

DRILL LOG

HOLE NO. B81-15 SHEET NO. 1 OF 2

PROJECT		SAPT GANDAKI PROJECT				DEPTH	50 M	ELEVATION				
SITE		DAM SITE B; RIVER CHANNEL		COORDINATE		INCLINATION	VERTICAL	DRILL RIG	STONE, UD-5			
AVERAGE CORE RECOVERY		91.8%		DATE	FROM APR. 2 TO APR. 9 '82	DRILLED BY	KIDO NORBAHOR		LOGGED BY	KUMAZAWA		
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION	BIT DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY	R. Q. D. & MAX. CORE L.	WATER PRESSURE TEST	DEPTH
									%	50 cm	LUGEON VALUE	
APR 2	1		Riverbed Sand and Gravels.	[Symbol]	Above 1.2 m; Sandy	C <sub>1</sub>	114	RIVER WATER LEVEL; 0.8 m above				1
	2				Below 1.2 m; Gravelly.					2		
	3									3		
	4	4.60			Including a sand layer in 4.1 to 4.3 m in depth.					4		
	5		Fine Sandst.	[Symbol]	Yellowish gray and some weathered.	C <sub>1</sub>						5
	6	5.93			Laminated.					6		
	7		Very Fine Sandstone	[Symbol]	Upper 10 cm; Purple gray and muddy.	C <sub>1</sub>						7
	8	7.30			Some patched and laminated.					8		
	9		Fine Sandst.	[Symbol]	Some greenish gray and patched.	C <sub>1</sub>						9
	10	8.40								10		
	11		Fine Sandst. and Siltstone	[Symbol]	Well laminated. Bedding slip clay; 6 cm. thick.	C <sub>1</sub>						11
	12	9.30								12		
	13		Muddy Sandstone	[Symbol]	Dirty gray colored. Weathered and crackly.	C <sub>1</sub>						13
	14	0.75								14		
	15		Fine Sandstone	[Symbol]	Above 11.85 m; Some greenish and muddy; including white calcareous spots.	C <sub>1</sub>						15
	16				White gray, micaceous and massive.					16		
	17		Laminated and patched.	[Symbol]		C <sub>1</sub>						17
	18	15.02								18		
	19		Muddy Fine Sandst.	[Symbol]	Greenish gray and massive with white calcareous spots.	C <sub>1</sub>						19
	20	16.07								20		
	21		Fine Sandst.	[Symbol]	Gray and massive with some patches.	C <sub>1</sub>						21
	22	17.02								22		
	23		White gray, micaceous and some hard.	[Symbol]		C <sub>1</sub>						23
	24									24		
	25		Laminated; esp. silty and well laminated in 18.75 to 19.05 m	[Symbol]		C <sub>1</sub>						25
	26	22.17								26		
	27		Bedding slip clay; 1 cm th.	[Symbol]		C <sub>1</sub>						27
	28	23.25								28		
	29		Gray and massive.	[Symbol]		C <sub>1</sub>						29
	30	24.30								30		
	31		Dark gray and patched.	[Symbol]		C <sub>1</sub>						31
	32	25.25								32		
	33		Laminated and/or patched. Bedding slip with clay seam.	[Symbol]		C <sub>1</sub>						33
	34	26.40								34		
	35		Some laminated. Bedding slip fault; 1 cm. thick.	[Symbol]		C <sub>1</sub>						35
	36	27.40								36		
	37		Gray and massive. Includ. vertical cracks	[Symbol]		C <sub>1</sub>						37
	38									38		
	39		White gray, massive and micaceous.	[Symbol]		C <sub>1</sub>						39
	40									40		
	41		Includ. fine sandstone portions.	[Symbol]		C <sub>1</sub>						41
	42									42		

LOC FORM-B

HOLE NO. B81-15

\*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/cm<sup>2</sup>  
 \*DEPTH and ELEVATION are in meter  
 \*DIAMETER is in millimeter

# DRILL LOG

HOLE NO. B81-15 SHEET NO. 2 OF 2

PROJECT		SITE		COORDINATE		DEPTH		ELEVATION			
AVERAGE CORE RECOVERY		DATE		FROM	TO	INCLINATION		DRILL RC			
LOGGED		DRILLED		ROCK CLASSIFICATION		CORE RECOVERY		WATER PRESSURE TEST			
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION	BAT & DIAMETER	GROUNDWATER LEVEL	R. Q. D. & MAX. CORE L. 50 cm	LUGEON VALUE	DEPTH
					Massive.	CII					
					32.2 to 32.8 m; Laminated.		32.00				
			Medium to Coarse Sandstone		35.0 to 39.7 m; White spots and grayish soft rock patches are scattered.						
					Cores are long and good condition.						
					40.3 to 41.3 m; Dark colored.	B					
					Long cores.						
					43.4 to 44.35 m } Pebble and 44.57 to 44.82 m } patch layers.						
					45 to 46.5 m; Including some pebbles and soft rock patches.						
	47.28				Boundary dips in 27°						
			Fine Sandstone		Dark gray and massive; including patches.						
	50.00				Long and some hard cores.		50.00				

LOC FORM-B

HOLE NO. B81-15

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DRILL LOG

HOLE NO. B81-16 SHEET NO. 1 OF 2

PROJECT		SAPT GANDAKI PROJECT				DEPTH	50 M	ELEVATION					
SITE		DAM SITE C; RIGHT BANK		COORDINATE	INCLINATION		VERTICAL	DRILL RIG	TOPE, UD-5				
AVERAGE CORE RECOVERY		96.2%		DATE	FROM MAR.23'80	TO MAR.31'82	DRILLED	by KIDO, KUMAL	LOGGED	by KUMAZAWA			
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION	BIT & DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY		WATER PRESSURE TEST		DEPTH
									%	cm	R. Q. D. & MAX. CORE L.	LUGEON VALUE	
MAR 23	1				Pale brown overburden.		99						1
	2				Including decomposed rocks.								2
	3												3
	4												4
	5												5
	6												6
	7												7
	8												8
	8.60												8.60
	9.20		Fine Sandst.		Gray, hard and calcareous.		66 (M. Bit - Spindle)						9.20
	10		Weathered Sandstone		Brownish weathered fine sandstone.								10
	11				Laminated.								11
	11.50												11.50
	12.10		Fractured rock		Fractured and clayey								12.10
MAR 25	13		Siltstone		Dark gray and cracky								13
	13.90							13.95					13.95
	14												14
	15		Fine Sandst.		Greenish gray, massive and some weak.								15
	15.25				14.85m; Minor fault clay; 1cm. th.								15.25
	16		Fine Sandst.		White gray and laminated.								16
	16.35				16.35m; Fault clay; 2cm. thick.								16.35
	16.75		Siltstone		Includ. folded laminae & slickensides.								16.75
	17		Fine Sandst.		Gray and some laminated.								17
	17.80				Includ. black lignitic fragments.								17.80
	18		Fine Sandst.		Patched.								18
	18.60				18 to 19.4 m; Cracky								18.60
	19				Laminated; high dipped.								19
	19.40												19.40
	20		Medium Sandstone		White gray and some laminated.								20
	21				19.8 to 21.7 m; Cracky and/or fractured.								21
	21.70												21.70
	22		Mudstone		Cracky and weak.								22
	23				Sandy								23
	23.60												23.60
	24		Fine Sandst.		Patched and weak.								24
	24.50												24.50
	25		Fine Sandst.		Pale greenish gray.								25
	25.90				24.5 to 25.9 m; Fractured zone.								25.90
	26				Laminated and patched structure.								26
	27												27
	27.30												27.30
	28		Fine Sandst.		White gray and massive.								28
	28.40				27.4 to 28.4 m; Fractured zone.								28.40
	29				Cracky.								29
	29.50												29.50

LOG FORM-B

HOLE NO. B81-16

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 \*LUGEON VALUE is l/min/m under injection water pressure of 10<sup>5</sup>/cm<sup>2</sup>  
 \*DEPTH and ELEVATION are in meter  
 \*DIAMETER is in millimeter

DRILL LOG

HOLE NO. B91-16 SHEET NO. 2 OF 2

PROJECT		SITE		COORDINATE		DEPTH	ELEVATION							
AVERAGE CORE RECOVERY		DATE	FROM	TO	DEPTH DRILLED	DRILL RIG	ELEVATION LOGGED							
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION	BIT & DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY	R. Q. D.	WATER PRESSURE TEST LUGEON VALUE	DEPTH		
MAR 28	31		Fine Sandstone		29.95 to 31.8 m; Rusted with brown and some cracky.	C <sub>L</sub> to C <sub>M</sub>			100		2.5 LV	31		
	32				Long cores and good; including sandst. patches.							100		32
	33				A vertical crack rusted with reddish brown.							100		33
	34			34.35 to 35.1 m; A reddish brown vertical crack.								34		
	35			Some coarse; medium sandst.								35		
	36			35.5 to 37.0 m; Fractured.								36		
	37.00		Fine Sandst.		37.0 to 37.05 m; Fractured. Dark gray, massive & muddy.	D			70		2.46 LV	37		
	38.15											38		
	39.45		Breccia		Dark gray, patched like breccia; small pebble size.	C <sub>L</sub>						39		
	39.75		Fractured		Clayey							40		
40.35		Fine Sandst.		Gray and some laminated.							40			
40.70		Siltstone		Dark gray and laminated.	C <sub>M</sub>						41			
41.60				Blackish gray, muddy and weak rock.							41			
42.15		Fine Sandstone		Gray and massive.						6.44 LV	42			
43				Gray and massive with patched structure.							43			
44				Bedding slip fault; 10 cm. th.							44			
44.60		Fine Sandst.		White gray, massive and micaceous.							45			
46.30				Lower part; silty and laminated.							46			
46.3 to 46.5 m; Bedding slip fault											47			
46.5 to 46.8 m; Muddy											47			
46.8 to 47.6 m; White gray, massive and micaceous										16.75 LV	48			
47.6 to 48.05 m; Patched											48			
48.05		Fine Sandst. and Siltst.		Gray to dark gray and well laminated.							49			
50.00				Some cracky.							50			

LOC FORM-3

HOLE NO. B91-16

\*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 Units/m under injection water pressure of 10 kg/cm<sup>2</sup>  
 \*DEPTH and ELEVATION are in meter  
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DRILL LOG

HOLE NO. B81-17 SHEET NO. 1 OF 2

PROJECT		SAPT GANDAKI PROJECT			DEPTH	50 M	ELEVATION				
SITE		DAM SITE B; RIGHT BANK		COORDINATE	INCLINATION		VERTICAL	DRILL RIG	UD-5		
AVERAGE CORE RECOVERY		89.8%			DATE	FROM MAR. 18 TO MAR. 22, '82		DRILLED by	KIDO KUMAR		
LOGGED by		KUMAZAWA									
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION	BIT DIAMETER & GROUNDWATER LEVEL	CORE RECOVERY	R.Q.D. & MAX. CORE L.	WATER PRESSURE TEST LUGEON VALUE	DEPTH
MAR 18	1		Overburden		Pale brown decomposed rock fragments.		99/00	100			1
	2		Overburden					100			2
	3.30		Decomposed Rock		Pale brown decomposed rock (sandstone)	D	66 mm (M.B.I.)	100			3
	4		Decomposed Rock					100			4
	5		Decomposed Rock					100			5
	6.60		Decomposed Rock					100			6
	7		Fine Sandstone		Upper 50 cm; Dark gray and some muddy and weak.	C <sub>H</sub>	700/1	100			7
	8		Fine Sandstone		Gray, massive and micaceous.			100			8
	9.60		Fine Sandstone		White gray.	C <sub>H</sub>		100			9
	10		Fine Sandstone		Laminated and/or patched.			100			10
	11.40		Fine Sandstone		Lower part; Medium sandst.			100			11
	12.60		Fine to Very Fine Sandstone		Gray and well laminated.	C <sub>L</sub>		100			12
	13		Muddy Sandstone		Fault clay along bedding, 15 cm. th.			100			13
	14		Muddy Sandstone		Greenish gray and massive.			100			14
	15		Muddy Sandstone		12.6 to 13.2 m; Weak.	C <sub>M</sub>		100			15
	16.50		Muddy Sandstone		Includ. sandstone patches.			100			16
	17.20		Fine Sandst.		16.0 m; Fault clay; 10 cm. th.			100			17
	18		Fine Sandst.		Dark gray and silty.			100			18
	19		Medium Sandstone		Gray and massive.			100			19
	20		Medium Sandstone		White gray, massive and micaceous.			100			20
	21		Medium Sandstone		Long cores.			100			21
	22.20		Medium Sandstone		Laminated.			100			22
	23		Coarse Sandstone		Includ. blackish lignitic laminae.	C <sub>H</sub>		100			23
	24		Coarse Sandstone					100			24
	25		Coarse Sandstone					100			25
	26		Coarse Sandstone		Some laminated.			100			26
	27.20		Medium to Coarse Sandstone		White gray, massive and micaceous.			100			27
	28		Medium to Coarse Sandstone					100			28
	29		Medium to Coarse Sandstone		Cores are long and good.			100			29
	30		Medium to Coarse Sandstone					100			30

LOG FORM-B

HOLE NO. B81-17

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 \* DIAMETER is in millimeter

29.35 (Apr. 7)

# DRILL LOG

HOLE NO. B81-17 SHEET NO. 2 OF 2

PROJECT		SITE		COORDINATE		DEPTH	ELEVATION										
AVERAGE CORE RECOVERY		DATE	FROM	TO	EXCLINATION	DRILLED	DRILL RIG										
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION	BIT & DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY	R. Q. D. & MAX. CORE L.	WATER PRESSURE TEST	DEPTH					
									%	50 cm	LUGEON VALUE						
MAR 20	31		Medium to Coarse Sandstone		(Coarse sandstone)	C <sub>H</sub>	66 (D. Bit: Double)		100			31					
	32	31.7 m; Including black lignite fragments.														32	
	33	32.15 to 32.35 m; Including gray and green siltstone patches.															33
	34	Laminated.															34
	35	35.1 to 35.7 m; Including softrock patches and pebbles.															35
	36	Very coarse and massive.															36
	37																37
	38	37.9 to 38.1 m; Including blackish lignitic laminae.															38
	40	40.60															40
MAR 21	41				Coarse to Very Coarse Sandstone					40.6 m; A pebble conglomerate layer; 5 cm, thick.	B	66 (M. Bit: Double)		100			41
	42	Massive coarse sandstone long cores; including granule size fragments.														42	
	43	White gray and micaceous.															43
	44																44
	45																45
	46																46
	47																47
	48																48
	49																49
MAR 22	50	50.00				Including pebbles and soft rock patches in places.	C <sub>H</sub>	5000									50

LOG FORM-B

HOLE NO. B81-17

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DRILL LOG

HOLE NO. B91-18 SHEET NO. 1 OF 2

PROJECT		SAPT GANDAKI PROJECT			DEPTH	50 M	ELEVATION				
SITE		DAM SITE C; LEFT BANK		COORDINATE			INCLINATION	VERTICAL	DRILL RIG	TONE, UD-5	
AVERAGE CORE RECOVERY		89.4%			DATE	FROM APR.2 TO APR.10'82		DRILLED	by M. KIDO KUMAR	LOGGED	by KUMAZAWA
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION & BIT DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY	R. Q. D & MAX. CORE L.	WATER PRESSURE TEST LUGRON VALUE	
								%	cm	50	100
APR 2	1		Terrace Deposits		Brownish soil with gravels. Granite and quartzite boulders.	66 (M.B. Single)		100			
	2							0			
	3							5			
	4							3			
	5							0			
APR 3	6.40				6.2 m; Tertiary sandstone soft cobbles included.	66 (M.B. Single)		100			
	7.25		Vary Fine Sandstone		Greenish gray laminated. 7.12 to 7.25 m. Fractured.	CL	7.10M	100			
	7.60		Mudstone		Greenish gray with white spots.		(APR.10)	100			
			Fine Sandst.		Gray and massive.			100			
					9.2 to 9.8 m; Including white calcareous spots.			100			
APR 4	9.80		Coarse Sandst.		White gray and micaceous.			100			
	10.12		Fine Sandst.		Laminated and/or patched.			100			
	10.62				Gray and massive.			100			
	11.36		Medium Sandst.					100			
					White gray, massive and micaceous.			100			
			Coarse Sandstone		11.4 m; High dipping crack. Long cores and not so hard.	66 (M.B. Double)		100			
APR 5	16.50							100			
			Mudstone		Greenish gray and massive. 16.5 to 17.0 m; Slaky. 17.6 to 18.5 m; Some patches.			100			
	18.50							100			
	19.42		Siltstone & Fine Sandst.		Gray and calcareous. Laminated and/or patched.			100			
	19.70				Gray and massive. Silty and patched.			100			
	20.10				Gray and well laminated.			100			
								100			
	22.45		Fine Sandstone		Gray and massive.			100			
APR 6	24.00				22.7 to 23.1 m; Vertical brownish cracks.			100			
	24.22				Siltstone. Laminated.			100			
	24.77				Dark gray and laminated siltstone to very fine sandst. Laminae dip in 35° to 40°.			100			
	26.20				26.2m; Bed slip fault clay; 1 cm Dark gray and muddy. Includ. blackish lig. fragments.			100			
	27.62		Fine Sandst.					100			
					Gray to white gray with some soft rock patches.			100			
	28.37		Med. to Coarse Sandstone					100			
					Dark gray with some patches. Some slaky and weak.			100			
	29.12		Mudstone					100			
					Gray to dark gray and laminated.			100			
			Fine Sandst.					100			

LOC FORM-B

HOLE NO. B91-18

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 \*DIAMETER is in millimeter



# DRILL LOG

HOLE NO. B81-18 SHEET NO. 2 OF 2

PROJECT		SITE		COORDINATE		DEPTH		ELEVATION				
AVERAGE CORE RECOVERY		DATE		FROM		TO		DRILL RIG				
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION	BIT & DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY	R. Q. D. MAX CORE L. 50 cm	WATER PRESSURE TEST LUGEON VALUE	DEPTH
APR 7	31.00		Fine Sandst. and Siltstone		29.43 to 29.48 m; Fractured along bedding. 30.48 m, 31.23 m and 31.85 m; Slip faults with clay seams. 31.9 to 32.43 m; Cross lamination.	CH	56 (1 D. Bit. Double)	-	100			31.00
	32.67		Medium Sandstone		White gray and micaceous. Some laminated. 33.45 m; a high dipping crack.				100			32.67
	34.60		Very Fine Sandstone		Dark gray and well laminated.				100			34.60
	35.43		Medium Sandstone		White gray, micaceous and laminated.				100			35.43
	36.95		Siltstone		Laminated with fossil leaves.				100			36.95
	37.36		Sandy Mudstone		37.36 to 37.57 m; Fractured. Greenish gray. Below 37.95 m; Patched.				100			37.36
	38.60		Fine Sandstone		Gray and massive.				100			38.60
	39.07		Mudstone		Gray to white gray and laminated. Bottom part; Muddy. Greenish gray.				100			39.07
	40.45		Fine Sandst.		40.7 to 41.3 m; Muddy and including white spots.				100			40.45
	40.70		Mudstone						100			40.70
	42.20		Fine Sandst. & Siltstone		Dark gray and well laminated.				100			42.20
	43.05		Muddy Fine Sandst.		Some greenish gray and massive				100			43.05
	43.95		Fine Sandst.		Calcareous patched and/or laminated.				100			43.95
	45.20		Fine Sandst.		Fractured layer.				100			45.20
	45.40		Fine Sandst.		Some laminated. 46.3 to 46.5 m; Fractured.				100			45.40
46.70		Fine Sandst.		Well laminated. Slickensides along laminae common.	100			46.70				
47.86		Muddy and slaky.			100			47.86				
48.55		Fine Sandst.		Dark gray and massive.	100			48.55				
49.15		Fine Sandst.		Dark gray and massive.	100			49.15				
50.00		Fine Sandst.		Dark gray and patched.	100			50.00				

LOG FORM-B

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DRILL LOG

HOLE NO. TG-1 SHEET NO. 1 OF 1

PROJECT		SAPT GANDAKI PROJECT			DEPTH	30 M	ELEVATION									
SITE		TEST GROUTING SITE		COORDINATE	INCLINATION	VERTICAL	DRILL RIG	TONE UD-5								
AVERAGE CORE RECOVERY		88.3 %		DATE	FROM DEC. 7 TO DEC. 16 '81		DRILLED	by SAKAI LOGGED by KUMAZAWA								
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION	BIT DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY		R. Q. D & MAX. CORE L	WATER PRESSURE TEST				DEPTH
									%	m		LUGEON VALUE				
DEC. 7	3.50	3.38	Overburden		Micaceous silty sand.		66 (M.B., Single)	7.50 (Dec 16)				Applied pressure (kg/cm <sup>2</sup> )				
					Including decomposed rock fragments.							Constant rate of flow (lit/min/100)				
DEC. 8	7.80	9.00	Med. Sandst.		White gray and massive.	CL	66 (M.B., Double)					Maximum Core Length				
					Dark gray and calcareous.							10 20 30 40 50				
DEC. 10	12.60	9.70	Very Fine Sandstone and Siltstone		4.1 to 4.8 m; laminated.	CH	66 (M.B., Double)					3.20 (kg)				
					4.8 to 6.5 m; patched strct.							10 20 30 40 50				
DEC. 11	15.60	11.35	Mudstone		6.5 to 7.8 m; laminated.	CM	66 (M.B., Double)					20.88 (kg)				
					Above 7 m; Cracks are brownish and weathered.							10 20 30 40 50				
DEC. 13	20.30	20.65	Fine Sandst.		Greenish gray, massive and slaky.	CH	66 (M.B., Double)					2.48 (kg)				
					Gray and massive.							10 20 30 40 50				
DEC. 14	27.90	27.90	Fine Sandst.		Gray and well laminated.	CH	66 (M.B., Double)					1.42 (kg)				
					Dark gray. Lower half; silty and laminated.							10 20 30 40 50				
DEC. 16	30.00	30.00	Fine Sandst.		Upper 40 cm; muddy & slaky.	CL	66 (M.B., Double)					1.42 (kg)				
					Gray and massive							10 20 30 40 50				
DEC. 16	30.00	30.00	Fine Sandst.		Lower 40 cm; silty and laminated.	CH	66 (M.B., Double)					1.42 (kg)				
					Bedding slip with clay seam.							10 20 30 40 50				
DEC. 16	30.00	30.00	Fine Sandst.		Gray and massive.	CH	66 (M.B., Double)					1.42 (kg)				
					Patched and some laminated.							10 20 30 40 50				
DEC. 16	30.00	30.00	Fine Sandst.		White gray and micaceous.	CH	66 (M.B., Double)					1.42 (kg)				
					Laminated.							10 20 30 40 50				
DEC. 16	30.00	30.00	Siltstone		Well laminated and calcareous.	CM to CL	66 (M.B., Double)					1.42 (kg)				
					White gray and laminated.							10 20 30 40 50				
DEC. 16	30.00	30.00	Fine Sandst.		Cracky and including patches.	CM to CL	66 (M.B., Double)					1.42 (kg)				
					21.05 m; including blackish lignite lamina; 0.5 cm. th.							10 20 30 40 50				
DEC. 16	30.00	30.00	Muddy Sandstone		Greenish gray and slaky.	CH	66 (M.B., Double)					1.42 (kg)				
					23.9 m; bedding slip with clay; 3 cm. thick							10 20 30 40 50				
DEC. 16	30.00	30.00	Muddy Sandstone		Massive, weak and slaky.	CH	66 (M.B., Double)					1.42 (kg)				
					Below 26.6 m; patched.							10 20 30 40 50				
DEC. 16	30.00	30.00	Medium Sandstone		Upper part; including some greenish patches.	CH to B	66 (M.B., Double)					1.42 (kg)				
					White gray and massive.							10 20 30 40 50				

LOG FORM-B

HOLE NO. TG-1

\*R.Q.D is Rock Quality Designation. R.Q.D = (Total length of cylindrical cores longer than 10 cm) / (Total core length) × 100%  
 \*LUGEON VALUE is l/min/m under injection water pressure of 10kg/cm<sup>2</sup>  
 \*DEPTH and ELEVATION are in meter  
 \*DIAMETER is in millimeter

DRILL LOG

HOLE NO. TG-2 SHEET NO. 1 OF 1

PROJECT		SAPT GANDAKI PROJECT				DEPTH	30 M	ELEVATION				
SITE		TEST GROUTING SITE		COORDINATE			EXCLINATION	VERTICAL	DRILL RIG	TONE UD-5		
AVERAGE CORE RECOVERY		82.3%		DATE	FROM DEC.6 TO DEC.21 '81		DRILLED	by A. SAKAI		LOGGED	by KUMAZAWA	
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION	BIT & DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY	R. Q. D. & MAX CORE L	WATER PRESSURE TEST	DEPTH
									50 cm	50 cm	LUGEON VALUE	
DEC 6	1		Overburden		Drilled by means of single core-barrel and non-cored		36 (M.B. Casing)				Ap. W. Pressure (kg/cm <sup>2</sup> ) Q. Constant Rate of Flow (L/min/m)	1
	2											2
	3	3.50										3
	4		Medium to Fine Sandst.		White gray and laminated.							4
	5											5
	6											6
	7	7.00	Siltstone		Dark gray, calcareous and hard.	CM		(Apr. 71) 7.60				7
	8	7.90	Siltstone		Dark gray and hard; slaky.			6.00 (Dec 21)				8
	9		Siltstone		Calcareous and patched.						7.20 L	9
	10	10.10										10
	11		Sandy Mudstone		Some greenish and massive.							11
	12	11.90	Fine Sandst.		Slaky.							12
	13	12.20	Fine Sandst. and Siltstone		Muddy and patched.							13
	14	13.65	Fine Sandst.		Well laminated.							14
	15	14.20	Fine Sandst.		Dark gray.						3.1 L	15
	16	14.90	Fine Sandst.		Silty and laminated.							16
	17		Fine Sandst.		Gray and massive.							17
	18	17.95	Fractured		Including patches and some laminations.	CH						18
	19	18.70	Fine Sandst.		Fault clay.						1.5 L	19
	20	18.95	Fine Sandst.		Upper; muddy							20
	21	19.45	Fine Sandst.		Lower; fine to medium.							21
	22		Fine to Medium Sandstone		Gray							22
	23	23.40			White gray and some laminated.							23
	24	24.45	Fine Sandst.									24
	25	24.70	Breccia		Patched-like breccia.							25
	26	26.10	Fine Sandst.		Gray to white gray; laminated and/or patched.							26
	27		Mudstone		Greenish gray and massive; slaky and weakness.	CL						27
	28				26.1 to 26.65m; fractured.							28
	29				27.4 to 27.7 m;							29
	30	30.00			28.8 to 29.9 m; brownish patches	CH						30
					Below 29.9 m; massive muddy sandstone.	CH						30

LOG FORM--B

HOLE NO. TG-2

\*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  $\frac{100}{m^2}$  under injection water pressure of 10kg/cm<sup>2</sup>  
 \*DEPTH and ELEVATION are in meter  
 \*DIAMETER is in millimeter

DRILL LOG

HOLE NO. TG - 3 SHEET NO. 1 OF 1

PROJECT		SAPT GANDAKI PROJECT			DEPTH	30 M	ELEVATION				
SITE		TEST GROUT SITE	COORDINATE		INCLINATION	VERTICAL	DRILL RC	TONE UD-5			
AVERAGE CORE RECOVERY		84.5%	DATE	FROM Dec.18 TO Dec.27	DRILLED	by A.SAKAI	LOGGED	by KUMAZAWA			
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION & BIT DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY	R.Q.D. & MAX. CORE L.	WATER PRESSURE TEST LUCEON VALUE	DEPTH
DEC.18	1		Overburden		Overburden						1
	3.40		Overburden								2
	4.60		Sandstone		White gray, medium to coarse. Cracks are brown.	C <sub>M</sub>					3
	6.25		Fine Sandstone		Gray, laminated including siltstone laminae.						4
	6.80		Mudstone		Greenish and silt patched.						5
	8.90		Siltstone		Gray, hard and calcareous. Includ. green mudstone and white gray silt patches. Brown cracks.						6
	11.10		Mudstone		Greenish gray, massive, not hard and latent cracks 9.1 to 9.3 m } White gray 10.0 to 10.3 m } silt patches Sandy (very fine sand)						7
	13.70		Fine Sandstone		Gray and well laminated. 11.1 to 12.0 m; Some greenish. Laminae 34° dip. 12.3 to 13.0 m; Silt stone dominant.	C <sub>H</sub>					8
	16.30		Sandy Mudstone		Greenish gray, massive. Apt to slake (latent crack nets) 15.1 to 15.6 m, Green patches 15.8 to 16.2 m, White gray patches						9
	16.73		Siltstone		Gray and laminated. (Fault clay; 1 cm th., 40° dip) 16.75 to 17.0 m and 17.4 to 17.7 m						10
	18.40		Fine to Medium Sandstone		Some greenish fine sandstone. White gray patches.						11
	21.35		Medium Sandstone		White gray and laminated. Laminae, 45° dip. 18.8 m. Green patched layer. Micaceous 19.8 to 20.2 m. Laminated fine sandstone, Stickensides common.						12
	21.60		Siltstone		Dark gray, Shaly						13
	23.20		Fractured Zone		Fractured medium to coarse sandstone. at 21.9 m; Lamination 70° dip.	C <sub>L</sub>					14
	24.00		Fine Sandstone and Siltstone		Gray and laminated. Crossing cracks with clay.	D					15
	24.60		Fractured		Dark gray siltstone and sandst. (Greenish fault clay; 1 cm)						16
	26.60		Mudstone		24.6 to 25.4 m, Deep green Rather weak. White gray silt patches. Some yellowish color.	C <sub>L</sub> to C <sub>M</sub>					17
	29.20		Sandstone		Sandy. White gray sandstone patches.	C <sub>H</sub>					18
	30.00		Sandstone		Fine to medium. Massive coarse sandstone.						19

LOG FORM-B

HOLE NO. TG-3

\*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/cm<sup>2</sup>  
 \*DEPTH and ELEVATION are in meter  
 \*DIAMETER is in millimeter

DRILL LOG

HOLE NO. TG-4 SHEET NO. 1 OF 1

PROJECT		SAPT GANDAKI PROJECT				DEPTH	20 M	ELEVATION			
SITE		TEST GROUT SITE		COORDINATE		INCINATION	VERTICAL	DRILL RIG	TONE UD-5		
AVERAGE CORE RECOVERY		79%		DATE	FROM DEC.30 TO JAN.6	DRILLED	by A. SAKAI	LOGGED	by KUMAZAWA		
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION & BIT DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY	R. Q. D. & MAX. CORE L. 50 cm	WATER PRESSURE TEST LUKEON VALUE	DEPTH
			Overburden		Overburden 0 to 1.3 m; Brownish gray micaceous fine sand with roots 1.3 to 2.7 m; Yellowish gray very fine sand 2.7 to 3.4 m; Pale greenish gray very fine sand to silt						
	3.40		Sandstone		Weathered, fine and laminated						
	3.80		Laminated Sandstone and Siltstone		Dark gray shaly, Inc. siltst. and sandst. patches 4.5 m; Crack with cement filling (2 mm thick) 5.6 to 5.8 m; Dark gray mudstone with white spots. 5.8 to 7.5 m; Hard, fine to very fine, Inc. white gray patches and cracks with dark brown soil. 7.5 to 8.35 m; Laminated hard siltst. 35° dip laminae and fossil leaves.	CM	4.90 5.30 Jan. 6 8:20 AM.				
	8.35		Mudstone		Massive; Greenish gray Inc. brown spots Latent crack nets		7.50 Jan. 4 9:00 AM.				
	10.20		Laminated Sandstone (Silty)		Gray fine to very fine sandst. 10.2 to 10.5 m; Patched sandst. 10.5 to 12.1 m; Well laminated. (cross lamination) 12.1 to 12.6 m; Dark gray shaly. Inc. some white patches. 12.6 to 13.15 m; Laminated.						
	13.15		Fine Massive Sandstone		13.15 to 15.85 m; Gray to white gray massive fine to medium sandstone. Inc. white patches. 15.85 to 16.1 m; Dark gray laminated and silty.	CH					
	16.10		Micaceous Sandstone		White gray micaceous and massive fine sandstone. Inc. white patches. 17.5 m; Some laminated. 17.5 to 18.5 m; Medium sandst. Inc. green patches. 18.6 to 20.0 m; Laminated. Bedding 45° dip. 19.55 to 19.75 m; Black lignite laminae.						
	20.00										

LDC FORM-B

\* R.Q.D. is Rock Quality Designation. R.Q.D. = (Total length of cylindrical cores longer than 10 cm / Total core length) x 100%  
 \* LUKEON VALUE is l/min/m under injection water pressure of 10kg/cm<sup>2</sup>  
 \* DEPTH and ELEVATION are in meter  
 \* DIAMETER is in millimeter

HOLE NO. TG-4

DRILL LOG

HOLE NO. TG-5 SHEET NO. 1 OF 1

PROJECT		SAPT GANDAKI PROJECT				DEPTH	20 M	ELEVATION				
SITE		TEST GROUTING SITE		COORDINATE		INCLINATION	VERTICAL	BRILL. RIG	TONE UD-5			
AVERAGE CORE RECOVERY		100 %		DATE	FROM JAN. 6 TO JAN. 10 '82	DRILLED	by A. SAKAI	LOGGED	by KUMAZAWA			
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION	BIT & DIAMETER	GROUT/WATER LEVEL	CORE RECOVERY	R. Q. D. & MAX. CORE L	WATER PRESSURE TEST LUGEON VALUE	DEPTH
Jan. 6	1		Overburden		Upper 90 cm; top soil; dark brownish and micaceous sandy.		66 (Single)					1
	2				Yellowish gray silty fine sand with decomposed rock fragments.							2
	3	3.40										3
	4		Fine Sandst.		White gray with patches.	CM						4
	5	5.40			Laminated.							5
	6	6.20	Very Fine Sandstone		Muddy Laminated.							6
	7	7.45	Fine Sandst.		Gray, calcareous and laminated.	CH		6.00 (Jan. 10) 8:00 AM				7
	8		Very Fine Sandstone		Calcareous and patched and/or laminated.							8
	9	9.35										9
Jan. 7	10		Mudstone		Greenish gray, massive, sandy and slaky.	CM						10
	11	11.20			Brownish							11
	12	11.70	Breccia		Brownish silt st. patched-like.							12
	13	12.75	Very Fine Sandstone		Some brownish and laminated.							13
	14	13.95	Fine Sandst.		Upper 10 cm; muddy Calcareous and laminated.							14
	15				Some greenish and muddy.							15
	16	15.95	Fine Sandst.		Gray and massive.	CH						16
	17	16.80	Fine Sandst.		Gray colored with brownish patches and lamination.							17
	18	17.05	Fractured									18
	19	17.78	Fine Sandst.		Upper 15 cm; muddy. Gray.							19
	20	20.00	Fine Sandst.		Upper 15 cm; muddy. Calcareous and patched and/or laminated.							20

HOLE NO. TG-5

LOG FORM-B

\*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 kN/m<sup>2</sup> under injection water pressure of 10kg/cm<sup>2</sup>  
 \*DEPTH and ELEVATION are in meter  
 \*DIAMETER is in millimeter

DRILL LOG

HOLE NO. TG-6 SHEET NO. 1 OF 1

PROJECT		SAPT GANDAKI PROJECT			DEPTH	20 M		ELEVATION				
SITE		TEST GROUTING SITE		COORDINATE	INCLINATION	VERTICAL		DRILL RIG	TONE UD-5			
AVERAGE CORE RECOVERY		75 %			DATE	FROM MAR. 4 TO MAR. 5 '82		DRILLED BY	KUMAL			
LOGGED					DATE			LOGGED	KIDO B by KUMAZAWA			
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION	BIT & DIAMETER	GROUT/WATER LEVEL	CORE RECOVERY	R. Q. D.	WATER PRESSURE TEST LUGEON VALUE	DEPTH
					No core was recovered.							
							99 (M.B. Casing pipe)					
	5.00	5.20	Fine Sandst.			CM						
	6.60		Very Fine to Fine Sandst.		Dark gray and laminated.	CH						
	8.80		Fine Sandst.		Upper 1 m; some greenish and muddy. Grayish and patched str. Reddish brown cracks.	CM						
	9.30		Fine Sandst.		Silty and laminated.	CM						
	11.32		Sandy Mudstone		Greenish and massive. 9.3 to 10.5 m; slaky Includ. brownish silt patches.							
	14.00		Fine Sandstone		Gray and laminated.							
	16.90		Fine Sandstone		Gray and massive; including patches.	CH						
	17.10		Siltstone		Stippled							
	17.75		Fine Sandst.		Gray and massive.							
	18.35		Fine Sandst.		Dark gray and patched str.							
	20.00		Fine Sandst.		White gray with lamination. 19.7 to 19.9 m; including a gray siltstone patch layer.							
							66 (D.B. Double)					

LOC FORM-B

HOLE NO. TG-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 l/min/m under injection water pressure of 10 kg/cm<sup>2</sup>  
 \*DEPTH and ELEVATION are in meter  
 \*DIAMETER is in millimeter

# DRILL LOG

HOLE NO. TG-7 SHEET NO. 1 OF 1

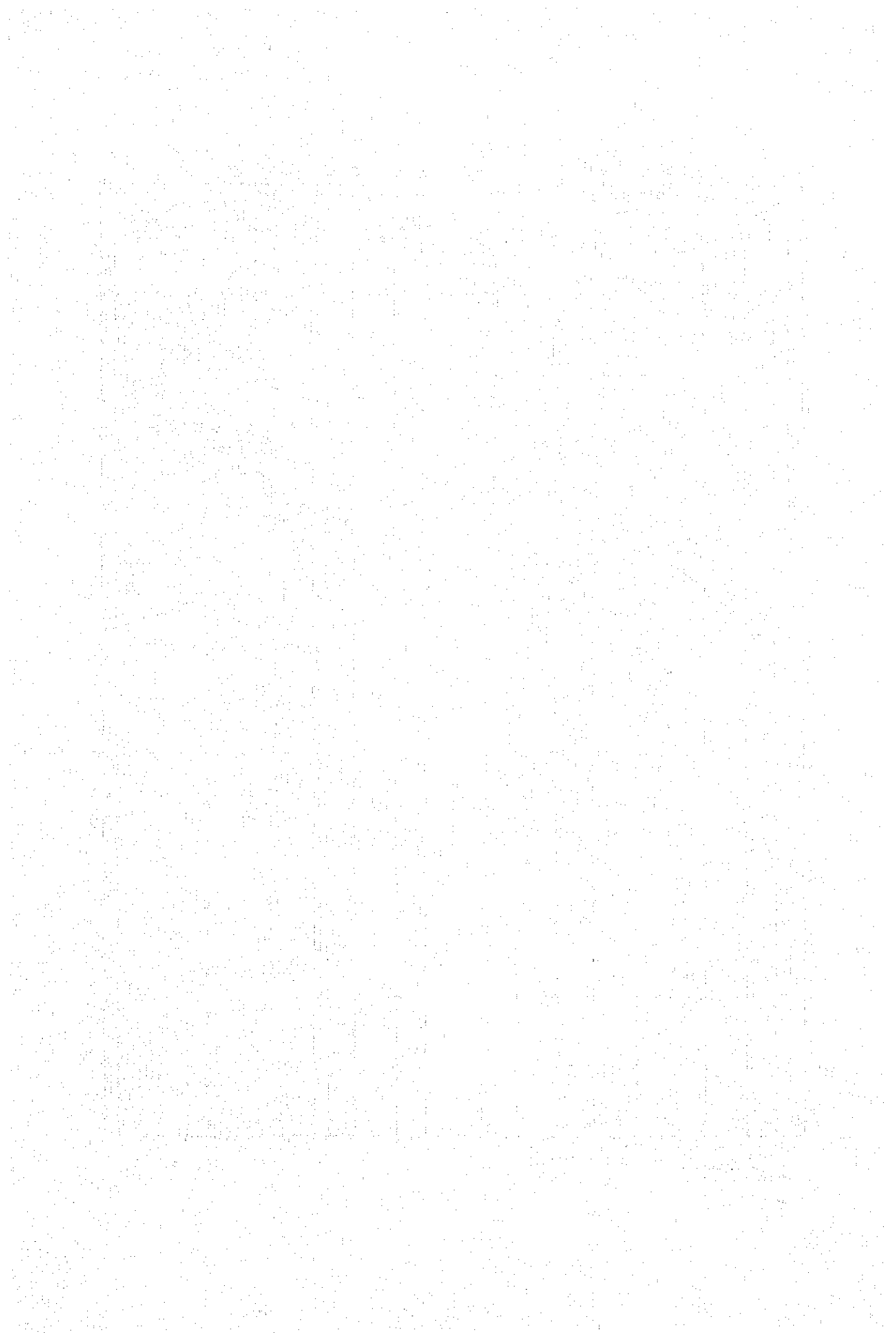
PROJECT		SAPT GANDAKI PROJECT				DEPTH	20 M	ELEVATION										
SITE		TEST GROUTING SITE	COORDINATE			INCLINATION	VERTICAL	DRILL RIG	TONE UD-5									
AVERAGE CORE RECOVERY		75 %	DATE	FROM MAR. 5 TO MAR. 7 '82		DRILLED	by KUMAL	LOGGED	by KUMAZAWA									
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK CLASSIFICATION	BIT & DIAMETER	GROUNDWATER LEVEL	CORE RECOVERY		WATER PRESSURE TEST LUGEON VALUE					DEPTH		
									%	cm	R. Q. D. & MAX. CORE L. 30 cm	Applied Pressure (kg/cm <sup>2</sup> )	Q. Coeff. Rate of Flow (litre/m <sup>2</sup> /day)	Minimum Core Length (cm)	R.O.D. (%)		(1.2 cu)	(0.1 cu)
MAR. 5	1				No core was recovered unnecessarily.		99 (M.B. Casing Pipe)											
	2																	
	3																	
	4																	
	5	5.00																
MAR. 6	5.50		Fine Sandst.		White gray and laminated. Upper 10 cm; dark gray and muddy.		CM											
	6		Fine Sandst.		Grayish, patched and/or laminated. Includ. brownish cracks.													
	7																	
	8																	
	8.70																	
	9		Sandy Mudstone		Greenish gray and massive. 9.0 to 10.2 m; slaky													
	10	10.20																
	10.65		Fine Sandst.		Gray and massive. Grayish, patched and/or well laminated.													
	11																	
	12	12.20		Fine Sandst.		Below 12 m; silty. 12.2 to 12.3 m; muddy. 12.7 to 13.4 m; laminated.												
MAR. 7	13						CH											
	13.40		Fine Sandst.		Muddy and some slaky.													
	14																	
	14.45		Fine Sandst.		Gray and massive; including patches.													
	15																	
	16		Mudstone		Bedding slip with clay seam. Upper 30 cm; muddy													
	16.30																	
	16.50																	
17		Fine Sandst.		White gray, laminated and micaceous. Cores are long and good.														
18	17.95																	
19			Fine to Med. Sandstone															
20	20.00																	

LOG FORM-B

HOLE NO. TG-7

\*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 10 kg/cm<sup>2</sup>  
 \*DEPTH and ELEVATION are in meter  
 \*DIAMETER is in millimeter





III

RECORD OF WATER PRESSURE TEST  
(37 SHEETS)





**RECORD OF WATER PRESSURE TEST**

PROJECT: SAFT GANDAKI PROJECT LOCALITY: DAMSITE, RIVERBED  
 BORE-HOLE No. B80-2 GROUND WATER LEVEL: (drilled in the Saft Gandaki river)

DATE	DEPTH m	SECTION LENGTH L m	HOLE RADIUS r m	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>s</sub> cm	PRESSURE GAUGE HEIGHT H <sub>g</sub> cm	TOTAL HEAD H <sub>p</sub> +H <sub>s</sub> +H <sub>g</sub> m	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3}{2.3} \times \frac{1}{60} \times \frac{1}{\log 7}$ C min/cm <sup>2</sup> sec	Q cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=Q/HK cm/sec	LUGDON UNIT L <sub>u</sub> =Q/LH <sub>2</sub> OP
				P kg/cm <sup>2</sup>	H <sub>p</sub> cm				Q l/min	Q cm <sup>3</sup> /min				
MAR.21	25.0 to 30.0	500	2.8	1	1,000	-180	250	1,070	7	7,000	$2.75 \times 10^{-5}$	6.54	$1.80 \times 10^{-4}$	
				3	3,000	-180	250	3,070	18	18,000	$2.75 \times 10^{-5}$	5.86	$1.61 \times 10^{-4}$	
				5	5,000	-180	250	5,070	18.7	18,700	$2.75 \times 10^{-5}$	3.69	$1.01 \times 10^{-4}$	
				7	7,000	-180	250	7,070	19.6	19,600	$2.75 \times 10^{-5}$	2.77	$7.62 \times 10^{-5}$	5.6
				10	10,000	-180	250	10,070	-	-				
MAR.21	20.0 to 30.0	1,000	2.8	1	1,000	-180	250	1,070	9.8	9,800	$1.56 \times 10^{-5}$	9.16	$1.43 \times 10^{-4}$	
				3	3,000	-180	250	3,070	22.8	22,800	$1.56 \times 10^{-5}$	7.43	$1.16 \times 10^{-4}$	
				5	5,000	-180	250	5,070	21.1	21,100	$1.56 \times 10^{-5}$	4.16	$6.49 \times 10^{-5}$	
				7	7,000	-180	250	7,070	21.9	21,900	$1.56 \times 10^{-5}$	3.10	$4.83 \times 10^{-5}$	3.1
MAR.22	35.0 to 40.0	500	2.8	1	1,000	-180	250	1,070	4.2	4,200	$2.75 \times 10^{-5}$	3.93	$1.08 \times 10^{-4}$	
				3	3,000	-180	250	3,070	16.4	16,400	$2.75 \times 10^{-5}$	5.34	$1.47 \times 10^{-4}$	
				5	5,000	-180	250	5,070	16.8	16,800	$2.75 \times 10^{-5}$	3.31	$9.11 \times 10^{-5}$	
				7	7,000	-180	250	7,070	17.4	17,400	$2.75 \times 10^{-5}$	2.46	$6.77 \times 10^{-5}$	5.0
MAR.22	30.0 to 40.0	1,000	2.8	1	1,000	-180	250	1,070	5.8	5,800	$1.56 \times 10^{-5}$	5.42	$8.46 \times 10^{-5}$	
				3	3,000	-180	250	3,070	21.4	21,400	$1.56 \times 10^{-5}$	6.97	$1.09 \times 10^{-4}$	
				5	5,000	-180	250	5,070	20.8	20,800	$1.56 \times 10^{-5}$	4.10	$6.40 \times 10^{-5}$	
				7	7,000	-180	250	7,070	24.4	24,400	$1.56 \times 10^{-5}$	3.45	$5.38 \times 10^{-5}$	3.5
				10	10,000	-180	250	10,070	-	-				

**RECORD OF WATER PRESSURE TEST**

PROJECT: SAFT GANDAKI PROJECT  
 BORE-HOLE No. B80-3

LOCALITY: LEFT BANK  
 DAMSITE: LEFT BANK  
 Varied from 12.9 m to 30.2 m

GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L, cm	HOLE RADIUS r, cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE Hs, cm	PRESSURE GAUGE HEIGHT Hg, cm	TOTAL HEAD Hs+Hg+Hg	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3}{2.3} \times \frac{1}{2.3} \times \frac{1}{2.3}$	Q cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=Q/RXG/Sec	LUGEON UNIT Ls=Q/L-RXHP
				P, kg/cm <sup>2</sup>	Hp, cm				Q', l/min	Q, cm <sup>3</sup> /min				
MAR.14	16.0 to 21.0	500	3.3	2	2,000	1,290	30	3,320	5.4	5,400	$2.66 \times 10^{-5}$	1.63	$4.34 \times 10^{-5}$	
				4	4,000	1,290	30	5,320	5.8	5,800	$2.66 \times 10^{-5}$	1.09	$2.90 \times 10^{-5}$	
				6	6,000	1,290	30	7,320	6.3	6,300	$2.66 \times 10^{-5}$	0.86	$2.29 \times 10^{-5}$	
				8	8,000	1,290	30	9,320	7.0	7,000	$2.66 \times 10^{-5}$	0.75	$2.00 \times 10^{-5}$	1.7
MAR.14	21.0 to 25.0	400	3.3	2	2,000	1,310	30	3,340	3.2	3,200	$3.18 \times 10^{-5}$	0.96	$3.05 \times 10^{-5}$	
				4	4,000	1,310	30	5,340	3.3	3,300	$3.18 \times 10^{-5}$	0.62	$1.97 \times 10^{-5}$	
				6	6,000	1,310	30	7,340	4.5	4,500	$3.18 \times 10^{-5}$	0.61	$1.94 \times 10^{-5}$	
				8	8,000	1,310	30	9,340	5.1	5,100	$3.18 \times 10^{-5}$	0.55	$1.75 \times 10^{-5}$	1.6
MAR.15	25.0 to 30.0	500	3.3	1	1,000	1,360	30	2,390	2.4	2,400	$2.66 \times 10^{-5}$	1.00	$2.66 \times 10^{-5}$	
				3	3,000	1,360	30	4,390	2.8	2,800	$2.66 \times 10^{-5}$	0.64	$1.70 \times 10^{-5}$	
				5	5,000	1,360	30	6,390	3.5	3,500	$2.66 \times 10^{-5}$	0.55	$1.46 \times 10^{-5}$	
				7	7,000	1,360	30	8,390	5.2	5,200	$2.66 \times 10^{-5}$	0.62	$1.65 \times 10^{-5}$	1.5
				6	6,000	1,360	30	7,390	3.1	3,100	$2.66 \times 10^{-5}$	0.42	$1.12 \times 10^{-5}$	
				2	2,000	1,360	30	3,390	1.7	1,700	$2.66 \times 10^{-5}$	0.50	$1.33 \times 10^{-5}$	
MAR.17	30.0 to 35.0	500	3.3	1	1,000	1,550	30	2,580	48	48,000	$2.66 \times 10^{-5}$	18.60	$4.95 \times 10^{-4}$	
				1.4	1,400	1,550	30	2,980	58	58,000	$2.66 \times 10^{-5}$	19.46	$5.38 \times 10^{-4}$	83
MAR.17	35.0 to 40.0	500	3.3	0	0	1,860	30	1,890	>64	>64,000	$2.66 \times 10^{-5}$	>33.86	> $9.01 \times 10^{-4}$	
MAR.18	40.0 to 45.0	500	3.3	0	0	3,020	30	3,050	>64	>64,000	$2.66 \times 10^{-5}$	>30.98	> $5.98 \times 10^{-4}$	
									None than					

**RECORD OF WATER PRESSURE TEST**

PROJECT: SAFT GANDAKI PROJECT  
BORE-HOLE No. B81 - 2 (1)

LOCALITY: DAM: B-SITS LEFT BANK  
GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L, m	HOLE RADIUS r, cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLES H <sub>s</sub> , cm	PRESSURE CHANCE HEIGHT H <sub>c</sub> , cm	TOTAL HEAD H <sub>p</sub> +H <sub>s</sub> +H <sub>c</sub>	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3}{L} \times \frac{1}{10^4} \times \frac{1}{10^4} \times \frac{1}{10^4}$	Q cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=Q/Hx C cm/sec	LUGON UNIT L <sub>u</sub> =Q/LxHxT
				P, kg/cm <sup>2</sup>	H <sub>p</sub> , cm				Q, l/min	Q, cm <sup>3</sup> /min				
FEB-4	15 to 20	500	3.3	1	1000	250	70	1520	0.9	900	2.66 x 10 <sup>-5</sup>	0.68	1.81 x 10 <sup>-5</sup>	
				2.5	2500			2820	4.9	1900		1.74	4.62 x 10 <sup>-5</sup>	
				4	4000			4320	18	18000		4.17	1.11 x 10 <sup>-4</sup>	9.0
				2.5	2500			2820	9.8	9800		3.48	9.24 x 10 <sup>-5</sup>	
				1	1000			1520	5.1	5100		3.86	1.03 x 10 <sup>-4</sup>	
FEB-5	20 to 25	500	3.3	1	1000	1340	70	2410	10.3	10300	2.66 x 10 <sup>-5</sup>	4.27	1.14 x 10 <sup>-4</sup>	
				3	3000			4410	20.3	20300		4.60	1.22 x 10 <sup>-4</sup>	
				5	5000			6410	32.7	32700		5.10	1.36 x 10 <sup>-4</sup>	13.08
				3	3000			4410	17	17000		3.85	1.03 x 10 <sup>-4</sup>	
				1	1000			2410	4.8	4800		1.99	5.30 x 10 <sup>-5</sup>	
FEB-6	25 to 30	500	3.3	1	1000	1400	70	2470	1.7	1100	2.66 x 10 <sup>-5</sup>	0.45	1.18 x 10 <sup>-5</sup>	
				3	3000			4470	1.4	1400		0.31	8.33 x 10 <sup>-6</sup>	
				5	5000			6470	2.1	2100		0.32	8.63 x 10 <sup>-6</sup>	
				7	7000			8470	2.4	2400		0.28	7.54 x 10 <sup>-6</sup>	0.69
				4	4000			5470	0.5	500		0.09	2.43 x 10 <sup>-6</sup>	
				2	2000			3470	0	0		0	0	
FEB-7	30 to 35	500	3.3	2	2000	1420	70	3490	1.7	1700	2.66 x 10 <sup>-5</sup>	0.49	1.30 x 10 <sup>-5</sup>	
				4	4000			5490	1.9	1900		0.35	9.21 x 10 <sup>-6</sup>	
				6	6000			7490	2.1	2100		0.28	7.46 x 10 <sup>-6</sup>	
				8	8000			9490	2.1	2100		0.22	5.89 x 10 <sup>-6</sup>	0.53
				5	5000			6490	1.5	1500		0.23	6.15 x 10 <sup>-6</sup>	
				3	3000			4490	1.1	1100		0.24	6.52 x 10 <sup>-6</sup>	
FEB-7	35 to 40	500	3.3	2	2000	870	70	2540	0.3	300	2.66 x 10 <sup>-5</sup>	0.10	2.71 x 10 <sup>-6</sup>	
				4	4000			6940	0.5	500		0.10	2.69 x 10 <sup>-6</sup>	
				7	7000			7940	1.1	1100		0.14	3.69 x 10 <sup>-6</sup>	0.31
				6	6000			6940	1.1	1100		0.16	4.22 x 10 <sup>-6</sup>	
				3	3000			3940	0.8	800		0.20	5.40 x 10 <sup>-6</sup>	



**RECORD OF WATER PRESSURE TEST**

PROJECT SAFI GANDAKI PROJECT LOCALITY DAI: B-SITE LEFT BANK  
 BORE-HOLE No. BEL - 2 (2) GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L m	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>s</sub> cm	PRESSURE GAUGE HEIGHT H <sub>g</sub> cm	TOTAL HEAD H <sub>p</sub> + H <sub>s</sub> + H <sub>g</sub> cm	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3}{4r} \times \frac{1}{60} \times \frac{1}{2.3} \log \frac{C}{P}$ C min/cm <sup>2</sup> sec	Q H <sub>2</sub> O cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K = Q/HK C cm/sec	LUCEON UNIT Lm <sup>2</sup> /L <sup>2</sup> Hx10 <sup>6</sup>
				P kg/cm <sup>2</sup>	H <sub>p</sub> cm				Q' l/min	Q cm <sup>3</sup> /min				
FEB.9	40 to 45	500	3.3	2	2000	910	70	2980	0.5	600	2.66 x 10 <sup>-5</sup>	0.20	5.36 x 10 <sup>-6</sup>	
				5	5000			5980	1.2	1800		0.30	8.01 x 10 <sup>-6</sup>	
				8	8000			8980	3.5	3500		0.28	1.04 x 10 <sup>-5</sup>	
				10	10000			10980	5.5	5500		0.50	1.33 x 10 <sup>-5</sup>	1.1
				7	7000			7980	5.5	5500		0.69	1.63 x 10 <sup>-5</sup>	
				3	3000			3980	2.2	2200		0.55	1.17 x 10 <sup>-5</sup>	
FEB.10	45 to 50	500	3.3	2	2000	960	70	3030	1.7	1700	2.66 x 10 <sup>-5</sup>	0.56	1.49 x 10 <sup>-5</sup>	
				5	5000			6030	3.5	3500		0.78	1.54 x 10 <sup>-5</sup>	
				8	8000			8030	4.8	4800		0.53	1.13 x 10 <sup>-5</sup>	
				10	10000			11030	5.9	5900		0.53	1.12 x 10 <sup>-5</sup>	1.18
				7	7000			8030	5.0	5000		0.62	1.66 x 10 <sup>-5</sup>	
				3	3000			4030	2.2	2200		0.72	1.91 x 10 <sup>-5</sup>	

**RECORD OF WATER PRESSURE TEST**

PROJECT SAPT BANDARI PROJECT  
 BORE-HOLE No. BH-3 (1)

LOCALITY DAKSHIN B. RIGHT BANK  
 GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L m	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>s</sub> cm	PRESSURE GAUGE HEIGHT H <sub>g</sub> cm	TOTAL HEAD H <sub>p</sub> +H <sub>s</sub> +H <sub>g</sub> cm	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3 \times 10^{-5} \times L \times r^2}{C}$ C min/sec	Q cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY $K = \frac{Q \times H \times C}{m \times h}$	LUGEON UNIT L <sub>u</sub> = Q / (L × H × M)
				P kg/cm <sup>2</sup>	H <sub>p</sub> cm				Q' %/min	Q cm <sup>3</sup> /min				
MAR.11	7.5 to 11	350	3.3	1	1000	260	-10	1250	0.2	200	$3.59 \times 10^{-5}$	0.16	$5.55 \times 10^{-6}$	0.72
				2	2000			2250	0.5	500		0.22	$7.84 \times 10^{-6}$	
				1	1000			1250	0.1	100		0.08	$2.82 \times 10^{-6}$	
MAR.12	10 to 15	500	3.3	1	1000	260	-10	1250	0.7	700	$2.66 \times 10^{-5}$	0.56	$1.49 \times 10^{-5}$	
				2	2000			2250	1.3	1300		0.58	$1.54 \times 10^{-5}$	
				3	3000			3250	3.5	3500		1.08	$2.86 \times 10^{-5}$	2.33
				2	2000			2250	2.0	2000		0.89	$2.34 \times 10^{-5}$	
				1	1000			1250	0.4	400		0.32	$8.51 \times 10^{-6}$	
MAR.12	15 to 20	500	3.3	1	1000	260	-10	1250	0.4	400	$2.66 \times 10^{-5}$	0.32	$8.51 \times 10^{-6}$	
				2.5	2500			2750	2.7	2700		0.98	$2.61 \times 10^{-5}$	
				4	4000			4250	4.9	4900		1.15	$3.07 \times 10^{-5}$	2.45
				2.5	2500			2750	2.5	2500		0.81	$2.42 \times 10^{-5}$	
				1	1000			1250	1.0	1000		0.8	$2.13 \times 10^{-5}$	
MAR.13	20 to 25	500	3.3	1	1000	440	-10	1430	0	0	$2.66 \times 10^{-5}$	-	-	
				3	3000			3430	1.1	1100		0.32	$8.53 \times 10^{-6}$	
				5	5000			5430	3.2	3200		0.59	$1.57 \times 10^{-5}$	1.28
				3	3000			3430	1.9	1900		0.55	$1.47 \times 10^{-5}$	
				1	1000			1430	0.5	500		0.35	$9.30 \times 10^{-6}$	
MAR.14	25 to 30	500	3.3	1	1000	460	-10	1650	2.1	2100	$2.66 \times 10^{-5}$	1.45	$3.85 \times 10^{-5}$	
				3	3000			3650	5.2	5200		1.51	$4.01 \times 10^{-5}$	
				5	5000			5650	6.4	6400		1.17	$3.12 \times 10^{-5}$	
				7	7000			7650	6.4	6400		0.86	$2.29 \times 10^{-5}$	1.83
				4	4000			4650	3.8	3800		0.85	$2.27 \times 10^{-5}$	
				2	2000			2650	2.5	2500		1.02	$2.71 \times 10^{-5}$	

# RECORD OF WATER PRESSURE TEST

PROJECT: SAFT GANDAKI PROJECT  
 BORE-HOLE No. BEL - 3 (2)

LOCALITY

GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L m	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE Hs cm	PRESSURE GAUGE HEIGHT Hg cm	TOTAL HEAD H <sub>p</sub> +H <sub>s</sub> +H <sub>g</sub> cm	WATER LEAKAGE Q l/min	CALCULATING CONST. $\frac{2.25}{L} \times \frac{1}{60} \times \frac{1}{r^2} \times \frac{1}{C}$	Q m <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=Q/RH C m/sec	LUGSON UNIT L=Q/L.RH C
				PRESSURE P kg/cm <sup>2</sup>	HEAD H <sub>p</sub> cm								
MAR.14	30 to 35	500	3.3	2	2000	460	-10	2450	5.00	$2.66 \times 10^{-5}$	2.04	$5.43 \times 10^{-5}$	
				4	4000			4450	6.9		1.55	$4.12 \times 10^{-5}$	
				6	6000			6150	7.6		1.18	$3.15 \times 10^{-5}$	
				8	8000			8150	9.2		1.09	$2.90 \times 10^{-5}$	2.3
				5	5000			5150	7.2		1.32	$3.51 \times 10^{-5}$	
				3	3000			3450	6.7		1.94	$5.17 \times 10^{-5}$	
MAR.15	35 to 40	500	3.3	2	2000	1166	-10	3150	3.1	$2.66 \times 10^{-5}$	0.98	$2.62 \times 10^{-5}$	
				4	4000			3150	4.6		0.89	$2.38 \times 10^{-5}$	
				7	7000			8150	7.2		0.88	$2.35 \times 10^{-5}$	
				9	9000			10150	9.3		0.92	$2.44 \times 10^{-5}$	2.07
				6	6000			7150	7.3		1.02	$2.72 \times 10^{-5}$	
				3	3000			3150	4.7		1.49	$3.97 \times 10^{-5}$	
MAR.16	40 to 45	500	3.3	2	2000	1400	-10	3390	6.9	$2.66 \times 10^{-5}$	2.04	$5.41 \times 10^{-5}$	
				5	5000			6390	12.8		2.00	$5.33 \times 10^{-5}$	
				8	8000			9390	19.2		2.04	$5.44 \times 10^{-5}$	
				10	10000			11390	23.2		2.05	$5.44 \times 10^{-5}$	4.66
				7	7000			8390	16.5		1.97	$5.23 \times 10^{-5}$	
				3	3000			4390	8.6		1.96	$5.21 \times 10^{-5}$	
MAR.17	45 to 50	500	3.3	2	2000	1435	-10	3425	4.4	$2.66 \times 10^{-5}$	1.28	$3.42 \times 10^{-5}$	
				5	5000			6425	6.9		1.07	$2.86 \times 10^{-5}$	
				8	8000			9425	8.4		0.89	$2.37 \times 10^{-5}$	
				10	10000			11425	8.1		0.71	$1.89 \times 10^{-5}$	1.62
				7	7000			8425	7.8		0.93	$2.46 \times 10^{-5}$	
				3	3000			4425	6.8		1.54	$4.09 \times 10^{-5}$	

### RECORD OF WATER PRESSURE TEST

PROJECT: SAFT GARDAKI PROJECT LOCALITY: DAM: A-SITE RIGHT BANK  
 PORE-HOLE No. B81 - 4 (1) GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L cm	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>s</sub> cm	PRESSURE CAUSE HEIGHT H <sub>p</sub> cm	TOTAL HEAD H <sub>p</sub> +H <sub>s</sub> +H <sub>g</sub> H cm	WATER LEAKAGE Q l/min	CALCULATING CONST. $\frac{2.3}{2.3} \times \frac{1}{10} \times \frac{1}{10^5}$ C min/cmsec	Q cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=Q/Hx C cm/sec	LUGEON UNIT L=Q/LxHxIP
				P kg/cm <sup>2</sup>	H <sub>p</sub> cm								
NOV-26	7 to 10	300	3.3	1	1000	260	30	1290	47.8	$3.98 \times 10^{-5}$	37.05	$2.17 \times 10^{-3}$	159.3
NOV-27	10 to 15	500	3.3	1	1000	185	30	1215	5.2	$2.66 \times 10^{-5}$	4.28	$1.14 \times 10^{-4}$	10.4
NOV-27	12 to 15	300	3.3	2	2000	185	30	2215	6.3	$3.98 \times 10^{-5}$	9.07	$3.22 \times 10^{-4}$	
				3	3000			3215	13.4		4.17	$1.66 \times 10^{-4}$	14.3
				2	2000			2215	6.4		2.88	$1.15 \times 10^{-4}$	
				1	1000			1215	1.4		1.15	$4.59 \times 10^{-5}$	
NOV-29	15 to 20	500	3.3	1	1000	230	30	1260	2.8	$2.66 \times 10^{-5}$	2.22	$5.91 \times 10^{-5}$	
				2	2000			2260	5.9		2.61	$6.94 \times 10^{-5}$	
				5	5000			5260	7.0		1.33	$3.54 \times 10^{-5}$	2.8
				4	4000			4260	6.4		1.50	$4.0 \times 10^{-5}$	
				2	2000			2260	5.8		2.57	$6.83 \times 10^{-5}$	
				1	1000			1260	4.8		3.81	$1.01 \times 10^{-4}$	
NOV-30	20 to 25	500	3.3	1	1000	300	30	1330	6.2	$2.66 \times 10^{-5}$	4.66	$1.24 \times 10^{-4}$	
				3	3000			3330	21.7		7.12	$1.97 \times 10^{-4}$	
				5	5000			5330	40.2		7.51	$2.01 \times 10^{-4}$	16.2
				3	3000			3330	25.5		7.76	$2.12 \times 10^{-4}$	
				1	1000			1330	16.5		12.11	$3.30 \times 10^{-4}$	
DEC-1	25 to 30	500	3.3	1	1000	465	30	1495	3.2	$2.66 \times 10^{-5}$	2.14	$5.69 \times 10^{-5}$	
				3	3000			3495	6.4		1.83	$4.87 \times 10^{-5}$	
				5	5000			5495	7.4		1.35	$3.58 \times 10^{-5}$	
				7	7000			7495	7.9		1.05	$2.80 \times 10^{-5}$	2.3
				4	4000			4495	6.8		1.51	$4.02 \times 10^{-5}$	
				2	2000			2495	5.5		2.20	$5.86 \times 10^{-5}$	



**RECORD OF WATER PRESSURE TEST**

PROJECT: SAZI GANDAKI PROJECT  
BORE-HOLE No. 881 - 5 (1)

LOCALITY: DAMSITE B, LEFT BANK  
GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L cm	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE Hs cm	PRESSURE GAUGE HEIGHT Hg cm	TOTAL HEAD Ht = Hs + Hg cm	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3 \times 10^{-1} \times L \log \frac{L}{r}}{C}$ C min/cm <sup>2</sup> sec	Q H cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY $K = Q/H \times C \text{ cm/sec}$	LOGON UNIT $L = Q/L \times H \times 10^4$			
				HEAD Hh cm	PRESSURE P kg/cm <sup>2</sup>				Q l/min	Q cm <sup>3</sup> /min							
FEB.14	10 to 15	500	3.3	1	1000	770	75	1785	0	0	$2.66 \times 10^{-5}$	0					
				2	2000			2785	0	0							
				3	3000			2785	0.6	600	0.16	$4.22 \times 10^{-6}$		0.16	$4.22 \times 10^{-6}$	0.4	
				2	2000			2785	0	0	0						
FEB.15	15 to 20	500	3.3	1	1000			1785	0	0		0					
				1	1000			1785	0	0							
				1	1000	980	75	2055	0	0	$2.66 \times 10^{-5}$	0					
				2.5	2500			3555	0	0							
FEB.15	20 to 25	500	3.3	1	1000	980	75	2055	0	0	$2.66 \times 10^{-5}$	0					
				3	3000			4055	0.9	900	0.22	$5.90 \times 10^{-6}$		0.22	$5.90 \times 10^{-6}$		
				5	5000			6055	1.6	1600	0.26	$7.03 \times 10^{-6}$		0.26	$7.03 \times 10^{-6}$	0.64	
				3	3000			4055	1.0	1000	0.25	$6.56 \times 10^{-6}$		0.25	$6.56 \times 10^{-6}$		
FEB.16	25 to 30	500	3.3	1	1000			2055	0	0		0					
				1	1000			2055	0	0							
				1	1000	1390	75	2465	1.3	1300	$2.66 \times 10^{-5}$	0.53	$1.40 \times 10^{-5}$		0.53	$1.40 \times 10^{-5}$	
				3	3000			4465	2.9	2900	0.65	$1.73 \times 10^{-5}$		0.65	$1.73 \times 10^{-5}$		
FEB.17	30 to 35	500	3.3	5	5000			6455	4.2	4200		0.65	$1.73 \times 10^{-5}$				
				7	7000			8455	5.9	5900	0.70	$1.85 \times 10^{-5}$		0.70	$1.85 \times 10^{-5}$	1.69	
				4	4000			5455	3.7	3700	0.68	$1.80 \times 10^{-5}$		0.68	$1.80 \times 10^{-5}$		
				2	2000			3455	2.1	2100	0.61	$1.61 \times 10^{-5}$		0.61	$1.61 \times 10^{-5}$		
FEB.17	30 to 35	500	3.3	2	2000	1340	75	2415	18.6	18600	$2.66 \times 10^{-5}$	5.45	$1.45 \times 10^{-4}$				
				4	4000			5415	28.1	28100	5.19	$1.38 \times 10^{-4}$		5.19	$1.38 \times 10^{-4}$		
				6	6000			7415	35.9	35900	4.98	$1.32 \times 10^{-4}$		4.98	$1.32 \times 10^{-4}$		
				8	8000			5415	43.1	43100	4.59	$1.22 \times 10^{-4}$		4.59	$1.22 \times 10^{-4}$	10.78	
FEB.17	30 to 35	500	3.3	5	5000			6415	31.2	31200		4.86	$1.29 \times 10^{-4}$				
				3	3000			4415	16.7	16700	3.78	$1.01 \times 10^{-4}$		3.78	$1.01 \times 10^{-4}$		

**RECORD OF WATER PRESSURE TEST**

PROJECT

BORE-HOLE No. B81 - 5 (2)

LOCALITY

GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L m	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>s</sub> cm	PRESSURE GAUGE HEIGHT H <sub>g</sub> cm	TOTAL HEAD H <sub>p</sub> +H <sub>g</sub> +H <sub>g</sub> cm	WATER LEAKAGE		CALCULATING CONST $\frac{2.3}{\pi} \times \frac{1}{60} \times \frac{1}{\log \frac{L}{r}}$ C min/cm <sup>2</sup> sec	Q H cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=Q/HxC cm/sec	LUGENON UNIT L=C <sup>2</sup> /L-RX19*
				P kg/cm <sup>2</sup>	H <sub>p</sub> cm				Q <sub>1</sub> l/min	Q <sub>2</sub> cm <sup>3</sup> /min				
FEB. 19	35 to 40	500	3.3	2	2000	1000	75	3075	0.9	900	2.66 x 10 <sup>-5</sup>	0.29	7.79 x 10 <sup>-5</sup>	
				4	4000			5075	2.0	2000		0.39	1.05 x 10 <sup>-5</sup>	
				7	7000			8075	3.1	3100		0.98	1.02 x 10 <sup>-5</sup>	
				9	9000			10075	4.0	4000		0.40	1.06 x 10 <sup>-5</sup>	0.89
				6	6000			7075	3.1	3100		0.44	1.17 x 10 <sup>-5</sup>	
				3	3000			4075	2.5	2500		0.61	1.69 x 10 <sup>-5</sup>	
FEB. 20	40 to 45	500	3.3	2	2000	1000	75	3075	1.4	1400	2.66 x 10 <sup>-5</sup>	0.46	1.21 x 10 <sup>-5</sup>	
				5	5000			6075	3.0	3000		0.49	1.31 x 10 <sup>-5</sup>	
				8	8000			9075	4.6	4600		0.51	1.35 x 10 <sup>-5</sup>	
				10	10000			11075	5.7	5700		0.51	1.37 x 10 <sup>-5</sup>	1.14
				7	7000			8075	4.9	4900		0.61	1.61 x 10 <sup>-5</sup>	
				3	3000			4075	3.3	3300		0.81	2.15 x 10 <sup>-5</sup>	
FEB. 21	45 to 50	500	3.3	2	2000	1310	75	3385	0	0	2.66 x 10 <sup>-5</sup>	0		
				5	5000			6385	2.4	2400		0.38	1.00 x 10 <sup>-5</sup>	
				8	8000			9385	5.0	5000		0.53	1.42 x 10 <sup>-5</sup>	
				10	10000			11385	5.9	5900		0.52	1.38 x 10 <sup>-5</sup>	1.18
				7	7000			8385	4.6	4600		0.55	1.46 x 10 <sup>-5</sup>	
				3	3000			4385	1.0	1000		0.23	6.07 x 10 <sup>-6</sup>	





**RECORD OF WATER PRESSURE TEST**

PROJECT

BORE-HOLE No. BEL - 7 (2)

LOCALITY

GROUND WATER LEVEL

-20.4 m.

DATE	DEPTH m	SECTION LENGTH L cm	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE Hs cm	PRESSURE GAUGE HEIGHT Hg cm	TOTAL HEAD Hs + Hg + Hg Hp + Hs + Hg cm	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3}{2.3} \times \frac{1}{2.3} \times \frac{1}{2.3}$	Q cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=Q/RXC=refr	LUGZON UNIT L=Q/LxHx10 <sup>8</sup>
				P kg/cm <sup>2</sup>	Hp cm				Q' l/min	Q cm <sup>3</sup> /min				
MAR.2	45 to 45	500	3.3	2	2000	2040	25	4065	0.5	500	2.66 x 10 <sup>-5</sup>	0.12	3.27 x 10 <sup>-6</sup>	
				5	5000			7065	2.0	2000		0.28	7.93 x 10 <sup>-6</sup>	
				8	8000			10065	4.0	4000		0.40	1.06 x 10 <sup>-5</sup>	
				10	10000			12065	4.5	4500		0.37	9.92 x 10 <sup>-6</sup>	0.9
				7	7000			5065	2.1	2100		0.29	6.16 x 10 <sup>-6</sup>	
				3	3000			5065	0.8	800		0.16	4.20 x 10 <sup>-6</sup>	
MAR.3	45 to 50	500	3.3	2	2000	2040	25	4065	0.5	500	2.66 x 10 <sup>-5</sup>	0.12	3.27 x 10 <sup>-6</sup>	
				5	5000			7065	7.0	7000		0.99	2.64 x 10 <sup>-5</sup>	
				8	8000			10065	14.8	14800		1.47	3.91 x 10 <sup>-5</sup>	
				10	10000			12065	36.4	36400		3.02	8.05 x 10 <sup>-5</sup>	7.28
				7	7000			9065	33.2	33200		3.66	9.74 x 10 <sup>-5</sup>	
				3	3000			5065	21.0	21000		4.15	1.10 x 10 <sup>-4</sup>	

**RECORD OF WATER PRESSURE TEST**

PROJECT: SAFT GANDAKI PROJECT LOCALITY: DAMSITE A: RIGHT BANK  
 BORE-HOLE No. B81 - 8 (1) GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L, m	HOLE RADIUS r, cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE Hs, cm	PRESSURE GAUGE RIGHT Hg, cm	TOTAL HEAD Hs + Hg + Hg H, cm	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3 \times 10^{-5} \times L \times \log \frac{L}{2r}}{C}$	Q H	COEFFICIENT OF PERMEABILITY $K = Q/HK \text{ cm/sec}$	LUGEON UNIT $L_u = Q/L \cdot RK \cdot H$
				P, kg/cm <sup>2</sup>	Hp, cm				Q', l/min	Q, cm <sup>3</sup> /min				
NOV.16	5 - 10	500	3.3	1	1000	310	25	1335	0.2	200	$2.66 \times 10^{-5}$	0.15	$2.99 \times 10^{-6}$	
				2	2000			2335	1.0	1000		0.43	$1.14 \times 10^{-5}$	1.0
				1	1000			1335	0.5	500		0.37	$9.96 \times 10^{-6}$	
NOV.16	10 - 15	500	3.3	1	1000	310	25	1335	1.1	1100	$2.66 \times 10^{-5}$	0.82	$2.19 \times 10^{-5}$	
				2	2000			2335	1.6	1600		0.69	$1.82 \times 10^{-5}$	
				3	3000			3335	1.7	1700		0.51	$1.36 \times 10^{-5}$	1.1
				2	2000			2335	1.2	1200		0.51	$1.37 \times 10^{-5}$	
				1	1000			1335	0.9	900		0.67	$1.25 \times 10^{-5}$	
NOV.17	15 - 20	500	3.3	1	1000	310	25	1335	1.2	1200	$2.66 \times 10^{-5}$	0.90	$2.39 \times 10^{-5}$	
				2.5	2500			2835	3.4	3400		1.20	$3.19 \times 10^{-5}$	
				4	4000			4335	6.5	6500		1.50	$3.99 \times 10^{-5}$	3.3
				2.5	2500			2835	3.3	3300		1.16	$3.10 \times 10^{-5}$	
				1	1000			1335	1.1	1100		0.82	$2.19 \times 10^{-5}$	
NOV.18	20 - 25	500	3.3	1	1000	350	25	1375	1.1	1100	$2.66 \times 10^{-5}$	0.80	$2.13 \times 10^{-5}$	
				3	3000			3375	4.4	4400		1.30	$3.47 \times 10^{-5}$	
				5	5000			5375	18.0	18000		3.35	$8.91 \times 10^{-5}$	7.2
				3	3000			3375	8.8	8800		2.61	$6.94 \times 10^{-5}$	
				1	1000			1375	3.0	3000		2.18	$5.80 \times 10^{-5}$	
NOV.19	25 - 30	500	3.3	1	1000	500	25	1525	2.9	2900	$2.66 \times 10^{-5}$	1.90	$5.06 \times 10^{-5}$	
				3	3000			3525	9.8	9800		2.78	$7.40 \times 10^{-5}$	
				5	5000			5525	13.5	13500		2.44	$6.50 \times 10^{-5}$	
				7	7000			7525	26.5	26500		3.52	$9.37 \times 10^{-5}$	7.6
				4	4000			4525	12.0	12000		2.65	$7.05 \times 10^{-5}$	
				2	2000			2525	5.4	5400		2.22	$5.30 \times 10^{-5}$	
NOV.21	30 - 35	500	3.3	2	2000	-450	25	1575	24.6	24600	$2.66 \times 10^{-5}$	15.62	$4.15 \times 10^{-4}$	
				4	4000			3575	40.8	40800		11.41	$3.04 \times 10^{-4}$	20.4



**RECORD OF WATER PRESSURE TEST**

PROJECT: SAFT GARDIAK PROJECT LOCALITY: DAMBUK A. LEFT BANK  
 BORE-HOLE No. B81 - 9 (1) GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L cm	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE Hs cm	PRESSURE GAUGE HEIGHT Hg cm	TOTAL HEAD H <sub>g</sub> + H <sub>s</sub> + H <sub>g</sub> cm	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3}{2.3} \times \frac{1}{2.3} \times \frac{1}{2.3}$	Q cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=Q/RXG/area	LUGEON UNIT L <sub>u</sub> =Q/L-RXHP		
				P kg/cm <sup>2</sup>	HEAD Hp cm				Q <sup>1</sup> l/min	Q <sup>2</sup> cm <sup>3</sup> /min						
OCT. 26	9.5 - 15	550	3.3	1	1000	630	40	1670	6.6	6600	2.46 x 10 <sup>-5</sup>	3.95	9.72 x 10 <sup>-5</sup>			
				2	2000			2670	9.8	9800				3.67	9.03 x 10 <sup>-5</sup>	
				3	3000			3670	12.2	12200					8.18 x 10 <sup>-5</sup>	7.4
				4	4000			4670	14.4	14400					1.84	4.88 x 10 <sup>-5</sup>
OCT. 31	15 - 20	500	3.3	1	1000	630	40	1670	2.9	2900	2.66 x 10 <sup>-5</sup>	1.74	4.62 x 10 <sup>-5</sup>			
				2	2000			2670	4.9	4900				1.84	4.88 x 10 <sup>-5</sup>	
				3	3000			3670	7.9	7900				2.15	5.73 x 10 <sup>-5</sup>	
				4	4000			4670	9.4	9400				2.01	5.35 x 10 <sup>-5</sup>	4.7
OCT. 31	20 - 25	500	3.3	1	1000	650	40	1690	3	3000	2.66 x 10 <sup>-5</sup>	1.80	4.78 x 10 <sup>-5</sup>			
				2	2000			2690	5.2	5200				2.52	6.67 x 10 <sup>-5</sup>	
				3	3000			3690	7.8	7800				2.61	6.94 x 10 <sup>-5</sup>	5.9
				4	4000			4690	10.5	10500				2.76	7.25 x 10 <sup>-5</sup>	
NOV. 1	25 - 28.7	470	2.3	1	1000	630	40	1670	7.3	7300		2.73	7.27 x 10 <sup>-5</sup>			
				2	2000			2670	12.9	12900				2.46	6.53 x 10 <sup>-5</sup>	
				3	3000			3670	19.1	19100				2.17	5.89 x 10 <sup>-5</sup>	
				4	4000			4670	26.8	26800				2.86	8.01 x 10 <sup>-5</sup>	
NOV. 2	30 - 35	500	3.3	1	1000	630	40	1670	10.5	10500	2.80 x 10 <sup>-5</sup>	2.80	7.65 x 10 <sup>-5</sup>			
				2	2000			2670	15.9	15900				2.49	6.97 x 10 <sup>-5</sup>	5.8
				3	3000			3670	19.1	19100				2.78	7.79 x 10 <sup>-5</sup>	
				4	4000			4670	26.8	26800				3.07	8.60 x 10 <sup>-5</sup>	
NOV. 2	30 - 35	500	3.3	1	1000	630	40	1670	8.2	8200		3.23	9.05 x 10 <sup>-5</sup>			
				2	2000			2670	12.4	12400				4.64	1.24 x 10 <sup>-4</sup>	
				3	3000			3670	16.2	16200				3.47	9.23 x 10 <sup>-5</sup>	
				4	4000			4670	22.8	22800				3.42	9.09 x 10 <sup>-5</sup>	
NOV. 2	30 - 35	500	3.3	5	5000			5670	28.8	28800		3.75	9.99 x 10 <sup>-5</sup>	8.2		
				6	6000			6670	20.8	20800				3.67	9.76 x 10 <sup>-5</sup>	
				7	7000			7670	15.8	15800				4.31	1.15 x 10 <sup>-4</sup>	
				8	8000			8670	13.4	13400				5.02	1.33 x 10 <sup>-4</sup>	



**RECORD OF WATER PRESSURE TEST**

PROJECT SAPT GANDAJI PROJECT

LOCALITY DAMSITE B; LEFT BANK

BORE-HOLE No. BEL - 12 (1)

GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L - m	HOLE RADIUS r - cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE Hs - cm	PRESSURE GAUGE HEIGHT Hg - cm	TOTAL HEAD		WATER LEAKAGE Q - cm <sup>3</sup> /min	CALCULATING CONST. $\frac{2.3 \times 10^{-5}}{2r} \times \frac{1}{\log \frac{L}{r}}$ C - min/cm-sec	Q cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K = Q/HrC cm/sec	LUSCON UNIT L = Q/L.Hr.Hp
				HEAD Hp - cm	HEAD H - cm									
JAN.18	15 to 20	500	3.3	1	1000	350	50	1400	2.7	2700	2.66 x 10 <sup>-5</sup>	1.93	5.13 x 10 <sup>-5</sup>	
				2.5	2500			2900	4.4	4400		1.52	4.04 x 10 <sup>-5</sup>	
				4	4000			4400	6.8	6800		1.55	4.12 x 10 <sup>-5</sup>	3.4
				2.5	2500			2900	4.7	4700		1.62	4.21 x 10 <sup>-5</sup>	
				1	1000			1400	2.7	2700		1.93	5.13 x 10 <sup>-5</sup>	
JAN.19	20 to 25	500	3.3	1	1000	380	50	1330	2.7	2700	2.66 x 10 <sup>-5</sup>	2.03	5.40 x 10 <sup>-5</sup>	
				3	3000			3330	5.0	5000		1.90	3.99 x 10 <sup>-5</sup>	
				5	5000			5330	5.5	5500		1.03	2.74 x 10 <sup>-5</sup>	2.2
				3	3000			3330	4.3	4300		1.29	3.43 x 10 <sup>-5</sup>	
				1	1000			1330	3.9	3900		1.42	3.80 x 10 <sup>-5</sup>	
JAN.20	25 to 30	500	3.2	1	1000	310	50	1360	0	0	2.66 x 10 <sup>-5</sup>	-		
				3	3000			3360	4.8	4800		1.43	3.80 x 10 <sup>-5</sup>	
				5	5000			5360	5.8	5800		1.08	2.87 x 10 <sup>-5</sup>	
				7	7000			7360	34.8	34800		4.73	1.26 x 10 <sup>-4</sup>	9.9
				4	4000			4360	7.5	7600		1.74	4.63 x 10 <sup>-5</sup>	
				2	2000			2360	0	0		-		
JAN.21	30 to 35	500	3.3	2	2000	380	50	2130	5.4	5400	2.66 x 10 <sup>-5</sup>	2.22	5.91 x 10 <sup>-5</sup>	
				4	4000			4430	8.7	8700		1.96	5.21 x 10 <sup>-5</sup>	
				6	6000			6430	22.6	22600		3.51	9.34 x 10 <sup>-5</sup>	
				8	8000			8430	44.0	44000		5.22	1.39 x 10 <sup>-4</sup>	11.0
				5	5000			5430	17.8	17800		3.28	8.72 x 10 <sup>-5</sup>	
				3	3000			3430	0.9	900		0.26	6.92 x 10 <sup>-6</sup>	
JAN.22	34.9 to 39.9	500	3.3	2	2000	480	50	2530	3.9	3900	2.66 x 10 <sup>-5</sup>	1.54	4.10 x 10 <sup>-5</sup>	
				4	4000			4530	5.3	5300		1.17	3.11 x 10 <sup>-5</sup>	
				7	7000			7530	13.7	13700		1.82	4.84 x 10 <sup>-5</sup>	
				9	9000			9530	55.0	55000		5.77	1.53 x 10 <sup>-4</sup>	12.2
				6	6000			6530	27.2	27200		4.17	1.11 x 10 <sup>-4</sup>	
				3	3000			3530	2.5	2500		0.71	1.89 x 10 <sup>-5</sup>	



**RECORD OF WATER PRESSURE TEST**

PROJECT SAFT GANDAKI PROJECT  
BORE-HOLE No. BEL - 12 (2)

LOCALITY DAMSITE B, LEFT BANK  
GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L m	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>0</sub> cm	PRESSURE GAUGE HEIGHT H <sub>g</sub> cm	TOTAL HEAD H <sub>0</sub> +H <sub>g</sub> +H <sub>g</sub> cm		WATER LEAKAGE Q l/min	CALCULATING CONST.		COEFFICIENT OF PERMEABILITY K=QHX/Csec	LUGEON UNIT L=Q/L-BHP
				P kg/cm <sup>2</sup>	Ep cm			Q' cm <sup>3</sup> /min	$\frac{3.2 \times 10^{-5} \times L \times P}{H}$		C min/cm <sup>2</sup> sec			
JAN.23	40 to 45	500	3.3	2	2000	440	50	2490	4.4	4400	$2.66 \times 10^{-5}$	1.77	$4.71 \times 10^{-5}$	
				5	5000			5490	6.0	6000		1.09	$2.90 \times 10^{-5}$	
				8	8000			8490	6.9	6900		0.81	$2.15 \times 10^{-5}$	
				10	10000			10490	10.6	10600		1.01	$2.65 \times 10^{-5}$	2.1
				7	7000			7490	8.0	8000		1.07	$2.85 \times 10^{-5}$	
				3	3000			2490	5.4	5400		1.75	$4.12 \times 10^{-5}$	
JAN.24	45 to 50	500	3.3	2	2000	430	50	2460	4.5	4500	$2.66 \times 10^{-5}$	1.89	$4.95 \times 10^{-5}$	
				5	5000			5460	6.2	6200		1.14	$3.03 \times 10^{-5}$	
				8	8000			8460	6.0	6000		0.71	$1.89 \times 10^{-5}$	
				10	10000			10460	5.6	5600		0.54	$1.44 \times 10^{-5}$	1.1
				7	7000			7460	6.4	6400		0.86	$2.29 \times 10^{-5}$	
				3	3000			2460	6.2	6200		1.79	$4.76 \times 10^{-5}$	
JAN.25	50 to 55	500	3.3	2	2000	680	50	2730	4.5	4500	$2.66 \times 10^{-5}$	1.65	$4.39 \times 10^{-5}$	
				5	5000			5730	6.2	6200		1.08	$2.87 \times 10^{-5}$	
				8	8000			8730	6.1	6100		0.70	$1.86 \times 10^{-5}$	
				10	10000			10730	6.6	6600		0.62	$1.65 \times 10^{-5}$	1.3
				7	7000			7730	6.1	6100		0.79	$2.10 \times 10^{-5}$	
				3	3000			2730	5.3	5300		1.42	$3.78 \times 10^{-5}$	
JAN.28	55 to 60	500	3.3	2	2000	610	50	2660	4.4	4400	$2.66 \times 10^{-5}$	1.55	$4.39 \times 10^{-5}$	
				5	5000			5660	6.2	6200		1.10	$2.93 \times 10^{-5}$	
				8	8000			8660	6.6	6600		0.76	$2.02 \times 10^{-5}$	
				10	10000			10660	6.6	6600		0.62	$1.65 \times 10^{-5}$	1.3
				7	7000			7660	6.0	6000		0.78	$2.07 \times 10^{-5}$	
				3	3000			2660	4.8	4800		1.31	$3.48 \times 10^{-5}$	

**RECORD OF WATER PRESSURE TEST**

PROJECT : SAFT GANDAKI PROJECT  
 BORE-HOLE No. 881-13

LOCALITY : DAMSITE B, REVERSED  
 GROUND WATER LEVEL

DATE	DEPTH m-	SECTION LENGTH L cm	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>s</sub> cm	PRESSURE GAUGE HEIGHT H <sub>g</sub> cm	TOTAL HEAD H <sub>p</sub> +H <sub>s</sub> +H <sub>g</sub> H cm	WATER LEAKAGE		CALCULATING CONST. $\frac{2.25 \times 10^{-5} \times L \times \log \frac{L}{r}}{C}$ C min/cm <sup>2</sup> sec	Q H cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=QR/KCm/sec	LUGEON UNIT L <sub>e</sub> =Q/L <sup>2</sup> H <sub>30</sub> H <sub>0</sub> <sup>2</sup>
				P kg/cm <sup>2</sup>	H <sub>p</sub> cm				Q' l/min	Q cm <sup>3</sup> /min				
APR.6	19.5 to 25	550	2.8	1	1000	-590	650	1060	65.7	65700	2.54 x 10 <sup>-5</sup>	61.97	1.58 x 10 <sup>-3</sup>	119.5
APR.7	25 to 30	500			(A packer leaked.)									
APR.8	30 to 35	500	2.8	2	2000	-590	650	2060	0	0	2.75 x 10 <sup>-5</sup>	0		
				4	4000			4060	0	0		0		
				6	6000			6060	0.6	600		0.10	2.75 x 10 <sup>-6</sup>	
				8	8000			8060	0.2	200		0.025	6.87 x 10 <sup>-7</sup>	0.05
				5	5000			5060	0.2	200		0.04	1.10 x 10 <sup>-6</sup>	
				3	3000			3060	0	0		0		
APR.9	35 to 40.35	535	2.8	2	2000	-590	650	2060	0	0	2.60 x 10 <sup>-5</sup>	0		
				4	4000			4060	0	0		0		
				7	7000			7060	0	0		0		
				9	9000			9060	0	0		0	0	0
				6	6000			6060	0	0		0		
				3	3000			3060	0	0		0		
APR.9	40 to 44.55	455	2.8	2	2000	-590	650	2060	0	0	2.96 x 10 <sup>-5</sup>	0		
				5	5000			5060	0	0		0		
				8	8000			8060	0	0		0		
				10	10000			10060	0.25	250		0.025	7.41 x 10 <sup>-7</sup>	0.05
				7	7000			7060	0	0		0		
				3	3000			3060	0	0		0		
APR.10	44.5 to 50	550	2.8	2	2000	-590	650	2060	0	0	2.54 x 10 <sup>-5</sup>	0		
				5	5000			5060	0.35	350		0.069	1.76 x 10 <sup>-6</sup>	
				8	8000			8060	0.7	700		0.087	2.21 x 10 <sup>-6</sup>	0.15
				10	10000			10060	0.85	850		0.084	2.14 x 10 <sup>-6</sup>	
				7	7000			7060	0.35	350		0.050	1.27 x 10 <sup>-6</sup>	
				3	3000			3060	0	0		0		

## RECORD OF WATER PRESSURE TEST

PROJECT: SAPT BANDAKI PROJECT LOCALITY: DAMSIITE G. LEFT BANK  
 BORE-HOLE No. BS - 14 (1) GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L, m	HOLE RADIUS r, cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>s</sub> , cm	PRESSURE GAUGE HEIGHT H <sub>g</sub> , cm	TOTAL HEAD H <sub>p</sub> = H <sub>s</sub> + H <sub>g</sub> , cm	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3}{2.7} \times \frac{1}{60} \times \frac{1}{100} \times \frac{L}{r^2}$ C, cm <sup>3</sup> /cm <sup>2</sup> -sec	Q, cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K = Q/HxC cm/sec	LUGEON UNIT L <sub>u</sub> = Q/L · H · XIP
				PRESSURE, P, kg/cm <sup>2</sup>	HEAD, H <sub>p</sub> , cm				Q, l/min	Q, cm <sup>3</sup> /min				
DEC. 28	2.5 - 7.5	500	3.3	1	1000	150	20	170	0.4	100	2.66 × 10 <sup>-5</sup>	0.34	9.09 × 10 <sup>-6</sup>	0.6
				2	2000			270	0.6	600		0.28	7.33 × 10 <sup>-6</sup>	
				1	1000			170	0.4	400		0.34	9.09 × 10 <sup>-6</sup>	
DEC. 29	5.00 - 10.00	500	3.3	1	1000	180	20	1200	0.1	100	2.66 × 10 <sup>-5</sup>	0.083	2.22 × 10 <sup>-6</sup>	0.1
				2	2000			2200	0.1	100		0.045	1.21 × 10 <sup>-6</sup>	
				1	1000			1200	0	0		0	0	
DEC. 29	10.00 - 15.00	500	3.3	1	1000	180	20	1200	1.7	1700	2.66 × 10 <sup>-5</sup>	1.42	3.77 × 10 <sup>-5</sup>	2.8
				2	2000			2200	2.8	2800		1.27	3.39 × 10 <sup>-5</sup>	
				3	3000			3200	4.2	4200		1.31	3.49 × 10 <sup>-5</sup>	
				2	2000			2200	2.5	2500		1.14	3.02 × 10 <sup>-5</sup>	
				1	1000			1200	0.8	800		0.67	1.77 × 10 <sup>-5</sup>	
DEC. 30	15.00 - 20.00	500	3.3	1	1000	770	20	1790	3.4	3400	2.66 × 10 <sup>-5</sup>	1.90	5.05 × 10 <sup>-5</sup>	3.6
				2.5	2500			3290	5.2	5200		1.58	4.20 × 10 <sup>-5</sup>	
				4	4000			4790	7.2	7200		1.50	4.00 × 10 <sup>-5</sup>	
				2.5	2500			3290	5.0	5000		1.52	4.04 × 10 <sup>-5</sup>	
				1	1000			1790	2.4	2400		1.34	3.57 × 10 <sup>-5</sup>	
DEC. 30	20.00 - 25.00	500	3.3	1	1000	520	20	1540	20.8	20800	2.66 × 10 <sup>-5</sup>	13.51	3.59 × 10 <sup>-4</sup>	22.2
				3	3000			3540	40.2	40200		11.36	3.02 × 10 <sup>-4</sup>	
				5	5000			5540	55.4	55400		10.0	2.66 × 10 <sup>-4</sup>	
				3	3000			3540	38.	38000		10.73	2.86 × 10 <sup>-4</sup>	
				1	1000			1540	15	15000		9.76	2.59 × 10 <sup>-4</sup>	
DEC. 31	25.00 - 30.00	500	3.3	1	1000	1060	20	2080	6	6000	2.66 × 10 <sup>-5</sup>	2.88	7.67 × 10 <sup>-5</sup>	6.5
				3	3000			4080	12.1	42100		2.97	7.89 × 10 <sup>-5</sup>	
				5	5000			6080	16.3	63800		2.76	7.35 × 10 <sup>-5</sup>	
				7	7000			8080	22.8	22800		2.82	7.51 × 10 <sup>-5</sup>	
				4	4000			5080	14.5	14500		2.85	7.59 × 10 <sup>-5</sup>	
				2	2000			3080	10.2	10200		3.31	8.81 × 10 <sup>-5</sup>	

**RECORD OF WATER PRESSURE TEST**

PROJECT

BORE-HOLE No. BSJ - 1A (2)

LOCALITY

GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L cm	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>s</sub> cm	PRESSURE CHANGE HEIGHT H <sub>g</sub> cm	TOTAL HEAD H <sub>p</sub> + H <sub>s</sub> + H <sub>g</sub> cm	WATER LEAKAGE Q l/min	CALCULATING CONST. $\frac{2.3}{2} \times \frac{L}{R} \times \frac{1}{\log T}$ C min/cm <sup>2</sup> sec	Q l/h	COEFFICIENT OF PERMEABILITY $K = Q/RH \text{ cm/sec}$	LUGEON UNIT $L = Q/(L \times H \times K)$
				P M/CM <sup>2</sup>	H <sub>p</sub> cm								
JAN. 1	30.00 - 35.00	500	3.3	2	2000	900	20	2920	0.2	2.66 x 10 <sup>-5</sup>	0.068	1.82 x 10 <sup>-6</sup>	
				4	4000			4920	0.4		0.081	2.16 x 10 <sup>-6</sup>	
				6	6000			6920	0.4		0.058	1.54 x 10 <sup>-6</sup>	
				8	8000			8920	0.7		0.078	2.09 x 10 <sup>-6</sup>	0.2
				5	5000			5920	0.6		0.101	2.70 x 10 <sup>-6</sup>	
				3	3000			3920	0.4		0.102	2.71 x 10 <sup>-6</sup>	
JAN. 2	35.00 - 40.00	500	3.3	2	2000	1100	20	3120	0.3	2.66 x 10 <sup>-5</sup>	0.096	2.56 x 10 <sup>-6</sup>	
				4	4000			5120	0.9		0.18	4.68 x 10 <sup>-6</sup>	
				7	7000			8120	1.3		0.16	4.26 x 10 <sup>-6</sup>	
				9	9000			10120	2.5		0.25	6.57 x 10 <sup>-6</sup>	0.6
				6	6000			7120	2.1		0.29	7.85 x 10 <sup>-6</sup>	
				3	3000			4120	1.4		0.34	9.04 x 10 <sup>-6</sup>	
JAN. 3	40.00 - 45.00	500	3.3	2	2000	950	20	2970	0.1	2.66 x 10 <sup>-5</sup>	0.094		
				5	5000			5970	0.1		0.017	Less than	
				8	8000			8970	0.1		0.011	Less than	
				10	10000			10970	0.1		0.009	1 x 10 <sup>-6</sup>	0.02
				5	5000			5970	0.1		0.017	(Impermeable)	
				3	3000			3970	0.1		0.025	(Impermeable)	
JAN. 4	45.00 - 50.00	500	3.3	2	2000	860	20	2880	0.1	2.66 x 10 <sup>-5</sup>			
				5	5000			5880	0.1			Less than	
				8	8000			6880	0			Less than	
				10	10000			10880	0			1 x 10 <sup>-6</sup>	0.0
				5	5000			5880	0			(Impermeable)	
				3	3000			3880	0			(Impermeable)	

**RECORD OF WATER PRESSURE TEST**

PROJECT: SAFT GANDAKI PROJECT LOCALITY: DARSITE B, RIVERBED  
 BORE-HOLE No. B81-15 (1) GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L, cm	HOLE RADIUS r, cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>0</sub> , cm	PRESSURE HEIGHT FROM WATER LEVEL H <sub>g</sub> , cm	TOTAL HEAD H <sub>0</sub> +H <sub>g</sub> +H <sub>h</sub> H, cm	WATER LEAKAGE Q, cm <sup>3</sup> /min	CALCULATING CONST. $\frac{2.3}{2\pi} \times \frac{1}{60} \times \frac{L}{r^2} \times \log \frac{L}{r}$ C, min/ft <sup>2</sup>	Q H cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=Q/HxC m/sec	LUGEON UNIT Lp=Q/L·HX20 <sup>6</sup>
				P, kg/cm <sup>2</sup>	H <sub>p</sub> , cm								
APR. 6	15 to 20	500	3.3	1	1000	110	110	1110	14.2	2.66 x 10 <sup>-5</sup>	12.79	3.40 x 10 <sup>-4</sup>	
				2.5	2500			2610	27.4		10.50	2.79 x 10 <sup>-4</sup>	
				4	4000			4110	35.4		8.61	2.29 x 10 <sup>-4</sup>	17.7
				2.5	2500			2610	24.1		9.23	2.46 x 10 <sup>-4</sup>	
				1	1000			1110	12.7		11.44	3.04 x 10 <sup>-4</sup>	
APR. 7	20 to 25	500	3.3	(A packer sealed.)									
APR. 7	25 to 30	500	3.3	(A packer sealed.)									
APR. 8	30 to 35	500	3.3	2	2000	110	110	2110	0	2.66 x 10 <sup>-5</sup>	0		
				4	4000			4110	0.1		0.024	6.39 x 10 <sup>-7</sup>	
				6	6000			6110	0.6		0.098	2.61 x 10 <sup>-6</sup>	
				8	8000			8110	1.35		0.166	4.42 x 10 <sup>-6</sup>	0.34
				5	5000			5110	0.5		0.098	2.61 x 10 <sup>-6</sup>	
				3	3000			3110	0		0		
APR. 8	35-65 to 40-65	500	3.3	2	2000	110	110	2110	0.05	2.66 x 10 <sup>-5</sup>	0.024	6.39 x 10 <sup>-7</sup>	
				4	4000			4110	0.2		0.049	3.30 x 10 <sup>-6</sup>	
				7	7000			7110	1.1		0.155	4.12 x 10 <sup>-6</sup>	
				9	9000			9110	1.75		0.192	5.11 x 10 <sup>-6</sup>	0.39
				6	6000			6110	0.75		0.123	3.27 x 10 <sup>-6</sup>	
				3	3000			3110	0		0		
APR. 9	40-3 to 45-3	500	3.3	2	2000	110	110	2110	0.15	2.66 x 10 <sup>-5</sup>	0.071	1.89 x 10 <sup>-6</sup>	
				5	5000			5110	0.65		0.127	3.38 x 10 <sup>-6</sup>	
				8	8000			8110	1.15		0.142	3.78 x 10 <sup>-6</sup>	
				10	10000			10110	1.6		0.158	4.20 x 10 <sup>-6</sup>	0.32
				7	7000			7110	0.85		0.120	3.19 x 10 <sup>-6</sup>	
				3	3000			3110	0.1		0.032	8.51 x 10 <sup>-7</sup>	



## RECORD OF WATER PRESSURE TEST

PROJECT: SAFT GANDAKI PROJECT LOCALITY: DAMSITE C; RIGHT BANK

BORE-HOLE No. 881-16 (1) GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L m	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>s</sub> cm	PRESSURE GAUGE HEIGHT H <sub>g</sub> cm	TOTAL HEAD H <sub>p</sub> +H <sub>g</sub> +H <sub>g</sub> cm	WATER LEAKAGE		CALCULATING CONST. $C = \frac{2.3}{47} \times \frac{Q}{r^2} \times \frac{1}{\log \frac{L}{r}}$	COEFFICIENT OF PERMEABILITY K=Q/Hx C cm/sec	LUGEON UNIT Lu=Q/L.Hx10 <sup>10</sup>
				P kg/cm <sup>2</sup>	H <sub>p</sub> cm				Q l/min	Q' l/min			
MAR.26	12 to 20	800	3-3	1	1000	630	0	1630	3.55	3550	1.82 x 10 <sup>-5</sup>	3.96 x 10 <sup>-5</sup>	
				2.5	2500			3130	8.7	8700		5.06 x 10 <sup>-5</sup>	
				4	4000			4630	15.7	15700		6.16 x 10 <sup>-5</sup>	4.91
				2.5	2500			3130	11.95	11950		6.95 x 10 <sup>-5</sup>	
				1	1000			1630	3.1	3100		3.46 x 10 <sup>-5</sup>	
MAR.27	20 to 25	500	3-3	1	1000	890	0	1890	4.0	4000	2.66 x 10 <sup>-5</sup>	5.64 x 10 <sup>-5</sup>	
				3	3000			3890	16.15	16150		1.10 x 10 <sup>-5</sup>	
				5	5000			5890	25.45	25450		1.15 x 10 <sup>-4</sup>	10.2
				3	3000			3890	14.15	14150		9.68 x 10 <sup>-5</sup>	
				1	1000			1890	0.5	500		7.05 x 10 <sup>-6</sup>	
MAR.28	25 to 30	500	3-3	1	1000	890	0	1890	3.65	3650	2.66 x 10 <sup>-5</sup>	5.13 x 10 <sup>-5</sup>	
				3	3000			3890	4.7	4700		3.22 x 10 <sup>-5</sup>	
				5	5000			5890	17.2	17200		7.77 x 10 <sup>-5</sup>	6.88
				7	7000			(The pressure could not be applied.)					
				4	4000			4890	14.1	14100		7.66 x 10 <sup>-5</sup>	
				2	2000			2890	7.6	7600		7.00 x 10 <sup>-5</sup>	
MAR.29	30 to 35	500	3-3	2	2000	1065	0	3065	7.1	7100	2.66 x 10 <sup>-5</sup>	6.17 x 10 <sup>-5</sup>	
				4	4000			5065	10.05	10050		5.27 x 10 <sup>-5</sup>	
				6	6000			7065	29.9	29900		1.13 x 10 <sup>-4</sup>	
				7	7000			8065	43.8	43800		1.44 x 10 <sup>-4</sup>	12.5
				5	5000			6065	28.4	28400		1.25 x 10 <sup>-4</sup>	
				3	3000			4065	13.85	13850		9.07 x 10 <sup>-5</sup>	
MAR.30	35 to 40	500	3-3	2	2000	1065	0	3065	4.45	4450	2.66 x 10 <sup>-5</sup>	3.86 x 10 <sup>-5</sup>	
				4	4000			5065	5.0	5000		2.63 x 10 <sup>-5</sup>	
				7	7000			8065	10.4	10400		3.43 x 10 <sup>-5</sup>	
				9	9000			10065	11.05	11050		2.93 x 10 <sup>-5</sup>	2.46
				6	6000			7065	8.6	8600		3.25 x 10 <sup>-5</sup>	
				3	3000			4065	5.6	5600		3.67 x 10 <sup>-5</sup>	

**RECORD OF WATER PRESSURE TEST**

PROJECT: SAFT GANDAKI PROJECT  
BORE-HOLE No. 881-16 (2)

LOCALITY: DARSITE C, RIGHT BANK  
GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L-m	HOLE RADIUS r-cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>a</sub> -cm	PRESSURE GAUGE REPORT H <sub>g</sub> -cm	TOTAL HEAD H <sub>p</sub> +H <sub>a</sub> +H <sub>g</sub> cm	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3}{2.3} \times \frac{1}{50} \times \frac{1}{50} \times \frac{1}{100} \times \frac{1}{100}$	Q m <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=QHX/Cmsec	LUGEON UNIT Lu=Q/L-HXIM <sup>2</sup>
				P kg/cm <sup>2</sup>	H <sub>p</sub> -cm				Q' l/min	Q cm <sup>3</sup> /min				
MAR.30	40 to 45	500	3.3	2	2000	1065	0	3065	1.3	1300	2.66 x 10 <sup>-5</sup>	0.426	1.13 x 10 <sup>-5</sup>	
				5	5000			6065	9.4	9400		1.55	4.12 x 10 <sup>-5</sup>	
				8	8000			9065	25.75	25750		2.84	7.56 x 10 <sup>-5</sup>	6.44
				10	10000	(The pressure could not be applied.)								
				7	7000			8965	21.7	21700		2.89	7.16 x 10 <sup>-5</sup>	
				3	3000			4065	13.4	13400		3.30	8.78 x 10 <sup>-5</sup>	
				2	2000			3330	33.2	33200	2.66 x 10 <sup>-5</sup>	9.97	2.65 x 10 <sup>-4</sup>	
MAR.31	45 to 50	500	3.3	5	5000	1330	0	6330	49.6	49600		7.84	2.09 x 10 <sup>-4</sup>	
				7.5	7500			8830	62.8	62800		7.11	1.89 x 10 <sup>-4</sup>	16.75
				7	7000			8330	64.5	64500		7.74	2.06 x 10 <sup>-4</sup>	
				3	3000			4330	38.5	38500		8.89	2.37 x 10 <sup>-4</sup>	



**RECORD OF WATER PRESSURE TEST**

PROJECT SAFT SANDAKI PROJECT  
BORE-HOLE No. B81-17 (1)

LOCALITY DAMSITE B; RIGHT BANK  
GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L cm	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE PRESSURE P kg/cm <sup>2</sup>	STATIC HEAD IN HOLE H <sub>s</sub> cm	PRESSURE GAUGE HEIGHT H <sub>g</sub> cm	TOTAL HEAD H <sub>p</sub> = H <sub>s</sub> + H <sub>g</sub> cm	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3 \times 10^{-5} \times L \times \log \frac{L}{r}}{4T}$	$\frac{Q}{H}$ cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY $K = Q/H \times C$ cm/sec	LUGEON UNIT $L_e = Q/L \times H \times P$
								Q l/min	Q cm <sup>3</sup> /min				
MAR. 19	10 to 15	500	3.3	1	1000	600	1560	0.6	600	2.66 x 10 <sup>-5</sup>	0.38	1.02 x 10 <sup>-5</sup>	
				2	2000		2550	2.0	2000		0.78	2.08 x 10 <sup>-5</sup>	
				3	3000		3560	3.5	3600		1.01	2.69 x 10 <sup>-5</sup>	2.4
				2	2000		2560	1.8	1800		0.70	1.87 x 10 <sup>-5</sup>	
				1	1000		1560	0.5	500		0.32	8.53 x 10 <sup>-6</sup>	
MAR. 20	15 to 20	500	3.3	1	1000	620	1580	0.9	900	2.66 x 10 <sup>-5</sup>	0.57	1.52 x 10 <sup>-5</sup>	
				2.5	2500		3080	0.6	600		0.19	5.18 x 10 <sup>-6</sup>	
				4	4000		4580	2.4	2400		0.52	1.34 x 10 <sup>-5</sup>	1.2
				2.5	2500		3080	1.7	1700		0.55	1.47 x 10 <sup>-5</sup>	
				1	1000		1580	0.9	900		0.57	1.52 x 10 <sup>-5</sup>	
MAR. 20	20 to 25	500	3.3	1	1000	620	1580	0.6	600	2.66 x 10 <sup>-5</sup>	0.38	1.01 x 10 <sup>-5</sup>	
				3	3000		3580	1.1	1100		0.31	8.17 x 10 <sup>-6</sup>	
				5	5000		5580	2.0	2000		0.36	9.54 x 10 <sup>-6</sup>	0.8
				3	3000		3580	1.1	1100		0.31	8.17 x 10 <sup>-6</sup>	
				1	1000		1580	0.5	500		0.32	8.42 x 10 <sup>-6</sup>	
MAR. 20	25 to 30	500	3.3	1	1000	620	1580	0.5	500	2.66 x 10 <sup>-5</sup>	0.32	8.42 x 10 <sup>-6</sup>	
				3	3000		3580	1.6	1600		0.45	1.19 x 10 <sup>-5</sup>	
				5	5000		5580	2.9	2900		0.52	1.38 x 10 <sup>-5</sup>	
				7	7000		7580	4.0	4000		0.53	1.40 x 10 <sup>-5</sup>	1.14
				4	4000		4580	2.3	2300		0.50	1.34 x 10 <sup>-5</sup>	
				2	2000		2580	0.6	600		0.23	6.19 x 10 <sup>-6</sup>	
MAR. 21	30 to 35	500	3.3	2	2000	765	2725	1.4	1400	2.66 x 10 <sup>-5</sup>	0.51	1.37 x 10 <sup>-5</sup>	
				4	4000		4725	1.5	1500		0.32	8.45 x 10 <sup>-6</sup>	
				6	6000		6725	3.3	3300		0.49	1.31 x 10 <sup>-5</sup>	
				8	8000		8725	4.3	4300		0.49	1.31 x 10 <sup>-5</sup>	1.08
				5	5000		5725	1.5	1500		0.26	6.97 x 10 <sup>-6</sup>	
				3	3000		3725	2.0	2000		0.54	1.43 x 10 <sup>-5</sup>	

**RECORD OF WATER PRESSURE TEST**

PROJECT: SAPT GANDAKI PROJECT  
BORE-HOLE No. 281-17 (2)

LOCALITY: DAMSITE B, RIGHT BANK  
GROUND WATER LEVEL

DATE	DEPTH	SECTION LENGTH	HOLE RADIUS	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE	PRESSURE GAUGE HEIGHT	TOTAL HEAD	WATER LEAKAGE		CALCULATING CONST.	Q	COEFFICIENT OF PERMEABILITY	LUGSON UNIT
				P	H <sub>p</sub>				Q'	Q				
	m	L	cm	kg/cm <sup>2</sup>	cm	cm	cm	H <sub>p</sub> + H <sub>g</sub> + H <sub>g</sub>	l/min	cm <sup>3</sup> /min	C	cm <sup>3</sup> /min	K=Q/HKcm/sec	L=Q/LRHP
MAR.21	35 to 40	500	3.3	2	2000	850	-40	2810	1.5	1500	2.66 x 10 <sup>-5</sup>	0.33	1.42 x 10 <sup>-5</sup>	
				4	4000			4810	1.9	1900		0.40	1.05 x 10 <sup>-5</sup>	
				7	7000			7810	2.0	2000		0.26	6.81 x 10 <sup>-6</sup>	
				9	9000			9810	2.8	2800		0.29	7.59 x 10 <sup>-6</sup>	0.62
				6	6000			6810	2.2	2200		0.32	8.60 x 10 <sup>-6</sup>	
				3	3000			3810	1.8	1800		0.47	1.26 x 10 <sup>-5</sup>	
MAR.22	40 to 45	500	3.3	2	2000	2650	-40	4610	3.7	3700	2.66 x 10 <sup>-5</sup>	0.80	2.14 x 10 <sup>-5</sup>	
				5	5000			7610	6.0	6000		0.79	2.10 x 10 <sup>-5</sup>	
				8	8000			10610	8.4	8400		0.79	2.11 x 10 <sup>-5</sup>	
				10	10000			12610	9.4	9400		0.75	1.98 x 10 <sup>-5</sup>	1.88
				7	7000			9610	7.2	7200		0.75	1.99 x 10 <sup>-5</sup>	
				3	3000			5610	4.2	4200		0.75	1.99 x 10 <sup>-5</sup>	
MAR.22	45 to 50	500	3.3	2	2000	2650	-40	4610	3.7	3700	2.66 x 10 <sup>-5</sup>	0.80	2.14 x 10 <sup>-5</sup>	
				5	5000			7610	6.6	6600		0.87	2.31 x 10 <sup>-5</sup>	
				8	8000			10610	9.0	9000		0.85	2.26 x 10 <sup>-5</sup>	
				10	10000			12610	10.2	10200		0.81	2.15 x 10 <sup>-5</sup>	2.04
				7	7000			9610	7.8	7900		0.81	2.16 x 10 <sup>-5</sup>	
				3	3000			5610	4.9	4900		0.87	2.32 x 10 <sup>-5</sup>	

# RECORD OF WATER PRESSURE TEST

PROJECT: SAFT GANDAKI PROJECT LOCALITY: DAMSITE C; LEFT BANK  
 BORE-HOLE No. 881-1B (1) GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L m	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE Hs cm	PRESSURE GAUGE HEIGHT Hg cm	TOTAL HEAD Ht = Hs + Hg cm		WATER LEAKAGE Q cm <sup>3</sup> /min	CALCULATING CONST. $\frac{2.3}{2.3} \times \frac{1}{50} \times \frac{1}{\log \frac{L}{r}}$ C cm <sup>3</sup> /cm <sup>2</sup> sec	Q cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY $K = \frac{Q}{L} \times \frac{C}{\Delta H}$	LUGEON UNIT $L_u = \frac{Q}{L} \times \frac{H}{\Delta H}$
				P kg/cm <sup>2</sup>	HEAD Hp cm									
APR. 5	10 to 15	500	3.3	1	1000	310	0	1310	0	2.66 x 10 <sup>-5</sup>	0			
				2	2000			2310	2.5		1.08	2.87 x 10 <sup>-5</sup>		
				3	3000			3310	4.8		1.45	3.86 x 10 <sup>-5</sup>		3.2
				2	2000			2310	3.5		1.52	4.04 x 10 <sup>-5</sup>		
				1	1000			1310	1.05		0.802	2.13 x 10 <sup>-5</sup>		
APR. 6	15 to 20	500	3.3	1	1000	650	0	1650	1.15	1150	0.697	1.85 x 10 <sup>-5</sup>		
				2.5	2500			3150	4.7	4700	1.49	3.95 x 10 <sup>-5</sup>		
				4	4000			4650	7.35	7350	1.56	4.20 x 10 <sup>-5</sup>		3.68
				2.5	2500			3150	4.9	4900	1.42	3.78 x 10 <sup>-5</sup>		
				1	1000			1650	2.35	2350				
APR. 7	20 to 25	500	3.3	1	1000	650	0	1650	0.9	900	0.545	1.45 x 10 <sup>-5</sup>		
				3	3000			3650	3.45	3450	0.945	2.51 x 10 <sup>-5</sup>		
				5	5000			5650	6.35	6350	1.12	2.98 x 10 <sup>-5</sup>		2.54
				3	3000			3650	3.9	3900	1.07	2.85 x 10 <sup>-5</sup>		
				1	1000			1650	1.4	1400	0.848	2.26 x 10 <sup>-5</sup>		
APR. 8	30 to 35	500	3.3	2	2000	500	0	2500	5.55	5550	2.22	5.91 x 10 <sup>-5</sup>		
				4	4000			4500	8.45	8450	1.88	5.00 x 10 <sup>-5</sup>		
				6	6000			6500	11.85	11850	1.82	4.84 x 10 <sup>-5</sup>		
				8	8000			8500	14.4	14400	1.69	4.50 x 10 <sup>-5</sup>		3.6
				5	5000			5500	8.8	8800	1.60	4.25 x 10 <sup>-5</sup>		
				3	3000			3500	3.85	3850	1.10	2.93 x 10 <sup>-5</sup>		
APR. 8	35 to 40	500	3.3	2	2000	590	0	2590	0.15	150	0.058	1.54 x 10 <sup>-6</sup>		
				4	4000			4590	0.8	800	0.174	4.63 x 10 <sup>-6</sup>		
				7	7000			7590	3.45	3450	0.455	1.21 x 10 <sup>-5</sup>		
				9	9000			9590	4.4	4400	0.459	1.22 x 10 <sup>-5</sup>		0.98
				6	6000			6590	2.85	2850	0.432	1.15 x 10 <sup>-5</sup>		
				3	3000			3590	0.4	400	0.111	2.95 x 10 <sup>-6</sup>		



## RECORD OF WATER PRESSURE TEST

PROJECT: SAFT GANDAKI PROJECT      LOCALITY: TEST GROUT SITE  
 BORE-HOLE No. TG - 1      GROUND WATER LEVEL

DATE	DEPTH	SECTION LENGTH	HOLE RADIUS	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE	PRESSURE GAUGE HEIGHT	TOTAL HEAD	WATER LEAKAGE	CALCULATING CONST.		COEFFICIENT OF PERMEABILITY	LUGEON UNIT
				PRESSURE	HEAD					$\frac{2.3}{2} \times \frac{L}{R} \times \frac{1}{\log \frac{L}{r}}$	$C \text{ min/cm}^2 \text{ sec}$		
DEC. 9	5 - 10	500	3.3	1	1000	600	25	1625	73	$2.66 \times 10^{-5}$	44.9	$1.19 \times 10^{-5}$	
				1.25	1250			1875	86.2		46.0	$1.22 \times 10^{-5}$	137.9
				1	1000			1625	79.2		48.7	$1.30 \times 10^{-5}$	
					2500								
DEC. 10	10 - 15	500	3.3	1	1000	980	25	1405	3.5	$2.66 \times 10^{-5}$	2.49	$6.63 \times 10^{-5}$	
				2.5	2500			2905	4.0		1.38	$3.66 \times 10^{-5}$	3.2
				1	1000			1405	3.5		2.49	$6.63 \times 10^{-5}$	
DEC. 11	15 - 20	500	3.3	1	1000	500	25	1525	29.8	$2.66 \times 10^{-5}$	19.54	$5.20 \times 10^{-4}$	
				2.5	2500			3025	38.0		12.56	$3.34 \times 10^{-4}$	
				3.75	3750			4275	30.4		11.79	$3.74 \times 10^{-4}$	26.9
				2.5	2500			3025	34.4		11.37	$3.02 \times 10^{-4}$	
				1	1000			1525	20		13.11	$3.49 \times 10^{-4}$	
DEC. 14	20 - 25	500	3.3	1	1000	330	25	1355	4.4	$2.66 \times 10^{-5}$	3.25	$8.64 \times 10^{-5}$	
				3	3000			1355	5.6		1.37	$3.65 \times 10^{-5}$	
				5	5000			5355	6.2		1.16	$3.08 \times 10^{-5}$	2.5
				3	3000			3355	4.2		1.25	$3.33 \times 10^{-5}$	
				1	1000			1355	4.6		3.39	$9.03 \times 10^{-5}$	
DEC. 16	25 - 30	500	3.3	1	1000	250	25	1275	4.8	$2.66 \times 10^{-5}$	3.76	$1.00 \times 10^{-4}$	
				3.5	3500			3775	4.0		1.06	$2.82 \times 10^{-5}$	
				6.5	6500			6775	4.6		0.68	$1.81 \times 10^{-5}$	1.4
				3.5	3500			3775	4.4		1.17	$3.10 \times 10^{-5}$	
				1	1000			1275	4.8		3.76	$1.00 \times 10^{-4}$	

### RECORD OF WATER PRESSURE TEST

PROJECT: SAPI GANDAKI PROJECT LOCALITY: TEST POINT SITE  
 BORE-HOLE No. TG - 2 GROUND WATER LEVEL

DATE	DEPTH m	SECTION LENGTH L cm	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE Fs cm	PRESSURE GAUGE HEIGHT Hg cm	TOTAL HEAD H <sub>p</sub> +H <sub>a</sub> +H <sub>g</sub> H cm	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3}{2.7} \times \frac{1}{60} \times \frac{1}{100} \log \frac{r}{L}$ C min/cm <sup>2</sup> sec	Q cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=Q/RXC cm/sec	LUGEON UNIT L=Q/L.RX10 <sup>6</sup>
				P kg/cm <sup>2</sup>	H <sub>p</sub> cm				Q' /min	Q cm <sup>3</sup> /min				
DEC.13	5 - 10	500	3.3	0.25	250	750	25	1025	90	90000	$2.66 \times 10^{-5}$	87.8	$2.34 \times 10^{-5}$	720
DEC.13	10 - 15	500	3.3	1	1000	285	25	1310	3.0	3000	$2.66 \times 10^{-5}$	2.29	$6.09 \times 10^{-5}$	
				2.5	2500			2810	4.6	4600		1.64	$4.25 \times 10^{-5}$	3.7
				1	1000			1310	3.8	3800		2.90	$7.72 \times 10^{-5}$	
DEC.15	15 - 20	500	3.3	1	1000	310	25	1335	3.0	3000	$2.66 \times 10^{-5}$	2.25	$5.98 \times 10^{-5}$	
				2.5	2500			2835	4.0	4000		1.41	$3.75 \times 10^{-5}$	
				3.75	3750			4085	2.8	2800		0.69	$1.82 \times 10^{-5}$	1.5
				2.5	2500			2835	4.2	4200		1.48	$3.94 \times 10^{-5}$	
				1	1000			1335	3.6	3600		2.70	$7.17 \times 10^{-5}$	
DEC.18	20 - 25	500	3.3	1	1000	800	25	1825	2.4	2400	$2.66 \times 10^{-5}$	1.32	$3.50 \times 10^{-5}$	
				3	3000			3825	3.2	3200		0.64	$2.23 \times 10^{-5}$	
				5	5000			5825	4.4	4400		0.76	$2.01 \times 10^{-5}$	1.8
				3	3000			3825	3.4	3400		0.89	$2.96 \times 10^{-5}$	
				1	1000			1825	3.0	3000		1.64	$4.27 \times 10^{-5}$	
DEC.21	25 - 30	500	3.3	1	1000	400	25	1425	4.0	4000	$2.66 \times 10^{-5}$	2.81	$7.17 \times 10^{-5}$	
				3.5	3500			3925	5.6	5600		1.43	$3.80 \times 10^{-5}$	
				6.5	6500			6925	5.2	5200		0.75	$2.00 \times 10^{-5}$	1.6
				3.5	3500			3925	4.2	4200		1.07	$2.85 \times 10^{-5}$	
				1	1000			1425	3.8	3800		2.67	$7.09 \times 10^{-5}$	

## RECORD OF WATER PRESSURE TEST

PROJECT SAPT GANDAKI PROJECT LOCALITY TEST GROUT SITE  
 BORE-HOLE No. TS - 3 GROUND WATER LEVEL

DATE	DEPTH m -	SECTION LENGTH L cm	HOLE RADIUS r cm	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE H <sub>s</sub> cm	PRESSURE GAUGE HEIGHT H <sub>g</sub> cm	TOTAL HEAD H <sub>p</sub> + H <sub>g</sub> + H <sub>s</sub> cm	WATER LEAKAGE		CALCULATING CONST. $\frac{2.3}{4r} \times \frac{1}{2.3} \times \frac{1}{\log \frac{1}{1}}$	Q H cm <sup>3</sup> /min	COEFFICIENT OF PERMEABILITY K=Q/HK cm/sec	LUGEON UNIT L <sub>u</sub> =Q/L-RKUP
				P kg/cm <sup>2</sup>	H <sub>p</sub> cm				Q / min	Q cm <sup>3</sup> /min				
DEC.21	5 - 10	500	3.3	1	1000	600	25	1625	3.0	3000	2.66 x 10 <sup>-5</sup>	1.85	4.91 x 10 <sup>-5</sup>	5.1
				1	1250			1875	3.2	3200		1.72	4.91 x 10 <sup>-5</sup>	
				1	1000			1625	3.0	3000		1.85	4.91 x 10 <sup>-5</sup>	
DEC.23	10 - 15	500	3.3	1	1000	165	25	1190	3.2	3200	2.66 x 10 <sup>-5</sup>	2.69	7.15 x 10 <sup>-5</sup>	2.6
				2.5	2500			2690	3.2	3200		1.19	3.16 x 10 <sup>-5</sup>	
				1	1000			1190	3.0	3000		2.52	6.71 x 10 <sup>-5</sup>	
DEC.24	15 - 20	500	3.3	1	1000	125	25	1150	0	0	2.66 x 10 <sup>-5</sup>	0	0	
				2.5	2500			2650	1.5	1500		0.57	1.51 x 10 <sup>-5</sup>	
				3.75	3750			3200	2.0	2000		0.51	1.36 x 10 <sup>-5</sup>	3.1
				2.5	2500			2650	1.5	1500		0.57	1.51 x 10 <sup>-5</sup>	
				1	1000			1150	0	0		0	0	
DEC.25	20 - 25	500	3.3	1	1000	315	25	1315	1.8	1800	2.66 x 10 <sup>-5</sup>	1.37	3.64 x 10 <sup>-5</sup>	
				3	3000			3315	2.4	2400		0.72	1.93 x 10 <sup>-5</sup>	
				5	5000			5315	3.0	3000		0.56	1.50 x 10 <sup>-5</sup>	1.2
				3	3000			3315	2.2	2200		0.66	1.77 x 10 <sup>-5</sup>	
				1	1000			1315	1.8	1800		1.37	3.64 x 10 <sup>-5</sup>	
DEC.25	25 - 30	500	3.3	1	1000	340	25	1365	2.4	2400	2.66 x 10 <sup>-5</sup>	1.76	4.68 x 10 <sup>-5</sup>	
				3.5	3500			3865	2.4	2400		0.44	1.16 x 10 <sup>-5</sup>	
				6.5	6500			6865	3.0	3000		0.44	1.16 x 10 <sup>-5</sup>	0.9
				3.5	3500			3865	2.6	2600		0.67	1.79 x 10 <sup>-5</sup>	
				1	1000			1365	2.2	2200		1.62	4.29 x 10 <sup>-5</sup>	







### RECORD OF WATER PRESSURE TEST

PROJECT: SAFT GANDAKI PROJECT

LOCALITY: TEST GRouting SITE

BORE-HOLE No. 10 - 6

GROUND WATER LEVEL

DATE	DEPTH	SECTION LENGTH	HOLE RADIUS	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE	PRESSURE GAUGE HEIGHT	TOTAL HEAD	WATER LEAKAGE		CALCULATING CONST.	Q	COEFFICIENT OF PERMEABILITY	LUGEON UNIT
				P	H <sub>p</sub>				Q	H				
		L (cm)	r (cm)	P (kg/cm <sup>2</sup> )	H <sub>p</sub> (cm)	H <sub>s</sub> (cm)	H <sub>g</sub> (cm)	H <sub>t</sub> (cm)	Q (cm <sup>3</sup> /min)	Q (l/min)	C (ml/cm <sup>2</sup> sec)	cm <sup>3</sup> /min	cm/sec	
MAR-5	5 to 10	500	3.3	1	1000	710	30	1740	0.1	100	2.66 x 10 <sup>-5</sup>	0.057	1.53 x 10 <sup>-6</sup>	1.2
				2	2000			2740	1.2	1000		0.44	1.16 x 10 <sup>-5</sup>	
				3	1000			1740	0.1	100		0.057	1.53 x 10 <sup>-6</sup>	
MAR-5	10 to 15	500	3.3	1	1000	710	30	1740	0	0	2.66 x 10 <sup>-5</sup>	0	-	
				2	2000			2740	0.1	100		0.036	9.71 x 10 <sup>-7</sup>	
				3	3000			3740	0.1	100		0.027	7.11 x 10 <sup>-7</sup>	0.07
				2	2000			2740	0.1	100		0.036	9.71 x 10 <sup>-7</sup>	
				1	1000			1740	0	0		0	-	
MAR-5	15 to 20	500	3.3	1	1000	710	30	1740	0	0	2.66 x 10 <sup>-5</sup>	0	-	
				2.5	2500			3240	0.1	100		0.031	8.21 x 10 <sup>-7</sup>	
				4	4000			4740	0.4	400		0.084	2.24 x 10 <sup>-6</sup>	0.2
				2.5	2500			3240	0.1	100		0.031	8.21 x 10 <sup>-7</sup>	
				1	1000			1740	0	0		0	-	







JICA