



REPUBLIC OF KENYA  
LAKE BASIN DEVELOPMENT AUTHORITY

SONDU RIVER MULTIPURPOSE  
DEVELOPMENT PROJECT

DATA BOOK - 2

GEOTECHNICAL SURVEY

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DECEMBER, 1986

JAPAN INTERNATIONAL COOPERATION AGENCY

NATION OFFICE  
P.O. BOX 60572  
NAIROBI KENYA

TOKYO HEAD OFFICE  
P.O. BOX 214 OJIYUKU  
TOKYO JAPAN



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資源調査課  
保存用

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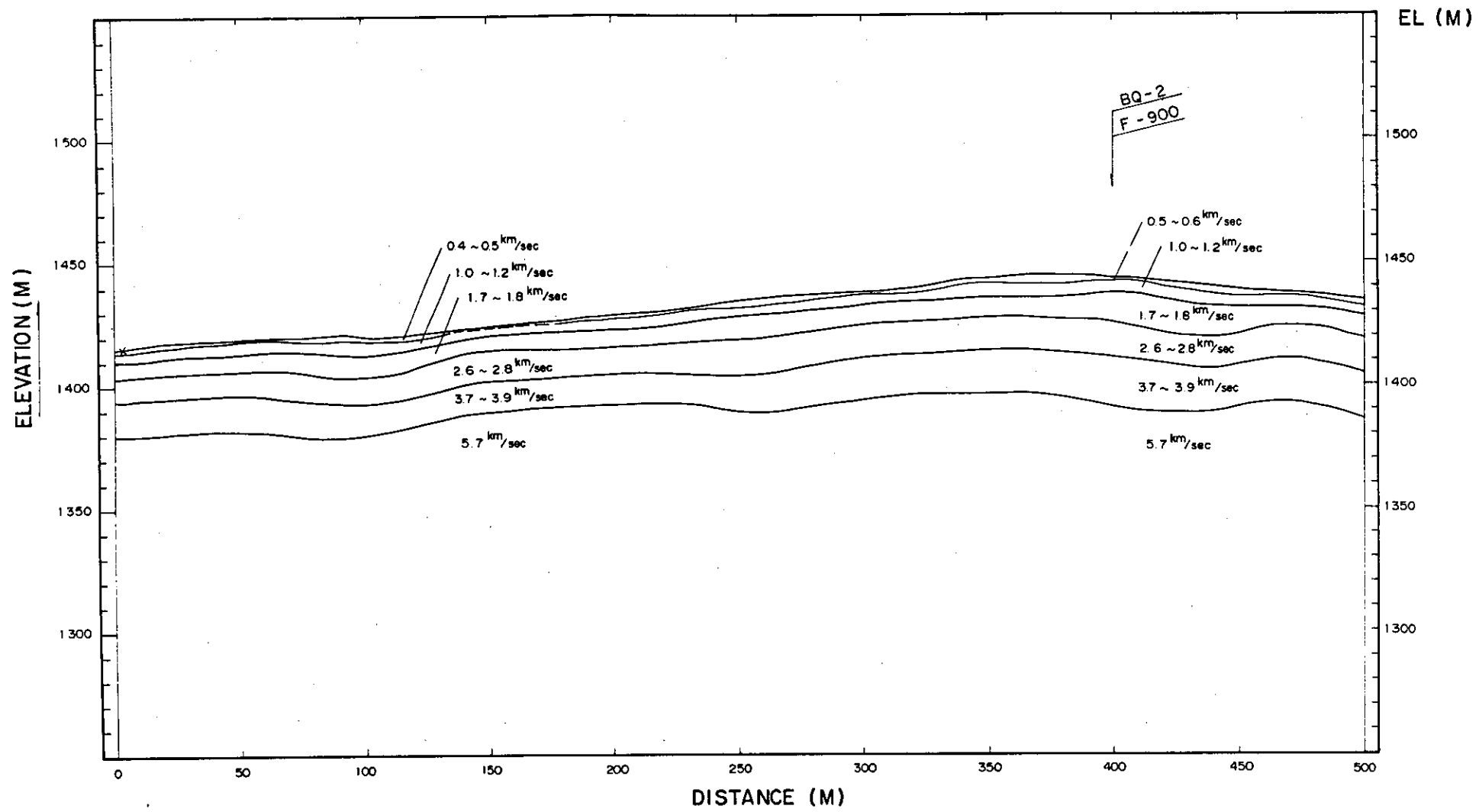
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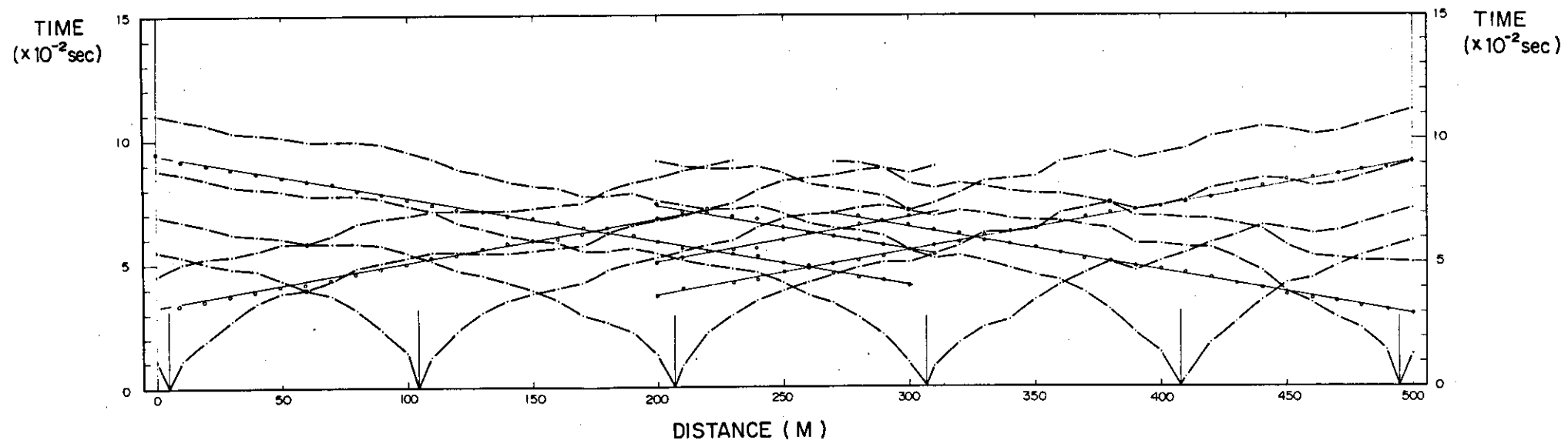
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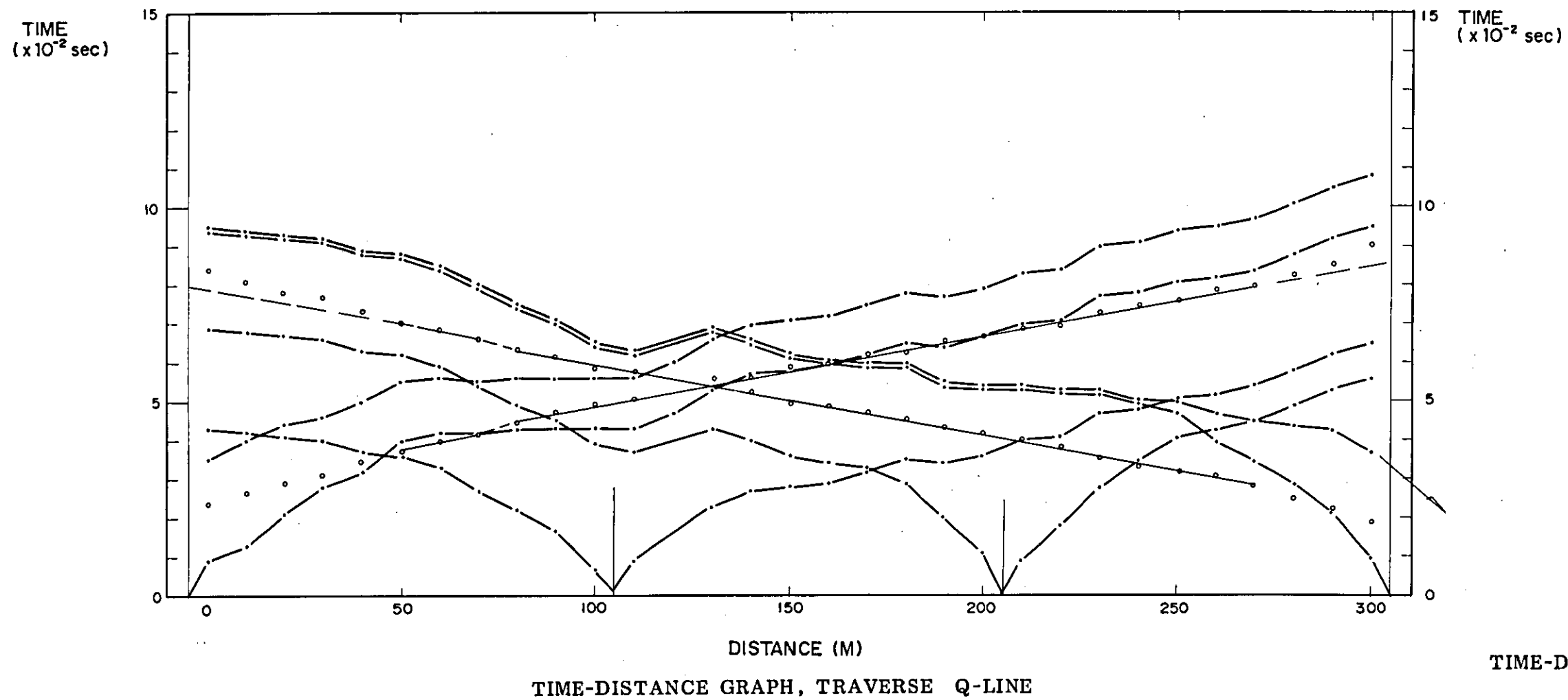
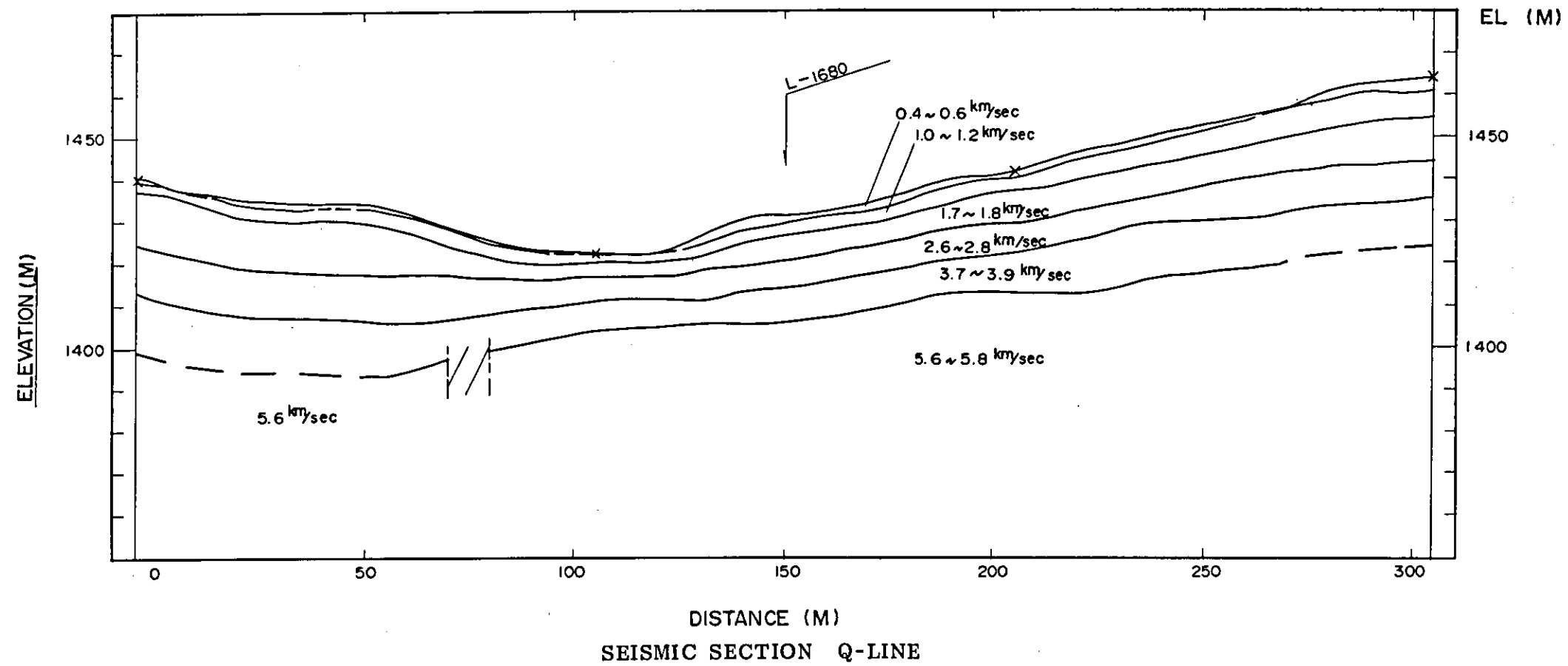


SEISMIC SECTION I-LINE

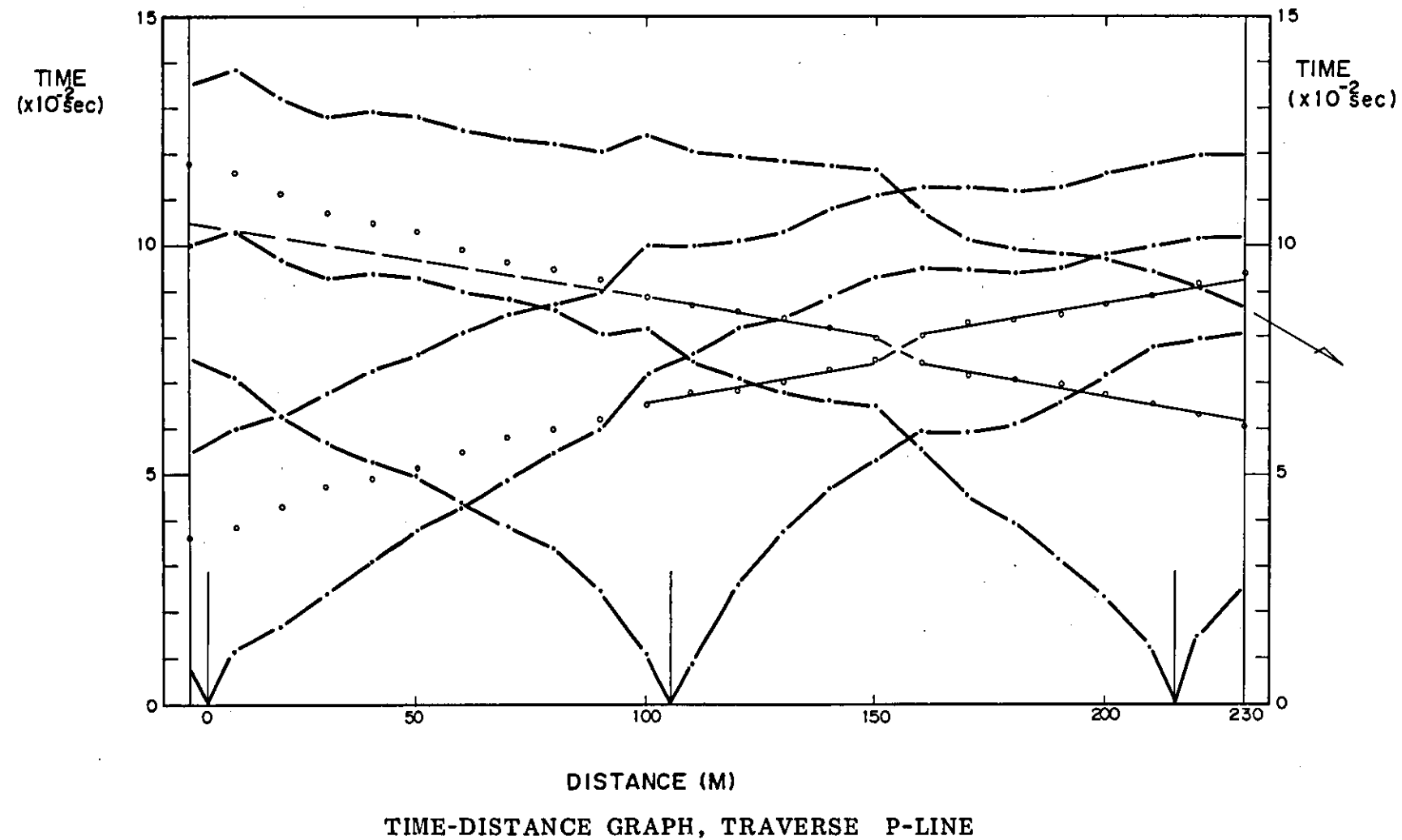
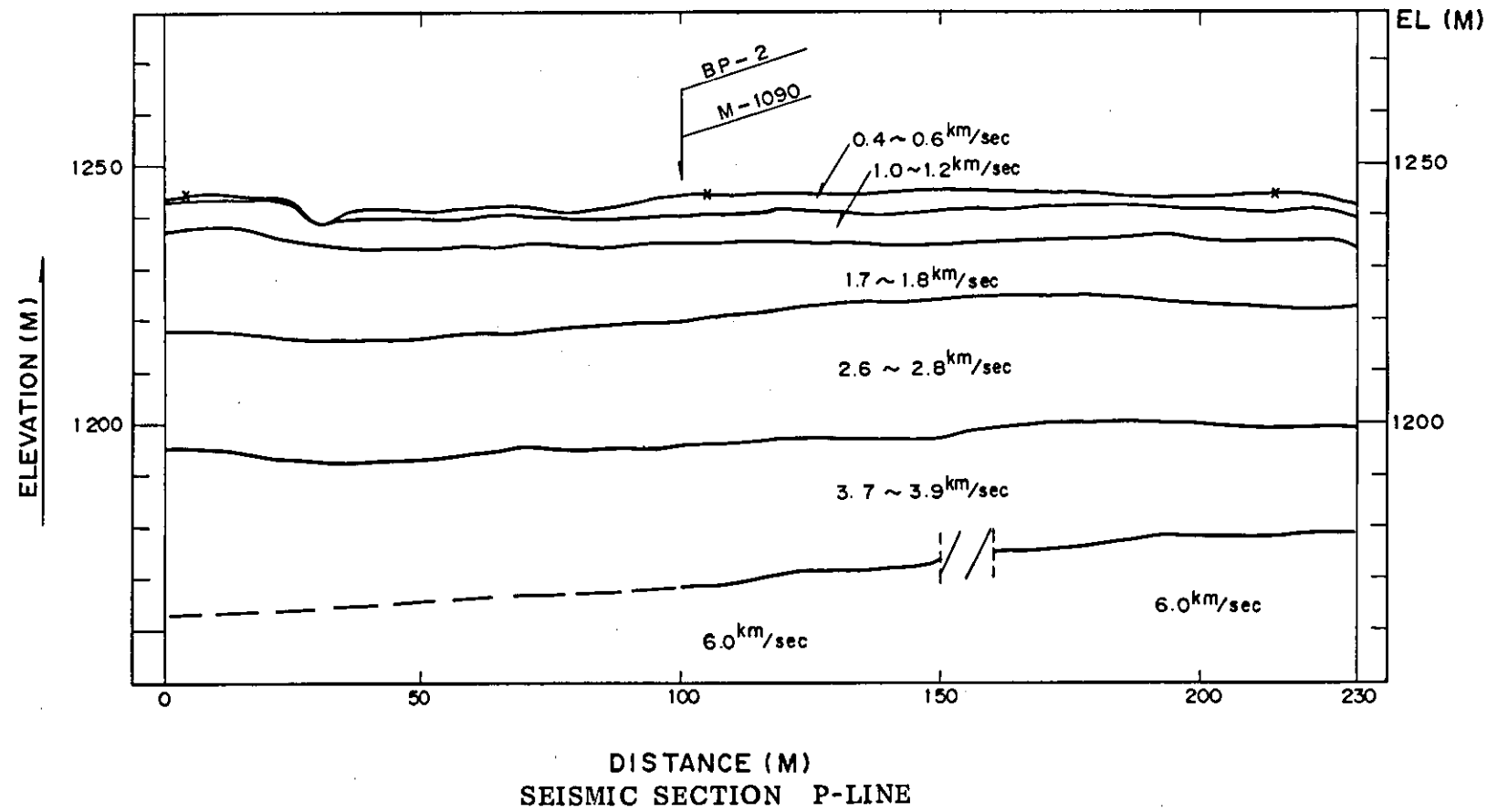


TIME-DISTANCE GRAPH, TRAVERSE I-LINE

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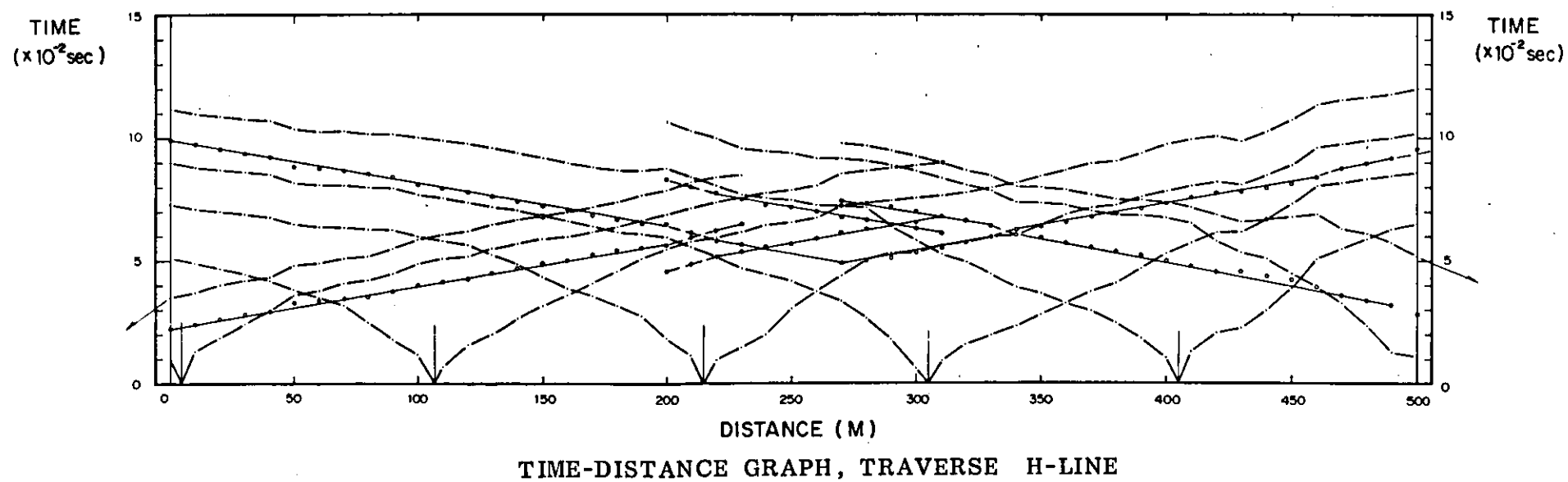
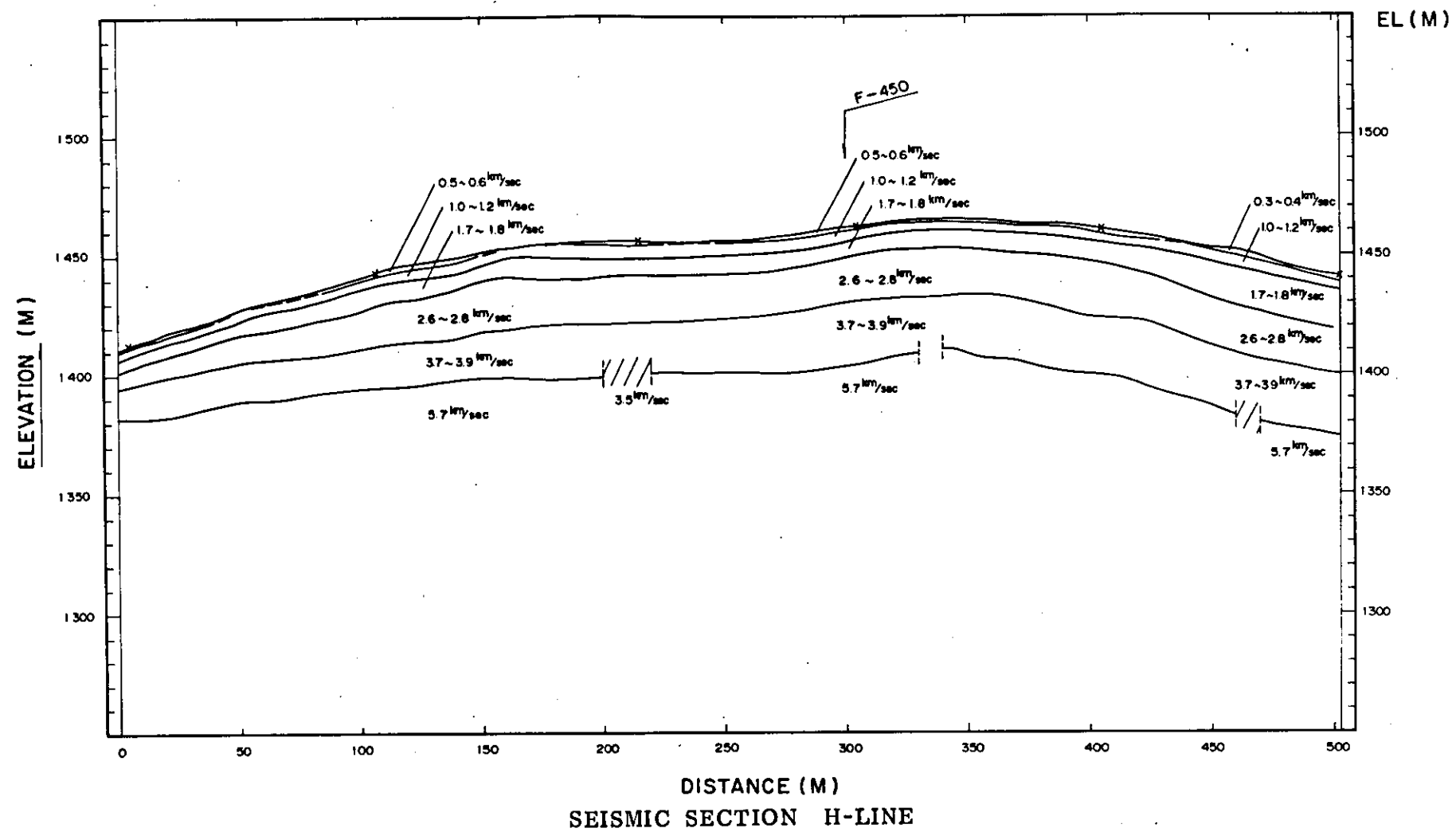


TIME-DISTANCE GRAPH & SEISMIC SECTION TRAVERSE Q-LINE

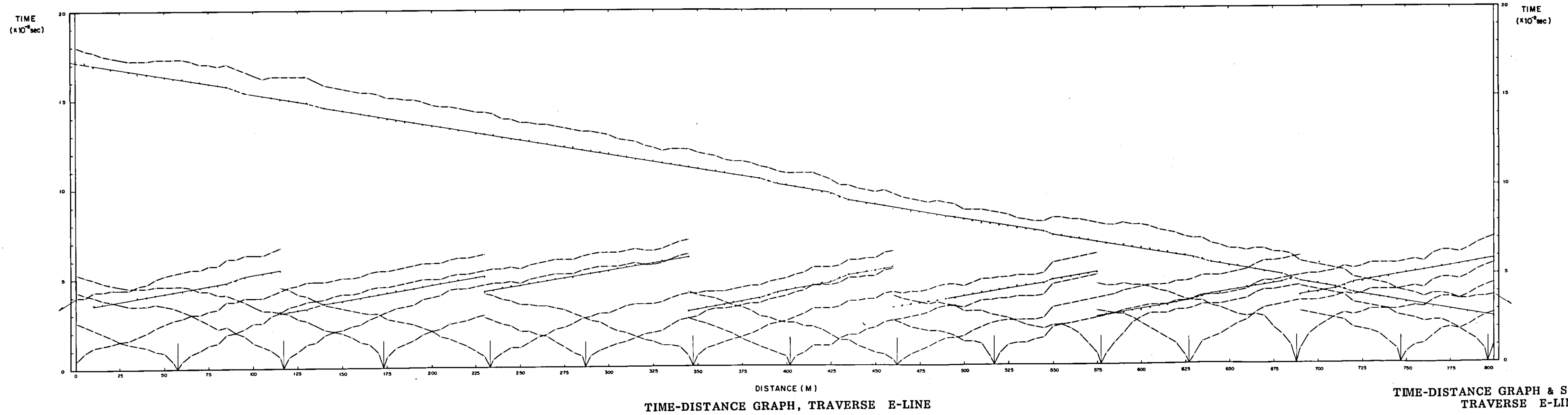
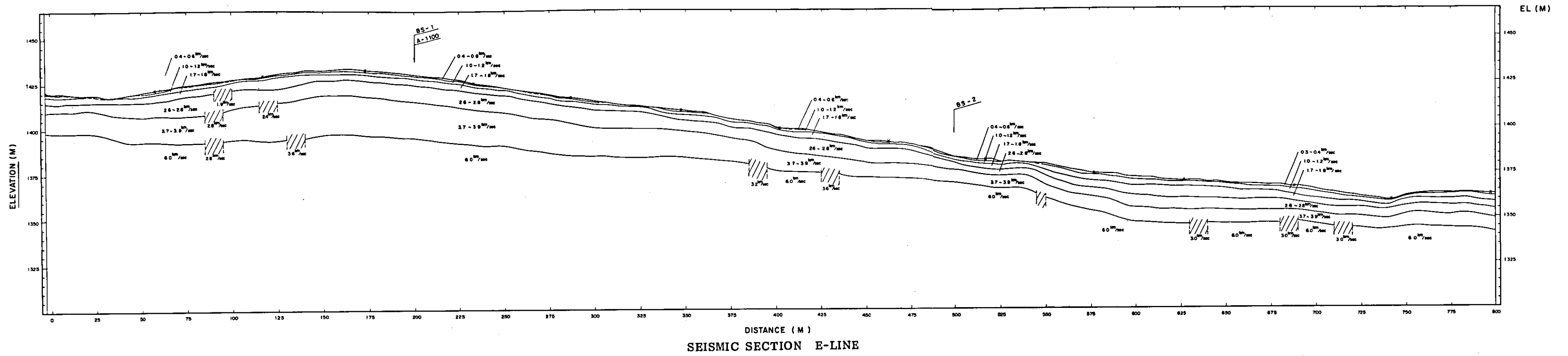


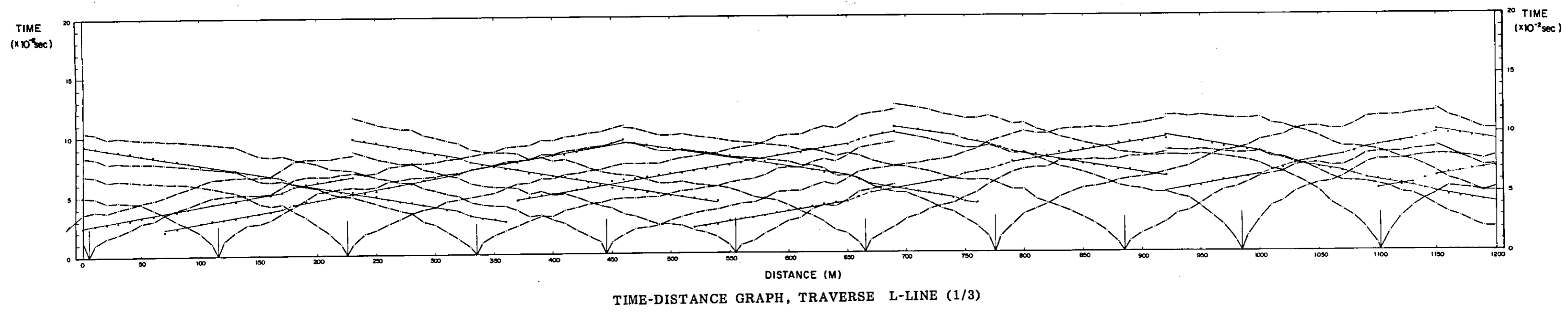
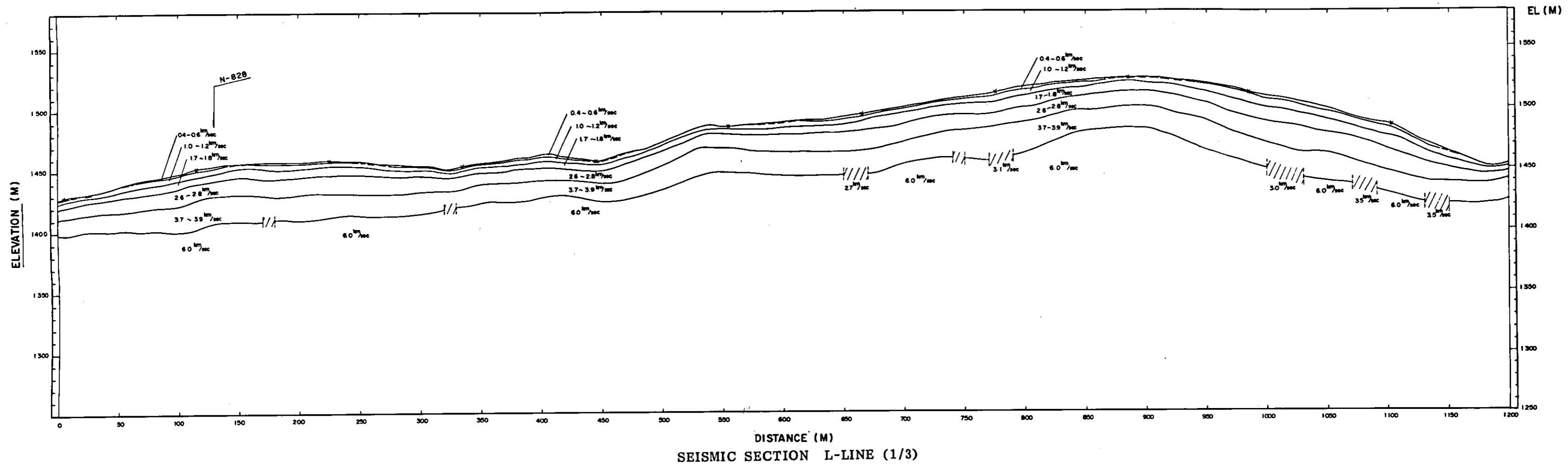
TIME-DISTANCE GRAPH & SEISMIC SECTION TRAVERSE P-LINE



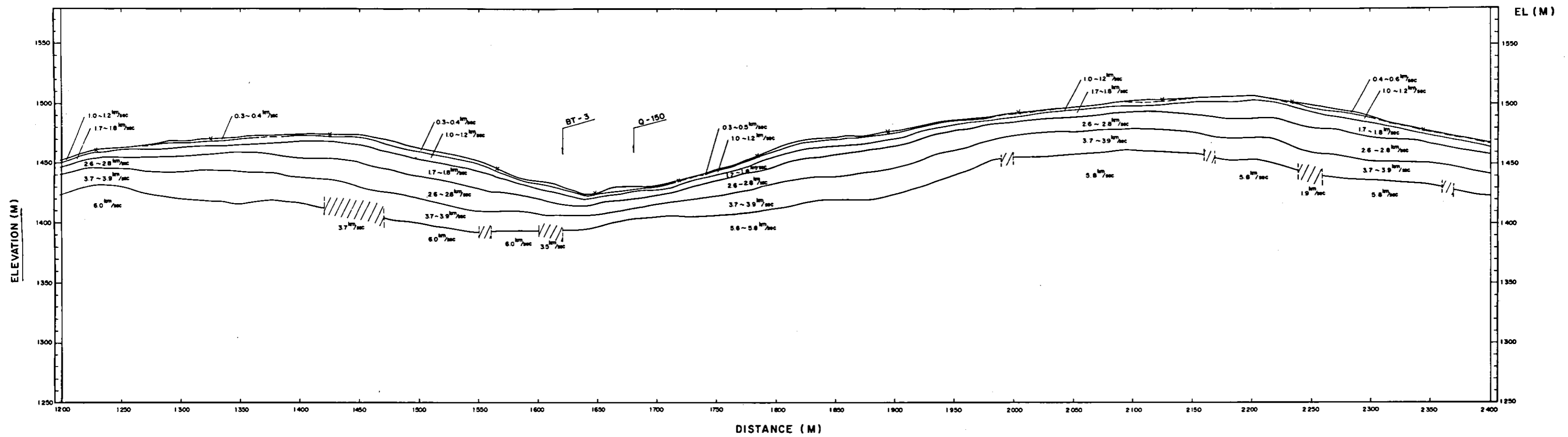


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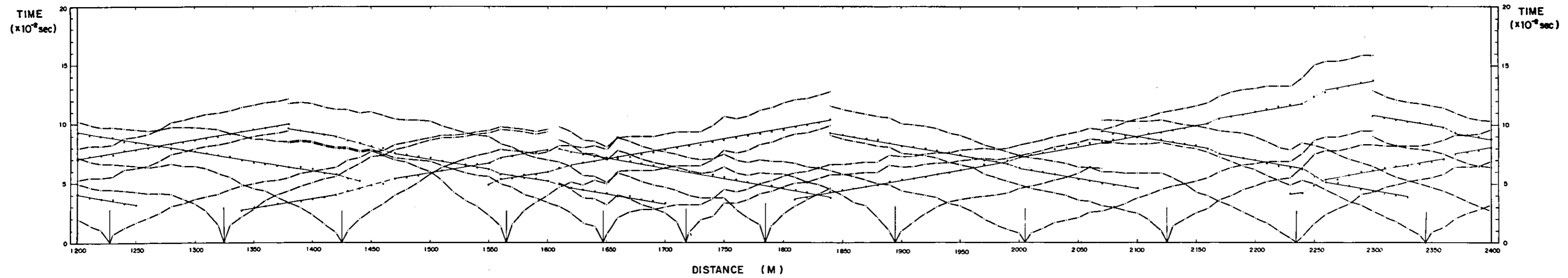




TIME-DISTANCE GRAPH & SEISMIC SECTION  
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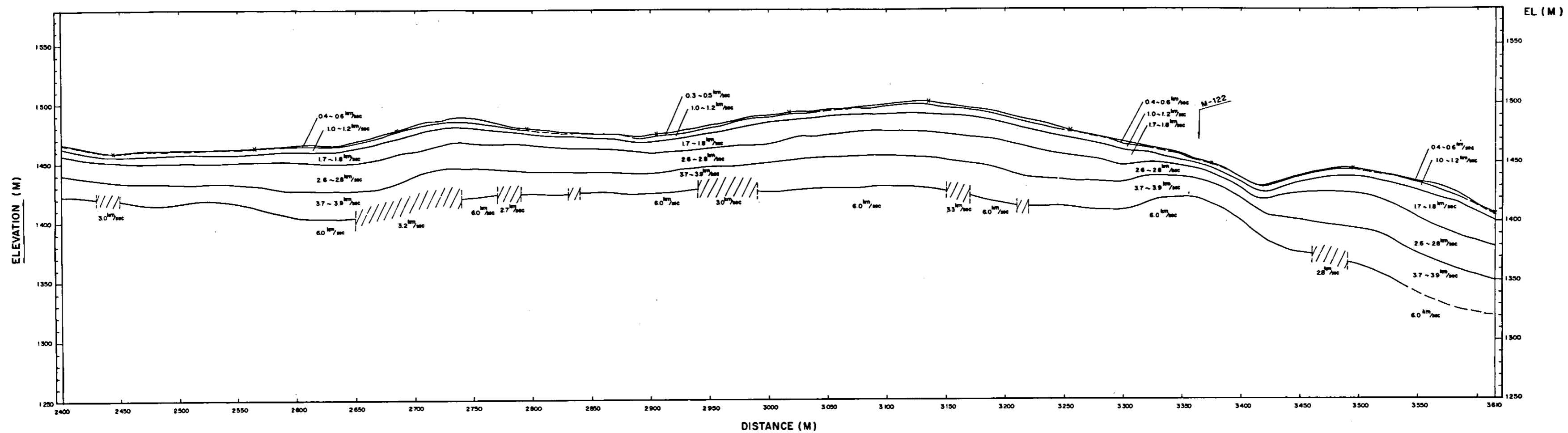


SEISMIC SECTION L-LINE (2/3)

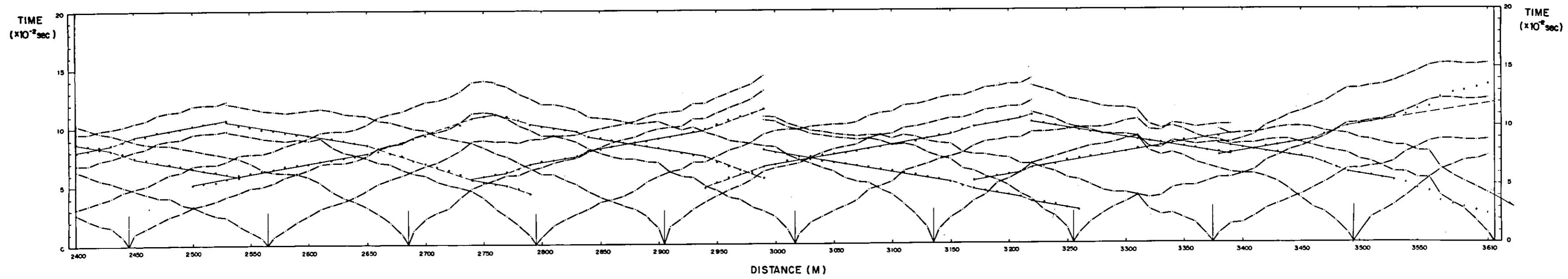


TIME-DISTANCE GRAPH, TRAVERSE L-LINE (2/3)

TIME-DISTANCE GRAPH & SEISMIC SECTION TRAVERSE L-LINE (2/3)

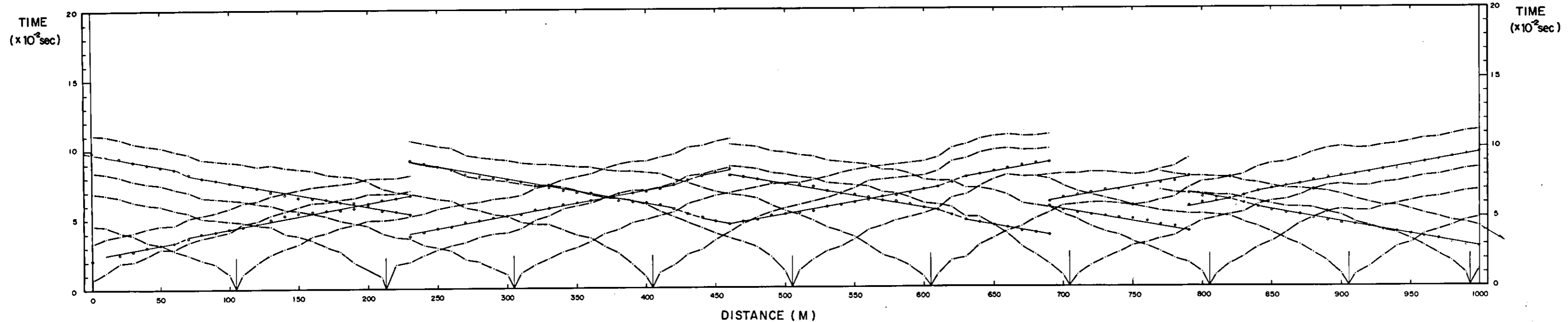
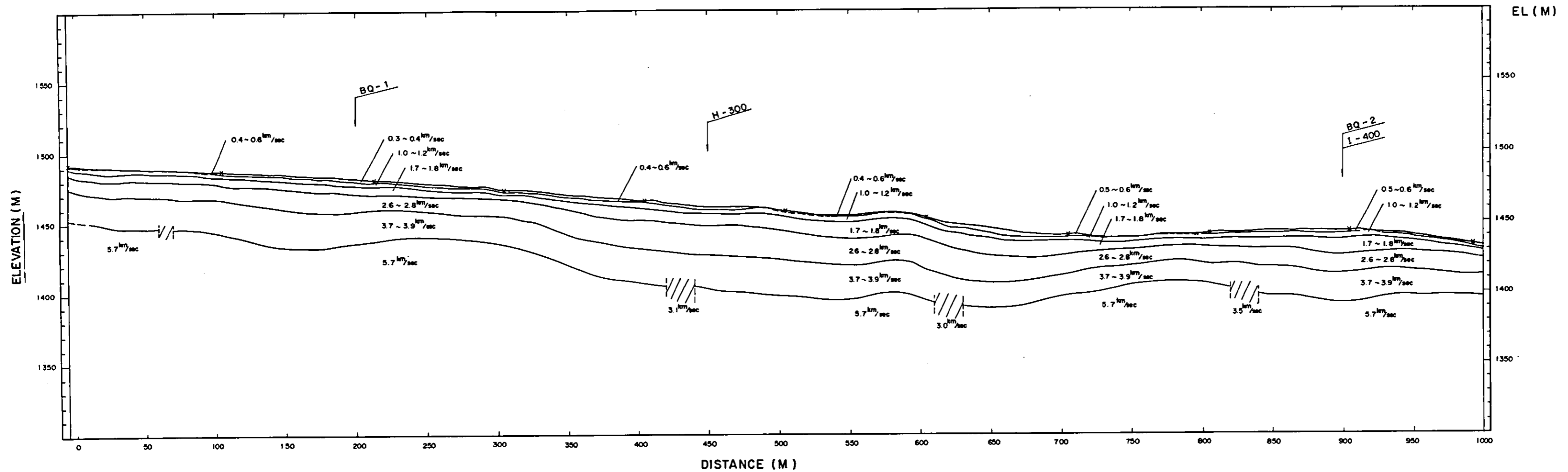


SEISMIC SECTION L-LINE (3/3)



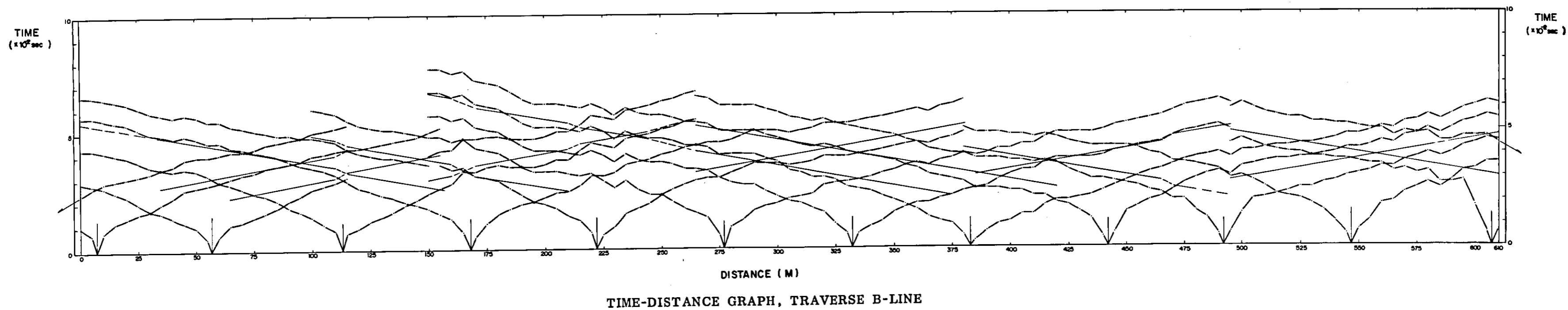
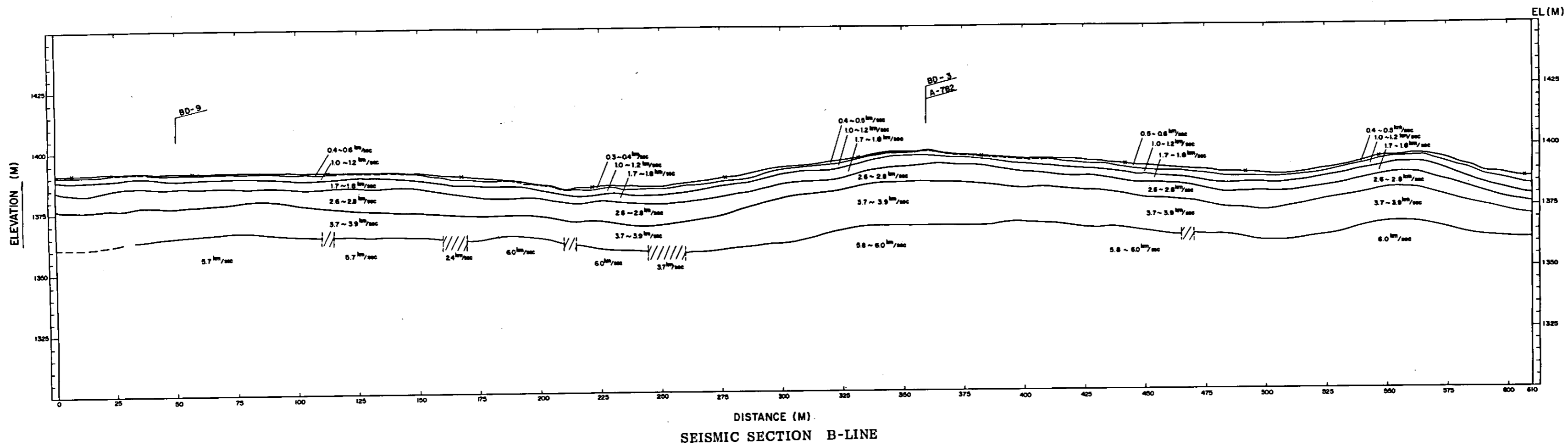
TIME-DISTANCE GRAPH, TRAVERSE L-LINE (3/3)

TIME-DISTANCE GRAPH & SEISMIC SECTION TRAVERSE L-LINE (3/3)

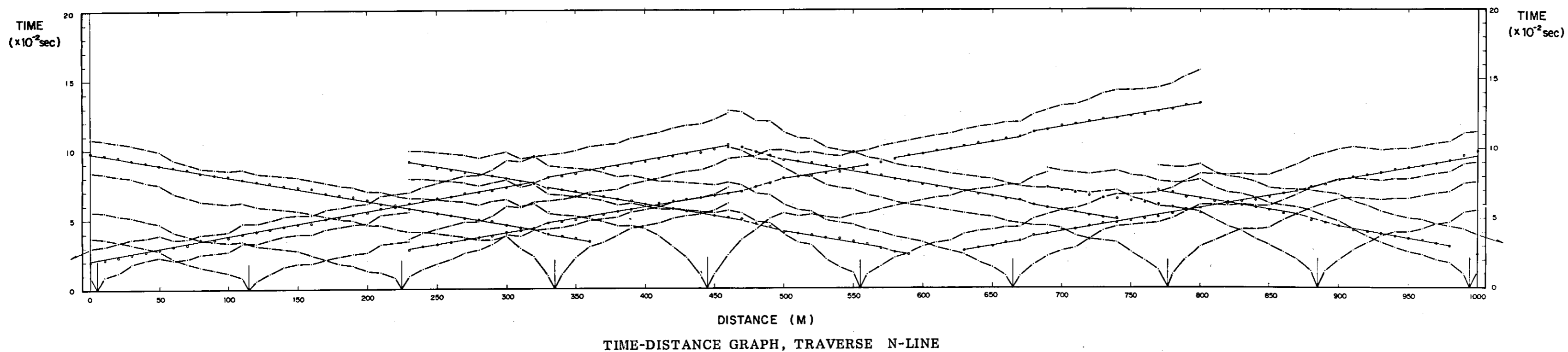
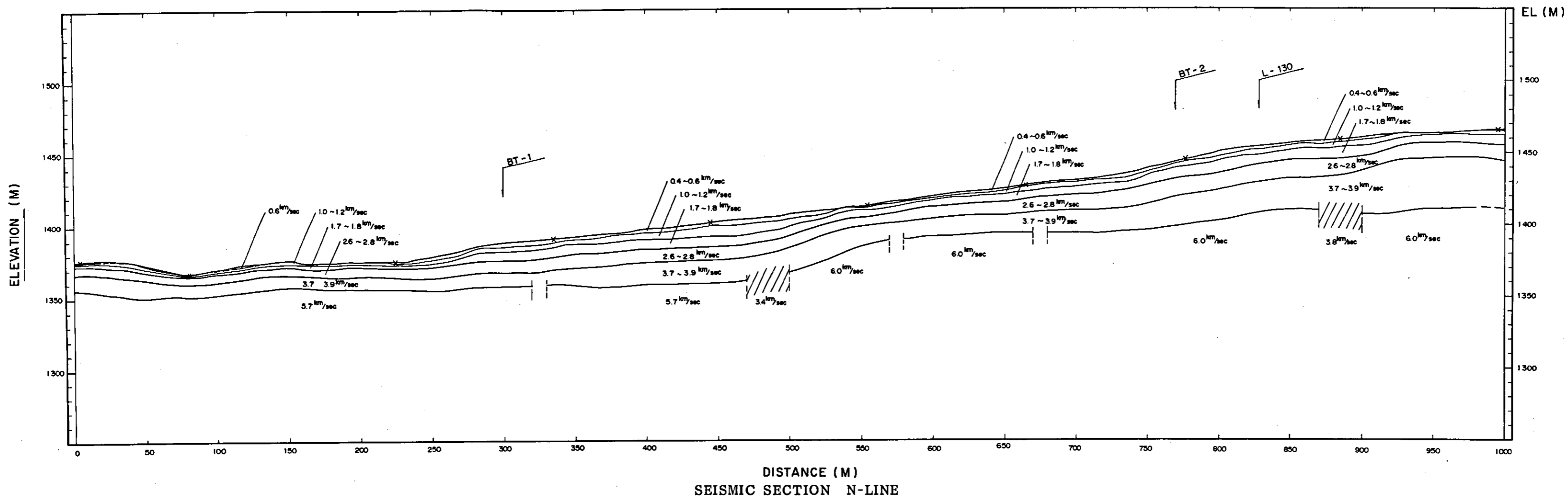


TIME-DISTANCE GRAPH, TRVERSE F-LINE

TIME-DISTANCE GRAPH & SEISMIC SECTION TRVERSE F-LINE

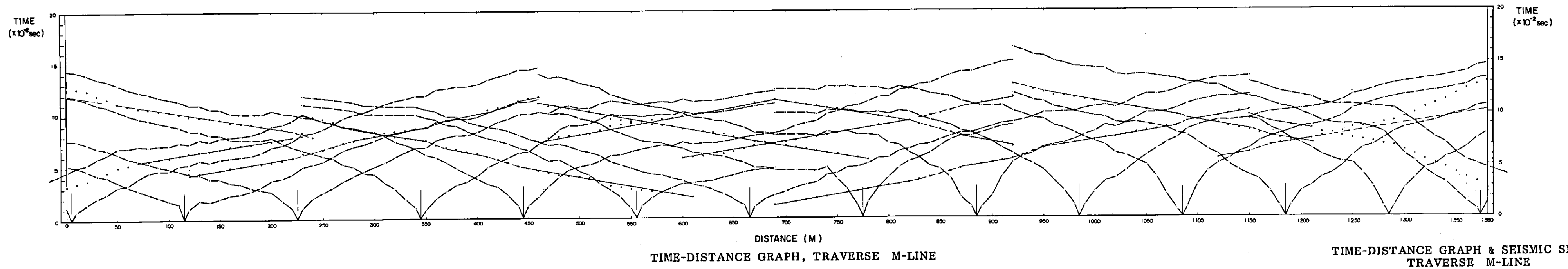
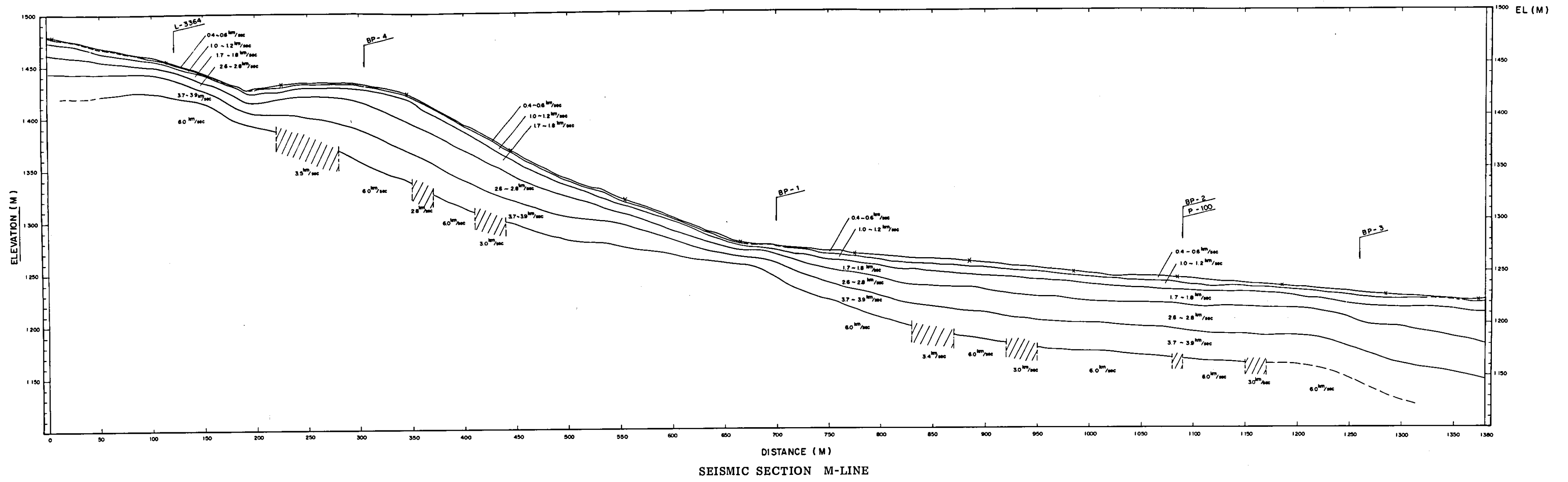


TIME-DISTANCE GRAPH & SEISMIC SECTION  
TRAVERSE B-LINE

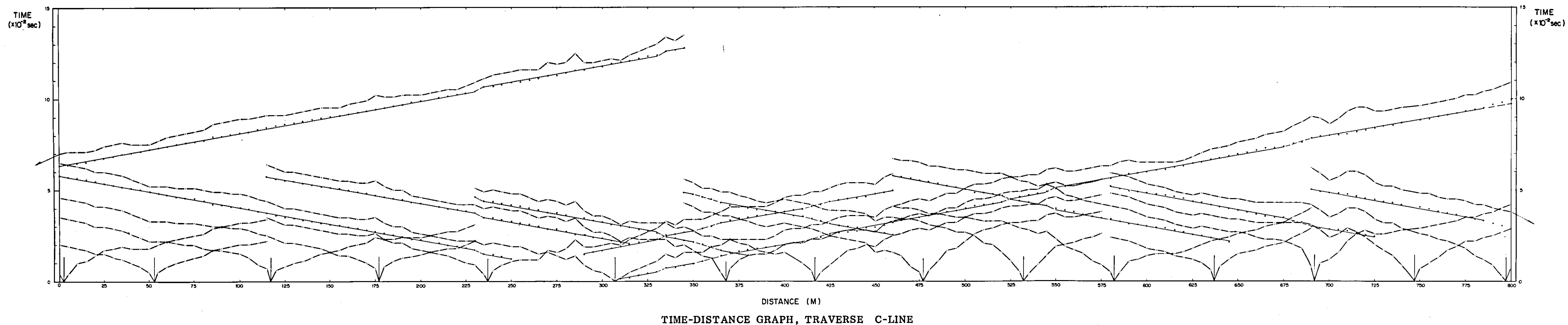
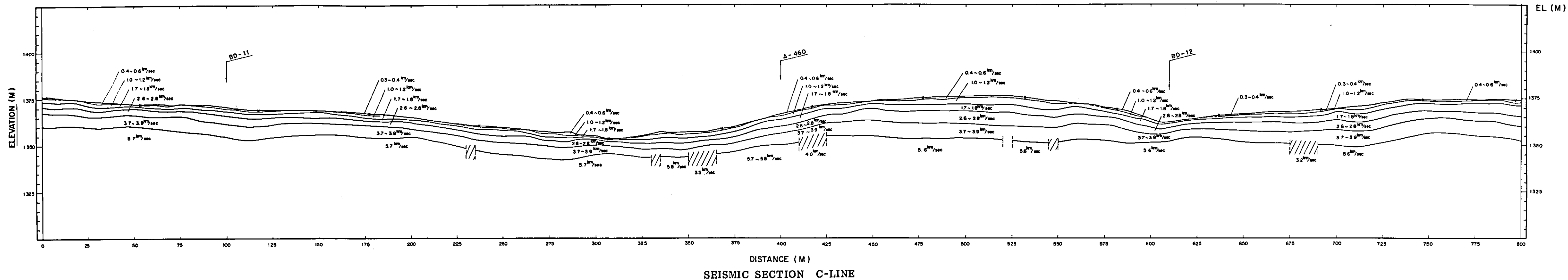


TIME-DISTANCE GRAPH & SEISMIC SECTION  
TRAVERSE N-LINE





**TIME-DISTANCE GRAPH & SEISMIC SECTION TRAVERSE M-LINE**



TIME-DISTANCE GRAPH & SEISMIC SECTION TRAVERSE C-LINE



**DRILLED LOGS**

# DRILL LOG

HOLE NO. BD-1

SHEET NO. OF

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	15.00 m	ELEVATION	1447.14										
SITE		Dam Site		COORDINATE	: A-1270 :		INCLINATION	90°	DRILL RIG	D-750									
AVERAGE CORE RECOVERY		83.0 %		DATE	FROM 14/10 TO 17/10 1984		DRILLED	B. Kisitu	LOGGED	T. Kimura									
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE						DEPTH		
								%	m		50	10	20	30	40	50			
	1.97	1445.17	Sand and Gravel		Light brown Silty sand and decomposed rock fragments of Granodiorite.	m/m 130													
			Granodiorite		Light brown - brown white. Moderately to highly weathered. Core length is 5 - 20cm, by hammering easily bracken. Coarse grained and moderately to highly weathered. Core samples are fractured in places. Extensive kaulinization. Water-stained along cracks.	2.63m	CM>CL												
	9.97	1437.17			Gray - Brown Slightly weathered. Medium hard-rock. Core length 5 - 15cm. Water-stained along cracks.	m/m 84		CM											
	15.41	1431.73				m/m 76													

LOG FORM - B

HOLE NO.

\*R.Q.D is Rock Quality Designation, R.Q.D = (Total length of cylindric cores longer than 10 cm / (Total core length) x 100%  
 \*LUGEON VALUE is 1:cm/m under injection water pressure of 10kg/cm<sup>2</sup>  
 \*DEPTH and ELEVATION are in meter  
 \*DIAMETER is in millimeter

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# DRILL LOG

HOLE NO. BD-2 SHEET NO. OF

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	30.00 m	ELEVATION	1430.96				
SITE		Dam Site		COORDINATE	: A-930 :		INCLINATION	90°	DRILL RIG	D-750			
AVERAGE CORE RECOVERY		84.6%		DATE	FROM 3/10 TO 8/10 1984		DRILLED	P. Muriuki	LOGGED	T. Kimura			
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	& BIT DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R Q D	WATER PRESSURE TEST		DEPTH
								%	m		LUGEON VALUE		
	0.50	1430.96	Sandy Silt White Gravel	[Symbol]	Brown. Top soil	84	A<B						
	5.06	1425.9			Yellow - Brown. Residual sand and silt with gravel and highly. Weathered Granodiorite rock fragments. Boulder 0.5 - 0.8m								
	7.95	1423.01	Grano-diorite	[Symbol]	Light Brown Highly weathered rock. Core samples are of sand and rock fragment.	17.12	CH						
	9.00	1421.96			Brown Weathered and cracky.								
	11.42	1419.54			Brown Moderately hand-rock being slightly weathered and cracky. Core length 3 - 10cm.								
	14.30	1416.66			Brown Moderately weathered and cracky. 11.42-12.95, 13.90-14.20m. Core samples are fractured in places.								
	15.00	1415.95			Brown								
	18.70	1412.85			Blue - gray Fresh and hard rock, being slightly cracky. Mostly columnar cores. Water-stained in part along cracks.								
	21.70	1409.26			Blue - gray Fresh and hard rock. Joint pitch is 50 - 70cm. Mostly columnar core. Water-stained in part along cracks.								
	30.00	1400.96			Blue - gray Fresh and very strong rock with clean joint surface.								

LOG FORM-B

HOLE NO.

\* 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. BD-3 SHEET NO. 1 OF BD-3

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	50.00 m	ELEVATION	1397.86									
SITE		Dam Site		COORDINATE	: A-780 :		INCLINATION	90°	DRILL RIG	D-750								
AVERAGE CORE RECOVERY		94.8%		DATE	FROM 18/9 TO 1/10 1984		DRILLED	P. Muriuki	LOGGED	T. Kimura								
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH		
								%	cm		5	10	20	30	40		50	
	0.90	1396.96	Sand	00	Brown-red													
	1.45	1396.4		CL		Greyish white. Rock fragments												
	2.70	1395.15		CL<CM		Greyish white. Highly weathered. Hard but cracky. Gray with red brown in part.												
	3.50	1394.35		CM		Hard rock. Weathering along the joint.												
						Pinkish red.												
						Slightly weathered, strong foliated, coarse grained.												
						Reddish colour indicates heavy concentration of ortho-clase.												
	7.30	1390.55				Mostly columnar cores.												
	8.50	1389.35				Pinkish red. Hard but cracky.												
	9.00	1388.85																
	9.50	1388.35			Crushed rock.													
			Grano-diorite		Blue-green.													
						9.50 - 10.05m hard Diorite.												
						10.05 - 10.20m cracky.												
						11.80 - 13.00m Reddish brown.												
						Mostly columnar cores, being water-stained along cracks.												
	13.70	1384.16																
	13.90	1383.96				Reddish brown.												
						Moderately weathered along the joint plane.												
						Many vertical joints recognized.												
	17.70	1380.16				Mostly hard columnar cores are fractured in places.	m/m 84											
	18.50	1379.35			Crushed rocks.	m 16.90												
					18.50 - 21.35m Reddish brown.													
					21.35 - 23.50 Blue green.													
					23.50 - 31.80m Reddish brown.													

Cores sampled for rock testing

HOLE NO.

LOG FORM-B

\*R.Q.D is Rock Quality Designation. R.Q.D=(Total length of cylindric 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

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# DRILL LOG

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

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT			DEPTH	70.00 m	ELEVATION	1352.24									
SITE		Dam Site		COORDINATE	: A-590 :		INCLINATION	50°	DRILL RIG	D-750							
AVERAGE CORE RECOVERY		97.9 %			DATE	FROM 13/9 TO 26/9 1984		DRILLED	B. Kizito	LOGGED	T. Kimura						
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH	
								%	cm		50	20	10	5	2		1
	0.65	1351.59	Sandy Silt	0	Dark brown. Top soil												
				+	Gray white - Greenish blue												
				+	Moderately to slightly weathered.												
				+	Hard rock with 5 ~ 10cm in joint pitch.												
				+	Joints are closely spaced.												
				+	Kaolinization and slightly stained along cracks.												
				+	Length of core samples is 3 - 10cm, in part, 10 - 20 cm and 5 - 20cm.												
				+	Dioritic rock.												
				+	12.00 - 12.05m Crushed rock with thin clay.												
	12.47	1339.77	Grano-diorite	+	Fault	98 m/m											
				+	Blue white	12.47 mm											
				+	Fresh and hard rock.												
				+	Joint pitch is 20 - 50cm.												
				+	Mostly columnar cores with clean joint surfaces.		B<CH										
	18.70	1333.54		+	Blue white, Fresh and hard, but easily broken along vertical joint planes.		CM										
	20.00	1332.24		+	Gray, Fresh and hard. Water-stained along cracks.		CH<CM										
	21.30	1330.94		+	Blue gray, Mostly fresh and hard rock.												
				+	Mostly columnar cores.		B<CH										

HOLE NO.

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

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# DRILL LOG

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

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	70.00 m	ELEVATION	1350.44												
SITE		Dam Site		COORDINATE	: A-520 :	INCLINATION	50°	DRILL RIG	D-750												
AVERAGE CORE RECOVERY		97.6%		DATE	FROM 13/8 TO 25/8 1984	DRILLED	B. Kizito	LOGGED	T. Kimura												
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST					DEPTH					
								cm	%		LUGEON VALUE										
			Grano-diorite	+	Blue green Fresh and hard but slightly weathered along the joint plane. Joint pitch is 10 - 30cm. Medium grained Dioritic rock. (0 - 47.00m)	18.00 mm	CM < CH				4.45										
	12.40	1338.0													5.1 = 4.3						
	14.70	1335.7							Blue green Moderately weathered along the joint plane and cracky. Joint pitch is 3 - 10cm. Reddish soft rock (12.50 - 12.75)		CM				8.00						
	18.00	1332.4							Blue green Sheared but recemented. Hard rock but brittle. Cracky (16.00 - 16.20m)		CH				11.60						
	19.10	1331.3							Blue green Joint pitch is 5 - 20cm. Hard but easily breaks.		CM				13.00						
	21.00	1329.4							Blue green Fresh and hard. Mostly columnar cores with slightly brittle in part.		CH				16.00						
	24.00	1326.4							Blue green Fresh and hard but slightly cracky. Joint pitch is 5 - 15cm. Slightly water-stained along cracks. Fault (22.30 - 24.00m) with thin clay.		CM				19.00						
	29.00	1321.4							Blue green Fresh and hard. Joint pitch is 5 - 20cm. Slightly water-stained along cracks. Mostly columnar cores.		CM < CH				24.00						

HOLE NO.

LOG FORM-B

\*R.Q.D is Rock Quality Designation, R.Q.D=(Total length of cylindric 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. BD-5

SHEET NO. 2 OF BD-5

DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK GRADE	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D		WATER PRESSURE TEST LUGEON VALUE					DEPTH				
								%	cm	50	%	10	20	30	40	50					
	32.20	1318.24	Granodiorite	+	Blue green Fresh and hard rock with 20 - 40cm in joint pitch. Stained along crack in places.		CH														
	32.90	1317.54		+	Cracky. Stained along cracks.		CM														
	37.70	1312.74		+	Blue green Fresh and hard. Mostly columnar cores with cracks in parts. Water-stained along cracks in places.		CM<CH														
	40.00	1310.44		+	Blue green Cracky. Joint pitch is 3 - 10cm. Water-stained along cracks with thin clay in part.		CM														
				+	Blue green Fresh and hard rock. Joint pitch is 30 - 50cm. Joint surface is clean.																
				+	Medium to coarse grained Granodiorite (47.00 - 70.00m)		B														
				+	Cracky (60.20 - 60.50m) (CM)																
				+	Fresh and hard rock																
				+																	

HOLE NO.

LOG FORM-C



# DRILL LOG

HOLE NO. BD-6

SHEET NO. 1 OF BD-6

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	35.00 m	ELEVATION	1360/22									
SITE		Dam Site		COORDINATE	: A-350 :		INCLINATION	90°	DRILL RIG	D-750								
AVERAGE CORE RECOVERY		89.3%		DATE	FROM 31/8 TO 5/9 1984		DRILLED	B. Kizito	LOGGED	T. Kimura								
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY	R. Q. D.	WATER PRESSURE TEST LUGEON VALUE	DEPTH							
	0.20	1369.02	Grano-diorite	+	Stop soil.	m/m 84	CL											
	4.30	1364.92			Green gray.							Moderately weathered.	Joint space is 1 - 5cm.	Water-stained along cracks with clay interbedded in part.				
	15.60	1353.62			Green gray.							Moderately weathered along the joint plane.	Minerals also weathered.	Joint pitch is 3 - 10cm.	Mostly short columnar cores.	Foliated rock with a lot of vertical joints.	Mostly hard but brittle.	Fault (14.90 - 15.60m) compresses thin clay and broken rock.
	19.10	1350.12			Blue green							Fresh and hard but slightly weathered along the joint plane.	Thin doleritic layers in places.					
	22.40	1346.82			Brown-gray							Moderately weathered.	Cracky and core samples mostly fractured, where many slickensides are recognized.					
	23.90	1345.32			Gray							Fresh and hard.	Heavily cracky in places.					
	25.40	1343.82			Gray							Fresh and hard.						
	27.80	1341.42			Blue green							Slightly weathered.	Joint pitch is 5 - 10cm.	Water-stained along cracks in parts.				
					Blue green							Fresh and hard.	Mostly columnar cores.					

LOG FORM-B

HOLE NO.

\* R.Q.D is Rock Quality Designation, R.Q.D = (Total length of cylindrical core 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

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# DRILL LOG

HOLE NO. BD-6 SHEET NO. 2 OF BD-6

DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK GRADE	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D.	WATER PRESSURE TEST					DEPTH		
								%	CM		LUGEON VALUE							
											50	10	20	30	40		50	
	35.00	1334.22		+	Cracks in places. Fresh and hard.		CM<CH											

Lu = 1.4

35.10

HOLE NO.

LOG FORM-C



# DRILL LOG

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

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	45.00 m	ELEVATION	1409.74									
SITE		Dam Site		COORDINATE	: A-190 :		INCLINATION	90°	DRILL RIG	D-750								
AVERAGE CORE RECOVERY		89.5%		DATE	FROM 25/8 TO 4/9 1984		DRILLED	P. Muriuki	LOGGED	T. Kimura								
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST					DEPTH		
								%	cm		LUGEON VALUE							
	2.60	1407.14	Sand		Brown Medium to coarse sand with heavily weathered granodiorite.													
	4.00	1405.74	Grano-diorite		Yellow brown Highly weathered rock which is easily broken by hammering.		CL											
	7.50	1402.24			Brown Moderately to highly weathered Fine-grained hard rock of Diorite (5.40 - 7.50m)		CM			5.70								
	15.00	1394.74			Gray white Moderately weathered but highly weathered in part. Mostly columnar cores. Medium hard but brittle. Joint pitch is 20 - 50cm.	m/m 98	CM			10.00								
	19.00	1390.74			Gray white Moderately weathered but highly weathered along the joint plane. 16.62-17.00, 17.40-17.70, 18.20-18.57, 21.50-23.40.		CL < CM			10.90								
	23.40	1386.34			Blue gray Fresh and hard but moderately weathered in part along the joint plane.		CM < CH			11.40								
	28.00	1381.74			Blue gray		B < CH			12.00								
										12.90								
										13.70								
									15.00									
									16.20									
									17.40									
									18.57									
									21.50									
									23.40									
									25.00									
									26.60									
									28.20									
									29.80									
									31.40									
									33.00									
									34.60									
									36.20									
									37.80									
									39.40									
									41.00									
									42.60									
									44.20									
									45.80									

LOG FORM-B

HOLE NO.

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

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

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# DRILL LOG

HOLE NO. BD-10 SHEET NO. OF

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	20.00 m	ELEVATION	1371.00										
SITE		Dam Site		COORDINATE	:	INCLINATION	90°	DRILL RIG	D-750										
AVERAGE CORE RECOVERY		94.1%		DATE	FROM 3/10 TO 6/10 1984	DRILLED	B. Kizito	LOGGED	T. Kimura										
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE						DEPTH		
								%	m		1	2	3	4	5	6			
	0.20	1370.80		+	Top soil														
	3.30	1367.70		+	Gray white Highly weathered and heavily cracky. Core samples are almost fractured.	m/m 98	CM>CL												
	6.00	1365.00	Grano-diorite	+	Gray Highly to moderately weathered. Medium hard. Mostly columnar cores are recovered but core samples are fractured in places.	2.30	CM												
	9.20	1361.80		+	Gray Fresh and hard. Slightly weathered. Joint pitch is 10 - 20cm. Joint surface is stained.		CM>CH												
				+	Gray Fresh and hard. Mostly columnar cores. Joint pitch is 20 - 50cm. Joint surface is stained in parts.		CH>B												
	20.00	1351.00																	

LOG FORM-B

HOLE NO.

\*R.Q.D is Rock Quality Designation, R.Q.D = (Total length of cylindric 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. BD-11 SHEET NO. OF

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	30.00 m	ELEVATION	1370.75									
SITE		Dam Site		COORDINATE	: C-100 :		INCLINATION	90°	DRILL RIG	D-750								
AVERAGE CORE RECOVERY		93.8%		DATE	FROM 7/9 TO 12/9 1984		DRILLED	P. Muruki	LOGGED	T. Kimura								
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D.	WATER PRESSURE TEST LUGEON VALUE					DEPTH		
								%	m		5	10	20	30	40		50	
	1.10	1369.65	Sand		Brown Sand and gravel with $\phi$ 1-5cm.													
	3.00	1367.75	Grano-diorite		Gray yellow Highly weathered and heavily cracky. Core samples are fractured.		D>CH											
	5.10	1365.65			Gray brown Moderately weathered but hard. Joint pitch is 5-10 cm. Joint surface is mostly stained.		CM											
					Gray green Fresh and hard. Mostly columnar cores. Joint pitch is 10 - 30cm. Joint surface is slightly stained. Cracky in places.		CH											
					11.90 - 12.00m } cracky 18.30 - 19.80m }													
	20.00	1350.75			Blue green Fresh and hard, but slightly weathered in parts along the joints surface. Mostly columnar cores. Joint pitch is 20 - 40cm. Cracky (26.90 - 27.40m)		B											
	30.00	1340.75																

HOLE NO.

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

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# DRILL LOG

HOLE NO. **BD-12** SHEET NO. **OF**

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT			DEPTH	30.00 m	ELEVATION	1362.02										
SITE		Dam Site	COORDINATE	: C-610 :	INCLINATION	90°	DRILL RIG	Radio										
AVERAGE CORE RECOVERY		94.3%	DATE	FROM 29/8 TO 6/9 1984	DRILLED	S. Mwanza	LOGGED	T. Kimura										
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH		
								%	cm		50	10	20	30	40		50	
	0.40	1361.62	Cobbles	○ ○	Granodiorite cobbles with sand.													
	3.30	1358.72		+	White yellow Medium hard but highly weathered. Minerals change in quality. Heavily cracky.		CL>CM											
	4.90	1357.12		+	Gray		CM											
	5.60	1356.42		+	Slightly weathered, but in places moderately weathered along the joint plane.		CH											
	7.60	1354.42		+	Mostly columnar cores.		CM>CH											
	8.90	1353.12		+	Core length is 5 - 40cm.													
	9.40	1352.62		+	Joint surface is slightly stained in most parts.		CM											
	11.40	1350.62		+		98	CH>B											
	13.30	1348.72		+		9.18	CH>CM											
	14.70	1347.32		+			CM>CH											
	22.00	1340.02	Granodiorite	+	Greenish blue Fresh and hard. Mostly columnar cores. Joint pitch is 20 - 40cm. Joint surface is slightly standard.		CH>B											
	24.70	1337.32		+	Greenish blue Hard but cracky. Core length is 3 - 10cm. Joint surface is stained.		CM											
	26.40	1335.52		+	Greenish blue Fresh and hard.		B											
	26.80	1335.22		+	Mostly columnar cores.		CM											
	28.90	1333.12		+	Joint pitch is 30 - 70cm.		CH>CM											
	30.00	1332.02		+	Joint surface is clean, but slightly stained in places.		B											

LOG FORM-B

HOLE NO.

\*R.Q.D is Rock Quality Designation. R.Q.D=(Total length of cylindric cores longer than 10 cm)/(Total core length) x 100%  
 \*LUGEON VALUE is l/mm/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. BD-13 SHEET NO. OF

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	30.00 m	ELEVATION	1370											
SITE		Dam Site		COORDINATE	:	INCLINATION	90°	DRILL RIG	D-750											
AVERAGE CORE RECOVERY		94.3%		DATE	FROM 28/9 TO 1/10 1984		DRILLED	B. Kizito	LOGGED	T. Kimura										
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER & ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D.	WATER PRESSURE TEST LUGEON VALUE					DEPTH					
							%	CM		5	10	20	30	40		50				
	3.30	1366.70	Sand and Boulder		Brown white Granodiorite and gneiss rock fragment. Big boulders in places.	m/m 98 m 6.10 CM														
	4.80	1365.20	Gneiss		Greenish gray Highly weathered soft rock of amphibolite gneiss.		CL													
	9.30	1360.70	Grano-diorite		Brown Moderately weathered. Slightly hard but brittle Easily broken by hammering. Minerals almost change in quality. Joint surface is stained.		CM													
	15.70	1354.30			Blue gray Hard but moderately weathered. Mostly columnar cores. Joint pitch is 15 ~ 30cm.		CM>CH													
	20.50	1349.50			Cracky (15.20 ~ 15.70m)		CH>CM													
	30.00	1340.00			Blue gray Fresh and hard. Joint surface is clean.	B														

HOLE NO.

LOG FORM-B

● R.Q.D is Rock Quality Designation. R.Q.D = (Total length of cylindric 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

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

# DRILL LOG

HOLE NO. BS-1 SHEET NO. OF

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT			DEPTH	30.00 m	ELEVATION	1429.91 m										
SITE		Dam Site		COORDINATE	: A-1100 :		INCLINATION	90°	DRILL RIG	D-750								
AVERAGE CORE RECOVERY		91.3%		DATE	FROM 9/10 TO 13/10 1984		DRILLED	P. Muriuki	LOGGED	T. Kimura								
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH		
								%	m		50	10	20	30	40		50	
	1.80	1428.1	Sand and Gravel	○ ○ ○ ○	Light brown Granodiorite Gravels and coarse sand.													
	2.50	1427.4	Grano-diorite	///	Light brown. Heavily weathered rocks which are seemingly of gravel type.		CL											
	3.20	1426.7		+	Light brown Medium hard but weathered.		CL>CM											
	7.20	1422.7		+	Yellow-white Medium hard. Core samples are fractured in places. Moderately weathered. Joint surface is stained.		CM											
	8.40	1421.5		///	Light brown. Heavily weathered sampled cores crushed to pieces.		CL											
	9.20	1420.7		+	Light brown. Medium hard.		CM											
	10.30			+	Light brown Fault. Cracky rock.		CL<CM											
	12.30	1419.6		+	Light brown Moderately weathered. Mostly columnar cores which are cracky in parts.		CM											
	16.40	1417.6		+	Gray Hard but slightly weath-ered. Joint pitch is, 10 - 20cm. Joint surface is slightly stained. Cracky in parts.		m/m 84 m 13.64 CM>CH					14.03						
	21.80	1413.5		+	Gray Fresh and hard, but cracky in parts. (45° and 80° joint) Jonint surface is stained in places.		CH					Lu = 2.6						
	22.50	1408.1		+	White-gray Cracky zone.		CM					21.25						
	26.45	1407.4		+	Gray Fresh and hard.		B>CH					Lu = 0.4						
	30.00	1399.91										29.28						
												26.45						
											Lu = 0.3							
											30.00							

LOG FORM-B

HOLE NO.

\*R.Q.D is Rock Quality Designation, R.Q.D=(Total length of cylindric 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. BS-2 SHEET NO. OF

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	20.00 m	ELEVATION	1384.12									
SITE		Dam Site		COORDINATE	: E-500 :		INCLINATION	90°	DRILL RIG	D-750								
AVERAGE CORE RECOVERY		88.3%		DATE	FROM 18/10 TO 22/10 1984		DRILLED	P. Muriuki	LOGGED	T. Kimura								
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH		
								%	cm		50	15	20	30	45		55	
	1.02	1383.10	Sand and Gravel		Brown. Sand silt and weathered Granodiorite gravels.													
	3.00	1381.12	Granodiorite		Brown Heavy weathered. Core samples are almost fractured.		CL											
	4.35	1379.77	Gneiss		Dark blue Amphibolite gneiss.		CM > CL											
	10.40	1373.72			3.00 ~ 4.35m weathered Cores are broken to pieces. 4.35 ~ 10.40m. Hard rock but by hammering easily broken. Joint pitch is 3 ~ 15cm. Joint surface is stained. Shearing zone (6.75 ~ 6.90m clay).													
	13.30	1370.82	Granodiorite		Greenish gray Heavily weathered. Core samples are fractured. Fault.		CL											
	14.70	1369.42			Greenish gray Slightly weathered. Hard but cracky.		CM											
	20.00	1364.12			Greenish gray Slightly weathered but hard. Mostly columnar cores. Joint pitch is 10 ~ 20cm. Joint surface is stained in parts.		CM < CH											

HOLE NO.

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

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

# DRILL LOG

HOLE NO. BT-1 SHEET NO. OF

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT			DEPTH	20.00 m	ELEVATION	1369.61										
SITE		Tunnel	COORDINATE	: N-300 :	INCLINATION		DRILL RIG	D-750										
AVERAGE CORE RECOVERY		36.2%	DATE	FROM 7/10 TO 11/10 1984	DRILLED	H. Wameyo A. Wambago	LOGGED	T. Kimura										
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH		
								%	cm		50	10	20	30	40		50	
	2.90	1386.71	Sand and Gravel		Reddish brown Sand and granodiorite gravels.													
	9.90	1379.71	Grano-diorite		Greenish gray - gray. Highly weathered. Sampled cores are seemingly of silt and sand type. Core is mostly lost by water drilling.	m/m 98 m 8.76	CL<D											
	17.80	1371.81			Yellow gray Highly to moderately weathered. Slightly hard, but by light hammering easily broken. Heavy cracks in places. Joint surface is mostly stained.		CM CL											
	19.10	1370.51			Blue gray Fresh and hard.		CH											
	20.00	1369.61			Blue gray Cracky zone.		CM>CL											

LOG FORM-B

HOLE NO.

\*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/mm/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. BT-2 SHEET NO. 1 OF BT-2

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT			DEPTH	70.00 m	ELEVATION	1443.28									
SITE		Tunnel		COORDINATE	: N-770 :	INCLINATION	90°	DRILL RIG	D-750								
AVERAGE CORE RECOVERY		90.2%		DATE	FROM 14/10 TO 6/11 1984	DRILLED	A. Wambogo	LOGGED	T. Kimura								
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH	
								%	cm		50	10	20	30	40		50
	3.35	1439.98	Sand and Gravel		Brown 0 - 1.55m Granodiorite boulders 1.55 - 3.35m Light brown Gravel with coarse sand												
	17.55	1425.78	Granodiorite		White-brown Moderately to highly weathered. Minerals and particles change in quality. Mostly columnar cores. Cracky in parts. By hammering easily broken. Joint surface is stained. Joint pitch is 5 - 20cm.	m/m 84 9.05m											
	23.00	1420.28			Dark grey Slightly weathered, siliceous hard rock. Joint surface is slightly stained in parts. Mostly columnar cores.		CH										
	25.30	1417.98			Grey Moderately weathered. Short columnar cores or fragment.		CM										
	28.40	1414.88			Grey Heavy cracky zone. Fault Moderately weathered. Core samples are fractured or not recovered in places. Cave at the depth of 28.40m		CL										
	29.70	1413.58			Dark grey Moderately weathered. Cracky.		CM										

LOG FORM-B

HOLE NO.

\*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

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# DRILL LOG

HOLE NO. BT-2 SHEET NO. 2 OF BT-2

DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK GRADE	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH		
								%	CM		5	10	20	30	40		50	
	31.70	1411.53	Granodiorite	+	Dark grey Fresh and hard. Joint surface is stained in parts.		CH											
				+	Dark grey Fresh and very strong rock. Slightly jointed and joint surface is clean. Very good condition.		A											
	54.12	1389.16		+	Dark green Fresh and hard, but cracky. Joint surface is stained in parts.		CH < CM											
	55.90	1387.38		+	Dark green 55.90 - 70.00m Fresh and very strong rock.		B											
	58.93	1384.35		+	Fresh and hard. Good condition.	A < B												

LOG FORM-C

HOLE NO.

# DRILL LOG

HOLE NO. BT-2

SHEET NO. 3 OF BT-2

DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK GRADE	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D.		WATER PRESSURE TEST LUGEON VALUE					DEPTH	
								%	CM	50	%	10	20	30	40	50		
5/11	70.00	1373.28	Granodiorite	+	Fresh and hard. Good condition.		A<B											

LOG FORM-C

HOLE NO.

# DRILL LOG

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

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT			DEPTH	70.00 m	ELEVATION	1431.46										
SITE		Tunnel	COORDINATE	: L-1620 :	INCLINATION	90°	DRILL RIG	D-750										
AVERAGE CORE RECOVERY		86.6%	DATE	FROM 24/10 TO 4/11 1984	DRILLED	B. Kizito	LOGGED	T. Kimura										
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH		
								%	CM		10	20	30	40	50			
	2.20	1429.25	Sandy Clay	---	Reddish brown													
	9.45	1422.01	Crano-diorite	***	Brownish white Highly weathered and cracky. Coarse grained. Foliated core forms almost broken pieces.		CL											
	20.03	1411.41		***	Grayish - Greenish white Highly weathered. By hammering easily separate along the joint. Joint surface has clay. Fault zone. Core samples are mostly fractured.		CM<CL											
	26.40	1405.06		***	Greenish gray Moderately weathered along the joint plane. Mostly columnar cores. Joint pitch is 10 ~ 30cm, but core samples are fractures in places.	m/m 84 21.50 m	CH											
	29.20	1402.26	***	Greenish gray Slightly weathered but cracky. Hard rock. Short columnar cores with 5 ~ 20cm in length.		CH<CM												

LOG FORM-B

HOLE NO.

\* R.Q.D is Rock Quality Designation, R.Q.D=(Total length of cylindric 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. BT-3 SHEET NO. 2 OF BT-3

DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK GRADE	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH		
								%	cm		50	40	30	20	10			
	0				Grayish green Slightly weathered along the joint plane. Hard rock but slightly cracky. Mostly columnar cores with 5 - 20cm in length, but core samples are fractured in places. Joint surface is stained in parts.		CH											
	42.90	1388.56	Granodiorite		Grayish green Fresh and hard. Mostly columnar cores. Joint pitch is 20 - 50cm. Joint surface is clean in most parts.		B											
	56.60	1380.86			Cracky		CM											
	51.40	1380.06			Grayish green Fresh and hard. Joint pitch is 10 - 30cm. Slightly cracky. Joint surface is stained in most parts.		CH>B											
	60.30	1371.16			Grayish green Fresh and hard. Columnar cores are recovered. Crack and joint closely adhered. Joint surface is clean. Good condition.		B<A											

LOG FORM-C

HOLE NO.

# DRILL LOG

HOLE NO. BT-3 SHEET NO. 3 OF BT-3

DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK GRADE	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D.	WATER PRESSURE TEST LUGEON VALUE					DEPTH	
								%	m		50	10	20	30	40		50
3/11	70.00	1361.46	Granodiorite	+	Grayish green Fresh and hard. Columnar cores are recovered. Crack and joint closely adhered. Joint surface is clean. Good condition.		B<A										

LOG FORM-C

HOLE NO.

# DRILL LOG

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

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	70.00 m	ELEVATION	1431.80									
SITE		Tunnel		COORDINATE	: M-305 :		INCLINATION	90°	DRILL RIG	A-750								
AVERAGE CORE RECOVERY		84.2%		DATE	FROM 31/10 TO 9/11 1984		DRILLED	P. Muriuki S. Mwanza	LOGGED	T. Kimura								
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST						DEPTH	
								%	m		LUGEON VALUE							
	2.92	1428.88	Sand	o	Light brown Heavily weathered gravel and sand.													
	8.25	1423.55	Grano-diorite	+	Grayish white Highly weathered rock. Minerals are almost weathered and altered in quality. Slightly hard but brittle. Core samples are mostly fractured.		CM<CL											
	15.40	1416.4		+	Grayish white Moderately weathered. Joint pitch is 5 - 15cm. Joint surface is stained in most parts. Short columnar cores. Core samples are fractured in places. Hard but brittle.		CM											
	28.40	1403.40		+	Grayish white Moderately weathered but highly weathered in places. Moderately strong. Columnar cores. By light hammering easily broken.		CM>CH											
				+	Grayish white													

LOG FORM-B

\*R.Q.D is Rock Quality Designation, R.Q.D=(Total length of cylindric 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

NIPPON KOEI CO., LTD.  
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HOLE NO.

# DRILL LOG

HOLE NO. BT-4 SHEET NO. 2 OF BT-4

DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK GRADE	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH	
								%	CM		5	10	20	30	40		50
	3.77		Grano-diorite	+	Grayish white												
	4.77				Moderately to highly weathered.												
	8.85				Joint pitch is 3 - 10cm.												
	8.85				Joint surface is mostly stained.												
	8.85				Sampled cores with 3 - 10cm in length.												
	8.85				Sheared and weathered zone.												
	5.77				44.50m A lot of caves and water loss 50%.		CM Partially CL										
	6.77				28.40 - 54.57m												
	7.77				Cementing is required for the protection of the bore hole and water loss is 20 - 50%.												
	8.77	60.00	1371.80		Moderately to highly weathered along the joint plane.												

HOLE NO.

LOG FORM-C

# DRILL LOG

HOLE NO. BT-4 SHEET NO. 3 OF BT-4

DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK GRADE	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D.		WATER PRESSURE TEST LUGEON VALUE					DEPTH
								%	CM	50	%	10	20	30	40	50	
	7.00	1361.80	Grano-diorite	+	Moderately to highly weathered along the joint plane.		CM Par-tiary CI										

LOG FORM-C

HOLE NO.

# DRILL LOG

HOLE NO. BP-1 SHEET NO.      OF     

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT			DEPTH	30.00 m	ELEVATION	1275.10											
SITE		Power House	COORDINATE	: M-700 :	INCLINATION	90°	DRILL RIG	D-750											
AVERAGE CORE RECOVERY		88.7%	DATE	FROM 10/11 TO 18/11 1984	DRILLED	A. Wambogo	LOGGED	T. Kimura											
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE						DEPTH		
								%	cm		50	40	30	20	10	5			
10/11	3.60	1271.50	Silty Sand		Brown Compacted fine to medium grained sand with gravel in places.														
12/11	7.55	1267.55	Grano-diorite		Blue green Slightly weathered and very strong. 6.27 - 8.42m highly jointed.		CH												
13/11					Green Fresh and hard, but highly jointed in places. Mostly columnar cores. Thin quartz vein and Pegmatite.														
18/11					Green Slightly weathered little cracky		CH>CM												
8/11		1245.10																	

HOLE NO.

LOG FORM-B

\*R.Q.D is Rock Quality Designation, R.Q.D=(Total length of cylindric 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. BP-2 SHEET NO. 1 OF BP-2

PROJECT		THE SONDU RIVER MUTLI-PURPOSE DEVELOPMENT PROJECT				DEPTH	50.00 m	ELEVATION	1243.64							
SITE		Power House		COORDINATE	: M-1090 :		INCLINATION	90°	DRILL RIG	D-750						
AVERAGE CORE RECOVERY		61.5%		DATE	FROM 7/11 TO 13/11 1984		DRILLED	S. Mwanza B. Kizito	LOGGED	T. Kimura						
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY	R. Q. D	WATER PRESSURE TEST					DEPTH	
										LUGEON VALUE						
	8.00	1235.64	Sand		Dark brown Coarse grained sand. Hill-wash with gravels and silty layer in places.											
	12.80	1230.84			Brown Decomposed and highly weathered. Core samples are mostly fractured.		CL									
			Grano-diorite		Brown white Moderately weathered and moderately strong, but heavily jointed in places. Joint surface is stained in most parts. Short columnar cores or broken cores. Core loss in places and many caves.		CM > CL									
						m/m 84										
						m 29.72										

HOLE NO.

LOG FORM-B

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

NIPPON KOEI CO., LTD.  
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DRILL LOG

DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK GRADE	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST					DEPTH	
								%	CM		LUGEON VALUE						
	34.00	1209.64	Grano-diorite	+	Brown white Moderately weathered and moderately strong, but heavily jointed in places. Joint surface is stained in most parts. Short columnar cores or broken cores. Core loss in places and many caves.		CM > CL			50	10	20	30	40	50		
	40.00	1203.64		+	Brown white Moderately to highly weathered. Especially highly weathered along the joint plane. Mostly short columnar cores or broken cores.		CM										
	50.00	1193.64		+	Brown white Highly weathered and heavily cracky. Joint surface is stained in most parts. Short columnar cores or broken cores. 43.00 - 44.00m Caves in places cementation. Sometimes core loss.		CM > CL										

HOLE NO.

LOG FORM-C



# DRILL LOG

HOLE NO. BP-3 SHEET NO. OF

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	30.00 m	ELEVATION	1229.56								
SITE		Power House		COORDINATE	: M-1260 :		INCLINATION	90°	DRILL RIG	D-750							
AVERAGE CORE RECOVERY		14.2%		DATE	FROM 13/11 TO 15/11 1984		DRILLED	S. Mwanza B. Kizito	LOGGED	T. Kimura							
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST					DEPTH	
								%	m		LUGEON VALUE						
	6.40	1223.15	Sand		Light brown Fine to medium grained sand. Clay content is 20 - 35%.												
	8.00	1221.56		+ + + +	Yellowish white Silicified rock. Hard but highly weathered.		CM<CL										
				/ / / /	Brown, white, pink Highly weathered and heavily cracky. Fractured zone with hard rocks in places. Boring core is almost washed out.		CL										
	27.25	1202.31		+ + + +	Brownish white Moderately weathered. Highly jointed	m/m 98											
	30.00	1199.56		+ + + +		m 27.25	CM										

LOG FORM-B

HOLE NO.

\* R.Q.D is Rock Quality Designation, R.Q.D = (Total length of cylindrical core 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

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# DRILL LOG

HOLE NO. BQ-1 SHEET NO. 1 OF BQ-1.

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT			DEPTH	40.00 m	ELEVATION	1481.30									
SITE		Quarry Site	COORDINATE	: F-200 :	INCLINATION	90°	DRILL RIG	Rodio									
AVERAGE CORE RECOVERY		80.9%	DATE	FROM 25/9 TO 14/10 1984	DRILLED	S. Mwanza	LOGGED	T. Kimura									
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT DIAMETER & ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH		
							%	cm		50	10	20	30	40		50	
	2.40		Sand and Gravel		Roddish brown coarse sand and gravels.												
		1478.90	Granodiorite		2.40 - 4.68m Gray, moderately weathered boulder, hard.	m/m 98 m 9.00	CL										
	9.90				4.68 - 9.90m Brown highly weathered rock. Core samples are almost broken. Heavily jointed. Joint surface is mostly stained. Sands occur in parts.												
		1471.40	Granodiorite		Light brown. Moderate to highly weathered. Joint pitch is 3 - 10cm. Joint surface is almost stained. Core samples are broken in most parts but short column cores are recovered at places.		CL>CM										
	19.75				10.50 - 14.00m Core loss and slime 17.05m cementation. 17.20 - 19.75m Medium hard but brittle.												
	23.27				Gray-brown. Moderately weathered. Slightly strong. Thin xenolith (meta-basalt) occurs in places.												
		1461.55	Granodiorite		Gray Fresh and hard. Slightly weathered along the joint plane at places. Joint pitch is 30 - 80cm almost clean surface. Joint surface is almost clean.		CH>B										
		1458.08															

HOLE NO.

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 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. BQ-1 SHEET NO. 2 OF BQ-1

DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK GRADE	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH		
								%	CM		50	10	20	30	40		50	
	11/10			+	Fresh and hard good condition.		CH>B											
	12/10			+														
	13/10			+														
	14/10	40.00		+														
		1441.30																

LOG FORM-C

HOLE NO.

# DRILL LOG

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

PROJECT		THE SONDU RIVER MULTI-PURPOSE DEVELOPMENT PROJECT				DEPTH	40.00 m	ELEVATION	1442.97										
SITE		Quarry Site		COORDINATE	: F-900 :		INCLINATION	90°	DRILL RIG	Radio									
AVERAGE CORE RECOVERY		73.1%		DATE	FROM 16/10 TO 31/10 1984		DRILLED	S. Mwanza B. Kizito	LOGGED	T. Kimura									
DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	BIT & DIAMETER	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST					DEPTH			
								%	m		LUGEON VALUE								
	4.36	1438.6	Sand and Gravel		Light-brown Coarse grained sand. 2.62 - 3.50m. Boulder of granodiorite.														
	12.07	1430.90	Grano-diorite		Light brown Highly weathered, almost crushed rock or sand. Core loss or slime. Hard boulders occur at places.		CL<D												
	18.40	1424.57			Blue-gray Slightly weathered. Hard but brittle. Mostly columnar cores. Joint pitch is 20 - 50cm. Joint surface is stained in parts.	m/m 84 m 14.70	CH												
	19.90	1423.07			Gray Slightly cracky. Joint surface.	CM<CH													
	26.20	1416.77			Gray-green Slightly to moderately weathered. Hard rock. Slightly cracky. Mostly columnar cores. Joint surface is slightly stained.	CH													
	26.75	1416.22			Fault, crushed rock and mud.	CL													
			Gray-green Slightly to moderately weathered. Hard rock. Joint pitch is 10 - 30cm. Joint surface is stained in parts.	CH>CM															

LOG FORM-B

HOLE NO.

\*R.Q.D is Rock Quality Designation, R.Q.D=(Total length of cylindric 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. BQ-2

SHEET NO. 2 OF BQ-2

DATE	DEPTH	ELEVATION	ROCK TYPE OR FORMATION	COLUMN SECTION	DESCRIPTION	ROCK GRADE	ROCK CLASSIFICATION	CORE RECOVERY		R. Q. D	WATER PRESSURE TEST LUGEON VALUE					DEPTH	
								%	cm		50	10	20	30	40		50
29/10	31.20	1411.77		+	Gray Moderately weathered. Hard but brittle. Cracky in parts.		CH>CM			50							
	32.80	1410.17					CM										
	39.50	1403.47			B>CH		Gray-green Slightly weathered. Mostly fresh and hard. Joint pitch is 30 - 80cm. Good condition.										

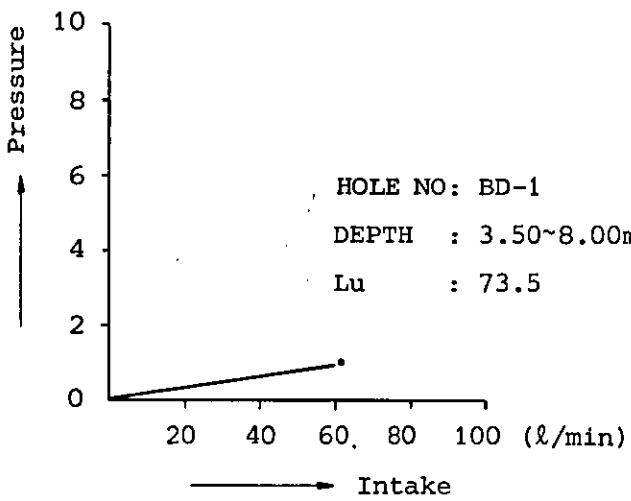
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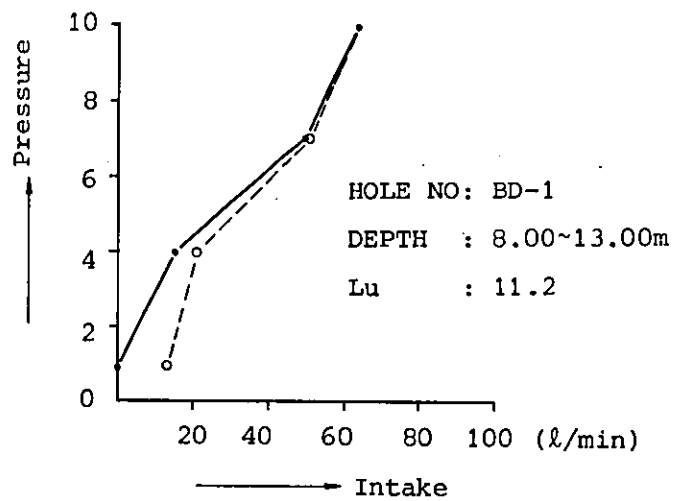
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**WATER PRESSURE TEST**

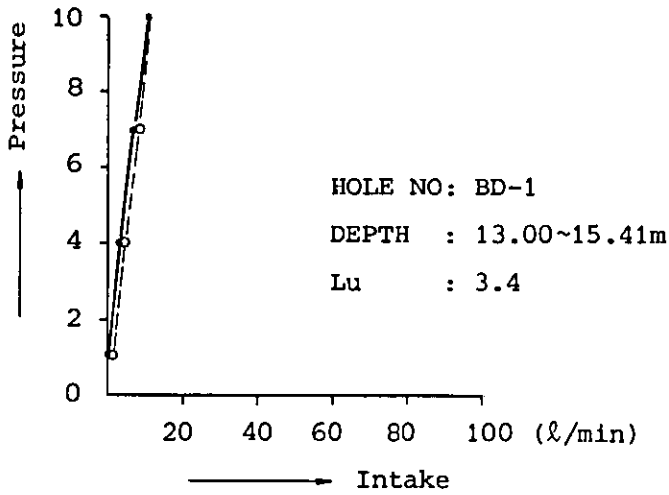
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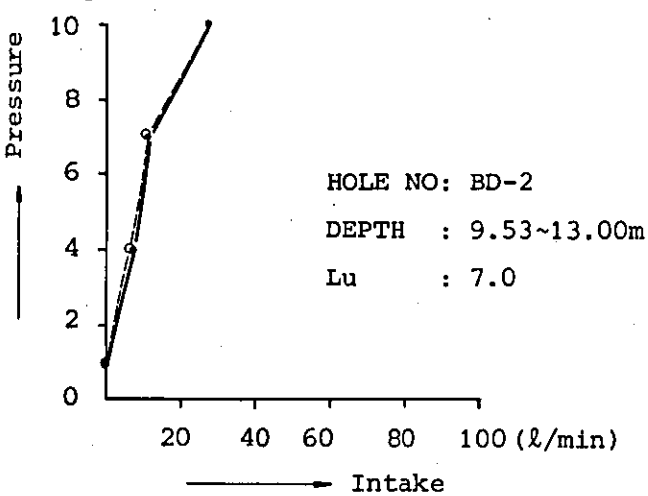
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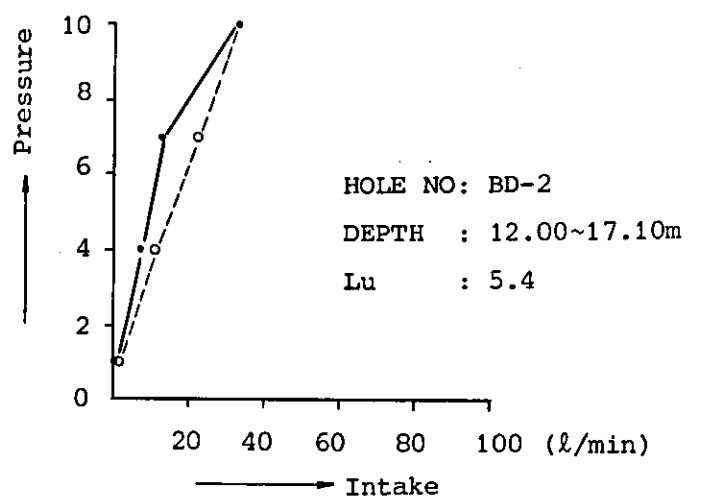
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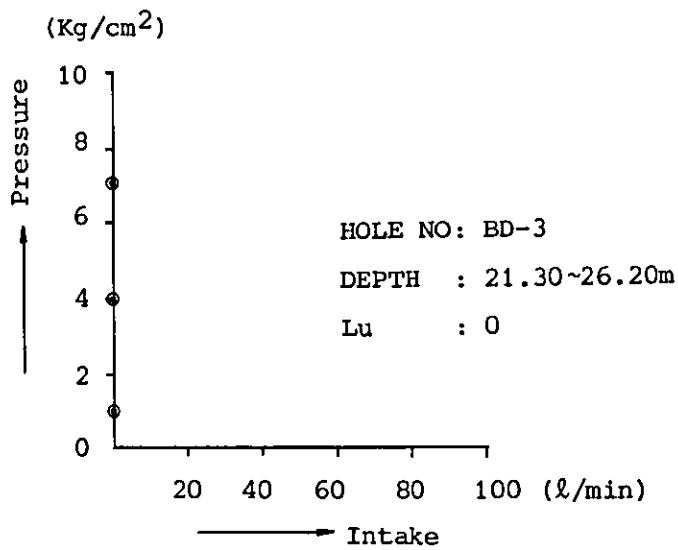
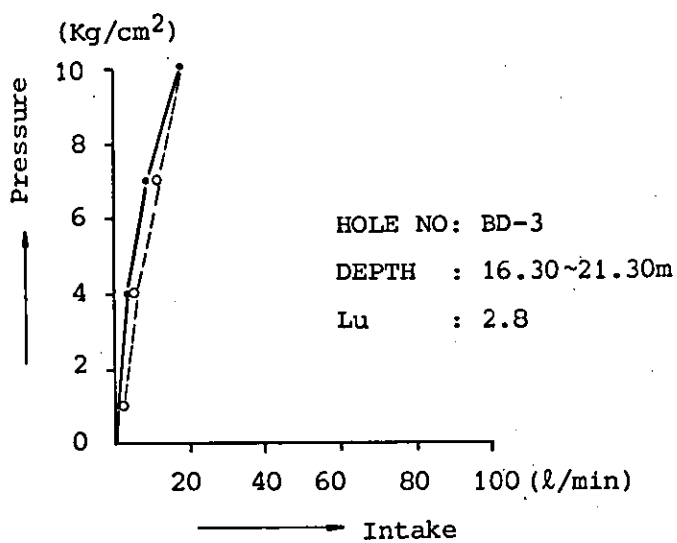
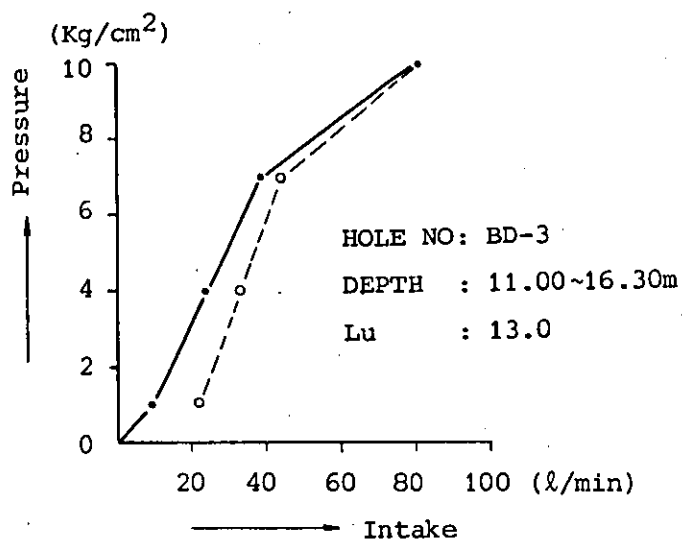
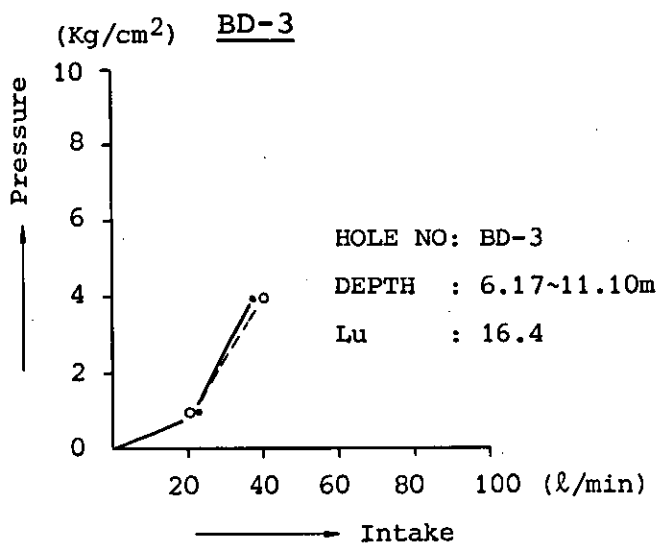
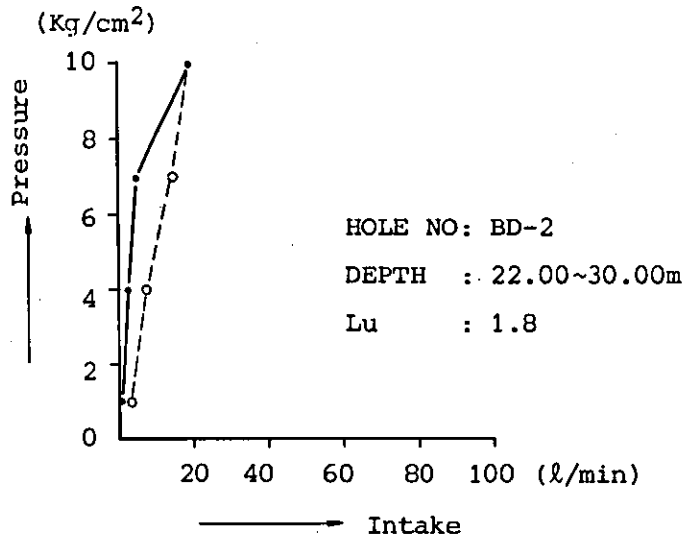
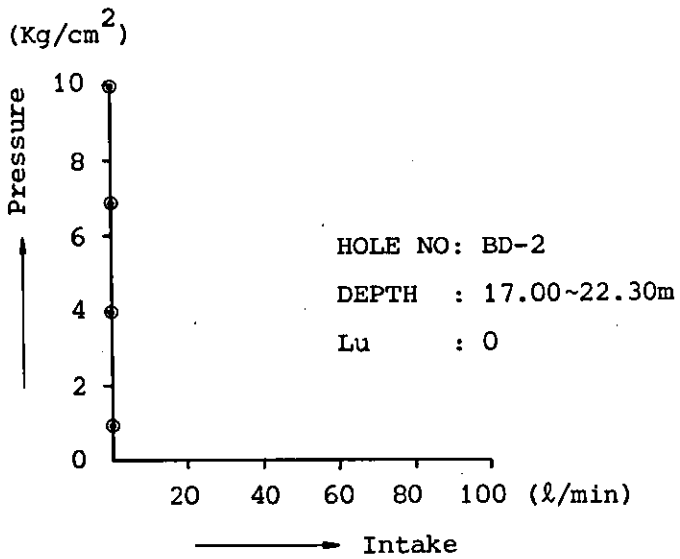


(Kg/cm<sup>2</sup>) BD-2

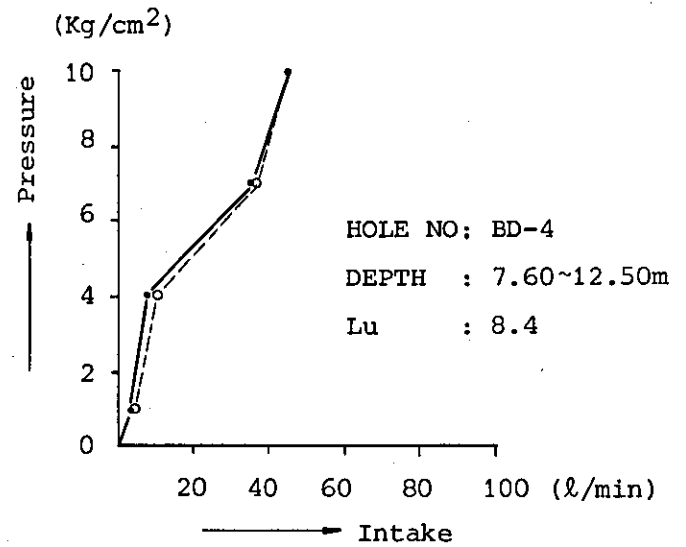
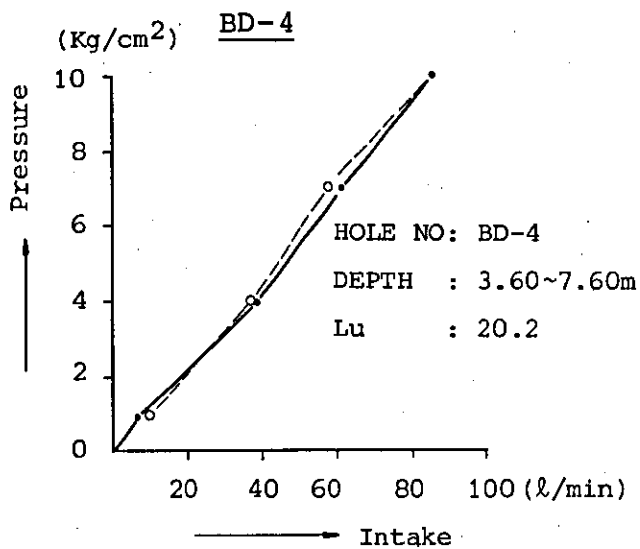
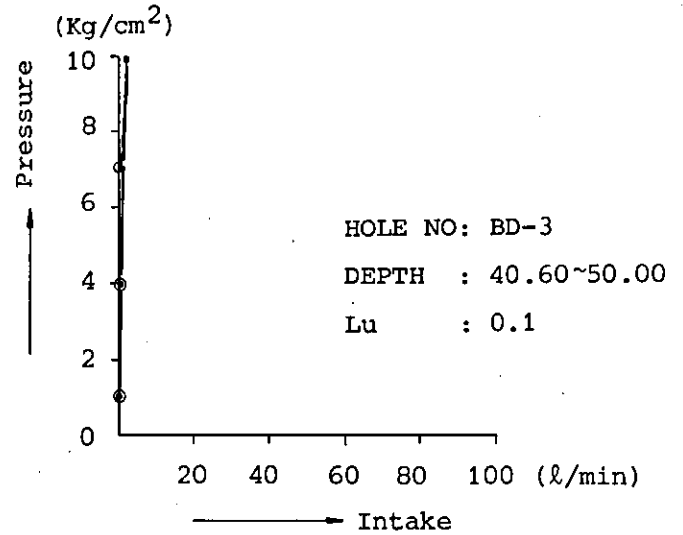
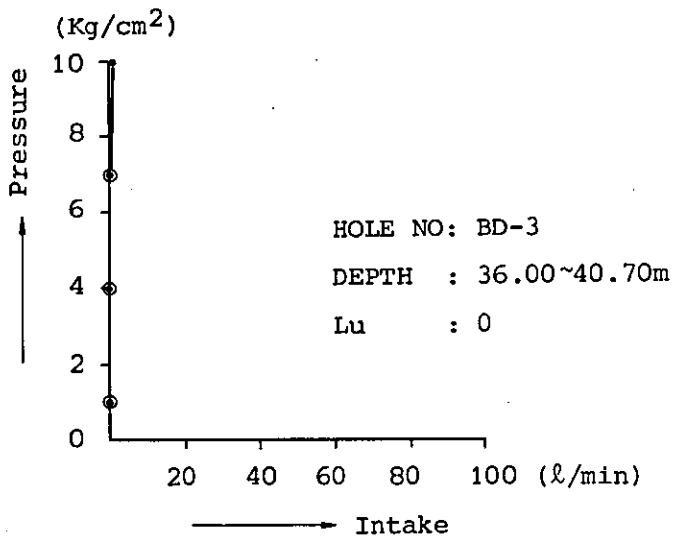
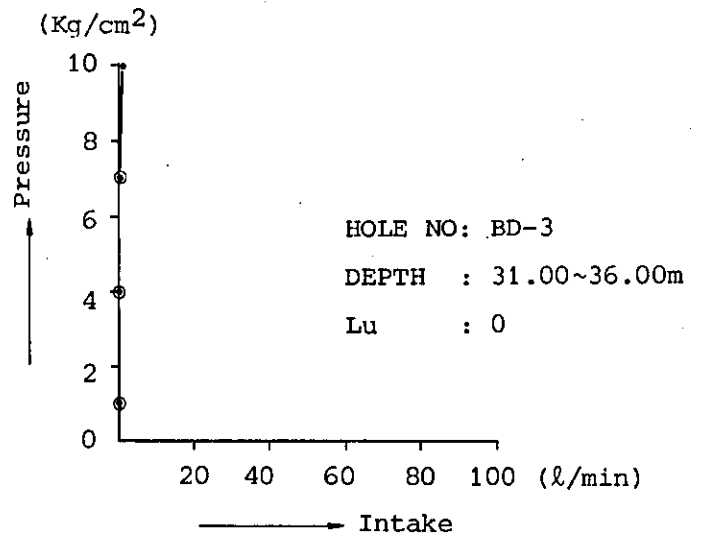
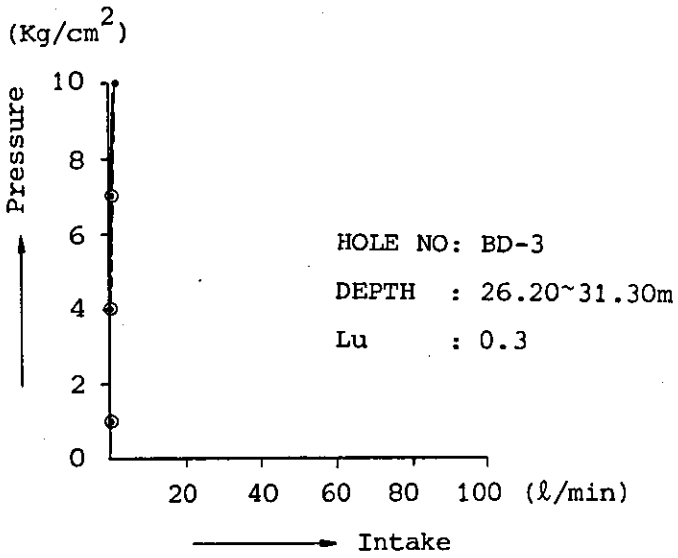


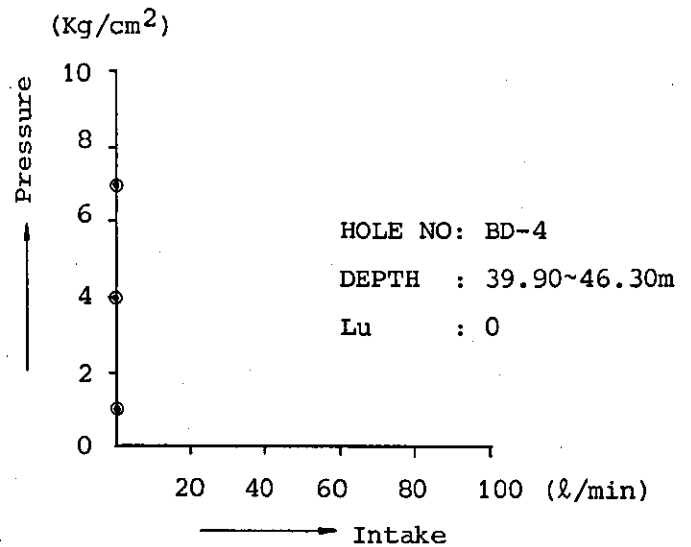
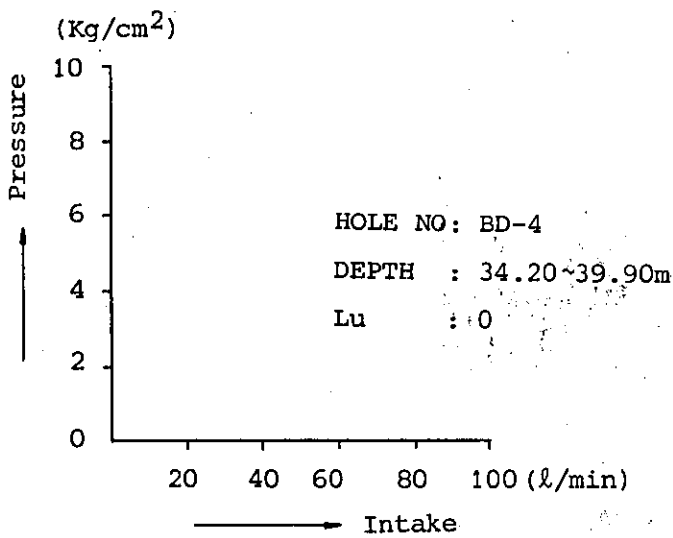
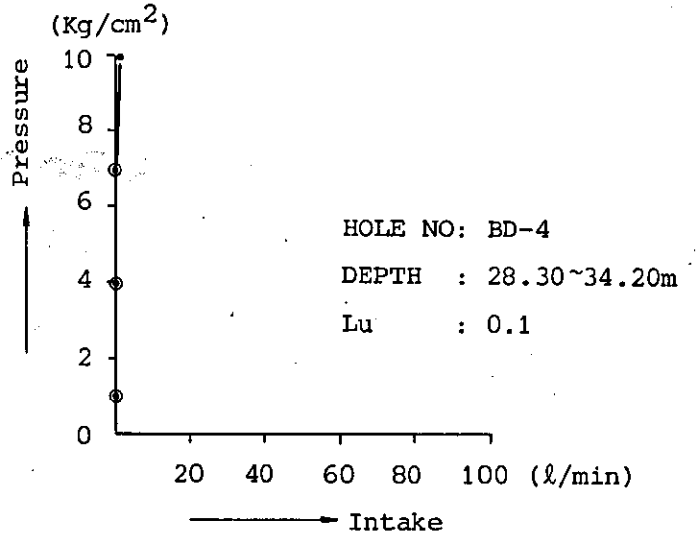
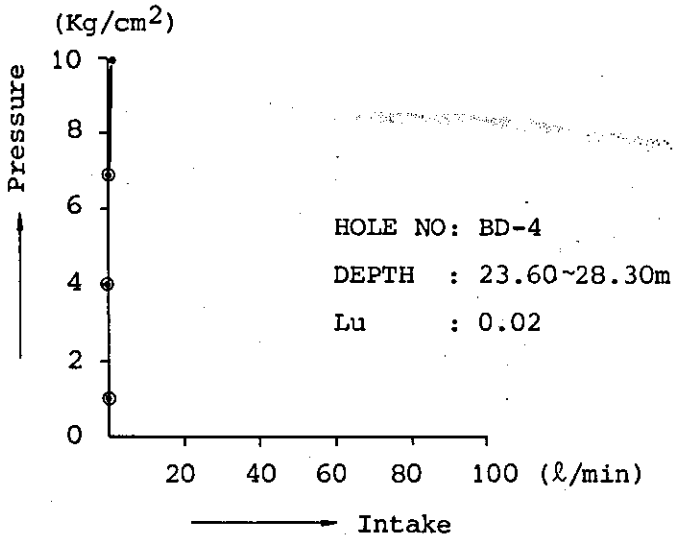
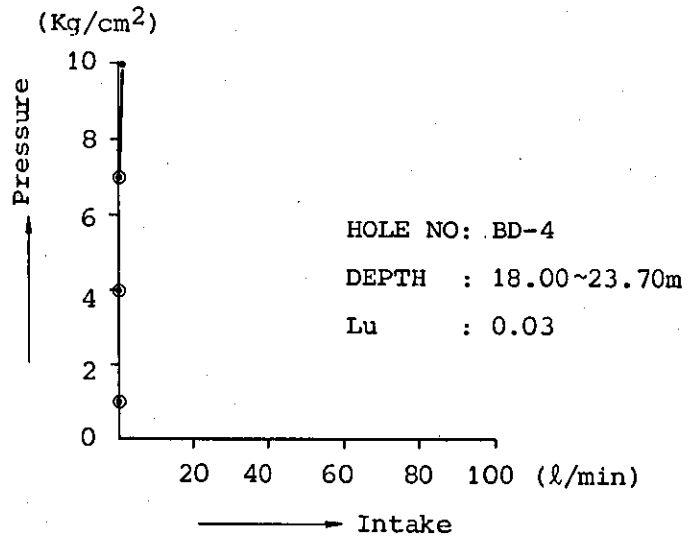
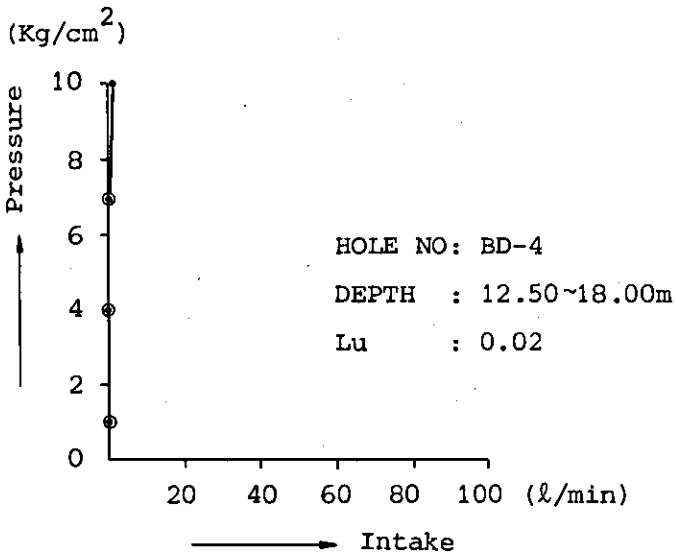
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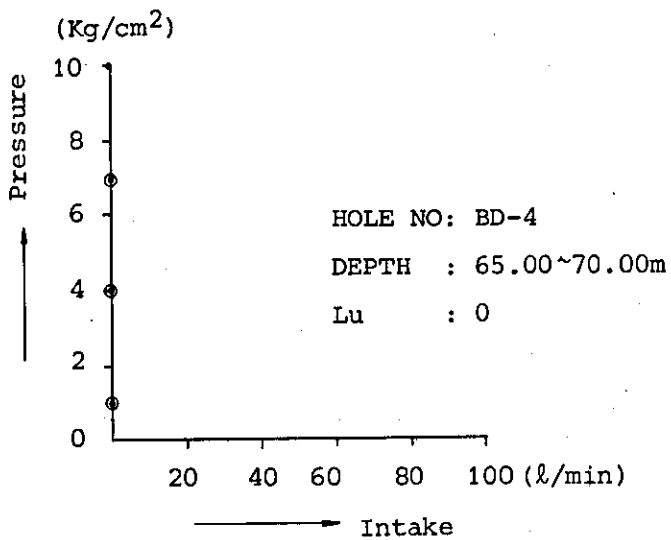
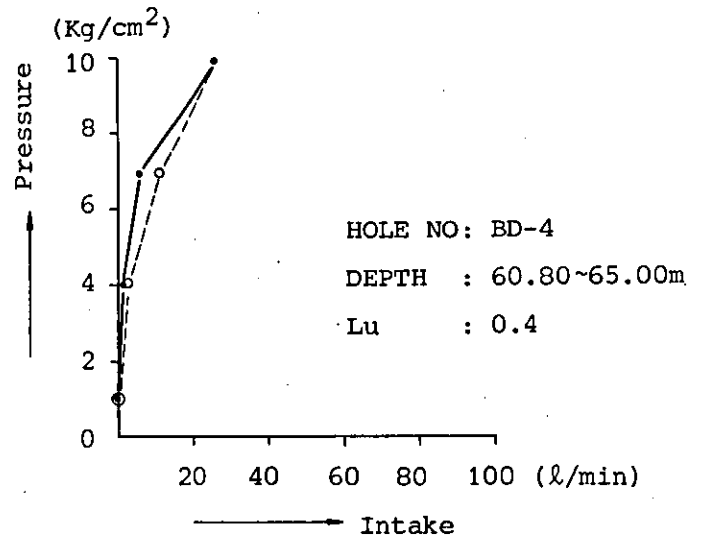
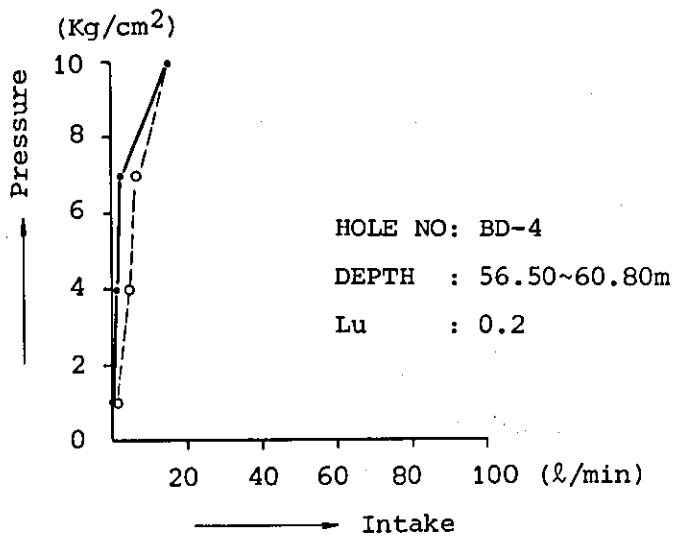
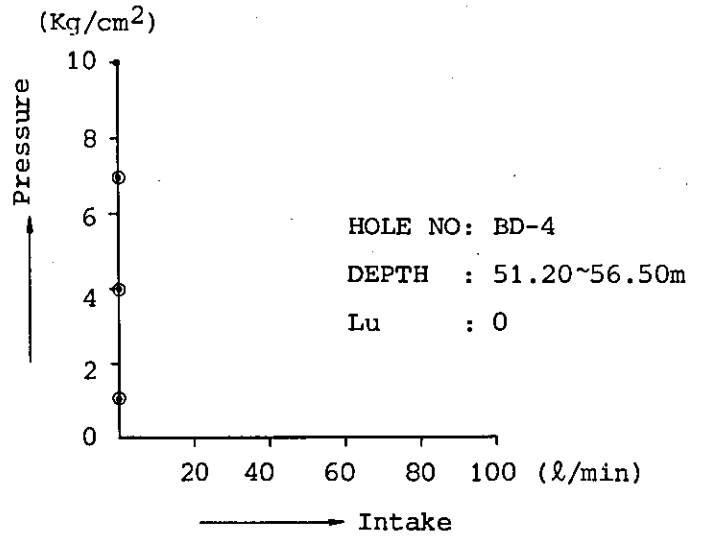
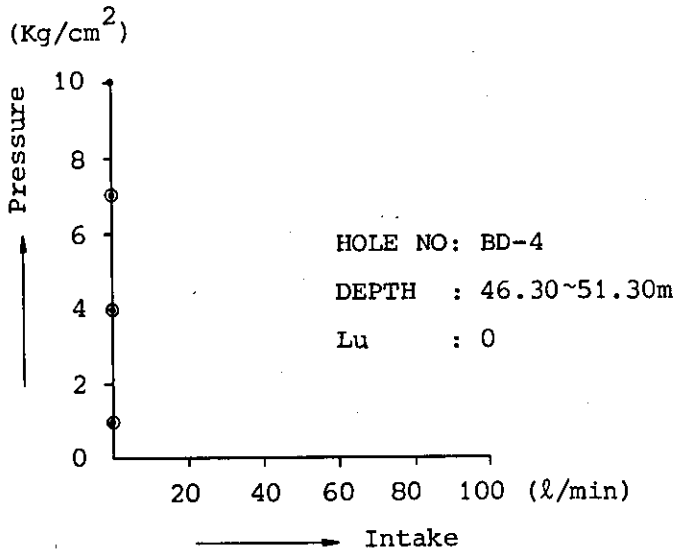


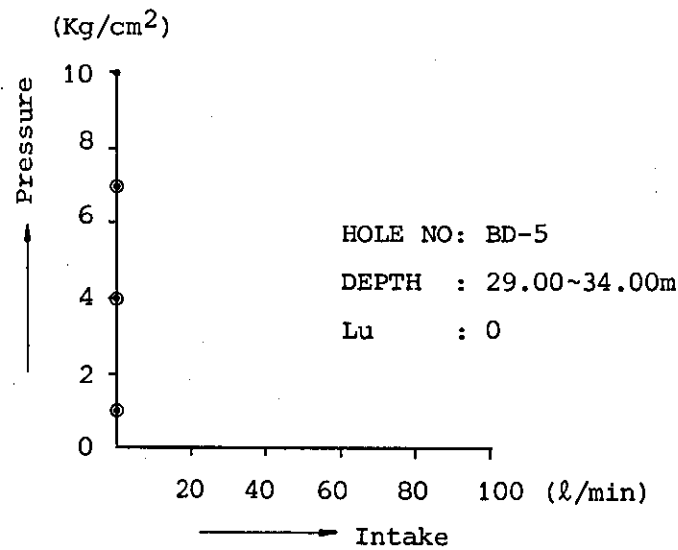
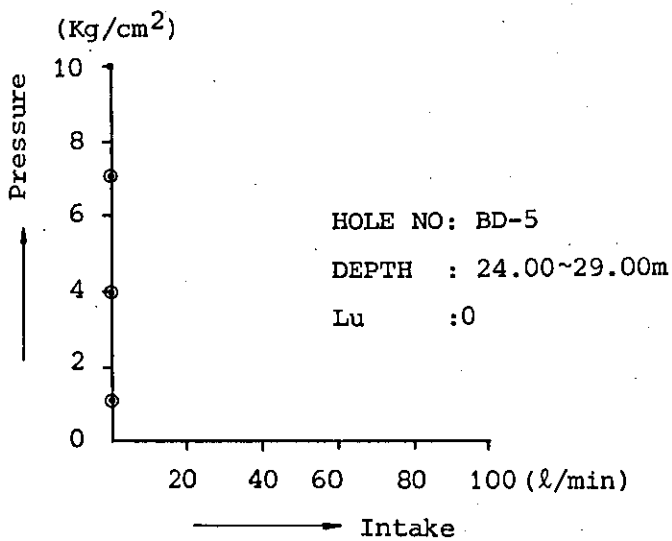
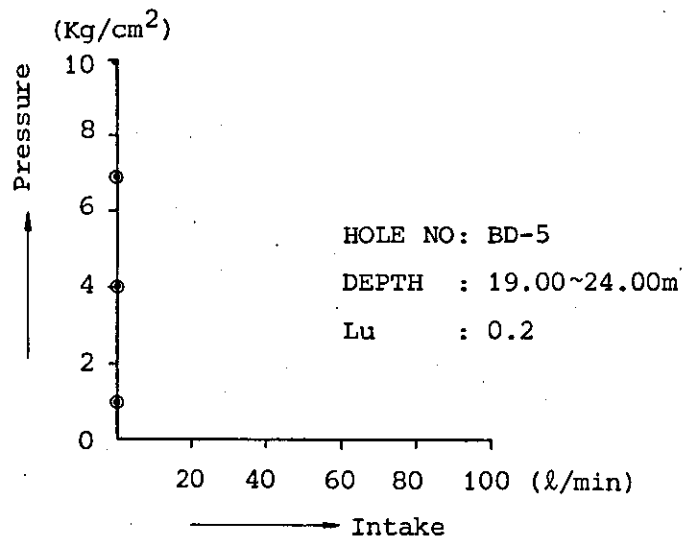
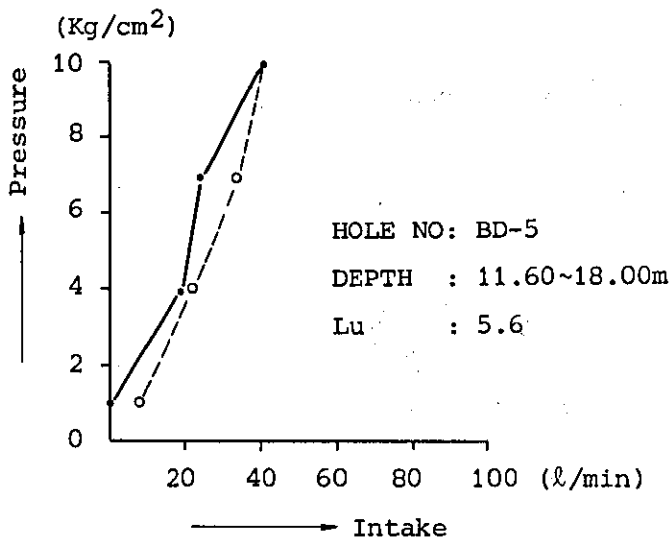
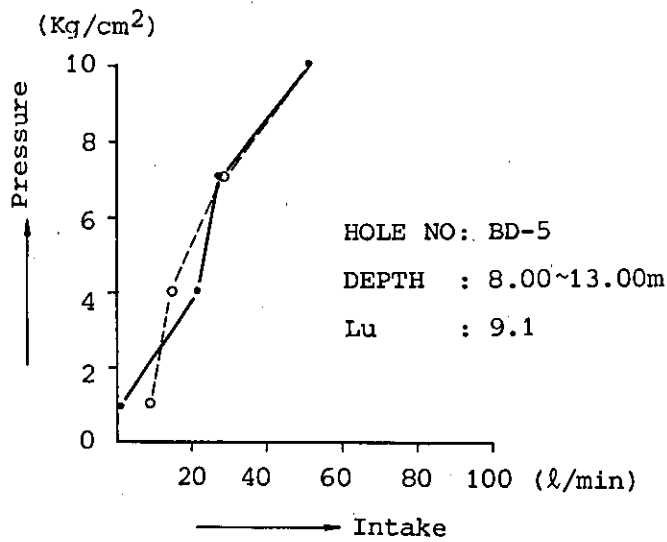
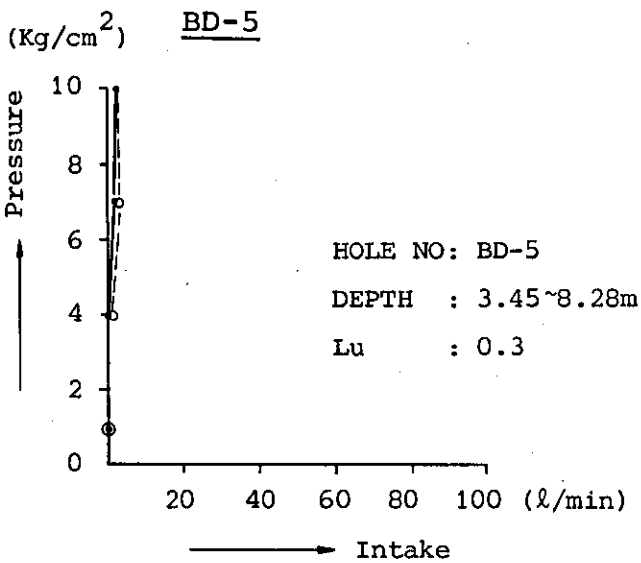


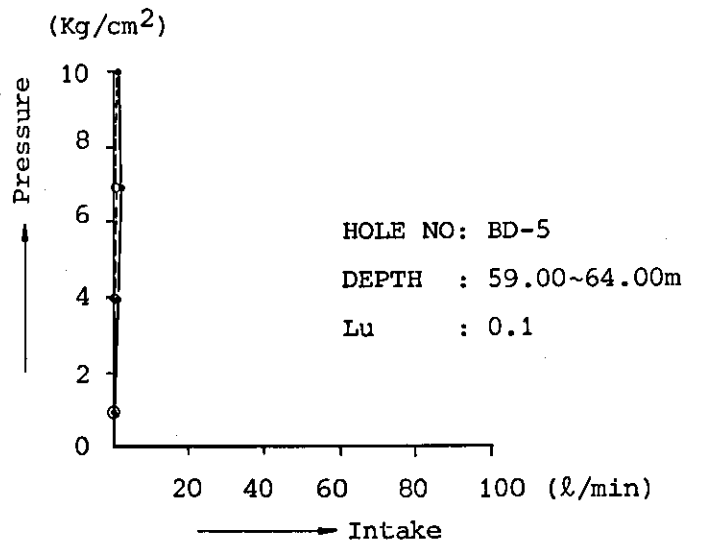
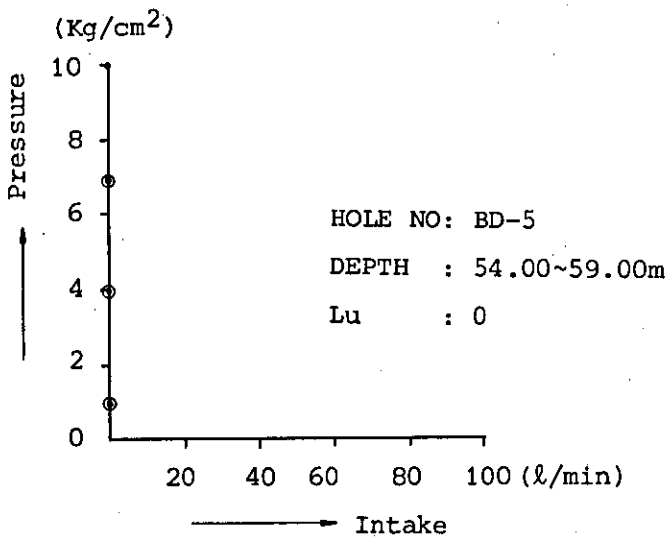
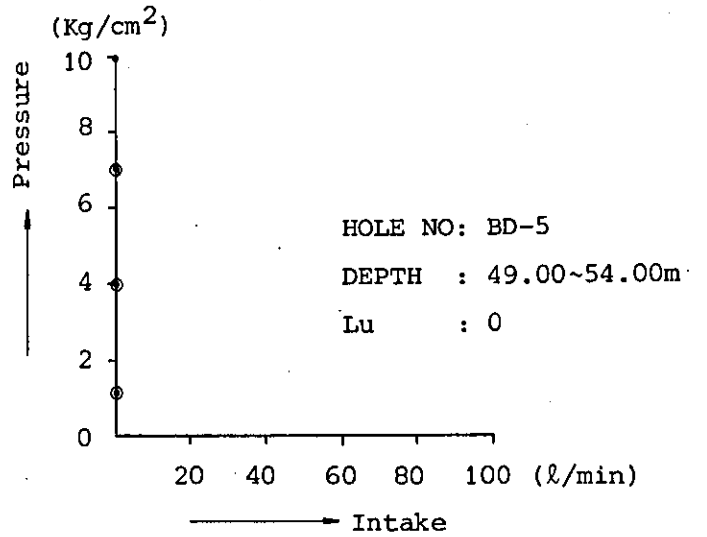
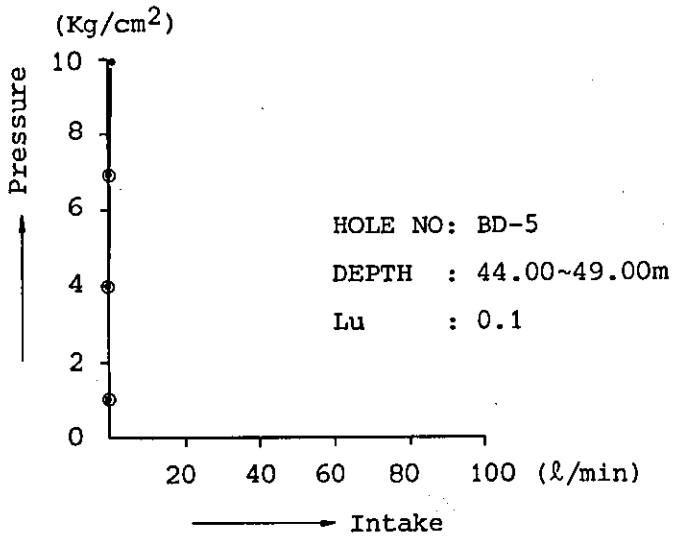
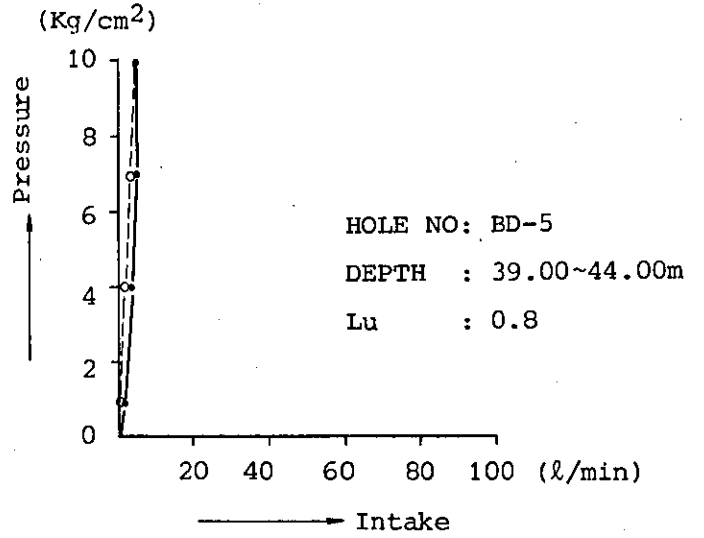
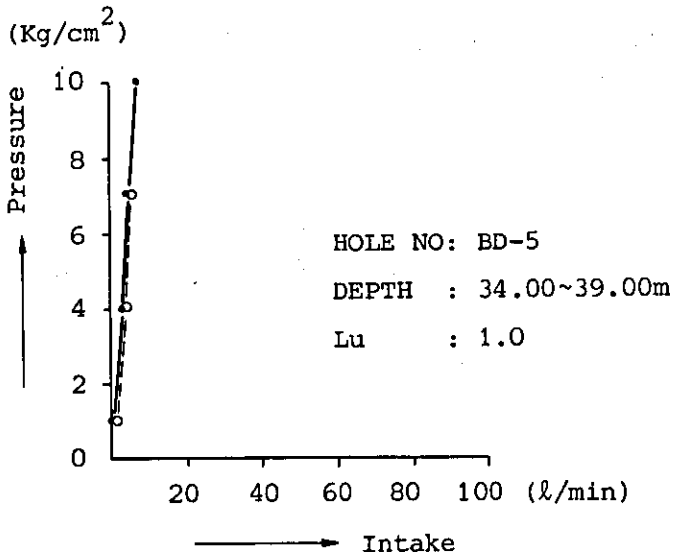


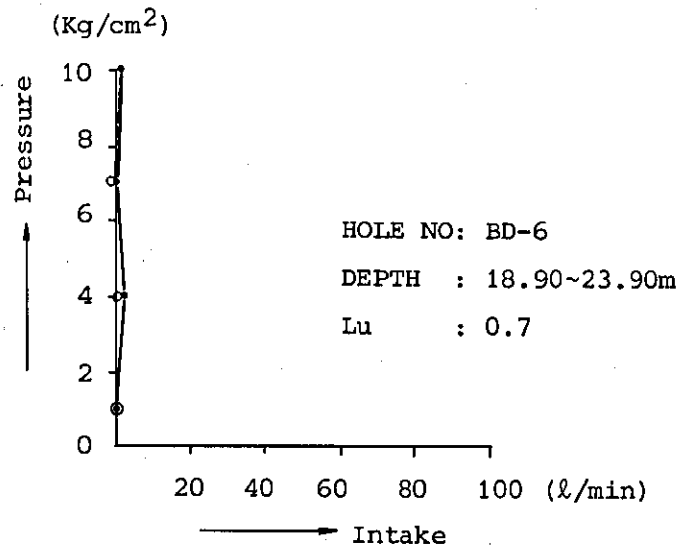
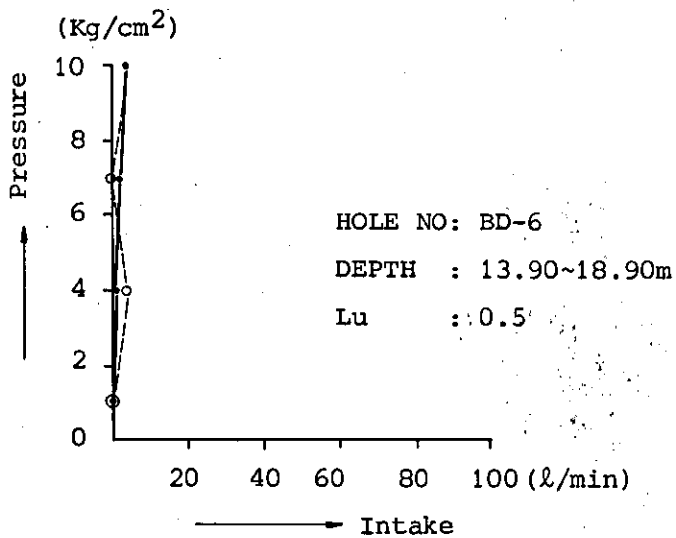
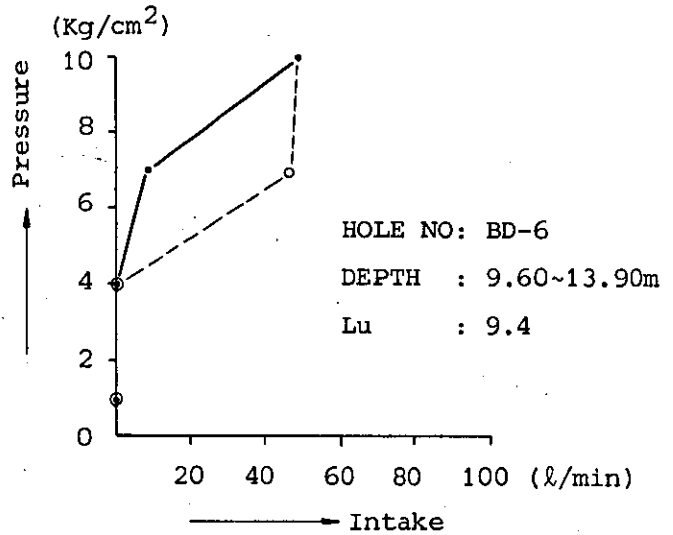
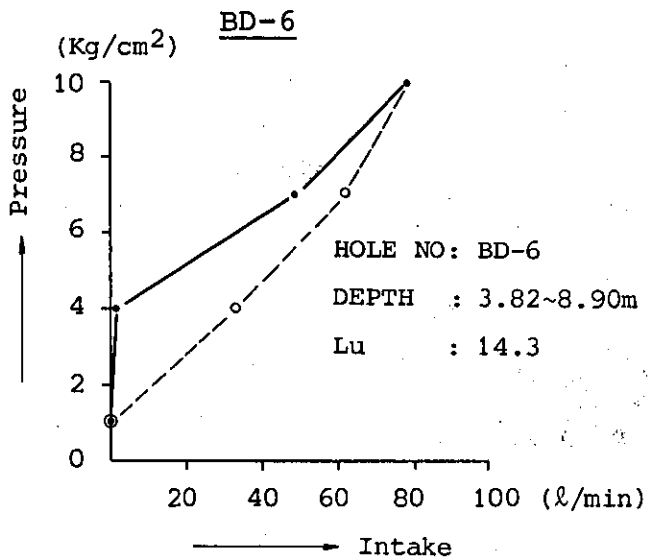
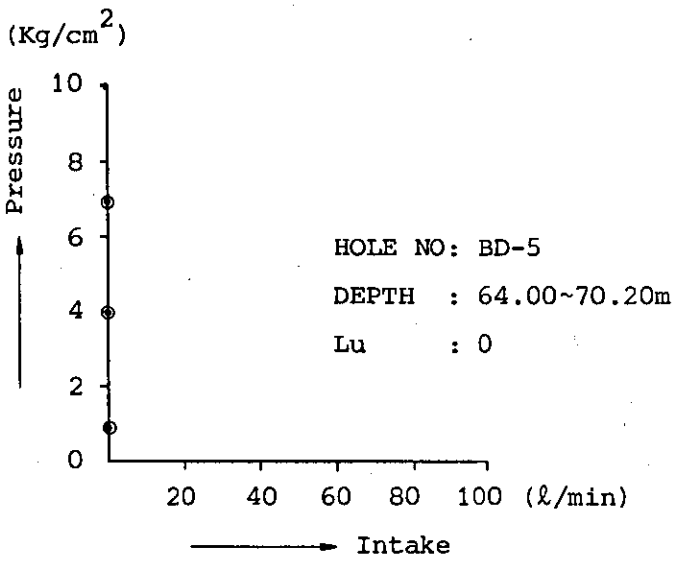


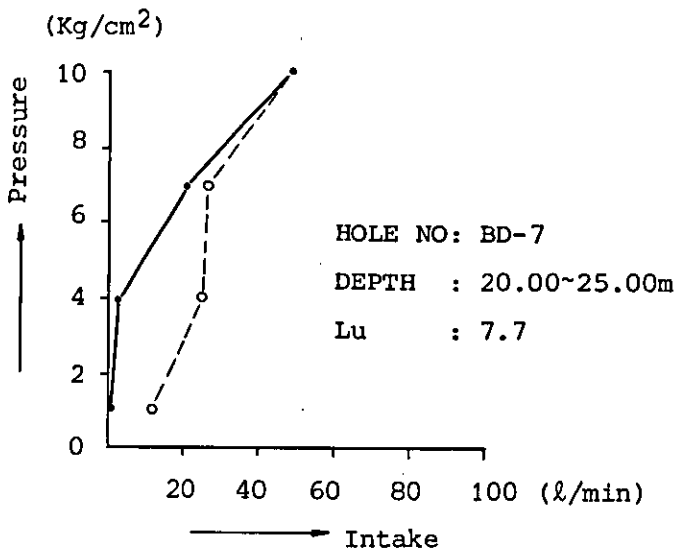
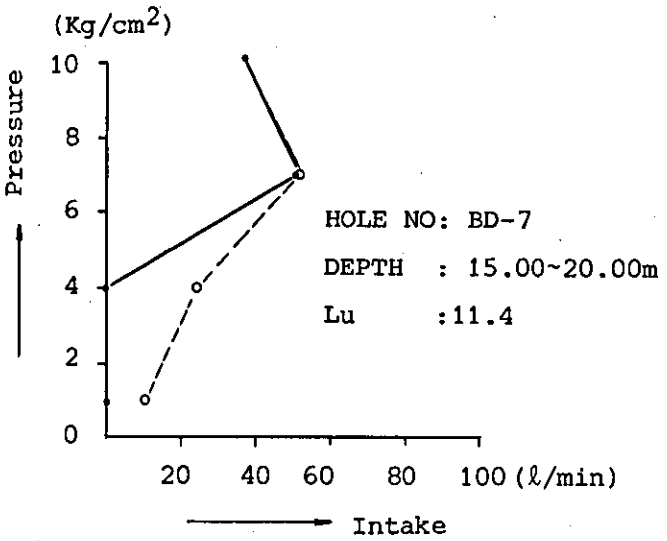
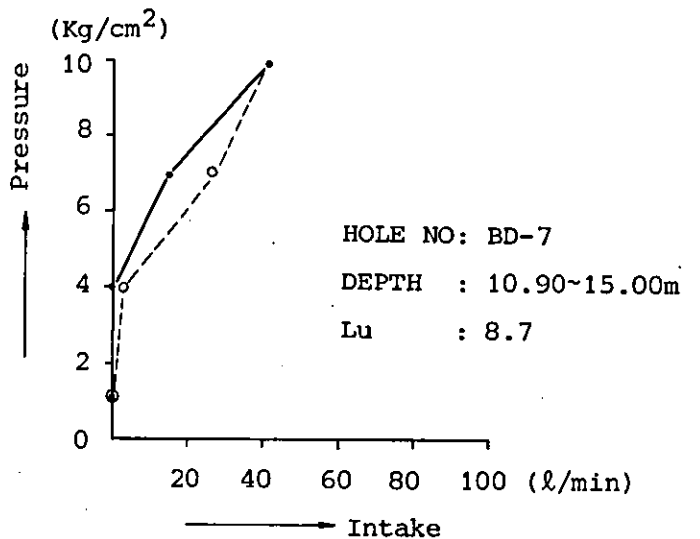
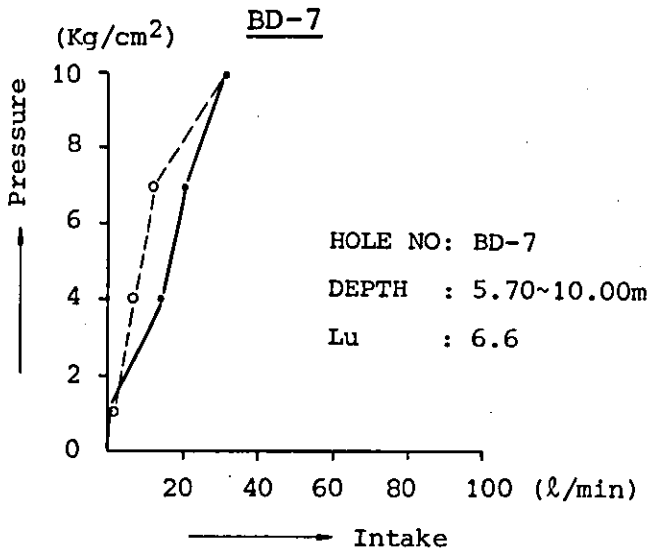
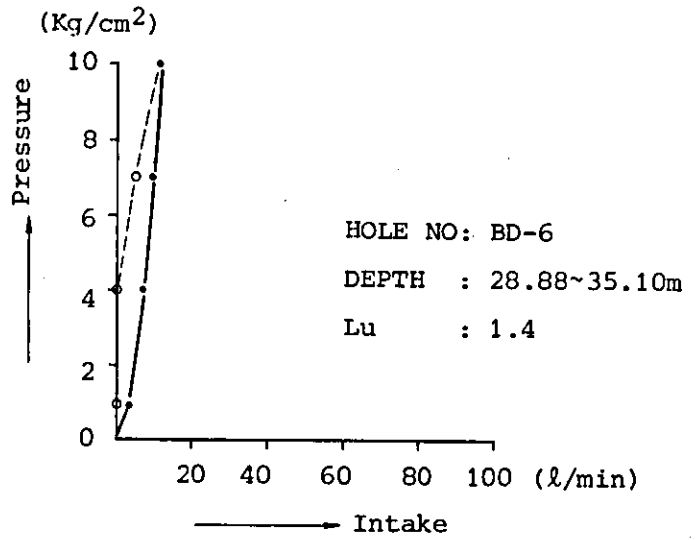
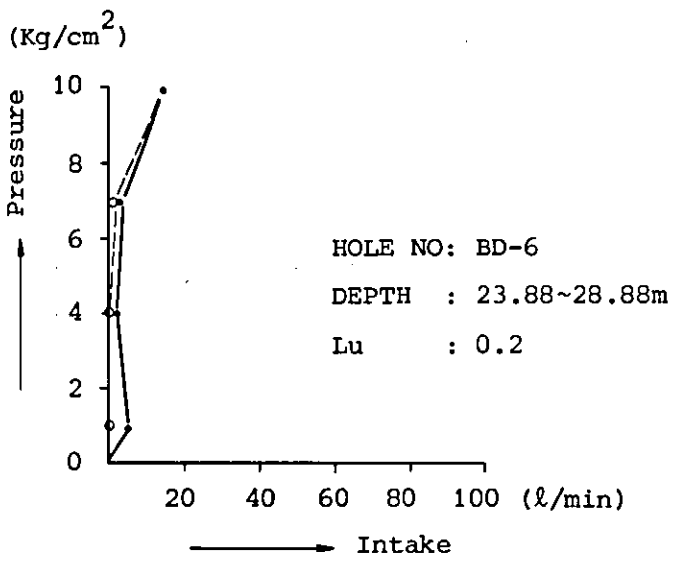


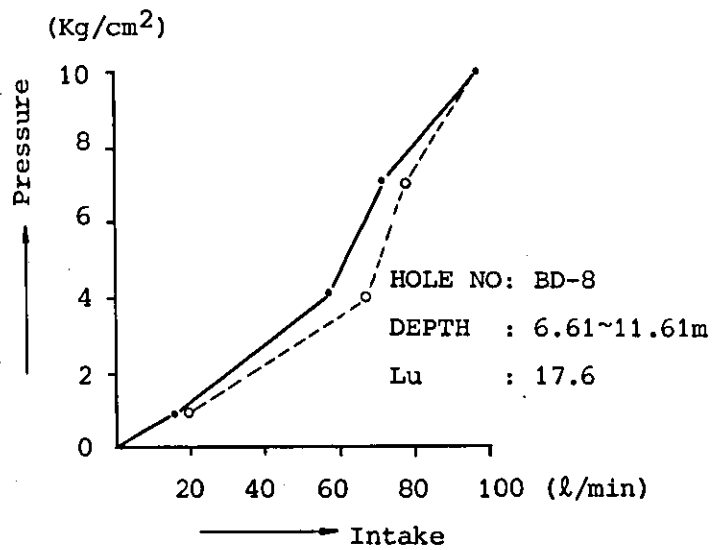
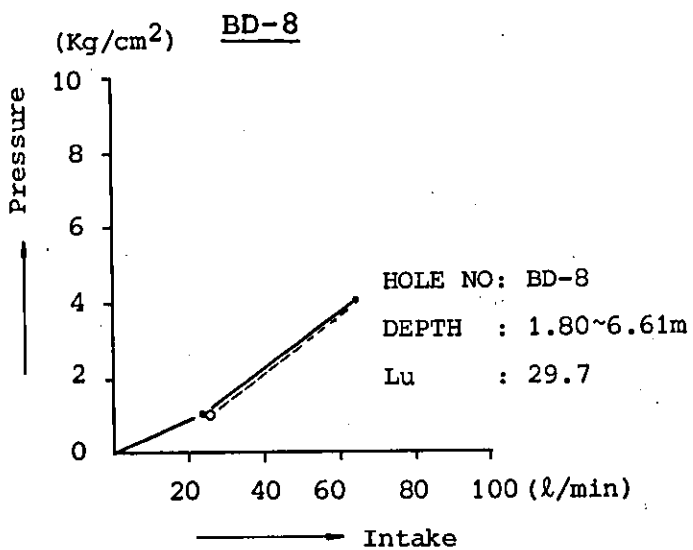
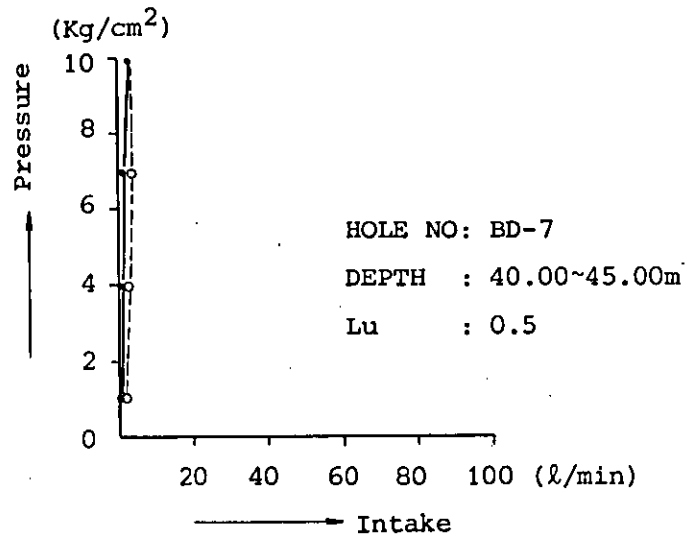
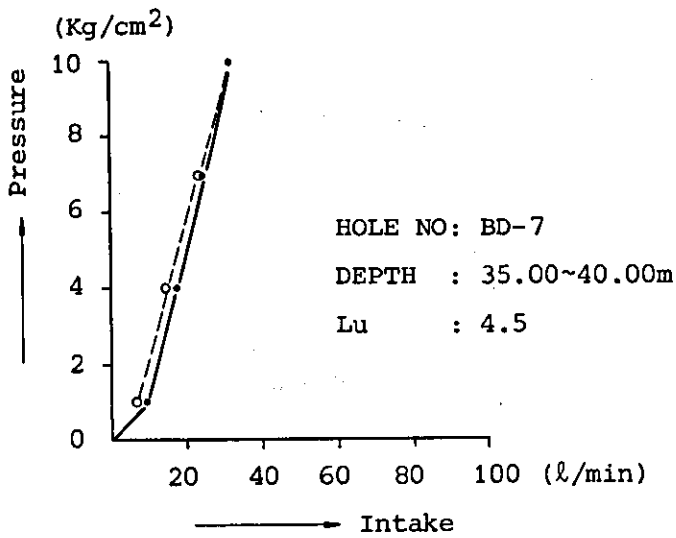
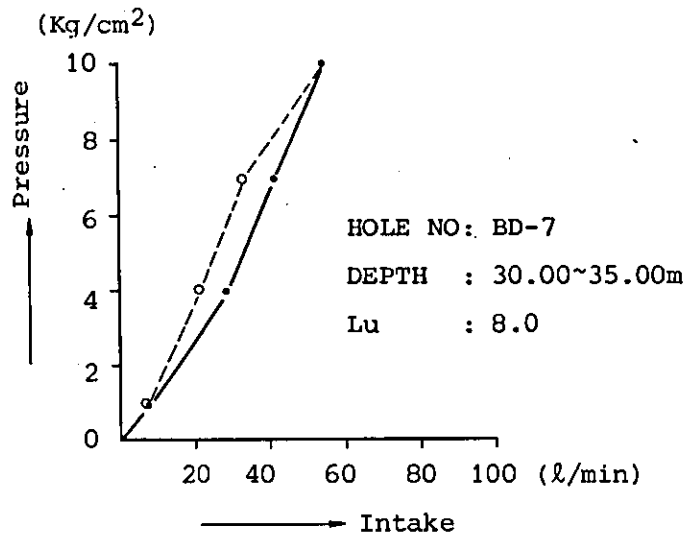
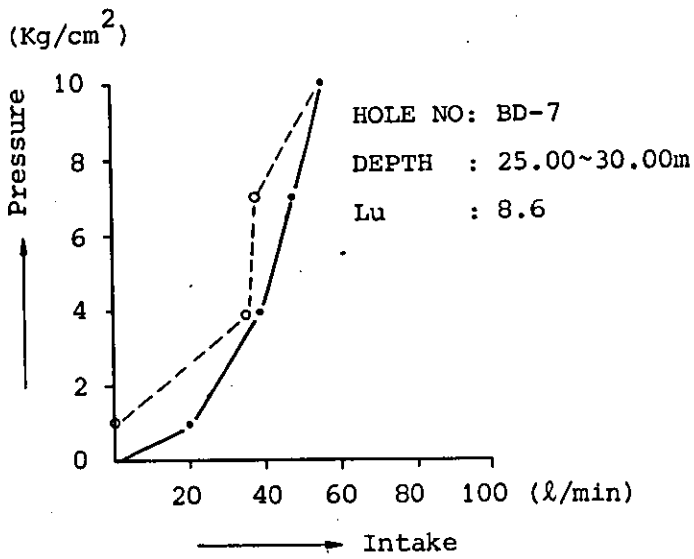




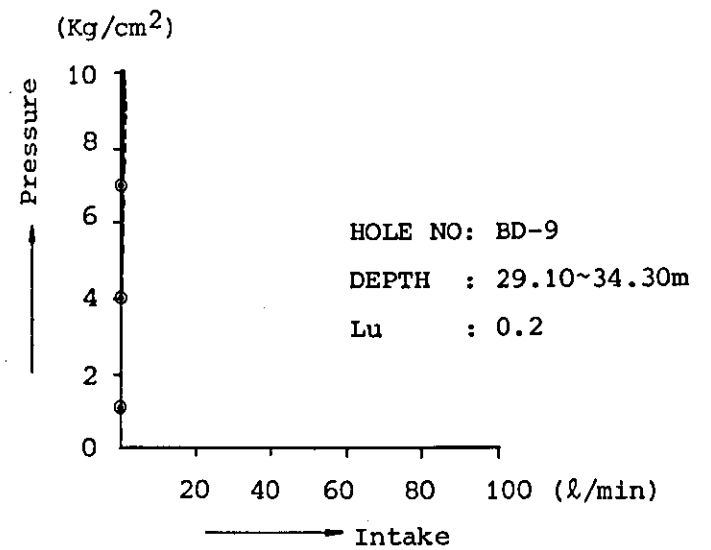
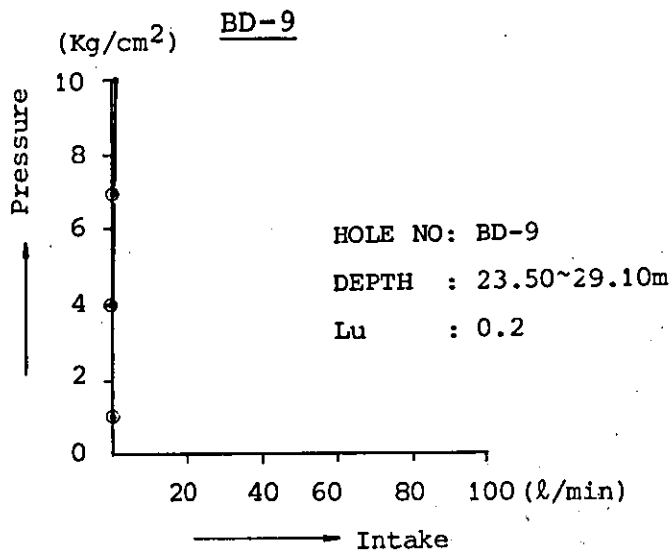
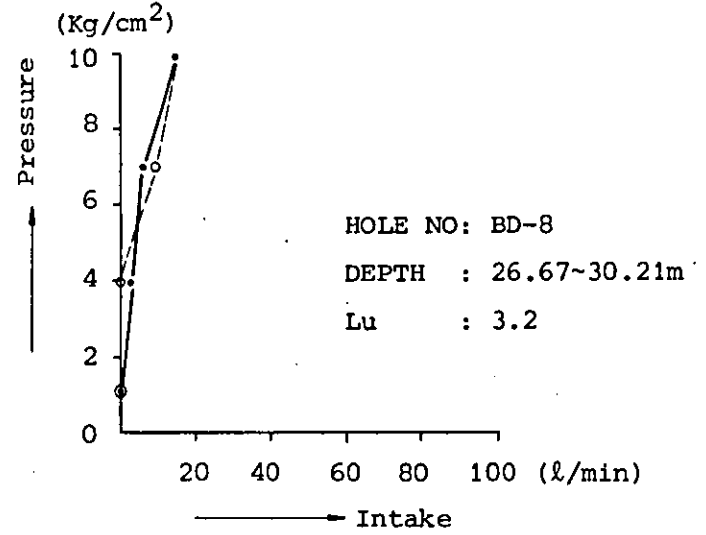
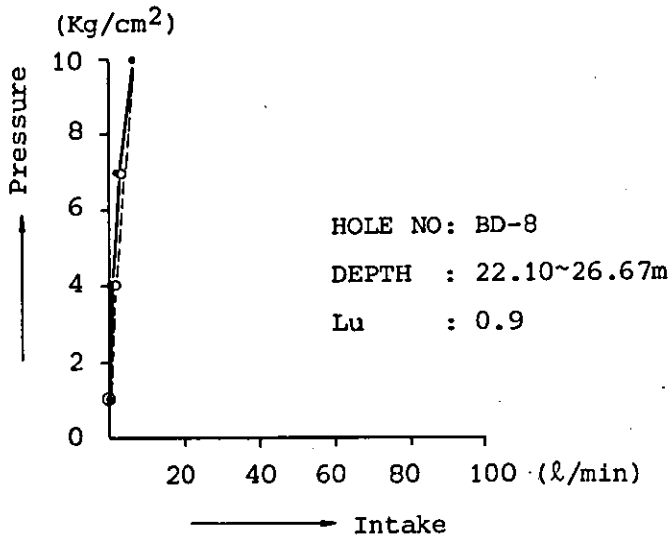
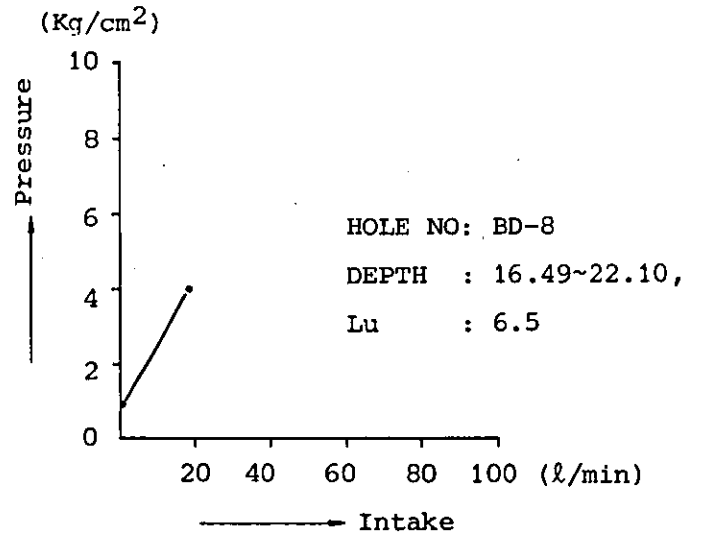
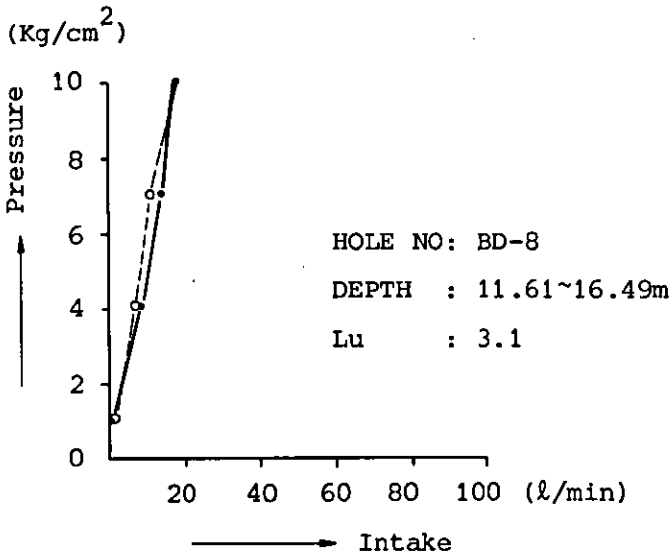


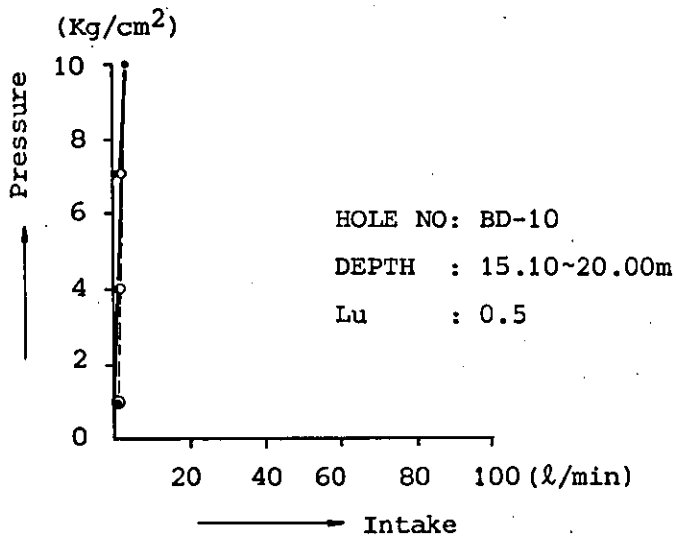
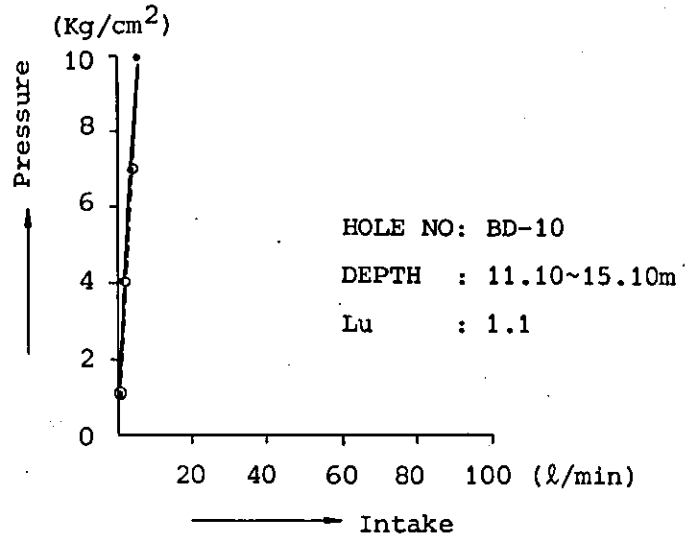
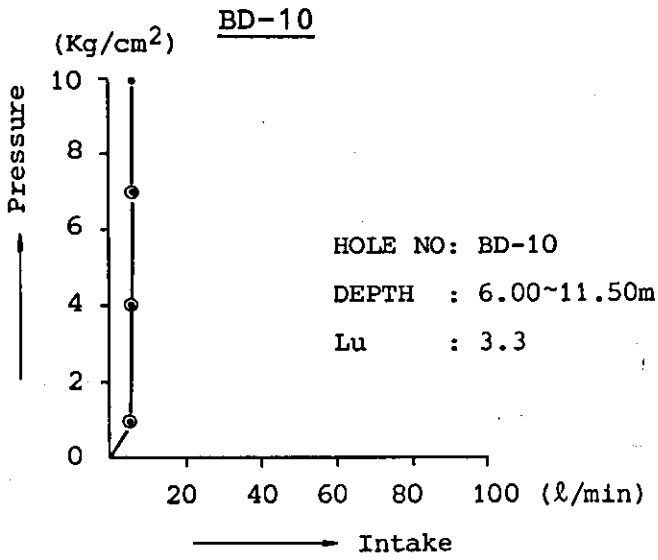
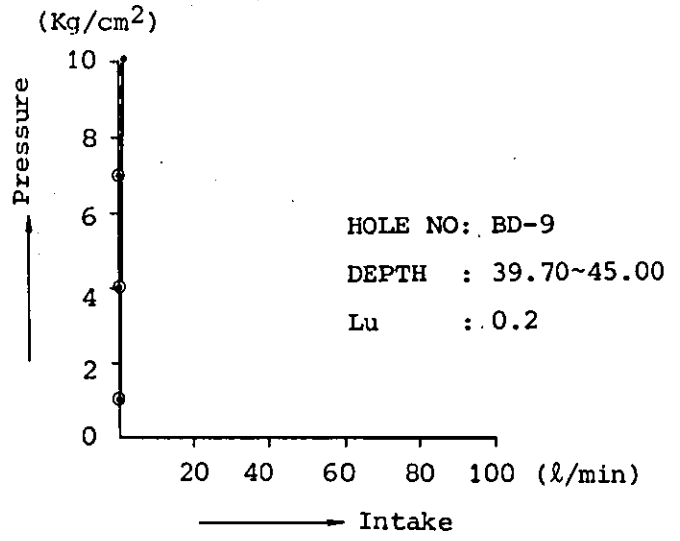
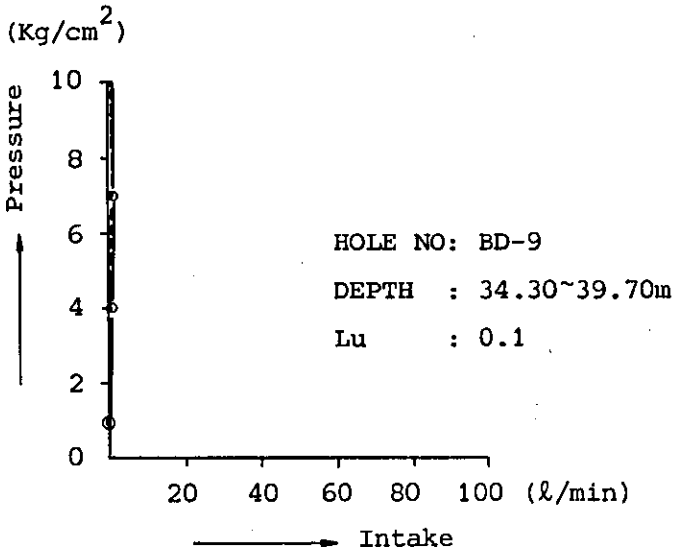


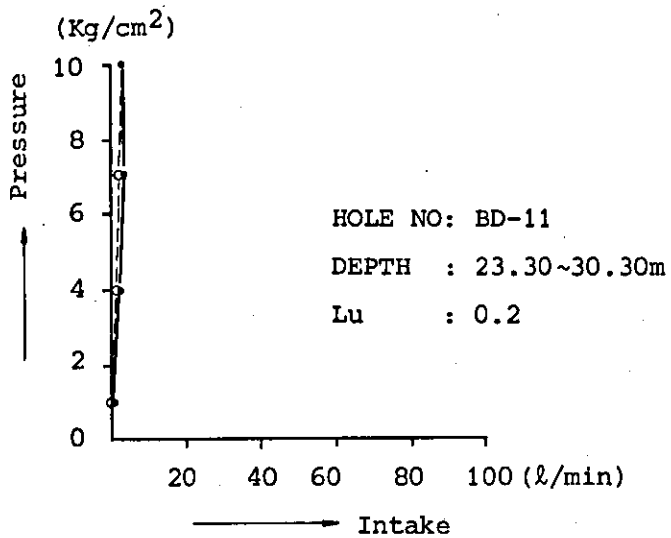
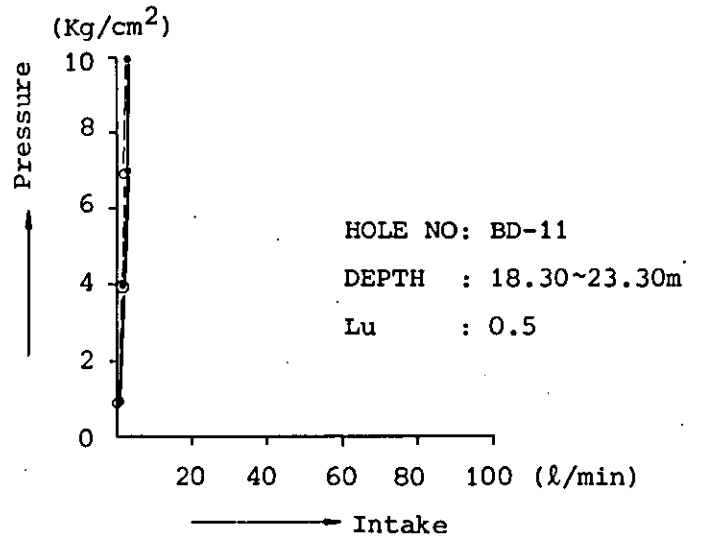
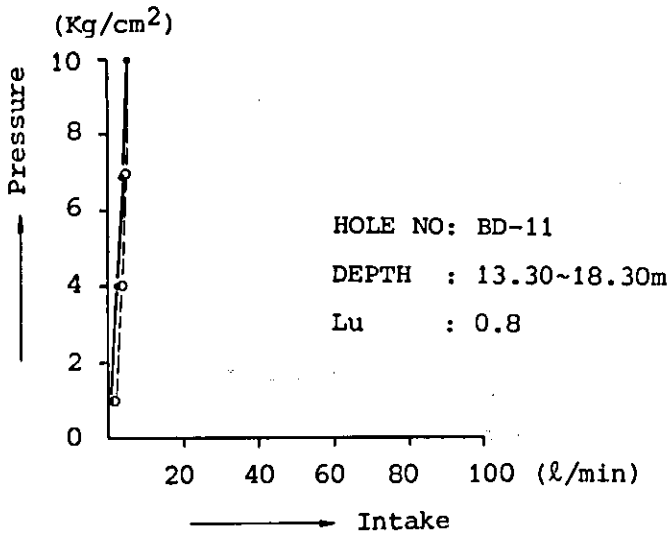
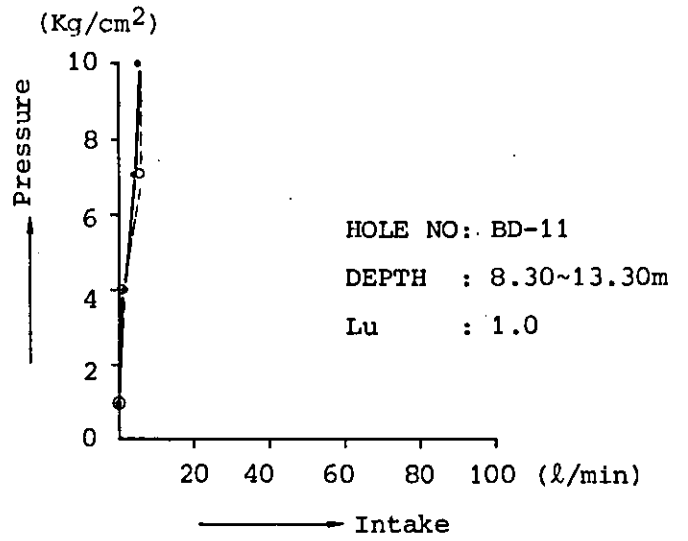
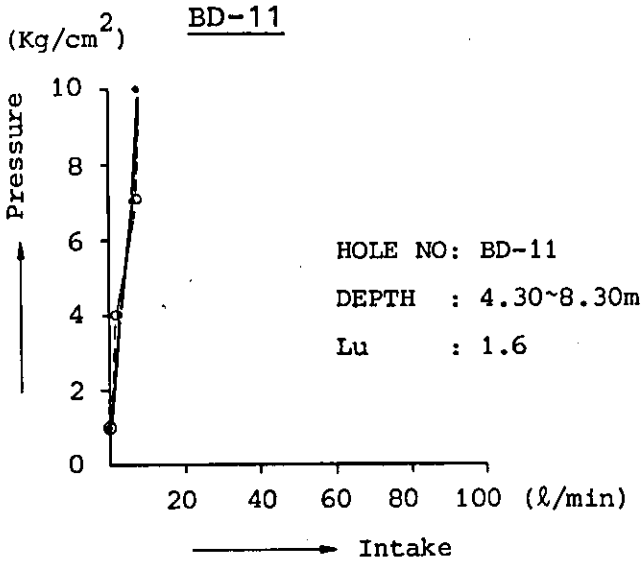


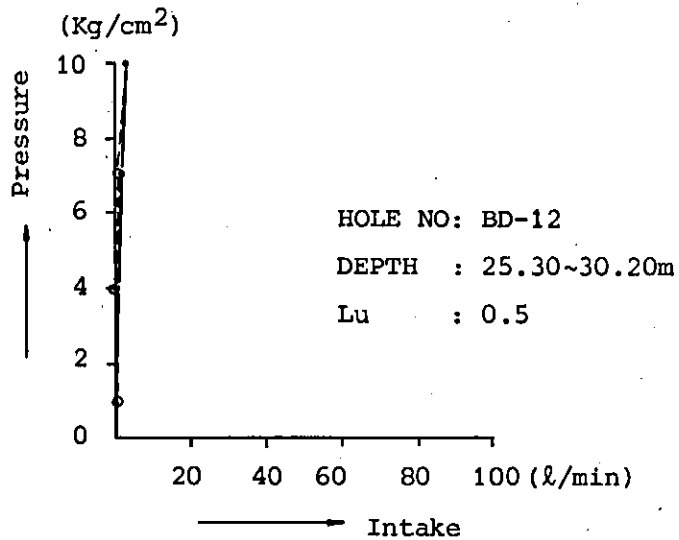
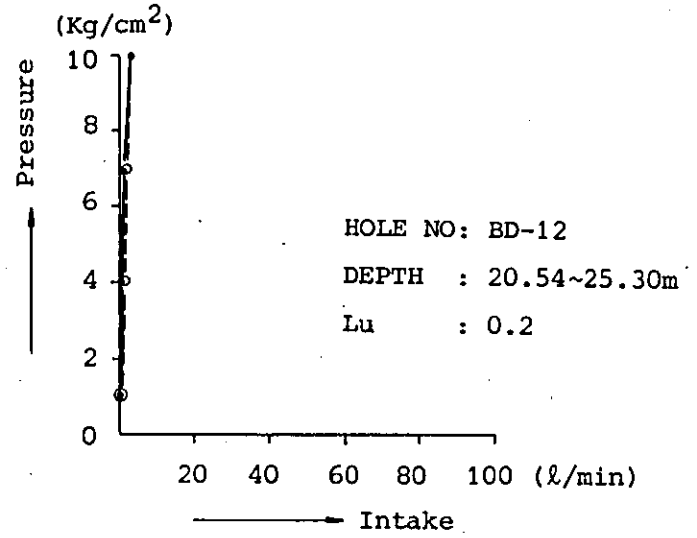
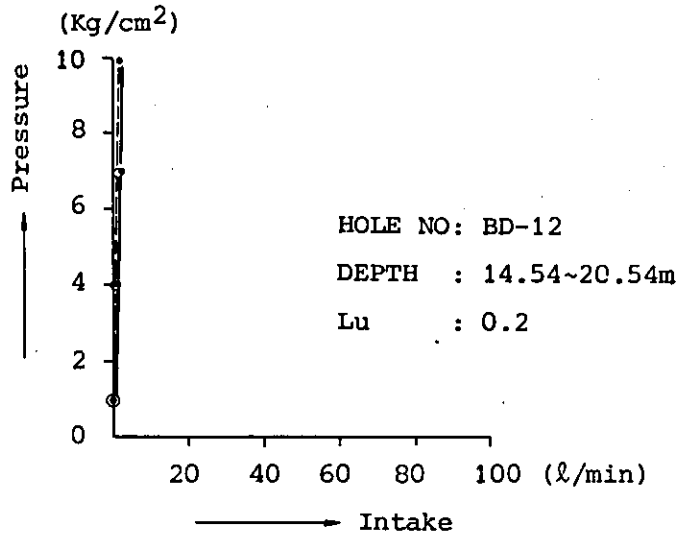
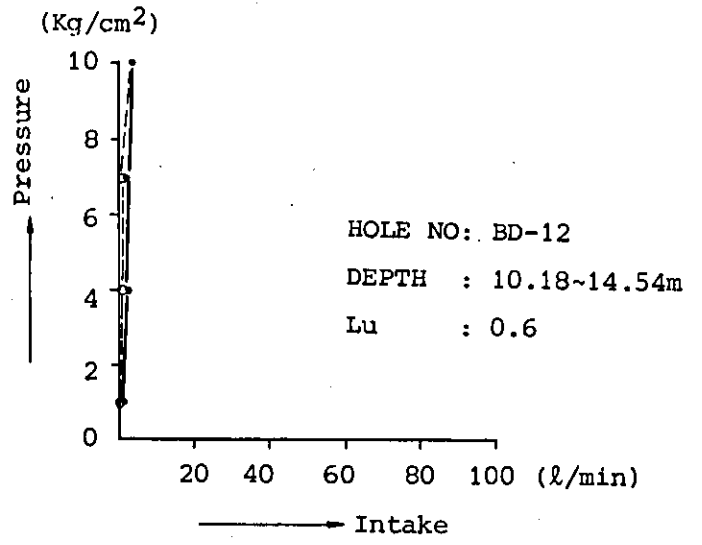
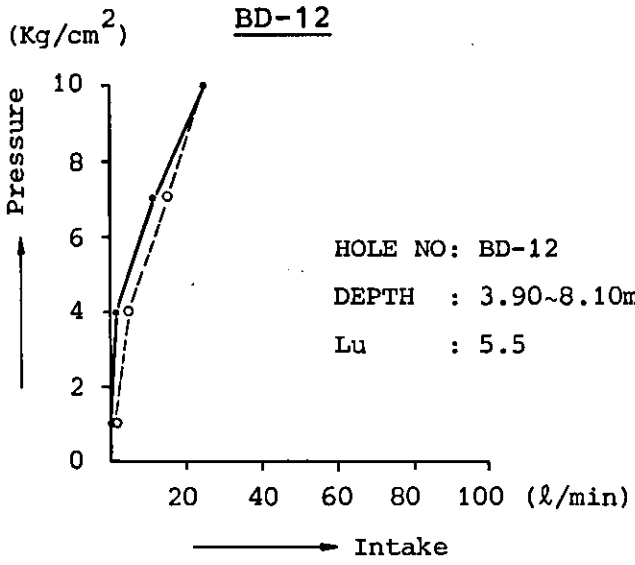




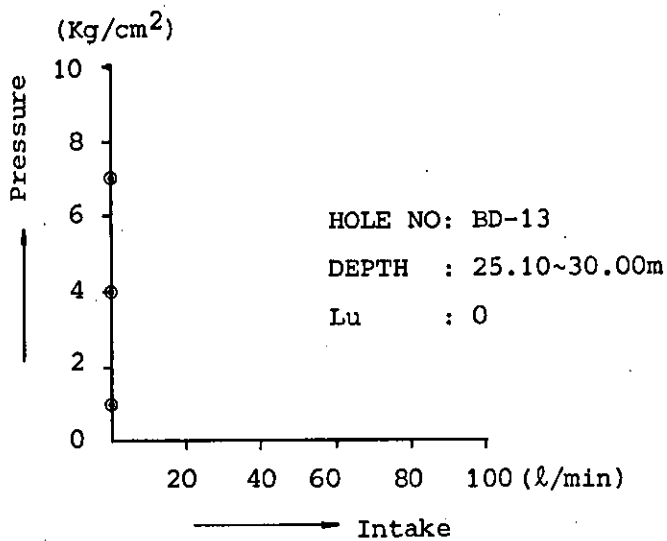
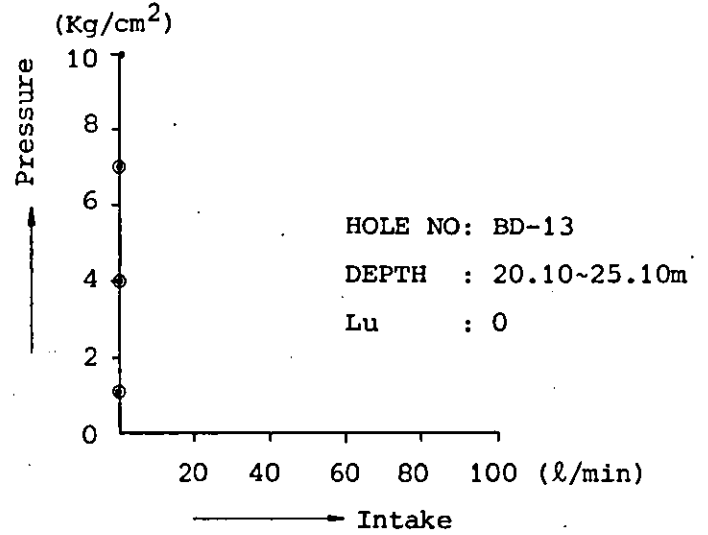
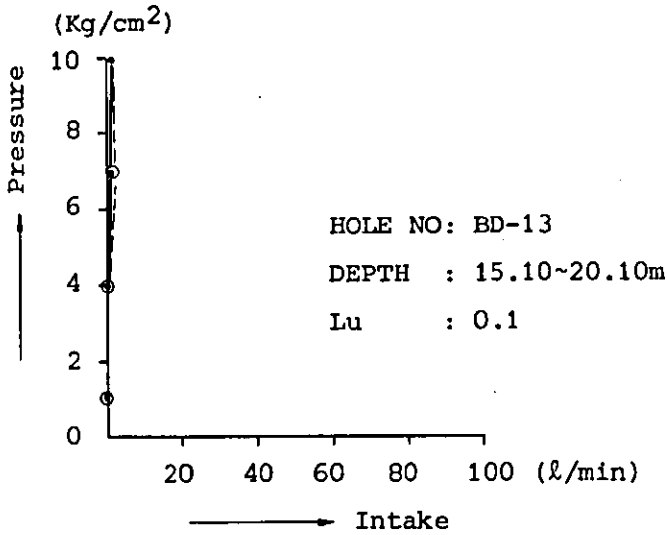
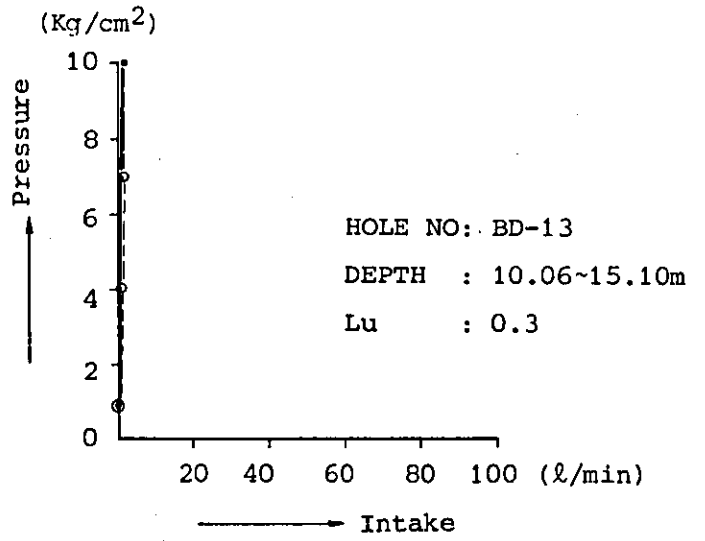
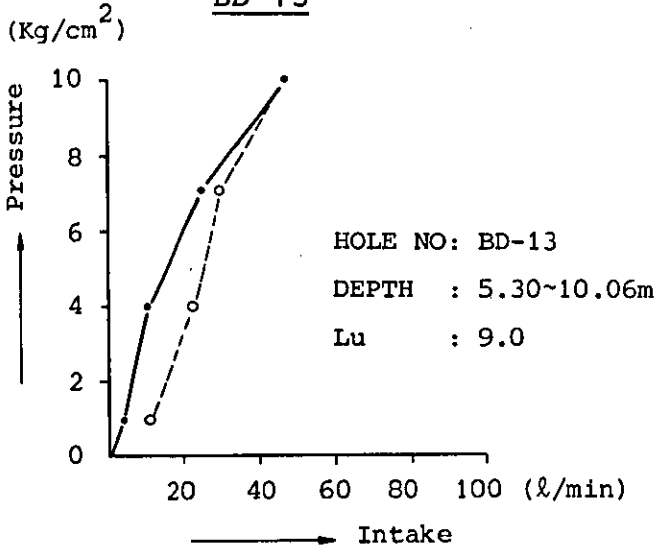


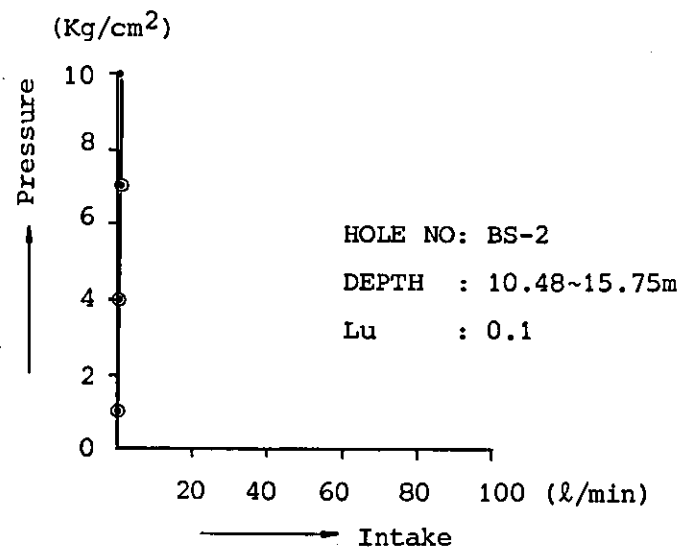
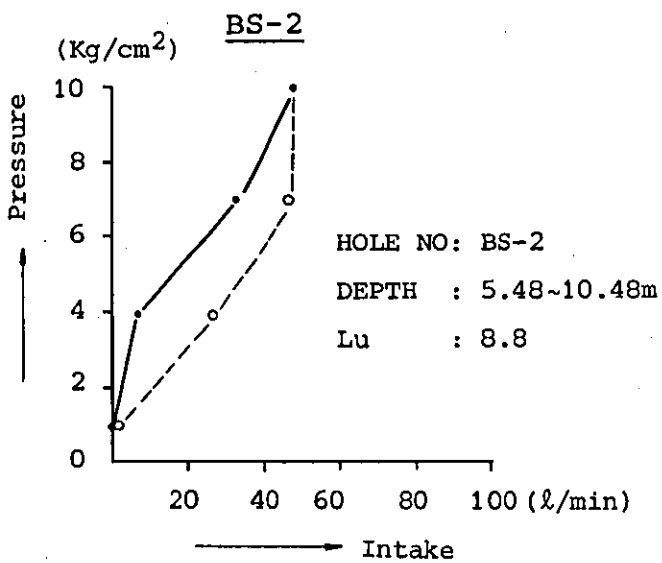
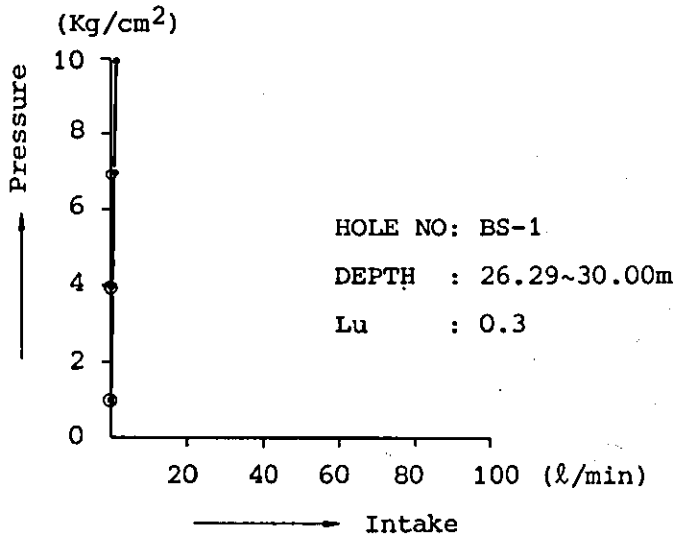
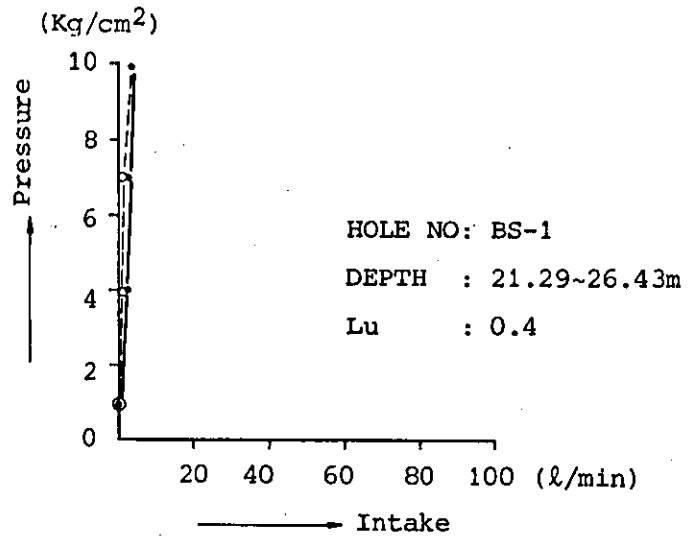
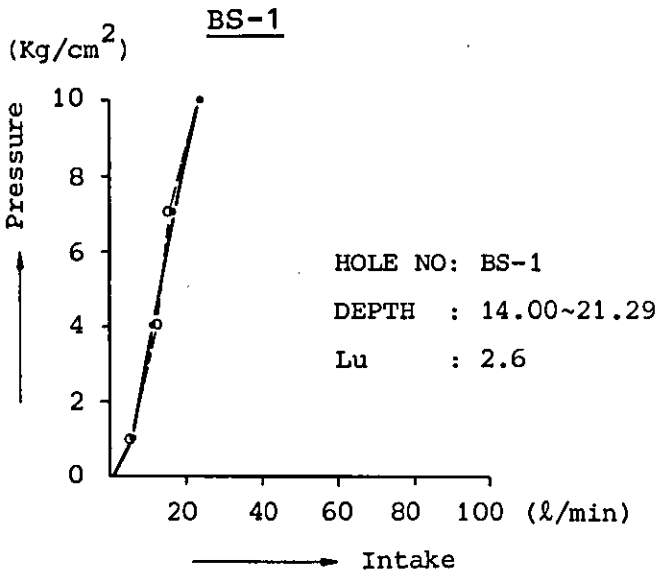




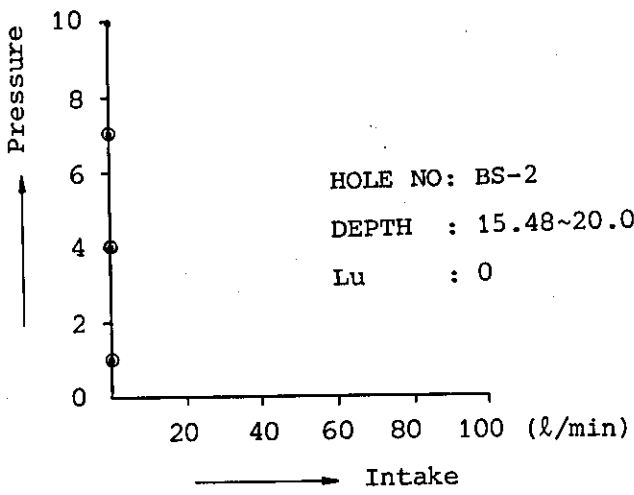


BD-13





(Kg/cm<sup>2</sup>)



**SEISMOLOGICAL RECORDS**



Layout of Historical file listing.

The sources of data for this file are:

1. 1904-1952. Gutenberg and Richter - "Seismicity of the Earth"
2. 1913-1963. International Seismological Summary (ISS).
3. 1935 Bureau Central International de Seismologie (BCIS).
4. 1950-1963 Nov 25. Bureau Central International de Seismologie (BCIS).
5. 1950-1963. L.R. Sykes catalogue of ridge events.
6. 1928-1960. United States Coast and Geodetic Survey.
7. 1964-1981. International Seismological Centre (ISC) prime estimates.
8. 1982-1983. Preliminary Determination of Epicentres from United States National Earthquake Information Service (NEIS).
9. 1983-now. Telex reports from NEIS and other sources

The file contained 307762 events, 331947 estimates on 1984 Jun 30.

This listing contains all estimates of the selected events.

Above each event the geographic region name for the first estimate is given. This is only intended as an approximate guide. Ref: Flinn, F.A. and Engdahl, P.J. 1965. A proposed basis for geographic and seismic regionalization. Rev. Geophys., Vol. 3, p113.

For each estimate the following items may be shown.

1. Time difference in minutes from previous estimate/event.
2. Distance in degrees from previous estimate/event.
3. (E) indicating that this is an epicentral estimate.
4. Agency code.
5. Route by which data was received.
  1. (B) - BCIS
  2. (I) - ISS/ISC
  3. (N) - NEIS
  4. (T) - Telex
6. UTC date and time of event
7. Latitude in degrees.
8. Longitude in degrees.
9. Depth normally in km.

Depth may be followed by one of the following alphabetic characters

  1. (D) - Depth in km based on identifications of pp phases.
  2. (G) - Depth in km held by Geophysicist
  3. (N) - Depth in km held as data is insensitive to depth determination
  4. (R) - Depth in earth radii
10. Magnitude.
  1. Magnitude Value.

2. Magnitude scale. Optional. Width 1

1. absent - unspecified
2. (B) - Body wave magnitude
3. (C) - Coda length magnitude
4. (D) - Duration magnitude
5. (L) - Local (Richter) magnitude
6. (N) - Magnitude from Lg phases (Nuttli)
7. (S) - Magnitude from surface waves

If the magnitude scale has been given the magnitude component may also be given.

1. (H) - Horizontal
2. (Z) - Vertical

3. Agency code for magnitude.

11. Distance in km. to specified position.

12. Normalised magnitude.

Body wave magnitudes and are converted into surface wave magnitudes using the formula derived by Kondorskaya (internal report of the International Seismological Centre.)

$$M_s = 2.119m_b - 5.826$$

where  $M_s$  = surface wave magnitude  
 $m_b$  = body wave magnitude

13. Intensity on the Modified Mercalli scale at specified position. using the formula quoted by Cornell (1968) Bulletin of the Seismological Society of America, (BSSA), Vol.58, p.1586.

$$i = 8.0 + 1.5m - 2.5 \ln r$$

where  $m$  = magnitude  
 $r$  = focal distance in km.  
 $\ln$  = natural logarithm

14. Peak horizontal acceleration in cms/sec/sec (ah). Using the formula given by Trifunac and Brady (1975) BSSA, Vol.65, p147

$$\log a_h = 0.014 + 0.30 i$$

This is based on data from the western United States and intensities in the range 4 to 10.

15. A variety of comments relating to the estimate including ..

1. Number of stations associated with this estimate.
2. Intensity data. If a maximum intensity value is given then the Felt/Damage flags are not normally present.
  1. (Damage) - Damage reported
  2. (Felt) - Felt report(s)
3. ((number)(scale)) maximum intensity where (number) is a one or two digit number between 0 and 12 inclusive. (scale) is
  1. absent - unspecified
  2. (CS) - Mercalli - Cancani - Seberg
  3. (J) - Japanese Meteorological Agency
  4. (M) - Mercalli
  5. (MM) - Modified Mercalli
  6. (RF) - Rossi - Forel

7. (SK) - Medevet - Sponheur - Karnik

Some GUTÉ records give accuracy indicators. These are printed below the time, longitude and depth and indicate the accuracy of epicentre, origin time and depth.

	Probable limits of error		
	epicentre in degrees	origin time in seconds	depth in km.
A, very accurate	1	5	30
B, good	2	8	50
C, fair	3	12	80
D, poor	-	-	-

Reference: Gutenberg and Richter. 1954. Seismicity of the Earth, page 11.

Agency codes used are:

BCIS Bureau Central International de Seismologie, Strasbourg, France.  
BUL Bulawayo, Zimbabwe.  
CGS U.S. Coast and Geodetic Survey, USA  
CRT Cartuja, Spain  
ESK Eskdalemuir, Scotland, U.K.  
GUTE Gutenberg, and Richter, "Seismicity of the Earth"  
MFS1 Magfors, Sweden  
ISC International Seismological Centre, UK  
ISS International Seismological Summary, UK  
LWI Lwiro, Zaire  
MCS Moscow, USSR.  
NEIS National Earthquake Information Service, Colorado, USA.  
PAL Palisades, New York, USA  
PAS Pasadena, California, USA.  
PCE Preliminary Determination of Epicentres from NEIS/CGS  
PRA Prague, Czechoslovakia  
PUL Pulkovo, USSR  
SPC Skalnaté-Pleso, Czechoslovakia  
STR Strasbourg, France.  
SYKES Sykes L.R., Earthquake Catalogue.  
TAS Tashkent, USSR  
USCGS United States Coast and Geodetic Survey.

This list contains 444 estimates of 404 events.

operat=CHDD  
infile=DEFAULT  
LATI 29.85E-4.62N  
LONG 29.85E-39.85E  
OUTPUT:DISK0:CHUGHESSISCCA.CUT  
EXFORM:INKPEN

d-time	d-locn	Agency	Date	time	latitude	longitude	depth	magnitude	kw	Mag	Int	Acc.
		E GUTE	1912 Jul 09	03:18:06	3 N	33 E		6.75S PAS	438	6.8	3.0	9
*****	4.6	E GUTE	1913 Sep 16	11:56:42	4 N	36.5 E		6.2 S PAS	730	6.2	0.9	2
	1.7	E CAT			4.4	N	37.0		581			
	2.7	E ESK			5.0	N	34.0		504			
	3.3	E PUL			4.5	N	39.5		748			
	4.3	E TAS			3.5	N	42.0		716			
-0.6	3.0	E ISS	1913 Sep 16	11:56:09	3.0	N	37.0		445			
*****	5.5	E GUTE	1915 May 21	04:18:06	6 N	31 E		6.6 S PAS	926	6.6	1.1	2
0.6	2.2	E ISS	1915 May 21	04:18:44	4.0	N	32.0		580			
*****	5.1	E ISS	1924 Jul 31	06:20:00	1.0	N	32.0		353			
*****	4.5	E GUTE	1923 Jan 06	19:31:53	0.5	N	36.5		209	7.0	5.1	35
-0.4	0.4	E ISS	1928 Jan 06	19:31:33	0.2	N	36.2		164			
		E ISS										
		E ISS										
		E ISS										
		E ISS										
		E ISS										
4733.6	0.5	E GUTE	1928 Jan 10	02:25:23	0.5	N	36		162	6.0	4.3	20
-0.3	0.4	E ISS	1928 Jan 10	02:25:13	0.2	N	36.2		164			
*****	4.0	E GUTE	1945 Mar 18	03:01:26				6.0 S PAS	329	6.0	2.6	6
-0.1	0.9	E ISS	1945 Mar 18	03:01:20	0.4	N	37.2		405			
*****	7.7	E GUTE	1945 Oct 31	19:00:48				6.0 S PAS	351	6.0	0.0	1
-0.1	6.8	E CGS	1949 Oct 31	19:00:42	7.5	S	36.5		375			
-0.1	2.0	E ISS	1949 Oct 31	19:00:43	0.4	N	36.5		957			
*****	5.1	E ISS	1951 Aug 20	12:25:21	2.3	S	32.6		499			
	1.8	E SPC			5.0	S	33.0		500			
-0.8	7.2	E BCIS	1951 Aug 20	12:24:24	11	S	34.5		1172			
*****	1.7	E GUTE	1951 Nov 31	11:10:37	4	S	35.25		409	6.0	2.0	4
-0.1	0.5	E ISS	1951 Nov 31	11:10:32	2.7	S	35.7		377			
0.0	0.4	E BCIS	1951 Nov 31	11:10:34	4	S	35.7		409			
*****	4.7	E GUTE	1952 Jan 31	20:55:14				6.25S PAS	625	6.3	1.2	2
	0.2	E STR			4	S	30.5		548			
-0.1	0.0	E CGS	1952 Jan 31	20:55:11	4	S	30.5		626	6.3	1.2	2
0.0	0.9	E ISS	1952 Jan 31	20:55:11	4	S	30.5		705			
0.0	0.0	E PDE	1952 Jan 31	20:55:12	4	S	30.5		626	6.0	0.9	2
*****	0.9	E ISS	1952 Apr 04	20:06:18	4	S	30.6		705			
0.0	0.9	E BCIS	1952 Apr 04	20:06:18	4	S	30.5		526			
*****	3.7	E ISS	1952 Jun 30	21:04:25	0.3	S	30.1		528			
	0.1	E STR			0.25	S	30		540			
0.1	0.6	E BCIS	1952 Jun 30	21:04:31	0.5	S	29.5		525			
*****	1.8	E SYKES	1955 Jul 22	04:00:02.9	1.42	N	30.52 E		522	5.0	0.0	1
		E SYKES										
*****	0.4	E ISS	1955 Sep 04	22:12:43	1.9	N	30.6		531			
-0.1	0.5	E CGS	1955 Sep 04	22:12:45	1.5	N	31		477			
0.0	0.7	E BCIS	1955 Sep 04	22:12:45	1.5	N	31.25		452			
0.0	0.3	E SYKES	1955 Sep 04	22:12:47.0	1.66	N	30.9		495	6.3	1.9	4
*****	6.8	E BCIS	1955 Dec 15	10:18:26	5	S	31		564			
0.1	1.2	E SYKES	1955 Dec 15	10:18:44.8	5.25	S	30.99		775	5.0	0.0	0
*****	0.6	E ISS	1956 Feb 03	21:37:53	4.3	S	36.4		593			
0.0	0.3	E SYKES	1956 Feb 03	21:37:53.9	5.03	S	30.21		726	5.0	0.0	1
0.1	0.4	E BCIS	1956 Feb 03	21:38:00	5	S	30		740	5.5	0.0	1
*****	4.8	E BCIS	1956 Apr 04	21:21:17	5	S	35.25 E		510	6.5	2.2	5
0.0	0.2	E SYKES	1956 Apr 04	21:21:14.6	4.98	S	35.44 E		510	6.5	2.2	5
*****	6.9	E LWI	1958 Apr 15	22:20:34	0	N	30.5 E		485	5.0	0.0	1
*****	5.4	E BCIS	1959 Jan 22	09:46:18	3	N	35 E		376	4.9	0.5	1
		E BCIS										
5517.7	4.5	E BCIS	1959 Jan 27	05:44:00	1	N	31 E		455	4.2	0.0	1
0.1	1.2	E SYKES	1959 Jan 27	05:44:03.1	0.46	N	29.97 E		551	4.2	0.0	0
*****	6.5	E SYKES	1959 Mar 08	22:37:15.9	3.78	N	35.94 E		517			
*****	10.8	E BCIS	1959 Mar 19	21:52:02	4.5	S	30 E		704			

Caution: Ten mile cleft formed along the Laikipia Escarpment. See ISS 1924 p.223 and ISS 1925 p.5 and p.8

FELT: Surface

FELT:

FELT:

Aftershock:

FELT:  
FELT:

n=7:

n=23:

Approximate solution:  
n=5:

n=25:  
FELT:

n=6:

Approximate solution:

Approximate solution:  
n=5:

n=5:

d-time	d-locn	Agency	Date	time	latitude	longitude	depth	magnitude	km	Mag	Int	Acc.	
*****	4.7	E BCIS	1959 May 10	10:25:18	Lake Victoria region			4.2	LWI	290	4.2	0.1	1
-0.4	1.4	E SYKES	1959 May 10	10:24:55.6	3.19 S 34.5 E			4.2	LWI	330	4.2	0.0	1
*****	2.1	E BCIS	1959 May 17	11:39:54	4.5 S 33 E			4.5	LWI	497	4.5	0.0	1
-0.1	0.5	E SYKES	1959 May 17	11:39:47.0	4.23 S 33.4 E			4.5	LWI	453	4.5	0.0	1
*****	5.6	E SYKES	1959 Jun 19	11:58:51.6	0.17 S 29.38 E			5.4	LWI	609	5.4	0.1	1
0.0	0.6	E LWI	1959 Jun 19	11:58:52	0.25 S 30 E			5.0	LWI	540	5.0	0.0	1
7851.5	3.6	E SYKES	1959 Jun 24	22:50:24.3	Lake Victoria region			4.5	LWI	545	4.5	0.0	1
*****	4.5	E BCIS	1959 Aug 09	11:17:00	0.5 N 29 E			5.1	LWI	658	5.1	0.0	1
-0.1	1.0	E SYKES	1959 Aug 09	11:16:51.4	0.79 N 29.91 E			5.1	LWI	565	5.1	0.0	1
*****	7.7	E ISS	1959 Aug 24	01:26:04	4.2 S 35.14 E			6.1	LWI	421	6.1	2.0	4
0.0	0.1	E SYKES	1959 Aug 24	01:26:03.9	4.24 S 35.04 E			6.1	LWI	425	6.1	2.0	4
0.1	1.1	E BCIS	1959 Aug 24	01:26:12	4.25 S 34 E			6.1	LWI	426	6.1	2.0	4
*****	0.8	E SYKES	1959 Oct 25	12:31:20.4	4.83 S 35.64 E			5.2	LWI	497	5.2	0.3	1
*****	4.8	E SYKES	1960 May 04	02:17:33.4	Lake Victoria region			5.7	LWI	280	5.7	2.5	6
0.1	0.6	E LWI	1960 May 04	02:17:36.8	1.21 S 32.46 E			5.7	LWI	319	5.7	2.1	5
*****	4.2	E ISS	1960 Sep 22	05:38:11	Lake Tanganyika region		0	5.63	PAL	740	5.6	0.2	1
0.0	1.1	E MDS	1960 Sep 22	05:38:09	3.52 S 33.96 E			5.4	LWI	670	5.4	0.0	1
0.0	0.1	E SYKES	1960 Sep 22	05:38:10.0	4 S 30 E			5.4	LWI	732	5.4	0.0	1
0.1	0.2	E CGS	1960 Sep 22	05:38:14.4	3.6 S 29.08 E		29	5.43	PAL	720	5.6	0.0	1
*****	3.6	E BCIS	1960 Oct 06	20:22:30	3.4 S 29.1 E			5.43	PAL	720	5.6	0.0	1
*****	2.7	E BCIS	I 1964 Jan 03	03:50:26	Tanzania			-----	-----	476	-----	-----	-----
8554.9	1.4	E BCIS	I 1964 Jan 09	02:25:18	Tanzania			-----	-----	288	-----	-----	-----
*****	1.2	E ISC	1964 Mar 05	10:17:00	Tanzania			-----	-----	409	-----	-----	-----
*****	0.5	E ISC	1964 May 07	05:45:31.9	Tanzania			-----	-----	322	-----	-----	-----
*****	5.1	E ISC	1964 Dec 21	14:03:41.8	Lake Tanganyika region		10	6.3	ISC	385	6.3	2.5	6
*****	5.2	E ISC	1965 Apr 06	19:31:05	3.88 S 35.06 E			5.6	ISC	655	5.6	0.2	1
*****	9.0	E ISC	1965 Apr 26	12:39:26	3.67 S 29.93 E			-----	-----	508	-----	-----	-----
7353.9	8.8	E ISC	1965 May 03	15:12:18.5	5.0 S 35.0 E			-----	-----	491	-----	-----	-----
*****	0.1	E ISC	1965 May 12	09:50:54.6	4.0 N 35.5 E			-----	-----	491	-----	-----	-----
*****	0.7	E ISC	1965 Jun 21	11:12:03.3	Tanzania		15	4.8	ISC	485	4.8	0.0	1
*****	1.3	E USC GS	I 1965 Nov 26	09:27:40.7	4.79 S 34.92 E			-----	-----	490	-----	-----	-----
*****	4.9	E BUL	I 1965 Dec 17	19:56:52	Tanzania		12	5.1	ISC	410	5.1	0.6	2
*****	4.2	E BUL	I 1966 Jan 01	13:13:51	4.1 S 35.1 E			-----	-----	548	-----	-----	-----
*****	5.1	E BUL	I 1966 Jan 12	20:18:38	Lake Victoria region			-----	-----	363	-----	-----	-----
*****	5.7	E ISC	1966 Feb 10	09:54:41.3	2 S 32 E			-----	-----	363	-----	-----	-----
6696.1	0.8	E BUL	I 1966 Feb 15	01:30:45	Lake Tanganyika region		0	-----	-----	670	-----	-----	-----
*****	3.0	E BUL	I 1966 Feb 22	19:58:34	4 S 30 E			-----	-----	402	-----	-----	-----
4549.8	2.6	E BUL	I 1966 Feb 25	23:48:20	Tanzania			3.6	BUL	398	3.6	0.0	0
5572.9	0.6	E BUL	I 1966 Mar 01	20:41:15	4 S 35.75 E			-----	-----	530	-----	-----	-----
*****	7.2	E ISC	1966 Mar 09	03:12:47.6	Tanzania			3.7	BUL	530	3.7	0.0	0
16.9	0.2	E ISC	1966 Mar 09	03:29:39	4 S 38 E			-----	-----	457	-----	-----	-----
*****	2.4	E ISC	1966 Mar 18	07:12:24	Tanzania			3.5	BUL	457	3.5	0.0	0
2391.3	1.0	E ISC	1966 Mar 19	23:04:41	4.5 S 35.4 E			-----	-----	398	-----	-----	-----
158.2	0.2	E ISC	1966 Mar 20	01:42:51.8	Tanzania		34	-----	-----	398	-----	-----	-----
34.1	1.1	E BUL	I 1966 Mar 20	02:17:00	4 S 35 E			3.6	BUL	398	3.6	0.0	0
*****	7.2	E ISC	1966 Mar 09	03:12:47.6	Uganda		35	5.4	ISC	482	5.4	0.6	2
*****	16.9	0.2	E ISC	1966 Mar 09	03:29:39	Uganda		4.6	ISC	486	4.6	0.0	1
*****	2.4	E ISC	1966 Mar 18	07:12:24	Uganda		0	-----	-----	474	-----	-----	-----
*****	2391.3	1.0	E ISC	1966 Mar 19	23:04:41	Zaire		-----	-----	561	-----	-----	-----
*****	158.2	0.2	E ISC	1966 Mar 20	01:42:51.8	Zaire		-----	-----	561	-----	-----	-----
*****	34.1	1.1	E BUL	I 1966 Mar 20	02:17:00	Uganda		4.5	BUL	528	4.5	0.0	1

d-time	d-locln	Agency	Date	time	latitude	longitude	depth	magnituda	km	Mag	Int	Acc.
7.0	0.0	E BUL	I 1966	Mar 20 02:24:00	0.3 S	Uganda 30.1 E		4.1 BUL	528	4.1	0.0	0
15.7	1.4	E ISC	1966	Mar 20 02:39:41	1.09 N	Zaire 29.92 E	16	5.4 ISC	572	5.4	0.2	1 n=26:
11.3	1.4	E BUL	I 1966	Mar 20 02:51:00	0.3 S	Uganda 30.1 E		4.2 BUL	529	4.2	0.0	0
6.0	0.0	E BUL	I 1966	Mar 20 02:57:00	0.3 S	Uganda 30.1 E		4.0 BUL	528	4.0	0.0	0
25.7	1.1	E ISC	1966	Mar 20 03:22:43	0.82 N	Uganda 30.05 E	4	5.1 ISC	550	5.1	0.0	1 n=37:
275.3	1.1	E BUL	I 1966	Mar 20 07:58:00	0.3 S	Uganda 30.1 E		4.0 BUL	528	4.0	0.0	0 n=1:
33.0	0.0	E BUL	I 1966	Mar 20 03:31:00	0.2 S	Uganda 30.1 E		4.1 BUL	528	4.1	0.0	0 n=1:
24.6	1.1	E ISC	1966	Mar 20 08:55:34	0.78 N	Zaire 29.92 E	1	5.6 ISC	563	5.6	0.6	2 n=43:
390.4	1.1	E BUL	I 1966	Mar 20 15:26:00	0.3 S	Uganda 30.1 E		4.0 BUL	528	4.0	0.0	0 n=4:
54.0	0.0	E BUL	I 1966	Mar 20 16:20:00	0.3 S	Uganda 30.1 E		4.0 BUL	528	4.0	0.0	0
4.0	0.0	E BUL	I 1966	Mar 20 16:24:00	0.3 S	Uganda 30.1 E		4.0 BUL	528	4.0	0.0	0 n=1:
110.0	0.0	E BUL	I 1966	Mar 20 18:14:00	0.2 S	Uganda 30.1 E		4.0 BUL	528	4.0	0.0	0 n=3:
80.0	0.0	E BUL	I 1966	Mar 20 19:24:00	0.3 S	Uganda 30.1 E		4.0 BUL	528	4.1	0.0	0 n=2:
829.8	1.1	E ISC	1966	Mar 21 09:23:49.9	0.84 N	Uganda 30.00 E	6	5.0 ISC	556	5.0	0.0	1 n=41:
356.0	6.9	E BUL	I 1966	Mar 21 15:19:52	4 S	Tanzania 35 E		4.4 BUL	398	4.4	0.0	1 n=4:
4186.1	6.1	E BUL	I 1966	Mar 24 13:06:00	0.3 S	Uganda 30.1 E		4.3 BUL	528	4.3	0.0	0 n=2:
803.6	1.2	E ISC	1966	Mar 25 02:29:37.9	0.86 N	Zaire 29.90 E	0		569			n=5:
660.2	0.9	E ISC	1966	Mar 25 13:49:52	0.5 N	Uganda 30.7 E	59	4.8 ISC	472	4.8	0.0	1 n=7:
487.8	0.6	E ISC	1966	Mar 25 21:57:39	1.0 N	Uganda 30.4 E	33		518			n=15:
5466.5	0.2	E ISC	1966	Mar 29 17:24:10	1.02 N	Uganda 30.20 E	31		540			n=11:
2.8	1.3	E BUL	I 1966	Mar 29 17:27:00	0.3 S	Uganda 30.1 E		4.4 BUL	528	4.4	0.0	0
*****	1.1	E ISC	1966	Apr 06 01:17:53.9	0.79 N	Zaire 29.86 E	41		570			n=7:
1371.3	0.2	E ISC	1966	Apr 07 00:09:10.9	0.58 N	Zaire 29.93 E	33	4.8 ISC	558	4.8	0.0	1 n=6:
3110.7	5.5	E BUL	I 1966	Apr 09 03:59:50	4 S	Tanzania 33 E		3.5 BUL	448	3.5	0.0	0 n=1:
4535.4	5.9	E ISC	1966	Apr 12 07:25:15	1.20 N	Uganda 30.07 E	40		569			n=6:
1119.1	0.2	E ISC	1966	Apr 13 02:14:19.4	0.99 N	Uganda 30.07 E	17	5.5 ISC	553	5.5	0.5	1 n=28:
448.8	0.3	E ISC	1966	Apr 13 09:43:05	1.16 N	Uganda 30.26 E	43		539			n=10:
135.4	0.3	E ISC	1966	Apr 13 11:58:27	1.5 N	Uganda 30.2 E	0		558			n=6:
1517.9	0.6	E ISC	1966	Apr 14 13:16:19.8	0.93 N	Zaire 29.94 E	33	5.3 ISC	565	5.3	0.1	1 n=7:
831.9	0.2	E ISC	1966	Apr 15 03:08:15.5	0.77 N	Zaire 29.98 E	26	4.9 ISC	557	4.9	0.0	1 n=34:
2135.0	0.1	E ISC	1966	Apr 16 14:43:17.8	0.76 N	Zaire 29.86 E	11	5.1 ISC	569	5.1	0.0	1 n=72:
663.2	2.8	E BUL	I 1966	Apr 17 01:46:29	1 S	Lake Victoria region 22 E		3.9 BUL	324	3.9	0.0	1 n=4:
981.8	2.2	E ISC	1966	Apr 17 18:08:17	0.5 N	Uganda 30.4 E	0		505			n=5:
209.7	1.6	E BUL	I 1966	Apr 17 21:27:57	1 S	Lake Victoria region 31 E		3.7 BUL	433	3.7	0.0	0 n=4:
*****	1.0	E BUL	I 1966	May 09 14:25:50	1 S	Lake Victoria region 32 E		3.6 BUL	324	3.6	0.0	1 n=5:
501.0	1.0	E BUL	I 1966	May 09 22:46:52	1 S	Lake Victoria region 31 E		3.5 BUL	433	3.5	0.0	0 n=5:
1386.6	2.6	E ISC	1966	May 10 21:53:28	1.6 N	Uganda 31.1 E	0		472			n=5:
1607.5	1.6	E BUL	I 1966	May 12 00:40:55	0 N	Lake Victoria region 31 E		4.2 BUL	430	4.2	0.0	1 n=5:
6063.4	1.1	E ISC	1966	May 16 05:44:19.9	0.61 N	Uganda 30.13 E	32	5.4 ISC	537	5.4	0.4	1 n=24:
1519.2	0.2	E ISC	1966	May 17 07:03:33.3	0.76 N	Zaire 29.95 E	35	5.5 ISC	550	5.5	0.4	1 n=135:

d-time	d-locn	Agency	Date	time	latitude	longitude	depth	magnitude	km	Mag	Int	Acc.		
1526.5	1.3	E BUL	I 1966 May 18	09:30:05	0	N 31	E	3.8	BUL	430	3.8	0.0	0	n=1:
*****	1.2	E ISC	1966 May 29	02:26:13.9	0.62	N 29.93	E	5.2	ISC	559	5.2	0.0	1	n=12:
9635.8	0.3	E ISC	1966 Jun 04	19:02:02.7	0.9	N 29.9	E	-----	-----	569	-----	-----	-----	n=5:
*****	1.1	E ISC	1966 Jun 14	15:37:47	0.19	S 30.28	E	-----	-----	509	-----	-----	-----	n=10:
492.9	1.3	E ISC	1966 Jun 14	23:50:41.9	1.07	N 30.00	E	5.2	ISC	563	5.2	0.0	1	n=12:
4001.2	0.3	E ISC	1966 Jun 17	19:31:54.9	0.75	N 29.91	E	5.3	ISC	564	5.3	0.1	1	n=52:
1823.0	0.1	E ISC	1966 Jun 19	00:54:51.8	0.68	N 29.96	E	5.1	ISC	557	5.1	0.0	1	n=23:
*****	0.1	E ISC	1966 Jul 02	11:21:27.8	0.76	N 30.05	E	4.6	ISC	549	4.6	0.0	1	n=30:
5257.2	0.7	E ISC	1966 Jul 06	02:58:37	1.3	N 30.5	E	-----	-----	519	-----	-----	-----	n=10:
7016.0	6.8	E ISC	1966 Jul 10	23:54:33.1	3.54	S 35.35	E	-----	-----	351	-----	-----	-----	n=5:
937.4	0.8	E BUL	I 1966 Jul 11	15:32:00	4	S 35	E	4.1	BUL	418	4.1	0.0	1	n=1:
105.6	3.1	E BUL	I 1966 Jul 11	17:17:38	1	S 35	E	3.7	BUL	68	3.7	3.0	8	n=1:
71.4	2.7	E BUL	I 1966 Jul 11	18:29:00	3.5	S 35.5	E	3.7	BUL	383	3.7	0.0	0	-----
198.0	0.4	E BUL	I 1966 Jul 11	21:47:00	3.9	S 35.4	E	4.0	BUL	391	4.0	0.0	1	-----
3190.9	1.2	E BUL	I 1966 Jul 14	02:57:54	5	S 35	E	3.6	BUL	508	3.6	0.0	0	n=2:
96.9	7.5	E ISC	1966 Jul 14	04:34:47.7	0.6	N 29.9	E	5.1	ISC	561	5.1	0.0	1	n=19:
430.6	6.8	E BUL	I 1966 Jul 14	11:45:26	4	S 35	E	3.5	BUL	398	3.5	0.0	0	n=2:
491.6	1.0	E BUL	I 1966 Jul 14	19:57:00	5	S 35	E	3.1	BUL	508	3.1	0.0	0	n=1:
1520.9	1.0	E BUL	I 1966 Jul 15	21:17:56	4	S 35	E	3.7	BUL	398	3.7	0.0	0	n=3:
56.0	1.0	E BUL	I 1966 Jul 15	22:13:58	4	S 36	E	3.7	BUL	418	3.7	0.0	0	n=2:
7817.9	0.5	E ISC	1966 Jul 21	08:31:53	2.90	S 35.53	E	-----	-----	394	-----	-----	-----	n=6:
1274.2	6.0	E BUL	I 1966 Jul 22	05:46:05	0	N 31	E	3.8	BUL	430	3.8	0.0	0	n=3:
2315.0	6.4	E BUL	I 1966 Jul 23	20:21:03	4	S 36	E	3.6	BUL	418	3.6	0.0	0	n=2:
844.1	1.0	E BUL	I 1966 Jul 24	10:25:07	3	S 36	E	3.4	BUL	314	3.4	0.0	0	n=2:
8399.4	6.8	E ISC	1966 Jul 30	06:24:33	0.9	N 30.4	E	-----	-----	515	-----	-----	-----	n=6:
1972.7	0.4	E ISC	1966 Jul 31	15:17:15.3	0.67	N 30.02	E	5.0	ISC	550	5.0	0.0	1	n=38:
1559.5	0.0	E ISC	1966 Aug 01	17:16:42.9	0.67	N 30.00	E	-----	-----	552	-----	-----	-----	n=14:
49.8	0.3	E ISC	1966 Aug 01	18:06:32	1.00	N 30.03	E	-----	-----	559	-----	-----	-----	n=6:
*****	6.7	E BUL	I 1966 Aug 15	07:19:36	4	S 34.5	E	4.1	BUL	400	4.1	0.0	1	n=3:
*****	6.6	E ISC	1966 Sep 02	00:09:16	1.03	N 30.18	E	-----	-----	543	-----	-----	-----	n=10:
461.7	1.5	E BUL	I 1966 Sep 02	07:51:00	0.6	N 31.5	E	4.0	BUL	378	4.0	0.0	1	n=3:
9523.3	5.4	E BUL	I 1966 Sep 08	22:34:16	3.3	S 35.4	E	3.9	BUL	326	3.9	0.0	1	n=3:
*****	1.9	E ISC	1966 Sep 18	04:27:47.2	4.08	S 33.63	E	-----	-----	428	-----	-----	-----	n=7:
7824.2	1.1	E BUL	I 1966 Sep 23	14:52:00	5	S 33	E	3.7	BUL	548	3.7	0.0	0	n=2:
1357.5	6.5	E ISC	1966 Sep 24	13:29:27	0.7	N 36.2	E	-----	-----	193	-----	-----	-----	n=5:
239.3	6.2	E BUL	I 1966 Sep 24	17:28:46	1	N 30	E	3.8	BUL	561	3.8	0.0	0	n=3:
2098.9	6.5	E BUL	I 1966 Sep 26	04:27:40	0.5	N 36.5	E	4.6	BUL	209	4.6	1.5	3	n=4:
1136.4	6.3	E ISC	1966 Sep 26	23:24:06	0.5	N 30.2	E	-----	-----	527	-----	-----	-----	n=5:
6821.1	1.7	E BUL	I 1966 Oct 01	17:05:10	0.4	S 31.7	E	3.6	BUL	350	3.6	0.0	0	n=2:
1626.6	6.4	E BUL	I 1966 Oct 02	20:11:44	5.3	S 35.8	E	3.8	BUL	551	3.8	0.0	0	n=4:



ALL: LISTINT AT 0.45 34.85E; MAP: SDX 5.385-4.62N 29.85E-29.85E

1982 Sep 07 09:21

d-time	d-locn	Agency	Date	time	latitude	longitude	depth	magnitude	km	Mag	Int	Acc.		
3622.9	7.9	E ISC	1966 Oct 05	08:34:40.1	0.02 N	29.94 E	28	5.3	ISC	548	5.3	0.2	1 n=97:	
5345.4	5.4	E BUL	I 1966 Oct 09	01:40:02	Lake Tanganyika region	5.3 S	30.9 E	3.5	BUL	697	3.5	0.0	0 n=1:	
1444.9	5.7	E BUL	I 1966 Oct 10	01:44:55	Lake Victoria region	0.2 N	32.4 E	3.8	BUL	280	3.8	0.0	1 n=3:	
*****	4.4	E BUL	I 1966 Oct 18	02:20:00	Tanzania	4 S	31 E	4.0	BUL	584	4.0	0.0	0 n=2:	
*****	4.1	E BUL	I 1966 Oct 26	08:04:07	Uganda	0.1 N	30.8 E	4.0	BUL	454	4.0	0.0	0 n=5:	
5563.8	2.8	E BUL	I 1966 Oct 30	04:47:56	Lake Victoria region	1.6 S	33 E	3.8	BUL	245	3.8	0.0	1 n=2:	
17.7	3.6	E ISC	1966 Oct 30	05:05:35.2	Lake Tanganyika region	3.62 S	29.97 E	33	5.2	ISC	548	5.2	0.0	1 n=39:
*****	0.4	E BUL	I 1966 Nov 09	01:00:25	Lake Tanganyika region	3.5 S	30.4 E	3.6	BUL	601	3.6	0.0	0 n=3:	
4881.8	3.6	E BUL	I 1966 Nov 12	10:22:15	Tanzania	4 S	34 E	3.8	BUL	409	3.8	0.0	0 n=3:	
3228.5	2.1	E ISC	1966 Nov 14	16:10:42.5	Zaire	5.08 S	35.80 E	0		528			n=5:	
4575.3	8.1	E ISC	1966 Nov 17	20:26:01	Tanzania	0.5 N	29.9 E	32		559			n=9:	
3738.5	7.4	E BUL	I 1966 Nov 20	10:44:29	Uganda	4.5 S	35.4 E	4.0	BUL	457	4.0	0.0	0 n=3:	
3933.2	9.2	E ISC	1966 Nov 22	04:17:38	Uganda	3.8 N	31.3 E	0		609			n=6:	
3911.4	3.2	E ISC	1966 Nov 25	21:28:59.6	Uganda	0.80 N	30.02 E	33	4.6	ISC	553	4.6	0.0	1 n=10:
*****	0.2	E BUL	I 1966 Dec 05	00:15:02	Tanzania	1 N	30 E	3.9	BUL	561	3.9	0.0	0 n=3:	
8430.2	8.5	E BUL	I 1966 Dec 10	20:45:15	Uganda	5 S	35 E	3.9	BUL	524	3.9	0.0	0 n=2:	
5592.8	8.6	E BUL	I 1966 Dec 14	17:58:00	Uganda	2 N	31 E	4.1	BUL	503	4.1	0.0	0 n=3:	
*****	1.3	E ISC	1966 Dec 29	16:48:16	Zaire	1.3 N	29.9 E	0		582			n=7:	
*****	8.7	E BUL	I 1967 Jan 12	09:22:07	Tanzania	5 S	36 E	4.0	BUL	524	4.0	0.0	0 n=3:	
840.1	8.5	E ISC	1967 Jan 12	22:22:10	Uganda	2.10 N	31.21 E	18		490			n=25:	
6565.2	7.7	E BUL	I 1967 Jan 17	12:07:23	Tanzania	4 S	36 E	3.7	BUL	419	3.7	0.0	0 n=1:	
*****	6.3	E ISC	1967 Feb 07	06:20:14	Uganda	0.7 S	30.6 E	0		474			n=5:	
9826.4	0.9	E ISC	1967 Feb 14	02:06:39	Uganda	0.20 N	30.36 E	0		504			n=5:	
2778.7	7.6	E BUL	I 1967 Feb 16	00:25:19	Tanzania	5 S	36 E	4.1	BUL	524	4.1	0.0	0 n=4:	
*****	1.0	E BUL	I 1967 Feb 25	23:56:01	Tanzania	5 S	35 E	3.9	BUL	508	3.9	0.0	0 n=1:	
*****	7.4	E ISC	1967 Mar 10	12:41:14.3	Uganda	0.63 N	30.19 E	43		530			n=7:	
*****	0.9	E BUL	I 1967 Apr 06	09:46:12	Uganda	1 N	31 E	3.9	BUL	455	3.9	0.0	0 n=1:	
4197.8	4.2	E BUL	I 1967 Apr 09	06:44:03	Lake Victoria region	3 S	32.5 E	3.7	BUL	388	3.7	0.0	0 n=2:	
9766.9	2.8	E BUL	I 1967 Apr 16	01:30:59	Tanzania	4.7 S	34.7 E	4.0	BUL	475	4.0	0.0	0 n=5:	
331.4	2.1	E BUL	I 1967 Apr 16	07:02:20	Tanzania	3 S	36 E	3.8	BUL	314	3.8	0.0	1	
*****	7.1	E ISC	1967 May 08	12:58:27	Kenya	4.1 N	35.4 E	0		501			n=6:	
*****	8.4	E BUL	I 1967 May 22	19:03:44	Tanzania	4.2 S	37 E	3.6	BUL	482	3.6	0.0	0 n=3:	
6795.8	8.2	E ISC	1967 May 28	12:19:32.8	Uganda	1.96 N	31.39 E	51	5.1	ISC	459	5.1	0.3	1 n=24:
*****	2.0	E BUL	I 1967 Jun 08	13:39:45	Uganda	0.1 S	30.8 E	4.0	BUL	452	4.0	0.0	0 n=4:	
*****	1.0	E ISC	1967 Jun 19	16:43:06	Uganda	0.64 N	30.15 E	34	4.7	ISC	535	4.7	0.0	1 n=10:
*****	7.7	E BUL	I 1967 Jun 28	22:38:16	Tanzania	3.8 S	36.5 E	4.7	BUL	419	4.7	0.0	1 n=5:	
7557.5	0.9	E BUL	I 1967 Jul 04	04:25:44	Tanzania	3 S	37 E	4.3	BUL	374	4.3	0.0	1 n=4:	
6484.3	1.0	E BUL	I 1967 Jul 08	16:39:59	Tanzania	3 S	36 E	4.2	BUL	314	4.2	0.0	1 n=4:	
6372.6	2.5	E ISC	1967 Jul 13	02:52:37	Tanzania	5.36 S	35.17 E	33		549			n=12:	
*****	9.7	E ISC	1967 Sep 09	22:35:54	Sudan	4.0 N	32.3 E	33	4.7	ISC	563	4.7	0.0	1 n=8:

d-time	d-locn	Agency	Date	time	latitude	longitude	depth	magnitude	km	Mag	Int	Acc.
8305.7	8.6	E ISC	1967 Sep 15	17:01:35.6	3.99 S	Tanzania 35.74 E	0		409			n=6:
*****	2.5	E ISC	1967 Oct 14	23:29:31.6	3.32 S	Kenya 38.19 E	33	5.1 ISC	492	5.1	0.1	1 n=47:
6430.8	3.8	E ISC	1967 Oct 19	10:40:20.2	5.28 S	Tanzania 34.90 E	33		539			n=23:
*****	7.7	E ISC	1967 Oct 30	19:55:45	1.8 N	Uganda 31.8 E	107		417			n=11:
86.9	0.8	E ISC	1967 Oct 30	21:22:41	2.5 N	Uganda 31.6 E	128		490			n=7:
988.4	0.7	E ISC	1967 Oct 31	13:51:04.5	1.99 N	Uganda 31.21 E	33	5.2 ISC	483	5.2	0.3	1 n=14:
2969.6	0.9	E ISC	1967 Nov 02	15:20:42	1.7 N	Uganda 30.4 E	0	4.3 ISC	546	4.3	0.0	0 n=6:
*****	1.1	E ISC	1967 Nov 11	02:28:44.4	2.02 N	Uganda 31.48 E	33	5.3 ISC	460	5.3	0.6	2 n=58:
3960.3	0.2	E ISC	1967 Nov 13	20:29:04.7	1.90 N	Uganda 31.61 E	33	5.1 ISC	441	5.1	0.4	1 n=19:
*****	0.4	E ISC	1967 Nov 23	05:27:11	2.0 N	Uganda 31.2 E	0	4.6 ISC	485	4.6	0.0	1 n=5:
5.0	0.6	E ISC	1967 Nov 29	05:32:08	1.9 N	Uganda 31.8 E	0		424			n=11:
4761.0	7.2	E BUL	I 1967 Dec 02	12:53:07	4 S	Tanzania 34 E		3.9 BUL	418	3.9	0.0	0 n=1:
*****	5.5	E BUL	I 1967 Dec 28	17:56:31	1 S	Lake Victoria region 31.4 E		3.6 BUL	389	3.6	0.0	0 n=2:
1148.0	1.1	E ISC	1967 Dec 29	13:04:22	0.2 S	Lake Victoria region 32.2 E	0	4.2 ISC	295	4.2	0.1	1 n=5:
42.0	3.3	E ISC	1967 Dec 29	13:46:30	3.0 N	Uganda 31.4 E	0	4.4 ISC	537	4.4	0.0	0 n=5:
116.5	0.3	E ISC	1967 Dec 29	15:42:01	2.8 N	Uganda 31.2 E	0	4.4 ISC	539	4.4	0.0	0 n=5:
24.0	3.2	E BUL	I 1967 Dec 29	16:07:03	1.3 N	Uganda 34 E		4.1 BUL	210	4.1	0.6	2 n=3:
452.2	0.0	E BUL	I 1967 Dec 29	23:39:13	1.3 N	Uganda 34 E		4.0 BUL	210	4.0	0.6	2 n=4:
647.9	5.3	E ISC	1967 Dec 30	10:27:08.3	2.10 S	Lake Tanganyika region 29.95 E	0	4.7 ISC	576	4.7	0.0	1 n=5:
*****	3.3	E BUL	I 1968 Jan 17	16:29:17	5.2 S	Tanzania 31.1 E		3.4 BUL	674	3.4	0.0	0 n=1:
*****	4.6	E ISC	1968 Feb 17	06:25:39.1	5.2 S	Tanzania 35.7 E	33		538			n=19:
26.5	0.1	E ISC	1968 Feb 17	06:52:10.7	5.09 S	Tanzania 35.72 E	0		527			n=6:
12.2	0.1	E ISC	1968 Feb 17	07:04:20	5.1 S	Tanzania 35.3 E	33		530			n=12:
643.3	0.0	E ISC	1968 Feb 17	17:47:39	5.1 S	Tanzania 35.3 E	33		530			n=7:
*****	2.2	E BUL	I 1968 Mar 13	18:23:22	5 S	Tanzania 38 E		3.4 BUL	517	3.4	0.0	0 n=1:
1263.3	5.8	E BUL	I 1968 Mar 14	15:26:40	1 S	Lake Victoria region 33.8 E		3.9 BUL	134	3.9	1.6	3 n=3:
257.6	0.0	E BUL	I 1968 Mar 14	19:44:16	1 S	Lake Victoria region 33.3 E		4.1 BUL	134	4.1	1.9	4 n=4:
2116.2	0.7	E ISC	1968 Mar 16	07:00:26.9	0.61 S	Lake Victoria region 34.40 E	0		55			n=7:
3853.6	0.4	E BUL	I 1968 Mar 18	23:14:05	0.5 S	Lake Victoria region 34 E		3.9 BUL	95	3.9	2.5	6 n=3:
2628.7	0.4	E ISC	1968 Mar 20	19:02:49	0.61 S	Lake Victoria region 34.42 E	13		53			n=9:
476.8	0.0	E ISC	1968 Mar 21	02:59:36.8	0.58 S	Lake Victoria region 34.38 E	41		56			n=8:
26.4	0.2	E BUL	I 1968 Mar 21	03:26:02	0.5 S	Lake Victoria region 34.2 E		4.0 BUL	73	4.0	3.3	10 n=4:
9.0	0.1	E BUL	I 1968 Mar 21	03:35:03	0.5 S	Lake Victoria region 34.3 E		4.0 BUL	62	4.0	3.7	13 n=2:
554.2	0.1	E ISC	1968 Mar 21	12:49:22	0.60 S	Lake Victoria region 34.37 E	0		58			n=7:
632.7	0.3	E ISC	1968 Mar 21	23:22:05	0.30 S	Lake Victoria region 34.44 E	0		47			n=6:
*****	4.4	E ISC	1968 Mar 31	23:35:57.4	4.67 S	Tanzania 34.96 E	33		472			n=27:
260.2	4.0	E ISC	1968 Apr 01	03:56:08	0.66 S	Lake Victoria region 34.41 E	0		57			n=7:
*****	3.6	E BUL	I 1968 Apr 21	10:42:20	4 S	Tanzania 33 E		3.4 BUL	448	3.6	0.0	0 n=4:
*****	2.6	E BUL	I 1968 May 06	17:13:19	4.3 S	Lake Tanganyika region 30.4 E		3.6 BUL	556	3.6	0.0	0 n=4:
5211.0	5.4	E ISC	1968 May 10	09:04:16	0.69 S	Lake Victoria region 34.40 E	18		59			n=9:

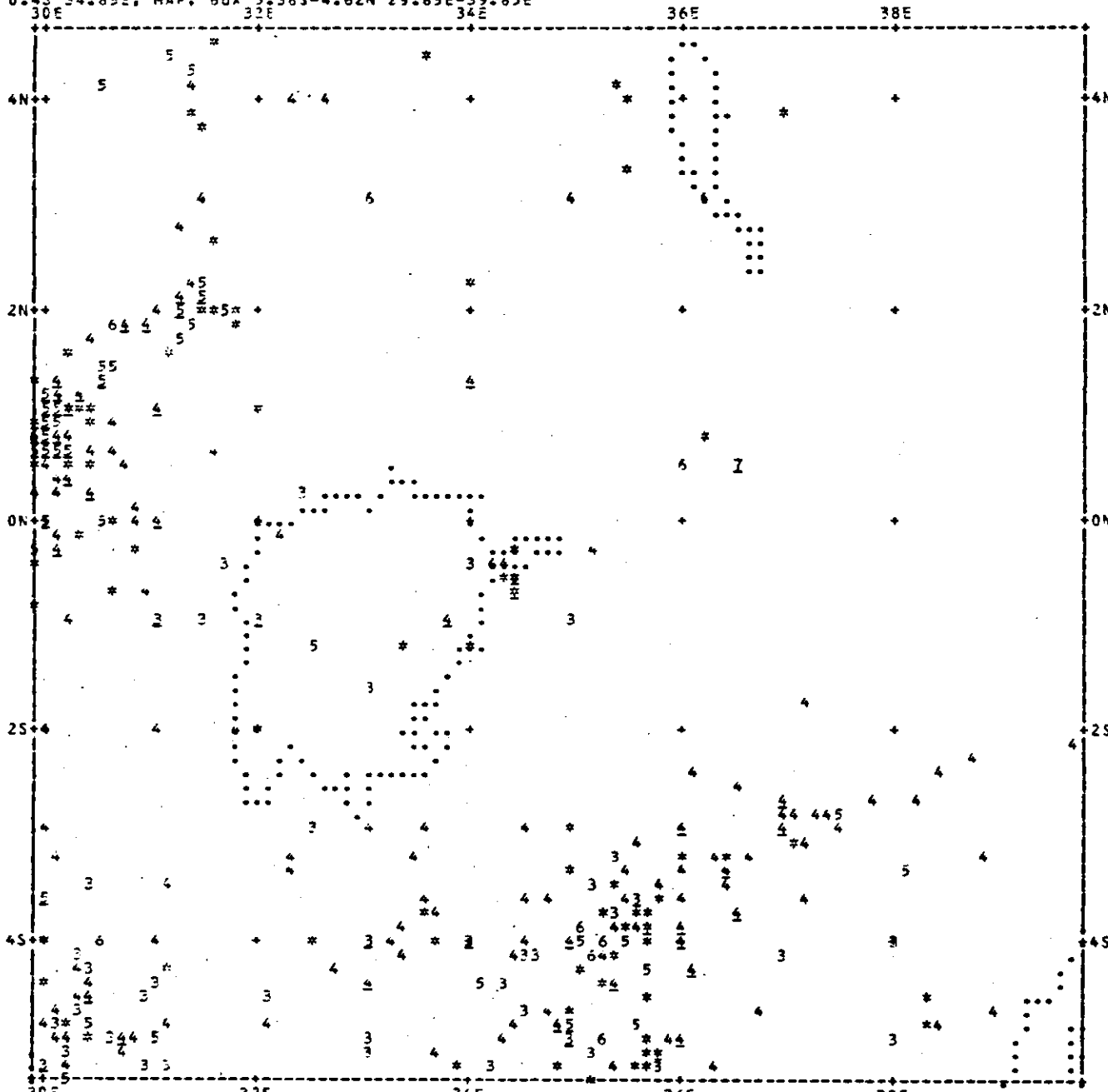
d-time	d-locn	Agency	Date	time	latitude	longitude	depth	magnitude	km	Mag	Int	Acc.		
*****	3.7	E ISC	1968	May 20 13:00:16.7	3.17 S	37.10 E	33		395			n=22:		
*****	3.6	E BUL	I 1968	Jun 01 11:38:18	Lake Victoria region 3.3 S	33.5 E		4.0	BUL	354	4.0	0.0	1	n=3:
7709.9	3.1	E BUL	I 1968	Jun 06 20:08:10	Tanzania 3.8 S	36.6 E		3.8	BUL	423	3.8	0.0	0	n=4:
1203.7	1.6	E ISC	1968	Jun 07 16:11:54	Tanzania 4.0 S	35.0 E	0			399				n=12:
4553.9	0.4	E ISC	1968	Jun 10 20:05:50	Tanzania 3.9 S	35.3 E	0			379				n=3:
4128.0	6.1	E ISC	1968	Jun 13 16:53:43.5	Uganda 2.21 N	33.35 E	66			305				n=8:
*****	7.6	E ISC	1968	Jun 23 04:43:45.4	Lake Tanganyika region 4.57 S	30.35 E	0			680				n=9:
1235.5	4.1	E ISC	1968	Jun 24 01:19:13	Zaire 0.5 S	29.9 E	0			551				n=7:
122.8	0.1	E ISC	1968	Jun 24 03:22:00.5	Zaire 0.36 S	29.89 E	33	5.0	ISC	552	5.0	0.0	1	n=30:
*****	0.4	E BUL	I 1968	Jul 02 11:01:25	Uganda 0 N	30 E		4.4	BUL	541	4.4	0.0	0	n=5:
1936.0	6.9	E ISC	1968	Jul 03 19:17:25.8	Tanzania 4.81 S	34.98 E	33			487				n=11:
3620.5	0.8	E ISC	1968	Jul 06 07:37:58.7	Tanzania 5.04 S	37.70 E	0			521				n=9:
346.4	4.4	E ISC	1968	Jul 06 13:24:22	Lake Victoria region 1.26 S	33.35 E	30			192				n=9:
*****	3.5	E ISC	1968	Aug 07 19:41:59.9	Tanzania 4.28 S	35.07 E	0			429				n=5:
*****	2.1	E BUL	I 1968	Sep 07 20:44:47	Tanzania 4 S	33 E		3.8	BUL	448	3.8	0.0	0	n=4:
20.6	2.7	E ISC	1968	Sep 07 21:05:20.4	Tanzania 4.63 S	35.56 E	0			476				n=7:
*****	7.7	E ISC	1968	Sep 21 23:41:52	Uganda 1.0 N	30.3 E	0			529				n=6:
*****	5.7	E ISC	1968	Nov 06 23:26:55	Kenya 3.3 N	35.5 E	0			415				n=7:
9677.4	4.2	E ISC	1968	Nov 13 16:44:18	Uganda 1.89 N	31.52 E	23			449				n=14:
*****	1.8	E ISC	1968	Nov 26 19:49:08.1	Uganda 0.80 N	30.02 E	0			553				n=16:
*****	7.3	E BUL	I 1969	Jan 04 19:06:49	Tanzania 5.2 S	34.2 E		3.9	BUL	535	3.9	0.0	0	n=5:
*****	2.0	E ISC	1969	Jan 25 07:49:44.3	Tanzania 3.81 S	35.63 E	34			386				n=12:
391.5	0.3	E ISC	1969	Jan 25 14:21:15.9	Tanzania 3.62 S	35.90 E	33			371				n=9:
*****	2.5	E ISC	1969	Feb 26 05:56:02.9	Tanzania 5.22 S	33.89 E	0			543				n=9:
*****	6.6	E BUL	I 1969	Mar 13 13:07:45	Uganda 0.6 N	30.6 E		4.0	BUL	485	4.0	0.0	0	n=3:
1742.6	1.6	E ISC	1969	Mar 14 23:10:22	Zaire 0.8 S	29.9 E	33			552				n=3:
*****	5.5	E ISC	1969	Apr 05 15:23:49	Sudan 4.5 N	31.6 E	29			651				n=8:
*****	8.7	E ISC	1969	Apr 14 01:06:56	Tanzania 4.26 S	31.10 E	0			596				n=5:
938.8	1.0	E ISC	1969	Apr 14 16:45:43.8	Lake Tanganyika region 4.95 S	30.40 E	0			705				n=11:
128.0	0.2	E ISC	1969	Apr 14 19:53:42.2	Lake Tanganyika region 4.96 S	30.20 E	33			714				n=12:
5598.4	6.4	E ISC	1969	Apr 18 16:12:04.7	Tanzania 3.20 S	36.44 E	33			356				n=10:
6107.1	7.1	E ISC	1969	Apr 22 21:59:12	Uganda 1.96 N	31.49 E	32			456				n=23:
9955.6	2.8	E ISC	1969	Apr 29 19:54:46	Uganda 0.76 S	30.91 E	27	4.6	ISC	440	4.6	0.0	1	n=15:
1313.8	5.7	E ISC	1969	Apr 30 17:42:33.2	Tanzania 4.48 S	35.24 E	0			453				n=7:
*****	0.8	E ISC	1969	May 10 21:16:15.5	Tanzania 3.84 S	35.69 E	33			391				n=10:
*****	4.7	E BUL	I 1969	May 23 23:44:42	Tanzania 4.5 S	31 E		3.5	BUL	623	3.5	0.0	0	n=5:
1526.0	5.0	E ISC	1969	May 25 01:10:40	Tanzania 3.9 S	36.0 E	33			407				n=9:
8497.8	0.4	E ISC	1969	May 30 22:48:30	Tanzania 4.3 S	35.1 E	0			453				n=9:
*****	0.6	E ISC	1969	Jun 20 13:14:21	Tanzania 3.9 S	35.7 E	0			398				n=9:
*****	2.3	E BUL	I 1969	Jul 15 12:55:26	Lake Victoria region 2 S	33.6 E		4.0	BUL	319	4.0	0.0	1	n=5:

d-time	d-locn	Agency	Date	time	latitude	longitude	depth	magnitude	km	Mag	Int	Acc.
218.0	6.9	E ISC	1969 Jul 15	16:33:27	3.62 N	31.44 E	15	-----	584			n=11:
*****	8.2	E BUL	I 1969 Aug 16	02:52:20	4.5 S	33 E		3.3 BUL	497	3.3	0.0	0 n=1:
*****	6.3	E ISC	1969 Aug 22	16:06:23	1.1 N	30.0 E	0	4.2 ISC	564	4.2	0.0	0 n=7:
4135.1	0.7	E ISC	1969 Aug 26	13:01:28	0.4 N	30.2 E	0	-----	525			n=7:
*****	0.9	E ISC	1969 Sep 05	13:54:14	0.3 S	30.8 E	0	-----	450			n=6:
*****	6.0	E ISC	1969 Dec 03	07:23:31	4.14 S	35.40 E	0	-----	418			n=7:
*****	3.2	E ISC	1969 Dec 14	06:55:39.8	1.25 S	34.02 E	0	-----	132			n=5:
*****	2.8	E ISC	1969 Dec 26	17:23:54	3.28 S	36.00 E	33	-----	343			n=9:
4616.5	2.9	E ISC	1969 Dec 29	22:20:23	4.9 S	38.4 E	0	-----	634			n=9:
*****	0.3	E ISC	1970 Mar 16	23:45:41	4.64 S	38.40 E	0	-----	517			n=6:
*****	6.3	E BUL	I 1970 Jun 06	18:55:19	4.6 S	32.1 E		3.5 BUL	555	3.5	0.0	0 n=4:
*****	3.6	E ISC	1970 Jul 01	13:22:45	3.7 S	35.5 E	0	-----	374			n=4:
*****	5.8	E BUL	I 1970 Dec 11	00:01:24	5.3 S	30 E		3.3 BUL	763	3.3	0.0	0 n=2:
*****	7.1	E ISC	1971 Jan 03	03:10:09.7	1.852N	30.655E	38	4.0 BUL	529	4.0	0.0	0 n=9:
2164.4	2.8	E ISC	1971 Jan 04	15:14:31.4	3.887N	32.631E	0	4.1 BUL	534	4.1	0.0	0 n=8:
583.7	9.5	E ISC	1971 Jan 05	00:58:12.1	4.700S	36.796E	0	4.0 BUL	522	4.0	0.0	0 n=6:
*****	6.5	E ISC	1971 Jan 19	00:08:22.9	4.292S	30.293E	0	4.0 BUL	564	4.0	0.0	0 n=6:
2651.2	5.0	E ISC	1971 Jan 20	20:19:51.7	3.449S	35.187E	0	3.9 BUL	339	3.9	0.0	1 n=7:
*****	0.4	E ISC	1971 Mar 06	20:03:49.7	3.649S	35.498E	0	4.1 BUL	366	4.1	0.0	1 n=7:
3965.7	5.7	E BUL	I 1971 Mar 13	13:09:31	5.3 S	30 E	0	3.7 BUL	763	3.7	0.0	0
*****	5.6	E ISC	1971 Apr 18	00:34:30.1	0.289N	30.033E	0	4.6 BUL	541	4.6	0.0	1 n=18:
315.3	0.1	E ISC	1971 Apr 18	05:49:49.3	0.202N	30.057E	32	4.8 BUL	537	4.8	0.0	1 n=21:
5091.0	0.2	E ISC	1971 Apr 21	19:40:50.3	0.196N	29.865E	0	4.3 BUL	558	4.3	0.0	0 n=12:
*****	4.3	E ISC	1971 May 19	05:49:28.4	4.143S	30.246E	0	3.8 BUL	658	3.8	0.0	0 n=6:
*****	9.0	E MFS1	I 1971 Sep 07	02:38:15.5	4.3 N	33.5 E	0	-----	537			
*****	5.1	E ISC	1972 Jan 08	17:27:51.0	0.583N	30.084E	33	4.8 B ISC	541	4.3	0.0	0 n=25:
5889.7	5.6	E BUL	I 1972 Jan 12	19:37:33	4 S	33.3 E	0	4.2 BUL	433	4.2	0.0	1
*****	1.0	E ISC	1972 Feb 13	10:02:42.4	4.501S	34.145E	33	5.0 B ISC	460	4.8	0.0	1 n=32:
5571.8	0.4	E ISC	1972 Feb 17	06:54:31.0	4.176S	34.413E	0	4.6 BUL	420	4.6	0.0	1 n=4:
*****	1.7	E BUL	I 1972 Apr 15	10:50:11	5.1 S	33 E	0	3.8 BUL	558	3.8	0.0	0
9955.3	2.8	E BUL	I 1972 Apr 22	09:45:26	5.1 S	30.2 E	0	3.8 BUL	732	3.8	0.0	0
*****	5.4	E ISC	1972 May 04	15:28:53.8	4.105S	35.511E	0	5.0 BUL	415	5.0	0.4	1 n=16:
*****	0.8	E ISC	1972 Aug 25	10:40:09.5	3.440S	35.980E	0	4.2 BUL	359	4.2	0.0	1 n=8:
*****	3.2	E ISC	1972 Sep 10	09:45:12.3	0.299S	35.117E	0	4.6 BUL	32	4.6	5.3	78 n=8:
*****	3.3	E ISC	1972 Oct 30	13:02:47.3	3.275S	36.662E	33	4.6 BUL	376	4.6	0.1	1 n=8:
119.2	0.9	E ISC	1972 Oct 30	15:01:57.7	3.574S	35.810E	0	4.46 BUL	365	4.5	0.0	1 n=6:
4.0	1.2	E ISC	1972 Oct 30	15:05:59.1	2.586S	36.554E	0	4.46 BUL	307	4.5	0.4	1 n=5:
67.7	0.8	E ISC	1972 Oct 30	16:13:40.8	3.417S	36.490E	0	4.6 BUL	389	4.6	0.1	1 n=11:
*****	0.1	E ISC	1972 Nov 07	09:16:49.0	3.504S	36.417E	0	4.3 BUL	285	4.3	0.0	1 n=7:
1457.4	0.5	E ISC	1972 Nov 08	09:34:11.7	3.559S	35.969E	0	4.5 BUL	375	4.5	0.0	1 n=8:

d-time	d-locn	Agency	Date	time	latitude	longitude	depth	magnitude	km	Mag	Int	Acc.		
*****	2.9	E ISC	1973	Mar 29 13:50:32.3	3.300S	38.968E	0	4.5	BUL	550	4.5	0.0	1	n=9:
*****	3.3	E ISC	1973	Apr 11 14:07:47.3	4.938S	35.965E	0	4.3	BUL	516	4.3	0.0	0	n=10:
*****	10.1	E ISC	1973	Apr 22 22:03:41.4	4.149N	31.318E	0	4.6	B ISC	638	3.9	0.0	0	n=17:
*****	8.3	E ISC	1973	Jul 07 16:04:10.6	3.046S	35.568E	33	4.5	BUL	303	4.5	0.5	1	n=11:
*****	2.1	E ISC	1973	Jul 28 06:51:10.6	5.149S	35.137E	0	3.9	BUL	526	3.9	0.0	0	n=5:
*****	5.1	E BUL	I 1973	Aug 05 15:21:51	5.3 S	30 E	0	3.7	BUL	763	3.7	0.0	0	
4683.0	0.5	E ISC	1973	Aug 08 21:24:51.5	4.853S	29.909E	0	4.0	BUL	737	4.0	0.0	0	n=7:
*****	4.5	E ISC	1973	Sep 11 00:25:19.2	4.856S	34.441E	0	4.5	B ISC	494	3.7	0.0	0	n=15:
*****	0.5	E BUL	I 1973	Nov 15 05:33:34	4.9 S	34.9 E	0	4.2	BUL	497	4.2	0.0	0	
5814.8	9.8	E ISC	1973	Nov 19 06:28:23.8	4.285N	31.326E	0	5.4	BUL	649	5.4	0.0	1	n=18:
*****	8.6	E ISC	1973	Dec 29 08:42:39.1	3.316S	35.422E	0	4.0	BUL	330	4.0	0.0	1	n=4:
*****	6.7	E ISC	1974	Jan 10 16:02:43.2	0.499N	29.907E	0	4.7	BUL	559	4.7	0.0	1	n=12:
6170.5	6.6	E BUL	I 1974	Jan 14 22:53:14	4.5 S	34.3 E	0	3.8	BUL	457	3.8	0.0	0	
3161.8	6.0	E ISC	1974	Jan 17 03:55:01.4	0.174S	30.096E	0	4.5	BUL	529	4.5	0.0	1	n=11:
*****	6.1	E ISC	1974	Feb 02 10:41:25.3	5.105S	33.697E	0	4.8	BUL	535	4.8	0.0	1	n=10:
*****	7.2	E ISC	1974	Apr 25 00:03:45.9	1.108N	30.049E	11	4.9	B ISC	559	4.6	0.0	1	n=116:
641.7	0.2	E ISC	1974	Apr 25 10:45:20.2	1.273N	30.104E	0	4.45	BUL	559	4.5	0.0	0	n=7:
*****	5.0	E BUL	I 1974	Jul 13 09:54:07	3.2 S	32.3 E	0	4.4	BUL	428	4.4	0.0	1	
*****	2.4	E ISC	1974	Sep 19 14:35:13.9	3.618S	34.724E	0	4.2	BUL	356	4.2	0.0	1	n=6:
*****	1.4	E ISC	1974	Oct 26 04:28:13.5	3.943S	33.303E	0	4.8	BUL	427	4.8	0.1	1	n=9:
*****	1.5	E ISC	1974	Nov 09 00:42:30.7	4.856S	32.085E	0	4.3	BUL	584	4.3	0.0	0	n=9:
*****	2.1	E BUL	I 1974	Dec 06 12:20:55	3 S	33 E	0	4.5	BUL	353	4.5	0.1	1	
*****	7.5	E ISC	1975	Mar 05 11:00:05.3	4.347N	31.091E	0	5.3	BUL	670	5.3	0.0	1	n=15:
*****	9.3	E ISC	1975	Mar 23 21:46:17.6	5.065S	30.177E	0	4.3	BUL	727	4.3	0.0	0	n=9:
139.2	0.6	E ISC	1975	Mar 24 00:05:32.1	4.976S	30.734E	0	4.2	BUL	681	4.2	0.0	0	n=7:
1947.6	0.1	E ISC	1975	Mar 25 08:33:07.3	4.915S	30.843E	0	4.3	BUL	668	4.3	0.0	0	n=6:
1147.7	0.8	E ISC	1975	Mar 26 03:40:48.4	5.335S	30.132E	28	5.0	B ISC	756	4.8	0.0	0	n=105:
68.5	2.9	E ISC	1975	Mar 26 04:49:21.1	3.251S	32.330E	0	4.2	BUL	430	4.2	0.0	1	n=6:
25.9	1.4	E ISC	1975	Mar 26 05:15:12.9	4.224S	33.390E	0	4.4	BUL	453	4.4	0.0	1	n=7:
3710.6	3.3	E ISC	1975	Mar 28 19:05:51.1	4.765S	30.102E	0	4.2	BUL	715	4.2	0.0	0	n=4:
*****	1.8	E BUL	I 1975	May 09 14:11:21	3 S	30 E	0	4.0	BUL	611	4.0	0.0	0	
*****	2.2	E ISC	1975	May 23 23:49:16.9	5.044S	30.740E	0	4.5	BUL	687	4.5	0.0	0	n=10:
*****	4.6	E ISC	1975	Jul 28 12:58:47.3	4.125S	35.237E	0	4.7	BUL	414	4.7	0.0	1	n=9:
7794.8	2.6	E ISC	1975	Aug 02 22:52:33.9	2.805S	37.508E	0	5.1	B ISC	397	5.0	0.5	1	n=21:
4206.0	1.3	E ISC	1975	Aug 05 20:59:33.1	2.358S	33.764E	0	4.6	BUL	486	4.6	0.0	1	n=6:
638.0	3.6	E ISC	1975	Aug 06 07:37:30.9	4.354S	35.750E	32	5.4	BUL	448	5.4	0.8	2	n=28:
*****	4.8	E ISC	1975	Aug 26 01:56:06.2	4.512S	30.900E	0	3.8	BUL	631	3.8	0.0	0	n=4:
*****	7.6	E ISC	1975	Sep 26 00:46:24.4	2.646S	38.287E	0	4.6	BUL	455	4.6	0.0	1	n=5:
*****	2.9	E ISC	1975	Oct 22 16:42:35.9	3.916S	35.623E	0	4.4	BUL	398	4.4	0.0	1	n=8:
*****	1.6	E ISC	1975	Nov 29 06:04:21.7	2.799S	36.152E	0	4.1	BUL	264	4.1	0.2	1	n=4:

d-time	d-locn	Agency	Date	time	latitude	longitude	depth	magnitude	km	Mag	Int	Acc.		
251.7	0.9 E	ISC	1975 Nov 29	10:16:05.2	2.743S	37.013E	0	4.7	BUL	353	4.7	0.4	1	n=9:
*****	0.8 E	ISC	1975 Dec 23	07:23:42.8	2.711S	37.861E	0	4.6	BUL	421	4.6	0.0	1	n=6:
3915.0	7.8 E	ISC	1975 Dec 26	00:38:42.4	3.287S	30.063E	0	4.5	BUL	520	4.5	0.0	0	n=11:
207.5	6.4 E	ISC	1975 Dec 26	04:06:15.3	3.411S	36.478E	0	4.4	BUL	379	4.4	0.0	1	n=4:
5098.9	0.7 E	ISC	1975 Dec 29	17:05:10.8	3.612S	37.159E	0	4.6	BUL	438	4.6	0.0	1	n=6:
*****	1.7 E	ISC	1976 Jan 09	23:13:35.3	2.447S	38.416E	0	4.4	BUL	456	4.4	0.0	1	n=6:
8744.7	1.4 E	BUL	I 1976 Jan 16	00:58:20	3.1 S	27.2 E	0	4.2	BUL	396	4.2	0.0	1	
146.9	7.7 E	ISC	1976 Jan 16	03:25:11.9	2.117N	31.441E	0	5.0	BUL	470	5.0	0.1	1	n=12:
5165.2	7.8 E	ISC	1976 Jan 19	17:30:24.1	2.940S	37.466E	26	4.9	BUL	404	4.9	0.3	1	n=15:
3173.8	0.2 E	ISC	1976 Jan 21	22:24:13.0	2.813S	37.346E	0	4.5	BUL	385	4.5	0.0	1	n=8:
*****	0.4 E	ISC	1976 Feb 05	07:46:31.1	2.784S	36.973E	41	4.8	BUL	354	4.8	0.5	1	n=12:
6498.2	0.4 E	ISC	1976 Feb 09	20:04:43.0	2.851S	37.386E	0	4.5	BUL	391	4.5	0.0	1	n=10:
*****	1.2 E	BUL	I 1976 Jun 08	21:48:58	3.3 S	35.3 E	0	4.4	BUL	359	4.4	0.0	1	
*****	7.1 E	BUL	I 1976 Jul 31	03:07:16	0.6 N	30.4 E	0	4.6	BUL	507	4.6	0.0	1	
*****	7.3 E	ISC	1976 Nov 29	20:42:21.5	2.664S	36.934E	0	4.2	BUL	341	4.2	0.0	1	n=7:
*****	0.3 E	BUL	I 1977 Mar 19	19:17:54	3 S	37 E	0	4.1	BUL	374	4.1	0.0	1	
7586.4	0.2 E	ISC	1977 Mar 25	00:44:20.0	2.804S	37.069E	0	4.3	BUL	352	4.3	0.0	1	n=4:
*****	1.7 E	ISC	1977 Jun 27	19:56:33.0	4.253S	36.092E	0	4.1	BUL	447	4.1	0.0	0	n=5:
*****	7.5 E	ISC	1977 Oct 07	03:40:40.8	0.908N	30.503E	0	4.7	BUL	494	4.7	0.0	1	n=5:
*****	7.1 E	ISC	1977 Dec 15	23:20:49.2	4.797S	34.915E	0	5.2	B ISC	436	5.2	0.3	1	n=121:
*****	7.7 E	ISC	1977 Dec 28	18:29:45.4	2.021N	31.190E	20	4.9	BUL	487	4.9	0.0	1	n=10:
9750.4	7.8 E	ISC	1978 Jan 04	13:00:10.2	4.913S	34.849E	0	4.5	BUL	498	4.5	0.0	1	n=9:
*****	0.5 E	BUL	I 1978 Feb 16	10:51:33	5 S	34.3 E	0	4.5	BUL	512	4.5	0.0	1	
5667.2	1.4 E	ISC	1978 Feb 20	09:18:44.4	3.735S	33.631E	0	4.8	BUL	392	4.8	0.3	1	n=6:
*****	3.8 E	BUL	I 1978 Mar 02	21:40:35	5.3 S	30.2 E	0	4.0	BUL	748	4.0	0.0	0	
*****	7.8 E	ISC	1978 Apr 05	17:46:13.0	1.717S	37.152E	25	4.9	B ISC	294	4.3	0.3	1	n=51:
6510.9	3.2 E	ISC	1978 Apr 10	06:17:08.1	3.597S	34.537E	0	4.6	BUL	355	4.6	0.2	1	n=6:
*****	4.1 E	ISC	1978 May 04	04:09:27.0	4.967S	30.513E	0	3.7	BUL	690	3.7	0.0	0	n=4:
*****	9.7 E	ISC	1978 May 23	09:02:37.1	2.969N	36.229E	7	4.6	B ISC	402	3.9	0.0	0	n=31:
*****	6.4 E	ISC	1978 Jul 13	19:35:28.9	0.223N	30.433E	0	4.5	BUL	496	4.6	0.0	1	n=4:
*****	9.5 E	ISC	1978 Jul 26	00:30:16.2	4.861S	38.445E	0	4.7	B ISC	634	4.1	0.0	0	n=7:
*****	7.7 E	ISC	1978 Nov 02	02:29:18.1	5.142S	30.717E	0	4.4	B ISC	696	3.5	0.0	0	n=20:
625.5	0.5 E	ISC	1978 Nov 03	12:54:49.9	4.832S	31.156E	0	4.3	BUL	639	4.3	0.0	0	n=8:
*****	5.2 E	ISC	1978 Nov 26	22:26:02.1	5.259S	36.376E	0	4.2	BUL	563	4.2	0.0	0	n=6:
*****	6.1 E	ISC	1978 Dec 07	19:38:59.9	4.548S	30.291E	0	4.4	BUL	683	4.4	0.0	0	n=7:
1168.8	0.2 E	BUL	I 1978 Dec 08	15:07:46	4.7 S	30.3 E	0	3.8	BUL	693	3.8	0.0	0	
101.3	0.1 E	BUL	I 1978 Dec 08	16:49:04	4.6 S	30.4 E	0	4.1	BUL	678	4.1	0.0	0	
123.0	0.2 E	BUL	I 1978 Dec 08	18:52:04	4.4 S	30.4 E	0	4.4	BUL	663	4.4	0.0	0	
*****	6.2 E	ISC	1979 Feb 26	04:40:35.7	1.845N	30.937E	6	4.7	B ISC	501	4.1	0.0	0	n=12:
*****	0.7 E	ISC	1979 Mar 09	10:01:18.8	1.297N	30.510E	32	5.0	B ISC	519	4.8	0.0	1	n=54:

d-time	d-locn	Agency	Date	time	latitude	longitude	depth	magnitude	km	Mag	Int	Acc.	
*****	7.0 E	BUL	I 1979 Mar 20	21:46:45	3 S	36 E	0	4.4	BUL	314	4.4	0.2	1
*****	7.0 E	ISC	1979 Apr 15	02:43:56.8	1.109N	30.308E	0	4.7	BUL	532	4.7	0.0	1 n=5:
*****	3.0 E	ISC	1979 Jun 26	13:43:27.1	4.142N	30.475E	0	5.2	BUL	699	5.2	0.0	1 n=8:
8701.3	8.7 E	ISC	1979 Jul 02	14:44:45.3	4.292S	32.592E	0	4.4	BUL	492	4.4	0.0	1 n=6:
*****	1.8 E	ISC	1979 Nov 04	03:23:56.5	4.187S	34.534E	19	3.7	BUL	420	3.7	0.0	0 n=10:
*****	6.7 E	ISC	1979 Dec 04	07:34:47.5	1.744N	31.286E	57	5.1	ISC	462	5.0	0.1	1 n=118:
*****	6.8 E	ISC	1980 Feb 29	02:03:27.7	4.961S	30.076E	0	4.7	BUL	731	4.7	0.0	0 n=10:
*****	8.9 E	BUL	I 1980 Mar 24	20:33:30	4.7 S	39 E	0	4.1	BUL	662	4.1	0.0	0
*****	5.5 E	BUL	I 1980 Apr 05	20:22:29	3.7 S	33.6 E	0	4.1	BUL	390	4.1	0.0	1
*****	1.8 E	ISC	1980 May 19	23:35:13.4	3.782S	35.426E	0	3.9	BUL	379	3.9	0.0	1 n=6:
1080.9	0.8 E	ISC	1980 May 20	17:36:06.5	4.164S	34.681E	23	3.6	BUL	416	3.6	0.0	0 n=7:
*****	6.7 E	ISC	1980 Jun 09	09:09:10.1	0.745N	30.142E	0	4.4	BUL	533	4.4	0.0	0 n=6:
6242.2	2.9 E	BUL	I 1980 Jun 13	08:11:20	2 S	31 E	0	4.4	BUL	463	4.4	0.0	1
*****	3.7 E	ISC	1980 Sep 22	09:23:31.2	1.753N	30.571E	0	4.3	ISC	522	3.3	0.0	0 n=6:
4222.4	1.0 E	ISC	1980 Sep 26	07:45:53.2	1.021N	29.940E	33	4.1	ISC	569	2.9	0.0	0 n=9:
*****	7.8 E	ISC	1980 Oct 29	10:09:32.6	3.858S	36.003E	33	4.4	BUL	403	4.4	0.0	1 n=7:
*****	1.5 E	ISC	1980 Nov 20	11:15:42.0	5.279S	35.431E	0	4.4	ISC	543	3.5	0.0	0 n=12:
*****	5.3 E	ISC	1980 Dec 04	21:05:40.9	2.136S	35.753E	0	4.3	BUL	573	4.3	0.0	0 n=6:
9862.2	9.6 E	BUL	I 1980 Dec 11	17:27:55	1 S	30.2 E	0	4.2	BUL	521	4.2	0.0	0
1488.6	1.4 E	ISC	1980 Dec 12	13:16:33.3	0.393N	30.171E	0	4.7	BUL	528	4.7	0.0	1 n=8:
*****	1.6 E	ISC	1981 Feb 07	00:12:22.9	1.849N	30.863E	0	4.8	ISC	509	4.3	0.0	0 n=11:
*****	0.6 E	ISC	1981 Mar 04	01:58:55.5	1.373N	30.543E	24	5.0	ISC	518	4.8	0.0	1 n=59:
*****	3.7 E	ISC	1981 Oct 19	19:24:15.9	2.105S	31.770E	0	4.1	BUL	391	4.1	0.0	1 n=6:
*****	3.3 E	ISC	1981 Dec 19	09:53:15.8	4.904S	30.022E	0	3.7	BUL	731	3.7	0.0	0 n=4:
*****	6.1 E	NEIS	1982 Jul 24	03:51:41.6	1.220N	30.107E	10G	4.5	NEIS	557	3.7	0.0	0 Poor solution: n=8:
*****	7.4 E	NEIS	1982 Aug 14	02:55:35.1	4.763S	34.566E	10G	3.8	NEIS	483	2.2	0.0	0 Poor solution: n=8:



Standard parallels at 3 degrees latitude  
 Key: . = coastline, + = graticule intersection, \* = unspecified magnitude, digit = maximum magnitude, \_ = multiple events. Modified Cylindrical Equal Area Projection 40° events



The codes used to identify the epicentre and comment data sources are :-

number	code	source
1	ISC	International Seismological Centre. Newbury RG13 1LZ, Berkshire, U.K.
2	NEIS	National Earthquake Information Service. United States Department of the Interior, Geological Survey, R10/S, Boulder, Colorado 80302, U.S.A.
3	SCIS	Bureau Central International de Seismologie. 35 Rue Rene Descartes, 67084 Strashourg Cedex, France.
4	JMA	Japan Meteorological Agency, Ote-machi, Chiyoda-ku, Tokyo, Japan.
5	WEL	Wellington Seismological Observatory, Geophysics Division, D.S.I.R., P.O. Box 9005, Wellington, New Zealand.
6	ANT	Antofagasta. Departamento de Geofisica y Geodesia, Universidad de Chile, E. Encalada 2085, Santiago, Chile.
7	BEG	Belgrade. Seismological Institute, Beograd-Tasmajdan, P.O. box 551, Yugoslavia.
8	BOG	Bogota. Instituto Geofisico de los Andes Colombianos, Pontificia Universidad Javeriana, Apartado nal. 445, Aereo 5318, Bogota, Colombia.
9	CAR	Caracas. Instituto Sismologico, Apartado 6745, Caracas, Venezuela.
10	CLL	Colla berg. Geophysikalisches Observatorium der Karl-Marx-Universitat, Leipzig, 7241 Colla/Oschatz, Germany.
11	JEN	Jena. Zentralinstitut fur Physik der Erde, Institutsteil Jena, Burgweg 11, 69 Jena, Germany.
12	JOH	Johannesburg. Bernard Price Institute of Geophysics, University of Witwatersrand, P.O. Box 7919, Johannesburg, South Africa.
13	KSA	Ksara. Observatoire de Ksara, 8032 Zahle, Lebanon.
14	MED	Madrid. Instituto Geografico y Catastral, Servicio de Sismologia e Ingenieria Sismica, Calle del General Ibanez de Ibero 3, Apartado 3007, Madrid 3.
15	MOS	Moscow. Institute of Physics of the Earth, B. Gruzinskaya 10, Moscow G-242, U.S.S.R.
16	NOU	Noumea. Observatoire de Geophysique, Centre D.P.S.T.C.M. de Noumea, Noumea, New Caledonia.
17	QUE	Quetta. Geophysical Centre, Pakistan Meteorological Department, P.O. Box 2, Quetta, Pakistan.
18	SHL	Shillong. Central Seismological Observatory, Shillong-5, Assam, India.
19	SSS	San Salvador. Centro de Estudios y Investigaciones Geotecnicas, Seccion de Sismologia, Apartado 109, San Salvador, El Salvador.
20	TAC	Tacubaya. Instituto de Geofisica, Torre de Ciencias, Ciudad Universitaria, Mexico 20, D.F., Mexico.
21	TAP	Taipei. Central Weather Bureau, 64 Kung Yuan Road, Taipei, Taiwan (100).
22	TRN	Trinidad. Seismic Research Unit, University of the West Indies, St. Augustine, Trinidad and Tobago.
23	UFP	Uppsala. Seismological Institute, Pox 517, S-751 20 Uppsala 1, Sweden.

The codes used to identify the epicentre and comment data sources are :-

number	code	source
24	ISC1	International Seismological Centre. Nambury RG13 1LZ, Berkshire, U.K.
25	VIE	Vienna. Zentralanstalt fur Meteorologie und Geodynamik, Hohe Warte 38, 1190 Wien, Austria.
26	LIS	Lisbon. Instituto Geofisico do Infante d. Luis, Rua da Escola Politecnica, Lisboa-2, Portugal.
27	NDI	Delhi. Meteorological Department, Government of India, Lodi Road, New Delhi 110003, India.
28	PAL	Tobin, D.G. and Sykes, L.P. 1966. J. Geophys. Res. v. 71, 1661.
29	RDM	Rome. Istituto Nazionale di Geofisica, Via Ruggero Bonghi 11/B, 00184 Roma, Italy.
30	SAR	Sarajevo. Seismological Station, Hydrometeorological Institute, Grdeni 36, P.O. Box 420, Sarajevo, Yugoslavia.
31	SKG	Skopje. University Seismological Observatory, P.O. Box 422, 61001 Skopje, Yugoslavia.
32	UNK	Unknown.
33	GBA	Guaribidanur Array. Shaba Atomic Research Centre, Trombay, Bombay-74, India.
34	ALM	Almeria. Instituto Geografico y Catastral, Observatorio Geofisico, Almeria, Spain.
35	REY	Reykjavik. Vадurstofa Islands, Reyjavik, Iceland.
36	BERK	Berckhamer, H. 1964. Notizbl. Hess. Landesamt. Bodenforsch. Wiesbaden. v. 92, 225. Das Erdbeben vom 10.2.1964 in Offenbach a. Main.
37	ERDA	Energy Research and Development Administration. Nevada Operations Office, P.O. Box 14100, Las Vegas, Nevada 89114, U.S.A.
38	ZUR	Zurich. Schweizerischer Erdbebendienst, Institut fur Geophysik, ETH - HONGERBERG, CH-8093 Zurich, Switzerland.
39	LJU	Ljubljana. Seizmoloski Zavod sr Slovenije, Kersinkova 7, 61000 Ljubljana, Yugoslavia.
40	UNKOWN	Unknown.
41	ATH	Athens. Seismological Institute, National Observatory of Athens, Athens 306, Greece.
42	PRU	Pruhonice. Geofysikalni ustav CSAV, 141 31 Praha 4-Sporilov, Czechoslovakia.
43	BNS	Bensberg. Erdbebenstation, D 506 Bensberg bei Koln, Vinzenz-Pallotti-strasse 26, Germany.
44	BRK	Berkeley. Seismographic Station, Department of Geology and Geophysics, University of California, Berkeley.
45	KRL	Karlsruhe. Erdbebenwarte, Geodatisches Institut der Technischen Hochschule, Englerstrasse 7, D-75 Karlsruhe, Germany.
46	WAR	Warsaw. Institute of Geophysics, Polish Academy of Sciences, ul. Pasteura 3, Warsaw, Poland.
47	ZAG	Zagreb. Geophysical Institute, Faculty of Sciences, University of Zagreb, Gric 3-P.O. Box 9, Zagreb 41103, Yugoslavia.

The codes used to identify the epicentre and comment data sources are :-

number	code	source
48	PAS	Pasadena. Seismological Laboratory, California Institute of Technology, P.O. bin 2, Arroyo Annex, Pasadena, California 91109, U.S.A.
49	STR	Strasbourg. Institut de Physique du Globe, Universite Louis Pasteur, 5 rue Rene Descartes, 67084 Strasbourg Cedex, France.
50	SLC	Salt Lake City. Cook, K.L. and Smith, R.B. 1967. Bull. Seism. Soc. Am., v. 57, 4.
51	STU	Stuttgart. Landeserdbebedienst Baden-Wuerttemberg, Richard-Wagner-str. 4+, D-7 Stuttgart 1, Germany.
52	MEL	Helsinki. Institute of Seismology, University of Helsinki, et. Mesperiankatu 4, Helsinki 10, Finland.
53	SOF	Sofia. Section of Seismology, B. A. S. Geophysical Institute, Moscovska 6, Sofia, Bulgaria.
54	MNR	Honiara. Department of Geological Surveys, Box G24, Honiara, Solomon Islands.
55	IST	Istanbul. Institute of Physics of the Earth, Technical University of Istanbul, Tesvikiye, Istanbul, Turkey.
56	BRA	Bratislava. Geofyzikalny ustav sav, Dubravska Cesta, Bratislava 1, P.O. Box D-74, Czechoslovakia.
57	BUC	Bucharest. Department of Seismology, 5 Cutitul de Argint St, Eucurasti 28, Romania.
58	PEK	Peking. Institute of Geophysics, State Seismological Bureau, Peking, China
59	SRI	Stanford Research Institute. Westphal, W.H. and Lange, A.L. 1967. Bull. Seism. Soc. Am. v. 57, 6.
60	CNG	Changalane. Seismographic Station, Meteorological Service of Mozambique, C.P. 256, Lourenco Marques.
61	BER	Bergen. Seismological Observatory, Villavei 9, N-5000 Bergen, Norway.
62	BRS	Brisbane. Seismograph Station, University of Queensland, St Lucia, Brisbane 4047, Australia.
63	BUL	Bulawayo. Goetz Observatory, P.O. Box AC 65, Ascot, Bulawayo, Zimbabwe.
64	SKL	Novoaleksandrovsk. Sakhalin Complex Scientific Research Institute, Novoaleksandrovsk, Sakhalin, U.S.S.R.
65	MUN	Munich. Institut fur Angewandte Geophysik der Universitat, Munchen, Germany.
66	MAN	Quezon City. Geophysical Observatory, Philippine Atmospheric, Geophysical, Astronomical Services Administration, 06603 Quezon City, Philippines.
67	HAN	Hannover. Niedersaechsisches Landesamt fur Bodenforschung, 3 Hannover-buchholz, Postfach 54, Germany.
68	CAN	Canberra. Research School of Earth Sciences, Australian National University, P.O. Box 4, Canberra, A.C.T. 2600, Australia.
69	ROC	Rochester. Odenbach Seismic Observatory, McQuaid Jesuit High School, 1800 Clinton Avenue South, Rochester, New York, U.S.A.
70	RAB	Rabaul. Volcanological Observatory, P.O. Box 386, Rabaul,

The codes used to identify the epicentre and comment data sources are :-

number	code	source
71	ADE	Papua New Guinea. Adelaide. Department of Physics, University of Adelaide, South Australia 5001.
72	LAO	Large Aperture Seismic Array. Seismic Discrimination Group, Lincoln Laboratory, M-I-T., 42 Carleton Street, Cambridge, Massachusetts 02142, U.S.A.
73	AUST	Australia. Bureau of Mineral Resources, Geology and Geophysics, Department of Minerals and Energy, P.O. Box 378, Canberra, A.C.T. 2601, Australia
74	SPGM	Morocco. Service de Physique du Globe, Faculte des Sciences, Universite Mohammad V, Avenue Moulay-cherif, Rabat, Morocco.
75	ISK	Istanbul. Kandilli Observatory, Cengelkoyu, Istanbul, Turkey.
76	TIR	Tirana. Seismological Centre, Academy of Sciences of Albania, Tirana, Albania.
77	FUR	Furstenfeldbruck. Geophysikalisches Observatorium der Universitat Munchen, Ludwigshofe 8, D-808 Furstenfeldbruck, Germany.
78	HFS	Hagfors. Hagfors Observatory, The Swedish Research Institute for National Defence, S-104 50 Stockholm 80, Sweden.
79	AFI	Afiama'u. Apia Observatory, P.O. Box 52, Apia, Western Samoa.
80	ARE	Arequipa. Universidad Nacional de San Agustin, Seccion de Sismologia, Casilla 23, Arequipa, Peru.
81	TAB	Tabriz. Seismological Observatory, P.O. Box 308, Tabriz, Iran.
82	SLM	Saint Louis. Department of Earth and Atmospheric Sciences, P.O. Box 8099, Laclade Station, Saint Louis, Missouri 63156, U.S.A.
83	HFS1	Hagfors. Hagfors Observatory, The Swedish Research Institute for National Defence, S-104 50 Stockholm 80, Sweden.
84	QCP	Manila Observatory. Ateneo de Manila Campus, P.O. Box 1231, Manila, Philippines.
85	SMI	Smithsonian Institution. Centre for short-lived phenomena, 60 Garden Street, Cambridge, Massachusetts, 02138, U.S.A.
86	CANSK	Canadian and Scandinavian networks. Hagfors Observatory, The Swedish Research Institute for National Defence, S-104 50 Stockholm 80, Sweden.
87	ALG	Algiers University. Institut de Meteorologie et de Physique du Globe, Boite Postale 1137, Alger, Algeria.
88	KHC	Kasperske Mory. Geofyzikalni ustav CSAV, 141 31 Praha 4-Sporilov, Czechoslovakia.
89	SET	Setif. Setif Observatory, Setif, Algeria.
90	IGS	Institute of Geological Sciences. Global Seismology Unit, Murchison House, West Mains Road, Edinburgh EH9 3LA, U.K.
91	KBL	Kabul. Afghanistan Seismological Observatory, Faculty of Engineering, Kabul University, Afghanistan.
92	PRE	Pretoria. Geological Survey, Department of Mines, Pretoria, South Africa.
93	PTO	Porto. Instituto Geofisico da Universidade do Porto, Serra do Pilar-Vila Nova de Gaia, Portugal.

The codes used to identify the epicentre and comment data sources are :-

number	code	source
94	TIF	Tiflis. Seismological Station, Prospekt Plakhanova 150, Tbilisi 12, Georgia, U.S.S.R.
95	TUL	Tulsa. Oklahoma Geophysical Observatory, Oklahoma Geological Survey, University of Oklahoma, Box 8, Leonard, Oklahoma 74043, U.S.A.
96	HFS2	Hagfors. Hagfors Observatory, The Swedish Research Institute for National Defence, S-104 50 Stockholm 80, Sweden.
97	OTT	Ottawa. Energy, Mines and Resources Canada, Earth physics branch, Seismology Division, 1 Observatory Crescent, Ottawa KIA0E4, Canada.
98		
99		
100	LDD	Lamont-Doherty Observatory. Seismology Department, Lamont-Doherty Geological Observatory, Palisades, New York 10964, U.S.A.
101	BKK	Bangkok. Meteorological Department, 612 Sukhumvit Road, Bangkok 11, Thailand.
102	DJA	Djakarta. Seismological Section, Meteorological and Geophysical Service, Djalan Arie Rachman Makin 3, Djakarta, Indonesia.
103	HKC	Hong Kong. Royal Observatory, 2 Nathan Road, Kowloon, Hong Kong.
104	PLM	Kuala Lumpur. Malaysian Meteorological Service, Jalan Sultan, Petaling Jaya, Selangor, West Malaysia.
105	CSEM	Centre Seismologique Europeo-Mediterraneen. F 67084 Strasbourg CEDEX 5 rue Rene Descartes, France.
106	LDG	Laboratoire de Detection et de Geophysique. Section traitement de donnees - geophysique, B.P. 136, 92120 Montrouge, France.
107	SJS	Instituto Costarricense de Electricidad. Apartado 10032, San Jose, Costa Rica.
108	ADH	Angra do Heroismo. Observatorio Afonso Chaves, Ponta Delgada, Azores. communications to: Servicio Meteorologico Nacional, Rua Saraiva de Carvalho, 2 - Lisboa, Portugal.
109	NAO	Norsar. NTNFXNDRSAR. P.O. Box 51, N - 2007 Kjeller, Norway.
110	TAU	Tasmania. Geology Department, University of Tasmania.

The codes used to identify the epicentre and comment data sources are :-

number	code	source
		Box 252 C GPO, Hobart Tas 7001, Australia
111	AAA	Alma-ata station from USSR
112	AAB	Alma-ata 2 station from USSR. Now called Talgar
113	ABA	Alger-bouzareah station. See ALG
114	APA	Apatity station from USSR
115	APT	Apia Observatory, PO Box 52, Apia, Western Samoa
116	AVE	Averroes station. Part of the SPM network
117	BAA	Buenos Aires, Servicio Meteorologico Nacional, 25 de Mayo 658, Buenos Aires, Argentina
118	CGS	Coast and Geodetic Survey of the United States. Now NEIS
119	CNH	Changchun station, China. See PEK
120	COM	Comitan station, Mexico. See YAC
121	CRT	Cartuja station, Spain. See MDD
122	DASA	Defense Atomic Support Agency. Now see ERDA
123	DBN	De Bilt station, Geophysical Division, Met. Institute, Utrechtseweg 297, de Bilt, Netherlands
124	EBM	Esen Boulak, Mongolia
125	EKA	Eskdalaunir array, Langholm, Scotland
126	PDF	Fort de France station. Part of TRN network
127	GOL	Golden, Colorado School of Mines
128	GUTE	Gutenberg and Richter. Catalogue in Seismicity of the Earth
129	HYD	Hyderabad station. See NDI
130	ISS	International Seismological Summary. Now ISC
131	JSA	Jesuit Society of America. Refer to SLM
132	KEW	Kew Observatory, United Kingdom. Now IGS
133	KHO	Khorog station, USSR. Refer MOS
134	KIR	Kiruna station, Sweden. Refer UPP
135	LEM	Lebanj station, Indonesia. Refer DJA
136	LIM	Lima station, Peru. Refer ARE
137	LPZ	La Paz, Observatorio San Calixto, Casilla 5939, La Paz, Bolivia
138	LVV	Lvov station, Ukraine, USSR. Refer MOS
139	LWI	Lwiro, Centre de Geophysique, I.R.S. Lwiro(Kivu), d/s Bukavu, Zaire
140	MAL	Malaga station, Spain. Refer MDD
141	MEF	Merida station, Mexico. Refer TAC
142	MSI	Messina, Istituto Nazionale di Geofisica, Messina, Sicilia, Italy
143	ALI	Alicante, Observatorio Sismologico Vicente Inglada Alicante, Plaza san Juan de Dios 3, Alicante, Spain
144	NAN	Nanking station, China. Refer PEK
145	NEU	Neuchatel, Switzerland. Refer ZUR
146	NUR	Nurmijarvi station, Finland. Refer HEL
147	DAX	Oaxaca station, Mexico. Refer TAC
148	OBM	Ulan-bator, Mongolia
149	PAV	Pavia station, Italy. Refer ROM
150	PDA	Observatorio Afonso Chevas, Ponta Delgada, Azores
151	PDE	Preliminary determination of epicentres given by US Coast and Geodetic Survey. Refer NEIS
152	PMG	Geophysical Observatory, PO Box 323, Port Moresby, Papua-New Guinea
153	POO	Poona observatory, India. Refer NDI
154	PRA	Department of Geophysics, Charles University, Prague, Czechoslovakia
155	RBA	Rabat, Morocco. Refer SPM
156	RIV	Riverview Observatory, Sydney, Australia
157	SAN	Santiago station, Chile. Refer ANT
158	SEA	Seattle Observatory, Washington, USA
159	SHI	Shiraz Observatory, PO Box 66, Shiraz, Iran
160	SOD	Sodankyla station, Finland. Refer HEL
161	SPC	Skalnate-Pleso, Czechoslovakia. Refer PRA
162	STK	Stockholm, Sweden. Refer HFS
163	STL	Santa Lucia, Chile. Refer ANT
164	SYKES	Sykes catalogue of earthquakes 1950 onwards
165	TEM	Tehran Observatory, Geophysical Institute, Amirabad Showali, Tehran, Iran
166	YOK	Tokyo observatory, Japan. Refer JMA
167	TOL	Toledo observatory, Spain. Refer MDD

The codes used to identify the epicentre and comment data sources are :-

number	code	source
168	TRI	Trieste observatory, Viale Romolo Gessi 4, Trieste, Italy
169	UCC	Uccle observatory, Observatoire Royal de Belgique, B-1180 Bruxelles, Belgium
170	USAEC	United States Atomic Energy Commission. Refer to ERDA
171	USCGS	United States Coast and Geodetic Survey. Refer to NEIS
172	VLA	Vladivostok station, USSR. Refer MJS
173	WMO	Wichita Mountains Observatory, Oregon. Refer NEIS
174	ZSC	Zose station, China. Refer PER
175	PPT	Papeete. Laboratoire de Geophysique, E.P. 640 - Papeete, French Polynesia
176	RESMAC	Red Sismica Mexicana de Apertura Continental. IIMAS-UNAM, Apertado 20-726, Mexico 20 D.F.
177	KUK	Accra. Geological Survey Department, P.O. Box M-80, Accra, Ghana
178	REN	University of Nevada. Mackay School of Mines, University of Nevada, Reno, Nevada 89557, U.S.A.
179	TUN	Tunis. Institut National de la Meteorologie, C.P. 22, Tunis, Tunisia
180	DIAC	Dublin Institute for Advanced Studies. 19 Burlington Road, Dublin 4, Ireland
181	TEIC	Tennessee Earthquake Information Centre. Memphis State University, Memphis, Tennessee, 38152, U.S.A.
182	WES	Weston Observatory. Weston, Massachusetts, 02193, U.S.A.
183	HRVC	Harvard University. Department of Geological Sciences, Harvard University, Cambridge, Massachusetts, 02138, U.S.A.
184	IPRG	Institute for Petroleum Research and Geophysics. P.O. Box 1717, Haifa, 61117 Israel
185	BUD	Hungarian Seismological Institute. 1118 Budapest, Meredak ul8, Hungary
186	VSI	YOLNFT. Seismological Laboratory University of Athens Panepistimiopoli Athens Greece
187	MES	Messina. Italy
188	JER	Jerusalem. Israel

agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d.	on	obs.	magnitude (se)	type on
Event	1	*	*	*	*	*	*	*	*	*	*
3UL	1968Jan17	16 29 17		5.2 S	31.1 E					3.4	
	573:Tanzania				delta( 12- 12)						37:Africa

agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d.	on	obs.	magnitude (se)	type	on
Event	2	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Feb17	06 25 36		4.8 S	35.9	mm				5.2		
USCGS	1968Feb17	06 25 38.8		5.0 S	35.9	mm		1.8 /	8	4.5		/
ISC	1968Feb17	06 25 39.1	+ 0.95	5.20 S+	35.7	mm	+ 0.15	2.82 /	14	19		
573:Tanzania												
37:Africa												
Event	3	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Feb17	06 52 10		4.8 S	36.1	m				4.3		
ISC	1968Feb17	06 52 10.7	+ 0.53	5.09 S+	35.72	m	+ 0.074	1.31 /	6	6		
573:Tanzania												
37:Africa												
Event	4	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Feb17	07 04 16		4.9 S	36.0	mm				4.7		
USCGS	1968Feb17	07 04 18.4		5.2 S	36.0	mm		1.2 /	7	4.2		/
ISC	1968Feb17	07 04 20	+ 1.1	5.10 S+	35.3	mm	+ 0.15	2.57 /	10	12		
573:Tanzania												
37:Africa												
Event	5	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Feb17	17 47 35		4.9 S	36.0	m				4.2		
USCGS	1968Feb17	17 47 37.4		5.2 S	36.0	m		1.5 /	6	3.8		/
ISC	1968Feb17	17 47 39	+ 1.1	5.10 S+	35.8	m	+ 0.15	2.55 /	7	7		
573:Tanzania												
37:Africa												
Event	6	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Mar13	18 23 22		5 S	38	m				3.4		
573:Tanzania												
37:Africa												
Event	7	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Mar14	15 26 40		1.0 S	33.2	m				3.9		
569:Lake Victoria region												
37:Africa												
Event	8	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Mar14	19 44 16		1.0 S	33.3	m				4.1		
569:Lake Victoria region												
37:Africa												
Event	9	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Mar16	07 00 28		0.3 S	34.1	mm				4.7		
ISC	1968Mar16	07 00 26.9	+ 0.55	0.61 S+	34.40	mm	+ 0.050	1.41 /	7	7		
569:Lake Victoria region												
37:Africa												
Event	10	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Mar18	23 14 05		0.5 S	34.0	m				3.9		
569:Lake Victoria region												
37:Africa												
Event	11	*	*	*	*	*	*	*	*	*	*	*
USCGS	1968Mar20	19 02 50.3		0.6 S	34.4	mm		0.7 /	5			
BUL	1968Mar20	19 02 52		0.5 S	34.3	mm				4.6		
ISC	1968Mar20	19 02 49	+ 4.3	0.61 S+	34.42	mm	+ 0.057	1.47 /	8	9		
569:Lake Victoria region												
37:Africa												
Event	12	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Mar21	02 59 36		0.5 S	34.2	mm				4.5		
USCGS	1968Mar21	02 59 36.0		0.6 S	34.3	mm		1.8 /	6			
ISC	1968Mar21	02 59 36.8	+ 0.72	0.58 S+	34.38	mm	+ 0.051	1.30 /	7	8		
569:Lake Victoria region												
37:Africa												



agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d.	on	obs.	magnitude (se)	type	on
Event	13	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Mar21	03 26 02		0.5 S	34.2 E					4.0		
			569:Lake Victoria region		delta( 3- 20)						37: Africa	
Event	14	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Mar21	03 35 03		0.5 S	34.3 E					4.0		
			569:Lake Victoria region		delta( 17- 20)						37: Africa	
Event	15	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Mar21	12 49 27		0.5 S	34.2 E					4.7		
ISC	1968Mar21	12 49 22	+ 1.5	0.6 S+	34.37 E	+ 0.064	0	1.65/	6	7		
			569:Lake Victoria region		delta( 3-125)						37: Africa	
Event	16	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Mar21	23 22 14		0.6 S	34.1 E					4.1		
ISC	1968Mar21	23 22 05	+ 1.1	0.3 S+	34.44 E	+ 0.041	0	1.06/	6	6		
			569:Lake Victoria region		delta( 3- 21)						37: Africa	
Event	17	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Mar31	23 35 54		4.5 S	34.8 E					5.2		
USCGS	1968Mar31	23 35 56.4		4.7 S	35.0 E		33	1.7 /	13	27		
ISC	1968Mar31	23 35 57.4	+ 0.49	4.67 S+	34.96 E	+ 0.096	33	2.07/	22	27	4.8	8 / 2
			573:Tanzania		delta( 4-137)						37: Africa	
Event	18	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Apr01	03 56 12		0.4 S	33.9 E					4.9		
ISC	1968Apr01	03 56 08.0	+ 0.44	0.66 S+	34.41 E	+ 0.049	0	1.14/	7	7		
			569:Lake Victoria region		delta( 2- 26)						37: Africa	
Event	19	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Apr21	10 42 20		4.0 S	33.0 E					3.6		
			573:Tanzania		delta( 5- 13)						37: Africa	
Event	20	*	*	*	*	*	*	*	*	*	*	*
BUL	1968May06	17 13 19		4.3 S	30.4 E					3.6		
			572:Lake Tanganyika region		delta( 7- 12)						37: Africa	
Event	21	*	*	*	*	*	*	*	*	*	*	*
BUL	1968May10	08 04 15		0.4 S	34.3 E					4.9		
ISC	1968May10	08 04 16	+ 1.8	0.69 S+	34.40 E	+ 0.029	18 +19	0.87/	9	9		
			569:Lake Victoria region		delta( 2- 20)						37: Africa	
Event	22	*	*	*	*	*	*	*	*	*	*	*
BUL	1968May20	13 00 14		3.2 S	37.5 E					5.0		
USCGS	1968May20	13 00 16.0		3.2 S	37.2 E		33	2.2 /	10	22	4.5	
ISC	1968May20	13 00 16.7	+ 0.61	3.17 S+	37.10 E	+ 0.097	33	2.18/	19	22	5.1	5 / 1
			573:Tanzania		delta( 2-132)						37: Africa	
Event	23	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Jun01	11 38 18		3.3 S	33.5 E					4.0		
			569:Lake Victoria region		delta( 4- 71)						37: Africa	
Event	24	*	*	*	*	*	*	*	*	*	*	*
BUL	1968Jun06	20 08 10		2.8 S	34.6 E					3.8		

agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d. on	obs.	magnitude (se)	type on
573:Tanzania										
37:Africa										
Event	25	* * * * *		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
BUL	1968Jun07	16 11 54		3.9 S	36.5	0			5.1	
ISC	1968Jun07	16 11 54	+ 1.4	4.0 S+ 0.12	35.0 E+ 0.16	0	3.57/	11 12	4.4	9 / 1
573:Tanzania										
37:Africa										
Event	26	* * * * *		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
BUL	1968Jun10	20 05 55		4.0 S	35.2	0			4.4	
ISC	1968Jun10	20 05 50	+ 1.3	3.6 S+ 0.12	35.3 E+ 0.15	0	3.55/	8 8		
573:Tanzania										
37:Africa										
Event	27	* * * * *		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
BUL	1968Jun13	16 53 50		2 N	34	66			4.3	
ISC	1968Jun13	16 53 49.5	+ 0.84	2.21 N+ 0.074	33.95 E+ 0.078	66 +13	1.72/	8 8		
568:Uganda										
37:Africa										
Event	28	* * * * *		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
BUL	1968Jun23	04 43 51		4.7 S	30.3	0			4.4	
ISC	1968Jun23	04 43 45.4	+ 0.55	4.57 S+ 0.045	30.35 E+ 0.092	0	1.79/	9 9		
572:Lake Tanganyika region										
37:Africa										
Event	29	* * * * *		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
BUL	1968Jun24	01 19 23		0.7 S	30.3	0			4.1	
ISC	1968Jun24	01 19 13	+ 2.2	0.5 S+ 0.19	29.9 E+ 0.12	0	1.36/	7 7		
567:Zaire										
37:Africa										
Event	30	* * * * *		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
BUL	1968Jun24	03 22 58		0.3 S	29.3	33			4.9	
USCGS	1968Jun24	03 22 00.2	+ 0.44	0.3 S+ 0.052	29.3 E+ 0.092	33	1.7/	8 30	5.0	8 / 5
ISC	1968Jun24	03 22 00.5		0.36 S+ 0.052	29.89 E+ 0.092	33	2.16/	25		
567:Zaire										
37:Africa										
Event	31	* * * * *		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
BUL	1968Jul02	11 01 25		0 S	30				4.4	
568:Uganda										
37:Africa										
Event	32	* * * * *		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
BUL	1968Jul03	19 17 25		4.8 S	35.0	33			4.4	
USCGS	1968Jul03	19 17 25.0		4.8 S	35.0	33	0.7/	7	3.7	
ISC	1968Jul03	19 17 25.8	+ 0.41	4.81 S+ 0.030	34.98 E+ 0.049	33	1.04/	10 11		
573:Tanzania										
37:Africa										
Event	33	* * * * *		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
BUL	1968Jul06	07 37 59		5.0 S	36.0	0			4.4	
ISC	1968Jul06	07 37 58.7	+ 0.96	5.04 S+ 0.061	35.7 E+ 0.11	0	2.14/	9 9		
573:Tanzania										
37:Africa										
Event	34	* * * * *		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
USCGS	1968Jul06	13 24 22.0		1.3 S	33.3	33			3.2	
ISC	1968Jul06	13 24 22	+ 3.2	1.25 S+ 0.060	33.35 E+ 0.038	30 +35	1.1/	7 9	1.22/	9
569:Lake Victoria region										
37:Africa										
Event	35	* * * * *		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
BUL	1968Aug07	19 41 58		3.9 S	35.4				4.1	



agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d.	on	obs.	magnitude	(se)	type	on
3UL	1969Mar13	18 07 45		0.6 N	30.6 E					4.0			
568:Uganda													
37:Africa													
Event	47	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Mar14	23 10 18		0.7 S	29.7 E					4.3			
USCGS	1969Mar14	23 10 22.3		0.7 S	29.9 E			1.2 /	6	4.9			
ISC	1969Mar14	23 10 22	+ 1.4	0.8 S+ 0.14	29.9 E			3.00 /	8	8			
567:Zaire													
37:Africa													
Event	48	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Apr05	15 23 41		5.4 N	31.3 E					4.7			
USCGS	1969Apr05	15 23 50.0		4.4 N	31.5 E			0.8 /	7				
ISC	1969Apr05	15 23 49	+ 4.3	4.5 N+ 0.19	31.60 E			0.90 /	8	8			
557:Sudan													
37:Africa													
Event	49	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Apr14	01 07 09		4.7 S	31.2 E					3.5			
ISC	1969Apr14	01 06 56	+ 1.1	4.26 S+ 0.088	31.1 E			2.22 /	5	5			
573:Tanzania													
37:Africa													
Event	50	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Apr14	16 45 49		5.0 S	30.1 E					5.0			
ISC	1969Apr14	16 45 43.8	+ 0.63	4.95 S+ 0.051	30.4 E			2.15 /	11	11			
572:Lake Tanganyika region													
37:Africa													
Event	51	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Apr14	18 53 38		4.9 S	30.4 E					5.1			
USCGS	1969Apr14	18 53 40.4		4.9 S	30.3 E			1.6 /	7	4.6			
ISC	1969Apr14	18 53 42.2	+ 0.83	4.85 S+ 0.071	30.2 E			3.06 /	12	12			
572:Lake Tanganyika region													
37:Africa													
Event	52	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Apr18	16 12 04		3.2 S	37.0 E					4.6			
USCGS	1969Apr18	16 12 04.5		3.2 S	36.5 E			1.6 /	7	4.1			
ISC	1969Apr18	16 12 04.7	+ 0.64	3.20 S+ 0.040	36.44 E			1.27 /	10	10			
573:Tanzania													
37:Africa													
Event	53	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Apr22	21 59 10		1.9 N	31.5 E					5.0			
USCGS	1969Apr22	21 59 11.0		1.9 N	31.5 E			1.3 /	13	6.0			
ISC	1969Apr22	21 59 12	+ 2.9	1.96 N+ 0.071	31.49 E			1.76 /	21	23	6.0		
568:Uganda													
37:Africa													
Event	54	*	*	*	*	*	*	*	*	*	*	*	*
USCGS	1969Apr29	19 54 45.5		0.8 S	30.7 E			1.2 /	9	5.0			
BUL	1969Apr29	19 54 50		1.1 S	30.7 E					4.8			
ISC	1969Apr29	19 54 46	+ 3.9	0.76 S+ 0.085	30.91 E			2.63 /	15	15	4.6		
568:Uganda													
37:Africa													
Event	55	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Apr30	17 48 36		4.3 S	35.4 E					4.1			
ISC	1969Apr30	17 48 33.2	+ 0.53	4.48 S+ 0.038	35.24 E			1.12 /	7	7			
573:Tanzania													
37:Africa													
Event	56	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969May10	21 16 08		3.6 S	35.5 E					4.4			
USCGS	1969May10	21 16 15.4		3.8 S	35.7 E			0.7 /	6	3.5			

agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d.	on	obs.	magnitude	(se)	type	on
ISC	1969May10	21 16 15.5	+ 0.30	3.84 S	35.69 E	33	0.70/	10	10				
573:Tanzania													
Event	57	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969May23	23 44 42		4.5 S	31.0 E					3.5			
573:Tanzania													
Event	58	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969May25	01 10 38		3.7 S	35.9 E					4.3			
USCGS	1969May25	01 10 38.4		3.8 S	35.8 E					3.6			1
ISC	1969May25	01 10 40	+ 1.0	3.9 S	36.0 E	33	4.23/	5	9				
573:Tanzania													
Event	59	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969May30	22 48 36		4.5 S	35.7 E					4.3			
ISC	1969May30	22 48 30	+ 2.1	4.3 S	36.1 E	0	4.48/	9	9				
573:Tanzania													
Event	60	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Jun20	13 14 28		4.2 S	35.9 E					4.2			
ISC	1969Jun20	13 14 21	+ 2.5	3.9 S	35.7 E	0	4.87/	8	9				
573:Tanzania													
Event	61	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Jul15	12 55 26		3.0 S	33.6 E					4.0			
569:Lake Victoria region													
Event	62	*	*	*	*	*	*	*	*	*	*	*	*
USCGS	1969Jul15	16 33 28.9		3.5 N	31.4 E	30	1.1 /	9		5.5			1
BUL	1969Jul15	16 33 30		3.4 N	32.1 E					4.7			
ISC	1969Jul15	16 33 27	+ 3.7	3.62 N	31.44 E	15	1.35/	10	11	5.2			1
568:Uganda													
Event	63	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Aug16	02 52 20		4.5 S	32.0 E					3.3			
573:Tanzania													
Event	64	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Aug23	16 06 50		0.0 S	29.5 E					4.3			
ISC	1969Aug23	16 06 23	+ 6.0	1.1 N	30.0 E	0	3.66/	7	7	4.2			3
568:Uganda													
Event	65	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Aug26	13 01 35		0.2 S	33.8 E					4.1			
ISC	1969Aug26	13 01 28	+ 6.2	0.4 N	30.2 E	0	2.22/	5	7	3.8			1
568:Uganda													
Event	66	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Sep05	18 54 42		2 S	30 E					4.1			
ISC	1969Sep05	18 54 14	+ 4.2	0.3 S	30.8 E	0	3.87/	5	6				
568:Uganda													
Event	67	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1969Dec03	00 23 29		3.9 S	35.9 E					4.8			
ISC	1969Dec03	00 23 31	+ 1.0	4.14 S	35.4 E	0	2.60/	7	7	4.0			1

agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d. on	obs.	magnitude (se)	type on	
573:Tanzania											
37:Africa											
Event	68	* * * * *									
BUL	1969Dec14	06 55 35		0.7 S	34.8 E				4.5		
ISC	1969Dec14	06 55 39.8	+ 0.61	1.25 S	34.32 E	0.051		0.46/ 5	5		
569:Lake Victoria region											
37:Africa											
Event	69	* * * * *									
BUL	1969Dec26	17 23 46		2.5 S	36.3 E				4.5		
USCGS	1969Dec25	17 23 53.2		2.2 S	36.3 E			0.7 / 7	4.0		
ISC	1969Dec26	17 23 54	+ 1.2	3.28 S	36.0 E	0.15		2.86/ 9	9	B / 1	
573:Tanzania											
37:Africa											
Event	70	* * * * *									
BUL	1969Dec29	22 20 24		4.8 S	38.8 E				4.7		
ISC	1969Dec29	22 20 23	+ 2.6	4.9 S	38.4 E	0.34		3.19/ 9	9	B / 2	
573:Tanzania											
37:Africa											
Event	71	* * * * *									
BUL	1970Mar16	23 45 52		4.4 S	37.5 E				3.9		
ISC	1970Mar16	23 45 41	+ 1.3	4.64 S	38.4 E	0.14		1.52/ 4	6		
573:Tanzania											
37:Africa											
ISC	1970Mar16	23 45 41		Poorly determined							
Event	72	* * * * *									
BUL	1970Jun06	18 55 19		4.6 S	32.1 E				3.5		
573:Tanzania											
37:Africa											
Event	73	* * * * *									
BUL	1970Jul01	13 22 45		3.6 S	35.5 E				3.9		
ISC	1970Jul01	13 22 45	+ 1.3	3.7 S	35.6 E	0.13		3.61/ 4	4		
573:Tanzania											
37:Africa											
ISC	1970Jul01	13 22 45		Poorly determined							
Event	74	* * * * *									
BUL	1970Dec11	00 01 24		5.3 S	30.0 E				3.3		
572:Lake Tanganyika region											
37:Africa											
Event	75	* * * * *									
BUL	1971Jan03	03 10 09		1.8 N	30.9 E				4.0		
NEIS	1971Jan03	03 10 09.1		1.948 N	30.750 E			0.7 / 7	9		
ISC	1971Jan03	03 10 10	+ 1.6	1.9 N	30.66 E	0.081		2.06/ 9	9		
568:Uganda											
37:Africa											
Event	76	* * * * *									
NEIS	1971Jan04	15 14 55.4		3.641 N	32.450 E			1.5 / 5	4.4	B / 1	
BUL	1971Jan04	15 14 52		2.8 N	32.0 E				4.1		
ISC	1971Jan04	15 14 31	+ 4.4	3.9 N	32.6 E	0.24		4.29/ 8	8		
568:Uganda											
37:Africa											
Event	77	* * * * *									
BUL	1971Jan05	00 58 11		4.2 S	37.0 E				4.0		
ISC	1971Jan05	00 58 12		4.7 S	36.8 E			1.50/ 4	6		
573:Tanzania											
37:Africa											
ISC	1971Jan05	00 58 12		LY DETERMINEDAN, IV							

agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d.	on	obs.	magnitude	(se)	type	on
Event	78	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1971Jan19	00 08 41		4.5 S	30.2 E								
ISC	1971Jan19	00 08 39	+ 2.7	4.3 S+	30.3 E+ 0.26	0		3.92/	5	6	4.0		
	572:Lake Tanganyika region				delta(10-16)							37:Africa	
Event	79	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1971Jan20	20 19 57		3.7 S	35.0 E								
ISC	1971Jan20	20 19 51.7	+ 0.97	3.45 S+	35.2 E+ 0.11	0		2.61/	7	7	3.9		
	573:Tanzania				delta(3-18)							37:Africa	
Event	80	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1971Mar06	20 03 58		3.5 S	34.7 E								
ISC	1971Mar06	20 03 50	+ 1.3	3.6 S+	35.5 E+ 0.16	0		3.41/	7	7	4.1		
	573:Tanzania				delta(3-19)							37:Africa	
Event	81	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1971Mar13	18 09 31		5.3 S	30.0 E								
	572:Lake Tanganyika region				delta(9-11)							37:Africa	
Event	82	*	*	*	*	*	*	*	*	*	*	*	*
NEIS	1971Apr18	00 34 24.1		0.238 N	30.142 E	33		1.0 /	10		4.6		B / 3
BUL	1971Apr18	00 34 24.1		0.238 N	30.142 E								
ISC	1971Apr18	00 34 30.1	+ 0.48	0.29 N+	30.03 E+ 0.075	0		1.75/	17	18	4.6		
	568:Uganda				delta(3-54)							37:Africa	
Event	83	*	*	*	*	*	*	*	*	*	*	*	*
NEIS	1971Apr18	05 49 49.0		0.159 N	30.196 E	32		1.1 /	12		4.7		B / 2
BUL	1971Apr18	05 49 52		0.1 N	30.2 E								
ISC	1971Apr18	05 49 49.3	+ 0.48	0.20 N+	30.06 E+ 0.081	32		1.91/	19	21	4.8		
	568:Uganda				delta(3-127)							37:Africa	
Event	84	*	*	*	*	*	*	*	*	*	*	*	*
NEIS	1971Apr21	18 40 54.0		0.205 N	29.899 E	33		1.7 /	10		4.3		B / 2
BUL	1971Apr21	18 40 55		0.2 N	30.2 E								
ISC	1971Apr21	18 40 50.3	+ 0.56	0.20 N+	29.86 E+ 0.065	0		1.48/	12	12	4.3		
	567:Zaire				delta(7-51)							37:Africa	
Event	85	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1971May19	06 49 30		2.8 S	30.7 E								
ISC	1971May19	06 49 28	+ 1.9	4.1 S+	30.2 E+ 0.29	0		2.55/	6	6	3.8		
	572:Lake Tanganyika region				delta(2-16)							37:Africa	
Event	86	*	*	*	*	*	*	*	*	*	*	*	*
HFS1	1971Sep07	02 38 15.5		4.3 N	33.5 E								
	557:Sudan				delta(0-0)							37:Africa	
Event	87	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1972Jan08	17 27 49		0.5 N	30.5 E								
NEIS	1972Jan08	17 27 51.8		0.768 N	29.833 E	33		1.2 /	11		4.8		B / 5
ISC	1972Jan08	17 27 51.0	+ 0.45	0.58 N+	30.08 E+ 0.096	33		2.23/	23	25	4.8		
	568:Uganda				delta(3-126)							37:Africa	
Event	88	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1972Jan12	19 37 33		4.0 S	33.3 E								
	573:Tanzania				delta(5-17)							37:Africa	

agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d.	on	obs.	magnitude (se)	type	on
Event	89	*	* * *	*	*	*	*	*	*	*	*	*
BUL	1972Feb13	10 02 36		4.0 S	34.1 E					5.7		
NEIS	1972Feb13	10 02 40.5		4.781 S	34.805 E	33			1.0 / 25	5.3	B / 3	
										4.5	L / 1	
										5.6	B	
MOS	1972Feb13	10 02 44		4.4 S	34.1 E							
MOS	1972Feb13	10 02 44		MS=5.2								
ISC	1972Feb13	10 02 42.4 + 0.37		4.50 S + 0.049	34.15 E + 0.095	33			2.78/ 90	5.0	B / 10	
					delta( 6-133)							
	573:Tanzania										37: Africa	
Event	90	*	* * *	*	*	*	*	*	*	*	*	*
BUL	1972Feb17	06 54 31		4.0 S	34.0 E					4.6		
ISC	1972Feb17	06 54 31		4.2 S	34.4 E	0			3.93/ 4	4		
					delta( 4- 18)							
	573:Tanzania										37: Africa	
	1972Feb17	06 54 31										
				POORLY DETERMINED								
Event	91	*	* * *	*	*	*	*	*	*	*	*	*
BUL	1972Apr15	10 50 11		5.1 S	33.0 E					3.8		
					delta( 5- 17)							
	573:Tanzania										37: Africa	
Event	92	*	* * *	*	*	*	*	*	*	*	*	*
BUL	1972Apr22	08 45 26		5.1 S	30.2 E					3.8		
					delta( 9- 9)							
	572:Lake Tanganyika region										37: Africa	
Event	93	*	* * *	*	*	*	*	*	*	*	*	*
BUL	1972May04	15 23 52		3.7 S	35.6 E					5.0		
ISC	1972May04	15 25 53.8 + 0.63		4.10 S + 0.066	35.5 E + 0.14	0			2.38/ 16	16		
					delta( 3- 72)							
	573:Tanzania										37: Africa	
Event	94	*	* * *	*	*	*	*	*	*	*	*	*
BUL	1972Aug25	10 40 16		3.5 S	33.3 E					4.2		
ISC	1972Aug25	10 40 09.8 + 0.61		3.44 S + 0.049	33.0 E + 0.10	0			1.49/ 8	8		
					delta( 2- 19)							
	573:Tanzania										37: Africa	
Event	95	*	* * *	*	*	*	*	*	*	*	*	*
BUL	1972Sep10	08 45 26		0.5 S	34.4 E					4.6		
ISC	1972Sep10	08 45 12 + 1.8		0.3 S + 0.18	35.1 E + 0.12	0			2.78/ 8	8		
					delta( 2- 21)							
	570:Kenya										37: Africa	
Event	96	*	* * *	*	*	*	*	*	*	*	*	*
BUL	1972Oct30	13 02 50		3.3 S	36.7 E					4.6		
ISC	1972Oct30	13 02 47 + 2.5		3.3 S + 0.20	36.7 E + 0.37	33			6.66/ 8	8		
					delta( 2- 48)							
	573:Tanzania										37: Africa	
Event	97	*	* * *	*	*	*	*	*	*	*	*	*
BUL	1972Oct30	15 01 57		3.6 S	35.8 E					4.45		
ISC	1972Oct30	15 01 58 + 2.7		3.6 S + 0.15	35.8 E + 0.22	0			1.14/ 6	6		
					delta( 7- 23)							
	573:Tanzania										37: Africa	
Event	98	*	* * *	*	*	*	*	*	*	*	*	*
BUL	1972Oct30	15 06 00		2.6 S	36.5 E					4.46		
ISC	1972Oct30	15 05 59.1 + 0.91		2.6 S + 0.17	36.5 E + 0.24	0			2.36/ 5	5		
					delta( 19- 48)							
	573:Tanzania										37: Africa	
Event	99	*	* * *	*	*	*	*	*	*	*	*	*
BUL	1972Oct30	16 13 44		3.4 S	35.5 E					4.6		
ISC	1972Oct30	16 13 40.8 + 0.75		3.42 S + 0.066	35.5 E + 0.12	0			2.00/ 11	11		





agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d. on	obs.	magnitude (se)	type on
BUL	1973Nov15	05 33 34		4.9 S	34.9 E				4.2	
573:Tanzania										
37:Africa										
Event	111	*	*	*	*	*	*	*	*	*
BUL	1973Nov19	06 28 24		4 N	30 E				5.4	
ISC	1973Nov19	06 28 23.8	+ 0.50	4.29 N+	31.33 E	0	2.05/	18	18	
557:Sudan										
37:Africa										
Event	112	*	*	*	*	*	*	*	*	*
BUL	1973Dec29	08 42 53		4.0 S	35.0 E				4.0	
ISC	1973Dec29	08 42 39		3.3 S	35.5 E	0	2.71/	4	4	
573:Tanzania										
POORLY DETERMINED										
37:Africa										
Event	113	*	*	*	*	*	*	*	*	*
BUL	1974Jan10	16 02 49		0.2 N	30.3 E				4.7	
ISC	1974Jan10	16 02 43.2	+ 0.76	0.50 N+	29.9 E	0	2.42/	12	12	
567:Zaire										
37:Africa										
Event	114	*	*	*	*	*	*	*	*	*
BUL	1974Jan14	22 53 14		4.5 S	34.3 E				3.8	
573:Tanzania										
37:Africa										
Event	115	*	*	*	*	*	*	*	*	*
BUL	1974Jan17	03 55 08		0.5 S	30.1 E				4.5	
ISC	1974Jan17	03 55 01.4	+ 0.92	0.17 S+	30.1 E	0	2.36/	11	11	
568:Uganda										
37:Africa										
Event	116	*	*	*	*	*	*	*	*	*
BUL	1974Feb02	10 41 08		2.9 S	35.7 E				4.8	
ISC	1974Feb02	10 41 25	+ 2.6	5.1 S+	33.7 E	0	5.65/	10	10	
573:Tanzania										
37:Africa										
Event	117	*	*	*	*	*	*	*	*	*
MOS	1974Apr25	00 03 47		0.8 N	29.8 E				5.3	
MOS	1974Apr25	00 03 47		M8.5,212,M54.97					5.0	
BUL	1974Apr25	00 03 47		1.0 N	30.3 E	33	0.8 /	55		B / 14
NEIS	1974Apr25	00 03 49.1		0.995 N	30.091 E					
HFS2	1974Apr25	00 03 50		2 N	30 E					
ISC	1974Apr25	00 05 47	+ 2.6	1.11 N+	30.05 E	11	1.15/	115	116	4.9 B / 17
568:Uganda										
37:Africa										
Event	118	*	*	*	*	*	*	*	*	*
BUL	1974Apr25	10 44 34		1 N	30 E				4.45	
ISC	1974Apr25	10 45 30	+ 1.0	1.27 N+	30.1 E	0	2.50/	7	7	
569:Uganda										
37:Africa										
Event	119	*	*	*	*	*	*	*	*	*
BUL	1974Jul13	09 54 07		3.3 S	32.3 E				4.4	+0
569:Lake Victoria region										
37:Africa										
Event	120	*	*	*	*	*	*	*	*	*
BUL	1974Sep19	14 35 20		3.9 S	34.3 E				4.2	
ISC	1974Sep19	14 35 14	+ 5.0	3.6 S+	34.7 E	0	2.16/	6	6	
569:Lake Victoria region										
37:Africa										



agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d. on	obs.	wagnitude (se)	type on
ISC	1975Mar28	19 05 51		POORLY DETERMINED		37: Africa				
Event	132	* * * * *								
BUL	1975May09	14 11 21		3	5	30	E		4.0	+0
ISC	1975May23	23 49 15	+ 1.6	4.8	5	30.5	E		4.5	+0
ISC	1975May23	23 49 17		5.04	S+ 0.097	30.7	E+ 0.39	0	2.96/ 10	10
Event	133	* * * * *								
BUL	1975Jul28	12 58 25		2.5	S	36.5	E		4.7	+0
ISC	1975Jul28	12 58 47	+ 5.6	4.1	S+ 0.31	35.2	E+ 0.57	0	2.72/ 8	8
Event	134	* * * * *								
BUL	1975Aug02	22 53 40		2.8	S	37.4	E		4.9	+0
ISC	1975Aug02	22 53 33.9	+ 0.71	2.80	S+ 0.078	37.5	E+ 0.13	0	2.87/ 21	21
Event	135	* * * * *								
BUL	1975Aug05	20 59 52		3.4	S	38.0	E		4.6	+0
ISC	1975Aug05	20 59 33	+ 2.5	2.4	S+ 0.20	38.8	E+ 0.55	0	4.92/ 6	6
Event	136	* * * * *								
BUL	1975Aug06	07 37 31		3.4	S	35.3	E		5.4	+0
BUL	1975Aug06	07 37 32								
NEIS	1975Aug06	07 37 30.4		4.369	S	35.903	E	32	5.1	+0
NEIS	1975Aug06	07 37 30.4								
ISC	1975Aug06	07 37 30.9	+ 0.25	4.35	S+ 0.025	35.75	E+ 0.057	32	0.99/ 28	28
Event	137	* * * * *								
BUL	1975Aug26	01 56 20		5.2	S	30.3	E		3.8	+0
ISC	1975Aug26	01 56 06		4.5	S	30.9	E	0	1.18/ 4	4
Event	138	* * * * *								
BUL	1975Sep26	00 46 41		2.6	S	36.9	E		4.6	+0
ISC	1975Sep26	00 46 29	+30	3	S+ 2.2	33	E+ 1.5	0	5.79/ 5	5
Event	139	* * * * *								
BUL	1975Oct22	16 42 35		3.6	S	35.7	E	33	4.4	+0
NEIS	1975Oct22	16 42 38.9		3.912	S	35.580	E	5		
NEIS	1975Oct22	16 42 38.9								
ISC	1975Oct22	16 42 35.8	+ 0.59	3.92	S+ 0.043	35.52	E+ 0.076	0	1.49/ 8	8
Event	140	* * * * *								
BUL	1975Nov29	06 04 37		3	S	36	E		4.1	+0
ISC	1975Nov29	06 04 22		2.4	S	36.2	E	0	0.93/ 4	4



agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d.	on	obs.	magnitude	(se)	type	on
NEIS	1976Feb05	07 46 28.5		2.966 S	36.966 E	33			6	4.2	+0		8
NEIS	1976Feb05	07 46 28.5		LESS RELIABLE SOLUTION.									
BUL	1976Feb05	07 46 31		3.2 S	37.7 E					4.8	+0		
ISC	1976Feb05	07 46 31	+ 2.8	2.8 S	37.0 E	41	+33	4.04/	12	12			
				delta( 2- 67)									
573:Tanzania				37: Africa									
Event	153	* * * * *		* * * * *	* * * * *	* * * * *				* * * * *			
BUL	1976Feb09	20 04 53		3.4 S	37.4 E					4.5	+0		
ISC	1976Feb09	20 04 43.0	+ 0.93	2.85 S	37.4 E	0		2.32/	10	10			
				delta( 2- 43)									
570:Kenya				37: Africa									
Event	154	* * * * *		* * * * *	* * * * *	* * * * *				* * * * *			
BUL	1976Jun08	21 48 58		3.3 S	36.3 E					4.4	+0		
				delta( 14- 19)									
573:Tanzania				37: Africa									
Event	155	* * * * *		* * * * *	* * * * *	* * * * *				* * * * *			
BUL	1976Jul31	03 07 16		0.6 N	30.4 E					4.6	+0		
				delta( 7- 22)									
569:Uganda				37: Africa									
Event	156	* * * * *		* * * * *	* * * * *	* * * * *				* * * * *			
BUL	1976Nov29	20 42 35		3.0 S	36.1 E					4.2	+0		
ISC	1976Nov29	20 42 21	+ 2.1	2.7 S	36.9 E	0		4.82/	7	7			
				delta( 1- 20)									
573:Tanzania				37: Africa									
Event	157	* * * * *		* * * * *	* * * * *	* * * * *				* * * * *			
BUL	1977Mar19	18 17 56		3 S	37 E					4.1	+0		
				delta( 2- 13)									
573:Tanzania				37: Africa									
Event	158	* * * * *		* * * * *	* * * * *	* * * * *				* * * * *			
BUL	1977Mar25	00 44 23		2.8 S	37 E					4.3	+0		
ISC	1977Mar25	00 44 20		2.8 S	37.1 E	0		3.74/	4	4			
				delta( 2- 19)									
570:Kenya				37: Africa									
ISC	1977Mar25	00 44 20		PEOPLY DETERMINED									
Event	159	* * * * *		* * * * *	* * * * *	* * * * *				* * * * *			
BUL	1977Jun27	19 56 35		4.3 S	36.0 E					4.1	+0		
ISC	1977Jun27	19 56 33	+ 1.2	4.25 S	36.1 E	0		2.75/	6	6			
				delta( 3- 20)									
573:Tanzania				37: Africa									
Event	160	* * * * *		* * * * *	* * * * *	* * * * *				* * * * *			
BUL	1977Oct07	08 40 45		0.9 N	30.9 E					4.7	+0		
ISC	1977Oct07	08 40 40.7	+ 0.22	0.91 N	30.50 E	0		0.42/	5	5			
				delta( 7- 36)									
569:Uganda				37: Africa									
Event	161	* * * * *		* * * * *	* * * * *	* * * * *				* * * * *			
BUL	1977Dec15	23 20 48		4.7 S	35.0 E					5.8	+0		
NEIS	1977Dec15	23 20 53.6		4.751 S	34.913 E	33				4.8	+0		8
MOS	1977Dec15	23 20 55		4.7 S	35.4 E					5.6			LZ
MOS	1977Dec15	23 20 55		M8.5/10, MS5.4/3									
ISC	1977Dec15	23 20 49	+ 3.5	4.80 S	34.92 E	0	+22	1.91/	119	121	5.2	+0	8 / 2d
				delta( 4-130)									
573:Tanzania				37: Africa									
Event	162	* * * * *		* * * * *	* * * * *	* * * * *				* * * * *			
NEIS	1977Dec28	18 29 46.9		2.030 N	31.155 E	33				5.2	+0		8
NEIS	1977Dec28	18 29 46.9		LESS RELIABLE SOLUTION.									
BUL	1977Dec28	18 29 55		1.3 N	30.6 E					4.9	+0		

agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d.	on	obs.	magnitude	(se)	type	on
ISC	1977Dec28	18 29 45	+ 3.5	2.02 N+ 0.078	31.19 E+ 0.069	20 +28	1.66/	10	10				
568:Uganda													
37:Africa													
Event	163	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Jan04	13 00 08		4.5 S	34.7 E					4.5		+0	*
NEIS	1978Jan04	13 00 13.0		4.845 S	34.780 E	33				4.1		+0	8
NEIS	1978Jan04	13 00 13.0		LESS RELIABLE SOLUTION									
ISC	1978Jan04	13 00 10.2	+ 0.76	4.91 S+ 0.058	34.84 E+ 0.099	0	2.02/	8	8				
573:Tanzania													
37:Africa													
Event	164	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Feb16	10 51 33		5.0 S	34.3 E					4.5		+0	*
573:Tanzania													
37:Africa													
Event	165	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Feb20	09 18 53		4.3 S	33.7 E					4.8		+0	*
ISC	1978Feb20	09 18 44	+ 1.7	3.7 S+ 0.18	33.6 E+ 0.27	0	2.39/	6	6				
569:Lake Victoria region													
37:Africa													
Event	166	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Mar02	21 40 35		5.3 S	30.2 E					4.0		+0	*
572:Lake Tanganyika region													
37:Africa													
Event	167	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Apr05	17 46 09		1.6 S	37.1 E					5.4		+0	*
NEIS	1978Apr05	17 46 10.5		1.647 S	36.937 E	25				4.7		+0	8
NEIS	1978Apr05	17 46 11.0		MINOR DAMAGE AT NAIROBI. FELT STRONGLY OVER A WIDE AREA									
ISC	1978Apr05	17 46 13.0	+ 0.43	1.72 S+ 0.063	37.15 E+ 0.096	25	3.29/	51	51	4.8		+0	9 / 9
570:Kenya													
37:Africa													
Event	168	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Apr10	06 17 09		3.4 S	34.7 E					4.6		+0	*
ISC	1978Apr10	06 17 08.1	+ 0.24	3.60 S+ 0.022	34.54 E+ 0.026	0	0.70/	6	6				
569:Lake Victoria region													
37:Africa													
Event	169	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1978May04	04 09 21		4.3 S	31.0 E					3.7		+0	*
ISC	1978May04	04 09 27.0	+ 0.43	4.97 S+ 0.040	30.61 E+ 0.065	0	0.75/	4	4				
572:Lake Tanganyika region													
37:Africa													
ISC	1978May04	04 09 27.0		POORLY DETERMINED									
Event	170	*	*	*	*	*	*	*	*	*	*	*	*
NEIS	1978May23	09 02 37.1		3.004 N	36.113 E	10				4.6		+0	8
ISC	1978May23	09 02 37.1	+ 0.37	2.97 N+ 0.047	36.23 E+ 0.083	10	1.98/	30	19	4.6		+0	9 / 7
570:Kenya													
37:Africa													
Event	171	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Jul13	19 35 22		0.8 N	30.9 E					4.6		+0	*
ISC	1978Jul13	19 35 29	+ 2.4	0.2 N+ 0.23	30.4 E+ 0.11	0	1.76/	4	4				
568:Uganda													
37:Africa													
ISC	1978Jul13	19 35 29		POORLY DETERMINED									
Event	172	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Jul26	00 30 17		4.9 S	38.1 E					4.6		+0	*
ISC	1978Jul26	00 30 16	+ 3.0	4.4 S+ 0.21	38.4 E+ 0.66	0	6.91/	7	7	4.7		+0	9 / 1
573:Tanzania													
37:Africa													

agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d.	on	obs.	magnitude (se)	type	on
Event	173	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Nov03	02 29 26		5.5 S	31.2 E					4.2	+0	
ISC	1978Nov03	02 29 18.1	+ 0.31	5.14 S	30.7 E	0.10			1.00/ 20	20	4.4	+0 B / 1i
				delta( 11- 67)						37: Africa		
										572: Lake Tanganyika region		
Event	174	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Nov03	12 55 02		5.5 S	31.2 E					4.3	+0	
ISC	1978Nov03	12 54 49.9	+ 0.97	4.83 S	31.2 E	0.11			2.53/ 8	8		
				delta( 7- 16)						37: Africa		
										573: Tanzania		
Event	175	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Nov26	22 26 01		4.4 S	35.4 E					4.2	+0	
ISC	1978Nov26	22 26 03	+ 1.2	5.26 S	36.4 E	0.22			2.05/ 6	6		
				delta( 4- 20)						37: Africa		
										573: Tanzania		
Event	176	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Dec07	19 39 00		4.4 S	30.7 E					4.4	+0	
ISC	1978Dec07	19 38 59.9	+ 0.66	4.55 S	30.25 E	0.061			0.57/ 7	7		
				delta( 7- 15)						37: Africa		
										572: Lake Tanganyika region		
Event	177	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Dec08	15 07 46		4.7 S	30.3 E					3.8	+0	
				delta( 12- 15)						37: Africa		
										572: Lake Tanganyika region		
Event	178	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Dec08	16 49 04		4.6 S	30.4 E					4.1	+0	
				delta( 12- 16)						37: Africa		
										572: Lake Tanganyika region		
Event	179	*	*	*	*	*	*	*	*	*	*	*
BUL	1978Dec08	18 52 04		4.4 S	30.4 E					4.4	+0	
				delta( 12- 17)						37: Africa		
										572: Lake Tanganyika region		
Event	180	*	*	*	*	*	*	*	*	*	*	*
NEIS	1979Feb26	04 40 35.9		1.858 N	30.936 E					4.9	+0	B
NEIS	1979Feb26	04 40 35.9		LESS RELIABLE SOLUTION.								
BUL	1979Feb26	04 40 45		1.3 N	31.1 E					4.9	+0	
ISC	1979Feb26	04 40 35.7	+ 0.48	1.85 N	30.94 E	0.082			1.20/ 12	12	4.7	+0 B / 4
				delta( 13- 84)		pP-P= 6.0 6.55		2.29/ 3		37: Africa		
										568: Uganda		
Event	181	*	*	*	*	*	*	*	*	*	*	*
MDS	1979Mar09	10 01 18.5		1.31 N	30.51 E							
MDS	1979Mar09	10 01 18.5		MDS-2/7								
NEIS	1979Mar09	10 01 18.7		1.252 N	30.567 E					41	5.0	+0 B
BUL	1979Mar09	10 01 19		1.3 N	30.6 E						5.3	+0
NAD	1979Mar09	10 01 20		1.0 N	30.0 E						4.8	+0 B
ISC	1979Mar09	10 01 18.8	+ 0.19	1.30 N	30.51 E	0.040			1.19/ 53	54	5.0	+0 B / 1a
				delta( 7-126)		pP-P= 33.0 0.42		0.15/ 3		37: Africa		
										568: Uganda		
Event	182	*	*	*	*	*	*	*	*	*	*	*
BUL	1979Mar20	21 46 45		3.0 S	36.0 E					4.4	+0	
				delta( 2- 19)						37: Africa		
										573: Tanzania		
Event	183	*	*	*	*	*	*	*	*	*	*	*
BUL	1979Apr15	02 44 02		0.7 N	30.7 E					4.7	+0	
ISC	1979Apr15	02 43 57	+ 1.7	1.1 N	30.31 E	0.077			0.74/ 5	5		
				delta( 7- 21)						37: Africa		



agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d. on	obs.	magnitude (se)	type on	
568:Uganda											
Event	184	*	*	*	*	*	*	*	*	*	
BUL	1979Jun26	13 43 41		3.2	N	30.3			5.2	+0	
ISC	1979Jun26	13 43 27	+ 2.0	4.1	N+	30.5	0.17	2.19/ 8	8		
557:Sudan											
37:Africa											
Event	185	*	*	*	*	*	*	*	*	*	
BUL	1979Jul02	14 44 48		4.2	S	32.7			4.4	+0	
ISC	1979Jul02	14 44 45.3	+ 0.88	4.29	S+	32.7	0.11	2.50/ 6	6		
573:Tanzania											
37:Africa											
Event	186	*	*	*	*	*	*	*	*	*	
NEIS	1979Nov04	03 23 56.3		4.198	S	34.545	E		3.9	+0	
NEIS	1979Nov04	03 23 56.3		LESS RELIABLE SOLUTION.							B
BUL	1979Nov04	03 23 57		4.3	S	34.6			3.7	+0	
ISC	1979Nov04	03 23 56	+ 1.9	4.19	S+	34.53	0.053	1.13/ 10	10		
573:Tanzania											
37:Africa											
Event	187	*	*	*	*	*	*	*	*	*	
NEIS	1979Dec04	07 34 44.8		1.754	N	31.294	E		5.0	+0	
BUL	1979Dec04	07 34 45		1.7	N	31.3			5.0	LZ	
MOS	1979Dec04	07 34 46.4		2.01	N	31.46			5.4	+0	
MOS	1979Dec04	07 34 46.4		MBS=2/16, MSS=0/4							
ISC	1979Dec04	07 34 48	+ 1.2	1.74	N+	31.29	0.042	1.63/ 114	118	5.1	
568:Uganda											
37:Africa											
Event	188	*	*	*	*	*	*	*	*	*	
BUL	1980Feb29	02 03 29		4.7	S	30.6			4.7	+0	
ISC	1980Feb29	02 03 27.7	+ 0.65	4.96	S+	30.08	0.096	1.99/ 10	10		
572:Lake Tanganyika region											
37:Africa											
Event	189	*	*	*	*	*	*	*	*	*	
BUL	1980Mar24	20 33 30		4.7	S	39.9			4.1	+0	
570:Kenya											
37:Africa											
Event	190	*	*	*	*	*	*	*	*	*	
BUL	1980Apr05	20 22 29		3.7	S	33.6			4.1	+0	
569:Lake Victoria region											
37:Africa											
Event	191	*	*	*	*	*	*	*	*	*	
BUL	1980May19	23 35 17		3.7	S	35.1			3.9	+0	
ISC	1980May19	23 35 13	+ 1.3	3.8	S+	35.4	0.14	3.37/ 6	6		
573:Tanzania											
37:Africa											
Event	192	*	*	*	*	*	*	*	*	*	
NEIS	1980May20	17 36 05.9		4.122	S	34.525	E		3.8	+0	
BUL	1980May20	17 36 06		4.2	S	34.5			3.6	+0	
ISC	1980May20	17 36 06.5	+ 0.42	4.14	S+	34.58	0.049	1.22/ 7	7		
573:Tanzania											
37:Africa											
Event	193	*	*	*	*	*	*	*	*	*	
BUL	1980Jun09	00 09 26		0.5	N	30.0			4.4	+0	
ISC	1980Jun09	00 09 10	+ 1.2	0.7	N+	30.1	0.11	2.73/ 6	6		
568:Uganda											
37:Africa											

agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d.	on	obs.	magnitude	(se)	type	on
Event	194	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1980Jun13	09 11 20		2 S	21 E					4.4	+0	*	*
	569:Lake Victoria region												
	37: Africa												
Event	195	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1980Sep23	09 23 39		1.5 N	30.5 E					4.6	+0	*	*
ISC	1980Sep23	09 23 31.2	+ 0.43	1.75 N	30.67 E			0.75/	6	6	4.3	+0	8 / 1
	568:Uganda												
	37: Africa												
Event	196	*	*	*	*	*	*	*	*	*	*	*	*
NEIS	1980Sep26	07 45 51.2		1.225 N	30.05 E					4.1	+0	8	*
NEIS	1980Sep26	07 45 51.2		LESS RELIABLE SOLUTION.									
BUL	1980Sep26	07 45 53.2	+ 0.51	1.0 N	30.1 E					4.4	+0	*	*
ISC	1980Sep26	07 45 53.2	+ 0.51	1.02 N	29.94 E			1.81/	9	9	4.1	+0	8 / 1
	567:Zaire												
	37: Africa												
Event	197	*	*	*	*	*	*	*	*	*	*	*	*
NEIS	1980Oct29	10 09 32.5		3.845 S	36.066 E					3.9	+0	3	*
NEIS	1980Oct29	10 09 32.5		LESS RELIABLE SOLUTION.									
BUL	1980Oct29	10 09 40		4.4 S	35.5 E					4.4	+0	*	*
ISC	1980Oct29	10 09 32.6	+ 0.71	3.86 S	35.0 E			1.70/	7	7			
	573:Tanzania												
	37: Africa												
Event	198	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1980Nov20	11 15 43		5.2 S	35.4 E					4.2	+0	*	*
NEIS	1980Nov20	11 15 44.3		5.163 S	35.134 E					4.3	+0	8	*
NEIS	1980Nov20	11 15 44.3		LESS RELIABLE SOLUTION.									
ISC	1980Nov20	11 15 42.0	+ 0.69	5.28 S	35.4 E			1.79/	12	12	4.4	+0	8 / 3
	573:Tanzania												
	37: Africa												
Event	199	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1980Dec04	21 06 05		2.1 S	38.0 E					4.3	+0	*	*
ISC	1980Dec04	21 05 41	+ 2.6	2.1 S	37.5 E			1.29/	6	6			
	570:Kenya												
	37: Africa												
Event	200	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1980Dec11	17 27 55		1.0 S	30.2 E					4.2	+0	*	*
	572:Lake Tanganyika region												
	37: Africa												
Event	201	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1980Dec12	18 16 26		0.7 N	29.9 E					4.7	+0	*	*
ISC	1980Dec12	18 16 33	+ 2.1	0.4 N	30.2 E			6.72/	8	8			
	568:Uganda												
	37: Africa												
Event	202	*	*	*	*	*	*	*	*	*	*	*	*
BUL	1981Feb07	00 12 24		1.8 N	30.3 E					4.3			
ISC	1981Feb07	00 12 22.9	+ 0.75	1.85 N	30.86 E			2.17/	10	11	4.8		8 / 2
	568:Uganda												
	37: Africa												
Event	203	*	*	*	*	*	*	*	*	*	*	*	*
NAD	1981Mar04	01 58 36		2.3 S	28.4 E					4.9		8	*
NEIS	1981Mar04	01 58 36		1.332 N	30.532 E					4.8		8	*
ISC	1981Mar04	01 58 33.5	+ 0.37	1.33 N	30.54 E			2.01/	56	59	5.0		8 / 2
	568:Uganda												
	37: Africa												
Event	204	*	*	*	*	*	*	*	*	*	*	*	*
	37: Africa												

agency	date	time	(s.e.)	latitude (s.e.)	longitude (s.e.)	depth(s.e.)	s.d.	on	obs.	magnitude	(se)	type	on
BUL	1981Oct19	19 24 42		3.8 S	30.7 E								
ISC	1981Oct19	19 24 16	+ 9.3	2.1 S+ 0.75	31.8 E+ 0.77	0	4.45/	6	6	4.1			
569:Lake Victoria region													
37:Africa													
Event	205	* * * * *		* * * * *	* * * * *								
BUL	1981Dec19	09 53 05		3.9 S	30.5 E								
ISC	1981Dec19	09 53 15.8	+ 0.73	4.90 S+ 0.058	30.02 E+ 0.092	0	0.40/	4	4	3.7			
572:Lake Tanganyika region													
ISC	1981Dec19	09 53 15.8		Poorly determined									
37:Africa													

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