

GEOLOGICAL RECORD OF BORING										HOLE No. Q-A1-3 (1)	
PROJECT <i>Agos HYDROPOWER</i>			LOCATION <i>Agos No. 1 QUARRY SITE X112650000/YS6602000</i>			ELEVATION OF GROUND SURFACE <i>201.107m</i>		DEPTH OF HOLE <i>58.0m</i>		INCLINATION OF HOLE <i>vertical</i>	
DIAMETER OF HOLE <i>76 mm</i>			MACHINE			DATE OF DRILLING			CORE RECOVERY <i>87%</i>		
CORE RECOVERY			DRILLED BY			LOGGED BY					
DATE	DEPTH (m)	ELEVATION (m)	ROCK TYPE	COLUMN SECTION	CORE RECOVERY %	DIAMETER (mm)	DESCRIPTION	RQD %			DEPTH
	1.00	200.107	<i>Talukapat</i>	0			<i>Talukapat. composed of rock fragments and clay soil</i>				1
	2.22	197.107		0							2
	3.42	194.107		0							3
	4.62	191.107		0							4
	5.82	188.107		0							5
	7.02	185.107		0							7
	8.22	182.107		0							8
	9.42	179.107		0							9
	10.62	176.107		0							10
	11.82	173.107		0							11
	13.02	170.107	<i>Graywacke</i>				<i>Except fine sandstone part. Mostly coarse grained graywacke - fine conglomerate.</i>				13
	14.22	167.107	<i>small grained conglomerate</i>				<i>Size of pebbles are 2-5mm and composed of angular black shale fragments mostly.</i>				14
	15.42	164.107					<i>2.5-11.0m Many vertical cracks which has vertical bedding planes. Fine sandstone has bedding plane striking about 30°</i>				15
	16.62	161.107	<i>fine sandstone - slab</i>								16
	17.82	158.107	<i>Graywacke</i>				<i>12.9-16.1 Coarsely grained 17.0-17.5 and reddish intensely and generally frag. b.</i>				17
	19.02	155.107									19
	20.22	152.107									20
	21.42	149.107	<i>fine sandstone</i>								21
	22.62	146.107	<i>Graywacke</i>								22
	23.82	143.107					<i>17.0-20.0 Lots of calcite 20.0-22.0 some white coarse 22.0-22.5 of bedding plane 22.5-25.7</i>				23
	25.02	140.107					<i>Bedding dips 30°</i>				25
	26.22	137.107	<i>fine sandstone</i>								26
	27.42	134.107	<i>Graywacke</i>								27
	28.62	131.107	<i>fine sandstone - slab</i>				<i>Fine sandstone - black shale bedding plane dips 45°</i>				28
	29.82	128.107	<i>Graywacke</i>				<i>General rock classification is C4 - C4 except following part:</i>				29
	31.02	125.107					<i>0.5 - 11.5 m } C1</i>				31
	32.22	122.107					<i>12.9 - 16.5 } C1</i>				32
	33.42	119.107					<i>17.0 - 21.0 } C4</i>				33
	34.62	116.107					<i>22.9 - 23.9 } C4</i>				34
	35.82	113.107									35
	37.02	110.107									37

GEOLOGICAL RECORD OF BORING										HOLE No. Q-A1-3(2)	
PROJECT			A903 HYDROPOWER			LOCATION			A903 No. 1 Quarry site		
ELEVATION OF GROUND SURFACE			206.129 m			DEPTH OF HOLE			100 m		
Diameter of Hole			76 mm			MACHINE			DATE OF DRILLING		
CORE RECOVERY			87 %			DRILLED BY			LOGGED BY		
DATE	DEPTH (m)	ELEVATION (m)	ROCK TYPE	COLUMN SECTION	CORE RECOVERY		DESCRIPTION	R.C.D.		DEPTH	
					%	ft		%	ft		
	31.10	169.909	Granite								
	36.00	166.859									
	36.00	165.309					31.5-32.5 crystals of calcite is present.				
	37.45	163.859	Fine sandstone ~ shale				bedding planes is not clear				
	38.90	161.309	Granite								
	42.00	159.109									
	44.60	157.959									
	46.60	157.459									
	47.70	157.409	Fine sandstone ~ shale				bedding planes dips about 20°				
	48.00	157.109					(Cm)				

GEOLOGICAL RECORD OF BORING										HOLE No. Q-A1-4 (1)	
PROJECT			AGOS HYDROPOWER			LOCATION		AGOS No. 1 QUARRY SITE X 1/2 MILE N. OF YOUNG, NEV.			
ELEVATION OF GROUND SURFACE			272.653			DEPTH OF HOLE		52.0m			
DIAMETER OF HOLE			2 1/2" / 63			MACHINE		DATE OF DRILLING			
CORE RECOVERY			68%			DRILLED BY		LOGGED BY			
DATE		DEPTH (m)	ELEVATION (m)	ROCK TYPE	COLUMN SECTION	CORE RECOVERY %	NET DIAMETER	DESCRIPTION	R Q D %	DEPTH	
		1.00	272.653	River bed deposit		50		0-120cm Mostly shales is recovered 0-20cm Light brown clay sand		1	
		2.00	271.653			50				2	
		3.00	270.653			50				3	
		4.00	269.653			50		21-29cm Short cylindrical cores are recovered.		4	
		5.00	268.653			50				5	
		6.00	267.653			50				6	
		7.00	266.653			50				7	
		8.00	265.653			50				8	
		9.00	264.653			50				9	
		10.00	263.653			50				10	
		11.00	262.653			50				11	
		12.00	261.653			50				12	
		13.00	260.653			50		22-28cm Dark grey coarse sand is recovered		13	
		14.00	259.653			50				14	
		15.00	258.653	Gneiss		50		180-225cm Strongly weathered fragmental brown cores - short cylindrical caps are recovered. Cores have pitted brown surface. Gneiss has pebbles partly the size of them are 1-2cm dia.		15	
		16.00	257.653			50				16	
		17.00	256.653			50				17	
		18.00	255.703			50				18	
		19.00	254.653			50				19	
		20.00	254.153			50				20	
		21.00	253.653			50		180-185cm } Only shales is recovered, no shales is composed of silty sand.		21	
		22.00	252.653			50				22	
		23.00	251.653			50				23	
		24.00	250.653			50				24	
		25.00	249.653			50				25	
		26.00	248.723			50				26	
		27.00	247.653			50				27	
		28.00	246.653			50				28	
		29.00	245.253			50				29	
		30.00	244.053			50				30	
		31.00	243.653			50				31	

GEOLOGICAL RECORD OF BORING										HOLE No. Q-A1-c (2)		
PROJECT		KFS HYDROPOWER			LOCATION		Area No. 1, Quarry site			INCLINATION OF HOLE		Vertical
ELEVATION OF GROUND SURFACE				DEPTH OF HOLE		DATE OF DRILLING		LOGGED BY				
CORE RECOVERY				MACHINE		DATE OF DRILLING		LOGGED BY				
68%				DRILLED BY								
D.A.T.	DEPTH (m)	ELEVATION (m)	ROCK TYPE	COLUMN SECTION	CORE RECOVERY %	BIT DIAMETER	DESCRIPTION	R.Q.D.		DEPTH		
								N	Ø			
	20.00	272.153	Gypsiferous		100	100				20		
	21.00	271.203			100	100				21		
	22.00	270.253			100	100				22		
	23.00	269.303			100	100				23		
	24.00	268.353			100	100				24		
	25.00	267.403			100	100				25		
	26.00	266.453			100	100				26		
	27.00	265.503			100	100				27		
	28.00	264.553			100	100				28		
	29.00	263.603			100	100				29		
	30.00	262.653			100	100				30		
	31.00	261.703	Fine sandstone - shale		100	100				31		
	32.00	260.753			100	100				32		
	33.00	259.803			100	100				33		
	34.00	258.853			100	100				34		
	35.00	257.903			100	100				35		
	36.00	256.953			100	100				36		
	37.00	256.003			100	100				37		
	38.00	255.053			100	100				38		
	39.00	254.103			100	100				39		
	40.00	253.153			100	100				40		
	41.00	252.203			100	100				41		
	42.00	251.253			100	100				42		
	43.00	250.303			100	100				43		
	44.00	249.353			100	100				44		
	45.00	248.403			100	100				45		
	46.00	247.453			100	100				46		
	47.00	246.503			100	100				47		
	48.00	245.553			100	100				48		
	49.00	244.603			100	100				49		
	50.00	243.653			100	100				50		

(C1)
 26.5 - 29.0 m
 Cores are rather fresh and still short cylindrical cores or fragmental cores are recovered.
 Cores are friable and not good enough for rock material. Mostly cracking planes are noted.

Dipping of shales is 45°
 39.0 - 50.0 m
 Mostly good sound cylindrical cores are recovered. (C1)

42.0 - 46.5 m
 Short cylindrical cores are recovered. 42.5 - 49.7 m these are considered to be occurred by mechanical break (C1 - C1)

(C1)

GEOLOGICAL RECORD OF BORING										HOLE No. Q-A1-511	
PROJECT <i>Agos HYDROPOWER</i>				LOCATION <i>Agos No 1 QUARRY SITE 2144992.021 / Y556241.204</i>							
ELEVATION OF GROUND SURFACE <i>192.360m</i>			DEPTH OF HOLE <i>51.0m</i>		INCLINATION OF HOLE <i>Vertical</i>						
DIAMETER OF HOLE <i>76 mm</i>		MACHINE		DATE OF DRILLING			LOGGED BY				
CORE RECOVERY <i>92%</i>		DRILLED BY									
DATE	DEPTH (m)	ELEVATION (m)	ROCK TYPE	COLUMN SECTION	CORE RECOVERY %	ROD DIAMETER	DESCRIPTION	ROD	DEPTH		
			<i>Residual soil</i>				<i>Partly gneiss fragments are present. Light brown soil.</i>				
	<i>2.00</i>	<i>192.360</i>									
	<i>4.00</i>	<i>192.360</i>									
	<i>4.00</i>	<i>193.360</i>	<i>Weathered gneiss</i>				<i>Fragmantal - short cylindrical cores are measured.</i>				
	<i>4.70</i>	<i>192.660</i>									
	<i>6.00</i>	<i>190.860</i>									
	<i>8.00</i>	<i>189.860</i>									
	<i>9.25</i>	<i>188.110</i>	<i>Gneiss</i>	<i>1/2 1/2</i>			<i>Mostly homogeneous gneiss similar to Q-79-2. Many white mass fragments they cause cracking planes.</i>				
	<i>11.00</i>	<i>185.360</i>		<i>1/2 1/2</i>							
	<i>14.00</i>	<i>182.360</i>		<i>1/2 1/2</i>							
	<i>16.55</i>	<i>181.210</i>		<i>1/2 1/2</i>							
	<i>18.00</i>	<i>179.360</i>		<i>1/2 1/2</i>							
	<i>20.55</i>	<i>178.310</i>		<i>1/2 1/2</i>			<i>185-210m Cores are measured strongly and fragments, cracking planes are visible (C1)</i>				
	<i>22.00</i>	<i>175.360</i>		<i>1/2 1/2</i>							
	<i>24.00</i>	<i>173.360</i>		<i>1/2 1/2</i>			<i>220-227m Cores are measured strongly</i>				
	<i>25.00</i>	<i>172.360</i>		<i>1/2 1/2</i>							
	<i>26.50</i>	<i>171.310</i>		<i>1/2 1/2</i>							
	<i>27.00</i>	<i>169.310</i>		<i>1/2 1/2</i>			<i>277-285m Slightly opened crack</i>				
	<i>28.00</i>	<i>167.360</i>		<i>1/2 1/2</i>							

GEOLOGICAL RECORD OF BORING										HOLE No. Q-A1-S (2)	
PROJECT <i>AGS HYDROPOWER</i>				LOCATION <i>Agos Mt. Quarry S.B.</i>							
ELEVATION OF GROUND SURFACE				DEPTH OF HOLE		INCLINATION OF HOLE					
DIAMETER OF HOLE				MACHINE		DATE OF DRILLING					
CORE RECOVERY				DRILLED BY		LOGGED BY					
DATE	DEPTH (m)	ELEVATION (m)	ROCK TYPE	COLUMN SECTION	CORE RECOVERY		DESCRIPTION	ROD		DEPTH	
					%	DIAMETER					
	36.40	166.160									
			<i>fine sandstone</i>								
	33.40	169.360									
	30.40	171.360									
	27.40	173.910									
	24.40	177.260					<i>323-381" Vertical - steep inclined cracks, associated with vertical plane</i>				
	21.40	180.560					<i>381-438" Many calcite veins are present and cores are fragile (Ch)</i>				
	18.40	183.910					<i>Bedding plane dips 55°</i>				
	15.40	187.260									
	12.40	190.560									
	9.40	193.910									
	6.40	197.260					<i>438-500" fine sandstone, dipping is about 45°</i>				

DRILL LOG

HOLE NO. B-2 SHEET NO. OF

PROJECT		AGOS HYDROPOWER										CLIENT						
LOCATION		AGOS Dam Bypass P.C.										DEPTH OF HOLE		DRILL RIG				
ELEVATION		162.520 m										CHECKED		DRILLED				
DATE	SCALE	ELEVATIONS	DEPTH	THICKNESS	SECTION	COLOR	CONSISTENCY OR U.S.C.	MATERIAL	FORMATION	DESCRIPTION	GROUND W.L. AND CASING	DEPTH	NO.	TEST VALUES				SCALE
														STANDARD PENETRATION TEST				
														Blow every 30cm				
														N VALUE				
														Numbers for 30cm depth				
		162.67	0.00	0.00						Reddish brown silty clayey loam				1	1	1	1	
		162.65	0.02	0.02										2	2	2	2	
		162.63	0.04	0.04										3	3	3	3	
		162.61	0.06	0.06										4	4	4	4	
		162.59	0.08	0.08										5	5	5	5	
		162.57	0.10	0.10										6	6	6	6	
		162.55	0.12	0.12										7	7	7	7	
		162.53	0.14	0.14										8	8	8	8	
		162.51	0.16	0.16										9	9	9	9	
		162.49	0.18	0.18										10	10	10	10	
		162.47	0.20	0.20										11	11	11	11	
		162.45	0.22	0.22										12	12	12	12	
		162.43	0.24	0.24										13	13	13	13	
		162.41	0.26	0.26										14	14	14	14	
		162.39	0.28	0.28										15	15	15	15	
		162.37	0.30	0.30										16	16	16	16	
		162.35	0.32	0.32										17	17	17	17	
		162.33	0.34	0.34										18	18	18	18	
		162.31	0.36	0.36										19	19	19	19	
		162.29	0.38	0.38										20	20	20	20	
		162.27	0.40	0.40										21	21	21	21	
		162.25	0.42	0.42										22	22	22	22	
		162.23	0.44	0.44										23	23	23	23	
		162.21	0.46	0.46										24	24	24	24	
		162.19	0.48	0.48										25	25	25	25	
		162.17	0.50	0.50										26	26	26	26	
		162.15	0.52	0.52										27	27	27	27	
		162.13	0.54	0.54										28	28	28	28	
		162.11	0.56	0.56										29	29	29	29	
		162.09	0.58	0.58										30	30	30	30	
		162.07	0.60	0.60										31	31	31	31	
		162.05	0.62	0.62										32	32	32	32	
		162.03	0.64	0.64										33	33	33	33	
		162.01	0.66	0.66										34	34	34	34	
		161.99	0.68	0.68										35	35	35	35	
		161.97	0.70	0.70										36	36	36	36	
		161.95	0.72	0.72										37	37	37	37	
		161.93	0.74	0.74										38	38	38	38	
		161.91	0.76	0.76										39	39	39	39	
		161.89	0.78	0.78										40	40	40	40	
		161.87	0.80	0.80										41	41	41	41	
		161.85	0.82	0.82										42	42	42	42	
		161.83	0.84	0.84										43	43	43	43	
		161.81	0.86	0.86										44	44	44	44	
		161.79	0.88	0.88										45	45	45	45	
		161.77	0.90	0.90										46	46	46	46	
		161.75	0.92	0.92										47	47	47	47	
		161.73	0.94	0.94										48	48	48	48	
		161.71	0.96	0.96										49	49	49	49	
		161.69	0.98	0.98										50	50	50	50	

* CONSISTENCY OR RELATIVE DENSITY
 * UNIFIED SOIL CLASSIFICATION

HOLE NO.

DRILL LOG

HOLE NO. 0-3 SHEET NO. OF

PROJECT		AGOS HYDROPOWER										CLIENT												
LOCATION		Agos Dam, Baiton P.C.										DEPTH OF HOLE		DRILL RIG										
ELEVATION		175.245										CHECKED		DRILLED										
DATE	SCALE	ELEVATIONS	DEPTH	THICKNESS	SECTION	COLOR	CONSIST. CT. OR REL. DENS.	U.S.C.	MATERIAL	FORMATION	DESCRIPTION	GROUND W.L. AND CASING	SAMPLING DEPTH	TEST NO.	TEST VALUES					SCALE				
															STANDARD PENETRATION TEST		N VALUE							
															N VALUE for 30cm depth									
															Blow every 30cm	Blows every 30cm	0	10	20	30	40	50		
			1.82								clayey loam				2.60	2/30								
			1.83								labric clayey soil, water stained.				1.85	4								
			1.84												1.90	16	4	2	2					
			1.85												1.95	5	2	2	3					
			1.86												2.00	5	2	2	3					
			1.87												2.05	9	5	4	5					
			1.88												2.10	7	5	4	5					
			1.89												2.15	9	4	5	4					
			1.90												2.20	8	3	4	4					
			1.91												2.25	8	3	4	4					
			1.92												2.30	9	4	5	4					
			1.93												2.35	13	5	6	6					
			1.94												2.40	16	6	8	8					
			1.95												2.45	17	7	7	11					
			1.96												2.50	23	11	10	10					
			1.97												2.55	38	17	19	19					
			1.98												2.60	41	18	20	21					
			1.99												2.65	43	27	22	20					
			2.00												2.70	50	17	16	24					
			2.01												2.75	57	18	24	24					
			2.02												2.80	36	20	16	26					
			2.03												2.85	46	21	30	24					
			2.04												2.90	83	9	26	27					
			2.05												2.95	87	31	50	33					
			2.06												3.00	59	22	-	-					

* CONSISTENCY OR RELATIVE DENSITY
 * UNIFIED SOIL CLASSIFICATION

DRILL LOG

HOLE NO. 0-4 SHEET NO. OF

PROJECT		AGOS HYDROPOWER										CLIENT								
LOCATION		AGOS W/M BORROW AREA										DEPTH OF HOLE								
ELEVATION		196.91m										5.00m								
DATE												DRILL RIG								
ELEVATIONS												DRILLED								
DATE	SCALE	DEPTH	THICKNESS	SECTION	COLOR	CONSISTENCY	U.S.C.	MATERIAL	FORMATION	DESCRIPTION	GROUND W.L. AND CASING	SAMPLING DEPTH	INSITU TEST NO.	TEST VALUES				SCALE		
														STANDARD PENETRATION TEST		N VALUE				
														Number for 30cm depth						
														N VALUE 0 20 40 60						
														Blow every 30cm						
														Blows at every 30cm						
					Red	Soft								2.85	3/85					
		1.35	1.35		brown	Medium		Silt						0.10	5/30	2	2	3		
										Including yellowish grey clay lump.				1.35	8	2	3	5		
														1.70	5	1	3	3		
														2.25	5	1	1	2		
														2.70	6	1	2	2		
														2.45	8	2	3	5		
														3.40	9	3	5	4		
		4.05	2.70		Brown	Stiff		Loam						5.00	17	4	7	20		
														4.80	26	6	10	16		
		5.00			Dark	Very dense		Decomposed rock		Containing rock fragments.				4.85	42	11	12	60		

* CONSISTENCY OR RELATIVE DENSITY
 * UNIFIED SOIL CLASSIFICATION

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

HOLE NO

DRILL LOG

HOLE NO. B-70-5(8-1) SHEET NO. OF

PROJECT AGOS HYDROELECTRIC										CLIENT						
LOCATION AFO DAM BORROW AREA					COORDINATE X: 493277.17 Y: 55622.622					DEPTH OF HOLE	DRILL RIG					
ELEVATION 196.891 m										DATE	FROM	TO	CHECKED	DRILLED		
DATE	SCALE	ELEVATIONS	DEPTH	THICKNESS	SECTION	COLOR	CONSISTENCY OR REL. DENS. U.S.C.	MATERIAL	FORMATION	DESCRIPTION	GROUND W.L. AND CASING	SAMPLING		TEST VALUES		SCALE
												DEPTH	NO.	STANDARD PENETRATION TEST	N VALUE	
												DEPTH	Blow cm every 30cm	Blow every 30cm	N VALUE	
		196.891	0.0			Yellowish brown	Stiff	Talus deposit		Talus deposit, some rock fragments are present						
		196.891	0.20													
		196.891	1.20	1.20												
		196.891	1.40													
		196.891	1.60													
		196.891	1.80													
		196.891	2.00													
		196.891	2.20													
		196.891	2.40													
		196.891	2.60													
		196.891	2.80	360												
		196.891	3.00													
		196.891	3.20													
		196.891	3.40													
		196.891	3.60													
		196.891	3.80													
		196.891	4.00													
		196.891	4.20													
		196.891	4.40													
		196.891	4.60													
		196.891	4.80													
		196.891	5.00													
		196.891	5.20													
		196.891	5.40													
		196.891	5.60													
		196.891	5.80													
		196.891	6.00													
		196.891	6.20													
		196.891	6.40													
		196.891	6.60													
		196.891	6.80													
		196.891	7.00													
		196.891	7.20													
		196.891	7.40													
		196.891	7.60													
		196.891	7.80													
		196.891	8.00													
		196.891	8.20													
		196.891	8.40													
		196.891	8.60													
		196.891	8.80													
		196.891	9.00													
		196.891	9.20													
		196.891	9.40													
		196.891	9.60													
		196.891	9.80													
		196.891	10.00													

* CONSISTENCY OR RELATIVE DENSITY
 • UNIFIED SOIL CLASSIFICATION

HOLE NO.

DRILL LOG

HOLE NO. B-6 SHEET NO. OF

PROJECT		AGOS HYDROPIWER		CLIENT		AS OOM		DRILL RIG											
LOCATION		AGOS Dam AUCM AT		COORDINATE		X: 112072.527 Y: 51725.427		CHECKED											
ELEVATION		130.261		DATE		FROM		TO											
DATE	SCALE	ELEVATIONS	DEPTH	THICKNESS	SECTION	COLOR	CONSISTENCY OR REL. DENS.	U.S.C.	MATERIAL	FORMATION	DESCRIPTION	GROUND W.L. AND CASING	DEPTH	NO.	TEST VALUES				SCALE
															STANDARD PENETRATION TEST				
															TEST VALUES				
															N value for 30cm depth				
															Blows every 30cm				
															Blows every 46cm				
															N VALUE				
															0 10 20 30 40 50				
			0.85								lateitic clayey sand				0.85	5/30	1	2	3
			0.90								partly inhomogeneous rock fragments are present				0.90	11	4	10	6
			1.25												1.25	2	3	5	
			1.80												1.80	17	3	9	2
			2.45												2.45	11	5	5	7
			2.70	2.70											2.70	17	8	8	7
			3.55												3.55	21	11	11	10
			3.60								clayey brown sand				3.60	100	11	43	57
			4.05												4.05	51	41	25	26
			4.10												4.10	11	14	2	4
			4.55												4.55	20	12	11	9
			5.00												5.00	16	4	2	2
			5.45												5.45	44	24	21	15
			6.30												6.30	25	21	24	11
			6.75												6.75	13	5	6	7
			7.40												7.40	14	5	6	2
			8.65												8.65	25	7	11	10
			9.10												9.10	31	11	11	14
			9.55												9.55	20	5	2	12
			10.00												10.00	19	14	27	32
			10.20	6.80											10.20	300			
			10.65												10.65				
			10.80								sandy fragmentals				10.80	25	18	15	10
			10.85								cores are recovered				10.85	23	17	7	14
			10.90												10.90	42	12	21	28
			11.00												11.00	10	24	22	22
			11.05												11.05	20	24	22	22
			11.70												11.70	20	16	22	50
			12.00												12.00	33	27	22	
			12.50								fragments, quartz				12.50		27	25	
											cores are recovered many calcite veins are present								

* CONSISTENCY OR RELATIVE DENSITY
 * UNIFIED SOIL CLASSIFICATION

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

HOLE NO.

DRILL LOG

HOLE NO. 8-7 SHEET NO. OF

PROJECT		AGOS HYDROPOWER						CLIENT											
LOCATION		Agos Dam Below P.C.						DEPTH OF HOLE											
ELEVATION		125.245						15.28 m											
DATE		COORDINATE		DATE		FROM		TO											
SCALE		X: 42386.113		Y: 558715.623		CHECKED		DRILL RIG											
ELEVATIONS		DATE		DATE		CHECKED		DRILLED											
DATE	SCALE	DEPTH	THICKNESS	SECTION	COLOR	CONSISTENCY	REL. DENS.	U.S.C.	MATERIAL	FORMATION	DESCRIPTION	GROUNDED W.L. AND CASING	SAMPLING DEPTH	NO.	TEST VALUES				SCALE
															STANDARD PENETRATION TEST				
		DEPTH		Blow every 15 cm		N VALUE		N VALUE for 30cm depth											
		0.00																	
		0.31																	
		1.15																	
		1.20																	
		2.25																	
		2.71																	
		2.75																	
		3.00																	
		4.01																	
		5.00																	
		4.85																	
		5.40																	
		5.45	6.25																
		6.50																	
		6.70																	
		7.00																	
		7.35																	
		7.90																	
		8.35																	
		8.80																	
		9.15	3.35																
		9.80																	
		10.65																	
		10.71																	
		11.10																	
		11.25																	
		11.81																	
		12.25	15.28																

* CONSISTENCY OR RELATIVE DENSITY
 • UNIFIED SOIL CLASSIFICATION

DRILL LOG

HOLE NO. *B-8* SHEET NO. OF

PROJECT LOCATION	<i>AGCS HYDROPOWER</i>			CLIENT															
ELEVATION	<i>258.509</i>		COORDINATE	<i>X: 1123926.115 Y: 557246.146</i>	DEPTH OF BORE	<i>15.00 m</i>	DRILL RIG												
DATE		DATE		FROM		TO		CHECKED											
DEPTH	THICKNESS	SECTION	COLOR	CONSISTENCY	REL. DENS.	U.S.C.	MATERIAL	FORMATION	DESCRIPTION	GROUND W.L. AND CASING	SAMPLING DEPTH	NO.	INSTRUMENT	TEST	TEST VALUES				SCALE
DEPTH	Blow	Blows							STANDARD PENETRATION TEST			N VALUE				<i>Values for 30m depth</i> 			
DEPTH	cm	every 30cm					DEPTH	cm	Blows	Blows	Blows	Blows	N VALUE						
0.00	7.50	3	4	3											1				
0.30	9	3	4	5												2			
1.35	15	10	9	6											3				
1.80	9	3	4	5												4			
2.25	11	4	6	6											5				
2.70	7	6	4	3												6			
3.15	7	4	4	3											7				
3.60	8	4	4	3												8			
4.05	9	3	13	16											9				
4.50	12	10	23	29												10			
4.95	15	15	28	38											11				
5.40	22	20	40													12			
5.85															13				
6.30																14			
6.75															15				
7.20																16			
7.65															17				
8.10																18			
8.55															19				
9.00																20			
9.45															21				
9.90																22			
10.35															23				
10.80																24			
11.25															25				
11.70																26			
12.15															27				
12.60																28			
13.05															29				
13.50																30			
13.95															31				
14.40																32			
14.85															33				
15.30																34			
15.75															35				
16.20																36			
16.65															37				
17.10																38			
17.55															39				
18.00																40			
18.45															41				
18.90																42			
19.35															43				
19.80																44			
20.25															45				
20.70																46			
21.15															47				
21.60																48			
22.05															49				
22.50																50			
22.95															51				
23.40																52			
23.85															53				
24.30																54			
24.75															55				
25.20																56			
25.65															57				
26.10																58			
26.55															59				
27.00																60			

* CONSISTENCY OR RELATIVE DENSITY
 * UNIFIED SOIL CLASSIFICATION

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

HOLE NO.

DRILL LOG

HOLE NO. B-9 SHEET NO. OF

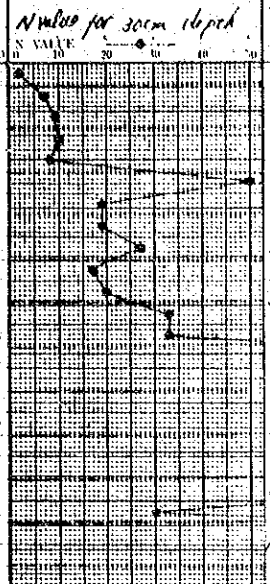
PROJECT		AG03 HYDROELECTRIC				CLIENT												
LOCATION		AG03 DAM BORROW AREA				DEPTH OF HOLE	DRILL RIG											
ELEVATION		322.2				11.25 m	DRILLED											
DATE	SCALE	DEPTH	THICKNESS	SECTION	COLOR	CONSISTENCY OR REL. DENS.	U.S.C.	MATERIAL	FORMATION	DESCRIPTION	GROUND W.L. AND CASING	SAMPLING DEPTH	INSITU TEST NO.	STANDARD PENETRATION TEST DEPTH	Blow every 10cm	Blows	TEST VALUES	SCALE
		0.00			Soft			Top soil		Dark brown top soil				0.00	2/30	3		
		0.30												0.30	5	7		
		0.60												0.60	2	8		
		0.90												0.90	9	12		
		1.20												1.20	14	18		
		1.50												1.50	19	24		
		1.80												1.80	24	30		
		2.10	270		5/11H									2.10	29	36		
		2.40												2.40	34	42		
		2.70												2.70	39	48		
		3.00												3.00	44	54		
		3.30												3.30	49	60		
		3.60												3.60	54	66		
		3.90												3.90	59	72		
		4.20												4.20	64	78		
		4.50	135		5/11H			clayey loam		Clayey lab. to soil				4.50	69	84		
		4.80												4.80	74	90		
		5.10												5.10	79	96		
		5.40												5.40	84	102		
		5.70												5.70	89	108		
		6.00												6.00	94	114		
		6.30												6.30	99	120		
		6.60												6.60	104	126		
		6.90												6.90	109	132		
		7.20												7.20	114	138		
		7.50												7.50	119	144		
		7.80												7.80	124	150		
		8.10	485											8.10	129	156		
		8.40												8.40	134	162		
		8.70												8.70	139	168		
		9.00												9.00	144	174		
		9.30												9.30	149	180		
		9.60												9.60	154	186		
		9.90												9.90	159	192		
		10.20												10.20	164	198		
		10.50												10.50	169	204		
		10.80												10.80	174	210		
		11.10												11.10	179	216		
		11.40												11.40	184	222		
		11.70												11.70	189	228		

* CONSISTENCY OR RELATIVE DENSITY
 * UNIFIED SOIL CLASSIFICATION

DRILL LOG

HOLE NO. 8-10 SHEET NO. OF

PROJECT		AGOS HYDROPOWER										CLIENT	
LOCATION		AGOS DAM BARRAGE AREA										DEPTH OF HOLE	
ELEVATION		176.651 m										CHECKED	
DATE												DRILL RIG	
SCALE												DRILLED	
ELEVATIONS													
DEPTH													
THICKNESS													
SECTION													
COLOR													
CONSIST. OR REL. DENS.													
U.S.C.													
MATERIAL													
FORMATION													
DESCRIPTION													
DIAMETER OF CASING													
SAMPLING DEPTH													
NO.													
INSTRUMENT													
TEST													
STANDARD PENETRATION TEST													
DEPTH (cm)													
Blow every 10cm													
Blows 15													
S VALUE													
10													
20													
30													
40													
50													
60													
70													
80													
90													
100													
110													
120													
130													
140													
150													
160													
170													
180													
190													
200													
210													
220													
230													
240													
250													
260													
270													
280													
290													
300													
310													
320													
330													
340													
350													
360													
370													
380													
390													
400													
410													
420													
430													
440													
450													
460													
470													
480													
490													
500													
510													
520													
530													
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710													
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740													
750													
760													
770													
780													
790													
800													
810													
820													
830													
840													
850													
860													
870													
880													
890													
900													
910													
920													
930													
940													
950													
960													
970													
980													
990													
1000													



* CONSISTENCY OR RELATIVE DENSITY
 * UNIFIED SOIL CLASSIFICATION

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

HOLE NO.

DRILL LOG

HOLE NO. B-11 SHEET NO. OF

PROJECT		AGOS HYDRO POWER				CLIENT		AGOS DAM BORROW AREA		COORDINATE		N: E:		DEPTH OF HOLE		DRILL RIG						
LOCATION		AGOS DAM BORROW AREA				CHECKED		5.60 m		DATE		FROM		TO		DRILLED						
DATE	SCALE	ELEVATIONS	DEPTH	THICKNESS	SECTION	COLOR	CONSISTENCY OR REL. DENS.	U.S.C.	MATERIAL	FORMATION	DESCRIPTION	WOUND W.L. AND CASING	SAMPLING DEPTH	NO.	TEST	TEST VALUES				SCALE		
																STANDARD PENETRATION TEST	N VALUE for 30cm depth					
																DEPTH	Blow	Blows	N VALUE			
																cm	every 10cm	0 10 20 30 40 50				
1			1.35	1.35		Brown	Soft Mud		Clayey loam		High moisture.					0.85	2.60	1	1	1		1
2						Brown and grey mottled	Hard		Silty loam		Slightly compact.					0.90	4	2	2	2		2
3			3.80	2.35			Very Dense		Decomposed rock		Compact residuum.					1.15	10	3	3	7		3
4							Very Dense									1.20	20	10	7	13		4
5			4.95	1.35		Brown	Very Dense		Dec. rock		Containing many rock fragments					2.25	31	13	15	14		5
6			5.60			Brown	Very Dense									3.35	41	21	20	21		6
																3.50	50	22	18	22		
																3.60	65	19	22	25		
																4.05	52	18	20	23		
																4.50	35	12	14	10		
																4.95	104	19	16	22		
																5.60	144	32	14	20		

* CONSISTENCY OR RELATIVE DENSITY
 * UNIFIED SOIL CLASSIFICATION

HOLE NO.

DRILL LOG

HOLE NO. B-12 SHEET NO. OF

PROJECT		AGAS HYDROPOWER				CLIENT												
LOCATION		AGAS DAM BORROW AREA				DEPTH OF HOLE		6.35 m										
ELEVATION		COORDINATE				CHECKED		DRILL RIG										
		DATE						DRILLED										
DATE	SCALE	ELEVATIONS	DEPTH	THICKNESS	SECTION	COLOR	CONSISTENCY OR REL. DENS.	L.S.C.	MATERIAL	FORMATION	DESCRIPTION	GROUND W. L. AND CASING	SAMPLING DEPTH	INSITU TEST NO.	TEST VALUES		SCALE	
															STANDARD PENETRATION TEST			
															Blow / 30 cm		N VALUE	
															every 30 cm		0 20 40 60	
1			0.45	0.45		Red brown	Soft		Clayey loam						0.45	2/30	1	1
2							Soft								0.90	7	2	3
3							l		Loam						1.35	5	3	2
4			3.60	3.15		Red brown	Medium		Silty loam						1.80	8	4	3
5			4.05	0.45		Red brown					Slightly compact.				2.25	9	5	5
6			4.95	0.90		Red brown	Medium		Loam						2.70	6	4	3
7						Yellow greenish grey	Dense		Decomposed rock		Sandy, with low moisture content.				3.15	6	2	2
8			6.35												3.60	9	5	4
															4.05	5	4	4
															4.50	5	5	5
															4.95	10	5	5
															5.40	15	15	10
															5.85	10	16	20
															6.30	190	41	70

* CONSISTENCY OR RELATIVE DENSITY
 * UNIFIED SOIL CLASSIFICATION

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

DRILL LOG

HOLE NO. B-23 SHEET NO. OF

PROJECT		AGOS HYDROPOWER		CLIENT		AGOS DAM BARRAGE AREA		COORDINATE		N 26 2770.236 E 357016.684		DEPTH OF HOLE		9.60m		DRILL RIG		DRIILED	
LOCATION	ELEVATION	DATE	FROM	DATE	TO	CHECKED	TEST	TEST VALUES	STANDARD PENETRATION TEST		N value for 30cm depth		SCALE						
DATE	SCALE	ELEVATIONS	DEPTH	THICKNESS	SECTION	COLOR	CONSISTENCY OR REL. DENS.	U.S.C.	MATERIAL	FORMATION	DESCRIPTION	DEPTH	NO.	Blow	Blows	Blows	Blows	Blows	Blows
														10cm	15cm	20cm	25cm	30cm	35cm
1		281.48	0.45	0.45		Red brown	Soft		Clay		with organic matters Sticky.	0.45	200	1	1	1			
2		282.43	2.70	2.25		Red brown	Medium		Clay		Highly moistened.	0.70	5	1	2	3			
3		280.08	5.85	3.15		brown	Stiff Very Stiff		Silty clay		Lower part somewhat more compact	1.35	6	2	3	3			
4												2.25	6	2	3	3			
5												2.70	6	3	3	3			
6												3.25	8	4	4	4			
7												3.80	7	2	3	3			
8												4.35	8	3	4	4			
9												4.90	9	4	4	4			
10		276.33	9.60			Brown	Dense Very Dense		Decomposed rock			5.45	11	5	4	7			
												6.00	14	7	7	6			
												6.55	16	11	16	20			
												7.10	16	20	22	24			
												7.65	20	20	26	28			
												8.20	28	28	30	28			
												8.75	30	28	30	30			
												9.30	36	30	40	40			
												9.85	106	28	42	58			
												10.40	112	50	55	58			
												10.95	101	42	45	56			
												11.50							

* CONSISTENCY OR RELATIVE DENSITY
 • CUBIC SOIL CLASSIFICATION

NIPPON KOEI CO., LTD
 CONSULTING ENGINEERS, TOKYO

HOLE NO.

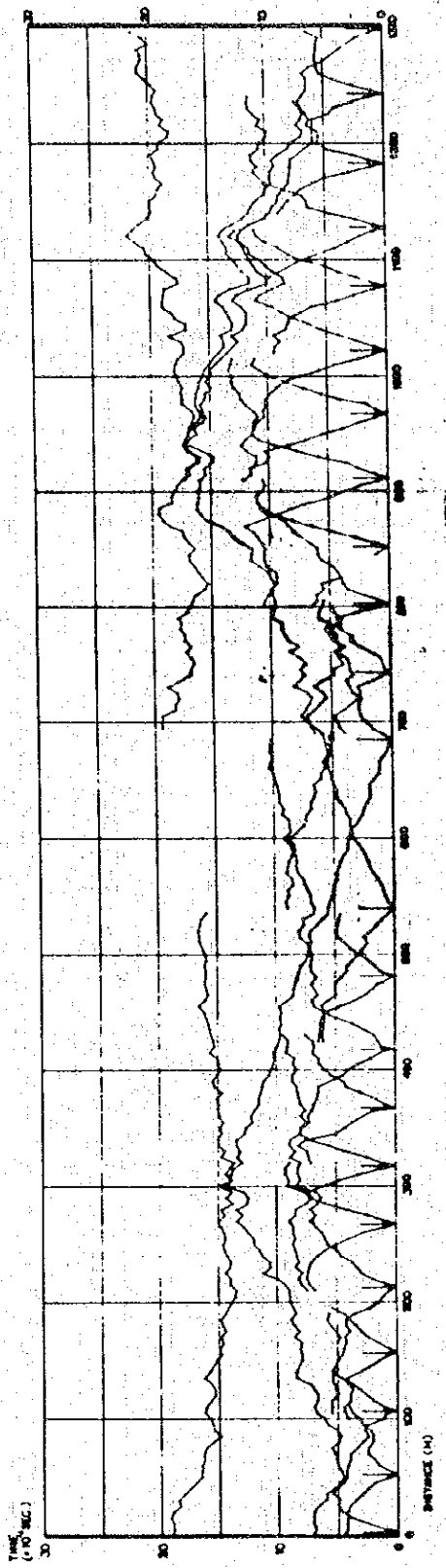
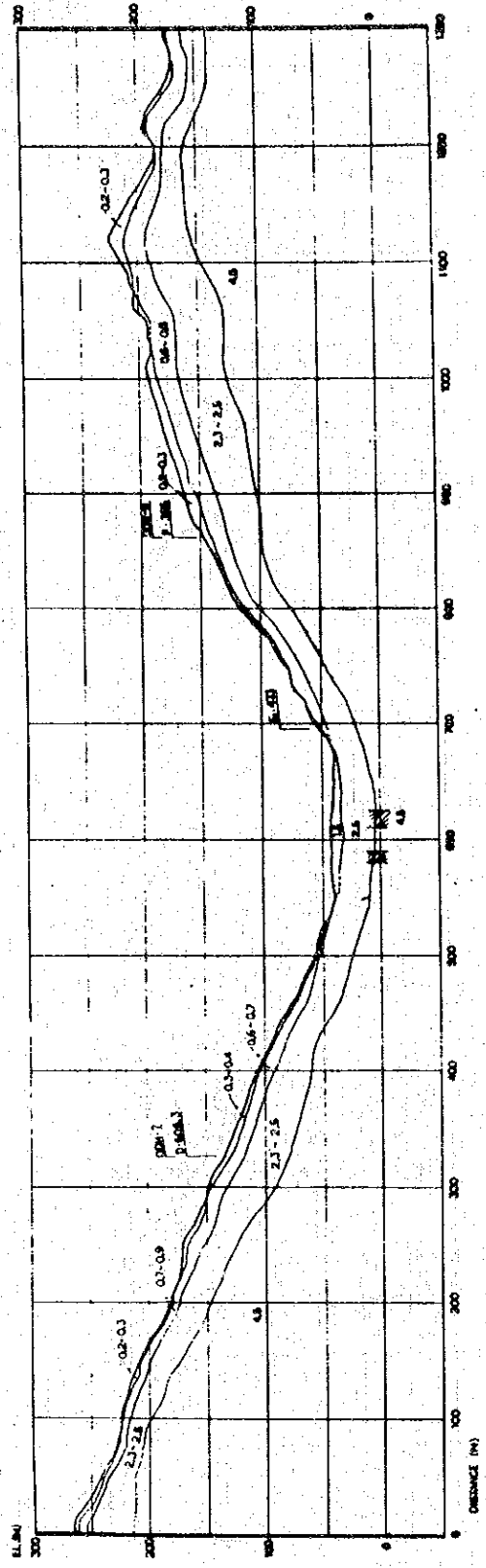
CHAPTER 2
PROFILE AND TIME-DISTANCE CURVE

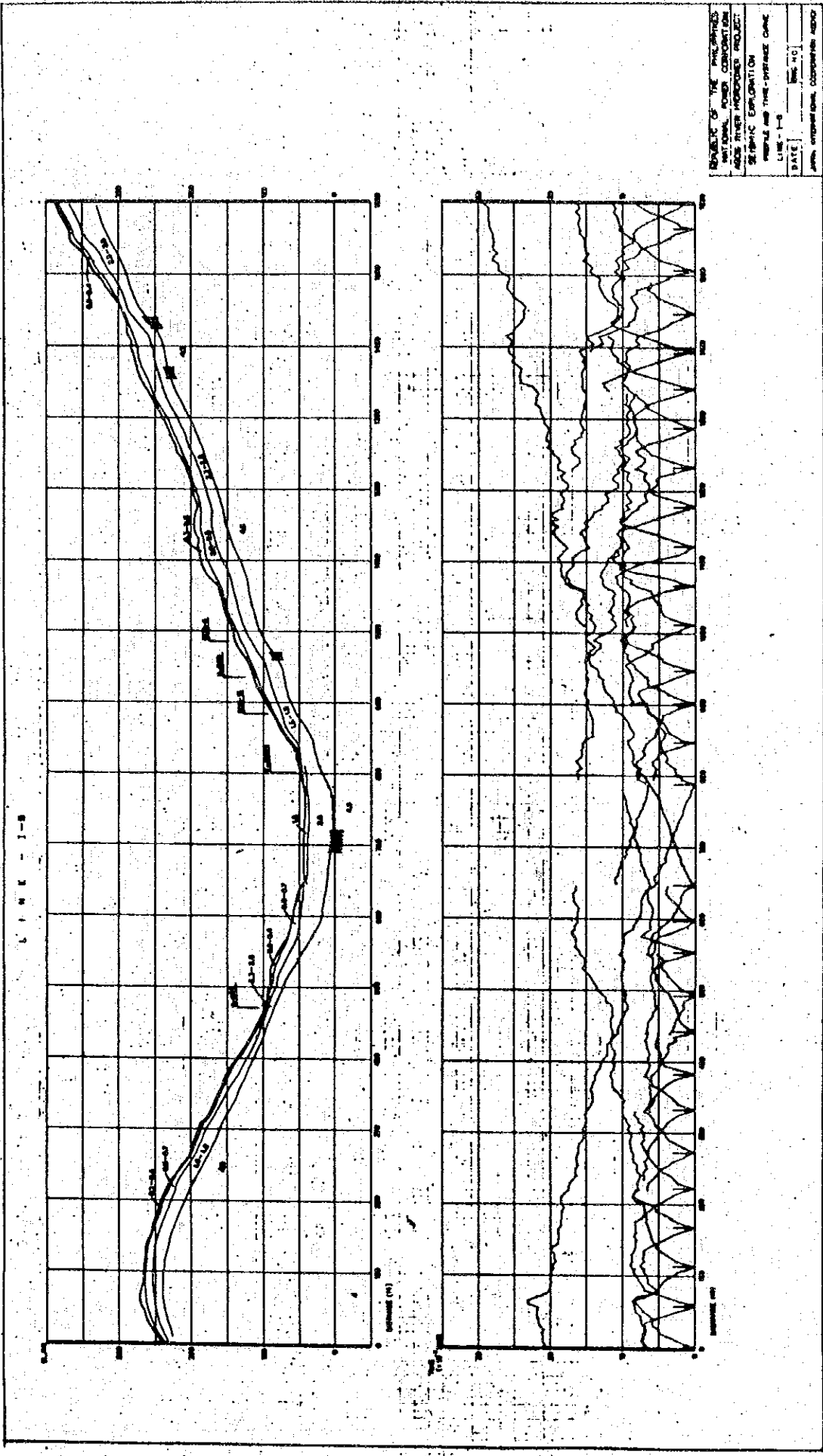
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REPUBLIC OF THE PHILIPPINES
 NATIONAL POWER CORPORATION
 AGOS RIVER HYDROPOWER PROJECT
 SEISMIC EXPLORATION
 PROFILE AND TIME-DISTANCE CURVE
 LINE-1-A
 DATE _____ DWG. NO. _____
 JAPAN INTERNATIONAL COOPERATION AGENCY

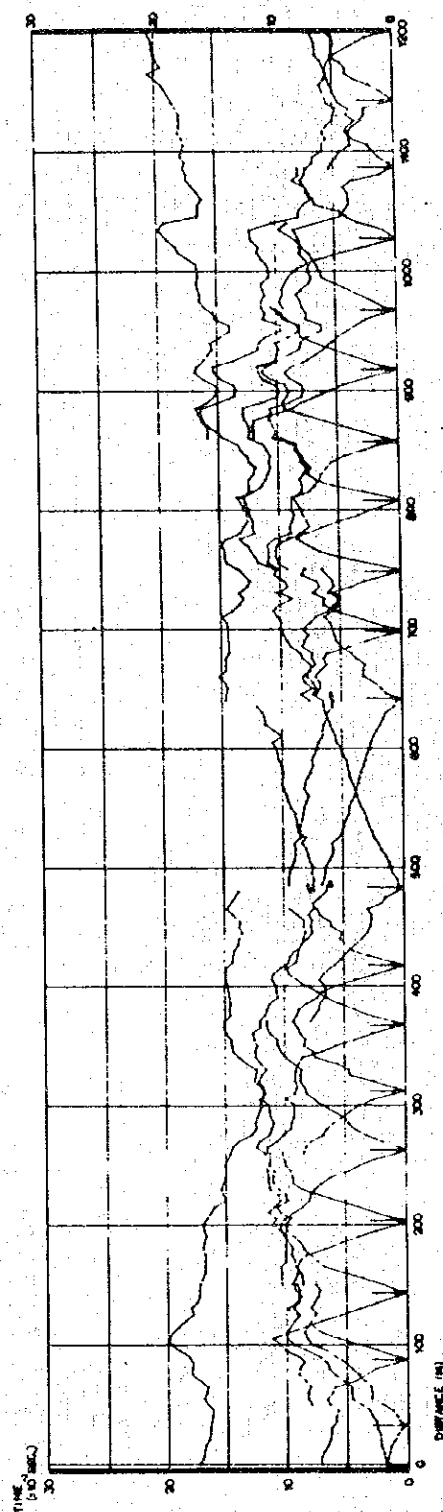
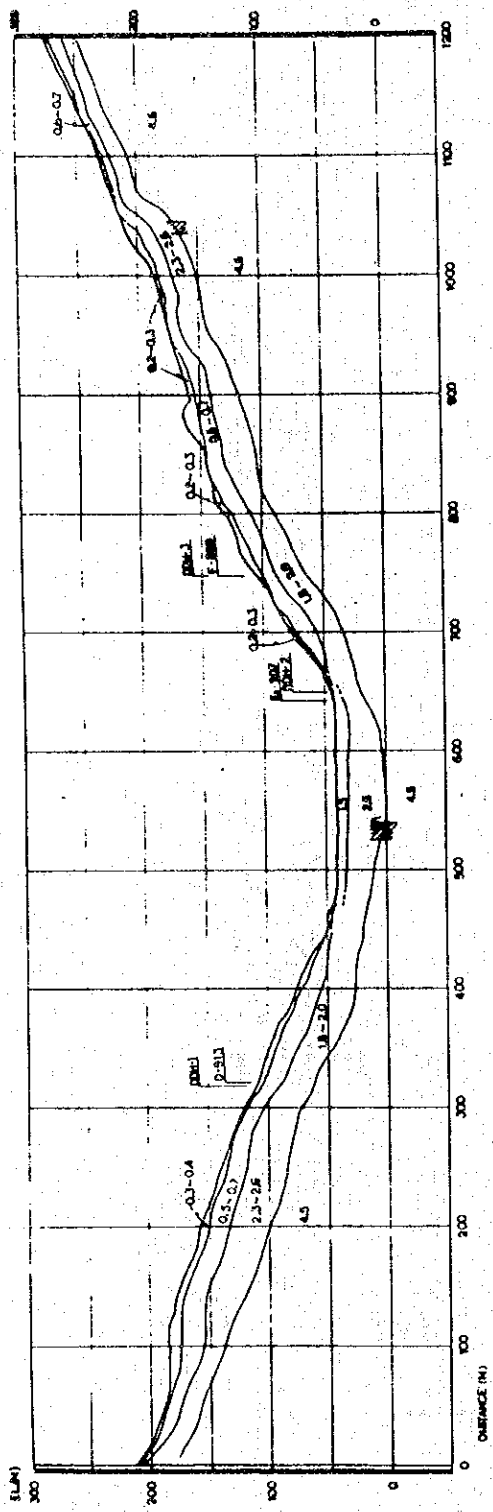
LINE-1-A



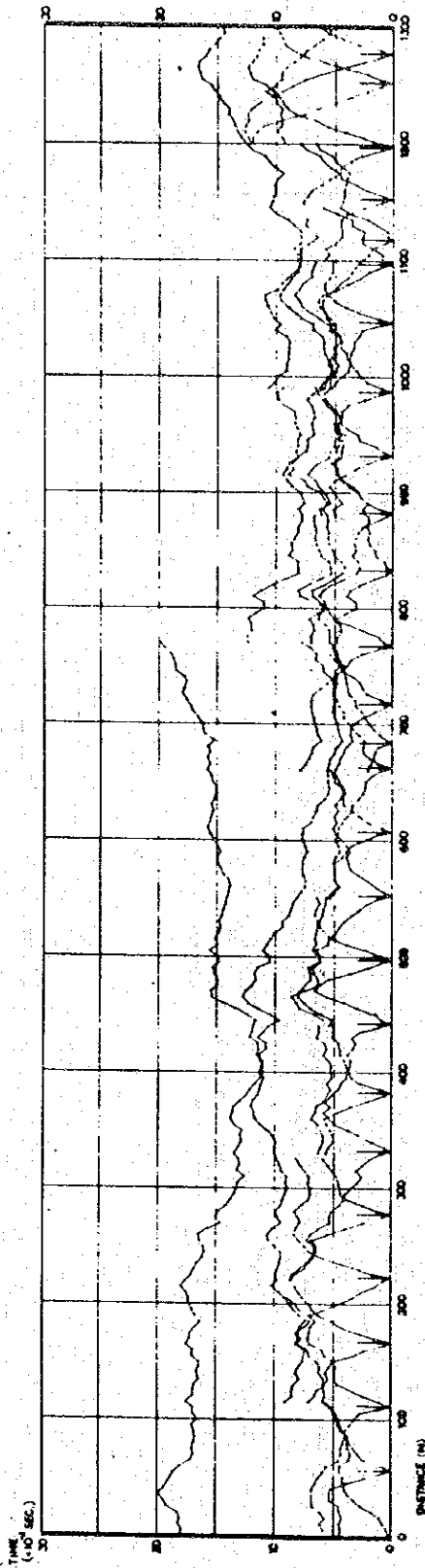
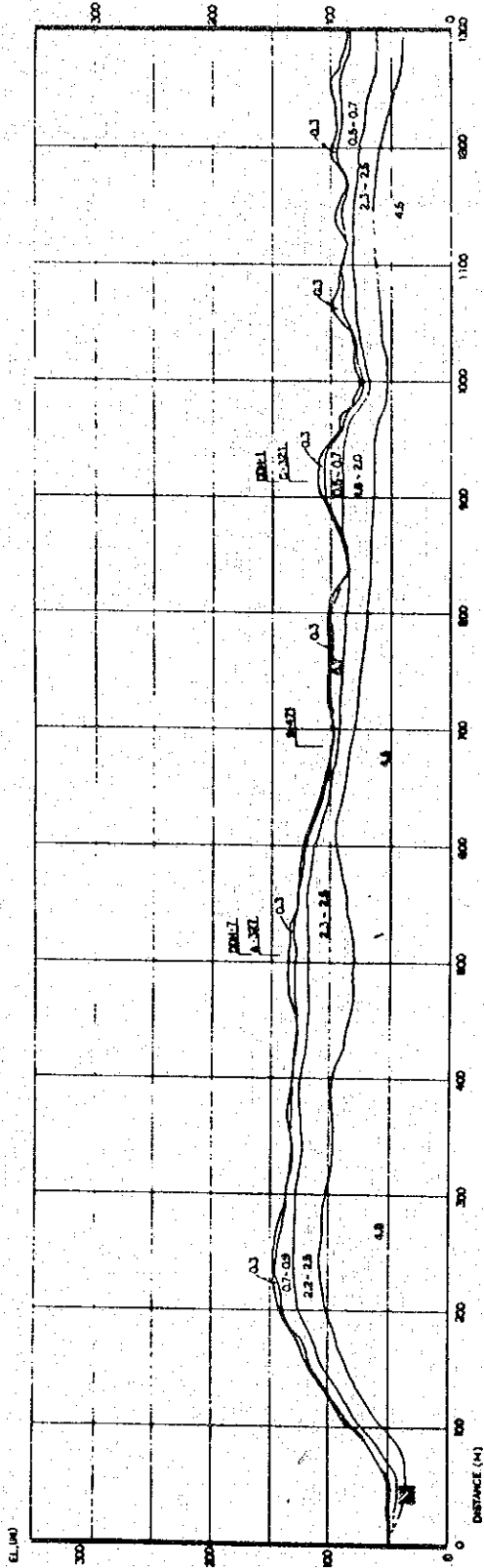


REPUBLIC OF THE PHILIPPINES
 NATIONAL POWER CORPORATION
 AGUS RIVER HYDROPOWER PROJECT
 SEISMIC EXPLORATION
 PROFILE AND TIME-DISTANCE CURVE
 LINE J-C
 DATE _____
 SHEET NO. _____
 JANAY INTERNATIONAL CORPORATION (SEPCO)

LINE - J-C



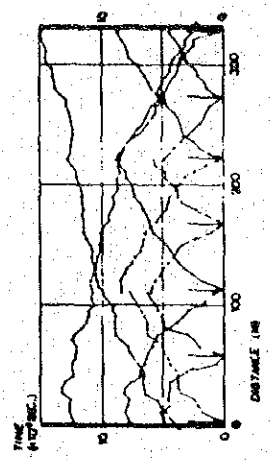
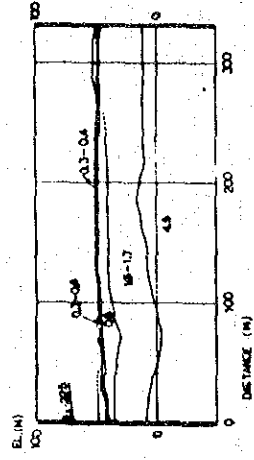
LINE - I-D



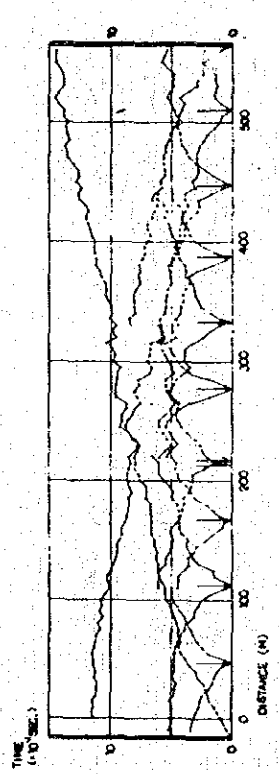
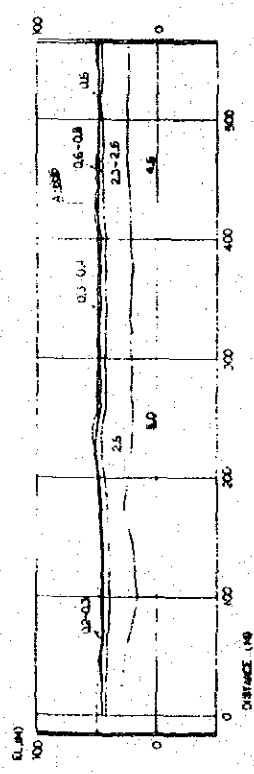
REPUBLIC OF THE PHILIPPINES
 NATIONAL POWER CORPORATION
 AGOS RIVER HYDROPOWER PROJECT
 SEISMIC EXPLORATION
 PROFILE AND TIME-DISTANCE CURVE
 LINE - I-D
 DATE _____ Dwg. No. _____
 JAPAN INTERNATIONAL COOPERATION AGENCY

REPUBLIC OF THE PHILIPPINES
 NATIONAL POWER CORPORATION
 AGOS RIVER HYDROPOWER PROJECT
 SEISMIC EXPLORATION
 PROFILE AND TIME-DISTANCE CURVE
 LINE - I-C1, E2, E3
 DATE _____ DISC NO. _____
 JAPAN INTERNATIONAL COOPERATION AGENCY

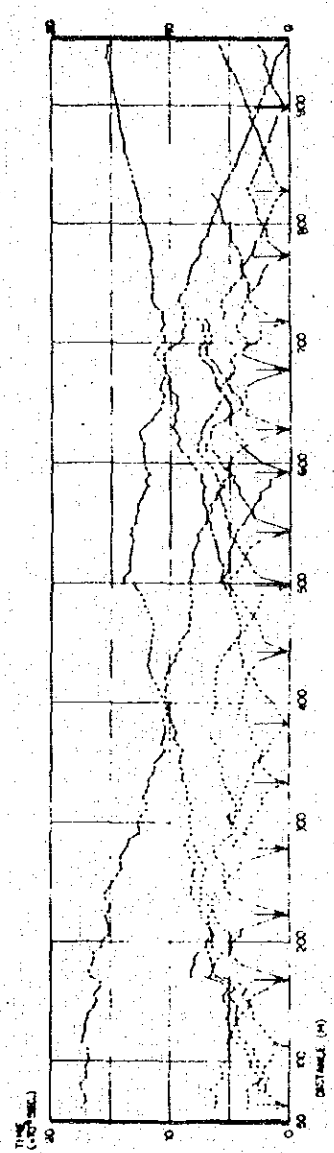
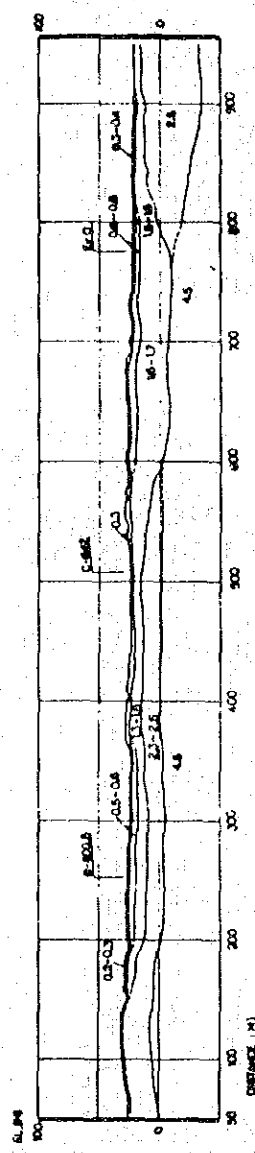
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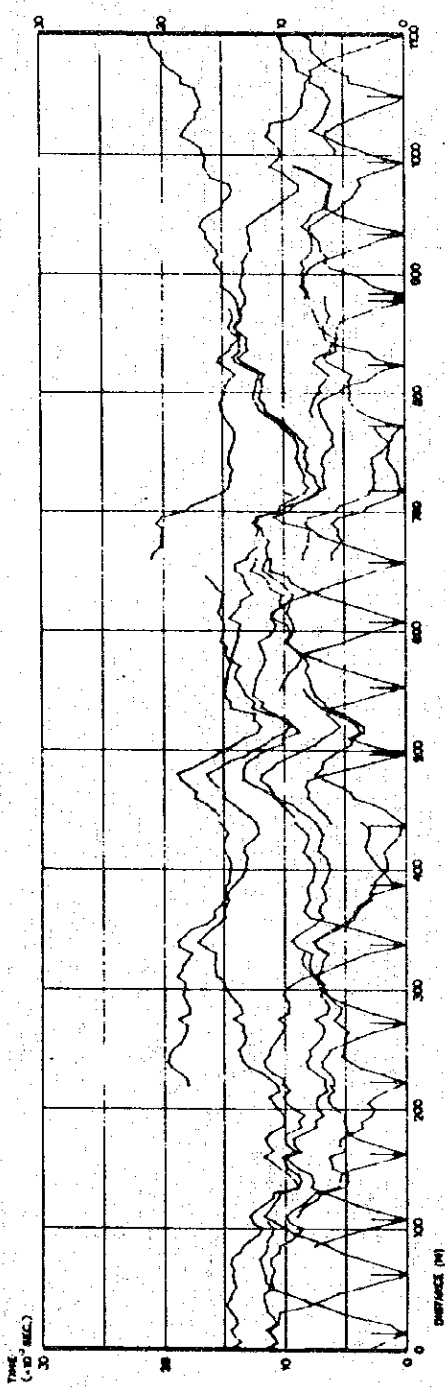
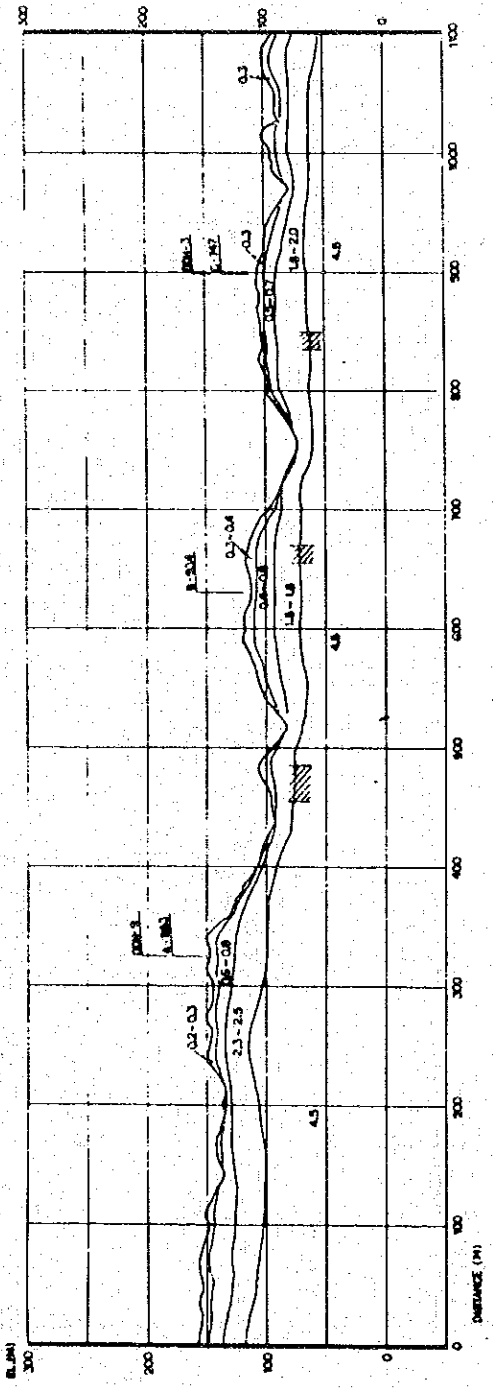
LINE - I-E1



LINE - I-E2



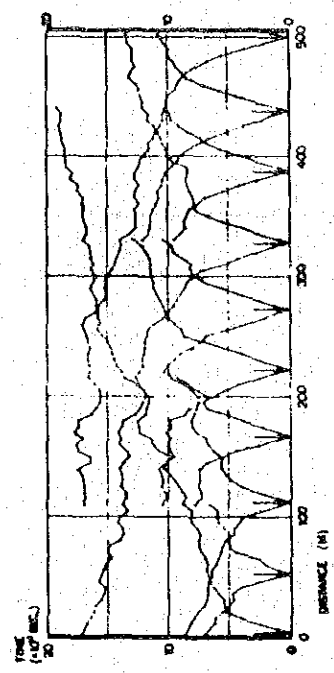
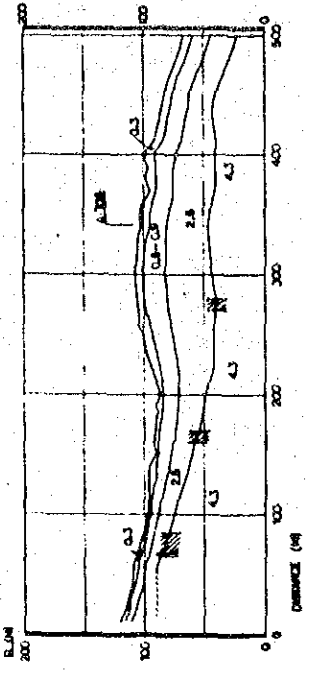
L I N E - I - F



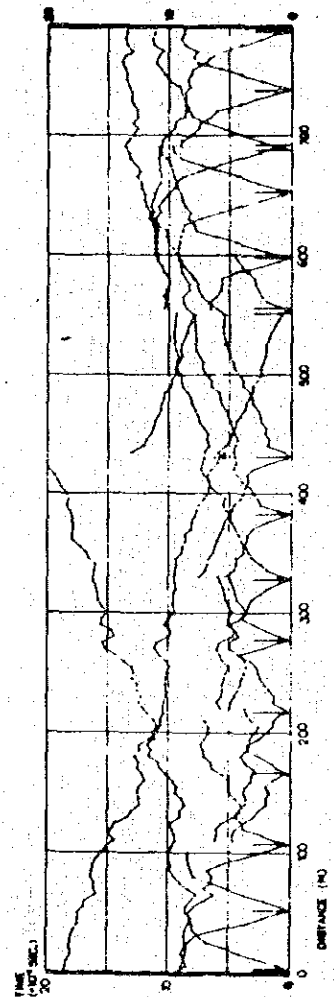
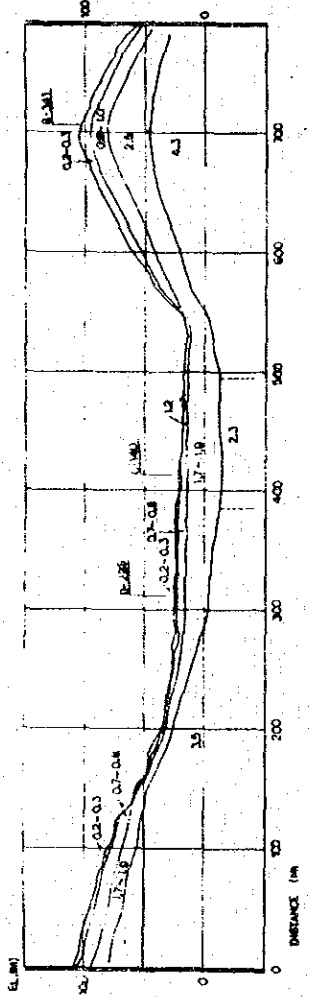
REPUBLIC OF THE PHILIPPINES
 NATIONAL POWER CORPORATION
 AGOS RIVER HYDROPOWER PROJECT
 SEISMIC EXPLORATION
 PROFILE AND TIME-DISTANCE CURVE
 LINE: I-F
 DATE: 1966 H.Q.
 JAPAN INTERNATIONAL COOPERATION AGENCY

REPUBLIC OF THE PHILIPPINES
 NATIONAL POWER CORPORATION
 AGOS RIVER HYDROELECTRIC PROJECT
 SEISMIC EXPLORATION
 PROFILE AND TIME-DISTANCE CURVE
 LINE J-A, B, C, D, E
 DATE _____ DMC NO. _____
 JAPAN INTERNATIONAL COOPERATION AGENCY

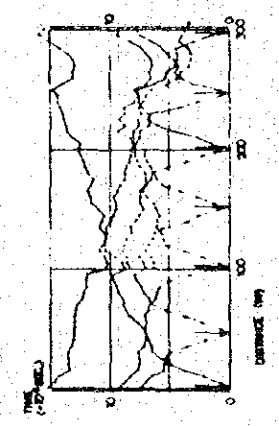
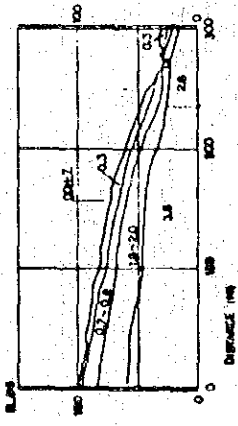
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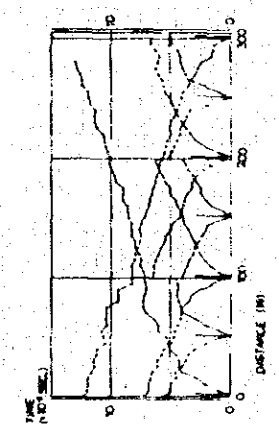
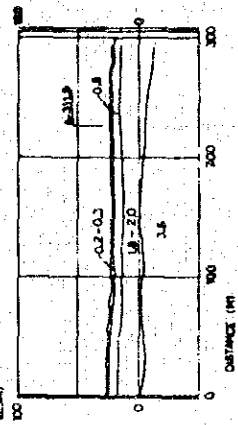
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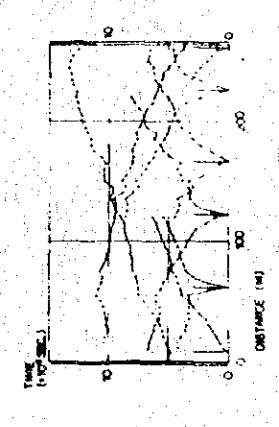
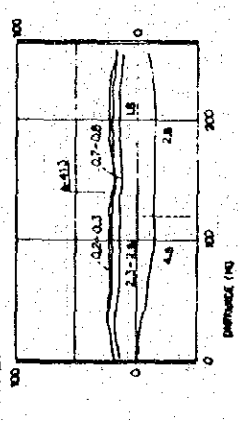
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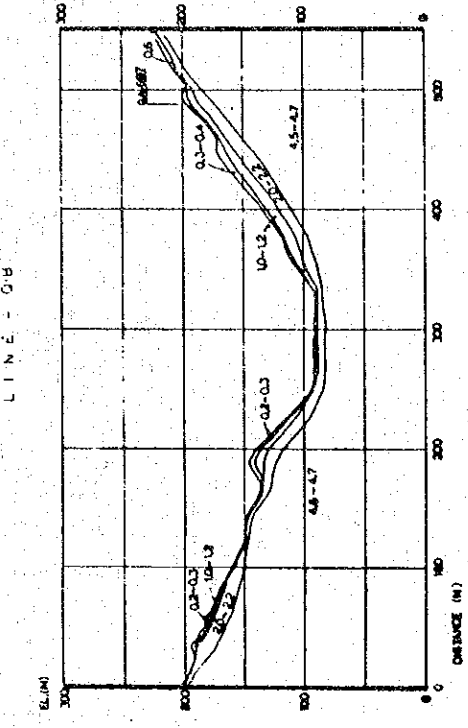
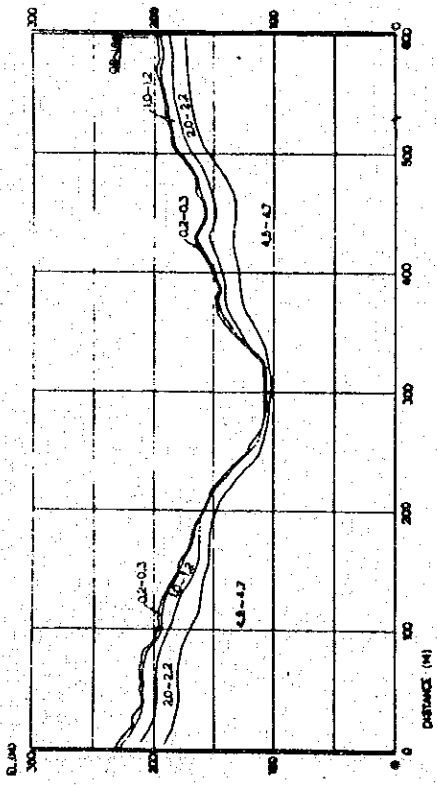
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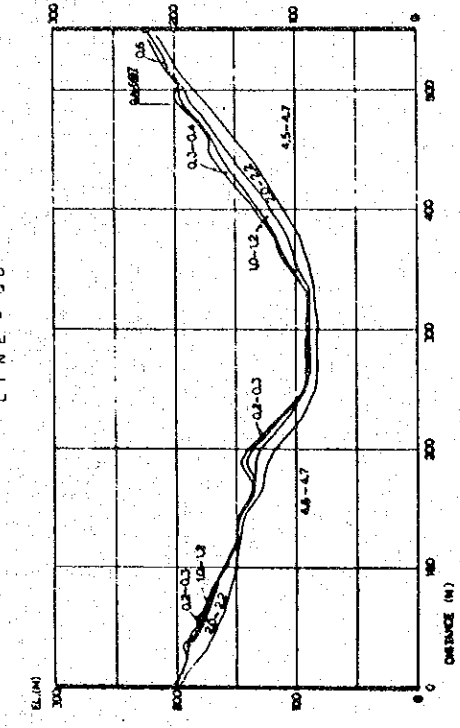
LINE - I-C



LINE - 01A



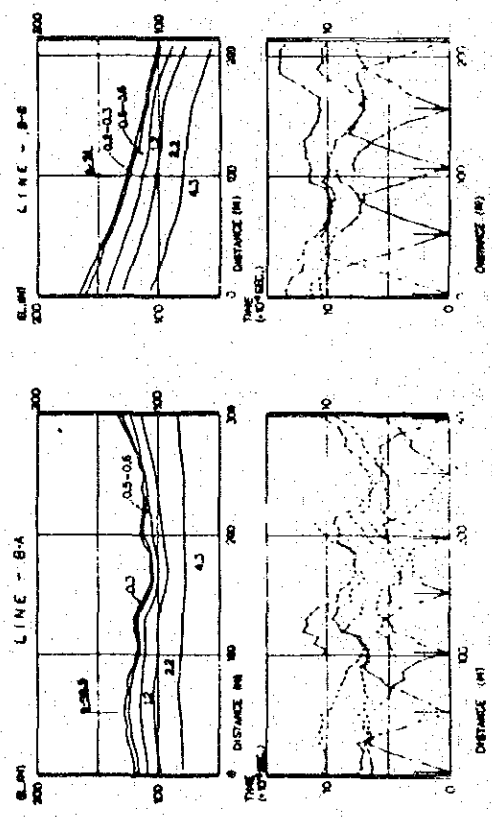
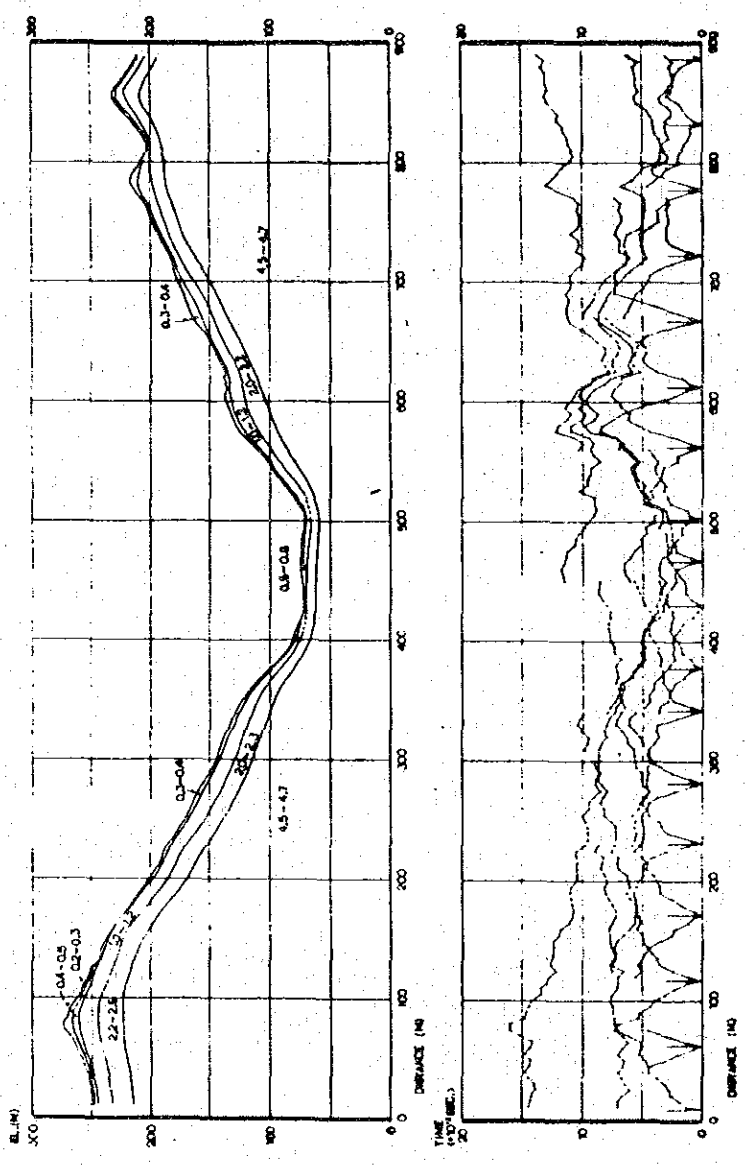
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REPUBLIC OF THE PHILIPPINES
 NATIONAL POWER CORPORATION
 ACOS RIVER HYDROPOWER PROJECT
 SEISMIC EXPLORATION
 PROFILE AND TIME-DISTANCE CURVE
 LINE - 01A, 01B
 DATE _____ Dwg. No. _____
 JAPAN INTERNATIONAL COOPERATION AGENCY

REPUBLIC OF THE PHILIPPINES
 NATIONAL POWER CORPORATION
 AGOS RIVER HYDROPOWER PROJECT
 SEISMIC EXPLORATION
 PROFILE AND TIME-DISTANCE CURVE
 LINE - O.C. BA, OB
 DATE _____ (ENG-40)
 JUNIOR GEOPHYSICAL COORDINATOR AGENT

LINE - OC



CHAPTER 3

RECORD OF WATER PRESSURE TEST



RECORD OF WATER PRESSURE TEST

PROJECT: AGOS HYDROPOWER LOCALITY: AGOS DAM SITE LINE: C. LEFT BANK
 BORE-HOLE No. A1-29-1 (1) GROUND WATER LEVEL: -11.50 ~ -11.80m

DATE	DEPTH	SECTION LENGTH	BORE RADIUS	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLES	PRESSURE HEAD CHARGE HEIGHT	TOTAL HEAD LOSS	WATER LEAKAGE	CALCULATING CONST.	COEFFICIENT OF PERMEABILITY	LUGGON UNIT
				PRESSURE	HEAD							
	10.00 ~ 15.00	500	381	1	1000	1550	100	2013	19000	2.19×10^{-5}	1.63×10^{-2}	L=6/1-242P
				4	9000		291	5079	20000		1.04×10^{-2}	
				7	7000		459	7891	25600		2.37×10^{-2}	
				10	10000		889	10601	32700		7.96×10^{-2}	6.2
				6	6000		387	8863	23700		2.71×10^{-2}	
				2	2000		207	3133	17600		1.45×10^{-2}	
	15.00 ~ 20.00	500	381	1	1000	1250	175	4200	92200	2.18×10^{-5}		
				4	4000							
				7	7000							
				10	10000							
				6	6000							
				2	2000							
	20.00 ~ 25.00	500	381	1	1000	2000	150	2119	40700	2.18×10^{-5}	1.16×10^{-3}	920
				4	4000		2188		91600			
				7	7000							
				10	10000							
				6	6000							
				2	2000							
	25.00 ~ 30.00	500	381	1	1000	2000	114	2751	16000	2.59×10^{-5}	1.35×10^{-2}	
				4	4000		881	5101	23700		1.19×10^{-2}	
				7	7000		1023	7486	28500		1.05×10^{-2}	
				10	10000		2005	9257	30900		2.39×10^{-2}	73
				6	6000		1208	8776	26600		1.80×10^{-2}	
				2	2000		392	3612	17000		1.22×10^{-2}	

RECORD OF WATER PRESSURE TEST

PROJECT AGOS HYDROPOWER

LOCALITY AGOS DAMSITE

LINE-C LEFT BANK

BORE-HOLE No. A1-79-1 (32)

GROUND WATER LEVEL -22.50 ~ -29.00 m

DATE	DEPTH	SECTION LENGTH	MOLE RADIUS	SUPPLIED WATER PRESSURE		STATIC HEAD IN BORE	PRESSURE HEAD ON TEST	TOTAL HEAD	WATER LEAKAGE		CALCULATING CONST.	COEFFICIENT OF PERMEABILITY	LUXEOM UNIT
				P	Q				Q' / min	Q / cm ² /min			
	30.00 ~ 35.00	500	381	1	1000	3000	771	2251	195	18500	2.58 x 10 ⁻²	2.6 x 10 ⁻⁶	L ₁₀ Q / L ₁₀ ΔP
				4	4000		2671	3876	247	25700		2.65 x 10 ⁻⁶	
				7	7000		4199	4652	423	47300		2.78 x 10 ⁻⁶	2/2
				10	10000	pressure was not allowed							
				1	1000		4057	3491	421	47100		3.43 x 10 ⁻⁶	
				2	2000		4381	2617	270	27000		2.66 x 10 ⁻⁶	
	35.00 ~ 40.00	500	381	1	1000	3000	0	3000	11	1100	2.52 x 10 ⁻³	2.27 x 10 ⁻⁶	
				4	4000		21	6199	29	2900		1.21 x 10 ⁻⁵	
				7	7000		52	6148	46	4600		1.93 x 10 ⁻⁵	
				10	10000		47	2483	80	8000		1.71 x 10 ⁻⁵	1.3
				6	6000		37	8163	39	3900		1.23 x 10 ⁻⁵	
				2	2000		0	4200	13	1300		1.11 x 10 ⁻⁵	
	40.00 ~ 45.00	500	381	1	1000	2500	122	2638	66	6600	2.52 x 10 ⁻³	4.8 x 10 ⁻⁵	
				4	4000		357	6243	41	4100		5.96 x 10 ⁻⁵	
				7	7000		127	8739	41	4100		5.64 x 10 ⁻⁵	
				10	10000		247	10223	235	23500		7.37 x 10 ⁻⁵	5.7
				6	6000		87	7941	171	17100		5.56 x 10 ⁻⁵	
				2	2000		137	8423	70	7000		3.91 x 10 ⁻⁵	
	45.00 ~ 50.00	500	381	1	1000	2900	110	4037	20	2000	2.52 x 10 ⁻²	1.29 x 10 ⁻⁵	
				4	4000		28	6912	53	5300		1.96 x 10 ⁻⁵	
				7	7000		222	9228	84	8400		2.21 x 10 ⁻⁵	
				10	10000		97	12447	137	13700		2.34 x 10 ⁻⁵	2.3
				6	6000		154	8976	70	7000		2.03 x 10 ⁻⁵	
				2	2000		25	5025	20	2000		1.42 x 10 ⁻⁵	

RECORD OF WATER PRESSURE TEST

PROJECT: AGDS HYDRO POWER LOCALITY: AGDS DAM SITE CASE - B RIGHT BANK
 BORE-HOLE No. A1-77-2 (1) GROUND WATER LEVEL: -322.8

DATE	DEPTH	SECTION LENGTH	MOLE RADIUS	SUPPLIED WATER PRESSURE		STATIC HEAD IN MOLE	PRESSURE HEAD LOSS		TOTAL HEAD	WATER LEAKAGE		CALCULATING CONST.	COEFFICIENT OF PERMEABILITY	LOCATION UNIT
				PRESSURE	HEAD		IN MOLE	IN MOLE		Q (ml/min)	Q (ml/min)			
	1925 ~ 2425	500	325	1	1000	310	-260		1274	25	2500	2.59×10^{-5}	7.12×10^{-5}	
				4	4000			4274	4274	29	9900		4.99×10^{-5}	
				7	7000			7274	7274	151	25100		5.38×10^{-5}	
				10	10000			10274	10274	246	36600		8.73×10^{-5}	6.7
				6	6000			6274	6274	89	9900		4.09×10^{-5}	
				2	2000			2274	2274	32	3200		3.15×10^{-5}	
	2025 ~ 2225	500	325	1	1000	300	-260		1274	21	3100	2.59×10^{-5}	6.31×10^{-5}	
				4	4000			4274	4274	73	7800		4.73×10^{-5}	
				7	7000			7274	7274	200	20000		7.13×10^{-5}	
				10	10000			10274	10274	449	40900		1.03×10^{-4}	8.0
				6	6000			6274	6274	214	22900		7.26×10^{-5}	
				2	2000			2274	2274	73	7800		7.87×10^{-5}	
	2125 ~ 2425	500	325	1	1000	300	-260		1274	26	3100	2.59×10^{-5}	7.33×10^{-5}	
				4	4000			4274	4274	68	6800		4.13×10^{-5}	
				7	7000			7274	7274	53	5800		2.07×10^{-5}	
				10	10000			10274	10274	87	8700		3.20×10^{-5}	1.7
				6	6000			6274	6274	39	3900		1.61×10^{-5}	
				2	2000			2274	2274	37	3900		4.45×10^{-5}	
	2225 ~ 2425	500	325	1	1000	300	-260		1274	25	3500	2.59×10^{-5}	1.12×10^{-5}	
				4	4000			4274	4274	137	13700		7.31×10^{-5}	
				7	7000			7274	7274	193	19300		6.88×10^{-5}	
				10	10000			10274	10274	241	24100		6.59×10^{-5}	5.1
				6	6000			6274	6274	167	16700		6.90×10^{-5}	
				2	2000			2274	2274	86	8600		7.81×10^{-5}	

RECORD OF WATER PRESSURE TEST

PROJECT AFOS HYDRO POWER
 BORE-HOLE No. A1-79-2 (2)

LOCALITY AFOS DAMSITE
 GROUND WATER LEVEL -2.00 R

LINE-B
RIGHT BANK

DATE	DEPTH	SECTION LENGTH	MOLE RADIUS	SUPPLIED WATER PRESSURE		STATIC HEAD IN BORE	PRESSURE HEAD LOSS	TOTAL HEAD	WATER LEAKAGE		CALCULATING CONST.	COEFFICIENT OF PERMEABILITY	LUGGON UNIT
				P	Q				Q	C			
	m	L	r	kg/cm ²	cm ³ /min	m	Hg	H ₁ +H ₂ +H ₃	l/min	cm ³ /min	min/cm ² sec	cm ² /min	cm ² /10 ⁻⁵ sec
	5825 ~ 5825	500	3.25	1	1000	211	-26.0	1274	2.5	2150	2.59 x 10 ⁻⁵	6.37 x 10 ⁻⁴	
				4	5000			4274	477	4290		2.71 x 10 ⁻⁴	
				7	7000			7274	715	7150		2.56 x 10 ⁻⁴	
				8	8000			8274	785	7870		2.49 x 10 ⁻⁴	19.2
				6	6000			6274	640	6500		2.66 x 10 ⁻⁴	
				2	2000			2274	226	2910		3.32 x 10 ⁻⁴	
	4925 ~ 4925	500	3.25	1	1000	310	-26.0	1274	7.0	7100	2.59 x 10 ⁻⁵	1.42 x 10 ⁻⁴	
				4	4000			4274	47	4700		2.25 x 10 ⁻⁵	
				7	7000			7274	64	6400		2.27 x 10 ⁻⁵	
				10	10000			10274	91	9100		2.30 x 10 ⁻⁵	1.2
				6	6000			6274	49	4900		2.02 x 10 ⁻⁵	
				2	2000			2274	43	6300		2.79 x 10 ⁻⁵	
	4925 ~ 5825	500	3.25	1	1000	200	-26.0	1274	3.4	3400	2.59 x 10 ⁻⁵	6.72 x 10 ⁻⁵	
				4	4000			4274	13.4	1350		8.63 x 10 ⁻⁵	
				7	7000			7274	47	6700		2.37 x 10 ⁻⁵	
				10	10000			10274	73	7300		1.84 x 10 ⁻⁵	1.4
				6	6000			6274	45	4500		1.86 x 10 ⁻⁵	
				2	2000			2274	32	3200		2.65 x 10 ⁻⁵	
	5825 ~ 5825	500	3.25	1	1000	200	-26.0	1274	0.6	600	2.59 x 10 ⁻⁵	1.22 x 10 ⁻⁵	
				4	4000			4274	0.0	0		0	
				7	7000			7274	0.1	200		2.25 x 10 ⁻⁶	
				10	10000			10274	1.7	1800		4.79 x 10 ⁻⁶	0.4
				6	6000			6274	0.5	500		2.07 x 10 ⁻⁶	
				2	2000			2274	0.0	0		0	

RECORD OF WATER PRESSURE TEST

PROJECT: AGOS HYDROPOWER LOCALITY: AGOS DAMSITE LINE-8: RIGHT BANK
 BORE-HOLE No.: A/ - 79 - 2 (3) GROUND WATER LEVEL: - 300 R

DATE	DEPTH m	SECTION LENGTH L, m	BORE RADIUS r, m	SUPPLIED WATER PRESSURE		STATIC HEAD IN BORE H ₀ , m	PRESSURE HEAD LOSS		TOTAL HEAD H ₀ + H ₁ + H ₂ + H ₃ , m	WATER LEAKAGE		CALCULATING CONST. $\frac{L}{r^2} \times \frac{L}{r^2} \times \frac{L}{r^2}$ C, m ³ /m ³	COEFFICIENT OF PERMEABILITY K = Q/ΔH C m/sec	LENGTH UNIT L = m / K - BHP
				P, kg/cm ²	H ₁ , m		H ₂ , m	H ₃ , m		Q, l/min	Q, m ³ /min			
	6000 ~ 6500	500	375	1	1000	300	-210		1270	10.3	10.300	259 × 10 ⁻⁵	3.72 × 10 ⁻⁶	
				4	4000			4270	4270	41.2	42200		2.56 × 10 ⁻⁶	
				7	7000			7270	7270	41.2	62200		2.22 × 10 ⁻⁶	
				8	8000			8270	8270	41.2	62200		2.10 × 10 ⁻⁶	16.5
	6500 ~ 7000	500	375	1	1000	300	-210		1270	36.9	36900	259 × 10 ⁻⁵	2.51 × 10 ⁻⁶	
				4	4000			4270	4270	45.5	45500		2.76 × 10 ⁻⁶	
				7	7000			7270	7270	57.8	57800		2.13 × 10 ⁻⁶	
				10	10000			10270	10270	70.8	70800		2.03 × 10 ⁻⁶	15.7
				6	6000			6270	6270	47.2	47200		2.03 × 10 ⁻⁶	
				2	2000			2270	2270	23.1	23100		2.63 × 10 ⁻⁶	

RECORD OF WATER PRESSURE TEST

PROJECT: AGOS HYDRO POWER LOCALITY: AGOS DAM SITE LANE-C RSHI BANK
 BORE-HOLE No. A1-79-3 (1) GROUND WATER LEVEL - 32.00

DATE	DEPTH	SECTION LENGTH	MOLE RADIUS	SUPPLIED WATER PRESSURE		STATIC HEAD IN MOLE	PRESSURE HEAD LOSS	TOTAL HEAD	WATER LEAKAGE		CALCULATING CONST.	COEFFICIENT OF PERMEABILITY	LUGEON UNIT
				P (kg/cm ²)	Q (l/min)				Q (l/min)	Q (cm ³ /min)			
	22.55 ~ 23.60	305	3.75	1	1000	2200	50	3250	401	40100	3.82 x 10 ⁻⁵	8.71 x 10 ⁻⁶	
				4	4000			6250	600	62000		3.79 x 10 ⁻⁶	
				7	7000			9250	700	70000		2.92 x 10 ⁻⁶	
				10	10000			12250	707	70700		2.21 x 10 ⁻⁶	18.9
				6	6000			8250	500	50000		2.50 x 10 ⁻⁶	
				2	2000			4250	313	31300		2.81 x 10 ⁻⁶	
	23.10 ~ 23.25	305	3.75	1	1000	2200	50	3250	385	38500	3.82 x 10 ⁻⁵	4.06 x 10 ⁻⁶	
				4	4000			6250	463	46300		2.80 x 10 ⁻⁶	
				7	7000			9250	465	46500		1.86 x 10 ⁻⁶	
				10	10000			12250	574	57400		1.85 x 10 ⁻⁶	15.9
				6	6000			8250	519	51900		2.59 x 10 ⁻⁶	
				2	2000			4250	360	36000		3.24 x 10 ⁻⁶	
	23.65 ~ 23.70	305	3.75	1	1000	2200	50	3250	374	37400	3.82 x 10 ⁻⁵	4.40 x 10 ⁻⁶	
				4	4000			6250	635	63500		3.88 x 10 ⁻⁶	
				7	7000			9250	603	60300		3.65 x 10 ⁻⁶	
				10	10000			12250	717	71700		2.80 x 10 ⁻⁶	24.0
				6	6000			8250	601	60100		9.77 x 10 ⁻⁶	
				2	2000			4250	470	47000		4.23 x 10 ⁻⁶	
	23.70 ~ 23.75	305	3.75	1	1000	2200	50	3250	286	28600	3.82 x 10 ⁻⁵	3.43 x 10 ⁻⁶	
				4	4000			6250	409	40900		2.50 x 10 ⁻⁶	
				7	7000			9250	543	54300		2.25 x 10 ⁻⁶	
				10	10000			12250	558	55800		4.56 x 10 ⁻⁶	14.9
				6	6000			8250	470	47000		5.74 x 10 ⁻⁶	
				2	2000			4250	281	28100		2.57 x 10 ⁻⁶	

RECORD OF WATER PRESSURE TEST

PROJECT: AGOS HYDRO POWER LOCALITY: AGOS DAMSITE LINE - c RIGHT BANK
 BORE-HOLE No. A1-71-3 GROUND WATER LEVEL - 22.00m

DATE	DEPTH	SECTION LENGTH	MOLE RADIUS	SUPPLIED WATER PRESSURE		STATIC HEAD IN MOLE	PRESSURE HEAD LOSS	TOTAL HEAD	WATER LEAKAGE		CALCULATING CONST.	COEFFICIENT OF PERMEABILITY	LINCOLN CURVE
				PRESSURE	HEAD				Q / MOLE	Q m ³ /min			
	36.75 ~ 37.20	30.5	3.75	1	1000	2200	50	22.50	24.5	15.500	372×10^{-5}	1.82×10^{-4}	
				4	4000			62.50	266	66900		1.89×10^{-4}	
				7	7000			92.50	327	23700		1.39×10^{-4}	
				10	10000			123.00	413	41300		1.29×10^{-4}	11.1
				6	6000			125.00	276	27600		1.22×10^{-4}	
				2	2000			42.50	180	19000		1.71×10^{-4}	
	37.20 ~ 42.25	30.5	3.75	1	1000	2200	50	22.50	210	21000	372×10^{-5}	2.87×10^{-4}	
				4	4000			62.50	330	33000		2.02×10^{-4}	
				7	7000			92.50	584	66400		1.83×10^{-4}	
				10	11000			122.50	678	47400		1.93×10^{-4}	12.7
				6	6000			82.50	373	37200		1.77×10^{-4}	
				2	2000			42.50	242	24200		2.17×10^{-4}	
	42.25 ~ 43.70	30.5	3.75	1	1000	2200	50	22.50	376	37600	372×10^{-5}	2.21×10^{-4}	
				4	4000			62.50	261	26100		2.21×10^{-4}	
				7	7000			92.50	364	26800		1.58×10^{-4}	
				10	10000			122.50	311	51100		1.57×10^{-4}	13.7
				6	6000			82.50	346	28600		1.60×10^{-4}	
				2	2000			42.50	216	21600		1.94×10^{-4}	
	43.70 ~ 46.25	30.5	3.75	1	1000	2200	50	22.50	370	37000	372×10^{-5}	2.17×10^{-4}	
				4	4000			62.50	252	25200		2.09×10^{-4}	
				7	7000			92.50	345	34500		1.57×10^{-4}	
				10	10000			122.50	573	47200		1.88×10^{-4}	12.7
				6	6000			82.50	325	22500		1.51×10^{-4}	
				2	2000			42.50	126	13600		1.13×10^{-4}	

RECORD OF WATER PRESSURE TEST

PROJECT ASAS HYDRO POWER LOCALITY ASAS DAM SITE LINE-C. RIGHT BANK
 BORE-HOLE No. A/ - 78-3 (3) GROUND WATER LEVEL - 22.00m

DATE	DEPTH	SECTION LENGTH	MOLE RADIUS	SUPPLIED WATER PRESSURE		STATIC HEAD IN MOLE	PRESSURE HEAD LOSS	TOTAL HEAD		WATER LEAKAGE		CALCULATING CONST.	COEFFICIENT OF PERMEABILITY	LUGEON UNIT
				PRESSURE	HEAD			H ₁ in	H ₂ in	H ₁ - H ₂ in	H ₁ - H ₂ + H ₃ + H ₄ in			
	61.75 - 58.99	305	3.75	1	1088	22.11	5.0	22.50	26.7	28700	382 x 10 ⁻³	270 x 10 ⁻⁶	1-8/12-20	
				4	2000			22.50	40.3	50300		185 x 10 ⁻⁶		
				7	7000			22.50	44.2	48200		183 x 10 ⁻⁶		
				10	10000			22.50	58.5	50500		152 x 10 ⁻⁶	135	
				1	6000			22.50	77.2	37200		172 x 10 ⁻⁶		
				2	2000			22.50	166	16800		149 x 10 ⁻⁶		

RECORD OF WATER PRESSURE TEST

PROJECT: AGOS HYDROPOWER LOCALITY: AGOS DAMSITE LINE: B, LEFT BANK
 BORE-HOLE NO.: A1-74-4 (1) GROUND WATER LEVEL: -2.50 ~ 3.00 m

DATE	DEPTH	SECTION LENGTH	HOLE RADIUS	SUPPLIED WATER PRESSURE		STATIC HEAD IN HOLE	PNEUM. HEAD LOSS	TOTAL HEAD	WATER LEAKAGE		CALCULATING CONST.	COEFFICIENT OF PERMEABILITY	LOGGING DET.
				PRESSURE	HEAD				Q (l/min)	h (cm)			
	5.00 ~ 11.00	570	3.81	1	1000	300	1.8	1222	18.4	12000	2.57×10^{-5}	3.78×10^{-6}	
				4	4000		5.1	3227	31.2	30200		2.53×10^{-6}	
				7	7000		13.4	6071	61.5	61700		2.61×10^{-6}	20.2
				10	10000								
				1	1000		3.7	3563	40.9	40700		2.27×10^{-6}	
				2	2000		2.7	2123	24.9	24700		2.74×10^{-6}	
	11.00 ~ 15.00	570	3.81	1	1000	300	3.3	1387	14.9	10900	2.58×10^{-5}	2.06×10^{-6}	
				4	4000		3.4	4076	23.1	23100		1.44×10^{-6}	
				7	7000		2.6	6126	24.3	24300		1.04×10^{-6}	
				10	10000		11.2	9268	41.1	41100		1.14×10^{-6}	8.9
				6	6000		6.0	5120	20.0	20000		1.53×10^{-6}	
				2	2000		4.5	2325	14.6	14600		1.63×10^{-6}	
	15.00 ~ 20.00	570	3.81	1	1000	300	1.8	1256	12.5	12700	2.53×10^{-5}	2.37×10^{-6}	
				4	4000		7.0	3710	24.0	24000		1.81×10^{-6}	
				7	7000		10.0	6352	31.9	31900		1.30×10^{-6}	
				10	10000		17.8	8715	40.2	40200		1.19×10^{-6}	9.2
				6	6000		24.1	5579	20.3	20300		1.31×10^{-6}	
				2	2000		3.0	2120	14.9	14900		2.06×10^{-6}	
	20.00 ~ 25.00	570	3.81	1	1000	300	1.2	1388	11.7	11700	2.58×10^{-5}	2.38×10^{-6}	
				4	4000		2.7	3613	28.1	28100		1.76×10^{-6}	
				7	7000		4.2	6132	20.2	20200		1.30×10^{-6}	
				10	10000		21.0	8296	31.4	31400		1.18×10^{-6}	9.1
				6	6000		20.9	5370	27.9	27900		1.34×10^{-6}	
				2	2000		3.8	2106	15.9	15900		1.95×10^{-6}	
	25.00 ~ 30.00	570	3.81	1	1000	300	3.8	1112	13.7	13700	2.58×10^{-5}	3.18×10^{-6}	
				4	4000		7.2	3719	20.3	20300		1.41×10^{-6}	
				7	7000		13.3	6107	27.6	27600		1.17×10^{-6}	
				10	10000		24.7	8173	34.2	34200		1.05×10^{-6}	8.1