



PT. Indra Karya (Persero)
Consulting Engineers

Fig. 1.1.6 DRILL LOG

HOLE No. B - 7

PROJECT		JATIBARANG-DAM		DEPTH		70.00 N		ELEVATION		90.424 M	
SITE		COORDINATE N: 9222170.403		INCLINATION		VERTICAL		DRILL RIG		TOHO	
CLIENT		DATE		DRILLED BY		BASOR		LOGGED BY		DIKIPRANOWO	
		Aug. 27, 1997		Nov. 15, 1997							
SAMPLING	DATE	DEPTH	ELEVATION	COLUMN SECTION	DESCRIPTION	GROUND WATER LEVEL	ROCK GRADE	CORE RECO VERY %	R Q D %	WATER PRESSURE TEST LUGEON VALUE	
	AUG. 27	1			RIVER DEPOSITE, loose condition			70	0		
	AUG. 28	2	89.424					70	0		
	AUG. 28	3			MUDDY TUFF with pumice, hornblende & wood, blackish grey	D		100			
	AUG. 29, 1997	3.30	87.124		PUMICE TUFF, yellowish grey	D		100	20		
	1997	3.55	86.874		TUFF, SANDSTONE, fine ~ very fine graine, yellowish grey	D					
		4.35	86.074		MUDDY TUFF, blackish grey	D		100	0		
	AUG. 29, 1997	4.75	85.674					100	0		
					SILTY TUFF with tuff. sandstone med. grained (5.75 ~ 6.05), brownish grey	D		100	0		
	AUG. 30, 1997	8.70	81.724					100	20		Lugeon Value = 55.78 Critical Pressure = kg/cm ²
	AUG. 30, 1997							100	25		
	AUG. 30, 1997							100	18		
	AUG. 30, 1997							90	25		
	SEPTEMBER 01, 1997							100	30		
								100	28		Lugeon Value = 3.61 Critical Pressure = 3.19 kg/cm ²
								100	35		
								100	40		
								100	60		
								100	30		
	SEPTEMBER 02, 1997							100	35		Lugeon Value = 4.57 Critical Pressure = 4.19 kg/cm ²
								100	30		
								100	35		
								100	30		
								100	15		
	PT. 03 '97							100			

VOLCANIC BRECCIA, compact, grey, with boulders (10.80 ~ 10.80)

CM-H

SEPT. 11	42	100	20	CL-H	CONGLOMERATE , poor cemented , grey	47.924	61.924	27.00	63.424	Δ Δ
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[illegible]

DATE	TIME	DEPTH (m)	ROCK QUALITY DESIGNATION	DESCRIPTION	LOG	LOGEON VALUE	CRITICAL PRESSURE	UNIT
OCT. 30, 1997	00	45.00	CL-L	SANDSTONE, med. grained with pebble, dark grey				
		46.00	CL-H	TUFF. SANDSTONE, fine - very fine grained, yellowish grey				
		46.80	CL-H	PUMICE TUFF, fine, yellowish white				
		48.15	CL-H	MUDDY TUFF, dense, brownish grey				
		48.50	CL-H	PUMICE TUFF, fine, yellowish white				
		48.50	CL-H	MUDDY TUFF, dense, brownish grey				
		49.40	CL-H	PUMICE TUFF, very fine, yellowish white				
		50.10	CL-H	TUFFACEOUS SANDSTONE, fine grained, compact, with lamination, brownish grey				
		50.40	CL-H	VOLCANIC BRECCIA, poor cemented, grey				
		52.00	CL-L	VOLCANIC CONGLOMERATE with matrix sand & hornblende crystal, brownish grey				
		53.05	CM-H	VOLCANIC BRECCIA, compact, whitish grey				
		53.20	CL-H	SANDSTONE, coarse grained, light grey				
		56.50	CL-H	TUFF with wood fragment, light grey				
		56.75	CL-H	MUDDY TUFF (lower grading to sandy), dark grey				
		57.30	CL-H	TUFF. SANDSTONE with pumice fragment, light grey				
		57.75	CL-L	CONGLOMERATE, poor cemented, light grey				
		60.15	CL-L	SANDSTONE, med. grained, greyish white				
		63.65	CL-L	CONGLOMERATE, poor cemented				
		63.10	CL-L	SANDSTONE, medium - fine grained, grey				
		63.35	CL-L	TUFF, fine, light grey - yellowish white				
		63.60	CL-L	SANDSTONE, medium grained				
		63.40	CL-L	TUFF, fine, yellowish white				
		64.50	CL-L	SANDY TUFF, well compact - dense, yellowish brown				
		64.40	CL-L	SANDY TUFF, rather low compact, grey				
		65.90	CM-H	VOLCANIC BRECCIA (lapilli tuff), included tuff (66.30 - 66.45), light grey				
		67.50	CL-L	SAND, loose, whitish grey				
		68.00	CL-H	SANDY TUFF, dense, yellowish grey				
		68.30	CL-L	SANDSTONE, medium grained, poor cemented - grey				
		68.90	CL-H	SANDY TUFF, dense, light grey				
		69.40	CL-L	SANDSTONE, medium grained, poor cemented, grey				
		69.95	CL-L	TUFF, soft, light grey				
		70.00		END OF DRILLING				

* R. Q. D. = Rock Quality Designation = (Total Length of Cylindric Cores longer than 10 cm) / (Total Core Length) x 100 %

* LOGEON VALUE is ltr/min/mtr under injection water pressure by 10 kgf/cm²

* G. W. L. = Ground Water Level = Height of Spring Water



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Fig. 1.1.7 DRILL LOG

HOLE No. B - 8

PROJECT		JATIBARANG DAM		DEPTH		70.00 M		ELEVATION		300.00 M				
SITE		COORDINATE N: 922228.423		INCLINATION		VERTICAL		DRILL RIG		TONE ID-5				
CLIENT		DATE: Aug 23, 1997		DRILLED BY		ABDUL SAMI		LOGGED BY		DIDIK PRANOWO				
SAMPLING	DEPTH	ELEVATION	COLUMN SECTION	DESCRIPTION	GROUND WATER LEVEL	ROCK GRADE	CORE RECO VERY %	R Q D		WATER PRESSURE TEST LUGEON VALUE				
								%		%				
	1			RIVER DEPOSITE, sand & gravel (loose)			80	50	0	10	20	30	40	50
	2						70	50	0	10	20	30	40	50
	3	87.226					70	50	0	10	20	30	40	50
				TUFF SANDSTONE, fine - very fine, soft, with punice, brown		D	80	50	0	10	20	30	40	50
		86.476		SANDSTONE, fine, grey		D	80	50	0	10	20	30	40	50
		86.226		MUDDY TUFF, fine, soft, dark brown		D	80	50	0	10	20	30	40	50
		86.126		SANDSTONE, medium grained, soft, brown		D	80	50	0	10	20	30	40	50
		85.576		MUDDY TUFF, fine, soft, dark brown		D	80	50	0	10	20	30	40	50
		85.326					80	50	0	10	20	30	40	50
				SANDY TUFF, soft - dense, brown		D	100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
				H. W. VOLCANIC BRECCIA, grey		CL-L	100	50	0	10	20	30	40	50
				PUNICE TUFF, compact, light brown		CL-H	100	50	0	10	20	30	40	50
				VOLCANIC BRECCIA, compact, grey		CM-H	100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
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							100	50	0	10	20	30	40	50
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							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50
							100	50	0	10	20	30	40	50

DATE	NO.	DEPTH (m)	SOIL DESCRIPTION	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	SHRINKAGE (%)	UNSATURATED WATER CONTENT (%)	FLUIDITY INDEX	GROUP SYMBOL	UNIT WEIGHT (kg/cm³)	CRITICAL PRESSURE (kg/cm²)	LIQUEFACTION VALUE
1997	34	100	Δ Δ Δ Δ	44.35	45.676					CL-H			
1997	35	100	Δ Δ Δ Δ	44.86	45.476					CL-H			
1997	36	100	Δ Δ Δ Δ	45.00	45.026					D			
1997	37	100	Δ Δ Δ Δ	45.35	44.676					CL-H			
1997	38	100	Δ Δ Δ Δ	45.00	44.026					D			
1997	39	100	Δ Δ Δ Δ	48.50	41.526					D			
1997	40	100	Δ Δ Δ Δ	49.00	41.026					D			
1997	41	100	Δ Δ Δ Δ	49.85	40.476					CL-H			
1997	42	100	Δ Δ Δ Δ	50.60	39.426					CL-H			
1997	43	100	Δ Δ Δ Δ	51.50	36.526					CL-L			
1997	44	100	Δ Δ Δ Δ	51.70	36.226					CL-L			
1997	45	100	Δ Δ Δ Δ	54.00	36.026					CL-L			
1997	46	100	Δ Δ Δ Δ	54.20	35.826					CL-L			
1997	47	100	Δ Δ Δ Δ	54.60	35.426					CL-L			
1997	48	100	Δ Δ Δ Δ	55.50	34.026					CL-L			
1997	49	100	Δ Δ Δ Δ	56.00	34.026					D			
1997	50	100	Δ Δ Δ Δ	60.00	30.026					D			
1997	51	100	Δ Δ Δ Δ							D			
1997	52	100	Δ Δ Δ Δ							D			
1997	53	100	Δ Δ Δ Δ							D			
1997	54	100	Δ Δ Δ Δ							D			
1997	55	100	Δ Δ Δ Δ							D			
1997	56	100	Δ Δ Δ Δ							D			
1997	57	100	Δ Δ Δ Δ							D			
1997	58	100	Δ Δ Δ Δ							D			
1997	59	100	Δ Δ Δ Δ							D			
1997	60	100	Δ Δ Δ Δ							D			
1997	61	100	Δ Δ Δ Δ							D			
1997	62	100	Δ Δ Δ Δ							D			
1997	63	100	Δ Δ Δ Δ							D			
1997	64	100	Δ Δ Δ Δ							D			

END OF DRILLING

R. Q. D. = Rock Quality Designation = (Total Length of Cylindric Cores longer than 10 cm) / (Total Core Length) x 100 %

LUGON VALUE is ltr/min/mtr under injection water pressure by 10 kgf/cm²

G. W. L. = Ground Water Level = Height of Spring Water

Consulting Engineers

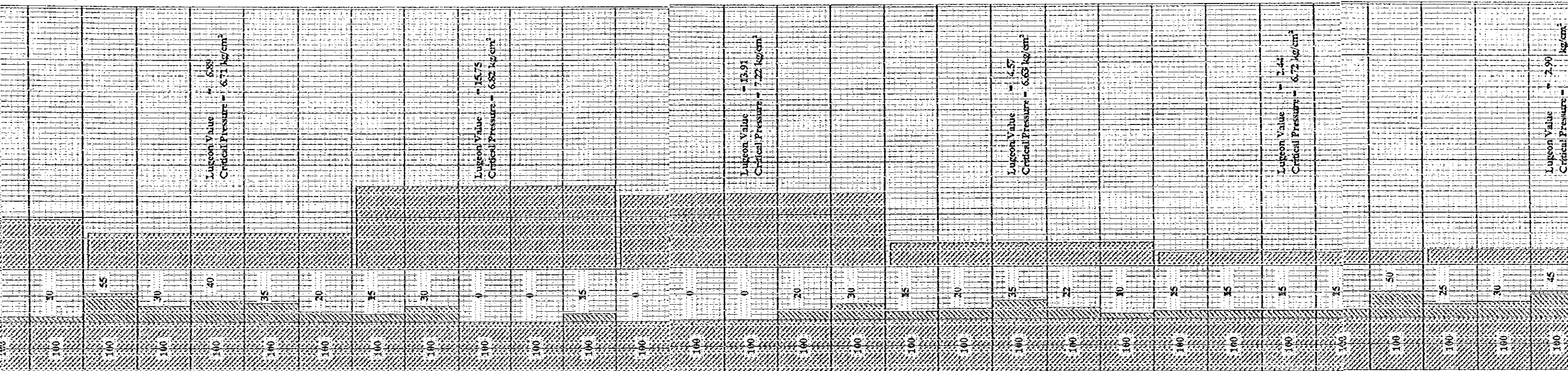
Fig. 1.1.8 DRILL LOG

HOLE No. B-9

PROJECT		JATIBARANG DAM				DEPTH		90.00 M.		ELEVATION		M.		
SITE		COORDINATE		X-9722367084 Y-428042750		INCLINATION		VERTICAL		DRILL RIG		T.O.H.O.		
CLIENT		JICA		DATE Nov. 05, 1997 till Nov. 27, 1997		DRILLED BY		EASORE		LOGGED BY		DIDIN PRANOWO		
DATE	SAMPLING	DEPTH	ELEVATION	COLUMN SECTION	DESCRIPTION	GROUND WATER LEVEL	ROCK GRADE	CORE RECO VERY %	R Q D %	WATER PRESSURE TEST LUGEON VALUE				
NOVEMBER 05, 1997		0.50	170.488	X	TOP SOIL , soft , brown									
	1				SANDY TUFF , soft , light brown		D	100	0					
	2					100	0							
	3					100	0							
	4					100	0							
	5					100	0							
	6					100	0							
	7	71.15	163.838			90	0	0	0					
NOVEMBER 06, 1997	8				TUFF SANDSTONE , soft ~ dense , brownish grey		D	100	0					
	9	92.35	161.638			20	0	0	0					
	10				SANDSTONE , fine grained , soft ~ dense with gravels (10.00 ~ 10.10) & tuff (11.80 ~ 12.00)	80	0	0	0					
	11					100	0	0	0					
	12					100	0	0	0					
	13					100	0	0	0					
		14	14.60	156.388			100	0	0	0				
	15			" " "	TUFF , soft ~ dense , light brown with conglomerate (15.90 ~ 16.00)		CL - L	100	0					
	16	16.00	154.988	" " "	SANDSTONE , medium grained , brownish grey		CL - L	100	0					
	17	16.30	154.688	" " "			CL - L	100	30					
	NOVEMBER 07, 1997	18			" " "	TUFFACEOUS SANDSTONE , coarse grained , dense , light brown		CL - L	100	40				
		19	19.60	151.388	" " "			CL - L	100	30	Lugeon Value = 17.05 Critical Pressure = 7.51 kg/cm ²			
		20			" " "			CL - L	100	25				
		21			" " "			CL - L	100	10				
							CL - L	85	15					

VOVOV

134.80	136.188	TUFF, dense, light grey ~ brown	CL - L
136.40	134.598	CONGLOMERATIC SANDSTONE, dense, brown included sandstone (40.60 ~ 40.85 & 41.40 ~ 41.70)	CL - H
41.70	129.288	VOLCANIC CONGLOMERATE, dense, grey with sands (44.85 ~ 45.25 & 46.20 ~ 47.35)	CL - H
47.80	123.188	TUFF, dense ~ soft, light brown	CL - H
48.60	122.488		CL - H
		VOLCANIC BRECCIA, compact, grey included conglomeratic s'tone (60.85 ~ 61.20) & sands (65.60 ~ 72.15)	CM - H



[illegible]

F - 1 - 8

* LUGEON VALUE is ltr/min/mtr under injection water pressure by 10 kgf/cm^2

* G. W. L. = Ground Water Level = Height of Spring Water