C.2 Drilling Log

	tOr-	rio.					110	CIDURIAN INTEGR	VA 1	EU				Date		LL LOG	-	_	4 E
			В	3G-1							+	50.4	191 r	n	05.0	7.94 to	07.0	7.94	
ocati					eum A			Groundwater Elevation 7.00 m	belo	ow g						Dadan			
		Elevation			Soll Profile	DESCRIP Classification		OF MATERIAL uondisse	£	0	of Blows 10	20 to	ARD ones	Numb	Value er of Blows in Penetration		■ 10 □ 5 □ 10	AMPL hinwall plit Barr Jenison	Tub el
	3	至			Sol	8	Colour	Ž.	Depth	10 cm	20 cm	30 can	ž	10 20	30 40	50	Depth	<u>0</u>	
	1	49,49	0.20	- 020- 1.00		SILŤ	dark brown	-Topsoil clayey SILT	7 -	-,2	3	3	· g				1-	1.	
	2		2.00			SILT	piowa vejicwish	SILT soft to firm	2 -	. 5	. 5		- 16	-			2-	2	
	3	47.49 46.79	0.70	3.70		PEBBLE SANDSTONE			3 -	-13	16	· 12	-41			<u> </u>	3-	ۇر. 4	
	4-		2.60		**** ****	PUMICE	reflewish light	fine to medium grained, poorly cemented	4 · 5 ·			·27 · 33	-71			- -	4 ·	5	
	6-	44.19		636		TUFF	o-swn	highly weathered	6.			٠ ا			•		6-	. 6	
-	7-	↓ 7	2.00		\$ 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	CLAY	yellowish gréy pale	highly to medium weathered	7.	- 39	- 40	- 50	129	<u> </u>		→	7-		-
İ	8	42.19		0£8		(tuffaceous)		.	•	-21	20		80			· • · · ·	8 -	9	
-	9	40,39	1.80	10.10		STONE (tuffaceous)	grey light	medium comented	10	-		- 32 - 25	86 61			→	9 - 10 -	10	
	11-		Ż.1ô	,		SILT	green sh	highly to medium weathered, medium cemented	,,,			- 50			<u> </u>	-	11-	_11	
1	12	38.29		12.20		SAND- STONE	green at	10	12		- 21			, .		→	12 -	13	
1	13 d	37.09	1.20	13.40	* · · · · · · · · · · · · · · · · · · ·	(tuffaceous SILT STONE		highly to medium	13			- 27 - 50				→ ~	13-	14	
- 1	15	35.49 35.09	ļ	15.99 15.40		(tuffaceous)		15	_		_	50 15			→	15 -	72	-
	16	54.74	0,85	16.25		STONE	g-sev green.ch	medium weathered	16							. 1	16		
3	17- 18-		3.10		*****	SAND- STONE (tuffaceous	green sh durk grev	medium weathered, fine grained, well cemented	17		•						17	ļ !	
	19-	31,14	ļ	19.35					19								19.		
	20	30.49	0.65	20.90	ЩЦ	SILT. STONE	1.64 3.664 sp	medium weathered	20	ļ			\vdash				20	<u> </u>	+
	21 -				, .	. , .			21								21		
	22-			-					22							-	22		
	23 -								23				!				24	!	
	25 -			-					25	1							25		
	26-								26		÷	•					26	İ	
İ	27 - 28 -								27						•		27		-
	28.								29			•					29		

	roje Hote		HE S	STUE	O YC	N CIWI	JNG-	CIDURIAN INTEGI	RA1	ΓED)UI Date		:5				LOC			
2010	7 11/10	. 110.	BE	1G-2							+	49.7	35 (lm .					08.0)7. 9 4	l to	10.0	7.94	
oca	tion		Cì	beur	eum R	iver		Groundwater Elevation no groun	ıd w	rater	enc	oun	tere	4	Surv	yed t	рy		•	Da	dang	Ro	sana	
		LASS					TION	OF MATERIAL								LATI	ON	[45]	ING			5.	AMPL	.ES
			,								lumbi of Blows 10		2				mber	alue of B		•		Q S	ninwall olit Barr enison	
Date	Scale	Elevation	Stratum Thickne	Depth	Soil Profile	Classification	Colour	Description	Depth	to 10 cm	to 20 cm	to 30 cm	N - Value		10	20		30 30	tration 40	50	-	Depth	ō.	ř.
	1	49.44 48.74	0.70	1.09		SILT	dark	with some	1	-	. ·	: -						.÷.				1		-
08.07.94	2-	47.39	1.35	2.35		CLAY	prownish grey	CLAY, soft - plastic	2 -	3	, 3 	 17	10									2-	2	
0	3	46.94	0.45	2.80	61010	CONGLON	d -brown th welley	CONGLOMERATE moderately weethered	١,,					ļ _.			٠.	٠, ٠		7		3 -		-
		46.34	0.60	3.40		SANDSTONE	gray dark	moderately weathered								2.70 m ssible	i norti	uther	penetr	ation				
	4-	45.74	0.60	4.00	<u> </u>	SANUSICHE	Jrey	moderately heathered	4) · ·						• •		4 1		
	5 -		3.10 			PUMICE TUFF	whitish dark grey	well cemented slightly to moderately weathered	s .			:										5-		
	7 -	42.64	ļ.,.	7.10		1		* * * * * * * * * * * * * *	7.]												7		١.
		42.04	0.60	7.70	·***	PUMICE TUFF	dark grey	well cemented]															
	8 -	40.84	1.20	8.90	3757; 3757;	CLAY- STONE (tuffaceous)	gr èc nish durk	moderately weathered	8											• :		8 -		
	9 -		1.10			SAND	dark	fine grained	١,	1		• •	'	1 .		•	•	• •		, .		,		
	10-	39.74	1.10	10.00		STONE (tuffaceous)		moderately weathered	10												. ,	10 -		
10.50	11-	39.24	0.50	10.50		SAND SAND STONE	- dyA -	moderately weathered fine to coarse grained, , well camented						-								11-		
		38.14	- 0.20	11.60	řiři	(tutfaceous	416	moderately weathered	12]	, .			ļ								12-		į
	12-	37.3 <u>4</u>	0.29	12.40		31(13)011	grey	moderately wouthered	13													13 -		
	14.	1							14	-												14-	, .	
	15 ·		2.40			SAND STONE (tuffaceous	Just Just Just Just	slightly to moderately	15 16													15-		
•	17	<u> </u>			****			weathered	17		 •						,				•	17.		
45/0.01	18								18		•											18		
	19			100		1			'	1	•											["		İ
7	20-	29.74 29.74		20.00	1414	SILTSTON	F	moderately weathered	20	+-			+	+-								20-	1	+-
	21								21													21		
	22	1							22			-					-					22		
	23								23													23		
	24								25					. .							i	25		
	26								26	;												26	1	
	27								27													27		
	28								28													28		
	29		-						29	1		•									, .	29		1

1	lore	e Ho	ile No.	В	8 G-3				Elevation			+	38.7	71 n	Date			17.	07.94 to	19.0	7.94	
CASSINGATION AND DISCRIPTION OF MATERIAL STANDARD PRIETRATION ISSING Conference Conferen	oc.	ation	1	c	ioana	gang '	River	····		belo		OUN	d su	rfac	Surve	yed by			Dadan	g Ro	sana	
Section Sect			CLAS					TION				51/	ND			ATIO	N TES	TING		S	AMPL	_
1			uo	E 55		Office	Cation		ption		0	of Nows 10	20	iu.		Numl	ber of 8	lows	1	□ S □ C	plit Ban	
1	-	Š				1				Depth	10	20	30	7		-				Depth	Š	<u>7</u>
1			38.37	0.40	0.40		SALT	d -brown	Topsoil, soft	1					i				,			
1				2.00		G.W.		are wrish	silty CLAY, soft - plestic		2	2	3	7	*	- -	 	 		-	_	
1	•		36.37	-	2.40	IIII	 -				S	5	5	15		_		_ :_		-	_	П
1	•			3.80			SAŅD		with fine to coarse						- · · · · · · · · · · · · · · · · · · ·	· · · ·			-	-	_ !]
10	7	5			, .		MIXTURE (ckt river		Sandstone, Siltsone, silicified Wood	5 -	14	28	50	50.	·	· <u>.</u>		<u>.</u>	- -	S	 - ئىد	
10		6	32.57	· · ·	620	b gri	<u> </u>			6-	† ·									6		
10		7		3.30			PEBBLE SAND	Jank	fine to medium grained, with fragments of Pumice, Andesite, Sandst.,													
10	20	9	29.22		9.50	0.0		g:e/	and tuffaceous sand					50 10	· <u>-</u> · -	-·÷	· <u>-</u> ·	<u>.</u> . <u>.</u>			. <u>. 6,</u>	
12	7		27.7	1.50			CLAY				1											
16- 16- 16- 17- 17- 17- 18- 18- 18- 19- 19- 19- 20- 20- 20- 21- 21- 21- 22- 22- 22- 23- 23- 23- 24- 24- 24- 25- 25- 25- 26- 26- 26- 27- 27- 27- 28- 28- 28-	_				1	000			mod. to slightly weath.	ŀ												
16- 16- 16- 17- 17- 17- 18- 18- 18- 19- 19- 19- 20- 20- 20- 21- 21- 21- 22- 22- 22- 23- 23- 23- 24- 24- 24- 25- 25- 25- 26- 26- 26- 27- 27- 27- 28- 28- 28-		13		4 60		000	PESSLE SAND		well cemented, with fragm, of Andesite,	13										13		
17- 17- 17- 18- 18- 18- 19- 19- 19- 20- 20- 20- 21- 21- 21- 22- 22- 22- 23- 23- 23- 24- 24- 24- 25- 25- 25- 26- 26- 26- 27- 27- 27- 28- 28- 28-		14 - +15			15,00	000			tuffaceous sand matrix										· · · · · ·			
18- 18- 19- 19- 20- 20- 21- 21- 22- 22- 23- 23- 24- 24- 25- 25- 26- 26- 27- 27- 28- 28-		16			.					16										16-		
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21- 22- 22- 23- 23- 24- 24- 25- 25- 26- 27- 28- 28- 28- 28- 21- 21- 21- 21- 21- 22- 22- 22- 22- 22											-										i •	
22- 23- 23- 24- 25- 25- 26- 27- 28- 28- 22- 23- 23- 24- 24- 25- 25- 26- 27- 28- 28- 28- 28- 28- 28- 28- 28		20	,							20										20-		
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re	Hok	e tio.		88G-4				Elevation				3€.	492 :	_ 7	Date		20	.06.94 t	~ 61	17 04	
ca.	tion					<u> </u>		Groundwater Elevation						-+.	urveyed	by					
_	نب	CI A C				er - Maja Nescolo	(KAL)	0.35 m OF MATERIAL	bel	ow g				•	ETRAY	·	_	Dadang 1			i ze
						Classification				1	lumbe of Blows 10	,		PEN	Nu	N-Valor of	an Blows		0.5	AMP hinwall iplit 8an tenison	Tub rel
	Scale	Elevation	Stretum	Depth	Soil Profit	1 - 3	Colour	Description	Depth	10 cm	20 cm	30 c/m	N - Value	·	10 21			50	Pe per	Š.	1
		34.99	0.50	0.50		0.35 SILT	g- brawn	clayey SILT, plastic					I			•					
	14		2.25	` -	G.W.	CLAY	dank dank	CLAY, plastic	1-	2	 2	2	6	_&		:	· · ·	· · · · · ·	- 1 -		
ļ	2 -						3,43		2					- \					2 -		
	3 -	32.74 32.49	0.25	2.75		PEBBLES	o: ¦; s v	PEBBLES, SAND	3				7					- -	- 3.	_	
		32.49		3.00			hrowns ^a			2	3	3	8	- }	-		 -		- -	-3	
- 1	*	. , .	2.40			SILT	33.8 1.45.	SILT, soft	•	3	3	4	10							-4	Ц
	5 -	30.09		5,40	Ш			TUFF	5 -		6		18		· /·				. s.		
ĺ	6								6							\			6	6	
	,						!	SANDSTONE Tuffaceous, completely to highly	,	7	8	10	25	_		- 1			٦,	-	1
1	•		4.60	ļ			aren 3.66. eu 66. voet	Weathered,		12	18	23	53	-					- '-	7	
	*					(Tuffacecum)	inasi.	fine grained, a poorly cemented, o brittle	8-	13	16	19	48					1	_	_8	
	9							poorly cemented, 5 brittle 5	9.				- 1		:				9.		
ļ	10 -	25.49		10.00	() () () () () () () () () ()				10	13		21	52						10	ļ — .	
								ed from	11 -	18	20	22	60						-	_10	
-	' '							SILTSTONE	'	26	35	39	100					- - -	- 11 - 1-	11	L
	12		5.00	. 		SILT-	gr <u>uuri</u> en dark	highly weathered	12 -	 29	35		102	·		· · ·			12	12	
	13-		1			STONE (Tuffactions)	èv	fine grained, poorly cemented,	13 -										13	13	
	14 -							broken, with silicified wood	14	20		26	72					— 	- 14		!
		20.49		15.00						21	25	30	76	-					- -	1 14	
Ť	15-				1111			<u></u>	15-								·		15-		+
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	TIO	e No.	BI	IG-5				Elevation			+	38.4	l65 i	Dat T	-			30.0	6.94 to	02.0	7.94	
2C3	tion		Ci	cinta	River	- Maja		Groundwater Elevation -2.30 m	belo	w gr	oun	d su	 irfac	Şur	veyed	by			Dada	ng Ro	sana	
		CLASS					TION	OF MATERIAL			ST	IND		PENET	RAT	ION	TES	TING			AMP	_
	_	tion	Stratum Thickness	22	Soil Profile	Cassification	5	Description	tł.		of Nows 10 to	20 10	Value			umbe	Value er of 81 n Pene			□ S	hinwall plit Ban Jenison	rel
	Scale	Elevation	Stratum Thickne	Depth	Soil	Class	Colour	Š	Depth	10 cm	20 cm	30 cm		10	2	20	30	40	50	Pepth	Š.	<u>\$</u>
	1 -	37.47	030 070	0.30 1.00		TOPSOIL SILT	dark brown black	clayey SILT								:				1		
		36.47	1.00	2.00		SANO	yellowish light grey	sity SAND, fine to medium grained		3	3 .	5	11		_	_				-	'	
30.00.94	3-	30.47	1,70	GW.		-2.30 SAND- STONE	yellowish Jight	fine to medium grained, completely to highly	3-	7	9	12	28		_ :		·			3 -	2	ļ
	3.	34.77		3.70		(tuffaceous)	gray	weathered		30	37	<u>50</u> 8	117 28		_	<u> </u>						Ш
	4-				,,,,,,				4-		• •									1		
3	5		3.30			TUFF	light gray	TUFF, fine to medium grained, well cemented,	5 -					:		•				5 -		
2	6						greensh gray	şlighdy weathered	6-											6.		· ·
	7.	31.47	<u> </u>	7.00		SAND-		medium grained,	7-								<i>.</i>			7.		-
	8	39.27	1.20	-8.20		STONE (tuffaceous)	gr ee nsh gray	medium grained, well cemented medium, to slightly weathered												8.		
	9.	17.67				PUMICE TUFF	greenish gray	medium grained, well cemented, with some fragment of Pumice (max 20 ~ 0.5 cm)	. و					:		٠.				9.		
-	10	1		9.70				medium grained,	10-								•*-			10	1	
Ì	11					PUMICE .	ʻ drżA ʻ	medium to slightly	111-	- <i>-</i>				, , .						111-		-
	12	† · ·		12.40 12.70		TUFF	13/4 1/64	highly to medium weath.	12							•				112]	
•	13		8.90	13.30		PUNICE TUFF TUFF	3,4 3/6 338 3/8	medium to slightly weath.	13											13		ŀ
	14	ļ		13.80		PUMICE TUFF	g:66:50 g:89	medium to slightly weath.	14	-	. ,								•	14		
	15			15.00 15.55	, , , , , , , , , , , , , , , , , , ,	TUFF	dark gow	compl. to highly weath.	15				.				• • •			15		
	16	1	- •		***	PUMICE	gieser'sh giev	medium to slightly weath.	16	1	•	• •	-							16		
	17	21.32	ļ. <u> </u>	17.10	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		dark gren	highly to medium weath.	17	1			-			• •	•			17	1	
	18			17.90 18.20	****	SAND-	- 1749	medium to slightly weath.	18	1							-			18	1	-
70.71	19		2.90	18.20		(intraceous	Jan jie	highly to medium weath.	19											19	+	
-		18.4/	ļ	29.00		1	drega	slightly weathered	20												<u> </u>	_
	21								21											21		
	22	1							22							, .				- 22		.
	23	1							23	-	-									23		
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	29							1	29	<u>ا</u>			. .							29	, _	

cati				IG-6				3			T :	3/./	/31 ;	•			20	.00.57	to 28	.00.	-	
	On		Ci	cinta	River	- Maja		Ground-water Elevation 1.20 m	beld	w ar	OUB	d cu	rfac	Su	iveyed t	y		Da	dang R	losa	na	
	C	LASS					TION	OF MATERIAL		-				PENE	RATI	ON TI	STIN	3		SA	MPL	ES
	٠		Stratum Thickness		Soli Profile	Classification		Description	£	Nu Bi O to	of lows 10 te	20 to	Value		Nu	N-Val	ue.		6	Thin Spli Den	wali I t Barre	Tube el
	Scale	E	Strai	Depth	S S	Q.	Colour	Š	Depth		20 cm	30 cm		10	20	30	40	50	Į į		Ż	,
	1 -	36.73	0.70	0.30 1.00		CLAY	d forown yellowish orown	sendy CLAY	1.					!	*		:	:			. , .	
	1	35.73	1.00	G.₩. 2.00		1.20	SIS WEST VENT	sitry CLAY		3	2.	2	7						-	-	-	لـــا
	3		1.40	1.00		SAND- STONE (tuffaceous)	veliowish Jiahr	fine to medium grained, completely to highly weathered	3-	19	26	29	74	·	<u> </u>			-	-	- -	. 2	
	-	34,33		3.40		1	grey brownsh			10	20	50	80					- →			_3	L
	4						ight-grey	fine to medium grained, well cemented	4	SOV7	1	::	- <u>50</u> 7		ع سيد	·		—· → ~·			_4	ĺ
	5-		4.20			PUMICE TUFF		medium, to slightly weathered, some fragments of pumice														
-	7-	30.13		7.60			greensh dârk-ýray	(max ≠ 1 cm)	7.										.	,		
	8	29.73	0.40 1.30	8.00	*****	SANDSTONE PUMICE TUFF		tuffac, fine-med, grained, _mod, weathered 											1			
	9 -	28.43	1. <i>j</i> 0	9.30		TUFF -		intercalations of Tuff fine to medium grained, with some fragments of	10										1	0 -		
	11-	26.73 26.23	0.50	11,00		TUFF	pro which grey	pumice (max = ~ 0.5 cm) tuffac, highly weathered	,,,										1	1 -		
-	12-			12.30	***	PUMICE	ght to dark gray	poorly cemented highly weathered	12										1	2	. :	
	13		2.80			TUFF		medium, to slightly weathered	13 14										1	3 +		-
-	15-	23.43	2.00	14.30		SAND STONE	daik-gray elicin si taik promo	fine to coarse grained, poorly cemented highly to mod, weath, (old river deposit)	15	-										5 -		
	16- 17-	21.43		16.30		SAND			16 17	1										7		-
3	18	19.13	2.30	18.60		\$TONE (tuffaceous	j earsh grev)	fine to coarse grained, moderately weathered	18										1	6		
	19-		1.40		***	Tite	dank dank	fine to coarse grained, poorly cemented medium to slightly weathered, some fragments of punic	19											9		
	20-	17.73		20	•			and the parties	20								-			1 -		-
	22-		,						22											2		
	23								23											3 -		
	24 · 25								24											4 -		
	26								26										}	6		
	27 -			. :					27							· · ·				27		
	28								26							- •	. ', .			28-	. :	

OI C	HOR	No.	B	BG-7				CIDURIAN INTEG		+:	26.6	.83 m	Date			11.0	7.94 to	15.0	7.94	
)C	tion							Groundwater Elevation	L . I .			-	Surve	eyed by			Dadan	-		
		d Acc			n Rive		TION	OF MATERIAL	Dek	ow goun-	_		PENETE	ΑΠΟ	NI TES	IING	Dagan		AMP	EG
	Scale	Elevation	Stratum Thickness		Soll Profile	Classification	Colour	scription	Depth	Number of Slows 0 10 to to 10 20		- Value	-	Numi	I-Value per of Bl cm Pene	ows		■ 1	hinwall plit Bun Jenison	Tube
	Š		9.40		% 	SILT		ැරි Topsoil, soft	å	CAMP CAMP	tmi	Z	10	20	30	40	50	å	ý	}
	1-	26.28 25.08 24.78	1.20	0.40 1.60		CLAY	d -brown Vellöwish brown	sity CLAY, soft - plastic -	1 -	2 1	. 2	5	 *	· ·	[.] .	 		1 - -	·	
	2			G.W.		2.00			2-	4 5	6	15						2-	2]_[
	3		3.70			CLAY	yellowsk light brown	sity CLAY, soft - plastic (derived from completely weathered Tuff)	3-	6 7	9	22	 - 		. i . — —	, 		3 - 4 -	 _3 4	
	5 -	21.08		5.60					5 -	5 5	 	17	·			 - <u>:</u>	 	5	5	
	6-	19.68	1.40	7,00		SANDY TUFF	zelicznistr grevish brown	fine to medium grained - completely to highly weathered	6 - 7	7 7		24			· · ·	 		6 - 7 -	_6	
		17.98	1.70	8.70		SILTY TUFF	di el Dicmuisp	fine to medium grained highly weathered poorly cemented	8-	6 8	10	24 35		- -		 		8	_7 	
	10-	16,63	1.30	10.00		SAND	dark grev	fine to medium grained (old river deposit)	9 - 10 -	11 12	14	37				-		9 -		
į	11 -	, -	2.50			SANDY TUFF	greenshi dark brown	fine to coarse grained highly to moderately weathered medium cemented	11-	35 50 7 50	13	35 85 17 50	 	 : ::::	_ (- '	 	11_	10 11 12	
1	13	14.18		12.50					13-	5 31 50 8	·	5 81 18	· <u>-</u> · <u>-</u>	<u>-</u> · <u>·</u> ·	<u> </u>		- -	13_	13	
	14-		3.90			SAND	duk grey	fine to medium grained (old river deposit)	14-	18 21	35	74	 - – –	· · · ·	 — -	 	• · · · · · · · · · · · · · · · · · · ·	14 -	14	
	16-	10.28		16.40					16-	25 27	30	82		- — 			• — —	16 -	16	
	17	88.6	0.40	16.80		CONGLOM.		(Andeste, Pumice, Quarz)	17	15 18	21	54 69		·			→	17	17	
	18-		3.65			SAND STONE (Tuffaceous)	grey grey	fine to coarse grained, (derived from completely weathered Pumice Tuff)	18 - 19 -	17 23	26	66		- -	 	· · ·	→ —	18-	18 io	
	20	6.23	0.25	20.45		CLAY			20-	13 17	19 37	74	· — ·	· · · ·		· ·	*	20 -	20	
į	21	- 5.98	2.00	20.79		CONGLOM.	preenish fork grey	Ø ~ 0,2 - 1 cm (Andeste, Pumice, Quarz) poorly cemented, highly weathered	21 - 22 -									21 - 22 -		
	23	7.90	2.30	-2.7.7		CLAY STONE	dark grey	moderately weathered, medium hard, strong	23 - 24 -		-							23 - 24 -		
+	.25-	1.68		25.00					25_				· 		*			25		
İ	26								26 - 27 -									26 - 27 -		-
	27 -								28									28-		
	29-						: } ! !		29 -		. !							29		

ore	rion	e No.	84	8G-8				Elevation			+1	9.2	75 n	Date B			18.	07. 94 t	o 19.0	7.94	
oca	tion		Cì	duria	n Rive	r (center	-)	Groundwater Elevation 0.00 m	belo	w are	und	su	rface	Sun	eyed b	,		Dada	ng Ro	sana	
		CLAS:						OF MATERIAL			_			PENET	RATIC	N TE	STING		S	AMPL	(\$
	Scale	Elevation	Stratum Thickness	Depth	Soil Profile	Cassification	Colour	Description	Depth	0 to 10	20 20	20 10 30	- Yakue	10	Num	N-Value ber of cm Per		50	o s	hinwall plit Barr Denison	
	1.	16.78	250	2.50		SILT SAND GRAVEL MIXTURE (old river, Sediment)	displayed throad	sity SAND with Gravels of Sandstone, Sitsone, Pumice (max e ~ 3.0 cm)	1 - 2 -	9	11	IS	35	— -			***		1 -	1 2	
	3 -	15.83	. 0.95	3.45	****	SANDY TUFF CLAY STONE	STOWN SIN STEE STEE STEE STEE STEE	sandy Tuff fine to medium grained moderately weathered	3-	23	21 35	50	108						3 -		
	5	14./8 13./8 13.28	1.00	4.50 5.50 6.00		SAND - STONE (Tuffaceous) GRAVEL	selov st	moderately weathered sendy GRAVEL maxiful Icm and over deposit	5 -			-						. . .	5		-
	7	12.68	0.60	6.60		CONGLOM. SAND STONE (Tuffsceous)		Sitistone - Sandstone (Andeste, Quartz, max 1 cm)	7										7-		
	9				V V V	CLAYSTONE SAND STONE (Tuffaceous) CLAYSTONE		SANDSTONE (Tuffaceous) fine to coarse grained, medium to well cemented mod, weathered	9			• .	50 12 50 10	. • <u></u> • .		· <u></u> .	····	_' -} _'	9.	_5	
	10-		7.80			SAND STONE (Tuffaceous) CLAYSTONE	ĺ	CLAYSTONE silty Clay,	10 -				50 50 9	· · · · · ·		·	·		10. 11.	6.	
	12				**************************************	SAND STONE (Tuffaceous) CLAYSTONE		well cemented, well grained	12 - 13 -				50 11	<u>1=</u> 1 :	<u> </u>	· <u></u> -		± - ∳-1 .	12	8	
	14	4 28	0.00	14.40		SAND STONE (Tuffaceous) CLAY STONE	suk-gres	mod. weath., well grained, lots of lignite intercelation							 				14	-	
	16 17]							16 ·										16 17	1	
	18								18										18		
	20								20- 21			,		,					20 21	ļ	
	22	1					4 · · · · · · · · · · · · · · · · · · ·		22			•							22	, and a second	
	24								24						. , .				24		
	25								25			-							25		
	27 28								27 28										- 27		
	29	1 .							29		٠.					-			29	1	-

ne	: Hol	ie ri	J.	BI	BG-9				Elevation			_+	25.6	5 6 5 1	Date			21.0	7.94 to	24.0	7.94	
Ca	Rion	1		C	duria	n Rive	•	· · · · · ·	Groundwater Elevation 4.00 m	bela	w a	our	ıd sı	ırfac	Surv	eyed by	_		Dadan	g Ro	sana	
		CL.	A 5 S					TION	OF MATERIAL						PENET	ATIO	N TES	TING		S	AMP	ΕŞ
			ro O			ofile	Classification		ptton			umbe of Nows		Li.e.		Num	N-Value bar of Bi cm Pana	lows		□ S □ C	hinwall plit 8an enison	rel
1	Scale	'	Levation	Stratum Thicknes	Depth	Soil Profile	Classiff	Colour	Description	Depth	10 10	20 cm	. 30 cm	N - Valu	10	20	30	40	50	Depth	ž	1 2
1		-2	5.27-	-0.40-	-0.40		SILT	d -brow∙	-SILT, soft (Topsoil)									:				
	1.	{·	-						sandy SELT,	1	,		2	5			· · . ·	· ; .	· · · ·	1-	1	
	2			3.05			SILT	brown	soft, fine to medium grained , with some Clay	2 -			· ·	٠		- · ·		 		2-		
l	3] ,	2.22		3.45				. 	3-		٠.			[.	• : •				3 -	· ;	l
	4	Г	1.42	0,80	4.25	<u></u>	SILT .	greyish brown	clayey SILT, with some fine sands	4										4	 	
		_	0.87	0.55	4.80		SILT	bisck	lake processed		7	8	. 8	23		_ >		- :		-		1
	5	1	9.67	1.20	6.00		GRAVEL	broivnish dark grey	SAND to GRAVEL, fine to medium grained, highly weathered, old river deposit	S	11	12	14	37		· • •		*	· <u>-</u> -	\$ -	_5	
İ	6	T	8,67	1.00	7.00		SAND	brownish dark gr ey	sity, gravelly SAND, fine to coarse grained, old river deposit	7-	13	14	16	43		<u> </u>		- >	·	7-	_6	
	,	Γ	7.77	0.90	7.90		SAND	dadt Jey	SAND (old river deposit), fine to medium grained	(13	13	14	40				-\$-		-		\parallel
-	8	Ť		135			CLAY	#at:	completely to highly weathered (derived from weathered	*	11	11	14	36	- : -			√ _		*-	_8 8	μ
	9	1	6:42	• •	925	7.7	STONE	grey	Pumice Tuff)	9-	12	15	. 17	44	· · ·	<i>.</i> 	· · ·	_ \	· · · ·	9 -	9	Ц
	10	1.		 2.65			SANDY	,ellow-sh	completely to highly weathered, fine to medium grained,	10 -	12	. , 13		40						10-	10	
!	111	1					TUFF	light prown	poorly cemented (derived from weathered)	11-		- •						/		11-	. ii	
	12		3.77		11.90	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			Pumice Tuff)	12.	10		- 11	31					 —	12-	12	
ļ						****	SAND.	lye-bowist	moderately weathered, fine to medium grained,	13	11	11		35				*	·	13	_	
	13		`	2.80			STONE (Tuffaceous)	prownsh grev	poorly to medium cemented,		12	14	14	40	-			- 7		-		-
	14	1	- 0.97		14.70	*****			Fe stained	14	17	16	17	50			 ·	 -	· • -	1	14	H
	15	-	0.67	030	15.00	Tiîtî	SILTSTONE			15	18	30		98			_	· ·	 - 	15-	15	-
	16	+	,	- 1.30			SANDY TUFF	hieffawish jereweish grey	fine to medium grained, medium cemented	16-	٠.									16	16	
į	į . 17		8.87		16.30 ÷17.90	TÜÜ	51£T	1 500	lake processed	17	19	32	50 8	28						17		-
	:			1.50			CLAY STONE	dark grey	moderately · weathered,											18		
	18		7.1 <u>7</u>	ļ	18.50		370112	o'acx	fine grained highly to moderately	18				'								
_	19	-				()		tark grey	weathered (derived from weathered	19	1			.						19		
	20	,]			29.00			<u></u>	Pumice Tuff)	20-	ļ									20	-	
	21]						on which	highly to moderately weathered, fine to medium grained,	21	┨.									21	-	
	22			650			SAND STONE	dark grev	medium to well camented (derived from weathered	22	.	-	= -						e e f	22	1	
	23				23.00		(Tuffaceous)		Pumice Tuff)	23	ļ									23		
•		ĺ				\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1	green sh	highly to moderately weathered, fine grained,	24				.						24		
10.10.LA	24		0.67		25.00	, , , , , , ,		j÷)	medium to well cemented (derived from weathered Pumice Tuff)									<u></u> -		25-		
	25				1	1																-
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	27									27	1	- •		1						27	1	
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	29	,		j.		'				29	. ∤									29	· .	

,,,	· ioic	No.∞	8	IG-10)			Elevation			+	26.3	63 ı	Date			01.	08.94 to	03.0	8.94	
C3t	ion		K	p. Pas	ir Ceu	ri		Groundwater Elevation 6.30 m	bek	w a	toun	d su	rfac	Surve;	ed by			Dadan	g Ro	5282	
Ų	Ç	LASS					ION	OF MATERIAL			STA	ND		PENETR	ATIO	N TES	TING		_	AMPL	_
		ilon	FT. 10455	_	rofile	Classification		Description	h		of Blows 10 te	20 (e	Vakue	þ	Numb	i-Value ier of 8 im Pene			□ S ■ C	hinwall plit Ban Jenison	rel
	200	Elevation	Stratum Thickness	Ze pt	Soil Profile	Gess	Colour	Desci	Depth	10	20 cm	30 cm	ž	10	20	30	40	50	Depth	ě	,
Ī		25.86	0.50	0.50		SILT d	·brown	clayey SILT							1	1	· · ·	,			
	1	:	٠.				٠.	silty CLAY,	1 -		1	,					-		1		
	2		4.20				ellowish xowers ^c grey	soft, with some fine sand	2 -				17					· · · · · ·	2-		
	3								3 -			. ,			<u> </u>	. : .			3 -		
Ì	4								4		5		17	/	· · ·				4		
.]	5	21.66	 	4.70				Decomposition Sand,	s -	. 3	3		11	->					5 -	4	Γ
		20.56	1.10	5.80		SAND	grey grey	v.soft, fine-med. grained poorly cemented		1	ì	1	3	*-				-	_	5	-
	6-		1.90	6.30	G.W.	3f17#	stownish greensh	completely to highly	•	15	17	21	53		<u>:</u>				•	_6	-
	7	18.86		7.50			- grey		7	17	20	 31	68						7 -		Ĺ
	•								8-		28	 50	97		· · ·	- ·	 	 - •	8 -		-
	9		3.30			SILT	grey grey	highly to moderately weathered.	٠,	'	:								9.		
-	10							Pumice	10.										10		
-	11-	15.56		10.80		SAND			ļ,,										11-		
		14.76	1.30	12 10		STONE	l ghi	highly to mod, weath, fine grained, poorly cemented	12										12		
	12	17.20		12.5																! !	1
	13		2.90			STONE	greenish dark	moderately weath, fine-medium grained, med well camented	13	1	- · •	•		1					13		
	14-					(Inteceous)	5 ⁷² 7	med welf comented . ਚ	14	1									14		
	15-	11.36	-	15,00	} *****				15-				-	ļ	· · ·			· · · · · · · · · · · · · · · · · · ·	15-	<u> </u>	t
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			8	8G-11	ľ						+	37.3	111 i	Date	•		2	7.06.	94 to	29.0	6.94	ŀ
οċ	otion		K	p. Da	ru - Ti	garaksa		Groundwater Elevation 9.60 m	bek	ow ar	oun	d su	ufac	Surv	eyed b	У			Dadan	ı Ro	sana	
		CLAS	"				TION	OF MATERIAL			_			PENET	RATIO	I NC	STIR				AMP	
•		Elevation	Stratum Thickness		Soll Profile	Classification		Description	Ę	i	of Hows 10	20 to 30	Value		Nur per 30	N-Vai nberol) cm Pe	Blows				hinwall plit Bar Jenison	l Tubi nel
ž	Scale	3	§ ₹	Pepth		ð	Calour	ř.	Depth	cas.	20 (m	(19)	ź	10	20	30	4	9 !	50	Depth	ż	
****		36,91	0.40	0.40		SILT - 0.60	d-brown	Торзой											,			
	1		1.60	G.W.		CĹAY	brownish green sh	silty CLAY, plastic	1.		- :					•	- • •	• •		1		. .
46.00	2	35.31		2.00			grey		2.	. 2	. 2	. 2	. 6	· *	<u> </u>					2-	1	Ļ
3		-	ĺ												٠	*						
	3					CLAY	he record	CLAY, soft, derived from	3.		•	•		/		• • •				3 -	۰.	1
	4		3.25				gr ey	decomposed Punice Tuff	4.	. 3.	. 5	8	-16	}. —	D		***	 . ;		4-	2	+
į	5	1 2200							ا .			- ,								ا .		
	_	32.06	0.70	5.95	ŢŢŢ	SILTSTONE (tuffaceous)	green sh	fine grained compl highly weath.										<u>`</u>			3	
	6	31.06		6.25	\$. \$. \$ \$! \$!	SANDSTONE SILTSTONE		fine to coarse grained	6	1.2	. 19	. 25	56	·	−÷	, <u></u>	-17F)	<i>→</i> +	÷ .—	6	. .	T
. CO. 54	7.	30.31	0.75	, 7.00	ؙڹؚٳڹؙڹؙ	(tuffaceous)	dark gray	highly weathered	7.										:	, -		
8	_		150			SAND- STONE	Care diak Gare diak Green ey	fine to medium grained poorly cemented		17.	24.	. 37	73]		. .			·		_4	-
Ì	֓֡֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֓֡֓֡	28.81	0.40	8.50	i vi vi vi vi vi vi vi vi vi vi vi vi vi	(tuffaceous) SILTSTONE	biack	highly weathered highly weathered	•		-									•]		ĺ
	9.	28.41	1.10	8.90	*****	SAND- STONE	greensh licht	fine to coarse grained poorly comented	9.		- •	٠						• •		9-	 	
•	10	27.31		10.00		(tuffacecus)	to stark gray	highly weathered	10	15.	22 .	29	66		. . - -	—	. .) — , —	10-	_ 5.	
				:	000	PEBBLE	greensa to	fine to coerse grained poorly cemented,	l	1									}			
	11	1	2.00) () () () ()	SAND- STONE	da k	some fragments of Quartz, Andesite (Ø 1 cm)	11-	13	20	20	53					-	·	-11 -	_6	-
	12	25.31	<u> </u> 	12.90	000			Quinty Milderite (2-1 cm)	12 -										!	12		
27.00	13		250				grev.	coarse grained,	13	16.	21.	25.	62	 			. .	-) –	13		-
			230	<u> </u>		SAND- STONE		poorly cemented highly weathered					ĺ	1					ļ			1
	14	24.31		14.50		(tuifaceous)			14	17	 24	28	69		 			 — ⊣	· · · · · · ·	14 -	_8	
	15-	22.3)	0.50	,15.00	. V.		3.64	slightly weathered, well comented	15.							·	<u> </u>			15-	· · · · · · · · · · · · · · · · · · ·	÷
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	JOIC.	No.	BE	3G-12				Elevation			+:	36.9	53 ı				05.0	07.94 to	07.0	7.94	
cati	OR.		Ci	calen	gka R	iver		Groundwater Elévation 0.50 m	belo	w gr	oun	d su	rfac	Sur	veyed b	У		Ardia	n Na	zmuł	
į	Ç	LASS					TION	OF MATERIAL			STA	ND		PENEL	RATIO	ON TE	STING		_	AMPL	
	Scale	Elevation	Stratum Thickness	Depth	Soll Profile	Classiffication	Colour	Description	Depth		of Nows 10 to 20	20 10 30	-Value			N-Valu nber of) cm Per	-		. os	hinwall plit Baro tenison	ei
4	2					₫	<u> </u>		å	CIR	CPR .	CR	ż	10	20	30	40	50	å	ġ X	•
	1 -	36.55	0.40	0.40 G.W.		O.50	_v elicavish	sandy SILT,	1	2	 2	3	7	- \	 - -		: 	·	1-		Ĺ
	3		4.05			31L 1	brown	derived from decomposed Punice Tuff	3-	. 3	· s	. 5	· 13			1			3-	_2	1.
	5-	32,50 30.95	1.55	4.45 6.00		CLAY	dark brown	sandy, gravelly CLAY, plastic	5	17	19 	21	57 72	- <u></u> .	<u> </u>	. <u></u>	·	-	5	_3	
	7-		250			SAND STONE (Tuffaceous)	dark grey	completely to highly weathered, fine to medium grained	7 -	25	38	35	88	 		 - <u>-</u>		- -	7-	 	
-		28.45	.080	8.50		CLAY	Jack	well cemented, mod weath,	9.												
	9-	<u> 27.65</u>	2.00	930	222	. CLAY . STONE (Tuffaceous)	jiey' 	with some Sand-St. Layers silty CLAY, low plastic highly weathered, derived from	10			-	,						10-		
1	11-	25.65 24.95	0.70	12:00		SILTSTONE (Tuffaceous)	bisck	decomposed Pumice Tuff lots of wood deposit Sand and Clay, mod. weathered,	11 - 12 -										11-		
	13	23.35	1.60	13.60		STONE (Tuffaceous) SILT STONE	zakgr a y	with some Quartz and young Coal layer highly weathered,	13 14										13 -		
Ī	16	21.95		15.00	1111	(Tuffaceous)		(Lignite)	15- 16-				-				·		15- 16-		-
1									17 18										17		
	19-																		19	İ	
-	21 -					1			21											·	
İ	23 - 24 -						-		23										23		
	25 - 26 -								25 26			_					-		25		
	27 -	-																	27		
	28 - 29 -								29				ľ								

			В	BG-13	,					not	2421	labi	e ye	t			01.0	8.94 to	03.0	8.94	
.00	ation		Ci	mant	uk Riv	er		Groundwater Elevation 6.00 m	belo	ow ar	oun	d su		Surveye	d by			Dadan	g Ro	sana	
		CLAS:	_				TION	OF MATERIAL						PENETRA	1101	TES	TING		5	AMP	ĮΣ
•	•	Elevation	Stratum Thickness	Depth	Soll Profile	Cassification	Colour	scription	pth		of lows 10 to 20	20 to 30	Value		Numb	-Value er of Bi n Pene			۵s	hinwali plit Barr Jenison	rel
	Scale	3	13. TH	8	Š	ð	ટ	8	2	CTR	cm.	СП	ż	10	20	30	40	50	å	ź	1
		31.87 31.37	0.50	0.50 1.00		CLAY SILT	di-brown yellowish Librown	silty CLAY with some roots sandy SILT, fine-grained										,		. !	
	2-		2.00			SAND STONE (Tuffsceom)	yellowish brown	highly weathered, fine to coarse grained, poorly cemented; derived from decomposed Punice Tuff	2	12 16	15	16 20	43 55		- - -		- 💠		2-	1	
	3 -	29.37		3.00		SAND	tewestor.	highly to mod, weathered, fine to coarse grained,	3 - 4 -	19	25	40	84	· · · · · · · · · · · · · · · · · · ·	 		· · ·	• · · · · · · · · · · · · · · · · · · ·	3 -	3	
	5 -	26.17	3.20	6.20-		STONE (Tuffeceous)	greensh , prowa	poorly cemented	5 -	18	28	35	81				, 		5	5	
•	7-	25.87 24.37	0.30 1.50	6.50 8.00		CLAYSTONE PUMICE TUFF	grey greensh	highly to mod, weathered medium weathered, fine to coarse grained, well cemented, with some Pumice	7-				- •		·. •				7-		
	3 -	23.77	0.60	8.60		STONE	green sh grey	moderately weathered with some lights intercalations moderately weathered,											•	 	
	9- 10-	21.87	1.90	10.50		PUMICE TUFF	greensh grey	fine to coarse grained, medium to well cemented with some Pumice (et 8.75 black Org. Metter)	10-										9 - 10 -		
	11 -	21.47	2,10	10.90		CLAY STONE	allah response response	fine grained, well cemented highly weathered, derived from decomposed	11 - 12 -										11-		
į	13-	19.37 18.87	0.50	13.90 13.50		SANDSTONE		Pumics Tuff MW, fm. grained, w. cem.	13 -			-							13-		
•	14-		2.45			CLAY STONE	lellowish breanish	slightly weathered, derived from decomposed Pumice Tuff	14 ·				-						14-	 	
1	16-	16.42 16.07	0.35	15.95 16.30		SANDSTONE	, पुंच १३३ (१/२४	MW, well camented	16-									• • -	16-		
	17-	13,77	2.30	18.60		CLAY STONE	grey	moderately weathered, 16,70 - 16,80 O.M. black (Lignite)	17 - 18 -				,						18	· ·	
10.00.00	19-	13.37 12.87 12.37	9.40 9.59 9.59	19.50 19.56 29.00		SANDSTONE CLAYSTONE SANDSTONE	Taley September	MW, well come tuffaceous MW derived from decomposed MW, figs, well com. 1,000	19 - 20 -				· ,	,,	. , ,				19 - 20 -	· · ·	
	21 -					. , .			21 - 22 -										21 -		
	23 -								23 -										23 -	-	
!	24								24-										24-		
	25 -	-	-						25 -							•			25 -	į	
	26-								26		•								26 -		
	27 - 26 -								27 - 28 -	,			, ,			•			27 -		
			:																	•	

ore !	Hole	No.	88	G-14				Elevation		+ 31.4	411 a	Date	28.0	7.94 to	30.0	7.94	
×at	ion		Ci.	mantu	L Div			Groundwater Elevation	belo	w ground su	urtace	Surveyed by	y .	Dadang	, Ros	iana	
	7	LASS				-	TION	OF MATERIAL		_		PENETRATIC	N TESTING		5.	AMPL	ĘŞ
		Elevation	2		Soil Profile	Classification		cription	t)	Number of Blows 0 10 20 to to to	Value	Num	N-Value nber of Blows cm Penetration		© Sp ■ De	inwall dit Barr enison	el
	Scale	Elevi	Stratum Thickney	Depth	Soli	ð	Colour	Š	Depth	10 20 30 cm cm cm	z	10 20	30 40	50	Depth	2	ķ
		30.71	0.70	0.70	HIH	SILT	dark brown	clayey SILT, w. Roots		i							
	1-	29.41	130	2.00		CLAY	dark brown	silty CLAY, very soft - plastic	1	2 1 1	4	 	-	·	1 -	_'	
	3 -	28.41	1.00	3.00		SILT	grey dark brownish	sandy SILT, fine to coarse grained w, Organic Matter	3 -	2 2 2	6	\frac{1}{2}		· <u></u>	3	_2	
	4-		2.60	G.W. 4.00		SAND	vellewish prownish dark grey	sity, gravelly SAND fine to coarse grained old river deposit (Gravels of Sittstone,	4	3 2 3	8			· — —	4 -	_3 _4 	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	6-	25.81	1.85	\$.60		CLAY	greenish dark	max # ~ 5.0 cm) sifty CLAY, soft - plastic, highly weathered.	6	2 2 2	10		·		6-	_5 _6	
*	8-	23.96	2.55	7.45		CLAY	selfow sh brownish	sandy, gravelly CLAY, fine to medium grained, max = ~3 cm.	7 8-	4 5 4 2 2 3	13	-) -			8-	 _7 _8	-1
PK. 70.67	10-	21,41	1.00	10.00		CLAY	greenish	(8.6 - 8.7 Limestone, carbonat, clastic)	9 - 10 -	2 3 3	8	-	·	· · · · ·	9 - 10 -	_9 _10	
-	11-	20.41	2.80	11.00		SAND	gray yellowish erownish	silty, gravelly SAND fine to coarse grained, poorly graded (gravels of Sand- Siltstone	11 - 12 -	5 4 5	14	-		· · · · · · · · · · · · · · · · · · ·	11 - 12 -	_11	
	13-	17.61		13.80			şrey	max e ~ 6.0 cm, old river deposit) 11.45 - 11.60 lignite	13 ·						13 -		
D/.V	15-		3.20			SANDY TUFF	del times ight become	highly to mod, weathered, fine to medium grained	15 ·						15-	_12	
	17 -	14.41		17.00				moderately weathered,	17 18	20 25 45	90				17 18		
	19	13.41	3.00	20.00		SILT	greensh prowns grev		19				,	· · · · ·	19-		 -
	21	<u> </u> 							21	1					21		
	22	1							22						22		
	23								23						23	1	
	24	1							24						24		1
	26								26						26	+	ļ
	27								27	, <u> </u>					27	1	
	28			. :.					29	H		, .			28	1 .	
	29								29	,					29	1	

		No.	B	BG-15	;			Elevation		not	949!	labl	e ye	t l	ate			03.	08.94	to 04.	08.94	
Cati	on		Ci	bun»	River			Groundwater Elevation 2.30 m	لمط			4 en	rf»-	Si	irveyed	by				lian N		
	(LASS					TION	OF MATERIAL	ET	- -				PENE	TRA	ION	TES	TING			SAMP	
		Elevation	Stretum Thickness		Soli Profile	Classification		Description	žħ.	0 to	imber of lows 10 to	20 te	Value		N	N- lumbe	Value If of Bi			a 0 s	fbinwail Split Bar Denison	Tubo rel
	Š			Depth		ð	Colour		Depth	10 cm	20 cm	30 cm	ż	1	0	20	30	40	50	Papth	ž	1
	1 -	35.28 34.18	1.10	0.35 1.45		SILT	pickui seqqey	Topsoil sandy SILT, moist, fine grained	1-		• :	-					• •			. 1		·ſ
	2		2.00	G.W.		2.30 CLAY		sandy CLAY, medhigh plastic, soft, very fine grained	2-	 5:	6	7	19 19	-	\$ \$	 	· · · · · · · · · · · · · · · · · · ·	 		2		
	3 -	32.18	1.00	3.45		SRT.	prownist	sandy SILT.	3 -	4	5	· · 5	14	 —		 	 -	 - —		- 3	3	Ц
1	5	31.18	1.60	4.45		CLAY	grey - brown	moist, soft, very fine grained sitty CLAY,	5 -	S	, , ,	6	16		1		 	 	 	- 5	1 4	
	6 -	29.18	2.00	6.45		5.60		soft, fine grained, with interculations of Sand	6-		5 18	9 14	18		à 	_				6	5	
1	7	, .	3.00			SAND		completely weathered Sandstone with intercalations of Claystone	7	21		45	99	 			 	·	•	,		
	9		3.00			SAND	grey	(laystone (dayey SAND, fine to medium grained, poorly cemented), fots of mollusca fossils	9 -	30	 35	47	112	 		 - .	• · · · · · · · · · · · · · · · · · · ·	.'. -	-	- 8	8	
	10-	26.18		9.45		ČLAY		Claystone highly weathered, fine grained	10 -	37	42	43	122		-	- - .			• • • • • • • • • • • • • • • • • • •	10	- 9 - 10	
1	13 -	24.18	2.00	11.45		STONE	grey	with intercalations of Sandstone, rich in mollusca fossils	11	15		24	63		-					- 11	<u> </u>	<u> </u>
	12	22.28	1.90	13.35		CLAY STONE		completely weathered, very fine grained, poorly cemented	12 - 13 -											12 13		
	4-	21.63	0.65	14.00	王.	LIME/CLAY STONE CLAY STONE	dirk"	Mix of Clay-, Limestone Gravel of Limestone, fresh very fine grained, poorly cemented	14-							٠.				14	-	
1	15-	20.83 20.43	0.40	14.89 15.20		SANDSTONE		CW, poorly cemented	15											15		
İ	17-			 		CLAY STONE		completely to highly weathered,	16-			· ·								16	-	
1	8-		4.80					very fine grained, well cemented	18 -											18	-	
1	19-	10.63		20.00			 		19-			-								19		
1	20-	15.63		20.XI					20 21											20		-
	22-								22 -				 							. 22		;
	23 -							,	23 -			-								23	* · · · ·	
	24								24 - 25 -											24		
į	26		,						26 -											26		
2	27 -					- , -			27 -							٠,		٠.		27	- · ·	
-	28				i			. , . , ,	28				<u> </u>					•	-	28		
2	29] 	- "				, .	· 		29-		-				: -					- 29	1	

DOLL	нон е	e No.		BG-16				CIDURIAN INTEG		noi	avai			TĎ	abe			31	.07	L LO 94 to	01.0	8,94	
loca	ation	-	•			·····		Groundwater Elevation						5	rveye	d by				Ardia:			
		1145			Rive		TION	2.10 m	bek	ow gi			•	PENE	TRA	TIO	N TE	STEN		Argiai		AMP	
		Elevation	Stratum Thickness		Solt Profile	Cassification		Description	pth	0	umbe of Hows 10 to	r 20 10	Value			N Numb	-Valu	•				hinwall plit Ban enison	Tube rel
o te	Scale			Depth		ð	Colour		2	10	20 cm	30 cm	2	1	o ′	20	30	40	5	٥ ,	pe D	ź	Ş
***************************************	1-	-35.12	3.20	0.25 G.W.	<u> </u>	SILT	dark brown :eddah	Sandy SILT, moist, soft, fine grained	1 -	2	3	3	8		 	 	-; · -; ·	 	 	 	1 - -: 2 -		
***************************************	3 -	31.92	•	3.45			brown		3 -	3	3	3 4	 10		 \	: -	. : 	· . 	· .		3 -		
6	4,	30. 9 2	- 1.00	4.45		- SILT	velicwish brown	sandy, gravelly SILT, fine to coarse grained	4-	٠. چ	5	 9	19	· · ·		\$	1	 		· ·	4		
31.07	5	29.92	-1.00	5.45		· CLAY·	gr ay brownish	sandy CLAY, very fine grained Claystone	5	13	16	28	57	:	· ·	· -			- →		5 -		
	7-	27.92	2.00	7.45		CLAY STONE	dark grey	completely weathered, very fine grained, well cemented, with intercalations of Sand stone	7	18	 29 50	39	86 118	· -	 				- → - →	 	7-	_6 7	
***************************************	8-	. 26.23	0.65			SAND STONE	è.ex	completely weathered, fine to medium grained, poorly cemented, with intercalations of Claystone, rich in feramini fera fooils. Completely to highly weathered	8-	\$0 \$0	·:	:	50 7 50 10	. <u></u> .	<u></u> .	<u>.</u>		<u></u>	- -	 	8 9	8 .و.	٩
H1	10-	25.57	1.90	9.80		CLAY	dark	Claystone completely to highly weathered,	10 -							· ·		• •			10 - 11 -		
	12-	23.67	0.70	11.70		STONE CLAY STONE	reddah grby dank grby	very fine grained, slightly weathered, fresh Gravel of Limestone completely to highly weathered	12-							. ,			٠.		12 -		
	14-	21.27	0.80	13.30		SAND STONE	dark	CW - HW,, fm, grained, well cemented, rich in Feraminifera fosits	14-												14		
01,08,94	15-			, -		CLAY		completely to highly	16-										• •		15-		
***************************************	17-		\$.90 [°]			STONE (Boiong- ments Formation)	gluit grev	Weathered, Yery fine grained, Well comented	17- 18-												17		
···	19 -	15.3/		20.00		• •		· · · · · · · · ·	19-										٠.		19-		
	21 -								21												21 -		
	27-								22 -												22 -		
	23 -			, .		. , ,			23 -										,		23 -		
	24								24-		٠									٠	24 -	• • •	1
	25 -								25 -		: •						•			•	25 -		
	26 - 27 -								26 -							- ·					26-		
	28 -								28												28-		
	29		 - •						29.												29 -		

ore	e Ho	le No.	B	8G-17	,			CIDURIAN INTEG		+ 37.0	670 i	Date	23.07.94 to	24.07.94
oc.	Hio	ή		i=	euri R			Groundwater Elevation		ow ground si	urfac.	Surveyed by		n Nazmul
		CLAS					TION	OF MATERIAL	Jek			PENETRATION TE		SAMPLES
Date	Scale	Elevation	Stratum Thickness		Soll Profile	Classification	Colour	scription	Depth	Number of Blows 0 10 20 to to 10 20 30	- Value	N-Valu Number of per 30 cm Pen	e Blows etration	■ Thinwall Tub □ Split Bairel ■ Cenison
3	Š	37.27	0.40	0.40	S	CLAY		A CAY (fares)	8	cma cma cma	z	10 20 30	40 50	S Z
		37.27	0.40	0.40		CLAT	piowi	sandy CLAY (Topsoil)						
	1	1							1 -	3 4 5	12	- -		
	2	 	4.05			 SILT	dark brown	sandy SILT,	3-					2 2
	3						to to	fine grained	3 -	3 3 4	10			
					G₩					3, 2 4	9	→		
	*	33.22		4.45	文	4.30			4-	1 1 1	3			4 1
	s								5 -					s
	6		3.00	 		, CLAY ,	, i ^y 57 ,	sandy CLAY, yery soft,	6-	1 1 2	4	Ţ		
								fine grained	_	2 1 2	5	-		- 6
	7	30.22		7.45	22.2		ļ		7.	1 2 2	5			71.5
	8	29.22	1.00	8.45		SAND	Stata Pid wulzy	silty SAND, fine to medium grained	8-	rsor i reer i reer	50 10	· - · - · - · - ·	<u></u>	8 8
	9							sitty, gravelly SAND, fine to medium grained,	۶.	35 50	85	. <u></u> .		9 9
			2.00			SAND STONE	grev	completely weathered			20 50			10 10
	10	27.22		10.45	````			Sand stone) HW, very fine grained, with	10	501 1	10	, <u> </u>	~ · · · · · · · · · · · · · · · · · · ·	10_1
	11	26.22	1.09	11.45		STONE	· grey ·	interculation of Sandstone, rich in Foram Fosils	11-					11-
	12]	1:15			SAND	ç:av	silty, fine-medium grained, mod. weathered, rich in	12-					12
	13	25.07	-	12.60		3,000		feraminifera fosils	13					13
	,,] 	completely to highly	"	ĺ				
	14		3.40			CLAY STONE	grav	weathered, fine grained,	14 -					14-
	15	-				1,0xc		weak rock	15					15
4.7	16	21.67	<u> </u>	16.00					16-					16-
į	'	20.87	0.80	16.80	:::::	SAND STONE	7/8y	silty SAND, mod. weathered						
	17	20.12		17.55		CLAY STONE	5.64	completely to highly weathered	17-					17
	16	19.97	=0.15	17.79		LIMESTONE	\$*4 ; E.	compact, stratified, fosils of molusca and corals	18	-	-			18
***************************************	19		2.30	ļ.		STONE	37	highly weathered with some coral/fosil	19.		.			197
7		17.67		20,00							ļ ļ			
	20	17.07	İ	20.00	11111			<u> </u>	20-				· · · · · · · · · · · · · · · · · · ·	20-
!	21	ļ	: •						21 -					21
	22								22 -			·		22
	22								23.					23 -
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	26	ļ) ,,						26 -			·		26
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	27	1.							27 -					27-
	28	1					i !		28 -					28 -
	29								29.					29
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	Hole			STUD BG-18		CILL	JNG-	CIDURIAN INTEGR Elevation	RAT	ED WATER + 37.0		Date	DRILL LO 26.07.94 to		7.04	
)CI	tion							Ground water Elevation		· · · · · · · · · · · · · · · · · · ·		Surveyed by	20.07.94 (o Ardia			
		11 A S C			euri R		TION	4.70 m	bek	ow ground su		PENETRATION TE			AMPL	33
	Scale	Elevation	Stratum		Soll Profile	Classification	Colour	escription	Depth	Number of Slows 0 10 20 to to to 30	- Value	N-Valu Number of per 30 cm Per	t Blows	■ I	hinwall plit Barr Jenison	Tube
-+	Š	36.60	0.40	0.40		SILT	U.	sandy SILT (Topsoil)	-	CIM CIM CIM	-z	10 20 30		+°	<u> </u>	۴
	1-	35.00	1.60	2,00		SILT	yellowish 1 brówni	sandy SILT, soft, moist, fine grained	1 -	2 2 2	6	<i>f</i> = = =	· · · · · · · · · · · · · · · · · · ·	2-	1] [
	3		3.45			SAND	brownish g:ey	sity SAND, fine to medium grained	3 -	1 2 2	5			3-		
	5 -	31.55		5.45	G.W.	-4.70			5 -	1 1 2				5		
	7-	29.55	2.00	7.45		CLAY	grey	sandy CLAY, soft, fine grained.	7	2 2 3	7			7	_ ⁶	
	9-		-3.00			SAND STONE	greyish to blackish	clayey SAND, completely weathered Sand-stone; rich in foraminifera fosils	9-	19 21 22 	62			9-	_8	
	10-	26.55	i.55	10.45		CLAY	J:47	highly weathered, with intercalations of Sand stone,	10 - 11 -	24 38 45 32 50	107 82 20			10 - 11 <u>-</u>	<u>io</u>	-
	12-	25.00	1.10	12.00		SAND STONE	Ç'ey	rich in foraminifera fosils sitty SAND, highly weathered, rich in foraminifera fosils	12 - 13 -					12-		
١	14-		3.90			CLAY	 }	highly weathered,	14-					14-		
	16					STONE	d.çA	very fined grained, weak to medium weak, with some coral foul	15 - 16 -					16-		
	17- 18-	20.00	'2. <u>2</u> 0	17.00		. SILT STONE	giey	silty SAND, fine grained, med. weak, rich in foraminifera fosils	17					17-		-
	19	17.89		19.20	ЩЦ	SAND		and some Pyrite	19.		•			19-		
4	20	17.00	0.80	20.00	 :::::	STONE	1/ev	highly weath, fine grained, weak to medium weak rich in foraminifera fosils	20-					20-		-
	21-	-					-		21 -					21 -		} -
	22-					 i			22.					22 -		
	23-								23					23 -		ļ
	24						'		24					24		-
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lion						· · ·	Groundwater Elevation		·				Surveyed by				
	77.67					TIO II	OF HATERIAL			. 7	1000						
										umbe of		•	N-Valu Number of I	e Blows	■ 2 2 1	hinwall Elit Bar	f fub rrel
SG			-	Soil Pt	-			Depth	10 CF	20 cm	30 cm	N - N	10 20 30	40 50	Depth		,
ŀ			0.40	HHI						,					1		
1	36,17	0.60	1.00	1111	Silt	Erc. An	sandy SILT	1 -				.			1		.
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		8.45				-ed-sh	sandy CLAY		5	4	4	13	├ �		- -		 -
5 1				.	, CLAT	crò⊷ń	with some gravers (max or ~ 1.0 cm)	5 -				,		· · · · · ·	5	6	
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}	27.72		9.45						7	7	7	21			_ -	_10	
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"]		4.00			CLAY	Srown	sandy CLAY	11-		15	16	40			_ ''-	_12	
12				4-4			saudh Mri	12-						[12-		1
	i	İ			į				10)	13	16	39		- 	- [-:	_13	-
13	23.72		13.45				• • • • • • • • •	13-	10 10			50 10	·· <u>·</u> · <u>·</u> · <u>·</u> ·····	<u></u>	_ 13_	_14	-
14		1.55			SAND STONE	orswn	completely weathered,	14-							14-		
15	22.17	- à xċ	15,00	****				15 -				[]			15-		
Ì	21.92	0.75	15.25	* .*.	PUMICE	ştu 2'0'n a	file grained, crystal fulf containing guarz, mice, homblehda, and								-		
16		0.75			SAND-ST.	i gar	mc. grained, locally with	16-			٠.				16 -		
17	20.42			***			interculation of tuff. Clay	17.							17		l.
		1.25		0.0	SAND	brown.	Pumice with mestrix of	Ι΄,									
18		_0.25_		200	70HE	graw [†]	Ste gared, measure semented	18 -							18-		
		0.75	•	000	CONGLOM.	fack prowa	compact, clasts, mostly Andesita with tuffaceous										į
' 7				~ ~ .		<u> </u>	fine - coarse grained,	"]'"		
20		1.90		งรู้งรู้ง _ไ	PUMICE TUFF	3N Disar	mod, weathered.	20-			٠.				20 -		-
	16.27		20.90		Í		Ø 0.3 mm, Pumice, Andesite	1	1		ļ				-	1	1
21 -		0.40 0.10	21,30		SANOST (36-1)		free give ed, well converted	21 -		•	٠.				21 -		-
22		0.25	21.85	5. X. X.	SANDST (707) CONGNOM		fine stained, strong	22-							22		
-	15.07		22.10	000	SANOST (CUM)	G.eh .	Compact, clasts, mostly									 	
23 -	13.87	- 29	23.30	0.0.0 ميضم			sand mastrix, well bedded, rounded	23 -				-			23 -	ĺ	-
, [SAND		medium - coarse grained,	,							,,		
-77		130			STONE	3.4	locally with intercalations	[**]							[]		
25	12.17		25.00	10:0:4		<u> </u>	of tuffaceous Clay	25-							25	<u> </u>	+
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26		· · ·					, ,	26-							26 -		
27-			, .					27 -							27 -		
28							,	28 -							28-		.
ı	- 1																
29							İ	29-							29	1	
	970S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 27	36.77 1 36.17 2 36.17 1 36.17	\$ 13 23.72	### CISACATION ### ### ### ### ### ### ### ### ### #	Cisadane Riv Cisa	Cisadane River CLASSIFICATION AND DESCRIF CLAY C	CLASSIFICATION AND DESCRIPTION 1	CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLAY	CLASSIFICATION AND DESCRIPTION OF MATERIAL 1	CLASSIFICATION AND DESCRIPTION OF MATERIAL 10	CLASSIFICATION AND DESCRIPTION OF MATERIAL 1	CLASSIFICATION AND DESCRIPTION OF MATERIAL 1	CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION AND AND AND AND AND AND AND AND AND AN	CLASSIFICATION AND DESCRIPTION OF MATERIAL STANDARD PUNISTRATION IS Number of Bidows Standard Standa	CLASSIFICATION AND DESCRIPTION OF MATERIAL CLASSIFICATION AND DESCRIPTION OF MATERIAL STANDARD PENSISATION ISSTING No Pension No Pensi	CLASSINICATION AND DESCRIPTION OF MATERIAL CLASSINICATION AND DESCRIPTION OF MATERIAL CLASSINICATION AND DESCRIPTION OF MATERIAL CLASSINICATION AND DESCRIPTION OF MATERIAL See See See See See See See See See Se	CLASSIFICATION AND DESCRIPTION OF MATERIAL STANDED PENETRATION ISSUED Property P

	Hole	•	8	8G-20				Elevation			+ 2	29.8	353	m j	ate			11.	37.9 4	to 13.	07.94	•
X.	rion		C	isada:	ne Riv	er		Groundwater Elevation		•			non		urveyed	by			Ar	lian N	zmu	1
J		(LAS					TION	OF MATERIAL			STA			PEN	TRA	ION	11451	ING			SAMP	LES
						Classification		pton	4	l	imber of lows 10		Value		N	N-1	/alue r of Ble	:		0 0	Thinwal Split Ba Denisor	ll Tub inel
	SCale	Elevation	Stratum Thickness	Depth	Soli Profile	Cass	Colour	Descri	Depth	10 cm	20	30 cm	A-N	1	0 :	20	30 -	40	50	a tg	è	
		29.45	0.40	0.40		CLAY	gark prown reddish	Topsoil : sandy CLAY, soft												7		-
	1					, .	to to	sandy SILT,	1	٠. ٠							٠		·	- 1	٠,	1
	2	, .	3.05				Sekwiss	moist,	. 3-			8]						ļ	1.
	3 -		,			SILT	ļ	fine grained	3 -	6		7	18		-+			- '	_		2	1
]	26.40		3,45				sandy SILT,]	4	5.	8	17	_	_		= _=			_ 3	3	-
	4	 _26,15	1.25	4.70				sandy sicr, soft, fine to medium grained	4	27	50		77 20						→	4.	_4	Ŀ
	5	24.85	030	5.00	***	S-ST.(Toff.)		mc. grain, highly weath.	5 -								··			- s	ļ.,	
	6						L	 	6-												1.	
							grey grey				٠			1				•				
	7		5.20			PUMICE	- '	compli to highly weath., * Fragments coarse to	7		,	•				. • •			• •	· · 7·		
	8				****	TUFF	'	pebble, Ø 1 - 2 cm, Andesite, Pumice, Clay	•					,			٠.	• •		. 8	-	}
	9 -				***		 - • •		9					,						. ,	<u> </u>	.
1	10-	19.65		10.20			. , .		10 -					. ,						10		
		19.45	_020	10.40	<u>, 0, 0</u>	CONGLOM.		Rine - coarse grained, well		,					-					"		
i	11 7	` •	1.90	·		PUMICE TUFF	j Syht yeey	bedded, fragments of quartz, mica, Pumice,	11-						·]11-	1	
!	12	17.55		12.30	*,*,*,*			Andeske, Ø ~ 1 cm · · ·	12-								٠.	. ,		12		
	13-	16.05	1.50	13.80	**** ****	GRAVEL	co-n	sandy Gravel, fine to coarse grained max e ~ 3.0 cm sub-engular/sub-rounded	13-						, .					13	7	
	14		1.70			SAND STONE	brown 17	mod. to highly weathered, medium - coarse grained, with interculations of	14-			-								14		1
7	15	14.35	· - ·	15.50		(fulticeous)	, per	tuffaceous Clay	15		• •	٠.				٠				15		
}	16		1.70			FEOOLE	i i i jav	fragments of Andesite, Quartz, med. strong.	16~							. , .				16	-	
1	17~	12.65	,	17.20		SAND		mod. weath., tuffaceous sand matrix	17-						٠,					. 17	 	
	18-				***			Alternation of tuffac, SSt. with Conglomerate	18-													
-			2.80		ج. و. و. م^ن	SAND STONE	grey	SANDSTONE: mod. weath. with intercal, of tuff. Clay												18	Ī	
	19-			19.70				CONGLOMERATE: subrounded, Andeste, Tuff, Ø ~ 3 cm	19-		• •	٠,								19	-	1.
1	20-	9.85	! i	20.00	~~~	CONGLOM	: !	1um, 10 ~ 3 cm	20-			_						·····		20-	1	-
	21 -						1		21 -											21	1	
	22-					,			22 -											-	1	
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	23	.		ŀ			1 · · ·		23-						· · ·		•		•	23	1	
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1	29								29				l							29	1	-

			В	BG-21				Elevation			+ 8.5	503 (Date Ta		12.6	8.94 ta	13.0	8.94	
o⊂a	tion		C	isadar	e Rive	er		Groundwater Elevation Boreho	le lo	cated	insida	a sive	Surveyed	by		Dadan	g Ros	sana	
Ė		LASS					TION	OF MATERIAL					PENETRAT	ION TE	TING			AMPL	Œ
		tion	ATR 110-55	2	rofile	Cassification	*	Description		Num Blo D 1 to to	iber f ws 0 20	Value	N	N-Valuumber of 8 30 cm Pen	e Nows		□ S¢	nowall plit Barr enison	ret [
	Š	Elevation	Stratum Thickness	Depth	Soll Profile	5	Colour	_	Depth	10 2	0 30	Z	10 2	0 30	40	50	Depth	ģ	,
	1 4	7.50	1.00	1.00		GRAVEL	grey to dust	sandy GRAVEL, fine to operse grained, well graded, max & ~ 4cm, sugangular to subrounded	1-								1 -		
	2	60.5	1.45	2,45		SAND	gray to dark ig ty	clayey SAND, fine grained, poorty graded	2-		2 2	5					2-		
	3	5.05	. 1.00	3.45		SAND	brownish grey	gravelly SAND, fine to coarse grained, well graded	3-	3	3 3 · · · · 6 6	9					3	3	
	4								4-		3 3	8		 	 	 	4-	_4	
	5					,		clayay SAND,	5 -	4	5 5	14		 - –	 		5	_5	۲
-	7	• •	\$.00			. SAND .	3.44	very fine grained	7.	4	 5 6	15					6-	_6	IJ
						,			8	4	3 4	11	-	— —. 			7 - 8 -	_7	
	9	6.05		8.45					,	\$ 	6 7	18	├ — <i>-</i> �				9-	_8	
	10-							gravelly SAND,	10-	20 : 50 :	20 30	70 50		 	· · · ·	••••••••••••••••••••••••••••••••••••••	10 -	10	
-	11		5.95			SAND	gr a y	graveny SAND, fine to coarse grained, well graded, max Ø ~ 2 cm	13 -			10		····			11-		
	12-	-						(old river deposit)	12-								12-		
	13								13								13		
	.15.	- 5.90 - 6.50	0.60	14.49 15.00		GRAVEL	dark grey	sandy GRAYEL well graded, max Ø ~ Scm, sugangular to subrounded (old river deposit)			·						15-		
	16	·						(old river deposit)	16-								16-		
	17								17-								17		
	18						ļ		18								18 7		
	19-						; [•			19-		
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	23-							• • • • • • • • • •	23 -								23 -		
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l	27-	•							27 -								27 -		
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3100 GEOS 11-2-33-4-5-5-6-7-10-113-114-115-115-116-117-117-117-117-117-117-117-117-117	13.70 38.65		\$45 5.45		·	Aret Colore Colo	Secundwater Elevation OF MATERIAL Topsol Topsol sandy SILT, soft, fined grained sandy, gravelly CLAY moist in place	4 2 3 4 5 6 7 8 8 5 6 7 8 7 8 8 5 6 7 8 8 7 8 8 5 6 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7		STAN imber of flows 10 20 30 cm cm cm 5 5 5 5 5 5 5 5 5 6 5 5 6 6 6 6 6 6 6	19 16 16 16 16 16 16 16 16 16 16 16 16 16	PENETRATIO Num		G	■ 11	AMPLAMBLE AMPLAMBBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBBLE AMPLAMBBLE AMPLAMBLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE AMPLAMBLE	Tub rel
3 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 16 - 16 - 16 - 16 - 16 - 16	13.79 13.865	S.0.5	0.49 0.49	AND	DESCRIP Understanding CLAY	dark brown	sandy SILT, soft, fined grained 131 per code code code code code code code code	2 - 3 - 5 - 6 - 7 -	6	mber of 10 20 10 10 10 10 10 10 10 10 10 10 10 10 10	19 16 16 16 13 13	PENETRATIO Num per 30	N-Value sber of Blows cm Penetrati	on	1 1 2 - 3 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3	phit Barrison c 2	Tub
1- 2- 3- 4- 5- 6- 7- 8- 9- 10- 11- 12- 13- 14- 15- 16-	38.65	5.05	5.45	Soul Profile	SILT	dark brown	sandy SILT, soft, fined grained	2 - 3 - 5 - 6 - 7 -	6	of forws 10 20 10 10 10 10 10 10 10 10 10 10 10 10 10	19 16 16 16 16 13 13 13 13 13 13 15 16 16 16 16 16 16 16 16 16 16 16 16 16	per 30	ber of Blows cm Penetrati	on	4 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	plit Barrison	rei
1- 2- 3- 4- 5- 6- 7- 8- 9- 10- 11- 12- 13- 14- 15- 16-	38.65	5.05	5.45	4 #05	SILT	dark brown	sandy SILT, soft, fined grained	2 - 3 - 5 - 6 - 7 -	6 	20 30 com com com com com com com com com com	19 16 16 16 13	10 20	30 44	50	3 - 3 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 -	2,	
3 - 4 - 5 - 6 - 7 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 7 - 16 - 7 - 17 - 18 - 16 - 7 - 18 - 18 - 18 - 18 - 18 - 18 - 18	38.65	\$.05	5.45		SILT	dark broken	sandy SILT, soft, fined grained person additional state of the state	5 - 6 -	6 S 	5 6 	16 16 16				3 3 4 3 5 4 5 6 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		
3 - 4 - 5 - 6 - 7 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 7 - 16 - 7 - 17 - 18 - 16 - 7 - 18 - 18 - 18 - 18 - 18 - 18 - 18						protein	soft, fined grained	5 - 6 -	6 S 	5 6 	16 16 16				3 3 4 3 5 4 5 6 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		
3-4-5-6-7-10-11-12-13-14-15-16-						protein	soft, fined grained	5 - 6 -	6 S 	5 6 	16 16 16				3 3 4 3 5 4 5 6 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		
3-4-5-6-7-10-11-12-13-14-15-16-						protein	soft, fined grained	5 - 6 -	6 S 	5 6 	16 16 16				3 3 4 3 5 4 5 6 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		
5- 6- 7- 8- 9- 10- 11- 12- 13- 14-						protein	soft, fined grained	5 - 6 -	\$ \$ 4	5 6	16 16 16				5-		
7- 8- 9- 10- 11- 12- 13- 14- 16-		6.00			CLAY		sandy, gravelly CLAY	5 - 7 -	\$ \$ 4	5 6	5 16				5-		
7- 8- 9- 10- 11- 12- 13- 14- 16-		6.00			CLAY		sandy, gravelly CLAY	5 - 7 -	\$ 4	5 6 	16				5-	_4	
7- 8- 9- 10- 11- 12- 13- 14- 16-		6.00			CLAY		sandy, gravelly CLAY	7	\$ 4	5 6 	16				5-		
7- 8- 9- 10- 11- 12- 13- 14- 16-		6.00			CLAY		sandy, gravelly CLAY		4	\$ 4 	13		· · · · · · · · · · · · · · · · ·		- 6- - 7-		-
7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 16 - 16 - 16 - 16 - 16 - 16	_32.65	6.00	11/45		CLAY		sandy, gravelly CLAY		4 5						- 6- 7-	· · · · · · ·	
9- 10- 11- 12- 13- 14- 15-	_32.65	6.00	11/45		CLAY		sandy, gravelly CLAY		5						7	}	ï
9- 10- 11- 12- 13- 14- 15-	_52.65	6.00	11.45		CLAY		sandy, gravelly CLAY		5	5 4	14				1 ' !	1	ľ
10 - 11 - 12 - 13 - 14 - 15 -	<u>32.65</u>	6.00	11/45		CLAY		sandy, gravelly CLAY	8							- -	-6	-
10 - 11 - 12 - 13 - 14 - 15 -	32.65		11:45				moist in place		i			<i> </i>			8-	ż	ŀ
10 - 11 - 12 - 13 - 14 - 15 -	_32.65		11/45				t	1 .		3 4	10	<i>- </i>			_		-
11-	_32.65		11.45					'	3	2 2	7	4				_8	L
13 14 7	32.65		11.45					10 -							10-	9.	١.
13 14 7	32.65		11/45	7.7					5	4 4	13	- 🌣 -			- -		-
13 -				4				111	6	5 6	17	· · · · /		 	_["-	10	Ļ
147		· · ·		, , , ,		.	completely to highly	12			.	<i> </i>			12		ĺ
147		2.15			PUMICE TUFF		weathered,		5	4 6	1	} — - ∲ -			- -	_!!	-
15	30.50		13.60			DICHA	sandy, gravelly CLAY	13	30.		50 10	· - · - ·		→	_ 13_	_12	ŀ
16 -	30,30	∷0.20≟ 0.60	13.80	V.V.	SST. (tufflec) PUMICE TUFF		Express of Solding Georg.	14								, .	
16 -	29.70 29.40	0.30	14.40 14.70	,,,,,	TUFF	ţ	Mila, Putrice Engraded, glass matternia , quarte					•					
	29.10	1.00	.15.00		GRAVEL (old river	J'ey-sh	sandy Gravel, fc. grained, max ৩ ~ 3 cm, subangular	15 -	, .						15-		
	28.10	1.00	16.00		(old river deposit)		to rounded	16							16		Ì
177	_27.40	0.70	16.70		SAND	Elaca	Sand Decomposition, fine grained, river sedim.]							1		
["]		1.10		, , , , , , , , , , , , , , , , , , ,	PUMICE TUFF	1	Fragments of Andesite, Quartz, Pumice, Ø 1 cm,	17		*					17 -	-	l
18-	26.30		17.80	***			poorly cemented	18							18 -		1
							CONGLOMERATE									l	!
19			•	0 0 0	Alternation		Fragments of Andesite	19-			1				19-		
20			'	200	of	Lypn	with matrix of ruff. Sand, well bedded,	20							20 -		•
				(÷*;;**)	CANIT	biowa	well cemented										
21 -		635		000	STONE (Tuffaceous)		SANDSTONE	21 -			1				21 -		
22 -					and		highly weathered,	22 -			.				22 -		į.
				0.0	CONGLOM		fine to coarse grained, locally with intercalations										
23 -				\$ 6 6 6 F			of tuffaceous Clay	23 -							23	,	
24 -	19.95		24.15	٨٩٩		.		24							24 -		
		0.85			SAND	gesy	slightly weathered, fine to coarse grained, well comented]		•					. -		Ì
25	19.(0)		25.00		SIUME		well cemented	25-	Ĺ -						25-		1
26								26							26 -		
"			•					"		٠					100	·	ĺ
27								27 -							27		-
30	ĺ					}											
28	,	•	٠ . ا	·			· · · · · · · · · · · · · · · · · · ·	28 -					• •		28)
29		ì	- 1			į l		29 -	l		1				29 -		1

ore	Hole	e No.	8	EM-1				Elevation				+ 42.	659	m	Date		06.0	7.94 to	07.0	7.94	
oca	tion		K	p. Pas	iecari			Groundwater Elevation 3.10 m	bel	low	aro	und s	urtac		Surveyed by	, 		Dadan	g Ro	sana	
		GLAS:					TION	OF MATERIAL	Ì		5	TANE			ETRATIC	N TES	TING		_	AMP	_
Dete	Scale	Elevation	Stratum Thickness	Depth	Soil Profile	Classification	Colour	Description	Depth	0 10	to 20	f ws 0 20 5 to 0 30	- Value		Num per 30	N-Value ber of 8 cm Pene	Nows etration	ř.	(as	hinwall plit Ban Jenison	rel
-	Š		0.80		ППП	SILT	3art	clayey SILT	+°	C.F	- C	w cm	2		10 20	30	40	50	۵		-
+5.70.00	1 -	41.86		0.80			brown	with some roots	. 1	1									1-		
	2		1.70				Sien Sien Sien	SHT soft, plastic	2	1	5 	5 5	15						2-		_
	3 -	40.16		2.50		SILT - 3.10			,	1	4	4 S	13	 					3 -	_2	1
			1.75	G.W.		- 3.10	prownish ight grey	'I CIST !			6 1	1 11	28	-		*	—		-	3	1
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j	6	, <i>.</i>	4.25	.		· CLAY · STONE	10000-1	highly - mod. weath.		┧,	 j 1	 .7 .24	52	_	 	· · ·	· · ·	.\	6	6	
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	9-	34.16	1.50	8.50	ŶĮŲ.	SILT	לגי המסינ	mod. weathered,	,	'	4 2	24 30	68					••• • • • • • • • • • • • • • • • • •	9.	9	
	10	32.66	1.50	10.00		STONE (tutfaceous)	dik 3%y	medium hard	10	ļ	0 2	7 29	76		·	·		+	10-	' 	
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e H	ole IV).		BEM-2				Elevation			4	39.	812	m	ùl e		26	. and 27	7.06.9	4	
atio	m			/- D.		Maia		Groundwater Elevation	L-I-					S	urveyed	by	C	Padang	Rosan	<u>. </u>	
	a	155			jab - I AND		HON	0.90 m OF MATERIAL	PER	J∓ g					1201	ON TE				AMP	(£
			22		Solf Profile	Classification		Description	£	ļ	of Blows 10	er	Value		No	N-Valid Sumber of So cm Pe	Blows			hinwall plit Ban Xenison	Tuk rel
Scale		EMANAGON	Stratum Thicknes	Depth	So¥ F	Classs	Colour	Desc	Depth	10 cu	20	30 : cm	> Z	1	0 2	30	40	50	Depth	2	_
	_	.31 .91	0.50 0.40	0.50		SAND SILT	y brown d brown	silty SAND, w. O.M. clayey SILT, w. O.M.											1		
1	1	***	1.10	G.W.		0.90 SAND	dark brown	silty SAND,	1 -	2	2	4	8	-0.	· · · · ·			· · · · 	- 1		L
2	37	.81		2.00	•		1-brown	fine to medium grained	2 -										2-		
3	, .			325	0'0'd		yelow brown	fine to course grained (Ø 0.2 - 1.0 cm)	3			8	22]	2		-	· ·	٦,		<u> </u>
			3.70	323	000	PEBSLE		Andesite, Pumice, Quartz, Sandstone,		21	17	18	56	-			<u> </u>	- -		_4	H
1	'	• •			o`o'a	SAND-		tuff matrics completely to highly	4	17	23	50	90		· · · ·				_ 4-	_5	-
3	}	-			900	• • • •	greensh	weathered	5 -		20		00						5	6	Ŀ
	_	.11		5.70	0,0,0	PEBBLE	Jank	medium to coarse grained	6-	19	30 		99						6	, .	
,	32	.81	1.30	7.00	0 0 0	SAND- STONE		(Ø 0.2 - 1.2 cm) with tuff matrics	7-	50	27	50	97					_ 	- ,		-
'	7	.21	0.60	7.60		SILT- STONE	dark grey black	SILTSTONE (tuffaceous) compl highly weath.		18	27	. 31	85	-				- - -	-[(_8	-
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9	,		2.40			LIGNITE	biack	soft, organic	9-		27		79					ا د د د اهما	٠,	10	
10	29	.81		10.00		<u> </u>			10-	13	- 21	7.4	/9						10-		-
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жa	tion		ĸ	n Ral	oakan		· · · ·	Groundwater Elevation					Non	Surveyed by	Dada	na Ro	sana	
		CLAS:					TION	OF MATERIAL			STA			PENETRATION			AMPL	
	Scale	Elevation	Stratum Thickness	Depth	Sold Profile	Cassification	Calour	Dascription	Depth		of lows 10 to		- Yalue	N-\ Number	falue r of Blows Penetration	\ \ \ \ \ \	hinwall oplit Bun Denison	reŧ
1	ğ	25.41	0.40	0.40	& 	SILT	S	SILI, (Tapsoli)	8	CIR.		CTRI	z	10 20	30 40 50	2	.0.	ا_ا
	1 -	24,71	0.70	1.10		SILT	dint brown	clayey SILT, with some fine sand	1									İ
	i									3	2	2	7	ø		. '-		μ
	2-		2.60	· · ·		SILT	חייניים	sandy SILT, fine to medium grained	2	1	1	1	3	4		2-	2	-
	3 -	22.11		370				very soft	3-		2.		 7	. \		3 -		
	4-	21.21	0.90	4.60		CLAY	Crómáist dark	sandy CLAY, fine grained	4							4	i	Ŀ
١	5-	20.81	0.40	5.09		CLAY	pley vehowish	soft - plastic sity CLAY	5		. S	6	14			5 -		-
	6	19.81	1.00	6.00		SAND	Drownish Dray	SAND, fine to medium grained with some silt	6-		6	7	19				_5	Γ
	7-									3	2	3	8			7-	_6	-
							relicions!	SAND,	7	6	7	9	22			-] '-		ŀ
-			- 4.00-			SAND	Suata puning T _P	fine to coarse grained, (old river deposit)	8	9	11	11	31	·		_ B -	_8	L
	9								9		 12	. 15	38			9-	9	ŀ
	10-	15.81		10.00					10-					A section to the sect	·	10-	<u> </u>	H
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ore	HOR	rlo.	В	EM-4				Elevation			+ 30.	205	mi !	Date	: .		. 05.	08.94 to	06.0	8.94	
жa	tion			p. Ra				Groundwater Elevation 3.15 m		· -			-	Surve	yed by			Dada			
		(LAS		<u> </u>		DESCRI	NOITS	OF MATERIAL					E	13 (8)	ATIO	N TES	HING			AMP	
			22			Classification		Description		Num of Bion 0 10	ber vs 20	Value			Į Numi	Value ber of E	e Nows	-		hinwall plit Ban enison	Tub rel
-	Scele	29.91	Stratum Thickness		Soll Profile	9	g.orcar		Depth	10 20 cm cm	30	2		10	20	30	40	50	Depth	ě	,
	,	28.76	1.15	1.45	,,,,,	SANDY TUFF	yellowish light brown	sendy SILT, fine to medium grained	1	' : • -							:				
	2					SANDY	vellowsh	compl highly weathered,	2-		8 12	27					_ · :		2-		H
	3		3,15	G.W		TUFF 3.15	prown	fine to medium grained	3-	6 15 1	7 10 	48						 	3	_4	
	4	25.61		4.60					4-	13 1		45	 	· -	· · ·		 	[4	_5	
	5	24.96	.065	5.25		SAND STONE	d forcing	highly - mod. weath.	5 -	15 2	5 32	72		: -	· <u>:</u>			·	5 -	6	
	6			}- ·		SAND STONE (Tuffaceous)	dut	highly - mod. weath., ' a fine-coarse grained, poorty - med. cem., 6	6-	20 2	 S 35	80			_	· · ·		 - →	6 -		
	7		3.55		****		grey black	fine-coarse grained, poorly - med, cem, with intercalations of tuffaceous highly weathered Claystone	8-										7	•	
	9-	21.41		8.80			grégosit	from	9-										9		
-	10-	20.21	1.20	10.00	, ===	STONE	daik grey	moderately weathered	10-										10-		 -
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,,ic	- 1 1025	e No.	8	EM-5				Elevation			+ 3	12.4	5 8 g	Date	•				30.0	7.94	
oca	ation		K	p. Sin	gahra	ja - Teny		Groundwater Elevation					none		veyed b	,		Dadan	g Ro	sana	
		CLAS:						OF MATERIAL			STA	ΝD	ARD	PENET	RATIC	N TES	TING		5	AMP	LES
	.2	Elevation	Stratum Thickness	ŧ	Soil Profile	Cassification	Colour	Description	Depth		to	20 te 30	Value		Num	N-Value ber of 8 cm Pen	lows		□ S ■ C	hinwall plit Ban enison	rel
	Scale	噩		Depth			3	De.	ľΦΩ	c#	CIRI	54	ż	10	20	30	40	50	Depth	ż	Q A
		_32.16.	030	Соза		SILT	d -brown	Topsoil					Ĭ								
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	_					*1.44	gjeenish	silty CLAY, soft - piastic,	_	7	7	8	23		>				-		Γ
	3-		6.40	ļ		CLAY	brawn	(derived from completely weathered sandy tuff)	3 -	6	6	,	19	. — -	_				3 -	3	
	4-	,							4 -	 s	 S	7	12					· •. • ·	4	· ,	
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	6 -	25.76		6.70		. , , .			5	3	3	5	11	🕊	(-				6	_6	П
	7-							silty CLAY,	7-	7	 7	10	24		1				7	7	
	8-		2.20			CLAY	yellow-sh greenish grey	soft, (derived from completely-	8-			."									
+5 (0.0c		23.56		8.90				weathered sandy tuff)	9	8	10	12	30			*	— <u>`</u> —		-		1
	y -	. , .	1.10			SAND STONE	dark grey	completely to highly weathered, fine to medium grained, poorly cemented	¥ 7	8	10	12	30			<u></u>			9-	_9	Ľ
+	-10-	22.46		10.00	7070	(Tuffaceous)	black	poorly cemented	10-					_				-,	10-	,	-
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		No.	8	EM-6				Elevation			+ 3	15.0	57 n	Dat •	e		. 2	1.07	7.94	to 2	2.0 ′	7.94	
cat	ion		K	p. Cila	NRA.		•	Groundwater Elevation 4.10 m	held	w dr	OUR	1 en	rfaci	Sur	veyed t	у			Dax	 past	Ro	sana	
	- (LASS				DESCRIP	TION	OF MATERIAL						PENET	RATI	ON T	STIL	IG				AMPL	1
			Stratum Thickness		Soli Profile	Clessification		Description	_	Nu B	mber of lows 10		- Value		. Nu	M-Vali nber of cm Pe	ue Blow				C3 Sp ■ Cx	hinwall plit Barr enison	rel
	200	Elevation	Strat	Depth		3	Colour	35 0	Depth			30 cm	ż	10	20	30) 4	0	50		Depth	ė.	
Ī	-	34.46	0.00	03.0		SILT	diforown	dayay SLT, soft, w. soots					Ĭ		:		·			7			Γ
	1-	32.91	1.55	2.15		CLAY	vellowish biownish grey	dayay SLT, soft, w. soots D	2 -	2	3	4	9	*	 \	· <u>-</u>	 .—	 	: . 		2 -	1 2 3	
	3-	31.26	1.65	3.80		SILT STONE	ð.ex díæciep	completely to highly weathered, with some fine send	3-	6 10	6 10	7	32	. .	- ¥-				 	- -	3	4	_
	4			G.W.		4.10			1	 D		14	38	<i>.</i> .	 	·	1				4		
	5					SAND	gueenish	highly to moderately weathered,	5 -	12		14	38		<i>.</i> 	· · -		 : <u> </u>	· ·		5	_6	. -
	•1	• •	4.80			STONE (Tuffaceous)	dist.	fine to medium grained, poorly to medium	°	12	13	18	43					Á		_	6		
1	7							cemented,	7		16	20	54	· · · · ·		· · ·	_		<u>`</u> , .		7-		-
	8	 26.46		8.60					1.	18	19		59						7, 5 	·	*-	 	Ŀ
	,	26.06	0.40	9.00	•• • • • • • • • • • • • • • • • • • •			moderately weathered	١,		. :			:					•. 		9		
	10-	25.06	1.00	10.00		SAND STONE (Tuffaceous)	dark-grey greenish	moderately weathered, medium to well comented	10-	17	19	20	56					_ •	• • •	_	10		
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		e No.	B	EM-7				Elevation			+	35.4	155 ı	Date	•		23.0	7.94 to	24.0	7.94	
oca	tion		K	n Sin	ga Ba	mea		Groundwater Elevation 1.00 m	held		rour	nd sı	urfac	Sun	eyed by	,		Dadan	g Ro	sana	
		CLAS:		•			TION	OF MATERIAL) H 9				PENET	RATIO	N TES	TING		5	AMP	(3.)
Design	Scale	Elevation	Stratum Thickness	Depth	Soli Profile	Classification	Colour	Description	Depth	0 to 10	of Slows 10 to 20	20 to 30	- Value		Num per 30	N-Value ber of 8 cm Pene	lows tration		05	hinwall plit Ban Jenison	
+	Š		0.80		Š	CLAY	fact	slity CLAY,	P	One.	- CPM	CM	2	10	20	30	40	50	٩	-	-
L4: 10:57	1-	34.66	1.55	0.80 G.W.		1.00 SAND	prown sellow sh light brown	soft with roots skity, gravelty SAND, fine to coarse grained (old diver deposit)	1 - 2 -	3	1	1 - 14	5	*			 	· · · · ·	1-	123	
	3 -	31.01	2.10	4.45		CLAY STONE	green sh gellowish gray	highly to moderately weathered, lots of wood, derived from decomposed Pumice Tuff	3 -	17	31	40	88	· - · ·	· · ·	· · ·		→ -	3 -	 _4 	
	5			5.60		SAND STONE (Tuffsceous)	brown	highly to moderately weathered, fine to medium grained, medium - well cemented	5 -										5-		
	7-		4.15			SAND STONE (Tuffsceous)	brownsh idark grev	highly to moderately weathered, fine to coarse grained, medium - well cemented	7 -	11	10	13	34			_	<u></u>		7-	S	
	9-	26.86 25.96	0.90	8.60 9.50		CLAY STONE	3.64v.2p	(old river deposit) moderately weathered, medium hard / strong	g.										9-	6	
	10	25.46	0.50	10.00		SILTSTONE	q'sy	moderately weathered, medium hard / strong	10-	17	31	40	88	 L <u>.</u>				-			
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re l	lole			TUD EX-1				Elevation			+	72.1	97 m	Date			14.0	7.94 to	15.0	7.94	
.ali	on		·· · · · ·			- Maja		Groundwater Elevation no grou	and :					Surve	yed by			Dadan	——		
	- (LASS					TION	OF MATERIAL			51	AND		PENETR	ATIO	N TEST	ING		S	AMPL	
	•	Elevation	Stratum Thickness	th.	Soll Profile	Classification	>	Description	ŧ	0	of Blows 10	20 te	Value		Numb	l- Value er of Blo m Penet			© S ■ D	hinwall I plit Barre enison	el
1	Š			Depth	3	ð	Colour		Qe pth	10 cm	20 cm	30 GM	ż	10	20	30	40	50	Depth	Š	1
	,	71.90 71.20	0.70	1.00		SILT	dark brown redish brown	Clayey SILT	١,							,					
	1	70.35	0.85	1.85		SAND	light brown	sitty SAND, fine grained	'	8	9	10	27		<u>-</u>	* -				-,	\vdash
	2	· .						<u>u</u>	. 2	1				- • •			•		2		
	3		2:15			SILT STONE	light órown	completely to highly weathered		- 7			31		., 				3 -		
-	•	68.20		4.00	ЩЩ	CLAY		mod. weathered,	4									 	4-		
	5 -	67.30	0.90	4.90		STONE		medium hard	3 5				.						5 -		ļ.
	6					}															
			530			SILT	g- ee nish	mod, weathered,			:								,	! !	
	7					STONE	.da.∜ grey		<u>.</u>										']		
																		- • •	*	·- ·	ŀ
-	9	63,10 -62.95	≓o.i 5=	9.10 9.25	ЩЩ	CLAYSTONE	F	mod, weathered	,	, .			.						9-		
-	10 -	62.20	0.75	10.00	Щ	SILTSTONE	greensh	mod, weathered	5 ,,	, .			-						10 -		1
	11 -	61.65	1,33	10.55			grey 		. 11	<u>ا</u>									11-		
-	12		. 2,70			SILTSTONE	greensn dare	mod. weathered,	12										12 -	į i	
i	ł						gren 	medium hard													
	13	58.95	0.65	13.25	Щ	CLAYSTONE	Dive	<u> </u>	- 13										13 -		
i	14	58.35		13.90		•			5	, }				:					14 -	,	
Ì	15 -		1.90			CLAYSTONE	1.4A 11.5 1.04c.4y	mod. to slightly weathered	derived from decomposed frumth 10	;									15 -		ļ
	16 ~	56.40		15.80	 -				2 9 10	5 -			ļ.						16 -		
	17 -					SAND	whitsh preases	mod, weathered, fine-coarse grained,	00 1:	,									17 -		
i		6133	2/40			STONE	316A	well cemented, medium hard	¥										18		
	18 -	54:00	1.35	18.20	IIII	r i	1-00r.c	mod. weathered,	De 1							·			1	1	
	19 -	52.65		19.55	Щ	SILTSTONE	1.61		_	9						• .		٠	19		
1	20-	52.20	0.45	20.00	†* <u>*</u> *	SANDSTONE	13 4 320	tuffaceous, mod. weath	2	•									20-	<u> </u>	Ť
	21 -	 							2	1									21		
	22 -								2	2	-						-		22		
	23 -								. 2	3 -								÷ •	23	1	-
 	24								2										24		
	25	1							2	5		•							25		ا
	26								2	6								•	26	1	
	27			-					2	7							-		27	}	
	28 -	1	ļ				ĺ		2										28	1 .	
- 1		ı	1	į.	1	1	1	1		i			•	1					ŧ	1	- 1

		No.	B	EX-2				Elevation			+	58.7	/09 i	Date			10	.07.9	4 to	13.0	7.94	}
жэt	ion		K	p. Pai	rceuri	- Maja		Groundwater Elevation 5.10 m	bek	w ar	oun	i su	etac	Surve	yed by			Đ	adan	g Ro	sana	1
Ţ	K	IIAS:					TION	OF MATERIAL			57A	ND		PENETR	ATIO	NIE	STIN	G			AMU	LES
	Scale	Elevation	Stratum Thickness	Depth	Soil Profile	Clessification	Colour	Dascription	Depth	ļ	of lows 10 to 20	20 to 30	- Value	•	Num	N-Valu ber of I cm Pen	Blows	n		۵s	plit Ba enisor	} -
:-	š			 -	% 				å	CW	Ç.MI	CTP1	ż	10	20	30	40	S	•	å	Š.	Type
		58.26	0.45	0.45		SILT	tiet trees	Topsoil 4														
	1-		· • •				biownish grey	sitty CLAY, Soft - plastic	1	3	4	5	12	- 4		 			·	1 -	_1	10
	2-		330			CLAY	paie : red		2-			. 5		·				·		2-	2	
	3 -							clayey SILT	3 -					7	· ·					3 -		
		\$4.96		3.75				E 0		4	6	7	17		}					-		İ
-			1.40		++ +	SILT	sellowsh light	clayey StLT	•	4	4	4	12	- 🚣	_					-	4	
	5	53.56		5.15	,	5.10 G.W.	biown	from	5 -	9	16	17	42					 •		5	_5	
1	6 -		1.65			SANOY TUFF	green'sh day	fine grained, on the compile to highly on the weathered on the compile to highly on the compile	6-			-								6-		1
	7-	51.91		6.80		SANDY	. 2300	weathered # 10 highly weathered,	7-	9	16	19	44	· — —	. <u></u>		 	Ŷ ~		7-		-
		51.11	0.80	7.60	, , , , , ,	TUFF	grey plack	fine grained		16	20	41	77		-				· -	-	_'	
1	8	• • •						Paso	8	31)	30	45	105	- -				- 🔷		8 -	8	
	9-		, .	- •				COMP	9.	50. 10	:		50 10	· - · -	· - <u>:</u> -	· <u>·</u> -	<u>-</u>		· <u>-</u>	9	9	٠
1	10 -		4.30			SILT STONE	greensb dark - grey-	highly weathered	10 -				,				v .			10 -	10	
								pasoduooop workned highly weathered buoy payiag	11	44	45	50	139		-	_		+		-		1
İ	11 -	16.31		11.90				G-P.	'	36	45	50	131		_				_	11 -		Ц
-	12-		0.90		1111	SAND	3	fine grained, medium cemented,	12-	39	43	50	132	· · · -			 	 		12 -	12	П
	13 ~	45.91 -43.71	_0.20 	12.80	<u> </u>	ORGANIC M.	5132k	moderately weathered Lignite, soft moderately weathered	13										-	13 -	13	1
	14	45.11		13.60		SILT	3/€Y geo lo nals		14	20	35	47	102							14 -		1
		43.71	1.40	15.00		STONE	dark diev	moderately weathered	.,	25 50	35	46	106			-		- +		- -	14 15	
	15 -			-					115 -	12			50 12		· -		'-	->	- '	15-	_	-
1	6								16 -	- 50 13		:	50 13	· <u>-</u>	- :-	<u></u> :		→	· ·	16 -	. 16	-
	 7					SILT			17 -	50. 13	٠;		50 13		· · ·	<u></u> :	<u>-</u> -		.: t	17	_17	-
:	8 -		5,00			STONE	green shi grev	moderately weathered (lots of wood)	18	50. 10	·		50 10	· . <u></u> · <u></u>	. <u>.</u>	<u>.</u>		<u></u>		18	_18	-
	-																	•			_19	
	9 -		. !	· ,				,	19 -	(k) 13	:- '		13	·			'-	- ->		19		-
†:	20-	_38.71		20.00	11111				20											20-		+-
2	21 -								21 -											21 -		
	22								22 -							-				22 -		-
	-						l		23 -											,,		
1	13 -		.		·			· · · · ·	23			Ì				-				23 -		-
1	24								24 -											24 -		
	25 -								25 -											25 -		
1	16-							e e e e e e e e e e e e e e e e e e e	26 -							-			.	26 -		
ĺ	į						·		27 -													
1	17-	-					·		["]	,										27 -		
12	≀8 -				·	,			28 -			•								28 -		
1.	29	ļ	į					•	29 -											29 -		

CLASSIFICATION AND DISCRIPTION OF MATERIAL STANDARD PENETRATION TESTING SAMPLE		Hole	No.		STUL EX-3	JY UI	N CIWIL	MU-	CIDURIAN INTEG	nΑ	ıεD		58.9		Date .		<u>LL LO(</u> 7.94 to :		7.94	
SAMPLE	Loca	tion							Ground water Elevation		,				Supered by		·			
Number N			CLASS					TION		bek	ow gi					STING	Deciality			35
1	Dete							-		epth	0 to 10	umbe of Nows 10 to 20	20 1e 30	- Vatue	N-Val Number of per 30 cm Pe	ie Slows netration	50	■ n	ninwall plit Barr enison	lube
### Add SAND Control Control Cont	ī	Š					_	ı ı	_	3	-		-					-		
SAND SAND	-ut	2-		4.70				pellowish	soft, fine to medium grained	2-	, .	 	7	 17				-	_3	
SAND SAND	¥	4-								4-	7		10	24			· · ·	4 -	5	
11	-	5 -	53,94	 		**	- 5.25			5	9	11	16	36	· · · · · · · · · · · · · · · · · · ·	· · ·	· · · · ·	5 -	_6	
11	······•			3.00					weathered, (sandy SILT, soft,		6	 8	 10	24						
11	5.07.		50.94		8.00						9	11	12	32				-	°	
11	7	9 -		1.90			· stone		(silty SAND,					- 1	- -			-		
11	Ŧ	10-	49.04	ļ 	9.90	11111		 		10-				30				10-		
16	1	11 -	47 <u>.49</u>		11.45			13.4		11-								 11 -		
16	.07.94	12		ļ.·				dyn	(sandy SILT, f-m grained, poorly cemented)	12 -								12 -		
16	70	13-						1.7		13-	8		14	30				13-	14	
16				5.25		*****	STONE	l day	compl. to highly weath.		8	8				· · · · ·	- · · ·	14 -	_15	
17	1										7	7	10	24				٠.	<u>ar</u>	
21 - 21 - 21 - 21 - 22 - 22 - 22 - 23 - 23	•		42.24	 	16.70	1000		ļ			,	1	12	26					_17	
21 - 21 - 21 - 21 - 22 - 22 - 22 - 23 - 23	27.07.94	i [SILT				15	15 	19	49			_	17- 18-		
21 - 21 - 21 - 21 - 22 - 22 - 22 - 23 - 23				3.90	j				highly weathered		16	16	20	52			-} -	-	19	
21 - 21 - 21 - 21 - 22 - 22 - 22 - 23 - 23	<u>.</u>	19								"	10	18	22	50			\$	"	20	
22- 22- 23- 23- 24- 24- 25- 25- 26- 26- 28- 26-	-	20-	<u> 38.'} </u>	0.30	20,00	2	CAYSTONE	12/ 14	highly weathered	20-	-			-				20-	<u> </u>	+
23 - 23 - 23 - 24 - 24 - 24 - 25 - 25 - 25 - 25 - 27 - 27 - 27 - 28 - 28 - 28 - 28 - 28		21								21								21		
24 - 24 - 24 - 25 - 25 - 25 - 25 - 25 -		22								22	1							22		
25- 26- 27- 28- 28- 28- 28- 28- 28-		23						<u> </u>		23	-							23		
26 - 27 - 27 - 28 - 28 - 28 - 28 - 28 - 28		24								24								24		-
27- 28- 28- 28-		25				, .				25								25		
28		26								26								16	į į	
		27								27								27	1	
29 29 29 29 29 29 29 29 29 29 29 29 29 2		28	1							28								28		
		29	1							29								29		

-	1 NOTE	flo.	8	EX-4				Elevation			+ 5	3.6	20 ı	Da			26	.07.9	4 to 3	0.07	7.94	
oc4	tion		K	p. Rar	ıcabu	ava		Groundwater Elevation 9.25 m	bek	w or	ounc	i su	rlac	Su	veyed I	Э		A	rdian	Naz	mul	
		CLAS:					TION	OF MATERIAL						PENE	RATI	ON T	STIN	G			AMPI	_
-	Scale	Elevation	Stratum Thickness	Depth	Soil Profile	Cassification	Colour	Description	Depth	,	te 20	20 to 30	N - Value	10	per 3		Blows natratio	n 50	-	۵Sp	inwall kit Barr enison	rei
_	<u>~</u>	53.32	0.30	0.30		CLAY	brown	sandy CLAY, (Topsoil)										-	7	+		
	1-		2.15			CLAY	brows	sendy CLAY, fine grained, soft	1 -	3	3	4	10	-9	 		 	 – –		2-		
		51.17	<u> </u>	2.45			bro waish	sandy SILT,		3	3	9	15		- 					-	2	Н
	3-	50.1 <i>7</i>	1.00	3.45		. SILT:	grey	fine grained	}	 7	11	18	36	_			-		_	3 -	_3	Ц
	4-	48.62	1.55	5.00		SAND STONE (Tuffeceous)	vellowish brown	Sandstone completely weathered (sity, gravelly SAND, fine to medium grained)	•	21	31	40	92	· -	 	· · · · —	. , , , — -	- -	-	5	_4	
	6-	, .			****			Sandstone	6-											6		
	7					SAND STONE - (Tulffeceous)	dark grey	completely to highly weathered, fine to medium grained,	7.											7		
			 		****			well cemented,	8.											8		
•	9 -		9.20	G.W.		9.25		Intercalations of compl. to highly weath., fine grained,	9.		- •									9		
1	10 -				*****			well cemented tuffaceous Claystone	10-											10		-
	12-							,	112-			-					<u>.</u> .			12-		
	13-				- 				13											13		
	14 -	39,12 38,62	0.80	14.20		SANDSTONE CLAYSTONE		alternating Sand /Clay- Stone, fine grained	14			. !								14		
1	15-			13,00	2.4.4			stone, me graned	15-											15		Ī
ļ	16								16- 17-			• • !					٠		l	16 4		
-	18-					,			18			. ;							l	1		
	19								19				. ,							19-		
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	21 -								21 -								٠	-		21 -		
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	29						٠,		i i				1						i	29 -		ĺ

			8	EX-5							+	46.	129	m	te		0	6.08.	94 to	08.0	8.94	
catio	วก		K	n. Kal	basira			Groundwater Elevation 3.25 m	held		roue	vl ei	utac	Su	rveyed t	у			Ardia	n Na	zmu!	
	(LASS					TION	OF MATERIAL	eTC	9				PENE	RATIL	ON T	STIR				AMP	
						Classification		Description		0	lumbe of Slows 10	¥F 20	- in		Nu	N-Val	ue Blows		- :	■ F □ S ■ E	hinwall plit Ban enison	Tu rel
1		Elevation	Stratum Thickness	Oepth	Sol! Profile	Classal	Colour	Descr	Depth	10 cm	20	30 - cm	N-V	10	20	30) 4		io (Depth	ć	
	7	45.73	0.40	0.40		-		Topsoil	H	l			1				-			Ħ		1
.	1 {								٦.										,	, ,		
;	2 -		2.85			CLAY	eddish- brown	sandy Clay, soft, moist,	2-	24	27	. 31 	82	·	- -		:	->	- -	2 -	_! 	-
	,	42.88		3.25		3.25		very fine grained	3 -	. 33	38		110			:) 		3 -	3	r
	_ [G.W.			1	5	5	5	15		9-				=	-	4 5	-
. '	•						- ,		4-	4	4	5	13	· · ·	1 _	· · ·	 	 	· ·	1	_6	L
	5	. , .	4.20						5 -	6	6	8	20			· · ·		 		5 -		
	6 -					-SANDY -	grey	SANDY TUFF (sandy, gravelly SILF, coarse grained,	6-										.	6-		
	,	10 /6		3.20				max Ø~ 2 cm)	7			. 11		:		* :				7-		-
		38.68 38.33	0.35	7.80	*****	5-ST.(Tuffec.)	हरू _{५०} ड	CW, poorly cemented	ا ا	3	3	5	11				_=_	<u></u> -		-	_9	L
	9 1		2.20			CLAY STONE	. Yey.	compt highly weathered, well cemented, derived from	9-	5 <u>0</u> 5			50 5			· <u>-</u> ·	<u></u> -	— -	<u>-</u>	9 1	ود.	
1,	ړ₀	36.13		10.00		(Tuffereous)		decomposed Pumice Tuff	10-											10-		
1			1.70] 		, TUFF .	ligat - grey -	highly weathered,	11 -													
		34.43		11.70			ALC.	well cemented,								• •						
1	2	33.48	0.95	12.65			g'ey	highly weathered, derived from decomposed Pumice Tuff	12-											12 -		-
1	3 .	.				CLAY STONE (Tuffaceous)	23/K	completely weathered, poorly cemented,	13 -	٠		-	•				• • •.			13	•	-
1	4		235			· · · · ·	grey -	derived from decomposed Pumice Tuff	14											14		
1	5 . 	31.13		15.00	\$2525		<u> </u>	 	15.											15-		1
1	6								16			. ,	-							16 -		
1	7 -						-		17-											17-		
,	8 -								18-											16-		1
1	9								19 -											19 -		
2	0 -								20-								-			20 -		
2	14								21 -											21 -		-
2	2													,						22 -		
	3-1												 				•	•	•		-	i
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21	6								26 -				•	٠.						26		
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١.,	. 1								29.	l			ŀ	.						29		1

910	, i roji	erw.	. 8	EX-6				Elevation			+	51.3	342	D D	ate			02.0	8.94 to	03.0	8.94	
oc:	tion	-	K	p. Cil	edon		·····	Groundwater Elevation 3.20 m	belo		roun	d cu	urtac	Ši	urveyed	by			Ardia	ın Na	zmul	
		CLAS				DESCRIP	TION	OF MATERIAL						PENE	TRAT	ON I	ESTI	NG		1	AMP	Ţ
		no	55 E \$		ofile	Classification		ptlon		0	umbe of Blows	20	Value			N-Va Imber o	of 8low			□ S	hinwali plit Ban Xenison	re
	Scale	Elevation	Stretum Thickness	Spth	Soil Profile	Classiff	Colour	Description	Depth	10 cm	20 cm	30 cm	N - K	1	-			40	50	Depth	ģ	į
		50.74	0.60	0.60				Topsoil												1		
1	1					, , , ,		sandy CLAY,	1-	1.		2	5	4	· ·	· · ·	· ·	· · ·		1	_1	Ц
	2 -	, ,	2.85			CLAY	powe	moist, soft, very fine grained	2-	. ,		2		1.				: .		2-		
	3 -	47.89)))		- 3.20 G.₩ .			3-											3 -	-3 - 4	
	4	47.34	0.55	3.45 4.00	V	SANDY TUFF	brownish	clayey SAND, fine - medium grained		2 . <u>50</u> .		3	.50	 			- -				 5 ض	
	•						grey to biacksh			7			7	_				•	_			
	5					5.00	<u>}</u>		5										•	5		
	6					- 、、.			6							•				6-		
	7-					SANDY	dan.	Sandy TUFF,	7-										•	7-		
	8-		7.10			TUFF	grey	completely weathered, (clayey, gravelly SAND,	8-			, .								8		-
	9							fine - coarse grained, poorly cemented)	۰													
									1										'			
	10-								10 -										.	10-		
-	11	40 24	i T	11,10	, , , , , , , , , , , , , , , , , , ,	- :		TUFF BRECCIA,	11-			, .					•			11-		
-	12							completely to highly weathered	12-											12 -		
İ	13-		-3.90		, A, A	TUFF BRECCIA	dark Grev	(sandy Gravel, fine to coasse grained,	13-											13-	-	
	14-		•		,	(old river deposit)	! ""' !	well graded, poorly cemented, subangular to subrounded												1,,		
. [1.4	36.34		15.00	A A A			max $\sigma \sim 5$ cm, with \pm 10% Clay)	1			·				•				["		İ
+	15-	36.34	<u> </u>	15.00					15-											15-		+
	16								16-		, ,									16 -		
	17								17-									٠.		17-		-
	18-								18 -											18		
	19-						ļ		,,			, .		, .						19.		
İ	20 -								20-		•									20 -		
	21								21 -							-	•	•		21 -		·
-	22-								22 -						÷		•			22-		
	23-								23			. !								23 -		
	24 -								24-											24 -		
	23				 	-	·		25 ~											25 -		
	26	٠				4			26	-	٠						•	•		26		ŀ
	27						<i>.</i>		27											27		
	28								28-											28 -		
	29								29											29 -		
									[]	Ė		-										-

are	HON	No.	В	RD-1				Elevation		+ 53.2	232 m	Date 06.07.94	to 07.07.9	4
X.I	tion		ı.	n Cib		- Maja		Groundwater Elevation	hal	w ground su	utoro.	Surveyed by Dac	lang Rosani	a
Ė		(LASS					TION	OF MATERIAL	Jen	_		ENETRATION TESTING	SAMI	
						Classification				Number of Blows 0 10 20		N-Value Number of Blows per 30 cm Penetration	■ Thinwa □ Split Ba ■ Deniso	ali Tu Jamet
	SCate	Elevation	Stratum Thickness	Depth	Soil Profile	Cassif	Colour	Description	Depth	to to to 10 20 30 cm cm cm	N - Value	10 20 30 40 50	No.	
	1 4	52.73 52.23	0.50 0.50	0.50		SILT	dark brown recush brown	sandy SILT clayey SILT	1.					
	2		,						2 -	7 8 11	26		- '- -	<u> </u>
	3		. 4.25				redish brown	silty CLAY.	,	7 9 10	26		$ \begin{bmatrix} 2 \\ 3 \end{bmatrix}$ $\begin{bmatrix} -2 \\ 3 \end{bmatrix}$	2
	Ĭ			, ,		CLAY	gale grey	soft, plastic		5 6 7	18			}
,	5 1					. ,		4.	1	3 3 6	12	- 🕇		!
-	6	47.98		5.25				highly weathered, a fine-coarse grained; to	6.	3 4 6	13		5	5
,	7		2.25			SAND- STONE (tuffaceous)	brownish light grey	poorly cemented with some Pumice 0	7.	6 8 11	25		7	١
		45.73 45.58	-0.15	7.50 7.65	7. V. V. V. V. V. V. V. V. V. V. V. V. V.	SILTSTONE	dark grey	fine-coarse grained; poonly cemented with some Purice fragments E		18 22 25	65			
	9.					مادوح		highly weathered, 50 fine-coarse grained, 5		16 19 24	59	· · · · · · · · · · · · · · · · · · ·		
	10		4.05			SAND- STONE (tuffaceous)	brownish Fight	fine-coarse grained, poorly cemented with some Pumice	10	16 18 21	55	· · · · · · · · · · · · · · · · · · ·	9	
	11 -			G.W.		-10.20		poorly cemented by with some Pumice by Fragments by Transcript by Transc	11.	19 21 26	56		- 11	1
;	12-	41.53 41.03	0.50	11.70 12.20	 Y!Y!	SILTSTONE	1-Er:"wh	highly weathered.	12	20 27 50	97 50		- 11 - 11 - 12 - 12 - 12 - 12 - 12 - 12	٠ ٢
ĺ	13-	40.63		12.60		SANDSTONE		mod, weathered	13.		5	· · · · · · · · · · · · · · · · · · ·	13 -	.
- !	14		2.40	[SILT- STONE	greenish da k grev	mod. weathered	14				14 -	
F	15.	38.23	<u></u>	15.00		(tuffaceous)	, ,		15			and the state of t	15	_
	16 -			-					16 -				16 -	and the same of the same of
	17 -							· · · · · · · · · · · · · · · ·	17				17	.
	18 -								18				18	
	19								19				. 19-	
	20 -								20				20 -	
	21 -								21				21	-
ļ	22							,	22				22 -	
	23 -								23				23 -	
	24 -								24		-		24 -	
	25						1		25			· · · · · · · · · · · · · · · · · · ·	25	
	26 -		-						26			· · · · <u> </u>	26	
	27		.	}			1 <		27				27	
	28	1	ر ا		1		\		28				28 -	
1	29	L		 	1 '	ĮJ	}	<i>↑ └</i>	29	<u> </u>	ıĿ		29 -	ı

		e No.	В	RD-2				Elevation			+ 44.3	200 i	m Date 18,07.94	to 19.07.94
OC:	xion		K	p. Kad	lepes			Groundwater Elevation 7.10 m	bek		und si	ırfac	Surveyed by Dad	ang Rosana
		CLASS					TION	OF MATERIAL					PENETRATION TESTING	SAMPLE
	Scale	Elevation	Stratum Thickness		Soil Profile	Classification	Colour	Description	Depth	81 to 1	nber of ows o to to so o cm	N - Vakre	N-Value Number of Blows per 30 cm Penetration 10 20 30 40 50	# Thinwall ful Split Barrel
1		43.60	0.60	0.60	Ш		d brown	clayey SILT, soft, w. roots					<u> </u>	-)
	1-						s'ellów sh		1 -		. : .			1
			2.20				grey grey			3	3 3	9	~ \ - ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	
Į	2-	41.40		2.80]	2-	4	4 5	13		2 2
	3 -	41.40		2.80				*	3 -					3 - 3
	4								4-	8	9 10	27		
								completely to highly weathered, with some		9	9 10	28	· /	
-	5 -		5.20			SILT	yellows!	weathered,	5-	7	78	22	·	5 5
1	5-					STONE	Pichu/y	fine grained seams.	6-					6 6
1	7.							9 P	7	8	8 9	25		7
	(G.W.	m	-7.10		from		1	9 10	26		'- -' -
	8-	36.20	 	8.00				completely to highly	8 -	8	7 8	23		8 8
	9.		2.15			CLAY .	greensh Janki		9-					9 9
						210NE	dista	weathered		14	16 20	50		
1	10 -	34.05		19.15	70.7		· ·	· · · · · · · · · · · · · · · · · · ·	10 -	10	18 20	48		10 10
ļ	11 -				****			11-11-1-1-1	11 -			-	· · · · · · · · · · · · · · · · · · ·	11-
	12 -				****	SAND	; ce 's '	highly to moderately weathered,	12-	14	18 20	52		12
-			4.85		7070	STONE (Tuffaceous)	3114	fine to coarse grained, poorly to medium		14	28 50	92		- 12 -
	13			·	*****			rich in local plant remains	13 -	14	28 50	92		_ 13 _ 13
	14 -	.					ļ		14 -					14 14
-	15	29.40	0.20	14.86	/.v.v.	LIGNITE	t I.C.		15-	14	28 50	92		15
1	16								16-		- '			16
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	18-]							18 -					18 -
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	27 -								27 -					27 -
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ļ	28 -								26 -		•		· · · · · ·	28-
Į	29 -	l	Ì	1	i '	ļ						1		29 -

	rece	No.	B	RD-3				Elevation			+	47.0	52 n	Date	!		27.0	7.94 to	28.0	i 7.94	
oc4	tion	·····	10		lana Y	engah		Groundwater Elevation 6.10 m			~~~			Surv	eyed by			Ardia	n Na	zmut	_
		CLASS					TION	OF MATERIAL	Jek	ow ga				PENET	ATIO	NITE	TING	_		AMPL	133
	Scale	Beration	Stratum Thickness	Depth	Soll Profile	Classification	Colour	scription	Depth		of lows 10 19 20		Value		Num	N-Value ber of 8			₩ F	hinwall plit Ban enison	fub rel
	3	46.65	0.40) % 			8	å	4	ам	CM	<u>خ</u> ا	10	20	30	40	50	8	ž	<u>_</u>
		40.00		0.40		SILT	reddish. brown	sandy SILT, (Topsol)						1	1						
	1							sandy SILT,	1	5	5	7	17		· · · · ·				1-	_1	L
	2		3.05	٠		SILT	brownish	soft, fine to medium grained	2										2-		Ш
10.77	3 -	43.60		3.45			grev 		3-	29	30	31	90		- <i>-</i>			→	3		
	4	43.00		3.43	immii		<u> </u>			10	8	10	28			\$				_3	Г
1	1		. 2.35			SANDY TUFF	C (C Whish	Sandy Tuff completely weathered, fine to medium grained,		17	28	39	84			_		→ —	1-	4	
	5 -	41.2S		5.80		. 1911	,	poorly graded	5	Š0	<u>:</u> .		50 10	· · -	- * - *	· ·	<u>·</u> ·	 -	5	. <u>. </u> 5.	ا
+	6-			G.W.	***	-5.10		7.25	6				. }				. : .		6		
	7		- 230			- TUFF -	light g:éy	Tuff compl. to highly weath., fine grained,	7-										7-		
	8	38.95		8.10			3.07	well cemented												!	
1	•								8-					· · · •					8		ľ
ļ	9 -							Tuff	9 -									•	9-	· [']	
	10		4.00			· TUFF ·	light.	compl. to highly weath., fine to med. grained,	10-		. :	. }	\cdot						10	!	
1	11							well cemented	11-										111		
		34.95		12.19								l	1							:	ì
Ì	12	34.25	0.70	12.80	ĬĬĬĬ	SILT]76×	completely weathered, weak, brittle	12-							• • •			12	ı	ļ
	13	. ;		·		,	· ·		13 -	-									13 -	:	
	14		2.20			CLAY STONE	dark 199	highly weathered, very fine grained,	14-				.				, . ,		14		
	15	32.05		15,00				well cemented	15										ا ا		{ !
	-																		[']		
	16		,	-					16	-							•		16		
1	17	• .							17 -										17		-
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1	29								29 -	1								4.	29 -		ļ

	. 1101	e No.	8	RY-1				Elevation			+	51.6	i15 i	Date	01.08.94 to	03.0	8.94	
oc.	ation		K	p. Cib	avana	1		Groundwater Elevation 3.90 m 1	belo	ow n	OUR	d su	ufac	Surveyed by	Dadan	g Ro	sana	
		CLASS					TION	OF MATERIAL		- 7				PENETRATION TEST			AMPL	143
	Scale	Elevation	Stratum Thickness	Depth	Soil Profile	Classification	Colour	Description	Depth		umbe of Nows 10 to 20	•	N - Value	N-Value Number of Bi per 30 cm Penet 10 20 30	ows	■ # □ \$	hinwall plit Barr enison	Tube rel
4X.60. D	1 - 2 - 3 - 4 - 5 - 6 -	46.87 46.52	4.75	4.75 5.10		SILT - 3.90 SILT	prelicivish reddish brown	sandy SILT, w. some Clay, fine to medium grained, soft, (derived from decomposed sandy suff). Compt. weath, fine grained. SANDSTONE, highly weathered, fine to medium grained.	3-4-5-6-	3	2	3 5 5 14	7 15 14 12 31			2-4-5-		
T.00.7	7 - 8 - 9 - 10 -		4.30	11.00		of SAND STONE (Tuffaceous) and CLAY STONE (Tuffaceous)	greensh dark grey	poorly comented CLAYSTONE highly - mod. weathered, fine grained, medium - well cemented, derived from decomposed Pumice Tuff	7 - 8 - 9 - 10 -	26 50 15	\$ <u>0</u> 5	40	90 13 102 50 15			7 8 9	_8 _9 _10	
	12 - 13 - 14 -	39.32 38.42	1.90 1.90	13.20		Decomp S-9: SAND STONE (Tuffaceous) SILT STONE (Tuffaceous) SILT STONE SILT STONE	dark grey crown st	poorly cemented highly weathered, poorly cemented highly - mod. weathered, fine to medium grained medium - well cemented highly - mod. weathered, with some Pyrite	12 - 13 - 14 -							13-		
9	15 - 17 - 18 -		3.20	18.30 18,70		CLAY STONE	greensh dare grev buick	moderately weathered, medium hard / strong, well cemented	16- 17-							16 - 17 - 18 -		
	19 - -20-	31.62	1.30)	20.00		CLAY STONE	grey grey	moderately weathered, well cemented	19 -	-			-			19-		
	21 -			- :					21 -							21 -		
	23 -						, .		23 -							23 -		
	25 -			-					25 -			-				25 -		
	26-						,		26-							26 -		
	26 - 29 -								28 - 29 -	-						28- 29-		

	Hole		B	RY-2				Elevation			+	49.	797	m '	ate 			{	36.0	8.94	to 07	.08.9	4
cat	ion		K	p. Kal	liper			Groundwater Elevation 2.60 m	belo	ow g	oun	d st	urfac	e S	urvey	ed by				Ar	dian N	azm i	ıi
ļ	Ķ	LAS:				DESCRIP	TION	OF MATERIAL		Ţ	ST	AND		PENI	117	TIO	N TE	SIII	VG			SAM	
		tion	E 55		Soil Profile	Classification	•	Description	_	1	umba of Hows 10		shte.		P	Num	V-Value berof	Blow			C	Thinwa Split B Deniso	कार्स
	Scale	Elevation	Stratum Thickness	030	Soli P	55	Colour	Copsoil	Depth	10 cm	20 cm	30 cm	Z		0	20	30		10	50		2	
ĺ	_	77-5	<u> </u>	0.30				sandy Clay,									٠.				1		
	1-		2.15			CLÂY	nedd'sh hown	soft, moist, very fine grained	1	9	9	9	27		_	_	 y	_	· ·	_	_ 1		Ľ
-	2-	47.35		2.45					2 -	 6	. 6		 19		٠.	1					_ 2		
ĺ	3 -			G.W.	M	2.60			3 -		, .									Ξ,	. 3]	
	4-		3,00			SILT.	biownish	sandy, gravelly SILT, fine to coarse grained,		11	14	13	38	-				7	 -] _	
-							grey	max Ø ~ 3 cm	'	10	11	13	34			_		*	_		-]		· -
	5 -	44.35		5.45					5 -	14	13	15	42		_	· ·	_	-	\ <u>.</u>		- 5		:
ŀ	6-	43.35	1.00	6.45		(Tuffaceous)	grey grayeist	very fine grained, completely weathered, poorly cemented	6			43	118				-				6	7	, <u> </u>
	,							completely weathered,	7-				28						. ,		_ ,	1	
	8 -		1.95			(Tuffectous)	grey grey	fine to medium grained, poorly cemented, week															
	•	41.40 -41.20	0.20	8.40	• • • • • • • • • • • • • • • • • • •	CLAYSTONE	d grey	completely weathered, weak	1 -														
	9-								9-							• •		- •	٠.		. 9	†	- -
	10-								10 -		٠.										- 10		
	11				¥=×=×	SÁNDSTÓNÉ		completely weathered,	11 -												11	1	
	12-		5.85			(Tuffaceous)	i փաչչ	fine to medium grained, poorly cemented,	12												,,	1	
	ł							with intercal-ations of tuffaceous Claystoms	'2								•	•			12]	Ì
	13				eXeX				13-		, .										- 13	1	·
	14-	35.35		14.45					14-												14	. 1	1
!	15 -		1.55			. CLAY .	. Lite	very fine grained, completely weethered, poorly cemented,	15												15	-	
İ.	16-	33.80	1	16.00		,Tuffaceous)	l grav	with intercalations of tuffaceous Sandstone	16-												16	1	
	}																						
	17-			1				completely weathered, fine to medium grained,	17			•									17	1	}
1	8-	•	4.00			SANDSTONE (Tuffsceous)	res	poorly camented, with interculations of	18 -										٠.		- 18	i	. .
-	19 -				منجه دء			tuffaceous Gaystone	19												19		
1	20-	29.80		20.00			<u> </u>	,	20.								4					1	
			ĺ				<u></u>		[1	
	21-				1				21 -												21	1	
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	23 -								23 -												23	1	
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	26				}			. , .	26										•		26	1	
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	9			ļ]			29.													1	
1		•	,				! !		 ''										•	-	. 29	1	

C.3 Test Pit Log

t Pit No.	TP	41		Elevation	not dete	rmined	Date	09.07.94
ation		. Karenyer	ng - Maia	Groundwater Elevation			Surveyed by	Dadang Rosana
	- 14			ASSIFICATION AT			AL	
			Soil P					
Pe of	No	rth Wall	East Wall	South Wall	West Wall	Classification	Colour	Description
2	70 _					SAND	light to dark brown	silty Sand fine to medium grained with some organic matter
** /0.50	60 - 70 - 70 - 70 - 70 - 70 - 70 - 70 -			0.50 m - 1.00 m Sample taken for Laboratory Testing		TUFF	whitish to light brown	sandy Tuff fine to medium grained well cemented with some fragments of Pumic (max ø ~ 0.5 cm)
2	29 - 40 - 50 - 60 - 70 - 50 - 50 - 50 - 50 - 50 - 50 - 5							
	30							

Projec		THE STUDY (ON CILLIUNG-C		EGRATED WA		URCES Date	TEST PIT LOG
Fest Pit N		TP-2		Elevation	not dete	rmined		11.08.94
tocation		Kp. Kadu		Groundwater Elevation no gr	oundwater encou	intered	Surveyed by	Dadang Rosana
			CL.	SSIFICATION A	ND DESCRIPTION	OF MATERI	AL	
			Soil Pr	ofile		a telution	Colour	Description
a a	Depth	North Wall	East Wall	South Wall	West Wall	Classification	Colour	l Description
	10					SILT	dark brown	clayey SILT, with some roots, soft
***************************************	50 <u> </u>					CLAY	yelowish reddish grey	sandy CLAY, wit some sand, fine grained
8.94	70 10					CLAY	teddish grey	sandy CLAY, fine grained, wit some fragments of pumice, max Ø ~ 2 cm (derived from decomposed tuffaceous sandstone)
	10 _ 20 _ 20 _ 30 _ 40 _ 50 _ 60 _ 70 _ 80 _ 90							

	·	TP-3		Elevation	not dete	rmined	ite.	12.08.94
cation	n	Kp. Cisauk G	irang (Setu)	Ground water Elevation	oundwater encou	intered	rveyed by	Ardian Nazmul
			(I)	ASSIFICATION A	ND DESCRIPTION	OF MATERIA	<u> </u>	
	Depth	North Walf	Soil Pr East Wall	ofile South Wall	West Wall	Classification	Colour	Description
***************************************	10							TOPSOIL
11	40 50 60 70 83							
	1.0			0.30 m - 2.00 m Sample taken for Laboratory Testing		SILT	reddish brown	sandy SILT, moist, fine grained
	2.0-		The second secon					
	55							

	No. TP-4		Elevation	not dete			14.07.94
atic	on Kp. Kadema	ngan	Groundwater Elevation	i oundwater encou	sntered Su	rveyed by	Dadang Rosana
				ND DESCRIPTION		1	
nere nere	North Wall	Soil Pr	rofile South Wall	West Wall	Classification	Colour	Description
	10				SAND and GRAVEL		
т Тактатататын тактатын тактатын тактатын тактатын тактатын тактатын тактатын тактатын тактатын тактатын тактатын	30 — 40 — 50 — 70 — 70 — 70 — 70 — 70 — 70 — 7				sandy SILT	redish brown	soft, low to medium plasticity fine grain of sand
	20						
	50		·				
	80 -						

Proj		THE STUDY (ON CIWUNG (CIDURIAN INT	EGRATED WA	TER RESO	JRCES	.3 Test Pit Log (5/10 TEST PIT LOG
Test Pit		TP-5		Elevation	not dete	emined	ate	04.08.94
Locatio	on	Kp. Cibunar		Groundwater Elevation no gr	oundwater encou	intered 5	urveyed by	Adrian Nazmul
			GI/	ASSIFICATION A	ND DESCRIPTION	OF MATERIA	Ļ	
	اء		Soil P	rofile		Classification	Colour	Description
Date	Depth	North Wall	East Wall	South Wall	West Walf	CHIMICATON	COROLL	Description
***************************************	10 20					SILT	brown	Topsoil, sandy SILT
um 04.08.94 munumannumannumannumannumannumannum	40 50 60 80					SILT	brown	sandy SILT, fine grained, poorly graded
4	10			0.30 m - 1.90 m Sample taken for Laboratory Testing		SAND	brownish grey	silty, graveffy SAND fine to coarse grained
#				1.90 m - 2.00 m Sample taken for Laboratory Testing		SAND	yellowish brovn	silty, gravelly SAND, max ø ~ 3c (completely weathered sandy Tuff
and the state of t	20							

cra	No.	1P-6		E lev ation	not dete	ermined .	ate	10.08.94
catio	'n	Kp. Pahang -	Daru (Tenjo)	Ground water Elevation no gr	n oundwater encou	untered S	rveyed by	Dadang Rosana
			CL.	ASSIFICATION A	ND DESCRIPTION	OF MATERIA	L	
	Depth		Soil P			Classification	Colour	Description
3	2	North Wall	East Wall	South Wall	West Wall			
***************************************	10 <u>-</u> 20 <u>-</u> 30 <u>-</u>					SILT	dark . brown	clayey SILT, soft, with some roots (Topsoil)
	50 60 70					CLAY	yellowish brown	silty gravelly CLAY, soft, with gravels of weathered fragments of pumice and tuff, max Ø ~ 2 cm
46	90 _ 1.0 - 10 _ 10 _ 10 _ 10 _ 10 _ 10 _ 10 _ 1			0.80 m - 2.00 m Sample taken for Laboratory Testing		SILT	reddish brown, pale grey	sandy clayey SILT, soft, fine to medium grained, with some fragments of weathered pumice, max Ø ~ 3 cm (derived from decomposed tuffaceous sandstone)
	20 _ 30 _				,			
	49.							
	50_	1						
	60.							
	70_							
	80_		1					
	20.	1						

Proj		THE STUDY O	N CIWUNG-C		EGRATED WA			TEST PIT LOG
Test Pit		TP-7		Elevation	not dete	rmined	Date	29.07.94
Locatio		Kp. Cijenekol	l / Adiyasa	Groundwater Elevation no gro	oundwater encou	ntered	Surveyed by	Dadang Rosana
Date	Depth	North Wall	G I . Soil Pr East Wall		ND DESCRIPTION West Wall	OF MATERIA		Description
	29					SILT	dark brown	clayey Sik (Topsoil), with someroots
***************************************	20					CLAY	brown	silty CLAY, with some fine grained sands
	20 20 40 60 80					SILT	reddish brown	clayey SILT, with some fine grained sands (derived from completely weathered Siltstone)
	3.0 20 40 63		HITHIT	2.90 m - 3.80 m Sample taken for Laboratory Testing		SANDY TUFF	yellowish light brown	completely to highly weathered fine to medium grained, poorly cemented
	4.0 -							
	5.0 - 20 - 40 - 60 -							

	No.	TP-8		Elevation	not dete	rmined	ste	30.07.94
catic	n .	Kp. Baru Ten	jo	Groundwater Elevation no gro	oundwater enco	intered Si	rveyed by	Dadang Rosana
			GL/	ASSIFICATION A	ND DESCRIPTION	OF MATERIA	į.	
•	Depth	North Wall	Soil Pi East Wall	ofile South Wall	West Wall	Classification	Cołour	Description
	10					SILT	dark brown	Topsoil, with Roots and Organic Matter
***************************************	50 - 50 - 70 - 70 -					SILT	piown	sandy SILT, fine grained with some Clay
30.07.94	90					SILT	yellowish light brown	clayey, gravelty SILT, (gravels of weathered Pumice max s ~ 1 cm)
***************************************	40			1.00 m - 2.00 m Sample taken for Laboratory Testing		SILT	light brown	clayey SILT, with some fine grained sand a gravels of pumice
	19 _ 20 _ 30 _		,					
	40 <u>.</u> 50							
	60 .) 	
	80.							
	90_	_			1	1		

tocation	T K	Cp. Ciganjur	Soil Pr	ASSIFICATION A	not dete	rmined Intered	urve,ed by L Colour	23.07.94 Dadang Rosana Description
23.07.94 Date	10 N		Soil Pr	no gro ISSIFICATION AI ofile	oundwater encou	OF MATERIA	l.	
23.07.94	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	lorth Wall	Soil Pr	ofile				Description
23.07.94	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -							
	7,7,7					SILT	light brown	clayey SILT, with some fine grained Sand and Roots
	70 = 50 80 = 50 90 = 50			0.60 m - 1.00 m Sample taken for Laboratory Testing		SANDY TUFF	whitish light brown grey	sandy TUFF, fine to medium grained with some fragments of Pumice (max p ~ 3 cm) well cemented
	10							
	70							
	30 - 40 - 50 - 60 - 70 -							

st Pit	No.	TP-10		Elevation	EGRATED WA not dete	10	ale	TEST PIT LOG 06.08.94
catio	en .	Kp. Ciuyah /	Sajira	Groundwater Elevation no gro	oundwater encou	intered Si	aveyed by	. Dadang Rosana
			(I)	ASSIFICATION A	ND DESCRIPTION	OF MATERIA		
Date	Depth		Soil Pr			Classification	Colour	D e scription
3	10_	North Wall	East Wall	South Wall	West Wall			
	20 <u>-</u> 30 <u>-</u> 40 <u>-</u>					SILT	dark brown	Topsoil, clayey SILT, soft, with roots
	50 60 70 80					SAND	brown	silty SAND, fine to medium grained, soft, with some roots
	1.0 - 10 - 20 - 30 -					. SILT	light brown	sandy SILT, fine to medium grained, soft (derived from completely weathered sandy tuff)
	80 _ 80 _ 20 _			1.60 m - 2.00 m Sample taken for Laboratory Testing		SANDY TUFF	yellowish brown light grey	SANDY TUFF, highly weathered, fine grained
	19 <u></u>		·					
	50 60 70 50							
	90 <u>. </u>		1, 1,	·				

C.4 Seismicity in West Java and Its Vicinity

SEISMICITY IN WEST JAVA AND ITS VICINITY : PERIOD 1970 - 1990 (M = 4.0 - 4.9 SR)

	:		Time		Epicent	er	Depth		dagnitud	le	·	Date			Time		Epicent	ег	Depth	1	Magnitude		Date			Time		Epicente	r I	Depth	У	Magnitude
y Mn	Yr	Hr	Mt	Sec	Lat.	Long	(km)	Mb	Ms	Ŗ	Day	Mn	Yr	Hr	Mt	Sec	Lat.	Long	(km)	Mb	Ms R	Day	Mn	Yr	Hr	Μt	Sec	Lat.	Long	(km)	Mb	Ms
07	1970	20	20	13 0	7.40 5 -	106,50 E	54	4.9			20	02	1002	04	40	10.0	6 80 C	100.00.12	22		45	16	04	1000	12	12	40.2	502 C	107.01.0	22	4.0	
07	1970			06.3		105.28 E		4.9			- 20 24	02 03	1983 1983	04	49 24			109.00 E 107.10 E	33	4.7	4.5	16 20	04	1989	07	54	03.1	5.93 S - 7.78 S -			4.8	
. 11				57.7		104.97 E		4.9			09	04	1983	00	44	13.0	7.30 S -		60	4.7	4.6	17	06	1989	17	42	50.4		107.92 E		4.7 4.7	
11			51	18.8	6.80 S -			,		4.9	17	04	1983	12	35	42.4		107.43 E		4.3	4.0	06	01	1970	23	26	45.6	7.80 S -			4.7	
11	1973			12.8		106.60 E		4.9		***	02	05	1983	07	00	04.8		106.44 E	33	4.6		18	01	1970	08	33	09.0	6.50 S -		136	4.0	
04	1974	11	30	06.1	6.10 S -	105.40 E		4.7			25	06	1983	23	14			106.02 E		4.9		23	01	1970		08		5.90 S -			5,1	
04	1974	20	24	24.7	6,60 S -	108.00 E	33	4.7			13	07	1983	14	07	38.0	7.10 S -		33		4.4	24	02	1970	04	02	59.0		106.10 E		5,3	
04	1974	05	58	13.8	8.90 S -	106.10 E	33	4.9			25	07	1983	10	27	08.8	7.76 S -	106.45 E	33	4.1		05	04	1970	12	12	10,6		106,74 E	134		
08	1974	22	02	03.4	8.50 S -	108.30 E	. 33	4.6			01	09	1983	02	04	0.00	7.90 S -	106.20 E	33		4.8	14	04	1970	03	30	56.3		108.10 E		4.9	
09	1974	03	13	33.1	6.70 S -	106.90 E	60	4.9			08	09	1983	12	58	19.5	8.10 S -	107.75 E	33		4.1	06	02	1971	18	26	19.1	6.90 S -	107.29 E	121	4.9	
11	1974			52 .1	8.30 S -	107.20 E		4.8			24	09	1983	09	27	30.0	8.50 S -	107.75 E	33		4.4	25	02	1971	09	32	41.7	5.54 S -	107.59 E	307	4.7	
04	1975			0.00		106.70 E		4.5			11	10	1983	21	01	15.0	8.20 S -	108.60 E	33	4.0		11	03	1971	05	40	26.2	7.81 S -	107.89 E	88	4.8	
05	1975			09.0		107.40 E		4.7			06	12	1983	06	12	00.0		105.20 E	33		4.9	23	05	1971	09	56	34.2	6.10 S -	107,10 E	70	4.6	
10				07.0		108.80 E		4.5			31	12	1983	20	04	17.0		107.80 E			4.1	01	02	1973	11	39	59.2	6.53 S -	106,97 E	77	4.5	
10				58.0		106.20 E		4.5			28	02	1984	12	55	05.9		105.18 E	56	4.8	3.9	24	02		19	07	54.5	6.40 S -	105.10 E	93	4.4	
11	1975			25.0		106.30 E					29	02	1984	23	46	12.6		105.25 E			4.5	13	04	1974		19	30.1		105.60 E	165	4.5	
12				17.9	8.80 S -						14	03	1984	14	00	41.0		105.75 E			4.6	01	06	1974		39	30.0	7.30 S -		89	4.6	
05				49.5		105.50 E					29	03	1984	03	11	43.2		105.17 E		4.4		20	09	1974	17	55	40.6		106.80 E	104		
05	1976			25.0		105.80 E		4.6			05	04	1984	11	45	29.0		108.15 E	33		4.0	06	10	1974	22	59	05.1		106.80 E	124		
05		20 16		57.0		106.00 E 107.00 E		4.2			15	04	1984	12	18	10.0		108.80 E	33		4.0	10	01	1976		23	38.1		105.96 E		4.6	
07 07	1976	05		35.0 01.2		107.00 E		4.0			13 14	05	1984 1984	03 03	58 13	25.6 27.9		106.65 E 105.33 E		4.8		25	03	1976	16	28	32.4		107.94 E	108	4.9	4.0
10				10.5		103.50 E						05	1984	14	45	21.5				4.8	16	29	04	1976	19	03	48.7		106.51 E	174		4.0
08				30.3		106.56 E		4.5			11	07	1984	- 06	55	30.0		108.80 E 108.20 E	33 33		4,6 4.3	30	07	1976		53	21.8		106.70 E		4.7	
01				27.0		106.20 E		4.5		4.9	20	07	1984	18	55	15.3		106.20 E		4.8	4.3	01 24	01	1977	02	18	20.1		107.87 E	90		
06				53.5		106.35 E			4.2	7.7	03	08	1984	05	45	55.9		105.37 E		4.9		30	04 03	1977 1978	22 15	18 40	37.7 32.9	6.95 S -	107.21 E 105.28 E	106	4.9	
07	1978			48.0		105,20 E			4.7		19	08	1984	02	11	08.7		106.16 E	33	4.9		28	03		19	31	49.8		105.28 E		4.6	
12	1978			11.4		107.75 E			4.1		20	09	1984	18	13	40.4		106.23 E		4.2		02	02		18	34	34.7		106.11 E		4.8	
12				47.0		107.60 E			4.7		24	09	1984	09	40	16.0		104.50 E			4,5	02	03	1979	18	34	34,5		106.20 E	153		
12	1978			16.7		107.99 E			4.3		08	11	1984	23	03	07.9		108.05 E		4.8	•••	18	05		08	04	29.8		106.60 E		4.4	
12	1978	13	57	34.5	8.06 S -	106.30 E	50		4.4		09	11	1984	17	46	46.7	9.02 S -			4.8		22	09	1979	17	50	40.8		108.00 E		4.7	
04	1979	05	18	17.7	7.90 S -	105.10 E	60	4.7			11	11	1984	05	22	43.2	6.24 S -			4.7		20	03	1980		50	27.4		106.22 E	151		
04	1979	05	53	47.8	7.80 S -	105.00 E	35	4.9	5.1		27	12	1984	10	50	05.0	8.25 S -	108.20 E	33		4.3	24	03	1980	13	39	01.5		107.17 E		4.9	
05	1979	08	23	30.4	8.70 S -	106,84 E	50		4.3		22	03	1985	05	57	50.0	7.50 S -	105.20 E	33		4.7	23	07	1980	13	32	27.3	7.64 S -	106.31 E	161		
06	1979	07	56	40.0	5.90 S -	105.60 E	33	4.4			22	03	1985	12	57	50.0	7.50 S -	105.20 E	33	4.7		28	02	1982	05	25	04.0	8.04 S -	100.15 E	147	4.8	
08	1979	20	39	23.3	8.90 S -	108.00 E	33	4.2			12	04	1985	21	04	51.3	6.14 \$ -	105.44 E	33		4.5	22	03	1982	17	55	25.0	8.53 S -	105.99 E	104		
09	1979	06	31	09.8	6.60 S -	104.90 E	37	4.9			06	06	1985	14	40	30.0	6.18 S -	105.53 E	33		4.6	25	03	1982	05	19	04.1	6.02 S -	105,58 E	- 66	4.6	
- 11	1979	06	25	45.2	8.47 S -	107,89 E	50	4.2			24	06	1985	02	28	0.00	8.90 S -	107,00 E	33		4.5	. 21	04	1982	19	40	58.4	6.16 S -	104.55 E	189	4.2	
12	1979	19	24	55.0	8.10 \$ -	107,00 E	33			4.1	14	07	1985	13	21	53.0	6.80 S -	107.03 E	29	4,4		03	05	1982	20	13	46.3	5.93 S -	105.85 E	115	4.9	
12	1979	13	26	49.1	8.43 S -	107.75 E	50			4.6	12	08	1985	00	51	52.3	5.07 S -	105.86 E	33	4.6		10	07	1982	17	51	18.9	7.39 S -	106.54 E	78	4.8	
01	1980	17	43	. 18.0	6.90 S	106.40 E	33			4.5	24	08	1985	17	51	50.0	8.00 S -	107.70 E	33		4.5	23	07	1982	00	56	30.9	7.88 S -	108.07 E	90	4.8	
02	1980	14	14	51.0	8.10 S -	106.90 E	33			4.4	11	09	1985		47	20.0	7.19 S -	106.87 E	54	4.8		18	01	1983	22	47	01.6	6.40 S -	107.76 E	270	4.3	
03	1980	23	35	39.5	5.45 S -	105.65 E	48	4.8			17	09	1985	00	11	12.0	8.00 S -	105.85 E	60	4.7		31	07	1983	15	38	53.4	5,88 S -	105.68 E	104	4.8	
04	1980	12	18	19.0	8.25 S -	108.80 E	33			4.5	04	10	1985	22	52	18.0	8.20 S -	106.15 E	33	4.3		01	09	1983	02	04	04.7	7,38 S -	106.42 E	68	4.6	
04	1980	16	03	40.0	8.90 S -	107.30 E	33			4.1	14	11	1985	17	49	60.0	7.00 S -	106.10 E	33		4.8	02	10	1983	00	24	30.0	5.20 S -	107.90 E	125	4.9	
06	1980	11	53	03.6	8.67 S -	106.61 E	E 40			4.3	27	12	1985	12	27	55.0	7.25 \$ -	104.80 E	33		4.6	10		1983			35.4		109.08 E		4.9	
07	1980	13	32	30.0	7.40 S	106.40 E	33			4.5	02		1986			13.0		105.00 E		4.7		18		1984			54.0		106.20 E			
08	1980	00	31	19.9	. 8.84 S -	106.10 E	33	4.6			02	01	1986	17	57	24.0	5.50 S -	104.70 E		4.9		24							105.86 E		4.2	
08			58			105.33 E		4.9			. 14	01	1986	15	32	10.0		106.25 E			4.4	20	09						105.35 E		4.8	
10	1980	00	80			108.80 E				4.5	′ 04	02	1986	16	41	52.0	8.10 S -	107.15 E	33		4.2	10	12	1984	13	27	18.0	7.61 \$ -	107.15 E	76	4.8	
11			21			108.70 F		4.9			09					10.0		107.30 E		4.1		17		1984			57.2	4.96 S -	105.22 E	66	4.7	
						106.20 E		4.9			14							105.70 E			4.2	22		1985			03.1	6:50 S -	106.18 E	115	4.8	
02						106.35 F		4.7										105.78 E		4.6		25	04	1985	14	15	0.00	7,80 S -	107.65 E	80	4.8	
10						· 105.29 F		4.7			24		1986			08.0		105.20 E			4.5	28							105.01 E			
10			36			- 106.24 E		4.4					1986					105.90 E		4.4		04		1985					106.32 E		4.9	
02						· 106.70 E		4.6			05							106.00 E			4.4	15	08				46.5		106.16 E		4.9	
03			08			- 105.76 F		4.9		10	14							107.50 E		4.6		11							108.50 E			
0.5						- 107.00 F				4.0						00.0		107.80 E		4.2		12		1985			58.0		108.20 E			
06						- 105.70 E				4.6	03							105,30 E		4.7		09		1987					105.10 E		4.9	
07						107.80 I				4.7	01 25		1988					105.11 E		4.4		07							107.36 E			
07						- 106.30 I				4.6	25		1988					108.80 E		4.7	•	24							106.08 E		4.9	
09			26			- 107.00 I				4.7	09					15.0		108.60 E		4.6		08							106.35 E			
09						- 106.70 I				4.2	25					49.0		106.05 E		4.4		02							106.17 E		4.9	
: [0						- 105.70 I - 108.55 I				4.4 4.4	12					04.0		106.70 E		4.4		0.5							105.40 E			
10						- 106.90 l				4.4	19		1988			18.0		107.85 E		4.1		01	- 01	1990	14	10	11.0	890 S -	107.50 E	60	4.5	
			27			- 106.75 I				4.9	02					38.0		- 106.70 E		4.3												
						- 106.75 I - 106.95 I		4.6		4.0	23							- 107.70 E		4.1												
- 11		- 10		4V.	7.07 3	(UU.7J	در ب	4.0			4.0	04	1303	- 41	23	30.0	1.00 5	105.50 E	. 33	4.9												

SEISMICITY IN WEST JAVA AND ITS VICINITY PERIOD 1990 - 1992 (M = 4.0 - 4.9 SR) (1/2)

No.	Day	Month	Year	Tin	ne (GN	AT)	Lat.		Long.	h	М	No.	Day	Month	Year	Time	(GM	(ī)	Lat.	Long.	h	М	No.	Day	Month	Year	Time	(GMT	Γ)	Lat.	Long.	h	М
23	2	07	90	15	12	0.0	0 9.9	2 S	109.12 E	33	4.1	725	30	10	90	13	43	13.2	5.49 S	102.92 E		4.5	1305	25	01	91	10			5.66 S	102.94 E	33	
30	3	07	90	8	38	32.	4 6.2	2 S	104.39 E	30	4.2	733	1	11	90	11	1	29.3	10.21 S	110.79 E		4.3	1350	30	01	91	7		54.2	8.61 S	108.74 E	30	4.0
34	3	07	90	13	19	12.	4 9.5	8 S	107.38 E	40	4.0	740	2	11	90	6	52	42.0	8.00 S	108.74 E		4.3	1381	4	02	91	19 .		54.7	8.11 S	107.32 E	30	4.7
51	5	07	90	23	5			4 S	108.72 E	30	4.3	744	2	11	90	13		11.6	6.79 S	104.50 E		4.1	1408	19	02	91	11		19.6 22.7	7.71 S 9.36 S	106.96 E	30 30	
60	6	07	90	9	26			15 S	107.44 E	30	4.0	754	4	11	90	15	4}	37.2 58.3	7.71 S 7.44 S	106.76 E 105.30 E	30 30		1413 1421	19 20	02 02	91 91	20 23		20.5	9.30 S 8.18 S	111.18 E 107.43 E	2	
73	8	07	90	8	53			81 S 80 S	109.10 E 106.20 E	30 30	4.1 4.5	761 770	5 5	11 11	90 90	3 _. 15	51 50	36.5	12.72 S	111.39 E	30	4.2	1429	22	02	91	15	40	26.6	9.76 S	107.45 E	33	
85 91	10 10	07 07	90 90	3 18	11 40			10 S	100.20 E	33	4.0	<i>77</i> 0 <i>7</i> 71	5	11	90	17	33	49.3	6.00 S	104.13 E	2		1431	23	02	91	6	26	25.5	9.91 S	109.03 E	30	
91 111	14	07	90	8	19			16 S	108.21 E	33	4.0	772	5	11	90	22	48	18.4	11.96 S	111.64 E	33		1438	24	02	91	14	0	2.5	10.40 S	108.75 E	30	
115	14	07	90	10				% S	108.71 E	33	4.2	777	6	11	90	14	28	44.3	9.90 S	106.89 E	30	4.0	1451	24	02	91	19	28	42.3	10.63 S	108.91 E	30	4.6
121	14	07	90	22			2 6.7	75 S	104.96 E	2	4.7	795	12	11	90	0	51	30.8	11.63 S	112.71 E	30	4.9	1452	24	02	91	19	35	43.9	10.38 S	108.99 E	30	4.2
138	15	07	90	8	54	53.	5 6.8	31 S	104.95 E	2	4.8	810	13	11	90	18	54	44.3	7.39 S	106.12 E	30	4.0	1455	25	02	91	0	7	54.3	10.46 S	108.84 E	30	
139	15	07	90	9	5	47.	6 6.7	71 S	105.04 E	2	4.3	817	14	11	90	3	29	32.8	3.45 S	109.88 E	33	4.3	1458	25	02	91	i	25	42.8	6.31 S	104.41 E	30	
151	16	07	90	7	14			51 S	107.11 E	2	4.3	830	15	11	90	3	18	39.3	6.78 S	102.46 E	30		1468	25	02	91	23	9	12.4	9.10 \$	108.26 E	33	
156	16	07	90	21	10			39 S	107.02 E	30	4.7	832	15	11	90	7	23	48.8	11.81 \$	112.17 E	33		1472	26	02	91	12		42.2		104.90 E	100 30	
158	17	07	90	3				73 S	104.97 E	2	4.9	833	15	11	90	23	5	1.1	5.43 S 6.93 S	102.28 E 110.87 E	33 33		1476 1482	27 28	02 02	91 91	3	- 8 - 4	34.9 25.1	3.61 S 10.45 S	104.91 E 108.61 E	30	
175	19	07	90	1	41			88 S	104.87 E	33 30	4.5	865 860	19	11 11	90 90	4 10	18 33	7.1 40.1	8.13 S	107.82 E	30		1489	6	03	91	3	12	10.5	8.15 S	107.97 E	30	
176 179	19 19	07 07	90 90	8 11	31 26			85 S 38 S	105.98 E 104.51 E	30	4.3 4.6	869 876	19 19	11	90	21	22	16.1	10.64 S	107.02 E	33		1510	9	03	91	11	35	4.0	5.59 S	103.65 E	30	
182	20	07	90	6				02 \$	104.01 E	30	4.9	880	20	11	90	4	9	8.6		107,25 E	30		1534	12	03	91	12	54	5.6	8.36 S		30	
193	20	07	90	14				47 S	103.71 E	30	4.9	901	28	11	90	4	50	11.5	4.08 S	108.48 E	33		1541	13	03	91	13	27	37.9	8.88 S	107.94 E	30	4.1
232	24	07	90	15				92 S	102.96 E	30	4.4	921	29	11	90	20	32	6.9	5.55 S	102.31 E	30	4.2	1544	13	03	91	17	30	55.0	4.20 S		30	
234	25	07	90	3	45	5 1.	.2 7.3	29 S	100.98 E	30	4.1	941	1	12	90	12	14	18,3	2.82 S		30	4.4	1562	15	03	91	11	35	4.0	5.59 S		30	
256	27	07	90	6	30	26	.9 4.:	51 S	102.50 E	30	4.0	943	2	12	90	0	52	36.7	5.88 S	103.52 E	30		1586	18	03	91	12	54	5.6			30	
267	28	07	90	9	-			62 S	104.18 E	30	4.7	945	2	12	90	1		37.3			30		1664	4	04	91	7	50	4.4	7.56 S		26	
285	29	07	90	20				02 S	107.05 E	33	4.0	946	2	12	90	5	53	26,6		, 104.75 B	30		1671	5	04	91 01	21 6	45 46	29.4 36.2	9.93 \$ 8.22 S		30 30	
309	1	08	90	10				08 \$	104.02 E	20	4.1	987	6	12	90 90	23 8	9 30	35.7 44.8	6.61 S 7.72 S		33	4.2 4.5	1679 1691	6 7	04 04	91 91	15	34	1.9	6.48 S		30	
10	1	08	90	13				06 S 09 S	105.37 E 105.27 E	30	4.5 4.1	996 1003	12 14	12 12	90	20		24.8	7.72 S		30		1706	9	04	91	0	23	39.7			60	
16 19	2	08 08	90 90	10 15				84 S	105.27 E	33 30	4.5	1014	16	12	90	9	4	23.3	8.30 S		12		1752	8	04	91	10	16	6.8			300	
338	3	08	90	15				82 S	102.82 E	30		1019	17	12	90	21	36		4.43 S			4.1	1776	11	04	91	8	57	24.8	7.64 S	106.48 E	35	4.
364	7	08	90	12				49 S	105.05 E	8		1023	18	12	90	8	48	6.9	6.61 S	104.11 E	22	4.6	1805	14	04	91	10	8	1.8	4.89 S	96.95 E	33	4.
396	10	08	90	5	3	i 29	.4 7.	83 S	106.50 E	2	4.1	1028	26	12	90	0	30	51.2	6.26 S	105,11 E	2	4.0	1812	15	04	91	10	59	42.0	10.40 S			4.
416	12	08	90	7	2	4 4	.0 4.	72 S	105.37 E	33	4.6	1029	26	12	90	10	10	1.4	8.19 S				1817	16	04	91	14	5	48.5			33	
127	14	08	90	C	20	6 30	.7 5.	55 S	101.90 E	30	4.8	1032	26	12	90	17	18						1821	16	04	91	23	56				33	
434	15	08	90	17				22 S	105.30 E	2		1034	26	12	90	20	4						1829	18	04	91	5	3				260	
438	16	08	90	21		-		.68 S	104.05 E	30		1050	27	12	90	19	14						1873	23	04 04	91 91	15 9	54 17	4.6 37.4			15 25	
465	22	08	90	. 2				.03 S	104.50 E		4.3	1052	27	12	90 90	21 1	12 29		5.24 S 7.00 S				1878 1881	24 24	04	91	16	10	8.4			33	
470	22	08 08	90 90	13 3				.09 S .67 S	105.30 E 106.49 E	30 2		1054 1061	28 28	12 12	90	19	11						1898	26	04	91	11	10	32.3			35	
477 485	23 23	08	90 90	22				.57.S	100.49 E	2		1080	20 1	01	91	0	43						1929		04	91	2	17	4.8			25	
492	25	08	90			6 43		.25 S	104.58 E	30		1099	4	01	91	8	53						1941	1	05	91	13	40	54.0	6.85 S	105.66 E	70) 4
503	26	08	90	14		6 20		.68 S				1103	4	01	91	15	48	36.8	6.08 S	110.46 E	100	4.2	1957	3	05	91	12	17	42.9	5.92 S	104.26 E	165	i 4
508	26	08	90	23	3 1	8 37	7.1 8.	.00 S	106.72 E	30	4.5	1104	4	01	91	15	48	36.8	6.05 S	110.47 E	90	4.2	1961	4	05	91	1			6.74 S) 4
509	27	08	90		1 4	2 11	.7 5.	.62 S	106.52 E	30	4.6	1105	4	01	91	15	48	36.9	5,97 \$				1972		05	91	17	28		7.10 S			
518	28	08	90	2	2 2	5 55		.76 S	103.72 E			1138	7	01	91	16	37						1975		05	91	6	42					
524	29	08	90	20				.31 \$	108,98 E			1139	7	01	91	17	41						1987		05 05	91 01	5 7	52		7.15 S 10.73 S			5 4 5 4
530	31	08	90	2	_			.32 S	107.28 E			1148	8	01	91	23		58.0 37.9					2005 2017		05 05	91 91	10		15.6				, ,
537 543	31	08 09	90 90	20 13		9 6 2 12		.59 S .26 S	105.23 E 99.98 E			1154 1157	9	01 01	91 91	13 17		55.0					2017		05	91	14		32.6				;
543 559	4	09	90					.73 S	99.98 E 106,81 E			1161	9	01	91	23	24		10.20 5				2029		05	91	10	36					5 4
565	4	09	90	2		55 II		.49 S			4.7	1167	10	01	91.	13							2040		05	91	23	31					5 .
571	5	09	90	2			9.2 10				4.6	1172	10		91	22		31.9					2045		05	91	14	12	51.7	10.25 S	108.88 E	33	3
577	5	09	90			24 39	9.0 5	.32 S			4.5	1186	13	01	91	14	47	30.5	4,64 5	and the second second			2047		05	91	17		39.9				2
584	6	09	90	2				.59 S			4.7	1195	14		91	3	21						2053		05	91	4		48.8)
590	6	09	90	1		2 13		.26 S			4.1	1197	14		91	12							2060		05	91	11			11.90 S)
606	8	09	90					1.73 S			4.7	1205	15		91	9	55						2072		05	91 01	8	38)
612	11	09	90	2				5.49 S			4.7	1218	16		91	7							2076		05 05	91 91	13 17		12.4 51.4				3
614	12	09	90			39 2		1.99 S			4.8	1225			91	21	45 46						2079 2089		05	91	23			13.23 8)
621 622	6 8	10 10	90 90	2				1.57 S 5.52 S			4.6	1233 1245			91 91	6 15							2102		05	91	17		54.0				5
625	10	10	90	•				7.78 S			4.3	1260	21	01	91	0							2107		05	91	13		15.5				0
638	11	10	90					5.55 S			4.3	1267	22		91	4		36.0					2110		05	91	15		19.8				0
670	19	10	90					5.63 S			4.0	1281	23		91	1	47					2 4,3	2112		0.5	91	17		41.8			30	0
671	19	10	90					3.23 S			4.5	1282			91	14							2125		06	91	16		· 58,1				0 4
674	20	10	90						104.86 E		4.6	1286			91	5	45	57.5	6.36				2138		06	91	15		40.7				5 4
702	26	10	90	3	5 :	24 2	8.9 7	7.51 S	106.31 E	30	4.2	1298	25	01	91	. 3	30	1.2	2 4.20	5 99.96 E	30) 4.4	2155	5	06	91	19	27	27.0	9,49 5	S 110.21 E	. 60	0

SEISMICITY IN WEST JAVA AND ITS VICINITY PERIOD 1990 - 1992 (M = 4.0 - 4.9 SR) (2/2)

No.	Day	Month	Year	Time	(GM	T)	Lat.	Long.	ь 1	im M (G)
2161	6	06	91	3	16	29.7	6.14 S	103.52 E	30	4.0
2177	9	06	91	16	49	53.3	5.84 S	102.62 E	30	4.4
2182	10	06	91	6	15	25.4	9.24 S	109.44 E	55	4.7
2193	12	06	91	9	30	57.6	4.93 S	102.81 E	26	4.1
2228	19	06	91	10	10	17.7	7.17 S	105.19 E	33	4.4
2235	20	06	91	17	39	47.0	10.42 S	111.87 E	33	4.8
2238	21	06	91	5	52	18.6	3.58 S	111.40 E	30	4.7
2242	21	06	91	18	34	50.9	4.59 S	101.90 E	33	4.3
2248	22	06	91	15	3	51.8	7.41 S	106.65 E	65	4.7
2252	22	06	91	18	18	7.7	7.21 S	105.54 E	35	4.8
2259	23	06	91	4	42	20.7	9.29 S	105.94 E	33	4.0
2264	23	06	91	22	35	45.6	8.04 S	107.03 E	33	4.3
2276	25	06	91	22	39	46.7	8.54 S	107.47 E	35	4.5
7	2	07	91	05	14	18.0	2.80 S	98.17 E	335	4.4
58	9	07	91	04	18	24.3	7.56 S	105.96 E	8	4.2
109	17	07	91	09	42	47.5	3.88 S	98.40 E	150	4.3
117	18	07	91	08	34	4.3	5.23 S	100.99 E	61	4.1
125	20	07	91	02	54	52.0	6.43 S	110.29 E	690	4.0
141	21	07	91	12	33	29.2	5.66 S	101.67 E	61	4.4
143	21	07	91	14	28	9.1	5.56 S	101.54 E	61	4.5
147	21	07	91	19	54	16.3	6.57 S	104.62 E	21	4.1
179	25	07	91	02	52	46.3	7.05 S	104.80 E	65	4.9
200	29	07	91.	12	33	29.2	5.66 S	101.67 E	61	4.4
202	30	07	91	14	28	9.1	5.56 S	101.54 E	61	4.5
289	10	08	91	15	25	21.3	7.59 S	106.78 E	51	4.1
297	11	08	91	07	17	46.8	6.53 S	106.65 E	184	4.0
328	18	08	91	03	33	22.4	9.26 S	109.70 E	317	4.5
371	26	08	91	21	23	52.5	6.58 S	103.46 E	21	4.6
410	4	09	91	02	03	20.1	6.18 S	105.21 E	13	4.3
423	5	09	9 1	04	16	20.1	6.97 S	105.83 E	113	4.8
460	14	09	91	12	43	47.1	10.13 S	109.37 E	150	4.5
473	17	09	91	00	16	14.7	6.14 S	105.32 E	12	4.7
619	18	10	91	05	00	28.0	6.27 S	105.16 E	9	4.1
648	22	10	91	09	42	31.8	7.29 S	105.37 E	2	4.3
693	24	10	91	17	13	45.7	7.36 S	105.34 E	12	4.9
696	24	10	91	22	07	45.5	7.45 S	105,48 E	61	4.7
849	14	11	91	18	06	44.8	8.14 S	107.11 E	21	4.0
879	19	11	91	00	17	42.3	6.16 S	104.02 E	21	4.1
893	22	11	91	23	59	20.5	9.62 S	108.08 E	12	4.6
957	3	11	91	15	45	53.7	6.80 S	102.57 E	12	4.6
1034	17	11	91	06	21	27.4	7.80 S	107.28 E	64	4.8

Legend:

h = depth (km)

M = magnitude (Richter Scale)

SEISMICITY IN WEST JAVA AND ITS VICINITY: PERIOD 1992 - 1993 (M = 4.0 - 4.9 SR) (1/2)

No.	Day	Month	Year	Time	(GMT))	Lat.	Long.	h	M	No.	Day	Month	Year	Time	(GMT)	Lat.	Long.	h	M	No.	Day	Month	Year	Time	(GMT)		Lat.	Long.	h	М
57	12	01	92	18	26 (00.5	7.00 S	101.13 E	354	4.2	834	2	05	92	05	20	05,9	7.81 S	106.52 E	12	4,8	1894	8	09	92	11	56 2	27.3	8.52 S	107.63 E	21	4.8
91	18	01	92	10		33.9	6.33 S	107.39 E	12	4.7	843	- 3	05	92	11		50.4	6.27 S	103.84 E	21	4.8	1896	8	09	92	14			7.55 S	106.48 E	47	4.7
133	25	01	92	19		40.8	7.19 S	104.27 E	12	4.7	847	4	05	92	04	00	39.5	9.12 S	108.21 E	21	4.8	7	8	01	93	03	03 5	2.4	8.43 S	107.86 E	30	4.8
167	1	02	92	06		58.0	7.78 \$	106,99 E	65	4.8	861	7	05	92	02		23.6	5.88 S	102.73 E	61	4.8	14	10	01	93	12			7.91 S	108,38 E	30	4.8
170 226	2 8	02 02	92 92	01 17		02,7 32.0	4.83 S 6.93 S	108.49 E 104.90 E	12 2	4.8 4.8	863 864	7 7	05 05	92 92	03 12		02.7 42.2	8.50 S 8.09 S	107.84 E 107.70 E	21 38	4.7 4.8	38 39	15 15	01 01	93 93	02 02			7.27 S 7.34 S	106,04 E 105,94 E	2	4.8 4.7
263	15	02	92	02		25.7	8.10 S	105.85 E	12	4.8	888	11	05	92	02		59.8	7.90 S	107.26 E	47	4.7	40	15	01	93	02			6.72 S	104.92 E	135	4.7
269	15	02	92	19		08.1	9.03 S	108.58 E	61	4.8	898	7	05	92	02	17	23.6	5.88 S	102.73 E	61	4.8	49	15	01	93	12	15 3	38.6	6.55 \$	105.97 E	1	4.1
281	17	02	92	01			10.03 S	109.98 E	35	4.3	900	7	05 05	92	03		02.7	8.50 \$	107.84 E	21	4.7	57	16	01	93	00			7.71 \$	106.56 E	21	4.7
326 345	24 28	02 02	92 92	10 04		21.9 03.6	7.10 S 7.80 S	105.94 E 106.04 E	70 21	4.8 4.8	901 925	7 11	05 05	92 92	12 02		42.2 59.8	8.09 S 7.90 S	107.70 E 107.26 E	38 47	4.8 4.7	60 70	16 17	01 01	93 93	08 18			7.16 S 7.79 S	106.97 E 106.46 E	2 21	4.7 4.8
354	29	02	92	17 -		10.2	7.04 S	105.21 E	21	4.7	993	17	05	92	21		09.9	4.52 S	100.21 E	15	4.8	87	31	01	93	05			7.65 S	107.04 E	2	4.8
372	4	03	92	80		26.7	8.20 S	105.42 E	61	4.7	995	17	05	92	23		12.8	4.61 S	99.91 E	103	4.8	89	31	01	93	10	41 4	46.0	7.34 S	106.95 E	30	4.7
373	4	03	92	08		40.7	7.93 S	107.57 E	79	4,8	997	18	05	92	04		52.2	5.71 S	102.61 E	100	4.8	136	7	02	93	14			6.26 S	105.42 E	30	4.9
374 382	4 5	03 03	92 92	14 14		17.7 09.7	6.69 S 5.60 S	110.04 E 102.87 E	150 21	4.6 4.8	1143 1145	4	06 06	92 92	19 19		27.3 26.3	7.46 \$ 7.54 \$	105.99 E 105.99 E	12 21	4.9 4.4	137 166	8 18	02 02	93 93	05 14			6.45 S 7.46 S	103,17 E 105,04 E	30 30	4.8 4.6
387	6	03	92	06		59.9	9.35 \$	112.42 E	248	4.2	1150	5	06	92	08		33.3	7.62 S	105.96 E	12	4.8	178	19	02	93	18			6.56 S	103.01 E	30	4.7
396	7	03	92	02		47.4	6,71 S	104.68 E	45	4.5	1170	7	06	92	08	05	05.2	6.80 S	102.59 E	61	4.8	212	26	02	93	16	55 3	33. 7	4.61 S	101.21 E	200	4.8
408	8	03	92	06		19.9	7.89 S	106.85 E	2	4.8	1206	10	06	92	11		12.2	8.37 S	107.94 E	12	4.8	236	2	03	93	10			7.13 S	106.01 E	2	4.8
422 435	9 11	03 03	92 92	22 22		29.4 16.0	6.09 S 4.70 S	102.53 E 103.25 E	61 21	4.8 4.9	1221 1226	12 12	06 06	92 92	02 12		51.6 41.9	6.17 S 7.17 S	102.02 E 105.18 E	61 12	4.3 4.7	237 284	2 8	03 03	93 93	10 11			7.08 S 10.38 S	105,98 E 105.42 E	21 61	4.8 4.8
437	12	03	92	01		49.6	7.27 S	105.49 E	3	4.8	1229	12	06	92	18		01.0	3.63 S	100.93 E	331	4.9	294	9	03	93	17			7.34 S	105.28 E	12	4.8
440	12	03	92	02	54	17.7	7.71 S	106.16 E	12	4.8	1232	13	06	92	01	10	42.7	7.42 S	106.14 E	25	4.7	321	13	03	93	03			6.59 S	103.64 E	61	4.8
442	12	03	92	04		10.6	7.55 S	106.00 E	21	4.9	1241	13	06	92	14		37.8	6.77 S	107.06 E	33	4.8	322	13	03	93	03		51.1	6.54 S	103.31 E	61	4.8
443	12 12	03 03	92 92	04 05		53.2 48.7	7.29 S 7.74 S	105.38 E 106.08 E	21 12	4.8 4.9	1244 1268	14 24	06 06	92 92	01 12		17.4 41.4	6.32 S 5.63 S	104.61 E 100.61 E	21 61	4.8 4.9	329 339	13 15	03 03	93 93	15 04		03.1	6.71 S	104.23 E	21	4.8
447	12	03	92	12		50.8	6.25 S	105.03 E	1	4.8	1289	26	06	92	05		14.0	5.67 S	100.01 E	61	4.9	374	13	03	93 93	03		36.8 24.9	7.49 S 6.59 S	106.70 E 103.64 E	74 61	4.8 4.8
451	12	03	92	22		40.7	8.64 S	107.02 E	21	4.8	1313	28	06	92	05		46.6	6.63 S	107.26 E	273	4.8	375	13	03	93	03		51.1	6.54 S	103.31 E	61	4.8
453	13	03	92	00		47.1	6.49 S	105.85 E	110	4.8	1320	29	06	92	05		56.8	6.59 S	104.78 E	21	4.4	382	13	03	93	15	12 (03.1	6.71 S	104.23 E	21	4.8
454 467	13	03 03	92 92	08 00		56.4 12.3	7.74 S 5.77 S	105.26 E	12	4.8	1329	1	07	92	00		21.2	7.39 S	106,56 E	80	4.7	392	13	03	93	04			7.49 S	106.70 E	74	4.8
479	16	03	92	02		39.6	7.35 S	105.22 E 106.03 E	151 2	4.8 4.8	1330 1335	i	07 07	92 92	· 01 10		21.6 27.8	6.95 S 5.03 S	105.89 E 104.76 E	152 228	4.7 4.7	411 415	17 17	03 03	93 93	17 22		31.1 09.5	8.40 S 7.96 S	107.84 E 104.73 E	21 12	4.9 4.8
480	16	03	92	03		20.8	7.75 S	106.53 E	12	4.8	1347	2	07	92	21	08	38.3	9.36 S	106.35 E	100	4.8	429	19	03	93	09		19.2	7.94 S	107.31 E	32	4.7
481	16	03	92	07			12.33 S	113.44 E	300	4.8	1368	5	07	92	21	50	30.6	8.38 S	106.75 E	21	4.8	440	20	03	93	10	08	40.2	5.35 S	99.74 E	12	4.8
487 488	16 16	03 03	92 92	20	54 1		3.69 S	101.26 E	321	4.8	1371	6	07	92	05		36.6	8.45 S	107.60 E	21	4.8	459	22	03	93	04		01.0	6.15 \$	105.12 E	222	4.8
490	17	03	92 92	21 02	17 18	11.9 08.2	5.99 S 4.38 S	103.14 E 103.36 E	61 421	4.8 4.9	1396 1400	10 10	07 07	92 92	01 21		53.7 45.8	10.24 S 7.27 S	108.85 E 106.60 E	61 119	4.9 4.7	477 482	23 23	03 03	93 93	15 22		56.2 13.3	6.04 S 4.42 S	103.76 E 102.87 E	12 100	4.8 4.8
492		03	92	05		47.2	7.13 S	105.43 E	43	4.8	1403	11	07	92	02		01.8	7.59 S	106.68 E	43	4.8	504	24	03	93	21		52.9	5.98 S	102.11 E	61	4.8
501	18	03	92	08		20.9	7.44 \$	106.46 E	69	4.7	1425	13	07	92	04	41	51.7	5.19 S	104.41 E	159	4.7	536	29	03	93	11	52	14.6	8.18 S	107.51 E	12	4.7
513		03	92	00		06.3	0.81 \$	96.99 E	33	4.9	1427	13	07	92	08		25.5	10.05 S	110.45 E	61	4.8	553	2	04	93	04		31.0	7.68 S		21	4.8
514 521	19 20	03 03	92 92	04 02		07.8 04.9	5.21 S 7.30 S	104,20 E 105,20 E	12 12	4.9 4.8	1431 1464	13 18	07 07	92 92	15 04	37 18	26,7 43,7	7.12 S 8.52 S	106.32 E 108.25 E	121 110	4.7 4.8	554 561	2 3	04 04	93 93	04 13		56,1 52,9	7.66 S 7.33 S	108.05 E 105.20 E	21 21	4.7 4.8
522		03	92	03		58.7	5.77 S	103.83 E	2	4.8	1500	21	07	92	20		35.1	8.56 S	100.23 E	56	4.7	573	4	04	93	22		45,6	7.83 \$		62	4.8
524	20	03	92	06	54	49.6	7.17 S	105.18 E	21	4.4	1509	22	07	92	12	01	34.7	6.12 S		298	4.8	577	5	04	93	02			9.30 S		118	4.8
526		03	92	08		51.3	5.92 S	105.72 E	150	4.8	1510	22	07	92	16		59.0	6.92 S	108.76 E	300	4.8	602	7	04	93	10	54		6.82 S		30	4.7
528 530	20 20	03 03	92 92	15 16	02 40	00,0 21.1	5.23 S 8.21 S	104.34 E 107.09 E	2 21	4.8 4.8	1515 1520	23 25	07 07	92 92	21 01		54.9	6.65 S	101.44 E	61 21	4.8	606	7	04	93	15		02.0	4.77 \$	107.58 E	30	4.8
	21	03	92	03		55.9	7.72 S	105.92 E	12	4.8	1580	2	08	92	12		26.4 50.7	9.06 S 6.68 S	106.17 E 108.27 E	225	4.7 4.9	634 646	10 11	04 04	93 93	17 19		23,3 38.8	8.66 S 7.64 S	109.81 E 106.03 E	30 30	4.9 4.8
	22	03	92	15	45		6.24 S		302	4.7	1586	3	08	92	01		35.1	7.25 S	106.66 E	88	4.7	647	11	04	93	20		02.2	7.10 S	105.92 E	30	4.7
	23	03	92	04		48.9	7.56 S	106.06 E	24	4.8	1598	5	08	92.	02		44.6	6.22 S	102.68 E	61	4.3	686	17	04	93	15	48	20.7	8.03 S	106.83 E	21	4.8
	23	03 03	92	21	54 56		5.79 S	103.80 E	12	4.7		5	08	92	19		48.1	4.18 S	100.22 E	213	4.9	687	17	04	93	15	55		8.33 S		12	4.8
	24 31	03	92 92	09 12	56 55		5.63 S 6.94 S	102.80 E 106.65 E	114 154	4.8 4.7	1613 1652	7 13	08 08	92 92	01 01	0 9 37	16.7 17.2	8.55 S 6.50 S	107.90 E 105.65 E	21 2	4.7 4.7	692 726	18 22	04 04	93 93	05 07	55 38	55.3 36.6	5.47 \$ 7.60 \$	101.49 E 105.97 E	61 21	4.8 4.8
618		04	92	06	19		5.73 S	100.30 E	364	4.3		15	08	92	16		17.6	7.78 S	106.94 E	52	4.9			04	93	21		33.3	8.49 S		66	4.8
621		04	92	14	03		9.02 S	106.54 E	12	4.3	1693	15	08	92	19		45.6	9.52 S		150	4.8	746		04	93	01		12.9	5.27 S		135	4.8
	10		92	16	14		5.08 S		281	4.0	1695	15	08	92	21		19.8	6.52 \$		2	4.8	759		04	93	14		10.7	8.04 S		56	4.7
	14 16		92 92	04 18	52 53		10.48 S 6.76 S		206 277	4.8 4.7	1718	19	08 08	92 92	11	42 54	13.4	4.22 S	- 101.18 E	61	4.9	760 786	26 30	04	93	14		35.7	7.71 \$	106.05 E	12	4.8
	17		92	01	31		6.19 S		146	4.7	1729 1737	20 21	- 08	92	14 14	5 4 45	17.9 19.3	5.70 S 7.11 S		111 12	4.9 4.8	786 787	30 30	04 04	93 93	04 08	16 08		7.43 S 6.26 S		21 194	4.8 4.8
	18		92	02	51		6.63 S		143	4.8	1748	22	08	92	14		44.5	6.75 S		54	4.0	797	2	05	93	17		39.3	8.00 S		21	4.8
	18		92	04		40.3	7.18 S	105.19 E	2	4.3	1774	26	08	92	09		25.1	5.77 S		21	4.8	801	3	05	93	09	13		6.01 S		228	4.8
	18		92	10		14.9	5.69 S		150	4.7	1816	4	09	92	00					150	4.8	819	7	05	93	18		30.9	7.30 S		65	4.8
	1 20	04 04	92 92	12 00	53 28	07.8 20.1	6.33 S 5.81 S		2 142		1839	5 7	09	92	00		20.0			105	4.8	824	8	05	93	09		46.4	9.96 S		61	4.7
	20		92	13		16.6	5.99 S		61	4.8	1859 1864	7	09 09	92 92	. 00		22.9 34.2	7.33 S 7.39 S		12 21	4.0 4.8	826 841	8 11	05 05	93 -93	15 06		14,7 15.0	7.79 S 8.17 S		167 32	4.9 4.3
	21		92	15		15.0	6.53 S		59		1869	7	09	92	05		31.1	7.38 S		21	4.8	880	17	05	93	11			7.10 S		61	4.8
764	22	04	92	00	44	05.8	5.29 S	103.98 E	12	4.8	1885	8	09	92	02				105.41 E	12	4.8		.17	05	93	13			5.05 S		61	

SEISMICITY IN WEST JAVA AND ITS VICINITY: PERIOD 1992 - 1993 (M = 4.0 - 4.9 SR) (2/2)

No.	Day	Month	Year	Time	(GM	T)	Lat.	Long.	h	M
911	21	05	93	10	53	32.8	6.91 S	107.92 E	254	4.7
913	22	05	93	00	51	38.8	7.91 S	104,50 E	21	4.8
985	30	05	93	03	53	52.3	7.58 S	106.83 E	52	4.7
1007	1	06	93	12	01	38,9	7.92 S	107.27 E	44	4.8
1011	1	06	93	18	49	18.2	6.61 S	107.69 E	21	4.8
1051	7	06	93	17	00	59.8	8.37 S	107.33 E	21	4.8
1056	7	06	93	21	04	19.9	5.99 S	103.65 E	12	4.2
1103	14	06	93	00	05	56.5	7.95 S	104.57 E	21	4.8
1119	16	06	93	05	01	19.8	5.70 S	102.52 E	12	4.8
1120	16	06	93	13	09	22.1	5.91 S	106.76 E	21	4.6
1130	18	06	93	14	24	34.4	9.34 S	110,37 E	i	4.2
1132 1169	18 23	06 06	93 93	15 09	54 02	13.5 00.0	6.97 S 8.75 S	102,06 E 108.05 E	61	4.2
1185	26	06	93	18	30	08.1	3.83 S	98.98 E	61 150	4.8 4.8
1186	26	06	93	19	53	04.1	6.22 S	105.11 E	0	4.8
1191	27	06	93	15	32	56.7	9.60 S	115.70 E	171	4.7
1196	28	06	93	05	47	02.2	8.06 S	106.89 E	21	4.2
1201	28	06	93	17	18	40.9	6.49 S	104.10 E	21	4,8
1203	28	06	93	20	12	17.4	6.39 S	107.51 E	344	4.7
1261	6	07	93	08	21	31,7	7.38 S	105.36 E	12	4.8
1319	11	07	93	03	18	23.2	6.96 S	105.89 E	117	4.7
1333	13	07	93	06	39	25.4	7.62 S	106.43 E	21	4.8
1335	13	07	93	13	10	27.1	5.70 S	101.54 E	80	4.8
1347	14	07	93	10	43	28.5	7.13 S	106.99 E	1	4.8
1362	16	07	93	11	53	29.9	9.32 S	112.60 E	300	4.8
1366	17	07	93	00	11	27.4	6.85 S	106.10 E	106	4.8
1368	17	07	93	11	18	43.8	8.75 \$	108.21 E	102	4.7
1393 1432	20 29	07 07	93	23 04	45	17.5	8.20 S	108.32 E	92	4.8
1454	2	08	93 93	15	55 56	56.6 28.1	8.35 S 7.18 S	107.33 E 105.34 E	21	4.9
1465	4	08	93	13	47	06.6	7.18 S	103.34 E	21 127	4.8 4.8
1470	4	08	93	20	43	42.7	6.95 \$	106.23 E	89	4.9
1497	10	08	93	06	07	12.2	6.11 S	103.81 E	21	4.8
1510	12	08	93	05	06	40.1	5.96 S	105.26 E	119	4.8
1541	19	08	93	04	19	45.9	6.43 S	105.87 E	113	4.3
1553	21	80	93	20	42	58.7	8.26 S	106.90 E	61	4.8
1558	21	08	93	23	05	30.8	8.65 S	107.28 E	113	4.0
1571	23	08	93	19	15	21.2	6.70 S	103. 79 E	12	4.8
1575	24	08	93	00	33	10.9	6.01 S	103.56 E	12	4.8
1578	24	08	93	09	58	52,2	6.56 S	107.64 E	319	4.7
1591	26	08	93	00	49	38.9	7.44 S	106.00 E	21	4.8
1611	28	08	93	18	00	55,2	6.18 S	105.92 E	151	4.8
1636 1665	31 5	08 09	93 93	18	40	25.5	7.16 S	108.71 E	254	4.7
1666	5 6	09	93 93	23 04	26 51	36.7 38.4	6.54 S 6.07 S	106.50 E	155	4.8 4.8
1668	6	09	93 93	10	04	38.4 25.1	7.61 S	104,50 E 105.94 E	2 35	4.8
1695	9	09	93	19	19	23.1	11.78 S	103.94 E 104.92 E	33	4.8
1703	ĺ	09	. 93	02	02	23.7	8.56 S	104.92 E	12	4.8
1705	11	09	93	04	05	30.0	8.23 S	107.11 E	21	4.
1724	14	09	93	01	43	31.3	7.17 S	109.09 E	12	4.1
1746	17	09	93	05	17	10.1	7.40 S	106.58 E	91	4.1
1759	18	09	93	22	54	41.0	8.15 S	107.91 E	50	4.
1770	21	09	93	07	39	50.3	5.58 S	102.84 E	61	4.8
1774	21	09	93	23	38	44.0	6.17 \$	102,77 E	100	4.3
1785	23	09	93	21	59	57,7	6.16 S	102.17 E	6 i	4.
1798	25	09	93	07	20	07.2	7.46 S	106.69 E	60	4.
1864	3	10	93	01	48	26.3	6.86 S	105.60 E	12	4.
1895	6	10	93	13	57	32.9	9.33 S	107.96 E	12	4.
1919	10	10	93	12	42	35.0	3.45 S	104.32 E	12	4.5
1933	13	10	93	07	07	32.0	8.76 S	106.77 E	12	4.
2014	26	10	93	00	52	02.9	7.00 S	106.23 E	121	4.
2025	28	10	93	17	55	49.7	6.75 \$	107.08 E	21	4.
2062 2067	4	11	93	09	20	07.2	8.97 S	108.66 E	21	4.1
2125	5 17	11 11	93 93	07	02 13	03.8	7.56 S	105.96 E	12	4.9
4143				21		02.6	7.29 S	105.18 E	12	4.
2157	23	11	93	00	16	32.8	7.38 S	106.49 E	54	4,8

2182 26 18 49 48.4 6.52 S 103.94 E 21 4.7 2193 28 10 50 33.1 6.07 S 110.38 E 11 23 21 44.6 8.09 \$ 106.98 E 04 23 52.1 7.33 S 105.36 E 2214 1 12 93 2217 1 16 54 57.4 1.53 S 103.20 E 2240 4 23 21 43.0 6.96 S 104.36 E 2244 5 93 12 07 58 10.0 7.09 S 105.22 E 2270 20 53 06.0 9.05 S 108.91 E 2337 17 12 23 17 59.8 6.69 S 106.14 E 169 4.1 2339 18 12 93 08 52 24.7 7.33 S 105.45 E 02 05 59.5 6.97 S 106.23 E 123 4.8 2377 25 14 07 08.7 6.06 S 103.85 E

h = depth (km)

M = magnitude (Richter Scale)

Date	;		Time		Epicente	it.	Depth		Magnitud	le		Date			Time		Epicent	er	Depth	Ī	Magnitu	de		Date			Time		Epicente	er	Depth	ı	/agnitude	3
Day Mont	h Yea	ır Hou	Minute	Sec.	Lat.	Long.	(km)	Mb	Ms	Ŕ	Day	Month	Year	Hour	Minute	Sec.	Lat.	Long.	(km)	Mb	Ms	R	Day	Month	Year	Hour	Minute	Sec.	Lat.	Long.	(km)	Mb	Ms	R
																														 				
24 02		0 04	02	54.0	6.90 S -			5.3			06	09		11	40	22.0	6.50 S -					5.3	10	05	1980	01	08	25.8		104.73 E				
14 04	197		47	31.0	5.80 S -			5.2		4.8	07	09	1984	07	30	35.0	6.50 S -					5.0 5.0	22 27	09	1980 1980	18	17	55.9		107.56 E 107.70 E		5.4		
14 04 08 05	197 197		27 07	53.6 33.0	5.80 S - 6.50 S -					5.0	03 20	10 11	1984 1984	20 08	24 37	54.4 56.7	6.00 S - 7.55 S -	105.00 E		5.2		3.0	06	10 02	1982	00 03	08 29	34.4 34.1	6.04 S -			5.0 5.0		
08 05 12 07	197		20	00.0		105,20 I			-5,0		15	12	1984	05	10	28.1	6.04 S						25	02	1983	16	33	08.8		107.17 E		5,1		
01 09			38	11.1	8.00 S -	107.40 1					22	01	1985	07	57	36,0	5.90 S -						06	03	1983	11	21	42,2	5.86 S -			5.0		
06 10			51	11.1		108,10 I					31	01	1985	12	49	25.7	6.39 S -			5.4			09	03	1983	00	05	46.4	7.19 S -			5.3		
19 02			25	35.9	5.86 S -	105.48 I					02	24	1985	15	33	0.00	8.60 S -	107.30 E	33			5.0	10	04	1983	00	44	11.9	7.44 S -	107.03 E	87	5.0		
18 03	197	1 21	25	25.1	7.22 S -	105.96 E	3 46	5.4	,		05	06	1985	17	09	57.0	7.30 S -	104.82 E	33	5.2	4.3		13	07	1983	15	07	39.7	6.71 S -	106.35 E	111	5.0		
08 05	197	1 13	12	02.9	7.20 S -	105.99 1	E 40	5.1			04	07	1985	14	55	10.5	7.40 S -	105.75 E	60			5.0	29	07	1983	12	25	09.0	7.31 S -	105,00 E	145	5.3		
05 02	197	11 13	55	52.0	6.50 S -	104,90 1	E 63	5,2	2		25	10	1985	06	47	11.0	8.75 S -	105.45 E	60			5.3	13	11	1983	03	48	50.1	6,08 \$ -	105.41 E	68	5.0		
20 03	197	22 22	56	08.5	6.98 S -				3		25	11	1985	16	26	30.0	8.45 S -					5,5	10	03	1984	02	14	52.8	6.82 S -			5.1		
06 07			12	23.7	6.62 S -						20	03	1986	21	00	20.0	5.95 \$ -			5.0			11	03	1984	09	50	32.2	5.90 S -			5.1		
21 08		72 21	57	17.2		105.94		5.3			04	04	1986	06	46	30.0		104.70 E				5.4	15	04	1984	03	22	18.5		105.33 E		5.5		
28 09		72 09	00	38.0	5.71 \$ -						20	05	1986	21	56	59.0	8.00 S -					5.6	26	04	1984	10	38	59.9	7.05 \$ -			5.3		
27 07	197		48	13.1	9.00 S -			5.5 5.4			14	08	1986	05	58	11.0 20.0	7.10 S - 8.00 S -			5.3		5.0	24	09	1984 1985	09	40	28.7 15.7	5.37 S -	105.14 E		5.0 5.1		
16 12 08 06			47 35	26.6 58.5	6.80 S - 6.00 S -						10 12	10 12	1986 1986	17 15	48 55	28.0		106.75 E 106.85 E		5.1			26 20	01 02	1985	21 20	09 21	13.7		105.96 E 105.39 E				
08 06 18 09			27	26.0	8.50 S -						26	02	1987	12	16	54.0		104.50 E				5.0	12	04	1985	21	05	08.1		105.57 E		5.1		
09 02			45	24.5	6.70 S -						06	08	1987	19	28	20.0		108.50 E		5.0		0.0	10	08	1985	04	12	46.3		105.39 E		5.3		
17 02			24	20.0	6.00 S -						02	03	1988	09	28	30.0		104.80 E				5.4	09	09	1985	10	36	19.0		104.91 E		5.3		
06 06			41	55.1	6.50 S			3 5.3			05	04	1988	01	22	57.9	6.73 S -	105,47 E	33	5,0			09	10	1985	01	15	01.0	7.30 S -	106.74 E	235	5.8		
16 06	197	75 04	14	04.0	7.80 S -	107.50	E 33	3 5.0)		19	12	1988	18	59	38.0	8.80 S -	105.40 E	33	5.3			09	12	1985	11	58	28.0	5.65 S -	105.82 E	E 148	5.1		
14 08	197	75 12	28	56.5	7.60 S -	106.40	E 33	5.3	3		03	08	1989	22	38	08.0	6.90 S -	105.90 E	33	5.2			22	05	1986	17	56	58.0		106.00 E		5.1		
14 02	197	75 20	31	38.2	8.08 S -	108,61			9 .		08	03	1989	08	22	35.2	6.01 S -	105.36 I	33	5.3			20	10	1986	23	53	07.8		104.89 E				
28 02			12	11.4		105.54					16	01	1970	02	27	31.6	7.10 S -			5.1			05	06	1987	04	49	38.3		105.94 E		5.0		
27 02			30	00.6		104.87					23	01	1970	05	08	32,3	5.90 S -			5.1			09	10	1987	10	17	44.0	7.50 S -			5.4		
10 08			07	26.9		107.64					24	02	1970	04	02	59.0	7.00 \$ -			5.3		4.7	18	11	1987		34	01.6	8.34 S -					5.6
14 08			38	51.5		107.57					21	05	1970	09	44	29.4	6.90 S -						02	03 10	1988 1988	09	28 50	30.1 21.4	6.38 S - 5.98 S -			5.4 5.0		
01 11			28 23	29.3 58.9	5.34 S - 8.04 S -				8 5.1 5.1		05 2 9	10 12	1970 1970	15 21	50 56	51.7 15.1		107.99 I 108.09 I		5.4 5.6			06 02	12	1988	11 15	59 10	44.6	7.21 \$ -			5,0		
09 02		78 07	39	21.3	6.25 S -				5.3		16	06	1971	07	31	20.0		105.55 I		5.0			20	01	1990		13	. 15.1	6.97 S -			5.5		
21 09		78 06		10.4		105.24					04	07	1971	19	02	56.3		105.42 I		5.2			06	04	1990		47	44.1	6.85 S -				5.6	
11 11		78 04	49	40.4		106.30					22	07	1971	21	05	25.4		108.04 I					21	05	1990	13	24	41.2	8.90 S -					
24 11		78 05		30.6		106.49		5.7			26	12	1971	00	26	46.4		106.93 I					06	07	1990		16	22.5	6.90 S -	108.10 1		5.2		
19 03	19	79 07	21	17.0	8.30 S -	107.60	E 63	5 5.1	1		14	04	1972	18	15	16.4	6.64 S -	105.76 I	E 80	5.3			07	12	1990	12	17	36.0	8.90 S -	108.50 1	E 200	5.7		
29 04	19	79 05	53	47,8	7.80 S -	105.00	E 3:	5 4.9	9 5.1		15	06	1972	11	52	03.5	6.42 S -	105.30 1	E 88	5.6			•							•				
06 05	19	79 14	32	20.0	8.50 S -	107.20	E 3:	3 5.	i		20	06	1972	15	17	30.6	7.28 S -	106.39 1	E 86	5.2														
27 05	19	79 10	44	14.4	6.20 S -			7 5.			04	07	1972		03	21.9		106.70 I		5.2														
07 08		79 04		47.0	9.00 S -						22	07	1973		35	01.9																		
14 08				15.0		109.00		3 5.0	0		02	05	1974		08	31.8		105.30 1		5.3					•									
		79 16			7.50 S -				0 66	6.0	14		1974				7.90 S - 6.80 S -																	
		79 13 79 22			7.21 S -				9 5.5		05		1974 1975		39 00		7.40 S			5.1 5.2														
20 00		80 19			6.10 S - 7.04 S -			4 5.3 3 5.3			14 10		1975		33		7.40 S -			5.6														
			38		8.20 S -			3 5.			21		1976				6.99 S			5.1														
25 05		80 12			7.44 S -				_	5.0	01		1976		36	34.5		106.32		5.2														
		81 13			8.77 S -			· 35.	.5 5.1		07		1976		09		6.80 S			5.0														
		81 13			8.82 S -			5 5.			27		1976				5.00 S			5.5											•			
		82 03			6.18 S -			3 5.			02	07	1976	04	04		6.10 S			5.1														
10 0	2 19	82 16	17	50.4	6,96 S -	106.88	E 3	3 5	.5		03	08	1977	19	54	07.2	7.32 S																	
22 0				226	0.70.0	105.00	20 0		_								A	105 10																

08 08 1977 01 42 55.6 7.78 S - 105.19 E 113 5.2

10 09 1977 13 39 01.7 6.57 S - 107.09 E 105 5.9

01 11 1977 20 28 29.2 5.93 S - 105.79 E 100 5.3

17 11 1977 17 18 29.0 6.00 S - 104.80 E 66 5.5

28 11 1977 06 12 55.5 6.00 S - 105.50 E 88 5.0

01 03 1978 10 50 20.7 7.21 S - 107.92 E 200 5.1

23 09 1979 22 19 52.0 7.14 S - 105.16 E 91

07 05 1979 12 52 06.3 6.30 S - 105.90 E 117 5.9

06 09 1979 16 01 32.0 6.80 \$ - 106.80 E 95 5.2

29 09 1979 06 31 14.6 6.91 S - 105.33 E 116 5.0

10 10 1979 13 39 15.3 7.32 S - 105.89 E 137 5.4

03 12 1979 03 20 48.5 6.80 S - 105.40 E 92 5.1

25 05 1980 12 07 12.2 7.15 S - 106.09 E 74 5.0

5.3

5.3

14 08 1977 21 38 48.5 8.60 S - 107.09 E 138 5.3 5.5

21 09 1978 06 27 12.7 7.09 S - 105.17 E 76 5.4 5.1

22 03 1982 17 15 23.5 8.60 S - 105.99 E 33 5.2

04 08 1982 08 49 02.1 7.94 S - 107.80 E 40 5.1

09 08 1982 17 51 10.0 7.60 S - 106.00 E 33

31 10 1982 22 17 34.0 6.30 S - 105.00 E 33

13 11 1982 10 21 13.8 6.05 S - 105.42 E 61

26 04 1983 12 38 07.0 6.90 S - 105.00 E 60

29 07 1983 11 25 27.6 6.73 S - 105.59 E 33 5.4

02 10 1983 00 24 24.5 8.15 S - 105.54 E 60 5.1

10 03 1984 09 02 00.7 7.64 S - 106,96 E 33 5.7

21 07 1984 02 18 18.6 8.12 S - 106.23 E 33 5.2

19 08 1984 00 06 54.4 8.52 S - 106.15 E 33 5.1

19 08 1984 11 31 00.9 8.49 S - 106.16 E 33 5.2

03 11 1983 12 40 50.0 5.30 S - 104.75 E 52

29 10 1982 08 13 06.0 8.11 S - 107.17 E 33 5.1 4.8

02 05 1983 06 59 50.8 8.67 S - 106.36 E 33 5.3 5.3

SEISMICITY IN WEST JAVA AND ITS VICINITY: PERIOD 1990 - 1993 (M = 5.0 - 5.9 SR)

															,		,,,,,	(1	- 5.0 - 5	., 010,	
No.	Date	Month	Year	Tim	e (GM	T)	Lat.	Long.	h	М	_	No.	Date	Month	Year	Time	e (GM	T)	Lat.	Long.	h
26	2	07	90	6	27	44.9	6.12 S	119.43 E	200	5.9		568	24	03	92	17	19	20.3	15.94 S	114,17 E	375
, 52	6	07	90	0	16	27.3	7.20 S	107.86 E	23	5.4		692	11	04	92	14	1	49.8	8.06 S	107.53 E	79
93 133	11 15	07 07	90 90	21 7	57 26	4.7 38.5	6.47 S 6.66 S	113.34 E 105.01 E	33	5.1		738	18	04	92	14	28	35.9	6.12 S	104.17 E	21
146	15	07	90	20	14	9.6		103.01 E	6 30	5.0 5.7		967 1265	16 24	05 06	92 92	21 3	30 20	50.0 49.1	6.19 S 7.73 S	105.06 E 106.01 E	21 21
162	17	07	90	7	8	51.6	5.57 S	106.73 E	30	5.1		1339	01	07	92	21	47	51.1	12.39 S	112.24 E	61
194	20	07	90	15	29	50.9	12.25 S	117.67 E	33	5.2		1409	11	07	92	12	53	5.0	5.20 S	101.56 E	100
212 213	23 23	07 07	90 90	2 4	58 38	31.5 10.9	10.45 S 6.35 S	114.65 E 107.13 E	33 2	5.6		460	22	03	93	5	24	57.3	9.43 \$	110.02 E	271
281	29	07	90	14	16	59.8	4.54 S	107.13 E	33	5.2 5.2		644 723	11 22	04 04	93 93	17 1	17 5	17.0 29.3	8.36 S 4.68 S	108.24 E 101.32 E	30 61
296	31	07	90	4	27	29.9	5.00 S	101.29 E	30	5.1		1234	02	07	93	20	48	51.5	4.56 S	100.98 E	61
349	5.	08	90	2	6	55.8	8.01 S	106.63 E	30	5.3		1375	. 17	07	93	23	56	40.9	7.32 S	111.61 E	677
463 463	21 21	08 08	90 90	17 17	31 31	58.9 58.9	5.67 S 5.67 S	106.19 E 106.19 E	30 30	5.0 5.0		1593 1639	26 01	08 09	93	1	43	9.0	8.96 S	109.26 E	333
482	23	08	90	12	12	6.9	8.79 S	108.06 E	30	5.3		1769	20	09	93 93	11 23	48 4	45.7 24.4	5.74 S 6.48 S	102.42 E 103.23 E	152 12
499	26	08	90	5	16	35.1	9.72 S	111.26 E	30	5.2	_	1841	30	09	93	5	41	11.4	3.52 S	99.41 E	312
507	26	08	90	22	35	21.2	5.20 S	102.56 E	30	5.0											
615 617	17 26	09 09	90 90	11 13	57 24	16.5 16.0	6.11 S 2.67 S	102.96 E 102.74 E	30 30	5.7 5.5											
619	1	10	90	11	50	56.6	7.86 S	106.50 E	30	5.4											
691	22	10	90	11	26	58.6	13.41 \$	118.55 E	30	5.6											
695 701	23	10	90	12	34	4.6	8.69 S	108.54 E	30	5.1											
701	26 26	10 10	90 90	6 22	19 42	51.8 51.7	6.22 S 8.28 S	103.37 E 107.32 E	30 30	5. 2 5.0											
774	6	11	90	5	46	17.5	15.92 S	114.30 E	33	5.7											
832	15	11	90	7	23	48.8	11.81 S	112.17 E	33	5.2											
847 898	17	11	90	2	13	1.5	2.89 \$	96.49 E	33	5.9											
908	22 28	11 11	90 90	3 18	57 13	9.5 54.0	6.14 S 10.47 S	106.56 E 91.60 E	30 30	5.0 5.0											
928	30	11	90	1	14	46.9	5.84 S	105.22 E	2	5.0											
947	2	12	90	7	8	38.9	8.52 S	108.45 E	30	5.1											
957 1031	3 26	12 12	90 90	22 15	39 37	7.5 16.8	5.40 S 10.23 S	103.18 E 106.94 E	30	5.2											
1149	7	12	91	16	27	26.2	8.34 S	100.94 E	30 30	5.7 5.0											
1155	9	01	91	15	50	9.7	7.74 S	106.92 E	30	5.3											
1194	14	01	91	2	36	47.3	10.77 S	112.38 E	30	5.1											
1270 1275	22 22	01 01	91 91	6 22	44 10	44.3 59.9	8.42 S 7.95 S	108.19 E 107.01 E	30 30	5.5 5.0											
1279	22	01	91	23	38	3.8	6.99 S	115.83 E	35	5,4											
1320	26	01	91	0	19	3.2	4.85 S	101.08 E	30	5.6											
1352	30	01	91	11	17	6.0	7.95 S	106.55 E	30	5.2											
1359 1403	1 7	02 02	91 91	10 4	58 6	11.7 23.5	5.00 S 6.72 S	98.53 E 104,30 E	33 33	5.2 5.3											
1404		02	91	4	6		6.72 S			5.3											
1416	20	02	91	5	49	30,4	8.99 S	108.29 E	30	6.1											
1427 1450	22 24	02 02	91 91	1 18	10 53	23.7 19.1	10.65 S	113,74 E	30	5.1											
1454	24	02	91	21	10	35.1	8.65 S 2.14 S	114.95 E 114.18 E	33 30	5.0 5.2							•				
1542	13	03	91	15	50	9.7	7.74 S	106.92 E	30	5.3											
1615	22	03	91	8	11	18,3	5.76 S	103.76 E	35	5.0											
1653 1723		03 04	91 91	5 17	28 56	28.9 16,8	5.81 S 7.94 S	102.31 E 107.30 E	40 35	5.5											
1737		04	91	3	26	4.3		110.55 E	160	5.4 5.0											
1817		04	91	14	5	48.5	2.03 S	103.47 E	33	5.2											
1883	24	04	91	18	31	55.8		114.57 E	385	5.2											
1985 2068		05 05	9! 91	23 6	46 27	2.9 44.9	10.66 S 6.12 S	113.11 E 119.43 E	30 200	5.1 5.9											
2126	2	06	91	16	50	6.2		111.15 E	75	6.1											
2160		06	91	2	28	49.5	6.16 S	103.79 E	35	6.1		٠									
2168 2190		06 06	91 91	17	12	52.3	9.98 S	113.26 E	300	5.8											
2190		06 06	91 91	18 12	55 37	44.1 43.1	5.17 S 8.43 S	101.34 E 107.65 E	55 35	6.0 5.0											
2203	14	06	91	21	43	59.2	8.24 S	107.85 E	40	5.4											
2223		06	91	4	18	27.5	8.17 S	107.90 E	35	5.3											
20 391		07 8	91 91	6	54 54	12.5 33.9	8.93 S	110.88 E	206	5.1											
698		10	. 91	23	12	15.9	8.17 S 4.44 S	107,43 E 100,35 E	51 352	5.2 5,0											
							,. 0	15		210											

SEISMICITY IN WEST JAVA AND ITS VICINITY

(1) Period 1970 - 1990 (M > 6.0 SR)

Date			Time			Epicenter		Depth	M	Magnitude	
Day	Month	Year	Hour	Minute	Sec.	Lat.	Long.	(km)	Mb	Ms	R
09	11	1974	19	10	55.2	6.50 S -	105,30 E	51	6.1		
09	02	1975	22	36	04.0	7.20 S -	105.90 E	33	6.3		
30	06	1976	07	00	06.9	7.86 S -	108.91 E	33	6.7		
06	09	1979	16	01	28.0	7.50 S -	106.50 E	33			6.0
02	11	1979	15	53	03.5	7.66 S -	108.25 E	62	6.1		
17	08	1988	01	58	50.0	9.00 S -	106.00 E	33	6.0		
04	05	1971	02	04	32.6	6.61 S -	105.37 E	69	6.1		6.0
17	05	1974	20	55	11.2	6.51 S -	106.84 E	131	6.0		
14	02	1978	00	03	51.6	7.71 S -	107.05 E	85	6.1		
26	10	1982	12	44	17.7	8.10 S -	108.44 E	237	6.1		
02	08	1990	15	03	28.5	6.90 S -	105.10 E	30	6.0		

Source : Meteorological and Geophysical Agency of Ministry of Communication (BMG)

(2) Period: 1991 - 1992 (M > 6.0 SR)

	Date			Time (GMT)			Epicenter		
Day	Month	Year	Hour	Minute	Sec.	Lat.	Long.	h	M
20	2	91	5	49	30.4	8.99 S -	108.29 E	30	6.1
2	6	91	16	50	6.2	9.89 S -	111.15 E	75	6.1
6	6	91	2	28	49.5	6.16 S -	103.79 E	35	6.1
11	6	91	18	55	44.1	5.17 S -	101.34 E	55	6.0
18	04	92	9	16	23.5	5.88 S -	100.49 E	61	6.6
09	06	92	0	32	9.6	9.31 S -	109.67 E	. 12	6.7
02	09	92	5	49	58.3	7.37 S -	111.25 E	756	6.3