

DRILL LOG

HOLE NO. BD 18 SHEET NO. 18 OF 19

HOLE NO. BD 18

PROJECT	MEMVE ELE HYDROELECTRIC POWER PROJECT			DEPTH	21.4 m	ELEVATION	397.14 m			
SITE	RIGHT BANK (Dam Site - 1)			INCLINATION	Vertical	DRILL RIG	YBM-05D			
AVERAGE CORE RECOVERY	94 %			DATE	FROM 8/23 TO 8/29/92	LOGGED	Suzumura			
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY %	R & D	N value Permeability-K-(cm/sec)	DEPTH
3.8	393.34	SILTY SOIL		Light or yellowish brown, laterite soil. High plasticity.				50	10 20 30 40 50	50
5.4	391.74	LATERITE SOIL		Reddish brown, silty clay. High plasticity. Limonite nodules are seen.						
		REDDISH TO PINKISH CLAY		Pinkish to whitish brown (alternating color with the 0.5 to 1 cm intervals) clay. Origine of the clay is weathered granitic gneiss and pyroxene - hornblend gneiss. Dip of alternating color band is 25 degrees.						
17.8	377.34	HEAVILY WEATHERED GNEISS		17.8 - 20.0 m depth : Light brown, heavily weathered granitic gneiss. Cutting or fragmental cores by the drilling work. Fragile. Moderately fresh, partly very hard, granitic gneiss. Cracks developing at the hole bottom.						
20.0	377.14	WEATHERED GNEISS								
21.4	375.74	WEATHERED GNEISS								
				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 19 SHEET NO. 19 OF 19

HOLE NO. BD 19

PROJECT	MEMVE ELE HYDROELECTRIC POWER PROJECT			DEPTH	ELEVATION	388.75 m	
SITE	LEFT BANK (DAM SITE - 1)			INCLINATION	DRILL RIG	YBM-05D	
AVERAGE CORE RECOVERY	95%			DRILLED	LOGGED	Suzumura	
DATE	COORDINATE	DATE	DESCRIPTION	BIT DIAMETER	GROUNDWATER LEVEL	DEPTH	
DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	BIT	DIAMETER	LEVEL	
DATE	RECOVERY	PERCENTAGE	PERCENTAGE	PERCENTAGE	PERCENTAGE	PERCENTAGE	PERCENTAGE
0.5	388.25	TOP SOIL	X				
1.5	387.25	RIVER SAND					
5.0	383.75	LATERITE SOIL					
5.5	383.25	SAND					
9.0	379.75	HEAVILY WEATHERED GRANITIC GNEISS					
9.5	379.25						
9.75	378.00						
10.6	378.15						
12.8	375.95	FRESH GNEISS					
20	368.75						

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 * LUGEON VALUE is 1/min/m under injection water pressure of 10kg/cm²
 * DEPTH and ELEVATION are in meter
 * DIAMETER is in millimeter

RECORD OF WATER PRESSURE TEST				HOLE No. :		BD-1			
DEPTH(m):		0-5							
GAUGE PRESS.	INJECTION QUANTITY	TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2	cm / sec	
0.47	5.00	1.00	5.00	66	0.66	2.50	0.79	12.72	1.69E-04
RECORD OF WATER PRESSURE TEST				HOLE No. :		BD-1			
DEPTH(m):		6-10							
GAUGE PRESS.	INJECTION QUANTITY	TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2	cm / sec	
0.54	18.00	4.50	4.00	66	0.66	8.00	1.41	32.01	4.07E-04
0.87	18.00	4.50	4.00	66	0.66	8.00	1.74	25.92	3.30E-04
RECORD OF WATER PRESSURE TEST				HOLE No. :		BD-1			
DEPTH(m):		11-15							
GAUGE PRESS.	INJECTION QUANTITY	TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2	cm / sec	
1.00	5.80	1.45	4.00	66	0.66	8.55	1.92	7.55	9.61E-05
1.50	29.90	7.48	4.00	66	0.66	8.55	2.42	30.88	3.93E-04
2.00	63.70	15.93	4.00	66	0.66	8.55	2.92	54.52	6.94E-04
RECORD OF WATER PRESSURE TEST				HOLE No. :		BD-1			
DEPTH(m):		18.5-20							
GAUGE PRESS.	INJECTION QUANTITY	TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2	cm / sec	
2.00	3.00	2.00	1.50	66	0.63	8.95	2.96	6.76	6.85E-05
4.00	5.00	3.33	1.50	66	0.63	8.95	4.96	6.72	6.81E-05
6.00	6.50	4.33	1.50	66	0.63	8.95	6.96	6.23	6.31E-05
8.00	8.00	5.33	1.50	66	0.63	8.95	8.96	5.95	6.03E-05
10.00	12.00	8.00	1.50	66	0.63	8.95	10.96	7.30	7.39E-05
8.00	10.00	6.67	1.50	66	0.63	8.95	8.96	7.44	7.53E-05
6.00	8.00	5.33	1.50	66	0.63	8.95	6.96	7.67	7.76E-05
4.00	6.00	4.00	1.50	66	0.63	8.95	4.96	8.07	8.17E-05
2.00	4.10	2.73	1.50	66	0.63	8.95	2.96	9.24	9.36E-05

RECORD OF WATER PRESSURE TEST										HOLE No. :	BD-2
DEPTH(m):			'1-5								
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE		
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec		
0.50	2.00	0.50	4.00	66	1.20	0.40	0.66	7.58	9.64E-05		
1.00	3.00	0.75	4.00	66	1.20	0.40	1.16	6.47	8.23E-05		
1.50	7.00	1.75	4.00	66	1.20	0.40	1.66	10.54	1.34E-04		
2.00	12.00	3.00	4.00	66	1.20	0.40	2.16	13.89	1.77E-04		
1.50	8.00	2.00	4.00	66	1.20	0.40	1.66	12.05	1.53E-04		
1.00	6.00	1.50	4.00	66	1.20	0.40	1.16	12.93	1.65E-04		
0.50	4.00	1.00	4.00	66	1.20	0.40	0.66	15.15	1.93E-04		
K-VALUE: COEFFICIENT OF PERMEABILITY											
RECORD OF WATER PRESSURE TEST										HOLE No. :	BD-2
DEPTH(m):			'5-10								
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE		
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec		
1.00	0.50	0.10	5.00	66	1.20	0.40	1.16	0.86	1.15E-05		
2.00	1.20	0.24	5.00	66	1.20	0.40	2.16	1.11	1.48E-05		
3.00	3.00	0.60	5.00	66	1.20	0.40	3.16	1.90	2.53E-05		
4.00	4.60	0.92	5.00	66	1.20	0.40	4.16	2.21	2.95E-05		
3.00	3.20	0.64	5.00	66	1.20	0.40	3.16	2.03	2.70E-05		
2.00	2.00	0.40	5.00	66	1.20	0.40	2.16	1.85	2.47E-05		
1.00	0.80	0.16	5.00	66	1.20	0.40	1.16	1.38	1.84E-05		
K-VALUE: COEFFICIENT OF PERMEABILITY											
RECORD OF WATER PRESSURE TEST										HOLE No. :	BD-2
DEPTH(m):			'10-15								
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE		
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec		
1.00	0.20	0.04	5.00	66	1.20	0.40	1.16	0.34	4.59E-06		
2.00	0.50	0.10	5.00	66	1.20	0.40	2.16	0.46	6.17E-06		
4.00	0.70	0.14	5.00	66	1.20	0.40	4.16	0.34	4.48E-06		
6.00	1.20	0.24	5.00	66	1.20	0.40	6.16	0.39	5.19E-06		
4.00	0.90	0.18	5.00	66	1.20	0.40	4.16	0.43	5.76E-06		
2.00	0.60	0.12	5.00	66	1.20	0.40	2.16	0.56	7.40E-06		
1.00	0.20	0.04	5.00	66	1.20	0.40	1.16	0.34	4.59E-06		
K-VALUE: COEFFICIENT OF PERMEABILITY											

RECORD OF WATER PRESSURE TEST										HOLE No. :		BD-3	
DEPTH(m):										'1-5			
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE				
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec				
0.50	0.80	0.20	4.00	66	0.65	2.46	0.81	2.47	3.14E-05				
1.00	2.30	0.58	4.00	66	0.65	2.46	1.31	4.39	5.58E-05				
1.50	6.00	1.50	4.00	66	0.65	2.46	1.81	8.28	1.05E-04				
2.00	18.00	4.50	4.00	66	0.65	2.46	2.31	19.47	2.48E-04				
1.50	12.00	3.00	4.00	66	0.65	2.46	1.81	16.57	2.11E-04				
1.00	10.00	2.50	4.00	66	0.65	2.46	1.31	19.07	2.43E-04				
0.50	7.00	1.75	4.00	66	0.65	2.46	0.81	21.58	2.75E-04				
K-VALUE: COEFFICIENT OF PERMEABILITY													
RECORD OF WATER PRESSURE TEST										HOLE No. :		BD-3	
DEPTH(m):										'5-10			
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE				
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec				
1.00	16.00	3.20	5.00	66	0.65	2.46	1.31	24.41	3.25E-04				
2.00	22.00	4.40	5.00	66	0.65	2.46	2.31	19.04	2.54E-04				
3.00	37.00	7.40	5.00	66	0.65	2.46	3.31	22.35	2.98E-04				
4.00	46.00	9.20	5.00	66	0.65	2.46	4.31	21.34	2.84E-04				
3.00	40.00	8.00	5.00	66	0.65	2.46	3.31	24.16	3.22E-04				
2.00	31.00	6.20	5.00	66	0.65	2.46	2.31	26.83	3.57E-04				
1.00	20.00	4.00	5.00	66	0.65	2.46	1.31	30.51	4.06E-04				
K-VALUE: COEFFICIENT OF PERMEABILITY													
RECORD OF WATER PRESSURE TEST										HOLE No. :		BD-3	
DEPTH(m):										'10-15			
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE				
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec				
1.00	30.00	6.00	5.00	66	0.65	2.46	1.31	45.77	6.10E-04				
2.00	36.00	7.20	5.00	66	0.65	2.46	2.31	31.16	4.15E-04				
3.00	43.00	8.60	5.00	66	0.65	2.46	3.31	25.97	3.46E-04				
3.60	47.00	9.40	5.00	66	0.65	2.46	3.91	24.03	3.20E-04				
3.00	44.00	8.80	5.00	66	0.65	2.46	3.31	26.58	3.54E-04				
2.00	38.00	7.60	5.00	66	0.65	2.46	2.31	32.89	4.38E-04				
1.00	30.00	6.00	5.00	66	0.65	2.46	1.31	45.77	6.10E-04				
K-VALUE: COEFFICIENT OF PERMEABILITY													

RECORD OF WATER PRESSURE TEST							HOLE No. :		BD-4	
DEPTH(m):			'1-5							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec	
0.50	11.00	2.75	4.00	66	0.75	3.00	0.88	31.43	4.00E-04	
1.00	18.00	4.50	4.00	66	0.75	3.00	1.38	32.73	4.16E-04	
1.50	24.00	6.00	4.00	66	0.75	3.00	1.88	32.00	4.07E-04	
2.00	33.00	8.25	4.00	66	0.75	3.00	2.38	34.74	4.42E-04	
1.50	25.00	6.25	4.00	66	0.75	3.00	1.88	33.33	4.24E-04	
1.00	20.00	5.00	4.00	66	0.75	3.00	1.38	36.36	4.63E-04	
0.50	15.00	3.75	4.00	66	0.75	3.00	0.88	42.86	5.45E-04	
K-VALUE: COEFFICIENT OF PERMEABILITY										
RECORD OF WATER PRESSURE TEST							HOLE No. :		BD-4	
DEPTH(m):			'5-10							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec	
1.00	4.00	0.80	5.00	66	0.75	4.20	1.50	5.35	7.13E-05	
2.00	16.00	3.20	5.00	66	0.75	4.20	2.50	12.83	1.71E-04	
3.00	22.00	4.40	5.00	66	0.75	4.20	3.50	12.59	1.68E-04	
4.00	40.00	8.00	5.00	66	0.75	4.20	4.50	17.80	2.37E-04	
3.00	24.00	4.80	5.00	66	0.75	4.20	3.50	13.73	1.83E-04	
2.00	17.00	3.40	5.00	66	0.75	4.20	2.50	13.63	1.81E-04	
1.00	7.00	1.40	5.00	66	0.75	4.20	1.50	9.36	1.25E-04	
K-VALUE: COEFFICIENT OF PERMEABILITY										
RECORD OF WATER PRESSURE TEST							HOLE No. :		BD-4	
DEPTH(m):			'10-15							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec	
2.00	3.00	0.60	5.00	66	0.75	4.20	2.50	2.40	3.20E-05	
4.00	6.60	1.32	5.00	66	0.75	4.20	4.50	2.94	3.91E-05	
7.00	13.00	2.60	5.00	66	0.75	4.20	7.50	3.47	4.62E-05	
10.00	17.60	3.52	5.00	66	0.75	4.20	10.50	3.35	4.47E-05	
7.00	14.00	2.80	5.00	66	0.75	4.20	7.50	3.74	4.98E-05	
4.00	7.40	1.48	5.00	66	0.75	4.20	4.50	3.29	4.38E-05	
2.00	3.80	0.76	5.00	66	0.75	4.20	2.50	3.05	4.06E-05	
K-VALUE: COEFFICIENT OF PERMEABILITY										

RECORD OF WATER PRESSURE TEST							HOLE No. :		BD-5	
DEPTH(m):			'1-5							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec	
0.50	3.00	0.75	4.00	66	0.80	3.00	0.88	8.52	1.08E-04	
1.00	12.00	3.00	4.00	66	0.80	3.00	1.38	21.74	2.77E-04	
1.50	26.00	6.50	4.00	66	0.80	3.00	1.88	34.57	4.40E-04	
2.00	38.00	9.50	4.00	66	0.80	3.00	2.38	39.92	5.08E-04	
1.50	30.00	7.50	4.00	66	0.80	3.00	1.88	39.89	5.08E-04	
1.00	21.00	5.25	4.00	66	0.80	3.00	1.38	38.04	4.84E-04	
0.50	14.00	3.50	4.00	66	0.80	3.00	0.88	39.77	5.06E-04	
K-VALUE: COEFFICIENT OF PERMEABILITY										
RECORD OF WATER PRESSURE TEST							HOLE No. :		BD-5	
DEPTH(m):			'5-10							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec	
1.00	1.10	0.22	5.00	66	0.80	7.50	1.83	1.20	1.60E-05	
2.00	3.40	0.68	5.00	66	0.80	7.50	2.83	2.40	3.20E-05	
3.00	5.00	1.00	5.00	66	0.80	7.50	3.83	2.61	3.48E-05	
4.00	12.00	2.40	5.00	66	0.80	7.50	4.83	4.97	6.62E-05	
3.00	7.00	1.40	5.00	66	0.80	7.50	3.83	3.66	4.87E-05	
2.00	5.00	1.00	5.00	66	0.80	7.50	2.83	3.53	4.71E-05	
1.00	3.20	0.64	5.00	66	0.80	7.50	1.83	3.50	4.66E-05	
K-VALUE: COEFFICIENT OF PERMEABILITY										
RECORD OF WATER PRESSURE TEST							HOLE No. :		BD-5	
DEPTH(m):			'10-15							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec	
1.00	22.00	4.40	5.00	66	0.80	12.50	2.33	18.88	2.51E-04	
2.00	29.00	5.80	5.00	66	0.80	12.50	3.33	17.42	2.32E-04	
3.00	34.00	6.80	5.00	66	0.80	12.50	4.33	15.70	2.09E-04	
3.30	47.00	9.40	5.00	66	0.80	12.50	4.63	20.30	2.70E-04	
3.00	35.00	7.00	5.00	66	0.80	12.50	4.33	16.17	2.15E-04	
2.00	30.00	6.00	5.00	66	0.80	12.50	3.33	18.02	2.40E-04	
1.00	25.00	5.00	5.00	66	0.80	12.50	2.33	21.46	2.86E-04	
K-VALUE: COEFFICIENT OF PERMEABILITY										

RECORD OF WATER PRESSURE TEST										HOLE No. :		BD-5				
DEPTH(m):										'15-20						
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE							
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec							
2.00	4.00	0.80	5.00	66	0.80	13.15	3.40	2.36	3.14E-05							
4.00	6.00	1.20	5.00	66	0.80	13.15	5.40	2.22	2.96E-05							
7.00	12.00	2.40	5.00	66	0.80	13.15	8.40	2.86	3.81E-05							
10.00	27.00	5.40	5.00	66	0.80	13.15	11.40	4.74	6.31E-05							
7.00	16.00	3.20	5.00	66	0.80	13.15	8.40	3.81	5.08E-05							
4.00	11.00	2.20	5.00	66	0.80	13.15	5.40	4.08	5.43E-05							
2.00	7.00	1.40	5.00	66	0.80	13.15	3.40	4.12	5.49E-05							
K-VALUE: COEFFICIENT OF PERMEABILITY																
RECORD OF WATER PRESSURE TEST													HOLE No. :		BD-5	
DEPTH(m):													'20-25			
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE							
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec							
2.00	0.00	0.00	5.00	66	0.80	13.15	3.40	0.00	#####							
4.00	0.20	0.04	5.00	66	0.80	13.15	5.40	0.07	9.87E-07							
7.00	0.50	0.10	5.00	66	0.80	13.15	8.40	0.12	1.59E-06							
10.00	1.20	0.24	5.00	66	0.80	13.15	11.40	0.21	2.80E-06							
7.00	0.60	0.12	5.00	66	0.80	13.15	8.40	0.14	1.90E-06							
4.00	0.20	0.04	5.00	66	0.80	13.15	5.40	0.07	9.87E-07							
2.00	0.00	0.00	5.00	66	0.80	13.15	3.40	0.00	#####							
K-VALUE: COEFFICIENT OF PERMEABILITY																
RECORD OF WATER PRESSURE TEST													HOLE No. :		BD-5	
DEPTH(m):													'25-30			
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE							
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec							
2.00	0.00	0.00	5.00	66	0.80	13.15	3.40	0.00	#####							
4.00	0.00	0.00	5.00	66	0.80	13.15	5.40	0.00	#####							
7.00	0.30	0.06	5.00	66	0.80	13.15	8.40	0.07	9.52E-07							
10.00	0.60	0.12	5.00	66	0.80	13.15	11.40	0.11	1.40E-06							
7.00	0.20	0.04	5.00	66	0.80	13.15	8.40	0.05	6.35E-07							
4.00	0.00	0.00	5.00	66	0.80	13.15	5.40	0.00	#####							
2.00	0.00	0.00	5.00	66	0.80	13.15	3.40	0.00	#####							

RECORD OF WATER PRESSURE TEST							HOLE No. :		BD-6	
DEPTH(m):			'2-5							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec	
0.50	1.20	0.40	3.00	66	0.90	1.45	0.74	5.44	6.51E-05	
1.00	3.60	1.20	3.00	66	0.90	1.45	1.24	9.72	1.16E-04	
1.50	6.80	2.27	3.00	66	0.90	1.45	1.74	13.06	1.56E-04	
2.00	11.00	3.67	3.00	66	0.90	1.45	2.24	16.41	1.96E-04	
1.50	7.00	2.33	3.00	66	0.90	1.45	1.74	13.45	1.61E-04	
1.00	3.50	1.17	3.00	66	0.90	1.45	1.24	9.45	1.13E-04	
0.50	1.30	0.43	3.00	66	0.90	1.45	0.74	5.90	7.05E-05	
K-VALUE: COEFFICIENT OF PERMEABILITY										
RECORD OF WATER PRESSURE TEST							HOLE No. :		BD-6	
DEPTH(m):			'5-10							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec	
1.00	0.20	0.04	5.00	66	0.90	1.45	1.24	0.32	4.31E-06	
2.00	0.30	0.06	5.00	66	0.90	1.45	2.24	0.27	3.58E-06	
4.00	0.50	0.10	5.00	66	0.90	1.45	4.24	0.24	3.14E-06	
6.00	1.20	0.24	5.00	66	0.90	1.45	6.24	0.38	5.13E-06	
4.00	0.60	0.12	5.00	66	0.90	1.45	4.24	0.28	3.77E-06	
2.00	0.30	0.06	5.00	66	0.90	1.45	2.24	0.27	3.58E-06	
1.00	0.20	0.04	5.00	66	0.90	1.45	1.24	0.32	4.31E-06	
K-VALUE: COEFFICIENT OF PERMEABILITY										
RECORD OF WATER PRESSURE TEST							HOLE No. :		BD-6	
DEPTH(m):			'10-15							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec	
2.00	0.00	0.00	5.00	66	0.90	1.45	2.24	0.00	#####	
4.00	0.00	0.00	5.00	66	0.90	1.45	4.24	0.00	#####	
7.00	0.20	0.04	5.00	66	0.90	1.45	7.24	0.06	7.36E-07	
10.00	0.60	0.12	5.00	66	0.90	1.45	10.24	0.12	1.56E-06	
7.00	0.10	0.02	5.00	66	0.90	1.45	7.24	0.03	3.68E-07	
4.00	0.00	0.00	5.00	66	0.90	1.45	4.24	0.00	#####	
2.00	0.00	0.00	5.00	66	0.90	1.45	2.24	0.00	#####	
K-VALUE: COEFFICIENT OF PERMEABILITY										

RECORD OF WATER PRESSURE TEST							HOLE No. :		BD-7	
DEPTH(m):			0.5-5							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec	
0.50	3.00	0.67	4.50	66	0.50	2.00	0.75	8.89	1.16E-04	
1.00	28.00	6.22	4.50	66	0.50	2.00	1.25	49.78	6.49E-04	
1.50	39.00	8.67	4.50	66	0.50	2.00	1.75	49.52	6.46E-04	
1.70	46.00	10.22	4.50	66	0.50	2.00	1.95	52.42	6.83E-04	
1.50	40.00	8.89	4.50	66	0.50	2.00	1.75	50.79	6.62E-04	
1.00	30.00	6.67	4.50	66	0.50	2.00	1.25	53.33	6.95E-04	
0.50	22.00	4.89	4.50	66	0.50	2.00	0.75	65.19	8.50E-04	
K-VALUE: COEFFICIENT OF PERMEABILITY										
RECORD OF WATER PRESSURE TEST							HOLE No. :		BD-7	
DEPTH(m):			5-10							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec	
2.00	0.00	0.00	5.00	66	0.50	2.00	2.25	0.00	#####	
4.00	0.00	0.00	5.00	66	0.50	2.00	4.25	0.00	#####	
7.00	0.00	0.00	5.00	66	0.50	2.00	7.25	0.00	#####	
10.00	0.20	0.04	5.00	66	0.50	2.00	10.25	0.04	5.20E-07	
7.00	0.00	0.00	5.00	66	0.50	2.00	7.25	0.00	#####	
4.00	0.00	0.00	5.00	66	0.50	2.00	4.25	0.00	#####	
2.00	0.00	0.00	5.00	66	0.50	2.00	2.25	0.00	#####	
K-VALUE: COEFFICIENT OF PERMEABILITY										
RECORD OF WATER PRESSURE TEST							HOLE No. :		BD-7	
DEPTH(m):			10-15							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE	
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec	
2.00	4.20	0.84	5.00	66	0.50	3.70	2.42	3.47	4.62E-05	
4.00	12.30	2.46	5.00	66	0.50	3.70	4.42	5.57	7.41E-05	
7.00	29.00	5.80	5.00	66	0.50	3.70	7.42	7.82	1.04E-04	
10.00	47.00	9.40	5.00	66	0.50	3.70	10.42	9.02	1.20E-04	
7.00	30.00	6.00	5.00	66	0.50	3.70	7.42	8.09	1.08E-04	
4.00	18.00	3.60	5.00	66	0.50	3.70	4.42	8.14	1.08E-04	
2.00	6.00	1.20	5.00	66	0.50	3.70	2.42	4.96	6.60E-05	
K-VALUE: COEFFICIENT OF PERMEABILITY										

RECORD OF WATER PRESSURE TEST										HOLE No. :		BD-7	
DEPTH(m):										15-19			
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE				
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec				
2.00	0.00	0.00	4.00	66	0.50	3.70	2.42	0.00	#####				
4.00	0.00	0.00	4.00	66	0.50	3.70	4.42	0.00	#####				
7.00	0.00	0.00	4.00	66	0.50	3.70	7.42	0.00	#####				
10.00	0.30	0.08	4.00	66	0.50	3.70	10.42	0.07	9.16E-07				
7.00	0.00	0.00	4.00	66	0.50	3.70	7.42	0.00	#####				
4.00	0.00	0.00	4.00	66	0.50	3.70	4.42	0.00	#####				
2.00	0.00	0.00	4.00	66	0.50	3.70	2.42	0.00	#####				
K-VALUE: COEFFICIENT OF PERMEABILITY													
RECORD OF WATER PRESSURE TEST										HOLE No. :		BD-7	
DEPTH(m):										19-20			
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE				
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec				
0.50	34.00	34.00	1.00	66	0.50	3.70	0.92	369.57	3.34E-03				
1.00	46.00	46.00	1.00	66	0.50	3.70	1.42	323.94	2.93E-03				
0.50	35.00	35.00	1.00	66	0.50	3.70	0.92	380.43	3.44E-03				
K-VALUE: COEFFICIENT OF PERMEABILITY													

RECORD OF WATER PRESSURE TEST				HOLE No. :		BD-8			
DEPTH(m):		'2-5							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec
0.50	1.20	0.40	3.00	66	0.75	2.55	0.83	4.82	5.77E-05
1.00	2.60	0.87	3.00	66	0.90	1.45	1.24	7.02	8.39E-05
1.50	3.70	1.23	3.00	66	0.90	1.45	1.74	7.11	8.50E-05
2.00	5.20	1.73	3.00	66	0.90	1.45	2.24	7.76	9.28E-05
1.50	4.00	1.33	3.00	66	0.90	1.45	1.74	7.68	9.19E-05
1.00	2.70	0.90	3.00	66	0.90	1.45	1.24	7.29	8.72E-05
0.50	1.40	0.47	3.00	66	0.90	1.45	0.74	6.35	7.60E-05
K-VALUE: COEFFICIENT OF PERMEABILITY									
RECORD OF WATER PRESSURE TEST				HOLE No. :		BD-8			
DEPTH(m):		'5-10							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec
1.00	0.20	0.04	5.00	66	0.75	2.55	1.33	0.30	4.01E-06
2.00	0.60	0.12	5.00	66	0.75	2.55	2.33	0.52	6.86E-06
4.00	0.80	0.16	5.00	66	0.75	2.55	4.33	0.37	4.92E-06
6.00	1.40	0.28	5.00	66	0.75	2.55	6.33	0.44	5.89E-06
4.00	0.90	0.18	5.00	66	0.75	2.55	4.33	0.42	5.54E-06
2.00	0.60	0.12	5.00	66	0.75	2.55	2.33	0.52	6.86E-06
1.00	0.20	0.04	5.00	66	0.75	2.55	1.33	0.30	4.01E-06
K-VALUE: COEFFICIENT OF PERMEABILITY									
RECORD OF WATER PRESSURE TEST				HOLE No. :		BD-8			
DEPTH(m):		'10-15							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec
2.00	0.00	0.00	5.00	66	0.75	2.55	2.33	0.00	#####
4.00	0.00	0.00	5.00	66	0.75	2.55	4.33	0.00	#####
7.00	0.10	0.02	5.00	66	0.75	2.55	7.33	0.03	3.63E-07
10.00	0.30	0.06	5.00	66	0.75	2.55	10.33	0.06	7.74E-07
7.00	0.10	0.02	5.00	66	0.75	2.55	7.33	0.03	3.63E-07
4.00	0.00	0.00	5.00	66	0.75	2.55	4.33	0.00	#####
2.00	0.00	0.00	5.00	66	0.75	2.55	2.33	0.00	#####
K-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST								HOLE No. :		BD-9	
DEPTH(m):			17-20								
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE		
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec		
2.00	0.00	0.00	3.00	66	1.00	2.00	2.30	0.00	#####		
4.00	0.60	0.20	3.00	66	1.00	2.00	4.30	0.47	5.56E-06		
7.00	1.60	0.53	3.00	66	1.00	2.00	7.30	0.73	8.74E-06		
10.00	2.30	0.77	3.00	66	1.00	2.00	10.30	0.74	8.90E-06		
7.00	1.50	0.50	3.00	66	1.00	2.00	7.30	0.68	8.19E-06		
4.00	0.50	0.17	3.00	66	1.00	2.00	4.30	0.39	4.64E-06		
2.00	0.00	0.00	3.00	66	1.00	2.00	2.30	0.00	#####		
K-VALUE: COEFFICIENT OF PERMEABILITY											
RECORD OF WATER PRESSURE TEST								HOLE No. :		BD-9	
DEPTH(m):			20-25								
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE		
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec		
2.00	0.00	0.00	5.00	66	1.00	3.60	2.46	0.00	#####		
4.00	1.00	0.20	5.00	66	1.00	3.60	4.46	0.45	5.97E-06		
7.00	1.40	0.28	5.00	66	1.00	3.60	7.46	0.38	5.00E-06		
10.00	2.20	0.44	5.00	66	1.00	3.60	10.46	0.42	5.60E-06		
7.00	1.20	0.24	5.00	66	1.00	3.60	7.46	0.32	4.28E-06		
4.00	1.00	0.20	5.00	66	1.00	3.60	4.46	0.45	5.97E-06		
2.00	0.00	0.00	5.00	66	1.00	3.60	2.46	0.00	#####		
K-VALUE: COEFFICIENT OF PERMEABILITY											
RECORD OF WATER PRESSURE TEST								HOLE No. :		BD-9	
DEPTH(m):			25-30								
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE		
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec		
2.00	2.30	0.46	5.00	66	1.00	4.20	2.52	1.83	2.43E-05		
4.00	4.60	0.92	5.00	66	1.00	4.20	4.52	2.04	2.71E-05		
7.00	14.40	2.88	5.00	66	1.00	4.20	7.52	3.83	5.10E-05		
10.00	24.80	4.96	5.00	66	1.00	4.20	10.52	4.71	6.28E-05		
7.00	18.80	3.76	5.00	66	1.00	4.20	7.52	5.00	6.66E-05		
4.00	8.40	1.68	5.00	66	1.00	4.20	4.52	3.72	4.95E-05		
2.00	5.00	1.00	5.00	66	1.00	4.20	2.52	3.97	5.28E-05		
K-VALUE: COEFFICIENT OF PERMEABILITY											

RECORD OF WATER PRESSURE TEST				HOLE No. :		BW-11			
DEPTH(m):		'5-10							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec
4.00	0.00	0.00	5.00	66	0.50	2.30	4.28	0.00	#####
6.00	0.02	0.00	5.00	66	0.50	2.30	6.28	0.01	8.48E-08
8.00	0.03	0.01	5.00	66	0.50	2.30	8.28	0.01	9.65E-08
10.00	0.05	0.01	5.00	66	0.50	2.30	10.28	0.01	1.30E-07
8.00	0.04	0.01	5.00	66	0.50	2.30	8.28	0.01	1.29E-07
6.00	0.00	0.00	5.00	66	0.50	2.30	6.28	0.00	#####
4.00	0.00	0.00	5.00	66	0.50	2.30	4.28	0.00	#####
K-VALUE: COEFFICIENT OF PERMEABILITY									
RECORD OF WATER PRESSURE TEST				HOLE No. :		BW-11			
DEPTH(m):		'10-15							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec
4.00	0.00	0.00	5.00	66	0.55	2.30	4.29	0.00	#####
5.00	0.10	0.02	5.00	66	0.55	2.30	5.29	0.04	5.04E-07
6.00	0.12	0.02	5.00	66	0.55	2.30	6.29	0.04	5.09E-07
10.00	0.16	0.03	5.00	66	0.55	2.30	10.29	0.03	4.14E-07
6.00	0.08	0.02	5.00	66	0.55	2.30	6.29	0.03	3.39E-07
5.00	0.06	0.01	5.00	66	0.55	2.30	5.29	0.02	3.02E-07
4.00	0.00	0.00	5.00	66	0.55	2.30	4.29	0.00	#####
K-VALUE: COEFFICIENT OF PERMEABILITY									
RECORD OF WATER PRESSURE TEST				HOLE No. :		BW-11			
DEPTH(m):		'15-20							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec
2.00	0.00	0.00	5.00	66	0.55	2.30	2.29	0.00	#####
4.00	0.00	0.00	5.00	66	0.55	2.30	4.29	0.00	#####
7.00	0.14	0.03	5.00	66	0.55	2.30	7.29	0.04	5.12E-07
10.00	0.16	0.03	5.00	66	0.55	2.30	10.29	0.03	4.14E-07
7.00	0.12	0.02	5.00	66	0.55	2.30	7.29	0.03	4.39E-07
4.00	0.04	0.01	5.00	66	0.55	2.30	4.29	0.02	2.49E-07
2.00	0.00	0.00	5.00	66	0.55	2.30	2.29	0.00	#####
K-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST										HOLE No. :		BD-16	
DEPTH(m):			'1-5										
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE				
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec				
0.50	1.50	0.38	4.00	66	0.80	3.00	0.88	4.26	5.42E-05				
1.00	4.00	1.00	4.00	66	0.80	3.00	1.38	7.25	9.22E-05				
1.50	7.60	1.90	4.00	66	0.80	3.00	1.88	10.11	1.29E-04				
2.00	18.00	4.50	4.00	66	0.80	3.00	2.38	18.91	2.41E-04				
1.50	8.00	2.00	4.00	66	0.80	3.00	1.88	10.64	1.35E-04				
1.00	4.30	1.08	4.00	66	0.80	3.00	1.38	7.79	9.91E-05				
0.50	2.00	0.50	4.00	66	0.80	3.00	0.88	5.68	7.23E-05				
K-VALUE: COEFFICIENT OF PERMEABILITY													
RECORD OF WATER PRESSURE TEST										HOLE No. :		BD-16	
DEPTH(m):			'5-10										
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE				
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec				
0.50	2.20	0.44	5.00	66	0.80	7.50	1.33	3.31	4.41E-05				
1.00	6.00	1.20	5.00	66	0.80	7.50	1.83	6.56	8.73E-05				
1.50	12.00	2.40	5.00	66	0.80	7.50	2.33	10.30	1.37E-04				
2.00	21.00	4.20	5.00	66	0.80	7.50	2.83	14.84	1.98E-04				
1.50	12.50	2.50	5.00	66	0.80	7.50	2.33	10.73	1.43E-04				
1.00	7.00	1.40	5.00	66	0.80	7.50	1.83	7.65	1.02E-04				
0.50	3.20	0.64	5.00	66	0.80	7.50	1.33	4.81	6.41E-05				
K-VALUE: COEFFICIENT OF PERMEABILITY													
RECORD OF WATER PRESSURE TEST										HOLE No. :		BD-16	
DEPTH(m):			'10-15										
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE				
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec				
1.00	11.00	2.20	5.00	66	0.80	10.15	2.10	10.50	1.40E-04				
2.00	23.00	4.60	5.00	66	0.80	10.15	3.10	14.86	1.98E-04				
3.00	34.00	6.80	5.00	66	0.80	10.15	4.10	16.61	2.21E-04				
3.30	47.00	9.40	5.00	66	0.80	10.15	4.40	21.39	2.85E-04				
3.00	35.00	7.00	5.00	66	0.80	10.15	4.10	17.09	2.28E-04				
2.00	26.00	5.20	5.00	66	0.80	10.15	3.10	16.80	2.24E-04				
1.00	16.00	3.20	5.00	66	0.80	10.15	2.10	15.27	2.03E-04				
K-VALUE: COEFFICIENT OF PERMEABILITY													

RECORD OF WATER PRESSURE TEST				HOLE No. :		BD-16			
DEPTH(m):		'15-20							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec
1.00	5.00	1.00	5.00	66	0.80	10.15	2.10	4.77	6.36E-05
2.00	7.00	1.40	5.00	66	0.80	10.15	3.10	4.52	6.02E-05
3.00	19.00	3.80	5.00	66	0.80	10.15	4.10	9.28	1.24E-04
3.20	28.00	5.60	5.00	66	0.80	10.15	4.30	13.04	1.74E-04
3.00	20.00	4.00	5.00	66	0.80	10.15	4.10	9.77	1.30E-04
2.00	11.00	2.20	5.00	66	0.80	10.15	3.10	7.11	9.47E-05
1.00	7.00	1.40	5.00	66	0.80	10.15	2.10	6.68	8.90E-05
K-VALUE: COEFFICIENT OF PERMEABILITY									
RECORD OF WATER PRESSURE TEST				HOLE No. :		BD-16			
DEPTH(m):		'20-25							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec
1.00	2.00	0.40	5.00	66	0.80	10.15	2.10	1.91	2.54E-05
2.00	6.20	1.24	5.00	66	0.80	10.15	3.10	4.01	5.34E-05
3.00	11.00	2.20	5.00	66	0.80	10.15	4.10	5.37	7.15E-05
3.60	46.00	9.20	5.00	66	0.80	10.15	4.70	19.60	2.61E-04
3.00	40.00	8.00	5.00	66	0.80	10.15	4.10	19.54	2.60E-04
2.00	33.00	6.60	5.00	66	0.80	10.15	3.10	21.32	2.84E-04
1.00	20.00	4.00	5.00	66	0.80	10.15	2.10	19.09	2.54E-04
K-VALUE: COEFFICIENT OF PERMEABILITY									
RECORD OF WATER PRESSURE TEST				HOLE No. :		BD-16			
DEPTH(m):		'25-30							
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec
1.00	1.50	0.30	5.00	66	0.80	10.15	2.10	1.43	1.91E-05
2.00	2.60	0.52	5.00	66	0.80	10.15	3.10	1.68	2.24E-05
3.00	4.80	0.96	5.00	66	0.80	10.15	4.10	2.34	3.12E-05
3.80	47.00	9.40	5.00	66	0.80	10.15	4.90	19.20	2.56E-04
3.00	35.00	7.00	5.00	66	0.80	10.15	4.10	17.09	2.28E-04
2.00	22.00	4.40	5.00	66	0.80	10.15	3.10	14.22	1.89E-04
1.00	20.00	4.00	5.00	66	0.80	10.15	2.10	19.09	2.54E-04
K-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST										HOLE No. :		BD-19	
DEPTH(m):			1-5										
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE				
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec				
0.50	3.00	0.75	4.00	66	0.70	3.00	0.87	8.62	1.10E-04				
1.00	5.50	1.38	4.00	66	0.70	3.00	1.37	10.04	1.28E-04				
1.50	8.20	2.05	4.00	66	0.70	3.00	1.87	10.96	1.40E-04				
2.00	16.00	4.00	4.00	66	0.70	3.00	2.37	16.88	2.15E-04				
1.50	9.00	2.25	4.00	66	0.70	3.00	1.87	12.03	1.53E-04				
1.00	6.00	1.50	4.00	66	0.70	3.00	1.37	10.95	1.39E-04				
0.50	3.50	0.88	4.00	66	0.70	3.00	0.87	10.06	1.28E-04				
K-VALUE: COEFFICIENT OF PERMEABILITY													
RECORD OF WATER PRESSURE TEST										HOLE No. :		BD-19	
DEPTH(m):			'5-10										
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE				
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec				
1.00	2.00	0.40	5.00	66	0.70	5.55	1.63	2.46	3.28E-05				
2.00	6.00	1.20	5.00	66	0.70	5.55	2.63	4.57	6.09E-05				
4.00	13.00	2.60	5.00	66	0.70	5.55	4.63	5.62	7.49E-05				
6.00	21.00	4.20	5.00	66	0.70	5.55	6.63	6.34	8.44E-05				
4.00	14.00	2.80	5.00	66	0.70	5.55	4.63	6.05	8.06E-05				
2.00	7.00	1.40	5.00	66	0.70	5.55	2.63	5.33	7.10E-05				
1.00	2.50	0.50	5.00	66	0.70	5.55	1.63	3.08	4.10E-05				
K-VALUE: COEFFICIENT OF PERMEABILITY													
RECORD OF WATER PRESSURE TEST										HOLE No. :		BD-19	
DEPTH(m):			'10-15										
GAUGE PRESS.	INJECTION QUANTITY		TEST LENGTH	HOLE DIA	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	K-VALUE				
Kg/cm2	Lit / Min	Lit / Min/	m	mm	m	m	Kg / cm2		cm / sec				
2.00	0.80	0.16	5.00	66	0.70	5.55	2.63	0.61	8.12E-06				
4.00	1.80	0.36	5.00	66	0.70	5.55	4.63	0.78	1.04E-05				
7.00	2.30	0.46	5.00	66	0.70	5.55	7.63	0.60	8.03E-06				
10.00	3.30	0.66	5.00	66	0.70	5.55	10.63	0.62	8.27E-06				
7.00	2.40	0.48	5.00	66	0.70	5.55	7.63	0.63	8.38E-06				
4.00	1.60	0.32	5.00	66	0.70	5.55	4.63	0.69	9.21E-06				
2.00	0.84	0.17	5.00	66	0.70	5.55	2.63	0.64	8.52E-06				
K-VALUE: COEFFICIENT OF PERMEABILITY													

Location of Test Pits

PIT NO	X-COORDINATION	Y-COORDINATION	ELEVATION(m)
TP 1	498400.400	32357.500	384.0
TP 2	498875.000	31871.500	394.0
TP 3	499460.000	30410.000	395.5
TP 4	499310.000	28213.000	386.23
TP 5	499204.000	27734.500	395.220
TP 6	aprox. 499610.0	27741.0	405.0
TP 7	498500.000	27503.800	396.840
TP 8	499786.000	30247.500	393.5
TP 9	500222.764	29269.771	384.900
TP 10	500227.182	29285.700	395.060
TP 11	500234.211	29310.082	404.065
TP 12	500243.250	29338.426	405.242
TP 13	aprox. 501600.	30300.	400.
TP 14	499376.027	29807.700	405.867
TP 15	499717.593	31307.104	393.670
TP 16	499525.806	31185.723	389.159
TP 17	499682.453	31490.824	384.691
TP 18	499757.335	31495.059	384.810
TP 19	500518.5	30750.0	405.4

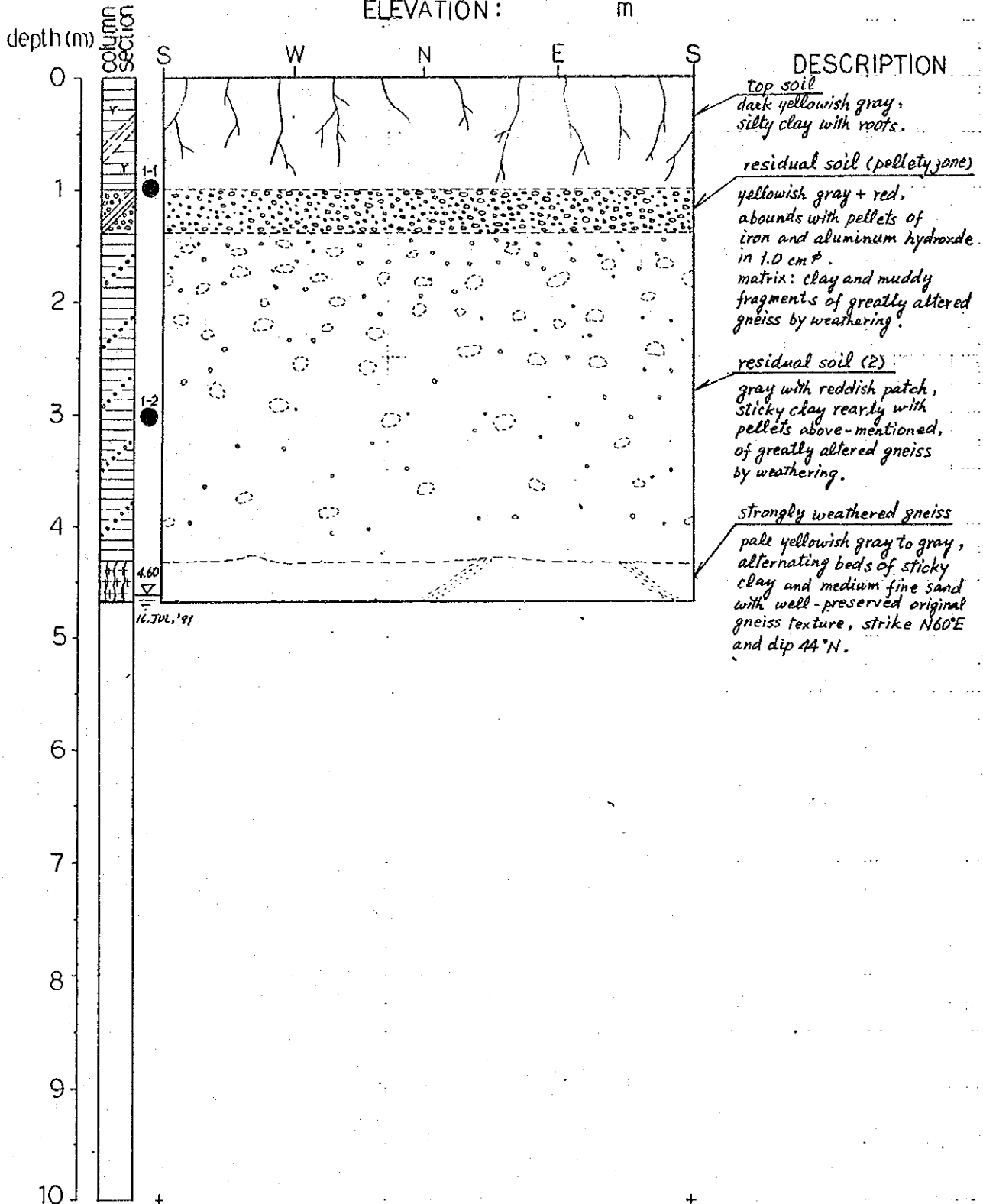
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (1)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP-1
ELEVATION: m



● sampling position
(No.)

LOGGED by K. HAYASHI
CHECKED by K. HAYASHI

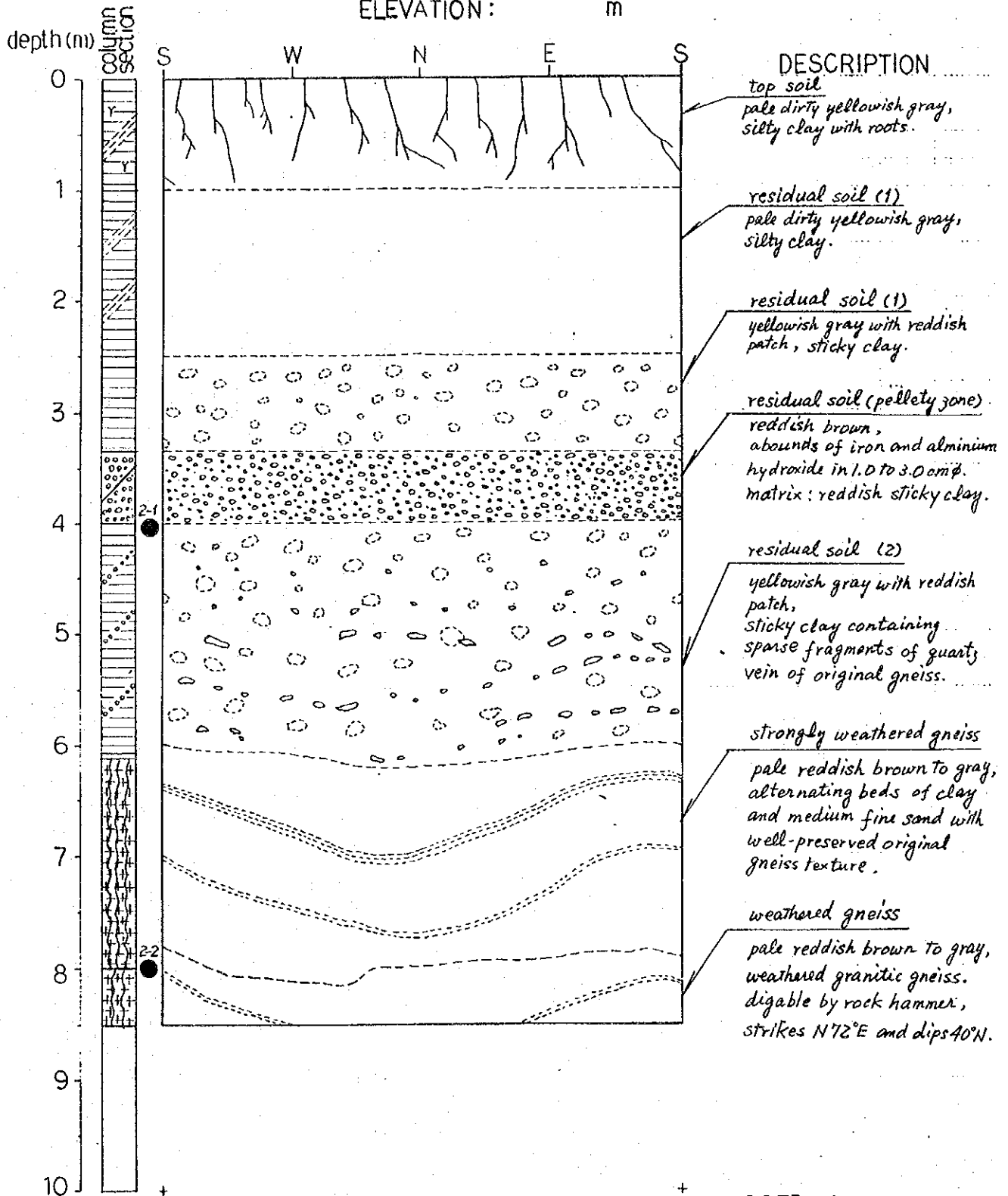
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (2)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP-2
ELEVATION: m



● sampling position (No.)

LOGGED by K. HAYASHI
CHECKED by K. HAYASHI

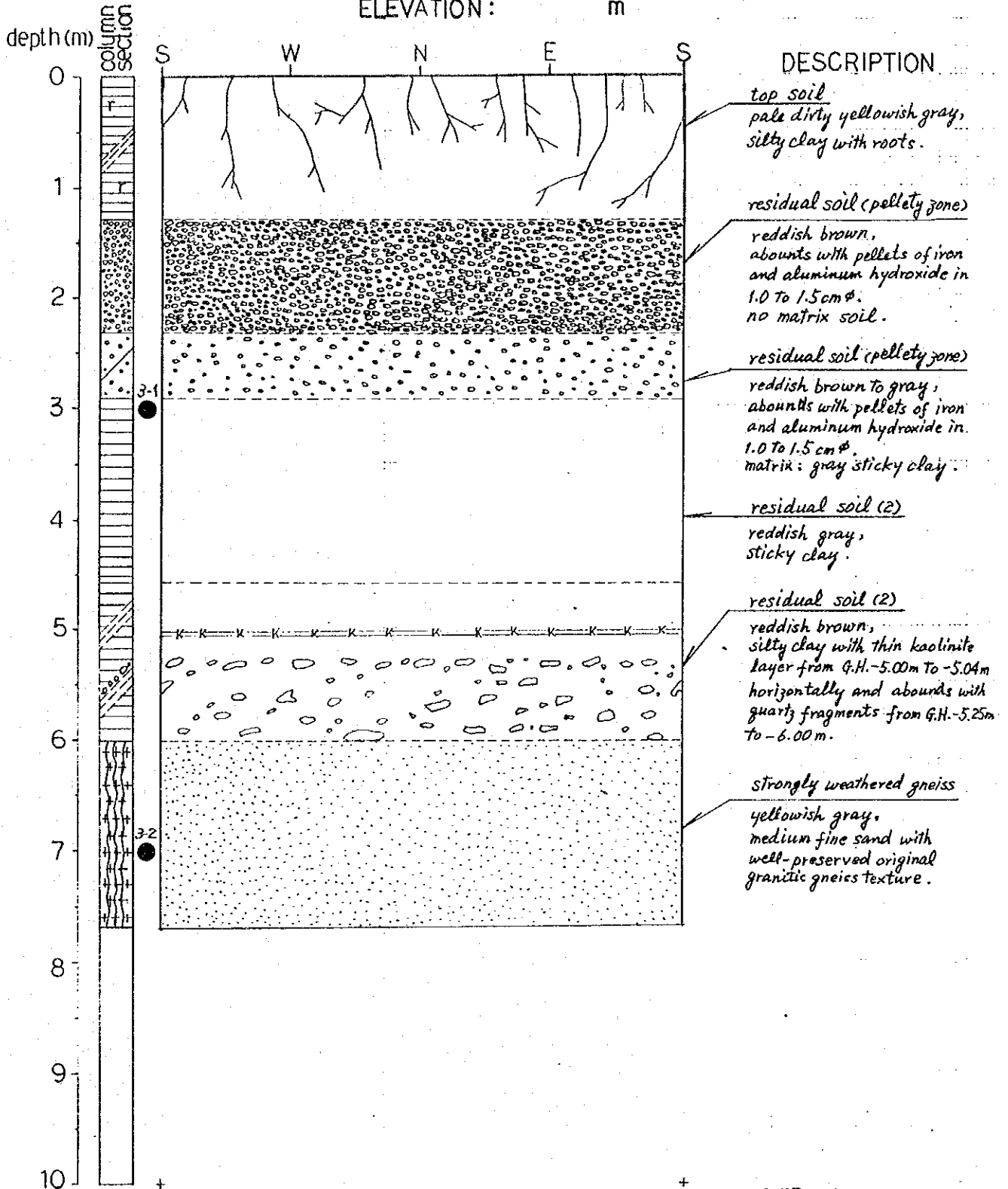
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (3)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP-3
ELEVATION: m



● sampling position (No.)

LOGGED by K. HAYASHI
CHECKED by K. HAYASHI

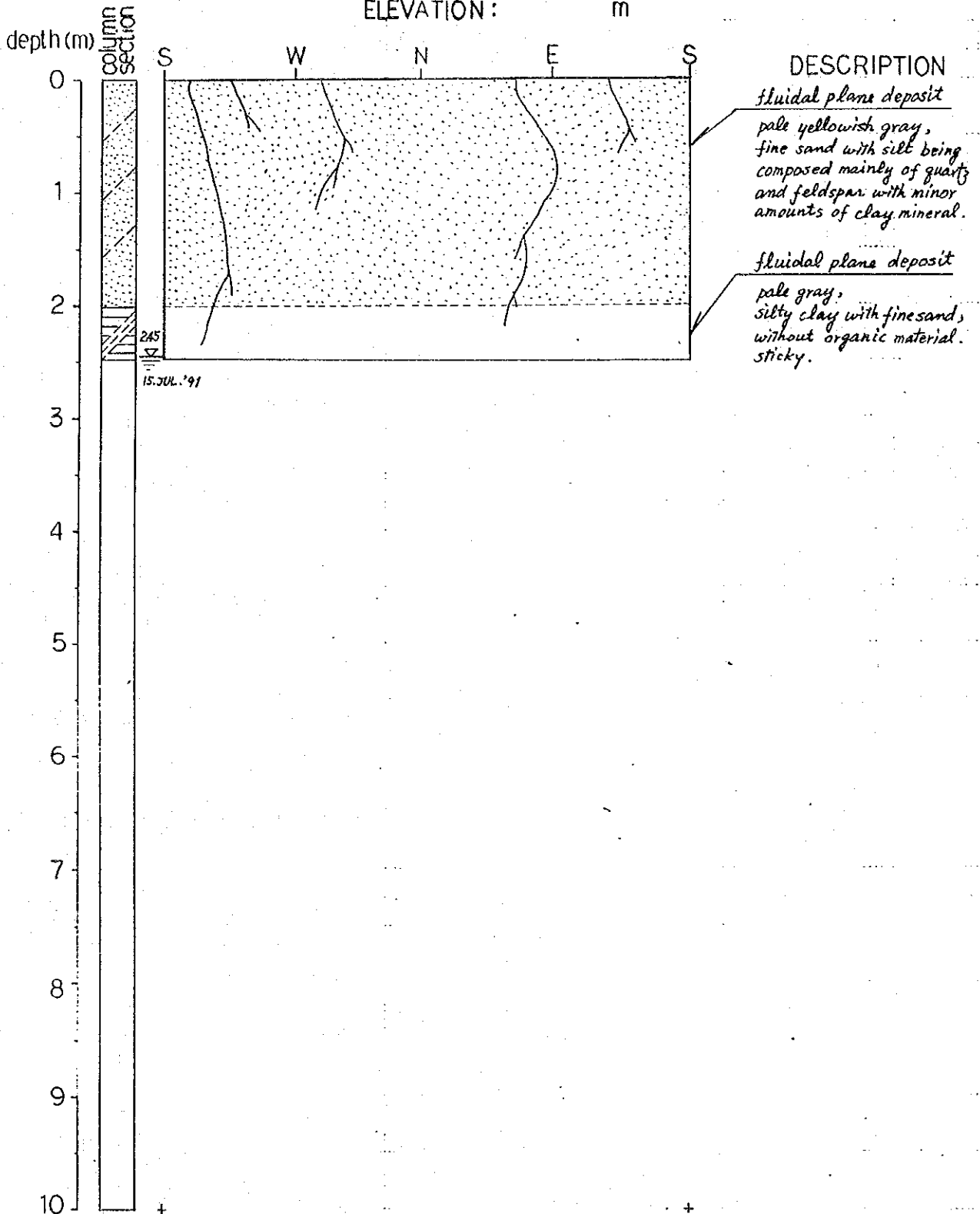
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (4)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP- 4
ELEVATION: m



● sampling position (No.)

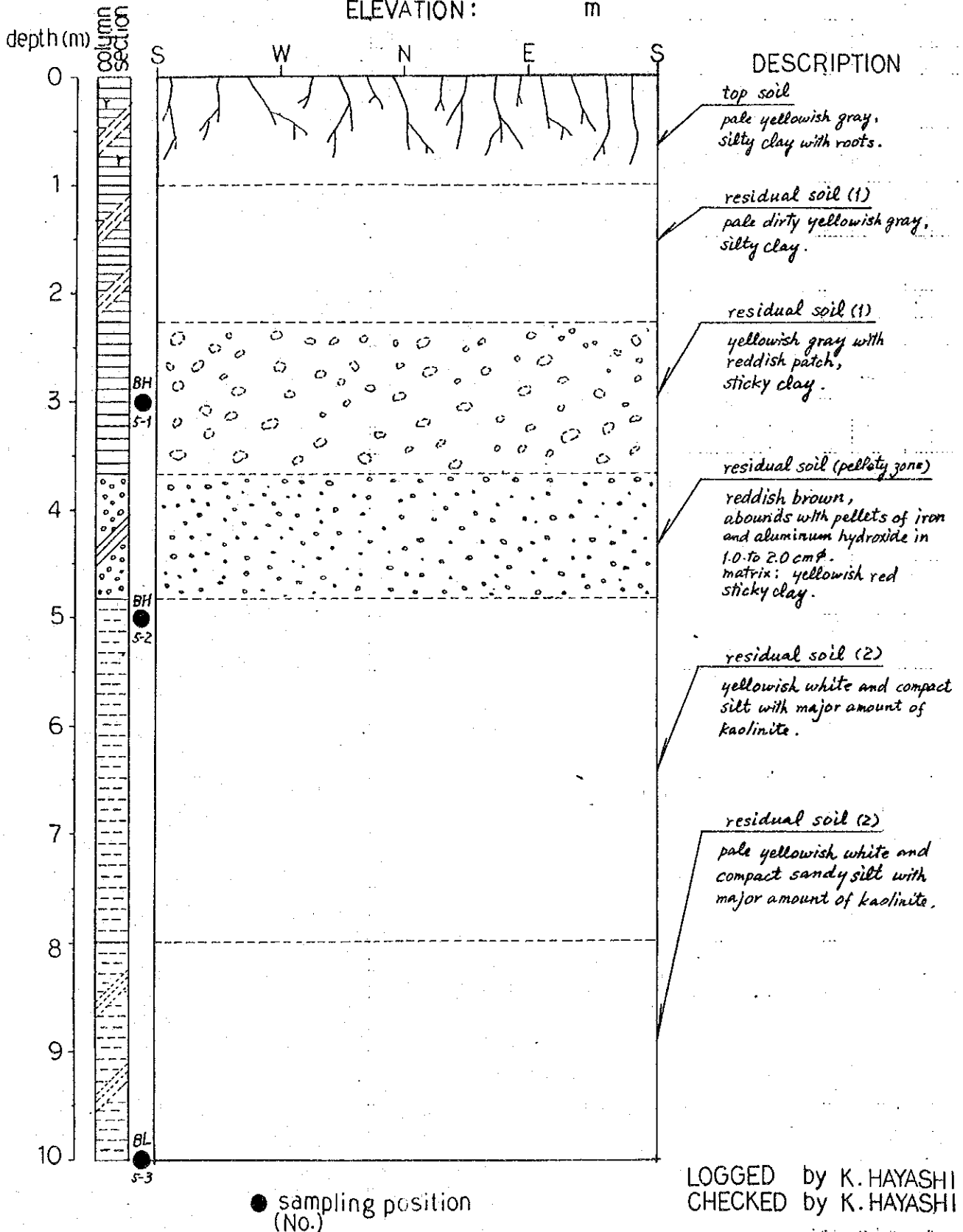
LOGGED by K. HAYASHI
CHECKED by K. HAYASHI

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Fig. 2.4.4 (5) GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP-5
ELEVATION: m

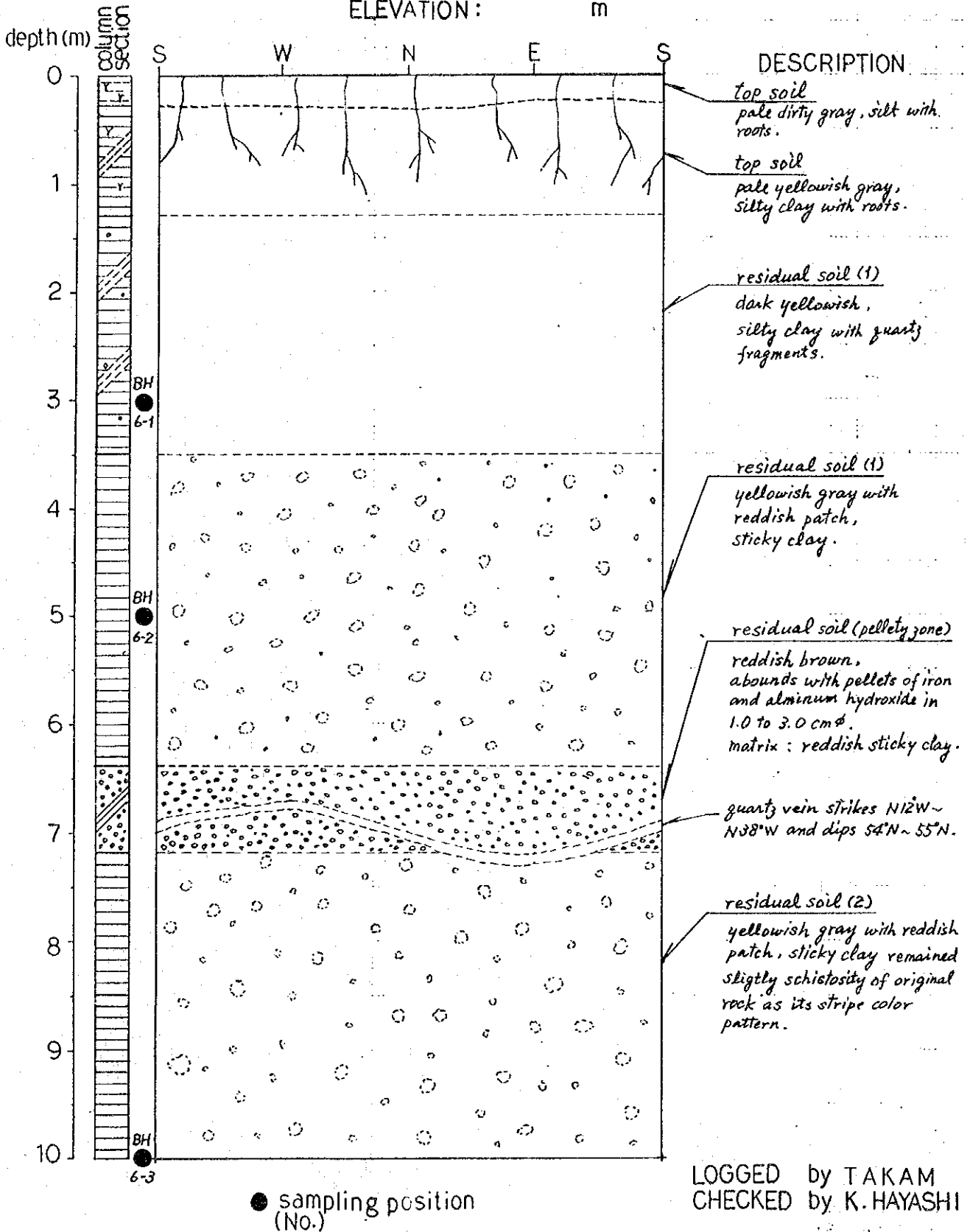


MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (6) GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP-6
ELEVATION: m



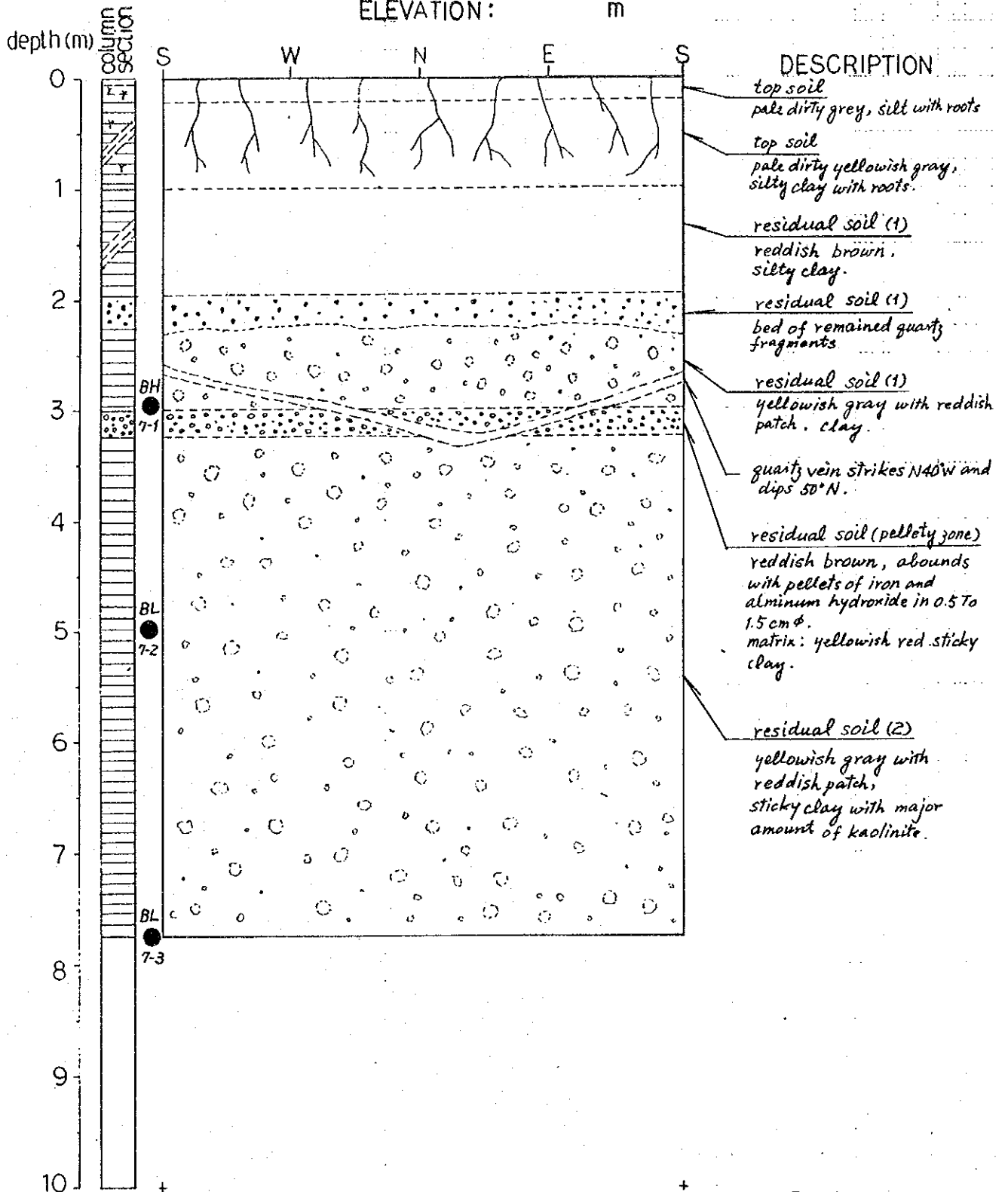
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (7)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP- 7
ELEVATION: m



● sampling position
(No.)

LOGGED by TAKAM
CHECKED by K. HAYASHI

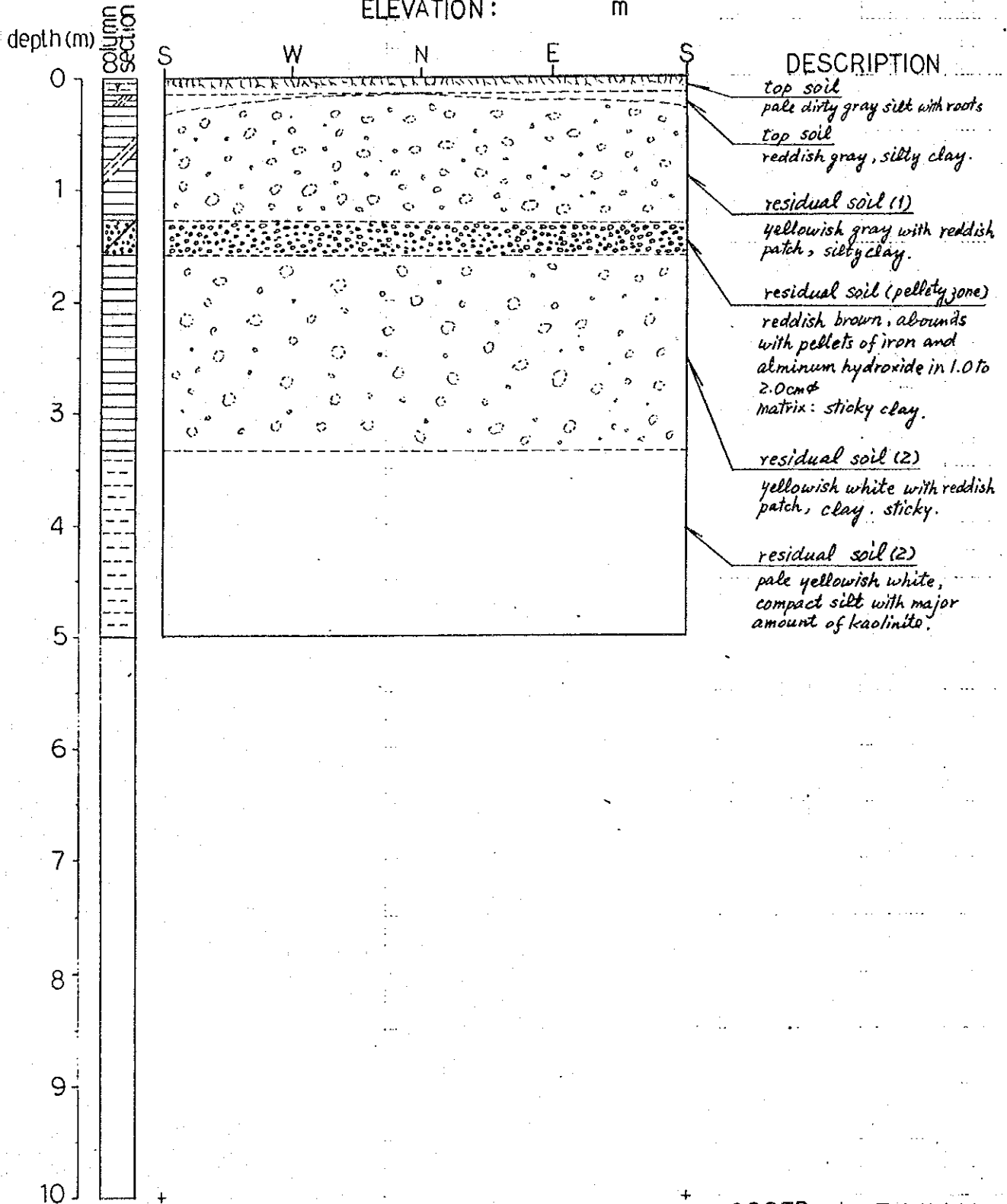
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (8)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP- 8
ELEVATION: m



● sampling position
(No.)

LOGGED by TAKAM
CHECKED by K. HAYASHI

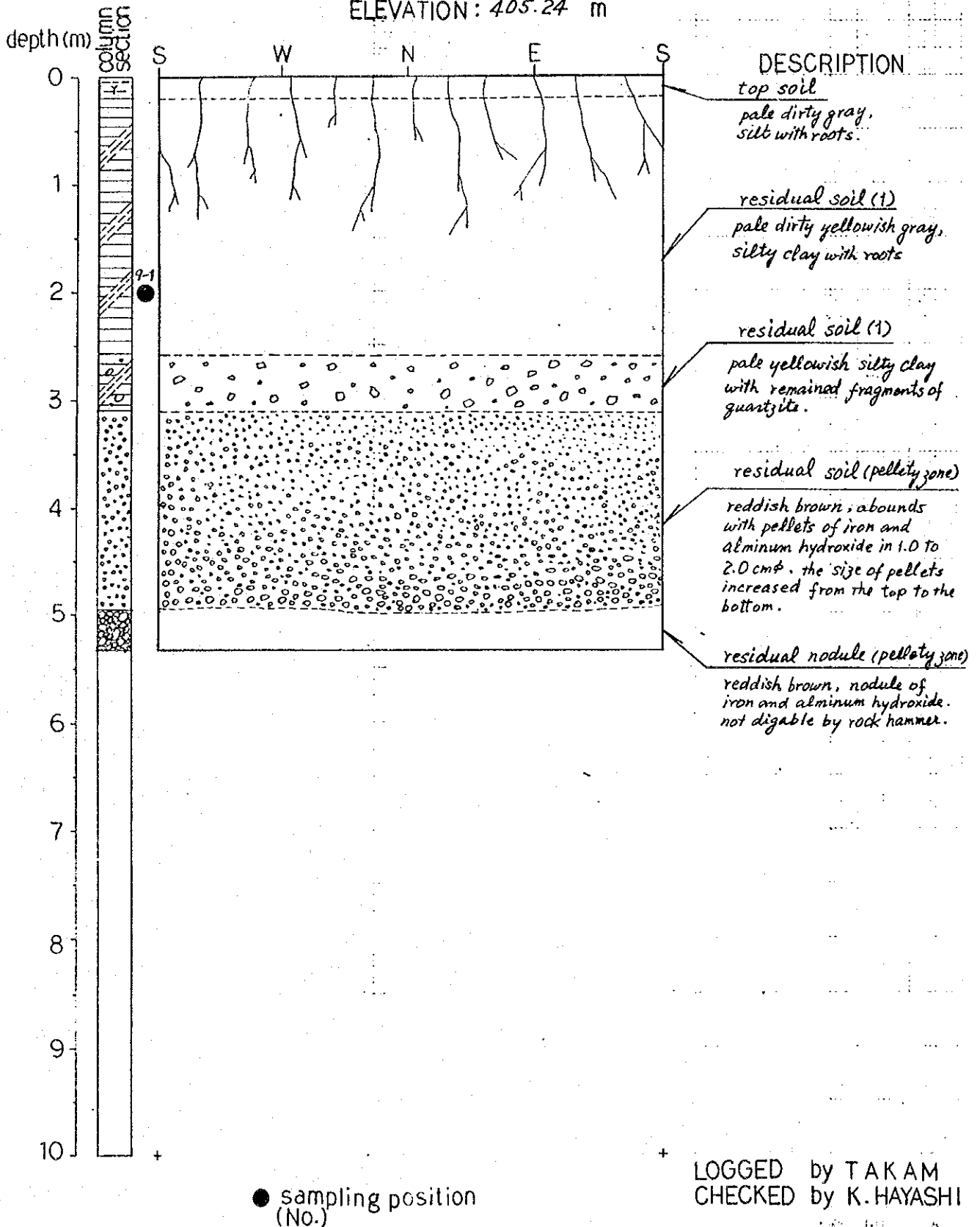
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (9)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP- 9
ELEVATION: 405.24 m



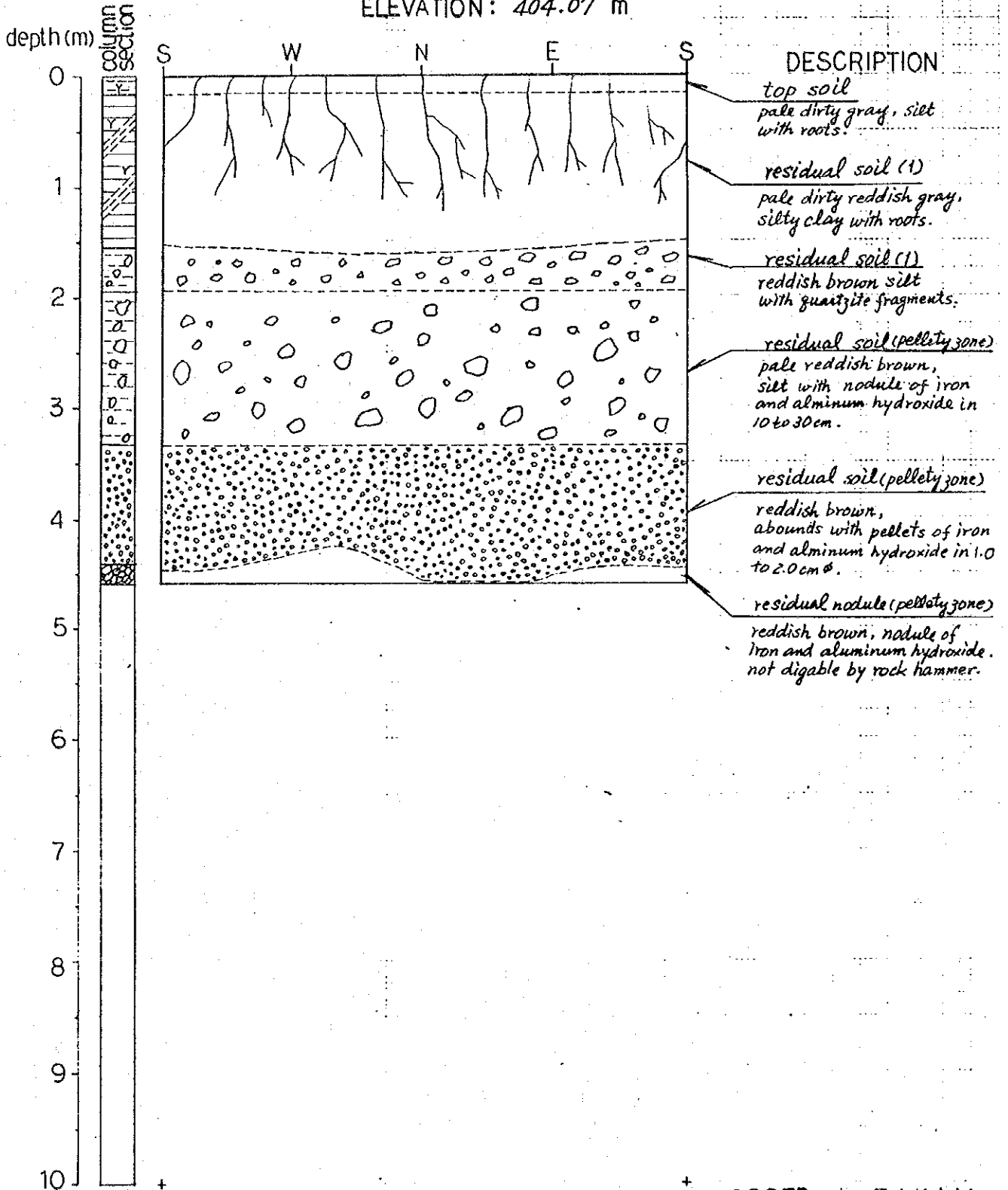
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (10)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP-10
ELEVATION: 404.07 m



● sampling position (No.)

LOGGED by TAKAM
CHECKED by K. HAYASHI

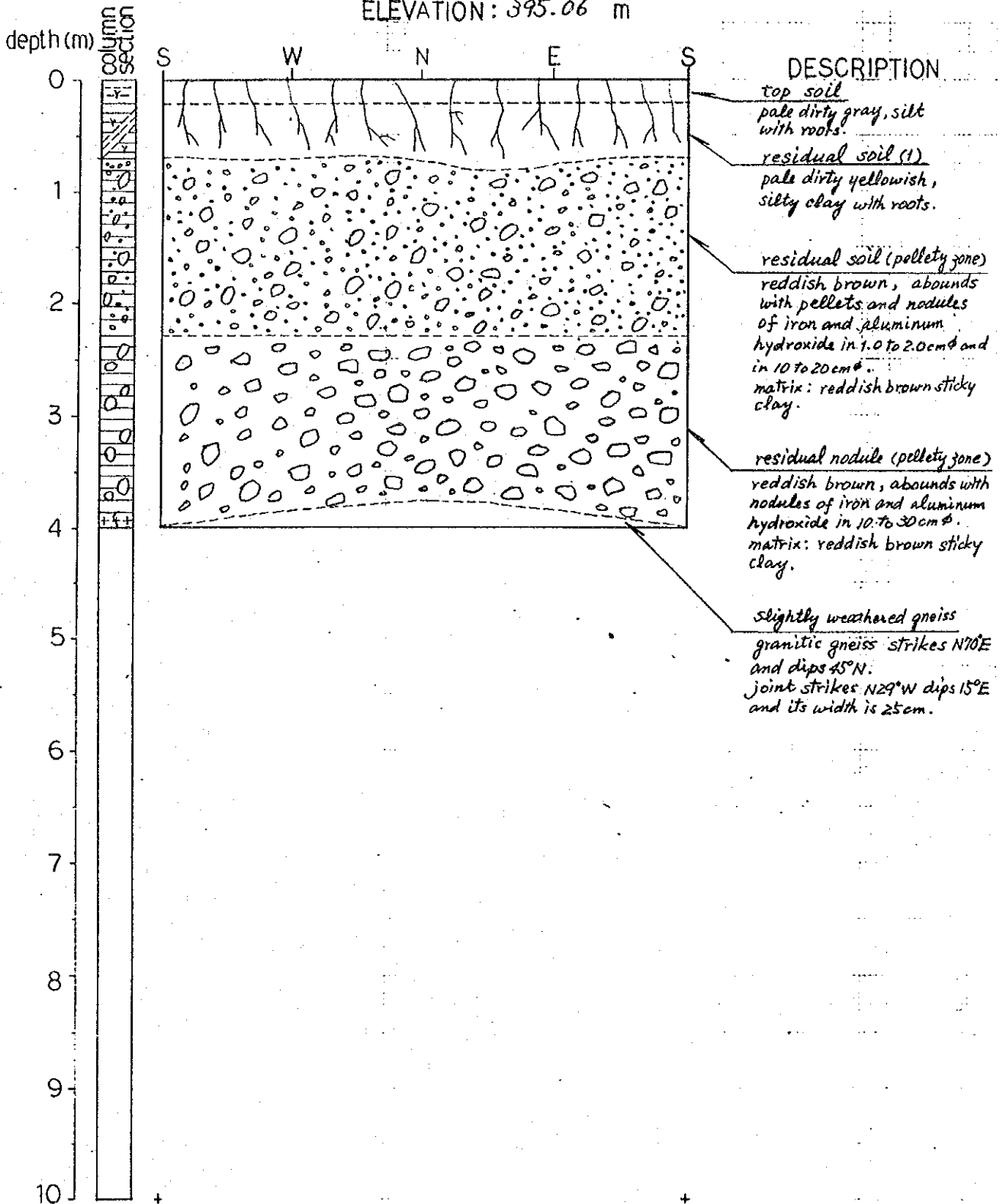
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (11)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP- 11
ELEVATION: 395.06 m



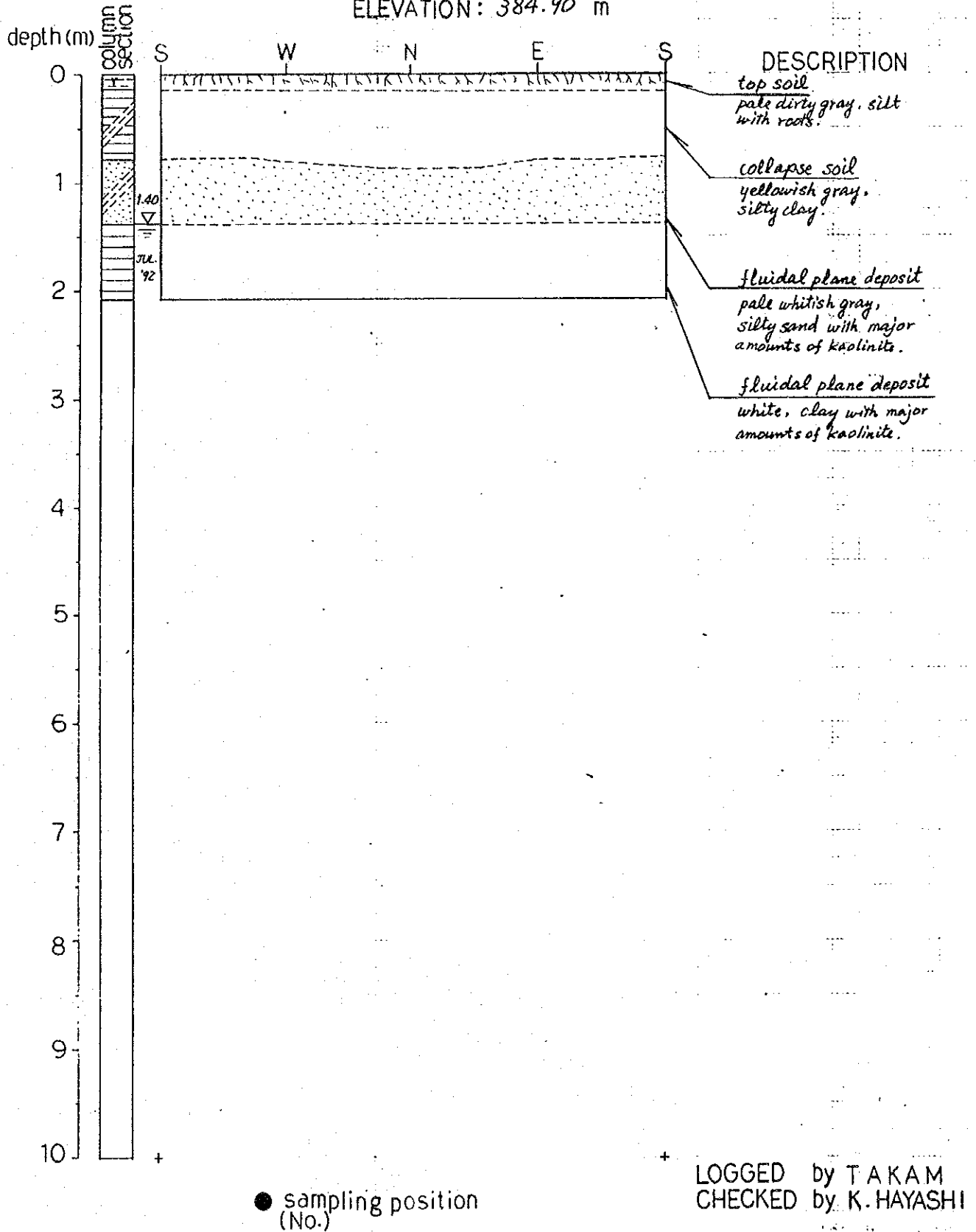
LOGGED by T A K A M
CHECKED by K. HAYASHI

MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (12) **GEOLOGICAL LOG OF TEST PIT**

SCALE 1/50

No. TP-12
ELEVATION: 384.90 m

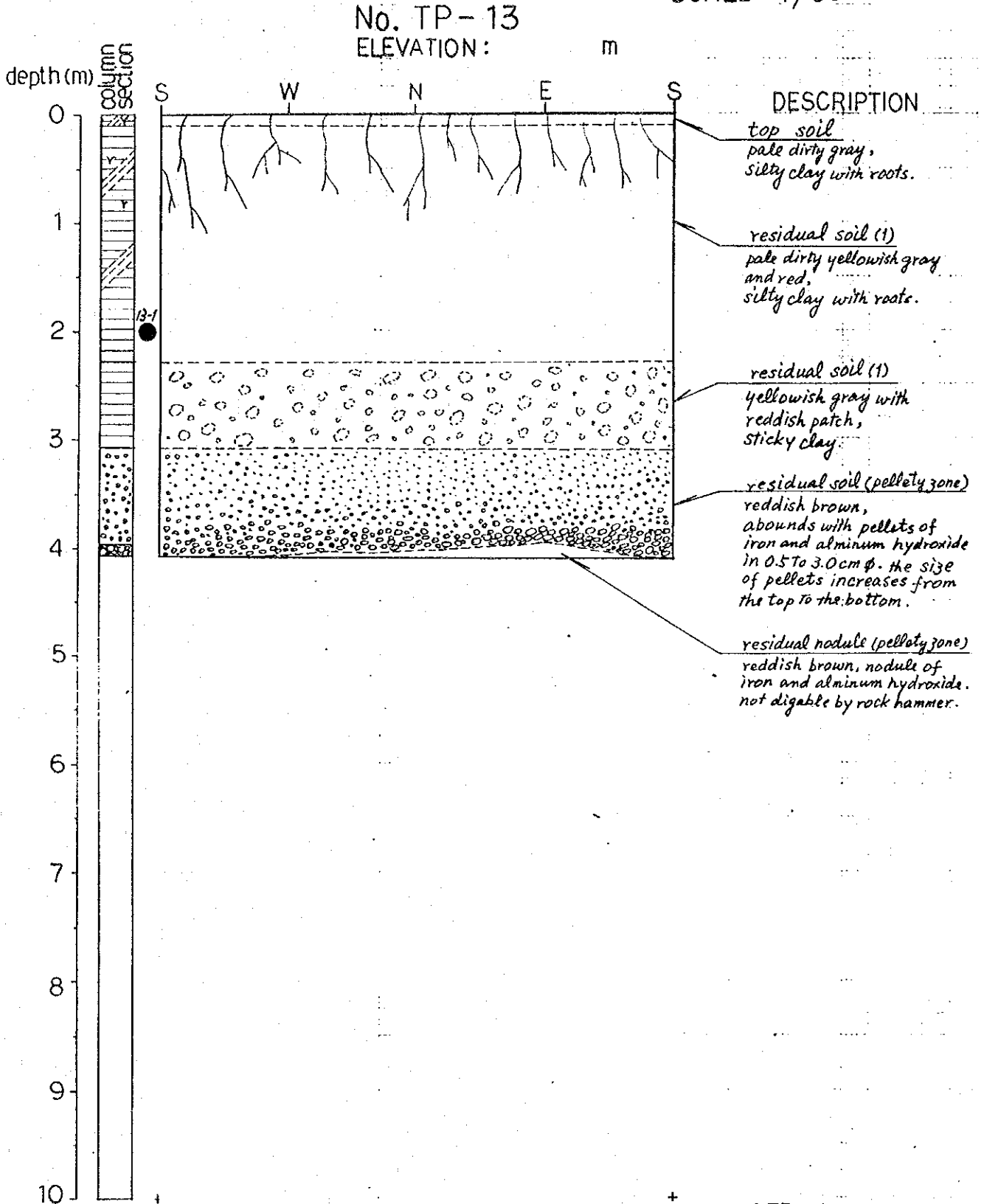


MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (13)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50



● sampling position
(No.)

LOGGED by T. KAM
CHECKED by K. HAYASHI

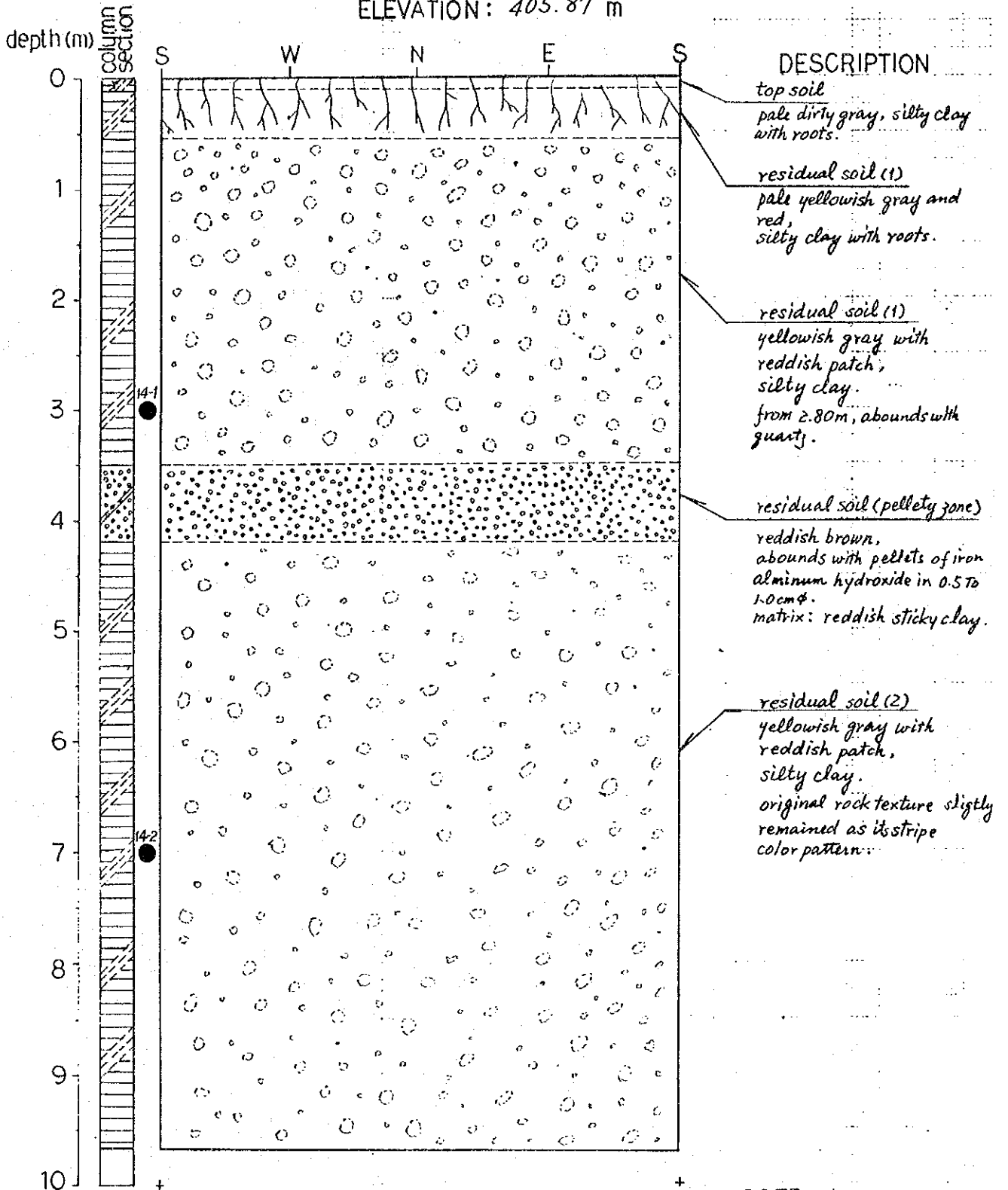
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (14)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP - 14
ELEVATION: 405.87 m



● sampling position (No.)

LOGGED by TAKAM
CHECKED by K. HAYASHI

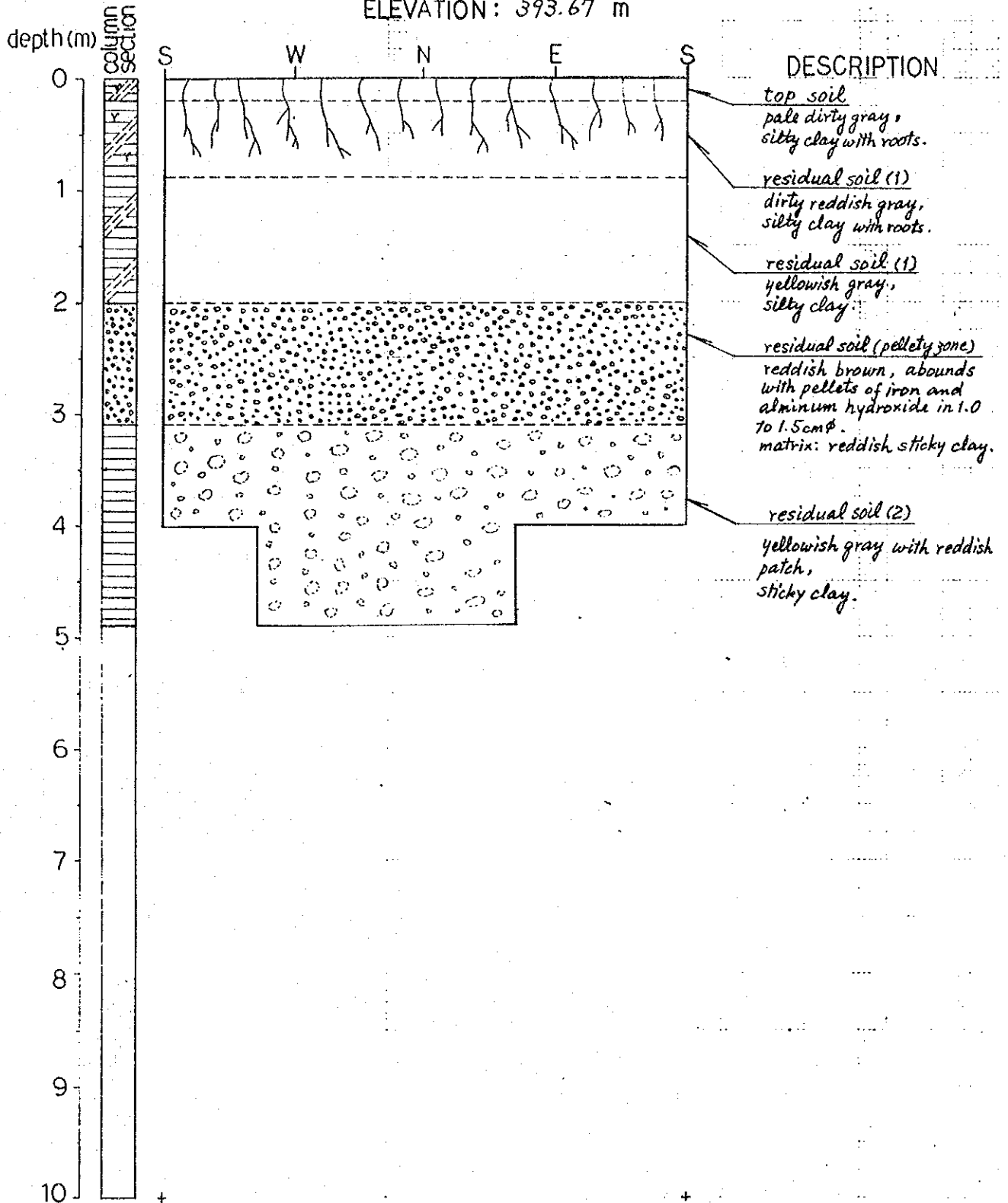
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (15)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP-15
ELEVATION: 393.67 m



● sampling position (No.)

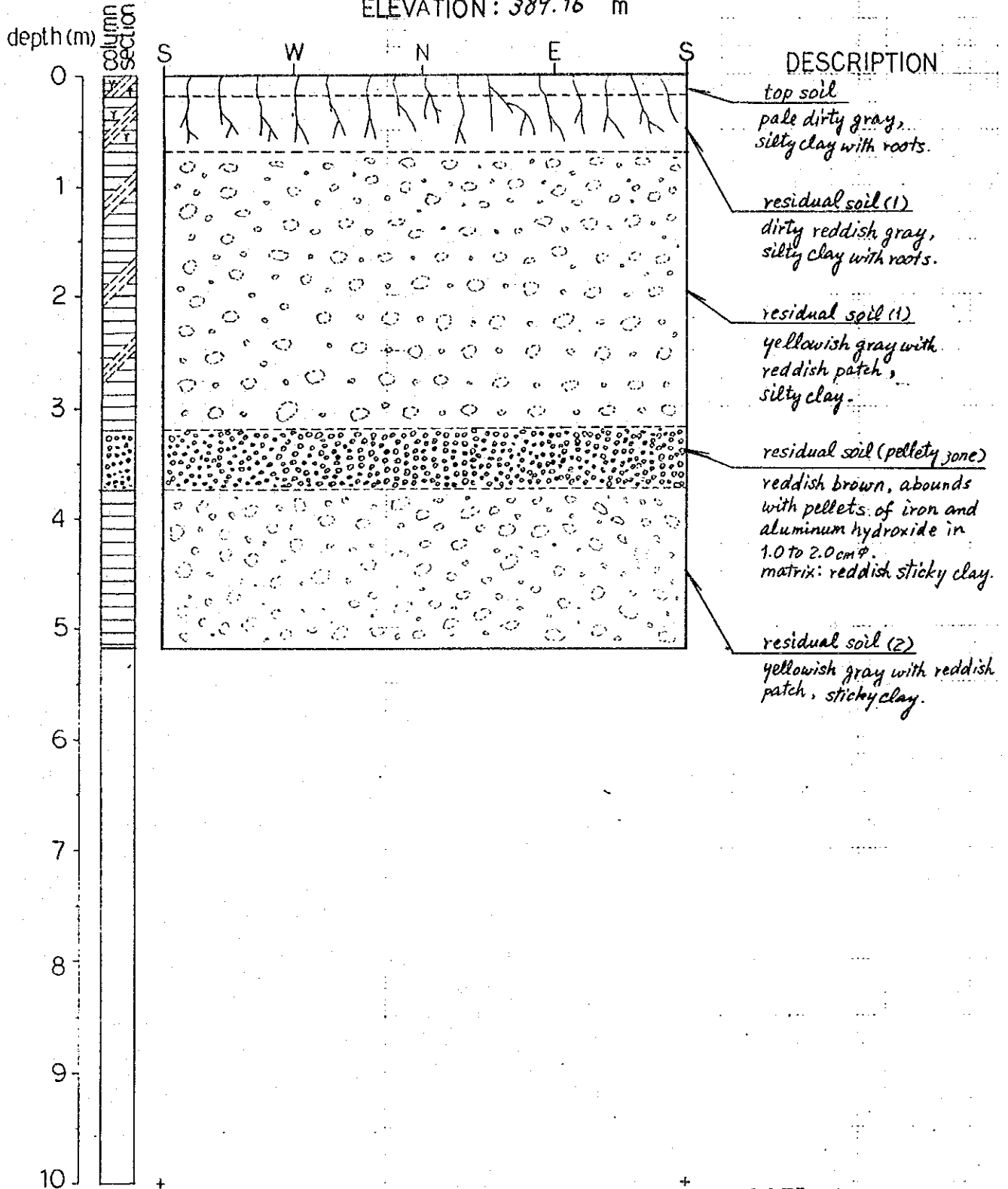
LOGGED by TAKAM.
CHECKED by K. HAYASHI

MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (16) GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP-16
ELEVATION: 389.16 m



● sampling position (No.)

LOGGED by TAKAM
CHECKED by K. HAYASHI

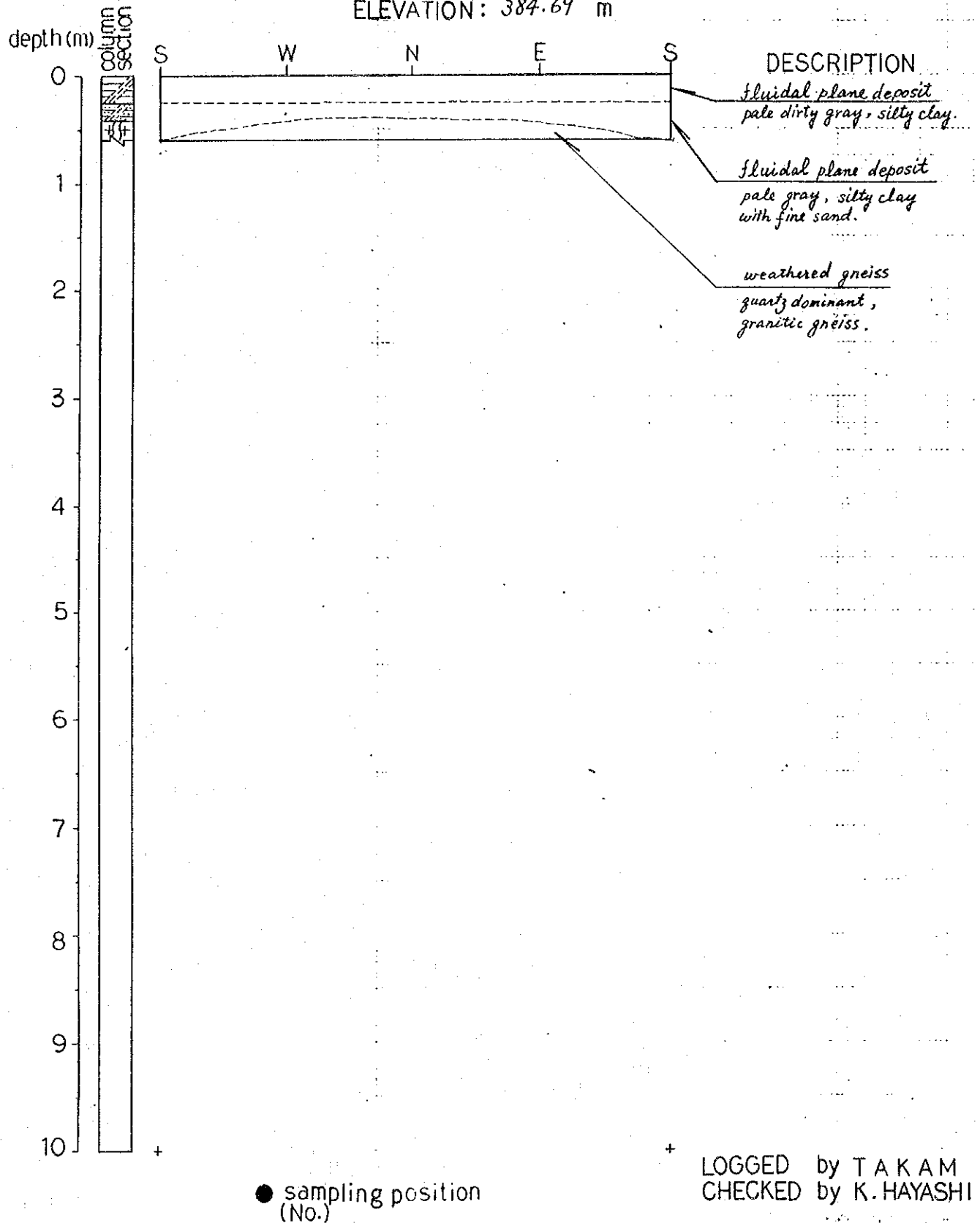
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.4 (17)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP-17
ELEVATION: 384.69 m



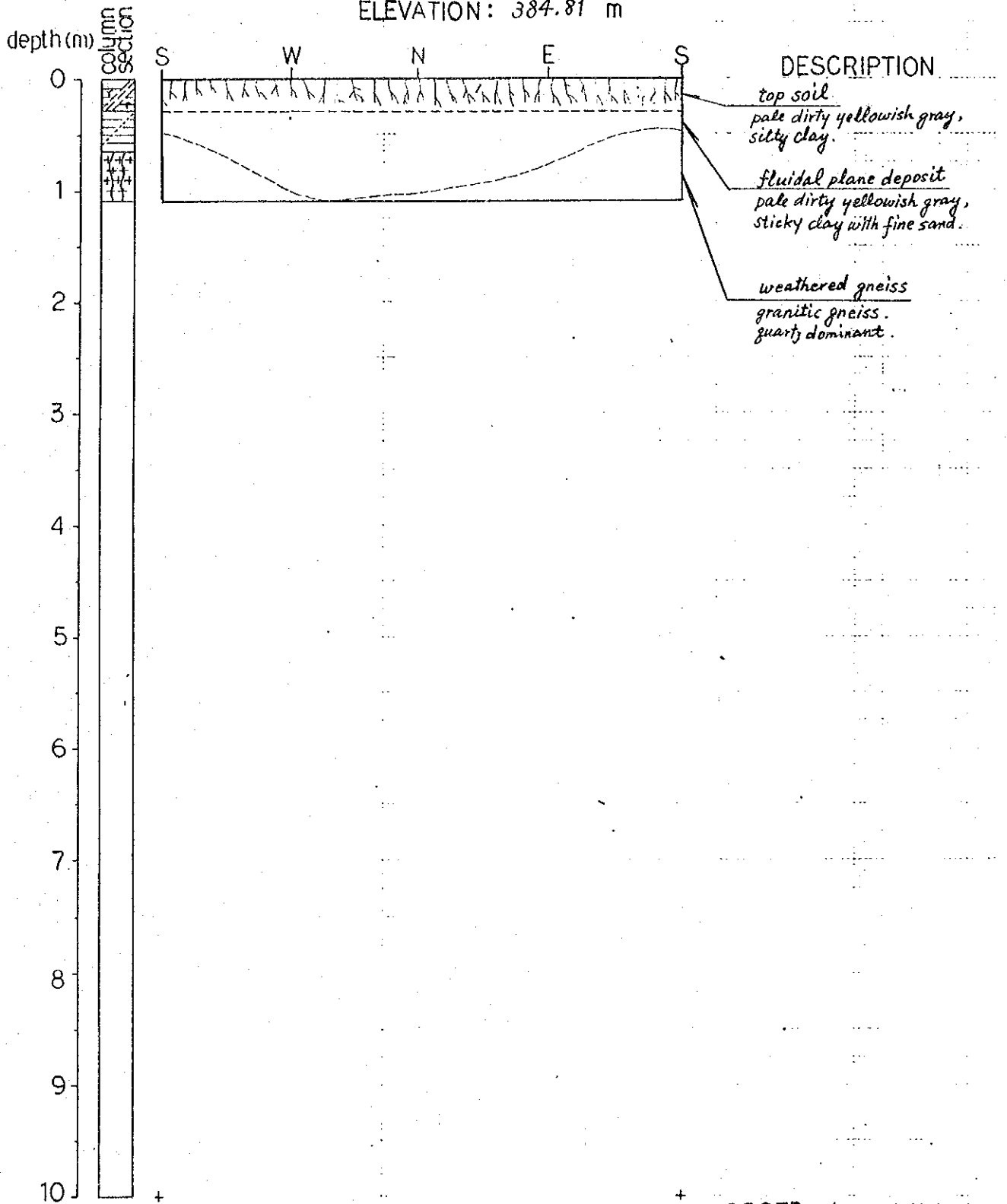
MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig 2.4.4 (18)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP-18
ELEVATION: 384.81 m



● sampling position (No.)

LOGGED by T A K A M
CHECKED by K. HAYASHI

MEMVE ELE HYDROELECTRIC POWER PROJECT

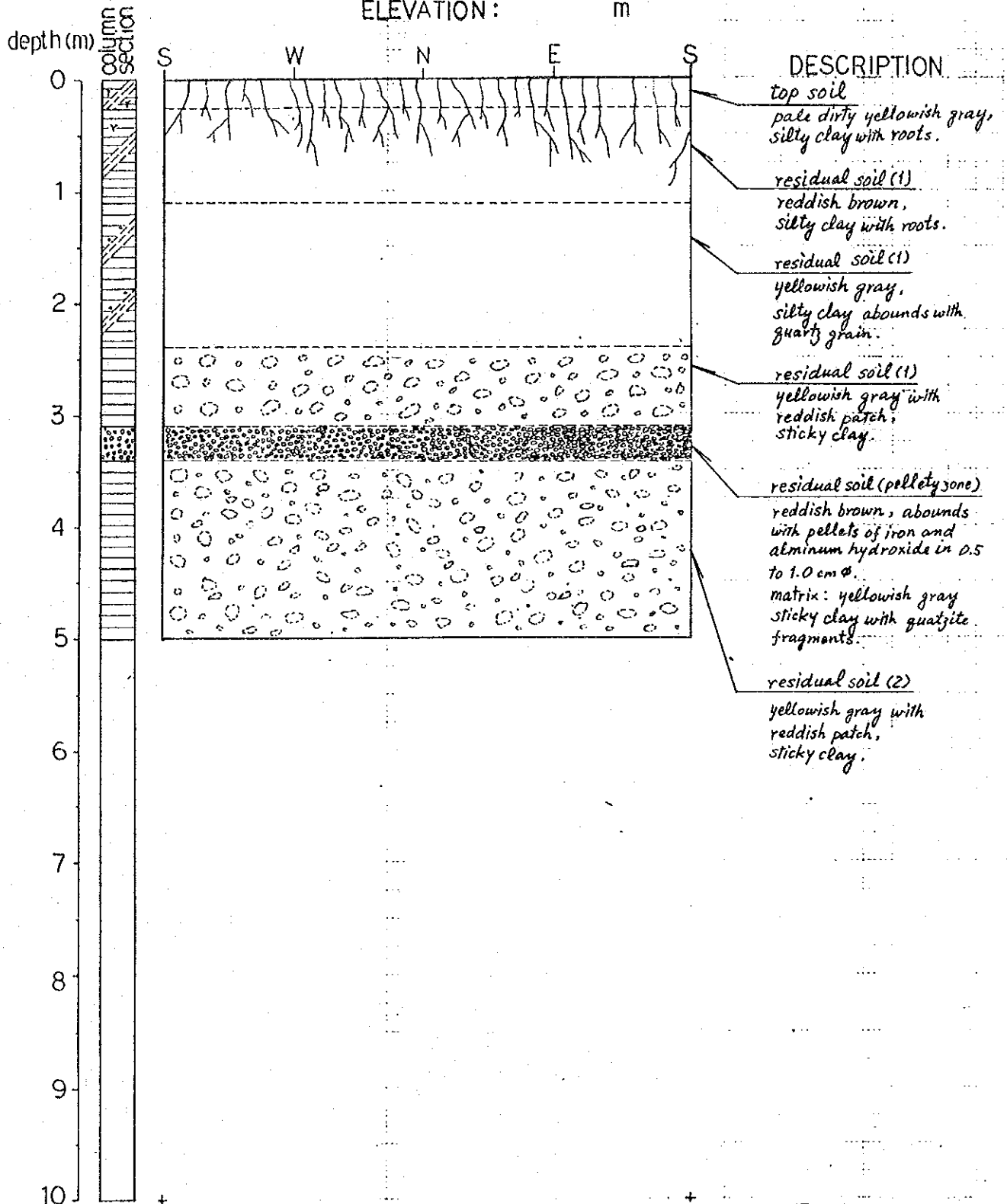
Fig. 2.4.4 (19)

GEOLOGICAL LOG OF TEST PIT

SCALE 1/50

No. TP-19

ELEVATION: m



● sampling position (No.)

LOGGED by T A K A M
CHECKED by K. HAYASHI

Location of the Penetration Test Points

SPOT NO	X-COORDINATION	Y-COORDINATION	ELEVATION(m)
PP 1	499101.771	28337.421	385.512
PP 2	498633.396	27654.258	384.738
PP 3	498356.225	28041.942	384.144
PP 4	497829.007	27493.723	386.963
PP 5	497916.118	28450.881	386.869
PP 6	497839.453	28627.499	382.615
PP 7	497203.327	28789.346	412.967
PP 8	498754.871	28542.348	384.494
PP 9	497833	26180	397.5
PP 10	497869	25902	397.5
PP 11	497784	25969.5	397.5

MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.5 (1)

GEOLOGICAL LOG OF PENETRATION TEST

SCALE 1/50

No. PP - 1
ELEVATION : 385.51 m

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LOGGED by K. HAYASHI

depth	elevation	rock or type formation	column section	description	N Value				
					0	10	20	30	40
0	0.50	385.01	top soil	blackish brown, very fine grained sand with organic material.					
1	1.00	384.51		pale yellowish gray, very fine grained sand					
	1.50	384.01	fluidal plane deposit	pale yellowish gray, clay with very fine grained sand. high moisture contents and sticky.					
2	2.25	383.26	Strongly weathered gneiss	pale yellowish green, soften and became sandy due to weathering					
	2.39	383.12	weathered gneiss	pale greenish gray, medium grained granitic gneiss. hard.					
3									
4									
5									
6									
7									
8									
9									

MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.5 (3)

GEOLOGICAL LOG OF PENETRATION TEST

SCALE 1/50

No. PP - 3
ELEVATION: 384.14 m

CARRIED OUT by TAKAM
CHECKED &
LOGGED by K. HAYASHI

depth	elevation	rock or type formation	column section	description	N Value					
					0	10	20	30	40	50
0	0.50	383.64	(f)	pale whitish gray, fine grained sand, homogeneous grained quartz.						
1	1.00	383.14	(vf)	pale whitish gray, very fine grained sand, quartz dominant.						
2	1.86	382.28	(vf)	pale brownish gray, very fine grained sand with organic material, very loose.						
	2.50	381.64	(vf)	pale whitish gray, very fine grained sand, quartz dominant.						
3	3.00	381.14	(vf-f)	pale whitish gray, very fine ~ coarse grained sand, quartz dominant and grain size changed gradually up to 5.00 m in depth.						
	3.50	380.64	(f-m)	bigger grained quartz colored yellowish.						
4	4.00	380.14	(m)							
	4.50	379.64	(m-c)							
5	5.00	379.14	(c)							
6										
7										
8										
9										

MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.5 (4)

GEOLOGICAL LOG OF PENETRATION TEST

SCALE 1/50

No. PP- 4
ELEVATION : 386.96 m

CARRIED OUT by TAKAM
CHECKED &
LOGGED by K.HAYASHI

depth	elevation	rock or type formation	column section	description	N Value					
					0	10	20	30	40	50
0				blackish brown, organic clay. high moisture contents and sticky, very soft.						
1	1.00	385.96								
	1.50	385.46		pale blackish brown, very fine grained sand and organic clay. sticky.						
2	2.00	384.96		pale yellowish white and brown, very fine grained sand with organic clay, and clay.						
	2.50	384.46		pale gray and pale yellowish white, very fine sand and clay. sticky						
3				pale yellowish white, clay, sticky, kaolinitized strongly.						
	3.50	383.46								
4				pale whitish gray, clay, sticky, kaolinitized strongly.						
5	5.00	381.96								
			fluidal plane deposit							
6										
7										
8										
9										

MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.5 (5)

GEOLOGICAL LOG OF PENETRATION TEST

SCALE 1/50

No. PP- 5
ELEVATION: 386.87 m

CARRIED OUT by TAKAM
CHECKED &
LOGGED by K. HAYASHI

depth	elevation	rock or type formation	column section	description	N Value				
					0	10	20	30	40
0			X	yellowish brown. silt with plant roots.					
0.50	386.37	top soil							
1	385.87			yellowish brown, silt					
2	384.87			pale yellowish brown, silt with fine grained sand. medium moisture contents and not sticky.					
3				stripe color pattern of yellowish orange, pale gray and yellowish white, silty clay with fine grained sand. high moisture contents and sticky.					
3.50	383.37								
4				yellowish orange. Clay contains a small quantity of iron hydroxide pellet. high moisture contents and sticky.					
4.50	382.37	residual soil							
5	381.87	(2)		stripe color pattern and yellowish orange. clay					
6									
7									
8									
9									

MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.5 (6)

GEOLOGICAL LOG OF PENETRATION TEST

SCALE 1/50

No. PP - 6

ELEVATION : 382.62 m

CARRIED OUT by TAKAM

CHECKED &

LOGGED by K. HAYASHI

depth	elevation	rock or type formation	column section	description	N Value				
					0	10	20	30	40
0	0.50 382.12	residual soil (pellety zone)	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	reddish brown, iron - aluminum hydroxide pellets.					
1			yellowish orange with reddish brown patches, clay contains a small quantity of iron hydroxide. high moisture contents and sticky						
2	2.00 380.62		○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	yellowish orange with reddish brown patches, clay contains a small quantity of iron hydroxide and fine grained sand. medium moisture contents and slightly sticky.					
3			○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	yellowish orange, clay. high moisture contents and sticky.					
4	4.00 378.62		○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○						
5	5.00 377.62	residual soil (2)	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○						
6									
7									
8									
9									

MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.5 (8)

GEOLOGICAL LOG OF PENETRATION TEST

SCALE 1/50


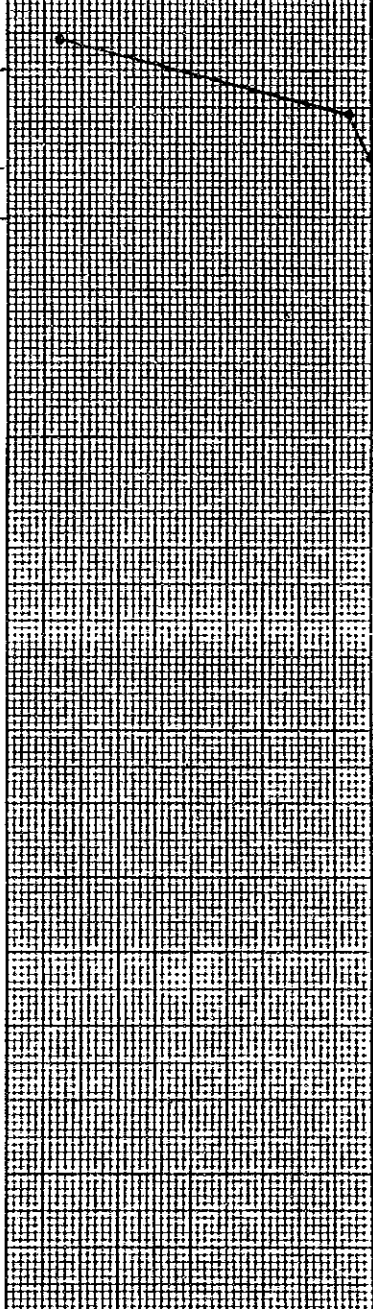


No. PP - 8

ELEVATION: m

CARRIED OUT by TAKAM

CHECKED &

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depth	elevation	rock or type formation	column section	description	N Value					
					0	10	20	30	40	50
0		<i>fluidal plane deposit</i>		<i>pale gray. silty sand. low moisture contents.</i>						
	0.50									
1		<i>Strongly weathered gneiss</i>		<i>medium grain granitic gneiss. pale yellow.</i>						
	0.85			<i>strongly weathered and soften.</i>						
	1.06	<i>weathered gneiss</i>		<i>ditto.</i>						
2										
3										
4										
5										
6										
7										
8										
9										

MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.5 (9)

GEOLOGICAL LOG OF PENETRATION TEST

SCALE 1/50

No. PP - 9

ELEVATION : m

CARRIED OUT by TAKAM

CHECKED &

LOGGED by K. HAYASHI

depth	elevation	rock or type formation	column section	description	N Value					
					0	10	20	30	40	50
0	0.50	fluidal Plane deposit	(vf)	pale whitish gray, very fine grained sand contains a small quantity of organic material						
1	1.00		(vf)	pale whitish gray, very fine grained sand. homogeneous grain size.						
	1.50		(f)	pale whitish gray, fine grained sand. quartz dominant.						
2	2.00		(vf)	pale whitish gray, very fine grained sand.						
			(vf-f)	pale whitish gray, very fine - fine grained sand. grain size changed gradually.						
3	3.00		(vf)	pale whitish gray, very fine grained sand.						
	3.50		(f)	pale brownish white, fine grained sand. contents a small quantity of coarse grained quartzite rounded fragments (φ 1-2cm).						
4										
5	5.00									
6										
7										
8										
9										

MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.5 (10)

GEOLOGICAL LOG OF PENETRATION TEST

SCALE 1/50

No. PP-10

ELEVATION: m

CARRIED OUT by TAKAM

CHECKED &

LOGGED by K. HAYASHI

depth	elevation	rock or type formation	column section	description	N Value					
					0	10	20	30	40	50
0	0.50		(4-f)	pale whitish gray, very fine fine grained sand contains a small quantity of organic material.						
1			(5)	pale whitish gray with dark green, fine grained sand with decomposed gneiss become dark greenish clayey silt due to strong weathering.						
2	2.50	fluidal plane deposit	(5)							
3										
4										
5										
6										
7										
8										
9										

MEMVE ELE HYDROELECTRIC POWER PROJECT

Fig. 2.4.5 (11)

GEOLOGICAL LOG OF PENETRATION TEST

SCALE 1/50

No. PP- 11

ELEVATION: m

CARRIED OUT by TAKAM
CHECKED &
LOGGED by K. HAYASHI

depth	elevation	rock or type formation	column section	description	N Value					
					0	10	20	30	40	50
0	0.50	top soil	(f)	blackish gray and white, fine grained sand with organic material.						
1	1.00	fluidal plane deposit	(f)	pale yellowish and whitish gray, fine grained sand						
	1.50	collapse soil	(f)	stripe pattern of yellow and pale gray, clay with fine grained sand.						
2		fluidal plane deposit	(f)	pale yellowish gray, fine grained sand with clay. high moisture contents.						
3	3.00		(f)							
4		residual soil (2)	(f)	stripe color pattern of pale yellow, pale yellowish brown, white and brown, clay with fine grained sand.						
5			(f)	original rock texture has been slightly remained as its stripe color pattern, and sericite is observed.						
5	5.50		(f)	high moisture contents and sticky. soft.						
6										
7										
8										
9										

