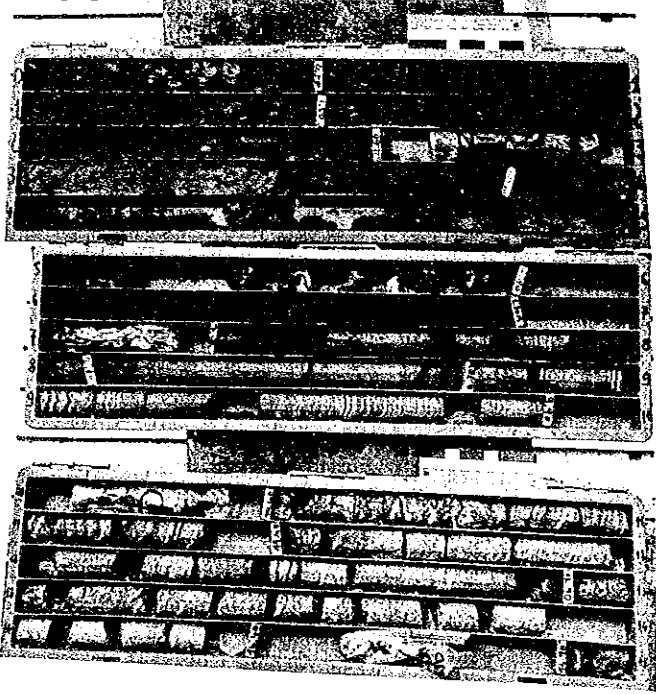


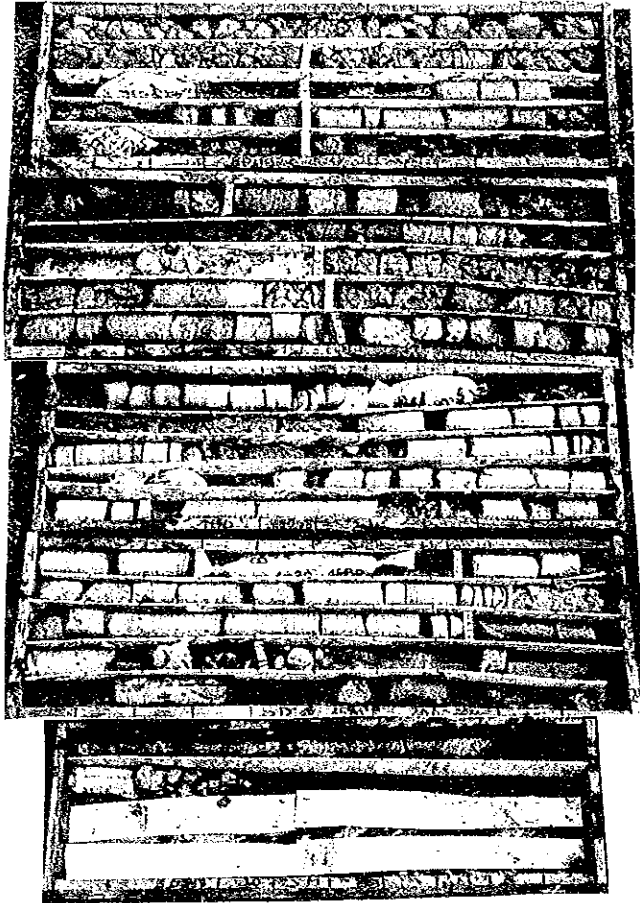
MEMVE ELE PROJECT
HOLE N° BQ17
DEPTH 0-5"
SONEL-JICA



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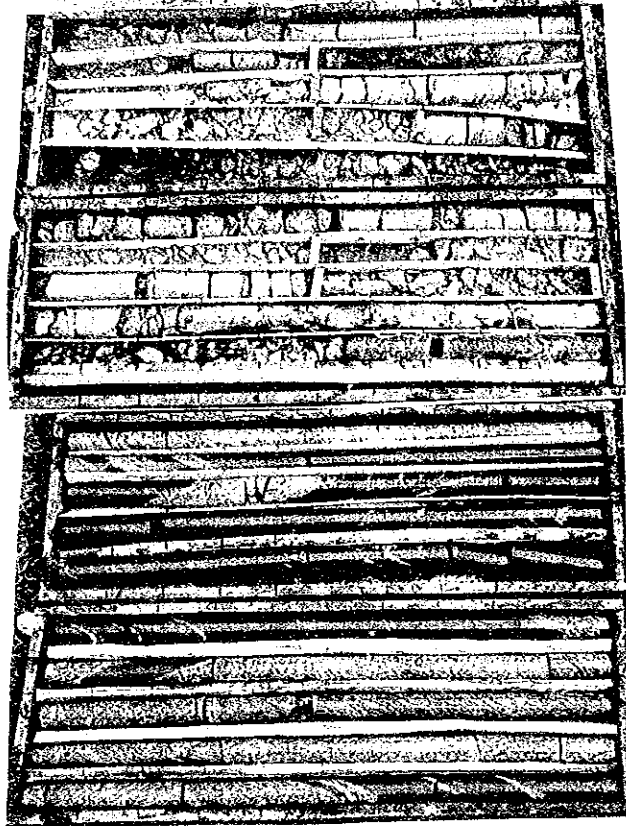
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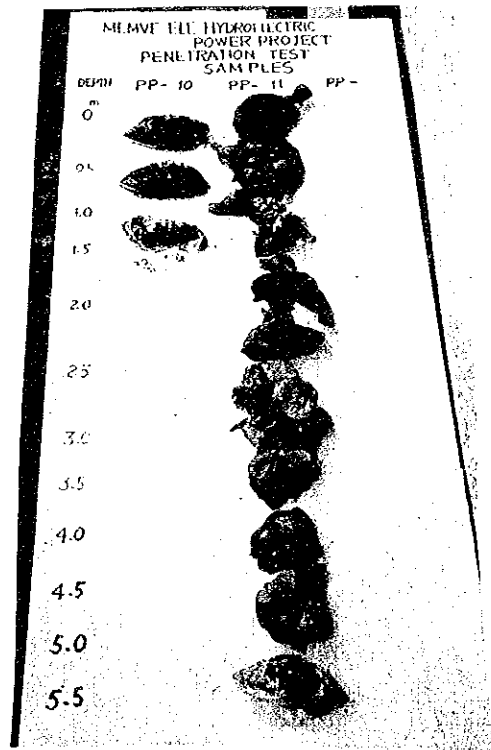
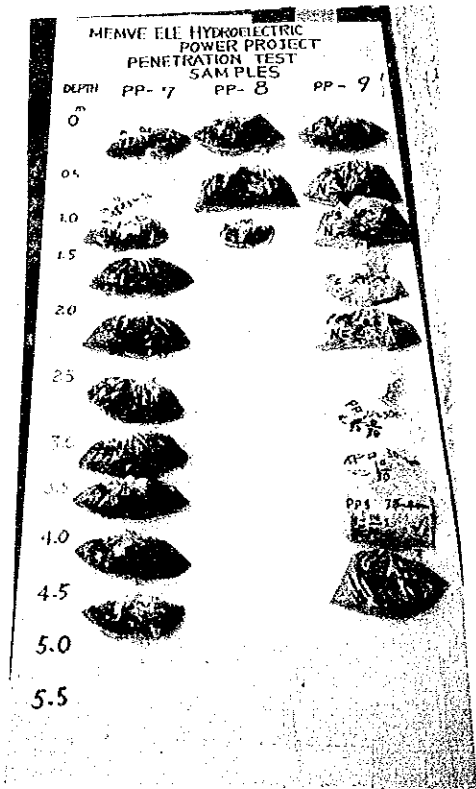
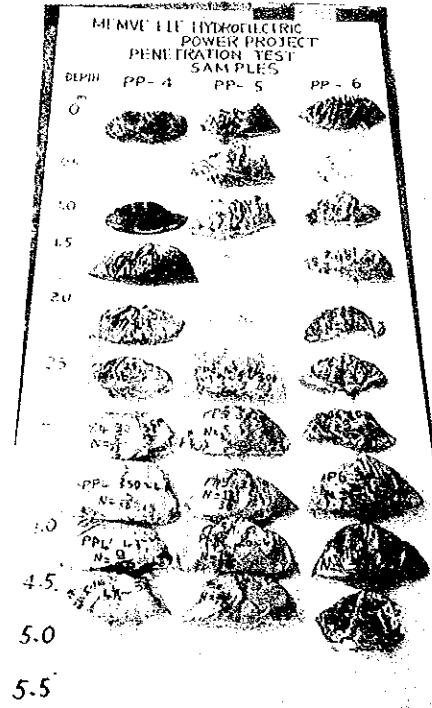
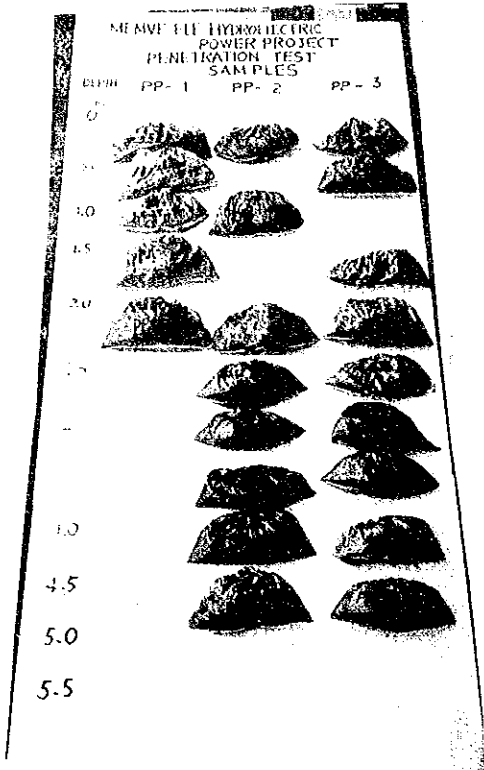
BD 18 DEPTH 0-214 m



BD 19

BD 19 DEPTH 0 - 20 ft



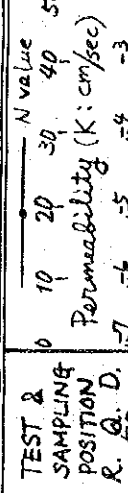


DRILL LOG

HOLE NO. BD-1 SHEET NO. 1 OF 19

HOLE NO. BD-1

PROJECT	MEMVE ELE HYDROELECTRIC POWER PROJECT			DEPTH	20.00 m	ELEVATION	395.20m
SITE	DAM SITE			INCLINATION	vertical	DRILL RIG	YBM-05D
AVERAGE CORE RECOVERY	99 %			DRILLED	I. MAEKAWA	LOGGED	K. HAYASHI
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT	DIAMETER	GROUNDWATER LEVEL
0	395.20	top soil		4-brown iron hydroxide pellets with silt.			
1	394.00	residual soil (pellety zone)		4-orange silt with iron hydroxide pellets (ø1.0-1.5cm). medium hard.			
6.15	389.05	residual soil (2)		reddish brown with pale yellow stripes, reddish brown silty clay with pale yellowish sandy silt. original rock texture (schistosity) has been remained slightly. medium moisture contents and slightly sticky.			
6.30	388.90	pellets		reddish brown iron hydroxide pellets (ø0.5-2.0cm)			
15.00	380.20	residual soil (2)		stripe pattern of pale yellow and yellowish brown. silty clay. high moisture contents and sticky. original rock texture (schistosity) has been remained slightly. 6.30~6.50m; strongly weathered gneiss, (remaining rock softened). deeper portion than 7.80m; kaolinization is observed and stripe pattern becomes clear.	single core tube (ø 66 mm) metal bit		
17.80	377.40	slightly weathered gneiss		pale brown and/or blackish gray, fine grain blackish gneiss. very cracky and all fractures have been filled up by iron hydroxide. 16.65~17.00m, 17.20~17.30m; strongly weathered gneiss and rock color turned to yellowish orange.	double core tube (ø66 mm) diamond bit		
18.00	377.40	fresh gneiss		slightly greenish gray due to epidote. medium grain granitic gneiss. few of cylindrical core, schistosity is clear and dips 60°. 18.85~19.15m; joints have been filled up by iron hydroxide.			
20.00	375.20						



* R.Q.D is Rock Quality Designation. R.Q.D = (Total length of cylindrical cores longer than 10 cm) / (Total core length) x 100%
 * LUCEON VALUE is 1/min/m under injection water pressure of 10kg/cm²
 * DEPTH and ELEVATION are in meter
 * DIAMETER is in millimeter

NIPPON KOEI CO., LTD.
 CONSULTING ENGINEERS, TOKYO.

DRILL LOG

HOLE NO. BD- 2 SHEET NO. 2 OF 19

PROJECT		MEMVE ELE HYDROELECTRIC POWER PROJECT				DEPTH	20.00 m	ELEVATION	382.73 m		
SITE		DAM SITE		COORDINATE	X: 48056.7 Y: 32464.3	INCLINATION	vertical	DRILL RIG	YBM05D		
AVERAGE CORE RECOVERY		85 %		DATE	FROM 18.6 TO 23.6, 1992	DRILLED	H. NISHINDONO	LOGGED	K. HAYASHI		
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER	LEVEL	CORE RECOVERY	R.Q.D	Permeability (K: cm/sec)	N Value	DEPTH
0	382.39	Top soil		dark blackish brown organic clay	single core tube (φ 66 mm)	0.00m		50			
1				whitish gray ~ pale yellowish gray, alternating beds of homogeneous grain quartz fine sand and clay. moisture contents are high.	metal bit						
2	380.58	fluidal plane deposit		yellowish orange ~ pale yellowish gray, mixed deposit of decomposed gneiss (yellowish orange), fine quartz sand and clay (pale yellowish gray). soft.							
4				yellowish orange ~ pale yellowish brown, clayey silt due to strong weathering of quartz dominant granitic gneiss							
5	377.93	collapse soil		original rock texture (schistosity) has been still remained. quartz has been altered to opalin silica and feldspar to kaolinite. 5.00-5.60 m, 6.00-7.00 m : high moisture contents.							
12	370.58	residual soil (2)		gray, fresh granitic gneiss with very clear schistosity. its surface has been slightly weathered and turned to white.	double core tube (φ 66 mm)						
12.48	370.25	boulder		reddish brown clay, soft.	diamond bit						
14.17	368.55	residual soil (2)		granitic gneiss turned white, fractures have been filled up by iron hydroxide (limonite).							
14.53	368.20	weathered gneiss		Stripe pattern of white and black medium grain granitic gneiss with clear schistosity dipped 50°. very hard.							
15				14.53 ~ 14.80 m : biotite and pyroxene dominant granitic gneiss.							
16				16.20 ~ 16.65 m : fine grain blackish gneiss. Slightly greenish part.							
17				15.65 ~ 15.80 m, 16.65 ~ 16.75 m : Silica mineral has been highly metamorphosed.							
18				most of fractures have been developed parallel to its schistosity.							
19											
20	362.73	fresh gneiss									
23.6, '92											
22.6, '92											
20.6, '92											
19.6, '92											
18.6, '92											

*R.Q.D is Rock Quality Designation, R.Q.D=(Total length of cylindrical cores longer than 10 cm)/(Total core length) x 100%
 *LUGON VALUE is l/min/m under injection water pressure of 10kg/cm²
 *DEPTH and ELEVATION are in meter
 *DIAMETER is in millimeter

NIPPON KOEI CO., LTD.
 CONSULTING ENGINEERS, TOKYO.

DRILL LOG

HOLE NO. BD-3 SHEET NO. 3 OF 19

HOLE NO. BD-3

(3)

PROJECT	MEMVE ELE HYDROELECTRIC POWER PROJECT			DEPTH	25.00m	ELEVATION	381.65m
SITE	DAM SITE			INCLINATION	vertical	DRILL RIG	YBM05D
AVERAGE CORE RECOVERY	COORDINATE	X: 498051.9	Y: 31866.6	DRILLED	H. NISHIMONO	LOGGED	K. HAYASHI
DATE	DATE	FROM 25.6 TO 30.6, 1992		LEVEL	R. Q. D	N value	
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT	DIAMETER	GROUNDWATER
DATE	DEPTH	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT	DIAMETER	GROUNDWATER
0	381.35	Top soil		Yellowish brown silt with plant roots	single core tube (φ66mm) metal bit		
1				Yellowish brown silt.			
2				original material was residual soil due to strong weathering.			
3				medium moisture contents and not sticky.			
3.30	378.35	collapse soil		alternating beds of yellowish brown silt and pale gray clay (inter-fingered), slightly clayey			
4	377.65	collapse soil		pale gray clay. soft, sticky and high moisture.			
4.15	377.30			blackish brown, organic clay. soft and sticky.			
5				whitish gray, fine sand.			
6	375.25			grauy sand with homogeneous grain size and with occasional intercalations of organic clay.			
7	374.15	fluidal plane deposit		blackish brown and whitish gray, alternating beds of fine sand and organic clay. 6.95-7.00m; became dense due to iron hydroxide.			
8	373.65	strongly weathered gneiss		dark greenish gray, silty sand original rock texture has been clayey			
8.60	373.05	weathered gneiss		pale greenish gray, crackly, all cracks have been filled up by iron hydroxide.			
9	372.65	strongly weathered gneiss		Same rock facies as 7.80-8.60m			
9.55	372.10	strongly weathered gneiss		dark green coarse grain granitic gneiss, biotite and pyroxene grains, dark and altered biotite altered to chlorite, color mineral base was stippled with talciferous spots.			
11	370.35	weathered gneiss		pale greenish gray, became soft and craky coarse-medium grain granitic gneiss. colored minerals, altered to iron hydroxide by weathering. 9.65-10.00m; strongly weathered			
12	369.35	slightly weathered gneiss		dark greenish fine grain gneiss. cylindrical core with epidote veins (1-2mm). biotite altered to chlorite, color mineral base was stippled with talciferous spots.			
13	369.25	weathered gneiss		pale greenish gray, fine grain gneiss. slightly soft. 12.55-12.63m; sheared.			
13.85	367.80	fresh gneiss		dark gray, fine grain gneiss. slightly greenish cylindrical core dominant and very hard.			
15	366.60	slightly weathered gneiss		pale greenish gray, fine grain gneiss. same rock facies as 11.30-12.30m. 13.85-14.00m; all fractures have been filled up by calcite and epidote.			
17	364.25	fresh gneiss		dark grayish green, fine grain gneiss. biotite and pyroxene dominant. colored mineral base was stippled with feldspar laths like snow crystals. cylindrical core dominant, all fractures have been filled up by epidote and calcite. 17.10m; with calcite thick vein (1-2cm).			
18				Stripe pattern of white and black. fine-medium grain granitic gneiss. schistosity is very clear and dips 50°.			
19				17.40-18.30m; crackly.			
20				grain size of minerals has been changed fine to medium gradually.			
21				17.50-17.62m; especially crackly.			
22				18.20-18.25m; ditto with calcite vein.			
23				18.30-25.00m; plenty of fracture filled up by calcite and few epidote. is observed.			
24				20.00-20.15m; 21.00-21.60m, 22.90-23.45m; crushed zone and all hair cracks were filled up by clay minerals. slightly pale colored.			
25	356.65	fresh gneiss					

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 * LUCICON VALUE is l/min/m under injection water pressure of 10kg/cm²
 * DEPTH and ELEVATION are in meter
 * DIAMETER is in millimeter

NIPPON KOEI CO., LTD.
 CONSULTING ENGINEERS, TOKYO.

LOG FORM-B

DRILL LOG

HOLE NO. BD-4 SHEET NO. 4 OF 19

HOLE NO. BD-4

(4)

PROJECT		MEMVE ELE HYDROELECTRIC POWER PROJECT				DEPTH	20.00m	ELEVATION	384.56 m			
SITE		DAM SITE				INCLINATION	vertical	DRILL RIG	YBM 05D			
AVERAGE CORE RECOVERY		83 %				DRILLED	H. NISHINOSONO	LOGGED	K. HAYASHI			
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY %	R & Q D	DEPTH			
0	384.56	TOP SOIL		yellowish brown silt with plant roots	single core tube (φ 66 mm) metal bit	▽ 4.20m		50	0			
1				pale yellowish brown silt.								10
2	382.26	residual soil (1)		no original rock texture due to strong weathering. medium moisture contents and not sticky.								20
3	381.36	residual soil (1)		pale yellowish brown with reddish brown pellets (φ 1 cm). Silt with iron hydroxide pellets. medium moisture contents and not sticky.								30
4	380.91	residual soil (pellet zone)		reddish brown, silt and iron hydroxide pellets. medium moisture content.								40
5	380.06	residual soil (2)		yellowish orange, silty clay with no original rock texture. high moisture contents and sticky.				50				
6				yellowish orange ~ pale yellowish orange, clay ~ silty clay.					60			
7	377.06	residual soil (2)		original rock texture has been remained slightly. strongly kaolinized. high moisture contents and sticky. deeper portion is paler color (pale whitish green).					70			
8				yellowish orange, clay with iron hydroxide powder, and well-preserved original gneiss texture. high moisture contents and sticky.					80			
9	375.56	residual soil (2)		brown ~ dark greenish gray, fine grain granitic gneiss.	double core tube (φ 66 mm) diamond bit				90			
10		strongly weathered gneiss		softened and became sandy fragments. most of fractures have been filled up by clay and/or iron hydroxide minerals.						100		
11	373.81			10.40-10.50m; highly crushed and epidotized. enriched limonite.						110		
12				10.45-10.70m; enriched limonite.						120		
13				black ~ dark green with stripe pattern of white and pale red ~ red.						130		
14				fine grain granitic gneiss.						140		
15				its schistosity is very clean and dips 50°. highly metamorphosed rock very hard and with plenty of spindle veinlet (l=1-2mm, max. 10mm).						150		
16				10.00-11.50m; observed compression cracks dip 70°-80°.						160		
17				14.60-14.85m; crackly and strongly epidotized.						170		
18				14.85-20.00m; very hard reddish part zone.						180		
19				15.85-16.20m. (6.60-17.30m; crushed zone)						190		
20	364.56	fresh gneiss		17.30m; joint has been filled up by limonite (l=1mm).						200		
				17.30-17.45m, 18.10-18.30m, 19.50-19.60m; very hard reddish parts.						210		
				17.40-17.90m, 19.50-19.85m; cylindrical core dominant.						220		
										230		
									240			
									250			
									260			
									270			
									280			
									290			
									300			
									310			
									320			
									330			
									340			
									350			

* R.Q.D is Rock Quality Designation. R.Q.D = (Total length of cylindrical cores longer than 10 cm) / (Total core length) x 100%
 * LUCEON VALUE is l/min/m under injection water pressure of 10kg/cm²
 * DEPTH and ELEVATION are in meter
 * DIAMETER is in millimeter

NIPPON KOEI CO., LTD.
CONSULTING ENGINEERS, TOKYO.

DRILL LOG

HOLE NO. BD - 5 SHEET NO. 5 OF 19

HOLE NO. BD - 5

(5)

PROJECT	MEMVE ELE HYDROELECTRIC POWER PROJECT				DEPTH	30.00m	ELEVATION	398.75m
SITE	DAM SITE				INCLINATION	vertical	DRILL RIG	YBM05D
AVERAGE CORE RECOVERY	COORDINATE X: 49825.4 Y: 30366.5				DRILLED	H. NISHINOSONO	LOGGED	K. HAYASHI
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER	LEVEL	CORE RECOVERY	DEPTH
DATE						GROUNDWATER	%	
0	398.75	TOP SOIL		pale yellowish brown clayey silt	single core tube (φ 66mm) metal bit		50	0
1	398.75	residual soil (1)		yellowish brown, silty clay no original rock texture has been remained. moisture contents high ~ medium, slightly sticky.				
2	398.00	residual soil (1)		yellowish orange with reddish brown patches. silt with clay. medium moisture contents and sticky.	double core tube (φ 66mm) diamond bit	13.15m	50	10
3	398.00	residual soil (1)		reddish brown. silty clay with iron hydroxide pellets (0.5-1.0cm) and rounded quartzite fragments (φ 1.0cm). high moisture contents and sticky.				
4	398.25	residual soil (1)		yellowish orange with reddish (zone), silty clay. original rock texture (schistosity) has been slightly remained. medium moisture contents and slightly sticky.	20.7, '92		50	20
5	398.25	residual soil (1)		pale reddish brown. clay. high moisture contents and sticky. original rock texture has been slightly retained and strongly kaolinized.				
6	398.50	residual soil (2)		pale yellowish brown, coarse sandy weathered gneiss. original rock texture has been clearly remained.	21.7, '92		50	30
7	398.50	strongly weathered gneiss		white, coarse grain granitic gneiss. softens with quartzite.				
8	394.80	weathered gneiss		dark greenish gray, medium grain granitic gneiss. colored minerals altered to chlorite. very hard. vertical joints have been developed and filled up by epidote.	22.7, '92		50	40
9	394.80	slightly weathered gneiss		black with red stripe, very fine grain gneiss. cylindrical core dominant. very hard.				
10	393.30	fresh gneiss		16.90-18.00m: crushed and hair cracks have been developed and filled up by epidote. 18.85-19.55m: epidotized. 19.50-19.60m: cracky.	22.7, '92		50	50
11	393.30	cracky zone		blackish gray, medium grain granitic gneiss.				
12	390.75	fresh gneiss		biotite and pyroxene dominant. with pink orthoclase. schistosity is clear and dips 60°.	23.7, '92		50	60
13	390.75	cracky zone		18.85-19.55m: epidotized. 19.50-19.60m: cracky.				
14	389.20	fresh gneiss		stripe pattern of white and black, coarse grain quartz dominant granitic gneiss. very hard and cylindrical core dominant.	24.7, '92		50	70
15	389.20	cracky zone		22.15-22.26m, 22.45-22.70m, 23.40-23.65m;				
16	387.50	fresh gneiss		biotite dominant strata, epidotization is common.	25.7, '92		50	80
17	387.50	cracky zone		26.50-26.85m; quartz grains become bigger (φ 1cm).				
18	387.50	fresh gneiss		26.85-28.45m; medium grain granitic gneiss.	27.7, '92		50	90
19	387.50	cracky zone						
20	387.50	fresh gneiss			28.7, '92		50	100
21	387.50	cracky zone						
22	387.50	fresh gneiss			29.7, '92		50	110
23	387.50	cracky zone						
24	387.50	fresh gneiss			30.00		50	120
25	387.50	cracky zone						

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 * LUIGEON VALUE is l/min/m under injection water pressure of 10kg/cm²
 * DEPTH and ELEVATION are in meter
 * DIAMETER is in millimeter

LOG FORM-B

DRILL LOG

HOLE NO. BD-6 SHEET NO. 6 OF 19

HOLE NO. BD-6

(6)

PROJECT		MEMVE ELE HYDROELECTRIC POWER PROJECT				DEPTH	20.00 m		ELEVATION	383.60 m	
SITE		DAM SITE				INCLINATION	vertical		DRILL RIG	YBM-05D	
AVERAGE CORE RECOVERY		100 %				DRILLED	H. NISHINOSONO		LOGGED	K. HAYASHI	
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT	DIAMETER	LEVEL	CORE RECOVERY %	R & D	PERMEABILITY (K _v cm/sec)	DEPTH
0	383.25	top soil		brownish gray, very fine sand.	Single core tube (66mm) metal bit						0
1	382.75	fluidal flame bedded gneiss		pale yellowish brown, very fine sand matrix, very fine sand.							1
2	381.90			pale brownish, granitic gneiss, crackly.							2
3				stripe color pattern of black and white,							3
4				medium grain granitic gneiss.							4
5				very hard and cylindrical core dominant.							5
6				its schistosity is very clear and dips 60°							6
7				3.00-3.25m, 3.45-3.70m, 4.25-4.30m, 6.30-6.40m; highly metamorphosed parts, the hardest portion with stripe color pattern							7
8				of pale greenish gray, white, pale pink and transparent.							8
9				6.20m, 6.31m, 6.37m, 6.65m, 6.85m; nearly horizontal open cracks were developed and rock color turned whitish along these cracks.							9
10				7.80-9.25m; rock color turned pale red							10
11		fresh gneiss		9.00-9.25m, 9.78-9.82m; highly metamorphosed and the hardest portion							11
12	371.95			blackish gray,							12
13				very fine grain blackish gneiss.							13
14				colored mineral base was							14
15				stippled by pale pink feldspar							15
16				laths like snow crystal and in deeper part, size of feldspar laths became bigger gradually.							16
17				cylindric core dominant.							17
18				12.85m; open crack							18
19				14.75m; chloritization is observed.							19
20	363.60	fresh gneiss		deeper than 18.00m; its schistosity became slightly more clear.							20
				15.70-15.80m, 16.85-17.15m, 17.90-17.60m; crackly zone. cracks dip 75-80°, were developed and filled up by epidote and manganese hydroxide (blackish).							

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*LUGEON VALUE is l/min/m under injection water pressure of 10kg/cm²
*DEPTH and ELEVATION are in meter
*DIAMETER is in millimeter

DRILL LOG

HOLE NO. BD 7 SHEET NO. 7 OF 19

HOLE NO. BD 7

PROJECT	MEMVE ELE HYDROELECTRIC POWER PROJECT	DEPTH	20 m	ELEVATION	387.86 m
SITE	LEFT BANK (Dam Site - 1.2.3)	INCLINATION	Vertical	DRILL RIG	YBM-05D
AVERAGE CORE RECOVERY	75%	DRILLED	Ochiai	LOGGED	Suzumura
DATE		BT	R & D	N: N value	10 20 30 40 50
DEPTH		DIAMETER	50	Permeability (K, cm/sec)	10 ⁻⁷ 10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³
ELEVATION		LEVEL			
ROCK TYPE OR FORMATION		DESCRIPTION			
COLUMN SECTION					
TOP SOIL					
CLAYEY SAND					
RESIDUAL SOIL					
GRANITIC GNEISS					
DEPTH	0.7				
ELEVATION	386.9				
DEPTH	2.5				
ELEVATION	385.1				
DEPTH	3.6				
ELEVATION	384.0				
DEPTH	4.2				
ELEVATION	383.4				
DEPTH	4.4				
ELEVATION	383.2				
DEPTH	5.4				
ELEVATION	382.2				
DEPTH	13.7				
ELEVATION	373.9				
DEPTH	16.1				
ELEVATION	371.5				
DEPTH	18.8				
ELEVATION	368.8				
DEPTH	20.0				
ELEVATION	367.6				

*R.Q.D is Rock Quality Designation. R.Q.D = (Total length of cylindrical cores longer than 10 cm) / (Total core length) x 100%
 *LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm²
 *DEPTH and ELEVATION are in meter
 *DIAMETER is in millimeter

NIPPON KOEI CO., LTD.
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DRILL LOG

HOLE NO. BD8 SHEET NO. 8 OF 19

HOLE NO. BD 8

PROJECT		MEMVE ELE HYDROELECTRIC POWER PROJECT				DEPTH	ELEVATION		
SITE		ISLAND (DAMSITE-4,5)		COORDINATE	X: 49824.58 Y: 29474.31	INCLINATION	DRILL RIG		
AVERAGE CORE RECOVERY		99%		DATE	FROM	TO	LOGGED		
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY %	DEPTH	
1.60	382.74	FINE TO MEDIUM SAND		Pale brown, fine to medium sand with clayey or organic matter.					
2.15	382.19	RESIDUAL SOIL	+	1.60 - 2.15 m depth: Reddish brown residual soil with deteriorated granite chips.					
2.65	381.19		+						
3.45	380.89	GRANITIC GNEISS	+	Open cracks of 2.65 m, 3.4 - 3.6m (cavity), 5.4 m, 5.5 m, 7.55 m and 9.0 m (a few centimeters wide) are seen. Cracks are mostly stained in pale brown color.					
3.65	380.69		+						
5.40	378.94		+						
5.50	378.94		+						
7.55	376.79		+	The other parts are very stable, hard granitic gneiss.					
9.00	375.34		+	45 degrees dip of schistosity.					
			+	Coarse grain crystals are in 4.3 m, 5.3 - 5.6 m and 7.8 - 8.3 m.					
			+	The other parts are very fine crystal or cryptocrystalline.					
20.00	364.34		+	END OF HOLE					

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*R.Q.D is Rock Quality Designation. R.Q.D = (Total length of cylindrical cores longer than 10 cm) / (Total core length) x 100%
*LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm²
*DEPTH and ELEVATION are in meter
*DIAMETER is in millimeter

DRILL LOG

HOLE NO. BD-9 SHEET NO. 9 OF 19

HOLE NO. BD-9

9

PROJECT	MEMVE ELE HYDROELECTRIC POWER PROJECT		DEPTH	35.00 m		ELEVATION	412.80 m	
SITE	DAM SITE		INCLINATION	Vertical		DRILL RIG	YSM-05D	
AVERAGE CORE RECOVERY	97 %		DRILLED	T. OCHIYAI		LOGGED	K. HAYASHI	
DATE	1.7.92		DATE	FROM 2.7 TO 15.7, 1992		COORDINATE	X: 498160.1 Y: 28740.7	
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT	DIAMETER	LEVEL	CORE RECOVERY
0	412.85	top soil		yellowish brown silt with plank roots. yellowish brown. silt. medium moisture contents and not sticky. no original rock texture has been remained.	single core tube (φ 66 mm) metal bit	28.00 m	R.Q.D	50
2	410.15	residual soil (1)		reddish brown. iron hydroxide pellets (φ 1-2mm) with reddish sandy silt. medium moisture contents and not sticky.				
4	408.80	residual soil (pellety zone)		reddish brown. red sandy silt with a few of iron hydroxide pellets (φ 1mm). medium moisture contents and not sticky.				
8	406.15	residual soil (2)		reddish brown with pale yellowish brown. silt with sand. medium moisture contents and not sticky. original rock texture, schistosity, has been slightly remained as its stripe color pattern of red and pale yellow.				
19	393.10	residual soil (2)		15.50-16.40m: Strongly weathered gneiss became sandy, has been remained, colored pale yellow.	double core tube (φ 66 mm) diamond bit	0.4 Lk	0	18
22	390.30	weathered gneiss		yellowish brown - pale whitish yellow, weathered medium grain granitic gneiss. 20.10-20.60m: Strongly weathered gneiss. clayey due to strong kaolinitization. 21.42-21.62m: fresh residual granitic gneiss. very hard. all fractures have been turned to yellow color by iron hydroxidation. stripe color pattern of black and white, medium grain granitic gneiss. its schistosity is clear and dips 50°.				
26	386.20	fresh gneiss		22.80-23.80 m: pinkish orthoclase dominant. 23.80-24.22m: fine grain blackish gneiss structure. 24.22-24.25m: slightly weathered. 25.00-25.50m. 25.85-26.00m. 26.25-26.60m: pinkish orthoclase dominant.				
35	377.80	fresh gneiss		blackish gray. fine grain blackish gneiss. colored mineral base was stippled with pinkish feldspar laths like snow crystal. its schistosity is unclear and very hard. cylindrical core dominant. 26.60m: contact plane between granitic gneiss and fine grain blackish gneiss has been filled up by iron hydroxide.				

* R.Q.D is Rock Quality Designation, R.Q.D = Total length of cylindrical cores longer than 10 cm Total core length x 100%
 * LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm²
 * DEPTH and ELEVATION are in meter
 * DIAMETER is in millimeter

NIPPON KOEI CO., LTD.
 CONSULTING ENGINEERS JAPAN

LOG FORM-II

DRILL LOG

HOLE NO. BW-10 SHEET NO. 10 OF 19

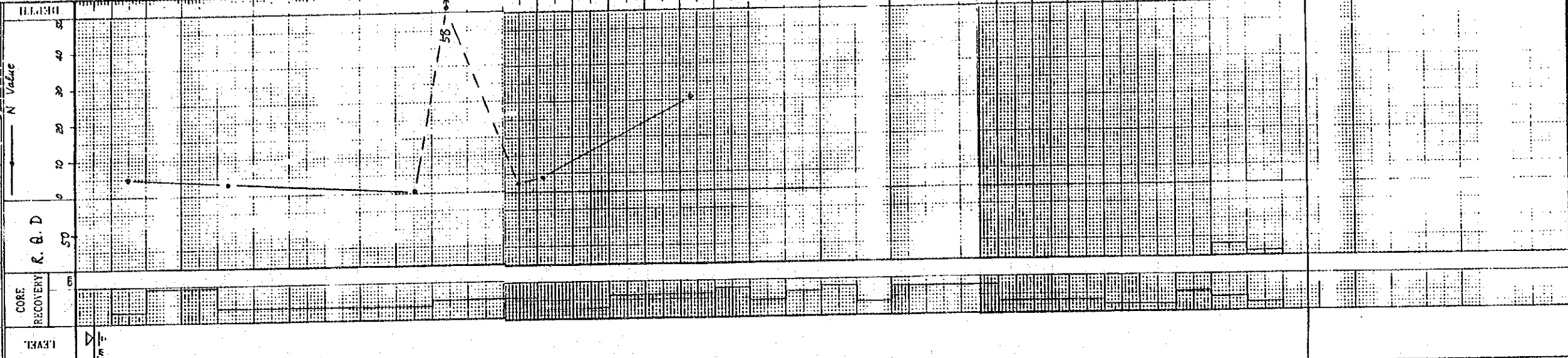
HOLE NO. BW-10

10

PROJECT		MEMVE EIE HYDROELECTRIC POWER PROJECT				DEPTH		ELEVATION	
SITE		WATERWAY		WATERWAY		INCLINATION		DRILL RIG	
AVERAGE CORE RECOVERY		60 %		COORDINATE		X: 491877.9Y: 28534.3		YBM-05D	
DATE		FROM 18, 7 TO 6, 8, 1992		LOGGED		T. OCHIAI		K. HAYASHI	
DEPTH		ELEVATION		ROCK TYPE OR FORMATION		COLUMN SECTION		DESCRIPTION	
DATE		ELEVATION		ROCK TYPE OR FORMATION		COLUMN SECTION		DESCRIPTION	
0	17.7.92								
1									
2									
3		381.14							
4	18.7.92	379.59							
5	20.7.92	379.09							
6									
7	21.7.92	376.59							
8									
9	22.7.92	374.59							
10									
11	23.7.92	373.09	fluidal						
12		372.59	plane deposit						
13									
14	24.7.92	371.09							
15		369.09	collapse soil						
16		368.09							
17									
18	27.7.92	365.09							
19		364.59							
20									
21									
22	28.7.92	361.59	residual soil (2)						
23									
24									
25									
26	30.7.92	358.09	Strongly weathered gneiss						
27									
28									
29	31.8.92	353.09	Strongly weathered gneiss						
30									
31									
32									
33									
34	4.8.92	349.34	Strongly weathered gneiss (fresh gneiss?)						
35									

single core tube (ø 66 mm) metal bit

single core tube and/or double core tube (ø 66 mm) metal bit or diamond bit



* R.Q.D. is Rock Quality Designation, R.Q.D. = Total length of cylindrical cores longer than 10 cm / Total core length x 100

* LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm²

* DEPTH and ELEVATION are in meter

* DIAMETER is in millimeter

NIPPON KOEI CO., LTD.

DRILL LOG

HOLE NO. BW-11 SHEET NO. 11 OF 19

HOLE NO. BW-11

(11)

PROJECT	MEMVE ELE HYDROELECTRIC POWER PROJECT		DEPTH	ELEVATION	420.85 m
SITE	WATERWAY		INCLINATION	DRILL RIG	YBM-05D
AVERAGE CORE RECOVERY	100 %		DRILLED	LOGGED	K. HAYASHI
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER & BIT
0	420.35	top soil	X	yellowish orange, silty clay with plant roots	single core tube (φ66mm) metal bit
1	419.65	residual soil (2)	—	yellowish orange, silt with a few iron hydroxide pellets (0.5-1.0cm), medium moisture contents and slightly sticky.	double core tube (φ66mm) diamond bit
2	418.97	residual soil (2)	—	yellowish orange with pale yellowish brown, clayey silt, medium moisture contents and slightly sticky. original rock texture has been slightly remained.	
3			^	dark grey-black, fine grain blackish gneiss.	double core tube (φ66mm) diamond bit 230m = 230m =
4			^	colored mineral base was stippled with feldspar laths like snow crystals. very hard.	
5			^	cylindrical core dominant.	
6			^	nearly vertical fractures, dips 70°-90° (partially 60°), developed and closed.	
7			^	schistosity is unclear.	
8			^	deeper than 5.85m; feldspar laths become pale pink.	
9			^	9.35-10.10m; most of fracture has been filled up by pale green hard silica mineral (t=1-2mm).	
10			^	11.35-11.48m, 13.47-13.50m; horizontal cracks developed.	
11			^	15.72-15.95m, 17.00-17.30m, 17.90-18.45m;	
12			^	nearly vertical fractures, dips 80°-85°, developed.	
13			^	18.46-18.48m; crack surface colored yellowish due to oxidation.	
14			^	23.75-23.82m; crushed zone, with pale greenish hard silica mineral.	
15			^	26.00-27.05m; calcite vein (t=1-2mm) developed along its schistosity.	
16			^	26.70-27.32m; crushed zone, all fractures have been filled up by calcite and quartz (t=2-4mm), rock color turned to pale greenish.	
17			^		
18			^		
19			^		
20			^		
21			^		
22			^		
23			^		
24			^		
25			^		
26			^		
27			^		
28			^		
29			^		
30	390.85	fresh gneiss	^		

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*R.Q.D is Rock Quality Designation, R.Q.D=(Total length of cylindrical cores longer than 10 cm)/(Total core length) x 100%
*LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm²
*DEPTH and ELEVATION are in meter
*DIAMETER is in millimeter

LOG FORM-B

DRILL LOG

HOLE NO. BW-12 SHEET NO. 12 OF 19

HOLE NO. BW-12

(12)

PROJECT		MEMVE ELE HYDROELECTRIC POWER PROJECT		DEPTH	30.00 m		ELEVATION	415.30 m	
SITE		WATERWAY		INCLINATION	vertical		DRILL RIG	YBM-05D	
AVERAGE CORE RECOVERY		100%		COORDINATE	X: 496545.0 Y: 27090.0		LOGGED	K. HAYASHI	
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT	DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY %	TEST & SAMPLING POSITION
0	415.30	TOP SOIL		yellowish brown silt with plant roots	single core tube (φ 66 mm) metal bit	73.50 m	-	-	-
0.50	414.80	residual soil (1)		yellowish brown, silt. medium moisture contents and not sticky.					
1				reddish brown, sandy silt with iron hydroxide pellets (φ 0.5-1.0 cm). medium moisture contents and not sticky.					
2				yellowish orange ~ reddish brown. silt.					
3	412.20	residual soil (pellet zone)		homogeneous and medium moisture contents, slightly sticky. no original rock texture has been remained.					
4				Stripe pattern of reddish brown and pale yellow. silt with clay.					
5				medium ~ high moisture contents and sticky. original rock texture has been slightly remained.					
6	408.80	residual soil (2)		reddish brown, clay with silt. high moisture contents and sticky.					
7				yellowish orange silty clay. medium moisture contents and sticky.					
8				reddish brown, silty clay with a few iron hydroxide pellets (φ 0.5 cm). original rock texture has been slightly remained.					
9				pale reddish brown, clay. high moisture contents and sticky. original rock texture has been slightly remained.					
10				ditto, color turned to pale yellowish brown.					
11	404.20	residual soil (2)		ditto. stripe pattern of pale yellowish brown ~ pale whitish yellow.					
12	403.20	residual soil (2)		ditto, reddish brown.					
12.50	422.80	residual soil (2)		yellowish brown sandy silt, ditto.					
13				pale greenish gray, medium grain granitic gneiss very hard.					
14	400.85	residual soil (2)		Schistosity is clear and dips 60°. 18.40-18.55m: color turned to green due to weathering.					
15	399.98	residual soil (2)		19.70m: crack colored yellowish.					
16	399.10	residual soil (2)		20.00-21.20m: fine grain granitic gneiss colored epidote green, pale red and stripe pattern of white and dark green.					
17	397.80	residual soil (2)		21.15-21.50m: cracky and all fractures have been filled up by yellowish iron hydroxide.					
18	397.30	residual soil (2)		blackish gray, fine grain blackish gneiss.					
18.40	396.90	residual soil (2)		colored mineral base was stippled with pale pink feldspar laths like snow crystal.					
19				22.05-24.20m: cracky zone. all cracks have been filled up by iron hydroxide.					
20				23.70m: compression cracks dip 80-90° developed.					
21				24.20-30.00m: cylindrical core dominant.					
22	393.25	fresh gneiss							
23									
24									
25									
26									
27									
28									
29									
30	385.30	fresh gneiss							

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* R.Q.D is Rock Quality Designation. R.Q.D = (Total length of cylindrical cores longer than 10 cm) / (Total core length) x 100%
* LUCEON VALUE is l/min/m under injection water pressure of 10kg/cm²
* DEPTH and ELEVATION are in meter
* DIAMETER is in millimeter

DRILL LOG

HOLE NO. BQ-13 SHEET NO. 13 OF 19

HOLE NO. BQ-13

13

PROJECT	MEMVE ELE HYDROELECTRIC POWER PROJECT		DEPTH	40.00 m	ELEVATION	376.70 m
SITE	POWER STATION		INCLINATION	Vertical	DRILL RIG	TBM-05D
AVERAGE CORE RECOVERY	100 %		COORDINATE	X: 495045.0 Y: 28787.0	LOGGED	K. HAYASHI
DATE	FROM	TO	DATE	FROM 19. 8	TO 31. 8, 1991	
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	HIT	DIAMETER
DATE	0.30	Top soil			metal bit	Single core tube (φ66mm)
	1.00	residual soil				double diameter tube (φ 66mm)
	3.10	residual soil				
	4.10	residual soil				
	4.30	residual soil				
	4.35	residual soil				
	4.40	residual soil				
	4.45	residual soil				
	4.50	residual soil				
	4.55	residual soil				
	4.60	residual soil				
	4.65	residual soil				
	4.70	residual soil				
	4.75	residual soil				
	4.80	residual soil				
	4.85	residual soil				
	4.90	residual soil				
	4.95	residual soil				
	5.00	residual soil				
	5.05	residual soil				
	5.10	residual soil				
	5.15	residual soil				
	5.20	residual soil				
	5.25	residual soil				
	5.30	residual soil				
	5.35	residual soil				
	5.40	residual soil				
	5.45	residual soil				
	5.50	residual soil				
	5.55	residual soil				
	5.60	residual soil				
	5.65	residual soil				
	5.70	residual soil				
	5.75	residual soil				
	5.80	residual soil				
	5.85	residual soil				
	5.90	residual soil				
	5.95	residual soil				
	6.00	residual soil				
	6.05	residual soil				
	6.10	residual soil				
	6.15	residual soil				
	6.20	residual soil				
	6.25	residual soil				
	6.30	residual soil				
	6.35	residual soil				
	6.40	residual soil				
	6.45	residual soil				
	6.50	residual soil				
	6.55	residual soil				
	6.60	residual soil				
	6.65	residual soil				
	6.70	residual soil				
	6.75	residual soil				
	6.80	residual soil				
	6.85	residual soil				
	6.90	residual soil				
	6.95	residual soil				
	7.00	residual soil				
	7.05	residual soil				
	7.10	residual soil				
	7.15	residual soil				
	7.20	residual soil				
	7.25	residual soil				
	7.30	residual soil				
	7.35	residual soil				
	7.40	residual soil				
	7.45	residual soil				
	7.50	residual soil				
	7.55	residual soil				
	7.60	residual soil				
	7.65	residual soil				
	7.70	residual soil				
	7.75	residual soil				
	7.80	residual soil				
	7.85	residual soil				
	7.90	residual soil				
	7.95	residual soil				
	8.00	residual soil				
	8.05	residual soil				
	8.10	residual soil				
	8.15	residual soil				
	8.20	residual soil				
	8.25	residual soil				
	8.30	residual soil				
	8.35	residual soil				
	8.40	residual soil				
	8.45	residual soil				
	8.50	residual soil				
	8.55	residual soil				
	8.60	residual soil				
	8.65	residual soil				
	8.70	residual soil				
	8.75	residual soil				
	8.80	residual soil				
	8.85	residual soil				
	8.90	residual soil				
	8.95	residual soil				
	9.00	residual soil				
	9.05	residual soil				
	9.10	residual soil				
	9.15	residual soil				
	9.20	residual soil				
	9.25	residual soil				
	9.30	residual soil				
	9.35	residual soil				
	9.40	residual soil				
	9.45	residual soil				
	9.50	residual soil				
	9.55	residual soil				
	9.60	residual soil				
	9.65	residual soil				
	9.70	residual soil				
	9.75	residual soil				
	9.80	residual soil				
	9.85	residual soil				
	9.90	residual soil				
	9.95	residual soil				
	10.00	residual soil				

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END OF HOLE

* R.Q.D is Rock Quality Designation, R.Q.D.m (Total length of cylindrical cores longer than 10 cm) / Total core length x 100%
 # LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm²
 # DEPTH and ELEVATION are in meter
 # DIAMETER is in millimeter

LOG FORM-B

DRILL LOG

HOLE NO. BQ-14 SHEET NO. 14 OF 19

HOLE NO. BQ-14

14

PROJECT	MEMVE ELE HYDROELECTRIC POWER PROJECT		DEPTH	40.00m		ELEVATION	339.40m	
SITE	TAILRACE		INCLINATION	N64E, -45°		DRILL BIG	YBM-05D	
AVERAGE CORE RECOVERY	100 %		COORDINATE	X: 4948650 Y: 26670.0		LOGGED	I. MAEKAWA	
DATE	FROM 21.8 TO 29.9, 1992		DRILLED	I. MAEKAWA		LOGGED	K. HAYASHI	
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY	TEST & SAMPLING POSITION
0								
1								
2								
3	337.28	debris	△△△	yellowish brown, sandy silt with weathered or slightly weathered gneiss fragments and angular pebbles.				
4			△△△					
5			△△△					
6			△△△					
7			△△△					
8			△△△					
9	333.09	weathered gneiss	△△△	pink white ~ greenish gray, fine ~ medium grain granitic gneiss. very crackly. distance of each crack is 2-5cm. all cracks have been filled up by iron hydroxide (limonite). epidote veinlets are observed.				
10			△△△					
11	331.94	slightly weathered gneiss	△△△	Stripe pattern of dark greenish gray and white, crackly. epidotization is commonly observed along joints and/or schistosity planes at 50° most of cracks colored slightly yellow-brown due to iron hydroxidation.				
12			△△△					
13			△△△					
14	329.85	fresh gneiss	△△△	dark greenish gray, fine grain granitic gneiss. very crackly. distance of fractures is 2-5cm. 12.35-13.50m; all fractures have been filled up by iron hydroxide. 13.35-13.40m; very strong iron-hydroxidation.				
15			△△△					
16			△△△					
17			△△△					
18			△△△					
19			△△△					
20			△△△					
21			△△△					
22			△△△					
23			△△△					
24			△△△					
25			△△△					
26			△△△					
27			△△△					
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31			△△△					
32			△△△					
33			△△△					
34			△△△					
35			△△△					
36			△△△					
37			△△△					
38			△△△					
39			△△△					
40	311.11	fresh gneiss	△△△	Stripe pattern of black and white, fine ~ medium grain granitic gneiss. schistosity is very clear and dips 50°. very hard. 13.50-15.00m; all fractures have been filled up by iron hydroxide. 13.90-13.92m; epidotized along its schistosity. deeper than 15.00m; rock became relatively fresh. 17.45-17.55m, 18.35-18.45m, 19.00-19.35m; epidotization is slightly clear. 15.40-16.10m; crackly zone and iron hydroxidation. 20.30-20.40m; cracks have been filled up by yellowish iron hydroxide. 20.70-21.13m, 21.35-21.55m; slightly crackly. 20.70-20.78m; reddish. 21.48-21.56m; epidotization is clear. 21.58-21.85m; reddish and harder. deeper than 22.00m; cylindrical core dominant. all surfaces of crack are fresh and closed. 25.05-25.45m; hair cracks were developed and filled up by epidote. 27.90-30.05m; slightly crackly and filled up by calcite (size 0.5mm) due to oxidation. 35.30-35.40m, 35.65-35.70m, 36.75-38.30m, epidotization was very strong and accompanied with reddish colored bands, crushed zone and now closed. 37.67-38.05m; slightly crackly zone. 38.79-40.00m; schistosity is unclear.				

LOG FORM-B

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* R.Q.D. is Rock Quality Designation. R.Q.D. = Total length of cylindrical cores longer than 10 cm / Total core length x 100%
 * LOGGED VALUE is 1/16mm under injection water pressure of 10kg/cm²
 * DEPTH and ELEVATION are in meter
 * DIAMETER is in millimeter

DRILL LOG

HOLE NO. BP-15 SHEET NO. 15 OF 19

HOLE NO. BP-15

(15)

PROJECT	MEMVE ELE HYDROELECTRIC POWER PROJECT			DEPTH	ELEVATION	387.57 m				
SITE	PONDAGE			INCLINATION	DRILL RIG	YBM-05D				
AVERAGE CORE RECOVERY	100 %			COORDINATE	LOGGED	K. HAYASHI				
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	LEVEL	GROUNDWATER	TEST & SAMPLING POSITION	DEPTH
22.6.92	0	387.57	Top soil			Single core tube (φ66mm) metal bit				
22.6.92	1	386.51	residual soil (pellety zone)		reddish brown, iron hydroxide pellets (φ1-2cm) with sandy silt					
22.6.92	3	384.31	residual soil (2)		pale yellowish orange - reddish brown, silt with sand, iron hydroxide pellets and weathered gneiss fragments (φ2cm). medium moisture contents and slightly sticky.					
23.6.92	3.60	383.91	strongly weathered gneiss		pale yellowish brown, coarse sandy, softened by weathering.					
23.6.92	4.52	382.99	slightly weathered gneiss		Stripe pattern of white and black, medium grain granitic gneiss. hand all fractures have been filled up by iron hydroxide. 4.08-4.20m; yellowish orange silt.					
24.6.92	5				Stripe pattern of white and black, medium grain granitic gneiss. very hard. cylindrical core dominant, the gneiss is partially weathered along its fractures.	double core diamond tube bit (φ 66 mm)				
24.6.92	6				5.0m; 5.85-5.90m, 6.70m, 8.32m, 7.60-7.70m, 9.70-9.80m; argon quartz vein crushed.					
25.6.92	7				epidiorization partially crossed its schistosity dips 60°.					
25.6.92	8				deeper than 10.0m; biotite and pyroxene were increasing					
25.6.92	9				11.75-12.10m; white - pale pink stratum with quartz vein.					
26.6.92	10				13.40-13.50m; pale reddish quartz crystal was crushed.					
26.6.92	11				14.25-14.35m; ditto					
26.6.92	12				16.80-17.05m; white - pale red crushed quartz dominant stratum.					
27.6.92	13				19.30-19.60m; fault, crushed and all fractures were closed.					
28.6.92	14									
28.6.92	15									
28.6.92	16									
28.6.92	17									
28.6.92	18									
28.6.92	19									
28.6.92	20	367.51	fresh gneiss							

*R.Q.D is Rock Quality Designation. R.Q.D = (Total length of cylindrical cores longer than 10 cm) / (Total core length) x 100%
 *LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm²
 *DEPTH and ELEVATION are in meter
 *DIAMETER is in millimeter

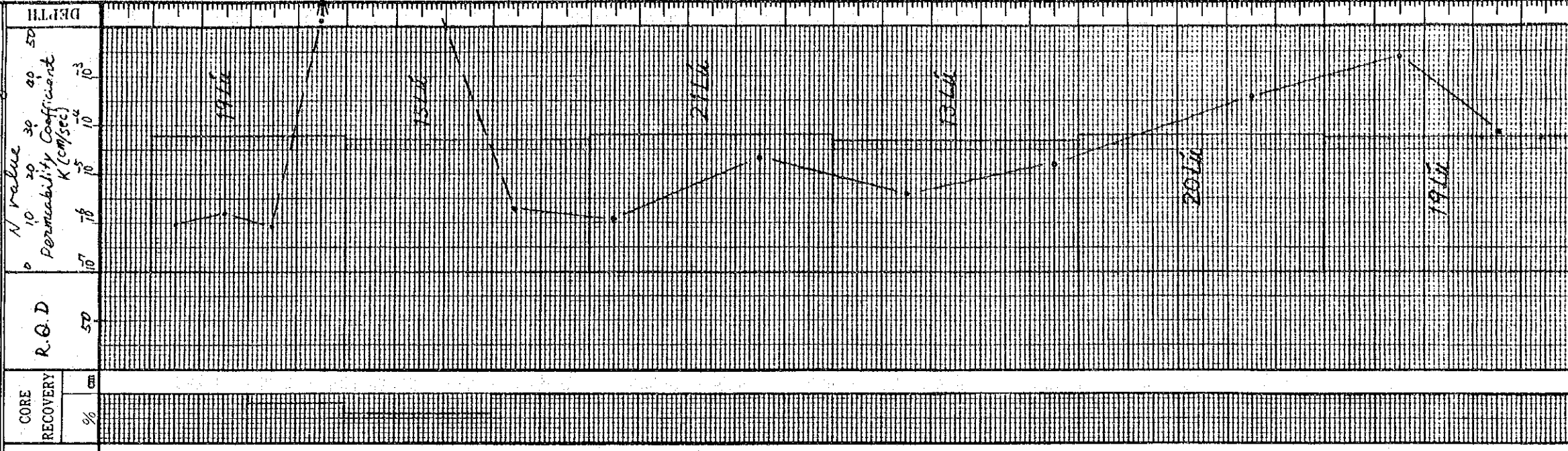
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 CONSULTING ENGINEERS, TOKYO.

DRILL LOG

HOLE NO. BD 16 SHEET NO. 16 OF 19

HOLE NO. BD 16

PROJECT	MEMVE ELE	HYDROELECTRIC	POWER	PROJECT	DEPTH	ELEVATION	410.09m
SITE	RIGHT BANK (Dam Site - 1)			COORDINATE	X: 570405.34 Y: 29382.96	INCLINATION	Vertical
AVERAGE CORE RECOVERY	92%			DATE	FROM	TO	LOGGED
DATE	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER	GROUNDWATER LEVEL	DRILLED
DEPTH					Ø		R.O.D
							50
4.0	406.09	SILTY SOIL		Dark yellowish silty soil. High plasticity.			
7.0	403.09	LATERITE SOIL		Dark reddish brown, hard clay with limonitic nodules of 1 to 3 centimeters in dia. High dense.			
		REDDISH PINKISH TO CLAY		White - red or pink color clay alternated in 1 to 2 centimeter thick. Below 13.7 m in depth, pink to grayish pink, heavily altered clay.			
				Black spots (dia 1 cm) of soft limonite are sporadically distributed at 22.4 - 24.2 m. High plasticity and medium dense.			
				Note; By sounding of rod crown metal bit with water injection, the hard zone is located at the depth of 35.45 m, which indicates a fresh granitic gneiss.			
30	380.09			END OF HOLE			



* R.Q.D is Rock Quality Designation. R.Q.D = (Total length of cylindrical cores longer than 10 cm) / (Total core length) x 100%
 * LUGEON VALUE is l/min/m under injection water pressure of 10kg/cm²
 * DEPTH and ELEVATION are in meter
 * DIAMETER is in millimeter

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DRILL LOG

HOLE NO. BQ.17 SHEET NO. 17 OF 19

HOLE NO. BD 17

PROJECT		MEMVE ELE	HYDROELECTRIC	POWER	PROJECT	DEPTH	15m	ELEVATION	405.50m					
SITE		RIGHT BANK (Dam Site - 1)			COORDINATE	X: 50079.37Y: 21779.77	INCLINATION	Vertical	DRILL RIG	YBM-05D				
AVERAGE CORE RECOVERY		90%			DATE	FROM	TO	LOGGED	Suzumura					
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY %	R&D	N value					
DATE								50	0	10	20	30	40	50
0.5	405.00	TOP SOIL		Brown top soil. High plasticity.										
3.7	401.80	SILTY SOIL		Light yellowish brown, silty clay or fine silt. High plasticity.										
8.7	396.80	LATERITE SOIL		Dark reddish brown, laterite soil with limonite nodules (dia 1 to 5 cm).										
15.0	390.50	REDDISH TO PINKISH CLAY		8.7 - 12.0 m depth : White and pale pink alternated color clay. High plasticity. 12.0 - 15.0 m depth : Reddish pink heavily altered clay. High plasticity.										
				END OF HOLE										

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 * LUCEON VALUE is l/min/m under injection water pressure of 10kg/cm²
 * DEPTH and ELEVATION are in meter
 * DIAMETER is in millimeter