8. DETAILED BREAKDOWN OF THE CONSTRUCTION COST

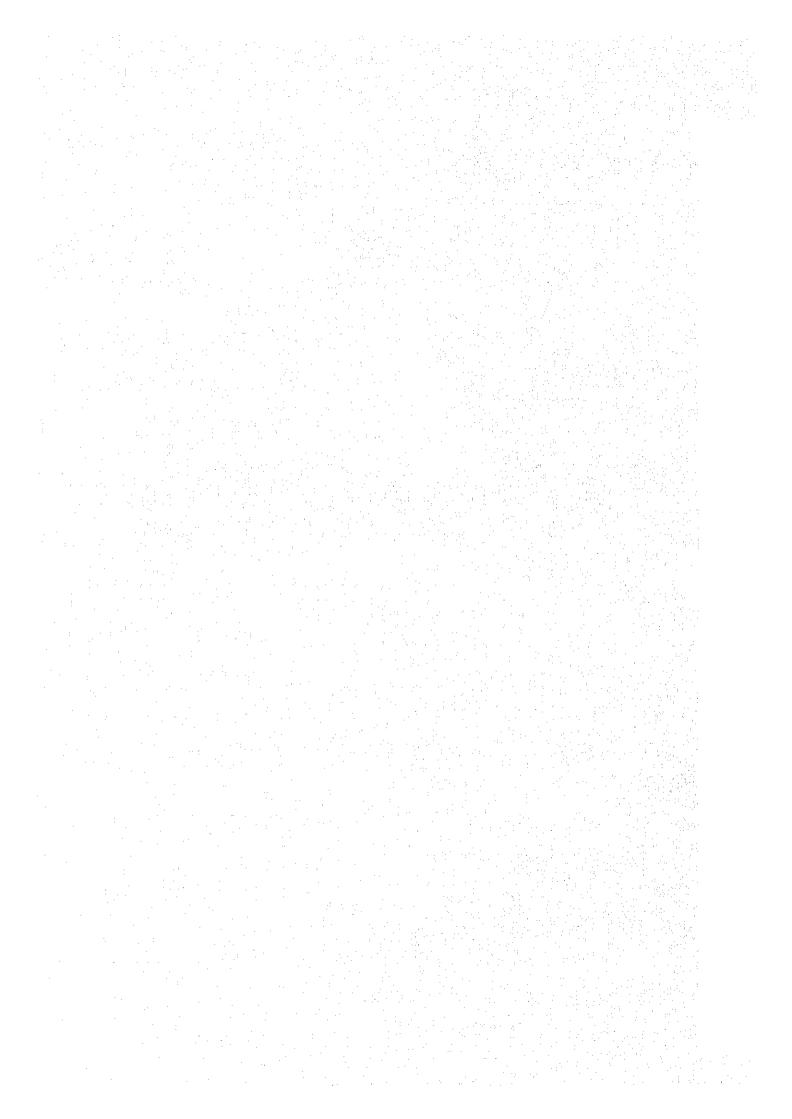


Table III.5.2-5 DETAILED BREAKDOWN OF THE CONSTRUCTION COST (1/7) Work Item:A-1.GENERAL ITEMS(1/1)

Item				Foreign Cu	Currency (Yen)	Local Cur	Currency (Rs.)
on N	Description	Unit	Unit Quantity	Unit Price	Amount	Unit Price	Amount
त	Temporary Facilities	т.S.	7	2,000,000	2,000,000	1,350,000	1,350,000
5	Temporary Buildings	L.S.	н	1,000,000	1,000,000	1,300,000	1,300,000
	Site Preparation and Demolition of Well Yards	г.s.	r-1	3, 800, 000	3,800,000	81,000	81,000
4.	Site Preparation and Demolition of Piling Yards.	г.ς.	н Г	36,000,000	36,000,000	220,000	220,000
ъ.	5. Check Boring	L.S.	Ч	2,100,000	2,100,000	140,000	140,000
6.	Electricity Supply System	L.S.	H	5,700,000	5,700,000	137,000	137,000
7.	Water Supply System	ч. С.	₽ -4	0	0	645,000	645,000
<u></u> α	Radio Communication System	L.S.	H	3,000,000	3,000,000	0	0
ത്	Safety Control	г. С.		1,500,000	1,500,000	135,000	135,000
10.	Testing Instruments and Apparatus	ц. s.	H	800,000	800,000	10,000	10,000
12.	Insurance for Works	г.s.	H	23,000,000	23,000,000	0	0
13.	Insurance for Third Party and Labours	L.S.	<u></u> н	0	0	130,000	130,000
14.	14. Transportation Cost for materials, Plant and Equipment	г.s.	Ы	238,000,000	238,000,000	1,900,000	1,900,000
	Total of A				316,900,000		6, 048, 000 39, 266, 029

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DETAILED BREAKDOWN OF THE CONSTRUCTION COST (2/7) Table III.5.2-5

1,405,090 2,197,286 5,590 375, 150 561,750 39, 520 21,120 00 0 4,300 116,480 362,520 100,080 1,110 50, 430 Currency (RS.) Amount 1,390 4,770 2,780 1,230 1,520 43 1,830 2,000 2,440 5,250 3,060 480 430 370 Local Unit Price 61, 500 62, 920 30, 800 3, 200 870 55,900 1,976,000 3,049,500 1,957,750 0 0 518,400 0 7,557,550 159,290 Currency (Yen) Amount 7,310 9,550 26,000 11,000 12,600 430 1,500 2,420 700 320 290 14,400 28,500 16,700 Foreign Unit Price 205 130 76 36 Unit |Quantity| 0 0 0 107 0 44 44 00 80 00 cu.m ແ. ມວ cu.m cu.m cu.m cu.m cu.m cu.m cu.m cu.m cu.m sq.m cu.m cu.m Gravelly soil Crushed stone Gravelly soil Cobble stone Soft rock II Cobble stone Cobble stone Soft rock II Sandy soil Sandy soil 2.2 Bottom concrete for water leakage 2.1 Top concrete for well protection well, well, well, well, well, 1.9 Excavation in drainage well, 1.2 Excavation in drainage well, 1.3 Excavation in drainage well, sub-total of B.2 Description 1.5 Excavation in drainage
1.6 Excavation in drainage 1.4 Excavation in drainage 1.7 Excavation in drainage 1.8 Excavation in drainage 2.3 Form for Item no. 2.2 sub-total of B.1 under water level under water level under water level under water level 1.1 Exvavation in open 2.Concrete Works 2.4 Backfilling 2.5 Backfilling 1.Earth Works Item No.

Work Item: A-2. DRAINAGE WELL (1/3)

133,177

Table III.5.2-5DETAILED BREAKDOWN OF THE CONSTRUCTION COST (3/7)Work Item:A-2.DRAINAGE WELL(2/3)

2,412,000 5,834,746 192,000 36,140 352,220 1,938,404 84, 600 75,920 262,209 14,520 13,600 43,520 11,360 765,000 32,400 1,562,000 85,000 Currency (RS.) Amount 340 8,100 4,000 610 850 1,420 850 1,390 470 1,420 330 3,400 Local Unit Price 7,776,000 1,661,400 2,448,000 369, 600 1,685,200 1,192,000 15,132,200 1,497,600 279, 600 32, 653, 000 1,777,200 23,100,000 868,000 8,685,000 Foreign Currency (Yen) Amount 162,000 63,900 13,600 46,200 38,300 298,000 11, 700 69, 900 8, 680 21, 000 9, 650 6,970 Price Unit 1,100 900 48 26 180 128 44 100 Unit Quantity ω 4 4 0 lin.m lin.m lin.m lin.m lin.m lin.m lin.m lin.m set set set set Diam.= 66 mm Diam.= 66 mm Diam.= 66 mm Diam.= 66 mm 5.Hcrizontal Boring Works for Water Collection ឪ ∾ ∥ щ 5.1 Boring in sandy & clayey soil 5.2 Boring in gravelly soil 5.3 Boring in cobble stone 5.4 Boring in soft rock Description sub-total of B.5 Sub-total of B.4 sub-total B.3 3.3 Vertical stiffner 4. Safety Facilities 3.2 Ring stiffner 3.4 Lateral strut 4.1 Fence 4.2 Notice board 3.1|Liner plate 3.6 Steel cover 3.Metal Works 3.5 Stairs Item No.

Table III.5.2-5 DETAILED BREAKDOWN OF THE CONSTRUCTION COST (4/7) Work Item:A-2.DRAINAGE WELL(3/3)

Item					Foreign Cu	Currency (Yen)	Local Cur	Currency (RS.)
No	Description		Unit	Quantity	Unit Price	Amount		1 ជ
6.но	 6.Horizontal Boring Works for Water Drainage	Drainage						
999	6.1 Boring in sandy & clayey soil 6.2 Boring in gravelly soil 6.3 Boring in cobble stone	Diam = 116 mm Diam = 116 mm Diam = 116 mm	lin.m m.ril m.ri m.r	10 100 100	6,850 9,190	689,250	000 990 1000	72,000
	6.4 Boring in soft rock	116	110.m	0	11,300	000,200,2	1,060	193, 750 0
	sub-total of B.6					3,751,750		265, 750
н д г`	7. Protection Works for Boreholes							659, 015
7.1	7.1 Installation of P.V.C. pipe, Installation of S.G. pipe,	Diam. = 40 mm Diam. = 100 mm	lin.m lin.m	2,100	370 3,370	777,000 674,000	310 310	651,000 62,000
	sub-total of B.7					1,451,000		713,000
8.Dr	8.Drainage Channel Works							
0000 11 11 11 11 11 11 11 11 11 11 11 11	8.1 Excavation in open8.2 Stone masonry8.3 Sod facing	t = 15 cm	cu.m sq.m sq.m	13 13 13	000	000	1110 160 25	5,500 7,680 325
	sub-total of B.8					096		13, 505 13, 606
	Total of B					62,482,950.00		5,353,965.00 11,903,540

Table III.5.2-5 DETAILED BREAKDOWN OF THE CONSTRUCTION COST (5/7) Work Item:A-3.HORIZONTAL BORING(1/1)

1,449,900 3,346,546 1,995,040 3,973,133 517,700 582,469 27,440 1,650 22,800 1,230 1,760 662,400 517,700 605,000 182,500 Currency (Rs.) Amount 1,210 730 1,230 440 310 530 720 110 Price Local Unit 157,200 1,550 360 18,871,010 6,854,000 9,150,000 18,094,000 617,900 159,110 ō 2,090,000 617,900 Currency (Yen) Amount 1,310 1,550 18,300 8,360 6,110 7,450 370 06 Ö Foreign Price Unit 1,670 920 500 250 15 120 4 Unit |Quantity 0 Ч Ground, Surface lin.m m.uil m.nil lin.m lin.m cu.m sq.m cu.m sq.m 1.Horizontal Boring Works for Water Collection on the 2. Pipe Installation Works for Boreholes Protection = 66 mm = 66 mm Diam. = 66 mm Diam. = 66 mm Diam. = 40 mm90 ទួ ഗ Diam. Diam. H μ 3.2 Gunite coating with wire mesh 1.1 Boring, sandy & clayey soil Description 3.3 Concrete for catch pit sub-total of C.3 sub-total of C.2 sub-total of C.1 3.4 Form for Item no.3.3 1.2 Boring, gravelly soil 1.3 Boring, cobble stone 1.4 Boring, soft rock II 3.Drainage Channel Works 3.1 Excavation, common Total of C 2.1 P.V.C. pipe Item No.

Table III.5.2-5 DETAILED BREAKDOWN OF THE CONSTRUCTION COST (6/7) Work Item: A-4.PILING(1/2)

32,340 22,770 78,110 1**31,752** 199,090 1,966,020 7,835,200 11,769,170 966, 520 33, 100, 398 23,000 1,768,860 926,200 174,720 174,720 113, 698, 321 40,320 224,867 Amount Currency (Rs. 110 50 70 430 930 1,600 930 420 Local Price Unit 680, 683, 000 123, 249, 600 165, 600 82, 800 263,340 511,740 15,417,900 153,053,600 297,226,000 478,400 972,404,100 9,331,200 306,557,200 478,400 Currency (Yen) Amount 35,300 16,200 1,150 72,400 360 200 570 64, 800 33, 300 139,000 Foreign Price Unit 8,420 576 460 414 462 463 2,114 4,897 1, 902 416 Unit Quantity lin.m lin.m lin.m cu.m cu.m lin.m Diam.=300mm, t=17mm [lin.m] lin.m time Diam.=300mm, t=9mmшш шш Ш , Min 350 = 350 = 350 = 350 4.Removal and Installation Works of Machinery 11 4.1 Removal and installation of machinery Diam. Diam. Diam. Diam. 1.1 Excavation, common
1.2 Embankment , excavated material
1.3 Backfilling 2. Vertical boring Works for piling 2.1 Boring, sandy & clayey soil Description sub-total of D.3 sub-total of D.4 sub-total of D.1 sub-total of D.2 3.1 Installation of pile 3.2 Installation of pile 3. Pile Installation Works 2.2 Boring, gravelly soil 2.3 Boring, cobble stone 2.4 Boring, soft rock II 1.Earth Works Item No.

DETAILED BREAKDOWN OF THE CONSTRUCTION COST (7/7) Work Item: A-4. PILING (2/2) Table III.5.2-5

180,400 789,297 45,100 135,300 15,930,000 152,496,292 1,877,240 866,140 990 3, 990 2,761,080 4,551,658 12,720 Currency (Rs.) Amount 50 150 2,840 3,410 530 1,330 90 Local Price Unit 7,271,000 5, 830 802,780 5,006,100 5, 808, 880 11,520 14,760 17,082,110 1,302,842,430 Foreign Currency (Yen) Amount 890 5,550 11,000 38,500 530 480 4,920 Price Unit 902 902 Unit Quantity 661 254 11 24 ŝ си. т си. т си. т си. т си. т cu.m ton earth materials crushed stone asphalt 5.Disposal Works of Drilling Mud and Slime 6.1 Concrete filling, inside of piles 6.2 Mortar filling, outside of piles 5.1 Disposal of drilling mud 5.2 Diaposal of slime Description sub-total of D.5 6.Plug Works for Pile Head sub-total of D.6 6.3 Pile head filing 6.4 Pile head filling 6.5 Pile head filling ρ Total of

Table I (Unit : Mil.Rs.)	Exchange Rate : 1.0 USS				Exchange	Exchange Rate : $1.0 \text{ US} = \text{Rs}.15.3 = \text{IYF} 146.0$	USS = Rs	$15.3 = \Gamma$
	F/C	Total L/C	total	E/C	1990/91 1 /C	total	т Ц Ц	1 /C
A. Construction Works) ī) Ì
A-1 General Item	33.2	6.0	39.2	20.3	3.6	23.9	12.9	2.4
A-2 Drainage Well	6.5	5.4	11.9	1.0	0.8	1.8	5.5	4.6
A-3 Horizontal Boring	2.0	2.0	4.0	0.7	0.7	1.4	1.3	1.3
A-4 Piling	136.6	15.9	152.5	17.1	1.9	19.0	119.5	14.0
Total of A	178.3	29.3	207.6	39.1	7.0	46.1	139.2	22.3
B. Administration Expense	0.0	6.3	6.3	0.0	2.3	2.3	0.0	4.0
Total of A to B	178.3	35.6	213.9	39.1	9.3	48.4	139.2	26.3
C. Price Escalation	0.0	5.2	5.2	0.0	0.7	0.7	0.0	4.5
Total of A to C	178.3	40.8	219.1	39.1	10.0	49.1	139.2	30.8
D. Physical Contingency	17.8	4.1	21.9	3.9	1.0	4.9	13.9	3.1
E. Engineering Service	16.5	2.4	18.9	6.9	1.0	7.9	9.6	1.4
Total of A to E	212.6	47.3	259.9	49.9	12.0	61.9	162.7	35.3
F. Interest during Construction	6.9	5.5	12.4	1.3	1.1	2.4	5.6	4.4
Grand Total	7195	5 C 2	5 020	C 13	12		C C V T	

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(Tnit - Mil Rs.)	Table III.5.	II.5.4-2	4-2 ANNUAL DISBURSEMENT SCHEDULE (Economic Cost)	DISBUR	SEMEN	T SCHE	DULE (I	Economic	c Cost)	5		
(10000000 - 1000)	D/H	Total 1./C	total	UH H	1 //	toto I	EXCNai	1991 1991 1 //	Exchange Kate : 1.0 US\$ = KS.15.3 = JYE 146.0 1991 192 192 1992	7.S.1.	1992	146.0
A. Construction Works	2		I COURT	2.7		IO IA			lotal		L F	total
-	33.2	6.0	39.2	0.0	0.0	0.0	20.5	5.0	25.5	12.7	1.0	13.7
	6.5	5.4	11.9	0.0	0.0	0.0	5.1	44	9.5	1.4	1.0	2.4
A-3 Horizontal Boring	2.0	2.0	4.0	0.0	0.0	0.0	1.3	1.3	2.6	0.7	0.7	1.4
A-4 Piling	136.6	15.8	152.4	0.0	0.0	0.0	89.4	8.9	98.3	47.2	6.9	54.1
Total of A	178.3	29.2	207.5	0.0	0.0	0.0	116.3	19.6	135.9	62.0	9.6	71.6
B. Administration Expense	0.0	6.3	6.3	0.0	0.4	0.4	0.0	4.3	4.3	0.0	1.6	1.6
Total of A to B	178.3	35.5	213.8	0.0	0.4	0.4	116.3	23.9	140.2	62.0	11.2	73.2
C. Price Escalation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total of A to C	178.3	35.5	213.8	0.0	0.4	0.4	116.3	23.9	140.2	62.0	11.2	73.2
D. Physical Contingency	17.8	3.5	21.3	0.0	0.0	0.0	11.6	2.4	14.0	6.2	1.1	7.3
E. Engineering Service	16.5	2.1	18.6	2.8	0.4	3.2	10.2	1.3	11.5	3.5	0.4	3.9
Total of A to E	212.6	41.1	253.7	2.8	0.8	3.6	138.1	27.6	165.7	71.7	12.7	84.4
F. Interest during Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grand Total	212.6	41.1	253.7	2.8	0.8	3.6	138.1	27.6	165.7	71.7	12.7	84.4

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9. CORE LOG OF DRILLED CORE SAMPLE

Clayer materials are less cohesive. Slickensides are not found. 22.00 - 23.00 m; no core recover. Little clayer materials are recover. Basaltic gravels are small in size. 0 0 0 0 0 0 0 0		**	DRILL	LO	G	ļ	HOLE	E NO.E	<u>IV-V1</u>	SHEET NO) <u>.</u> OF		
Avestade corret 2:500,1/2 Date Panel vit/ (1/2) Date Date Panel vit/ (1/2) Date Panel vit/ (1/2) Date Dat			TUDY ON L	ANDSLI						30.00m	ELEVATION	55.40	m
		DRE											
$\frac{1}{2}$ $\frac{1}$				<u>y</u>		FROM 17/5	10 20	<u>)/6/89</u>	r i i i i i i i i i i i i i i i i i i i				KI
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$\frac{1}{2}$ $\frac{1}$	DE D	LEV		SECTION		ION	IT IAMI		┝───┬─┤└	TIMES/Cm)			065
$\frac{1}{2}$ $\frac{1}$		544 			Clay is coherive and cof				% en			The second s	
$ \frac{7}{2} $ $ 7$				=8-	4.70-5.40 m; slightly st	iff but	ø		70				
$\begin{array}{c} \begin{array}{c} 1 \\ 5 \\ 5 \\ 5 \\ 5 \\ 6 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7$				- Ø	cohesive.								
$\frac{7}{10}$ nil $\frac{3}{2}$ $\frac{3}{2}$ $\frac{3}{2}$ $\frac{3}{2}$ $\frac{46}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{3}{2}$ $\frac{1}{2}$				0			N IA		<u>180</u>	51/5			
$\frac{1}{5}$ $\frac{1}$							ø	nil	100				
$\frac{5}{5}$ $\frac{3}{6}$ $\frac{3}$					2								
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Charger staticals area earbor of and all is parts are earbor terrored. 900 12×10^{-1} 100×10^{-1}			· · ·	- <i>Ø</i>					≈∕				
Charger staticals area earbor of and all is parts are earbor terrored. 900 12×10^{-1} 100×10^{-1}	E 8 70	46.70	Clay with gravel	Ø									
$\begin{array}{c} 9,00 \\ 9,$		10.10	<u></u>	08	Clayey asterials vere va	shed out and	11		80				
$\begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 $			·	$ \mathcal{V}_{\Lambda} $	basaltic gravels were on	y recovered.		9.00	e en	C LL LL LL LL K	304×10	5	
$\frac{1}{2} = \frac{1}{2} = \frac{1}$				l'n	10.40-10.80 : slightly o	ohesive;		9.50					
$\frac{1}{2200} = \frac{1}{2200} = \frac{1}{200} = \frac{1}{100} = $	E			NO	5				EC				
$\frac{1}{2200} = \frac{1}{39.40} \operatorname{Cravel vilb clay}$ $\frac{1}{2100} = \frac{1}{23.00} \operatorname{sr} \operatorname{sr} \operatorname{coverr}.$ $\frac{1}{30} = \frac{1}{30} = \frac{1}$				$\int \mathcal{Y}$	13.50 - 14.00 m; no core	recovery			e d				
$\frac{1}{2200} = \frac{1}{39.40} \operatorname{Cravel vilb clay}$ $\frac{1}{2100} = \frac{1}{23.00} \operatorname{sr} \operatorname{sr} \operatorname{coverr}.$ $\frac{1}{30} = \frac{1}{30} = \frac{1}$				6									
$\frac{1}{2200} = \frac{1}{39.40} \operatorname{Cravel vilb clay}$ $\frac{1}{2100} = \frac{1}{23.00} \operatorname{sr} \operatorname{sr} \operatorname{coverr}.$ $\frac{1}{30} = \frac{1}{30} = \frac{1}$				\mathbb{Z}				1200	DC I				
335 345 35 35 36 37 37 37 37 37 37 37 37				20				1-1-0	i ad				
$\frac{1}{2200} = \frac{39.40}{31.40} \frac{6}{1000} \text{ vib chy}$ $\frac{1}{200} = \frac{30.00}{31.40} \frac{6}{1000} \frac{1}{1000} $	796	ł		∇				-				7	
$\frac{1}{22.00} = \frac{39}{40} \text{ Gravel with clay}$ $\frac{1}{22.00} = \frac{39}{40} \text{ Gravel with clay}$ $\frac{1}{22.00} = \frac{39}{40} \text{ Gravel with clay}$ $\frac{1}{22.00} = \frac{1}{23.00} \text{ gravel serve loged slightly.}$ $\frac{1}{22.00} = \frac{1}{23.00} \text{ gravel serve loged slightly.}$ $\frac{1}{22.00} = \frac{1}{23.00} \text{ gravel serve loged slightly.}$ $\frac{1}{23.00} = \frac{1}{23.00} \text{ gravel serve loged slightly.}$				0/0				- Dil		N.	D SUKIO		백역
$\frac{22.02}{22.02} = 39.40 \text{ Gravel with clay}$ $\frac{22.02}{22.02} = 39.40 \text{ Gravel with clay}$ $\frac{22.02}{22.02} = 39.40 \text{ Gravel with clay}$ $\frac{22.02}{22.02} = 31.40 \text{ Clayey with gravel}$ $\frac{22.00}{22.00} = 23.00 \text{ gravel saterials are less cohesive.}$ Slickensides are not found. $\frac{22.00}{22.00} = 23.00 \text{ gravel saterials are recover.}$ bittle clayer materials are recover. bittle clayer materials are small in size. $\frac{1}{22.02} = \frac{1}{22.02} = \frac{1}{22$				Ø					8				
$\frac{1}{22.00} = \frac{39.40}{31.40} \text{ Gravel vith clay}$ $\frac{1}{22.00} = \frac{1}{22.00} = \frac{1}{20.00} = 1$				QÅ									
$\frac{22.00}{39.40}$ Gravel vith clay $\frac{22.00}{39.40}$ Gravel vith clay $\frac{22.00}{31.40}$ Clayer with gravel $\frac{32.00}{5}$ $\frac{22.00}{5}$ $$				\mathcal{O}									
$\frac{22.00}{39.40}$ Gravel vith clay $\frac{22.00}{39.40}$ Gravel vith clay $\frac{22.00}{31.40}$ Clayer with gravel $\frac{32.00}{5}$ $\frac{22.00}{5}$ $$	4			No					P d				
$\begin{array}{c c} 22.00 & 39.40 & \text{Gravel vith clay} \\ \hline \\ 22.00 & 39.40 & \text{Gravel vith clay} \\ \hline \\ 22.00 & 23.00 & \text{gravels are not found,} \\ \hline \\ 22.00 & 23.00 & \text{gravel site not found,} \\ \hline \\ \hline \\ \hline \\ \\ \hline \\ \hline \\ \\ \hline \\ \\ \hline \hline \\ \hline \hline \\ \hline \\ \hline \\ \hline \\ \hline \\$				\mathcal{P}_{o}									
$\begin{array}{c c} 22.00 & 39.40 & \text{Gravel vith clay} \\ \hline \\ 22.00 & 39.40 & \text{Gravel vith clay} \\ \hline \\ 22.00 & 23.00 & \text{gravels are not found,} \\ \hline \\ 22.00 & 23.00 & \text{gravel site not found,} \\ \hline \\ \hline \\ \hline \\ \\ \hline \\ \hline \\ \\ \hline \\ \\ \hline \hline \\ \hline \hline \\ \hline \\ \hline \\ \hline \\ \hline \\$				0/									
$\frac{22.0C}{24.0C} 39.40 \text{ (Gravel with clay}$ $\frac{22.0C}{24.0C} 31.40 \text{ (Clayey with gravel}$ $\frac{22.00 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}$ $\frac{1}{200 - 23.00 \text{ m; no core recovery.}}{100 \text{ core recovery.}}{100 \text{ core recovery.}}{100 \text{ core recover.}}{100 core recover.$		[aU		i			1 80	K	1.26×10		29
Clayer materials are less cohesive. Slickensides are not found. 224.00 31.40 Clayer with gravel 22.00 - 23.00 m; no core recovery. Little clayer materials are recover. Basaltic gravels are small in size. 0 in it is in it if if it is in it if it is it is it if it is it is it if it is it if it is it is it if it is it if it is it if it is it is it if it is it if				$\sum \mathscr{Y}$				HIL	Fri				
Clayey saterials are less cohesive. Slickensides are not found. 22.00 - 23.00 m; no core recovery. Little clayey saterials are recover. Basaltic gravels are small in size. 0 in it is in i	Enor -			$\tilde{\mathcal{A}}$		•							
$\frac{24.00}{55}$ $\frac{21.00}{5}$ $\frac{22.00}{5}$ $\frac{22.00}{5}$ $\frac{22.00}{5}$ $\frac{23.00}{5}$ $\frac{22.00}{5}$ $\frac{23.00}{5}$ $\frac{22.00}{5}$ $\frac{23.00}{5}$ $\frac{23.00}{5}$ $\frac{23.00}{5}$ $\frac{22.00}{5}$ $\frac{23.00}{5}$	E Ferdia	<u>59.40</u> 0	iravel vito ciay	<u></u>	Clayey materials are less	cohesive.			6 0				
$\frac{24.0C}{25}$ $\frac{21.00 - 23.00 \text{ m}; \text{ no core recovery.}}{\frac{22.00 \text{ m}; \text{ no core recovery.}}{22.$	EI I	.		0									
$\frac{2}{25}$ $\frac{1}{25}$		21 / 0	Javov with gravel	-9									
$\frac{225}{26.75}$ $= \frac{28.65}{26.75}$ $\frac{26.75}{26.75}$ $\frac{1}{2}$	El	21.401	lajej stea grates	0 7/				nil					
$= \frac{28.65 \cdot 26.75 \text{ Gravel with clay}}{\text{V} \text{V}} \text{ Cracks are developed slightly.}$	525			Vo	Basaltic gravels are small	l in size.			85	ka li ke	9 96 x 10	2	23
$\frac{1}{28.65} = \frac{28.65}{26.75}$ Gravel with clay \circ \bigcirc		1		\$ ·				nil	40				-
$\frac{2}{28.65} = \frac{28.65}{26.75}$ Gravel with clay $\sim \Delta$ v v v Gracks are developed slightly.													
$= \frac{28.65 \cdot 26.75 \text{ Gravel with clay}}{\sqrt{\sqrt{\frac{1}{\sqrt{1}}}}}}}}}}$	2			°.A			╽╽┞	nil	1				
$-\frac{28.65 \cdot 26.75 \text{ Gravel with clay}}{\sqrt{\sqrt{\frac{1}{\sqrt{1}}}}}}}}}}$				\mathbb{N}				<u>-¥-27.35</u> ∩il	ar 1				
V V Cracks are developed slightly.	28.64 2	6.75	ravel with clay	10									
		T			Cracks are developed slig	htly.			70				
BCI3000 25.40 Bedrock (basalt) v v	<u>z 10050</u>	5.40B	edrock (basalt)				∦						27

#R.Q.D is Rock Quality Designation, R.Q.D= (Total length of cylindric cores longer than 10 cm)/(Total core length) x 100% #LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm³ #DEPTH and ELEVATION are in meter #INAMETER in in millimeter

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LOG FORM-B

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HOLE NO.BV-V2 SHEET NO. OF

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	ERACE RECOV	/ERY	RE.	<u>2.73m</u>	/day	D/	ATE	FROM14/8	торо	18/89	DRILLEI	D.D.S		LOGGED		ZUKI
ш	2		ELEVATION	ROCK TYPE	COLUMN				BIT & DIAMETER	GROUNDWATER LEVEL	CORE			COEFFICI OF	ENT	=
DATE	DEPTH		EVAT	OR	SECTION	DES	SCRIPT	ION	NE.	UNDWA1 LEVEL	RECOVERY			PERMEAE	BILITY	143
	G		급	FORMATION	SECTION				BIT DIV	CROL	96 cm			(Cm/se		l ^e
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媥	r.				the	Kax. dia. of grav 17.20-18.50 m; cl	ar inch	u cm. Ides slickensides					K	=4.12×1	6	17
Ē	Ĭ				X /0	19.60-19.90 m; sl	ickensid	les are not found		2.00						
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*	da				\mathcal{L}						75		K	+138×	0	bc
T	<u>40.4</u>	<u>y 2</u>	<u>8.69</u>	Gravel with clay	10	00 00 01 J0				16.05						
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₹.	-			· .	v v	24.20 m; light gr	ayish c	lay		01.50						
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7 Ú	UUL	<u>4 18</u>	<u>5.89</u>	Bedrock (basalt)	<u> </u>	L			<u> </u>	22,80		punkiijiji	1111 I I I I	ann pridiciji	ana ka ji	<u>ere ere ere ere ere ere ere ere ere ere</u>

#RQD is Rock Quality Designation, RQD=(Tots) length of cylindric cores longer than 10 cm)/(Tots] core length) 276080 #LUCEON VALUE is Vinin/m under injection water pressure of 10kg/cm² #DEPTH and ELEVATION are in meter #DIAMETER is in millipoter

LOC FORM-B

HOLE NO. BV-V3 SHEET NO.

OF PROJECT STUDY ON LANDSLIDE PROTECTION PROJECT IN PORT LOUIS DEPTR 17.00m ELEVATION 36.55m SITE LA BUTTE COORDINATE :995.964 :1003.402 INCLINATION DRILL RIG VERTICAL GEMCO AVERAGE CORE RECOVERY 4.25 m/dav DATE FROM 9/6 то13/6/89 DRILLED LOGGED D.D.S Y. KOZUKI BIT & DIAMETER ELEVATION ROCK TYPE COEFFICIENT CROUNDWATEN DEPTH CORE DATE COLUMN OF PERMEABILITY LEVEL Ē OR DESCRIPTION RECOVER SECTION Ě FORMATION (Cm/sec) 04 Yellowish brown topsoil: small water contents; a little gravel (1-3 cm) DIA ø 76 mm 1.80 34.75 Clay with gravel 3.10-3.50, 4.60-4.75, 5.30-5.50 :: cohesive clay 5.30-5.50 m; slickensides are seen 3.25-3.50 m; very soft Gravel size is less than 1 cm. nil 5 5.50 31.05 Clay with gravel Clayey saterials are seen partly. Q 7.75, 8.55-8.60, 9.05-9.30 m; clayey materials are cohesive partly. nil 1110 215fx Gi 7.45 0.60 25.95 Gravel with clay Low cohesive clay materials 11.20 m; slightly stiff and slickensides re seen. 13.20-13.80 m; slightly soft and weak. Gravel size is about 1 cm. 22.7 Clay with gravel 1<u>3.80</u> Fresh basalt; cracks are seen a little. SWL. v v 14.45 Partly basalt is vesicular. 15 100 v v v v v v Y ۷ 131717.00 19.55 Bedrock (basalt) 100 5.40 HOLE

*RQD is Rock Quality Designation, RQD=(Total length of cylindric cores longer than 10 cm)/(Total core length) x 100% #LUGEON VALUE is 1/min/m under injection water pressure of 10kg/em

***DEPTH and ELEVATION are in meter** ◆DEAMETER is in millimeter

LOC FORM-B

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	PROJE		STUDY ON	LANDSL	IDE PROT	ECTION F	ROJECT II	V POF	RT.L	DUIS	DEPTH	25.0		ELEVATION	22.70	m
AVI		CORE ERY	L.A	A BUTTE m∕day		COORDINATE	:995.9	974 :10	003.	490	INCLINATION	VERT	CAL	DKILL RIG	MINDRI	
F			1		<u> </u>	DATE	FROM23/	9 TO2	<u>28/9</u>	∕ <u>′89</u>	DRILLED	D.D		LOGGED	Y. KOZ	
ATE	HLAEO	ELEVATION	ROCK TYI	COLUM	N	DESCRIPT	(AN)	2	GROUNDWATER	Ξī	CORE			COEFFICIE OF	ENT	н
	ā	ELE	FORMATIO	N SECTIO	N	DESCRIPTION	10,4	E		TEVEL	RECOVERY			PERMEAB		DEPTI
1		1			Clayey nate	erials were re	covered	MET			% (m			CCm/se	C)	
	-				🚽 predoninani	lly. Recovered in general.	core samples	Ø	AU I							- 1
				8	5.00-5.80,	12.00-14.00,	14.10-14.80 m;	86								
E-					predominani Slickenside	s are found f	requently belo	mn •	"							
-					√6 a but sli	ckensides are 1 between 14-1	not found in				85					
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Ēľ	<u>8,20</u>	4.50	Clay with gravel		Xoderately sti	ff clay and c	phonion long				95					
Ē					Slickensides a	re found freq	ently in				00					
Ēd					general but th section of 20.	cy are not fo 00-20.45 m.	and in the				in an					
F			15										K	1.59 × 10	2	<u>20</u>
F	21.10	1.60	Clay						8.9	5 🏢	100					
1				V V V	ittle develop esicles are se	ent of cracks en very frequ	are seen. ently.				100					
				V V		•	-									Ē
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żþ	5.00 -	2.30	edrock(basalt)	V V V V												
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*RQD is Rock Quality Designation, RQD=(Total length of cylindric cores longer shan 10 cm)/(Total core length) x 100% *LUCEON VALUE is 1/min/m under injection water pressure of 10kg/cm² *DEPTH and ELEVATION are in meter *IJANETER is in millimeter

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FORM-B

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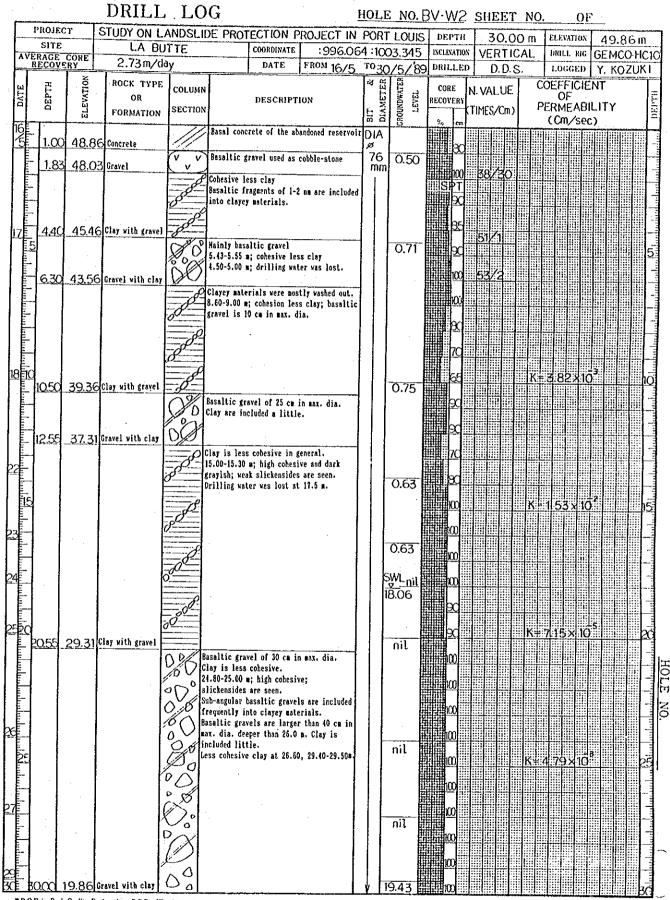
	DRILL LO	G	HOLE NO.	<u>BV·W1</u> sheet	NO. OF
PROJECT	STUDY ON LANDSLID	E PROTECTION PROJECT			m ELEVATION 62.48 m
SITE AVERAGE CORE RECOVERY	LA BUTTE		6.053:1003.28		L DRILL HIG MINDRILL
	2.50 m/day	DATE FROM 17	<u>′5 ^{то} 1/6/ 89</u>	DRILLED D.D.S.	LOGGED Y. KOZUKI
DATE DEPTH ELEVATION	ROCK TYPE COLUMN		BIT & DIAMETER CROUNDWATER	CORE N. VALUE	COEFFICIENT
DATE DEPTH	OR FORMATION SECTION	DESCRIPTION	T AMETI UNDWAT	RECOVERY	OF PERMEABILITY
<u> </u>	FORMATION		DIA BIT	% cm (TIMES/Cm)	(Cm/sec)
		Less cohesive clay which appears to	be DIA		
	8	dark grayish deeper than 1.90 m. Weak slickensides are found at 7.40	n 76	11 IE 00	
	<u>*</u>	8.00-8.40 m; cohesive; developed	Լուսլ	00 527	
		slickensides; 1-2 am sub-angular gra are included.	vels	00 027	
5	-8			85	
	p <u>e</u>		nil		
5				EC III	5
	0				
				50	
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				X	
19 9.30 53.1	8 Clay with gravel	· · · · · · · · · · · · · · · · · · ·	4.00		
240		ecovered core samples are composed o asallic gravel with clayey materials	0.00	α	K+3.01 X10
		lay is highly cohesive.	9.50		
		4.50-14.70 m; weak slickensides 5.70-15.80 m; gravely (several mm in		<u> </u>	
23		ia.): dark brownish high cohesive cl.	w		
		9.90-20.00 m; sub-angular gravels sm han 5 mm in dia.; weak slickensides	11(""		
24		0.30-20.30 m; weak slickensides are	Seen.	6 0	
		2-13 m; drilling water was lost.	13.05		
	$\bigcap_{i=1}^{n}$			E DC	15
*	U U		nil		K=2.20×10
	Ben				
	$\circ()$	·		100	
	06		SWI		
ET	1 So		SWL. 18,11		
			10.11	95	
	DX				,
	2			95	K#2.62×10
20.95 41.53	Gravel with clay OP		nil		-
		lightly cohesive clay 2.10-22.50 m; clayey; flat slickensi			
		re seen at 22.20 m.	es		
	2				
11月11日 第二日 第二日 第二日 第二日 第二日 第二日 第二日 第二日 第二日 第二					
	E2		nil	B A	
294	Clay with gravel	saltic gravel with a little clay	nil		K = 6.04 x 10 ³ 25
- 2570 36 78	Gravel with clay	and a start with a second cidy		60	<u>1-0.0m/20</u>
E		covered cores are gravely; vesicles		hd line	
		re developed frequently. 2.20-29.40,29.70-29.75 m; volcanic			
	br	eccias are clayey by weathering.		P	
E I		-			
	V V				
! ⊑	. v v		·		
5 80.00 32.48	Bedrock (basalt) V V			m	
	······································	cylindric cores longer than 10 cm)/(Total			

#RQD is Rock Quality Designation, RQD= (Total length of cylindric cores longer than 10 cm)/(Total core length) x 100% #LUGEON VALUE is //imi/cm under injection water pressure of lokg/cm' #DEPTH and ELEVATION are in meter #DIAMETER is in millimrter

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*RQD is Rock Quality Designation, RQD=(Total length of cylindric cores longer than 10 cm/(Total core length) × 100% *LUCEON VALUE is I/min/m under injection water pressure of 10kg/cm²

#DEPTH and ELEVATION are in meter

*DIAMETER is in millimeter

FORM-B

ļ	PROJ		DRILI STUDY ON I		DE PROTECTION F	ROJECT IN	PORT	LOUIS	V-W3		00 m	ELEVATO	1 32
-	SIT AVERAG RECO	E CORE	4.00 m/dd	re	COORMANATE	:996.07	7:100	3.430	MINIDA	VERT	ICAL		GEN
ŀ			ROCK TYPE	<u> </u>	7	FROM 30/5	1087 & 30		DATIFED	D.D.		OEFFICI	M. N
	DEPTH	SLEVATION	OR	CULCX:	DESCRIPT	ION	RUT AN DIAMETER	15VEL LEVEL	CORE RECOVERY			OF	
ľ		13	FORMATION	SECTIO				ца п 1987				(Cm/se	C)
P				30	0.0-1.50 m; solt 1.50-3.90 m; slightly st	iff chy	DIA ø	กป					
	F			¢			76						
					2		mm 1		- P0		1	1	
	-			P					i hoc				
	3.9	282	1 Clay with gears	1 0	9		1						
	5			do	Mainly besaltic gravel; partly	løyer materials	11						
	Ĕ			5.0	1. 15-1. 69 1. 1. 80-5. 50 1;	alightly stiff			D2				
ľ	_			0.0	clayer naterints. 2.45-7.50 n; high cohesi en casaltic sub-angular	e clay; several		nil	20				
	ŧ.	1		0	Line leséed								
Ì				60	8.40-8.50 m; soft clay 16.25-16.85 m; slightly : slickensides are included								
	Į.,			60	slickensides are included	ciff claf; veik			13				
				20	High cohesive clay at 20 Soft high cohesive clay a	35 9.			m				
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	-	1.00	diater and eny		Soft cohesise clay								
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		1	:	2					75				
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	_ <u>p/9C</u>	- <u>5.79</u>	Gravel with clay	0/0	racks are developed freque	atly.			Ľф				<u>11</u>
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HOLE NO. BV-W4 SHEET NO.

OF STUDY ON LANDSLIDE PROTECTION PROJECT IN PORT LOUIS PROJECT DEPTH 13.00m ELEVATION 15.43m SITE LA BUTTE COORDINATE : INCLINATION VERTICAL DRILL RIG GEMCO ERAGE CORE RECOVERY AV 3.25 m/day DATE FROM 30/9 то 4/10/89 DRILLED D.D.S. LOGGED Y. KOZUKI BIT & ROCK TYPE ELEVATION **GROUNDWATER** DEPTH COLUMN CORE DATE LEVEL OR DESCRIPTION RECOVERY SECTION FORMATION 0.5014.9 Asphalt with subgrade gravel Gravel $\Delta\Delta\Delta$ Cohesive clay 1.30 lay with grave) 14.1 Cley materials were washed out 2.00 13.43 Gravel with clay Clay is slightly stiff and less cohesive; Only sub-rounded gravel of less than 1 cm in dia. is included partly. 11.25-11.40 m; highly cohesive 12.40-12.60 m; cohesive and soft nil 6.42 41313.00 2.83 Clay with gravel 2.43 Clay Slightly stiff clay 'n

#RQD is Rock Quality Designation, RQD= (Total length of cylindric cores longer than 10 cm)/(Total core length) x 100% #LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm*

DEPTH and ELEVATION are in meter
 DIAMETER is in millimeter

LOG FORM-B

			DRILL	LO	G	. 1	HOLI	NO.E	<u>V-X1</u>	<u>SHEET</u>	NO	<u>0</u> F	· .		
-	PROJE				DE PROTECTION P				DEPTH	22.00		ELEVATION	54.1		
ĀV		CORE ERY		BUTTE n∕day	COORDINATE DATE	:996.16			INCLINATION	VERTI		DRILL RIG	GEM		
			ROCK TYPE	<u>17 uuy</u>	DATE	<u>- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</u>		то <u>18/8/89 окт</u>		D.D.S.			Y KO		
DATE	рЕРТН	ATIC	OR OR	COLUMN	DESCRIPT	DESCRIPTION		CROUNDWATER	CORE RECOVERY			OF	_	Ē	ĺ
Ē	0 0	ROCK TYPE COLUMN OR FORMATION SECTION					BIT & DIAMETER	LEI			PERMEABILITY (Cm/sec)				
					Less cohesive clay; inclu	uded gravel	DIA		% cm			(Cii/Se	C) Hereiseler		
					size is 20 cm in max. di Shallover than 3.2 m, 6.0	a.	Ø		00						
	-1			0	predominant clay layer		76		a a a a a a a a a a a a a a a a a a a						
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	-			\$ <u> </u>	-				100						1
11					7										
	- <u> 8.3(</u>	<u>145.8</u>	9 Clay with gravel	0-	Clayey materials were mos	tly washed out	$\left \right $	6.40							
	-				clayey materials adhere o) E						
	d	l			slightly 11.60-11.75 m; cohesive c	lar					ĸ	=4.02 x 1(5	5	
			· · ·	$ 0\rangle$											
	-			C/					pd 🛛						
14									n a					-	
1	<u>12.5</u>	41.64	Gravel with clay	\mathbb{Z}_{\circ}				8.12							
	-			v v	Cores are fractured and c developed.	racks are			pd 🛛						
					Small vesicles are seen f	requently.									
165		1		V V											
	5			v v				12.00	E PO		J K	= 2.16 X 1()	15	
E					4.15			12.00	B C						
				V V											
	17.55	36.64	Bedrock (basalt)	v v					백						
				ΔX	Basaltic gravels are pred	onicantly			BC						
	1010	25 00	Bedrock) (tuff breccia)		included. Tuff is sandy.										
		100.05	JILUIT DECCENT		Cores are fractured partl	y and appear									
172	1			V V	tv-o be sub-angular grave			17.00	8 0		K	-2.15 X 10) Î	20	
				v v				13.20							
La La	1	[v v											HO
182	<u>\$200</u>	32.19	Bedrock (basalt)					14.05						22	E
								14.85							NO
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*R.Q.D is Rock Quality Designation, R.Q.D= (Total length of cylindric cores longer than 10 cm)/(Total core length) x 100% *LUGEON VALUE is Uninfm under injection water pressure of 10kg/cm³ •DEPTH and ELEVATION are in meter •DIAMETER is in millimeter

RM-B

		Okan mangang dan	DRILL						<u>V-X2</u>	<u>SHEET</u>	NO.	0	2	
	PROJEC	:T	STUDY ON L	ANDSLI	DE PROTECTION PI	ROJECT IN	PORT	LOUIS	DEPTH	25.0	Om	ELEVATION	37.9	95m
AVE	SITE	COPE	LA B	UTTE	COORDINATE	:996.18			EXCLUSATION	VERTI		DRILL RIG	+	
	RAGE		5.00 m/d	dy	DATE	FROM 15/6	то20	/6/89	DRILLED	D.D.S		LOGGED		
ш	H	ELEVATION	ROCK TYPE	COLUMN			BIT & DIAMETER	TER	CORE		C	OEFFICI		J.
DATE	рертн	TAVE	OR		DESCRIPT	ION	MET	GROUNDWATER LEVEL	RECOVERY		•	OF PERMEAE		Ē
		ELE	FORMATION	SECTION			DIAI	ROU!	9.j. (m		"	CRMEAC (Cm/se	21111 213	DEPTI
E.					Soft topsoil		DIA	<u> </u>	%, cm				stereneste	
Ę.	1.30	28	9 Clay with grave		· ·		76		65					
Ē	·				Clay is soft in general a	nd less cohesive	. mm							
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					are not seen 7.40-8.40 m; slightly sti	ff			75					-
Ε.]	[8	10.25-11.85 m; very soft									
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	<u>11.85</u>	17.6	4 Clay with gravel						75					-
E.					Gravel is 25 cm in max. di	8.								
Ë				$ \mathcal{N} $	14.40-14.75 p; soft clay 20.45-20.70 m; highly come	sive: frequently			85					
E.				100	developed slickensides are	seen.								1
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25	<u>25.00</u>	4.49	Gravel with clay	\mathscr{P}			¥		ill bd					лc
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R.Q.D is Rock Quality Designation, R.Q.D=(Total length of cylindric cores longer than 10 cm)/(Total core length) × 100%
 #LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm²
 #DEPTR and ELEVATION are in meter
 #DAMETER in in millimeter

FORM-B

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HOLE NORV-X3 SHEET NO. O

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		····-		ROCK TYPE	7	[227	<u>8 10</u> / *	<u>179789</u> 515	CORE	<u>1</u>	D. <u>D.S</u> I		COEFFIC)ZUK	늼
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Depty is not quality designation, RQUe Total length of sylindric cores longer than 10 cm// Yotal core length: a 100%
 DEFTH and ELEVATION are in meter
 DEFTH and ELEVATION are in meter

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ł	PROJEC	т			E PROTECTION P	ROJECT IN	PORT	LOUIS	DEPTH	<u>SHEET N</u> 18.00 m		15.15 m)
VÉ	SITE	CORE		BUTTE	COORDINATE	:996.23			INCLINATIO:	VERTICA		SPRAGL	
R	RAGE	1	3.001	<u>n/day</u>	DATE	FROM 18/9	то <u>23</u>	<u>/9/'89</u>	DRILLĖI	D.D.S.	LOGGED	Y. KOZU	KI
	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTI	ION	BIT & DIAMETER	CROUNDWATER LEVEL	RECOVERY	N. VALUE (TIMES/Cm)	COEFFICI OF PERMEAB (Cm/se	ILITY	nuntii
يبرابجرا سلساني	2.40	12.7	5 Clay with gravel	ð	Clay is slightly cohesiv 1.75-2.0 m; cores appear	e to be grayish	NETAL Ø 86 mm		00 100				-
لسلسلسل				° 🔏 o	3.75-3.90 m; less cohesiv are included. 5.35-6.50 m; cohesive; su of 2-5 mm in dia. are inc	b-rounded gravel	D1A ø 76 mm	1.04	<u>80</u> 60				
سلسلسلسارها	6.75	8.4	Gravel with clay					1.30	80 75		K=199×1	01	-
أسطسط سعاعونا	-				Very stiff and less cohes Veathered yellowish gray included occasionally.				95 97 97 97 97 97 97 97 97 97 97 97 97 97	23/30			1 1 1
	<u>9.95</u> 11.20		Clay Clay Sclay with gravel	-8	Dark brownish and less co	hesive.		0.95	e B5 X		K=2.62×1	3-3- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	1Č
	<u>12.30</u>		Veathered bedrock [basslt]	} √ * }	Cracks are developed freq Vesicular basalt; cracks little.			7.98	e E E				-
1		·		v v v v v v				-) 00		K = 8.87 x 1	21	- 1Ē
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	<u>18.00</u>	-2.8	DBedrock (basalt)				V	nil					18
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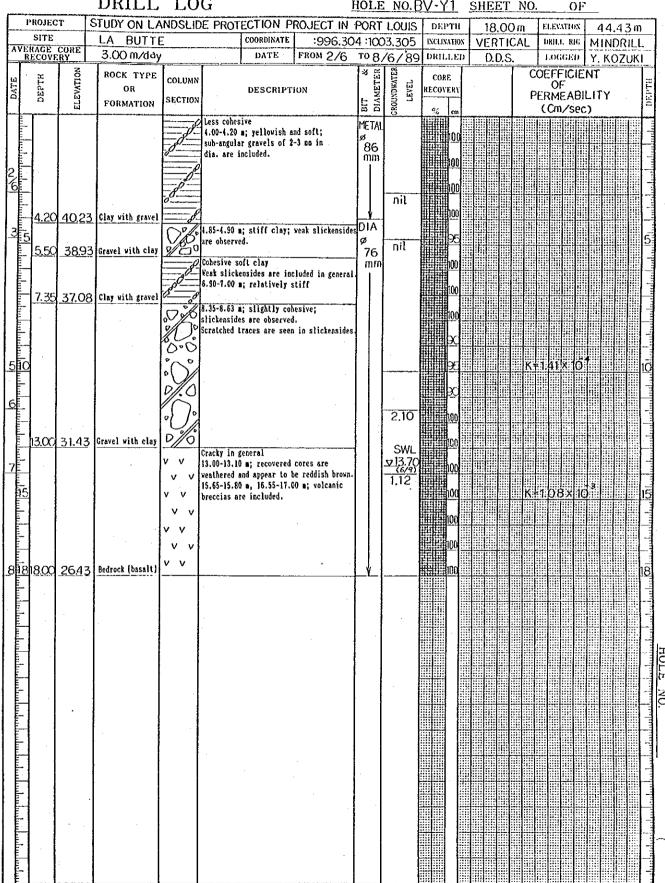
res longer than 10 cm1/(Total core length) x 100% LUCEOD is note quality Designation. RCqD= 1 Total tength of sylindric co BLUCEON VALUE is i/minfm under injection water pressure of 10kg/cm³
 DEPTH and ELEVATION are in meter
 DEAMETER is in millimeter

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LOC FORM-B

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HOLE NO. BV-Y1 SHEET NO.



#R.Q.D is Rock Quality Designation, R.Q.D≂(Total length of cylindric cores longer than 10 cm)/(Total core length) × 100% #LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm *DEPTH and ELEVATION are in meter

♦DIAMETER is in millimeter

FORM-B

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HOLE NO. BV-Y2 SHEET NO.

 \mathbf{OF} STUDY ON LANDSLIDE PROTECTION PROJECT IN PORT LOUIS PROJECT DEPTH 22.00m ELEVATION 29.49 m SITE LA BUTTE COORDINATE :996.325 :1003.369 DRILL, RIG MINDRILL INCLINATION VERTICAL AVERAGE CORE RECOVERY 3.67 m/day DATE FROM9/6 TO 15/6/89 DRILLED D.D.S. LOGGED Y. KOZUKI ROCK TYPE BIT & DIAMETER ď ELEVATION DEPTH COEFFICIENT ROUNDWATER CORE COLUMN LEVEL OF PERMEABILITY OR Ē DESCRIPTION RECOVERY SECTION DEI FORMATION (Cm/sec) Less cohesive stiff clay ME TAL 100 86 mm 100 6 4.00 25,49 Clay with gravel inn $\bigcirc \mathscr{Y}$ Clay is sandy, less cohesive, and soft. DIA nil ø 76 (\cdot) <u>5.75</u> 23.74 Gravel with clay 1 mm Slightly cohesive 6.40 23.09 Clay with gravel Clay is soft and less cohesive and appears to be light gravish. 1Ö 8.40 21.09 Clay with gravel 1,27 \mathbb{Z} 8.40-9.55 m; highly cohesive clay 1110 36 X 10 IK 0.95 11.15 18.34 Gravel with clay 1 Clay is cohesive in general. 12.40-12.70 m, 13.55-13.75 m; sandy clay 15.50 13.99 Clay with gravel \overline{o} Clay is relatively stiff and sandy. SWL 18.38 18.90 10.59 Gravel with clay Cracky basalt v 19.60-20.50 =; fractured; weathered thin 14 20 v v layers of volcanic breccias are included. 4.07 v ν v v HOLE ν v 222200 7.49 Bedrock (basalt) 15 Ý. 5.07 NO

*R.Q.D is Rock Quality Designation, R.Q.D= (Total length of cylindric cores longer than 10 cm)/(Total core length) x 100% *LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm³

*DEPTH and ELEVATION are in meter *DIAMETER is in millimeter

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HOLE NO.BV-Y3 SHEET NO. OF

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	PROJECT STUDY ON LANDSLIDE PROTECTION PROJECT I								PORT LOUIS DEPTH 10.00 m ELEVATION				 19.77m			
┝	AVE							03.435	INCLINATION	VERTICAL						
╞	$\frac{\overline{R}}{1}$	ECOVE	r	2.50 m/d	ay :	T	DATE	FROM 9/6	то <u>14</u>	<u>/6/'89</u>	DRILLED	D.D.S.		M. NEGISI	1	
	DALE	DEPTH	ELEVATION	ROCK TYPE OR	COLUMN		DECODIES		BIT & DIAMETER	CROUNDWATER LEVEL	CORE	1	COEFF OF		E	
	۶	DEI	ורבא	FORMATION	SECTION		DESCRIPT	ION	IT	TEVEL OUNDWAT	RECOVERY		PERME	ABILITY	OEP.	
\mathbf{r}	÷	r				Less cohe	riva clar		METAL	<u>.</u>	96 cm		(Cm/	/sec)		
	Ē	<u>0.90</u>	<u>18.87</u>	Clay with gravel					86		100				1	
	The second second second second second second second second second second second second second second second se				D^{\prime}	Clay is le 5.80-5.00	ss cohesive n; highly cohes	ive; slickensid	es DIA							
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l		6.00	13.77	Gravel with clay Clay	۶N			· .			100					
		6.40	_13.37	Clay	00/	Righly col \included.	hesive clay; no	gravel is		nil						
ľ					$ \mathcal{N} $	Clay which	is less cohes	ive is included		0.95	100					
	in l				X,º	predominan 7.50-7.75	ntly. m; soft clay			SWL	10				-	
l	in la				D,O					<u>v</u> 8.40						
ł	uluu,				1X					0.10						
14	Į	10.00	9.77	Gravel with clay	\mathcal{N}°	: 			<u> </u>		11.00				no	
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N.Q.D in Rock Quality Designation, R.Q.D≃(Total length of cylindric cores longer than 10 cm)/(Total core length) × 160%
 ■LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm²
 ■DEPTH and ELEVATION are in meter
 ■HAMETER is in millimeter

LOC FORM-B.

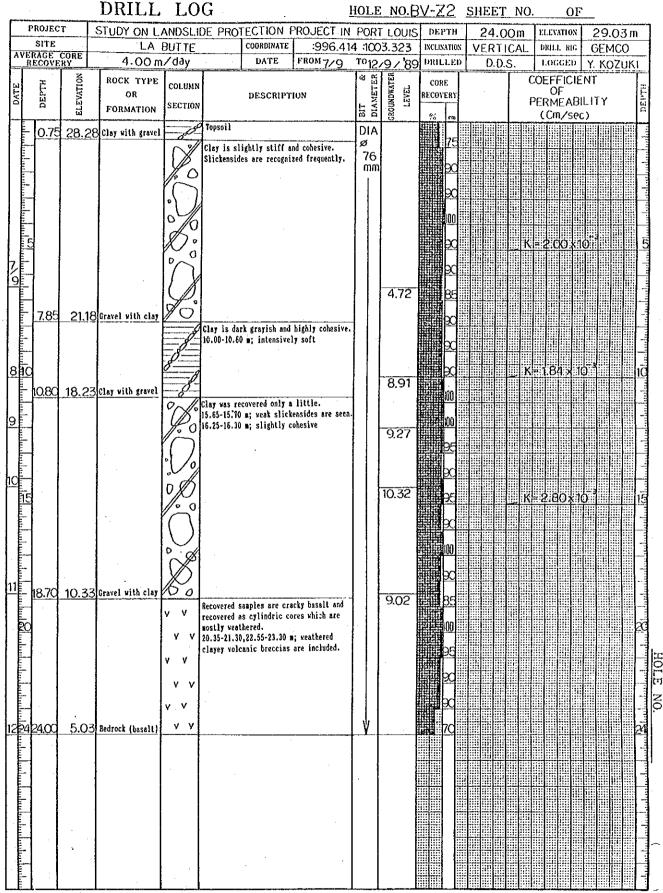
HOLE NO. BV-Z1 SHEET NO.

OF PROJECT STUDY ON LANDSLIDE PROTECTION PROJECT IN PORT LOUIS DEPTH 20.00 m ELEVATION 45.73m SITE COORDINATE :996.384 :1003.275 LA BUTTE INCLINATION DRILL RIG MINDRILL VERTICAL AVERAGE CORE RECOVERY FROM15/9 4.00 m/day DATE TO 20/9/'89 DRILLED D.D.S. LOGGED Y. KOZUKI BIT & DIAMETER COEFFICIENT OF ROCK TYPE ROUNDWATER ELEVATION DEPTH CORE COLUMN LEVEL DAT ÔR RECOVERY DESCRIPTION PERMEABILITY DET SECTION FORMATION (Cm/sec) é; n Less cohesive in general 1.05-1.20 m; soft YETA i00 44.53 Clay 1.20 ଷ 86 Clay is sandy, yeak, and less cohesive. mm 100 3.70 42.03 Clay with gravel ſX Tuff breccias including basaltic gravels; DIA Δ Χ yellowish gray; consolidated but brittle partly. 8.10-8.55,12.05-12.60,13.00-13.50 m; lava ø K 78 4.25 76 mm χ Δ layers are sandwiched. £1 ΔX Χ Δ ∆ X χ Δ 16 к 10 8.17 ΔX × A 1۶ Δ 兴 11.15 × A $\Delta \cdot \mathbf{X}$ ×Δ 11.15 ∆∵≍ ×Δ $\Delta \times$ Bedrock 20202000 25.73 (tuff breccias) 49 10 12.55 HOLE

*RQD is Rock Quality Designation, RQD= (Total length of cylindric cores longer than 10 cm)/(Total core length) × 100% *LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm

*DEPTH and ELEVATION are in meter +DIAMETER is in millimeter

LOG FORM-B

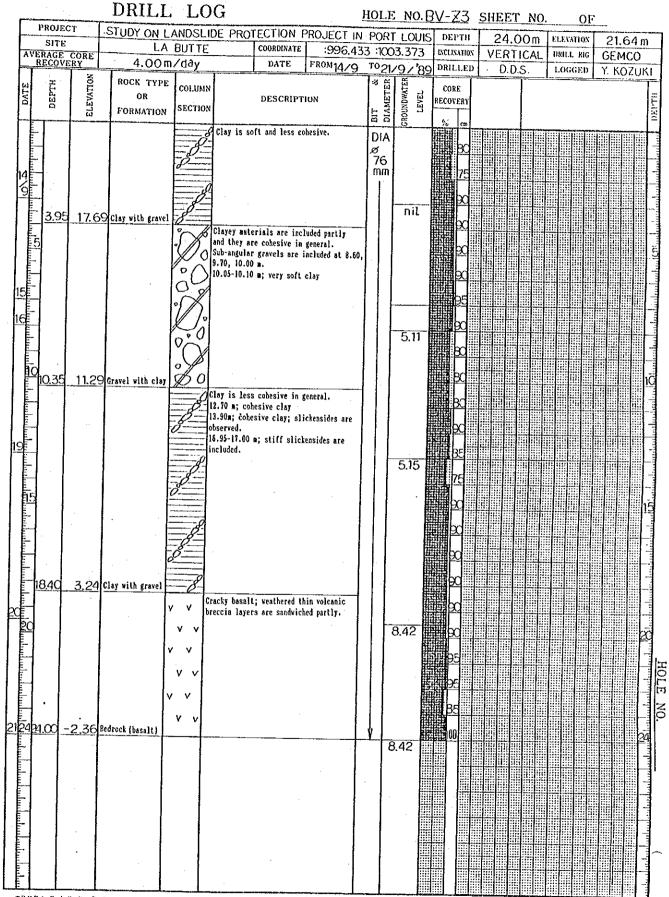


★ RULD in Rock Quality Designation, RULD ~ (Total length of cylindric cores longer than 10 cm)/(Total core length) × 100% #LUCEON VALUE in 1/min/m under injection water pressure of 10kg/cm² ★ DEPTH and ELEVATION are in meter

• DIAMETER is in millimeter

LOC FORM-B

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#RQD in Rock Quality Designation, RQD=(Total length of cylindrie cores longer than 10 cm)/(Total core length) x 100% ♦LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm²

*DEPTH and ELEVATION are in meter

FORM-B

DRILL LOG HOLE NO. BV-Z4 SHEET NO. OF STUDY ON LANDSLIDE PROTECTION PROJECT IN PORT LOUIS PROJECT DEPTH 13.00m ELEVATION 12.30m SITE LA BUTTE COORDINATE :996.474 :1003.427 INCLINATION VERTICAL DRILL RIG MINDRILL AVERAGE CORE RECOVERY 3.25 m/day DATE FROM 17/6 TO 30/6/89 LOGGED Y. KOZUKI DRILLED D.D.S. BIT & DIAMETER COEFFICIENT ELEVATION ROCK TYPE DEPTH CROUNDWATER CORE COLUMN LEVEL OF PERMEABILITY E Y C DEPTH OR DESCRIPTION RECOVERY SECTION FORMATION (Cm/sec) a. Less cohesive clay Scratched traces are seen in slickensides METAL ø ້ 86 ກາກ nil 19 nil DIA 7.50 Clay with gravel 4.80 F ø 76 mm Stiff clay in general 5.60-6.00 m; very soft clay 6.40 5.90 Chy ν Appears to be reddish brown <u>7.20</u> 5.10 Weathered bedrock Basalt including volcanic breccia bands. v Vesicular basalt shallower than 8.7 m SWL v v 11.40-12.20 m; fractured; volcanic <u>v 8</u>79 ۷ ν breccias are weathered and clayey. v Q v ٧ v v ν v v 301313.00 -0.70 Bedrock (basalt) HOLE

#R.Q.D is Rock Quality Designation, R.Q.D≃(Total length of cylindric cores longer than 10 cm)/(Total core length) χ 100% #LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm² ●DEUTH and ELEVATHIN are in meter

*DIAMETER is in millimeter

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