

# GEOLOGIC LOG OF DRILL HOLE

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OLUR PROJECT		HOLE No.	SK-215	( SHEET 3 of 4 )
LOCATION	DAM SITE (RIGHT BANK)	DEPTH OF HOLE	80.00 m	COMMENCED
ELEVATION	1069.66 m	DIRECTION OF HOLE	90°	COMPLETED
COORDINATE	X: 4511856.14	CORE RECOVERY	%	DRILLED BY
	Y: 515844.34	DRILLING MACHINE		LOGGED BY
				I. Vardal

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING			BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt. H)	DEPTH			
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	LUCEON	Pmax	Pc							DEPTH RESULT		
	40m			0 → 100%							Kgf/cm					%		40m			
1029.66	1	Granite Porphyry	+			1	1	1	Vertical joint, undulated, rough, oxidized, 1-2mm clay infilling.	Lu<1	10							1			
	2		1/2		1	2		Lu=25.84											2		
	3		1		1	1		Lu=25.84												3	
	4		2					Lu=25.84													4
	5		2		1	2		Lu=1.28													5
	6		3		2	3		Lu=1.28													6
	7		3		2	1		Lu=16.98													7
	8		4		3	3		Lu=16.98													8
	9		1		1	1		Lu=1.4													9
	50		2			2		Lu=1.4													50
	1		3		2	3		Lu=2.42													1
	2		4		3	4		Lu=2.42													2
	3		2		1			Lu=0													3
	4		3		2			Lu=0													4
	5		2		1	2		Lu=1.6													5
	6		2		2			Lu=1.6													6
	7		3		2	3		Lu=0													7
	8		1		1	1		Lu=0													8
	9		3		2	3		Lu=11.5													9
1009.66	60				+			2		1		2		Lu=11.5							60

Vertical joint, undulated, rough, oxidized, 1-2mm clay infilling.

Vertical joint, oxidized

45.20m  
(Final)

1 (fresh) - 5 (decomposed)

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OUR PROJECT		HOLE No.	SK-215	( SHEET 4 of 4 )
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ELEVATION	1069.66 m	DIRECTION OF HOLE	90°	COMPLETED
COORDINATE	X: 4511856.14	CORE RECOVERY	%	DRILLED BY
	Y: 515844.34	DRILLING MACHINE		LOGGED BY
				I. Vardal

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt. H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
	60m			0 + 100%								Kgf/cm					%		60m
1069.66																			
	1		+			2 3	2 3	2 3		Diabase : less strong compared to granite	Lu<1								1
	2		+				1	2											2
	3		+			3	1	1			Lu<1								3
	4		+				2	3		Fractured zone									4
	5		+				1	2			Lu=2.8								5
	6		+			3	1	1											6
	7		+				2	3		Fractured zone	Lu=2.78								7
	8		+			3 4	2 3	4			Lu<1								8
	9		+			2	1												9
	70		+																70
	1	Granite Porphyry	+			2	1	1			Lu<1								1
	2		+					2											2
	3		+			2 3	1 2	2 3			Lu=1.12								3
	4		+			2	1	2											4
	5		+			1	1	1			Lu=4								5
	6		+			3	2	3											6
	7		+			3 4	2 3	3			Lu=4.6								7
	8		+			2	1	1											8
	9		+			3	2	2		Fractured zone									9
	80		+			3 4	2 3	4			Lu=1.93								80
989.66										End of the Borehole									

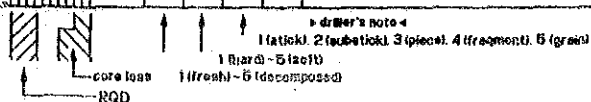
core loss  
 RQD  
 1 (stick), 2 (substick), 3 (piece), 4 (fragment), 5 (grain)  
 1 (hard) - 6 (soft)  
 1 (fresh) - 6 (decomposed)

# GEOLOGIC LOG OF DRILL HOLE

Page

OLUR PROJECT		HOLE No.	DSA-217	( SHEET 1 of 5 )
LOCATION	SPILLWAY (RIGHT BANK)	DEPTH OF HOLE	81.40 m	COMMENCED
ELEVATION	1030.05 m	DIRECTION OF HOLE	90°	COMPLETED
COORDINATE	X: 8515880.84	CORE RECOVERY	%	DRILLED BY
	Y: 4512055.84	DRILLING MACHINE		LOGGED BY
				I. Vardal

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING			BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEON	p max	P c						
	0m			0 → 100%								Kgf/cm <sup>2</sup>					%		0m
1030.05	1	Slope Wash								0.0-57.0m : Slope Wash 0.0-19.0m : Clayey, sandy, gravelly silt : Clay : 10% Sand : 20-25% Gravel : 25-30% Silt : 40-45% All clay and some amount of silt are washed away. Gravel sizes vary from 0.4cm to 1.5cm. Gravels are gray in colour at the upper levels and originated from granite, diabase and rhyolite.									1
	2																		2
	3																		3
	4																		4
	5																		5
	6																		6
	7																		7
	8																		8
	9																		9
	10																		10
	1																		1
	2																		2
	3																		3
	4																		4
	5																		5
	6																		6
	7																		7
	8																		8
	9																		9
1010.05	20																		20



# GEOLOGIC LOG OF DRILL HOLE

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OLUR PROJECT		HOLE No.	DSA-217	( SHEET 2 of 5 )
LOCATION	SPILLWAY (RIGHT BANK)	DEPTH OF HOLE	81.40 m	COMMENCED
ELEVATION	1030.05 m	DIRECTION OF HOLE	90°	COMPLETED
COORDINATE	X:8515880.84	CORE RECOVERY	%	DRILLED BY
	Y:4512055.84	DRILLING MACHINE		LOGGED BY
				W.Basaran
				I.Vardal

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	Pc	DEPTH RESULT						
	20m			0 → 100%								Kgf/cm					%		20m	
1010.05											19.0-53.6m : silty, sandy gravel. Gravel sizes vary between 3-7.5cm. Gravels are generally dark gray, gray, light brown and light pink in colour; they are generally angular and originated from granite, diabase and rhyolite. Fines are gray in colour. Mostly clay, and partially silt are washed away. Silt : 10-15% Sand : 20% Gravel : 60-65%									
	1																		1	
	2																		2	
	3																		3	
	4																		4	
	5																		5	
	6																		6	
	7																		7	
	8																		8	
	9																		9	
	30																		30	
	1																		1	
	2																		2	
	3																		3	
	4																		4	
	5																		5	
	6																		6	
	7																		7	
	8																		8	
	9																		9	
990.05	40																		40	

> driller's note <
   
 1 (stick), 2 (substick), 3 (piece), 4 (fragment), 5 (grain)
   
 1 (hard) - 5 (soft)
   
 1 (fresh) - 5 (decomposed)
   
 core loss
   
 RQD

# GEOLOGIC LOG OF DRILL HOLE

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OLUR PROJECT		HOLE No.	DSA-217	( SHEET 3 of 5 )
LOCATION	SPILLWAY (RIGHT BANK)	DEPTH OF HOLE	81.40 m	COMMENCED
ELEVATION	1030.05 m	DIRECTION OF HOLE	90°	COMPLETED
COORDINATE	X: 8515880.84	CORE RECOVERY	%	DRILLED BY
	Y: 4512055.84	DRILLING MACHINE		LOGGED BY
				I.Vardal

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	Pc	DEPTH RESULT					
990.05	40m			0 + 100%								Kgf/cm					%		40m
	1																		1
	2																		2
	3																		3
	4																		4
	5																		5
	6																		6
	7																		7
	8																		8
	9																		9
	50																		50
	1																		1
	2																		2
	3																		3
	4																		4
	5																		5
	6																		6
	7																		7
	8																		8
	9																		9
	50																		50
	1																		1
	2																		2
	3																		3
	4																		4
	5																		5
	6																		6
	7																		7
	8																		8
	9																		9
	60																		60

Granite block

Silty, sandy gravel:  
Silt-sand : 15-20%  
Gravel : 80-85%  
Gravels are generally angular and medium and coarse in size.

Granite  
Upper levels are completely weathered. The section between 57.0-68.0 is argillitized.

> driller's note <  
1 (block), 2 (subblock), 3 (piece), 4 (fragment), 5 (grain)  
1 (hard) - 5 (soft)  
1 (fresh) - 5 (decomposed)  
core loss  
RQD

**EPDC**   
ELECTRIC POWER DEVELOPMENT CO., LTD.

# GEOLOGIC LOG OF DRILL HOLE

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OLUR	PROJECT	HOLE No.	DSA-217	( SHEET 4 of 5 )
LOCATION	SPILLWAY (RIGHT BANK)	DEPTH OF HOLE	81.40 m	COMMENCED
ELEVATION	1030.05 m	DIRECTION OF HOLE	90°	COMPLETED
COORDINATE	X: 8515880.84	CORE RECOVERY	%	DRILLED BY
	Y: 4512055.84	DRILLING MACHINE		LOGGED BY
				I. Vardal

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	Pc	DEPTH RESULT					
970.05	60m			0 → 100%								Kgf/cm					%		60m
	1		+							57.0-81.4m Granite: Light pinkish gray in colour occasionally displays the properties of microgranite (quartzite grains are coarse at the upper levels and fine at the lower levels.)									1
	2		+				3	3											2
	3		+			3	3	3											3
	4		+				4	4											4
	5		+																5
	6		+																6
	7		+					3		Thin feather joints									7
	8		+					3		Generally cracky									8
	9		+					4											9
	10		+					3											10
	11		+				3	3											11
	12		+					4											12
	13		+					3											13
	14		+					3											14
	15		+					4											15
	16		+																16
	17		+					3											17
	18		+					2											18
	19		+					3											19
	20		+					3											20
	21		+					4											21
	22		+																22
	23		+					3											23
	24		+					2											24
	25		+					3											25
	26		+					3											26
	27		+					3											27
	28		+					3											28
	29		+					3											29
	30		+					3											30
	31		+					3											31
	32		+					3											32
	33		+					3											33
	34		+					3											34
	35		+					3											35
	36		+					3											36
	37		+					3											37
	38		+					3											38
	39		+					3											39
	40		+					3											40
	41		+					3											41
	42		+					3											42
	43		+					3											43
	44		+					3											44
	45		+					3											45
	46		+					3											46
	47		+					3											47
	48		+					3											48
	49		+					3											49
	50		+					3											50
	51		+					3											51
	52		+					3											52
	53		+					3											53
	54		+					3											54
	55		+					3											55
	56		+					3											56
	57		+					3											57
	58		+					3											58
	59		+					3											59
	60		+					3											60

core loss R20

# GEOLOGIC LOG OF DRILL HOLE

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OLUR PROJECT		HOLE No.	DSA-217	( SHEET 5 of 5 )
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ELEVATION	1030.05 m	DIRECTION OF HOLE	90°	COMPLETED
COORDINATE	X: 8515880.84	CORE RECOVERY	%	DRILLED BY
	Y: 4512055.84	DRILLING MACHINE		LOGGED BY
				I. Vardal

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt. H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGION	Pmax	Pc						
	80m			0 + 100%								Kgf/cm²				%		80m	
950.05		Gp	+		l.p.g	2	2	2						φ76mm				1	
	1		+			3	3	3										2	
948.65										End of the Borehole								3	
	2																	4	
	3																	5	
	4																	6	
	5																	7	
	6																	8	
	7																	9	
	8																	90	
	9																	1	
	90																	2	
	1																	3	
	2																	4	
	3																	5	
	4																	6	
	5																	7	
	6																	8	
	7																	9	
	8																	90	
	9																	1	
930.05	100																	2	
																		3	
																		4	
																		5	
																		6	
																		7	
																		8	
																		9	
																		100	

core loss  
 RQD  
 \* driller's note \*  
 1 (stick), 2 (substick), 3 (piece), 4 (fragment), 5 (grain)  
 1 (hard - 5 (soft))  
 1 (fresh) - 5 (discolored)

# GEOLOGIC LOG OF DRILL HOLE

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OLUR PROJECT		HOLE No.	SY-220	( SHEET 1 of 4 )
LOCATION	POWER HOUSE SITE	DEPTH OF HOLE	72.00 m	COMMENCED
ELEVATION	934.69 m	DIRECTION OF HOLE	90°	COMPLETED
COORDINATE	X:4514526.46	CORE RECOVERY	%	DRILLED BY
	Y:506521.48	DRILLING MACHINE		LOGGED BY
				M.Celik

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt. H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	P.C.	DEPTH RESULT					
	0m			0 → 100%								Kgf/cm <sup>2</sup>					%		0m
934.69										0.0-1.5 Top soil									
	1									Clay and silt of fine material are washed away. Sand resulting from mechanical grinding is observed in the sediment sample bags containing coarse sand. Less amount of gravel. Gravel : 10% Fine material: 90%									1
	2																		2
	3																		3
	4																		4
	5																		5
	6																		6
	7																		7
	8																		8
	9																		9
	10																		10
	11									Gravel : 15-20% Fine material: 80%									11
	12																		12
	13																		13
	14																		14
	15																		15
	16																		16
	17																		17
	18																		18
	19																		19
	20																		20

- Driller's note -  
 1 (solid), 2 (subsolid), 3 (piece), 4 (fragment), 5 (grain)  
 1 (hard) - 5 (soft)  
 1 (fresh) - 5 (decomposed)  
 core loss  
 RQD



# GEOLOGIC LOG OF DRILL HOLE

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OLUR PROJECT		HOLE No.	SY-220	( SHEET 2 of 4 )
LOCATION	POWER HOUSE SITE	DEPTH OF HOLE	72.00 m	COMMENCED
ELEVATION	934.69 m	DIRECTION OF HOLE	90°	COMPLETED
COORDINATE	X: 4514526.46	CORE RECOVERY	%	DRILLED BY
	Y: 506521.48	DRILLING MACHINE		LOGGED BY

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt. H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	Pc	DEPTH RESULT						
	20m			0 → 100%								Kgf/cm <sup>2</sup>						%		20m
914.69	1	Alluvial Deposit								Gravels subrounded, rounded, rarely angular, average gravel size 4-5cm, maximum gravel size 6cm, gravels are originated from granite, diabase, limestone, dacite blocks in place with 12-13cm size.										1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
	30																			30
	1																			1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
	40																			40
894.69	40									Gravel : 10% Fine material: 90%										

core loss  
 RQD  
 1 (a tick), 2 (a sub tick), 3 (a piece), 4 (a fragment), 5 (a grain)  
 1 (hard) - 5 (soft)  
 1 (frost) - 5 (decomposed)

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 ELECTRIC POWER DEVELOPMENT CO., LTD.

## GEOLOGIC LOG OF DRILL HOLE

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OLUR PROJECT HOLE No. SY-220 (SHEET 3 of 4)

LOCATION POWER HOUSE SITE DEPTH OF HOLE 72.00 m COMMENCED 91-10-31

ELEVATION 934.69 m DIRECTION OF HOLE 90° COMPLETED 91-12-31

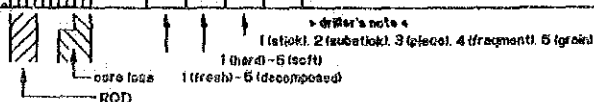
COORDINATE X:4514526.46 CORE RECOVERY % DRILLED BY M.Celik

Y:506521.48 DRILLING MACHINE LOGGED BY

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEON	Pmax	Pc	DEPTH RESULT						
	40m			0 + 100%								Kgf/cm <sup>2</sup>						%		40m
894.69																				
	1																			1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
50																				50
	1																			1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
874.69	60																			60

Alluvial Deposit

Gravel : 10%  
 Fine material: 90%  
 Fine material chiefly  
 comprises fine and medium  
 sand.



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# GEOLOGIC LOG OF DRILL HOLE

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OLUR PROJECT		HOLE No. SY-220	( SHEET 4 of 4 )
LOCATION	POWER HOUSE SITE	DEPTH OF HOLE	72.00 m
ELEVATION	934.69 m	DIRECTION OF HOLE	90°
COORDINATE	X:4514526.46	CORE RECOVERY	%
	Y:506521.48	DRILLING MACHINE	
		LOGGED BY	M.Celik

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt. II)	DEPTH
					COLOR	WEATHER- ING	HARD- NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	Pc						
	60m			0 → 100%								Kgf/cm				%		60m	
874.69	1	Volcanic Breccia	△		Greyish Light Brown	4	4	4	Fractured zone										
	2		5			4	5	5											2
	3							3											
	4							4											
	5							2											
	6							3											
	7							2											
	8							3											
	9							1											
	70							2											
	1							3											
	2							2											
862.69	3								End of the Borehole									3	
	4																	4	
	5																	5	
	6																	6	
	7																	7	
	8																	8	
	9																	9	
854.69	80																	80	



core loss  
 RQD

> driller's note <  
 1 (solid), 2 (subsolid), 3 (piece), 4 (fragment), 5 (grain)  
 1 (hard) - 5 (soft)  
 1 (fresh) - 5 (decomposed)

# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. NI-101	( SHEET 1 of 8 )
LOCATION DAM SITE (RIVER BED)	DEPTH OF HOLE 160.00 m	COMMENCED 82-11-16
ELEVATION 810.54 m	DIRECTION OF HOLE 90°	COMPLETED 83-03-01
COORDINATE X:4514563.34	CORE RECOVERY %	DRILLED BY I. Teke
Y:493503.80	DRILLING MACHINE	LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING			BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH			
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax							Pc	DEPTH RESULT	
	0m			0 → 100%								Kgf/cm				%		0m			
810.54	1	Alluvial Deposit								0.00-60.00 ALLUVIUM : It consists of silty, sandy, blocky gravel; gravels are medium-coarse grained and gray, dark gray, brown, and greenish gray in colour. Maximum block size is 15cm. Gravels and blocks are originated from basalt, rhyolite, diabase, limestone, and sandstone. Gravels are rounded and subrounded.								1			
	2																			2	
	3																				3
	4																				4
	5																				5
	6																				6
	7																				7
	8																				8
	9																				9
	10																				10
	1												Composition of alluvium by weight is as follows:  10-15% Silt-sand 60-65% Gravel 20% Block							1	
	2																				2
	3																				3
	4																				4
	5																				5
	6																				6
	7																				7
	8																				8
	9																				9
	20																				20
790.54																					

< Driller's note >  
 1 (at least) 2 (subat least) 3 (total) 4 (frequent) 5 (grain)  
 1 (sharp) - 5 (soft)  
 1 (fresh) - 5 (decomposed)

core loss  
 RGD

# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. NI-101	( SHEET 2 of 8 )
LOCATION DAM SITE(RIVER BED)	DEPTH OF HOLE 160.00 m	COMMENCED 82-11-16
ELEVATION 810.54 m	DIRECTION OF HOLE 90°	COMPLETED 83-03-01
COORDINATE X:4514563.34	CORE RECOVERY %	DRILLED BY I.Teke
Y:493503.80	DRILLING MACHINE	LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUBED	Pmax	Pc	DEPTH RESULT						
	20m			0 → 100%								Kgf/cm <sup>2</sup>						%		20m
790.54	1	Alluvial Deposit																		1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
	30																			30
	1																			1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
	40																			40

core loss  
 RQD  
 1 (fresh) - 5 (decomposed)  
 1 (hard) - 5 (soft)  
 1 (block) - 2 (subblock) - 3 (piece) - 4 (fragment) - 5 (grain)

# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. NI-101	( SHEET 3 of 8 )
LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>160.00</u> m	COMMENCED <u>82-11-16</u>
ELEVATION <u>810.54</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>83-03-01</u>
COORDINATE <u>X:4514563.34</u>	CORE RECOVERY _____ %	DRILLED BY <u>I. Teke</u>
<u>Y:493503.80</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt. H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGERON	Pmax	Pc	DEPTH RESULT						
	40m			0 → 100%								Kgf/cm <sup>2</sup>						%		40m
770.54																				
	1																			1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
	50																			50
	1																			1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
750.54	60																			60

< driller's note >
   
 1 (at least) 2 (subat least) 3 (piece) 4 (fragment) 5 (gram)
   
 1 (hard) - 5 (soft)
   
 1 (fresh) - 5 (discomposed)
   
 core loss    fresh    RQD

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 ELECTRIC POWER DEVELOPMENT CO., LTD.

## GEOLOGIC LOG OF DRILL HOLE

Page

AYVALI PROJECT

HOLE No. N1-101

( SHEET 4 of 8 )

LOCATION	DAM SITE(RIVER BED)	DEPTH OF HOLE	160.00 m	COMMENCED	82-11-16
ELEVATION	810.54 m	DIRECTION OF HOLE	90°	COMPLETED	83-03-01
COORDINATE	X:4514563.34	CORE RECOVERY	%	DRILLED BY	I.Teke
	Y:493503.80	DRILLING MACHINE		LOGGED BY	Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
	60m			0 → 100%								Kgf/cm					%		60m
750.54								2		60.4-60.7m C=3									
	1		Δ					3											1
	2		Δ					2											2
	3		Δ					1											3
	4		Δ					2		63.1-63.3m C=2 Slickensided and polished surfaces, 0.2cm thick pyrite infilling (25deg)									4
	5		Δ					3		63.3-63.5m C=3									5
	6		Δ					2		Solution cavities and sulphur stains between 66.30-70.00m.									6
	7		Δ					3											7
	8		Δ					1											8
	9		Δ					2											9
	70		Δ					1											70
	1	Volcanic Breccia	Δ		Greenish Grey			2		2mm gypsum on some joint surfaces, pyrite crystals in some joints, sulphur stains on rock cores.									1
	2		Δ					1											2
	3		Δ					3											3
	4		Δ					1		73.3-73.5m C=3									4
	5		Δ					3											5
	6		Δ					1		Feather joints are greenish yellow in colour due to sulphur infilling.									6
	7		Δ					2											7
	8		Δ					1											8
	9		Δ					3											9
730.54	80		Δ					1											80

1 (solid), 2 (subsolid), 3 (pieceal), 4 (fragmental), 5 (grain)
   
 1 (hard) - 5 (soft)
   
 1 (fresh) - 6 (decomposed)
   
 RQD

EPDC


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# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AVVALI PROJECT	HOLE No. NI-101	( SHEET 5 of 8 )
LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>160.00</u> m	COMMENCED <u>82-11-16</u>
ELEVATION <u>810.54</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>83-03-01</u>
COORDINATE <u>X:4514563.34</u>	CORE RECOVERY _____ %	DRILLED BY <u>I.Teke</u>
<u>Y:493503.80</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT						
730.54	80m			0 → 100%								Kgf/cm						%		80m
	1		Δ					1			Lu=3.6									1
	2		Δ					2												2
	3		Δ					1			Lu=0.1									3
	4		Δ					3		83.0-83.3m C=3	Lu=0.1									4
	5		Δ				1				Lu=1									5
	6		Δ																	6
	7		Δ							Mostly sulphur stained, occasionally encountered greenish yellow feather joints.	Lu=2.4									7
	8		Δ																	8
	9		Δ					1			Lu=0.7									9
	90		Δ				2				Lu=0.2									90
	1	Volcanic Breccia	Δ		Greenish Grey						Lu=0.2									1
	2		Δ																	2
	3		Δ								Lu=0.2									3
	4		Δ					3		93.6-93.9m C=3										4
	5		Δ					1												5
	6		Δ				2	3		Feather joints less frequent	Lu=0.1									6
	7		Δ					2												7
	8		Δ				1				Lu=0.2									8
	9		Δ																	9
	98		Δ					3		97.65-97.85m C=3										98
	99		Δ				2	1												99
	100		Δ					3		98.85-99.25m C=3										100
710.54	100		Δ					1			Lu=0									100


 > Driller's note <  
 1 (solid) 2 (subsolid) 3 (piece) 4 (fragment) 5 (grain)  
 1 (hard) - 5 (soft)  
 core loss 1 (fresh) - 5 (decomposed)  
 RQD

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 ELECTRIC POWER DEVELOPMENT CO., LTD.




# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. NI-101	( SHEET 6 of 8 )
LOCATION: DAM SITE(RIVER BED)	DEPTH OF HOLE: 160.00 m	COMMENCED: 82-11-16
ELEVATION: 810.54 m	DIRECTION OF HOLE: 90°	COMPLETED: 83-03-01
COORDINATE: X:4514563.34	CORE RECOVERY: _____ %	DRILLED BY: I.Teke
Y:493503.80	DRILLING MACHINE: _____	LOGGED BY: Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
710.54	100m			0 → 100%								Kgf/cm					%		100m
	1		Δ				1	1		-101.2-101.5m H=2,C=3	Lu=0.1								1
	2		Δ				2	3			Lu=0.2								2
	3		Δ				1	1			Lu=0.1								3
	4		Δ				2	2			Lu=0.1								4
	5		Δ							Mostly sulphur stained, occasionally encountered greenish yellow feather joints; gypsum on oblique joint surfaces.	Lu=0.1								5
	6		Δ								Lu=0.1								6
	7		Δ								Lu=0.1								7
	8		Δ								Lu=0.1								8
	9		Δ							0.5cm gypsum infilling in the joints at 115.95m and 116.30m.	Lu=0.1								9
	10		Δ								Lu=0.1								10
	11		Δ								Lu=0.1								11
	12		Δ								Lu=0.1								12
	13		Δ							0.5cm gypsum infilling in the joints at 115.95m and 116.30m.	Lu=0.1								13
	14		Δ								Lu=0.1								14
	15		Δ								Lu=0.1								15
	16		Δ								Lu=0.1								16
	17		Δ							0.5cm gypsum infilling in the joints at 115.95m and 116.30m.	Lu=0.1								17
	18		Δ								Lu=0.1								18
	19		Δ								Lu=0.1								19
	20		Δ								Lu=0.1								20


 > driller's note <  
 1 (solid) 2 (subsolid) 3 (piece) 4 (fragment) 5 (grain)  
 1 (hard) - 5 (soft)  
 1 (fresh) - 5 (decomposed)  
 core loss  
 RQD

# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. NI-101	( SHEET 7 of 8 )
LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>160.00</u> m	COMMENCED <u>82-11-16</u>
ELEVATION <u>810.54</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>83-03-01</u>
COORDINATE <u>X:4514563.34</u>	CORE RECOVERY _____ %	DRILLED BY <u>I. Teke</u>
<u>Y:493503.80</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Dpt. II)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
	120m			0 → 100%								Kgf/cm <sup>2</sup>					%		120m
690.54	1	Volcanic Breccia	X		Greenish Grey			1		120.5-120.7m C=3	Lu=0.1								1
	2		X					3		121.1-121.3m C=3									2
	3		X					1											3
	4		X					3											4
	5		X					1											5
	6		X					3											6
	7		X					1											7
	8		X					3											8
	9		X					1											9
	10		X					3											10
	11		X					1											11
	12		X					3											12
	13		X					1											13
	14		X					3											14
	15		X					1											15
	16		X					3											16
	17		X					1											17
	18		X					3											18
	19		X					1											19
	20		X					3											20
	21		X					1											21
	22		X					3											22
	23		X					1											23
	24		X					3											24
	25		X					1											25
	26		X					3											26
	27		X					1											27
	28		X					3											28
	29		X					1											29
	30		X					3											30
	31		X					1											31
	32		X					3											32
	33		X					1											33
	34		X					3											34
	35		X					1											35
	36		X					3											36
	37		X					1											37
	38		X					3											38
	39		X					1											39
	40		X					3											40
	41		X					1											41
	42		X					3											42
	43		X					1											43
	44		X					3											44
	45		X					1											45
	46		X					3											46
	47		X					1											47
	48		X					3											48
	49		X					1											49
	50		X					3											50
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	72		X					3											72
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	74		X					3											74
	75		X					1											75
	76		X					3											76
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	78		X					3											78
	79		X					1											79
	80		X					3											80
	81		X					1											81
	82		X					3											82
	83		X					1											83
	84		X					3											84
	85		X					1											85
	86		X					3											86
	87		X					1											87
	88		X					3											88
	89		X					1											89
	90		X					3											90
	91		X					1											91
	92		X					3											92
	93		X					1											93
	94		X					3											94
	95		X					1											95
	96		X					3											96
	97		X					1											97
	98		X					3											98
	99		X					1											99
	100		X					3											100

1 (stick), 2 (fist), 3 (piece), 4 (fragment), 5 (grain)
   
 1 (hard) - 5 (soft)
   
 1 (fresh) - 5 (decomposed)
   
 core loss
   
 RQD

**EPDC** (P)  
 ELECTRIC POWER DEVELOPMENT CO., LTD.

## GEOLOGIC LOG OF DRILL HOLE

Page

AYVALI PROJECT

HOLE No. NI-101

( SHEET 8 of 8 )

LOCATION	DAM SITE (RIVER BED)	DEPTH OF HOLE	160.00 m	COMMENCED	82-11-16
ELEVATION	810.54 m	DIRECTION OF HOLE	90°	COMPLETED	83-03-01
COORDINATE	X:4514563.34	CORE RECOVERY	%	DRILLED BY	I. Teke
	Y:493503.80	DRILLING MACHINE		LOGGED BY	Sukru Day

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Dpt.H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGCON	Pmax	Pc	DEPTH RESULT					
670.54	140m			0 → 100%								Kgf/cm <sup>2</sup>					%		140m
	1	Volcanic Breccia	△		Greenish Grey			2		Two parallel fractures with 1-2mm gypsum infilling and slicken-sided surfaces.									1
	2		△				1	1			Lu=0.7								2
	3		△				1				Lu=0.4								3
	4		△					2			Lu=0.4								4
	5		△				2	1			Lu=0.4								5
	6		△					3											6
	7		△					1											7
	8		△				2	2			Lu=0.9								8
	9		△				2	1			Lu=0								9
	150		△				1	2			Lu=0								150
	1	Rhyolite	△		Pinkish Grey			2		Frequent feather joints with gypsum infilling									1
	2		△					3			Lu=0								2
	3		△				1	3											3
	4		△				2	1			Lu=0								4
	5	Vb	△		P.B.		1	1		Frequent feather joints with gypsum infilling	Lu=0.1								5
	6	Rhyolite	△				2	2											6
	7		△		P.B.		1	1		Fractured zone, occasionally 0.5cm gypsum on fragment surfaces.	Lu=0.2								7
	8	Vb	△				2	4											8
	9		△		Greenish Grey		1	2		End of the Borehole	Lu=0.3								9
	160		△				2	1											160

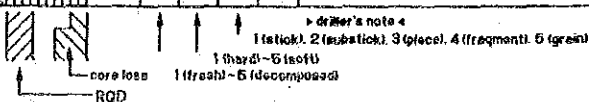
→ driller's note ←  
 1 (thick) 2 (medium) 3 (piece) 4 (fragment) 5 (grain)  
 1 (hard) - 5 (soft)  
 1 (fresh) - 5 (decomposed)  
 → core loss  
 RQD

# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. N1A-108	( SHEET 1 of 4 )
LOCATION DAM SITE (RIVER BED)	DEPTH OF HOLE 70.00 m	COMMENCED 91-09-03
ELEVATION 811.52 m	DIRECTION OF HOLE 90°	COMPLETED 91-11-08
COORDINATE X:4514625.01	CORE RECOVERY %	DRILLED BY I.Teke
Y:493746.77	DRILLING MACHINE	LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEON	Pmax	Pc	DEPTH RESULT						
	0m			0 → 100%								Kgt/cm					%		0m	
811.52		Alluvial Deposit								Gravelly silt										
	1																			1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
	10																			10
	1																			1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
791.52	20																	20		



# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

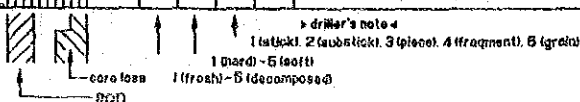
AYVALI PROJECT

HOLE No. NIA-108

( SHEET 2 of 4 )

LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>70.00</u> m	COMMENCED <u>91-09-03</u>
ELEVATION <u>811.52</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>91-11-08</u>
COORDINATE <u>X:4514625.01</u>	CORE RECOVERY _____ %	DRILLED BY <u>I.Teke</u>
<u>Y:493746.77</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Dpt.H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LOGEON	Pmax	Pc	DEPTH RESULT						
	20m			0 → 100%								Kgf/cm <sup>2</sup>						%		20m
791.52		Alluvial Deposit													ø 86mm					
	1																			1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
	30																			30
	1																			1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
771.52	40																			40



# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT

HOLE No. NIA-108

( SHEET 3 of 4 )

LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>70.00</u> m	COMMENCED <u>91-09-03</u>
ELEVATION <u>811.52</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>91-11-08</u>
COORDINATE <u>X:4514625.01</u>	CORE RECOVERY _____ %	DRILLED BY <u>I.Teke</u>
<u>Y:493746.77</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEON	Pmax	Pc						
	40m			0 → 100%								Kgf/cm					%		40m
771.52	1	Alluvial Deposit																	1
	2																		2
	3																		3
	4	Volcanic Breccia	△							Many brown feather joints; joint surfaces are oxidized.									4
	5		△		3	2	3												5
	6		△																6
	7		△							Completely weathered zone; no intact rock core; argillization; rock fragments in clay.									7
	8		△		4	4	4												8
	9		△																9
	50		△					2	3										50
	1		△																1
	2		△					1	2										2
	3		△					2	4		Fractured zone; no oxidation								3
	4	△						2										4	
	5	△				1		3										5	
	6	△								Generally no weathering; gypsum infillings in some joints; sulphur stains on core surfaces.								6	
	7	△					1											7	
	8	△																8	
	9	△																9	
751.52	60	△																60	

\* driller's note \*

1 (fat) 2 (medium) 3 (loose) 4 (fragment) 5 (grain)

1 (hard) - 5 (soft)

1 (fresh) - 5 (decomposed)

core loss

RQD

**EPDC** (EP)  
ELECTRIC POWER DEVELOPMENT CO., LTD.

# GEOLOGIC LOG OF DRILL HOLE

Page

AYVALI PROJECT

HOLE No. NIA-108

( SHEET 4 of 4 )

LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>70.00</u> m	COMMENCED <u>91-09-03</u>
ELEVATION <u>811.52</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>91-11-08</u>
COORDINATE <u>X:4514625.01</u>	CORE RECOVERY <u>        </u> %	DRILLED BY <u>I.Teke</u>
<u>Y:493746.77</u>	DRILLING MACHINE <u>        </u>	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt. H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	Pc	DEPTH RESULT						
	60m			0 → 100%								Kgf/cm						%		60m
751.52	1	Volcanic Breccia	Δ		Greenish Grey										ø 66mm					1
	2		Δ			1	1	1												2
	3		Δ							62.90m 3cm thick oblique gypsum infilling										3
	4		Δ			2	2	3												4
	5		Δ																	5
	6		Δ							65.45m 1cm thick oblique gypsum infilling										6
	7		Δ																	7
	8		Δ			1	1	1												8
	9		Δ																	9
	10		Δ																	10
741.52	70									End of the Borehole										70
	1																			1
	2																			2
	3																			3
	4																			4
	5																			5
	6																			6
	7																			7
	8																			8
	9																			9
731.52	80																			80

core loss RQD
   
 1 (stick), 2 (substick), 3 (piece), 4 (fragment), 5 (grain)
   
 1 (hard) - 5 (soft)
   
 1 (fresh) - 6 (decomposed)
   
 \* driller's note

**EPDC** (®)
   
 ELECTRIC POWER DEVELOPMENT CO., LTD.

# GEOLOGIC LOG OF DRILL HOLE

Page

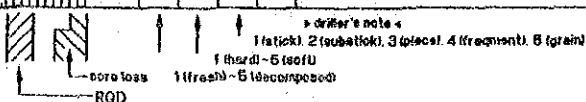
AYVALI PROJECT

HOLE No. NI-109

( SHEET 1 of 4 )

LOCATION	DAM SITE (RIVER BED)	DEPTH OF HOLE	70.00 m	COMMENCED	91-06-04
ELEVATION	810.58 m	DIRECTION OF HOLE	90°	COMPLETED	91-08-02
COORDINATE	X:4514539.28	CORE RECOVERY	%	DRILLED BY	I. Teke
	Y:493558.85	DRILLING MACHINE		LOGGED BY	Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt. H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEDON	Pmax	Pc	DEPTH RESULT						
810.58	0m			0 → 100%								Kgf/cm <sup>2</sup>						%		0m
	1									0-20m. mainly $\phi$ 2-5cm gravel and $\phi$ 10-20cm boulders.										1
	2																			2
	3													3.20m N=50				2.60m (Final)		3
	4									4.50-4.95m mainly 5mm coarse sand.				4.50m N=14						4
	5									6.00-6.45m mainly 2-5mm coarse sand.				6.00m N=50						5
	6																			6
	7									7.50-7.95m mainly 5mm coarse sand.				7.50m N=25						7
	8																			8
	9									9.00-9.45m mainly 5mm coarse sand.				9.00m N=35						9
	10									10.50-10.95m mainly 5mm coarse sand.				10.50m N=50				1.75m (9.45m)		10
	11																			11
	12																	1.90m (12.00m)		12
	13									13.50-13.95m mainly 5mm coarse sand.				13.50m N=50						13
	14																			14
	15									15.00-15.45m 5mm coarse sand and 2-3cm gravel.				15.00m N=50						15
	16									16.50-16.95m 3-5mm coarse sand.				16.50m N=26				2.00m (16.50m)		16
	17																			17
	18									18.00-18.45m 1-5mm sand.				18.00m N=32						18
	19																			19
	20									19.50-19.95m 1-5mm sand.				19.50m N=33						20



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# GEOLOGIC LOG OF DRILL HOLE

Page

AYVALI PROJECT	HOLE No. N1-109	( SHEET 2 of 4 )
LOCATION DAM SITE (RIVER BED)	DEPTH OF HOLE 70.00 m	COMMENCED 91-06-04
ELEVATION 810.58 m	DIRECTION OF HOLE 90°	COMPLETED 91-08-02
COORDINATE X:4514539.28	CORE RECOVERY %	DRILLED BY I.Teke
Y:493558.85	DRILLING MACHINE	LOGGED BY Sokru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING			BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Dpt.N)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEON	Pmax	Pc						
	20m			0 + 100%								Kgf/cm					%		20m
790.58	1	Alluvial Deposit								21.00-21.45m mainly silt to fine sand.				21.00m N=25					1
	2									22.50-22.95m 1-5mm sand.				22.50m N=17					2
	3									24.00-24.45m mainly 5mm coarse sand.				24.00m N=23					3
	4									25.50-25.95m mainly 5mm coarse sand. Note: 20m to 30m φ2-5cm gravels φ10-20cm a few.				25.50m N=31					4
	5																		5
	6																		6
	7																2.50m (27.00m)		7
	8									28.50-28.95m mainly 5mm coarse sand.				28.50m N=27					8
	9									30.00-30.45m mainly 1-5mm sand. Note: 30m to 40m mainly coars sand. some gravels φ5-10cm				30.00m N=33					9
30	30																		30
	1																		1
	2																		2
	3									33.00-33.45m mainly 1-5mm sand.				33.00m N=35					3
	4									34.50-34.95m mainly 5mm coarse sand.				34.50m N=50			2.35m (31.00m) 2.50m (31.50m)		4
	5																		5
	6																		6
	7									37.50-37.95m more than 5mm				37.50m N=41			2.35m (37.50m)		7
	8																		8
	9									39.00-39.45m 1-5mm sand.				39.00m N=25			2.30m (39.45m)		9
770.58	40																		40

1 (total) 2 (subtotal) 3 (piece) 4 (fragment) 5 (grain)
   
 1 (hard) - 5 (soft)
   
 1 (fresh) - 5 (decomposed)
   
 RQD

**EPDC**
  
 ELECTRIC POWER DEVELOPMENT CO., LTD.

# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT	HOLE No. Ni-109	( SHEET 3 of 4 )
LOCATION DAM SITE(RIVER BED)	DEPTH OF HOLE 70.00 m	COMMENCED 91-06-04
ELEVATION 810.58 m	DIRECTION OF HOLE 90°	COMPLETED 91-08-02
COORDINATE X:4514539.28	CORE RECOVERY %	DRILLED BY I.Teke
Y:493558.85	DRILLING MACHINE	LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEON	Pmax	Pc	DEPTH RESULT						
770.58	40m			0 → 100%								Kgf/cm						%		40m
	1	Alluvial Deposit								42.00-42.45m 1-5mm sand.				42.00m N=30					2.35m (40.50m)	1
	2																		2.50m (42.45m)	2
	3									43.50-43.95m mainly 5mm coarse sand Note: 40.0-46.5m mainly coarse sand, some gravels 5-10cm.				43.50m N=26					2.50m (44.25m)	3
	4																		2.75m (45.00m)	4
	5																		2.50m (46.50m)	5
	6									End of river deposit 46.50m									2.45m (47.60m)	6
	7	Volcanic Breccia			Dark	3	3	4		Weathered zone at the top of basement rock.										7
	8									Good rock but cracks brn. chloritization at pumices and remarkable pyrite.										8
	9				Dark Grey	2														9
	50					3	2	2											2.55m (50.00m)	50
	1									Good cores, some cracks at 53.00m, 53.80m, and 54.50-55.00m brn, but others fresh or gray color, chloritization at pumices and remarkable pyrite.										1
	2																			2
	3																		2.40m (53.20m)	3
	4																			4
	5																			5
	6				Dark Grey to Black	2	2	1											3.40m (56.00m)	6
	7																			7
	8																			8
	9																			9
730.58	60									same up to 70m.										60

→ Driller's notes  
 1 (stick), 2 (substick), 3 (piece), 4 (fragment), 5 (grain)  
 1 (hard) - 5 (soft)  
 1 (fresh) - 5 (decomposed)  
 core loss  
 RQD

# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT

HOLE No. N1-109

( SHEET 4 of 4 )

LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>70.00</u> m	COMMENCED <u>91-06-04</u>
ELEVATION <u>810.58</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>91-08-02</u>
COORDINATE <u>X:4514539.28</u>	CORE RECOVERY _____ %	DRILLED BY <u>I. Teke</u>
<u>Y:493558.85</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Dpt.H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	Pc	DEPTH RESULT					
	60m			0 + 100%								Kgf/cm					%		60m
750.58										58.40-59.80m Vertical Joint									
	1		X																1
	2		X															2.65m (62.00m)	2
	3		X																3
	4		X																4
	5		X			2	2	1											5
	6		X																6
	7		X															2.65m (67.30m)	7
	8		X																8
	9		X																9
740.58	70		X							End of the Borehole									70
	1																		1
	2																		2
	3																		3
	4																		4
	5																		5
	6																		6
	7																		7
	8																		8
	9																		9
730.58	80																		80

driller's note  
 1 (stick), 2 (substick), 3 (piece), 4 (fragment), 5 (grain)  
 1 (hard) - 5 (soft)  
 1 (fresh) - 5 (decomposed)  
 core loss  
 RQD

**EPDC** (P)  
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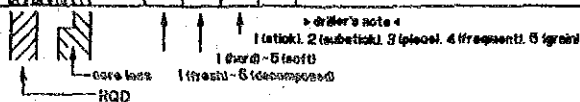
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# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT	HOLE No. SG-102	( SHEET 1 of 10 )
LOCATION DAM SITE(RIVER BED)	DEPTH OF HOLE 200.00 m	COMMENCED 83-03-21
ELEVATION 928.37 m	DIRECTION OF HOLE 90°	COMPLETED 83-07-06
COORDINATE X:4514751.26	CORE RECOVERY %	DRILLED BY I.Teke
Y:493540.00	DRILLING MACHINE	LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Dpt.H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	PC	DEPTH RESULT						
	0m			0 → 100%								Kgf/cm						%		0m
928.37	1	Volcanic Breccia	X		Greenish Gray			4		Joint surfaces are highly oxidized between 0.50-36.20m.										1
	2		X				2													2
	3		X				1													3
	4		X				3	3												4
	5		X				3	4												5
	6		X				3	3												6
	7		X				2	2												7
	8		X				2	1												8
	9	Rhyolite	L		Greenish Gray			3		Oblique joint at 17.40m with 0.5cm clay infilling	Lu=30	10								9
	10		L				2	3											9.50m (10.00m)	10
	11		L					2			Lu=31	10								11
	12		L				2	3												12
	13		L				1	3			Lu=38	10								13
	14		L				3													14
	15		L					2			Lu=38	10							0.00m (16.00m)	15
	16		L				2	1												16
	17		L					3			Lu=39	10							0.00m (16.00m)	17
	18		L																	18
	19		L				1	2			Lu=38	10								19
908.37	20		L																0.00m	20



# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT	HOLE No. SG-102	( SHEET 2 of 10 )
LOCATION <u>DAM SITE (RIVER BED)</u>	DEPTH OF HOLE <u>200.00</u> m	COMMENCED <u>83-03-21</u>
ELEVATION <u>928.37</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>83-07-06</u>
COORDINATE <u>X:4514751.26</u>	CORE RECOVERY _____ %	DRILLED BY <u>I. Teke</u>
<u>Y:493540.00</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Dpt. H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT						
	20m			0 → 100%								Kgf/cm <sup>2</sup>						%		20m
908.37		Volcanic Breccia	X		Greenish Grey	3	2	3			Lu=37	10								
	1		X																	1
	2		X																	2
	3		X								Lu=36	10								3
	4		X															0.00m (24.00m)		4
	5		X								Lu=39	10								5
	6		X															0.00m (26.00m)		6
	7		L							Occasional feather joints between 26.00-34.00m.	Lu'=56	6								7
	8		L								Lu'=57	6								8
	9		L																	9
	30	Rhyolite	L		Greenish Grey	3		1			Lu=33	10						29.00m (30.00m)		30
	1		L																	1
	2		L								Lu=37	10								2
	3		L																	3
	4		X															31.00m (34.00m)		4
	5		X								Lu=12	10								5
	6		X																	6
	7		X								Lu=2.1	10						27.50m (37.20m)		7
	8		X																	8
	9		X								Lu=0.5	10								9
908.37	40		X																	40

# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT

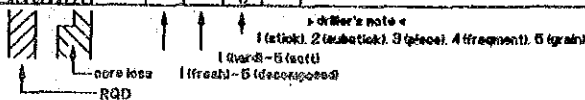
HOLE No. SG-102

( SHEET 3 of 10 )

LOCATION DAM SITE (RIVER BED)  
 ELEVATION 928.37 m  
 COORDINATE X:4514751.26  
Y:493540.00

DEPTH OF HOLE 200.00 m  
 DIRECTION OF HOLE 90°  
 CORE RECOVERY \_\_\_\_\_ %  
 DRILLING MACHINE \_\_\_\_\_  
 COMMENCED 83-03-21  
 COMPLETED 83-07-06  
 DRILLED BY I.Teke  
 LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Dpt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
888.37	40m	Vb	Δ	0 → 100%	Greenish Grey	3	2	2			Lu=4.5	10							40m
	1	Rhyolite	L																1
	2		L				1	1			Lu=5.8	10						39.50m (42.00m)	2
	3		L				2	2											3
	4		L								Lu=19	10						39.50m (44.00m)	4
	5	Volcanic Breccia	Δ																5
	6		Δ				1	1											6
	7		Δ								Lu=2.4	10						44.50m (47.00m)	7
	8		Δ			3		2											8
	9		Δ							Fractured, oxidized, highly weathered zone.	Lu=1.8	10							9
	50		Δ		Greenish Grey		4	4			Lu=10	10							50
	1		Δ				1	1											1
	2		Δ					2											2
	3		Δ			2	1	1			Lu=0.1	10							3
	4		Δ																4
	5		Δ			3		2			Lu=0.1	10							5
	6	Rhyolite	L																6
	7		L			2				Feather joints, joint surfaces oxidized and brown in colour	Lu=0.1	10							7
	8		L					2											8
	9		L			3					Lu=0	10							9
888.37	80									Fractured zone									80



# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT

HOLE No. SG-102

( SHEET 4 of 10 )

LOCATION	DAM SITE(RIVER BED)	DEPTH OF HOLE	200.00 m	COMMENCED	83-03-21
ELEVATION	928.37	DIRECTION OF HOLE	90°	COMPLETED	83-07-06
COORDINATE	X:4514751.26	CORE RECOVERY	%	DRILLED BY	I. Teke
	Y:493540.00	DRILLING MACHINE		LOGGED BY	Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Dpt.H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGON	Pmax	PC	DEPTH RESULT					
	60m			0-100%								Kgt/cat					%		60m
868.37																			
	1		X					2			Lu=2.4	10							1
	2		X					3			Lu=3.9	10							2
	3		X								Lu=7.8	10							3
	4		X					1			Lu=2.6	10							4
	5		X			2		3			Lu=1.5	10							5
	6		X					1			Lu=4.6	10							6
	7		X					2			Lu=3.7	10							7
	8		X								Lu=1.4	10							8
	9		X					3			Lu=1	10							9
	10		X					1											10
	11		X					2											11
	12		X					3											12
	13		X					1											13
	14		X					2											14
	15		X					3											15
	16		X					1											16
	17		X					2											17
	18		X					3											18
	19		X					1											19
	20		X					2											20
	21		X					3											21
	22		X					1											22
	23		X					2											23
	24		X					3											24
	25		X					1											25
	26		X					2											26
	27		X					3											27
	28		X					1											28
	29		X					2											29
	30		X					3											30
	31		X					1											31
	32		X					2											32
	33		X					3											33
	34		X					1											34
	35		X					2											35
	36		X					3											36
	37		X					1											37
	38		X					2											38
	39		X					3											39
	40		X					1											40
	41		X					2											41
	42		X					3											42
	43		X					1											43
	44		X					2											44
	45		X					3											45
	46		X					1											46
	47		X					2											47
	48		X					3											48
	49		X					1											49
	50		X					2											50
	51		X					3											51
	52		X					1											52
	53		X					2											53
	54		X					3											54
	55		X					1											55
	56		X					2											56
	57		X					3											57
	58		X					1											58
	59		X					2											59
	60		X					3											60
	61		X					1											61
	62		X					2											62
	63		X					3											63
	64		X					1											64
	65		X					2											65
	66		X					3											66
	67		X					1											67
	68		X					2											68
	69		X					3											69
	70		X					1											70
	71		X					2											71
	72		X					3											72
	73		X					1											73
	74		X					2											74
	75		X					3											75
	76		X					1											76
	77		X					2											77
	78		X					3											78
	79		X					1											79
	80		X					2											80
	81		X					3											81
	82		X					1											82
	83		X					2											83
	84		X					3											84
	85		X					1											85
	86		X					2											86
	87		X					3											87
	88		X					1											88
	89		X					2											89
	90		X					3											90

Fracture between 68.95m and 69.10m with slickensided surfaces and clay and gypsum infilling

Vertical joint between 75.65-77.70m with oxidized and brown surfaces

69.20m (78.00m)

driller's note  
1 (flick), 2 (rubatic), 3 (piece), 4 (fragment), 5 (grain)  
1 (hard) - 5 (soft)  
1 (fresh) - 5 (decomposed)  
core loss  
RQD

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# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. SG-102	( SHEET 5 of 10 )
LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>200.00</u> m	COMMENCED <u>83-03-21</u>
ELEVATION <u>928.37</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>83-07-06</u>
COORDINATE <u>X:4514751.26</u>	CORE RECOVERY _____ %	DRILLED BY <u>I.Teke</u>
<u>Y:493540.00</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING			BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH	
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax							Pc
	80m			0 → 100%								Kgf/cm				%		80m	
848.37	1	Volcanic Breccia	A					3		Fault zone between 84.60-85.85m with gouge and clay infilling.	Lu=2	10					68.00m (81.30m)	1	
	2		A					2			Lu=0	10						2	
	3		A					3			Lu=0	10						3	
	4		A					3			Lu=0	10						68.00m (84.00m)	4
	5		A				2		3		Lu=0	10						5	
	6		A						3		Lu=0	10						6	
	7		A							Lu<1	10							7	
	8		A							Lu=2	10							8	
	9		A					1	1	Lu=2	10							9	
90	1		A							Lu=1.5	10							69.00m (82.00m)	1
	2	A							Lu<1	10							2		
	3	A						2	Lu<1	10							3		
	4	A							Lu<1	10							4		
	5	A							Lu<1	10							5		
	6	A						3	3	Fractured zone	Lu<1	10					88.00m (93.00m)	6	
	7	A							Lu<1	10							7		
	8	A					1	1	No oxidation after the depth of 96.40m.	Lu<1	10						8		
	9	A				2				Lu<1	10						9		
828.37	100		A				2	2		Lu<1	10						75.00m	100	

> driller's note 4  
 1 (solid), 2 (subsolid), 3 (spinel), 4 (fragment), 5 (grain)  
 1 (hard) - 5 (soft)  
 1 (fresh) - 5 (decomposed)  
 core loss  
 RQD



# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT	HOLE No. SG-102	( SHEET 6 of 10 )
LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>200.00</u> m	COMMENCED <u>83-03-21</u>
ELEVATION <u>928.37</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>83-07-06</u>
COORDINATE <u>X:4514751.26</u>	CORE RECOVERY _____ %	DRILLED BY <u>I.Teke</u>
<u>Y:493540.00</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
828.37	100m			0 → 100%								Kgf/cm <sup>2</sup>					%		100m
	1	Volcanic Breccia	X		Greenish Grey		1	3			Lu=5	10							1
	2		X			2	5	2				10							2
	3		X				2	2				10							3
	4		X					3				10							4
	5	Rhyolite	L		Greenish Grey			2		Pyrite crystals on joint surfaces.	Lu=3.7	10							5
	6		L					3				10							6
	7		L					1				6							7
	8		L					2				6							8
	9		L					3		Oblique joint at 112.10m with clay and pyrite infilling. Occasional sulphur stains and solution cavities after the depth of 112.10m.	Lu=42	6							9
	10		L					3				6							10
	11		L					2				10							11
	12		L					3				10							12
	13		L					3		Oblique joint at 112.10m with clay and pyrite infilling. Occasional sulphur stains and solution cavities after the depth of 112.10m.	Lu=38	6							13
	14		L					2				6							14
	15		L					3				6							15
	16		L					3				6							16
	17		L					2		Oblique joint at 112.10m with clay and pyrite infilling. Occasional sulphur stains and solution cavities after the depth of 112.10m.	Lu=20	10							17
	18		L					3				10							18
	19		L					3				6							19
	20		L					3				6							20
	21		L					2		Oblique joint at 112.10m with clay and pyrite infilling. Occasional sulphur stains and solution cavities after the depth of 112.10m.	Lu=45	6							21
	22		L					3				6							22
	23		L					3				6							23
	24		L					2				6							24
	25		L					3		Oblique joint at 112.10m with clay and pyrite infilling. Occasional sulphur stains and solution cavities after the depth of 112.10m.	Lu=47	6							25
	26		L					3				6							26
	27		L					3				10							27
	28		L					2				10							28
	29		L					3		Oblique joint at 112.10m with clay and pyrite infilling. Occasional sulphur stains and solution cavities after the depth of 112.10m.	Lu=23	10							29
	30		L					3				10							30
	31		L					3				10							31
	32		L					3				10							32
898.37	120										Lu=10.5	10							120

1 (hard) - 5 (soft)
   
 1 (fresh) - 5 (decomposed)
   
 1 (fossil) - 5 (decomposed)

# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT	HOLE No. SG-102	( SHEET 7 of 10 )
LOCATION <u>DAM SITE (RIVER BED)</u>	DEPTH OF HOLE <u>200.00</u> m	COMMENCED <u>83-03-21</u>
ELEVATION <u>928.37</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>83-07-06</u>
COORDINATE <u>X:4514751.26</u>	CORE RECOVERY _____ %	DRILLED BY <u>I. Teke</u>
<u>Y:493540.00</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Dpt. H)	DEPTH
					COLOR	WEATHER- ING	HARD- NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	PC	DEPTH RESULT						
	120m			0 → 100%								Kgf/cm						%		120m
808.37											Lu=9	10								
	1																			1
	2																			2
	3										Lu=6	10								3
	4																		116.00m (124.00m)	4
	5										Lu=4	10								5
	6																			6
	7										Lu=4	10								7
	8																		65.50m (123.00m)	8
	9										Lu=19	10								9
130																				130
	1										Lu'=35	3								1
	2																		113.00m (132.00m)	2
	3										Lu'=40	3								3
	4																		114.00m (134.00m)	4
	5										Lu'=40	3								5
	6																			6
	7										Lu=10	10								7
	8																		114.00m (138.00m)	8
	9										Lu=0	10								9
788.37	140																			140

core loss
   
 RQD
   
 1 (fresh) - 5 (decomposed)
   
 1 (hard) - 5 (soft)
   
 1 (block), 2 (sub-block), 3 (piece), 4 (fragment), 5 (grain)
   
 \* Driller's notes

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## Page

HOLE No. SG-102

( SHEET 8 of 10 )

LOCATION	DAM SITE (RIVER BED)	DEPTH OF HOLE	200.00	m	COMMENCED	83-03-21
ELEVATION	928.37	m	DIRECTION OF HOLE	90°	COMPLETED	83-07-06
COORDINATE	X:4514751.26	CORE RECOVERY		%	DRILLED BY	I.Teke
	Y:493540.00	DRILLING MACHINE			LOGGED BY	Sukru Bay

[illegible]

The diagram illustrates the relationship between soil types and litter decomposition rates. It features two horizontal axes at the top representing different soil types: "dryer soils" on the left and "wetter soils" on the right. Below these axes, various symbols represent different soil components or processes:

- A hatched rectangle labeled "core loss".
- An upward-pointing arrow labeled "ROD".
- A series of vertical arrows pointing upwards, labeled "driller's note" above them.
- A legend below the arrows defines the numbers associated with each symbol:
  - 1 (bar) ~ 5 (soft)
  - 1 (fresh) ~ 6 (decomposed)
  - 1 (stick), 2 (substick), 3 (piece), 4 (fragment), 5 (grain)

The diagram shows how these factors vary across the gradient from dryer to wetter soils.

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# GEOLOGIC LOG OF DRILL HOLE

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AYVALI	PROJECT	HOLE No.	SG-102	( SHEET 9 of 10 )
LOCATION	DAM SITE(RIVER BED)	DEPTH OF HOLE	200.00 m	COMMENCED
ELEVATION	928.37 m	DIRECTION OF HOLE	90°	COMPLETED
COORDINATE	X:4514751.26	CORE RECOVERY	%	DRILLED BY
	Y:493540.00	DRILLING MACHINE		LOGGED BY
				Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
	160m			0 → 100%								Kgf/cm					%		160m
768.37																			
	1										Lu=0	10							1
	2						1	1			Lu=0	10							2
	3						1	1			Lu=0	10							3
	4						2	2			Lu=0	10							4
	5										Lu=0	10							5
	6						2	1			Lu=0	10							6
	7							3			Lu=0	10							7
	8										Lu=0	10							8
	9						1	2	2		Lu=0	10							9
	170						3	3	3		Lu=0	10							170
	1						3	3	3		Lu=0	10							1
	2										Lu=0	10							2
	3							2	3		Lu=0	10							3
	4										Lu=0	10							4
	5										Lu=0	10							5
	6						2	2			Lu=0	10							6
	7										Lu=0	10							7
	8							2			Lu=0	10							8
	9							1	3		Lu=0	10							9
748.37	180																		180

Driller's note: 1 (tick), 2 (subtick), 3 (piece), 4 (fragment), 5 (grain)
   
 1 (hard) - 5 (soft)
   
 1 (fresh) - 5 (disintegrated)
   
 core loss
   
 RQD

# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT

HOLE No. SG-102

( SHEET 10 of 10 )

LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>200.00</u> m	COMMENCED <u>83-03-21</u>
ELEVATION <u>928.37</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>83-07-06</u>
COORDINATE <u>X:4514751.26</u>	CORE RECOVERY _____ %	DRILLED BY <u>1.Teke</u>
<u>Y:493540.00</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING			BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc						
748.37	180m			0 → 100%								Kgf/cm					%		180m
	1					3	3	3		Fractured zone: 2-3mm gypsum and clay on joint surfaces	Lu=0	10							1
	2						1	2										57.00m (182.00m)	2
	3					1	5			Feather joints	Lu=0	10							3
	4						2	1										97.00m (184.00m)	4
	5					2	2	2											5
	6					2	5	3										105.00m (186.00m)	6
	7									Sound rock and sulphur stains between 186.10-200m.	Lu=0	10							7
	8							2										110.00m (188.00m)	8
	9						2	5											9
190	1							3										100.00m (190.00m)	190
	2																	112.00m (192.00m)	2
	3																		3
	4							1										113.00m (194.00m)	4
	5																		5
	6																	113.00m (196.00m)	6
	7							1											7
	8							5											8
	9							2											9
728.37/200	200									End of the Borehole									200



 \* driller's note  
 1 (fatickl), 2 (fauetickl), 3 (piece), 4 (fragment), 5 (grain)  
 1 (hard) - 5 (soft)  
 1 (fresh) - 5 (decomposed)  
 core loss  
 RQD

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# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. SG-105	( SHEET 1 of 7 )
LOCATION DAM SITE(RIVER BED)	DEPTH OF HOLE 125.00 m	COMMENCED 83-10-01
ELEVATION 868.2 m	DIRECTION OF HOLE 90°	COMPLETED 83-11-30
COORDINATE X:4514706.14	CORE RECOVERY %	DRILLED BY I.Teke
Y:493597.07	DRILLING MACHINE	LOGGED BY Sukru Bay


ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH			
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT									
	0m			0 → 100%								Kgf/cm <sup>2</sup>					%		0m				
868.20		Rhyolite			Pinkish Grey	4	3	4	As a result of hydrothermal alteration and weathering, joint surfaces are oxidized and their colour is reddish brown.														
	1					3	3	1														1	
	2							4															2
	3																						3
	4							2															4
	5							3			2	1	Mainly hard stick core, 2.6-2.7m, 4.4-4.6m, 5.9-6.1m Cracky C=3-4	Lu=34	3								5
	6							1				3											6
	7							2						Lu>25	10								7
	8										3	3	Fragments and 5cm core										8
	9										1	1											9
	10										4	4		Lu>25	10								10
	1							2			2	2	10.0-10.30m, 10.6-11.3m Cracky C=3-4	Lu=0	10							4.30m (10.00m)	1
	2							1			1	1											2
	3							3			3	3		Lu=0	10								3
	4											2	Joint surfaces are oxidized between 9.00-12.00m; pyrite and occasional gypsum. Infillings in joints.	Lu=0	10								4
	5							2							Lu=13.6	10							7.70m (14.00m)
	6										1	2	Mainly substick core, 15.0-15.5m Cracky C=3	Lu=7.6	10								6
	7							3				3			Lu=3.9	10							
	8																						8
	9											1											9
848.20	20																	14.10m	20				


core loss (fresh) - 5 (discoloured)
   
 1 (stick), 2 (substick), 3 (piece), 4 (fragment), 5 (grain)
   
 1 (hard) - 5 (soft)
   
 RQD

# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. SG-105	( SHEET 2 of 7 )
LOCATION <u>DAM SITE (RIVER BED)</u>	DEPTH OF HOLE <u>125.00</u> m	COMMENCED <u>83-10-01</u>
ELEVATION <u>866.2</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>83-11-30</u>
COORDINATE <u>X:4514706.14</u>	CORE RECOVERY _____ %	DRILLED BY <u>I. Teke</u>
<u>Y:493597.07</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Dpt.H)	DEPTH			
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEON	Pmax	Pc							DEPTH RESULT		
	20m			0 → 100%								Kgf/cm					%	20m				
848.20	1	Rhyolite		0 → 100%				1	Hard, stick core Small pyrite are observed on crack surface.	Lu=3.6	10							1				
	2						2	2												2		
	3							1				Lu<1	10								3	
	4							2													4	
	5										3	Fragments and piece core	Lu=19.1	10							9.00m (24.00m)	5
	6							2			4											6
	7							3			3	Joint surfaces are oxidized and sulphur stained between 18.00-56.00m.	Lu=17.4	10							15.25m (26.00m)	7
	8																					8
	9										2			Lu=2.6	10							9
30	30							1														30
	1										2	32.0-32.9m Cracky, cross joints. C=3-4	Lu=9	10							17.00m (30.70m)	1
	2										3											2
	3													Lu=1.3	10							3
	4											2cm fault gouge, oxidized fault plane, gypsum (1mm) and pyrite infilling, slickensided surfaces. (25deg)									30.00m (34.00m)	4
	5										4			Lu=1.8	10							5
	6										3											6
	7							1		Lu=1.2	10							7				
	8																	8				
	9							2		Lu<1	10							9				
828.20	40																	40				


 > driller's note <  
 1 (stick) 2 (substick) 3 (piece) 4 (fragment) 5 (grain)  
 1 (hard) - 5 (soft)  
 1 (fresh) - 5 (decomposed)  
 core loss  
 RQD

**EPDC**   
 ELECTRIC POWER DEVELOPMENT CO., LTD.

# GEOLOGIC LOG OF DRILL HOLE

Page

AYVALI PROJECT

HOLE No. SG-105

( SHEET 3 of 7 )

LOCATION DAM SITE (RIVER BED)  
ELEVATION 868.2 m  
COORDINATE X:4514706.14  
Y:493597.07

DEPTH OF HOLE 125.00 m  
DIRECTION OF HOLE 90°  
CORE RECOVERY %  
DRILLING MACHINE

COMMENCED 83-10-01  
COMPLETED 83-11-30  
DRILLED BY I.Teke  
LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	Pc						
828.20	40m			0 → 100%								Kgf/cm <sup>2</sup>					%		40m
	1									Crack surfaces are oxidized. 45.6-46.0m Vertical joint	Lu=1.3	10							1
	2							2											2
	3				Pinkish Grey	2	2				Lu<1	10							3
	4																		4
	5					1	1			46.0-46.6m, 48.0-48.1m. 48.4-48.6m Cracky C=3-4	Lu=1.5	10							5
	6							2											6
	7					3	3	1			Lu=2.8	10							7
	8							3											8
	9										Lu=1.8	10							9
	50																		50
	1				Greenish Grey					Fresh and hard stick core	Lu=2.9	10							1
	2							1											2
	3					2	2	1			Lu=8.2	10							3
	4							2											4
	5										Lu=5.8	10							5
	6																		6
	7				Greenish Grey			2		Joint surfaces are oxidized and frequently sulphur stained between 56.00-65.00m; cavities.	Lu=2.2	10							7
	8					3	1	2											8
	9						3	1			Lu=4.4	10							9
808.20	60							3											60

Driller's note:  
1 (solid), 2 (subsolid), 3 (fossil), 4 (fragment), 5 (grain)  
1 (hard) - 5 (soft)  
1 (fresh) - 5 (decomposed)  
core loss  
RQD

EPDC  
ELECTRIC POWER DEVELOPMENT CO., LTD.



# GEOLOGIC LOG OF DRILL HOLE

Page

AYVALI PROJECT

HOLE No. SG-105

( SHEET 4 of 7 )

LOCATION	DAM SITE(RIVER BED)	DEPTH OF HOLE	125.00 m	COMMENCED	83-10-01
ELEVATION	868.2 m	DIRECTION OF HOLE	90°	COMPLETED	83-11-30
COORDINATE	X:4514706.14	CORE RECOVERY	%	DRILLED BY	I.Teke
	Y:493597.07	DRILLING MACHINE		LOGGED BY	Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING			BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc					
	60m			0 → 100%								Kgt/cm <sup>2</sup>					%	60m
868.20																		
	1		X								Lu<1	10						1
	2		X					1										2
	3		X			3	2	1			Lu<1	10						3
	4		X					2										4
	5		X								Lu=6.4	10						5
	6		X															6
	7		X					2			Lu=1.2	10						7
	8		X					3										8
	9		X				2				Lu=6.4	10						9
	70		X			2		2		Tuff-Lappili tuff.								70
	1		X					1			Lu=3.7	10						1
	2		L					2		72.1-72.3 Cracky C=3-4								2
	3		L					3			Lu=7.6	10						3
	4		L					4		Vertical joints								4
	5		L					2			Lu=10.2	10						5
	6		L					3		Vertical joint between 76.00-78.60m. Cores are broken into fragments, because of vertical and cross joints	Lu=9	10						6
	7		L					4										7
	8		L					3										8
	9		L					2			Lu=5.1	10						9
788.20	80		L			2	2	1										80

> driller's note <  
 1 (solid), 2 (subsolid), 3 (glass), 4 (fragment), 5 (grain)  
 1 (hard) - 5 (soft)  
 1 (fresh) - 5 (decomposed)  
 core loss  
 ROD

EPDC (E)

ELECTRIC POWER DEVELOPMENT CO., LTD.

# GEOLOGIC LOG OF DRILL HOLE

Page

AYVALI PROJECT	HOLE No. SG-105	( SHEET 5 of 7 )
LOCATION DAM SITE(RIVER BED)	DEPTH OF HOLE 125.00 m	COMMENCED 83-10-01
ELEVATION 868.2 m	DIRECTION OF HOLE 90°	COMPLETED 83-11-30
COORDINATE X:4514706.14	CORE RECOVERY %	DRILLED BY I.Teke
Y:493597.07	DRILLING MACHINE	LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
	80m			0 → 100%								Kgf/cm					%		80m
788.20	1	Rhyolite			Pinkish Grey	2	2	2		NOTE: Gypsum and pyrite infillings varying from 2mm to 8mm have been observed in all of the joints after the depth of 86.00m.	Lu=18.3	10							1
	2							3			Lu=4.9	10							2
	3										Lu<1	10							3
	4					2	1				Lu<1	10						52.00m (84.00m)	4
	5									Vertical joint between 86.00-86.90m with gypsum (1-5mm) and pyrite infilling	Lu<1	10							5
	6							2			Lu<1	10							6
	7					2		3		Fault (89.00-89.55m): 10mm gypsum and pyrite infilling, slickensided surfaces.	Lu<1	10							7
	8					1					Lu<1	10						52.00m (88.00m)	8
	9					3	2			Shear zone with 3-4cm gypsum and pyrite infilling. (40deg)	Lu<1	10							9
90	1					1		1			Lu<1	10							10
	2	Rhyolite			Pinkish Grey					Vertical joint between 96.30-97.30m with pyrite and gypsum infilling.	Lu<1	10							1
	3							2			Lu<1	10							2
	4					2					Lu<1	10							3
	5							1			Lu<1	10							4
	6					2				Vertical joint between 96.30-97.30m with pyrite and gypsum infilling.	Lu<1	10							5
	7							2			Lu<1	10							6
	8							1		Vertical joint between 96.30-97.30m with pyrite and gypsum infilling.	Lu<1	10							7
	9							3			Lu<1	10							8
	10							1		Vertical joint between 96.30-97.30m with pyrite and gypsum infilling.	Lu<1	10							9
788.20	100							2			Lu<1	10							100

\* driller's note \*

1 (solid), 2 (subsolid), 3 (piece), 4 (fragment), 5 (grain)

1 (hard) - 5 (soft)

1 (fresh) - 5 (decomposed)

core loss


RQD

# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. SG-105	( SHEET 6 of 7 )
LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>125.00</u> m	COMMENCED <u>83-10-01</u>
ELEVATION <u>868.2</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>83-11-30</u>
COORDINATE <u>X:4514706.14</u>	CORE RECOVERY _____ %	DRILLED BY <u>I.Teke</u>
<u>Y:493597.07</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEDON	Pmax	Pc	DEPTH RESULT						
768.20	100m			0-100%								Kgf/cm						%		100m
	1										Lu<1	10								1
	2										Lu<1	10								2
	3						2	1			Lu<1	10								3
	4					1					Lu<1	10								4
	5										Lu<1	10								5
	6					5				Shear zone (107.60-108.00m): 4-5cm gypsum and pyrite infilling, crushed (30deg)	Lu<1	10							53.00m (106.00m)	6
	7							2			Lu<1	10								7
	8					2	2	3			Lu<1	10								8
	9										Lu<1	10								9
110	110	Rhyolite			Pinkish Grey					Oblique joint (110.50-110.65m): 5mm gypsum and pyrite infilling; pyrite are concentrated.	Lu<1	10							53.00m (110.00m)	110
	1							3	1		Lu<1	10								1
	2										Lu<1	10								2
	3					3	4	4		Fault zone (112.30-112.70m): Fault gouge, gypsum infilling, crushed.	Lu<1	10								3
	4										Lu<1	10								4
	5							2			Lu=6.9	10							53.00m (114.00m)	5
	6										Lu=0	10							53.00m (116.00m)	6
	7					2		3			Lu=0	10								7
	8										Lu=0	10								8
	9							4		Fracture zone between 118.00-120.00m.	Lu=0	10								9
748.20	120							3			Lu=0	10							53.00m	120


 > driller's note  
 1 (stick), 2 (substick), 3 (piece), 4 (fragment), 5 (grain)  
 1 (fresh) - 5 (decomposed)  
 core loss  
 RQD

## Page

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**EPDC** (H)  
ELECTRIC POWER DEVELOPMENT CO. LTD.

# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. SGE-106	( SHEET 1 of 5 )
LOCATION <u>DAM SITE (RIVER BED)</u>	DEPTH OF HOLE <u>100.00</u> m	COMMENCED <u>83-07-30</u>
ELEVATION <u>864.14</u> m	DIRECTION OF HOLE <u>45°</u>	COMPLETED <u>83-09-29</u>
COORDINATE <u>X:4514707.15</u>	CORE RECOVERY _____ %	DRILLED BY <u>1.Teke</u>
<u>Y:493596.94</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEON	Pmax	Pc	DEPTH RESULT						
	0m			0 → 100%								Kgf/cm <sup>2</sup>						%		0m
864.14	1				Brown					Open excavation (Silty, sandy gravel) 75% Gravel 25% Sand-silt.										1
	2																			2
	3																			3
	4																			4
	5							3												5
	6																			6
	7									Sulphur stains, solution cavities in place, oxidized joint surfaces										7
	8																			8
	9						3	2			Lu=24	10								9
	10																			10
	11										Lu=19	10								11
	12							3												12
	13										Lu=10.9	10								13
	14																			14
	15										Lu=16.8	10								15
	16							1												16
	17						2				Lu=2.9	10								17
	18							2												18
	19																			19
	20						3	2			Lu=2.1	10								20

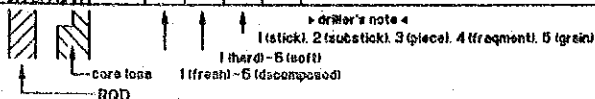
core loss RQD
   
 1 (fresh) - 5 (decomposed)
   
 1 (solid), 2 (subsolid), 3 (piece), 4 (fragment), 5 (grain)
   
 1 (hard) - 5 (soft)
   
 > driller's note >

# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. SGE-106	( SHEET 2 of 5 )
LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>100.00</u> m	COMMENCED <u>83-07-30</u>
ELEVATION <u>864.14</u> m	DIRECTION OF HOLE <u>45°</u>	COMPLETED <u>83-09-29</u>
COORDINATE <u>X:4514707.15</u>	CORE RECOVERY _____ %	DRILLED BY <u>I.Teke</u>
<u>Y:493596.94</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
	20m			0 → 100%								Kgf/cm <sup>2</sup>					%		20m
844.14	1	Rhyolite								Sulphur stains, oxidized joint surfaces, 1-2mm pyrite infillings in joints.	Lu=2.2	10							1
	2										Lu=2	10							2
	3										Lu=3.2	10							3
	4						2	2			Lu=3.2	10							4
	5						3	1			Lu=5	10							5
	6						3	3			Lu=7.5	10							6
	7									Joint surfaces are oxidized and brown in colour between 0.00-46.00m.	Lu=4.6	10							7
	8										Lu=3.8	10							8
	9										Lu=3	10							9
	30										Lu=10.6	10							30
	1						2	2			Lu=7.7	10							1
	2						1	1											2
	3						3	3											3
	4																		4
	6							2											5
	6						3	3											6
	7																		7
	8						3												8
	9							2											9
824.14	40																		40



# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. SGE-106	( SHEET 3 of 5 )
LOCATION DAM SITE(RIVER BED)	DEPTH OF HOLE 100.00 m	COMMENCED 83-07-30
ELEVATION 864.14 m	DIRECTION OF HOLE 45°	COMPLETED 83-09-29
COORDINATE X:4514707.15	CORE RECOVERY %	DRILLED BY I.Teke
Y:493596.94	DRILLING MACHINE	LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEON	Pmax	Pc	DEPTH RESULT					
	40m			0 → 100%								Kgf/cm					%		40m
824.14	1	Rhyolite	L		Greenish Grey			2		Sulphur stains and pyrite crystals	Lu=7	10							1
	2		L				2	2											2
	3		L			3	5	1			Lu=3.5	10							3
	4		L				3	3											4
	5		L								Lu=7.8	10							5
	6		L																6
	7		L								Lu=6.6	10							7
	8		L					2											8
	9		L				2	5			Lu=4.3	10							9
	50		L			2	5	3											50
	1	Volcanic Breccia	L		Greenish Grey					Fresh joint surfaces	Lu=5.4	10							1
	2		L					2											2
	3		L								Lu=2.6	10							3
	4		L					2											4
	5		X				3	3			Lu=6.7	10							5
	6		X																6
	7		X			1		2			Lu=1.7	10							7
	8		X			2		1											8
	9		X				3				Lu=1.5	10							9
804.14	60		X					2											60

1 (thick), 2 (sub-thick), 3 (piece), 4 (fragment), 5 (grain)
   
 1 (hard) - 5 (soft)
   
 1 (fresh) - 5 (decomposed)
   
 core loss
   
 RQD

# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. SGE-106	( SHEET 4 of 5 )
LOCATION <u>DAM SITE(RIVER BED)</u>	DEPTH OF HOLE <u>100.00</u> m	COMMENCED <u>83-07-30</u>
ELEVATION <u>864.14</u> m	DIRECTION OF HOLE <u>45°</u>	COMPLETED <u>83-09-29</u>
COORDINATE <u>X:4514707.15</u>	CORE RECOVERY _____ %	DRILLED BY <u>I.Teke</u>
<u>Y:493596.94</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc						
	60m			0 → 100%								Kgf/cm <sup>2</sup>					%		60m
804.14		Vb	Δ		29.1.17	1 1 2	2 1 3	2 3											
	1	Rhyolite	L		Greenish Grey					Fractured zone; joint surfaces are fresh.	Lu=2.4	10							1
	2		L															2	
	3		L															3	
	4		L															4	
	5		L															5	
	6		L															6	
	7		L															7	
	8		L															8	
	9		L															9	
	70		L															70	
	1	L															1		
	2	L															2		
	3	L															3		
	4	L															4		
	5	Volcanic Breccia	Δ		Greenish Grey													5	
	6		Δ														6		
	7		Δ														7		
	8		Δ														8		
	9		Δ														9		
80			Δ															80	
784.14																			

1 (fresh) - 5 (decomposed)

**EPDC** | 
  
 ELECTRIC POWER DEVELOPMENT CO., LTD.

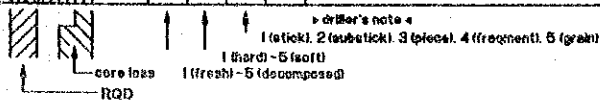


# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT	HOLE No. SGE-106	( SHEET 5 of 5 )
LOCATION <u>DAM SITE (RIVER BED)</u>	DEPTH OF HOLE <u>100.00</u> m	COMMENCED <u>83-07-30</u>
ELEVATION <u>864.14</u> m	DIRECTION OF HOLE <u>45°</u>	COMPLETED <u>83-09-29</u>
COORDINATE <u>X:4514707.15</u>	CORE RECOVERY _____ %	DRILLED BY <u>I.Teke</u>
<u>Y:493596.94</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Dpt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
	80m			0 + 100%								Kgf/cm <sup>2</sup>					%		80m
784.14	1	Volcanic Breccia	X		Greenish Grey			2		Sulphur stains on rock core, fresh joint surfaces	Lu=5.6	10							1
	2		X					3			Lu=19	10							2
	3		X			1	2	3			Lu=3	10							3
	4		X					2											4
	5		X					3											5
	6		X					1											6
	7		X					2											7
	8		X			2	3				Lu=1.1	10							8
	9		X					2			Lu=2.2	10							9
	90		X					3			Lu=2.7	10							90
	1	Rhyolite	L		Greenish Grey			3		Fractured zone	Lu=2.6	10							1
	2		L					4			Lu=6.6	10							2
	3		L								Lu=2.9	10							3
	4		L							Feather joints with calcite infilling	Lu=2.5	10							4
	5		L				2	2											5
	6		L																6
	7		L																7
	8		L					3	3		Lu=6.6	10							8
	9		L																9
784.14	100		L							End of the Borehole									100



# GEOLOGIC LOG OF DRILL HOLE

Page \_\_\_\_\_

AYVALI PROJECT

HOLE No. SGE-107

( SHEET 1 of 5 )

LOCATION DAM SITE (RIVER BED)  
 ELEVATION 817.67 m  
 COORDINATE X:4514636.75  
Y:493575.91

DEPTH OF HOLE 100.00 m  
 DIRECTION OF HOLE 45°  
 CORE RECOVERY \_\_\_\_\_ %  
 DRILLING MACHINE \_\_\_\_\_

COMMENCED 83-12-12  
 COMPLETED 84-01-28  
 DRILLED BY I. Teke  
 LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt. II)	DEPTH
					COLOR	WEATHERING	HARDNESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
	0m			0 → 100%								Kgf/cm <sup>2</sup>					%		0m
817.67	0					4	4	5		Open excavation									1
	1					3	3	4											2
	2							1											3
	3							1											4
	4							2											5
	5							2		Sulphur stained and oxidized joint surfaces between 0.5-15.5m.								6	
	6					2		1											7
	7							3											8
	8																		9
	9							2											10
	10							3											11
	11							3											12
	12							3		Fractured zone, oxidized joint surfaces	Lu=13	10							13
	13							2											14
	14							3											15
	15							2											16
	16							3											17
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	96							3											97
	97							3											98
	98							3											99
	99							3											100

> driller's note <  
 1 (stick), 2 (substick), 3 (piece), 4 (fragment), 5 (grain)  
 1 (hard) - 5 (soft)  
 1 (fresh) - 5 (decomposed)  
 core loss  
 RQD

**EPDC** (EP)  
 ELECTRIC POWER DEVELOPMENT CO., LTD.

# GEOLOGIC LOG OF DRILL HOLE

Page

AYVALI PROJECT

HOLE No. SGE-107

( SHEET 2 of 5 )

LOCATION	DAM SITE(RIVER BED)	DEPTH OF HOLE	100.00 m	COMMENCED	83-12-12
ELEVATION	817.67 m	DIRECTION OF HOLE	45°	COMPLETED	84-01-28
COORDINATE	X:4514636.75	CORE RECOVERY	%	DRILLED BY	I.Teke
	Y:493575.91	DRILLING MACHINE		LOGGED BY	Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Dpt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT						
797.67	20m			0 + 100%								Kgf/cm <sup>2</sup>						%		20m
	1	Rhyolite	L		21.17	2	2	3			Lu=38	6								1
	2		X					2		Pyrite crystals and sulphur infilling in joints.	Lu=0	10								2
	3		X			2	1	3			Lu=0	10								3
	4		X				3	3			Lu=0	10								4
	5		X								Lu=0	10								5
	6	Volcanic Breccia	X					2			Lu=0	10								6
	7		X					3			Lu=0	10								7
	8		X				2	1			Lu=0	10								8
	9		X					2		Sulphur stains on joint surfaces	Lu=0	10								9
	30		X			1		3			Lu=0	10								30
	1		X					2			Lu=0	10								1
	2		X								Lu=0	10								2
	3		L			1		1			Lu=0	10								3
	4		L				1			1-2mm gypsum infillings in joints	Lu=0	10								4
	5		L			2					Lu=0	10								5
	6	Rhyolite	L					2			Lu=0	10								6
	7		L				2				Lu=0	10								7
	8		L					1			Lu=0	10								8
	9		L					2			Lu=0	10								9
777.87	40		L								Lu=0	10								40

Driller's note:  
 1 (tick), 2 (subtick), 3 (piece), 4 (fragment), 5 (grain)  
 1 (hard) - 5 (soft)  
 1 (fresh) - 5 (decomposed)  
 core loss  
 RCD

# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT HOLE No. SGE-107 ( SHEET 3 of 5 )

LOCATION DAM SITE(RIVER BED) DEPTH OF HOLE 100.00 m COMMENCED 83-12-12

ELEVATION 817.67 m DIRECTION OF HOLE 45° COMPLETED 84-01-28

COORDINATE X:4514636.75 CORE RECOVERY % DRILLED BY I.Teke

Y:493575.91 DRILLING MACHINE LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
	40m			0 + 100%								Kgf/cm <sup>2</sup>					%		40m
777.87	1		L					1			Lu=0	10							1
	2		L					1			Lu=0	10							2
	3		L								Lu=0	10							3
	4		L					1			Lu=0	10							4
	5		L					1			Lu=0	10							5
	6		L					2			Lu=0	10							6
	7		L				1				Lu=0	10							7
	8		L					1			Lu=0	10							8
	9		L					2		2-4mm gypsum infillings in joints	Lu=0	10							9
50	10		L								Lu=0	10							10
	11		L							Fresh, hard, stick core	Lu=0	10							11
	12		L								Lu=0	10							12
	13		L					1			Lu=0	10							13
	14		L				2				Lu=0	10							14
	15		L								Lu=0	10							15
	16		L					2			Lu=0	10							16
	17		L								Lu=0	10							17
	18	Vb	Δ					1		57.5-58.5m Volcanic Breccia	Lu=0	10							18
	19		L					2			Lu=0	10							19
757.67	20		L					2			Lu=0	10							20
	21		L					3			Lu=0	10							21

Driller's note:

1 (stick), 2 (substick), 3 (piece), 4 (fragment), 5 (grain)

1 (hard) - 5 (soft)

1 (fresh) - 5 (decomposed)

core loss

RQD

EPDC (EP)


ELECTRIC POWER DEVELOPMENT CO. LTD.

# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT	HOLE No. SGE-107	( SHEET 4 of 5 )
LOCATION DAM SITE(RIVER BED)	DEPTH OF HOLE 100.00 m	COMMENCED 83-12-12
ELEVATION 817.67 m	DIRECTION OF HOLE 45°	COMPLETED 84-01-28
COORDINATE X:4514636.75	CORE RECOVERY %	DRILLED BY I.Teke
Y:493575.91	DRILLING MACHINE	LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE						TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LU=0	Pmax	Pc	DEPTH RESULT						
	60m			0 + 100%								Kgf/cm						%		60m
757.67	1	Rhyolite	L		Greenish Grey			1		2-3mm gypsum infillings in joints. Occasional feather joints with gypsum infilling.	Lu=0	10								1
	2		L					1			Lu=0	10								2
	3		L				1				Lu=0	10								3
	4		L					2			Lu=0	10								4
	5		L			1					Lu=0	10								5
	6		L				2	1			Lu=0	10								6
	7		L					2			Lu=0	10								7
	8		L					1			Lu=0	10								8
	9	Volcanic Breccia	X		Greenish Grey			2			Lu=0	10								9
70	10		X			1	2	1			Lu=0	10								70
	11	Rhyolite	L		Greenish Grey						Lu=0	10								11
	12		L								Lu=0	10								12
	13	Rhyolite	L		Greenish Grey						Lu=0	10								13
	14		L								Lu=0	10								14
	15	Rhyolite	L		Greenish Grey						Lu=0	10								15
	16		L			1	2	1			Lu=0	10								16
	17	Rhyolite	L		Greenish Grey						Lu=0	10								17
	18		L								Lu=0	10								18
	19	Rhyolite	L		Greenish Grey						Lu=0	10								19
	20		L								Lu=0	10								20


 Core loss  
 RQD

1 (soft) - 5 (hard)  
 1 (fresh) - 5 (decomposed)

1 (soft) - 5 (hard)  
 1 (fresh) - 5 (decomposed)

# GEOLOGIC LOG OF DRILL HOLE





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AYVALI PROJECT

HOLE No. SGE-107

( SHEET 5 of 5 )

LOCATION <u>DAM SITE (RIVER BED)</u>	DEPTH OF HOLE <u>100.00</u> m	COMMENCED <u>83-12-12</u>
ELEVATION <u>817.67</u> m	DIRECTION OF HOLE <u>45°</u>	COMPLETED <u>84-01-28</u>
COORDINATE <u>X:4514636.75</u>	CORE RECOVERY _____ %	DRILLED BY <u>I.Teke</u>
<u>Y:493575.91</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>

ELEVATION		DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Opt.H)	DEPTH
		80m			0 → 100%	COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT				%	80m
737.67		1	Rhyolite			Greenish Grey	1				Feather joints	Lu=0	10							1
	2																		2	
	3																		3	
	4																		4	
	5																		5	
	6																		6	
	7		Volcanic Breccia								Oblique joint with 5mm gypsum infilling at 89.20m.	Lu<1	10						7	
	8																		8	
	9																		9	
90			Volcanic Breccia									Lu=0	10						90	
	1																		1	
	2																		2	
	3		Rhyolite								Oblique joints with gypsum infilling.	Lu=0	10						3	
	4																		4	
	5																		5	
	6																		6	
	7																		7	
	8																		8	
	9											Lu=0	10					9		
717.67	100										End of the Borehole								100	

> driller's note <
   
 1 (solid), 2 (subsolid), 3 (piece), 4 (fragment), 5 (grain)
   
 1 (hard) - 5 (soft)
   
 1 (fresh) - 5 (decomposed)
   
 core loss
   
 RQD

# GEOLOGIC LOG OF DRILL HOLE

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AYVALI PROJECT

HOLE No. SL-110

( SHEET 1 of 5 )

LOCATION <u>DAM SITE (RIVER BED)</u>	DEPTH OF HOLE <u>100.00</u> m	COMMENCED <u>91-05-25</u>	
ELEVATION <u>852.03</u> m	DIRECTION OF HOLE <u>90°</u>	COMPLETED <u>91-08-07</u>	
COORDINATE <u>X:4514465.24</u>	CORE RECOVERY _____ %	DRILLED BY <u>S.Kaya</u>	
<u>Y:493681.98</u>	DRILLING MACHINE _____	LOGGED BY <u>Sukru Bay</u>	

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L. (Dpt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	Pc	DEPTH RESULT					
	0m			0 → 100%															0m
852.03																			
	1				Brown-Brownish Grey	3				Small fragments, surfaces of fragments are brown.									1
	2					1	4	4											2
	3					4													3
	4																		4
	5					3	3	3		Crack surfaces are brownish in color.									5
	6									Fairly fresh, stick-substick core									6
	7					2	2	1		6.4m-6.5m Fragments	L <sub>u</sub> =4.0	10.2							7
	8					5	4~5	5		Sheared zone, many pyrite (30deg)									8
	9								1		L <sub>u</sub> =1.3	10.9							9
	10					2	2	1											10
	11								2										
	12					2	2	2		10.9-12.2m Vertical Joints, Crack surface is brown	L <sub>u</sub> =0.8	10.6							1
	13					3		3											2
	14								1	Crack surfaces are slightly weathered. Flow structure is obvious	L <sub>u</sub> =0.8	10.7							3
	15								1										4
	16								2		L <sub>u</sub> =1.2	10.8							5
	17								2	15.9-16.0 Cracky									6
	18					2	2	1		16.5-17.5 Cracky	L <sub>u</sub> =3.1	11.4							7
	19								1	Chloritization in some places.									8
	20								1		L <sub>u</sub> =0.5	11.6							9
	21								2										10
	22								3										11
	23																		12
	24																		13
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	110																		99
	111																		100

core loss      RQD

1 (fresh) 2 (discolored) 3 (pieces) 4 (fragments) 5 (grains)

1 (fresh) 2 (discolored) 3 (pieces) 4 (fragments) 5 (grains)

1 (fresh) 2 (discolored) 3 (pieces) 4 (fragments) 5 (grains)

**EPDC**
  
 ELECTRIC POWER DEVELOPMENT CO., LTD.

# GEOLOGIC LOG OF DRILL HOLE

Page

AYVALI PROJECT	HOLE No. SL-110	( SHEET 2 of 5 )
LOCATION DAM SITE(RIVER BED)	DEPTH OF HOLE 100.00 m	COMMENCED 91-05-25
ELEVATION 852.03 m	DIRECTION OF HOLE 90°	COMPLETED 91-08-07
COORDINATE X:4514465.24	CORE RECOVERY %	DRILLED BY S.Kaya
Y:493681.98	DRILLING MACHINE	LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUGEN	Pmax	Pc						
	20m			0 → 100%															20m
832.03	1							2											1
	2							3											2
	3					2	2			Stick core. Crack surface is not weathered. Chloritization and small pyrite along crack surfaces.	Lu=2.8	11.4							3
	4							1											4
	5																		5
	6					4	4-5	5		Fractured zone. Silt-fine sand with pyrite. (20deg)	Lu=0.3	11.5							6
	7							2		Fragments 26.8-27.4m Vertical Joint	Lu=3.6	11							7
	8							4		Small fragments								8.20m (28.00m)	8
	9							1		Many hair cracks. No chloritization in the light grey part.	Lu=0.4	10.8							9
	30																		30
	1						2											15.00m (30.85m)	1
	2					2		1											2
	3							1											3
	4	Vb						1										19.20m (34.00m)	4
	5							2		Flow structure	Lu=11	11.7							5
	6							3	3										6
	7							1	1	Remarkable chloritization	Lu=5.8	11.3							7
	8						2	2											8
	9							3	1	Fragments and small core. Crack surfaces are fresh	Lu=3.0	11.5						33.50m (38.00m)	9
	10							4											10

1 (solid), 2 (crack), 3 (piece), 4 (fragment), 5 (grain)
   
 1 (hard) - 5 (decomposed)
   
 core loss RQD



# GEOLOGIC LOG OF DRILL HOLE

Page

AYVALI PROJECT HOLE No. SL-110 (SHEET 3 of 5)

LOCATION DAM SITE(RIVER BED) DEPTH OF HOLE 100.00 m COMMENCED 91-05-25

ELEVATION 852.03 m DIRECTION OF HOLE 90° COMPLETED 91-08-07

COORDINATE X:4514465.24 CORE RECOVERY % DRILLED BY S.Kaya

Y:493681.98 DRILLING MACHINE LOGGED BY Sukru Bay

ELEVATION	DEPTH	ROCK NAME	LOG	CORE RECOVERY	OBSERVATION OF CORE					TESTING				BIT TYPE	CASING	CEMENTATION	DRILL WATER RETURN	G.W.L (Opt.H)	DEPTH
					COLOR	WEATHER-ING	HARD-NESS	CRACK SPACING	ROCK EVALUATION	DESCRIPTION	LUCEON	Pmax	Pc	DEPTH RESULT					
	40m			0 → 100%								Kgf/cm <sup>2</sup>					%		40m
812.03	1	Rhyolite	L	100%	Light Greenish Grey-Grey	2	2	3		Cracky, fragments and small piece, Crack surfaces are fresh.	Lu=0.7	11.4						31.80m (48.80m) (Firm)	1
	2					3	3	4											2
	3							1		42.2-42.5m, 43.5-43.8m Dark greenish grey volc. breccia.	Lu=0.8	11.4							3
	4					2	2			44.6-44.9m Cracky	Lu=1.4	11.5							4
	5							2											5
	6	Volcanic Breccia	X	100%	Light Greenish Grey-Grey	2	2	3										12.35m (46.00m)	6
	7																		7
	8				Dark Grey	3	3	3		Small fragments-10cm core Lots of small pyrite along crack surfaces.	Lu=2.2	11.5							8
	9							4											9
	50																		50
	1	Rhyolite	L	100%	Light Greenish Grey-Grey			2		50.5-50.6 sheared and HTA zone, silts, sand with small pyrite.	Lu=0.9	11.2						25.00m (51.30m)	1
	2																		2
	3					2		1		Crack surface is not oxidated. But chloritization on the surface of cracks.	Lu=27	11.2							3
	4							2											4
	5					2		2											5
	6	Rhyolite	L	100%	Light Greenish Grey-Grey		2	3		Cracky, Vertical Joint.	Lu=26	14.2						42.00m (51.00m)	6
	7							1											7
	8						2												8
	9							2		Crack surfaces are slightly oxidated.	Lu=19	11.9						42.00m (53.73m)	9
792.03	60																		60

