DRILL LOG			HOLE NO.	LD-2	SHEET N	O. 1	OF 7	
PROJECT	Study on Water Re	sources Develo	opment for Metro Manila	DEPTH	200.00m	ELEV	/ATION	370.00m
SITE	Daraitan Limestone Area	COODINAT	E N 14 ⁰ 34'19.2"; E 121 ⁰ 26'13.2"	INCLINATION	Vertical	DRII	LL RIG	LY 44
CASING DEPTH	90.00m	DATE		DRILLED	Palm	a		

				oil		Core Recovery			S	PT-Test	-		
Scale	Elevation	E Depth	Column Section	Type of Rock or So	Description	Rock Classificatio	G.W.L	N-Value	10	N-Val	ue	10 5	WPT-Test (Lugeon Value)
utur 1 1 2 3 3 3 4 4 5 6 7 7 8 8 9 9 10 10 10 10 10 10 10 10 10 10 10 10 10				Clayey Silt	0.00-0.10m Reddish brown humic soil. 0.10-10.60m Reddish brown clayey silt. Extremely weathered zone.	(400), (400), (400), (400), (400), (400), (400), (400), (400), (400), (400), (400), (400), (400), (400),							
11 12 13 14 14 15 16	359.40	10.60		Gravelly Silt	10.60-17.30m Reddish brown sandy to clayey silt with soft fragments of tuff breccia, and with hard boulders of andesite. Extremely to moderately weathered zone.	(60) (79) (79) (67) (79) (67) D							-
18 19 20 21 22 23 23 24	345.00	25.00		Silt Sand	17.30-25.00m Brown silty sand, fine grained, with boulders of weathered andesite which is 10-50cm in diameter. Extremely to moderately weathered zone.	4(9) 							-
25 26 27 28 28 29				Tuff Breccia (Quarternary)	25.00-60.70mGrayish brown fine grained sand with boulders of fresh and weathered andesite.Diameter of boulders is 0.5-1m in diameter.Possibly moderately to extremely weathered Pleistocene consolidated deposit such as tuff breccia.								-

DRI	LL I	LOG						HOLE	NO.	LD-2		SHEET N	JO. 2	OF 7	
Р	ROJ	ECT		Stud	y on Water Re	sources D	evelopment	for Metro I	Manila	DE	PTH	200.00m	ELEV.	ATION	370.00m
	SIT	Έ	D	araitan	Limestone Area	COODIN	NATE N 14°3	34'19.2"; E 12	1º26'13.2"	INCLIN	JATION	Vertical	DRIL	l RIG	LY 44
CAS	ING	DEPT	Н		90.00m	DATE				DRII	LED	Palm	a		
	_														
			-	lio					Core Re	covery 5		SP	ſ-Test		
	E		ction	or S					(Icati					alue
cale	vatio	epth	In Se	Rock		Descri	otion			assi	W.L /alue				T-To on V
S	Ele		olum	c of]							.9 Z				WF
(m)	(n)	(a)	Ŭ	Type					0 50	100		0 10	N-Value	e 40	50
				•						(st)			20 00		
31															\neg
- 32													-		
- 33										MT					-
- 34										(85)					
- 35				•					4135						
26										(50)					A
- 30									0(35)						
- 37										5(60)					
- 38									4135				-		200
- 39									HHN					-	
- 40													-		224
- 41															
- 42									ar[38]						
42				lary)						8					
- 43				rtern											
- 44				(Qua											-
- 45				ccia						(90)			1		
- 46				Bre											_
- 47				Tuff											_
- 48															_
- 49										6)					
									1200						
- 50									TIN						1900

H

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**

DRILL LOG			HOLE NO.	LD-2	SHEET N	0.3	OF 7	
PROJECT	Study on Water Re	sources Devel	lopment for Metro Manila	DEPTH	200.00m	ELEV	/ATION	370.00m
SITE	Daraitan Limestone Area	COODINAT	ΓE N 14 ⁰ 34'19.2"; E 121 ⁰ 26'13.2	" INCLINATION	Vertical	DRII	LL RIG	LY 44
CASING DEPTH	90.00m	DATE		DRILLED	Palm	a		

				lio		Core Recovery				S	SPT-	Test			
Scale	Elevation	Depth	Column Section	pe of Rock or So	Description	ck C d Ø N ck C d Ø N ck [%]	G.W.L	N-Value					2 40 10 10 10 10 10 10 10 10 10 10 10 10 10		WPT-Test (Lugeon Value)
(11)	(n)	(a)		Ty		0 50 100			0	10)	N-Value 20 30	40	50	
-				Tuff Breecia (Quarternary)		(44)									
- 61			***		60.70-70.00m										
62					Gray brown sand and fragments					-	_	+ +			
63			***		of hard andesite and soft tuff			1						_	з
-					breccia. Weathered layer of old Tertiary	(ł do)									uflo
- 04					tuff breccia	4400									er Ir
- 65			***			D					-			-	Vate
66										-					-
67			***			~(35)				_		_			
- 68		ļ.													low
- 69													-		In
- 70						(P4)					_	-	_		ater
-			***	. 8	70.00-200.00m	(100)									M
- 71					Gray or light brown tuff breccia	(100)									
- 72					with rubbles of 1-30cm in average				-		-	+	-		
- 73			***	2	Fresh part is hard In 70 00-117 00m	(40)									
- 74				rtia	cracky and iron stains noted on	(86)									
- /4			***	T (Te	surface of all cracks.	400									Lu'=3.7
- 75				scci						-	-				
- 76				Bre		(96)					_	-			
- 77			***	Tuff		[60] (100)									
in the						101	1								
- 78			***												
- 79						(65)/ CL					-	+			L2 (
- 80						(0)							_) 5	Lu=3.0
-			***			1461			1						
- 81						(80) 5									
- 82			***									+	-		
83												+ +	-		
- 01						() aox									
- 04						(400)									Lu=5.1
- 85						400			1						
- 86						[14]			3		_	+ +	_		
. 87			***			0.00									
-						(100)									low
- 88						(tdox									· Inf
- 89															ater
00						4.00×			3						W:

DR	LL I	LOG						НО	LE N	0.	LD-2			SHEET	n NC	D. 4	OF 7		
Р	ROJI	ECT		Study	y on Water Re	sources De	evelop	ment for Me	tro Ma	anila	D	EPTH		200.00)m [ELEV	ATION	J 370).00m
	SIT	E	Da	ıraitan	Limestone Area	COODIN	JATE	N 14 ⁰ 34'19.2";	E 121 ⁰	26'13.2"	INCL	NAT	ON	Vertic	al	DRIL	L RIG	L	Y 44
CAS	SING	DEPT	Н	ç	90.00m	DATE					DR	ILLEI)	Pa	alma				
_			_	_									_		_				
c Scale	Elevation	Depth	Column Section	ype of Rock or Soil		Descriț	ption			Core Rec → (R Q [Cock Classification	G.W.L	N-Value		SPT-	Test N-Value		T TWIN	WP1-Test (Lugeon Value)
(8)	(6)	(8)		L				and the second second	_	0 50	100		-	0 1	0 2	20 30	40	50	1911 - 19
93 94 93 94 95 96 97 98 99 99 99 99 90 100 101 102				reccia (Tertiary)						(7) (7) (7) (7) (7) (7) (7) (7)	5)								u'=2.1 Pc=9.5)
-106				TuffB						(0)	809								
-108										[25]	4400				-				
109											50) (100)	108.9 분							w-0.7
-110										16	1000				1				.u =0.7
-112										[0]									
-113											(100)								
-114											\$0) \$0]				-				
-115										(0)	8003			-	-	-		L	.u'=0.4
116										E	50) (1.00)				-	-			
-117					Below 11	7.00m no) extre	mely iron		[0]	1000				1	-			
118					stains not	ed on surf	ace of	cracks.			1801								
-119					In 117.00 and hard.	-136.00m	, fresh	, massive		(20)	400) 50) (100)							L	.u'=0.3

DRILL LOG			HOLE NO.	LD-2	SHEET N	IO. 5	OF 7	
PROJECT	Study on Water Re	sources Devel	opment for Metro Manila	DEPTH	200.00m	ELEV	/ATION	370.00m
SITE	Daraitan Limestone Area	COODINAT	Έ N 14 ⁰ 34'19.2"; E 121 ⁰ 26'13.2"	INCLINATION	Vertical	DRII	LL RIG	LY 44
CASING DEPTH	90.00m	DATE		DRILLED	Palm	a		

			_	ioil		Core Recovery 5				SI	PT-7	ſest			-
Scale Scale	 Elevation 	E Depth	Column Sectior	Type of Rock or S	Description	R Q D Q South of the second se	G.W.L	N-Value	0	10	12	N-Valu	ie 0 40	50	WPT-Test (Lugeon Value)
121						(100)k (118) (100)k (100)k (100)			-						Lu'=0.3
-122						(100).									
-125						(100). [89]									
-125						(59) (100).						<u> </u>			Lu'=0.4
126						(100), [35]			-					_	
-127						[138]			+			-			
128						(100)			ŀ	-		-			
129						(70)			ł			1	\vdash		Lu'=0.4
-130									F						
-131			***			(Lalo), [100]			Ī						
-132				(jr		(100), (100)									
-133				Tertia		().00) [100]					_	-			Lu'=0.5
-135				eccia ((100) (100)			ł	_			$\left \right $		Eu 0.5
-136	-			uff Br	In 136.00 200.00m highly fractured	(100) (100)				-+	-	-	\vdash		
-137				Ē	parts making up 50% in whole	[D]			ŀ						
-138					section, while fresh massive parts 50%.	[115] (90)			-				$\left \right $		
-139					Possibly fractured zone caused	(86)								_	Lu'=0.5
-140					drilling and/or by fault passing	(14) (80) 4			T						Lu 0.5
-141					nearby the borehole.	(82)			ŀ						
142															
143						(86)									
145						(19)						-			Lu'=0.8
-146						[0]					-	-			
-147						(68) (50)			F	-	_	-		-	
-148						(52)						-		-	Lu'=0.8
-149						(52)			F	-					24 0.0
150						(SO)			-	-		1	-		

DRI	LL	LOG	r -					HOLE	NO.	LD-2		SHEE	ST N	U. 6	OF 7	
Р	ROJ	ECT		Study	y on Water Re	sources D	evelopment	for Metro N	/Ianila	DE	PTH	200.0)0m	ELEVA	ATION	370.00
	SIT	Έ	Da	ıraitan	Limestone Area	COODIN	NATE N 14 ⁰	34'19.2"; E 121	⁰ 26'13.2"	INCLIN	JATION	Vert	ical	DRILI	RIG	LY 4
CAS	ING	DEP	ΓH	Ģ	90.00m	DATE				DRII	LED	I	Palma	ı		
											1 1	_				-
				Soil					Core Re	sovery 5			SPT	-Test		
	uo	_	cetio	or						ficat						est
cale	vati	epth	In Se	Rock		Descrij	otion			assi	W.L /alue					T-T
S	Ele		olum	c of]					RQ		5 Z					WF
(m)	(n)	(m)	Ŭ	Type					0 50	"JON		0	10	N-Value	40	50
										4004				20 30	40	
-151			***						172	400		-	1		1	— Lu'=
-152								Ì	$\left 1 \right 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 $	[89]		}	+	+		
-153			***					1	[30]						_	
154		1							6	(88).1 76]						
-1.34								1		(94) d- sop						Lu'=
-155			***							(100)						
156										(100)						
157								i		1901		-	+			
158			***						[40			-	-			
159										1				+		
160										(100). [80]			_			Lu'=
-100										(100) (90)						
-161								1	(43)	(100)						
162										(100)			1			
163			***	iary)					[30]	1000			+-			
164				(Tert					(33)	- N		-		+	-+-	Lu'=
165				ccia					[25]			-	-			
-166				Bre					[26]	0.002						
167				Tuff						(1.00) 50)						
-10/									1	(100)						
168										(100)						2
-169										(100)						
-170			***						(60)	4.000		-	-		-	Lu'=
-171									H	[80]		-	-	+		
-172										[80]			-	+ +		
172			***							(100)) [78]						2.5
1/3										(100)). 76)						
-174										(100)						Lu'=
175			***							(100)						
-176										(100)		-		+	1	. .
177									[16]							
-178										[80]		_		+		
100										(LOO)). [80]						Lu'=
-179										0.00						

DRILL LOG				HOLE NO.	LD-2	SHEET N	O. 7	OF 7	
PROJECT	Study on Water Re	sources De	evelop	ment for Metro Manila	DEPTH	200.00m	ELEV	/ATION	370.00m
SITE	Daraitan Limestone Area	COODIN	ATE	N 14 ⁰ 34'19.2"; E 121 ⁰ 26'13.2"	INCLINATION	Vertical	DRII	LL RIG	LY 44
CASING DEPTH	90.00m	DATE			DRILLED	Palm	a		
						-			

			-	lio		Core Recovery 5				SI	PT-Te	st			-
Scale Scale	E Elevation	E Depth	Column Section	Type of Rock or S	Description	R Q D R Q R Q L Sock Classificati	G.W.L	N-Value	0	10	N- 20	Value 30	40	50	WPT-Test (Lugeon Value)
-181						(100), [82], (100), (70)]									Lu'=0.6
-182 -183 -184 -185 -186						(KG) (KG) (COA (SO) (SO) (SO) (SO) (SO) (SO) (SO) (SO)									Lu'=0.8
-187 -188 -189 -190 -191				Tuff Breccia (Tertiary)		(00), (0), (0)									Lu'=0.9
-192 -193 -194 -195 -196						(100), (122) (155) (155) (155) (155) (100), (159) (100), (10), (Lu'=0.4
-197 -198 -199	170.00	200.0				(440), [30] (400), (400), (400), (400), (30)									Lu'=1.0

DRILL LOG			HOLE NO.	TD-1	SHEET N	IO. 1	OF 1	
PROJECT	Study on Water Res	sources Develo	pment for Metro Manila	DEPTH	30.00m	ELEV	/ATION	135.00m
SITE	Transfer Tunnel No.1 Route	COODINATI	E N 1,616,300 ; E 550,915	INCLINATION	$\theta = 45^{\circ}$	DRII	LL RIG	LY 24
CASING DEPTH	0.50m	DATE		DRILLED	Diaz	<u>r</u>		

				lio		Core Recovery				5	SPT	-Test			
3 Scale	 Elevation 	Depth	Column Section	Type of Rock or S	Description	R Q D S N R Q D S N Lock Classification 00 00 00 00 00 00 00 00 00 00 00 00 00	C WT	N-Value	0	10)	N-Valu 20 30	e 0 40	0 50	WPT-Test (Lugeon Value)
- 1 - 2 - 3 - 4 - 5 - 6 - 7 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14				Sand Stone	 0.00-10.00m Gray to dark gray sandstone, medium grained. In 0.00-4.60m, cracky and observed chlorite and striation on crack surface. Below 4.60m, firm with some calcite veins of 30° and 70° in dip. In 7.60m, observed slickenside on surface of sharp crack dipping 70°. 10.00-15.00m Dark gray sandstone, medium to coarse grained.	UT-CW (164) (164) (164) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100)	and the second se	50							Lu'=4.0 (Pc=8.3) Lu'=2.8 (Pc=4.3)
15 16 17 18 19 20	115.00	20.00		Conglomerate	15.00-20.00m Gray firm conglomerate, with rubbles of 1cm in maximum diameter.	[54] [54] [53] [86] [100									Lu'=3.3 (Pc=6.5)
20				Stone	20.00-30.00m Dark gray to gray sandstone, medium to coarse grained, with a few cracks dipping 60-80°in 23.70m, 24.80m and 27.40m.	(60) (100) (100) (100) (100)									Lu'=4.0 (Pc=7.2)
25 26 27 28 28	105.00	30.00		Sand		1100) 1100) 1100) 1100) 1100)									Lu'=3.4 .(Pc=7.0)

DRILL LOG				HOLE NO.	TD-2	SHEET N	O. 1	OF 3	
PROJECT	Study on Water Res	sources De	evelop	ment for Metro Manila	DEPTH	70.00m	ELEV	ATION	180.00m
SITE	Transfer Tunnel No.1 Route	COODIN	JATE	N 1,616,180 ; E 550,570	INCLINATION	Vertical	DRII	LL RIG	LY 24
CASING DEPTH	3.0m	DATE			DRILLED	Diaz			

			1	oil		Core Recovery 5	
3 Scale	Elevation	ê Depth	Column Section	Type of Rock or S	Description	$ \begin{array}{c} -10 \\ -10 $	WPT-Test (Lugeon Value)
1 2 3 4 5 6	173.50	6.50		Conglomerate	0.00-6.50m Greenish gray conglomerate, with rubbles of granule. Many cracks in which surface is brownish in whole of this section.	(469) (4	-
7 8 9				tone	 6.50-14.00m Gray firm sandstone, medium grained, with bedding planes of 45-50° in dip. Above 9.00m, surface of cracks 		Lu=4.2
10 11 12	166.00	14.00		Sand S	dipping 30° and 70° indicates brownish color. A few calcite veins in whole of this section.	(46%) (100) (10) (10) (10) (10) (10) (10) (10) (10) (10) (10) (10) (100) (100) (100) (100) (100) (100) (100) (100) (100)	Lu'=4.0 (Pc=9.7)
14 15 16 17 18 19	10000				14.00-30.00mGreenish gray conglomerate, with rubbles of andesite, sandstone and mudstone. Size of rubbles is 4cm in maximum diameter.Comparatively cracky in total.A few calcite veins observed.	(169) (169) (100) </td <td>Lu'=3.7 (Pc=9.4)</td>	Lu'=3.7 (Pc=9.4)
- 20 - 21 - 22 - 23 - 24				Conglomerate			Lu'=3.8 (Pc=9.6)
- 25 - 26 - 27 - 28 - 29	150.00	30.00				(100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100)	Lu'=3.5 (Pc=9.1)

DRILL LOG				HOLE NO.	TD-2	SHEET N	IO. 2	OF 3	
PROJECT	Study on Water Res	sources De	evelop	ment for Metro Manila	DEPTH	70.00m	ELEV	ATION	180.00m
SITE	Transfer Tunnel No.1 Route	COODIN	JATE	N 1,616,180 ; E 550,570	INCLINATION	Vertical	DRII	LL RIG	LY 24
CASING DEPTH	3.0m	DATE			DRILLED	Diaz	<u>s</u>		

				oil		Core Recovery				SP	Γ-Test			
Scale Scale	E Elevation	E Depth	Column Section	Type of Rock or S	Description	Solution 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	G.W.L N-Value	0	1	0	N-Valu 20 3	ue 30 4	0 5(WPT-Test (Lugeon Value)
					30.0-60.00m	(100)				Ī				
31					Gray to greenish gray sandstone,	469				T				
32					fine to medium grained.	0.004				t	-		-	Lu'=2.7 (Pc=4.6)
33					In whole of this section, a rew chlorite observed.	(160)				+	-			(,
- 34					In fine grained part, easy to be	1:00)				+		-	-	
- 35					cracky by drilling operation.	11001				-				
- 36					Below 35.00m, calcite veins	[100]				+			-	
- 37					dipping 45° and 90° rich.	(160) [100]				-		-	-	Lu'=3.1
38						(160) [90]								(Pc=/.5)
39						(100) (100)								
40						(160) [100]					_		1	
40						(100) (100)								
- 41						0,009								
- 42						(100)				T			1	Lu'=3.0
- 43										1		\square		(Pc=8.7)
- 44				one		1100				-		-	1	
- 45				nd St		1100 CM				-	_	-		
- 46				Sar		[100]			-	-		-		
- 47						(160) (100)				-		-		Lu'=4.5
48						(100) [92]				_		-		
49						(100) (100)								
						(10 0) [94]								
- 50						(100)								
- 51						(100)								
- 52		8				900			-	1			-	Lu'=3.3
- 53						(196)				-		1	1	
- 54	f 1					(100)				+		+		
- 55						1100				+		+		
- 56						(166)			-	-	-			
57												-		
- 58						(100) [100]							-	Lu=3.1
- 50						(166)					1			
- 59						(400)								

DRILL LOG				HOLE NO.	TD-2	SHEET N	IO. 3	OF 3	
PROJECT	Study on Water Res	sources Dev	/elop	ment for Metro Manila	DEPTH	70.00m	ELEV	ATION	180.00m
SITE	Transfer Tunnel No.1 Route	COODINA	ATE	N 1,616,180 ; E 550,570	INCLINATION	Vertical	DRII	LL RIG	LY 24
CASING DEPTH	3.0m	DATE			DRILLED	Diaz	Z		

			c	Soil		Core Recovery		SPT-Test	0
Scale Scale	Elevation	E Depth	Column Section	Type of Rock or S	Description	R Q D S ION Rock Classificati	G.W.L N-Value	0 10 20 30 40 50	WPT-Test (Lugeon Value
61					60.00-66.00m				
62					Gray sandstone, medium to fine	(166)) (100)			u=3 1
63					bedding planes of 45-50° in dip.	CH 4000			u 5.1
64				Stone		Ceda (96)			
- 65				Sand	66 00-70 00m	(168).			
66					Dark gray sandstone, very fine	[972]			
- 67					grained.	1244			u'=4.2
68					of sharp crack dipping 90°.	54] CL			
- 69					Partially like a mylonite with chlorite, possibly old stable fault.	(100)			
	110.0	70.00			contraction possibly of stable fault.	(100)			

DRILL LOG				HOLE NO.	TD-3	SHEET N	O. 1	OF 7	
PROJECT	Study on Water Res	sources D	evelop	ment for Metro Manila	DEPTH	200.00m	ELEV	/ATION	252.00m
SITE	Transfer Tunnel No.1 Route	COODIN	NATE	N 14 ⁰ 34'24"; E 121 ⁰ 26'13.2"	INCLINATION	Vertical	DRII	LL RIG	LY 44
CASING DEPTH	96.00m	DATE			DRILLED	Palm	a		

				oil		Core Recovery				S	PT-Test			
Scale Scale	Elevation	E Depth	Column Section	Type of Rock or S	Description	R Q Q R R Lassificati		G.W.L N-Value	0	10	N-Val	ue 30	40 50	WPT-Test (Lugeon Value)
1 1 2 3 3 4 4 4 4 5 5 6 7 7 8 9 10 1 11 11 12 12 13 13 14 14 14 14 14 14 14 14 14 14 14 14 14	246.80	5.20		Gravely Silt Clay	 0.00-5.20m Brown clay with high plasticity. Extremely weathered zone. 5.20-16.00m Light brown sandy silt with many fragments of shale. Extremely to moderately weathered zone of shale layer. Iron stains noted on surface of fragments. 				U					
- 15 - 16 - 17 - 18 - 19 - 20	236.00	16.00		ale	16.00-25.00m Dark gray shale, with a few thin layers of medium grained sandstone (20-50cm in thickness). Shale part notes extremely slaking. No iron stains are observed below	(100) (100) (100) (100) (100) (100) (100) (100)	16	5.5 0 ≌						Lu'=4.7 (Pc=4.2)
- 21 - 22 - 23 - 24 - 25	227.00	25.00		Sh	16.00m up to end of the borehole.	(100) (100) (100) (100) (100) (100) (100) (100) (100) (100)								Lu'=2.4 (Pc=4.5)
- 26 - 27 - 28 - 29				Sand Stone	25.00-32.00m Gray firm sandstone, fine to medium grained.	(400) (100) (100) (400) (100) (100) (400) (100) (400) (100)	2							Lu'=4.4 (Pc=8.1)

DRILL LOG				HOLE NO.	TD-3	SHEET N	0.2	OF 7	
PROJECT	Study on Water Res	sources Deve	elopm	ent for Metro Manila	DEPTH	200.00m	ELEV	ATION	252.00m
SITE	Transfer Tunnel No.1 Route	COODINA	TE N	V 14 ⁰ 34'24"; E 121 ⁰ 26'13.2"	INCLINATION	Vertical	DRII	LL RIG	LY 44
CASING DEPTH	96.00m	DATE			DRILLED	Palm	a		
		200 - 20 A							

e scale	Elevation Elevatio	E Depth	Column Section	Type of Rock or Soil	Description	Core Recovery → (%)	G.W.L N-Value	0	10	N-Va 20	llue 30 4	10 50	WPT-Test (Lugeon Value)
- 31 - 32 - 33 - 34 - 35	220.00 219.20	32.00		Sand Stone Stone	32.00-32.80m Dark gray conglomerate with slightly soft muddy matrix, and rubbles of 0.5-1cm in diameter.	معنان المحالي (معنان المحالي (محالي (مح ي (محالي (محاليي (محالي (محاليي (محالي (محاليي (محالي (محاليي (محالي (مح							Lu=6.7
- 36 - 37 - 38 - 39 - 40				Shale	Bedding plane dipping 65°. 32.80-43.10m Dark gray shale, with a few thin layers of medium grained sandstone. Extremely slaking noted.								Lu=8.0
41	208.90	43.10		ale	43.10-52.80m Alternation of dark gray firm	(400), 1000 (400), 1000 (400), 1000 (400), 1000 (400), 1000							Lu'=4.6 (Pc=8.2)
45 46 47 48 49				on of conglomerate and sh	conglomerate and soft shale. Shale layers are 10-20cm in thickness, making up 15% in this section, and show extremely slaking.	(400) (400) (100) (400) (100) (400) (400) (400)							Lu'=3.2 (Pc=7.7)
- 50 - 51 - 52 - 53 - 54	199.20	52.80		e Alternatio	52.80-56.10m Dark gray shale with extremely	(400), (400), (100) (400), (100) (400), (100) (400), (100) (400), (100) (400), (100) (400), (40),							Lu'=4.5 (Pc=7.2)
55 56 57 58 59	196.00	56.00		Alternation of conglomerate and shale Sha	slaking. 56.00-73.80m Almost same as 43.10-52.80m.	(400, Y (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100)							Lu'=4.7 (Pc=4.8)