
9	2.27	57.80	2.25	55.30	2.21	49.00	2.13	40.20	2.18		2.18		9
10	2.31	62.80	2.25	55.30	2.20	54.00	2.12	39.10	2.19		2.19		10
11	2.31	62.90	2.25	55.30	2.22	51.60	2.11	38.00	2.29		2.27		11
12	2.55	99.60	2.26	56.60	2.16	44.60	2.11	38.00	2.46		2.23		12
13	2.29	60.10	2.20	49.00	2.15	43.60	2.14	41.30	2.30		2.19		13
14	2.26	58.50	2.22	51.60	2.11	39.10	2.15	42.40	2.34		2.19		14
15	2.42	78.60	2.41	77.10	2.08	36.10	2.13	40.20	2.29		2.18		15
16	2.40	75.50	2.32	62.90	2.07	35.20	2.13	40.20	2.22		2.16		16
17	2.31	62.90	2.27	56.60	2.37	71.30	2.12	39.10	2.19		2.15		17
18	2.35	68.50	2.32	62.90	2.26	56.60	2.10	37.10	2.16		2.15		18
19	2.46	84.80	2.34	65.70	2.23	52.80	2.09	36.10	2.15		2.14		19
20	2.34	67.10	2.36	68.60	2.24	54.00	2.09	36.10	2.16		2.14		20
21	2.34	67.10	2.39	72.70	2.25	55.30	2.09		2.20		2.13		21
22	2.26	56.50	2.30	60.10	2.49	89.30	2.18		2.17		2.13		22
23	2.22	51.60	2.31	61.50	2.27	64.30	2.34		2.25		2.13		23
24	2.18	46.80	2.31	61.50	2.17	50.10	2.38		2.30		2.12		24
25	2.20	49.00	2.27	56.60	2.14	46.80	2.29		3.99		2.12		25
26	2.17	45.70	2.27	56.60	2.15	46.80	2.62		2.81		2.11		26
27	2.15	43.50	2.24	52.80	2.15	46.80	2.61	92.70	2.54		2.11		27
28	2.15	43.50	2.13	40.20	2.18	49.00	2.40	96.00	2.47		2.11		28
29	2.15	43.50	2.15	42.40	2.25	37.80	2.30	93.60	2.38		2.10		29
30	2.15	43.50	2.10	37.10	2.24	55.30	2.26		2.35		2.10		30
31	2.17	45.70	2.00	27.70			2.25				2.09		31
MAX		257.90		77.10		89.60							MAX
MIN		32.30		22.70		35.20							MIN
TOTAL		2037.90		1688.40		1516.60							TOTAL
DAYS		31		31		30							DAYS
MEAN		65.70		54.06		50.50							MEAN

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table - 34 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system: GAGAYAN Name of stream: MAGAT Drainage area (Km²): 1,784 Year 1970

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	1.39	29.70	1.29	19.76	1.01	5.10	0.87	3.70	0.87	3.70	1.77	124.06	1
2	1.41	44.08	1.27	17.68	1.00	5.00	0.87	3.70	0.86	3.60	1.79	129.70	2
3	1.43	48.64	1.26	16.64	1.00	5.00	0.87	3.70	0.85	3.50	1.78	126.88	3
4	1.46	55.48	1.24	14.80	1.00	5.00	0.86	3.60	0.84	3.40	1.55	67.06	4
5	1.47	67.76	1.21	12.40	0.99	4.90	0.86	3.60	0.83	3.30	1.62	84.28	5
6	1.48	60.04	1.21	12.40	0.99	4.90	0.86	3.60	0.82	3.20	1.82	138.16	6
7	1.46	55.48	1.19	10.88	0.98	4.80	0.85	3.50	0.77	2.70	1.83	140.98	7
8	1.44	50.92	1.19	10.88	0.98	4.80	0.85	3.50	0.75	2.50	1.88	155.80	8
9	1.43	48.64	1.18	10.16	0.98	4.80	0.85	3.50	0.73	2.30	1.86	149.80	9
10	1.45	53.20	1.17	9.44	0.96	4.60	0.84	3.70	0.71	2.10	1.81	135.34	10
11	1.44	50.92	1.16	8.72	0.97	4.70	0.84	3.40	0.69	1.90	1.81	135.34	11
12	1.42	46.36	1.15	8.00	0.97	4.70	0.84	3.40	0.67	1.70	1.76	118.12	12
13	1.40	41.80	1.16	8.72	0.97	4.70	0.82	3.20	0.72	2.20	1.86	146.80	13
14	1.40	41.80	1.14	7.60	0.96	4.60	0.82	3.20	0.65	1.50	1.97	180.16	14
15	1.39	39.70	1.14	7.60	0.96	4.60	0.82	3.20	0.66	1.60	1.90	196.20	15
16	1.38	37.60	1.12	6.80	0.96	4.60	0.80	3.00	0.67	1.70	1.84	181.15	16
17	1.39	39.70	1.12	6.80	0.96	4.60	0.80	3.00	0.67	1.70	1.77	164.70	17
18	1.38	37.60	1.10	6.00	0.95	4.50	0.80	3.00	0.69	1.90	1.72	153.52	18
19	1.37	35.50	1.09	5.80	0.95	4.50	0.79	2.90	0.69	1.90	1.67	142.72	19
20	1.35	31.30	1.09	5.90	0.95	4.50	0.78	2.80	0.71	2.10	1.61	130.52	20
21	1.34	29.20	1.08	5.80	0.93	4.30	0.77	2.70	0.72	2.20	1.57	120.67	21
22	1.36	33.40	1.07	5.70	0.93	4.30	0.77	2.70	0.73	2.30	1.54	115.64	22
23	1.37	35.50	1.05	5.50	0.83	4.30	0.76	2.60	0.72	2.20	1.49	106.24	23
24	1.37	35.50	1.04	5.40	0.92	4.20	0.79	2.90	0.71	2.10	1.45	99.31	24
25	1.36	33.40	1.04	5.40	0.91	4.10	0.82	3.20	0.69	1.90	1.41	92.95	25
26	1.34	29.20	1.03	5.30	0.91	4.10	0.86	3.60	0.69	1.90	1.38	88.18	26
27	1.33	29.10	1.01	5.10	0.91	4.10	0.87	3.70	0.69	1.90	1.35	83.60	27
28	1.31	22.90	1.00	5.00	0.91	4.10	0.89	3.90	0.71	2.10	1.33	80.80	28
29	1.31	22.90			0.90	4.00	0.89	3.90	0.71	2.10	1.32	79.40	29
30	1.30	20.80			0.90	4.00	0.89	3.90	0.73	2.30	1.32	79.40	30
31	1.31	22.90			0.89	3.90			0.71	2.10			31
MAX		60.04		19.76		5.10		3.90		3.70		196.20	MAX
MIN		20.80		5.00		3.90		2.60		1.50		67.06	MIN
TOTAL		1231.02		250.28		140.30		100.00		71.60		3747.28	TOTAL
DAYS		31		28		31		30		31		30	DAYS
MEAN		39.71		8.94		4.53		3.33		2.31		124.19	MEAN

H : Gauge height in m, Q : Discharge in m³/sec,
Zero point of water gauge : El. _____

Table - 35 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system, CAGAYAN Name of stream: MAGAT Drainage area (Km²): 1.784 Year 1970

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	1.31	78.00	1.60	138.40	1.37	96.13	0.50	24.40	1.01	49.72	0.89	39.76	1
2	1.29	75.20	1.58	124.44	1.36	94.52	0.53	25.00	0.98	47.04	1.10	58.90	2
3	1.28	73.80	1.56	120.52	1.35	92.95	0.59	26.20	0.99	47.87	1.08	56.86	3
4	1.26	71.00	1.52	122.64	1.33	89.77	0.62	27.00	0.99	47.87	1.00	48.70	4
5	1.24	68.58	1.48	115.14	1.34	91.36	0.67	28.50	0.98	47.04	0.97	46.21	5
6	1.23	67.37	1.43	106.24	1.32	88.18	0.68	28.80	0.96	45.38	0.95	44.55	6
7	1.24	68.58	1.40	100.90	1.31	86.59	0.81	34.64	0.93	42.89	0.93	42.89	7
8	1.20	66.16	1.44	108.02	1.25	78.00	0.85	37.20	0.92	42.06	0.91	41.23	8
9	1.59	122.62	1.43	106.24	1.23	75.20	0.88	38.12	0.91	41.23	0.88	39.12	9
10	1.58	120.67	1.42	104.46	1.27	80.80	0.90	40.40	0.88	39.12	0.86	37.84	10
11	1.56	116.92	1.45	109.80	3.00	613.70	0.91	41.23	0.84	36.56	0.82	35.82	11
12	1.55	115.14	1.51	120.67	2.60	439.90	0.94	43.72	0.81	24.64	0.81	34.64	12
13	1.54	113.36	1.59	136.43	1.75	171.75	0.96	45.38	0.84	36.56	0.86	37.84	13
14	1.53	111.58	1.64	147.04	1.63	144.88	0.99	47.87	0.90	44.40	0.91	41.23	14
15	1.52	109.80	1.69	157.84	1.76	174.10	1.06	54.82	0.94	43.72	0.94	43.72	15
16	1.50	106.24	1.95	222.55	1.79	181.15	1.08	56.86	0.98	47.04	0.87	38.48	16
17	1.49	104.40	1.66	151.36	1.62	142.72	0.98	47.04	1.06	54.82	0.85	37.20	17
18	1.47	100.90	1.60	138.40	1.38	97.12	0.95	44.55	1.10	58.90	0.88	39.12	18
19	1.44	96.13	1.49	116.92	1.37	96.13	0.75	31.70	1.09	57.88	0.85	37.20	19
20	1.43	94.54	1.29	83.60	0.81	34.64	0.68	28.80	1.07	55.84	0.83	35.92	20
21	1.38	86.59	1.32	88.18	0.32	22.68	0.67	28.50	1.00	48.70	0.83	35.92	21
22	1.26	69.79	1.34	91.36	0.32	22.68	0.64	27.60	0.96	45.38	0.84	36.56	22
23	0.83	33.54	1.35	92.95	0.30	22.62	0.66	28.20	0.94	43.72	0.81	34.64	23
24	0.81	32.62	1.40	100.90	0.33	22.71	0.69	29.10	0.92	42.06	0.81	34.64	24
25	0.82	33.08	1.42	104.46	0.34	22.74	0.75	31.70	0.92	42.06	0.80	34.00	25
26	0.81	32.62	1.44	108.02	0.33	22.71	0.87	38.48	0.93	42.89	0.79	33.54	26
27	0.85	34.64	1.43	106.24	0.30	22.62	1.01	49.72	0.93	42.89	0.75	31.70	27
28	0.93	39.76	1.42	104.46	0.27	22.53	0.95	44.55	0.91	41.23	0.74	31.24	28
29	1.43	100.90	1.41	102.68	0.21	22.35	0.89	39.76	0.93	42.89	0.79	31.24	29
30	1.52	116.92	1.41	102.08	0.53	25.00	0.95	44.55	0.91	41.23	0.74	31.24	30
31	1.61	99.31	1.39	99.31			1.01	49.72			0.74	31.24	31
MAX		140.56		222.55		613.70		56.86		57.88		58.90	MAX
MIN		32.62		83.60		22.35		24.40		34.64		31.24	MIN
TOTAL		2602.12		3652.87		3198.85		1165.11		1349.63		1202.65	TOTAL
DAYS		31		31		30		31		30		31	DAYS
MEAN		83.94		117.83		106.63		37.58		44.99		38.79	MEAN

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table - 36 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system: CAGAYAN Name of stream: MAGAT Drainage area (Km²): 1.784 Year 1971

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	0.74	31.24	0.68	28.80	0.69	29.10	0.71	29.86	0.58	42.89	0.73	66.16	1
2	0.78	33.08	0.68	28.80	0.68	28.80	0.69	29.40	0.59	43.72	0.74	67.37	2
3	0.81	34.64	0.68	28.80	0.69	29.10	0.67	28.80	0.59	45.38	0.75	67.37	3
4	0.87	35.28	0.67	28.50	0.70	29.40	0.67	28.80	0.61	44.04	0.75	67.37	4
5	0.77	32.62	0.67	28.50	0.70	29.40	0.65	28.80	0.61	48.70	0.74	64.95	5
6	0.75	31.70	0.68	28.80	0.70	29.40	0.61	27.90	0.62	49.72	0.74	64.95	6
7	0.74	31.24	0.68	28.80	0.70	29.40	0.60	27.60	0.66	55.89	0.74	64.95	7
8	0.73	30.78	0.68	28.80	0.70	29.40	0.61	27.60	0.68	52.90	0.74	64.95	8
9	0.74	31.24	0.68	28.80	0.70	29.40	0.63	29.40	0.69	60.11	0.73	62.53	9
10	0.73	30.78	0.67	28.50	0.71	29.86	0.63	29.40	0.70	62.53	0.73	62.53	10
11	0.72	30.32	0.67	28.50	0.71	29.86	0.64	30.78	0.73	60.16	0.77	64.95	11
12	0.71	29.86	0.68	28.80	0.73	29.78	0.63	30.32	0.74	67.37	0.80	68.58	12
13	0.71	29.86	0.67	28.50	0.75	31.20	0.62	30.32	0.76	71.00	0.85	73.80	13
14	0.71	29.86	0.67	28.50	0.78	33.08	0.62	30.32	0.75	69.79	0.91	82.20	14
15	0.70	29.40	0.67	28.50	0.84	36.56	0.60	29.86	0.72	66.16	0.97	89.77	15
16	0.71	29.86	0.68	28.80	0.77	32.16	0.62	30.32	0.72	66.16	1.00	92.95	16
17	0.70	29.40	0.68	28.80	0.73	29.86	0.62	30.32	0.74	68.58	0.99	91.36	17
18	0.70	29.40	0.68	28.80	0.72	28.80	0.58	29.86	0.75	71.00	0.95	89.77	18
19	0.69	29.10	0.68	28.80	0.70	27.95	0.56	29.86	0.76	72.40	0.94	82.20	19
20	0.68	28.80	0.67	28.50	0.70	27.95	0.55	29.40	0.78	75.20	0.92	78.00	20
21	0.69	29.10	0.67	28.50	0.69	26.70	0.54	31.27	0.81	30.80	0.91	96.60	21
22	0.68	28.80	0.68	28.80	0.69	26.70	0.54	31.24	0.79	98.00	0.89	72.40	22
23	0.68	28.80	0.67	28.50	0.69	26.70	0.53	32.16	0.77	75.20	0.87	68.58	23
24	0.68	28.80	0.67	28.50	0.68	26.70	0.54	32.62	0.75	72.40	0.87	68.58	24
25	0.67	28.50	0.68	28.80	0.66	25.60	0.55	34.64	0.75	73.80	0.86	66.16	25
26	0.68	28.80	0.68	28.80	0.67	25.80	0.55	34.64	0.71	68.58	0.87	67.37	26
27	0.68	28.80	0.68	28.80	0.67	25.80	0.55	37.20	0.71	68.58	0.92	72.40	27
28	0.67	28.50	0.69	29.10	0.68	26.40	0.57	38.48	0.70	69.95	0.94	75.20	28
29	0.67	28.50			0.69	27.30	0.57	39.76	0.69	63.74	0.97	78.00	29
30	0.67	28.50			0.71	28.50	0.56	39.12	0.68	62.53	0.94	73.80	30
31	0.68	28.80			0.72	29.10			0.70	69.95			31
MAX		35.28		29.10		36.56		39.76		80.80		96.60	MAX
MIN		28.50		28.50		25.60		27.60		42.89		62.53	MIN
TOTAL		934.36		803.40		897.26		909.08		1982.18		2175.80	TOTAL
DAYS		31		28		31		30		31		30	DAYS
MEAN		30.14		28.69		28.94		30.30		63.94		72.53	MEAN

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table -37 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system: CAGAYAN Name of stream: MAGAT Drainage area (Km²): 1,784 Year 1971

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	0.91	68.58	0.96	56.86	0.95	50.74	0.96	47.04			1.50	100.00	1
2	0.89	66.16	0.94	54.82	1.03	58.90	0.93	44.55			1.43	87.70	2
3	0.89	66.16	0.92	52.78	1.01	56.86	1.01	62.53			1.24	73.70	3
4	0.87	62.53	0.86	47.04	1.01	56.86	1.06	56.86			1.23	59.35	4
5	0.88	63.74	0.78	40.40	0.98	52.78	1.09	58.90			1.17	52.15	5
6	0.88	63.74	0.77	39.76	0.95	49.72	1.15	66.16			1.10	44.50	6
7	0.86	58.90	0.78	40.40	0.96	50.74	1.25	79.40			1.33	72.55	7
8	0.93	67.37	0.85	46.21	0.97	51.76	1.60	140.56		No Records	0.97	32.05	8
9	0.94	67.37	0.96	56.86	0.94	48.70	1.80	191.12			0.99	33.85	9
10	0.93	66.16	0.92	52.78	0.93	47.87	2.03	244.96			0.98	32.95	10
11	0.92	64.95	0.92	51.76	0.95	49.72	1.71	46.05			0.93	28.75	11
12	0.97	69.79	0.93	52.78	0.99	52.78	1.59	119.50			0.87	24.25	12
13	1.00	72.40	0.97	56.86	0.97	50.74	1.26	64.45			0.83	21.55	13
14	1.03	75.20	1.13	60.70	0.97	50.74	1.17	53.25			0.86	19.75	14
15	0.99	69.79	1.24	91.36	1.02	55.84	0.99	34.75			0.81	20.35	15
16	0.97	67.37	1.14	16.60	1.03	55.84	0.98	33.85			0.82	20.95	16
17	0.99	69.79	1.04	63.74	1.04	56.86	0.95	31.15	0.45		6.00	0.77	17.95
18	1.01	71.00	1.01	60.11	1.01	53.80	0.92	28.75	0.41	4.80	0.81	20.35	18
19	1.02	72.40	1.01	60.11	0.97	49.72	0.87	25.00	1.04	43.45	0.77	17.95	19
20	1.02	72.40	0.99	56.86	0.96	48.70	0.85	23.68	0.60	12.00	0.73	15.75	20
21	1.01	69.79	0.98	55.84	0.99	51.76	0.81	21.55	0.54	8.95	0.71	14.75	21
22	0.99	66.16	0.98	55.84	1.01	53.80	0.76	18.55	0.45	5.70	0.70	14.75	22
23	0.99	66.76	0.96	53.80	1.02	54.82	0.74	17.35	0.41	4.55	0.70	14.25	23
24	1.00	64.95	0.96	53.80	1.05	56.86	0.75	17.95	0.75	19.15	0.62	10.65	24
25	1.01	66.16	0.96	53.80	1.06	57.88	0.71	15.75	1.00	37.45	0.67	12.90	25
26	1.03	67.37	0.94	51.76	1.09	61.32	0.69	14.75	0.98	35.65	0.62	10.25	26
27	1.01	64.95	0.93	50.74	1.06	57.88	0.65	12.90	0.99	37.75	0.64	11.55	27
28	1.00	62.53	0.92	49.72	1.04	55.84	0.64	12.45	1.23	60.55	0.67	12.90	28
29	0.99	61.32	0.91	47.87	1.01	51.76	0.59	10.22	1.86	166.00	0.67	12.90	29
30	0.97	58.90	0.89	46.21	0.98	48.70	0.54	8.15	1.72	146.05	0.71	14.75	30
31	0.96	57.88	0.88	45.38			0.51	7.05			0.82	20.95	31
MAX		75.20		91.36		58.90		244.96				100.00	MAX
MIN		57.88		40.40		47.87		7.05				10.25	MIN
TOTAL		1978.23		1699.45		1600.29		1709.08				947.00	TOTAL
DAYS		31		31		30		31				31	DAYS
MEAN		64.46		54.82		53.34		55.13				30.55	MEAN

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table -38 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system: CAGAYAN Name of stream: MAGAT Drainage area (Km²): 1,784 Year 1972

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	0.90	26.50	0.53	23.84	0.39	22.53	0.53	22.78	0.88	15.75	0.98	49.72	1
2	0.96	31.15	0.53	23.70	0.38	22.50	0.52	22.74	0.84	13.80	1.01	52.78	2
3	1.04	38.35	0.52	23.56	0.37	22.91	0.51	22.71	0.87	13.80	0.91	43.72	3
4	1.04	38.35	0.52	23.56	0.38	22.50	0.55	22.86	0.87	15.25	0.97	49.72	4
5	0.99	47.04	0.52	23.56	0.39	22.53	0.56	22.90	0.91	20.25	1.00	52.78	5
6	0.93	41.23	0.51	23.42	0.43	22.65	0.53	22.74	0.94	22.15	1.02	55.89	6
7	0.86	36.56	0.51	23.42	0.44	22.65	0.51	22.68	0.96	23.50	1.02	55.84	7
8	0.81	34.64	0.50	23.28	0.40	22.53	0.53	22.74	0.97	24.25	1.00	53.80	8
9	0.81	33.08	0.49	23.00	0.39	22.50	0.53	22.74	0.97	24.25	0.98	50.74	9
10	0.77	31.24	0.48	22.95	0.37	22.44	0.67	22.95	0.94	24.25	1.02	53.80	10
11	0.73	29.40	0.48	22.95	0.31	22.53	0.57	22.95	0.91	22.15	1.03	54.80	11
12	0.66	27.00	0.47	22.90	0.30	22.20	0.52	22.68	0.85	19.15	1.05	56.86	12
13	0.61	25.80	0.47	22.90	0.28	22.14	0.56	22.82	0.86	19.75	1.06	57.88	13
14	0.61	25.80	0.47	22.90	0.31	22.20	0.57	22.95	0.85	19.15	1.07	57.88	14
15	0.59	25.20	0.47	22.90	0.31	22.20	0.63	23.42	0.96	27.25	1.04	40.30	15
16	0.59	25.20	0.46	22.82	0.31	22.20	0.61	23.14	0.99	27.50	1.01	37.45	16
17	0.59	25.20	0.46	22.82	0.33	22.26	0.58	2.55	1.01	32.95	0.96	32.95	17
18	0.58	25.00	0.45	22.78	0.32	22.23	0.58	2.55	1.02	34.75	0.86	25.00	18
19	0.58	25.00	0.45	22.78	0.33	22.26	0.57	2.80	0.99	30.05	0.77	18.55	19
20	0.57	24.80	0.45	22.78	0.42	22.50	0.61	3.30	0.98	31.15	0.79	19.75	20
21	0.57	24.60	0.44	22.74	0.49	22.71	0.64	4.05	1.01	34.75	0.78	17.15	21
22	0.57	24.60	0.44	22.74	0.48	22.68	0.63	4.30	1.03	37.45	0.89	26.50	22
23	0.56	24.40	0.43	22.71	0.47	22.65	0.64	4.55	1.01	36.55	0.96	32.05	23
24	0.57	24.60	0.42	22.68	0.50	22.71	0.67	5.44	0.99	34.75	1.01	36.55	24
25	0.55	29.26	0.42	22.68	0.50	22.71	0.66	5.44	1.02	37.45	1.09	43.45	25
26	0.56	24.40	0.42	22.68	0.53	22.82	0.68	5.44	1.02	37.45	1.13	47.65	26
27	0.55	24.12	0.41	22.65	0.53	22.88	0.71	7.05	0.99	35.65			27
28	0.55	24.12	0.40	22.62	0.53	22.82	0.82	11.55	0.98	34.75			28
29	0.54	23.98	0.39	22.56	0.53	22.82	0.82	11.55	0.96	32.95			29
30	0.54	23.98			0.54	22.86	0.85	14.25	0.93	34.75			30
31	0.53	23.84			0.53	22.82			1.03	39.25			31
MAX		47.04		23.84		22.86		23.42		39.25			MAX
MIN		23.84		22.56		22.14		2.55		13.80			MIN
TOTAL		883.44		666.98		692.44		450.62		860.95			TOTAL
DAYS		31		29		31		30		31			DAYS
MEAN		28.50		23.00		22.53		15.02		27.77			MEAN

H : Gauge height in _____, Q : Discharge in _____,
Zero point of water gauge : El. _____

Table -39 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system: CAGAYAN Name of stream: MAGAT Drainage area (Km²): 1,784 Year 1972

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	1.19	59.55	1.97	228.10	1.85	214.36	0.81	46.21	0.31	25.40	0.51	35.20	1
2	1.28	65.80	1.96	225.28	1.74	188.58	0.78	43.72	0.31	25.40	0.44	31.00	2
3	1.27	64.41	1.81	201.28	1.74	188.58	0.78	44.55	0.31	25.20			3
4	1.29	67.15	1.87	202.80	1.49	176.45	0.77	43.72	0.30	25.20	0.35	26.00	4
5	1.29	67.15	1.80	183.50	1.59	153.52	0.77	43.72	0.25	26.20	0.35	26.00	5
6	1.31	69.85	1.82	188.58	1.59	153.52	0.74	41.23	0.41	28.20	0.35	26.00	6
7	1.43	87.70	1.83	191.12	1.55	149.22	0.71	39.76	0.54	33.64	0.35	26.00	7
8	1.74	150.85	1.82	188.58	1.52	142.72	0.70	39.12	0.42	28.80	0.34	25.50	8
9	1.97	214.75	1.97	201.28	1.48	134.46	0.67	37.20	0.36	27.00	0.32	24.50	9
10	2.23	301.30	1.99	206.36	1.49	136.43	0.66	36.56	0.34	26.40	0.31	24.00	10
11	2.36	328.10	1.84	193.66	1.44	128.55	0.64	35.92	0.27	27.60	0.31	24.00	11
12	2.28	322.90	1.77	176.45	1.41	122.64	0.62	34.64	0.29	28.20	0.30	23.50	12
13	2.22	343.10	1.91	211.63	1.41	122.67	0.60	33.64	0.38	27.90	0.30	23.50	13
14	2.20	296.50	1.87	201.20	1.44	128.55	0.57	23.08	0.36	27.30	0.29	23.50	14
15	2.14	277.80	1.91	211.63	1.42	126.58	0.55	31.70	0.71	48.70	0.28	23.00	15
16	2.09	262.48	1.94	219.82	1.38	118.70	0.53	30.78	0.72	49.92	0.20	23.00	16
17	2.04	247.88	1.97	228.01	1.35	113.36	0.51	30.32	0.74	51.76	0.29	23.50	17
18	2.09	262.48	2.61	239.12	1.31	108.02	0.45	28.50	0.75	52.78	0.27	22.60	18
19	2.15	280.95	1.98	233.47	1.26	99.31	0.40	27.70	0.76	53.80	0.26	22.20	19
20	2.00	296.50	1.88	206.36	1.19	88.18	0.42	27.30	0.77	54.82	0.26	22.20	20
21	2.18	290.20	1.85	201.18	1.15	82.20	0.39	26.70	0.78	56.86	0.25	21.80	21
22	2.17	287.17	1.80	188.58	1.07	71.00	0.37	26.20	0.79	57.88	0.25	21.80	22
23	2.16	284.06	1.77	183.50	1.03	66.16	0.36	26.00	0.81	60.11	0.25	21.80	23
24	2.14	277.87	1.77	183.50	0.97	58.90	0.35	25.80	0.79	57.88	0.24	21.40	24
25	1.98	230.74	1.79	188.58	0.97	60.11	0.34	25.80	0.71	49.92	0.23	31.00	25
26	1.95	222.45	1.79	188.58	0.94	56.86	0.33	25.00	0.47	33.08	0.23	21.00	26
27	1.92	214.36	1.84	203.82	0.91	54.82	0.22	25.40	0.54	37.00	0.23	21.00	27
28	1.87	201.28	1.89	217.09	0.90	53.80	0.33	25.00	0.52	35.80	0.22	20.60	28
29	1.83	191.12	1.95	253.47	0.86	49.73	0.33	25.60	0.55	37.60	0.21	20.20	29
30	1.81	186.04	1.89	219.82	0.84	47.87	0.32	25.90	0.56	38.20	0.21	20.20	30
31	1.78	178.80	1.15	211.60			0.32	25.40			0.22	20.60	31
MAX		348.10		239.12		214.36		46.21		60.11		35.20	MAX
MIN		54.40		176.45		47.87		25.40		25.20		20.20	MIN
TOTAL		6606.52		6356.55		3242.27		1012.97		1158.25		732.60	TOTAL
DAYS		31		31		30		31		30		31	DAYS
MEAN		213.11		205.05		180.08		32.68		38.61		23.63	MEAN

H : Gauge height in m, Q : Discharge in m³/sec,
Zero point of water gauge : El. _____

Table - 40 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system, CAGAYAN Name of stream: MAGAT Drainage area (Km²): 1.784 Year 1973

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	0.22	20.60	0.16	18.70	0.12	18.70	0.12		0.11		0.11	9.40	1
2	0.23	21.00	0.16	18.70	0.12	18.70	0.12				0.11	9.40	2
3	0.23	21.00	0.16	18.70	0.12	18.70	0.11				0.11	9.40	3
4	0.23	21.00	0.15	18.40	0.11	18.70	0.11				0.12	9.60	4
5	0.23	21.00	0.17	19.00	0.11	18.70	0.11				0.12	9.50	5
6	0.22	20.60	0.18	19.40	0.11	18.70	0.11				0.12	9.50	6
7	0.21	20.20	0.18	19.40	0.12	19.00	0.10				0.11	9.40	7
8	0.20	19.80	0.19	19.80	0.10	18.70	0.10						8
9	0.20	19.80	0.19	19.80	0.10	18.70	0.10						9
10	0.20	19.80	0.20	20.20	0.10	18.70	0.10						10
11	0.19	19.80	0.18	19.40	0.11	19.00	0.10						11
12	0.19	19.80	0.17	19.00	0.11	19.50	0.11				0.11	9.40	12
13	0.18	19.40	0.16	18.70	0.12	19.80	0.11		0.11	9.10	0.13	9.70	13
14	0.18	19.40	0.15	18.40	0.12	19.80	0.11		0.12	9.30	0.15	9.90	14
15	0.17	19.00	0.16	18.70	0.12	19.80	0.11		0.12	9.30	0.17	10.10	15
16	0.18	19.40	0.15	18.70	0.12	19.80	0.11		0.11	9.20	0.18	10.20	16
17	0.19	19.80	0.14	18.40	0.13	20.20	0.11		0.10	9.20	0.18	10.20	17
18	0.18	19.40	0.14	18.40	0.13	20.20	0.11		0.10	9.20	0.19	10.30	18
19	0.18	19.40	0.14	18.40	0.13	20.20	0.10		0.10	9.20	0.20	10.40	19
20	0.17	19.00	0.14	18.40	0.14	20.60			0.11	9.30	0.29	11.60	20
21	0.17	19.00	0.13	18.40	0.14	20.60					0.91	14.80	21
22	0.17	19.00	0.13	18.40	0.13	7.05					0.60	17.50	22
23	0.17	19.00	0.13	18.40	0.13	7.05					0.55	19.00	23
24	0.16	18.70	0.12	18.40	0.13	7.40					0.63	22.20	24
25	0.16	18.70	0.12	18.40	0.13	7.40					0.65	23.00	25
26	0.17	19.00	0.12	18.40	0.13	7.40			0.11	9.30	0.60	21.00	26
27	0.15	18.40	0.13	18.70	0.12	7.45			0.12	9.40	0.61	21.40	27
28	0.15	18.40	0.13	18.70	0.12	7.45			0.12	9.40	0.60	21.00	28
29	0.15	18.40			0.12	7.05			0.12	9.40	0.63	22.20	29
30	0.16	18.70			0.12	7.05			0.11	9.40	0.63	22.20	30
31	0.16	18.70			0.12	7.45			0.11	9.40			31
MAX		21.00		20.20		20.60				9.40		23.00	MAX
MIN		18.40		18.40		7.05						9.70	MIN
TOTAL		605.20		526.40		449.85				213.06		399.80	TOTAL
DAYS		31		28		31				31		30	DAYS
MEAN		19.52		18.80		14.51				6.87		13.33	MEAN

H : Gauge height in M, Q : Discharge in m³/sec,
Zero point of water gauge : El. _____

Table - 41 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system: CAGAYAN Name of stream: MAGAT Drainage area (Km²): 1784 Year: 1973

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	0.61	21.40	0.88	37.00	0.74	29.80	0.93	42.40	1.06	54.82	0.86	37.60	1
2	0.62	21.80	0.88	37.00	0.77	31.00	0.95	44.40	1.06	54.82	0.88	34.60	2
3	0.59	20.60	0.89	37.60	0.76	30.40	0.95	44.40	1.01	49.72	0.78	32.80	3
4	0.61	21.40	0.88	37.00	0.74	29.80	0.95	44.40	0.99	45.40	0.75	31.00	4
5	0.63	22.20	0.87	38.40	0.72	28.00	0.94	43.40	0.92	42.40	0.74	30.40	5
6	0.57	20.00	0.89	37.60	0.68	26.50	0.97	46.40	0.86	37.60	0.74	30.40	6
7	0.63	22.20	0.87	36.40	0.64	24.50	0.96	45.40	0.80	34.00	0.73	29.80	7
8	0.65	23.00	0.87	36.40	0.62	23.50	1.09	56.86	0.75	31.00	0.73	29.80	8
9	0.66	23.50	0.86	35.80	0.58	21.80	1.78	176.45	0.74	30.40	0.72	29.20	9
10	0.67	24.00	0.85	35.20	0.53	19.80	1.67	151.30	0.74	30.40	0.73	29.80	10
11	0.68	24.50	0.84	34.60	0.46	17.50	1.61	138.40	0.73	29.80	0.72	29.20	11
12	0.67	25.00	0.84	34.60	0.71	28.00	1.60	136.43	0.72	29.20	0.72	29.20	12
13	0.66	23.50	0.83	34.00	0.70	27.50	1.56	128.65	0.72	29.20	0.72	29.20	13
14	0.69	25.00	0.82	33.40	0.63	24.00	1.49	115.14	0.71	28.60	0.71	28.60	14
15	0.70	26.00	0.81	32.80	0.61	23.00	1.75	169.40	0.73	29.80	0.71	28.60	15
16	0.71	26.50	0.80	32.20	0.64	24.50	2.14	274.73	0.72	29.20	0.70	28.00	16
17	0.72	27.00	0.79	32.20	0.65	25.00	2.35	346.95	0.72	29.20	0.70	28.00	17
18	0.73	27.50	0.79	32.20	0.67	26.00	2.16	284.06	0.73	29.80	0.70	28.00	18
19	0.73	27.50	0.78	31.60	0.80	33.40	1.94	217.82	0.78	32.80	0.71	28.60	19
20	0.75	28.60	0.77	31.50	0.83	35.20	1.86	198.74	0.78	32.80	0.71	28.60	20
21	0.76	29.22	0.77	31.00	0.84	35.00	1.77	178.45	0.82	35.20	0.72	29.20	21
22	0.77	29.80	0.75	30.40	0.86	37.00	1.64	147.64	0.89	39.40	0.72	29.20	22
23	0.81	32.20	0.75	30.40	0.87	37.60	1.57	132.49	1.00	48.70	0.72	29.20	23
24	0.82	33.40	0.74	29.80	0.88	38.20	1.49	116.02	1.05	53.80	0.72	29.20	24
25	0.84	34.60	0.73	29.20	0.81	34.00	1.41	102.68	1.08	56.86	0.71	28.60	25
26	0.84	34.60	0.73	29.20	0.91	40.40	1.35	92.95	1.03	51.76	0.70	28.00	26
27	0.85	35.20	0.74	29.80	0.95	44.40	1.30	85.00	1.00	48.70	0.70	28.00	27
28	0.85	35.20	0.74	29.80	0.94	43.40	1.21	76.60	0.98	48.40	0.70	28.00	28
29	0.86	35.80	0.76	30.40	0.93	42.40	1.20	71.00	0.97	47.40	0.70	28.00	29
30	0.87	36.40	0.74	29.80	0.96	45.40	1.18	68.58	0.91	41.40	0.69	27.50	30
31	0.87	36.40	0.73	29.20			1.08	56.86			0.69	27.50	31
MAX		36.40		37.60		45.40		346.95		56.86		37.60	MAX
MIN		25.60		29.20		17.50		42.40		28.60		27.50	MIN
TOTAL		854.60		1024.00		927.80		3834.26		1182.58		973.80	TOTAL
DAYS		31		31		30		31		30		31	DAYS
MEAN		27.57		33.03		30.93		123.68		39.42		29.48	MEAN

H : Gauge height in m, Q : Discharge in m³/sec,
 Zero point of water gauge : El. _____

Table-42 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system: CAGAYAN Name of stream: MAGAT Drainage area (Km²): 1,784 Year 1974

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	0.67	26.50	0.55	21.00	0.45	17.50	0.39	15.70	0.47	18.10	0.46	17.80	1
2	0.66	26.00	0.54	20.60	0.45	17.50	0.39	15.70	0.47	18.10	0.47	18.10	2
3	0.60	25.00	0.55	21.00	0.46	17.80	0.40	16.00	0.48	18.40	0.48	18.40	3
4	0.63	24.50	0.54	20.60	0.45	17.50	0.39	15.70	0.48	18.40	0.50	19.00	4
5	0.62	24.00	0.54	20.60	0.45	17.50	0.39	15.70	0.49	18.70	0.52	19.80	5
6	0.61	22.50	0.53	20.20	0.44	17.20	0.38	15.40	0.49	18.70	0.54	20.60	6
7	0.59	22.60	0.52	19.80	0.44	17.20	0.38	15.40	0.48	18.40	0.56	21.40	7
8	0.59	22.60	0.52	19.80	0.47	17.20	0.39	15.70	0.48	18.40	0.59	22.60	8
9	0.58	22.60	0.51	19.40	0.44	17.20	0.38	15.40	0.48	18.40	0.62	24.00	9
10	0.59	21.80	0.52	19.80	0.43	16.90	0.38	15.40	0.49	18.70	0.69	27.50	10
11	0.57	21.80	0.51	19.40	0.44	17.20	0.37	15.10	0.50	19.00	2.59	436.03	11
12	0.56	21.40	0.51	19.40	0.43	16.90	0.37	15.10	0.49	18.70	2.27	319.60	12
13	0.56	21.40	0.50	19.00			0.38	15.40	0.48	18.40	2.14	277.84	13
14	0.55	21.00	0.51	19.40			0.37	15.10	0.49	18.70	2.03	247.96	14
15	0.56	21.40	0.50	19.50			0.37	15.10	0.48	18.40	1.93	217.09	15
16	0.55	21.00	0.50	19.00	0.43	16.90	0.38	15.40	0.48		1.75	171.75	16
17	0.55	21.00	0.50	19.00	0.42	16.60	0.38	15.40	0.48		1.65	149.20	17
18	0.55	21.00	0.51	19.40			0.38	15.40	0.48		1.57	132.49	18
19	0.56	21.40	0.47	18.70			0.39	15.70	0.48	18.40	1.49	116.92	19
20	0.55	21.00	0.49	18.70			0.39	15.70	0.47	18.10	1.43	106.24	20
21	0.55	21.00	0.49	18.70	0.42	16.60	0.44	17.20	0.48	18.40	1.38	97.72	21
22	0.56	21.40	0.48	18.40	0.41	16.30	0.45	17.50	0.47	18.10	1.34	91.36	22
23	0.56	21.40	0.47	18.10	0.42	16.60	0.47	18.10			1.29	83.60	23
24	0.57	21.80	0.46	17.80	0.41	16.30	0.48	18.40			1.25	78.00	24
25	0.56	21.40	0.46	17.80	0.41	16.30	0.48	18.40			1.17	67.37	25
26	0.57	21.80	0.46	17.80	0.41	16.30	0.47	18.10	0.47	18.10	1.11	60.11	26
27	0.57	21.80	0.45	17.50	0.40	16.00	0.48	18.40	0.46	17.80	1.06	54.82	27
28	0.57	21.80	0.45	17.50	0.40	16.00	0.47	18.10	0.46	17.80	1.01	48.72	28
29	0.56	21.14			0.37	15.70	0.47	18.10	0.48	18.40	0.99	48.40	29
30	0.56	21.14			0.40	16.00	0.47	18.10	0.47	18.10	0.96	46.40	30
31	0.56	21.14			0.39	15.70			0.46	17.80			31
MAX		26.50		21.00		17.80		18.40		19.00		436.03	MAX
MIN		21.00		17.50		15.70		10.10		17.80		17.80	MIN
TOTAL		68.77		537.40		579.40		590.10		568.00		3059.82	TOTAL
DAYS		31		28		31		30		31		30	DAYS
MEAN		22.18		19.19		16.75		19.67		18.32		101.99	MEAN

H : Gauge height in m, Q : Discharge in m³/sec,

N. K. Form 1201

Zero point of water gauge : El. _____

Table-43 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system CAGAYAN Name of stream: MAGAT Drainage area (Km²): 1.784 Year 1974

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	0.94	44.40	0.96	46.40	0.97	47.40	0.90	40.40	1.08	56.86	0.95	45.40	1
2	0.93	43.70	0.96	46.40	1.03	51.76	0.95	45.40	1.08	56.86	0.98	48.40	2
3	0.92	42.40	0.97	47.40	1.03	51.76	0.97	47.40	1.13	62.53	1.08	56.86	3
4	0.91	41.40	0.96	46.40	1.03	51.76	0.96	46.40	1.16	66.16	1.14	63.74	4
5	0.90	40.00	0.97	47.40	1.06	54.82	0.94	44.00	1.18	68.58	1.12	61.32	5
6	0.87	38.20	1.01	49.72	1.08	54.86	0.95	45.40	1.18	68.58	1.12	61.32	6
7	0.85	37.00	1.02	50.74	1.06	54.82	0.97	47.40	1.15	64.95	1.10	58.90	7
8	0.82	35.00	1.06	54.82	1.04	52.78	0.96	46.40	1.13	62.53	1.16	66.16	8
9	0.81	34.60	1.06	54.82	1.08	56.86	0.95	45.40	1.16	66.16	1.16	66.16	9
10	0.79	33.40	1.09	57.88	1.06	54.80	0.95	45.40	1.17	67.37	1.13	62.53	10
11	0.78	32.80	1.06	54.82	1.05	53.80	0.95	45.40	1.13	62.53	1.11	60.11	11
12	0.78	32.80	1.04	52.78	1.03	57.76	0.93	43.40	1.12	61.32	1.07	55.84	12
13	0.76	31.60	1.04	52.78	1.00	48.70	0.92	42.40	1.11	60.11	1.06	54.80	13
14	0.75	31.00	1.01	49.72	1.00	48.70	0.91	41.40	1.08	56.86	1.01	49.72	14
15	0.73	29.80	0.97	47.40	0.98	48.40	0.94	44.00	1.13	62.53	1.01	49.72	15
16	0.70	28.00	0.87	38.20	0.96	46.40	0.93	43.40	1.14	63.74	1.04	52.78	16
17	0.70	28.00	0.96	46.40	0.96	46.40	0.92	42.40	1.11	60.11	1.05	53.80	17
18	0.71	28.60	0.95	45.40	0.96	46.40	0.93	43.40	0.99	49.40	1.07	55.84	18
19	0.87	38.20	0.94	44.40	0.96	46.40	0.92	42.40	0.96	46.40	1.08	56.86	19
20	0.98	40.40	0.97	44.40	0.95	45.40	0.93	43.40	0.97	47.40	1.05	53.80	20
21	2.07	228.01	0.93	43.40	0.96	46.40	0.92	42.40	0.97	47.40	1.02	50.74	21
22	1.88	203.88	0.92	42.40	0.97	47.40	0.95	45.40	0.92	42.40	1.04	52.78	22
23	1.80	183.50	0.92	42.40	0.96	46.40	0.98	48.40	0.96	46.40	1.04	52.78	23
24	1.71	162.35	0.91	41.40	0.95	45.40	1.03	51.76	0.97	47.40	1.02	50.74	24
25	1.61	140.56	0.91	41.40	0.95	45.70	1.05	53.80	0.95	45.40	1.01	49.72	25
26	1.49	116.92	0.91	41.40	0.95	45.40	1.06	54.80	0.96	46.40	0.99	49.40	26
27	1.37	96.13	0.91	41.40	0.97	47.40	1.06	54.80	0.97	47.40	0.97	47.40	27
28	1.29	83.60	0.94	44.40	0.95	45.40	1.06	54.82	0.95	45.40	0.96	46.40	28
29	1.17	67.37	0.97	47.40	0.93	43.40	1.06	51.82	0.97	47.40	0.97	47.40	29
30	1.06	54.82	0.97	47.40	0.91	41.40	1.02	50.74	0.97	47.40	0.96	46.40	30
31	0.97	47.40	0.98	48.40			1.07	55.84			0.96	46.40	31
MAX		228.01		57.88		56.86		55.84		68.58		66.16	MAX
MIN		28.00		38.00		41.40		40.00		42.40		45.40	MIN
TOTAL		2104.08		1059.68		1470.00		1453.62		1673.48		2698.36	TOTAL
DAYS		31		31		30		31		30		31	DAYS
MEAN		67.87		47.09		49.00		46.89		55.78		87.04	MEAN

H : Gauge height in m, Q : Discharge in m³/sec,
Zero point of water gauge : El. _____

Table-44 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system: CAGAYAN Name of stream: MAGAT Drainage area (Km²): 1.784 Year 1975

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	1.78	178.80	1.50	118.70	1.39	99.31	1.25	78.00	0.91	41.40	0.73	29.80	1
2	1.76	174.10	1.60	118.70	1.38	97.72	1.28	82.20	0.90	40.40	0.73	29.80	2
3	1.73	167.05	1.48	115.14	1.36	94.54	1.25	78.00	0.92	42.40	0.72	29.20	3
4	1.76	174.10	1.48	115.14	1.35	92.95	1.24	76.60	0.90	40.40	0.73	29.80	4
5	1.75	171.75	1.47	113.36	1.34	91.36	1.22	73.80	0.91	41.40	0.71	28.60	5
6	1.75	171.75	1.47	113.36	1.32	88.18	1.20	71.00	0.90	40.40	0.71	28.60	6
7	1.73	167.05	1.47	113.36	1.31	86.59	1.17	67.37	0.89	39.40	0.71	28.60	7
8	1.67	153.52	1.47	113.36	1.31	86.59	1.16	66.16	0.88	38.80	0.70	28.00	8
9	1.67	153.52	1.46	111.58	1.30	85.00	1.13	62.53	0.88	38.80	0.70	28.00	9
10	1.67	157.84	1.46	111.58	1.30	85.00	1.12	61.32	0.88	38.80	0.71	28.60	10
11	1.67	153.52	1.47	113.36	1.29	83.60	1.08	56.86	0.86	37.60	0.71	28.60	11
12	1.62	142.72	1.46	111.58	1.29	83.60	1.06	54.82	0.85	37.00	0.70	28.00	12
13	1.66	151.36	1.45	109.80	1.28	82.20	1.04	52.78	0.83	35.80	0.69	27.50	13
14	1.64	147.04	1.45	109.80	1.29	83.60	1.04	52.78	0.83	35.80	0.69	27.50	14
15	1.63	144.88	1.43	106.24	1.28	82.20	1.02	50.74	0.82	35.20	0.68	27.00	15
16	1.62	142.72	1.43	106.24	1.27	80.80	1.02	50.74	0.80	34.00	0.67	26.50	16
17	1.61	140.56	1.42	104.46	1.26	79.40	1.00	50.40	0.80	34.00	0.66	26.00	17
18	1.60	138.40	1.42	104.46	1.26	79.40	0.99	47.40	0.80	34.00	0.66	26.00	18
19	1.60	138.40	1.40	100.90	1.26	79.40	0.97	47.40	0.80	34.00	0.66	26.00	19
20	1.61	140.56	1.40	100.90	1.25	78.00	0.97	47.40	0.80	34.00	0.65	25.50	20
21	1.60	138.40	1.48	115.14	1.25	78.00	0.97	47.40	0.79	34.00	0.66	26.00	21
22	1.60	138.40	1.48	115.14	1.24	76.60	0.96	46.40	0.79	34.00	0.66	26.00	22
23	1.59	136.43	1.47	113.36	1.24	76.60	0.97	47.40	0.78	32.80	0.65	25.50	23
24	1.59	136.43	1.46	111.58	1.24	76.60	0.96	46.40	0.77	32.20	0.64	25.00	24
25	1.60	138.40	1.43	106.24	1.23	75.20	0.96	46.40	0.77	32.20	0.65	25.50	25
26	1.58	137.46	1.43	106.24	1.23	75.20	0.95	46.40	0.76	31.60	0.63	24.50	26
27	1.59	136.43	1.41	102.68	1.23	75.20	0.95	46.40	0.76	31.60	0.64	25.00	27
28	1.58	134.46	1.40	100.90	1.22	73.80	0.92	42.40	0.75	31.00	0.62	24.00	28
29	1.57	132.49			1.21	72.40	0.93	43.40	0.75	31.00	0.62	24.00	29
30	1.56	130.52			1.21	72.40	0.92	42.40	0.75	31.00	0.62	24.00	30
31	1.56	130.52			1.20	71.00			0.74	30.40			31
MAX		178.80		118.70		99.31		82.20		42.40		29.80	MAX
MIN		130.52		100.90		71.00		42.40		30.45		24.00	MIN
TOTAL		4576.58		3083.30		2542.44		1682.30		1104.20		807.10	TOTAL
DAYS		31		28		31		30		31		30	DAYS
MEAN		148.28		110.12		82.01		56.08		35.62		26.90	MEAN

H : Gauge height in m, Q : Discharge in m³/sec
 Zero point of water gauge : El. _____

Table-45 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system, CAGAYAN Name of stream : MAGAT Drainage area (Km²): 6284 Year 1975

	July		Aug		Sept		Oct		Nov		Dec		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	0.62	24.00											1
2	0.62	24.00											2
3	0.60	23.00											3
4	0.61	23.50											4
5	0.62	24.00											5
6	0.61	23.50											6
7	0.61	23.50											7
8	0.60	23.00											8
9	0.61	23.00											9
10	0.60	23.00											10
11	0.59	22.60											11
12	0.59	22.60											12
13	0.68	24.00											13
14	0.67	26.50											14
15	0.66	26.00											15
16	0.66	26.00											16
17	0.66	26.00											17
18	0.66	26.00											18
19	0.64	25.00											19
20	0.63	24.50											20
21	0.63	24.50											21
22	0.62	24.00											22
23	0.60	23.00											23
24	0.60	23.00											24
25	0.60	23.00											25
26	0.58	22.20											26
27	0.58	22.20											27
28	0.58	22.20											28
29	0.56	21.40											29
30	0.57	21.80											30
31	0.56	21.40											31
MAX		27.00											MAX
MIN		21.40											MIN
TOTAL		735.90											TOTAL
DAYS		31											DAYS
MEAN		23.74											MEAN

H : Gauge height in m, Q : Discharge in m³/sec,
 Zero point of water gauge : El. _____

Table - 46 WATER LEVEL AND DISCHARGE (Original)

STATION BATO

River system: CAGAYAN Name of stream: MAGAT Drainage area (Km²): 1784 Year: 1976

	Jan		Feb		Mar		Apr		May		June		
	H	Q	H	Q	H	Q	H	Q	H	Q	H	Q	
1	0.66	26.00	0.62	24.00	0.91	41.40	0.73	29.80	0.91	41.40	3.23	727.60	1
2	0.66	26.00	0.62	24.00	0.90	40.40	0.76	31.60	0.99	49.40	2.65	460.40	2
3	0.64	25.00	0.62	24.00	0.92	42.40	0.75	31.00	1.23	76.20	2.80	523.00	3
4	0.64	25.00	0.62	24.00	0.90	40.40	0.75	31.00	1.07	55.84	2.44	379.12	4
5	0.62	24.00	0.64	25.00	0.90	40.40	0.76	31.60	1.20	71.00	2.27	319.60	5
6	0.62	24.00	0.63	24.50	0.89	39.40	0.76	31.60	1.02	50.74	2.24	309.70	6
7	0.61	23.50	0.64	25.00	0.91	41.40	0.76	31.60	1.02	50.74	2.23	306.40	7
8	0.60	23.00	0.64	25.00	0.88	38.80	0.78	32.80	1.48	115.14	2.24	309.70	8
9	0.60	23.00	0.65	25.50	0.88	38.80	0.79	33.40	2.40	364.40	2.24	309.70	9
10	0.58	22.20	0.66	26.00	0.86	37.60	0.80	34.00	2.23	306.40	2.24	309.70	10
11	0.58	22.20	0.65	25.50	0.86	37.60	0.80	34.00	3.13	676.93	2.23	306.40	11
12	0.58	22.20	0.65	25.50	0.83	35.80	0.80	34.00	3.19	706.99	2.02	242.04	12
13	0.57	21.80	0.66	26.00	0.82	35.80	0.80	34.00	3.09	657.08	1.26	79.40	13
14	0.56	21.40	0.66	26.00	0.82	35.20	0.87	34.60	3.12	671.92	1.26	79.40	14
15	0.55	21.00	0.67	26.50	0.80	34.40	0.80	34.00	3.27	748.40	1.26	79.40	15
16	0.58	22.20	0.67	26.50	0.80	34.00	0.81	34.60	4.00	1175.50	1.27	80.80	16
17	0.65	25.50	0.67	26.50	0.80	34.00	0.80	34.00	4.83	1689.90	1.28	82.20	17
18	0.66	26.00	0.68	27.00	0.79	33.40	0.82	35.20	5.50	2110.15	1.29	83.60	18
19	0.67	26.50	0.68	27.00	0.79	33.40	0.83	35.80	6.20	2554.00	1.28	82.20	19
20	0.68	27.00	0.72	29.20	0.79	33.40	0.83	35.80			1.29	83.60	20
21	0.69	22.60	0.70	28.00	0.77	32.20	0.86	37.60	6.53	2765.08	1.29	83.60	21
22	0.69	22.60	0.71	28.60	0.77	32.20	0.86	37.60	4.66	1583.98	1.30	85.00	22
23	0.60	23.00	0.71	28.60	0.77	32.20	0.88	38.80	4.02	1187.82	1.30	85.00	23
24	0.61	23.50	0.70	28.00	0.76	31.60	0.88	38.80	4.07	1278.62	1.31	86.59	24
25	0.60	23.00	0.70	28.00	0.76	31.60	0.91	41.40	3.20	712.00	1.32	88.18	25
26	0.61	23.50	0.71	28.60	0.75	31.00	0.89	39.90	3.24	732.80	1.32	88.18	26
27	0.61	23.50	0.71	28.60	0.75	31.00	0.90	39.40	3.25	738.00	1.34	91.76	27
28	0.62	24.00	0.71	28.60	0.75	31.00	0.91	41.40	3.29	758.80	1.35	92.95	28
29	0.61	23.50	0.73	29.80	0.77	30.40	0.90	40.40	3.25	738.00	1.36	94.54	29
30	0.60	23.00			0.73	29.80	0.92	42.40	3.00	613.70	1.38	97.72	30
31	0.62	24.00			0.72	29.20			3.79	1046.35			31
MAX		27.00		29.80		42.40		42.40		2765.08		727.60	MAX
MIN		21.00		24.00		29.20		29.80		41.40		79.40	MIN
TOTAL		733.70		769.50		1087.80		1062.60				6047.08	TOTAL
DAYS		31		29		31		30		31		30	DAYS
MEAN		23.67		26.53		35.15		35.42		808.28		201.57	MEAN

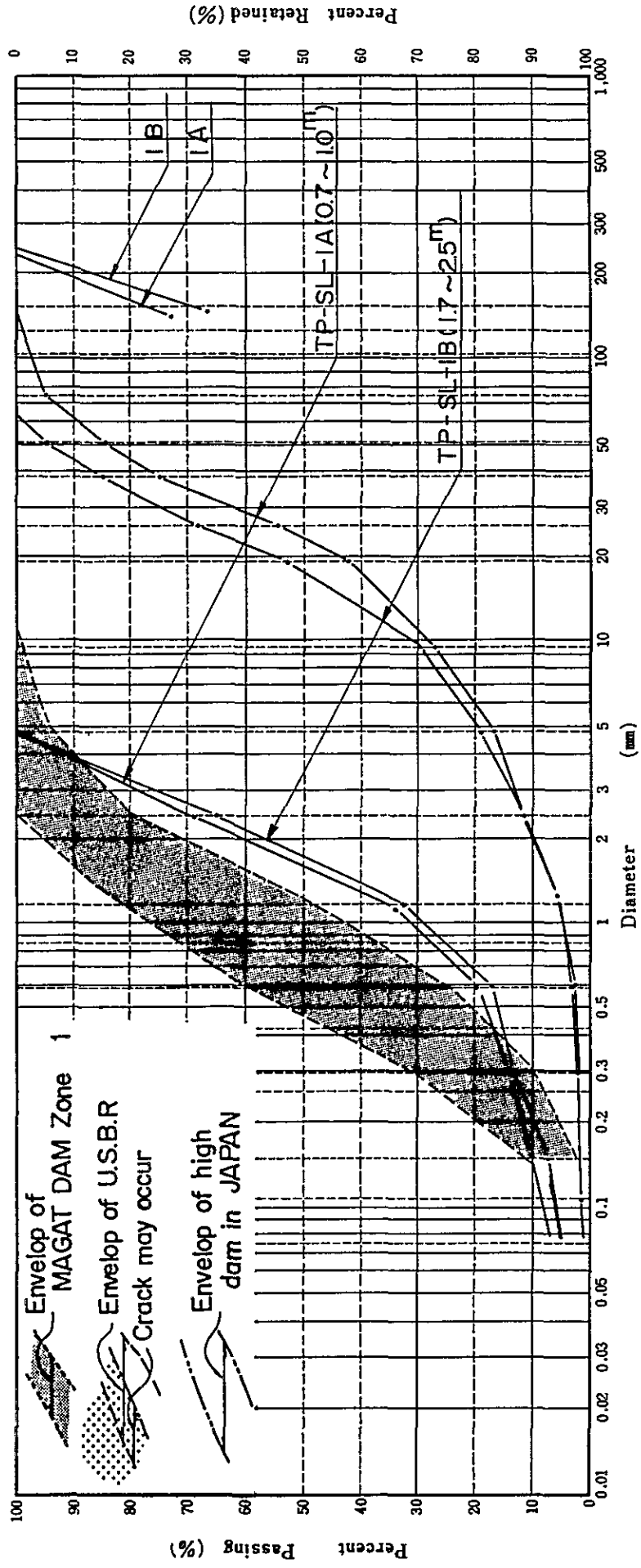
H : Gauge height in M, Q : Discharge in M³/sec,
Zero point of water gauge : El. _____

GRADATION TEST

TP-SL-1

Sample No	
D ₆₀ (mm)	
D ₃₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c ((D ₃₀) ² /D ₁₀ D ₆₀)	
D _{max} (mm)	

Sieve & Screen	#200	#100	#60±50	#40	#30	#20	#16	#10±8	#4	3/8"	1 1/2"	2"	3"	4"	5"	6"	8"				
	74μ	105μ	149μ	250μ	297μ	420μ	590μ	840μ	1.19"	2.0"	2.38"	4.76"	9.52"	19.1"	25.4"	38.1"	50.8"	76.2"	101.6"	127"	152"



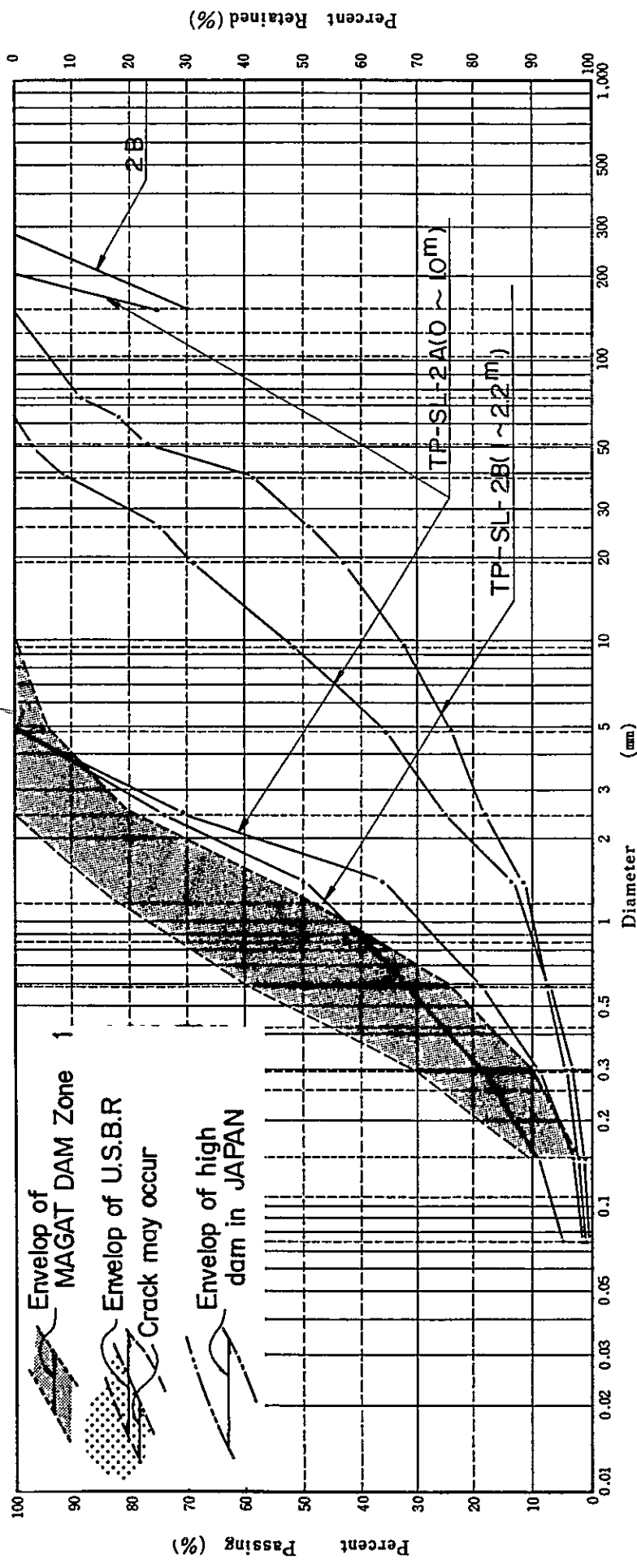
Clay to Silt (Fines)	Sand	Gravel	Boulders
	fine medium coarse	fine coarse	

GRADATION TEST

TP-SL-2

Sample No.	
D ₆₀ (mm)	
D ₅₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c ((D ₃₀ ² /D ₁₀ D ₆₀))	
D _{max} (mm)	

Sieve & Screen	#200	#100	#60#50	#40	#30	#20	#16	#10±8	#4	3/8"	1 1/2"	2"	3"	4" 5" 6" 8"							
	74μ	105μ	149μ	250μ	297μ	420μ	590μ	840μ	1.19 mm	2.0 mm	2.36 mm	4.75 mm	9.52 mm	19.1 mm	25.4 mm	38.1 mm	50.8 mm	76.2 mm	101.6 mm	127 mm	152 mm



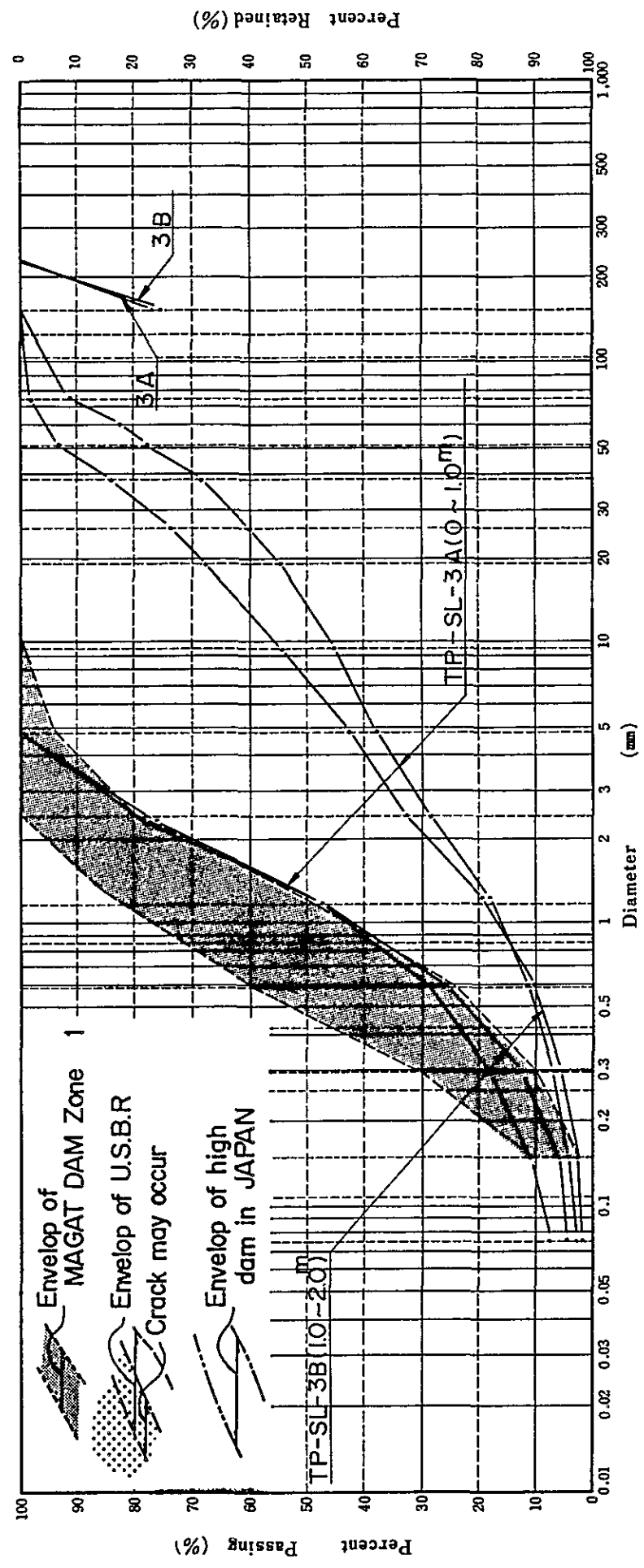
Clay to Silt (Fines)	Sand		Gravel		Cobbles	Boulders
	fine	medium	coarse	coarse		

GRADATION TEST

TP-SL-3

Sample No.	
D ₅₀ (mm)	
D ₂₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c [(D ₃₀ ² /D ₁₀ D ₆₀)]	
D _{max} (mm)	

Sieve & Screen	74μ	105μ	149μ	250μ	297μ	420μ	590μ	840μ	1.19 mm	2.0 mm	2.36 mm	4.76 mm	9.52 mm	19.1 mm	25.4 mm	38.1 mm	50.8 mm	76.2 mm	101.6 mm	127 mm	152 mm
	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	8"	



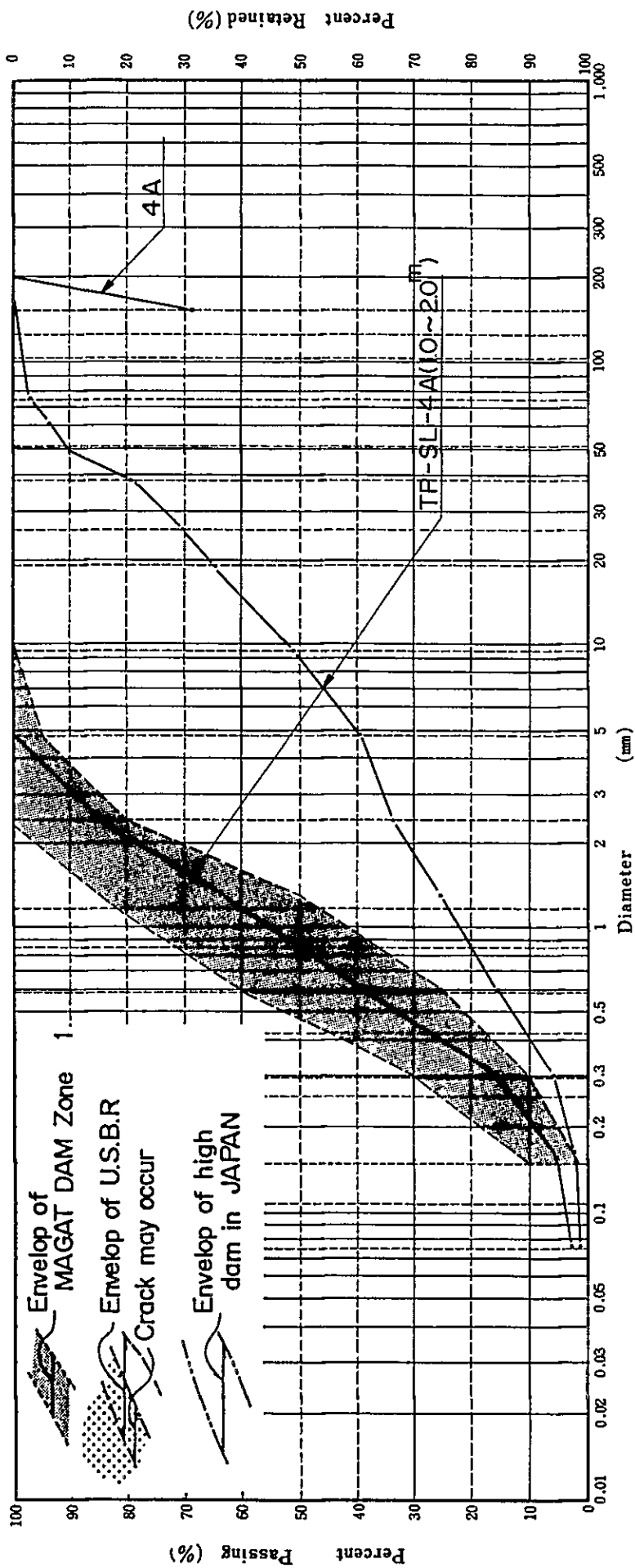
Clay to Silt (Fines)	Sand		Gravel		Cobbles	Boulders
	fine	medium	coarse	fine		

GRADATION TEST

TP-SL-4

Sample No.	
D ₆₀ (mm)	
D ₃₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c ((D ₃₀) ² /D ₁₀ D ₆₀)	
D _{max} (mm)	

Sieve & Screen	#200	#100	#60#50	#40	#30	#20	#16	#10#8	#4	9.52	19.1	25.4	38.1	50.8	76.2	101.6	127	152
	74μ	105μ	149μ	250μ	297μ	420μ	580μ	840μ	1.19	2.0	2.36	4.76						



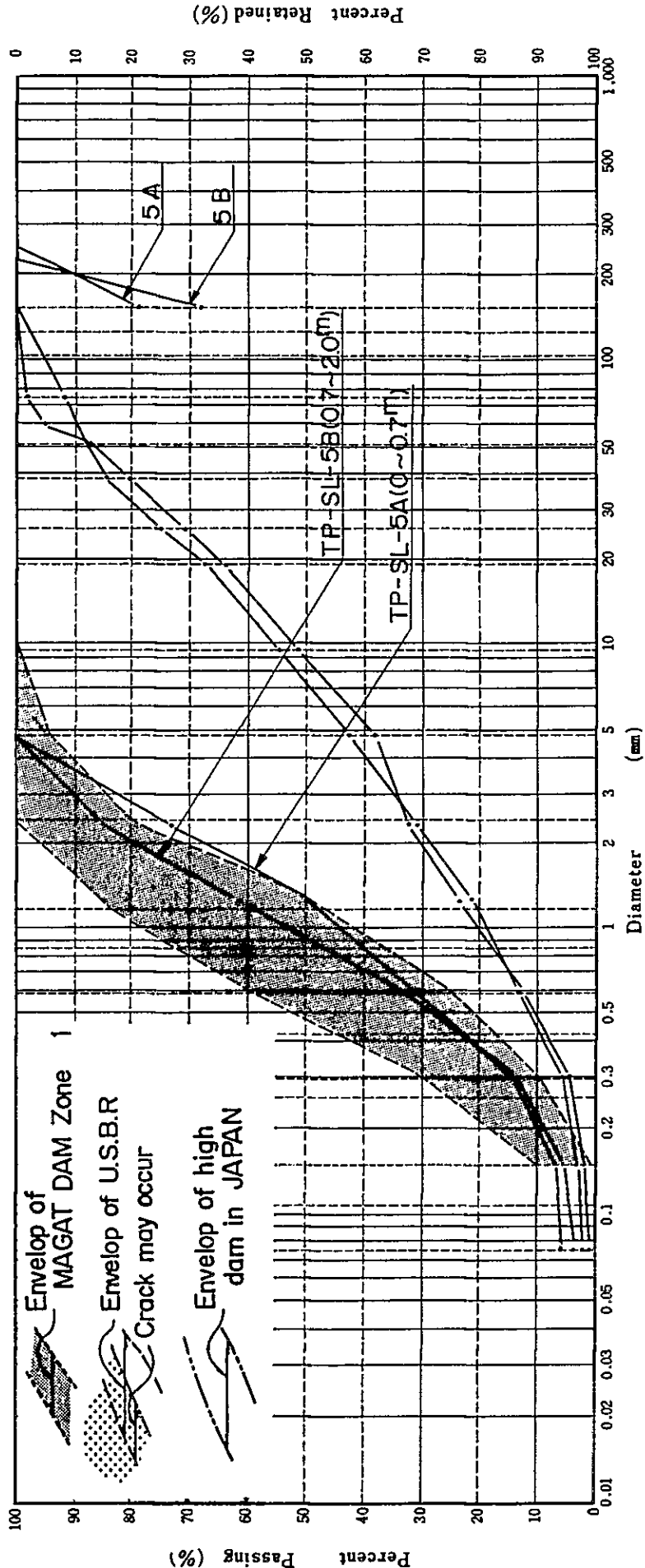
Clay to Silt (Fines)	Sand		Gravel		Cobbles	Boulders
	fine	medium	coarse	coarse		

GRADATION TEST

TP-SL-5

Sample No.	
D ₆₀ (mm)	
D ₃₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c ((D ₃₀ ² /D ₁₀ × D ₆₀)	
D _{max} (mm)	

Sieve & Screen	74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19 ^{mm}	2.0 ^{mm}	2.38 ^{mm}	4.76 ^{mm}	9.52 ^{mm}	19.1 ^{mm}	25.4 ^{mm}	38.1 ^{mm}	50.8 ^{mm}	76.2 ^{mm}	101.6 ^{mm}	127 ^{mm}	152 ^{mm}
	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	#4	3/8"	1"	1 1/2"	2"	3"	4"	5"	6"	8"



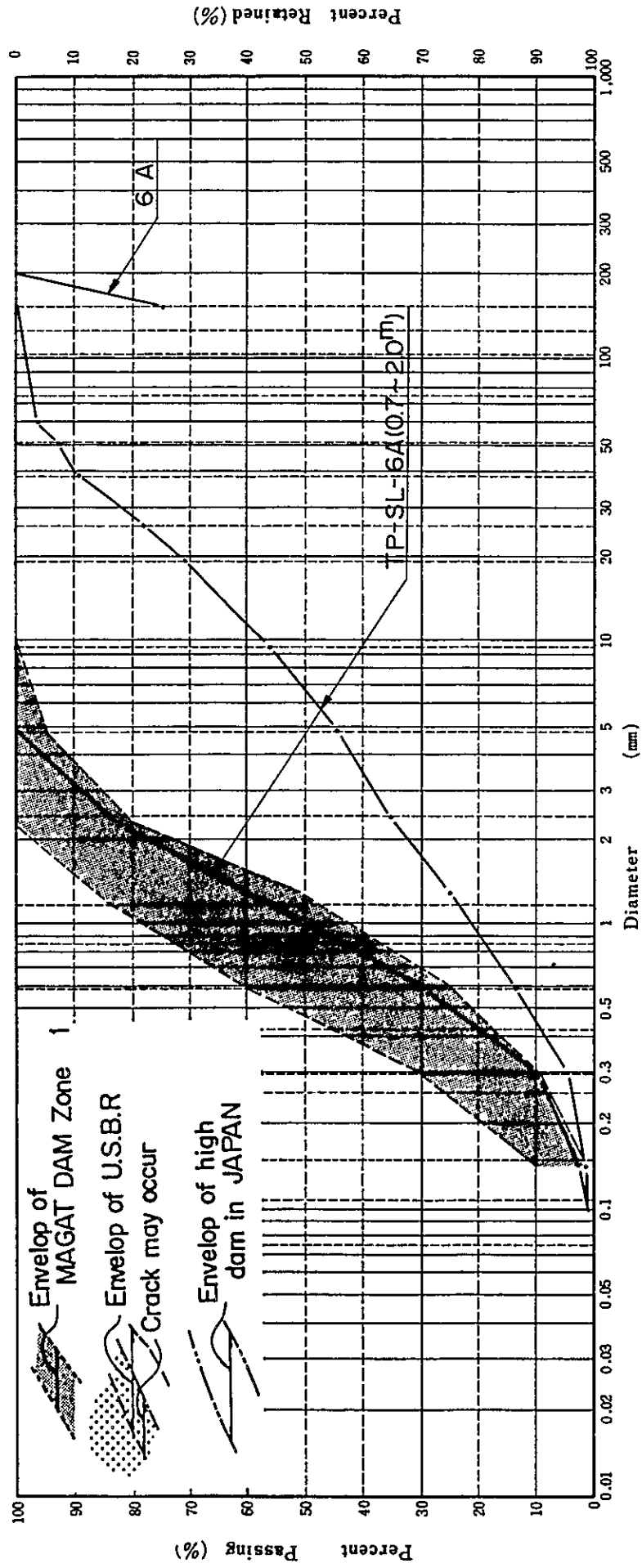
Clay to Silt (Fines)	Sand	Gravel	Boulders
	fine	coarse	coarse

GRADATION TEST

TP-SL-6

Sample No.	
D ₅₀ (mm)	
D ₆₀ (mm)	
D ₁₀ (mm)	
Cu (D ₆₀ /D ₁₀)	
Cc ((D ₁₀) ³ /D ₅₀ D ₆₀)	
D _{max} (mm)	

Sieve & Screen	74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19 ^{mm}	2.0 ^{mm}	2.38 ^{mm}	4.76 ^{mm}	#4	#10	#16	#20	#30	#40	#50	#60	#100	#200	3/16"	1/4"	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	8"
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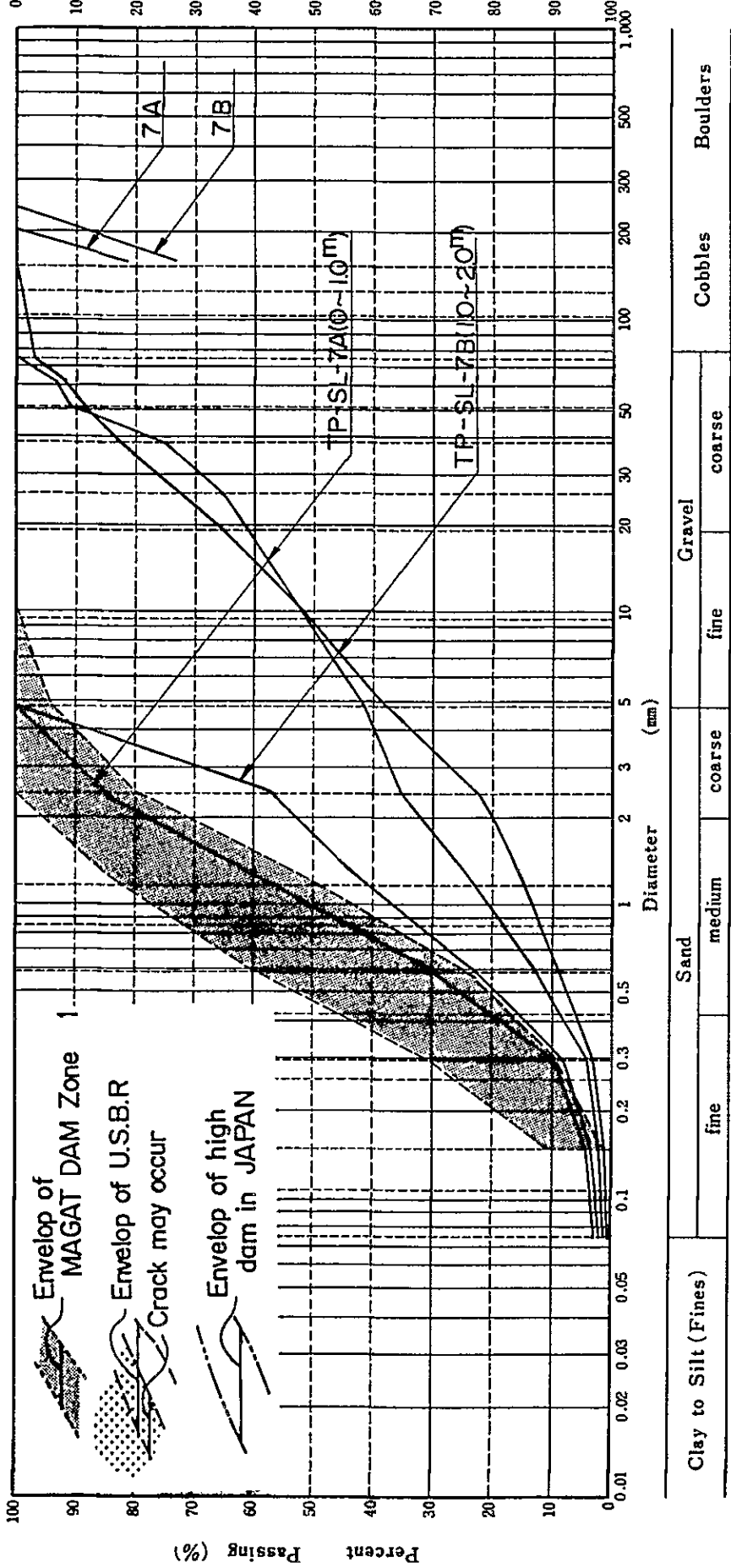
Clay to Silt (Fines)	Sand				Gravel		Cobbles	Boulders
	fine	medium	coarse	coarse	fine	coarse		

GRADATION TEST

TP-SL-7

Sample No.	
D ₆₀ (mm)	
D ₃₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c [(D ₃₀ - D ₁₀) / (D ₆₀ - D ₃₀)]	
D _{max} (mm)	

Sieve & Screen	74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19	2.0	2.38	4.76	9.52	19.1	25.4	38.1	50.8	76.2	101.6	127	152	
	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	#2	#1	3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	8"

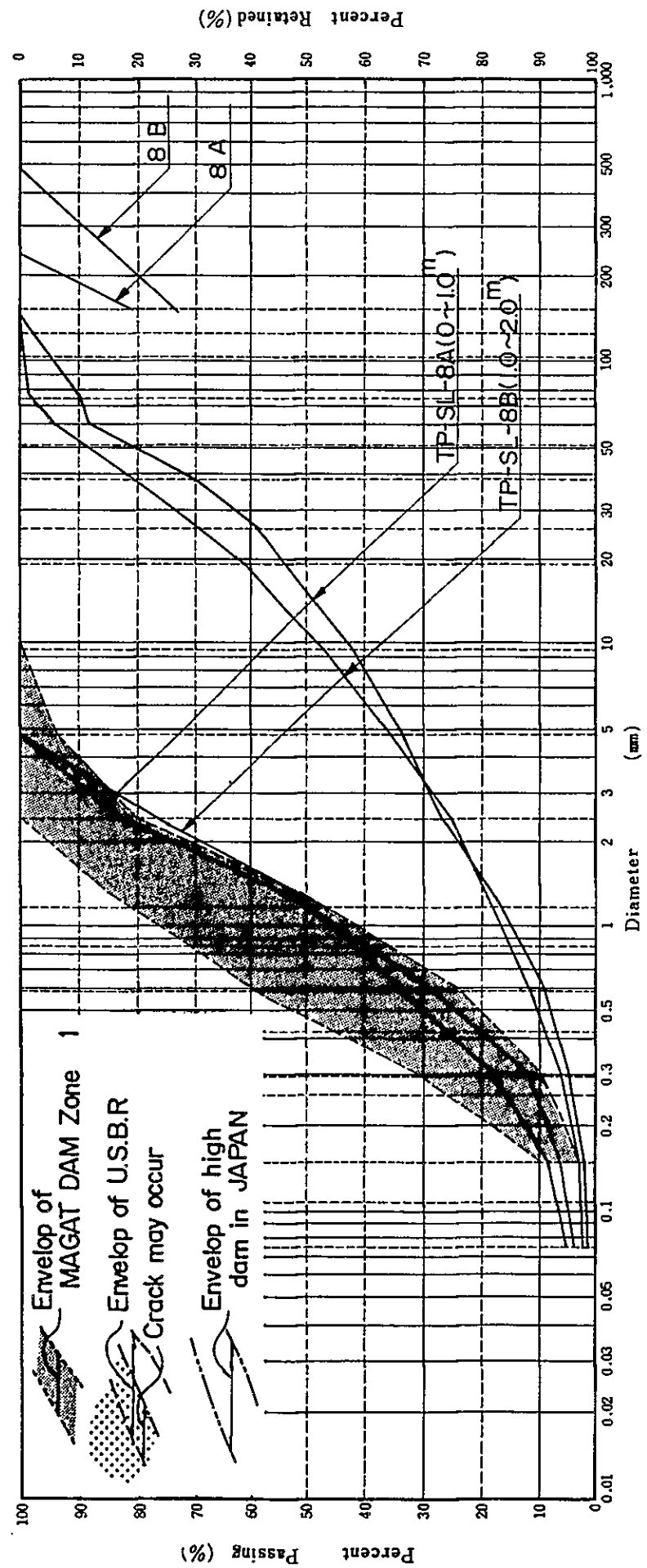


GRADATION TEST

TP-SL-8

Sample No.	
D_{60} (mm)	
D_{50} (mm)	
D_{10} (mm)	
C_u (D_{60}/D_{10})	
C_c ($(D_{30}^2/D_{10}D_{60})$)	
D_{max} (mm)	

Sieve & Screen	74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19 ^{mm}	2.0 ^{mm}	2.38 ^{mm}	4.76 ^{mm}	9.52 ^{mm}	19.1 ^{mm}	25.4 ^{mm}	38.1 ^{mm}	50.8 ^{mm}	76.2 ^{mm}	101.6 ^{mm}	127 ^{mm}	152 ^{mm}	
	#200	#100	#60	#40	#30	#20	#16	#10	#8	#4	#3	#2	#1 1/2	#1	#3/4	#3/8	#4	#10	#20	#40	#60	#100



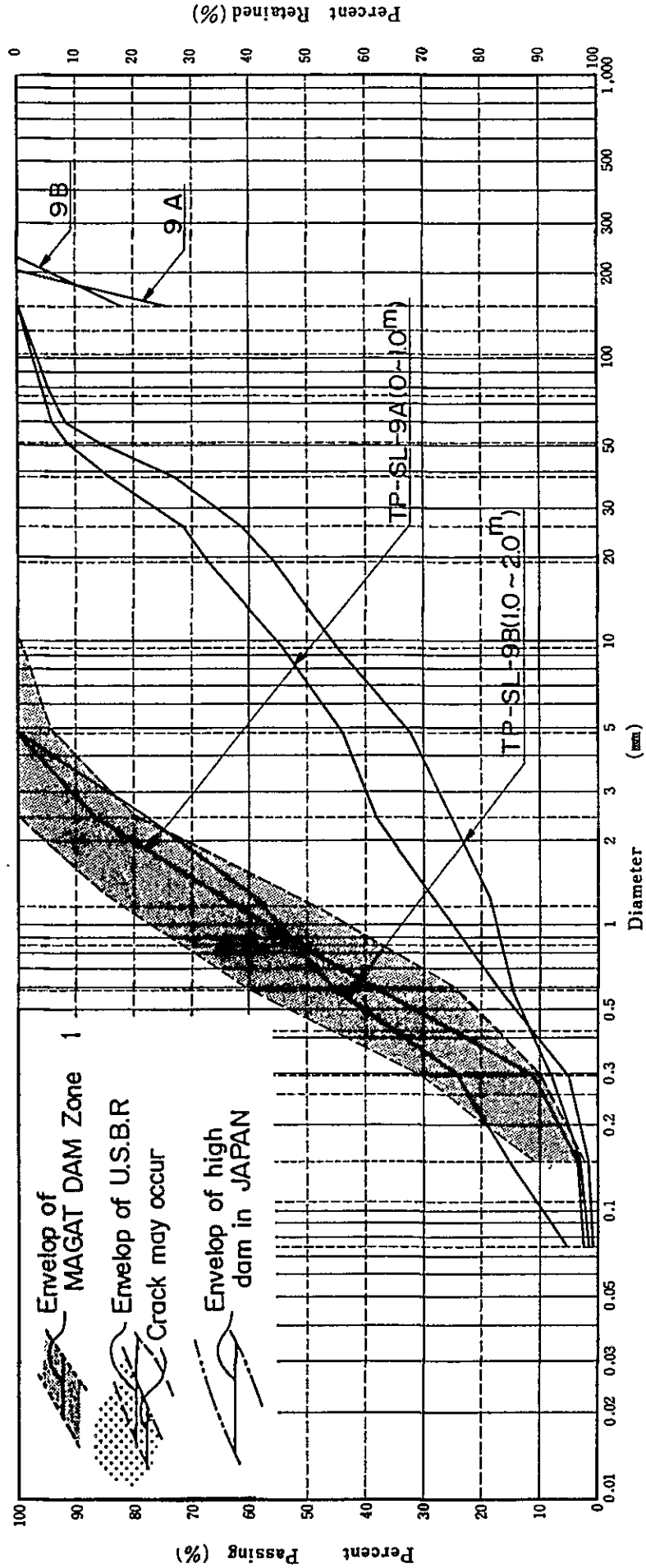
Clay to Silt (Fines)	Sand	Gravel	Boulders
fine	medium	coarse	
	coarse	fine	coarse

GRADATION TEST

TP-SL-9

Sample No	
D ₆₀ (mm)	
D ₃₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c ((D ₃₀) ² /D ₁₀ D ₆₀)	
D _{max} (mm)	

Sieve & Screen	74μ	105μ	149μ	250μ	297μ	420μ	590μ	840μ	1.19 ^{mm}	2.0 ^{mm}	2.36 ^{mm}	4.76 ^{mm}	9.52 ^{mm}	19.1 ^{mm}	25.4 ^{mm}	38.1 ^{mm}	50.8 ^{mm}	76.2 ^{mm}	101.6 ^{mm}	127 ^{mm}	152 ^{mm}
	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	#4	3/8"	1/2"	2"	3"	4"	5"	6"	8"	



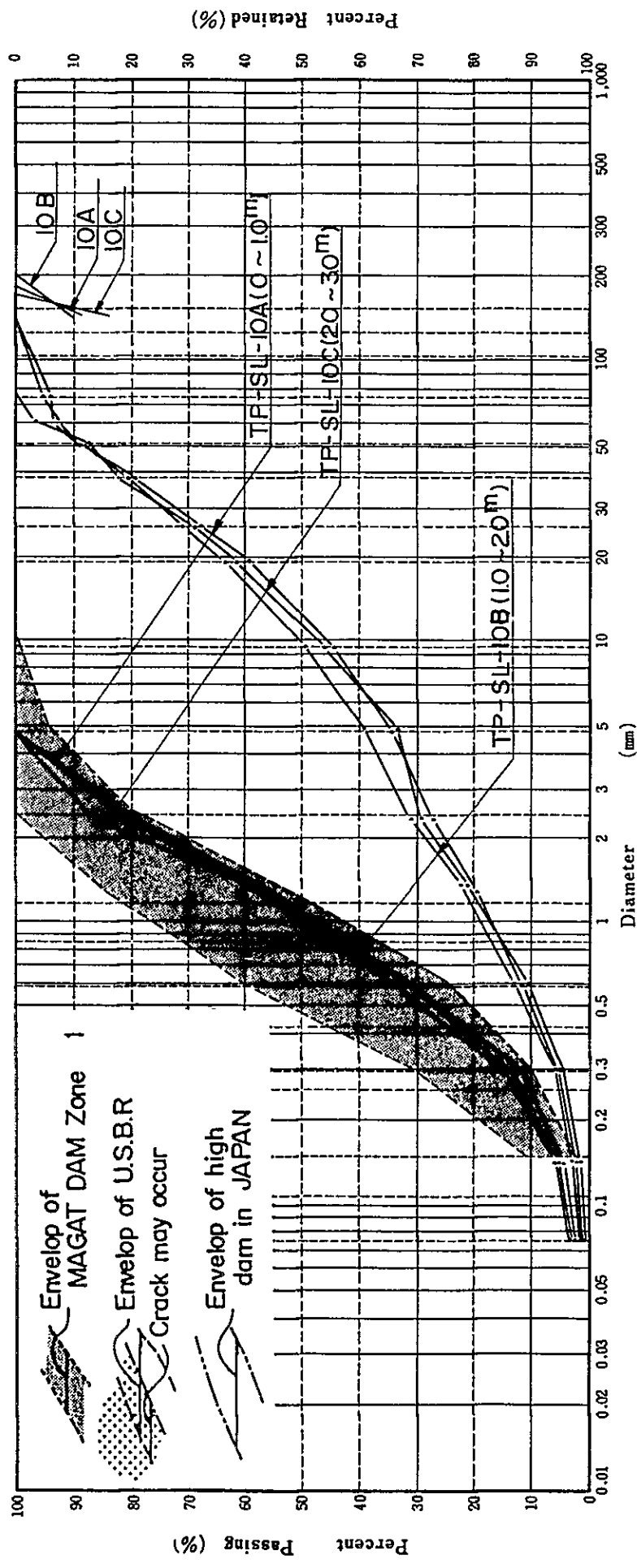
Clay to Silt (Fines)	Sand		Gravel		Cobbles	Boulders
	fine	medium	coarse	fine		

GRADATION TEST

TP-SL-10

Sample No.	
D ₅₀ (mm)	
D ₃₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c [(D ₃₀) ² /D ₁₀ D ₆₀]	
D _{max} (mm)	

Sieve & Screen	74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19 ^{mm}	2.0 ^{mm}	2.38 ^{mm}	4.76 ^{mm}	9.52 ^{mm}	19.1 ^{mm}	25.4 ^{mm}	38.1 ^{mm}	50.8 ^{mm}	76.2 ^{mm}	101.6 ^{mm}	127 ^{mm}	152 ^{mm}	
	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	#4	3/8"	1/2"	1"	1 1/2"	2"	3"	4"	5"	6"	8"



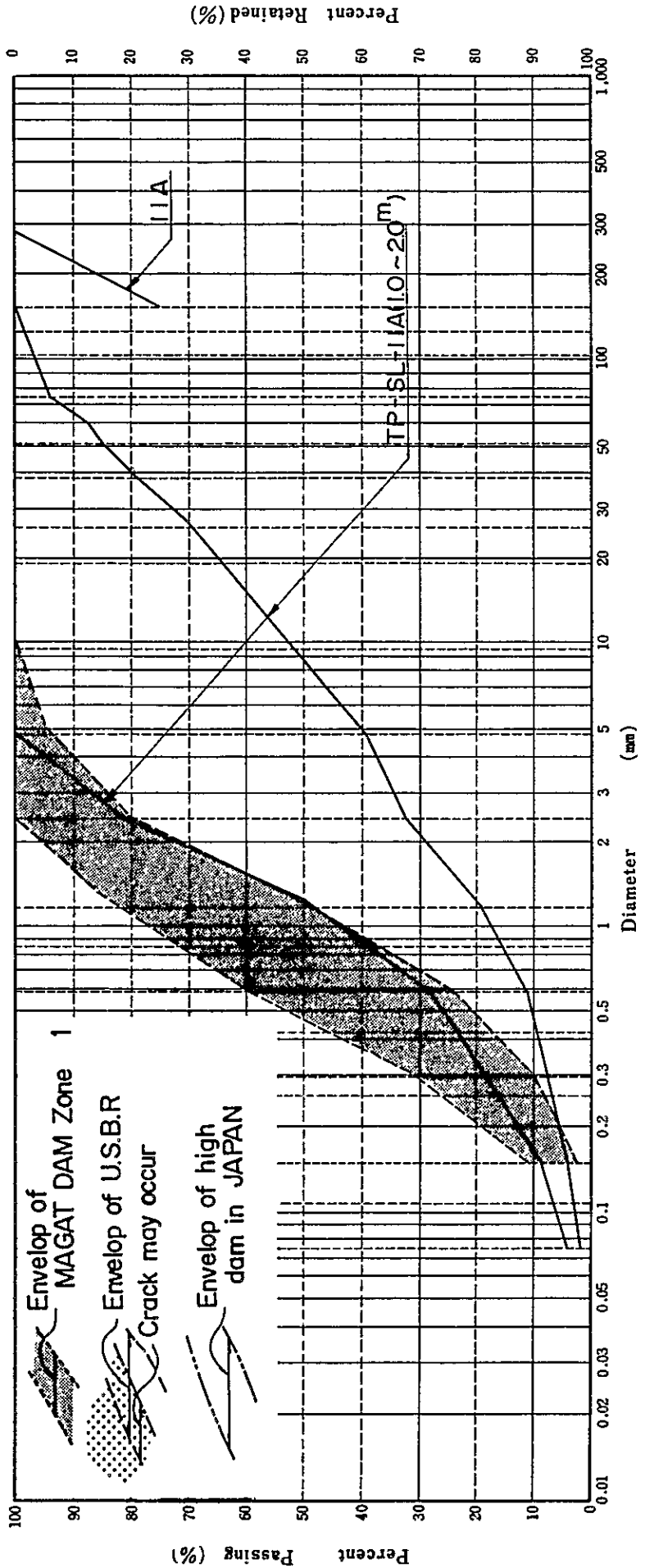
Clay to Silt (Fines)	Sand		Gravel		Cobbles	Boulders
	fine	medium	coarse	fine	coarse	

GRADATION TEST

TP-SL-11

Sample No	
D ₅₀ (mm)	
D ₂₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c ((D ₃₀) ³ /D ₁₀ D ₆₀)	
D _{max} (mm)	

Sieve & Screen	74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19 ^{mm}	2.0 ^{mm}	2.38 ^{mm}	4.76 ^{mm}	9.52 ^{mm}	3/8"	1"	1 1/2"	2"	3"	4"	5"	6"	8"	



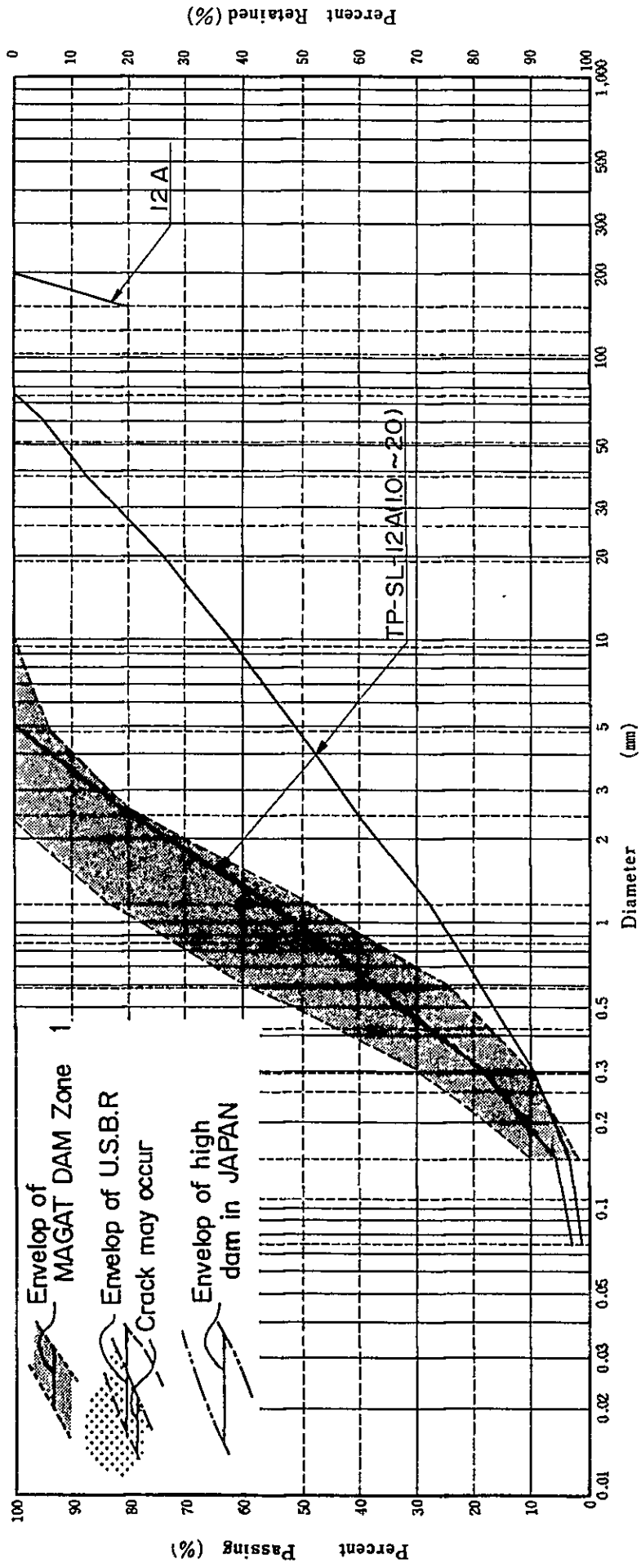
Clay to Silt (Fines)	Sand	Gravel		Cobbles	Boulders
	fine	medium	coarse	fine	coarse

GRADATION TEST

TP-SL-12

Sample No.	
D ₁₀ (mm)	
D ₃₀ (mm)	
D ₆₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c ((D ₃₀) ² /D ₁₀ D ₆₀)	
D _{max} (mm)	

Sieve & Screen	74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19 mm	2.0 mm	2.36 mm	4.76 mm	9.52 mm	19.1 mm	25.4 mm	38.1 mm	50.8 mm	76.2 mm	101.6 mm	127 mm	152 mm	
	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	3/8"	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	8"



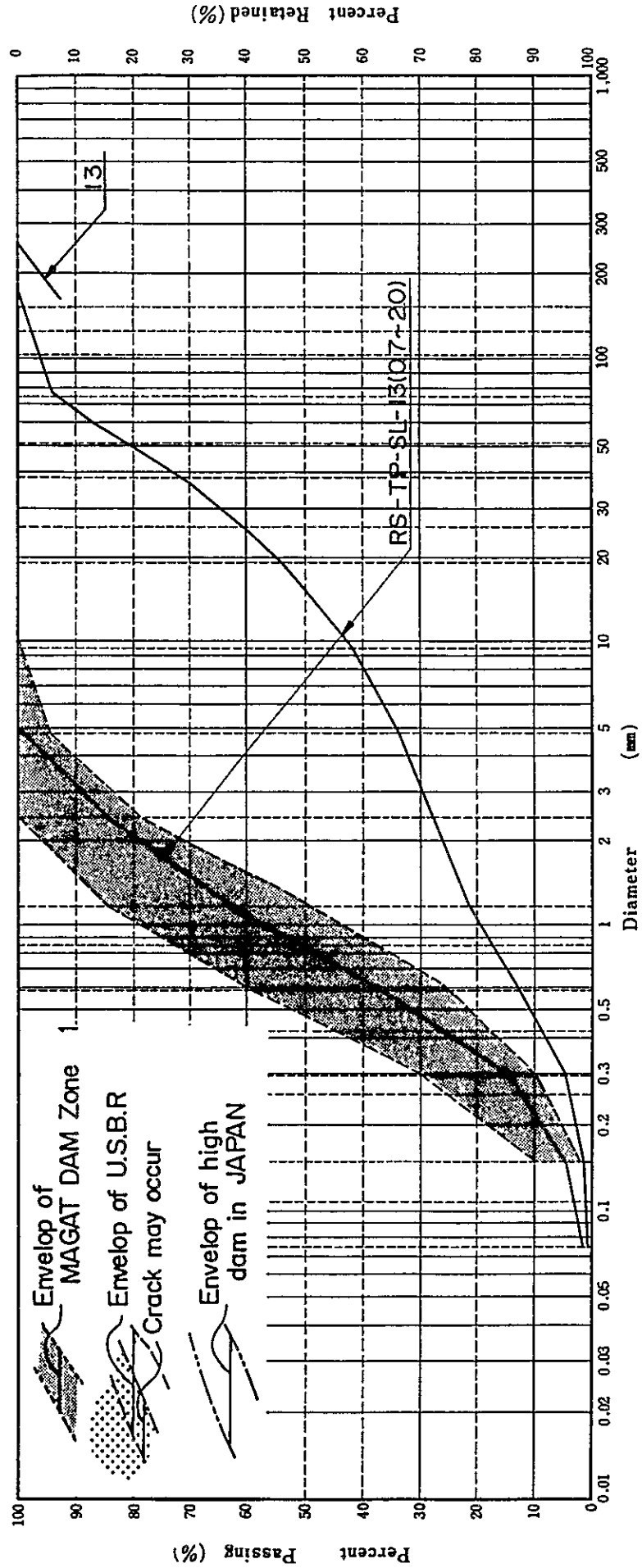
Clay to Silt (Fines)	Sand		Gravel		Cobbles	Boulders
	fine	medium	coarse	fine		

GRADATION TEST

TP-SL-13

Sample No.	
D ₆₀ (mm)	
D ₃₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c ((D ₃₀) ² /D ₁₀ D ₆₀)	
D _{max} (mm)	

Sieve & Screen	74μ	105μ	149μ	250μ	297μ	420μ	590μ	840μ	1.19 ^{mm}	2.0 ^{mm}	2.38 ^{mm}	4.76 ^{mm}	9.52 ^{mm}	19.1 ^{mm}	25.4 ^{mm}	38.1 ^{mm}	50.8 ^{mm}	76.2 ^{mm}	101.6 ^{mm}	127 ^{mm}	152 ^{mm}
	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	3/8"	3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	8"



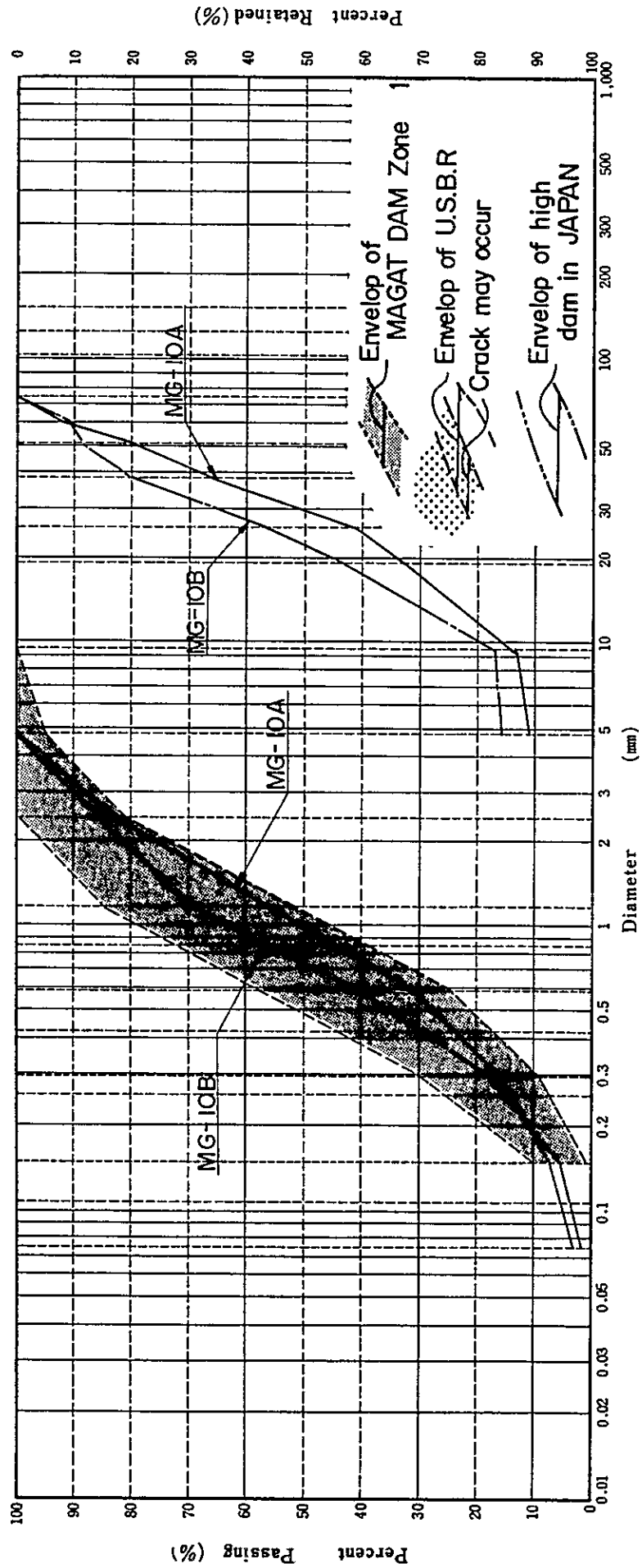
Clay to Silt (Fines)	Sand		Gravel		Cobbles	Boulders
	fine	medium	coarse	coarse		

GRADATION TEST

MG-10 (Sand & Gravel)

Sample No.	
P ₆₀ (mm)	
D ₃₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c [(D ₃₀) ² /D ₁₀ D ₆₀]	
D _{max} (mm)	

74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19 ^{mm}	2.0 ^{mm}	2.38 ^{mm}	4.76 ^{mm}	9.52 ^{mm}	19.1 ^{mm}	25.4 ^{mm}	38.1 ^{mm}	50.8 ^{mm}	76.2 ^{mm}	101.6 ^{mm}	127 ^{mm}	152 ^{mm}
#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	#4	3/8"	1"	1 1/2"	2"	3"	4"	5"	6"	8"



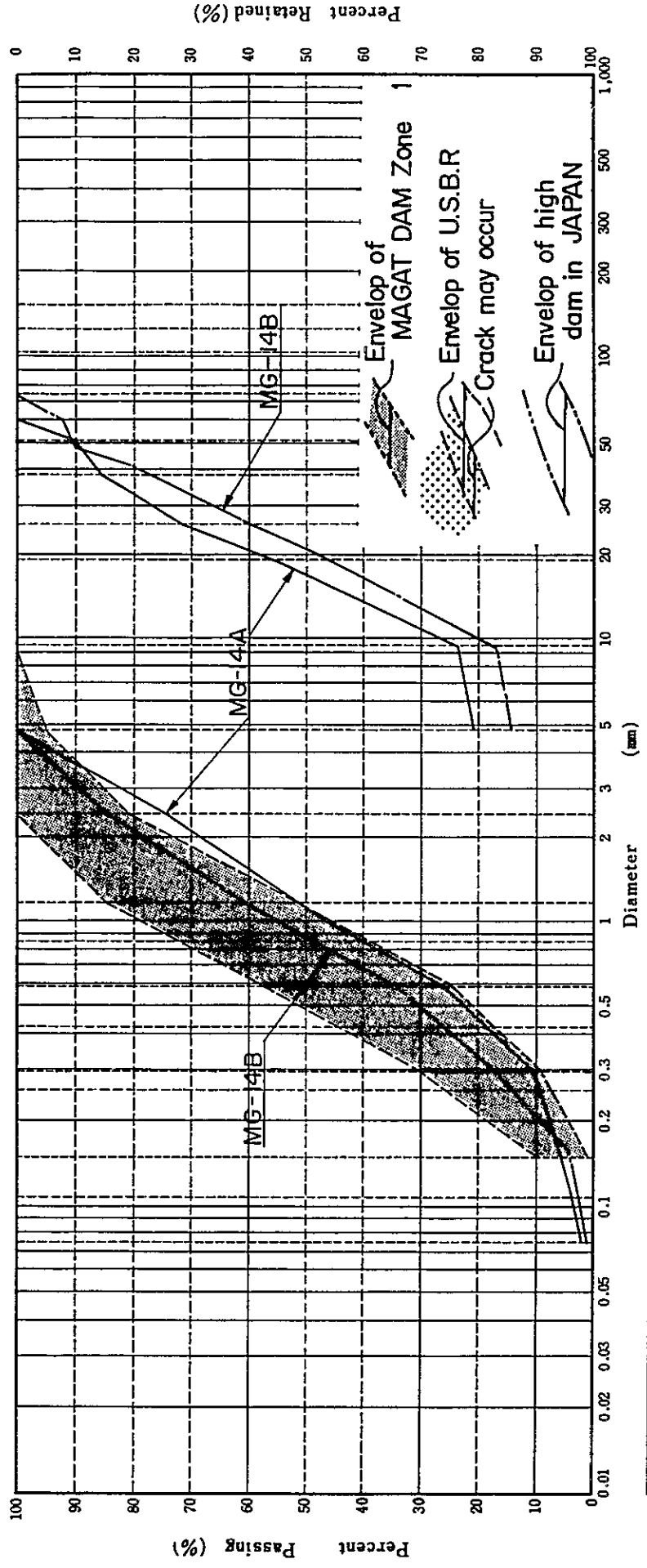
Clay to Silt (Fines)	Sand		Gravel		Boulders
	fine	medium	coarse	fine	

GRADATION TEST

MG-14 (Sand & Gravel)

Sample No.	
D ₅₀ (mm)	
D ₇₅ (mm)	
D ₁₅₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c ((D ₃₀ ² /D ₁₀ D ₆₀))	
D _{max} (mm)	

Sieve & Screen	74 μ	105 μ	149 μ	200 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19 ^{mm}	2.0 ^{mm}	2.36 ^{mm}	4.76 ^{mm}	9.52 ^{mm}	19.1 ^{mm}	25.4 ^{mm}	38.1 ^{mm}	50.8 ^{mm}	76.2 ^{mm}	101.6 ^{mm}	127 ^{mm}	152 ^{mm}	



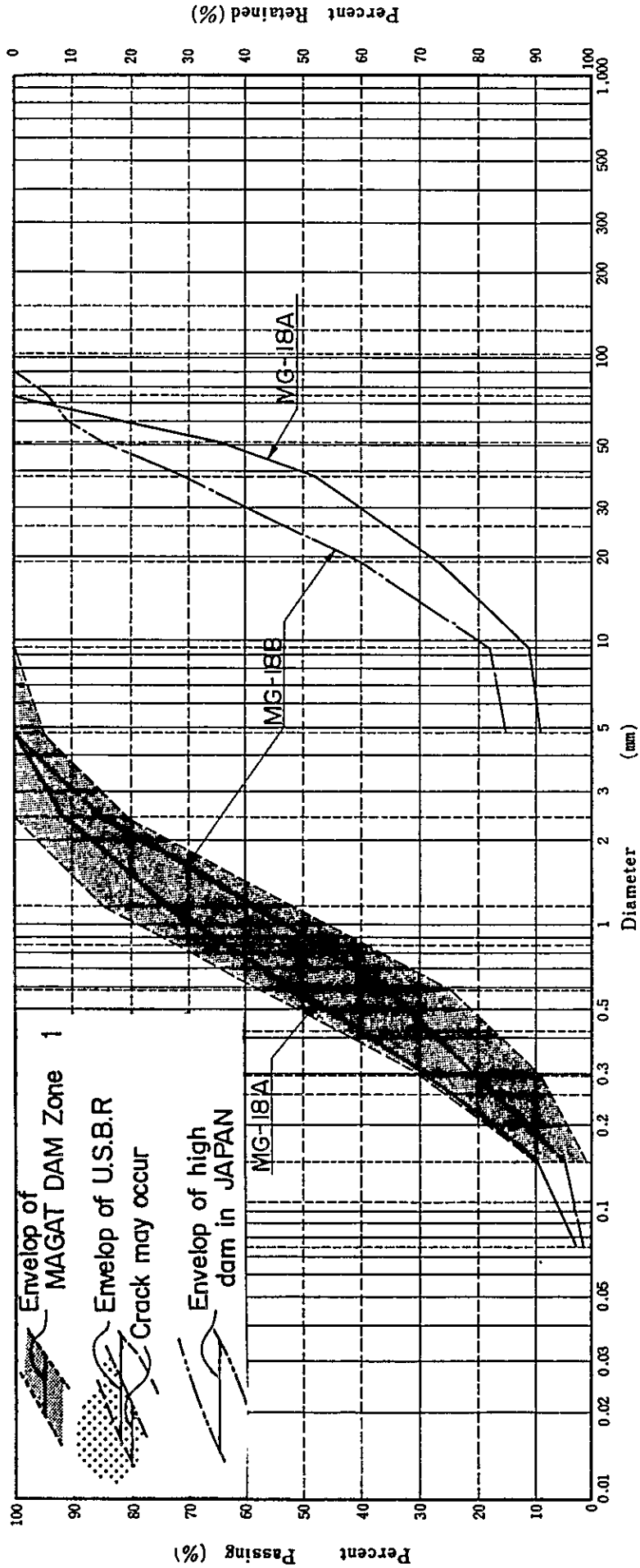
Clay to Silt (Fines)	Sand			Gravel		Cobbles	Boulders
	fine	medium	coarse	fine	coarse		

GRADATION TEST

MG-18 (Sand & Gravel)

Sample No.	
D ₁₀ (mm)	
D ₃₀ (mm)	
D ₅₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c ((D ₃₀ ² /D ₁₀ D ₆₀))	
D _{max} (mm)	

Sieve & Screen	74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19 ^{mm}	2.0 ^{mm}	2.38 ^{mm}	4.76 ^{mm}	9.52 ^{mm}	19.1 ^{mm}	25.4 ^{mm}	38.1 ^{mm}	50.8 ^{mm}	76.2 ^{mm}	101.6 ^{mm}	127 ^{mm}	152 ^{mm}		
	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	#2	#1	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	8"



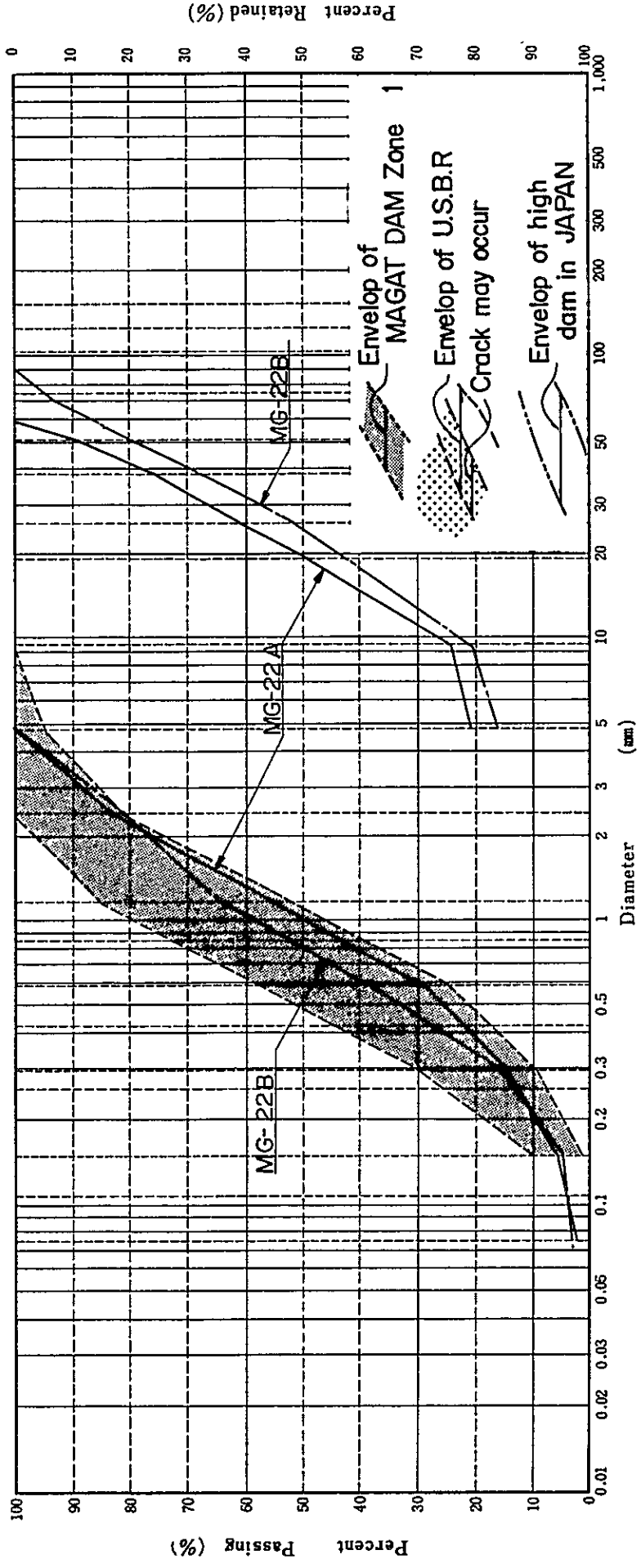
Clay to Silt (Fines)	Sand		Gravel		Cobbles	Boulders
	fine	medium	coarse	fine		

GRADATION TEST

MG-22 (Sand & Gravel)

Sample No.	
D ₆₀ (mm)	
D ₅₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c ((D ₃₀) ² /D ₁₀ D ₆₀)	
D _{max} (mm)	

	74μ	105μ	149μ	250μ	297μ	420μ	590μ	840μ	1.19 ^{mm}	2.0 ^{mm}	2.38 ^{mm}	4.76 ^{mm}	9.52 ^{mm}	19.1 ^{mm}	25.4 ^{mm}	38.1 ^{mm}	50.8 ^{mm}	76.2 ^{mm}	101.6 ^{mm}	127 ^{mm}	152 ^{mm}	
Sieve & Screen	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	#4	3/8"	1/2"	1"	1 1/2"	2"	3"	4"	5"	6"	8"



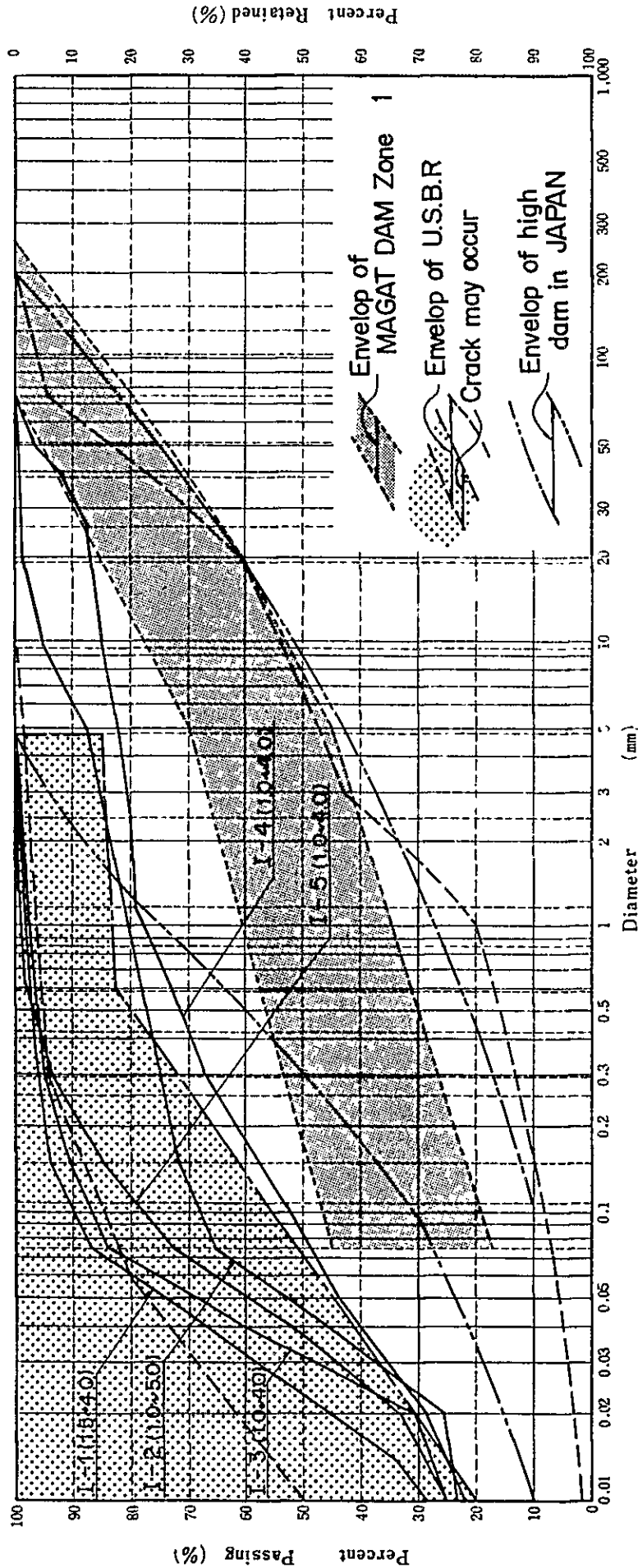
Clay to Silt (Fines)	Sand		Gravel		Cobbles		Boulders	
	fine	medium	coarse	coarse	fine	coarse		

GRADATION TEST

MATUNO BORROW - I

Sample No.	
D ₆₀ (mm)	
D ₃₀ (mm)	
D ₁₀ (mm)	
C _u (D ₆₀ /D ₁₀)	
C _c (D ₃₀ - D ₁₀) / (D ₆₀ - D ₃₀)	
D _{max} (mm)	

Sieve & Screen	74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19 mm	2.0 mm	2.36 mm	4.76 mm	9.52 mm	19.1 mm	25.4 mm	38.1 mm	50.8 mm	76.2 mm	101.6 mm	152 mm	
	#200	#100	#60	#40	#30	#20	#16	#10	#8	#4	3/8"	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	8"



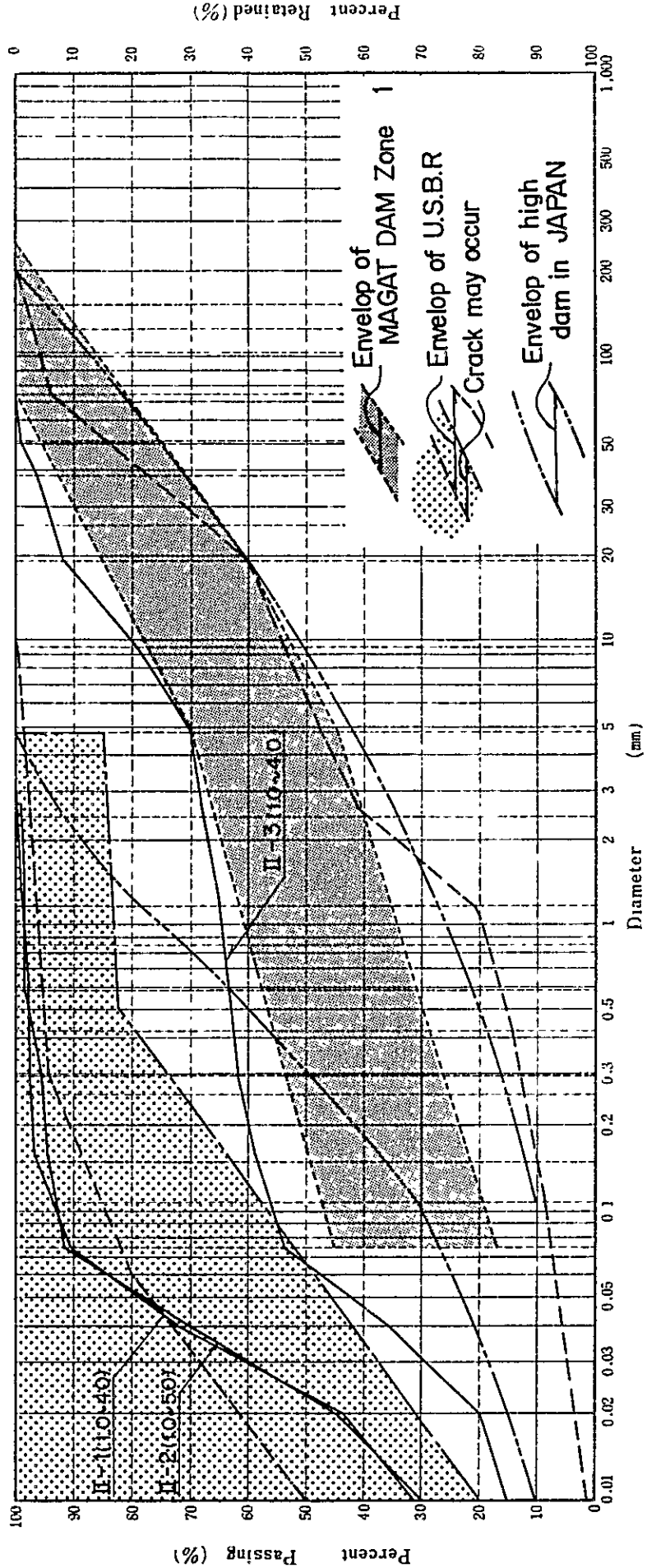
Clay to Silt (Fines)	Sand		Gravel		Cobbles	Boulders
	fine	medium	coarse	fine		

GRADATION TEST

MATUNO BORROW - II

Sample No	
D ₆₀	
D ₅₀	
D ₄₀	
C _u	
C _c	
D _{max}	

Sieve & Screen	mm	mm	mm	mm	mm	mm	mm	mm	mm
	75	105	149	250	425	590	840	1190	1900
	#200	#100	#50	#40	#30	#20	#16	#10	#4
	3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	8"
	19.1	25.4	38.1	50.8	76.2	101.6	127	152	



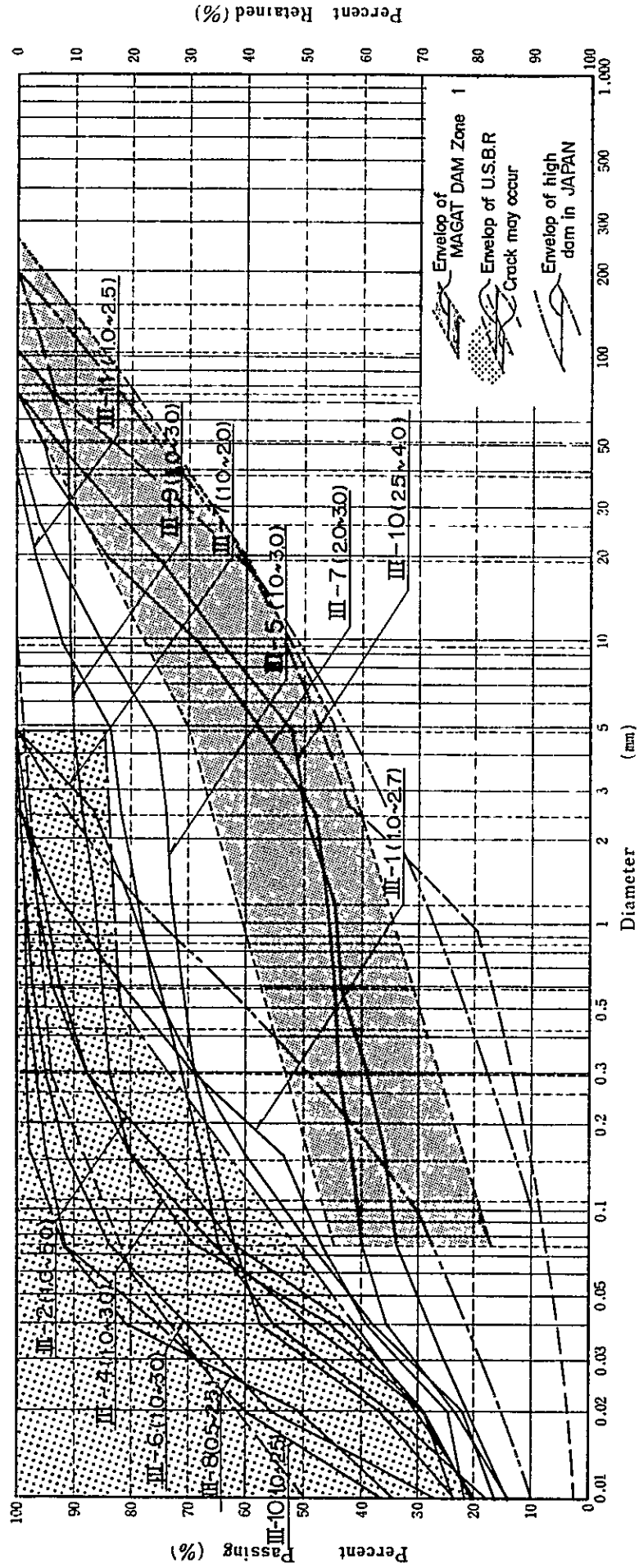
Clay to Silt (Fines)	Sand	Gravel	Cobbles	Boulders
fine	medium	fine	coarse	

GRADATION TEST

MATUNO BORROW - III

Sample No.	
D ₆₀	mm
D ₃₀	mm
D ₁₀	mm
C _u = D ₆₀ /D ₁₀	
C _c = (D ₃₀ - D ₁₀) / (D ₆₀ - D ₃₀)	
D _{max}	mm

Sieve & Screen	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	4.75 mm	9.5 mm	19.1 mm	38.1 mm	50.8 mm	76.2 mm	101.6 mm	127 mm	152 mm	



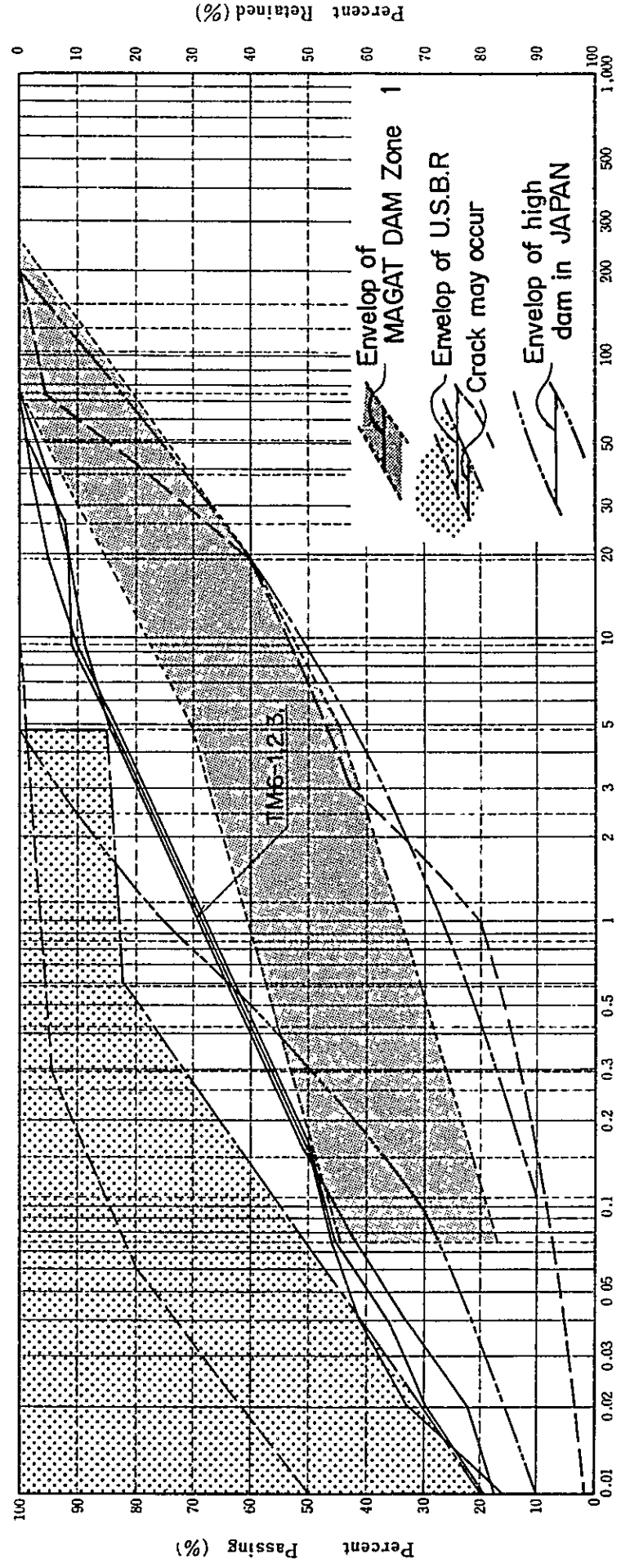
Clay to Silt (Fines)	Sand		Gravel		Cobbles	Boulders
	fine	medium	coarse	fine		

GRADATION TEST

MATUNO BORROW - B-I

Sample No	
D ₁₀₀	
D ₇₅	
D ₆₀	
C _u	
C _c	
D _{max}	

Sieve & Screen	74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19 μ	2.0 μ	2.38 μ	4.76 μ	9.52 μ	19.1 μ	25.4 μ	38.1 μ	50.8 μ	76.2 μ	101.6 μ	127 μ	152 μ
	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	3/8"	1/2"	2"	3"	4"	5"	6"	8"		



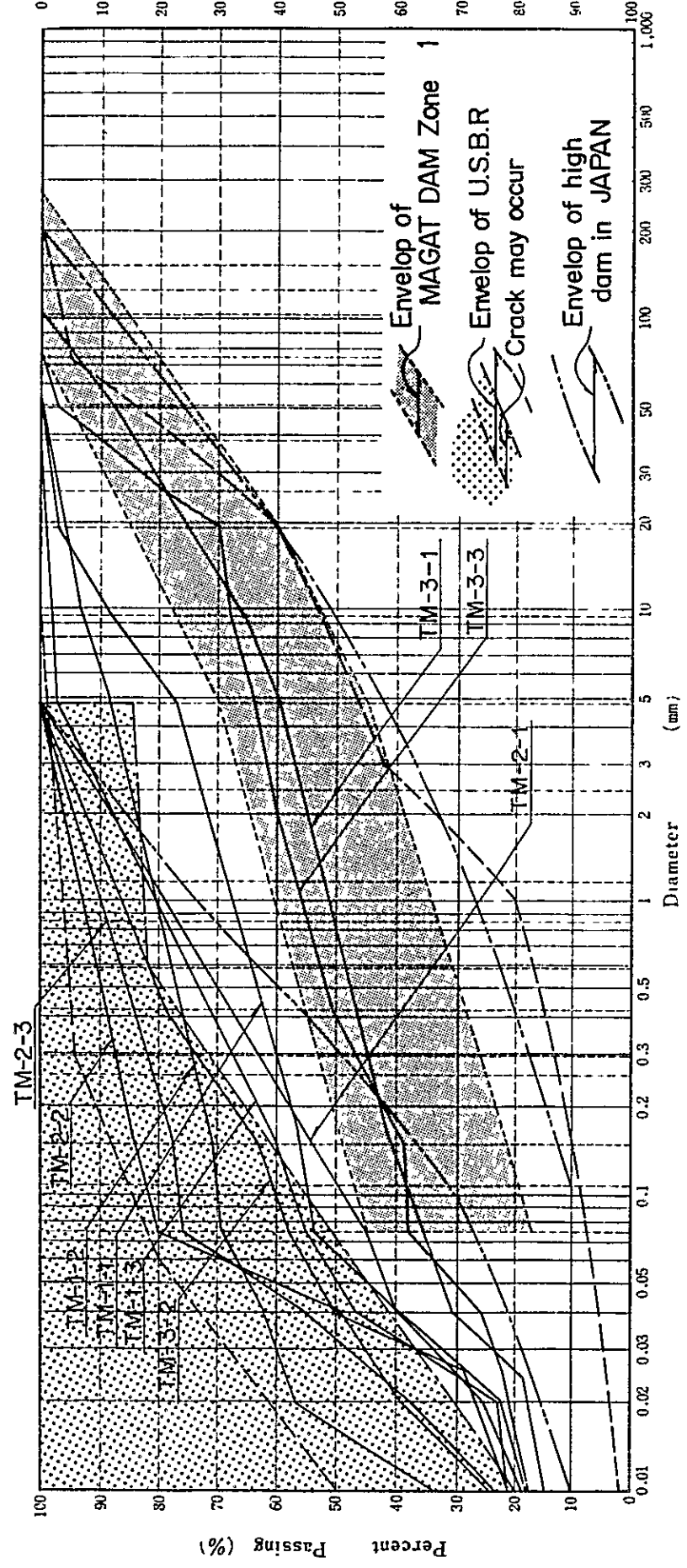
Clay to Silt (Fines)	Sand		Gravel		Boulders	
	fine	coarse	fine	coarse	Cobbles	Boulders

GRADATION TEST

MATUNO BORROW - B - II

Sample No.	
D ₁₀₀	
D ₇₅	
D ₆₀	
D ₄₀	
D ₃₀	
D ₂₅	
D ₂₀	
D ₁₅	
D ₁₀	
D _{7.5}	
D ₆	
D _{4.75}	
D _{3.75}	
D _{2.5}	
D _{1.5}	
D _{0.75}	

Sieve & Screen	74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	1.19	2.0	2.38	4.76	9.52	19.1	25.4	38.1	50.8	76.2	101.6	127.0	152	
	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	3/4"	3/8"	1"	1 1/2"	2"	3"	3 1/2"	4"	5"	6"	8"



Clay to Silt (Fines)	Sand	Gravel	Cobbles	Boulders
	fine medium coarse	fine coarse		

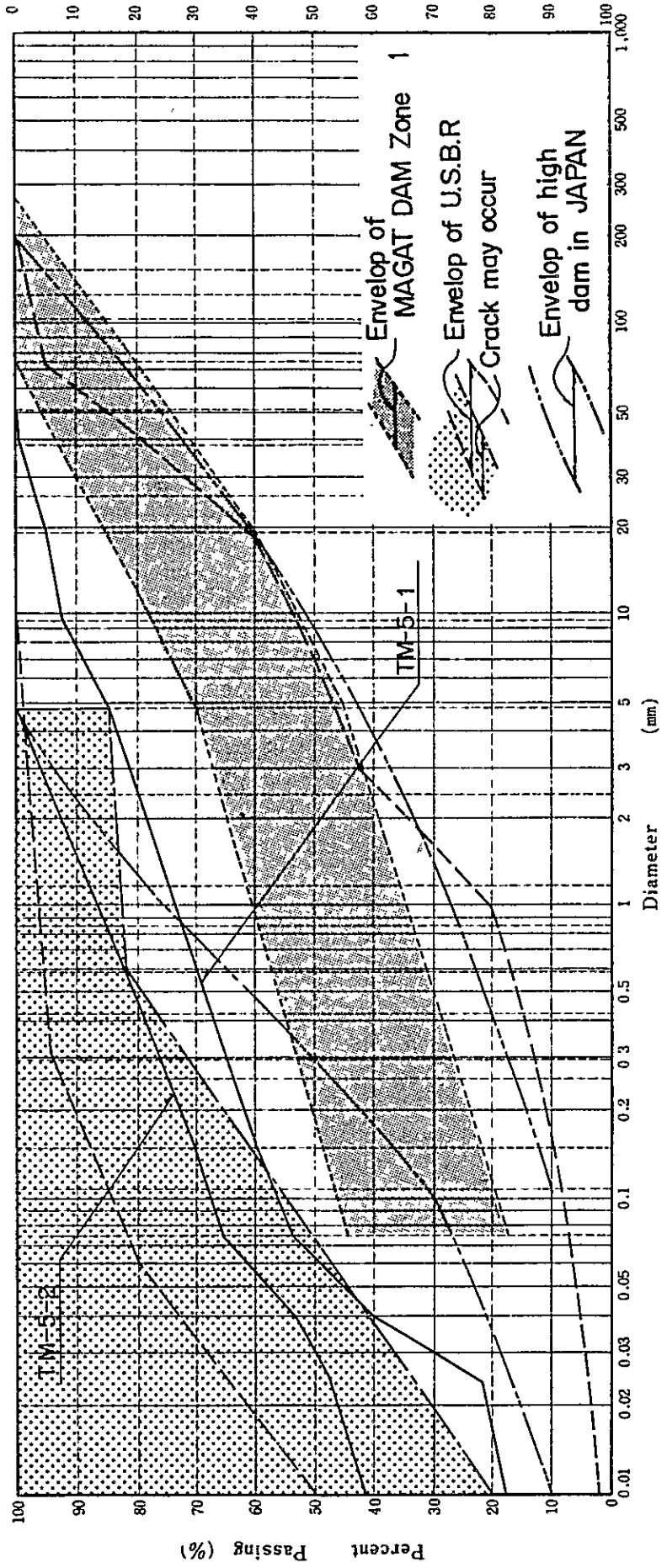


GRADATION TEST

MATUNO BORROW - B - III

Sample No	
D ₅₀	
D ₇₅	
D ₁₀₀	
C _u (D ₆₀ /D ₁₀)	
C _c (D ₃₀ /D ₁₀)	
D _{max}	

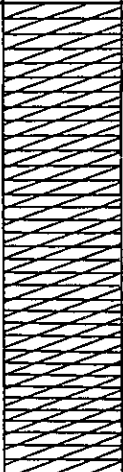
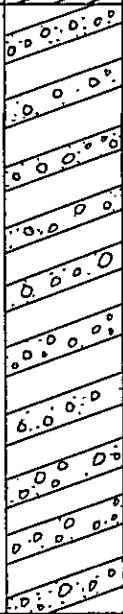
	74 μ	105 μ	149 μ	250 μ	297 μ	420 μ	590 μ	840 μ	119 μ	2.0	2.36	4.76	9.52	19.1	25.4	38.1	50.8	76.2	101.6	127	152
	#200	#100	#60	#50	#40	#30	#20	#16	#10	#8	#4	#2	#1.18	#0.85	#0.6	#0.425	#0.3	#0.25	#0.15	#0.106	#0.075



Clay to Silt (Fines)	Sand		Gravel		Cobbles	Boulders
	fine	medium	coarse	fine		

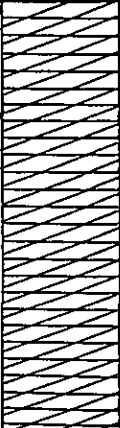
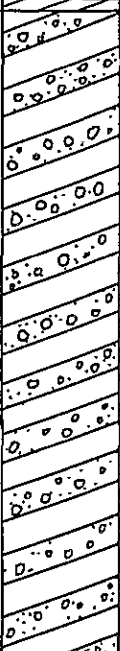
LOG OF TEST PIT

HOLE NO. TM-1

Project		Matuno River Development Project		Feature		Dam, Core Material		
Area Designation				Borrow B-II		Ground E.L.		
Method of Excavation				Test pitting		Depth of Water Level		None
Dates of Excavation				Dec. 8, 1982		Logged by		WLL
DEPTH (M)	CLASSIFICATION SYMBOL		SIZE & TYPE OF SAMPLED TAKEN	CLASSIFICATION & DESCRIPTION OF MATERIALS				
	LETTER	GRAPHIC						
0.00 - 1.30	OL		0 - 1.0 M *(60 kg) 1.0 M (TM-1-1)	0.00 - 1.30 m. Silty to sandy clay soil with organic material. Medium plastic and fine-grained soil.				
1.30 - 3.00	GC		1.0 - 2.0 M (60 kg) 2.0 M (TM-1-2) 2.0 - 3.0 M (60 kg) 3.0 M (TM-1-3)	1.30 - 3.00 m. Residual soil of conglomerate siltstone and sandstone interbeds. Silty, sandy and gravelly soil. Gravel fragments are extreme to totally weathered. Coarse-grained soil. Gravel: max. size 100 - 120 m/m φ10 - 60 m/m : 40 - 60%				
				* Samples (3 x 60 kg) will be utilized for laboratory test.				


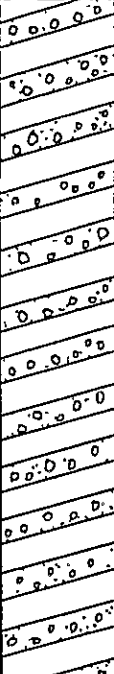
LOG OF TEST PIT

HOLE NO. TM-2

Project		Matuno River Development Project		Feature	Dam, Core Material	
Area Designation			Borrow B-II		Ground EL.	
Method of Excavation			Test pitting		Depth of Water Level	None
Dates of Excavation			Dec. 10, 1982		Logged by	WLL
DEPTH (M)	CLASSIFICATION SYMBOL		SIZE & TYPE OF SAMPLED TAKEN	CLASSIFICATION & DESCRIPTION OF MATERIALS		
	LETTER	GRAPHIC				
0.00 1.0 1.2	OL		0 - 1.0 M * (60 kg)	0.00 - 1.20 m. Sandy to silty clay soil with minor amount of organic material. Medium plastic and fine-grained soil.		
			1.0 M (TM-2-1)			
1.2 2.0 3.0	GC		1.0 - 2.0 M (60 kg)	1.20 - 3.00 m. Aresidual soil of conglomerate, siltstone and sandstone interbeds. Gravelly, sandy to silty clay soil. Coarse-grained. Residual gravel: max. size 50 m/m φ10 - 30 m/m : 10 - 30%		
			2.0 M (TM-2-2)			
			2.0 - 3.0 M (60 kg)			
			3.0 M (TM-2-3)			
				* Samples (3 x 60 kg) will be utilized for laboratory test.		

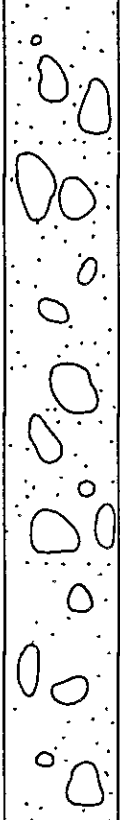
LOG OF TEST PIT

HOLE NO. TM-3

Project		Matuno River Development Project		Feature		Dam, Core Material		
Area Designation				Borrow B-II		Ground EL.		
Method of Excavation				Test pitting		Depth of Water Level		None
Dates of Excavation				Dec. 16, 1982		Logged by		WLL
DEPTH (M)	CLASSIFICATION SYMBOL		SIZE & TYPE OF SAMPLED TAKEN	CLASSIFICATION & DESCRIPTION OF MATERIALS				
	LETTER	GRAPHIC						
0.00 1.0 1.10	OL		0 - 1.0 M *(60 kg)	0.00 - 1.10 m. Sandy to silty clay soil with organic material, medium plastic when slightly wet. Fine-grained soil.				
1.10			1.0 M (TM-3-1)					
2.0	GC		1.0 - 2.0 M (60 kg)	1.10 - 3.00 m. Gravelly clay, it is a residual product of conglomerate. Slightly plastic and coarse-grained soil. Gravel : max. size 150 m/m φ10 - 80 m/m : 50 - 70%				
2.0			2.0 M (TM-3-2)					
3.0			2.0 - 3.0 M (60 kg)					
3.0			3.0 M (TM-3-3)					
				* Samples (3 x 60 kg) will be utilized for laboratory test.				


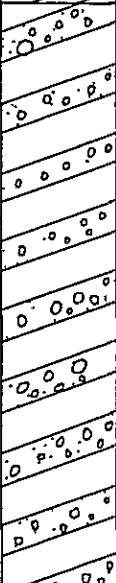
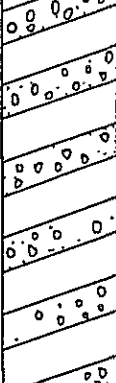
LOG OF TEST PIT

HOLE NO. TM-4

Project		Matuno River Development Project		Feature		Dam, Core Material		
Area Designation				Borrow B-III		Ground EL.		
Method of Excavation				Test pitting		Depth of Water Level		None
Dates of Excavation				Dec. 10, 1982		Logged by		WLL
DEPTH (M)	CLASSIFICATION SYMBOL		SIZE & TYPE OF SAMPLED TAKEN	CLASSIFICATION & DESCRIPTION OF MATERIALS				
	LETTER	GRAPHIC						
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.30	GP		No samples taken	0.0 – 2.30 m. Terrace and Talus deposits, consist of pebble to boulder limestone fragments with largest sizes averaging 77 cm. It is binded about 20% silty clay soil.				


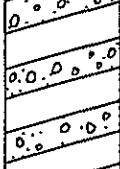
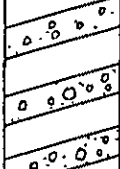
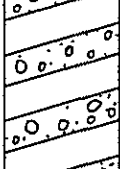

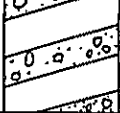
LOG OF TEST PIT

HOLE NO. TM-5

Project		Matuno River Development Project		Feature		Dam, Core Material	
Area Designation		Borrow B-III		Ground EL.			
Method of Excavation		Test pitting		Depth of Water Level		None	
Dates of Excavation		Dec. 12, 1982		Logged by		WLL	
DEPTH (M)	CLASSIFICATION SYMBOL		SIZE & TYPE OF SAMPLED TAKEN	CLASSIFICATION & DESCRIPTION OF MATERIALS			
	LETTER	GRAPHIC					
0.3	OL			0.00 – 0.30 m. Sandy to silty clay soil with minor amounts of organic materials. Medium plastic, fine grained soil.			
1.0	GC		1.0 M *2.0 kg and 60 kg (TM-5-1)	0.30 – 3.00 M. Gravelly, silty to sandy clay soil, and slightly plastic. Coarse-grained soil.			
2.0			2.0 M 2.0 kg and 60 kg (TM-5-2)	Gravel : max. size : 100 – 200 m/m φ10 – 80 m/m : 40 – 60%			
3.0							
				* Samples (2 x 62 kg) will be utilized for laboratory test.			

LOG OF TEST PIT

HOLE NO. TM--6

Project		Matuno River Development Project		Feature		Dam, Core Material		
Area Designation				Borrow B-I		Ground EL.		
Method of Excavation				Test pitting		Depth of Water Level		None
Dates of Excavation				Dec. 14, 1982		Logged by		WLL
DEPTH (M)	CLASSIFICATION SYMBOL		SIZE & TYPE OF SAMPLED TAKEN	CLASSIFICATION & DESCRIPTION OF MATERIALS				
	LETTER	GRAPHIC						
1.0	GC		0 - 1.0 m * (60kg)	0.00 - 3.0 m. Residual product of conglomerate, gravelly silty clay soil. Coarse-grained soil. Gravel : max. size : 150 m/m φ10 - 80 m/m : 40 - 60%				
			1.0 m (TM-6-1)					
			1.0 - 2.0 m (60 kg)					
2.0			2.0 m (TM-6-2)					
			2.0 - 3.0 m (60 kg)					
3.0			3.0 m (TM-6-3)					
				* Samples (3 x 60 kg) will be utilized for laboratory test.				

DRILL LOG

HOLE NO. B-1

SHEET NO. 1 OF 2

PROJECT		MATUNO RIVER DEVELOPMENT PROJECT		DEPTH	50.0 m	ELEVATION	514.458 m
LOCATION		Left bank slope, Damsite B		COORDINATE		DRILL NO.	
GROUND WATER LEVEL		Ground Water Level in the hole -23.25 m		DATE		LOGGED	
DEPTH (m)	LITHOLOGY	DESCRIPTION	CORRECTION	RECOVERY (%)	WATER PRESSURE TEST		DEPTH (m)
					WATER PRESSURE (kg/cm ²)	K-VALUE	
1.50	Light brown Heavily weathered Sandstone	Heavily weathered, medium to coarse-grained sand, containing weathered gravel of $\phi 1 - 2$ cm.					
2.00	Weathered Gravels	Moderately weathered conglomerate					
3.00		Core samples recovered are all gravels in the conglomerate					
4.00		The gravels range: $\phi 1 - 4$ cm, 10 cm at max.					
5.00		They are fresh and hard, having water-stain on their surface and cracks					
6.00							
7.00							
8.00							
9.00							
10.00							
15.00		Carbonic Sandstone (D ₁ - C _L)	Carbonic sandstone, fine-grained in upper part, coarse-grained in lower part				
15.75	Fresh and crackless, easily broken to piece during core sampling						
18.00	Core sample recovered are only gravels in the conglomerate, which are fresh and hard, $\phi 1 - 2$ cm, subangular.						
18.70	Slightly weathered fine pebbles and sandy core samples are recovered						
20.00	Rather fresh Conglomerate (C _L)	Core samples recovered are only gravels in the conglomerate.					
21.75		Gravels are fresh and hard, partly water-stained on their surface.					
23.00	Sandstone (D ₁ - C _L)	Gravels are $\phi 1 -$ several cm max. $\phi = 8$ cm					
25.00							
27.00	Rather fresh Conglomerate (C _L)						
28.00							
30.00							

HOLE NO. B-1

① If the length of the core is more than 10 m, total core length is 100 m. (If the length of the core is less than 10 m, total core length is the length of the core.)
 ② The water pressure test was conducted at 10 m intervals.
 ③ The water pressure test was conducted at 10 m intervals.

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DRILL LOG

HOLE NO B-1 SHEET NO. 2 OF 2

ELEVATION	DEPTH	FORMATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER	APPROPRIATE LEVEL	CORRECTION	R Q D	WATER PRESSURE TEST (LUCEON VALUE)					DEPTH				
										1	2	3	4	5					
	30.65		D1-CL Sandstone		Medium grained sandstone similar to those in 21.75 - 23.0 m upper part is slightly weathered lower part is fresh														
	31.70		CL																
	32		Conglomerate (CL)		Fresh conglomerate Core samples recovered are only gravels in the conglomerate Gravels are fresh and hard 6.1 - 4 cm, sometimes 3 - 7 cm														
	33																		
	34																		
	35	35.0																	
	36																		
	37																		
	38																		
	39																		
	40	40.0																	
	41																		
	42																		
	43																		
	44																		
	45	45.0																	
	46																		
	47																		
	48	48.45																	
	49	49.10	Sandstone CL		Fine- to coarse-grained sandstone, intercalated														
	50	50.0	Conglomerate CM		Core samples contain gravels and sandy matrix														

HOLE NO. B-1

DRILL LOG

HOLE NO B-2

SHEET NO 1 OF 3

MATUNO RIVER DEVELOPMENT PROJECT				DEPTH	70.00 m	ELEVATION	525.308	
CORRECTED				INCLINATION		DRILLER		
DATE FROM				TO		LOCATED		
DEPTH (m)	CORRECTION	LITHOLOGY	DESCRIPTION	COR. REMARKS	R Q D	WATER PRESSURE TEST		DEPTH (m)
						DEPTH (m)	VALUE	
1		Conglomerate class D ₂	Sandy, containing weathered gravels light brown.					1
2		Sandstone class D ₂	Sandy, weathered, light brown.					2
3			Core samples recovered are all gravels in the conglomerate					3
4			Gravels are of φ1 - 3 cm					4
5	5.0	Weathered Conglomerate class D ₁	Gravels are generally hard, water-stained on their surface					5
6								6
7								7
8								8
9	9.15	Weathered Sandstone Brown	Weathered, fine-grained sandstone					9
10	10.0							10
11	10.70							11
12		Weathered Conglomerate class D ₁	Weathered					12
13								13
14								14
15	15.0							15
16	16.00	Weathered Sandstone	Brown, weathered fine-grained sandstone (D ₂)					16
17	16.80							17
18								18
19								19
20	20.0	Weathered Conglomerate class D ₁	Weathered					20
21								21
22								22
23								23
24								24
25	25.0							25
26								26
27	27.0	Weathered Sandstone	Brown coloured, class D ₂					27
28	27.4							28
29		Weathered Conglomerate class D ₁ -C _L	Weathered					29
30	30.0							30

HOLE NO. B-2

* R Q D : Rock Quality Designation. R Q D : Total length of sections (over 10 cm) Total core length : 100
 † CORRECTION : mm under injection water pressure of 10 kg/cm²
 ‡ DEPTH AND ELEVATION are in meter
 § φ (mm) : in millimeter

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DRILL LOG

HOLE NO B-2

SHEET NO. 2 OF 3

ELEVATION	DEPTH	FORMATION	ROCK TYPE OR STRATIGRAPHY	COLUMN SECTION	DESCRIPTION	HOLE DIAMETER	CORRECTION	CORP. RECOVERY	R Q D	WATER PRESSURE TEST					DEPTH		
										TICKIMAGURE (1)							
30.0	31		Weathered Conglomerate Class D ₁ -C _L														
	32																
	33																
	34																
35.0	35		Coarse-grained Sandstone Class D ₂		Coarse-grained sandstone containing pebbles. Rather fresh, but brittle. Core recovered are fine pebbles and sand.												
	36																
38.50	38		Conglomerate, fresh Class C _L -C _M		Core samples are all gravels in the conglomerate. Gravels are fresh and hard with ϕ 1 - 2 cm. Rather fresh conglomerate.												
	39																
45.0	45		Calcareous Sandstone		Fossiliferous fine and medium-grained sandstone. Fresh, hard and sound, recovered core samples are broken to pieces of 3 - 10 cm length.												
	46																
50.0	50		Fresh Conglomerate Class C _M		Rather fresh conglomerate. Core samples obtained are all gravels. The gravels are fresh and hard, subangular, ϕ 1 - 3 cm. Calcareous sandstone of 7 cm in length is recovered at 49.2 m.												
	47																
	48																
	49																
	51																
	52																
	53																
	54																
	55																
	56																
64.75	64				Dark grey, soft sandstone fragment of 10 cm length is found at the depth of 64 m.												

HOLE NO. B - 2