

# DRILL LOG

SHEET NO. 1 OF 1

SITE		QUARRY SITE		HOLE NO.		JQ-2	
LATITUDE		0.00		LONGITUDE		0.00	
DATE				ELEVATION		0.00 m	
ANGLE		180° DOWN		DEPTH		15.00 m	
SCALE	DEPTH	ELEVATION	GEOLOGICAL AGE	DIRECTION	SLOPE	HORIZON	DATE
			ALLUVIAL			90°	
			Talus				
			Deposits				
			Flow Breccia				
			Classy Basalt				
			OLD LAVA				
			Weathered Basalt				
			Black glassy basalt.				
			Dark brownish grey humid soil.				
1	1.00	-1.25					
2	2.00	-2.00					
3	3.00	-3.00					
4	4.00	-4.00					
5	5.00	-5.00					
6	6.00	-6.00					
7	7.00	-7.00					
8	8.00	-8.00					
9	9.00	-9.00					
10	10.00	-10.00					
11	11.00	-11.00					
12	12.00	-12.00					
13	13.00	-13.00					
14	14.00	-14.00					
15	15.00	-15.00					
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NIPPON KOEI CO., LTD.,  
CONSULTING ENGINEERS, TOKYO


R.Q.D. is Rock Quality Designation. R.Q.D. (Total length of cylindrical cores longer than 10 cm / Total drill length) x 100%  
 KLUCEON VALUE is l/min/m under injection water pressure of 10kg/cm<sup>2</sup>  
 DEPTH and ELEVATION are in meter  
 DIAMETER is in millimeter

## DRILLING LOG OF JQ-2 (1/1)

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

# DRILLING LOG

SHEET NO. 1 OF 1

SITE		QUARRY SITE		HOLE No. JQ-3		ELEVATION		DEPTH						
LATITUDE	0.00	LONGITUDE	0.00	DATE	0.00	DEPTH	0.00m	30.00m						
ANGLE			DIRECTION		SLOPE		HORIZON $\sigma$							
SCALE	DEPTH	ELEVATION	GEOLOGICAL AGE	ROCK TYPE	COLUMN SECTION	ROCK CLASS	DESCRIPTION	DATE	BIT & DIAMETER	WATER LEVEL	CORE RECOVERY % (m)	R.O.D. X (m)	WATER PRESSURE TEST	
														ALLUVIAL
1	1.00													
2	2.00	-1.00												
3	3.00	-2.00												
4	4.00	-3.00												
5	5.00	-4.00												
6	6.00	-5.00												
7	6.50	-5.50												
8	8.00	-6.00												
9	9.00	-7.00												
10	10.00	-8.00												
11	11.00	-9.00												
12	12.00	-10.00												
13	13.00	-11.00												
14	14.00	-12.00												
15	15.00	-13.00												
16	16.00	-14.00												
17	17.00	-15.00												
18	18.00	-16.00												
19	19.00	-17.00												
20	20.00	-18.00												
21	21.00	-19.00												
22	22.00	-20.00												
23	23.00	-21.00												
24	24.00	-22.00												
25	25.00	-23.00												
26	26.00	-24.00												
27	27.00	-25.00												
28	28.00	-26.00												
29	29.00	-27.00												
30	30.00	-28.00												

## DRILLING LOG OF JQ-3 (1/1)

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT  
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Fig. B-71

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R.O.D is Rock Quality Designation, R.O.D=(total length of cylindrical cores longer than 10 cm)/(total drill length) x 100%  
 KLUCCON VALUE is 1/air/m under injection water pressure of 10kg/cm<sup>2</sup>  
 DEPTH and ELEVATION are in meter  
 DIAMETER is in millimeter

# DRILL LOG

SHEET NO. 1 OF 1

SITE		PAILES TREATMENT PLANT		HOLE No.		JTP-1			
LATITUDE	LONGITUDE	0.00	0.00	ELEVATION	DEPTH	70.55m	20.00m		
DATE	DIRECTION		SLOPE		WATER PRESSURE TEST				
FROM 8. June, 1990 to 11. June, 1990	27° N 130° W		90° E						
ANGLE	DIRECTION		SLOPE		CORE RECOVERY				
100° UP DOWN	90°		90°						
SCALE	DEPTH	ELEVATION	GEOLOGICAL AGE	ROCK TYPE	ROCK CLASS	DESCRIPTION	DATE	BIT & DIAMETER	WATER LEVEL
1	0	70.55		Residual Soil	D	Reddish brown residual soil. Up to 0.70m fragments of basalt white weathered rock are included.			
2	0.70	69.85		Basalt	CL	Intensely weathered vesicular basalt. Light yellowish grey, earthy cores recovered.			
3	1.40	69.15		Weathered Basalt	CL	Light grey to grey, intensely weathered vesicular basalt. Fragile fragmental cores are recovered.			
4	2.10	68.45		Basalt	CL	Moderately weathered vesicular basalt. Cracks are stained with water. Partially fragmental cores are recovered.			
5	2.80	67.75		Basalt	CL	Dark grey, weakly weathered vesicular basalt. Fine olivine phenocrysts are recovered.			
6	3.50	67.05		Basalt	CL	Brecciated and weathered to brown grey earthy material at 8.40m. Less vesicular from 9.20 to 11.2			
7	4.20	66.35		Weathered Basalt	D	Intensely weathered basalt. Fragmental to earthy cores are recovered.			
8	4.90	65.65		Basalt	CL	Slightly weathered basalt. Partially weathered and broken fragments.			
9	5.60	64.95		Basalt	CH	Less vesicular from 15.90 to 16. Cracky below 17.1m.			
10	6.30	64.25		Basalt	CH				
11	7.00	63.55		Basalt	CH				
12	7.70	62.85		Basalt	CH				
13	8.40	62.15		Basalt	CH				
14	9.10	61.45		Basalt	CH				
15	9.80	60.75		Basalt	CH				
16	10.50	60.05		Basalt	CH				
17	11.20	59.35		Basalt	CH				
18	11.90	58.65		Basalt	CH				
19	12.60	57.95		Basalt	CH				
20	13.30	57.25		Basalt	CH				
21	14.00	56.55		Basalt	CH				
22	14.70	55.85		Basalt	CH				
23	15.40	55.15		Basalt	CH				
24	16.10	54.45		Basalt	CH				
25	16.80	53.75		Basalt	CH				
26	17.50	53.05		Basalt	CH				
27	18.20	52.35		Basalt	CH				
28	18.90	51.65		Basalt	CH				
29	19.60	50.95		Basalt	CH				
30	20.30	50.25		Basalt	CH				

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CONSULTING ENGINEERS, TOKYO

R.O.D is Rock Quality Designation, A.O.D= (Total length of cylindrical cores longer than 10 cm / (Total drill length) x 100%  
XLOGEN VALUE is 1/air/m under injection water pressure of 10kg/cm<sup>2</sup>  
DEPTH and ELEVATION are in meter  
DIAMETER is in millimeter

# DRILL LOG

SHEET NO. 1 OF 1

SITE		PAILE TREATMENT PLANT		HOLE NO.		JTP-2	
LATITUDE	LONGITUDE	0.00		ELEVATION	58.62m		DEPTH
DATE		From 7. June, 1990 to 8. June, 1990		0.00		20.00m	
ANGLE	DIRECTION	270° W 90° E		SLOPE		HORIZON 0°	
DEPTH	ROCK TYPE	ROCK CLASS	DESCRIPTION	DATE	BIT & DIAMETER	MATER LEVEL	CORE RECOVERY % (m)
SCALE	GEOLOGICAL AGE	COLUMN SECTION	DESCRIPTION	DATE	BIT & DIAMETER	MATER LEVEL	CORE RECOVERY % (m)
1			Light grey coral sand for filtra				1.65 13.0 1.35
2			Reddish brown lateritic residual Boulder- to cobble-size basalt r are included.				3.55 23.0 3.95
3			Light yellowish grey, earthy cor recovered.				5.25 6.0 5.55
4			Light grey to grey, moderately w ed vesicular basalt.				7.65 11.0 7.25
5			Intensely weathered basalt. Fragile fragmental cores are co				9.25 11.0 5.25
6			Weakly weathered, less vesicular				
7			Moderately weathered basalt. Partially fragmental cores are r ered.				
8			Weakly weathered basalt. Cores are broken into fragments 14.80 to 15.00m, and 15.50 to 1				
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R.G.D is Rock Quality Designation, R.G.D=(total length of cylindrical cores longer than 10 cm)/(Total drill length) x 100%  
KLOGON VALUE is 1/min/m under injection water pressure of 10kg/cm2  
DEPTH and ELEVATION are in meter  
DIAMETER is in millimeter

# DRILLING LOG

SHEET NO. 1 OF 1

Fig. B-74

SITE		PAILLES TREATMENT PLANT		HOLE No. JTP-3						
LATITUDE		0.00		ELEVATION 58.01m						
DATE		From 9. June, 1990 to 16. June, 1990		DEPTH 20.00m						
ANGLE	DIRECTION		SLOPE	HORIZON $\sigma$	DATE					
DEPTH	ELEVATION	GEOLOGICAL AGE	ROCK TYPE	ROCK CLASS	DESCRIPTION	BIT & DIAMETER	WATER LEVEL	CORE RECOVERY % (m)	R.O.D. (m)	WATER PRESSURE TEST
1		Young Lava	Soil		Light grey coral sand for filter			1.15	0.00	
2			Residual	D	Reddish brown lateritic residual			15.2	0.00	14.4, 7.1
3					Intensely weathered basalt.			1.42	0.00	18.7, 6.1
4				DL	Moderately weathered basalt. Fragmental to earthy cores are present.			2.05	0.00	
5					Light brownish grey, weakly to finely weathered basalt. Fragile fragmental cores are seen from 12.65 to 13.00m.			21.0	0.00	
6								2.94	0.00	
7				DM				4.15	0.00	
8								50.0	0.00	50.0, 0.0
9								4.25	0.00	
10									0.00	
11				CL-D					0.00	
12									0.00	
13				DM	Dark grey, fresh vesicular basalt. Olivine phenocrysts are recognizable.				0.00	
14									0.00	
15				CL-D	Moderately to intensely weathered earthy cores are recovered from to 16.60m.				0.00	
16									0.00	
17				DM	Moderately weathered, light brown grey basalt.				0.00	
18									0.00	
19				D	Intensely weathered to brownish. Fragile, fragmental cores are present.				0.00	
20									0.00	
21									0.00	
22									0.00	
23									0.00	
24									0.00	
25									0.00	
26									0.00	
27									0.00	
28									0.00	
29									0.00	
30									0.00	

R.O.D. is Rock Quality Designation. R.O.D. (total length of cylindrical cores longer than 10 cm / (total drill length) x 100%  
 RUCOR VALUE is 1/min/m under injection water pressure of 10kg/cm<sup>2</sup>  
 DEPTH and ELEVATION are in meter  
 DIAMETER is in millimeter

NIPPON KOEI CO., LTD.,  
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DRILL LOG

SHEET NO. 1 OF 1

SITE		PAILLES TREATMENT PLANT		HOLE NO.		JTP-4	
LATITUDE		0.00		LONGITUDE		0.00	
DATE		From 15. June, 1990 to 16. June, 1990		ELEVATION		67.94m	
ANGLE		DIRECTION		SLOPE		DEPTH	
ELEVATION		ROCK TYPE		DESCRIPTION		CORE RECOVERY	
DEPTH		R.O.D. (m)		BIT & DIAMETER		WATER PRESSURE TEST	
SCALE		R.O.D. (m)		DATE		WATER LEVEL	
1	0	Residual Soil	0	Reddish brown residual soil. Cobbles of vesicular basalt are included.	0	0	0
2	0		CH	Dark grey, less vesicular basalt. Compact and hard.	0	1.65	1.65
3	0		CM	Weakly weathered and vesicular. Partially weathered along cracks.	0	1.84	1.84
4	0		CL	Moderately weathered vesicular basalt. Fragmental to short cylindrical cores are recovered.	0	3.15	3.15
5	0		CH	Slightly weathered, less vesicular basalt. Cracks are coated with yellowish clayey material.	0	4.50	4.50
6	0		CH	Massive, compact non-vesicular basalt. Very hard.	0	5.85	5.85
7	0				0	7.20	7.20
8	0				0	8.55	8.55
9	0				0	9.90	9.90
10	0		CH-CL	Moderately weathered, light brown grey basalt. Fragmental cores are recovered. Fragments, fragmental cores are recovered from 9.00 to 9.80m.	0	11.25	11.25
11	0				0	12.60	12.60
12	0				0	13.95	13.95
13	0				0	15.30	15.30
14	0				0	16.65	16.65
15	0				0	18.00	18.00
16	0				0	19.35	19.35
17	0				0	20.70	20.70
18	0				0	22.05	22.05
19	0				0	23.40	23.40
20	0				0	24.75	24.75
21	0				0	26.10	26.10
22	0				0	27.45	27.45
23	0				0	28.80	28.80
24	0				0	30.15	30.15
25	0				0	31.50	31.50
26	0				0	32.85	32.85
27	0				0	34.20	34.20
28	0				0	35.55	35.55
29	0				0	36.90	36.90
30	0				0	38.25	38.25

R.O.D. is Rock Quality Designation. R.O.D. (Total length of cylindrical cores longer than 10 cm / Total drill length) x 100%  
 INFLUENCE VALUE is 1/min under injection water pressure of 10kg/cm<sup>2</sup>  
 DEPTH and ELEVATION are in meter  
 DIAMETER is in millimeter

NIPPON KOEI CO., LTD.  
 CONSULTING ENGINEERS, TOKYO

DRILLING LOG OF JTP-4 (1/1)

GOVERNMENT OF MAURITIUS  
 PORT LOUIS WATER SUPPLY PROJECT  
 JAPAN INTERNATIONAL COOPERATION AGENCY

DRILL LOG SHEET NO. 1 OF 1

SITE		PAILLES TREATMENT PLANT		HOLE No. JTP-5		ELEVATION		DEPTH				
LATITUDE		0.00		LONGITUDE		0.00		57.01m				
DATE		From 14. June. 1990 to 15. June. 1990		DIRECTION		SLOPE		20.00m				
ANGLE		180° UP DOWN		270° N 90° W 0° E 180° S		HORIZON		DATE				
SCALE	DEPTH	ELEVATION	GEOLOGICAL AGE	ROCK TYPE	COLUMN SECTION	ROCK CLASS	DESCRIPTION	BIT & DIAMETER	WATER LEVEL	CORE RECOVERY % (m)	R.O.D. x (m)	WATER PRESSURE TEST
1				Residual Soil		D	Reddish brown residual soil. Fragments of vesicular basalt are included.			1.5 12.0 1.5	15.00	(15.45)
2				Basalt	[Pattern]	CH	Intensely weathered vesicular basalt.			2.5 2.5	17.50	
3			Weakly weathered, vesicular basalt. Partially intense weathering and cracks.									
4			Intensely weathered to brownish									
5			Moderately weathered basalt. Partially vesicular.									
6			Slightly weathered vesicular basalt.									
7			Weakly weathered, less vesicular. Partially weathered along cracks.									
8												
9												
10			Young Lava					CH-CL				
11												
12				Weathered Basalt								
13												
14												
15				Basalt		CH	Weakly weathered vesicular basalt.			2.5 2.5	22.50	
16						CL	Moderately weathered to light br grey. Partially spherulitic vesicles are included.			2.5 2.5	25.00	
17						CH-CH				2.5 2.5	27.50	
18										2.5 2.5	30.00	
19				Basalt		CH				2.5 2.5	32.50	
20										2.5 2.5	35.00	
21										2.5 2.5	37.50	
22										2.5 2.5	40.00	
23										2.5 2.5	42.50	
24										2.5 2.5	45.00	
25										2.5 2.5	47.50	
26										2.5 2.5	50.00	
27										2.5 2.5	52.50	
28										2.5 2.5	55.00	
29										2.5 2.5	57.50	
30										2.5 2.5	60.00	

R.O.D. is Rock Quality Designation, R.O.D. = (Total length of cylindrical cores longer than 10 cm) / (Total Drill length) x 100%  
 KUSON VALUE is 1/min/m under injection water pressure of 10kg/cm<sup>2</sup>  
 DEPTH and ELEVATION are in meter  
 DIAMETER is in millimeter  
 NIPPON KOEI CO., LTD., CONSULTING ENGINEERS, TOKYO

DRILLING LOG OF JTP-5 (1/1)

GOVERNMENT OF MAURITIUS  
 PORT LOUIS WATER SUPPLY PROJECT  
 JAPAN INTERNATIONAL COOPERATION AGENCY

DRILLING LOG

SITE		PAILLES TREATMENT PLANT		HOLE No.		JTP-6	
LATITUDE	0.00	LONGITUDE	0.00	ELEVATION	57.08m	DEPTH	20.00m
DATE	From 17, June, 1990 to 20, June, 1990						
ANGLE	DIRECTION		SLOPE		HORIZON		
DEPTH	ROCK TYPE	ROCK CLASS	DESCRIPTION	DATE	BIT & DIAMETER	WATER LEVEL	WATER PRESSURE TEST
SCALE	GEOLOGICAL AGE	COLUMN SECTION	DESCRIPTION	DATE	BIT & DIAMETER	WATER LEVEL	WATER PRESSURE TEST
1			Reddish brown residual soil. Fragments of weathered basalt are cluded.				1.15 42.0 1.45
2			Dark grey, less vesicular, compact basalt. Supposed to be boulders.				4.55 24.0 7.55
3			Reddish brown residual soil. Fragments of weathered basalt are cluded.				
4			Intensely to moderately weathered vesicular basalt. Fragmental cores are recovered.				
5			Moderately weathered vesicular basalt. Partially fragmental to earthy cores are recovered.				
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R.O.D is Rock Quality Designation, R.O.D=(Total length of cylindrical cores longer than 10 cm)/(Total drill length) x 100%  
 \*LUGSON VALUE is 1/3rd/min under injection water pressure of 10kg/cm2  
 \*DEPTH and ELEVATION are in meter  
 \*DINOMETER is in millimeter

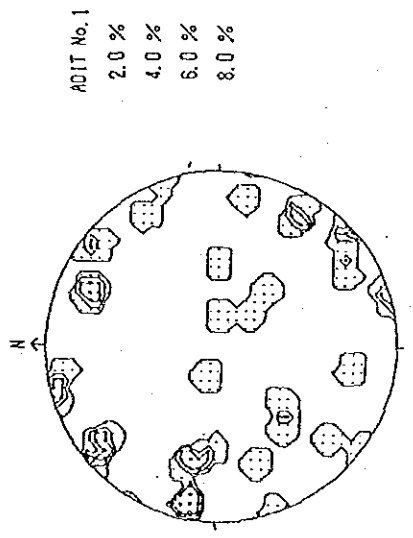
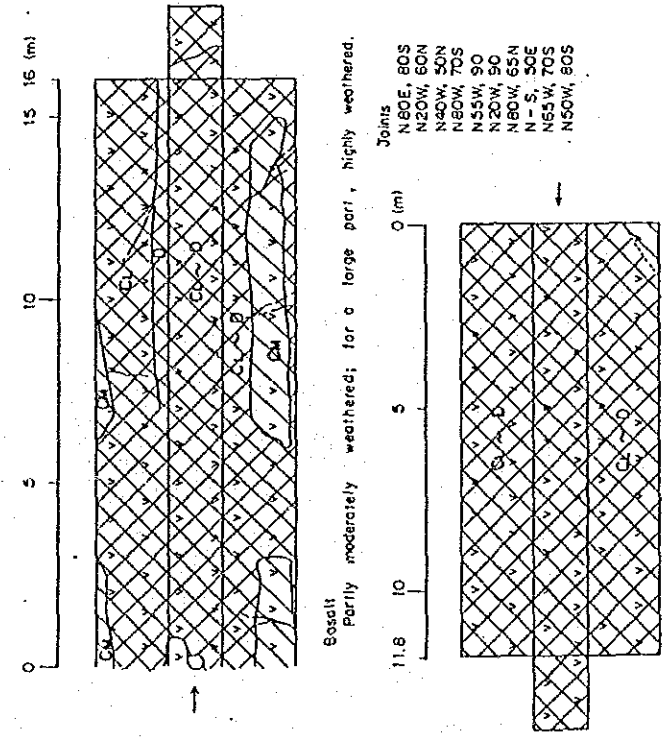
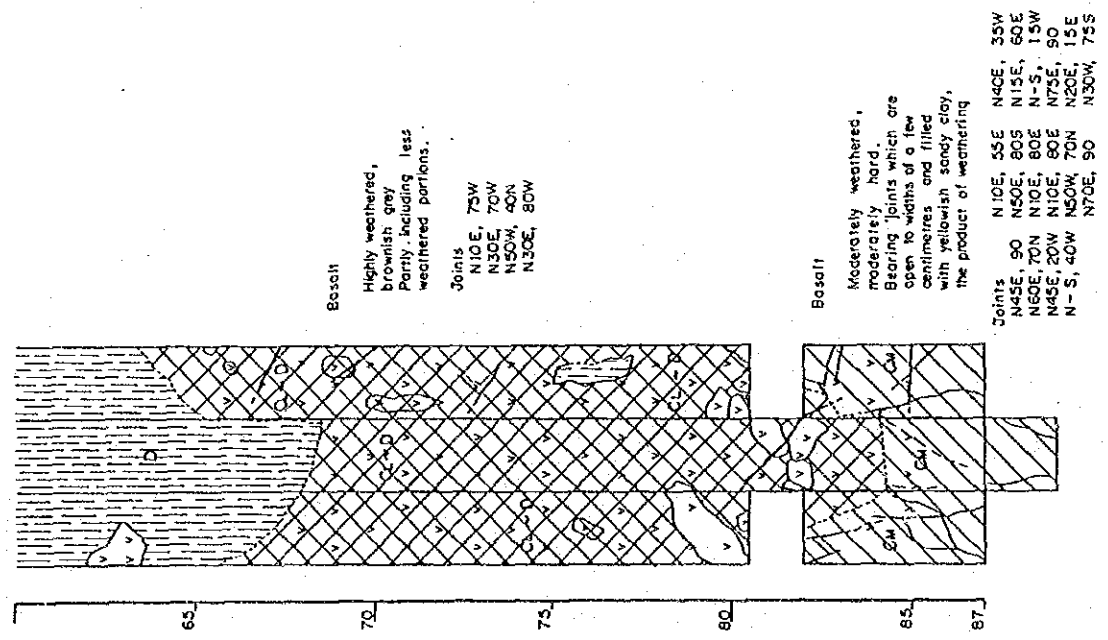
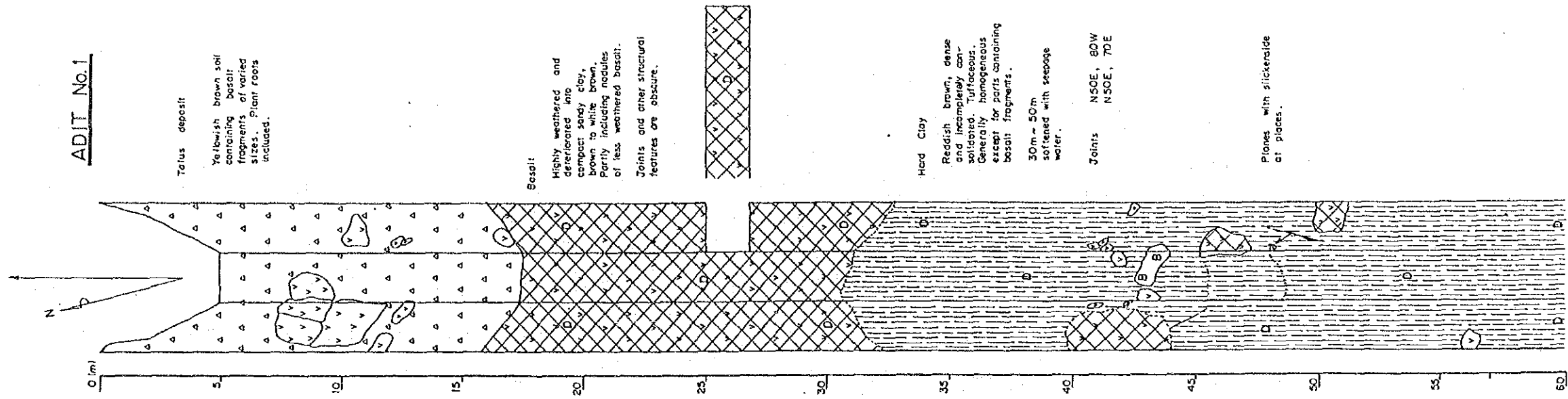
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 CONSULTING ENGINEERS, TOKYO

DRILLING LOG OF JTP-6 (1/1)

GOVERNMENT OF MAURITIUS  
 PORT LOUIS WATER SUPPLY PROJECT  
 JAPAN INTERNATIONAL COOPERATION AGENCY



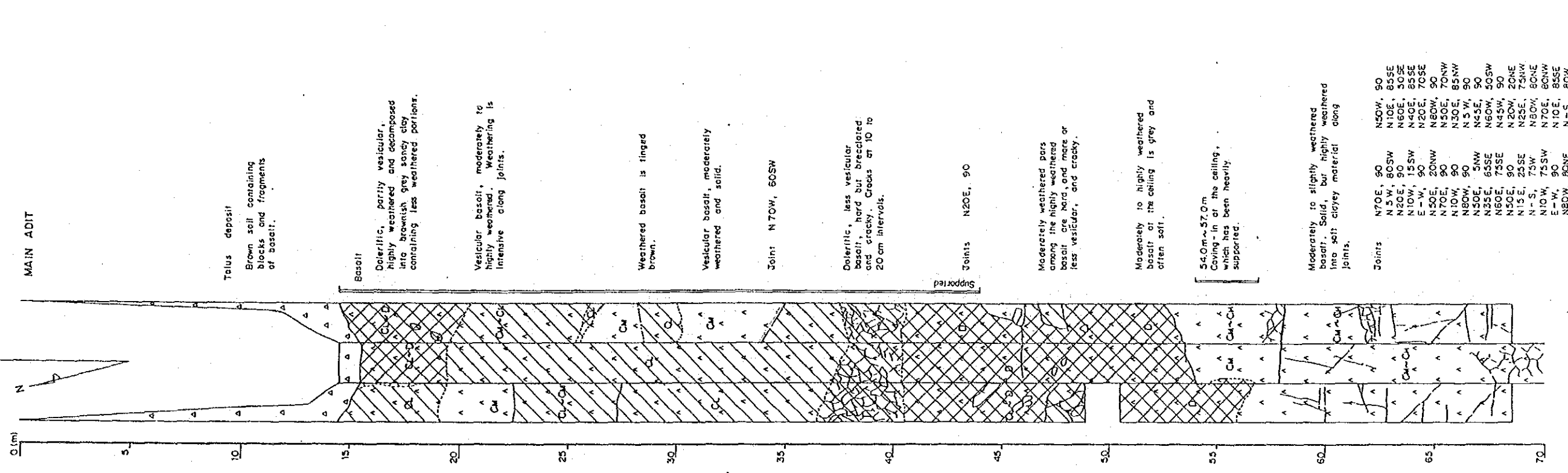
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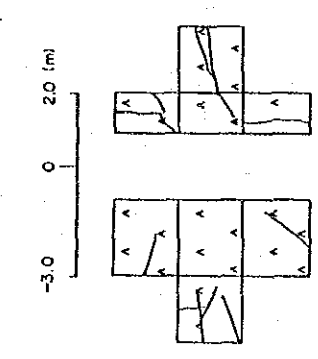
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GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

**ADIT No.2**

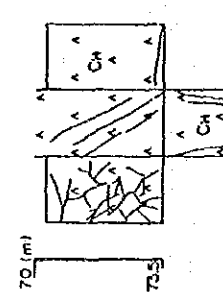


- BRANCH ADITS**
- Joints
- N85W, 75SW
  - N30E, 65NW
  - N4E, 80SE
  - N85W, 5NE
  - N60E, 90
  - N65E, 55SE
  - N45E, 50
  - N20E, 20SE
  - E-W, 80N
  - N25W, 80NE

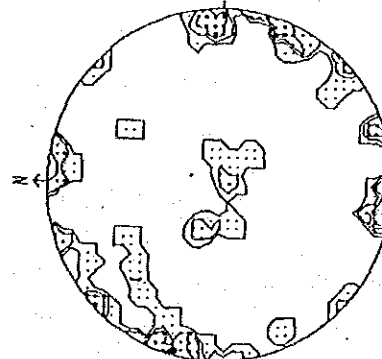


Doleritic basalt, not vesicular. Moderately weathered, hard. With yellowish-brown sandy clay in open joints. Slickensides on joints, orient.

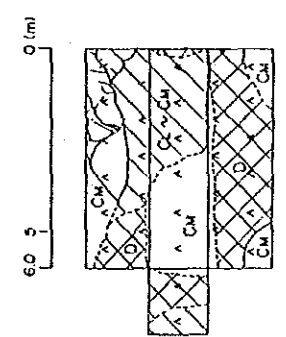
**MAIN ADIT**



- ADIT No. 2**
- 2.0 %
  - 4.0 %
  - 6.0 %
  - 8.0 %



**BRANCH ADIT (TEST CHAMBER)**



Talus deposit  
Brown soil containing blocks and fragments of basalt.

Basalt  
Doleritic, partly vesicular, highly weathered and decomposed into brownish grey sandy clay containing less weathered portions.

Vesicular basalt, moderately to highly weathered. Weathering is intensive along joints.

Weathered basalt is finged brown.

Vesicular basalt, moderately weathered and solid.

Joint N70W, 60SW

Doleritic, less vesicular basalt, hard but brecciated and cracky. Cracks at 10 to 20 cm intervals.

Joints N20E, 90

Moderately weathered parts among the highly weathered basalt are hard, and more or less vesicular, and cracky.

Moderately to highly weathered basalt at the ceiling is grey and often soft.

54.0m-57.0m  
Caving-in at the ceiling, which has been heavily supported.

Moderately to slightly weathered basalt. Solid, but highly weathered into soft clayey material along joints.

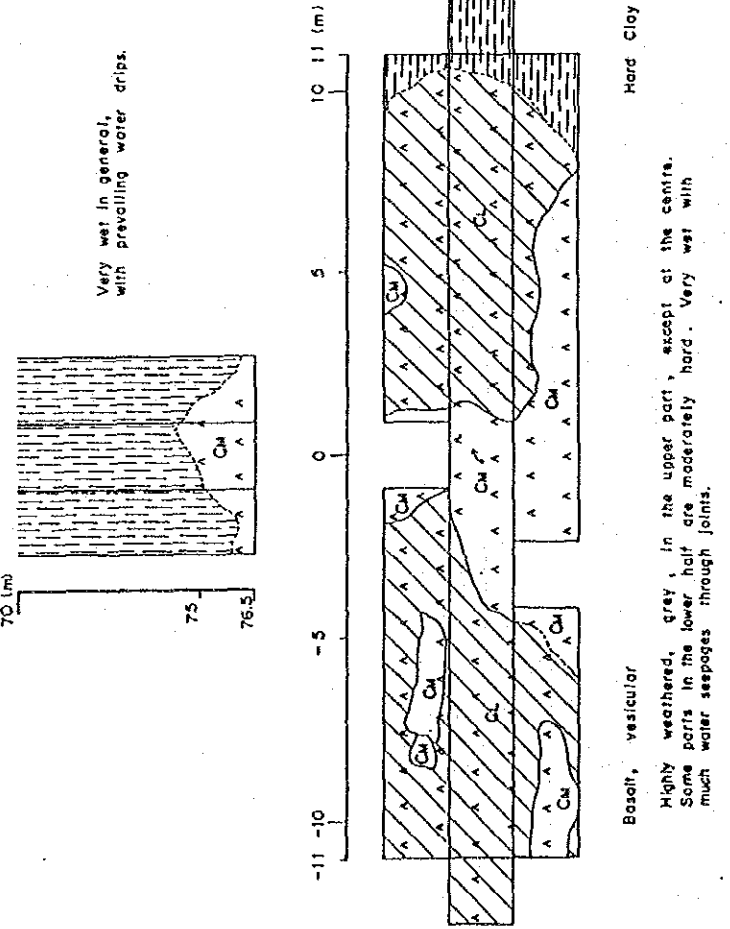
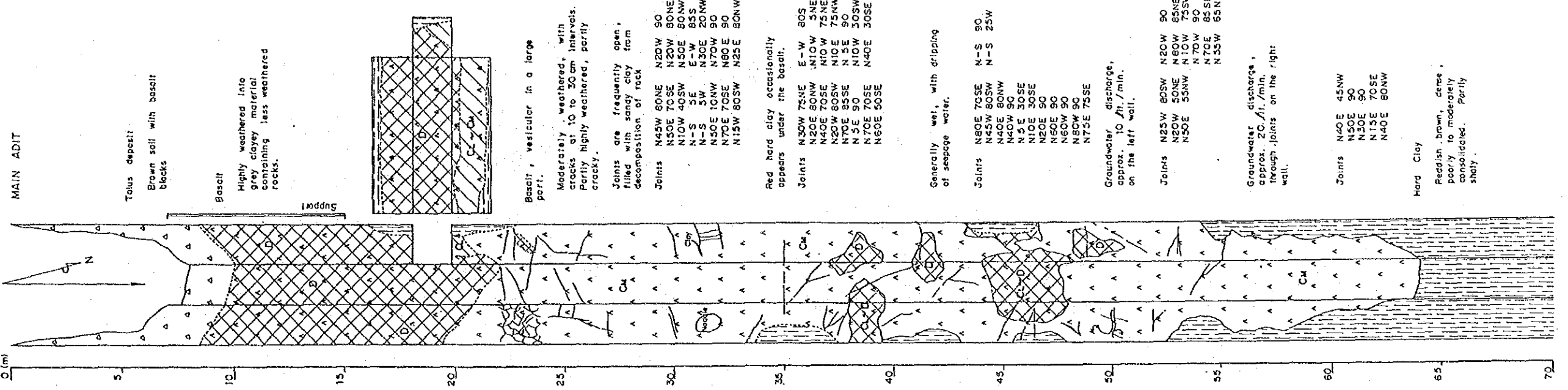
Joints

- N70E, 90
- N50W, 80
- N10E, 85SE
- N3W, 80SW
- N20E, 90
- N60E, 50SE
- N10W, 15SW
- N40E, 85SE
- E-W, 90
- N20E, 70SE
- N50E, 20NW
- N80W, 90
- N70E, 90
- N50E, 70NW
- N10W, 90
- N30E, 85NW
- N80W, 90
- N5W, 90
- N45E, 90
- N35E, 5NW
- N35E, 65SE
- N60E, 75SE
- N45W, 90
- N50E, 90
- N15E, 25SE
- N25E, 75NW
- N-S, 75W
- N80W, 80NE
- N10W, 75SW
- E-W, 90
- N70E, 85SE
- N10E, 80W
- N80W, 80NE
- N-S,

**GEOLOGICAL SKETCHMAP OF TEST ADIT NO.2**

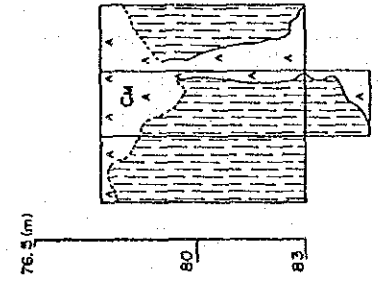
GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

ADIT No.3



Joints N40W 90 N80W 30NE  
 N40W 75SW N70W 70SW  
 N70E 90 N70W 70SW  
 N60W 10SW N30E 70NW  
 N50W 70NE

Hard Clay  
 Reddish brown, dense, shaly.



Basalt, vesicular in a large part.  
 Moderately weathered, with cracks at 10 to 30 cm intervals. Partly highly weathered, partly crackly.  
 Joints are frequently open, filled with sandy clay from decomposition of rock  
 Joints N45W 80NE N20W 90  
 N50E 70SE N30W 80NE  
 N10W 40SW N50E 80NW  
 N-S 3E N30E 85S  
 N-S 3W N30E 20NW  
 N50E 10NW N70W 90  
 N70E 70SE N80E 90  
 N15W 80SW N25E 80W

Red hard clay occasionally appears under the basalt.  
 Joints N30W 75NE E-W 80S  
 N20E 80NW N10W 5NE  
 N40E 70SE N10W 75NE  
 N20W 80SW N10E 75NW  
 N70E 85SE N 5E 90  
 N 5E 90 N10W 30SW  
 N70E 70SE N40E 30SE  
 N60E 50SE

Generally wet, with dripping of seepage water.  
 Joints N80E 70SE N-S 90  
 N45W 80SW N-S 25W  
 N40E 80NW  
 N40W 90  
 N 5E 30SE  
 N10E 30SE  
 N20E 50  
 N50E 90  
 N60W 90  
 N80W 90  
 N75E 75SE

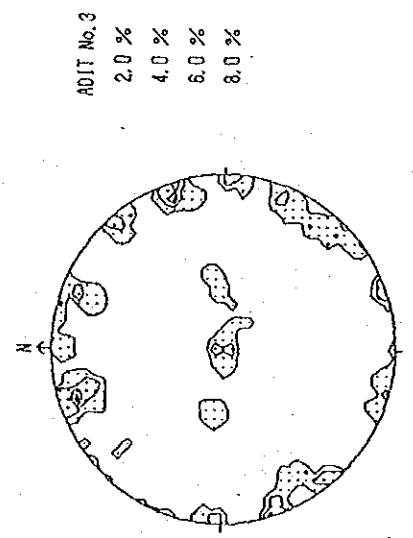
Groundwater discharge, approx. 10 lit./min. on the left wall.

Joints N25W 80SW N20W 90  
 N20W 50NE N60W 85NE  
 N50E 55NW N10W 75SW  
 N70W 90  
 N70E 85SE  
 N55W 65NE

Groundwater discharge, approx. 20 lit./min. through joints on the right wall.

Joints N40E 45NW  
 N50E 90  
 N30E 90  
 N15E 70SE  
 N40E 80NW

Hard Clay  
 Reddish brown, dense, poorly to moderately consolidated. Partly shaly.



ADIT No. 3  
 2.0 %  
 4.0 %  
 6.0 %  
 8.0 %

GEOLOGICAL SKETCHMAP OF TEST ADIT NO.3

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 PORT LOUIS WATER SUPPLY PROJECT  
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**ADIT No.4**

MAIN ADIT

Talus deposit  
Brown argillite soil and rock fragments.

Basalt  
Fresh except on joints on the left wall. In other parts the basalt is vesicular and highly to moderately weathered.

Highly weathered basalt, which has decomposed largely into hard brown clay, develops continuously in the lower part of the adit. The upper part of the adit is occupied by moderately to slightly weathered hard basalt.

A few joints are open up to 5 cm, filled with clay, probably due to loosening from stress relief on the steep slope.

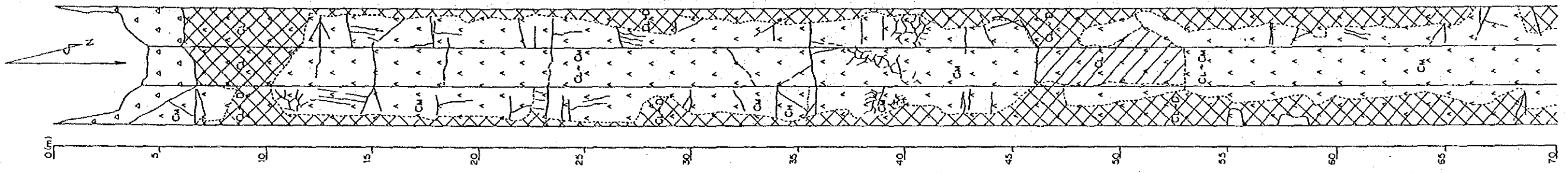
- Joints
- N10W, 50
  - N30E, 50
  - N50E, 70NW
  - N60E, 20SE
  - N20E, 20SE
  - N70E, 80SE
  - E-W, 75S
  - E-W, 10N
  - N10E, 80SE
  - N-S, 90
  - N25W, 90
  - N80E, 80SE
  - N55E, 10SE
  - N5E, 5NW
  - N10E, 50
  - N40W, 75NE
  - N45E, 50SE
  - N60E, 70SE
  - N10E, 90
  - N40E, 90

Slickensides are observed on some of joint planes, of which direction varies.

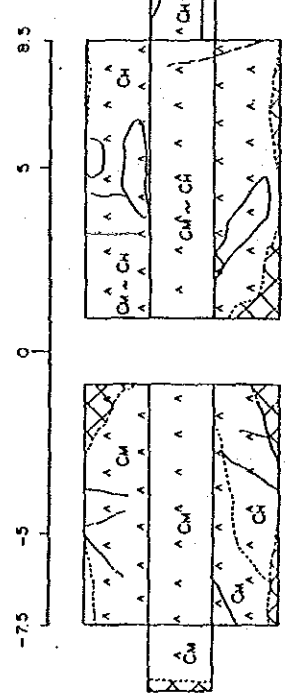
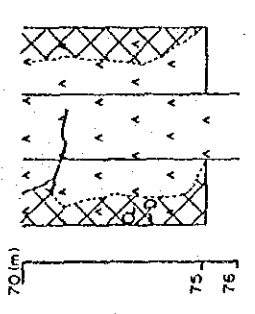
- Joints
- N40E, 50
  - N70W, 90
  - N60E, 50
  - N70E, 10NW
  - N10E, 50SE
  - N50E, 70NW
  - N60E, 50
  - N40E, 50NW
  - N-S, 60E
  - N70E, 30NW
  - N-S, 90
  - N80E, 70NW
  - N-S, 50E
  - N-S, 80E
  - N20E, 90
  - N-S, 80E
  - N50W, 80SW
  - N10E, 90
  - N50W, 80SW
  - N80W, 90
  - N20W, 85SW
  - N30E, 80W
  - N55E, 65SE
  - N20E, 90
  - N20W, 90
  - N40E, 90
  - N60E, 80SE
  - N55E, 90
  - N-S, 90
  - E-W, 65S
  - N60E, 60NW

Cracks around Sta. 40m.

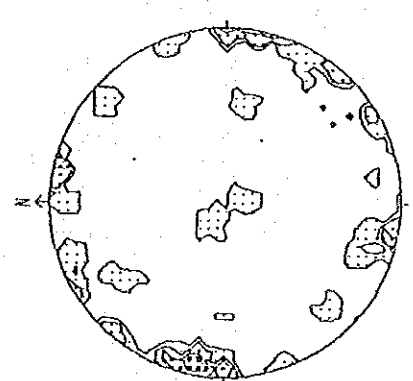
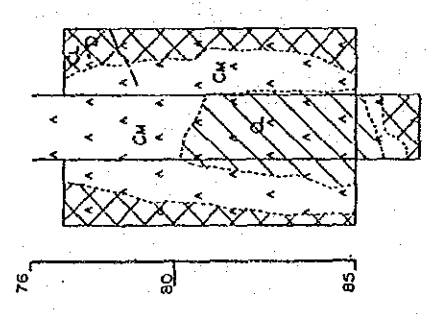
- Joints
- N 80W, 90
  - N 10E, 50
  - N40E, 65NW
  - N80W, 70NE
  - N20E, 10SE
  - N20E, 80SE
  - N65W, 70NE
  - N80W, 90
  - N20E, 90
  - N15E, 45NW
  - E-W, 80S
  - N75W, 90
  - N70E, 80SE
  - N-S, 50W
  - N-S, 50E



Joints N-S, 80W



- Joints
- N80W, 75NE
  - N80E, 50NW
  - N45W, 50NW
  - N10E, 50NE
  - N70W, 70NE
  - N50W, 60SW
  - N10W, 70SW
  - N40E, 90
  - N10E, 80SE
  - N50E, 60SE
  - N80W, 90

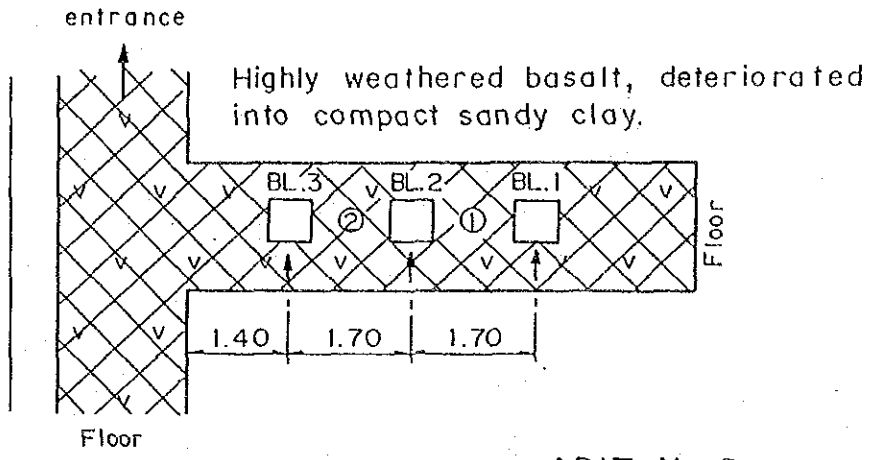


**GEOLOGICAL SKETCHMAP OF TEST ADIT NO.4**

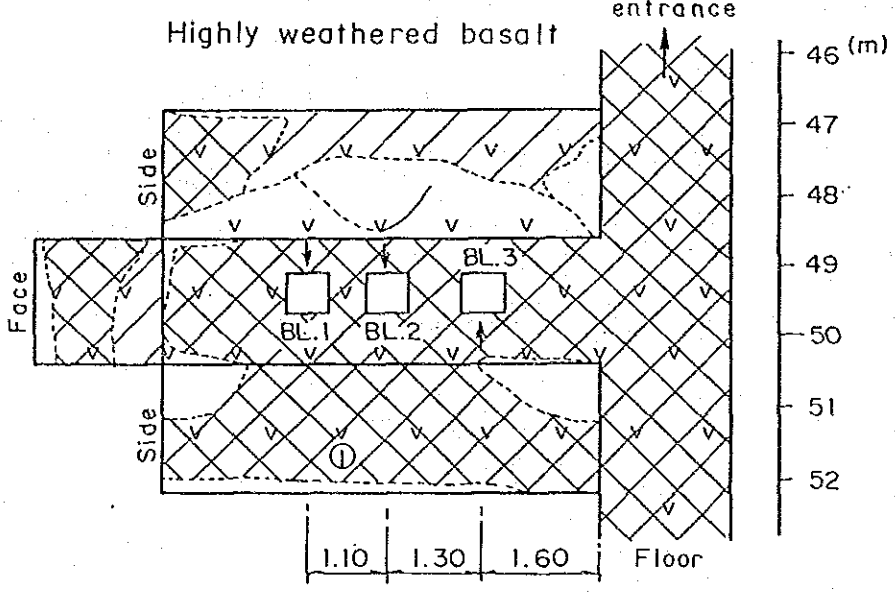
GOVERNMENT OF MAURITIUS  
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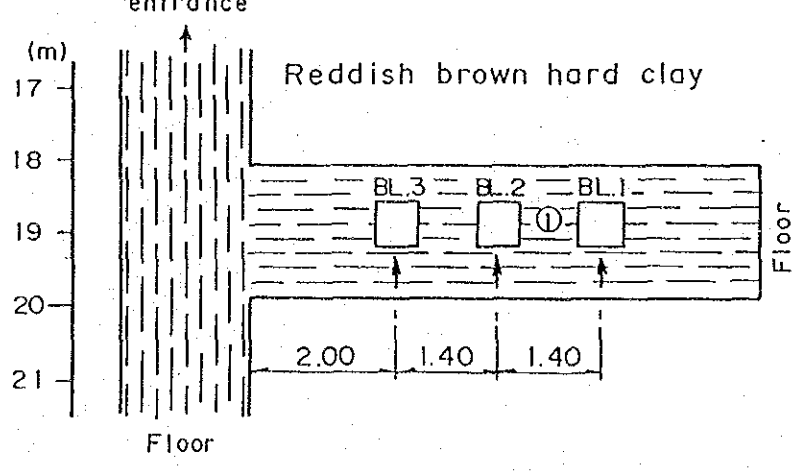
ADIT No.1



ADIT No.2

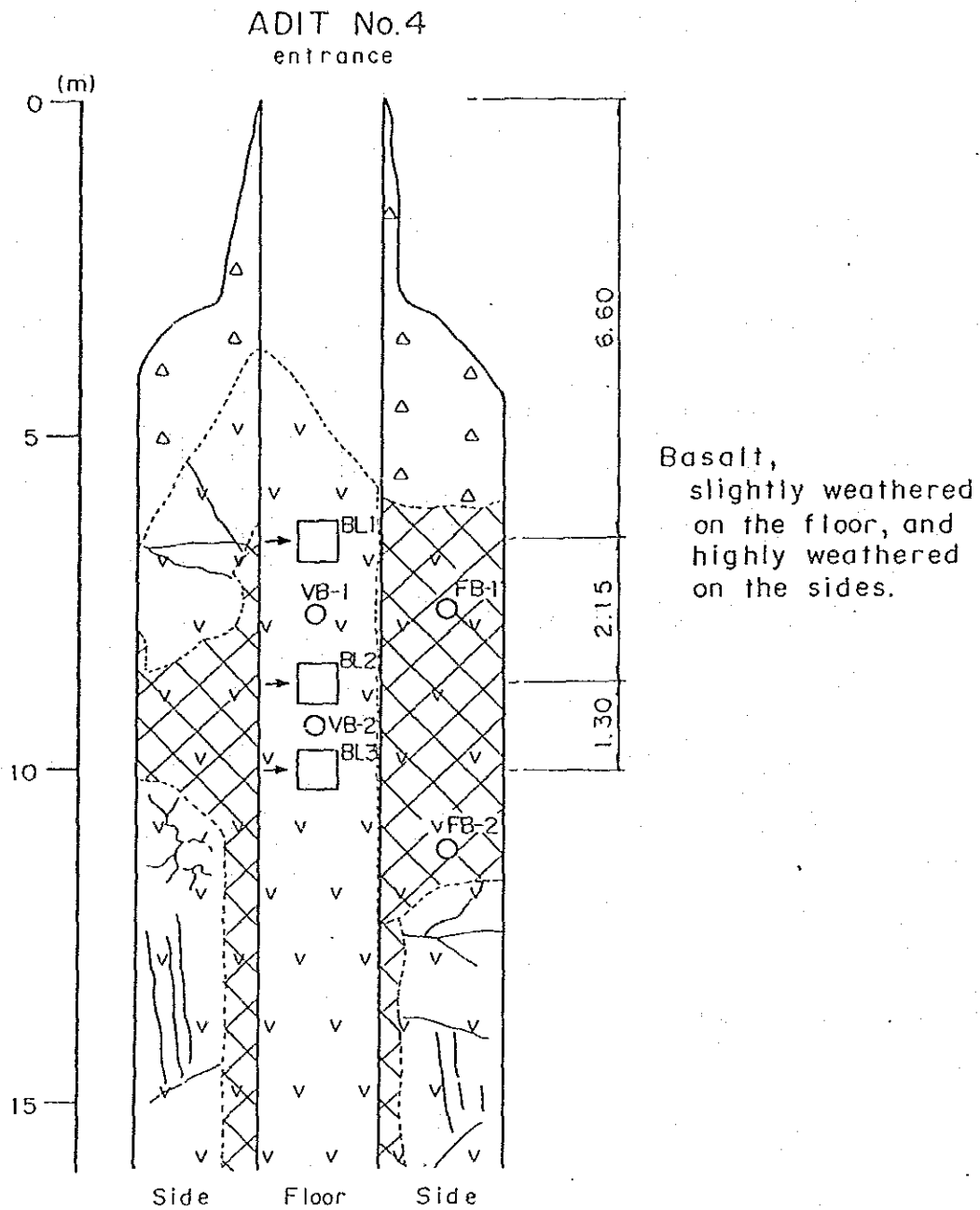


ADIT No.3



LOCATION OF ROCK MECHANICS TEST (1)  
ADIT NO.1

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LOCATION OF ROCK MECHANICS TEST (2)  
ADIT NO.4

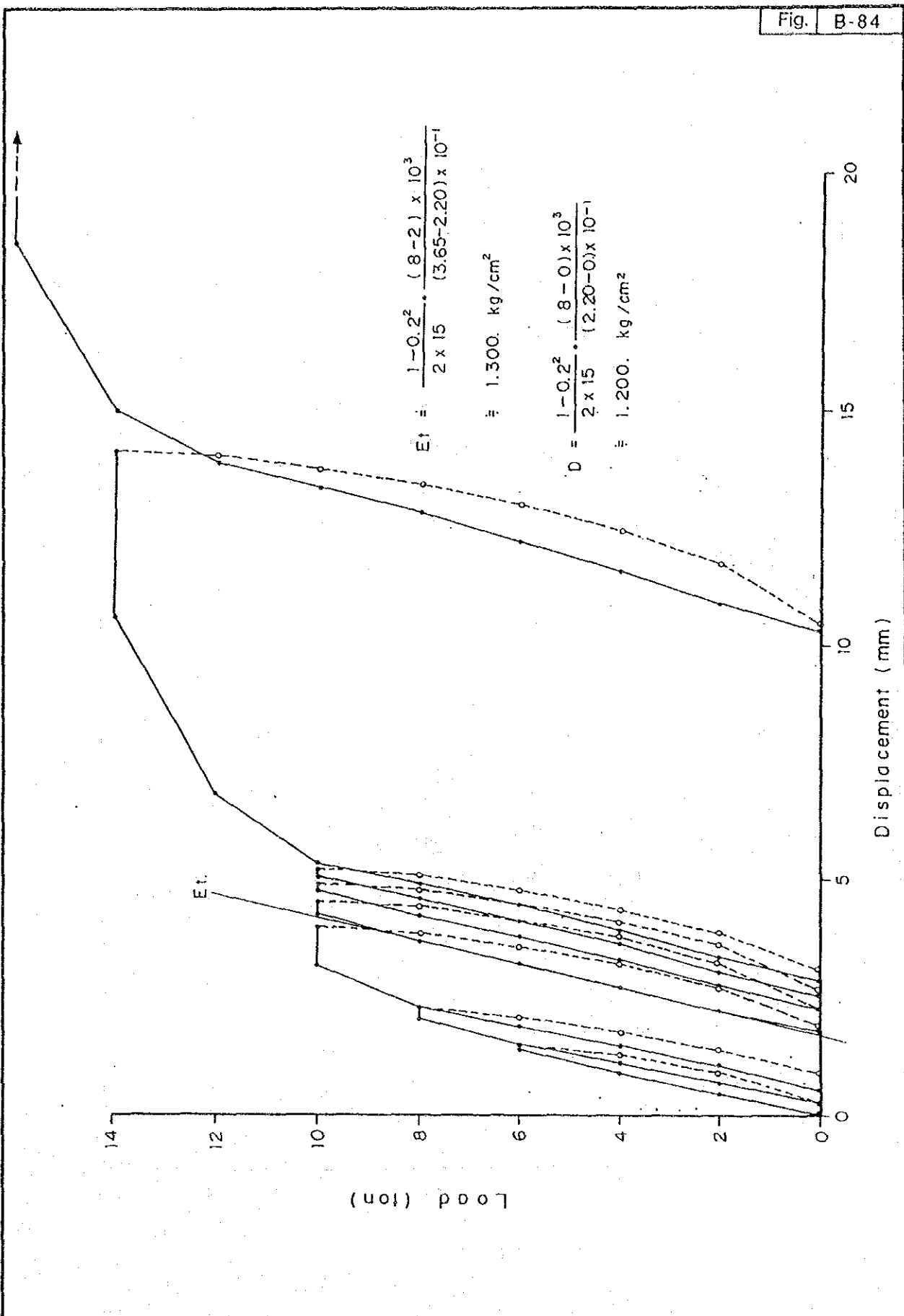


PLATE LOADING TEST, LOAD-DISPLACEMENT RELATIONS ADIT NO.1, TEST NO.1 (VERTICAL LOAD)

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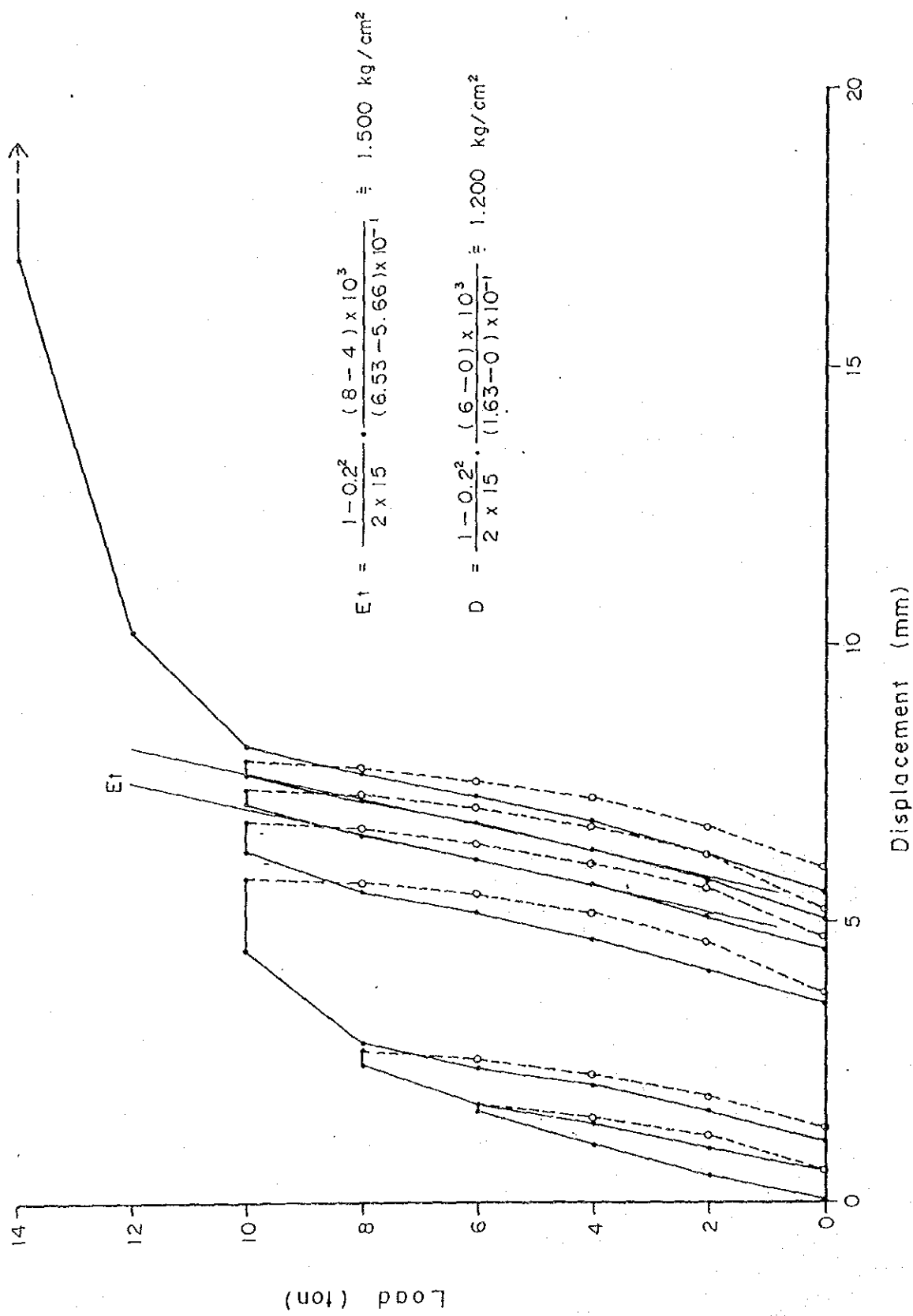


PLATE LOADING TEST, LOAD-DISPLACEMENT RELATIONS ADIT NO.1, TEST NO.2 (VERTICAL LOAD)

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 PORT LOUIS WATER SUPPLY PROJECT  
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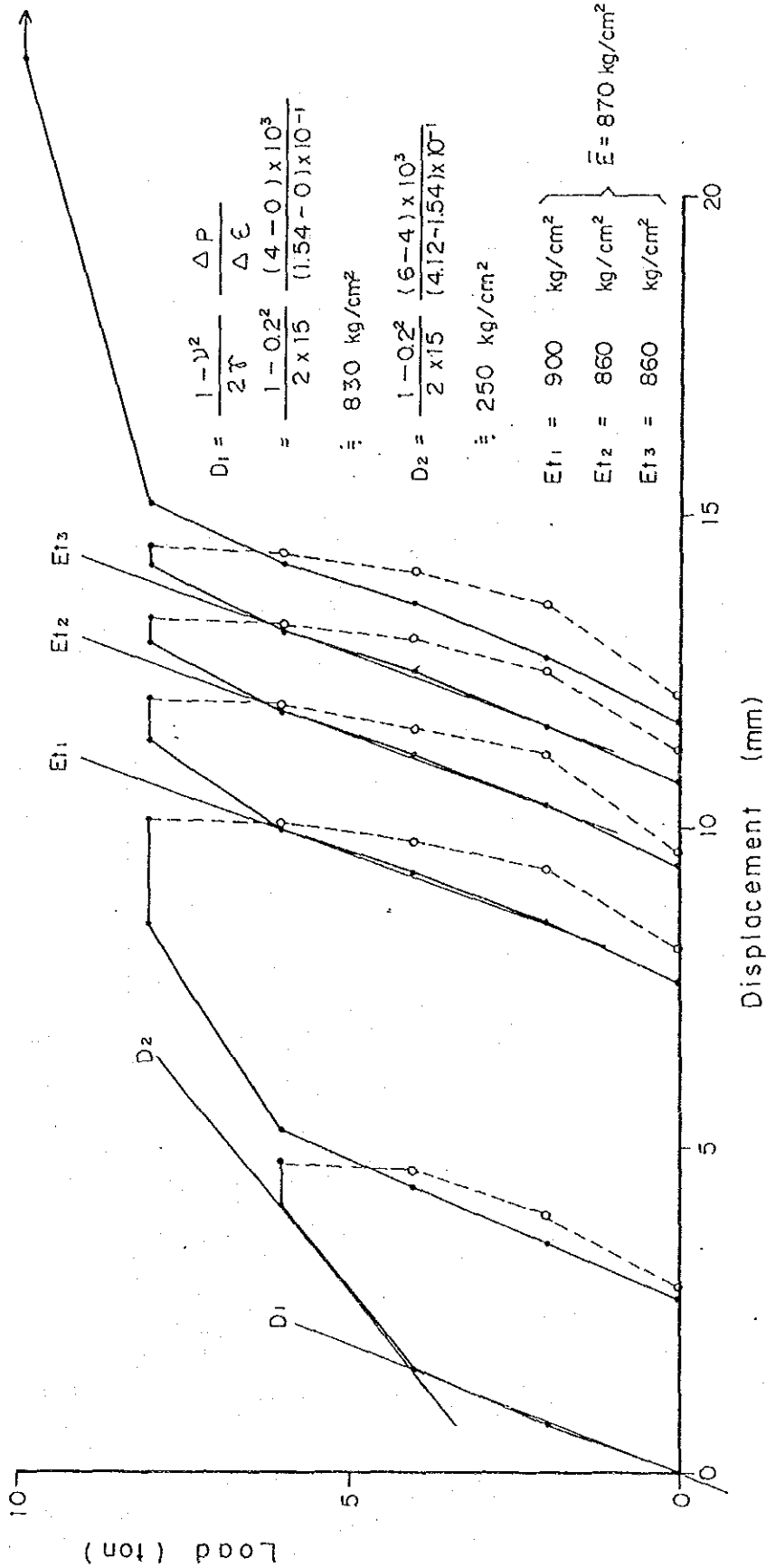
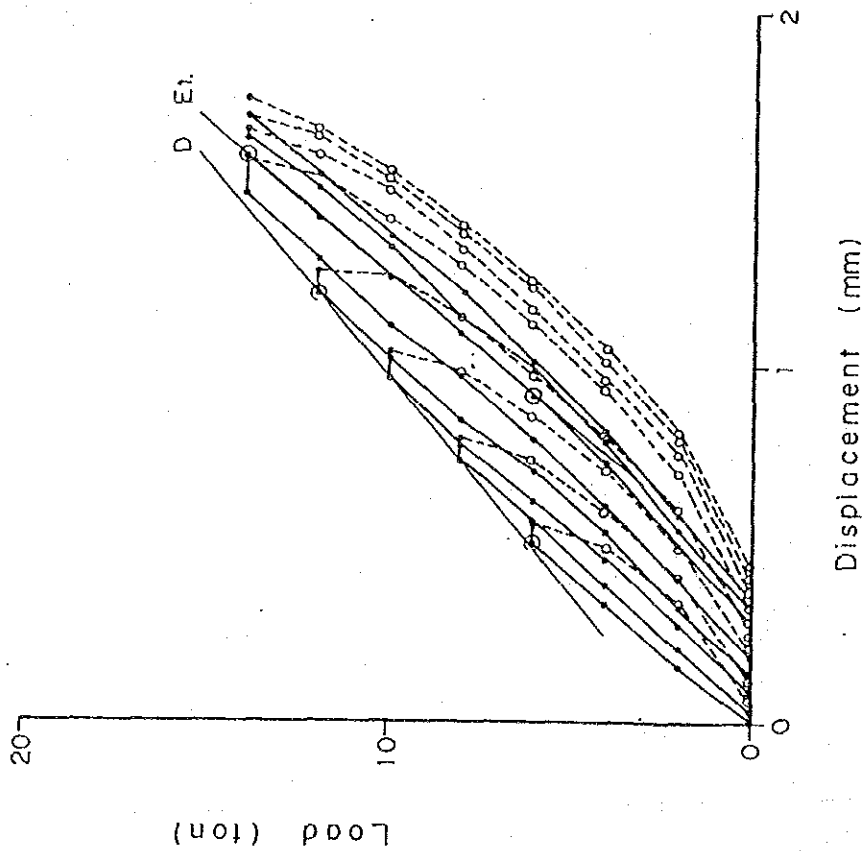


PLATE LOADING TEST, LOAD-DISPLACEMENT RELATIONS ADIT NO.2, TEST NO.1 (HORIZONTAL LOAD)

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$$D = \frac{(1 - \sigma^2)}{2r} \cdot \frac{\Delta P}{\Delta \varepsilon} = \frac{1 - 0.2^2}{2 \times 15} \cdot \frac{(12 - 6) \times 10^3}{(12 - 0.5) \times 10^{-1}}$$

= 2.700 kg/cm<sup>2</sup>

$$E1 = \frac{1 - 0.2^2}{2 \times 15} \cdot \frac{(14 - 6) \times 10^3}{(1.58 - 0.92) \times 10^{-1}} = 3.900 \text{ kg/cm}^2$$

Highly weathered basalt

$$D = \frac{1 - 0.2^2}{2 \times 15} \cdot \frac{(16 - 0) \times 10^3}{(4.76 - 0) \times 10^{-1}} = 1.100 \text{ kg/cm}^2$$

$$Et = \frac{1 - 0.2^2}{2 \times 15} \cdot \frac{(20 - 8) \times 10^3}{(8.3 - 7.3) \times 10^{-1}} = 3.800 \text{ kg/cm}^2$$

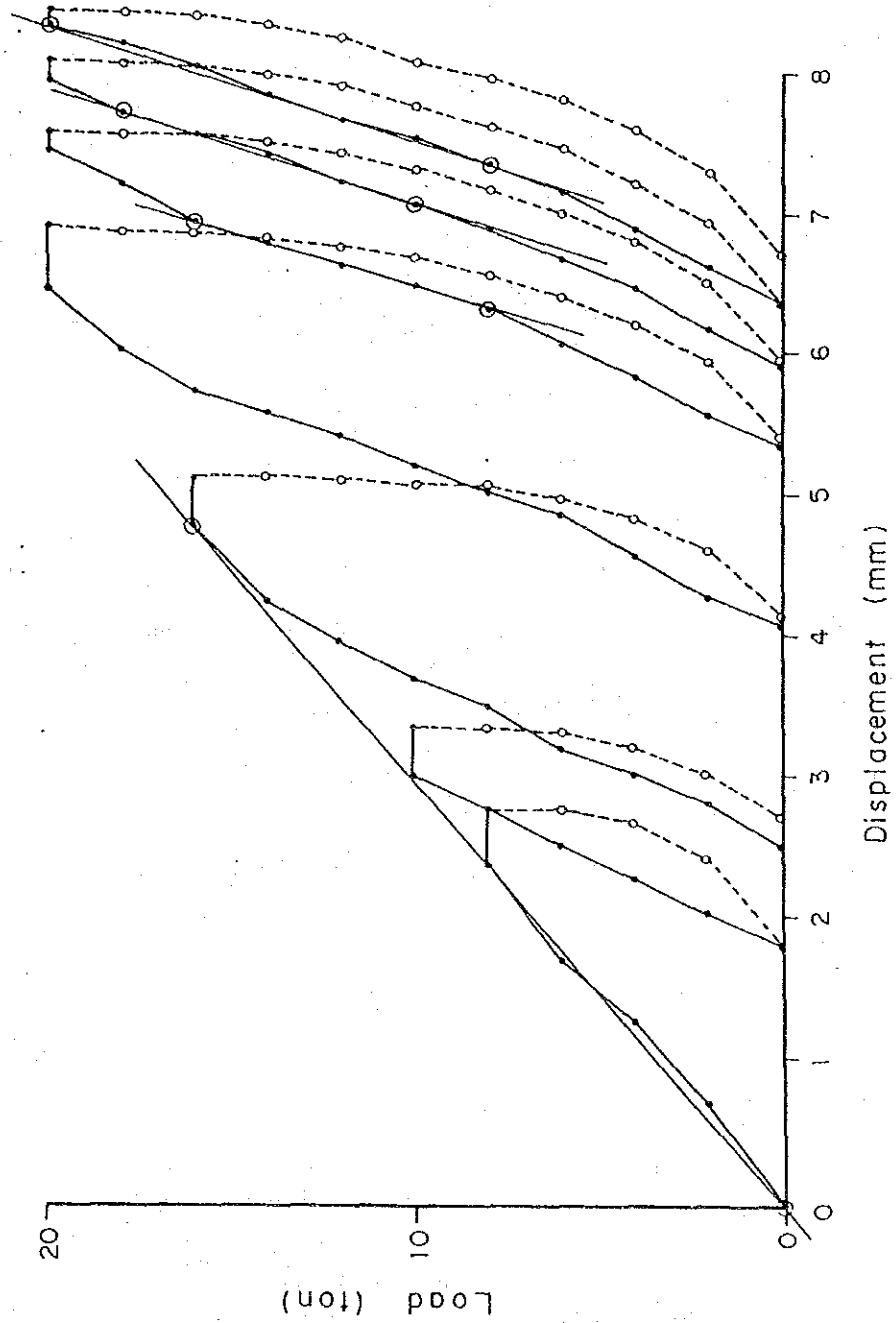


PLATE LOADING TEST, LOAD-DISPLACEMENT RELATIONS ADIT NO.4, TEST NO.FB-1 (HOR. LOAD)

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Highly weathered basalt

$$D = \frac{1 - 0.2^2}{2 \times 15} \cdot \frac{(14 - 0) \times 10^3}{(6.13 - 0) \times 10^{-1}} = 730 \text{ kg/cm}^2$$

$$E_1 = \frac{(1 - 0.2^2)}{2 \times 15} \cdot \frac{(18 - 8) \times 10^3}{(12.66 - 11.05) \times 10^{-1}} = 2,000 \text{ kg/cm}^2$$

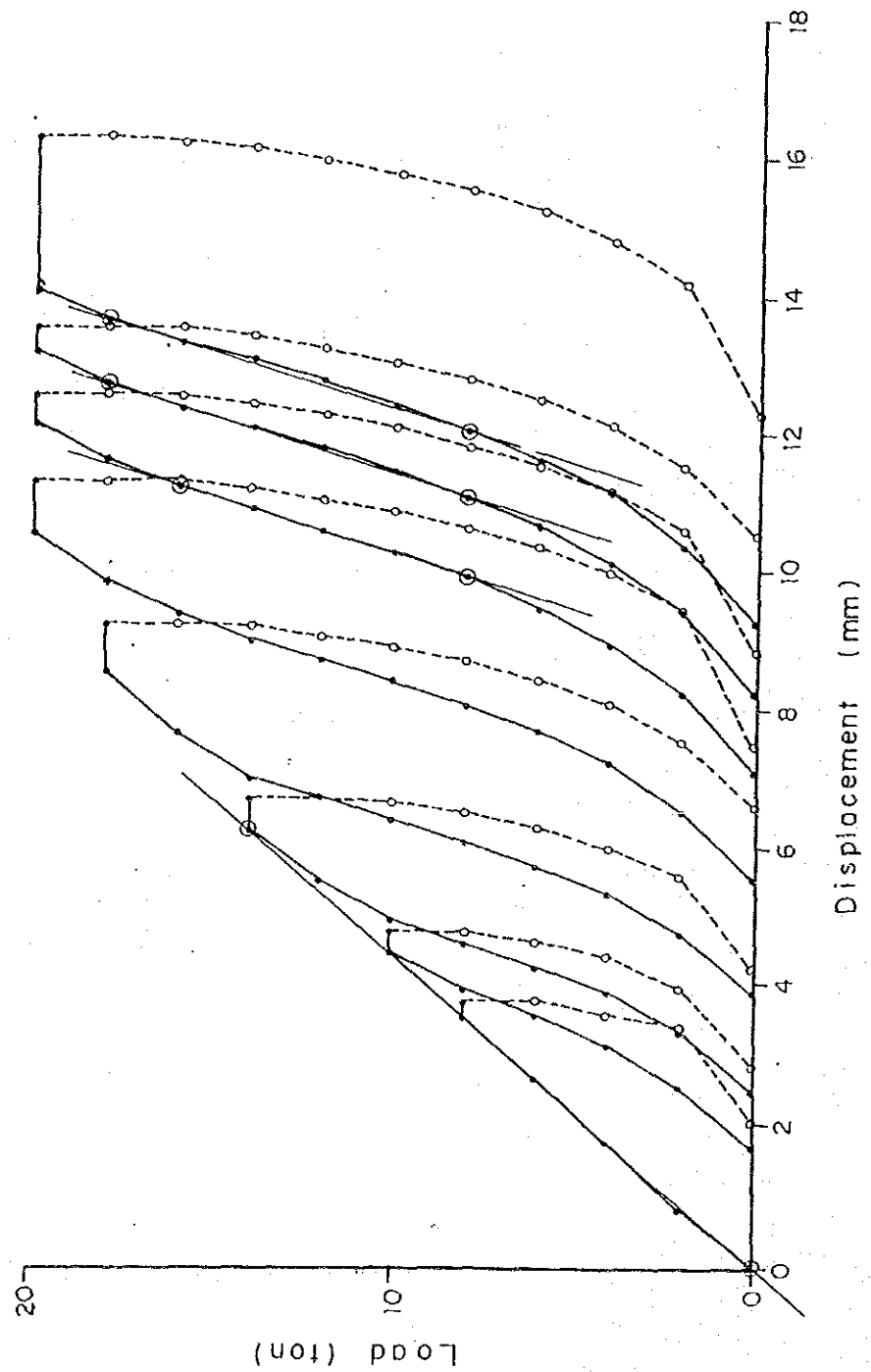


PLATE LOADING TEST, LOAD-DISPLACEMENT RELATIONS ADIT NO.4, TEST NO.FB-2 (HOR. LOAD)

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Vesicular Basalt

$$D = \frac{1 - 0.2^2}{2 \times 15} \cdot \frac{(22-8) \times 10^3}{(0.215 - 0.1025) \times 10^{-1}} = 40,000 \text{ kg/cm}^2$$

$$E1 = \frac{1 - 0.2^2}{2 \times 15} \cdot \frac{(22-6) \times 10^3}{(0.215 - 0.125) \times 10^{-1}} = 57,000 \text{ kg/cm}^2$$

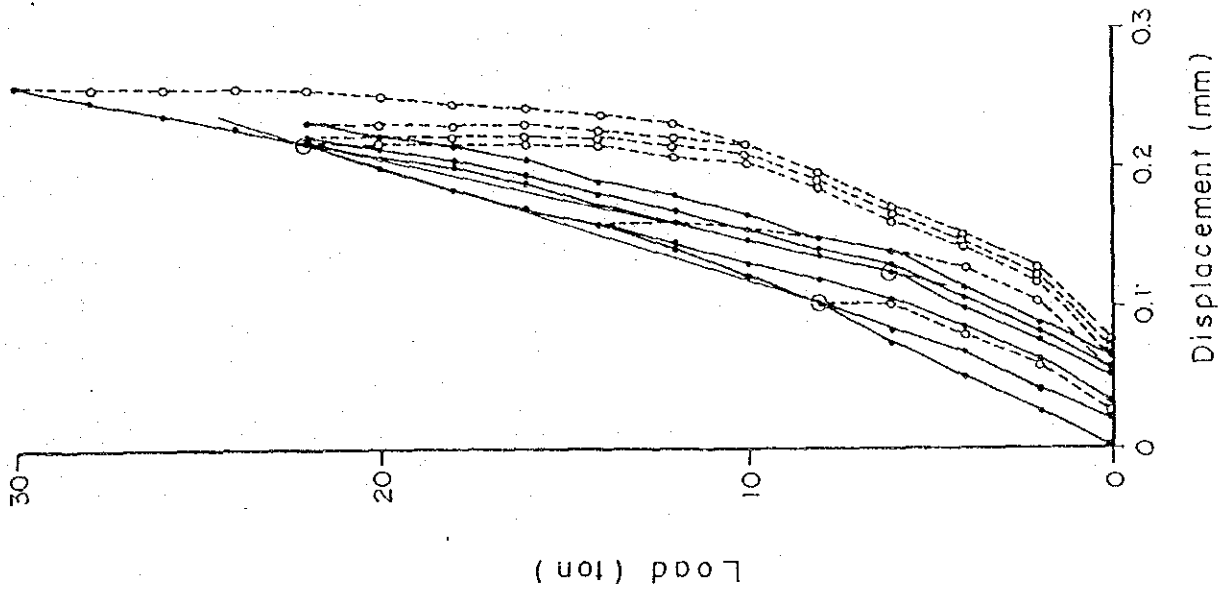


PLATE LOADING TEST, LOAD-DISPLACEMENT  
RELATIONS ADIT NO.4, TEST NO.VB-1 (VER. LOAD)

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

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Vesicular Basalt

$$D = \frac{1 - 0.2^2}{2 \times 15} \frac{(32 - 16) \times 10^3}{(0.46 - 0.3) \times 10^{-1}} = 32.000 \text{ kg/cm}^2$$

$$E1 = \frac{1 - 0.2^2}{2 \times 15} \frac{(32 - 22) \times 10^3}{(0.47 - 0.41) \times 10^{-1}} = 53.000 \text{ kg/cm}^2$$

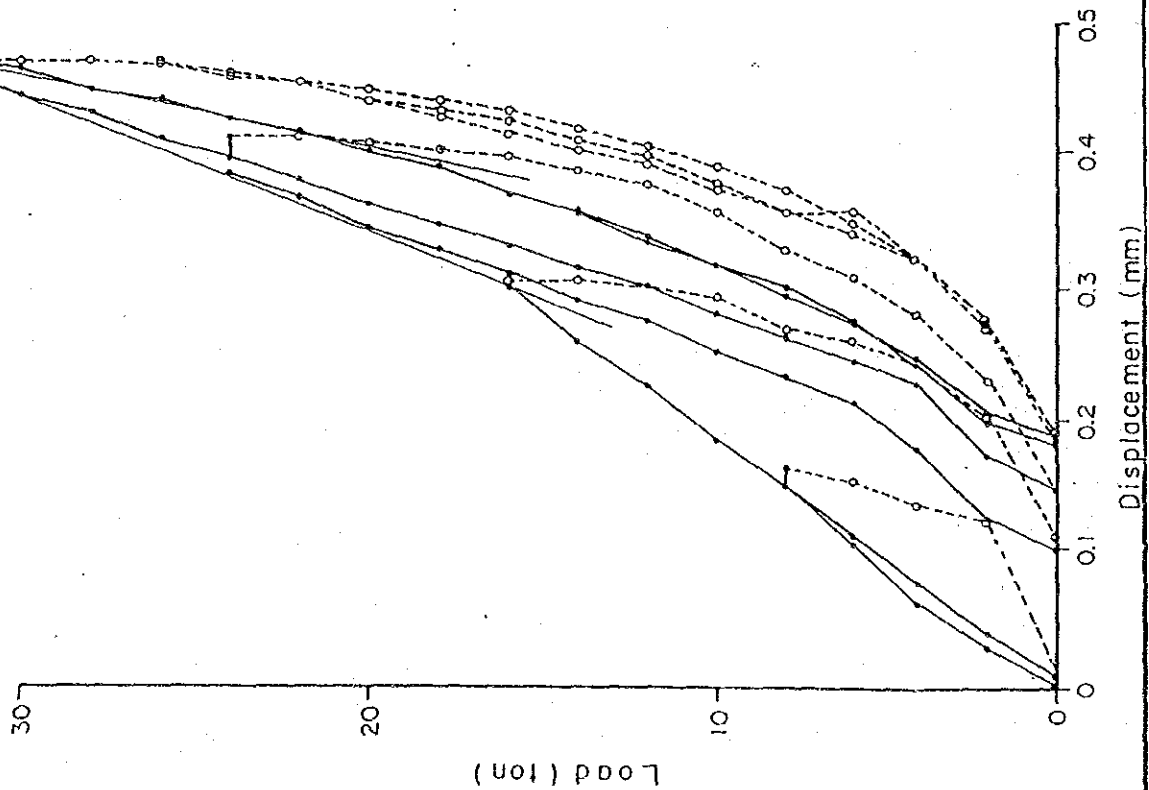
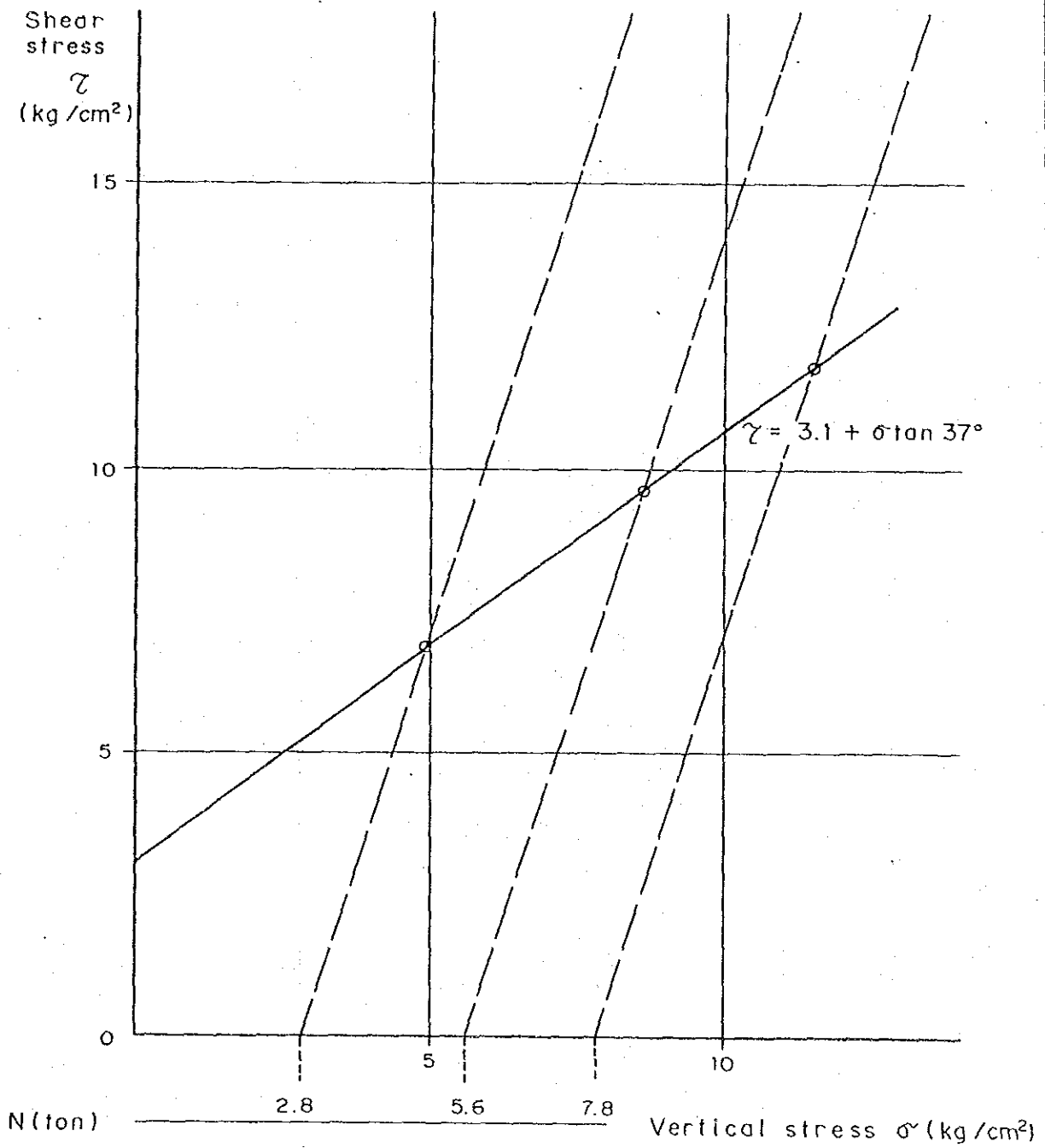


PLATE LOADING TEST, LOAD-DISPLACEMENT  
RELATIONS ADIT NO.4, TEST NO. VB-2 (VER. LOAD)

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

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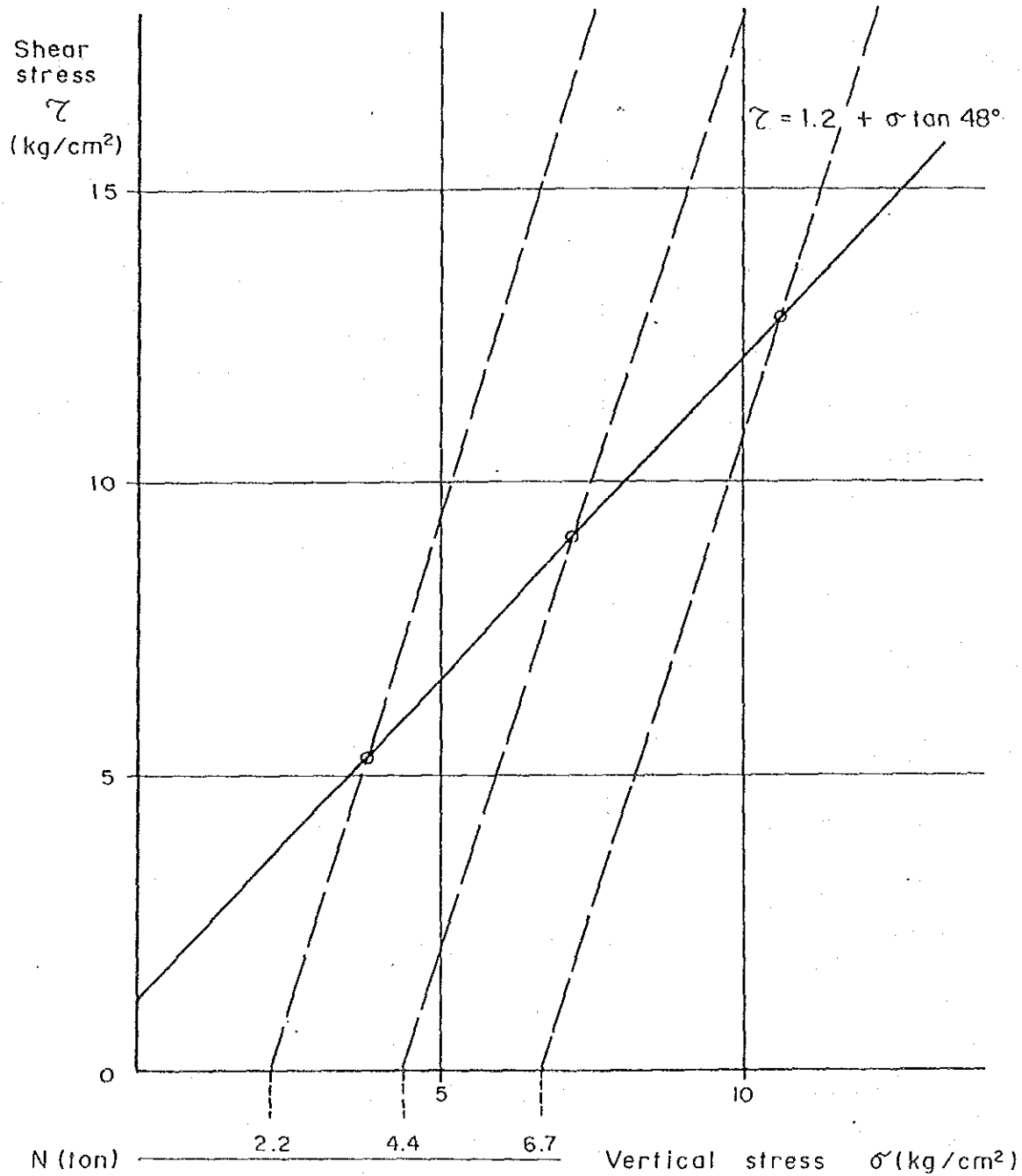


BLOCK SHEAR TEST, VERTICAL STRESS VS. SHEAR STRESS RELATION ADIT NO.1 HIGHLY WEATHERED BASALT

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY

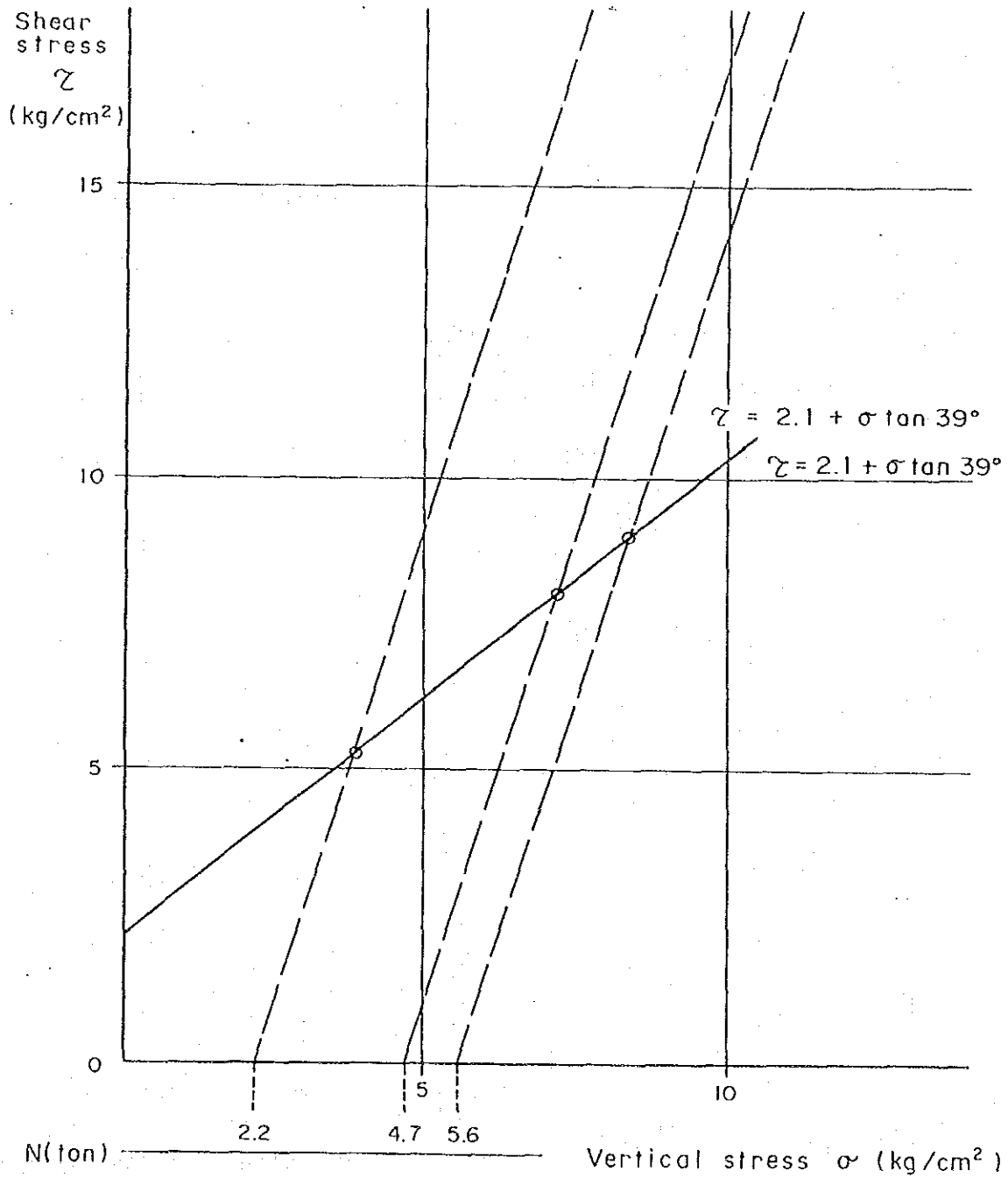




BLOCK SHEAR TEST, VERTICAL STRESS VS. SHEAR STRESS RELATION ADIT NO.2 HIGHLY WEATHERED BASALT

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

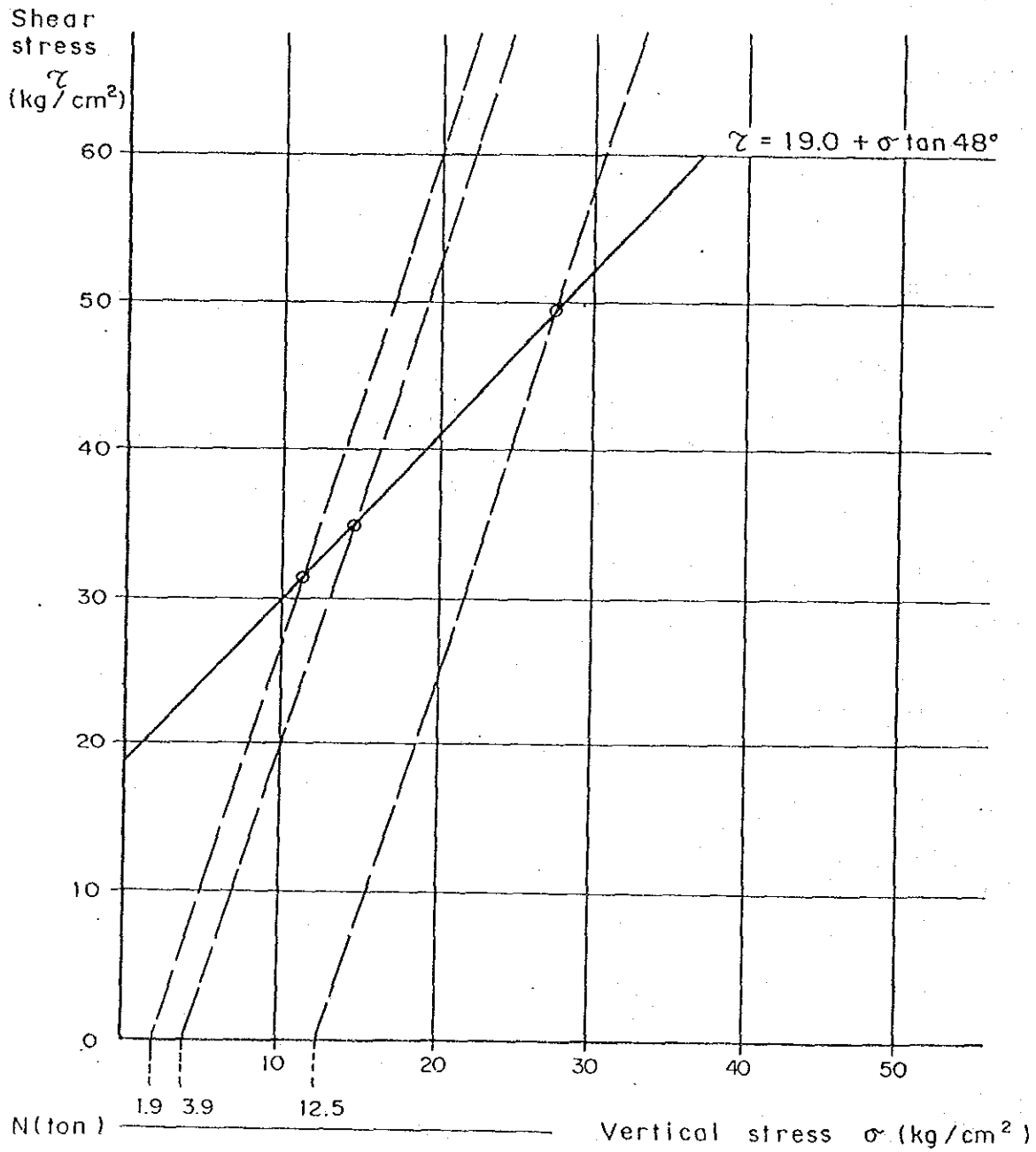
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BLOCK SHEAR TEST, VERTICAL STRESS VS. SHEAR STRESS RELATION ADIT NO.3 HARD CLAY

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

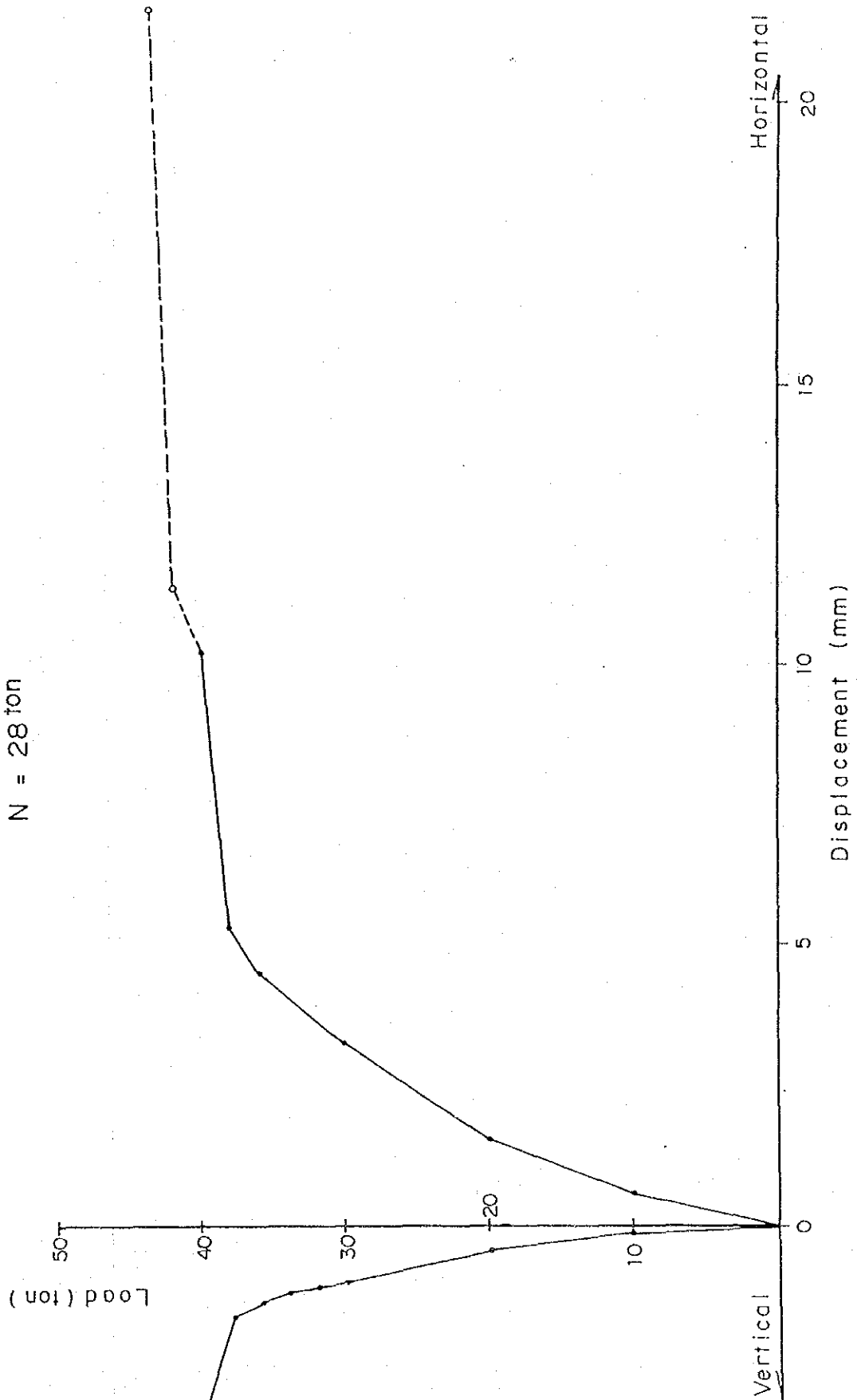
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BLOCK SHEAR TEST, VERTICAL STRESS VS. SHEAR STRESS RELATION ADIT NO.4 VESICULAR BASALT

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

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N = 28 ton

Load (ton)

Vertical

Horizontal

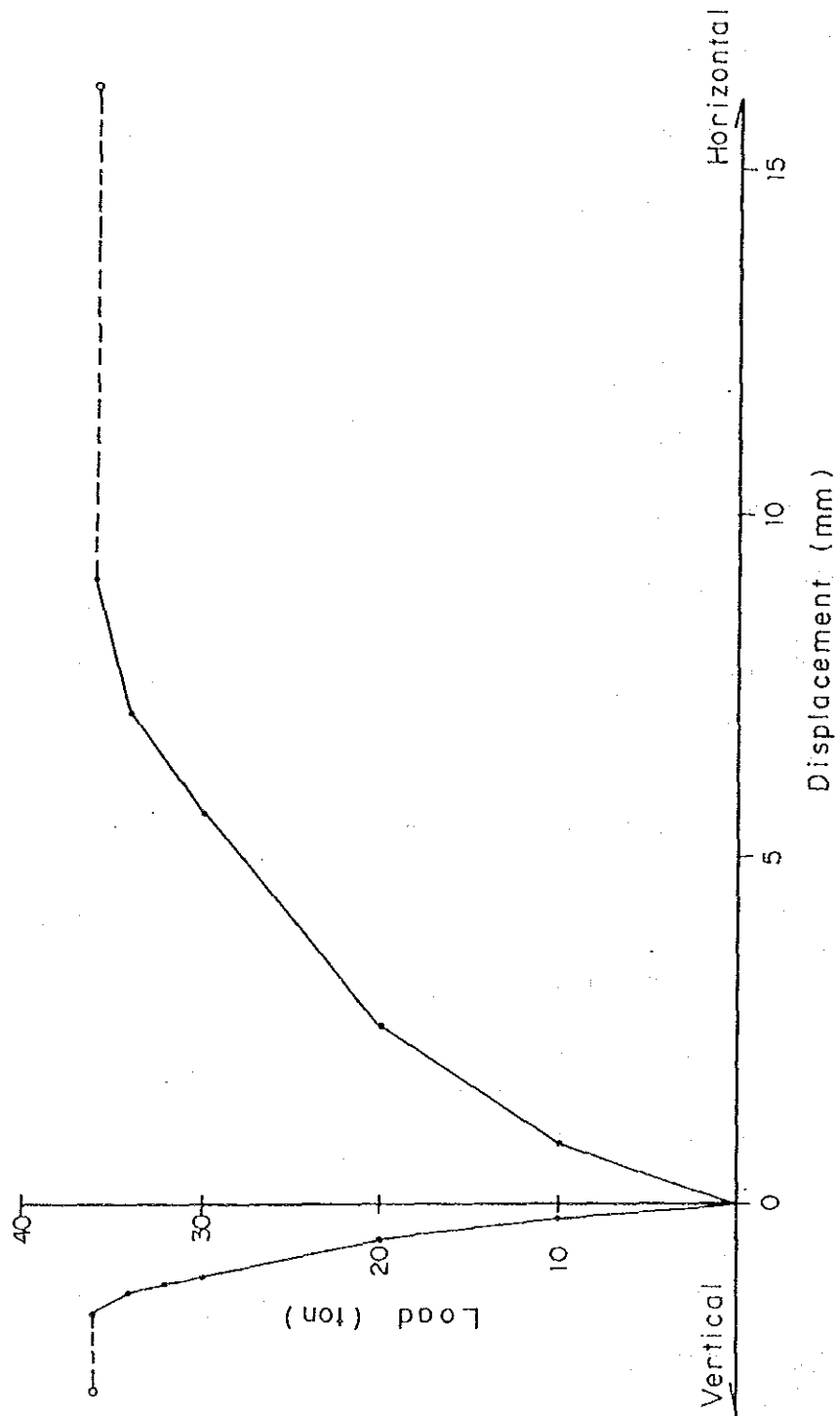
Displacement (mm)

BLOCK SHEAR TEST, LOAD-DISPLACEMENT RELATIONS ADIT NO.1, BLOCK NO.1

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

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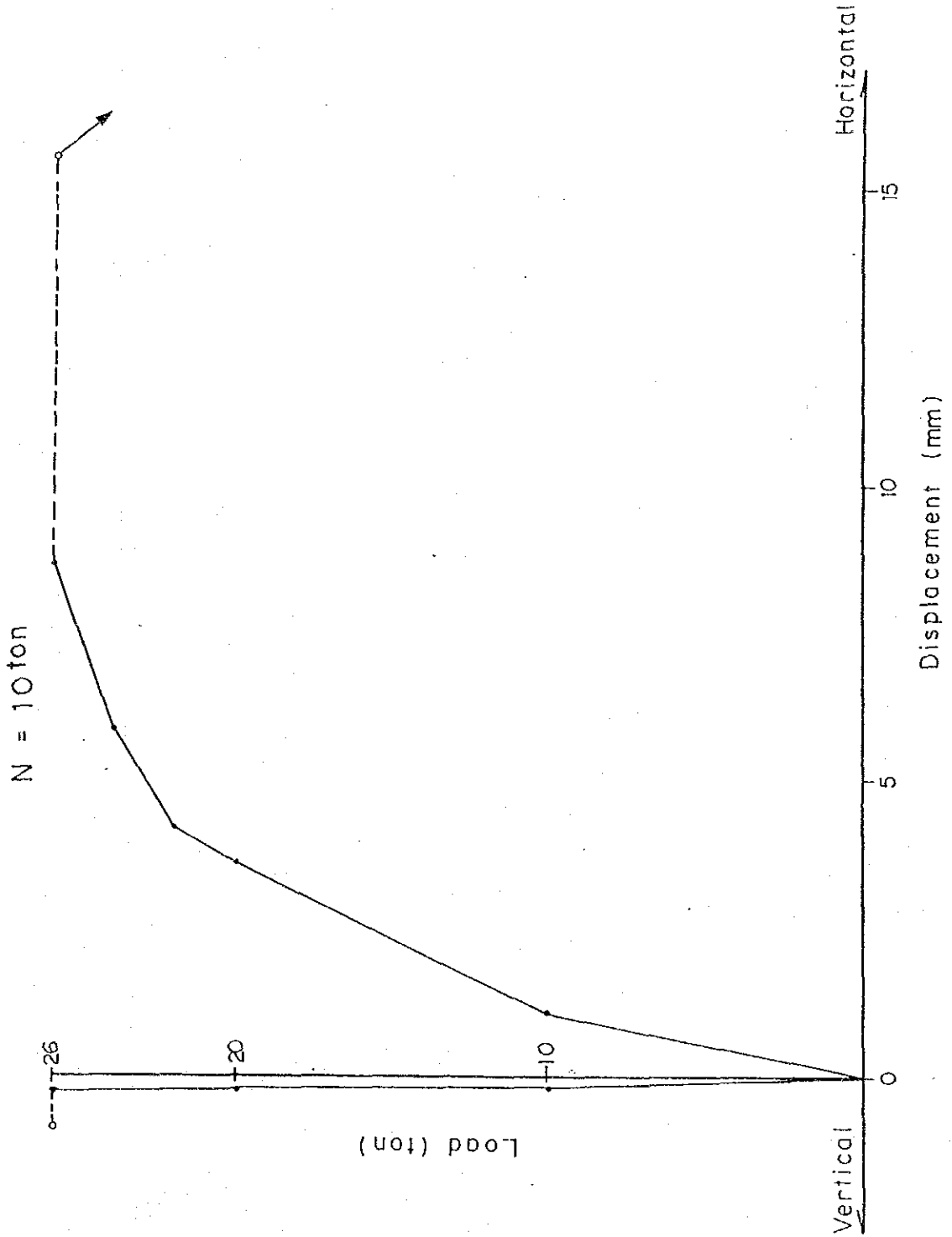
N = 20 ton



BLOCK SHEAR TEST, LOAD-DISPLACEMENT  
RELATIONS ADIT NO.1, BLOCK NO.2

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

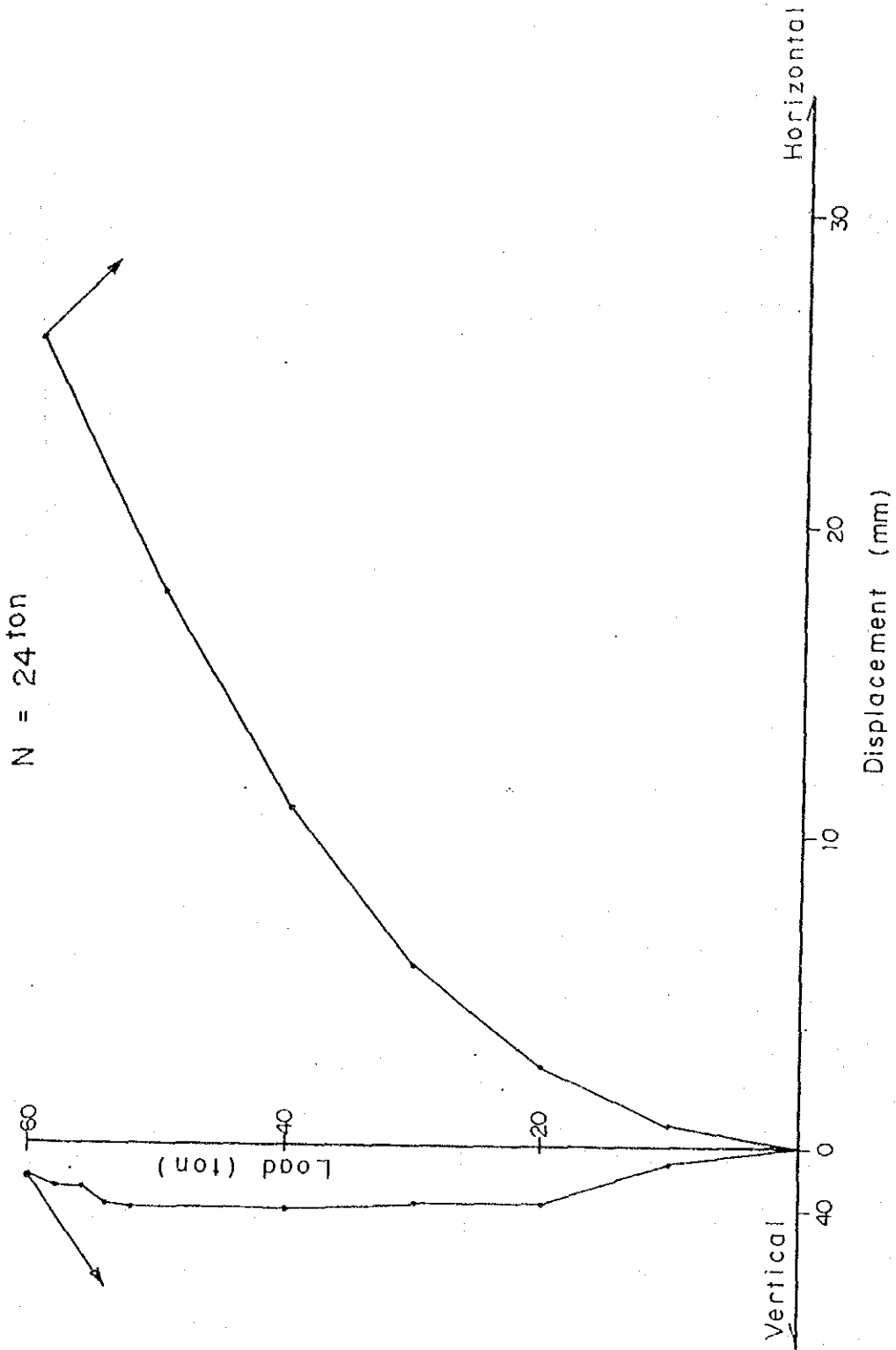
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BLOCK SHEAR TEST, LOAD-DISPLACEMENT  
RELATIONS ADIT NO.1, BLOCK NO.3

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

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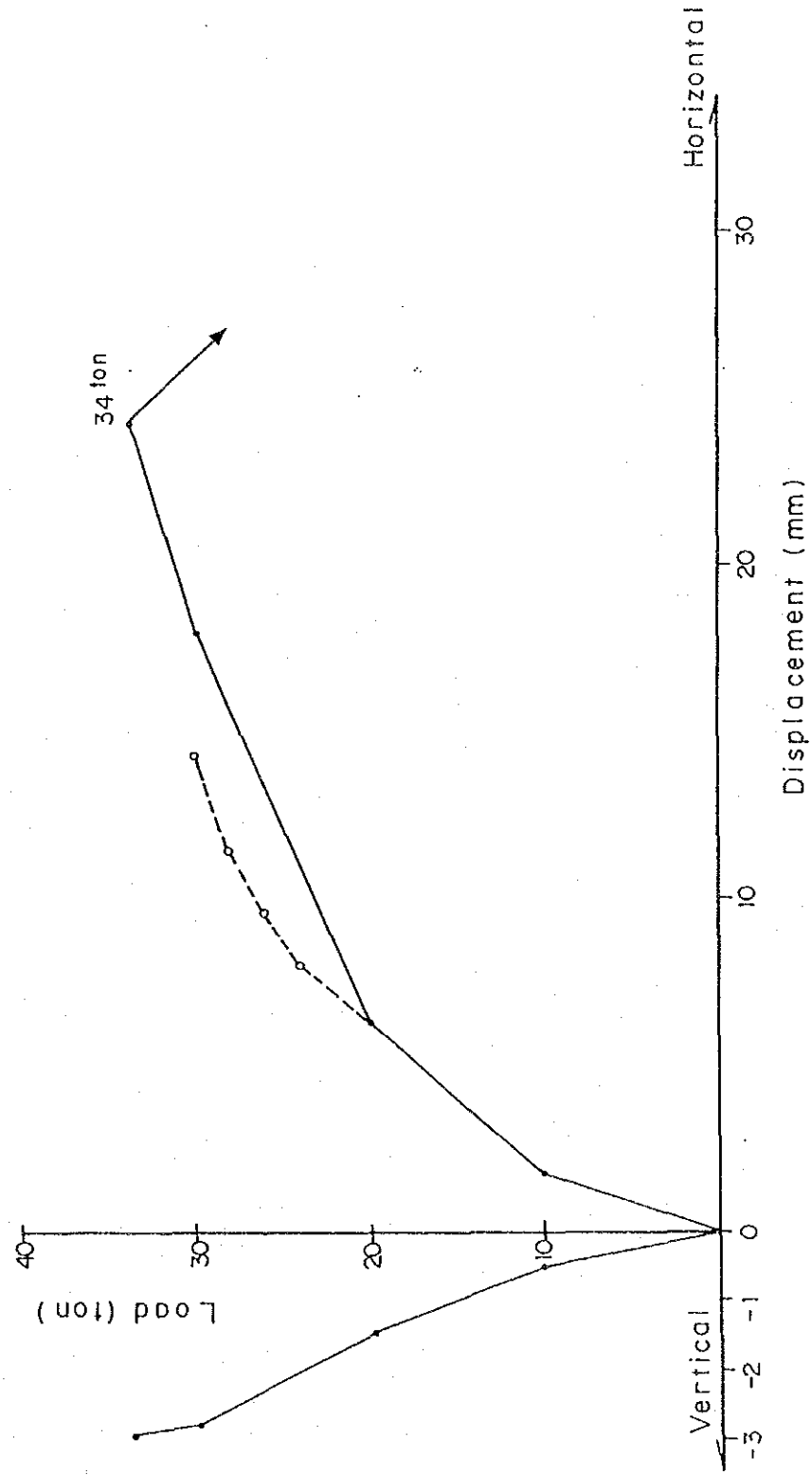


BLOCK SHEAR TEST, LOAD-DISPLACEMENT  
RELATIONS ADIT NO.2, BLOCK NO.1

GOVERNMENT OF MAURITIUS  
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N = 16 ton



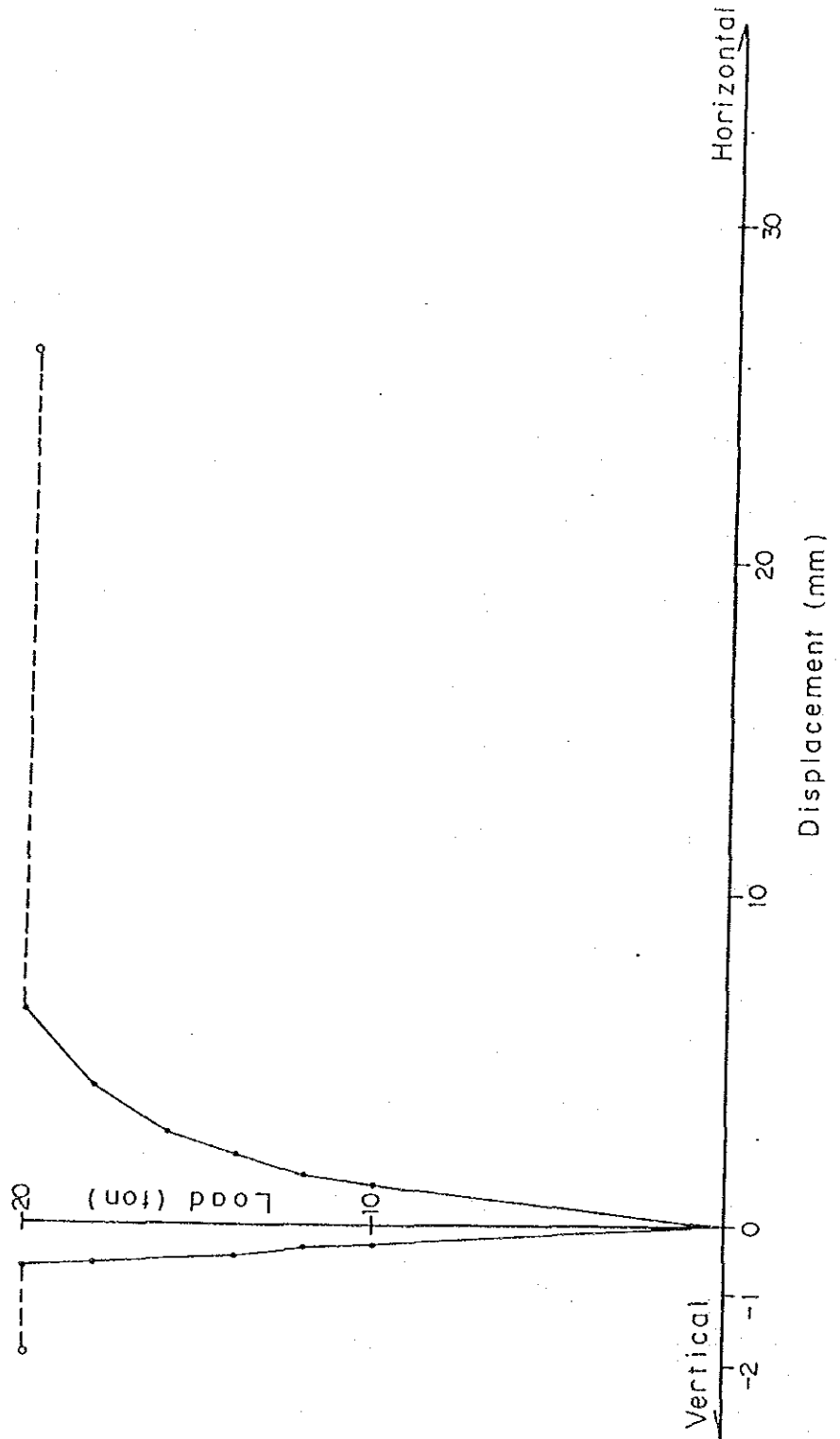
BLOCK SHEAR TEST, LOAD-DISPLACEMENT RELATIONS ADIT NO.2, BLOCK NO.2

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N = 8 ton

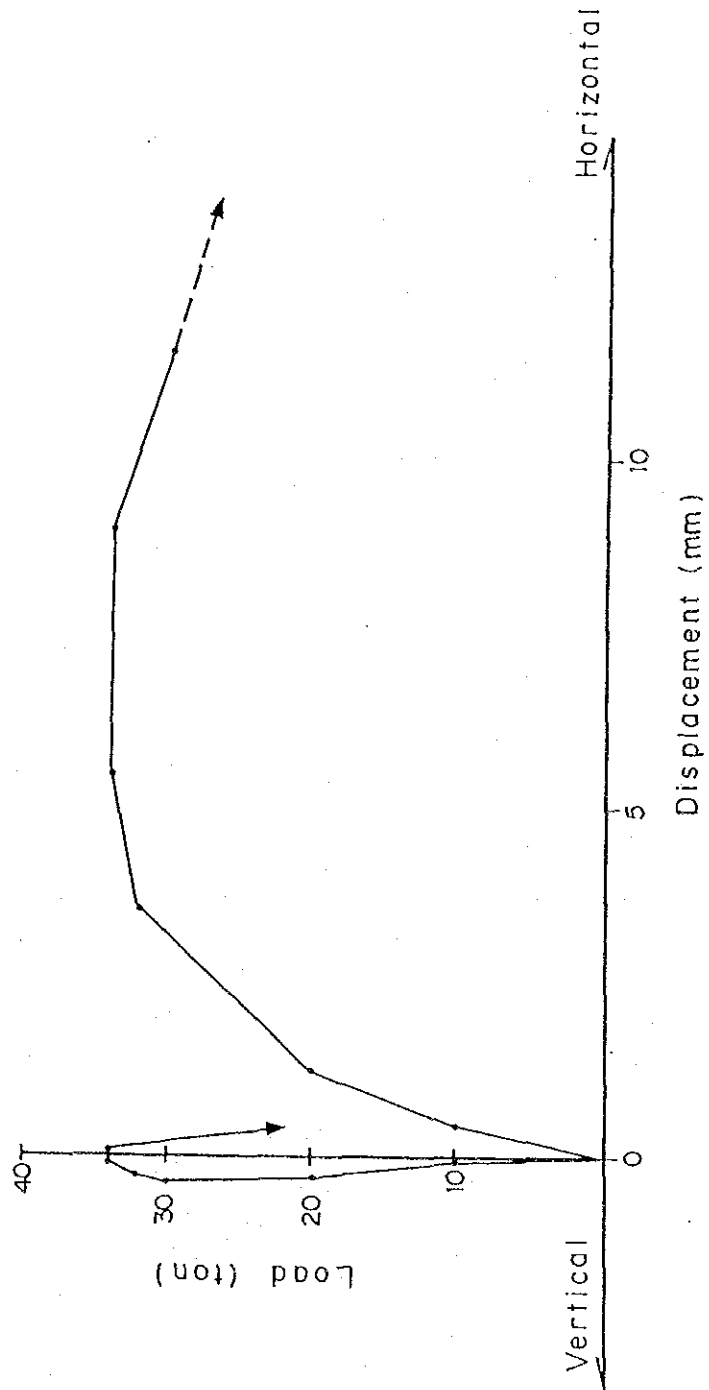


BLOCK SHEAR TEST, LOAD-DISPLACEMENT RELATIONS ADIT NO.2, BLOCK NO.3

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY

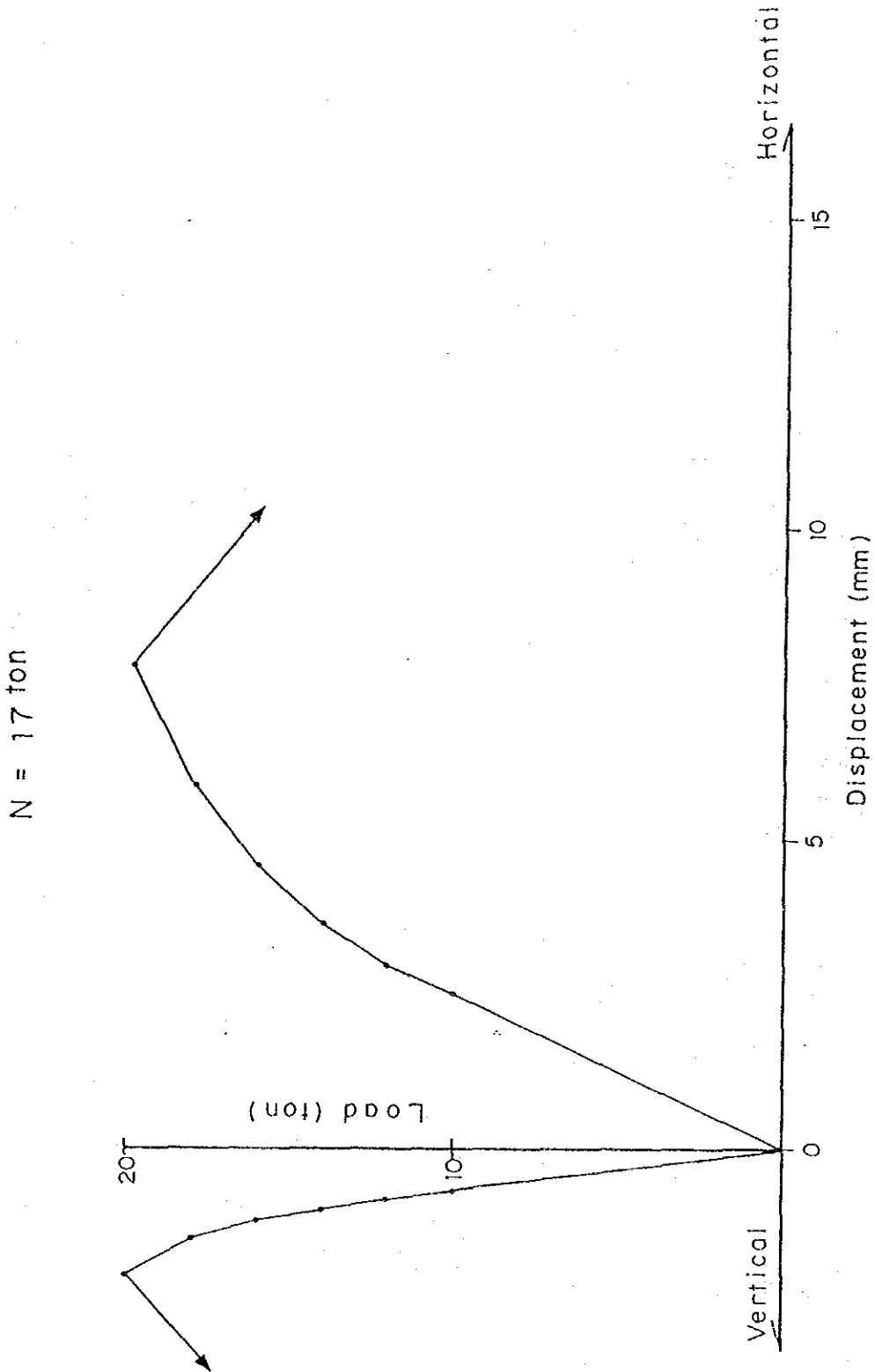
N = 20 ton



BLOCK SHEAR TEST, LOAD-DISPLACEMENT  
RELATIONS ADIT NO.3, BLOCK NO.1

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

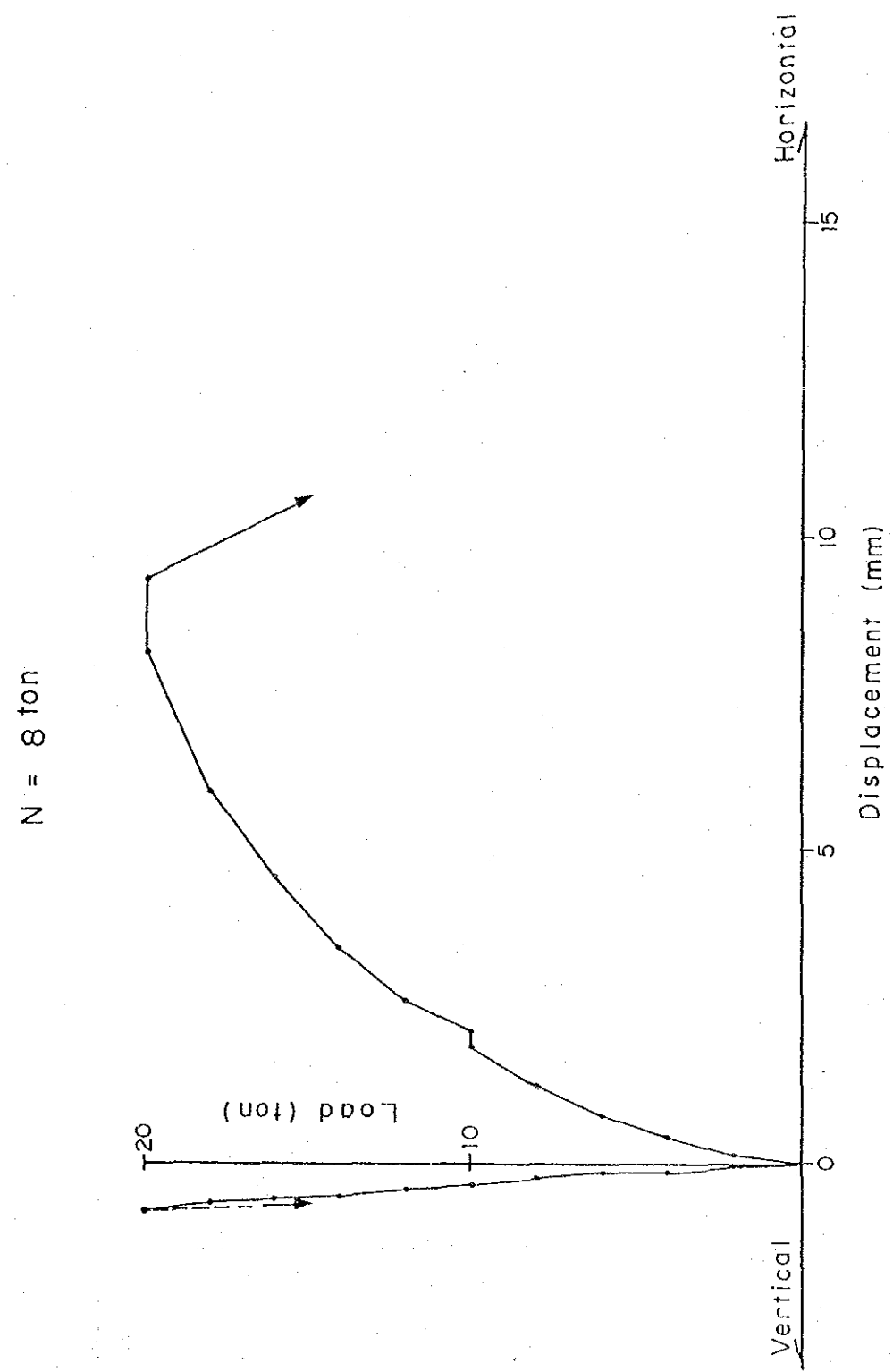
JAPAN INTERNATIONAL COOPERATION AGENCY



BLOCK SHEAR TEST, LOAD-DISPLACEMENT  
RELATIONS ADIT NO.3, BLOCK NO.2

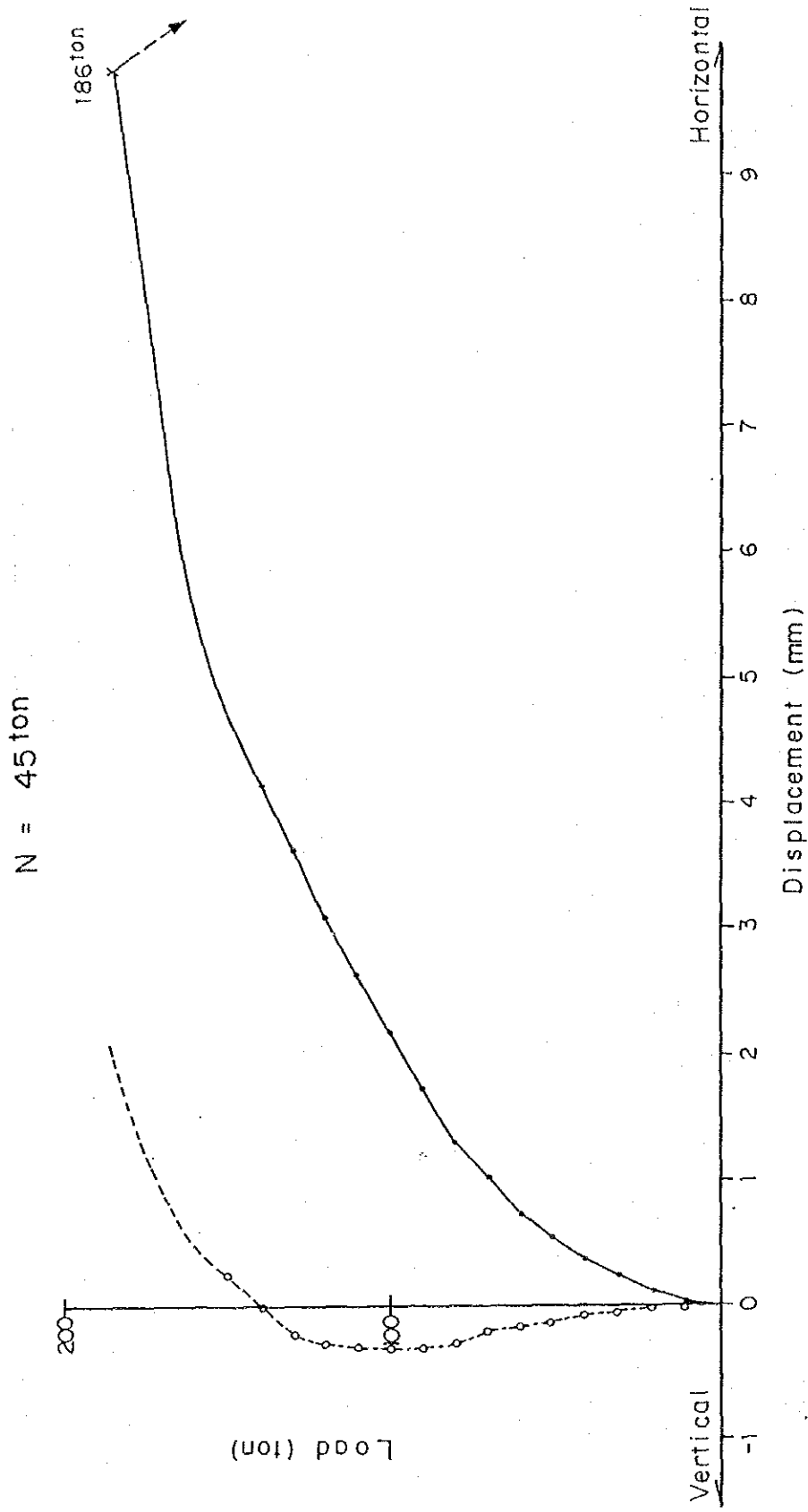
GOVERNMENT OF MAURITIUS  
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BLOCK SHEAR TEST, LOAD-DISPLACEMENT RELATIONS ADIT NO.3, BLOCK NO.3

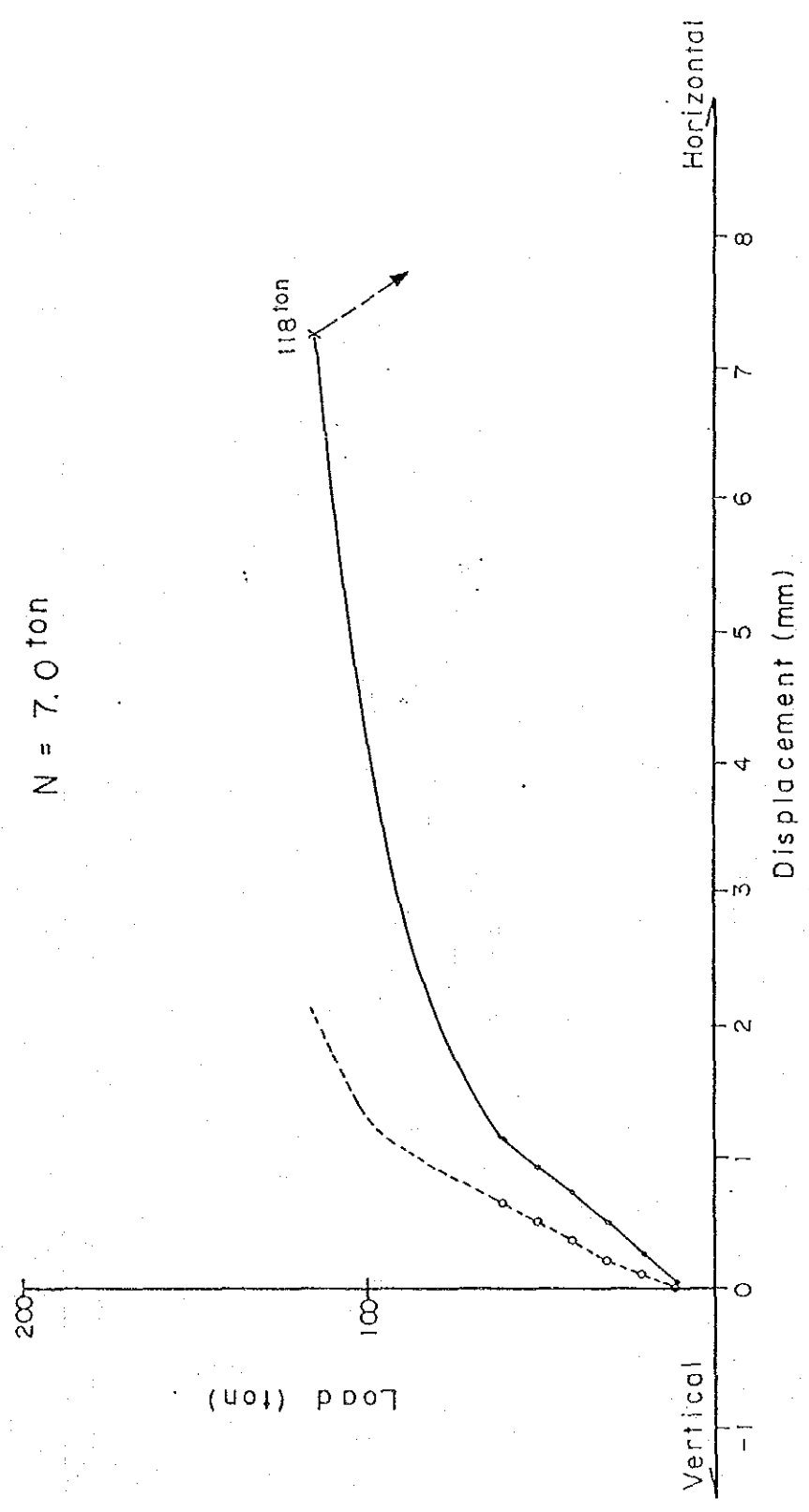
GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY



BLOCK SHEAR TEST, LOAD-DISPLACEMENT  
RELATIONS ADIT NO.4, BLOCK NO.1

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

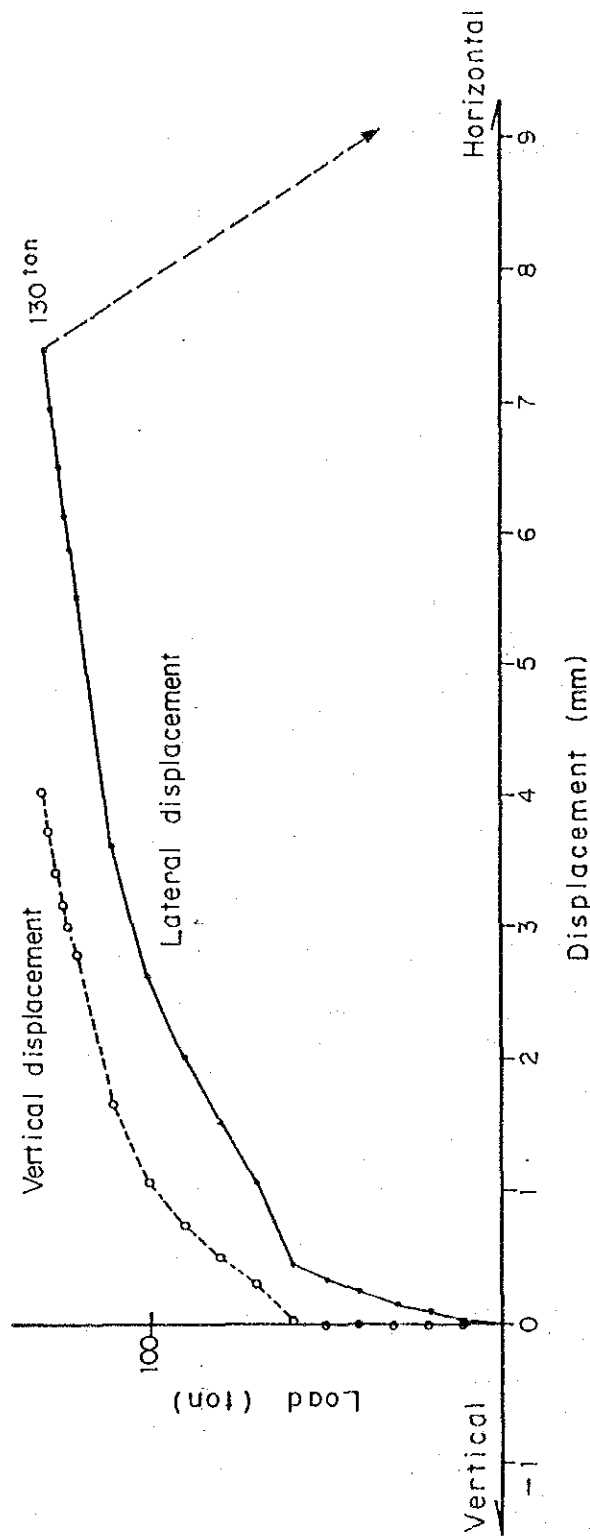
JAPAN INTERNATIONAL COOPERATION AGENCY



BLOCK SHEAR TEST, LOAD-DISPLACEMENT  
RELATIONS ADIT NO.4, BLOCK NO.2

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT  
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N = 14 ton

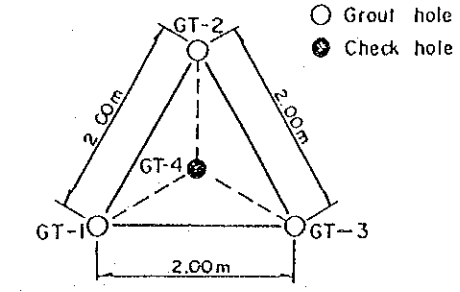


BLOCK SHEAR TEST, LOAD-DISPLACEMENT  
RELATIONS ADIT NO.4, BLOCK NO.3

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY

GEOLOGICAL DATA OF GT-4					LUGEON VALUE				INJECTION CEMENT				
DEPTH	ELEVATION	GEOLOGICAL AGE	ROCK TYPE	COLUMN SECTION	ROCK CLASS	Total Quantity for 10m~60m, 3,063.97 Kg (15.32 Kg/m)							
						GT-1	GT-2	GT-3	GT-4	GT-1	GT-2	GT-3	GT-4
						(Kg/m)	(Kg/m)	(Kg/m)	(Kg/m)	(Kg/m)	(Kg/m)	(Kg/m)	(Kg/m)
146.24		ALLUVIAL	Talus Deposits										
4.30	141.94		Boulders										
3.00													
8.00	138.24												
10.00			Weathered Porphyritic Basalt		CM	(71.00)	(189.7)	(140.2)	GT-4	(81.71 Kg/m)	(293.8 Kg/m)	(204.9 Kg/m)	GT-4
13.00					CL	2.27	102.9	1.13		2.52 Kg/m	257.3 Kg/m	0.78 Kg/m	0.00 Kg/m
17.60	128.64	(OL 3)	Weathered Basalt		CH								
18.20	128.04												
20.00	126.24				CH	12.00	4.61	0		7.36 Kg/m	3.48 Kg/m	0.00 Kg/m	2.42 Kg/m
		OLD LAVA 3	Basalt		B								
28.00	118.24												
30.00			Weathered Basalt		CM	16.52	4.12	3.87		52.93 Kg/m	5.62 Kg/m	1.122 Kg/m	0.00 Kg/m
32.30	114.94												
35.00	110.24		Glassy Basalt		CH								
37.20	109.04				CM								
40.00		OLD LAVA 2 (OL 2)	Basalt			2.12	2.35	0.83		8.64 Kg/m	13.28 Kg/m	0.00 Kg/m	0.00 Kg/m
50.00			Glassy Basalt		CH	24.10	29.51	5.45		48.58 Kg/m	10.03 Kg/m	16.50 Kg/m	2.62 Kg/m
52.90	93.34		Hard Clay		CL								
53.10	93.14												
55.93	90.29	OLD LAVA 1 (OL 1)	Weathered Basalt		CM								
58.60	87.64		Flow Breccia		D								
60.00	86.24		Weathered Basalt		CL	0.99	1.01	0.22		0.00 Kg/m	0.00 Kg/m	0.00 Kg/m	0.00 Kg/m



DISPOSITION OF BOREHOLES FOR TEST GROUTING

LIST OF GROUTING PRESSURE

Depth (m)	Max Pressure for Grouting (Kg/cm <sup>2</sup> )	Pressure for Permeability Test (Kg/cm <sup>2</sup> )
0 - 5	No need to grout	No need to test
5 - 10	2.0	0.5-1-1.5-2-1.5-1-0.5
10 - 15	4.0	1-2-3-4-5-2-1
15 - 20	6.0	1-2-4-6-4-2-1
20 - 30	10.0	2-4-7-10-7-4-2
30 - 40	10.0	2-4-7-10-7-4-2
40 - 50	10.0	2-4-7-10-7-4-2
50 - 60	10.0	2-4-7-10-7-4-2

AMOUNT OF INJECTED CEMENT (Kg)

STAGE	GT-1	GT-2	GT-3	GT-4	Total
0 - 5	—	—	—	—	—
5 - 10	408.54	1,468.76	1,024.72	—	2,902.02
10 - 15	12.60	1,286.60	3.88	0.00	1,303.08
15 - 20	36.82	17.93	0.00	12.11	66.86
20 - 30	529.27	56.20	112.16	0.00	697.63
30 - 40	86.39	132.75	0.00	0.00	219.14
40 - 50	485.80	100.33	164.97	26.16	777.26
50 - 60	0.00	0.00	0.00	0.00	0.00
Total	1,559.42	3,062.57	1,305.73	38.27	5,965.99





RECORD OF WATER PRESSURE TEST  
DEPTH(m): 55-60

HOLE NO. JD-2

GAUGE PRESS. kg/cm2	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	26.0	5.20	5.0	76.0	1.25	33.44	5.5	9.5	1.23E-04
4.0	31.5	6.30	5.0	76.0	1.25	33.44	7.5	8.4	1.09E-04
7.0	37.0	7.40	5.0	76.0	1.25	33.44	10.5	7.1	9.15E-05
10.0	43.0	8.60	5.0	76.0	1.25	33.44	13.5	6.4	8.26E-05
7.0	36.0	7.20	5.0	76.0	1.25	33.44	10.5	6.9	8.90E-05
4.0	28.3	5.66	5.0	76.0	1.25	33.44	7.5	7.6	9.81E-05
2.0	23.2	4.64	5.0	76.0	1.25	33.44	5.5	8.5	1.10E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 7.8 1.00E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 60-65

HOLE NO. JD-2

GAUGE PRESS. kg/cm2	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	156.0	31.20	5.0	76.0	1.88	35.71	5.8	54.2	7.01E-04
4.0	180.0	36.00	5.0	76.0	1.88	35.71	7.8	46.4	6.01E-04
7.0	205.0	41.00	5.0	76.0	1.88	35.71	10.8	38.1	4.93E-04
9.0	210.0	42.00	5.0	76.0	1.88	35.71	12.8	32.9	4.26E-04
7.0	200.0	40.00	5.0	76.0	1.88	35.71	10.8	37.2	4.81E-04
4.0	178.0	35.60	5.0	76.0	1.88	35.71	7.8	45.9	5.94E-04
2.0	156.0	31.20	5.0	76.0	1.88	35.71	5.8	54.2	7.01E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 44.1 5.71E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 65-70

HOLE NO. JD-2

GAUGE PRESS. kg/cm2	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	5.4	1.08	5.0	76.0	2.63	35.71	5.8	1.9	2.40E-05
4.0	11.0	2.20	5.0	76.0	2.63	35.71	7.8	2.8	3.63E-05
7.0	23.0	4.60	5.0	76.0	2.63	35.71	10.8	4.2	5.50E-05
10.0	29.0	5.80	5.0	76.0	2.63	35.71	13.8	4.2	5.43E-05
7.0	23.0	4.60	5.0	76.0	2.63	35.71	10.8	4.2	5.50E-05
4.0	12.0	2.40	5.0	76.0	2.63	35.71	7.8	3.1	3.97E-05
2.0	6.0	1.20	5.0	76.0	2.63	35.71	5.8	2.1	2.66E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 3.2 4.15E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 70-75

HOLE NO. JD-2

GAUGE PRESS. kg/cm2	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	16.0	3.20	5.0	76.0	1.00	28.12	4.9	6.5	8.43E-05
4.0	22.0	4.40	5.0	76.0	1.00	28.12	6.9	6.4	8.24E-05
7.0	28.0	5.60	5.0	76.0	1.00	28.12	9.9	5.6	7.31E-05
10.0	33.0	6.60	5.0	76.0	1.00	28.12	12.9	5.1	6.62E-05
7.0	28.4	5.68	5.0	76.0	1.00	28.12	9.9	5.7	7.42E-05
4.0	22.0	4.40	5.0	76.0	1.00	28.12	6.9	6.4	8.24E-05
2.0	17.0	3.40	5.0	76.0	1.00	28.12	4.9	6.9	8.96E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 6.1 7.89E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 75-80

HOLE NO. JD-1

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.0	0.00	5.0	76.0	2.45	16.35	3.9	0.0
4.0	0.0	0.00	5.0	76.0	2.45	16.35	5.9	0.0
7.0	0.0	0.00	5.0	76.0	2.45	16.35	8.9	0.0
10.0	0.0	0.00	5.0	76.0	2.45	16.35	11.9	0.0
7.0	0.0	0.00	5.0	76.0	2.45	16.35	8.9	0.0
4.0	0.0	0.00	5.0	76.0	2.45	16.35	5.9	0.0
2.0	0.0	0.00	5.0	76.0	2.45	16.35	3.9	0.0
AVERAGE							0.0	0.00E+00
k-VALUE: COEFFICIENT OF PERMEABILITY								

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 80-85

HOLE NO. JD-1

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.0	0.00	5.0	76.0	2.35	28.78	5.1	0.0
4.0	0.0	0.00	5.0	76.0	2.35	28.78	7.1	0.0
7.0	0.0	0.00	5.0	76.0	2.35	28.78	10.1	0.0
10.0	0.0	0.00	5.0	76.0	2.35	28.78	13.1	0.0
7.0	0.0	0.00	5.0	76.0	2.35	28.78	10.1	0.0
4.0	0.0	0.00	5.0	76.0	2.35	28.78	7.1	0.0
2.0	0.0	0.00	5.0	76.0	2.35	28.78	5.1	0.0
AVERAGE							0.0	0.00E+00
k-VALUE: COEFFICIENT OF PERMEABILITY								

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 82-90

HOLE NO. JD-1

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.0	0.00	8.0	76.0	2.62	38.26	6.1	0.0
4.0	1.9	0.24	8.0	76.0	2.62	38.26	8.1	0.3
7.0	0.5	0.06	8.0	76.0	2.62	38.26	11.1	0.1
10.0	0.7	0.09	8.0	76.0	2.62	38.26	14.1	0.1
7.0	0.0	0.00	8.0	76.0	2.62	38.26	11.1	0.0
4.0	0.0	0.00	8.0	76.0	2.62	38.26	8.1	0.0
2.0	0.0	0.00	8.0	76.0	2.62	38.26	6.1	0.0
AVERAGE							0.1	8.35E-07
k-VALUE: COEFFICIENT OF PERMEABILITY								

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 90-96

HOLE NO. JD-1

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.1	0.02	6.0	76.0	1.53	24.30	4.6	0.0
4.0	0.1	0.02	6.0	76.0	1.53	24.30	6.6	0.0
7.0	0.3	0.05	6.0	76.0	1.53	24.30	9.6	0.1
10.0	0.6	0.10	6.0	76.0	1.53	24.30	12.6	0.1
7.0	0.1	0.02	6.0	76.0	1.53	24.30	9.6	0.0
4.0	0.0	0.00	6.0	76.0	1.53	24.30	6.6	0.0
2.0	0.0	0.00	6.0	76.0	1.53	24.30	4.6	0.0
AVERAGE							0.0	4.04E-07
k-VALUE: COEFFICIENT OF PERMEABILITY								

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 90-102

HOLE NO. JD-1

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm <sup>2</sup>	lit/min	lit/min/m	m	mm	m	kg/cm <sup>2</sup>		cm/sec	
2.0	8.4	0.70	12.0	76.0	2.40	25.32	4.8	1.5	2.24E-05
4.0	7.0	0.58	12.0	76.0	2.40	25.32	6.8	0.9	1.31E-05
7.0	1.8	0.15	12.0	76.0	2.40	25.32	9.8	0.2	2.34E-06
10.0	17.4	1.45	12.0	76.0	2.40	25.32	12.8	1.1	1.73E-05
7.0	13.0	1.08	12.0	76.0	2.40	25.32	9.8	1.1	1.69E-05
4.0	16.4	1.37	12.0	76.0	2.40	25.32	6.8	2.0	3.08E-05
2.0	3.0	0.25	12.0	76.0	2.40	25.32	4.8	0.5	8.00E-06

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 1.0 1.58E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 102-108

HOLE NO. JD-1

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm <sup>2</sup>	lit/min	lit/min/m	m	mm	m	kg/cm <sup>2</sup>		cm/sec	
2.0	3.0	0.50	6.0	76.0	2.32	29.02	5.1	1.0	1.31E-05
4.0	4.2	0.70	6.0	76.0	2.32	29.02	7.1	1.0	1.32E-05
7.0	5.4	0.90	6.0	76.0	2.32	29.02	10.1	0.9	1.19E-05
10.0	7.8	1.30	6.0	76.0	2.32	29.02	13.1	1.0	1.33E-05
7.0	6.0	1.00	6.0	76.0	2.32	29.02	10.1	1.0	1.32E-05
4.0	4.2	0.70	6.0	76.0	2.32	29.02	7.1	1.0	1.32E-05
2.0	3.0	0.50	6.0	76.0	2.32	29.02	5.1	1.0	1.31E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 1.0 1.30E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 108-114

HOLE NO. JD-1

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm <sup>2</sup>	lit/min	lit/min/m	m	mm	m	kg/cm <sup>2</sup>		cm/sec	
2.0	13.2	2.20	6.0	76.0	2.15	26.73	4.9	4.5	6.04E-05
4.0	15.6	2.60	6.0	76.0	2.15	26.73	6.9	3.8	5.07E-05
7.0	20.4	3.40	6.0	76.0	2.15	26.73	9.9	3.4	4.62E-05
10.0	25.2	4.20	6.0	76.0	2.15	26.73	12.9	3.3	4.38E-05
7.0	16.8	2.80	6.0	76.0	2.15	26.73	9.9	2.8	3.80E-05
4.0	14.4	2.40	6.0	76.0	2.15	26.73	6.9	3.5	4.68E-05
2.0	12.0	2.00	6.0	76.0	2.15	26.73	4.9	4.1	5.49E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 3.6 4.87E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 114-120

HOLE NO. JD-1

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm <sup>2</sup>	lit/min	lit/min/m	m	mm	m	kg/cm <sup>2</sup>		cm/sec	
2.0	4.8	0.80	6.0	76.0	2.02	23.82	4.6	1.7	2.34E-05
4.0	5.4	0.90	6.0	76.0	2.02	23.82	6.6	1.4	1.84E-05
7.0	6.0	1.00	6.0	76.0	2.02	23.82	9.6	1.0	1.40E-05
10.0	10.2	1.70	6.0	76.0	2.02	23.82	12.6	1.4	1.81E-05
7.0	9.1	1.52	6.0	76.0	2.02	23.82	9.6	1.6	2.12E-05
4.0	8.4	1.40	6.0	76.0	2.02	23.82	6.6	2.1	2.86E-05
2.0	7.8	1.30	6.0	76.0	2.02	23.82	4.6	2.8	3.81E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 1.7 2.31E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 75-80

HOLE NO. JD-2

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	54.6	10.92	5.0	76.0	1.71	32.17	5.4	20.3	2.62E-04
4.0	65.8	13.16	5.0	76.0	1.71	32.17	7.4	17.8	2.31E-04
7.0	102.8	20.56	5.0	76.0	1.71	32.17	10.4	19.8	2.56E-04
10.0	124.6	24.92	5.0	76.0	1.71	32.17	13.4	18.6	2.41E-04
7.0	109.6	21.92	5.0	76.0	1.71	32.17	10.4	21.1	2.73E-04
4.0	98.8	19.76	5.0	76.0	1.71	32.17	7.4	26.7	3.46E-04
2.0	85.6	17.12	5.0	76.0	1.71	32.17	5.4	31.8	4.11E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 22.3 2.89E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 80-90

HOLE NO. JD-2

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	13.5	1.35	10.0	76.0	1.21	36.76	5.8	2.3	3.44E-05
4.0	19.0	1.90	10.0	76.0	1.21	36.76	7.8	2.4	3.60E-05
7.0	29.5	2.95	10.0	76.0	1.21	36.76	10.8	2.7	4.04E-05
10.0	58.5	5.85	10.0	76.0	1.21	36.76	13.8	4.2	6.27E-05
7.0	36.5	3.65	10.0	76.0	1.21	36.76	10.8	3.4	5.00E-05
4.0	26.0	2.60	10.0	76.0	1.21	36.76	7.8	3.3	4.93E-05
2.0	20.5	2.05	10.0	76.0	1.21	36.76	5.8	3.5	5.23E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 3.1 4.64E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 90-96

HOLE NO. JD-2

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	13.4	2.23	6.0	76.0	1.28	39.55	6.1	3.7	4.93E-05
4.0	24.0	4.00	6.0	76.0	1.28	39.55	8.1	4.9	6.64E-05
7.0	41.2	6.87	6.0	76.0	1.28	39.55	11.1	6.2	8.32E-05
10.0	54.6	9.10	6.0	76.0	1.28	39.55	14.1	6.5	8.68E-05
7.0	47.0	7.83	6.0	76.0	1.28	39.55	11.1	7.1	9.49E-05
4.0	40.0	6.67	6.0	76.0	1.28	39.55	8.1	8.2	1.11E-04
2.0	34.8	5.80	6.0	76.0	1.28	39.55	6.1	9.5	1.28E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 6.6 8.85E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 96-102

HOLE NO. JD-2

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	15.6	2.60	6.0	76.0	0.38	40.05	6.0	4.3	5.78E-05
4.0	19.6	3.27	6.0	76.0	0.38	40.05	8.0	4.1	5.45E-05
7.0	48.4	8.07	6.0	76.0	0.38	40.05	11.0	7.3	9.81E-05
10.0	62.4	10.40	6.0	76.0	0.38	40.05	14.0	7.4	9.94E-05
7.0	55.8	9.30	6.0	76.0	0.38	40.05	11.0	8.4	1.13E-04
4.0	47.6	7.93	6.0	76.0	0.38	40.05	8.0	9.9	1.32E-04
2.0	37.4	6.23	6.0	76.0	0.38	40.05	6.0	10.3	1.39E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 7.4 9.91E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 102-108

HOLE NO. JD-2

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	28.6	4.77	6.0	76.0	2.05	52.87	7.5	6.4	8.54E-05
4.0	37.0	6.17	6.0	76.0	2.05	52.87	9.5	6.5	8.72E-05
7.0	52.0	8.67	6.0	76.0	2.05	52.87	12.5	6.9	9.32E-05
10.0	80.0	13.33	6.0	76.0	2.05	52.87	15.5	8.6	1.16E-04
7.0	65.6	10.93	6.0	76.0	2.05	52.87	12.5	8.8	1.18E-04
4.0	55.4	9.23	6.0	76.0	2.05	52.87	9.5	9.7	1.31E-04
2.0	47.6	7.93	6.0	76.0	2.05	52.87	7.5	10.6	1.42E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 8.2 1.10E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 108-114

HOLE NO. JD-2

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	75.0	12.50	6.0	76.0	1.38	51.04	7.2	17.3	2.32E-04
4.0	85.0	14.17	6.0	76.0	1.38	51.04	9.2	15.3	2.06E-04
7.5	97.0	16.17	6.0	76.0	1.38	51.04	12.7	12.7	1.70E-04
4.0	79.8	13.30	6.0	76.0	1.38	51.04	9.2	14.4	1.93E-04
2.0	73.0	12.17	6.0	76.0	1.38	51.04	7.2	16.8	2.26E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 15.3 2.05E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 114-120

HOLE NO. JD-2

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	96.0	16.00	6.0	76.0	1.90	51.41	7.3	21.8	2.93E-04
4.0	103.4	17.23	6.0	76.0	1.90	51.41	9.3	18.5	2.48E-04
7.0	115.0	19.17	6.0	76.0	1.90	51.41	12.3	15.5	2.09E-04
4.0	101.0	16.83	6.0	76.0	1.90	51.41	9.3	18.0	2.42E-04
2.0	93.2	15.53	6.0	76.0	1.90	51.41	7.3	21.2	2.85E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 19.0 2.55E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 2-5

HOLE NO. JD-3

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
0.5	51.4	17.13	3.0	66.0	1.20	3.50	1.0	176.6	2.11E-03
1.0	65.4	21.80	3.0	66.0	1.20	3.50	1.5	148.3	1.77E-03
1.5	70.4	23.47	3.0	66.0	1.20	3.50	2.0	119.1	1.43E-03
2.0	76.6	25.53	3.0	66.0	1.20	3.50	2.5	103.4	1.24E-03
1.5	69.0	23.00	3.0	66.0	1.20	3.50	2.0	116.8	1.40E-03
1.0	51.0	17.00	3.0	66.0	1.20	3.50	1.5	115.6	1.38E-03
0.5	36.0	12.00	3.0	66.0	1.20	3.50	1.0	123.7	1.48E-03
AVERAGE								129.1	1.54E-03
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 5-10

HOLE NO. JD-3

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
1.0	12.2	2.44	5.0	66.0	1.20	7.50	1.9	13.0	1.74E-04
2.0	29.2	5.84	5.0	66.0	1.20	7.50	2.9	20.3	2.71E-04
3.0	49.8	9.96	5.0	66.0	1.20	7.50	3.9	25.7	3.43E-04
4.0	41.6	8.32	5.0	66.0	1.20	7.50	4.9	17.1	2.28E-04
3.0	53.4	10.67	5.0	66.0	1.20	7.50	3.9	27.6	3.67E-04
2.0	36.0	7.20	5.0	66.0	1.20	7.50	2.9	25.1	3.34E-04
1.0	25.0	5.00	5.0	66.0	1.20	7.50	1.9	26.7	3.56E-04
AVERAGE								22.2	2.96E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 10 - 15

HOLE NO. JD-3

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
1.0	42.4	8.48	5.0	66.0	1.20	12.50	2.4	35.8	4.77E-04
2.0	50.0	10.00	5.0	66.0	1.20	12.50	3.4	29.7	3.95E-04
4.0	73.4	14.68	5.0	66.0	1.20	12.50	5.4	27.3	3.64E-04
6.0	98.0	19.60	5.0	66.0	1.20	12.50	7.4	26.6	3.54E-04
4.0	76.0	15.20	5.0	66.0	1.20	12.50	5.4	28.3	3.77E-04
2.0	57.0	11.40	5.0	66.0	1.20	12.50	3.4	33.8	4.51E-04
1.0	45.0	9.00	5.0	66.0	1.20	12.50	2.4	38.0	5.06E-04
AVERAGE								31.4	4.18E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 15-20

HOLE NO. JD-3

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	44.4	8.88	5.0	66.0	1.20	16.45	3.8	23.6	3.14E-04
4.0	65.6	13.12	5.0	66.0	1.20	16.45	5.8	22.8	3.03E-04
6.0	82.2	16.44	5.0	66.0	1.20	16.45	7.8	21.2	2.82E-04
8.0	97.4	19.48	5.0	66.0	1.20	16.45	9.8	19.9	2.66E-04
6.0	84.0	16.80	5.0	66.0	1.20	16.45	7.8	21.6	2.88E-04
4.0	71.0	14.20	5.0	66.0	1.20	16.45	5.8	24.6	3.28E-04
2.0	55.5	11.10	5.0	66.0	1.20	16.45	3.8	29.5	3.93E-04
AVERAGE								23.3	3.11E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 20-25

HOLE NO. JD-3

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.9	0.18	5.0	66.0	1.20	19.42	4.1	5.90E-06
4.0	1.2	0.24	5.0	66.0	1.20	19.42	6.1	5.27E-06
7.0	41.2	8.24	5.0	66.0	1.20	19.42	9.1	1.21E-04
10.0	72.2	14.44	5.0	66.0	1.20	19.42	12.1	1.59E-04
7.0	59.0	11.80	5.0	66.0	1.20	19.42	9.1	1.73E-04
4.0	38.0	7.60	5.0	66.0	1.20	19.42	6.1	1.67E-04
2.0	24.0	4.80	5.0	66.0	1.20	19.42	4.1	1.57E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 8.5 1.13E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 25-30

HOLE NO. JD-3

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	47.8	9.56	5.0	66.0	1.20	19.41	4.1	3.14E-04
4.0	67.6	13.52	5.0	66.0	1.20	19.41	6.1	2.97E-04
7.0	89.2	17.84	5.0	66.0	1.20	19.41	9.1	2.62E-04
10.0	107.0	21.40	5.0	66.0	1.20	19.41	12.1	2.36E-04
7.0	88.0	17.60	5.0	66.0	1.20	19.41	9.1	2.59E-04
4.0	73.5	14.70	5.0	66.0	1.20	19.41	6.1	2.33E-04
2.0	56.5	11.30	5.0	66.0	1.20	19.41	4.1	3.71E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 22.1 2.94E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 30-35

HOLE NO. JD-3

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	52.2	10.44	5.0	66.0	1.20	19.66	4.1	3.40E-04
4.0	67.4	13.48	5.0	66.0	1.20	19.66	6.1	2.95E-04
7.0	90.2	18.04	5.0	66.0	1.20	19.66	9.1	2.64E-04
10.0	107.2	21.44	5.0	66.0	1.20	19.66	12.1	2.36E-04
7.0	86.0	17.20	5.0	66.0	1.20	19.66	9.1	2.52E-04
4.0	61.5	12.30	5.0	66.0	1.20	19.66	6.1	2.69E-04
2.0	46.0	9.20	5.0	66.0	1.20	19.66	4.1	3.00E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 21.0 2.80E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 35-40

HOLE NO. JD-3

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	49.8	9.96	5.0	66.0	1.20	28.02	4.9	2.69E-04
4.0	66.4	13.28	5.0	66.0	1.20	28.02	6.9	2.56E-04
7.0	88.4	17.68	5.0	66.0	1.20	28.02	9.9	2.37E-04
10.0	104.8	20.96	5.0	66.0	1.20	28.02	12.9	2.16E-04
7.0	84.0	16.80	5.0	66.0	1.20	28.02	9.9	2.25E-04
4.0	59.0	11.80	5.0	66.0	1.20	28.02	6.9	2.27E-04
2.0	43.5	8.70	5.0	66.0	1.20	28.02	4.9	2.35E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 17.9 2.38E-04



RECORD OF WATER PRESSURE TEST  
DEPTH(m): 6-10

HOLE NO. JD-4

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
0.5	18.6	4.65	4.0	66.0	0.80	2.57	0.8	55.6	7.07E-04
1.0	33.2	8.30	4.0	66.0	0.80	2.57	1.3	62.1	7.90E-04
1.5	41.8	10.45	4.0	66.0	0.80	2.57	1.8	56.9	7.24E-04
2.0	49.6	12.40	4.0	66.0	0.80	2.57	2.3	53.1	6.75E-04
1.5	33.0	8.25	4.0	66.0	0.80	2.57	1.8	44.9	5.72E-04
1.0	28.0	7.00	4.0	66.0	0.80	2.57	1.3	52.4	6.66E-04
0.5	11.5	2.88	4.0	66.0	0.80	2.57	0.8	34.3	4.37E-04

AVERAGE 51.3 6.53E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 10-15

HOLE NO. JD-4

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
1.0	34.0	6.80	5.0	66.0	0.80	12.80	2.4	26.8	3.84E-04
1.5	49.4	9.88	5.0	66.0	0.80	12.80	2.9	34.5	4.60E-04
2.0	56.6	11.32	5.0	66.0	0.80	12.80	3.4	33.7	4.49E-04
2.5	68.0	13.60	5.0	66.0	0.80	12.80	3.9	35.2	4.69E-04
2.0	57.0	11.40	5.0	66.0	0.80	12.80	3.4	33.9	4.52E-04
1.5	50.5	10.10	5.0	66.0	0.80	12.80	2.9	35.3	4.70E-04
1.0	33.0	6.60	5.0	66.0	0.80	12.80	2.4	28.0	3.72E-04

AVERAGE 32.8 4.37E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 15-20

HOLE NO. JD-4

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
1.0	29.2	5.84	5.0	66.0	0.80	16.80	2.8	21.2	2.82E-04
2.0	43.6	8.72	5.0	66.0	0.80	16.80	3.8	23.2	3.09E-04
3.0	56.2	11.24	5.0	66.0	0.80	16.80	4.8	23.6	3.14E-04
4.0	68.6	13.72	5.0	66.0	0.80	16.80	5.8	23.8	3.17E-04
3.0	56.5	11.30	5.0	66.0	0.80	16.80	4.8	23.7	3.16E-04
2.0	45.0	9.00	5.0	66.0	0.80	16.80	3.8	23.9	3.19E-04
1.0	28.5	5.70	5.0	66.0	0.80	16.80	2.8	20.7	2.75E-04

AVERAGE 22.9 3.05E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 20-25

HOLE NO. JD-4

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
1.0	29.2	5.84	5.0	66.0	0.80	18.40	2.9	20.0	2.66E-04
2.0	56.8	11.36	5.0	66.0	0.80	18.40	3.9	29.0	3.86E-04
4.0	73.8	14.76	5.0	66.0	0.80	18.40	5.9	24.9	3.32E-04
5.0	89.6	17.92	5.0	66.0	0.80	18.40	6.9	25.9	3.45E-04
4.0	73.0	14.60	5.0	66.0	0.80	18.40	5.9	24.7	3.28E-04
2.0	56.0	11.20	5.0	66.0	0.80	18.40	3.9	28.6	3.81E-04
1.0	44.5	8.90	5.0	66.0	0.80	18.40	2.9	30.5	4.06E-04

AVERAGE 26.2 3.49E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 25-30

HOLE NO. JD-4

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm <sup>2</sup>	lit/min	lit/min/m	m	mm	m	kg/cm <sup>2</sup>		cm/sec
1.0	33.2	6.64	5.0	66.0	0.80	20.60	3.1	2.82E-04
2.0	41.0	8.20	5.0	66.0	0.80	20.60	4.1	2.64E-04
4.0	61.6	12.32	5.0	66.0	0.80	20.60	6.1	2.67E-04
5.0	76.0	15.20	5.0	66.0	0.80	20.60	7.1	2.84E-04
4.0	62.0	12.40	5.0	66.0	0.80	20.60	6.1	2.69E-04
2.0	40.5	8.10	5.0	66.0	0.80	20.60	4.1	2.61E-04
1.0	37.5	7.50	5.0	66.0	0.80	20.60	3.1	3.18E-04

AVERAGE 20.9 2.78E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 29-35

HOLE NO. JD-4

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm <sup>2</sup>	lit/min	lit/min/m	m	mm	m	kg/cm <sup>2</sup>		cm/sec
1.0	21.6	3.60	6.0	66.0	0.80	21.64	3.2	1.53E-04
2.0	26.6	4.43	6.0	66.0	0.80	21.64	4.2	1.44E-04
4.0	47.2	7.87	6.0	66.0	0.80	21.64	6.2	1.74E-04
6.0	67.2	11.20	6.0	66.0	0.80	21.64	8.2	1.88E-04
4.0	51.0	8.50	6.0	66.0	0.80	21.64	6.2	1.88E-04
2.0	37.0	6.17	6.0	66.0	0.80	21.64	4.2	2.01E-04
1.0	12.0	2.00	6.0	66.0	0.80	21.64	3.2	8.51E-05

AVERAGE 11.7 1.62E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 35-40

HOLE NO. JD-4

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm <sup>2</sup>	lit/min	lit/min/m	m	mm	m	kg/cm <sup>2</sup>		cm/sec
2.0	56.4	11.28	5.0	66.0	0.80	24.79	4.6	3.30E-04
4.0	75.8	15.16	5.0	66.0	0.80	24.79	6.6	3.08E-04
7.0	89.6	17.92	5.0	66.0	0.80	24.79	9.6	2.50E-04
9.0	101.4	20.28	5.0	66.0	0.80	24.79	11.6	2.34E-04
7.0	94.5	18.90	5.0	66.0	0.80	24.79	9.6	2.63E-04
4.0	76.0	15.20	5.0	66.0	0.80	24.79	6.6	3.09E-04
2.0	60.0	12.00	5.0	66.0	0.80	24.79	4.6	3.51E-04

AVERAGE 21.9 2.92E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 40-45

HOLE NO. JD-4

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm <sup>2</sup>	lit/min	lit/min/m	m	mm	m	kg/cm <sup>2</sup>		cm/sec
2.0	43.2	8.64	5.0	66.0	0.80	25.75	4.7	2.47E-04
4.0	56.4	11.28	5.0	66.0	0.80	25.75	6.7	2.26E-04
7.0	67.2	13.44	5.0	66.0	0.80	25.75	9.7	1.85E-04
9.0	75.6	15.12	5.0	66.0	0.80	25.75	11.7	1.73E-04
7.0	70.5	14.10	5.0	66.0	0.80	25.75	9.7	1.94E-04
4.0	57.0	11.40	5.0	66.0	0.80	25.75	6.7	2.28E-04
2.0	46.0	9.20	5.0	66.0	0.80	25.75	4.7	2.63E-04

AVERAGE 16.3 2.17E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 45-50

HOLE NO. JD-4

GAUGE PRESS.	INJECTION Q'ty		TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	m	kg/cm2		cm/sec
2.0	38.4	7.68	5.0	66.0	0.80	26.80	4.8	16.1	2.15E-04
4.0	69.6	13.92	5.0	66.0	0.80	26.80	6.8	20.6	2.74E-04
7.0	94.6	18.92	5.0	66.0	0.80	26.80	9.8	19.4	2.58E-04
4.0	74.0	14.80	5.0	66.0	0.80	26.80	6.8	21.9	2.92E-04
2.0	55.5	11.10	5.0	66.0	0.80	26.80	4.8	23.3	3.11E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 20.3 2.70E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 31-36m

HOLE NO. JD-5

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
2.0	7.2	1.44	5.0	66.0	1.76	19.50	4.1	3.5	4.65E-05
4.0	17.8	3.56	5.0	66.0	1.76	19.50	6.1	5.8	7.74E-05
7.0	30.4	6.08	5.0	66.0	1.76	19.50	9.1	6.7	8.87E-05
10.0	53.4	10.68	5.0	66.0	1.76	19.50	12.1	8.8	1.17E-04
7.0	14.0	2.80	5.0	66.0	1.76	19.50	9.1	3.1	4.09E-05
4.0	11.5	2.30	5.0	66.0	1.76	19.50	6.1	3.8	5.00E-05
2.0	5.5	1.10	5.0	66.0	1.76	19.50	4.1	2.7	3.55E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 4.9 6.52E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 35-40m

HOLE NO. JD-5

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
2.0	15.2	3.04	5.0	66.0	1.76	20.65	4.2	7.2	9.55E-05
4.0	20.6	4.12	5.0	66.0	1.76	20.65	6.2	6.6	8.79E-05
7.0	22.4	4.48	5.0	66.0	1.76	20.65	9.2	4.8	6.46E-05
10.0	28.4	5.68	5.0	66.0	1.76	20.65	12.2	4.6	6.18E-05
7.0	44.5	8.90	5.0	66.0	1.76	20.65	9.2	9.6	1.28E-04
4.0	36.0	7.20	5.0	66.0	1.76	20.65	6.2	11.5	1.54E-04
2.0	14.5	2.90	5.0	66.0	1.76	20.65	4.2	6.8	9.11E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 7.3 9.75E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 40-45m

HOLE NO. JD-5

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
2.0	3.8	0.76	5.0	66.0	1.76	21.18	4.3	1.8	2.36E-05
4.0	7.6	1.52	5.0	66.0	1.76	21.18	6.3	2.4	3.22E-05
7.0	14.6	2.92	5.0	66.0	1.76	21.18	9.3	3.1	4.18E-05
10.0	24.2	4.84	5.0	66.0	1.76	21.18	12.3	3.9	5.24E-05
7.0	21.0	4.20	5.0	66.0	1.76	21.18	9.3	4.5	6.02E-05
4.0	9.0	1.80	5.0	66.0	1.76	21.18	6.3	2.9	3.81E-05
2.0	6.5	1.30	5.0	66.0	1.76	21.18	4.3	3.0	4.03E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 3.1 4.12E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 45-50m

HOLE NO. JD-5

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
2.0	6.4	1.28	5.0	66.0	1.76	23.60	4.5	2.8	3.76E-05
4.0	7.8	1.56	5.0	66.0	1.76	23.60	6.5	2.4	3.18E-05
7.0	11.6	2.32	5.0	66.0	1.76	23.60	9.5	2.4	3.24E-05
10.0	17.4	3.48	5.0	66.0	1.76	23.60	12.5	2.8	3.70E-05
7.0	24.5	4.90	5.0	66.0	1.76	23.60	9.5	5.1	6.84E-05
4.0	22.5	4.50	5.0	66.0	1.76	23.60	6.5	6.9	9.17E-05
2.0	18.0	3.60	5.0	66.0	1.76	23.60	4.5	7.9	1.06E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 4.3 5.78E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 15-20

HOLE NO. JD-6

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	38.4	7.68	5.0	66.0	0.83	16.22	3.7	20.7	2.76E-04
4.0	49.6	9.92	5.0	66.0	0.83	16.22	5.7	17.4	2.32E-04
7.0	61.4	12.28	5.0	66.0	0.83	16.22	8.7	14.1	1.88E-04
10.0	77.4	15.48	5.0	66.0	0.83	16.22	11.7	13.2	1.76E-04
7.0	49.0	9.80	5.0	66.0	0.83	16.22	8.7	11.3	1.50E-04
4.0	26.0	5.20	5.0	66.0	0.83	16.22	5.7	9.1	1.21E-04
2.0	10.5	2.10	5.0	66.0	0.83	16.22	3.7	5.7	7.55E-05
AVERAGE								13.1	1.74E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 20-25

HOLE NO. JD-6

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	35.6	7.12	5.0	66.0	0.83	22.63	4.3	16.4	2.18E-04
4.0	45.4	9.08	5.0	66.0	0.83	22.63	6.3	14.3	1.91E-04
7.0	56.6	11.32	5.0	66.0	0.83	22.63	9.3	12.1	1.61E-04
10.0	71.8	14.36	5.0	66.0	0.83	22.63	12.3	11.6	1.55E-04
7.0	40.5	8.10	5.0	66.0	0.83	22.63	9.3	8.7	1.15E-04
4.0	22.0	4.40	5.0	66.0	0.83	22.63	6.3	6.9	9.23E-05
2.0	8.5	1.70	5.0	66.0	0.83	22.63	4.3	3.9	5.21E-05
AVERAGE								10.6	1.41E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 25-30

HOLE NO. JD-6

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	33.8	6.76	5.0	66.0	0.83	24.10	4.5	15.0	2.00E-04
4.0	43.8	8.76	5.0	66.0	0.83	24.10	6.5	13.5	1.80E-04
7.0	54.8	10.96	5.0	66.0	0.83	24.10	9.5	11.5	1.54E-04
10.0	69.6	13.92	5.0	66.0	0.83	24.10	12.5	11.1	1.48E-04
7.0	37.0	7.40	5.0	66.0	0.83	24.10	9.5	7.8	1.04E-04
4.0	18.5	3.70	5.0	66.0	0.83	24.10	6.5	5.7	7.59E-05
2.0	6.0	1.20	5.0	66.0	0.83	24.10	4.5	2.7	3.56E-05
AVERAGE								9.6	1.28E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 4 - 10

HOLE NO. JD-7

Gauge	INJECTION PRESS. Q'ty	TEST LENGTH	HOLE DIA.	Gauge HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
1.0	29.4	4.90	6.0	66.0	1.00	2.16	1.3	37.2	5.14E-04
2.0	36.8	6.13	6.0	66.0	1.00	2.16	2.3	26.5	3.65E-04
3.0	55.6	9.27	6.0	66.0	1.00	2.16	3.3	27.9	3.86E-04
4.0	62.4	10.40	6.0	66.0	1.00	2.16	4.3	24.1	3.33E-04
3.0	51.0	8.50	6.0	66.0	1.00	2.16	3.3	25.6	3.54E-04
2.0	39.0	6.50	6.0	66.0	1.00	2.16	2.3	28.1	3.87E-04
1.0	31.0	5.17	6.0	66.0	1.00	2.16	1.3	39.3	5.42E-04

AVERAGE 29.8 4.12E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 10 - 15

HOLE NO. JD-7

Gauge	INJECTION PRESS. Q'ty	TEST LENGTH	HOLE DIA.	Gauge HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
1.0	20.4	4.08	5.0	66.0	1.00	2.16	1.3	31.0	4.13E-04
2.0	23.6	4.72	5.0	66.0	1.00	2.16	2.3	20.4	2.71E-04
4.0	48.4	9.68	5.0	66.0	1.00	2.16	4.3	22.4	2.99E-04
6.0	63.0	12.60	5.0	66.0	1.00	2.16	6.3	19.9	2.66E-04
4.0	46.0	9.20	5.0	66.0	1.00	2.16	4.3	21.3	2.84E-04
2.0	29.0	5.80	5.0	66.0	1.00	2.16	2.3	25.0	3.34E-04
1.0	22.0	4.40	5.0	66.0	1.00	2.16	1.3	33.4	4.45E-04

AVERAGE 24.8 3.30E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 15-20

HOLE NO. JD-7

Gauge	INJECTION PRESS. Q'ty	TEST LENGTH	HOLE DIA.	Gauge HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	34.8	6.96	5.0	66.0	1.00	0.40	2.1	32.5	4.33E-04
4.0	55.6	11.12	5.0	66.0	1.00	0.40	4.1	26.9	3.58E-04
6.0	68.0	13.60	5.0	66.0	1.00	0.40	6.1	22.1	2.95E-04
8.0	73.0	14.60	5.0	66.0	1.00	0.40	8.1	17.9	2.39E-04
6.0	55.0	11.00	5.0	66.0	1.00	0.40	6.1	17.9	2.39E-04
4.0	40.0	8.00	5.0	66.0	1.00	0.40	4.1	19.3	2.57E-04
2.0	24.5	4.90	5.0	66.0	1.00	0.40	2.1	22.9	3.05E-04

AVERAGE 22.8 3.04E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 20-25

HOLE NO. JD-7

Gauge	INJECTION PRESS. Q'ty	TEST LENGTH	HOLE DIA.	Gauge HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	34.4	6.88	5.0	66.0	1.00	0.86	2.2	31.5	4.19E-04
4.0	58.0	11.60	5.0	66.0	1.00	0.86	4.2	27.7	3.69E-04
7.0	78.0	15.60	5.0	66.0	1.00	0.86	7.2	21.7	2.89E-04
10.0	91.0	18.20	5.0	66.0	1.00	0.86	10.2	17.9	2.38E-04
7.0	74.0	14.80	5.0	66.0	1.00	0.86	7.2	20.6	2.74E-04
4.0	56.0	11.20	5.0	66.0	1.00	0.86	4.2	26.8	3.56E-04
2.0	39.0	7.80	5.0	66.0	1.00	0.86	2.2	35.7	4.75E-04

AVERAGE 26.0 3.46E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 25-30

HOLE NO. JD-7

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	25.8	5.16	5.0	66.0	1.00	1.52	2.3	22.9
4.0	41.0	8.20	5.0	66.0	1.00	1.52	4.3	19.3
7.0	57.6	11.52	5.0	66.0	1.00	1.52	7.3	15.9
10.0	73.0	14.60	5.0	66.0	1.00	1.52	10.3	14.2
7.0	53.5	10.70	5.0	66.0	1.00	1.52	7.3	14.8
4.0	39.0	7.80	5.0	66.0	1.00	1.52	4.3	18.3
2.0	23.0	4.60	5.0	66.0	1.00	1.52	2.3	20.4

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 18.0 2.39E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 30-36

HOLE NO. JD-7

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.0	0.00	6.0	66.0	1.00	0.72	2.2	0.0
4.0	18.0	3.00	6.0	66.0	1.00	0.72	4.2	7.2
7.0	27.0	4.50	6.0	66.0	1.00	0.72	7.2	6.3
10.0	35.4	5.90	6.0	66.0	1.00	0.72	10.2	5.8
7.0	25.0	4.17	6.0	66.0	1.00	0.72	7.2	5.8
4.0	21.0	3.50	6.0	66.0	1.00	0.72	4.2	8.4
2.0	0.0	0.00	6.0	66.0	1.00	0.72	2.2	0.0

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 4.8 6.60E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 36-42

HOLE NO. JD-7

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.0	0.00	6.0	66.0	1.00	1.80	2.3	0.0
4.0	1.8	0.30	6.0	66.0	1.00	1.80	4.3	0.7
7.0	2.4	0.40	6.0	66.0	1.00	1.80	7.3	0.5
10.0	2.8	0.47	6.0	66.0	1.00	1.80	10.3	0.5
7.0	2.0	0.33	6.0	66.0	1.00	1.80	7.3	0.5
4.0	1.5	0.25	6.0	66.0	1.00	1.80	4.3	0.6
2.0	0.0	0.00	6.0	66.0	1.00	1.80	2.3	0.0

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 0.4 5.41E-06

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 39-48

HOLE NO. JD-7

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.0	0.00	9.0	66.0	1.00	1.80	2.3	0.0
4.0	0.0	0.00	9.0	66.0	1.00	1.80	4.3	0.0
7.0	0.5	0.06	9.0	66.0	1.00	1.80	7.3	0.1
10.0	0.6	0.07	9.0	66.0	1.00	1.80	10.3	0.1
7.0	0.4	0.04	9.0	66.0	1.00	1.80	7.3	0.1
4.0	0.0	0.00	9.0	66.0	1.00	1.80	4.3	0.0
2.0	0.0	0.00	9.0	66.0	1.00	1.80	2.3	0.0

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 5-10

HOLE NO. JD-8

GAUGE PRESS. kg/cm2	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
1.0	49.0	9.80	5.0	66.0	1.15	5.20	1.6	59.9	7.98E-04
2.0	66.2	13.24	5.0	66.0	1.15	5.20	2.6	50.2	6.69E-04
4.0	85.4	17.08	5.0	66.0	1.15	5.20	4.6	36.9	4.91E-04
7.0	116.4	23.28	5.0	66.0	1.15	5.20	7.6	30.5	4.06E-04
4.0	75.8	15.16	5.0	66.0	1.15	5.20	4.6	32.7	4.36E-04
2.0	63.6	12.72	5.0	66.0	1.15	5.20	2.6	48.3	6.43E-04
1.0	45.6	9.12	5.0	66.0	1.15	5.20	1.6	55.8	7.43E-04
AVERAGE									44.9 5.98E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 10-15

HOLE NO. JD-8

GAUGE PRESS. kg/cm2	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
1.0	34.4	6.88	5.0	66.0	1.15	6.32	1.7	39.4	5.24E-04
2.0	45.4	9.08	5.0	66.0	1.15	6.32	2.7	33.1	4.40E-04
4.0	57.4	11.48	5.0	66.0	1.15	6.32	4.7	24.2	3.22E-04
7.0	67.2	13.44	5.0	66.0	1.15	6.32	7.7	17.3	2.31E-04
4.0	56.0	11.20	5.0	66.0	1.15	6.32	4.7	23.6	3.14E-04
2.0	39.4	7.88	5.0	66.0	1.15	6.32	2.7	28.7	3.82E-04
1.0	26.0	5.20	5.0	66.0	1.15	6.32	1.7	29.8	3.96E-04
AVERAGE									28.0 3.73E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 15-20

HOLE NO. JD-8

GAUGE PRESS. kg/cm2	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
1.0	23.4	4.68	5.0	66.0	1.15	6.45	1.8	26.6	3.54E-04
2.0	31.8	6.36	5.0	66.0	1.15	6.45	2.8	23.0	3.07E-04
4.0	34.4	6.88	5.0	66.0	1.15	6.45	4.8	14.5	1.92E-04
7.0	51.8	10.36	5.0	66.0	1.15	6.45	7.8	13.4	1.78E-04
4.0	38.5	7.70	5.0	66.0	1.15	6.45	4.8	16.2	2.15E-04
2.0	19.5	3.90	5.0	66.0	1.15	6.45	2.8	14.1	1.88E-04
1.0	13.0	2.60	5.0	66.0	1.15	6.45	1.8	14.8	1.97E-04
AVERAGE									17.5 2.33E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 20-25

HOLE NO. JD-8

GAUGE PRESS. kg/cm2	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
1.0	44.2	8.84	5.0	66.0	1.15	9.37	2.1	43.1	5.74E-04
2.0	54.4	10.88	5.0	66.0	1.15	9.37	3.1	35.6	4.75E-04
4.0	65.8	13.16	5.0	66.0	1.15	9.37	5.1	26.0	3.47E-04
7.0	82.4	16.48	5.0	66.0	1.15	9.37	8.1	20.5	2.73E-04
4.0	58.5	11.70	5.0	66.0	1.15	9.37	5.1	23.2	3.08E-04
2.0	39.5	7.90	5.0	66.0	1.15	9.37	3.1	25.9	3.45E-04
1.0	16.0	3.20	5.0	66.0	1.15	9.37	2.1	15.6	2.08E-04
AVERAGE									27.1 3.61E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									



RECORD OF WATER PRESSURE TEST  
DEPTH(m): 25-30

HOLE NO. JD-8

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
1.0	25.2	5.04	5.0	66.0	1.15	14.42	2.6	19.7	2.63E-04
2.0	34.4	6.88	5.0	66.0	1.15	14.42	3.6	19.3	2.58E-04
4.0	33.6	6.72	5.0	66.0	1.15	14.42	5.6	12.1	1.61E-04
7.0	42.0	8.40	5.0	66.0	1.15	14.42	8.6	9.8	1.31E-04
4.0	38.0	7.60	5.0	66.0	1.15	14.42	5.6	13.7	1.82E-04
2.0	9.0	1.80	5.0	66.0	1.15	14.42	3.6	5.1	6.74E-05
1.0	7.5	1.50	5.0	66.0	1.15	14.42	2.6	5.9	7.81E-05

AVERAGE 12.2 1.63E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 30-35

HOLE NO. JD-8

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
1.0	13.4	2.68	5.0	66.0	1.15	17.52	2.9	9.3	1.24E-04
2.0	17.8	3.56	5.0	66.0	1.15	17.52	3.9	9.2	1.23E-04
4.0	30.4	6.08	5.0	66.0	1.15	17.52	5.9	10.4	1.38E-04
7.0	45.4	9.08	5.0	66.0	1.15	17.52	8.9	10.2	1.36E-04
4.0	55.0	11.00	5.0	66.0	1.15	17.52	5.9	18.7	2.50E-04
2.0	44.0	8.80	5.0	66.0	1.15	17.52	3.9	22.8	3.03E-04
1.0	31.0	6.20	5.0	66.0	1.15	17.52	2.9	21.6	2.88E-04

AVERAGE 14.6 1.95E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 35-40

HOLE NO. JD-8

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	11.8	2.36	5.0	66.0	1.15	17.28	3.8	6.1	8.18E-05
4.0	14.4	2.88	5.0	66.0	1.15	17.28	5.8	4.9	6.56E-05
7.0	26.4	5.28	5.0	66.0	1.15	17.28	8.8	6.0	7.95E-05
10.0	45.8	9.16	5.0	66.0	1.15	17.28	11.8	7.7	1.03E-04
7.0	58.0	11.60	5.0	66.0	1.15	17.28	8.8	13.1	1.75E-04
4.0	26.0	5.20	5.0	66.0	1.15	17.28	5.8	8.9	1.19E-04
2.0	18.5	3.70	5.0	66.0	1.15	17.28	3.8	9.6	1.28E-04

AVERAGE 8.1 1.07E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 40-45

HOLE NO. JD-8

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	5.6	1.12	5.0	66.0	1.15	15.29	3.6	3.1	4.09E-05
4.0	6.4	1.28	5.0	66.0	1.15	15.29	5.6	2.3	3.02E-05
7.0	23.6	4.72	5.0	66.0	1.15	15.29	8.6	5.5	7.27E-05
10.0	51.4	10.28	5.0	66.0	1.15	15.29	11.6	8.8	1.18E-04
7.0	36.0	7.20	5.0	66.0	1.15	15.29	8.6	8.3	1.11E-04
4.0	9.0	1.80	5.0	66.0	1.15	15.29	5.6	3.2	4.25E-05
2.0	4.5	0.90	5.0	66.0	1.15	15.29	3.6	2.5	3.29E-05

AVERAGE 4.8 6.40E-05  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 45-50

HOLE NO. JD-8

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	4.2	0.84	5.0	66.0	1.15	14.80	3.6	3.11E-05
4.0	5.4	1.08	5.0	66.0	1.15	14.80	5.6	1.9
7.0	6.6	1.32	5.0	66.0	1.15	14.80	8.6	2.05E-05
10.0	15.2	3.04	5.0	66.0	1.15	14.80	11.6	2.6
7.0	5.5	1.10	5.0	66.0	1.15	14.80	8.6	1.3
4.0	3.5	0.70	5.0	66.0	1.15	14.80	5.6	1.3
2.0	1.5	0.30	5.0	66.0	1.15	14.80	3.6	0.8

AVERAGE 1.7 2.24E-05  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 50-55

HOLE NO. JD-8

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	23.0	4.60	5.0	66.0	1.15	16.55	3.8	12.2
4.0	25.4	5.08	5.0	66.0	1.15	16.55	5.8	8.8
7.0	42.4	8.48	5.0	66.0	1.15	16.55	8.8	9.7
10.0	73.8	14.76	5.0	66.0	1.15	16.55	11.8	12.5
7.0	76.0	15.20	5.0	66.0	1.15	16.55	8.8	17.3
4.0	46.0	9.20	5.0	66.0	1.15	16.55	5.8	15.9
2.0	33.5	6.70	5.0	66.0	1.15	16.55	3.8	17.8

AVERAGE 13.5 1.79E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 55-60

HOLE NO. JD-8

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	12.2	2.44	5.0	66.0	1.15	12.52	3.4	7.2
4.0	17.4	3.48	5.0	66.0	1.15	12.52	5.4	6.5
7.0	26.4	5.28	5.0	66.0	1.15	12.52	8.4	6.3
10.0	85.8	17.16	5.0	66.0	1.15	12.52	11.4	15.1
7.0	94.0	18.80	5.0	66.0	1.15	12.52	8.4	22.5
4.0	39.0	7.80	5.0	66.0	1.15	12.52	5.4	14.5
2.0	27.5	5.50	5.0	66.0	1.15	12.52	3.4	16.3

AVERAGE 12.6 1.68E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 60-65

HOLE NO. JD-8

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	3.6	0.72	5.0	66.0	1.15	14.90	3.6	2.0
4.0	8.4	1.68	5.0	66.0	1.15	14.90	5.6	3.0
7.0	18.6	3.72	5.0	66.0	1.15	14.90	8.6	4.3
10.0	25.8	5.16	5.0	66.0	1.15	14.90	11.6	4.4
7.0	38.0	7.60	5.0	66.0	1.15	14.90	8.6	8.8
4.0	26.0	5.20	5.0	66.0	1.15	14.90	5.6	9.3
2.0	20.5	4.10	5.0	66.0	1.15	14.90	3.6	11.4

AVERAGE 6.2 8.23E-05  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
 DEPTH(m): 65-70

HOLE NO. JD-8

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	4.4	0.88	5.0	66.0	1.15	12.28	3.3	2.6 3.51E-05
4.0	9.8	1.96	5.0	66.0	1.15	12.28	5.3	3.7 4.89E-05
7.0	14.6	2.92	5.0	66.0	1.15	12.28	8.3	3.5 4.66E-05
10.0	22.4	4.48	5.0	66.0	1.15	12.28	11.3	3.9 5.26E-05
7.0	14.0	2.80	5.0	66.0	1.15	12.28	8.3	3.4 4.47E-05
4.0	10.5	2.10	5.0	66.0	1.15	12.28	5.3	3.9 5.23E-05
2.0	4.5	0.90	5.0	66.0	1.15	12.28	3.3	2.7 3.59E-05
AVERAGE							3.4	4.51E-05
k-VALUE: COEFFICIENT OF PERMEABILITY								

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 54-60

HOLE NO. JD-9

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	113.5	18.92	6.0	76.0	2.12	24.42	4.7	5.46E-04
4.0	130.0	21.67	6.0	76.0	2.12	24.42	6.7	4.37E-04
6.0	150.0	25.00	6.0	76.0	2.12	24.42	8.7	3.88E-04
4.0	133.5	22.25	6.0	76.0	2.12	24.42	6.7	4.49E-04
2.0	110.0	18.33	6.0	76.0	2.12	24.42	4.7	5.29E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 35.0 4.70E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 60-65

HOLE NO. JD-9

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	6.7	1.34	5.0	76.0	2.40	27.62	5.0	3.47E-05
4.0	10.1	2.02	5.0	76.0	2.40	27.62	7.0	3.73E-05
7.0	27.8	5.56	5.0	76.0	2.40	27.62	10.0	7.20E-05
10.0	37.8	7.56	5.0	76.0	2.40	27.62	13.0	7.53E-05
7.0	32.6	6.52	5.0	76.0	2.40	27.62	10.0	8.44E-05
4.0	27.8	5.56	5.0	76.0	2.40	27.62	7.0	1.03E-04
2.0	24.9	4.98	5.0	76.0	2.40	27.62	5.0	1.29E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 5.9 7.65E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 65-70

HOLE NO. JD-9

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	127.0	25.40	5.0	76.0	2.75	51.00	7.4	4.46E-04
4.0	140.4	28.08	5.0	76.0	2.75	51.00	9.4	3.88E-04
7.0	174.0	34.80	5.0	76.0	2.75	51.00	12.4	3.64E-04
9.0	196.5	39.30	5.0	76.0	2.75	51.00	14.4	3.54E-04
7.0	180.0	36.00	5.0	76.0	2.75	51.00	12.4	3.77E-04
4.0	157.0	31.40	5.0	76.0	2.75	51.00	9.4	4.34E-04
2.0	137.0	27.40	5.0	76.0	2.75	51.00	7.4	4.81E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 31.4 4.06E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 70-75

HOLE NO. JD-9

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	170.0	34.00	5.0	76.0	1.43	59.27	8.1	5.45E-04
4.0	195.0	39.00	5.0	76.0	1.00	28.12	6.9	7.30E-04
5.5	210.0	42.00	5.0	76.0	1.00	28.12	8.4	6.46E-04
4.0	190.0	38.00	5.0	76.0	1.00	28.12	6.9	7.12E-04
2.0	165.0	33.00	5.0	76.0	1.00	28.12	4.9	8.70E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 54.1 7.01E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 75-80

HOLE NO. JD-9

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	67.8	13.56	5.0	76.0	2.27	59.17	8.1	2.16E-04
4.0	65.0	13.00	5.0	76.0	2.27	59.17	10.1	1.66E-04
7.0	109.8	21.96	5.0	76.0	2.27	59.17	13.1	2.16E-04
10.0	125.2	25.04	5.0	76.0	2.27	59.17	16.1	2.01E-04
7.0	115.8	23.16	5.0	76.0	2.27	59.17	13.1	2.28E-04
4.0	101.6	20.32	5.0	76.0	2.27	59.17	10.1	2.59E-04
2.0	90.0	18.00	5.0	76.0	2.27	59.17	8.1	2.86E-04

AVERAGE 17.3 2.25E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 80-85

HOLE NO. JD-9

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	55.6	11.12	5.0	76.0	2.82	42.63	6.5	2.20E-04
4.0	63.8	12.76	5.0	76.0	2.82	42.63	8.5	1.93E-04
7.0	88.6	17.72	5.0	76.0	2.82	42.63	11.5	1.99E-04
10.0	97.4	19.48	5.0	76.0	2.82	42.63	14.5	1.73E-04
7.0	84.6	16.92	5.0	76.0	2.82	42.63	11.5	1.90E-04
4.0	61.4	12.28	5.0	76.0	2.82	42.63	8.5	1.86E-04
2.0	58.4	11.68	5.0	76.0	2.82	42.63	6.5	2.31E-04

AVERAGE 15.4 1.99E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 85-90

HOLE NO. JD-9

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	107.0	21.40	5.0	76.0	1.08	36.86	5.8	4.78E-04
4.0	118.4	23.68	5.0	76.0	1.08	36.86	7.8	3.93E-04
7.0	137.0	27.40	5.0	76.0	1.08	36.86	10.8	3.29E-04
10.0	155.0	31.00	5.0	76.0	1.08	36.86	13.8	2.91E-04
7.0	139.2	27.84	5.0	76.0	1.08	36.86	10.8	3.34E-04
4.0	120.4	24.08	5.0	76.0	1.08	36.86	7.8	4.00E-04
2.0	104.2	20.84	5.0	76.0	1.08	36.86	5.8	4.66E-04

AVERAGE 29.7 3.84E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 90-96

HOLE NO. JD-9

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	102.4	17.07	6.0	76.0	2.00	36.98	5.9	3.89E-04
4.0	115.2	19.20	6.0	76.0	2.00	36.98	7.9	3.26E-04
7.0	135.4	22.57	6.0	76.0	2.00	36.98	10.9	2.78E-04
10.0	155.0	25.83	6.0	76.0	2.00	36.98	13.9	2.50E-04
7.0	136.6	22.77	6.0	76.0	2.00	36.98	10.9	2.81E-04
4.0	115.0	19.17	6.0	76.0	2.00	36.98	7.9	3.26E-04
2.0	96.6	16.10	6.0	76.0	2.00	36.98	5.9	3.67E-04

AVERAGE 23.6 3.16E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 96-103

HOLE NO. JD-9

Gauge Press.	Injection Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.0	0.00	7.0	76.0	1.43	37.86	5.9	0.00E+00
4.0	0.0	0.00	7.0	76.0	1.43	37.86	7.9	0.00E+00
7.0	0.0	0.00	7.0	76.0	1.43	37.86	10.9	0.00E+00
10.0	0.0	0.00	7.0	76.0	1.43	37.86	13.9	0.00E+00
7.0	0.0	0.00	7.0	76.0	1.43	37.86	10.9	0.00E+00
4.0	0.0	0.00	7.0	76.0	1.43	37.86	7.9	0.00E+00
2.0	0.0	0.00	7.0	76.0	1.43	37.86	5.9	0.00E+00

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 0.0 0.00E+00

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 103-109

HOLE NO. JD-9

Gauge Press.	Injection Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.0	0.00	6.0	76.0	2.85	53.94	7.7	0.00E+00
4.0	0.0	0.00	6.0	76.0	2.85	53.94	9.7	0.00E+00
7.0	0.0	0.00	6.0	76.0	2.85	53.94	12.7	0.00E+00
10.0	0.0	0.00	6.0	76.0	2.85	53.94	15.7	0.00E+00
7.0	0.0	0.00	6.0	76.0	2.85	53.94	12.7	0.00E+00
4.0	0.0	0.00	6.0	76.0	2.85	53.94	9.7	0.00E+00
2.0	0.0	0.00	6.0	76.0	2.85	53.94	7.7	0.00E+00

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 0.0 0.00E+00

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 109-114

HOLE NO. JD-9

Gauge Press.	Injection Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.8	0.16	5.0	76.0	2.27	47.44	7.0	2.97E-06
4.0	2.4	0.48	5.0	76.0	2.27	47.44	9.0	6.93E-06
7.0	2.7	0.54	5.0	76.0	2.27	47.44	12.0	5.84E-06
10.0	7.1	1.42	5.0	76.0	2.27	47.44	15.0	1.23E-05
7.0	1.8	0.36	5.0	76.0	2.27	47.44	12.0	3.89E-06
4.0	1.7	0.34	5.0	76.0	2.27	47.44	9.0	4.91E-06
2.0	2.0	0.40	5.0	76.0	2.27	47.44	7.0	7.43E-06

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 0.5 6.32E-06

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 114-120

HOLE NO. JD-9

Gauge Press.	Injection Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	13.9	2.32	6.0	76.0	2.27	47.44	7.0	4.46E-05
4.0	14.8	2.47	6.0	76.0	2.27	47.44	9.0	3.69E-05
7.0	19.6	3.27	6.0	76.0	2.27	47.44	12.0	3.66E-05
10.0	32.7	5.45	6.0	76.0	2.27	47.44	15.0	4.89E-05
7.0	26.4	4.40	6.0	76.0	2.27	47.44	12.0	4.94E-05
4.0	20.1	3.35	6.0	76.0	2.27	47.44	9.0	5.01E-05
2.0	15.6	2.60	6.0	76.0	2.27	47.44	7.0	5.01E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 3.4 4.52E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 120-126

HOLE NO. JD-9

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	173.5	28.92	6.0	76.0	2.35	47.92	7.0	41.2
4.0	202.5	33.75	6.0	76.0	2.35	47.92	9.0	37.4
7.0	239.0	39.83	6.0	76.0	2.35	47.92	12.0	33.1
10.0	251.0	41.83	6.0	76.0	2.35	47.92	15.0	27.8
7.0	240.0	40.00	6.0	76.0	2.35	47.92	12.0	33.3
4.0	199.0	33.17	6.0	76.0	2.35	47.92	9.0	36.7
2.0	174.0	29.00	6.0	76.0	2.35	47.92	7.0	41.3

AVERAGE LUGEON VALUE: 35.8  
k-VALUE: COEFFICIENT OF PERMEABILITY 4.81E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 126-132

HOLE NO. JD-9

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	189.0	31.50	6.0	76.0	2.28	53.97	7.6	41.3
4.0	233.5	38.92	6.0	76.0	2.28	53.97	9.6	40.4
7.0	266.0	44.33	6.0	76.0	2.28	53.97	12.6	35.1
10.0	289.5	48.25	6.0	76.0	2.28	53.97	15.6	30.9
7.0	269.5	44.92	6.0	76.0	2.28	53.97	12.6	35.6
4.0	231.5	38.58	6.0	76.0	2.28	53.97	9.6	40.1
2.0	190.5	31.75	6.0	76.0	2.28	53.97	7.6	41.6

AVERAGE LUGEON VALUE: 37.9  
k-VALUE: COEFFICIENT OF PERMEABILITY 5.08E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 59-65

HOLE NO. JD-10

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm <sup>2</sup>	lit/min	lit/min/m	m	mm	m	kg/cm <sup>2</sup>		cm/sec	
1.0	200.0	33.33	6.0	76.0	2.84	34.36	4.7	70.6	9.48E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 70.6 9.48E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 64-70

HOLE NO. JD-10

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm <sup>2</sup>	lit/min	lit/min/m	m	mm	m	kg/cm <sup>2</sup>		cm/sec	
2.0	180.0	30.00	6.0	76.0	0.84	50.07	7.1	42.3	5.68E-04
4.0	222.0	37.00	6.0	76.0	0.84	50.07	9.1	40.7	5.46E-04
6.5	254.0	42.33	6.0	76.0	0.84	50.07	11.6	36.5	4.90E-04
4.0	230.0	38.33	6.0	76.0	0.84	50.07	9.1	42.2	5.66E-04
2.0	216.0	36.00	6.0	76.0	0.84	50.07	7.1	50.8	6.82E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 42.5 5.71E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 70-75

HOLE NO. JD-10

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm <sup>2</sup>	lit/min	lit/min/m	m	mm	m	kg/cm <sup>2</sup>		cm/sec	
2.0	2.0	0.40	5.0	76.0	2.28	48.05	7.0	0.6	7.36E-06
4.0	2.5	0.50	5.0	76.0	2.28	48.05	9.0	0.6	7.16E-06
7.0	3.0	0.60	5.0	76.0	2.28	48.05	12.0	0.5	6.45E-06
10.0	4.2	0.84	5.0	76.0	2.28	48.05	15.0	0.6	7.23E-06
7.0	3.0	0.60	5.0	76.0	2.28	48.05	12.0	0.5	6.45E-06
4.0	2.6	0.52	5.0	76.0	2.28	48.05	9.0	0.6	7.45E-06
2.0	2.0	0.40	5.0	76.0	2.28	48.05	7.0	0.6	7.36E-06

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 0.5 7.07E-06

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 70-80

HOLE NO. JD-10

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm <sup>2</sup>	lit/min	lit/min/m	m	mm	m	kg/cm <sup>2</sup>		cm/sec	
2.0	10.0	1.00	10.0	76.0	2.35	45.10	6.7	1.5	2.19E-05
4.0	18.4	1.84	10.0	76.0	2.35	45.10	8.7	2.1	3.11E-05
7.0	36.4	3.64	10.0	76.0	2.35	45.10	11.7	3.1	4.58E-05
10.0	53.8	5.38	10.0	76.0	2.35	45.10	14.7	3.6	5.39E-05
7.0	40.0	4.00	10.0	76.0	2.35	45.10	11.7	3.4	5.03E-05
4.0	28.6	2.86	10.0	76.0	2.35	45.10	8.7	3.3	4.83E-05
2.0	22.6	2.26	10.0	76.0	2.35	45.10	6.7	3.4	4.95E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 2.9 4.30E-05



RECORD OF WATER PRESSURE TEST  
DEPTH(m): 80-90

HOLE NO. JD-10

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	14.2	1.42	10.0	76.0	1.76	51.14	7.3	1.9 2.88E-05
4.0	23.2	2.32	10.0	76.0	1.76	51.14	9.3	2.5 3.69E-05
7.0	40.8	4.08	10.0	76.0	1.76	51.14	12.3	3.3 4.91E-05
10.0	55.8	5.58	10.0	76.0	1.76	51.14	15.3	3.6 5.39E-05
7.0	47.6	4.76	10.0	76.0	1.76	51.14	12.3	3.9 5.73E-05
4.0	42.4	4.24	10.0	76.0	1.76	51.14	9.3	4.6 6.75E-05
2.0	30.2	3.02	10.0	76.0	1.76	51.14	7.3	4.1 6.12E-05

AVERAGE 3.4 5.07E-05  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 90-95

HOLE NO. JD-10

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	19.0	3.80	5.0	76.0	1.82	51.14	7.3	5.2 6.74E-05
4.0	25.4	5.08	5.0	76.0	1.82	51.14	9.3	5.5 7.07E-05
7.0	33.2	6.64	5.0	76.0	1.82	51.14	12.3	5.4 6.99E-05
10.0	42.6	8.52	5.0	76.0	1.82	51.14	15.3	5.6 7.21E-05
7.0	24.6	4.92	5.0	76.0	1.82	51.14	12.3	4.0 5.18E-05
4.0	18.4	3.68	5.0	76.0	1.82	51.14	9.3	4.0 5.12E-05
2.0	12.2	2.44	5.0	76.0	1.82	51.14	7.3	3.3 4.33E-05

AVERAGE 4.7 6.09E-05  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 95-100

HOLE NO. JD-10

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	11.0	2.20	5.0	76.0	2.70	51.14	7.4	3.0 3.86E-05
4.0	12.5	2.50	5.0	76.0	2.70	51.14	9.4	2.7 3.45E-05
7.0	14.5	2.90	5.0	76.0	2.70	51.14	12.4	2.3 3.03E-05
10.0	18.5	3.70	5.0	76.0	2.70	51.14	15.4	2.4 3.11E-05
7.0	16.0	3.20	5.0	76.0	2.70	51.14	12.4	2.6 3.34E-05
4.0	13.0	2.60	5.0	76.0	2.70	51.14	9.4	2.8 3.59E-05
2.0	10.5	2.10	5.0	76.0	2.70	51.14	7.4	2.8 3.68E-05

AVERAGE 2.7 3.44E-05  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 100-110

HOLE NO. JD-10

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	21.5	2.15	10.0	76.0	0.81	51.14	7.2	3.0 4.42E-05
4.0	28.0	2.80	10.0	76.0	0.81	51.14	9.2	3.0 4.50E-05
7.0	35.5	3.55	10.0	76.0	0.81	51.14	12.2	2.9 4.30E-05
10.0	42.0	4.20	10.0	76.0	0.81	51.14	15.2	2.8 4.09E-05
7.0	31.5	3.15	10.0	76.0	0.81	51.14	12.2	2.6 3.82E-05
4.0	19.0	1.90	10.0	76.0	0.81	51.14	9.2	2.1 3.05E-05
2.0	13.0	1.30	10.0	76.0	0.81	51.14	7.2	1.8 2.67E-05

AVERAGE 2.6 3.84E-05  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 15-20

HOLE NO. JD-11

GAUGE PRESS.	INJECTION Q'ty		TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
	kg/cm2	lit/min							
1.0	35.2	7.04	5.0	66.0	0.83	14.31	2.5	28.0	3.73E-04
2.0	52.8	10.56	5.0	66.0	0.83	14.31	3.5	30.1	4.00E-04
3.0	61.4	12.28	5.0	66.0	0.83	14.31	4.5	27.2	3.62E-04
4.0	76.4	15.28	5.0	66.0	0.83	14.31	5.5	27.7	3.69E-04
3.0	71.0	14.20	5.0	66.0	0.83	14.31	4.5	31.5	4.19E-04
2.0	56.0	11.20	5.0	66.0	0.83	14.31	3.5	31.9	4.24E-04
1.0	41.0	8.20	5.0	66.0	0.83	14.31	2.5	32.6	4.34E-04

AVERAGE 29.8 3.97E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 20-25

HOLE NO. JD-11

GAUGE PRESS.	INJECTION Q'ty		TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
	kg/cm2	lit/min							
2.0	27.8	5.56	5.0	66.0	1.83	17.27	3.9	14.2	1.89E-04
4.0	54.4	10.88	5.0	66.0	1.83	17.27	5.9	18.4	2.45E-04
7.0	68.6	13.72	5.0	66.0	1.83	17.27	8.9	15.4	2.05E-04
10.0	85.6	17.12	5.0	66.0	1.83	17.27	11.9	14.4	1.91E-04
7.0	69.0	13.80	5.0	66.0	1.83	17.27	8.9	15.5	2.06E-04
4.0	51.5	10.30	5.0	66.0	1.83	17.27	5.9	17.4	2.32E-04
2.0	38.5	7.70	5.0	66.0	1.83	17.27	3.9	19.7	2.62E-04

AVERAGE 16.4 2.19E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 25-30

HOLE NO. JD-11

GAUGE PRESS.	INJECTION Q'ty		TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
	kg/cm2	lit/min							
2.0	34.4	6.88	5.0	66.0	1.33	21.82	4.3	15.9	2.12E-04
4.0	43.4	8.68	5.0	66.0	1.33	21.82	6.3	13.7	1.83E-04
7.0	63.8	12.76	5.0	66.0	1.33	21.82	9.3	13.7	1.82E-04
10.0	78.8	15.76	5.0	66.0	1.33	21.82	12.3	12.8	1.70E-04
7.0	65.5	13.10	5.0	66.0	1.33	21.82	9.3	14.1	1.87E-04
4.0	46.5	9.30	5.0	66.0	1.33	21.82	6.3	14.7	1.96E-04
2.0	35.0	7.00	5.0	66.0	1.33	21.82	4.3	16.2	2.16E-04

AVERAGE 14.5 1.93E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 30-35

HOLE NO. JD-11

GAUGE PRESS.	INJECTION Q'ty		TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
	kg/cm2	lit/min							
2.0	15.2	3.04	5.0	66.0	0.83	26.59	4.7	6.4	8.54E-05
4.0	22.2	4.44	5.0	66.0	0.83	26.59	6.7	6.6	8.77E-05
7.0	43.9	8.78	5.0	66.0	0.83	26.59	9.7	9.0	1.20E-04
10.0	59.4	11.88	5.0	66.0	0.83	26.59	12.7	9.3	1.24E-04
7.0	34.5	6.90	5.0	66.0	0.83	26.59	9.7	7.1	9.43E-05
4.0	27.0	5.40	5.0	66.0	0.83	26.59	6.7	8.0	1.07E-04
2.0	12.0	2.40	5.0	66.0	0.83	26.59	4.7	5.1	6.74E-05

AVERAGE 7.4 9.80E-05  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 60-65

HOLE NO. JD-12

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	14.6	2.92	5.0	76.0	2.75	29.30	5.6	7.26E-05	
4.0	23.4	4.68	5.0	76.0	2.75	29.30	7.2	8.41E-05	
7.0	24.8	4.96	5.0	76.0	2.75	29.30	10.2	6.29E-05	
10.0	30.4	6.08	5.0	76.0	2.75	29.30	13.2	5.96E-05	
7.0	26.2	5.24	5.0	76.0	2.75	29.30	10.2	6.65E-05	
4.0	19.2	3.84	5.0	76.0	2.75	29.30	7.2	6.90E-05	
2.0	5.8	1.16	5.0	76.0	2.75	29.30	5.2	2.88E-05	
AVERAGE								4.9	6.34E-05
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 65-70

HOLE NO. JD-12

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	7.2	1.44	5.0	76.0	2.50	31.18	5.4	3.47E-05	
4.0	12.4	2.48	5.0	76.0	2.50	31.18	7.4	4.36E-05	
7.0	20.6	4.12	5.0	76.0	2.50	31.18	10.4	5.14E-05	
10.0	25.8	5.16	5.0	76.0	2.50	31.18	13.4	5.00E-05	
7.0	18.4	3.68	5.0	76.0	2.50	31.18	10.4	4.59E-05	
4.0	11.4	2.28	5.0	76.0	2.50	31.18	7.4	4.01E-05	
2.0	8.0	1.60	5.0	76.0	2.50	31.18	5.4	3.86E-05	
AVERAGE								3.4	4.35E-05
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 70-75

HOLE NO. JD-12

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	54.0	10.80	5.0	76.0	3.35	35.45	5.9	2.38E-04	
4.0	63.0	12.60	5.0	76.0	3.35	35.45	7.9	2.07E-04	
7.0	85.8	17.16	5.0	76.0	3.35	35.45	10.9	2.04E-04	
10.0	116.2	23.24	5.0	76.0	3.35	35.45	13.9	2.17E-04	
7.0	102.2	20.44	5.0	76.0	3.35	35.45	10.9	2.43E-04	
4.0	94.6	18.92	5.0	76.0	3.35	35.45	7.9	3.11E-04	
2.0	51.8	10.36	5.0	76.0	3.35	35.45	5.9	2.28E-04	
AVERAGE								18.2	2.35E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 75-87

HOLE NO. JD-12

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	77.2	6.43	12.0	76.0	1.60	45.50	6.7	1.46E-04	
4.0	107.4	8.95	12.0	76.0	1.60	45.50	8.7	1.57E-04	
7.0	142.4	11.87	12.0	76.0	1.60	45.50	11.7	1.55E-04	
10.0	197.4	16.45	12.0	76.0	1.60	45.50	14.7	1.71E-04	
7.0	165.2	13.77	12.0	76.0	1.60	45.50	11.7	1.79E-04	
4.0	102.8	8.57	12.0	76.0	1.60	45.50	8.7	1.50E-04	
2.0	63.0	5.25	12.0	76.0	1.60	45.50	6.7	1.19E-04	
AVERAGE								10.1	1.54E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 85-90

HOLE NO. JD-12

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	15.2	3.04	5.0	76.0	0.55	42.70	6.3	6.22E-05
4.0	24.2	4.84	5.0	76.0	0.55	42.70	8.3	7.53E-05
7.0	29.4	5.88	5.0	76.0	0.55	42.70	11.3	6.72E-05
10.0	41.8	8.36	5.0	76.0	0.55	42.70	14.3	7.55E-05
7.0	15.6	3.12	5.0	76.0	0.55	42.70	11.3	3.57E-05
4.0	7.8	1.56	5.0	76.0	0.55	42.70	8.3	2.43E-05
2.0	4.2	0.84	5.0	76.0	0.55	42.70	6.3	1.72E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 3.9 5.10E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 90-100

HOLE NO. JD-12

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	15.2	1.52	10.0	76.0	0.82	47.50	6.8	3.29E-05
4.0	24.2	2.42	10.0	76.0	0.82	47.50	8.8	4.05E-05
7.0	29.4	2.94	10.0	76.0	0.82	47.50	11.8	3.67E-05
10.0	41.8	4.18	10.0	76.0	0.82	47.50	14.8	4.17E-05
7.0	15.6	1.56	10.0	76.0	0.82	47.50	11.8	1.95E-05
4.0	7.8	0.78	10.0	76.0	0.82	47.50	8.8	1.31E-05
2.0	4.2	0.42	10.0	76.0	0.82	47.50	6.8	9.09E-06

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 1.9 2.76E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 100-110

HOLE NO. JD-12

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	2.4	0.24	10.0	76.0	1.20	47.70	6.9	5.15E-06
4.0	5.8	0.58	10.0	76.0	1.20	47.70	8.9	9.64E-06
7.0	8.4	0.84	10.0	76.0	1.20	47.70	11.9	1.04E-05
10.0	23.6	2.36	10.0	76.0	1.20	47.70	14.9	1.62E-05
7.0	15.2	1.52	10.0	76.0	1.20	47.70	11.9	1.89E-05
4.0	10.4	1.04	10.0	76.0	1.20	47.70	8.9	1.73E-05
2.0	7.0	0.70	10.0	76.0	1.20	47.70	6.9	1.50E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 1.0 1.43E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 110-120

HOLE NO. JD-12

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	4.4	0.44	10.0	76.0	0.90	49.52	7.0	9.24E-06
4.0	5.4	0.54	10.0	76.0	0.90	49.52	9.0	8.83E-06
7.0	8.2	0.82	10.0	76.0	0.90	49.52	12.0	1.01E-05
10.0	15.2	1.52	10.0	76.0	0.90	49.52	15.0	1.49E-05
7.0	11.8	1.18	10.0	76.0	0.90	49.52	12.0	1.45E-05
4.0	3.6	0.36	10.0	76.0	0.90	49.52	9.0	5.89E-06
2.0	1.4	0.14	10.0	76.0	0.90	49.52	7.0	2.94E-06

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 0.6 9.48E-06

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 65-70

HOLE NO. JD-13

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	17.6	3.52	5.0	76.0	2.53	61.20	8.4	5.44E-05
4.0	19.8	3.96	5.0	76.0	2.53	61.20	10.4	4.94E-05
7.0	23.2	4.64	5.0	76.0	2.53	61.20	13.4	4.49E-05
4.0	40.5	8.10	5.0	76.0	2.53	61.20	10.4	1.01E-04
2.0	31.0	6.20	5.0	76.0	2.53	61.20	8.4	9.58E-05

AVERAGE 5.3 6.91E-05  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 70-75

HOLE NO. JD-13

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	25.2	5.04	5.0	76.0	0.72	61.92	8.3	7.89E-05
4.0	32.8	6.56	5.0	76.0	0.72	61.92	10.3	8.27E-05
6.0	56.4	11.28	5.0	76.0	0.72	61.92	12.3	1.19E-04
4.0	32.5	6.50	5.0	76.0	0.72	61.92	10.3	8.20E-05
2.0	28.5	5.70	5.0	76.0	0.72	61.92	8.3	8.93E-05

AVERAGE 7.0 9.04E-05  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 73-80

HOLE NO. JD-13

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	14.6	2.09	7.0	76.0	0.84	61.59	8.2	3.50E-05
4.0	23.6	3.37	7.0	76.0	0.84	61.59	10.2	4.55E-05
7.0	31.8	4.54	7.0	76.0	0.84	61.59	13.2	4.75E-05
4.0	22.5	3.21	7.0	76.0	0.84	61.59	10.2	4.34E-05
2.0	16.5	2.36	7.0	76.0	0.84	61.59	8.2	3.96E-05

AVERAGE 3.0 4.22E-05  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 80-85

HOLE NO. D-13

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	28.8	5.76	5.0	76.0	0.50	62.73	8.3	8.96E-05
4.0	33.8	6.76	5.0	76.0	0.50	62.73	10.3	8.48E-05
7.0	36.6	7.32	5.0	76.0	0.50	62.73	13.3	7.11E-05
10.0	42.2	8.44	5.0	76.0	0.50	62.73	16.3	6.69E-05
7.0	36.0	7.20	5.0	76.0	0.50	62.73	13.3	6.99E-05
4.0	31.0	6.20	5.0	76.0	0.50	62.73	10.3	7.77E-05
2.0	19.0	3.80	5.0	76.0	0.50	62.73	8.3	5.91E-05

AVERAGE 5.7 7.42E-05  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 85-90

HOLE NO. D-13

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	29.0	5.80	5.0	76.0	0.60	62.80	8.3	9.00E-05
4.0	36.6	7.32	5.0	76.0	0.60	62.80	10.3	9.16E-05
7.0	45.2	9.04	5.0	76.0	0.60	62.80	13.3	8.77E-05
10.0	53.2	10.64	5.0	76.0	0.60	62.80	16.3	8.43E-05
7.0	43.5	8.70	5.0	76.0	0.60	62.80	13.3	8.44E-05
4.0	37.5	7.50	5.0	76.0	0.60	62.80	10.3	9.39E-05
2.0	29.5	5.90	5.0	76.0	0.60	62.80	8.3	9.16E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 6.9 8.91E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 90-100

HOLE NO. D-13

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	26.4	2.64	10.0	76.0	1.63	69.10	9.1	4.30E-05
4.0	33.2	3.32	10.0	76.0	1.63	69.10	11.1	4.43E-05
7.0	42.2	4.22	10.0	76.0	1.63	69.10	14.1	4.43E-05
10.0	49.6	4.96	10.0	76.0	1.63	69.10	17.1	4.29E-05
7.0	31.5	3.15	10.0	76.0	1.63	69.10	14.1	3.31E-05
4.0	27.0	2.70	10.0	76.0	1.63	69.10	11.1	3.60E-05
2.0	21.5	2.15	10.0	76.0	1.63	69.10	9.1	3.50E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 2.7 3.98E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 100-110

HOLE NO. D-13

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	11.6	1.16	10.0	76.0	2.60	69.95	9.3	1.85E-05
4.0	17.0	1.70	10.0	76.0	2.60	69.95	11.3	2.23E-05
7.0	24.0	2.40	10.0	76.0	2.60	69.95	14.3	2.49E-05
10.0	57.0	5.70	10.0	76.0	2.60	69.95	17.3	4.88E-05
7.0	42.0	4.20	10.0	76.0	2.60	69.95	14.3	4.36E-05
4.0	27.0	2.70	10.0	76.0	2.60	69.95	11.3	3.55E-05
2.0	11.0	1.10	10.0	76.0	2.60	69.95	9.3	1.76E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 2.0 3.02E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 55-60

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	20.4	4.08	5.0	76.0	2.85	24.45	4.730	8.63	1.12E-04
4.0	21.4	4.28	5.0	76.0	2.85	24.45	6.730	6.36	8.23E-05
7.0	51.8	10.36	5.0	76.0	2.85	24.45	9.730	10.65	1.38E-04
10.0	62.2	12.44	5.0	76.0	2.85	24.45	12.730	9.77	1.26E-04
7.0	54.6	10.92	5.0	76.0	2.85	24.45	9.730	11.22	1.45E-04
4.0	23.8	4.76	5.0	76.0	2.85	24.45	6.730	7.07	9.15E-05
2.0	19.2	3.84	5.0	76.0	2.85	24.45	4.730	8.12	1.05E-04

AVERAGE  
k-VALUE: COEFFICIENT OF PERMEABILITY

8.83 1.14E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 60-65

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	18.8	3.76	5.0	76.0	0.80	26.65	4.745	7.92	1.03E-04
4.0	22.2	4.44	5.0	76.0	0.80	26.65	6.745	6.58	8.52E-05
7.0	25.8	5.16	5.0	76.0	0.80	26.65	9.745	5.30	6.85E-05
10.0	28.8	5.76	5.0	76.0	0.80	26.65	12.745	4.52	5.85E-05
7.0	27.8	5.56	5.0	76.0	0.80	26.65	9.745	5.71	7.38E-05
4.0	23.6	4.72	5.0	76.0	0.80	26.65	6.745	7.00	9.06E-05
2.0	20.6	4.12	5.0	76.0	0.80	26.65	4.745	8.68	1.12E-04

AVERAGE  
k-VALUE: COEFFICIENT OF PERMEABILITY

6.53 8.45E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 65-70

HOLE NO. JD101

GAUGE PRESS. kg/cm2	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	13.8	2.76	5.0	76.0	1.83	22.40	4.423	6.24	8.08E-05
4.0	24.4	4.88	5.0	76.0	1.83	22.40	6.423	7.60	9.83E-05
7.0	31.0	6.20	5.0	76.0	1.83	22.40	9.423	6.58	8.52E-05
10.0	38.4	7.68	5.0	76.0	1.83	22.40	12.423	6.18	8.00E-05
7.0	23.4	4.68	5.0	76.0	1.83	22.40	9.423	4.97	6.43E-05
4.0	22.0	4.40	5.0	76.0	1.83	22.40	6.423	6.85	8.87E-05
2.0	17.8	3.56	5.0	76.0	1.83	22.40	4.423	8.05	1.04E-04

AVERAGE  
k-VALUE: COEFFICIENT OF PERMEABILITY

6.64 8.59E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 70-75

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty		TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
	lit/min	lit/min/m							
2.0	64.4	12.88	5.0	76.0	2.75	54.20	7.695	16.74	2.17E-04
4.0	71.2	14.24	5.0	76.0	2.75	54.20	9.695	14.69	1.90E-04
7.0	77.6	15.52	5.0	76.0	2.75	54.20	12.695	12.23	1.58E-04
10.0	95.8	19.16	5.0	76.0	2.75	54.20	15.695	12.21	1.58E-04
7.0	96.0	19.20	5.0	76.0	2.75	54.20	12.695	15.12	1.96E-04
4.0	83.0	16.60	5.0	76.0	2.75	54.20	9.695	17.12	2.22E-04
2.0	69.5	13.90	5.0	76.0	2.75	54.20	7.695	18.06	2.34E-04

AVERAGE  
k-VALUE: COEFFICIENT OF PERMEABILITY

15.17 1.96E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 75-80

HOLE NO. JD-101

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty lit/min	INJECTION lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
2.0	13.0	2.60	5.0	76.0	0.86	52.40	7.326	3.55	4.59E-05
4.0	23.6	4.72	5.0	76.0	0.86	52.40	9.326	5.06	6.55E-05
7.0	30.2	6.04	5.0	76.0	0.86	52.40	12.326	4.90	6.34E-05
10.0	45.2	9.04	5.0	76.0	0.86	52.40	15.326	5.90	7.63E-05
7.0	28.5	5.70	5.0	76.0	0.86	52.40	12.326	4.62	5.99E-05
4.0	24.5	4.90	5.0	76.0	0.86	52.40	9.326	5.25	6.80E-05
2.0	18.0	3.60	5.0	76.0	0.86	52.40	7.326	4.91	6.36E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 4.89 6.32E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 80-85

HOLE NO. JD-101

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty lit/min	INJECTION lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
2.0	16.0	3.20	5.0	76.0	1.84	54.29	7.613	4.20	5.44E-05
4.0	26.4	5.28	5.0	76.0	1.84	54.29	9.613	5.49	7.11E-05
7.0	31.0	6.20	5.0	76.0	1.84	54.29	12.613	4.92	6.36E-05
10.0	54.2	10.84	5.0	76.0	1.84	54.29	15.613	6.94	8.99E-05
7.0	38.0	7.60	5.0	76.0	1.84	54.29	12.613	6.03	7.80E-05
4.0	21.0	4.20	5.0	76.0	1.84	54.29	9.613	4.37	5.66E-05
2.0	14.5	2.90	5.0	76.0	1.84	54.29	7.613	3.81	4.93E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 5.11 6.61E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 85-90

HOLE NO. JD-101

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty lit/min	INJECTION lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
2.0	11.8	2.36	5.0	76.0	2.91	70.30	9.321	2.53	3.28E-05
4.0	14.4	2.88	5.0	76.0	2.91	70.30	11.321	2.54	3.29E-05
7.0	24.4	4.88	5.0	76.0	2.91	70.30	14.321	3.41	4.41E-05
10.0	47.6	9.52	5.0	76.0	2.91	70.30	17.321	5.50	7.11E-05
7.0	30.5	6.10	5.0	76.0	2.91	70.30	14.321	4.26	5.51E-05
4.0	27.0	5.40	5.0	76.0	2.91	70.30	11.321	4.77	6.17E-05
2.0	19.5	3.90	5.0	76.0	2.91	70.30	9.321	4.18	5.42E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 3.88 5.03E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 90-95

HOLE NO. JD-101

GAUGE PRESS. kg/cm <sup>2</sup>	INJECTION Q'ty lit/min	INJECTION lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm <sup>2</sup>	LUGEON VALUE	k-VALUE cm/sec
2.0	19.2	3.84	5.0	76.0	0.91	68.40	8.931	4.30	5.57E-05
4.0	25.8	5.16	5.0	76.0	0.91	68.40	10.931	4.72	6.11E-05
7.0	47.2	9.44	5.0	76.0	0.91	68.40	13.931	6.78	8.77E-05
10.0	63.6	12.72	5.0	76.0	0.91	68.40	16.931	7.51	9.72E-05
7.0	36.0	7.20	5.0	76.0	0.91	68.40	13.931	5.17	6.69E-05
4.0	33.5	6.70	5.0	76.0	0.91	68.40	10.931	6.13	7.93E-05
2.0	25.5	5.10	5.0	76.0	0.91	68.40	8.931	5.71	7.39E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 5.76 7.46E-05



RECORD OF WATER PRESSURE TEST  
DEPTH(m): 95-100

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	18.2	3.64	5.0	76.0	1.83	69.40	9.123	3.99	5.16E-05
4.0	23.6	4.72	5.0	76.0	1.83	69.40	11.123	4.24	5.49E-05
7.0	30.4	6.08	5.0	76.0	1.83	69.40	14.123	4.31	5.57E-05
10.0	55.2	11.04	5.0	76.0	1.83	69.40	17.123	6.45	8.35E-05
7.0	41.0	8.20	5.0	76.0	1.83	69.40	14.123	5.81	7.52E-05
4.0	35.5	7.10	5.0	76.0	1.83	69.40	11.123	6.38	8.26E-05
2.0	28.0	5.60	5.0	76.0	1.83	69.40	9.123	6.14	7.95E-05

AVERAGE LUGEON VALUE: 5.33  
k-VALUE: COEFFICIENT OF PERMEABILITY 6.90E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 100-105

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	11.0	2.20	5.0	76.0	2.83	68.52	9.135	2.41	3.12E-05
4.0	20.4	4.08	5.0	76.0	2.83	68.52	11.135	3.66	4.74E-05
7.0	27.4	5.48	5.0	76.0	2.83	68.52	14.135	3.88	5.02E-05
10.0	42.4	8.48	5.0	76.0	2.83	68.52	17.135	4.95	6.41E-05
7.0	25.5	5.10	5.0	76.0	2.83	68.52	14.135	3.61	4.67E-05
4.0	19.5	3.90	5.0	76.0	2.83	68.52	11.135	3.50	4.53E-05
2.0	14.0	2.80	5.0	76.0	2.83	68.52	9.135	3.07	3.97E-05

AVERAGE LUGEON VALUE: 3.58  
k-VALUE: COEFFICIENT OF PERMEABILITY 4.64E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 105-110

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	5.8	1.16	5.0	76.0	0.83	67.40	8.823	1.31	1.70E-05
4.0	10.2	2.04	5.0	76.0	0.83	67.40	10.823	1.88	2.44E-05
7.0	15.2	3.04	5.0	76.0	0.83	67.40	13.823	2.20	2.85E-05
10.0	24.6	4.92	5.0	76.0	0.83	67.40	16.823	2.92	3.79E-05
7.0	14.0	2.80	5.0	76.0	0.83	67.40	13.823	2.03	2.62E-05
4.0	9.0	1.80	5.0	76.0	0.83	67.40	10.823	1.66	2.15E-05
2.0	7.5	1.50	5.0	76.0	0.83	67.40	8.823	1.70	2.20E-05

AVERAGE LUGEON VALUE: 1.96  
k-VALUE: COEFFICIENT OF PERMEABILITY 2.54E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 110-115

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	14.2	2.84	5.0	76.0	1.83	66.52	8.835	3.21	4.16E-05
4.0	18.6	3.72	5.0	76.0	1.83	66.52	10.835	3.43	4.44E-05
7.0	19.6	3.92	5.0	76.0	1.83	66.52	13.835	2.83	3.67E-05
10.0	31.4	6.28	5.0	76.0	1.83	66.52	16.835	3.73	4.83E-05
7.0	17.0	3.40	5.0	76.0	1.83	66.52	13.835	2.46	3.18E-05
4.0	12.5	2.50	5.0	76.0	1.83	66.52	10.835	2.31	2.99E-05
2.0	8.5	1.70	5.0	76.0	1.83	66.52	8.835	1.92	2.49E-05

AVERAGE LUGEON VALUE: 2.84  
k-VALUE: COEFFICIENT OF PERMEABILITY 3.68E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 115-120

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	INJECTION lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	19.2	3.84	5.0	76.0	2.83	71.42	9.425	4.07	5.27E-05
4.0	24.4	4.88	5.0	76.0	2.83	71.42	11.425	4.27	5.53E-05
7.0	29.6	5.92	5.0	76.0	2.83	71.42	14.425	4.10	5.31E-05
10.0	56.4	11.28	5.0	76.0	2.83	71.42	17.425	6.47	8.38E-05
7.0	45.5	9.10	5.0	76.0	2.83	71.42	14.425	6.31	8.17E-05
4.0	37.0	7.40	5.0	76.0	2.83	71.42	11.425	6.48	8.38E-05
2.0	29.5	5.90	5.0	76.0	2.83	71.42	9.425	6.26	8.10E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 5.42 7.02E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 120-125

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	INJECTION lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	15.8	3.16	5.0	76.0	0.83	71.45	9.228	3.42	4.43E-05
4.0	18.8	3.76	5.0	76.0	0.83	71.45	11.228	3.35	4.33E-05
7.0	25.8	5.16	5.0	76.0	0.83	71.45	14.228	3.63	4.69E-05
10.0	42.0	8.40	5.0	76.0	0.83	71.45	17.228	4.88	6.31E-05
7.0	24.0	4.80	5.0	76.0	0.83	71.45	14.228	3.37	4.37E-05
4.0	16.0	3.20	5.0	76.0	0.83	71.45	11.228	2.85	3.69E-05
2.0	13.5	2.70	5.0	76.0	0.83	71.45	9.228	2.93	3.79E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 3.49 4.52E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 125-130

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	INJECTION lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	16.4	3.28	5.0	76.0	1.83	68.71	9.054	3.62	4.69E-05
4.0	22.6	4.52	5.0	76.0	1.83	68.71	11.054	4.09	5.29E-05
7.0	35.8	7.16	5.0	76.0	1.83	68.71	14.054	5.09	6.59E-05
10.0	45.6	9.12	5.0	76.0	1.83	68.71	17.054	5.35	6.92E-05
7.0	40.5	8.10	5.0	76.0	1.83	68.71	14.054	5.76	7.46E-05
4.0	31.0	6.20	5.0	76.0	1.83	68.71	11.054	5.61	7.26E-05
2.0	24.0	4.80	5.0	76.0	1.83	68.71	9.054	5.30	6.86E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 4.98 6.44E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 130-135

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	INJECTION lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	30.4	6.08	5.0	76.0	2.83	88.51	11.134	5.46	7.07E-05
4.0	35.8	7.16	5.0	76.0	2.83	88.51	13.134	5.45	7.06E-05
7.0	51.8	10.36	5.0	76.0	2.83	88.51	16.134	6.42	8.31E-05
10.0	62.4	12.48	5.0	76.0	2.83	88.51	19.134	6.52	8.44E-05
7.0	49.0	9.80	5.0	76.0	2.83	88.51	16.134	6.07	7.86E-05
4.0	36.0	7.20	5.0	76.0	2.83	88.51	13.134	5.48	7.10E-05
2.0	17.0	3.40	5.0	76.0	2.83	88.51	11.134	3.05	3.95E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 5.50 7.11E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 135-140

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	35.8	7.16	5.0	76.0	0.86	90.07	11.093	6.45	8.35E-05
4.0	51.4	10.28	5.0	76.0	0.86	90.07	13.093	7.85	1.02E-04
7.0	77.4	15.48	5.0	76.0	0.86	90.07	16.093	9.62	1.25E-04
10.0	85.6	17.12	5.0	76.0	0.86	90.07	19.093	8.97	1.16E-04
7.0	73.0	14.60	5.0	76.0	0.86	90.07	16.093	9.07	1.17E-04
4.0	39.5	7.90	5.0	76.0	0.86	90.07	13.093	6.03	7.81E-05
2.0	31.0	6.20	5.0	76.0	0.86	90.07	11.093	5.59	7.23E-05

AVERAGE LUGEON VALUE: 7.66  
k-VALUE: COEFFICIENT OF PERMEABILITY 9.91E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 140-145

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	50.2	10.04	5.0	76.0	1.82	83.82	10.564	9.50	1.23E-04
4.0	72.8	14.56	5.0	76.0	1.82	83.82	12.564	11.59	1.50E-04
7.0	79.4	15.88	5.0	76.0	1.82	83.82	15.564	10.20	1.32E-04
10.0	85.8	17.16	5.0	76.0	1.82	83.82	18.564	9.24	1.20E-04
7.0	76.0	15.20	5.0	76.0	1.82	83.82	15.564	9.77	1.26E-04
4.0	48.0	9.60	5.0	76.0	1.82	83.82	12.564	7.64	9.89E-05
2.0	39.5	7.90	5.0	76.0	1.82	83.82	10.564	7.48	9.68E-05

AVERAGE LUGEON VALUE: 9.35  
k-VALUE: COEFFICIENT OF PERMEABILITY 1.21E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 145-150

HOLE NO. JD-101

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	35.8	7.16	5.0	76.0	2.80	79.50	10.230	7.00	9.06E-05
4.0	52.4	10.48	5.0	76.0	2.80	79.50	12.230	8.57	1.11E-04
7.0	70.2	14.04	5.0	76.0	2.80	79.50	15.230	9.22	1.19E-04
10.0	82.4	16.48	5.0	76.0	2.80	79.50	18.230	9.04	1.17E-04
7.0	75.5	15.10	5.0	76.0	2.80	79.50	15.230	9.91	1.28E-04
4.0	61.0	12.20	5.0	76.0	2.80	79.50	12.230	9.98	1.29E-04
2.0	45.0	9.00	5.0	76.0	2.80	79.50	10.230	8.80	1.14E-04

AVERAGE LUGEON VALUE: 8.93  
k-VALUE: COEFFICIENT OF PERMEABILITY 1.16E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 55-60

HOLE NO. JD-102

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	49.0	9.80	5.0	76.0	2.83	49.10	7.193	13.62	1.76E-04
4.0	54.4	10.88	5.0	76.0	2.83	49.10	9.193	11.84	1.53E-04
7.0	60.4	12.08	5.0	76.0	2.83	49.10	12.193	9.91	1.28E-04
10.0	65.4	13.08	5.0	76.0	2.83	49.10	15.193	8.61	1.11E-04
7.0	58.8	11.76	5.0	76.0	2.83	49.10	12.193	9.64	1.25E-04
4.0	53.2	10.64	5.0	76.0	2.83	49.10	9.193	11.57	1.50E-04
2.0	48.2	9.64	5.0	76.0	2.83	49.10	7.193	13.40	1.73E-04

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 11.23 1.45E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 60-65

HOLE NO. JD-102

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	16.4	3.28	5.0	76.0	0.78	45.25	6.603	4.97	6.43E-05
4.0	23.2	4.64	5.0	76.0	0.78	45.25	8.603	5.39	6.98E-05
7.0	34.4	6.88	5.0	76.0	0.78	45.25	11.603	5.93	7.67E-05
10.0	38.6	7.72	5.0	76.0	0.78	45.25	14.603	5.29	6.84E-05
7.0	31.0	6.20	5.0	76.0	0.78	45.25	11.603	5.34	6.92E-05
4.0	17.2	3.44	5.0	76.0	0.78	45.25	8.603	4.00	5.18E-05
2.0	14.6	2.92	5.0	76.0	0.78	45.25	6.603	4.42	5.72E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 5.05 6.53E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 65-70

HOLE NO. JD-102

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	15.4	3.08	5.0	76.0	1.78	51.53	7.331	4.20	5.44E-05
4.0	28.2	5.64	5.0	76.0	1.78	51.53	9.331	6.04	7.82E-05
7.0	33.2	6.64	5.0	76.0	1.78	51.53	12.331	5.38	6.97E-05
10.0	43.6	8.72	5.0	76.0	1.78	51.53	15.331	5.69	7.36E-05
7.0	35.2	7.04	5.0	76.0	1.78	51.53	12.331	5.71	7.39E-05
4.0	28.0	5.60	5.0	76.0	1.78	51.53	9.331	6.00	7.77E-05
2.0	14.0	2.80	5.0	76.0	1.78	51.53	7.331	3.82	4.94E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 5.26 6.81E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 70-75

HOLE NO. JD-102

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	30.0	6.00	5.0	76.0	2.86	54.60	7.746	7.75	1.00E-04
4.0	34.6	6.92	5.0	76.0	2.86	54.60	9.746	7.10	9.19E-05
7.0	42.0	8.40	5.0	76.0	2.86	54.60	12.746	6.59	8.53E-05
10.0	65.4	13.08	5.0	76.0	2.86	54.60	15.746	8.31	1.08E-04
7.0	54.6	10.92	5.0	76.0	2.86	54.60	12.746	8.57	1.11E-04
4.0	31.8	6.36	5.0	76.0	2.86	54.60	9.746	6.53	8.45E-05
2.0	15.6	3.12	5.0	76.0	2.86	54.60	7.746	4.03	5.21E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 6.98 9.04E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 75-80

HOLE NO. JD-102

Gauge Press.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	Gauge HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	34.2	6.84	5.0	76.0	0.90	51.49	7.239	9.45	1.22E-04
4.0	43.6	8.72	5.0	76.0	0.90	51.49	9.239	9.44	1.22E-04
7.0	71.8	14.36	5.0	76.0	0.90	51.49	12.239	11.73	1.52E-04
10.0	78.4	15.68	5.0	76.0	0.90	51.49	15.239	10.29	1.33E-04
7.0	76.5	15.30	5.0	76.0	0.90	51.49	12.239	12.50	1.62E-04
4.0	46.5	9.30	5.0	76.0	0.90	51.49	9.239	10.07	1.30E-04
2.0	39.0	7.80	5.0	76.0	0.90	51.49	7.239	10.77	1.39E-04

AVERAGE  
k-VALUE: COEFFICIENT OF PERMEABILITY

10.61 1.37E-04

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 80-85

HOLE NO. JD-102

Gauge Press.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	Gauge HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	18.4	3.68	5.0	76.0	1.78	51.49	7.327	5.02	6.50E-05
4.0	25.4	5.08	5.0	76.0	1.78	51.49	9.327	5.45	7.05E-05
7.0	26.6	5.32	5.0	76.0	1.78	51.49	12.327	4.32	5.59E-05
10.0	35.8	7.16	5.0	76.0	1.78	51.49	15.327	4.67	6.05E-05
7.0	27.0	5.40	5.0	76.0	1.78	51.49	12.327	4.38	5.67E-05
4.0	23.0	4.60	5.0	76.0	1.78	51.49	9.327	4.93	6.38E-05
2.0	16.0	3.20	5.0	76.0	1.78	51.49	7.327	4.37	5.65E-05

AVERAGE  
k-VALUE: COEFFICIENT OF PERMEABILITY

4.73 6.13E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 85-90

HOLE NO. JD-102

Gauge Press.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	Gauge HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	12.8	2.56	5.0	76.0	2.73	49.30	7.203	3.55	4.60E-05
4.0	17.8	3.56	5.0	76.0	2.73	49.30	9.203	3.87	5.01E-05
7.0	27.2	5.44	5.0	76.0	2.73	49.30	12.203	4.46	5.77E-05
10.0	51.4	10.28	5.0	76.0	2.73	49.30	15.203	6.76	8.75E-05
7.0	35.5	7.10	5.0	76.0	2.73	49.30	12.203	5.82	7.53E-05
4.0	31.0	6.20	5.0	76.0	2.73	49.30	9.203	6.74	8.72E-05
2.0	22.0	4.40	5.0	76.0	2.73	49.30	7.203	6.11	7.91E-05

AVERAGE  
k-VALUE: COEFFICIENT OF PERMEABILITY

5.33 6.90E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 90-95

HOLE NO. JD-102

Gauge Press.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	Gauge HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	16.4	3.28	5.0	76.0	0.83	47.71	6.854	4.79	6.19E-05
4.0	26.4	5.28	5.0	76.0	0.83	47.71	8.854	5.96	7.72E-05
7.0	31.4	6.28	5.0	76.0	0.83	47.71	11.854	5.30	6.86E-05
10.0	46.4	9.28	5.0	76.0	0.83	47.71	14.854	6.25	8.09E-05
7.0	28.0	5.60	5.0	76.0	0.83	47.71	11.854	4.72	6.11E-05
4.0	20.5	4.10	5.0	76.0	0.83	47.71	8.854	4.63	5.99E-05
2.0	13.5	2.70	5.0	76.0	0.83	47.71	6.854	3.94	5.10E-05

AVERAGE  
k-VALUE: COEFFICIENT OF PERMEABILITY

5.08 6.58E-05