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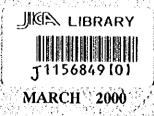
MINISTRY OF COMMUNICATIONS THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

THE STUDY ON CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA

IN KHULNA

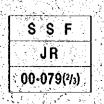
(Phase 2)

FINAL REPORT VOLUME II : APPENDIX



PACIFIC CONSULTANTS INTERNATIONAL

JAPAN OVERSEAS CONSULTANTS



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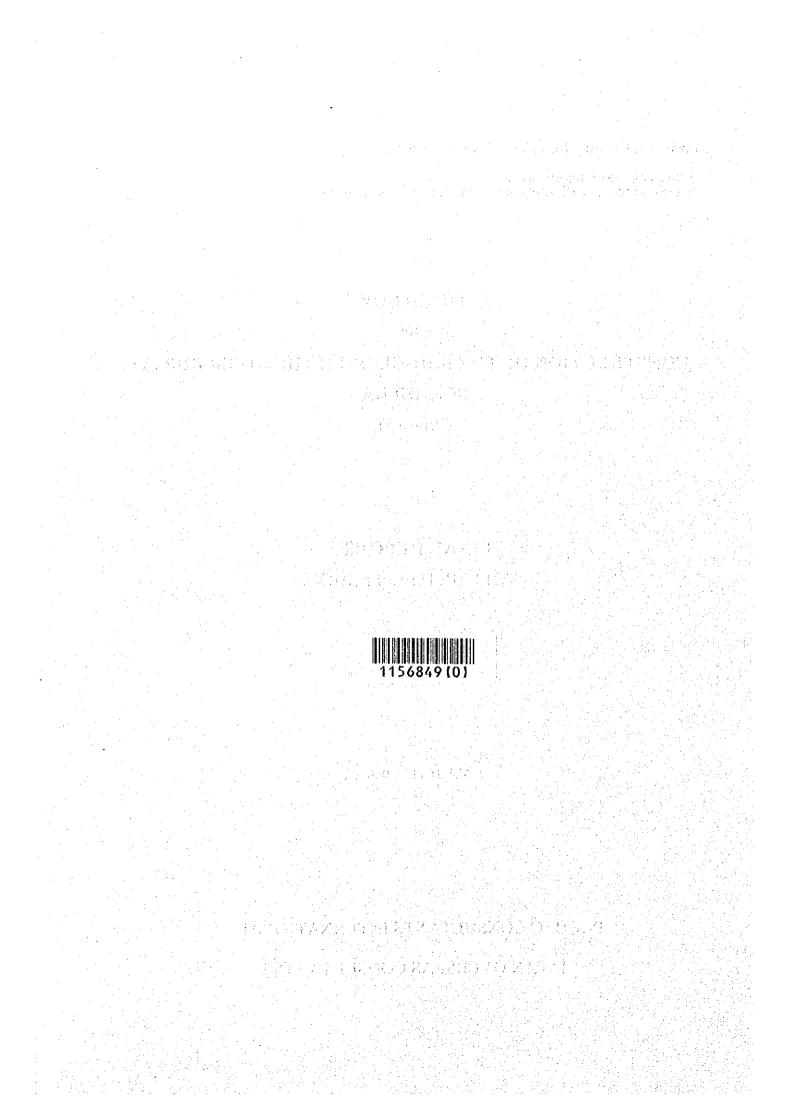
(Phase 2)

FINAL REPORT VOLUME II : APPENDIX

MARCH 2000

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THE STUDY ON CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

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Preconsolidation Pressure (kPa)		130		(60)	•			
Compression 1 Index		6. 4. 80		0.267				
Strain at Failure (%)				12.5 13		· · · · · · · · · · · · · · · · · · ·		
Atterberg Limits(%) PI Unconfined LL PL Compressive Strength (kPa)				78 89				
Limits(X) PI PL	23 9	41 55	26 24	27 17 32 40 78	27 35 36 30		23 10 36 45	25 13 25 14 26 18 26 18 25 19 54 77
Atterberg LL	32	96	20	72	66 62	40 34 97	8 2	88 8 4 4 <u>1</u> 1
of Initial Void Specific Granding Analysis (%) F.N n(%) Ratio Gravity Sand Silt Clay e0	14 032	76 0.17	35 0.41		32 40 5 32		4 0 0 4 0	16 16 32 25 25 47
Analysis Silt (72 36	24 34 34	64 14	71 36 29	67 21 59	74 67 74 32	50 18 18 18	70 71 67 73 52
Granding A Sand	14		1 88	- 0 00	- 7	3	22 7 4 5 7 8 7	
Specific Gravity	2.67	2.2	2.72		2.68 2.71 2.62	2.52	2.68 2.60 2.69 2.70	2.71 2.72 2.72 2.72 2.42
Initial Void Ratio e0				1.09				
Degree Saturatio Sr		5		80				
Wet Density (KN/m ³) 71		11.30	15.40	15.00 17.10/18.17		15.00		
Moisture Content(%) Wn	33 30 30	46 147/197 119 38 32	25	26 39 49	72			
Depth (m)	3.00-3.45 4.50-4.95 6.00-6.45	3.00-3.45 3.00-3.45 5.55-6.00 7.50-7.95 9.00-9.45 43.50-43.95 23.55-24.00	7.05-7.50 9.00-9.45 42.00-42.45	4.05-4.50 8.55-9.00 31.50-34.95 49.50-49.95	6.00-6.45 33.00-33.45 6.00-6.45	7.50-7.95 13.50-13.95 54.00-54.45 7.50-4.95 7.50-7.95 9.00-9.45	30.00-30.45 4.50-4.95 10.50-10.95 30.00-30.45	
Sample No.	6 7 7 7 6 7 7 7 6 0 0		UD-1 DS-6 DS-28	UD-2 UD-2 DS-21 DS-23	DS-22 DS-22 DS-22	- φ - φ - φ - φ - φ - φ - φ - φ - φ - φ	DS-20 DS-3 DS-7 DS-7	0 - 2 - 2 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4
Borchoia No.	1 //P-1	VP-2	2VP-1	2VP-2	3VP-1 3VP-2	184-1	IVA-1	IVA-2 IWA-1

u	,						(300)				T									55										1	
Preconsolidation Pressure (kPa)		1				12	8			•				•	1	· · · ·			•												
Compression I Index	1			0.243			0.197								0.31		-	• • • • • • • •	- - - - - -	0.735											
Strain at Failure (%)	60/40 4.0/17.	· .		56/45 8.5/5.0		• .				-					·								: -								
Unconfined Compressive Strength (kPa)	60/40			56/45																			·								
Limits(%) PI PL	23 18			25 9		28 28	23 13				Ş	23 20	27	26	25 19		20 16	3		29 30	· .			37 48	58		27 14	3 28 25		5 25 21	
Atterberg	41			34		56	36					43	48	45	4		15	}		23		•		85	4 73		41	53		46	
(%) Clay	3			12		<mark>2 20</mark>				020	T	18	51	8	27	ल ।	0 00	3.	c	49	· .	n		+			13	35	31	45	
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Granding Sand	24			21		<mark>8 9</mark>				3	7	27	1	<u> </u>	0	82	5/ 2	* ?	64	0		22	1	2			4	0	0		and a second second
Specific Gravity	2.69			2.72	-	2.68	2.65	2.67	-			2.69	2.71	2.72	2.67	267	1/7	2 2	2.70	2.50	-	2.70	ł	1/7				2.73	2.65	2.73	
Initial Void Ratio e0							0.856			···· / ·····					1.21					1.180							the second results of				
Degree of Saturation(%) Sr	97			94			96								86					001											a series and the second second second
Wet Density (KN/m ²) 7t	19.60/18.50			18.90/18.40	16.80		18.70		18.80	15.60	-				17.40					16.20	17.70	4	17.40			19.60	A THE PARTY AND A PROPERTY				17.10
Moisture Content(%) Wn	29 36/35	8	<u>8</u> 8	35/33	46	6 5 65	30/31	25	33	ន	1	45	34	4	4	25	23	1	1	72/57	34		4	24 65	30	41	36	37	59	39	44
Depth (m)	3.00-3.45 4.05-4.45	6.00-6.45	7.50-7.95 9.00-9.45	14.55-15.00	25.05-25.50	45.00-45.45 50.00-50.55	13.00-13.45	19.50-19.95	28.00-28.45	40.00-40.45	54.00-54.45	10.50-10.95 52.50-52.95	3.00-3.45	9.00-9.45	10.00-10.45	45.00-45.45	60.00-60.45 # 50 - 50	CR./-DC./	34.50-34.95	7.00-7.45	26.50-26.95	43.50-43.95	50.50-50.95	08.50-08.90	54.00-54.45	35.50-35.95	7.50-7.95	51.00-51.45	6.00-6.45	24.00-24.45	26.50-26.95
Sampie No.	2 4 2 4 2 4		ሦ ር ር	~	е С С	1.1.1.1				1.2.		DS-7 DS-35	1			7.3	_	1.1	DS-23	UD-1	0-7 0-73	DS-29	-00-3	-29-29-	DS-36	2-9 20-7	DS-5	DS-34	DS-4	DS-16	-1-00 -
Borcholc No.	iEA-1						2BA-1	-:			1	2BA-2	2VA-1					Z-A-Z		3BA-1				284-7	1		3VA-1-		3VA-2		

idatior ure)	120	150	(20)			•	÷				•		120				(00 L)		:			-250	3		(150)	
Preconsolidation Pressure (kPa)							:				-										-					
Compression Index	0.907	0.283	1.17		-	-	· · ·	0.712					0.225	-			0.447				• • •	0150	. :		0.245	
Strain at Failure (%)		20/15.5	16.5 1					8.5 16					14.00						•	4.4	00.4	00/00	07/016	1	8.11	
Unconfined Compressive Strength (kPa)		54/40	21.5					4	· · ·		• • • •		106	- - -						1	19	56 /20	70 /00		22	
Limits(X) PI PL Co	26 49	25 20 27 5	43 60 36					33 49 43					34 43				35 43				24 12	05 11	3		25 21	
Atterberg Lim	75	45 32	103					82					17				78	-			36	36	2		46	
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S C S	63	31	4 65			، ۱۹۰۰ -	1	°.		•		17 4	30 70			51	<u></u>				751 20		31 33		60 37	<u> </u>
Analysis Silt	37	69 64	34				ſ	40					ເຕັ					-								
Granding Sand	0		-				92	PO				79	0			43	0				S	1	, 99 66		C	68
Spocific Gravity	2.46	2.71 2.71	2.50				Ţ	2.62				2.71	2.70			269	2.61				2.73	ř	2.70	-	271	•
Initial Void Ratio e0	2.24	0.964	2.92					1.80					101				1.37				0.898	1000	1020		1.04	
Degree of Saturation(%) Sr	56	100	99 99					66					86				66				96		0		100	
Wet Density (KN/m ³) : 7 t	14.20	17.40/18.70	16.20/13.50		17.60	17.80	17.40	16.30/15.70		17 60	18.50		16.92/18.30				16.70				19.30/18.90		00.81 /08./ 1		17.40/18.40	
Moisture Content(X) Wn	67/87 101 97 68	34/36		32	34 30	33	38	70/68	28	2 e	29	23	36/37	51	ន	3 1	51/52	83	5	E	26/32	57	34/30	87	42/39	अ
Depth (m)	255-3.00 4.50-4.95 6.00-6.45 10.50-10.95	4.05-4.50	2.55-3.00	3.00-3.45 6.00-6.45	8.00-8.45 9.00-93.45	14.55-15.00	19:00-19.45	43.50-43.95	4.50-4.95	1,50-7,95	25.05-25.50	45.00-45.45	2.55-3.00	4.50-4.95	6.00-6.45	7.50-7.90	2.55-3.00	4.50-4.95	6.00-6.45	9.00-9.45	2.55-3.00	7.50-7.95	20-22-00 20-22-95	3.00-3.45	4.05-4.50	7.50-7.95
Sample No.				7 7 7 7 0 0	0-7-0-7 0-6-7	no-3	5 7 7	1-01	ې د د			8	5	r L	4	2 2 2		-0-3	4	9 0	5	ۍ م	2-12 D-12	2-2-0		ې د د
Borehole No.	1	158-2	1EB-2'					IFB-2					1EB-3				1E8-4				2-8-2 5-8-2			IEB-6		
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	Summary of Laboratory Soil Tests on Sample Obtained from Borehol
	Sumn

Preconsolidation	Pressure	(kPa)		(240)			•						•													-							÷ ÷	
Compression	Index			0.267																											• .			
Strain	at	Failure (%)		11.00											•							-			- - - -									
Unconfined	Compressive	Strength (kPa)		115								· · · · · · · · · · · · · · · · · · ·						1										•			•			
Limits(%) Pt				25 15									•										55 25	22 -	7			161 99			32	5	55	
(%) F.N Attorberg Limits(%) Pt Unc	F			4																			99	87 8	20			260			56	35	42	46
N E N	·	· · · · ·		28					~		+		2 2 2 3	; ; ;	-		0.33	0.06		4			24		0 (<u>N 0</u>	ෆ		- :	- - , -	54	• 61	28	37
				2		-			24	╀	╉		ۍ -				20	30		01		1. T	5		4	121	2 2 1	ہ بر محمد محمد محمد محمد م	· · · -			22	1997	19
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Granding						• • • • • • •															• • •	· ·												
Specific	Gravity			2.71					2.70				1	02.0	2		-	I		2.70			2.74	2.74	ti	272	2.71	· · ·			2.75	273	2.74	2.73
of Initial Void Specific Gr		ç		0.946								4																						
Derree	Ś	Ś		100	· · · · · ·																													
Wet Density	(KN/m ³)	¥		19.00/18.90			17.90	18.30		0.71	08./1	14.50	17.50		17.70	18.50			16,30		17.20								17.30	17.70				
Moisture	Content(%)	W	44	42/35	30	33	36	35	1	07	43	75	<mark>සි</mark> 		3 6	19	1	-	53	23	40	47	32	56	7	21	ន	236	37	8	4	32	33	40
Depth (m)			3.00-3.45	4.05-4.50	6.00-6.45	12.00-12.45	12.55-13.00	25.05-25.50	28.50-28.95	58.25-39.00	2.55-3.00	2.55-3.00	5.55-6.00	24 00 00 00	2.55-3.00	2.55-3.00	19,50-19,95	21.00-21.45	4.05-4.50	10.50-10.95	17.55-18.00	19.50-19.95	22.50-22.95	34.50-34.95	c+ 1c-00.1c	66.00-66.45 87.50-87.45	4.50-4.95	7.50-7.95	10.55-11.00	19.55-20.00	18:00-18:45	34.50-34.95	42.00-42.45	49.50-49.95
Sample	No.		D-2	-97	0-4 	8	2-07		0-19 19	4	5	5	00-2 08-15			1-05	DS-13	DS-14	1-00	0-1	<u>1-0</u> 2	D-13	0-10	នុ ដ ភូ ភ្ន	オットコ	D-44 D-58	0-3	s L	1-0 <u>0</u>	2-0N	D-12	D-23	D-28 .	D-33
Borchole			E8-7 [2EB-2			, ,	2EB-4	* 4. 1	3EB-1		IMP-3							IMP-6							

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	fation re		
	Preconsolidation Pressure (kPa)	· .	
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	Compression Index		
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	fined essive ngth : va)		
8 8 8	Unconfined Compressive Strength (kPa)		
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$\hat{\mathbf{a}}$	Limits(%) PL	29 24 23	
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	Atterberg	4 0 0	
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S	s (%) Clay	60 57 57 57 57 57	
	Analysis Silt		
	d fi	307.7.3 83 301.7.3 83	
a de la construcción de la constru La construcción de la construcción d	Granding Sand		
	Specific Gravity	2.71 2.72 2.74 2.74 2.75	
	ູດີ ບັ ເຊ		
Summary of Laboratory Soil Tests on Sample Obtained from Boreholes	Initial Void Ratio e0		
· 동네는 사람들은 가슴을 다 가지 않는다. 	2 2		
${oldsymbol{\mathcal{S}}}$	Degree of Saturation(%) Sr		
φ	Satur		
Table-5	Wet Density (KN/m ³) 71	16.80	
	Wet Den (KN/ 7 t		
		2 4 4 7 5 8 5 8 4 5 5 8 5 8 5 8 5 8 5 8 5 8 5 8	
	Moisture Content(%) Wn		
		000000000000000000000000000000000000000	
	Depth (m)	7.50-7.95 14.55-15.00 19.05-19.50 19.50-19.95 39.00-39.45 48.00-48.45	
	Sample No.	0-5 0-13 0-28 0-13 0-32 0-32 0-32 0-32	
	<u>•</u>		
	Boreho No.	L 2 2	
		A - 4 - 5	

Table-6 Summary of Chemical and Loss of Ignition Tests on Soil with Organic Matter

										:					٢	*	<u> </u>	 :
uo												•	• .			CBR*	(%)	3.8
s of Isniti	(%)	6.23	8.28	8.66		, (1 01	10.82	0.075					1.1		Clolide	(%)	1
so I			•								- 1 -			• • •		ኪ የ		•
oluble	s SO, (%)			0.058)			0.079	0.063		1 ⁻¹ 3-1	-				Compaction Test (4.5kg)	Pdmax (KN/m ³)	18.20
Water soluble	sulphate as SO ₃ (%)		1	00	> >	1 . * . * . *	•	0.0	00		- - -					Compao (4.1	Wopt (%)	15
hate ac								6	• •••					Sardina		on Test [g)	Pdmax (KN/m ³)	16.90
Tatal Sulmhate ac	I ULAI SULPHA	0.18	0.16			l	0.17	0.126	0.101				D. 11. C. : C.	Summary of Material Lesis on Durk 301 Samples		Compaction Test (2.5kg)	Wopt (%)	19
	(%)					2	7						5	Ial Lests 0		its (%)	Id	18
	Cloride (%)	0.07	0.09	; 1		0.07	0.07	1	1					ol Mater		Atterberg limits (%)	PL	26
-						· · · ·		: + 		-				mmary		Att	H	4
	pH	8	, r) }	6.8	1 1	5.7	58	. 4	<u>c</u>				•				1
	¢,) 4				~,	7						Table-7		(%) sis	Clay	
	p (m)					10	10		· · ·			N				g Analy	Silt	
	Sampling Depth (m)	2 to 2 45	24 C 14 C	0100	2.55 to 3.0	4.5 to 4.95	1.5 to 1.95	5 1 to 6 D		7.0 to 7.45						Grading Analysis (%)	Sand	
	Samp																No.	
	s No.		• • •		7		>	, (7	г							ocation	
	Borehole No.			TAL	TEB1		TER?'		1472	3BA1						and the second	Sampling Location	

0.048 0.014 ļ ı ı, 8.2 6.7 ī 1 1 18.20 18.40 16.10 18.10 18.20 17.80 រុះ H ង្អ 16 ្ពុរ 16.90 16.90 16.50 15.30 16.30 16.70 83 6I S 5 19 19 18 16 14 4 2 2 ដ ដ 828 38 38 \$ क ß 1 2.72 2.72 2.72 2.71 2.71 • 32 33 18 38 ŧ 2 8 8 88 t 8 0 0 3 0 . **ч су су** ÷ 0 b) 148m from Bh/BA/ River bed Near BH1/BA2 Near BH/EBA River bank Paddy

9.6 1.9 2.1 19

: :

> * CBR at 95% Pdmax determined by 4.5kg rummer method LL : Liquid limit, PL : Plastic limit, PI : Plasticity Index Wopt : Optimum water content, Pdmax : Maximam dry density

A - 4 - 6

ļ	Projec lole h later	lumbe		-1£81 (PA -275	<u>(25 of 1)</u>		ject the St s the River Rig	isa in Kruhu	DRILLIN WACKION of Bridge Type O Date A 01056) m. Driller	[G (Drill) 15/1/5		<u>L(</u> 14353 835		т 	. [<u>Remarks</u> O : Ostubed Sol Sangle VO : Undisturbed Sol Sangle Laten by Sheby Iube
		E	3	B B	<i>.</i>	Soil				Sam	pling				r	rd Penetration Test
	Scale in m	Elevation i	Depth in n	Thickness	Legend	Type of So	Colour	Relative Densit or Consistency	General Remarks	Depth in m	Sample No.	N-Value Blovs/30cm	Bio Each Each	15 5	t cm	N – Value 10 20 30 40 50
					vv∦×	Sity Ocy			Plastic With Cecanyosed arganic motter throughout traces of roots of 0-1.							
Ž	2	-			××××××××××××××××××××××××××××××××××××××		Brewa	Soft		1.55 1.95 2.55 1.00	0-18 V0-18		1	<u>-</u>	2	
7	4			-						100 115 145 4,65 4,95	0-215 0-15	2	1	0	2	
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Hole Number 34-1682 (PAGE 1 of 2)	over the River Rupsa in Khut-	Date	2/10/99 - 4/10,	/39	lide	teres of averal
Water Table Q040 III		T T	Sampling	Standa	rd Penetration '	Test
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10 7.31 14.00 600 200 14 11	Dojej Sil Grej Verj Solt	With seams of fire sand. Trace of arguric motion and mice	10.65 10.55	2011		
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	Sondy Sat Grey Soft Ta Vectors	Slightly plastic. Sand is fine grained. Kace of argonic maller and mice.	1155 D-JE 1155 D-JE		• • • • • • • • • • • • • • • • • • •	
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	<u>et No</u> Numt		(-1)1A1 (F	ACE 2 of 2	Pro	IC Dject Res er the River Ru	itudy on Con Ipsa in Khuln	struction of Bridge Type o		ling 59 - 29/	Rotory 1/99					<u>Remarks</u> Distuded Sol So			
Water	r Tabl	e Q	-0.0	r	n. Ele	vation P	0+2 266 (5)	A 5+764) m. Driller											
	ë j		B E		a		Density stency	Remarks	Sam	pling			Sta	nda	rd	Penetrat	ion Te	est	
Scale in m	Elevation i	Depth in m	Thickness	Legend	Type of Soil	Colour	ative Consi	General R	DepC E	Sample No.	N- Value Blows/30cm	Ble Eac	ovs P h 15	сп		N 10 20	Val 30	ue 40	50
Š	ដ័	2	Ę.	<u> </u>	<u>۾</u>	8	P. Rel	<u> </u>			N of	Ĩ	N.	15cm					
				×××*	Sand	Light Grey	Very Dense	Sand is line grained. Little sill and knoce of mica	30.15 30.45	D-20	50	15	n	28		50 BLO (5/X	km .		1
<u>31</u>			•					ëroughout.	31.65 31.95	0-211	52	13	23	29		52 810-5/X		~	-
32									31.95	0-218									₹ 1
33					÷.		Dense		3315 3145	0-22	17	14	20	v	• 	╞╼┨╸		 ¶	L
34											·								∜
<u>35 </u>									34,65 34,95	0-23	62	24	28	34		<u>62_BL045/30</u>	<u>m</u>		ا
36									36.15 36.45	0-24	<u>65</u>	24	29	36		65 6LC 15/30			
37												1		•	 		- +		
38									37.65 37.95	0-2515	67	19	28	39		67 8.0/5/30	<u>em</u>	╞	
39				*****					39.15 39.45	0-2615	65	24	28	38		66 8L0 (5/30			
40																╺┠╸╤╺┨╍╴			
41									40.65 40.95	0-278	n	24	32	40		11 51.0 5/30			×
42									4215 42.45	0-28 🔊	62	18	28	34		52 8L0 (5/30	 cm		
43		in di Salah			4				42.45						: • •				
44			-	· · · · · · ·	an a ta An An Tagata				43.65 43.95	0-29 8	65	20	23	36		65 BLOIS/30	<u>.</u>	╞╌═╴	
45				×***					15.15	-0-30F	83/23	30	45	35/8		33 810 K5/23			<u> </u>
46	-1373	45.00	21.00	· · · · · ·	Sond	Light Greg	Yery Dense	a baran da karan da k	45.38					-7-			~]-,-
47				**		Clur or l		Sand is line grained. Trace of mice throughout. With seams of sill and trace of day at 0-31, 33 and 34.	45 65 45 95	0-318	70	23	32	38		70 8.C. 15/30		╞═	
48								Doly of D-31, 33 Coa 34.	13.15										
49				× vvv				With a thin layer of clayey sill with Atta organic matter of	48,45	D-3215	<u>- 63</u>		25	"	: . 	69 81015/30			1
<u>50</u>		,		v				0-32	49.65 19.95	0-331	13	23	26	0		13 RLO 5/30	<u></u>		
51				v ^v ××				frace of organic matter before	\$1.15		Т. К								
52	-49.73	52.00	603	×*				19n.	51,15 51,45	0-348	99	37	12	<u>>/</u>		99 GLONS/300	m]		
53				*****	Sandi	Light Grey	rery Dense	Sand is line grained. Little sill and trace of mice throughout.	52.65 52.95	0-33	<u>96</u>	30	38	58	·	95 810 5/30c	<u></u>		
54															·				
55									54,15 54,45	03615	<u>n</u>	34	"	12		19 BLC (5/3%	m]		
56				· · · × × ·					55 65 55.95	0-315	82	35	40	12	•••	82 BLOIS/30c	m _		
57		1994) 1997 2017							93.89								 		
58									57.15 57.45	0-3815	81	31	40	"		81 81.CWS/302	n		
59				××					54.65 58.95	0.365	74	79	34		÷	11 0 1 1	+	╬╾┯╶┤ ┊	
				× *					58.95	0-39		<u>.0</u>	<u>~</u>	<u>"" </u>	<u>ئے ہے</u> ج	71 BLOVS/XX	"# =		
60	-58.18	⁺ 60.45	\$.15						VV. 73	0-1015	80	30	38	12	مد مد د د	50 BLO 5/300	n	<u> </u>	
61		<u> </u>			<u>- [NÙ d</u> e	oraling- I					 ;						<u>ј</u>	l 'age.	<u> </u>
<u> </u>								u u ni systemicki siki sulat. T	1999 (1999) 								<u> </u>	uge.	

He	ole I	L No. Numbe Table		-11231 (P) -2.75	102 tol 2) F		er the Roes Rug	ise in Khuhu	DRILLIN Inction of Bridge Type of Date A 51992) ro. Driller		ing 9 - 12/8,	L(Rotary /39)(<u>emai</u> lubid S	<u>'Ks</u> 27 Somp ²	c		
	Е	E	E	5 <u>1</u>		Soil		ative Density Consistency	General Remarks	Samj		E	 	Sta m F	· .	rd P		ratio	* . . *	· · ·	
	Scale in	Elevation	Depth in	Thickness	legend	Type of	Colour	Relative or Consi	General	Depth in m	Sample Na.	N-Value Blows/30cr		115 5		1	0	20 :	30 4	io (50
-	1			·	×,×,	Ocycy Sal	Light Brown To Light Grey	Yery Soft	Plastic. With decomposed organic matter throughout. Trace of mica.												, ,
2	2		ч 1		× × × × × ×	2007 2007 2007				1.65 1.95	Q-18	1	0	0	1	P	 				
	3			· _	*/ * * * * *					3.15 3.45	0-2		0	0		ENF PE	FIRATO	N BY HA	evi R		
	4		 	;																- 	
	5	-1.17	5.50	5.50	× × × ×		Light Grey			4.65 4.55	<u>0-))</u>	0	0	Ó	0	RU PI	ERANC	N BY HA	WER		
	8				V.XX	Sity Sord	tigti Grey	Yery Loose	Sond is fine groined. Froce of mice throughout, froce of organic mother at D-4 nd D-S.	6.15 6.45	0-15	<u>े</u> •	1	2	2.	- } -			; 		
	7	2			××				Kin seams of clayer sit of 0-5 and 0-7.	7.65			5	3	· · · · · · · · · · · · · · · · · · ·			}			
	8	100 210			v ^v .×					7.65 7.95	0-51										
	<u>9</u> 10									9.15 9.15	0-615	5	0	3	5				'		• •
	11									10 55 10 95	0-76	:. 1	1	3	4						
	12				:•••(x :•••(x			Loose									(; 	: 			
	13									1215 1245	0-815	9	3	4	5		;		· · · ·		
	14				· · · × · · · ×			Vedum		13.65 13.95	6-98	12	3	5	<u>,</u>		 - -	 			• ,
	<u>15</u>	-12.47	11.50	3.00	· · · × ×	Sord	Light Gray	Yedun	Sond is line gromed. With Althe sill. Trace of mica.	1515 1545	0-1015	21	7	10	ព		<u> </u>	. 			
	16									an Area								{ {			
	17						1000 (A.) 1000 (A.)		i se se la presenta de la composición d La composición de la c	16.55 16.95	0-118	24	8	12	12			•	- 12 		
	<u>18</u>				, x x x x			i a tu		14.15 14.45	0-12	28	8	10	18	- <u></u> -	-				
Ì	<u>19</u>	-		-						11.65					а А		-	<u>`</u>	[_`-		
	20	-14.17	20 50	6.00		Sitly Soud	Light Grey	Dense Vedum	Sond is fine grained. Trace of	19.65 19.95	Q-1315	32	9	14	18		 				
	<u>21</u> 22	- 19.57	22.00	1.50	l- k	31(7) 30%	optot		nice.	21.15 21.45	0-14 B	28	1	10	18	<u>ب</u> ية مع معة ا الم			 		
	23	10.37	22.00		××××	Sand	Light Geg	Cense	Sond is line groined. With little silt and trace of mice throughout of the layer.	22.65 22.95	0-138	46	12	18	28		 				
	24	т. - на								1997 - E						, 		[] _	
	25									24,15 24,45 7	0-16.8	46	13 	18	28		<u> </u>				
	26				×× ×*					25.65 25.95	D-1718	65	18	28	38		56 BLO	S/30cm			
	27			1 1 1						2215							 			 	
	<u>28</u>									27.15 27.45	0 <u>-18</u> 18	68	20	28	38		66 8101	S/30cm		 	
	59									28 65 28 95	<u>8 et-0</u>	н	20	24	50	;	H BLO	s/socn			1
	<u>30</u>		an a					Yery Dense		3015 3045	0-201	84	- 	26	- 		84 51 11	S/30cm			
L	31		<u>, i</u> ,	L	<u> </u>					<i>.</i>								<u> </u>	L	L	Ľ

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	t No. Yumbe		-1761 /21	ICE 2 01 2)	Pro	G ject he si u he find fig	udy on Cons 1950 in Khulm	DRILLIN struction of Bidge Type O Date	f Drill	ing 19 - 12/13	Rotary Ass	· · · ·			<u>Remarks</u> 0: Okluited Soil Sample	. *
	Table		-2.25			vation F	0+2.033 (5)	(A 5+302) m. Driller								
	£		E				5	1	Sam	pling			Sta	nda	rd Penetration Test	<u></u>
Scale in m	Elevation in	Depth in m	Thickness in	Legend	Type of Soil	Colour	ative Cons	General Remarks	Depth in m	Sample No.	N-Value Blows/30cm	810 Eaci	113 113 E	cm	N Value 10 20 30 40	50
Sc	ឆ័	ដ័	4		2 2 50:14	č Light Gry			30.15 30.45	0-2015			4051 26	۲ ا5cm	84 BL045/Xcm	
<u>31</u>		t.		**************************************				Sond is five grained With fillse sitt and trace of mice throughout of the layer. Trace of argonic motter of	. :				15	u		
32		:		vv.v				D-21 and D-22. With accessional seams of diayey sill between 34 and 37m.	-	0-2118					63 BLOrS/JOcn	≥d
34				ý V .					1115 1145	0-275	<u>62</u>	15	24	8	42 81045/30cm	×
35									5465 3495	Q-231	42	16	13	23		
3 <u>6</u> 37						an an An An An An	Dense		36.15 56.45	0-21	42	16	19	23		
ः 38		-		X					37.65 37.95	0-251	55	13	23	32	55_BL0/5/30cm	
<u>39</u>									39,15 39,45	0-2615	53	u	21	35	53 81.045/XXxm	- >
<u>40</u> 41									42.65 40.95	0-275	65	15	28	у	66 BL045/J3cn	
42				× × ×					42.15 42.45	<u>0-28 B</u>	65	18	25	40	65 8L0/5/J0xm	
<u>43</u> 44									4365 4195	0-79]	<u>67</u>	13	2(33	62 80.045/JCcm	
45 15									4515 4545	0-3015	n	20	32	42	74 81.045/30cm	
46 47				, x x x x x	· · · ·		- 12 - 14 - 14 - 14 - 14 - 14 - 14 - 14 - 14		45.65 45.55	0-315	56_	16	22	ы	55 BLOYS/Jacon	
48	-45.42	48.45	26.45				Yery Dense		4515	<u>10-75</u> 8			25			
<u>49</u>			20.13		-640 0	F CRUMS-			48.45		 					
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61		L	L												Page	ـــــــ ۶۰

	Proje	el No.				<u>.</u>	Pro	IG Dject De S	itudy on Con	skuction of Bridge Type	VG of Drill	ing	L(Rolary) (<u><u>u</u></u>		<u>Re</u> 0 : 0 sh 10 : 1h		eil Somp			
Ì	lole	Numb	er BH	(-14P1 (P	ADE I O	<u>(2)</u>		er the River R.	çsa in Khuin	Date	6/1/3	9 - 7/8/	3				00:04	CISTURDO	a 204 2	ompie ic	rea of 2	neog au
j	Mater	Table	<u> </u>	-0.10		n	n. <u>Ele</u>	vation A	0+2156 (51	(<u>A 6+078) m. Driller</u>			· · · · ·									
		С Б	, i	8			1		Density stency	Remarks	Sam	pling			Sta	nda	rd Pe	neti	ratio	n Te	st	· · ·
	le in m	Elevation in	th B	Thickness		regena	e of Soil	Colour	Relative Densit; or Consistency	General Re	Depth In H	Sample No.	K-Value Blove/30cm	B! Eec	0»5 1 h 15		10			Valu 30	le 40	50
	Scale	Elev	Depth	Ţ		Š	Type	Cole	Reje	8 S	рая 	~~~	*	5	ž	ş	· · .	· •.	· .			
â	1	:			×××	<u>,</u>	571 ·	Bicardish Grey	Soft	Ordzed zone. Sightly plostic. Sightly day and sand									-		T .	
	2				× × × ×	× × × × ×					1.65 1.55	0-1	3	<u> </u> ,	2	1	•		· · · ·	[
	3	-031	250 1	2.50	×× ×××	X	Sondy Sil	Light Grey	Yery Loose	Non piestie	115 1.6			2	2	.	┟┧╌┟		;	 	. 	
-	4	-1 84	<u> </u>	1.50	× × × × × ×		Sandy Sit	Light Grey	Yery Soft	Sightly plastic.		0-31		<u> -</u>			<i>[</i>	• 4•				
	5			:	××× ×××						4.65 4.95	0-31	0	0	0	0.	KŪ KA	RATO	I BY HA	INER		
	6 5 7				× × × × × ×						6.15 6.05	0-18	1	0	1	0		• - -	1			 - -
	8				× × × × × ×						1.00 1.45 7.65 7.55	10-1 0-51	2	NO R	:00/C 1	21 1		• ::: •				
-	9				× × × × × ×						9.15		2		1	1			::: 	· · ·		
	10	-7.81	10.00	1.00	× × × × × ×		Sordy SH	Light Grey	Vestra	Non plostic	9.65	<u>0-8</u>	- -			<u> </u>		: 		· 		
	<u> </u>				× × × × × ×						10.65 10.95	0-78	10	3	8	6		3 				
	<u>12</u> 13				× × × × × ×						1215 1245	<u>0-1 R</u>	11	3	4	1		*:				 : :
	14				*** ***						13 65 13 95	0-98	Ħ	.5	5	5						[
	<u>15</u>				× × × ×						15.15 15.45	0-10	2 12	- 	6	6					- <u>-</u> -	
	<u>16</u>	-13.84	16 00	<u>6.00</u>	× × × ×	×	Silly Sond	Light Grey	Westura	Sord is fire groked. Very silly and non pissic. Frace of mice Broughaut			i e, e i					$\left\{ \cdot \right\}$				
	<u>17</u> 18				· · · · · · · · · · · · · · · · · · ·	×				nice Braghait	16 65 16 95	0-118	16	5	7	9						
	19					×					18,15 18,15	0-121	17	5	1	10			 \			
	20			1		× × v					19.65 19.95	<u>a-138</u>	28	.11	12	15	•	+			: 	
	21					×					71 15 21 45	0-1415	24	12	12	17						
	53 55					×							ः 	12	10	25						
	<u>23</u> 24	d.	anta Car			××			Dense		22.65 22.95	0-15	•1 - : - : - :	••	.7	<u>.</u> .				/	, -	
	25					×			Wedium		24.15 24.15	0-161	29	,	11	18				, \		
	26					×					25.65 25.95	0-178	34	,	15	19						; -
	27					×					27.15	0-18	11	18	n	20					- 2 	
	<u>28</u> 29				 	××						0.10	12	17	20	22					<u> </u>	
	29 30	-17.34	29.50	13.50		×	Sity Sond	Light Grey	Dense Very Dense	Sond is fine grained. Very		0-19		<u></u>		•				<u>- 12</u> - 34 - 4		
	31				 	×				Sond is line grained. Very sity end non plastic. Grace of mice throughout.	30.15 30.45	0-2015	71	20	33	и	: n	8.0%	/30cm			

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Pr	roiec	t No.		•			IG Diect The SI	ludy on Cons	LIN Invetion of Bridge Type O	IG (Drill		L.(<u></u>	ł		<u>marks</u> atel Sol Son	pie		
		Numbe	er 6/	(-11P) (P)	LOE 2 of 2	0	er the River Rus	osa in Khulos			1 - 1/8/5	9								
Wa	ater	Table	<u>a</u>	-0.40		m. Ele	valion P*	0+2.156 (ST	A 6+078) m. Driller	·						L				
ſ		E		ä B		3		Density stency	Remarks	Sam	pling			Sta	nda	rd Pe	netratio	on Te	st	
	le in m	Elevation in	ដ ដ	Thickness	Legend	e of Soil	our	Relative Density or Consistency	General Ro	Depth in m	Sample No.	N-Value Blows/30cm	Bie Eac	033 F h 15	¢m	ų	N - 20	Valu 30	e 40	50
	Scale	ឆំ	Depth	Ť	3	Type	Colour	or Rel	G E			Blox	5	ž	<u>ک</u>					
┝			· · · ·		f×	Sity Sond	light Grey	Yes y Dease	Sond is fine grained. Yery sity and non plastic. Trace of mice throughout.	30.15 30.15	0-2015	n	20	33	38		71 8.0%5/3000	- T	<u> </u>	
	<u>31</u>				÷ ×				mice throughout.		17						·			-{
	32									31.65 31.95	D-21)	n	25	33	40		13 BLC /5/3000	° <u>↓</u> =		
	<u>30</u>				l:::[x					3315 3345	0-72 6	55	15	20	35		55 BLC (S/30cm	<u> </u>		
	34				,× ,×					33.45								"]_;_
	35	•			:: :-::(×					34.65 34.95	0-21	51	16	21	30		51 8.045/30ca	,		
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1	37		7	· . . :	×					36.15 36.45	0-24	62	20	22	43		52 810 5/300	<u> </u>		
	38				×					37.65 37.55	0-25	52	18	21	31		52 BLONS/30cm			
	39				[×					1 2 2	1. 1.				•					
					l					39,15 39,45	0-26 🕅	59	25	23	30		59 BLOIS/30cm	·[- [1
	<u>40</u>				÷÷; (x́x					40.65 40.95		់ ទា	21	23	38			1		1
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	42				· · · · ×					42.15 42.45	0-28	76	22	u	43		15 BLOYS/JOCA	+		
	43				: 		2013) 2014 - 1011											+		
	44			i. Te	××					43.65 43.95	0-2915	67	23	29	38		57 8LO 5/30cm	₽ <u></u> =		
	45				· · · × · · · ×					45.15 45.45	0-30	65	25	30	35		55 BLOX5/50cm	+	<u> </u>	
	46				× ×													- -		
	47	-1534	17.50	18.00	x x					45.65 45.95	0-31	83	24	30	33		19 81.015/30cm			
	48	-13.4	17.30	15.00	× × · ·	Sandy Sill	tight Grey	Yery Dense	Nan plastic. Sand is line grained. Trace of mica.	積15	A 145	50	11	2	S.		a marc (10			
	49				××× ×××					柱15 4345	0-32	~	<u> </u>	~			ю BLC/S/30ст	°↓		
	50	- 17.79	43 95	245	× × × ×					49 65 49 55	0-JJR	52	12	21	31	5	2 81.045/30cm	ļ		
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£	rojec	t No.				Pro	ject hest		truction of Bridge Type O	(Drill	Ing	Rolary			· · ·			t Somple ∶			15	
ł	lole 1	Numbe	er Bi	-1541 (P)	0 <u>(</u> 183		er like River Rug	isa in Khukha	Dale	23/1/1	n - 21/1	/11				n de la composition de la composition de la composition de la composition de la comp		-	• •		e P	
Ŷ	Yaler	Table	<u>a</u>	-160		<u>m. Ele</u>	vation P#	0+3.975 (51	A 6+281} m. Driller													i 1
		E S	G	u u		q		Density istency	Remarks	Sam	pling			Star	nda	rd P			ı Tes	·		
	н Н		ii B		υ	of Soil	5.	ative Densit Consistency		मु ह		alue '30cm	£	ins ₽ h 15		1		- ' 20 3	Valu 10 4	e 0 5	0	
	Scale	Elevation	Depth	Thickness	Legend	Type	Colour	Relative or Consi	Ceneral	ri e Pickov Pick	Sample No.	N- Value Biovs/30cr	ភ្ល	15cm	15Gm					-1.		:
ł							2 C	Westurn	Ouldzed zone. With fine sond.						-		; 		· · · · · ·			
	1			. *		a Cory Sn	Light Brown	*courn	Trace of roots and shall.		· .						; 			اه سه دم	بو 	
Å	2				lv×⊧	4				1.65 L95	0-16	5	0	1	•							
	3	<u>ta</u>	259	250	×× ××	Coper Sit	Light Brown	Vestim	Oxidized zone. Plastic, Troce												-	
	4	-9.02	4.00	1.50	×××		to Ger		of stol	115 145	0-21	5	<u> </u>	1	4	1					-	
					XX	Ocycy SI	Ger	Very Soft	Nedium plastic to plastic. Trace of fine sand.	4.65 4.95	D-38	0	0	0	0.	LAT PE	ETRATIO	1 81 14	INER		2. 4	
	5				×××E					1.73												
	6				× × × ×					5.15 5.45	0-18	0	0	0	0	លក	FRADO	Y BY HA	INER	[
	?									7.65 7.95	0-55	0	0	。	0 0	n in e	C TP L TC	1 81 KA				
	8	-152	8.50	150	××E					1.1	35-0-38		Ť							→ → _^		
	3					x Stig Sond X	Grey	Loosé	Sand is fine grained. Irace of mice throughout of the layer. With seams of clayey sit at 0-7 and 0-10. Very sity at 0-5	915 945	0-61	8	•	3	3					}		
	10					×			-0-1 203 0-107 151 251 01 0+:												⁻	
	<u> </u>				[×				10.65 10.95	0-71	<u>"</u>	5	5	6							
	15					x				1215 1245	0-86	10	1	5	5		╞╶┊╴	<u>-</u> .				
	<u>13</u>					x											A					
	14				:	×				13 65 13 95	0-91	14	3	6	8		-•					
	<u>15</u>				:	×	Light Grey	Nectors		15,15 15,45	0-10	17		5	12	 	<u> -</u> -}-					
:	<u>16</u>	-12.02	16.00	7.50		x x Sily Sord	Light Grey	Vedua	Sand is fine argined. Non	100		Ś					╞╺╶┨╸					
-	<u>17</u>				 	×			Sond is fine grained. Non plastic, frace of mice throughout	18.45 18.95	0-116	16	1	/	9					. 		
•	18					×				16.15	3.9 13			8	13	 	: <u>)</u>	Į				
	19		÷.,			×				18.15 18.45	0-12	21	- <u>6</u> -					,		 		
	20					x x				19 55 19 95	0-131	20	5	6	14							
	21	-15.52	2050	(50	<u> </u> [× × Sity Sond	tight Grey	Vectors	interbedded silk sandy clayey sill. Silly sand is predominant.						-							
	55	-18 02	22.00	150	::: 	×			Sec any song is presention.	21,15 21,45	0-14	<u>n</u>	10	10	11					2	 	
	23				× × -× ×	- Sordy Sil	Light Gry	Yery Stilf	Sond is line grained. Iroce of mica.	22.65 22.95	0-15		8	9	1						-	
	24	-19.52	23.50	1.50	××.	y Sily Sond	tight Grey	Dense	Sand is fine grained. Frace of	(***)				[[[
	25					×			Sand is fine grained. Frace of mice throughout, frace of organic matter back 27m.	24.15 24.05	0-15	40	3	16	21	- -	 		<u> </u>			
. :	- 14 A					× ×				75.65								 	†,			
	26					× ¥				75.65 25.95	0-1/3	0+ B	8	11	26	}			t-7			
	27				vv}	×				27.15 27.15	0-131	36	9	7 14	22				<u>†</u> -₹			
	28				::: 	×									۰ _۱ .				$\left\{\frac{1}{2}\right\}$	<u>k-</u> -		
	29		29 50	6.00		×				28.65 28.95	0-191	15	12	20	15				 	┝┑		
	<u>30</u>	-25.52	1030	0.00		X X Sity Send	Light Grey	Yery Dense	Sond is line grained. frace of mica.	30.15				2	34	 	51.00			<u> </u>		
	31					×				30.15 30,45	0-201			ť	Ľ		at 900	5/30cm]
	· · · · ·					usta Maa Uta ta ta s						1919	83) - 23 -						P	age	•••••	<u> </u>
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Hole	ct No. Numb Table	er B		105 2 61 3	Pro	G ject Ness w He Rive Ra valion PM	psa in Khulod	Date		ing 21 - 27/1	L(Rotary 1/59)(<u>Rema</u> 0 = Ostabed S				.:
nater	E	<u>- u</u>	E						Sam	pling			 Star	ıdar	d Penel	ratio	n Tes	st	
Scale in m	Elevation in r	Depta in m	Thickness in	Legend	Type of Soil	Colour	Relative Density or Consistency	General Remarks	Depth in m	Semple No.	N-Velue Blows/30cm	Eact	ns Po 15	<u>ern</u>		20 20	Valu 30		50
Х	ដ	å	යි 	<u></u>							8	iSon	15cm	<u>ş</u>		, . 			
31			2013. 14	×	Sity Send	tight Grey	Very Cense	Sand is fire grained. Frace of mice.	30,15 30,45	0-201	61	21	27	34	61 B.(145/30cm			
32				:		÷			31.65 31.95	6-218	53	રુ	22	<u>»</u>	59 BL)/5 /30 cm			
33	-28.52	32 50	1.00	·····	Sond	Light Grey	Very Cense	Valerial is some as above layer but less sit fraction.	33.15 33.65	0-22	ព	22	8	36	63 81.0	#5/30cm			
34 35							. 1		34.65 34.95	0-231	11	17	ы	10	74 80) 15/30cm			
36	- 31 52	35 50	100	J.	Silly Sand	Light Grey	Dense	Sand is fire grained. Frace of mice throughout of the layer. With a section of pisstic dayey sit section at 0-24.	36.15 36.45	0-24 \$	41	18	19	22				/	
<u>37</u> 38				····× ····× ····×	 			cleyey sit section at 0-24. Less sit content at bottom.	37.65 37.95	0-25	40	13	18	22					
<u>39</u>				× * *					39.15 39.15	0-25		13	23	 0,	53 80				
40				· · · · × ×					39.15 40.15 40.95	0-27		16		23) S/30cm			
<u>41</u> 42											-								
<u>43</u>	- 39 02	\$1.00	1.50	× × ×	Sandy Sill	Gey	Very Dense Very Cease	Sand is line grained. Irace of	4215 4245	0-28	53	10	21	<u>"</u>)iiS/30cm			
44				* * * * *				mice throughout. Inoce of mice.	4365 4355	0-235	54	11	21	<u>33</u>	54_84)/S <mark>/30</mark> cm	=		
45 46	- 12 02	45.00	3.00	X _X -X X X X X X X		1.1) 6	Had	Vaa aleeria 138a eleman	4515 4545	0-30 <u>1</u> 5	52	12	n	<u>»</u> [52 8.0)(S/30cm		7	
47				X X X X	Sondy Sill	Light Grey	narg	Non pissic. Little day at top. Sand is fire grained trace of suice throughout. Trace of day at bollom.	45 65 46.95	<u>0-Ji</u>	38	9	15	23	***		- 1		
<u>48</u> 49				× × · · · × · · · · · · · · · · · · · ·					48.15 68.45	D-3215	37	8	17	23					
50	- 45 52	50 50	4.50	× × × × ×			Yey Sulf		49.65 49.95	0-JJ	22	, ,	<u>;</u>	15				- <u>-</u> -	
<u>51</u> 52				XXX	Sondy Sill	Light Gray	Cense	Sond is fine grained. Frace of clay and mice. Grace of roots at D-36.	51.15 51.45	0-34 [5	44	,	18	26				•	- 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2
53				×××					52.65 52.95	0-1515	42	<u> </u>	16	26				-	
54				× × × × × × × V × V					5E15 5E45	0-3615	45 	יג 11	8	26		- <u>-</u> -		- - •	
55 56	-51.02	55.00	4.50	X X	Sond	light Grey	Yery Cense	Sond is fine grained. Very sity at 0-37, titlle sit below S7m, Frace of micro Verwyshout of the layer. With seams of clayey sit of 0-40.	55.65 55.95	0-3) [5	60	15	2	<u>"</u>	50 BLC	5 <u>/30cm</u>			
<u>57</u>								uncognose of the rojer, white seams of clayey sit at 0-40.	57.15 57.45	0-34E	125	29	. <u>,</u>	n	125 80	WS/30em			·
58 59				× ×					58.65 58.95	Q-J9 [5	67	21	27	6	57 810	S/30cm			
<u>60</u>									60.15	0- 19 5	87	26	35 1	12		5/30:4			
61	-57.02	§1.00	6.00	××					60.45	v- 1715						[/			<u>.</u> -

roje	ct No.			-		[G Dject Die St ar the River Rug		DRILLIN Inclian of Bridge Type O			L()(emar Word Se				
lote	Numb	e r 8H	-1841 (PA	L lo L 301]	·····		Date	13/1/3	9 - 27/7	/59				÷.	۰.				1
later	· Table	: a	-1.63	<u>r</u> 1	n. <u>Ele</u>	valion P	0+3.976 (ST	a (+281) m. Driller					Sta		rd D	anal		n Tes	•	
	£	:	E				Density istency	General Remarks	Sam	pling			Jia	Irda		eneu	acivi	1 103		
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Scale in	Elevation	Depth 1	Thickness	legend	Type of	Colour	Relative or Consi	shera	Depth in m	Sample No.	N-Yalue Stown/30cm	E				0 8		<u> </u>	<u>iu</u> :	<u> </u>
Š	ឌ័	Dej	4	<u>_ 1</u>	4	<u></u> 8	97 P	Ŭ			8	15cm	15cm	150					·	•• •••
			<u>.</u>		Sond	Light Grey	Yery Dense	Sand is fine grained. Very silly at 0-37. Little sill	62.15 60.45	0-WB	8)	25	35	52		87 (BLC)	5/30cm	-		
<u>61</u>	-57.02	\$1.00	600	<u>، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، </u>	Sily Soud	Light Gay	Yery Conse	beige Stat. frace of mice								بد مد م				
<u>65</u>								Naterial is some as above layer	61.65 61.95	0-118	n	27	Я	45		<u>11 8.0</u>	S/Mon			,
63								but more silt fraction.	\$315	0 12 0	14 / 15	36	74			74 8.67	5755m			
64				· · · ×					63 30											
65				:[×					665 6680	0-13-	61/ <u>15</u>	40	61			54 BLO	5/15:24			· ·
	-61.52	<u>65.50</u>	1.50		Sone	Light Grey	Yers Banco	Valeriel is some as obout lower	••••											
66						cyn act		Notorial is some as above layer but less sit fraction	55.15 55.15	0-11	63	23	n	36		63 BLO	S/Xcm			
67																				
68									\$7.55 \$7.95	<u>0-45</u>	75	24	34	42		76 8.0	S/Non			
69				· · · · · · ·					69.15	0-1515		, ,	62							
70									69.65	0-4513			41			134 840				
71	-55.27	70 95	5.45						70.55 70.55	0-17	132	28	60	n		132 8.0	15/3000			
			3 - 17 - 18		-640 (F DRUING-	5. L				•							[[<u> </u>
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	ect N Num		EH	-14P3 (P	ACE 1 of 1		er the River Rug	sé in Khuine	Date		ing 19 - 30/1	tolory 0/99	· .			0 : Dis V0 : V4	emar lurbed Si ndsturbe ide	al Somp	e mpie tok	en by She	\$J
ate	r Tat	le	<u>a</u>			m. Ele	valion P#			Sam	oline			 Slar	nda	rd P	eneti	atio	n Tes	ι	
E	E S		B	8 .9		Soil		Relative Density or Consistency	Remarks				Blo	33 Pe			N	:	Valu	e	
ale in	Elevation		Depth in	Thickness	Legend	6	Colour	lative Consi	General	Depth in m	Sample No.	N-Value Blows/JOcm	Each	13 E	1	1	0 2		30 4		50
Scale	<u>ă</u>	-	ă	Ę.	<u> </u>	Type	S					Blo	15cm	<u>ş</u>	tSem						
- 1	-	T			· · · · · · · · · · · · · · · · · · ·	Sity Sond	Light Gey	Loose	Sond is fine grained. Trace of mice Oroughout.	an ta									ļ		-
2						((1.65 1.95	0-18	10	2	1	6						
3			 		 	e C				315 145	<u> 1</u> 8	8			4						
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5	-10.9		\$ 50	5 50	· · · · · · · · · · · · · · · · · · ·					4.65 4.95	0-11	8	4	4	4						
6		+	3.30	3.50	****	Sand	Brownish Light Grey To Light Grey	Vedun	Sond is fire ground. Little sit and trace of mice throughout.	6.15 6.45	0-1	13	1	6	,		}				
7														,	\$						
8] /		-							7.65 7.95	0-518	15	8	1	0		/" -		+		
9	<u>ן</u>									9.15 9.45	0-65	- 11	•	5	8	•	 .				
<u>10</u> 11										10.65 10.95	0-1	ņ	5	5	6						-
12	-15.9	•	11.50	6.00		k Sily Sond	Light Grey	Vesun	Sand is line grained. Irace of mice throughout, With little decomposed organic matter at		14 A. Ar			-			\square				
13						x estimation x estimation			decomposed argonic matter at D-9.	12.15 12.45	0-3	20	12	10	10		/			.) 	
<u>14</u>					.vk	×				1165 1195	0-91	15	1	8	1		- •				
15	-19.9	0	11.50	300	××	Sondy Sill	Light Grey	Vector	Sond is fine grained Little clay trace of mice.	15,15 15,45	0-101	5	4	•	4		<u> </u>				
<u>16</u>			1. And 1.		× × × ×											-†			+		
<u>17</u>	-22 !	0	17.50	100	× × × ×			\$0/1		16.65 15.95 17.55	0-118	5	4	4	2	-					
18					Ø	¥ Saty Coy ×	Light Grey	2011	Trace of organic matter throughout tille fine sand at 0-16.	18.00 18.15 18.45	<u>UO-1</u> D-125	12	-	6	6		•		†		
<u>19</u> 20						× ×				19.65 19.95	0-131	11	6	5	6						
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22	-				Ē	× ×				21.15 21.45	0-14	12	8	5	8		 		 	:- 	
े 23	. j				鬥	×				22.65 22.95	0-158	1	5	1	5		 - -			· 	
24					l in the second	× ×				24.15 21.45	0-16	, - 14	5	8	 6		- 		+ <u></u>		
25		0	25.00	7.50		× × SII	Light Grey	Yery Still	frace of clay. With seams of fire sand			Ļ.					<u>-</u> }-				
20	-JI	8	26 50	1.50	X X X	xi			fine sond.	25.65 25.55	0-171	18	5	8	10		L.				
27					× ×	× Sond	Light Grey	Yery Dense	Sand is fine grained. Trace of mice throughout, With seams of sit and trace of clay of top. Slightly sit below 28m.	11.15 27.45	0-18 K	55	10	16	40		58 BLO	s/30cm	<u> </u>		
28									signulg set belog 2011.				11	2	21				+	1/-	
29				111	×***	•		Dense		28.85 28.95	0-19	<u>0</u>		AV.		-			†		
<u>3(</u>			21.00		××××	:]				30,15 30,45	0-201	38	9	17	21	} 			Ţ		
3	· · · · · · · · · · · · · · · · · · ·	1	31.00	1.50	1	4	.	.											P	age	

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	Numbe			Q 243				Date (A (+110) m. Driller	18/10/	<u>in - 30/1</u>	0/99	•	- 6 24	:	•		5 - 5		•	
Yater	Table	<u>a</u>	:		n. <u>Elev</u>	vation P							≓ Star	 nda	rd P	eneti	ration	Tes	t	
	e		ы В				Density stency	Remarks	Sam	pling										•
ii B	ion in	8 .5		P	of Soil	5	tive Densit Consistency		र्भ व	pie	tue Socm	8lo Each	15 P		1	N 0 2		Valu 10 4		50
Scale	Elevation	Depth	Thickness	Legend	Type	Colour	Relative or Consi	Ceneral	Depth in m	Sample No.	N-Value Blows/30cr	ş	n) Yem	5			••	•	• • • • • •	
							Donse		14.16					21			:		 	
31	- 36,42	JI.00	150		Sandi	ligal Grey	· · · · ·	Sand is fire grained. Trace of mice throughout. With seams of sill and trace of clay of top.	30.15 31.45	0-2018	38	,	"	-	••					
35				, - X	Sity Sand	UçAL Grey	Dense	Sightly sit beice 28m. Sond is fine grained. Trace of	31.65 31.95	0-2118	40	12	16	24						
33			:	×××	a • .			mice throughout.							- 24 41					
			-	×					3135 3145	0-228	38	11	18	8				1		
34									31.65 34.95	0-571	32	8	12	N			1	7		
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36									36,15 56.45	0-216	X	18	19	19		<u>}-</u>		╞╌╞		
37									17.65						••		 -			
38	-1190	34,50	1.50						37.65 37.95	0-258	13	13	20	19						
39				, × * *	Sand	Light Greg	Cersa	Sond is line grained. With seams of sit and skyhly day and trace of mice throughout.	39.15 39.45	0-26	42	17	21	<u>n</u>		⊢ <u>-</u> -	- <u>-</u> -		∳	
40									-											
41									40.65 40.95	0-318		15	22	22						
42									42.15 42.45	0-28	56	23	27	29		58 8.Ŭ	vS/X)cra			<u> </u>
43									12.93				С. С.	-						
44									43.65 43.95	0-29 6	59	n	28	31		<u>59 BLO</u>	x5/30cm	- - -		
<u>45</u>									45.15 45.45	0-3015	4	57		1			*5/30cn			
46									45.45	20-30		<u> </u>								
47							Yey Cense		46.65 46.95	0-JIR	67	23	31	36		67 8.0	s/socm			
18	-52.90	17.50	5.00	× ***	ડ્ય	tight Gey	Hard	Will seams of the sord it Alle day and loce of mice.			4		÷			, . 	_	· · · · · · · · ·	[/	'
49				× × ×					445	0-321	45	16	21	25			27 27			
50				××××					45.65 49.95	0-336	52	n	20	32		52 810	s/socm			
51	-55.90	50.50	100	*****	Sitj Day	light Gry	ऽध्य	With seams of fine sand, trace						1.12					[
52	-57.43	52.00	1.50					ol mice.	51,15 \$1,45	0-145	11	1	8 5	8		•				
53	1			× * *	Sit	Light Grey	Rad	With scame of fine sand. Groce of mice.	52.65	0-351	-	10	19	24]
	-53.90	\$3 50	1.50	- X X X X	Sily Soud	Light Gey	Yery Dane	Sund is fine proimed. From at	52.95				1					† – –	$\left[\right] $	
54				l: k	**1 2010	-91.04	1 1 1 1 1 1 1	sand is line grained. Trace of mice Wraughauk.	54.15 54.15	0-368	78	25	33	15		78 810	vs/30cm			 →
55				[::: ;														 		
58				[? [?					55.65 55.95	0-376	- 117	43	55	62		<u>111 B.C</u>	∑r <u>s/30</u> cm	=		1
<u>57</u>		. ·							\$7.15 \$7.5	0-338	118	25	12	76		INB BLC	s/30 cm			
58																 	 -,	1 1 8 7 5		
59	1			 .					58.65 58.95	0-395	107	23	39	68		107 84	5/30cm			
60				: 					60.15		n	23	8 - 100	47	 				(() 	
61				[::: ;					60,15 50,45	0-4315			~	<u>"</u>		<u>[″ во</u>	vis/sucm			1
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	Numb	er Bi	-1%23 (8/	10: 3 01 3		er the River Rug	ose in Khuing	Date	18/10/	n - 10/	0/59									
fater	Table	<u>a</u>	-		m. <u>Ele</u>	vation P	1	<u>a (1110) m. Driller</u> 10					<u> </u>		rd P	enetr	ation	Tes		J
	E		ii I				Density stency	General Remarks	Sam	pling			Jiai	iua		CHECK	ation			
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	5	-13.48	5 50	1.59	*XVV VV	Sand	Light Grey	Loose	Sond is line to medium grained. With sit seams and little organic matter.	465 495	<u>a-9</u>	7	5	3	1						
	6				×××	Sand	Light Grey	Veckura	Send is fine grained. With sit seams, Srightly day, Trace of mice.	6.15 6.45	0-118	n	3	ан 5 -	6						
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	14					Sily Coy	Ught Crey	Vectors	While fine sand. Irace of Secomposed argonic maller.	1165 1395 1455	<u>0-1</u> 8	4	0	2	2						
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	<u>17</u>				¥ ¥ ¥ × ×	Sity Ocy	light Grey	Nedium Ta Stiff	have of sand and decomposed organic matter.	16.65 16.95	<u>0-11</u> 5	8	•	4	•				2,4 		
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	20				THE A	Sity Ocy	Light Grey	SUA A CAR	tille decomposed organic motter, leace of sand and mice.	19.05 19.50 19.65 19.95	0-115	<u>11</u>	4	5	6						
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	24 25	- 32.98	25.00	3.00			1:			24.15 2445	C-1615	8	2	•	¢						
	26					Sord	Light Grey	Cense	Sond is fine gradied. With seams of sill Sightly clay and krace of mice.	25.65 25.95	0-178	40	11	19	21		0 2 - - - - -				· · · · · ·
	27 28									27.15 27.45	0-18	43 43	14	8	23						
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58 0-38. With secons of sit et 57.30 59 -67.48 59.50 60 -67.48 50.50		-51.45		600		Sand	Light Grey	Very Dense	Sond is line grained. Trace of		•										
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$\frac{-67.48}{60} = \frac{59.50}{100} = \frac{100}{100} = \frac{100}{100$,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					58.65		63	16	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	45		60 G A				
에는 사실, 사실, 가실, 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이		-67.48	54 50	100						58.95	<u>9-398</u>	to	10	<u></u>	- <u>-</u>	-, ;		1.200			
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Wat	er 1	able	a		!	m. <u>Ele</u>	vation fi	0-7.978 (5	(A 61560) m. Driller						<u> </u>						
		E		B E				Density istency	Remarks	Samj	oling			Star	ıdaı	rd P	eneti	ation	n Tes	ι	
, , ,		Elevation i	h in B	Thickness	ъ Ц	e of Soil	, TR	Relative Density or Consistency	General Re	Depth in m.	Sample No.	N-Value Blows/30cm	Blo Eact	NS Pe		1		20 3	Valu 30 ∢	e 10 5	50
Scale		Eev	Depth	Thic	Legend	Type	Colour	Rela	e S S	:	7			ž	ž	:				. : 	
61			• • • • • •			Sity Sand	Light Grey	Yery Cense	Sond is line grained. Inoce of mice throughout of the layer.	60.15 60.30	0 10 6	100/15	38	100			100 8.0	115/15cm			
62										81.65 61.80	-0-11 8	160/15	43	160			160 BLC	₩S/\Scm			
63					×					63.15 63.23	-0-42	81/8	90	88/8	[· · · ·	88 'BLOI	578 <i>0</i> 71 -		-:	
<u>64</u>				•	· · · · · · · · · · · · · · · · · · ·					54.65	0-13	112/8	115	112/2			 112 BLO	 15/8cm			
<u>65</u>						4				61.73											
6 <u>6</u> 67		7			· · · · × · · · · × · · · ×					65.15 65,45	0-11	120	31	46	<u>n</u>		120 81.0	то — т м5/30ст			
68	5	÷.								67.65 67.73	0-45-	85/8	n	86/8	_	·	85 BLOI	S/8cm 			
69					· × · × · · · · ×					63.15 69.45	0-451	103	30	43	69		103 81.0	rS/30cm			
20					X X X					70 65										, ,	
<u>?</u>] 72]				[× [×					70 95	0-17	112	34	45	68		112 80.0 (33)	45/30cm		>	
										7215 7245	Q-381	111	5	47	64		111 81.0	5/30 cm			
2				•	× ×					73.65 73.95	0-198	115	32	17	63		116 8.0	15/30cm	-=		
25	5				× ×					75.15 75.45	0-501	128_	35	52	75		128 8.0	ИS/30с т			
1 76					l č×								4		-	•				 	
12					× ×			i se Tur		76.65 76.95	0-511	117	IJ	49	<u>63</u>			75/30cm			
1										7815 7338	0-576	123/23	30	59 (54/8		125 8.0	н S/23ст			
<u>8</u> (2		5.							73.65 79.80	0-53 -	92/15	<u>3</u>	92			92 800	s/Ison			
<u>8</u>					× × ×					81.15 81.30	-0-51 E	115/15	45	115		- 	11 5 B LO	15 7 15cm	-=		
82											0.55		. У.	123			123 84.0				<u> </u>
8 <u>1</u> 81					×					12 8								·			
85	·] ·									84.15 84.30	<u>-0-56</u> ∞	1128/15	49	128			125 800	95715cm	[
88	<u> </u>		1		{*					85.85 85.73	<u>.e-sr</u>	110/B	168	110			110 BLO	S/8cm			
81	-	an a								87.15 87.23	0-58	86/8	94	85/8			85 B.O	5/8071			
88					::- : ::: :::						2	88/8	68	64/8			88 BLC				
8					:::{×					88.65 88.73											
9(9)										90.15 90.23	0-60,	82/8	76	82/8			82-80.0	5/8671			
9					••			e un de S •											Р	age	

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Proj	ect No					Pro	oject Die St er Die River Rug	udy of Cons se in Xhulos	struction of Bridge Type							0:08	iturbed S	iol Surgi	t		
<u>Hole</u>	Numb	er 8	1-17C (P.	10E 1 of	<u>()</u>				Date	36/N/	33 -21/1	1/39		-							
Wate	er Tabl	e a	-		m	n. <u>Ele</u>	vation Pm)-7.978 (51	(A 6+550) m. Driller												
			E E		T			3.	zks	Sam	pling			Sta	nda	rd P	enet	ration	n Tes	t,	
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Scale	Elevation	Depth	Thickness	- and		Type	Colour	Relative or Consi	General Remarks	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Sample No.	N-Value Blown/30cr	t sea	est.	ş	- • •				•	•
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	Projec Hole 1	t No. Numbe	r 64	-11/FS (P)	uce 1 al 3	Pro	er the River Rug	sa in Khuing	Date 3	f Drilli	ing R	24/11/	 		(2 9	0:0s V0:0	emar Iurbed S hofslurbe ibe	cii Sompi	e inç'e tok	en by Sh	€ 3 y	
· I	Water	Table	a	-220		m. <u>Ele</u>	vation P#		<u>4 6+710) m. Driller</u>	Sam	aline			Sta	nda	rd P	enet	ratio	n Tes	i L		ן ן
	ß	8 ,g	ß	s in B	•	Soil		stive Densit Consistency	Remar			E	Bic	ivs F	er		N		Valu			
	Scale in	Elevation	Depth in	Thickness	Legend	Type of	Colour	Relative Density or Consistency	General Remarks	Septi In B	Sample No.	N-Value Blows/30cm	Esci wx;	15 mpc	15cm 15		0	20	30	40 (50	-
					····()	Sily Sord	Light Grey	Very Loose	Sond is fire grained. Non plastic, trace of mica.											· ·		-
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<u>y</u>	2	- 9.40	2.50	2 50	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	Sond	Light Grey	Kesturn	Send is fine grained. Slightly silly, frace of mica.										[
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	5					•				4,65 4,95	0-315	3	•	4	5					, 		
	6	-12.43	\$ 50	300		Sity Sond	Light Grey	Veđan	Sand is fine grained. Trace of mice	615	0-48	10	3	•	6				<u> </u>			
	7	-13 90	7.00	1.50		(Crosnic	Block	Vestura	Plastic_	6.45												
	8	-15.40	8 50	1.50	vv vv	Organic Oay				7.65	0-51	7	4	3	•	•		 - <u>-</u>	 		 -	
	9					C Sity Doj	Gei	Soft	Plastic, WUs seams of line send. Trace of mica.	9.15 9.45	0-51	s	4	3	2	╡			+			
	<u>10</u>	- 16.90	10.00	1.50		c Sily Day	light Gey	Staff	With stightly sitly fine sond. Trace of mica	10.00 10.45 10.65	<u>10-1</u>	10	-	4	6	}			+		⁻	
	<u> </u>	-18,49	11.50	1.50		c Sitr Doy	Light Grey	sən	Picstic. Trace of decomposed	10.35	<u> </u>					7	-		†		 -	
	<u>12</u> 13	-19.50	1300	159	V				organic matter and fine sand.	1215 1245	0-81	4	2	2	2	(-			-			-
	13	- 13.30			1	Saly Dey	Light Gey	Stat	Plostic. With slightly silly fine sound. Iroce of mica.	13.65 13.95	0-35	9	2	•	5							-
	15	-21.43	14.50	1.50		e Silty Cloy	Light Grey	ऽध्य	Plastic, Irace of decomposed organic motter Uroughout										 			
	<u>16</u>		an a		Ĕ.	× ×				1515 1545	0-13	9	-) 					 			1
••	<u>17</u>					×				15 65 15 95	0-116	-H	•	5	6		.			 		
1	<u>18</u>	-			Ē	×		5 ¹		18.15 18.45	0-12	3	2	1	5	-	 		<u> </u>]
•	<u>19</u>				VY V	×												<u>-</u>				
	50	-26.90	20 00	\$ 50		x x Saty Sond	Light Grey	Vectora	Sand is fine grained. Non plastic, With seams of alayey sill and trace of mica	19.65 19.95 20.40	0-13	8		4		_	(-≞- \					-
	51		· · · ·		[×			sill and trace of mica	21.15 21.45	0-14	15		1	8		Ŕ					-
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	25				Ê	×			decomposed organic moller.	24.15 24.65	<u>0-18</u>	11	•	5	6				[-
1	26					×				25 55 25 55	0-178	n		8	6							-
	27	-33.43	25 50	100	×.	× Clojey Sil	Light Grey	Yery Stiff	Slightly plastic. With seams of fine sand		an a		.							,		1
	28	-34.99	28 00	1.50	× ×		Light Grey	Vedum		27.15 27.45	0-18	19	5	8	11		!	\				
	<u>59</u>					Silty Sord X		- count	Sond is line grained. Sightly plastic, trace of clay and mice.	28 65 28 95	0-19E	23)	8	<u>12</u>		<u> </u>					-
	30					Â X				30.15 30.45	0-201	30	10	13	17	 	.	- <u> -</u> }	↓ <u>-</u> -	 		
	31	-37.99	31.00	100	<u>[:::}</u>	x				CF 10		ļ		<u> </u>						<u> </u>		1
									A - 4 - 32				1977 		<u>.</u>				F	Page	<u></u>	

Projec	t No.		· . · .		<u> </u> Pro	ject hes	udy on Cons	DEVELLIN Incline of Bridge Type O	lG 1 Drill	ing	<u>Fir</u>)(<u>x</u>		<u>Rema</u> 0 : Østurbed		ie		
	Numbe	er Br	- 11426 (P/	E to \$ 301	0v	er the River Ru	oso in Khulna		-		21/0/	99 - 2	8/11/S	9					
	Table		- 2 20		• •	vation P	0-6.898 (ST	A 61710) m. Driller	-		·								
	ц ц		a R				~	Remarks	Sam	pling			Stan	ida	rd Pene	tratio	n Tes	it	
Scale in m	Elevation i	Depth in m	Thickness	Legend	Type of Soil	Colour	Relative Densit or Consistency	General Ro	Depth is a	Sample No.	N-Value Blows/30cm	Eact	vs Pe 15 5	· ·	10	N - 20			50
۵۰ 	ы 	Ā	14 	ב. איזיייי	E-1 Silly Sand	Light Grey	Vecum	Sond is line provined. Shiphiliy	J0.15 30.45	10-30		رت ت	Ĩ	1) 2			•		
<u>31</u>	-37.92	31.00	100		Saty Sond	Light Grey	Fo Dense Dense	plastic frace of clay and mica. Sand is fine grained. Non plastic. With seams of clayey sit. Frace of mica.								•	$\left \right\rangle$		
<u>32</u> 33								sil froce of mica.	J1.65 31.95	0-215	40	15	17	23	• • • • • •		<u> </u>	 \	
<u>33</u> 34				×					33.15 31.45	0-12	45	H	21	21					
35	- 12, 10	JS 50	150	×					34.65 34.95	0-23	41	11	18	23	• • • •				
36				()× ×	Silty Sand	Light Grey	Yory Dense	Waterial is some as above layer.	36.15 38.45	0-24 6	52	12	23	79	52 B	1045 /30 cm		->	<u> </u>
37 38				×					37.65 37.95	0-25	53	ы IJ	25	28	53 8	Oils/Norm	+ 		
39_	45.40	38.50	100	× × × ×	Co _r ey Sil	Light Grey	Ford	Sightly plastic. With seams of fine sand and trace of mica	•	0-26 1		14 14	18	23		-	 		
<u>40</u>				× × ×				Groughout									 	[
<u>41</u> 42			7	× × ×					40.65 40.95	0-3715	38	9	16	22		-	╡ <u></u> ₹	<u>}</u>	
43									42,15 42,45	0-28	44	10	15	29					
44				× × × × × ×					41.65 43.95	0-29	43	<u>11</u>	11	26				 •	
45 46				× × I × × × I × × × I					45,15 45,45	0-30	42	-3 15	18	28			†	H	
47				*** ***					45.65 45.95	0-J18	35	8	13	22			╡┥		
<u>48</u>	-51.40	47.50	100	× × ····× ···×	Saly Sord	Light Grey	Dense	Sond is line groined. Slightly plastic, With seams of dayay sit	48.15 43.45	0-1215	41	19	20	21					<u> </u>
<u>49</u> 50	-55.90	45.00	1.50	× × ×	Cojey SIL	Light Grey	Hare	Sightly plastic. With seams of sand. Trace of mica	49.65 49.95	<u>0-33</u>	32	5	16	16			7		
51	-57,40	50 50	150	× ×	Sond	Light Grey	Very Dense	Sond is line to medium grained. Slightly sity and trace of mice throughout.	51.15 51.45	0-34		27	,,,	41	7a 9	Qins/30cm			
52		· · · · ·						ning er ovykalt.											
53 54		14 A.							52.65 52.95	0-35	91	13	12	4A (<u>91 B</u>	0%S/30cm			
<u>55</u>				×*					54.15 54.45	0-36]S	90	26	40	50	\$0 8t	015/30cm			
<u>56</u>				x					55.65 55.95	0-JJE	89	25	12	"		0#\$/30cm	 =		
57 58		arda ara Managara							57.15 57.45	0-3815	122	32	52	70	122 6	LOWS/30cr			
59									58.65 58.95	-0-3915	n	21	32	12	<u>1(B</u>	0W5/30cm			
60				, X X -					60.15 60.45	0-4015	104	27	46	58	104 8	LCWS/JOCA			
61	-\$7.90	<u> 61.00</u>	19.50]				age.	L
	-87.90		13.50									27		\$ 9	104 8	(CWS/XOCA		age.	

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