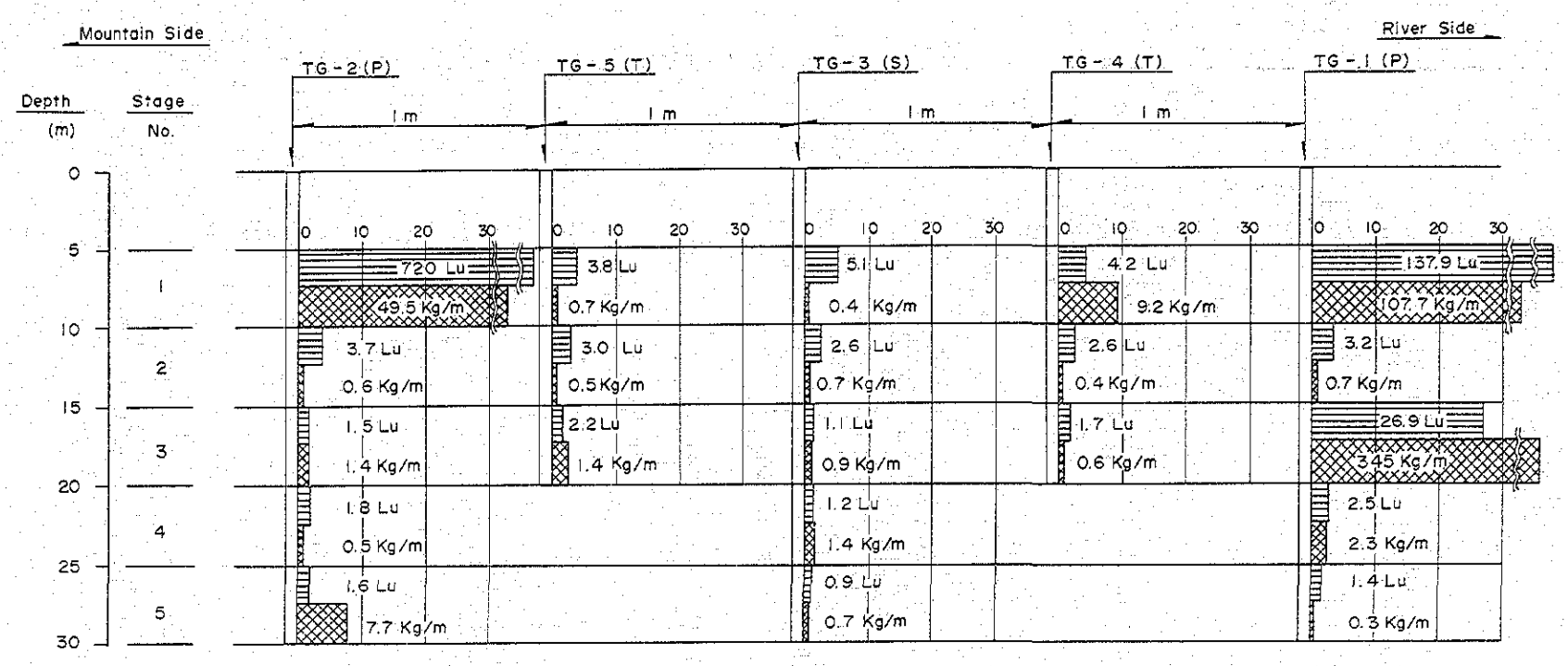

Note :

Injecting unit (stage)

(Upper part) Lugeon value (Lu)

(Lower part) Injected cement weight per borehole linear meter (Kg/m)

(P) : Primary hole

(S) : Secondary hole

(T) : Tertiary hole

FIG- E.10 : GRAPH OF GROUT TAKE AND LUGEON VALUE IN THE CROSS SECTION OF TEST GROUT SITE

HIS MAJESTY'S GOVERNMENT OF NEPAL
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FIG-E.10

FIG-E.11

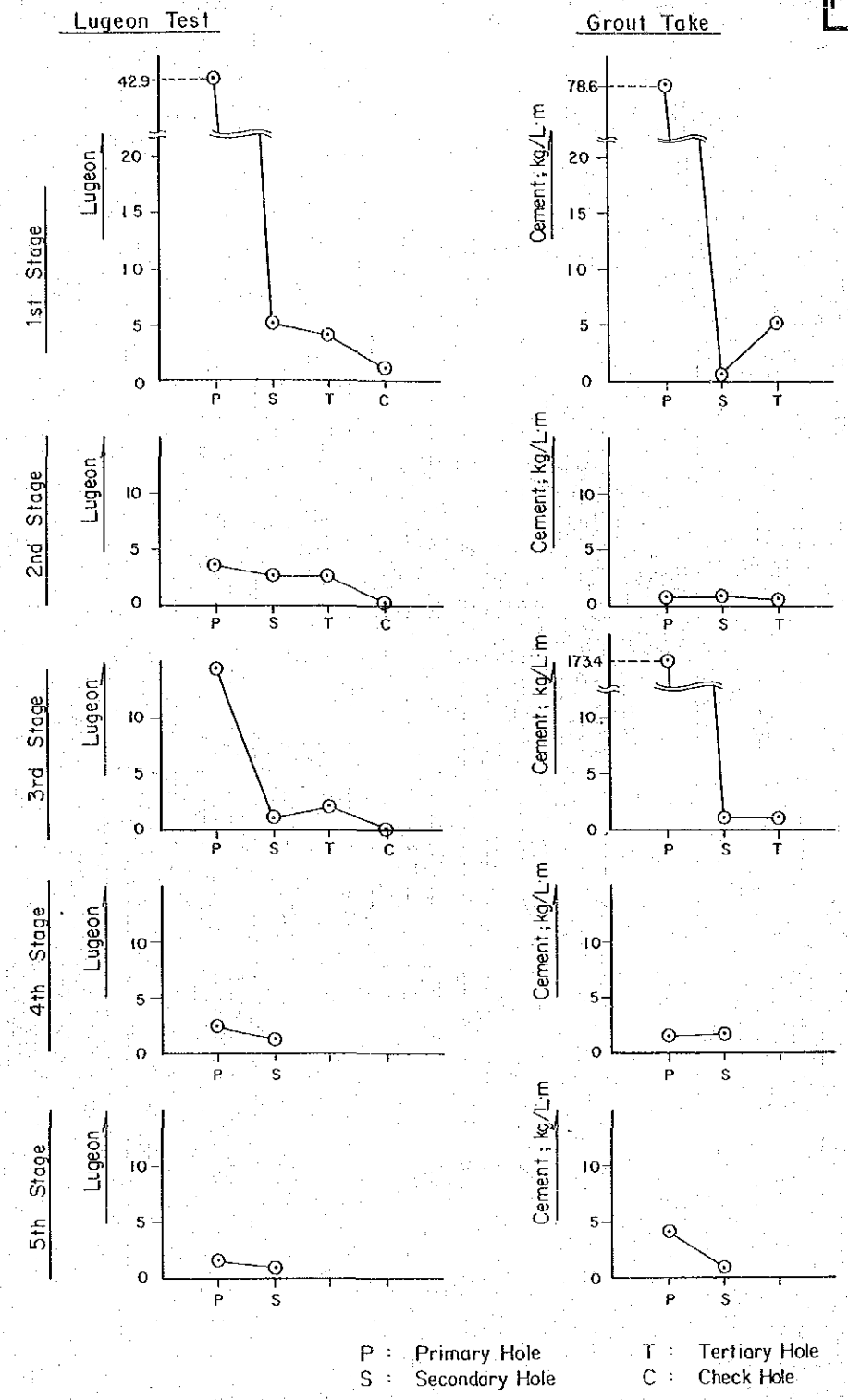

FIG-E.11 : EFFECT OF GROUTING

HIS MAJESTY'S GOVERNMENT OF NEPAL
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FIG-E.12

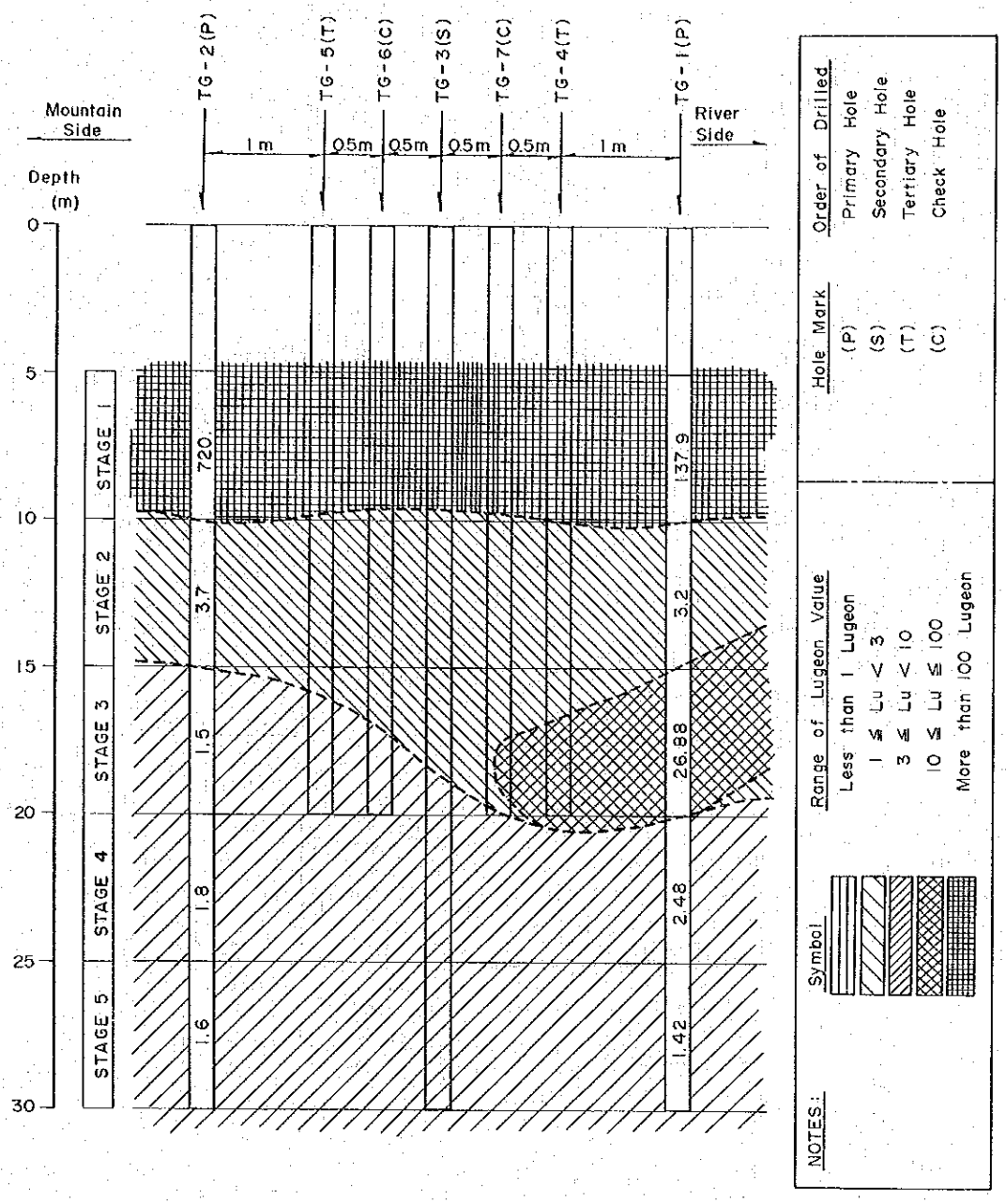

FIG- E.12 :

PERMEABILITY (BY THE LUGEON TEST) MAP IN THE CROSS SECTION OF THE TEST GROUT SITE(1) BEFORE GROUTING: i.e. LUGEON TESTS IN PRIMARY HOLES

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC POWER DEVELOPMENT PROJECT
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FIG-E.13

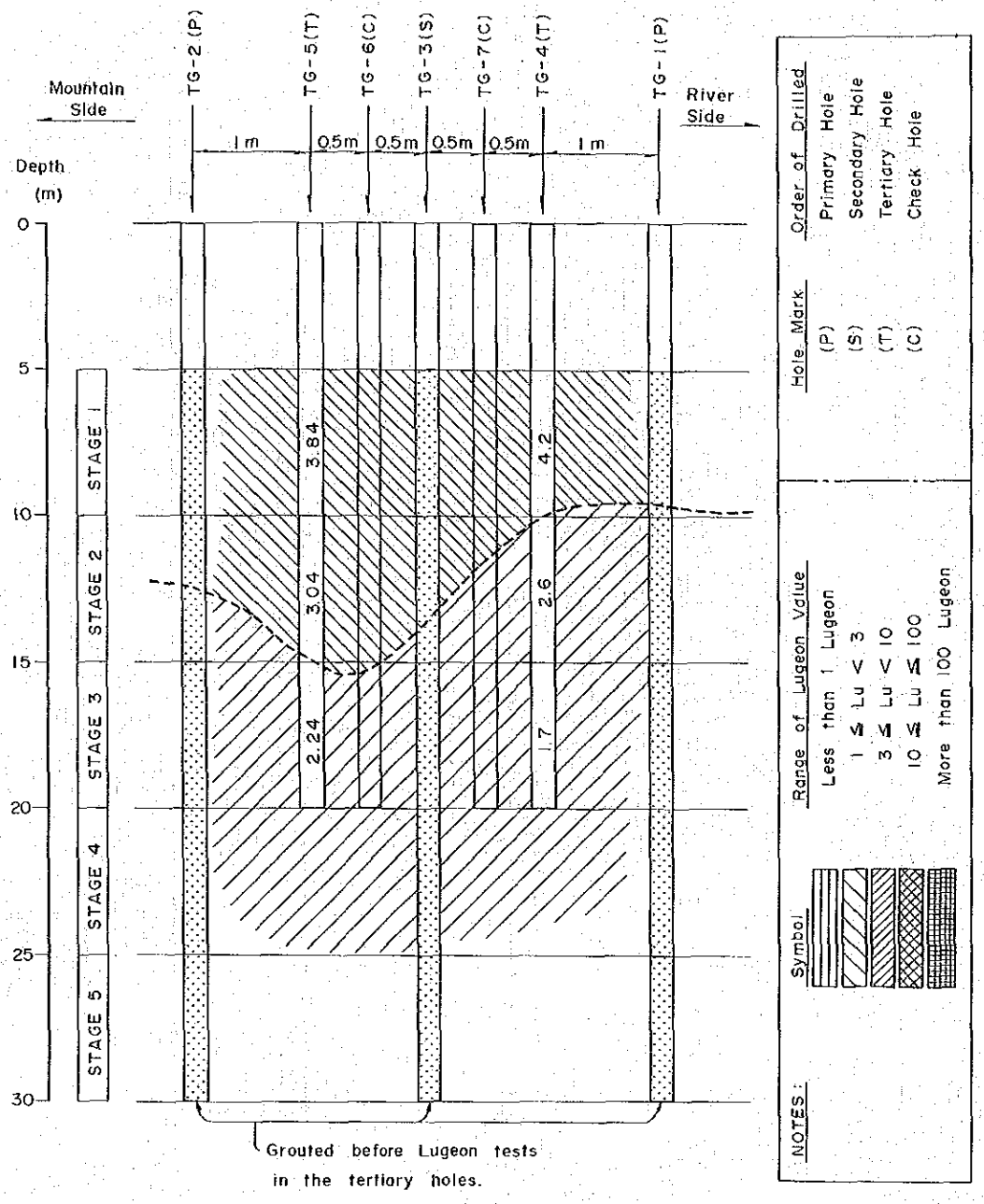

FIG- E.13 : PERMEABILITY (BY THE LUGEON TEST) MAP IN THE CROSS SECTION OF THE TEST GROUT SITE(2) AFTER GROUTED IN 2M APART: i.e. LUGEON TESTS IN TERTIARY HOLES

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC POWER DEVELOPMENT PROJECT
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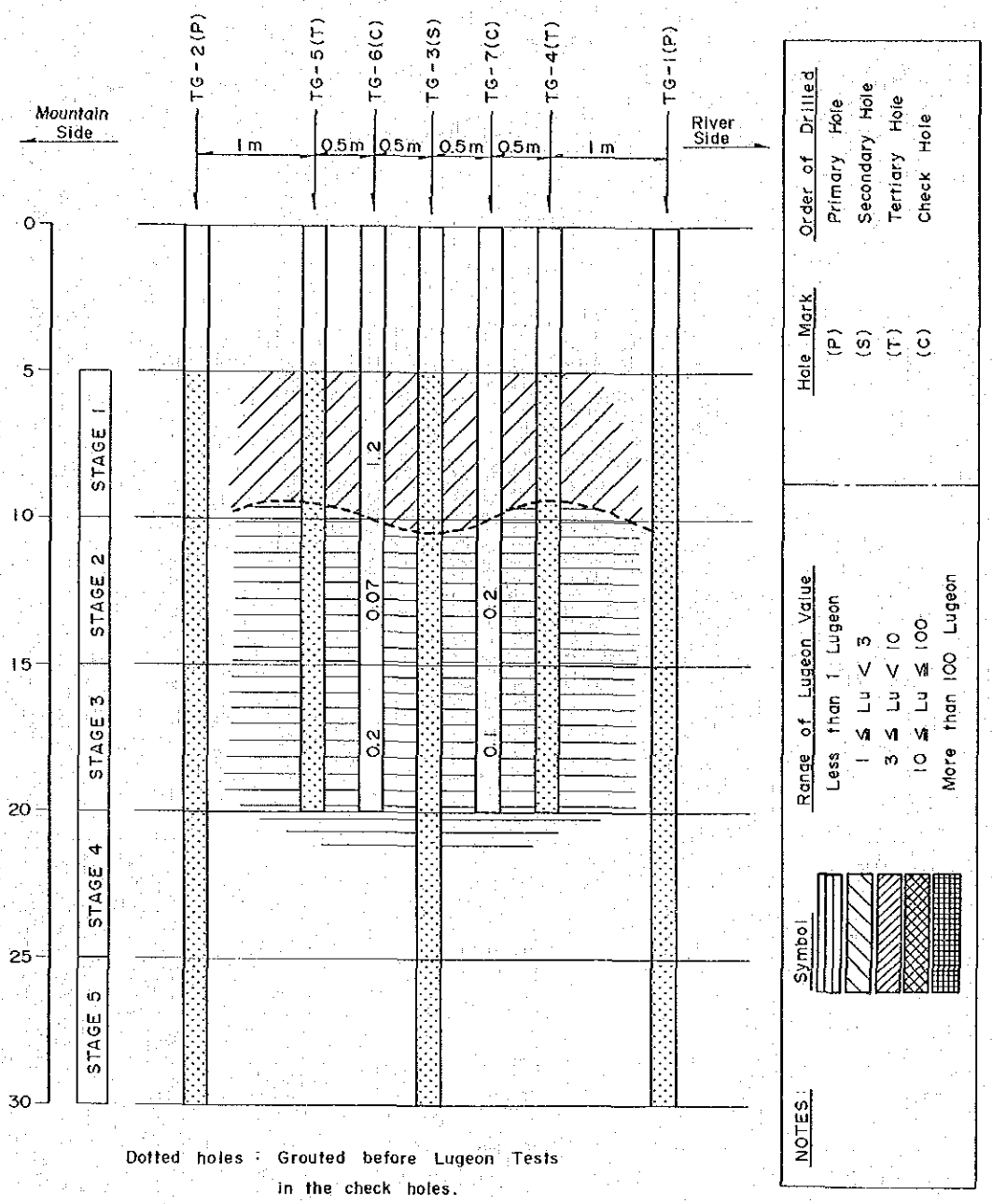
FIG-E.14



Dotted holes : Grouted before Lugeon Tests in the check holes.

FIG- E.14 : PERMEABILITY (BY THE LUGEON TEST) MAP IN THE CROSS SECTION OF THE TEST GROUT SITE(3) AFTER GROUTED IN 1M APART: i.e. LUGEON TESTS IN CHECK HOLES

HIS MAJESTY'S GOVERNMENT OF NEPAL
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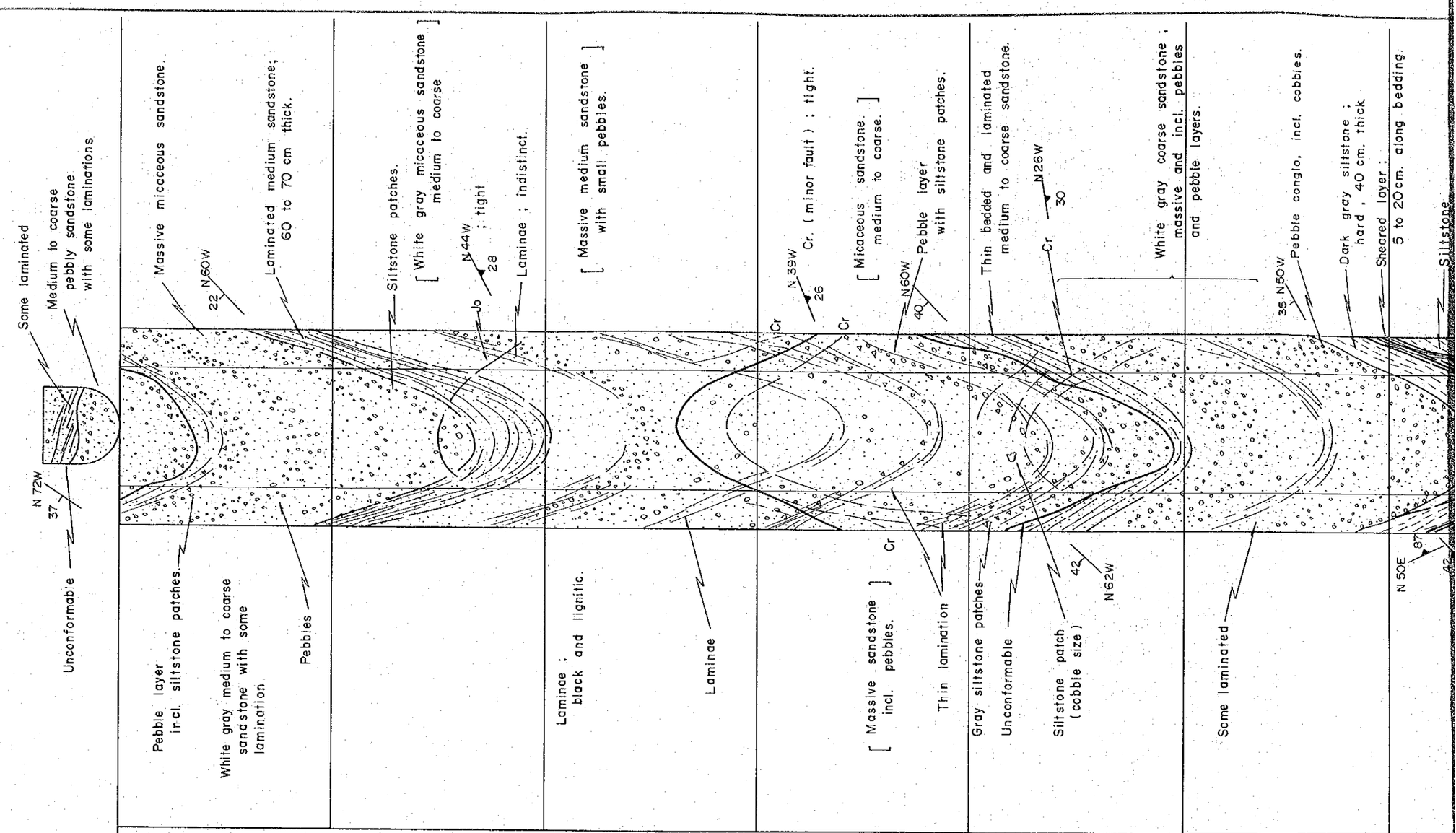

General Description	White gray, medium to coarse sandstone ; micaceous and pebbly. including pebble layers and some indistinct lamina layers. Moderately hard				Dark gray siltstone hard.
Rock Classification	[CH]				
Seismic Wave Velocity	2.0 km/sec	3.6 km/sec	1.7 km/sec	3.2 km/sec	
In-situ Rock Tested	BS-15, BS-14			BS-13, BS-12, BS-11, PL-3	
Distance (m)	50 (End), 45, 40		35	30, 25	20

FIG- E.15

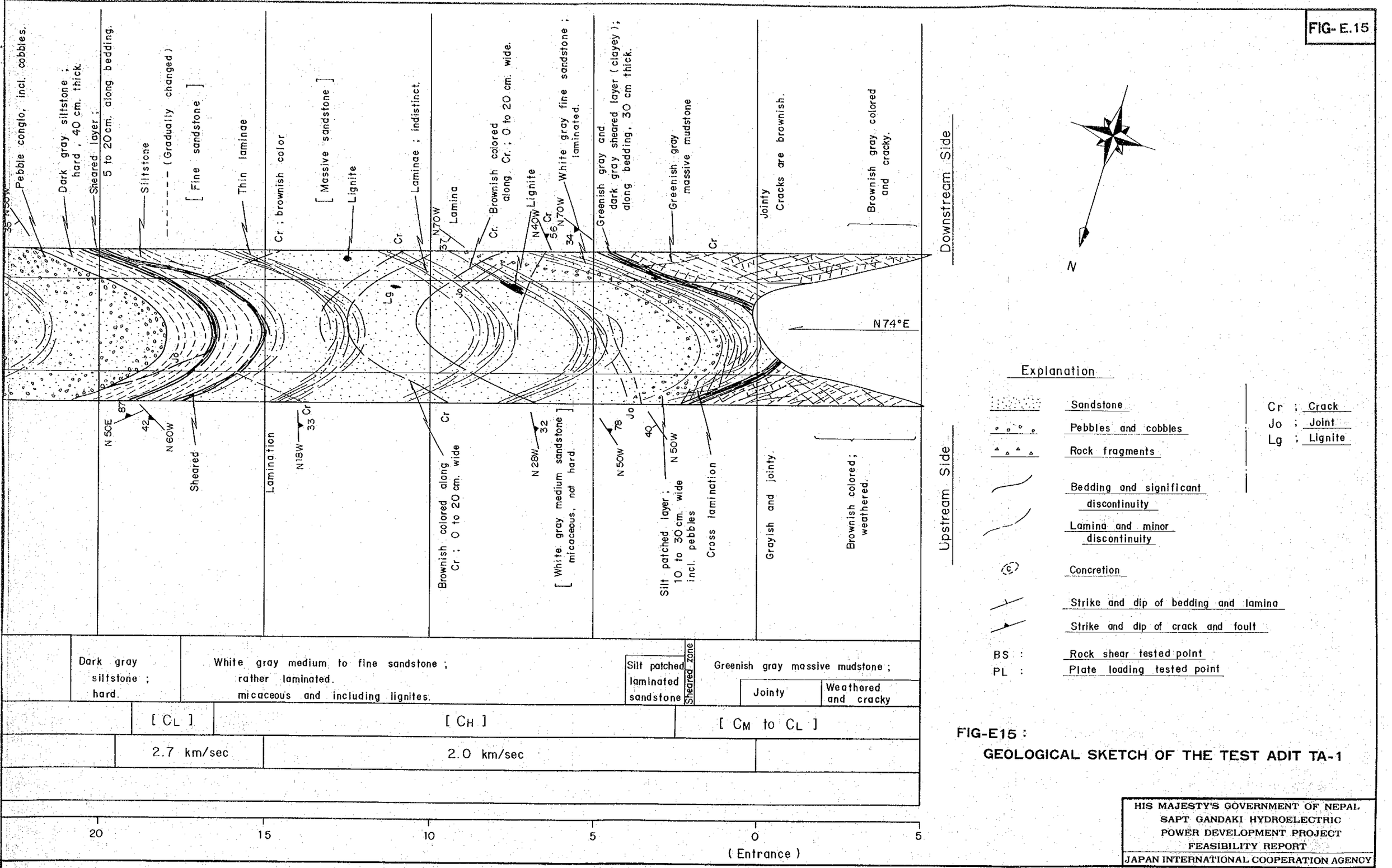

FIG-E15 :
GEOLOGICAL SKETCH OF THE TEST ADIT TA-1

HIS MAJESTY'S GOVERNMENT OF NEPAL
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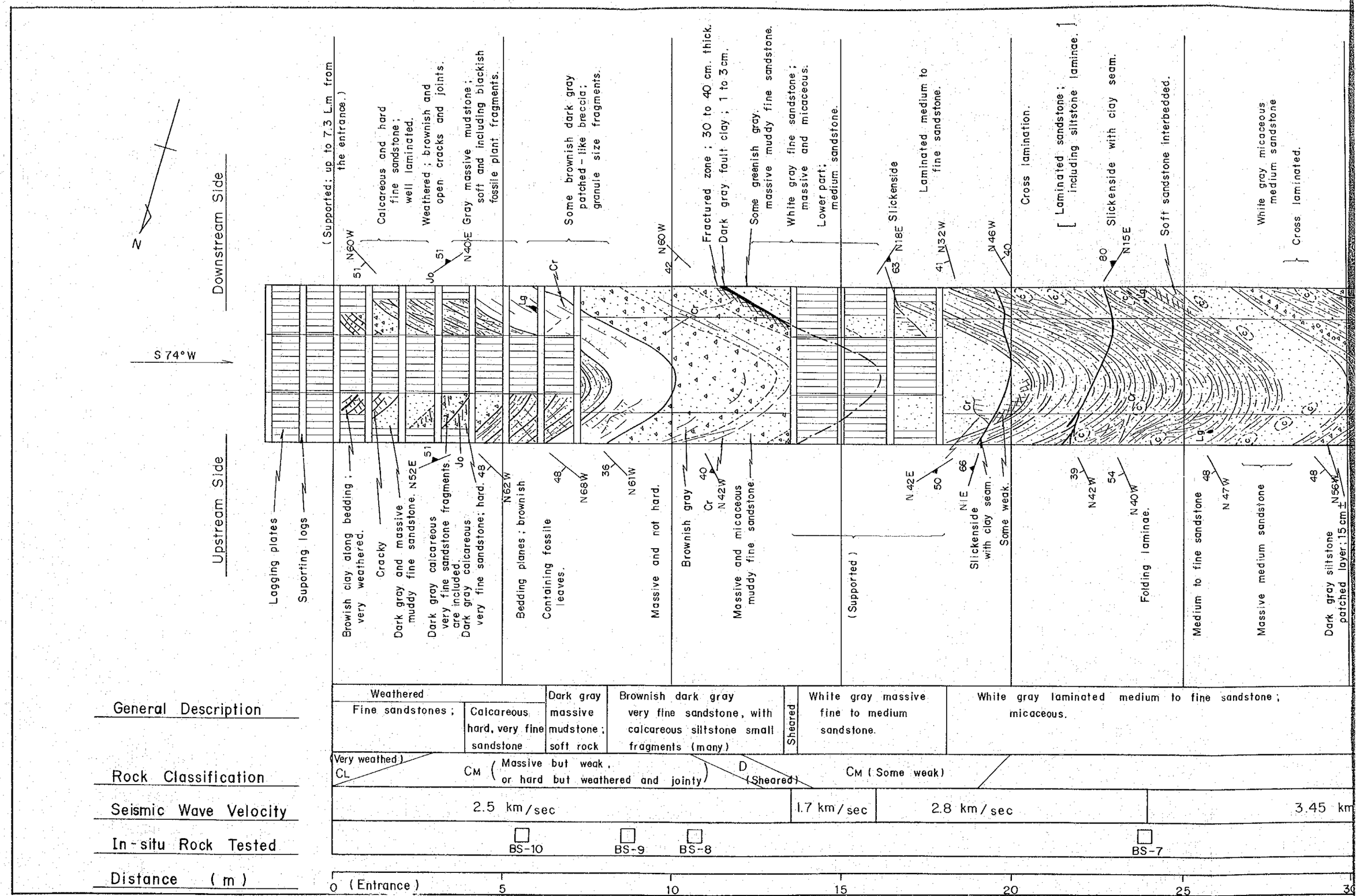
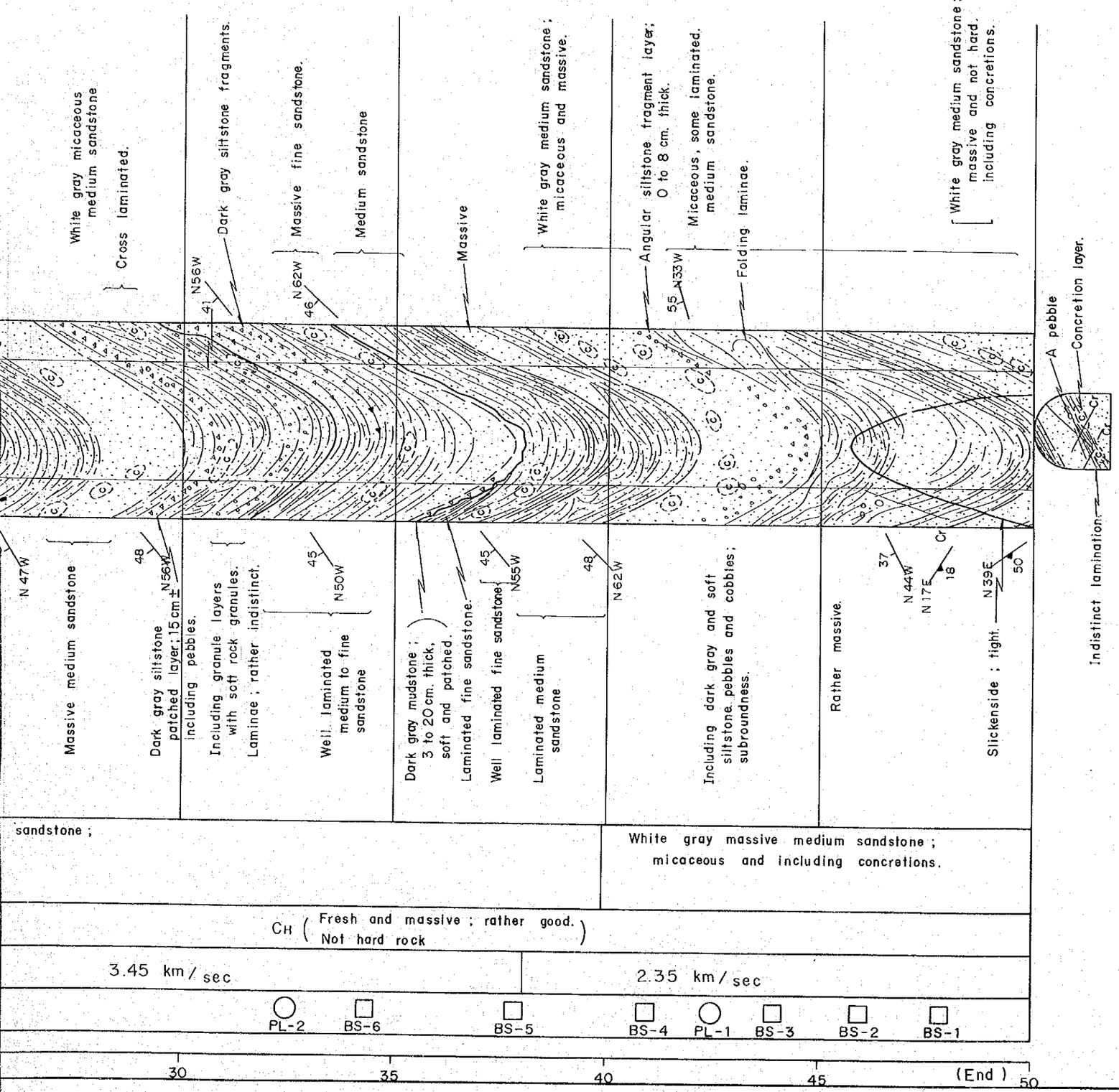

N
S 74°W
Downstream Side
Upstream Side
Lagging plates
Supporting logs
(Supported; up to 7.3 L.m from the entrance.)
Calcareous and hard fine sandstone; well laminated.
Weathered; brownish and open cracks and joints.
Gray massive mudstone; soft and including blackish fossile plant fragments.
Some brownish dark gray patched-like breccia; granule size fragments.
Fractured zone; 30 to 40 cm. thick.
Dark gray fault clay; 1 to 3 cm.
Some greenish gray, massive muddy fine sandstone.
White gray fine sandstone; massive and micaceous.
Lower part; medium sandstone.
Slickenside
Laminated medium to fine sandstone.
Cross lamination.
Laminated sandstone; including siltstone laminae.
Slickenside with clay seam.
Soft sandstone interbedded.
White gray micaceous medium sandstone
Cross laminated.
Brownish clay along bedding; very weathered.
Cracky
Dark gray and massive muddy fine sandstone. N52E 51
Dark gray calcareous very fine sandstone fragments are included. Jo
Dark gray calcareous very fine sandstone; hard. 48
N62W
Bedding planes; brownish
Containing fossile leaves. 48 N68W
36 N61W
Massive and not hard.
Brownish gray 40
Cr N42W
Massive and micaceous muddy fine sandstone.
(Supported)
N42E 50
66 N1E
Slickenside with clay seam.
Some weak.
39 N42W
54 N40W
Folding laminae.
Medium to fine sandstone 48 N47W
Massive medium sandstone
Dark gray siltstone patched layer; 15 cm± N56W
General Description
Weathered
Fine sandstones; Calcareous hard, very fine sandstone
Dark gray massive mudstone; soft rock
Brownish dark gray very fine sandstone, with calcareous siltstone small fragments (many)
Sheared
White gray massive fine to medium sandstone.
White gray laminated medium to fine sandstone; micaceous.
Rock Classification
(Very weathered) CL
CM (Massive but weak, or hard but weathered and jointy)
D (Sheared)
CM (Some weak)
Seismic Wave Velocity
2.5 km/sec
1.7 km/sec
2.8 km/sec
3.45 km
In-situ Rock Tested
BS-10
BS-9
BS-8
BS-7
Distance (m)
0 (Entrance)
5
10
15
20
25
30

FIG- E.16



Explanation

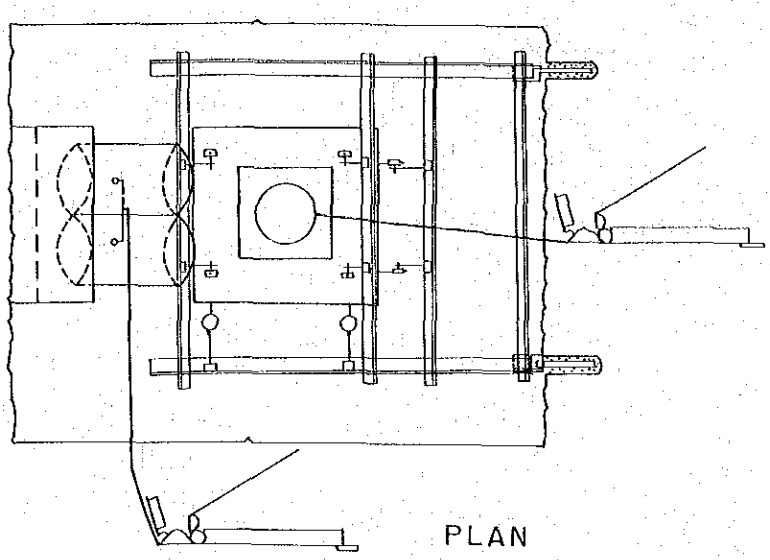
- Sandstone
- Pebbles and cobbles
- Rock fragments
- Bedding and significant discontinuity.
- Lamina and minor discontinuity
- Concretion
- Strike and dip of bedding and lamina
- Strike and dip of crack and foult.
- BS : Rock shear tested point
- PL : Plate loading tested point

Cr ; Crack
Jo ; Joint
Lg ; Lignite

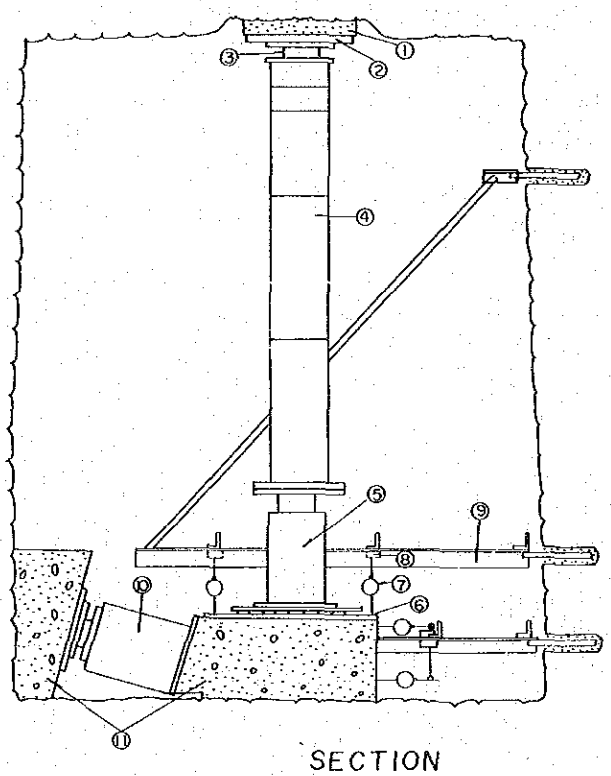
FIG-E.16 : GEOLOGICAL SKETCH OF THE TEST ADIT TA-2

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
FEASIBILITY REPORT
JAPAN INTERNATIONAL COOPERATION AGENCY

FIG-E.17



PLAN



SECTION

①	Mortar
②	Plate
③	Universal head
④	Pipe saports
⑤	Hydraulic jack(100ton)
⑥	Plate
⑦	Dial gauge
⑧	Magnet stand
⑨	Angle
⑩	Hydraulic jack(200 ton)
⑪	Concrete block

FIG-E.17 : THE BLOCK SHEAR TEST ARRANGEMENTS

HIS MAJESTY'S GOVERNMENT OF NEPAL
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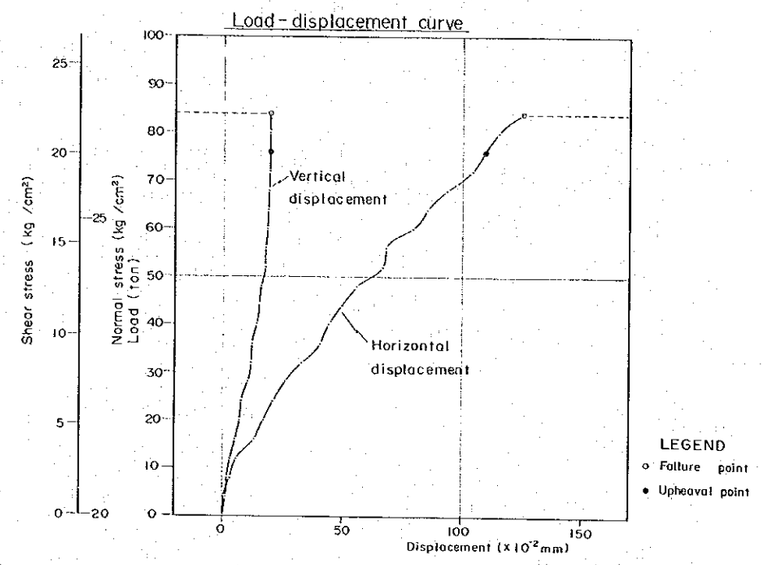
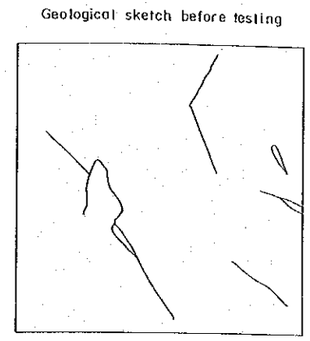
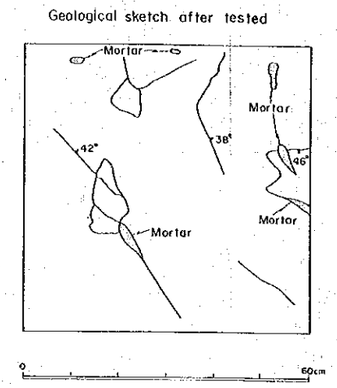
FIG- E.18

BS I LOADING N = 72 ton $\theta = 17°$



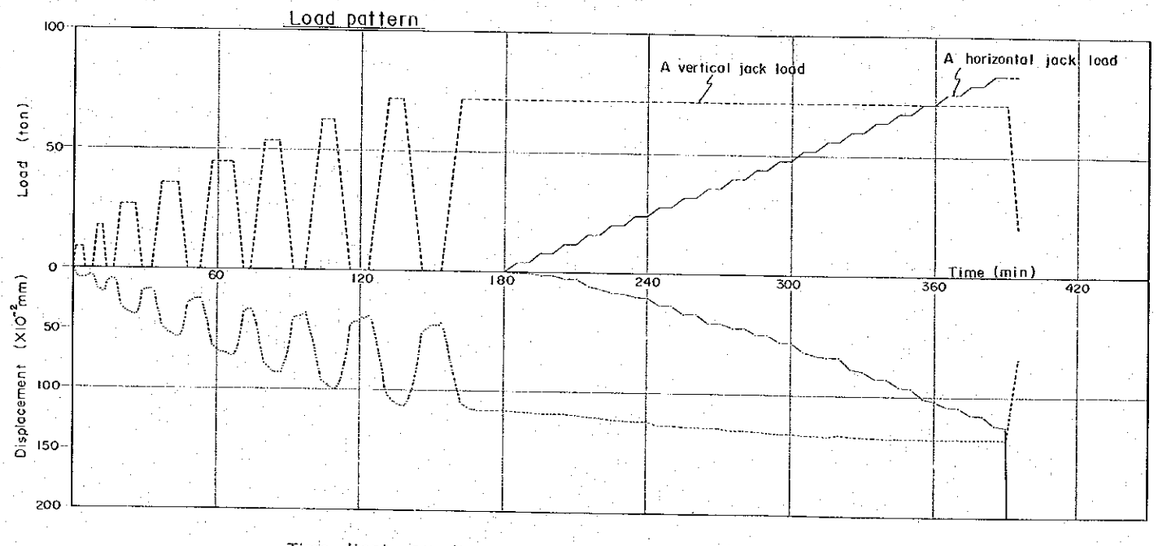




LEGEND
- ○ Failure point
- ● Upheaval point

Rock type : Sand stone.

Note : White gray.
medium sandstone.
massive and micaceous.



Time-displacement curve

LEGEND
- Horizontal displacement
- Vertical displacement

FIG- E.18 : BLOCK SHEAR TEST RECORD, BS-1

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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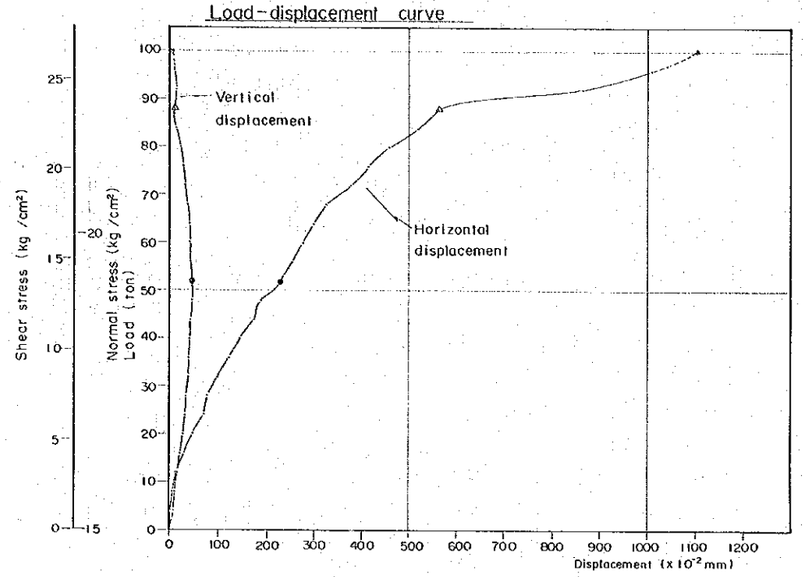
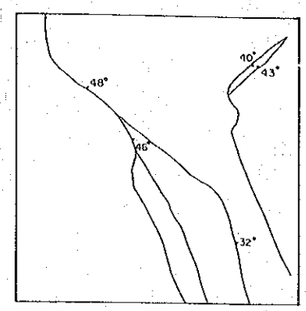
FIG-.E.19

BS 2 LOADING N = 54 ton θ = 17°

Load-displacement curve

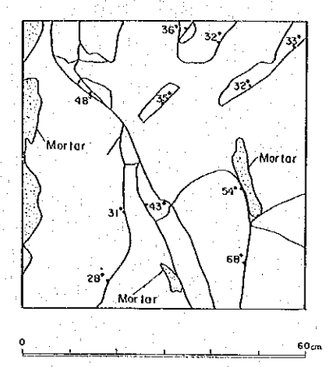


Geological sketch before testing



Force (S19°E)

Geological sketch after tested

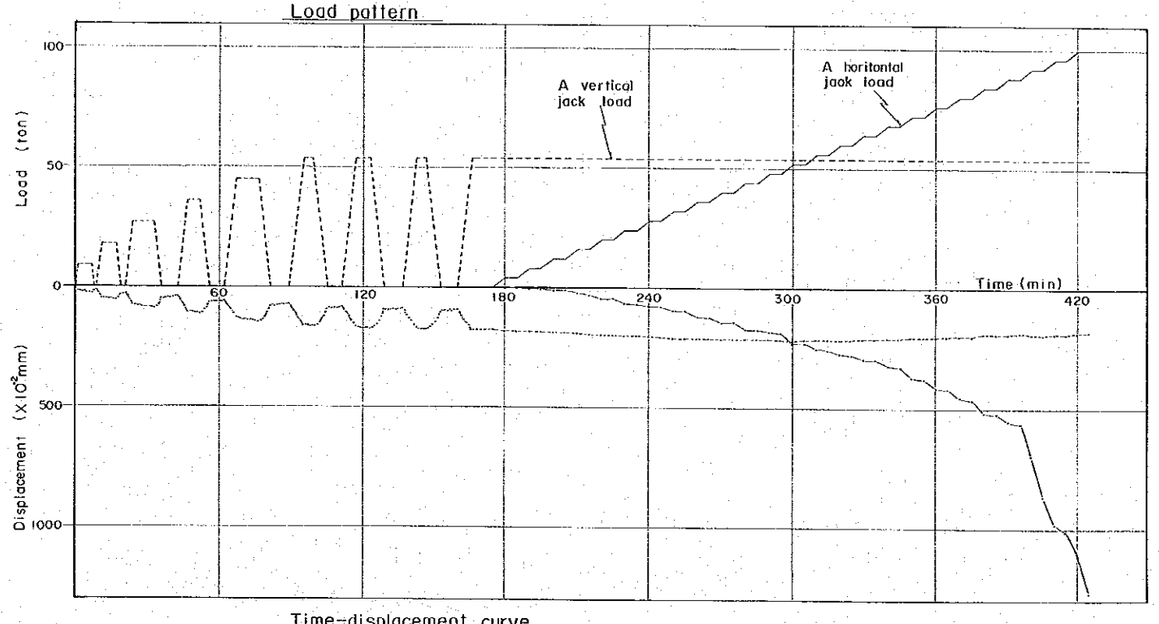


Rock type : Sand stone

Note : White gray.
fine to medium sandstone.
massive and micaceous.

LEGEND
- ○ Failure point
- △ Principal yield point
- ● Upheaval point

Load pattern



LEGEND
- Horizontal displacement
- Vertical displacement

Time-displacement curve

FIG- E.19 : BLOCK SHEAR TEST RECORD, BS-2

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
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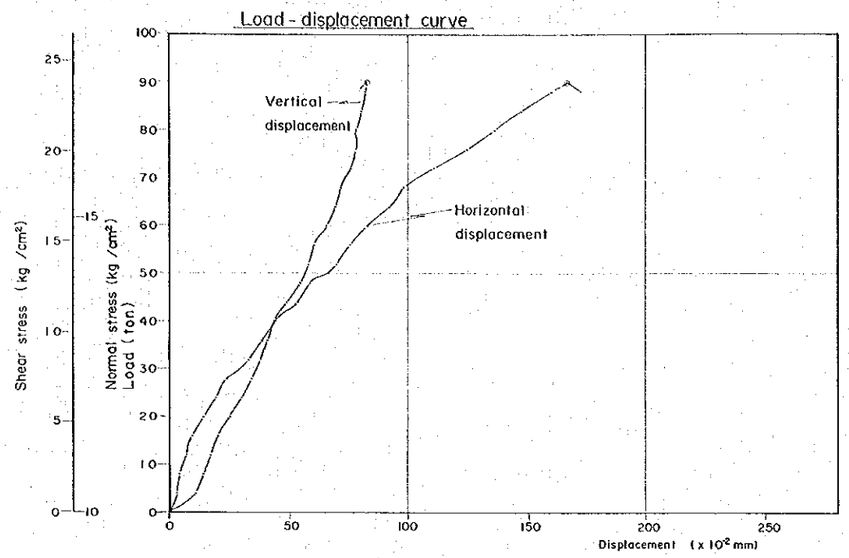
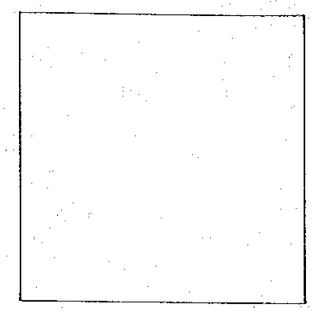
FIG- E.20

BS 3 LOADING N = 36 ton θ = 17°

Load - displacement curve

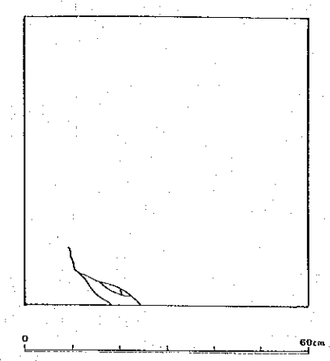


Geological sketch before testing



Force (S 8° E)

Geological sketch after tested



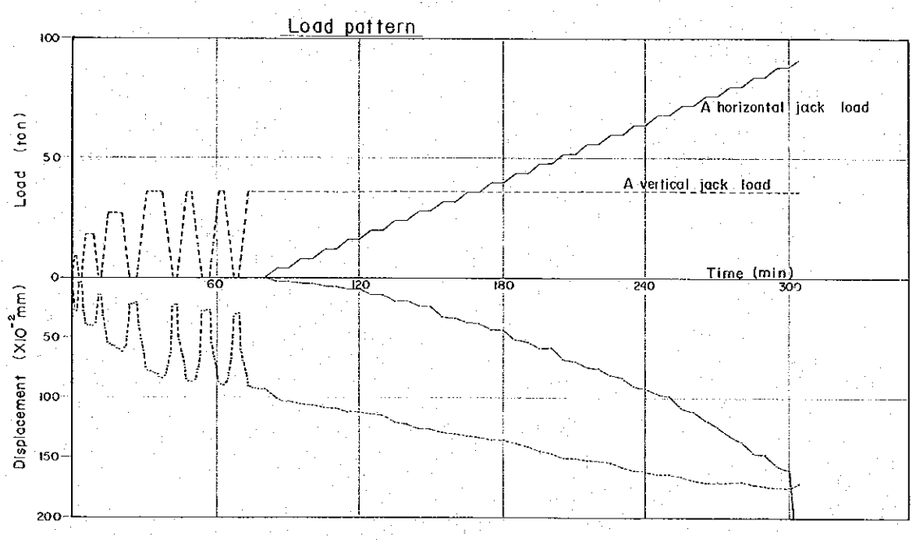
LEGEND

○ Failure point

Rock type : Sand stone.

Note : White gray.
medium sandstone.
massive and micaceous.

Load pattern



LEGEND

——— Horizontal displacement

- - - - Vertical displacement

Time-displacement curve

FIG- E.20 : BLOCK SHEAR TEST RECORD, BS-3

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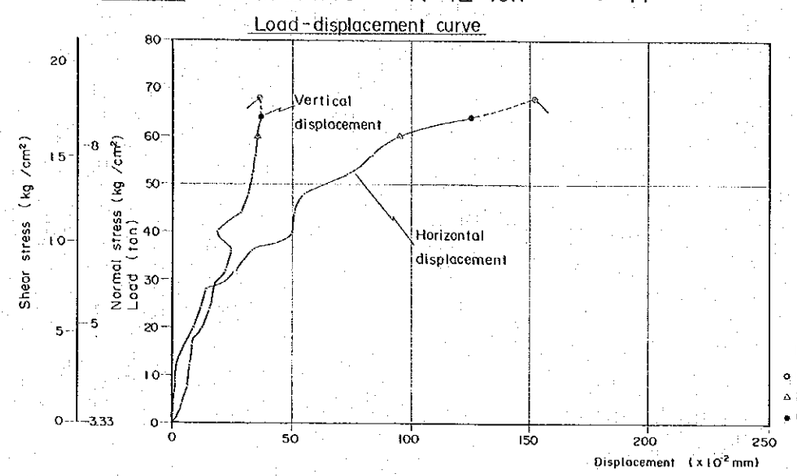
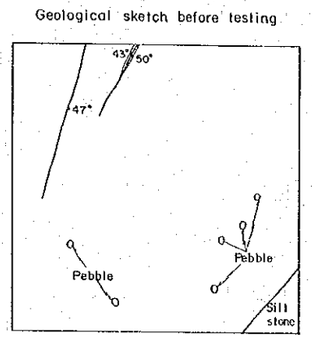
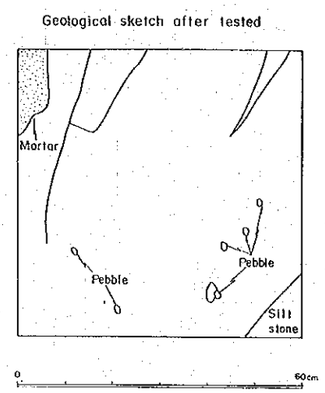
FIG- E.21

BS 4 LOADING N=12 ton θ=17°





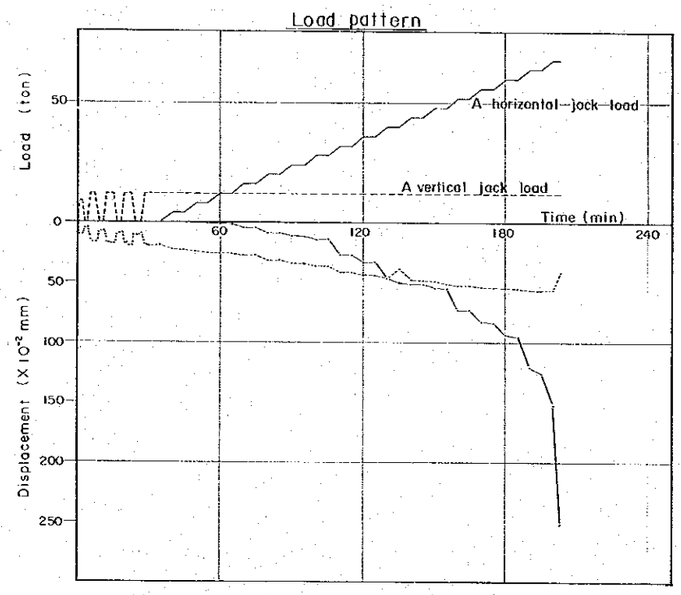


Force (S 17°E)

LEGEND
- o Failure point
- △ Principal yield point
- • Upheaval point

Rock type : Sand stone.

Note : White gray.
medium to coarse sandstone
massive and micaceous.



Time-displacement curve

LEGEND
- Horizontal displacement
- Vertical displacement

FIG- E.21 : BLOCK SHEAR TEST RECORD, BS-4

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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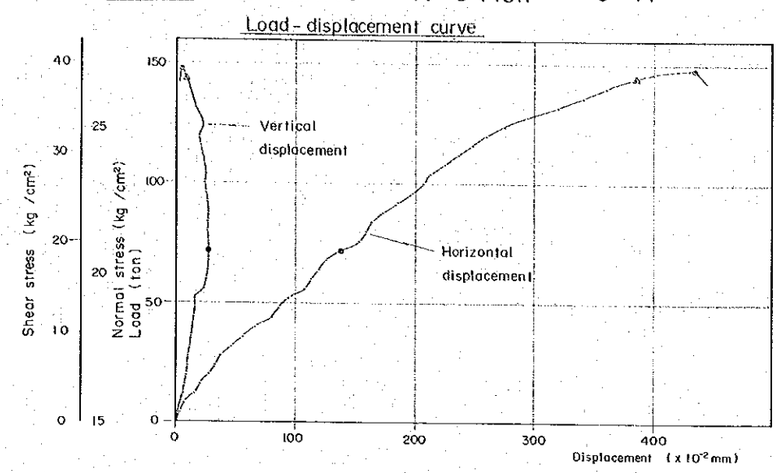
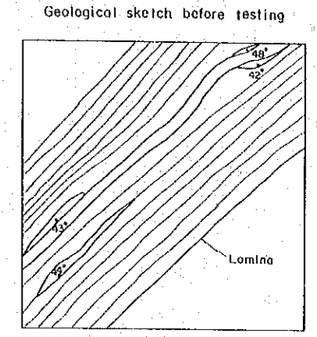
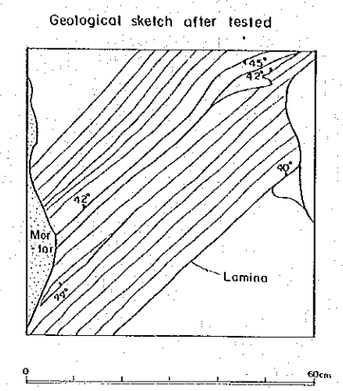
FIG- E.22

BS 5 LOADING N = 54 ton θ = 17°





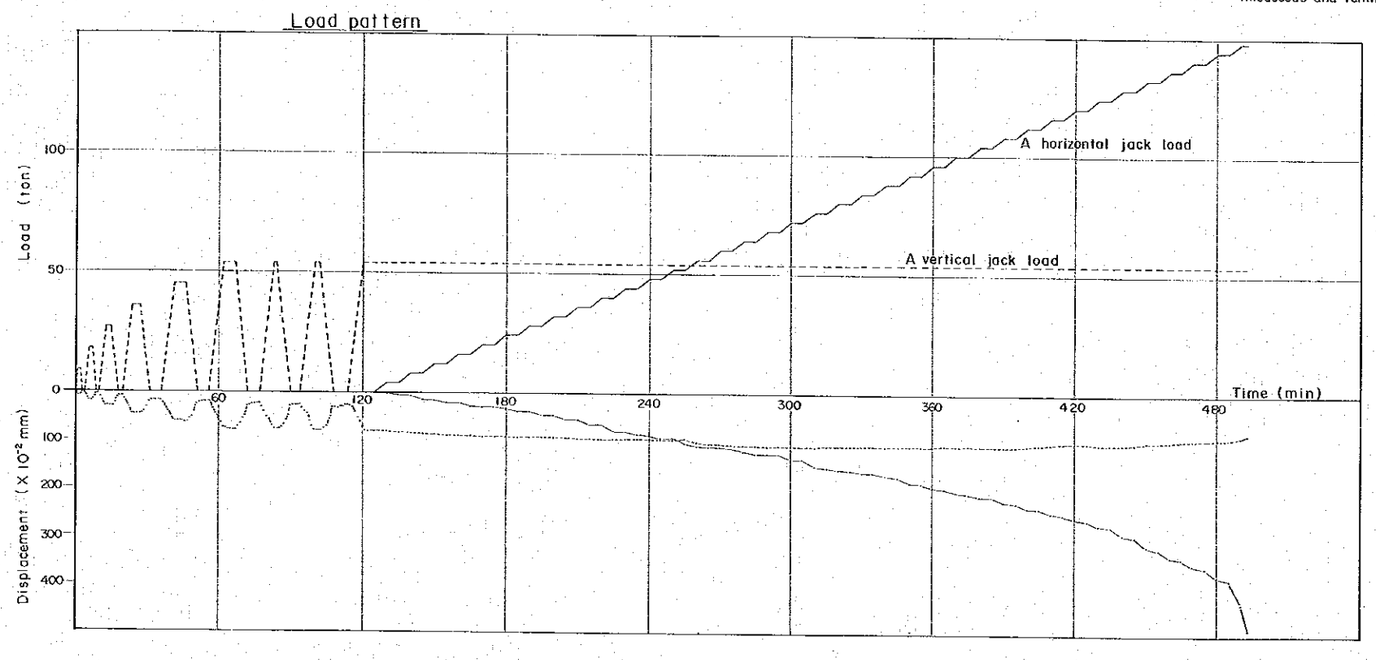


LEGEND
- ○ Failure point
- △ Printipal yield point
- ● Upheaval point

Force [S 15° E]

Rock type : Sand stone

Note : White gray. fine sandstone. micaceous and laminated.



Time-displacement curve

LEGEND
- Horizontal displacement
- Vertical displacement

FIG- E.22 : BLOCK SHEAR TEST RECORD, BS-5

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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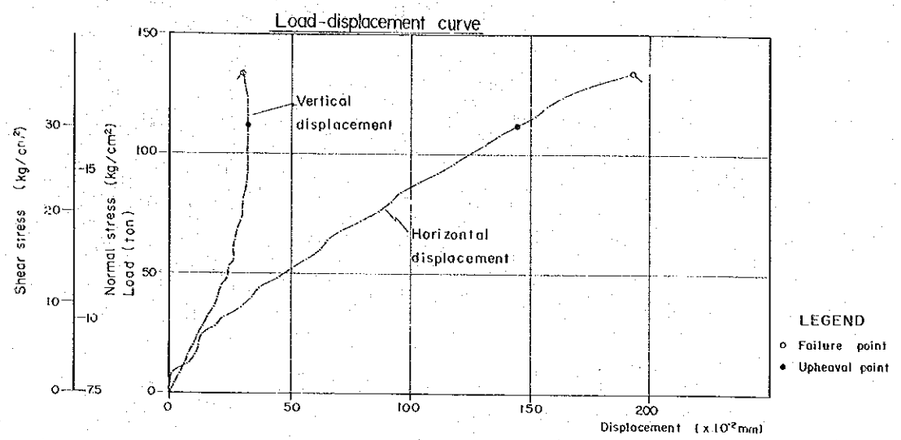
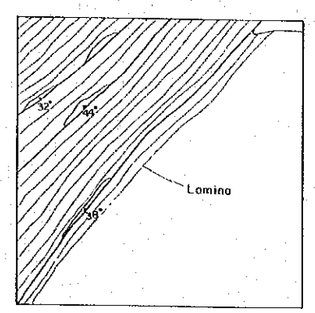
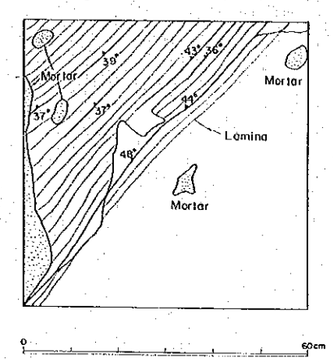
FIG- E.23

BS 6 LOADING N=27 ton θ=17°

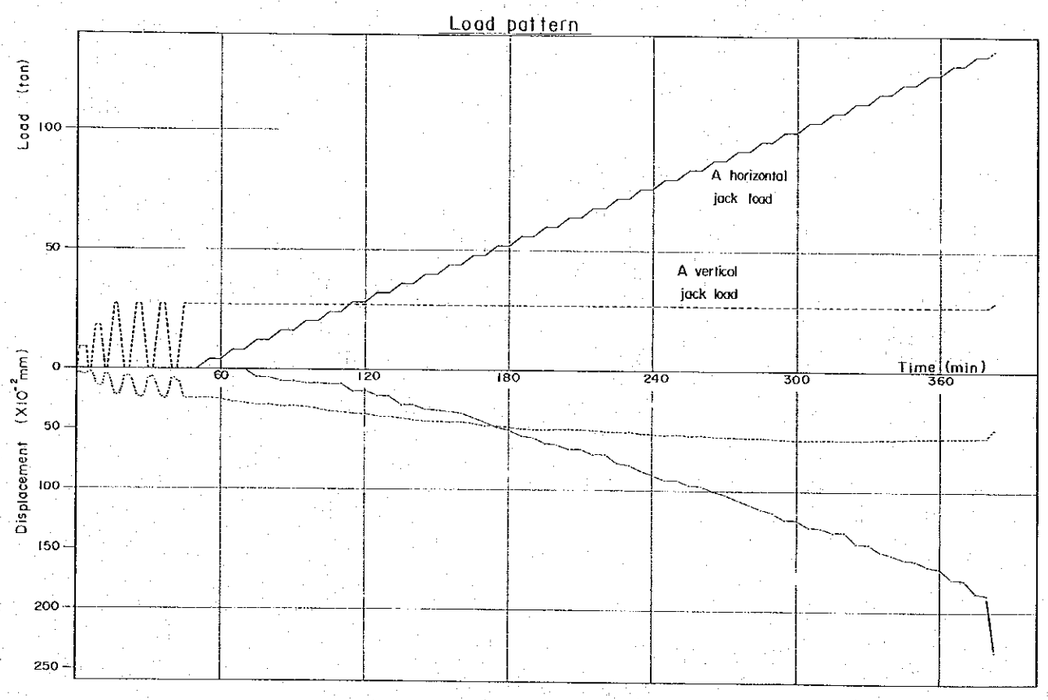






Rock type : Sand stone.

Note : White gray.
fine sandstone.
micaceous and laminated.



Time-displacement curve

FIG- E.23 : BLOCK SHEAR TEST RECORD, BS-6

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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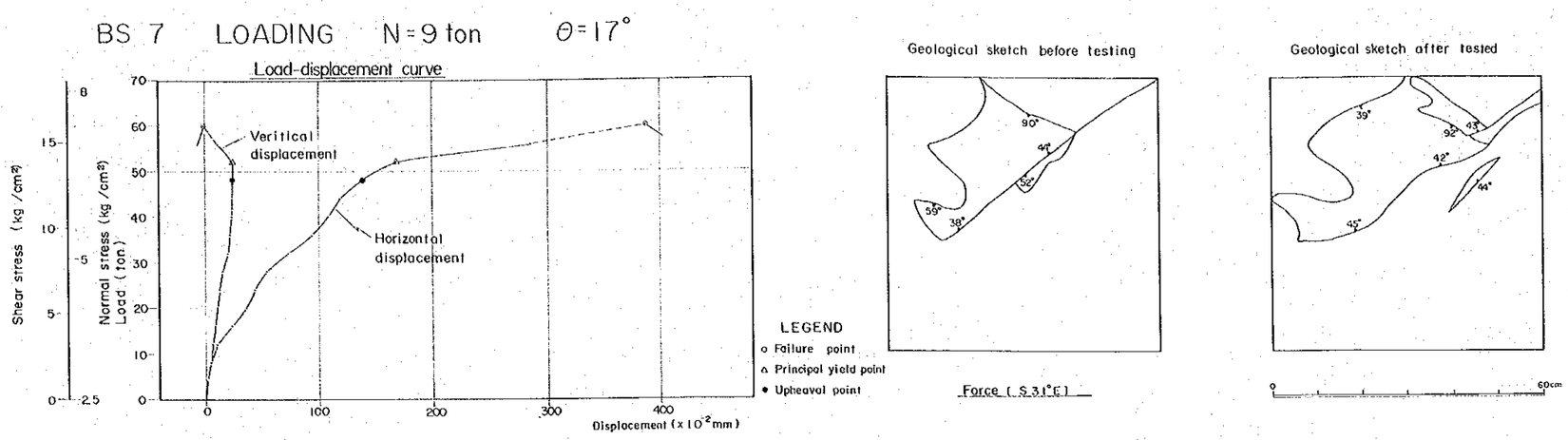
FIG- E.24



Rock type : Sand stone.

Note : White gray.
massive and micaceous.
medium to fine sandstone.

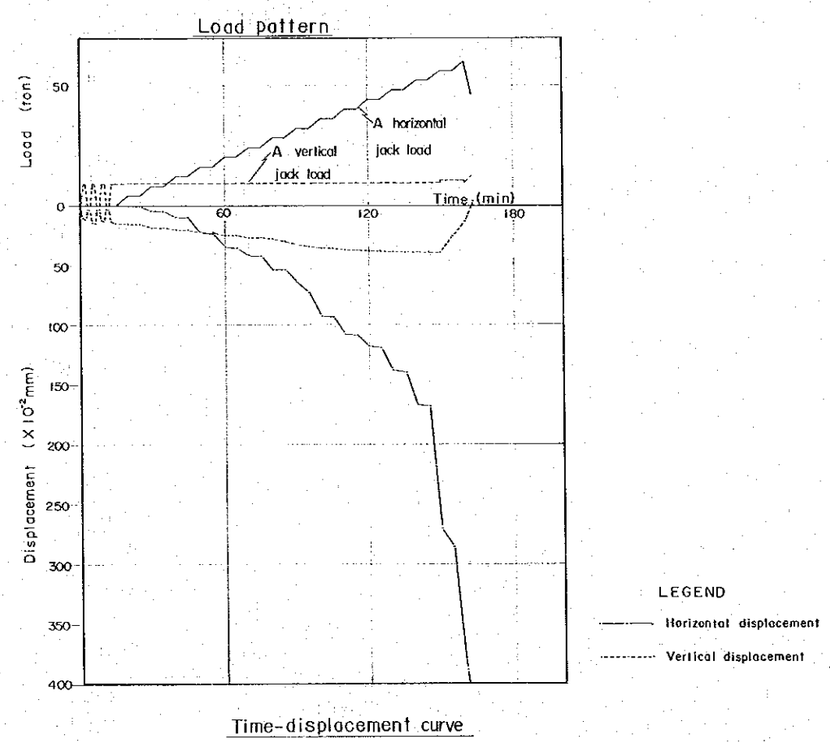


FIG- E.24 : BLOCK SHEAR TEST RECORD, BS-7

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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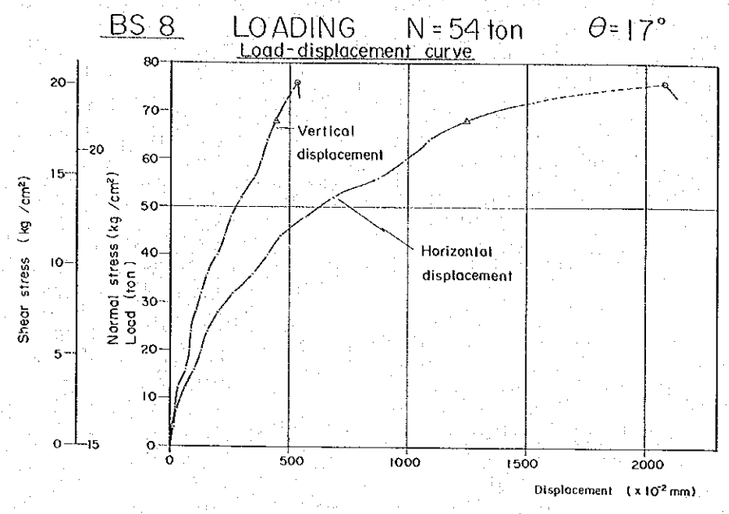
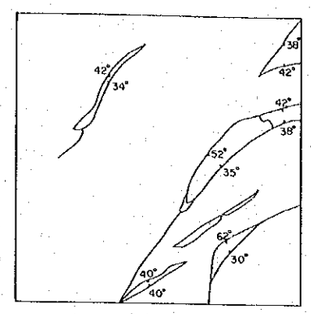
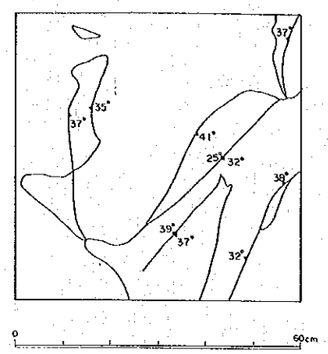
FIG- E.25



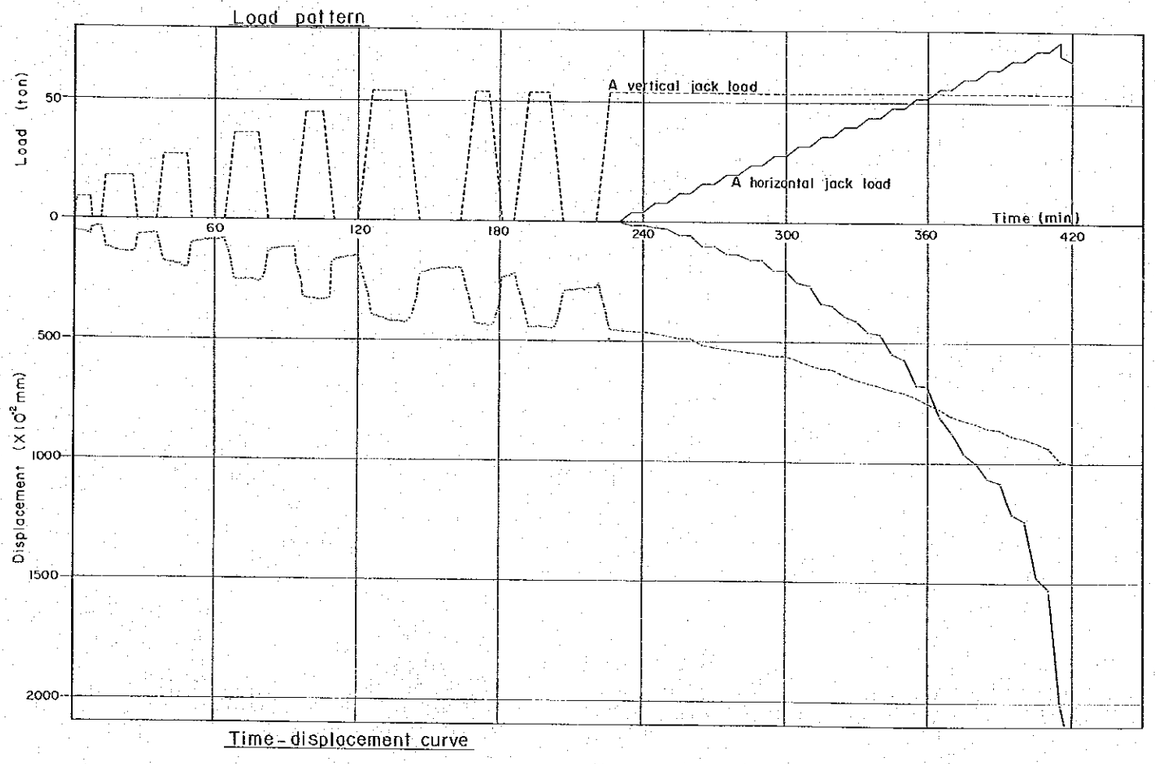
LEGEND
- o Failure point
- Δ Principal yield point





Rock type : Mud stone.

Note : Brownish gray.



LEGEND
- Horizontal displacement
- Vertical displacement

FIG- E.25 : BLOCK SHEAR TEST RECORD, BS-8

HIS MAJESTY'S GOVERNMENT OF NEPAL
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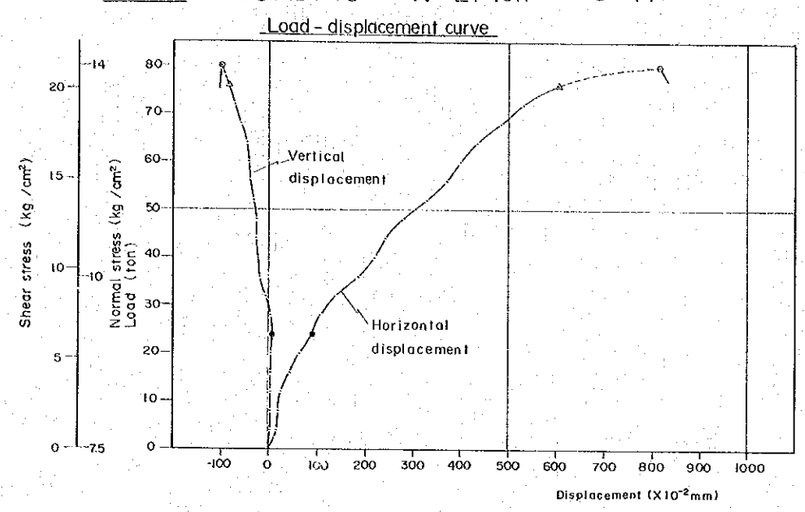
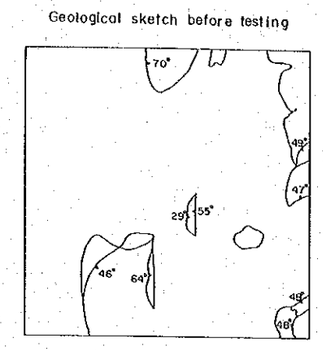
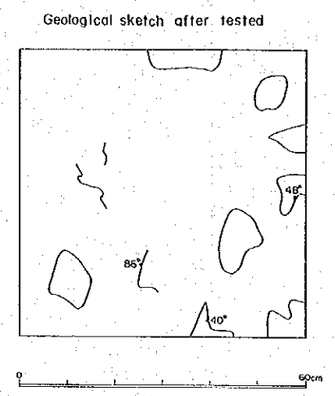
FIG- E.26

BS 9 LOADING N = 27 ton θ = 17°



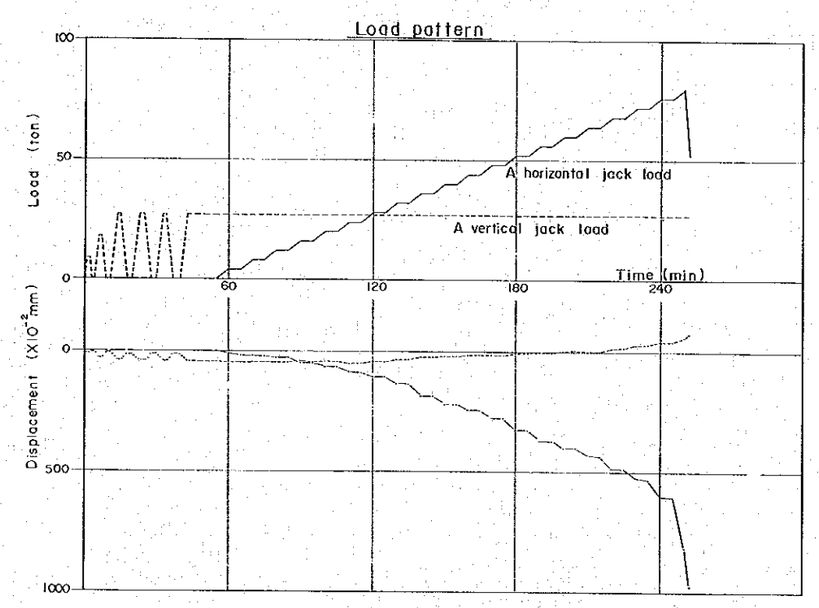




LEGEND
- ○ Failure point
- △ Principal yield point
- ● Upheaval point

Rock type : Mud stone.

Note : Brownish gray.



LEGEND
- Horizontal displacement
- Vertical displacement

Time-displacement curve

FIG- E.26 : BLOCK SHEAR TEST RECORD, BS-9

HIS MAJESTY'S GOVERNMENT OF NEPAL
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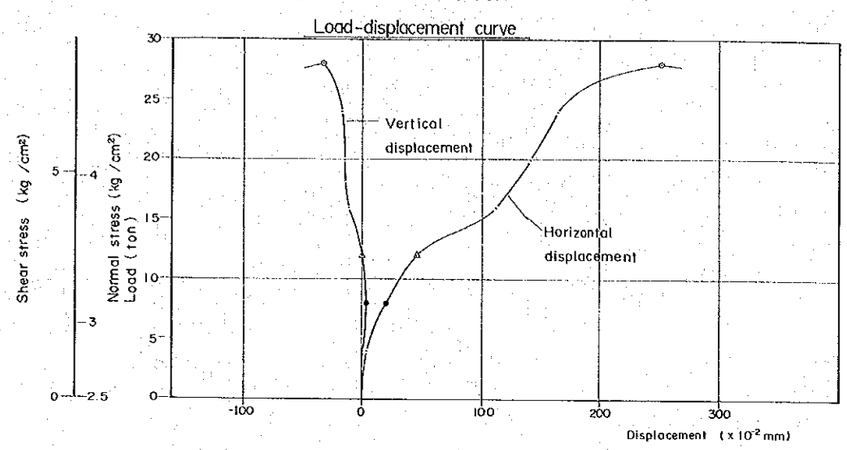
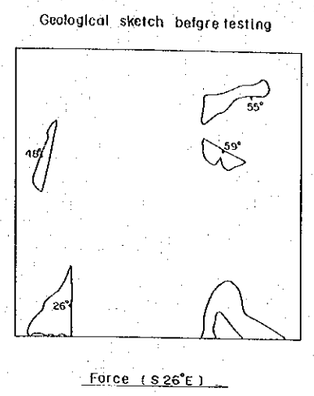
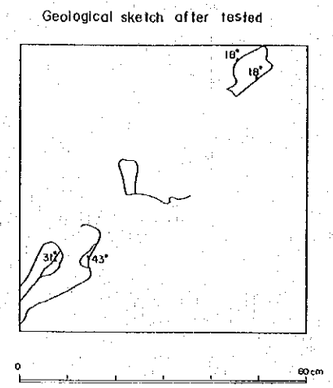
FIG- E.27

BS 10 LOADING N = 9 ton θ = 17°



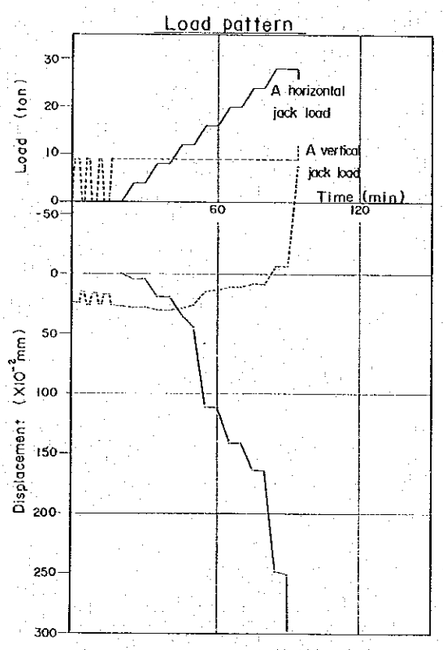




Rock type : Mud stone.

Note : Dark gray, massive mudstone.

LEGEND
- ○ Failure point
- △ Principal yield point
- ● Upheaval point



LEGEND
- Horizontal displacement
- Vertical displacement

Time-displacement curve

FIG- E.27 : BLOCK SHEAR TEST RECORD, BS-10

HIS MAJESTY'S GOVERNMENT OF NEPAL
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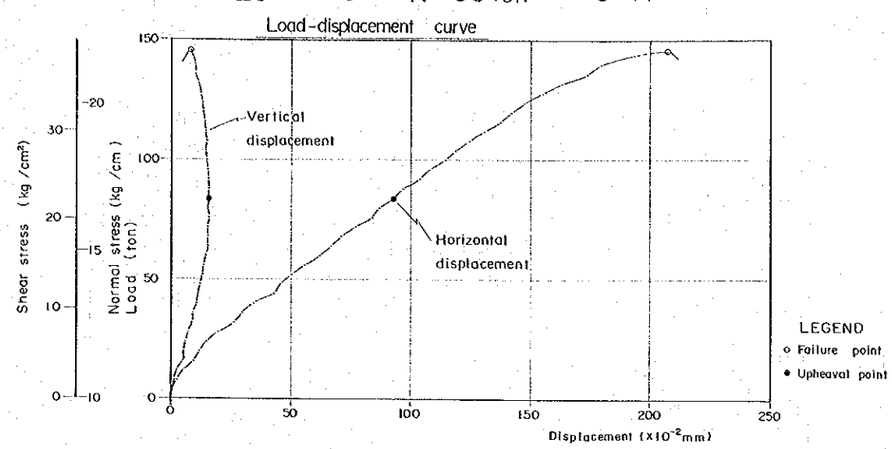
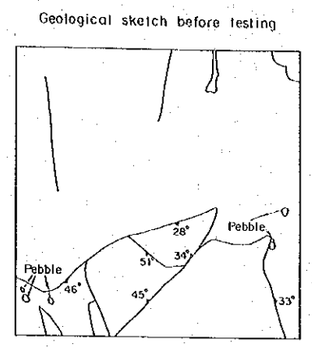
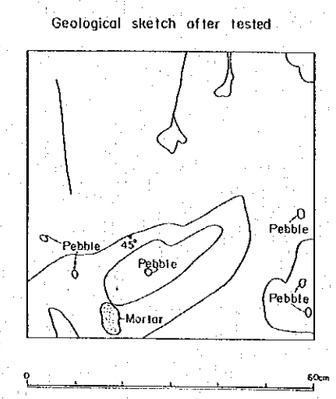
FIG- E.28

BS 11 LOADING N = 36 ton θ = 17°



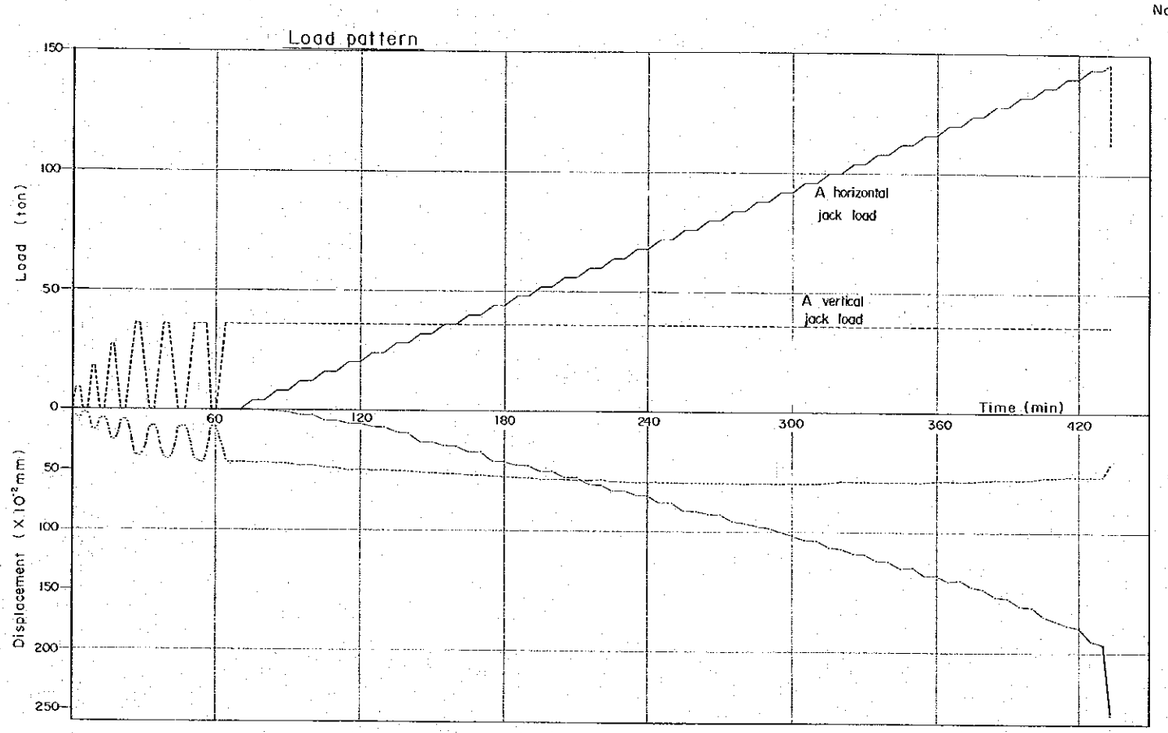




LEGEND
- ○ Failure point
- ● Upheaval point

Rock type : Sand stone.

Note : White gray, massive, coarse sandstone with some pebbles.



Time-displacement curve

LEGEND
- Horizontal displacement
- Vertical displacement

FIG- E.28 : BLOCK SHEAR TEST RECORD, BS-11

HIS MAJESTY'S GOVERNMENT OF NEPAL
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FIG- E.29

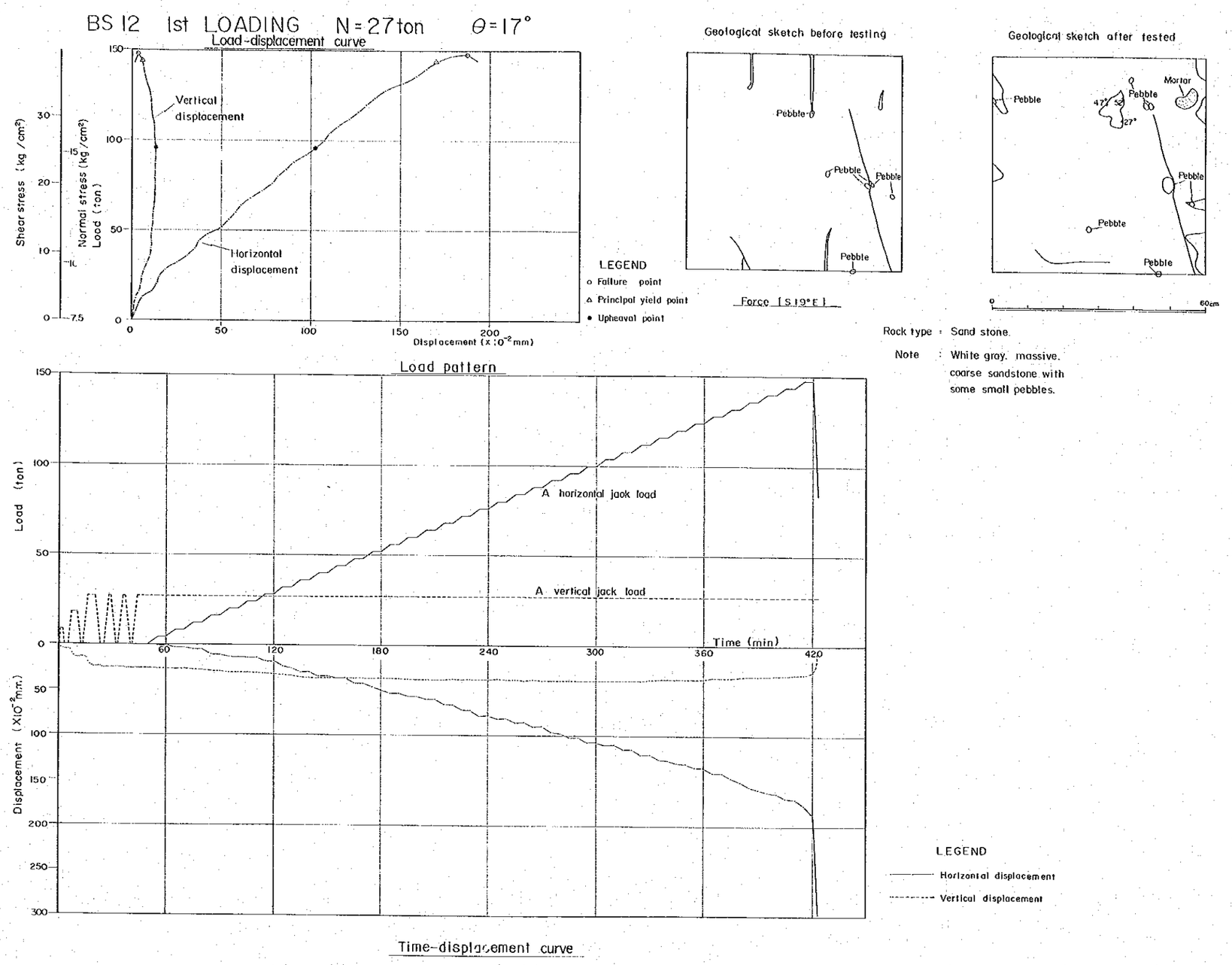

FIG- E.29 : BLOCK SHEAR TEST RECORD, BS-12

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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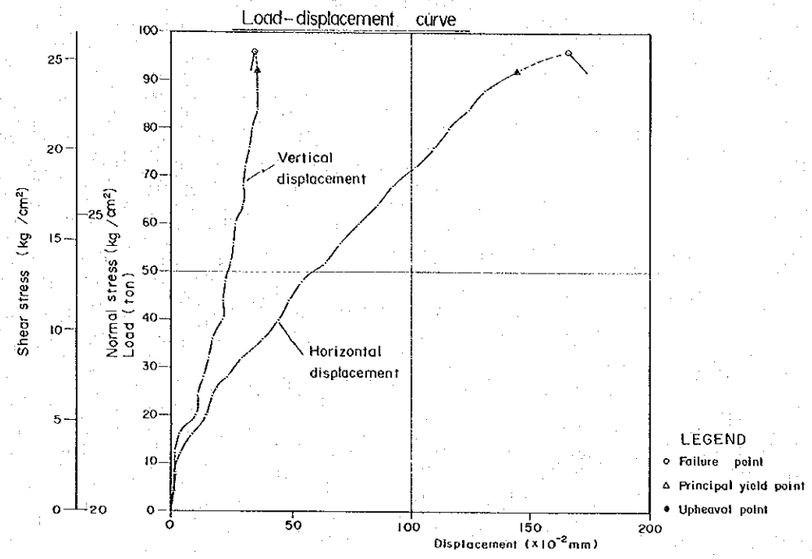
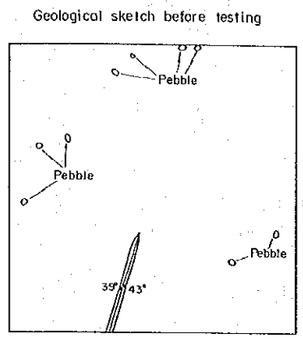
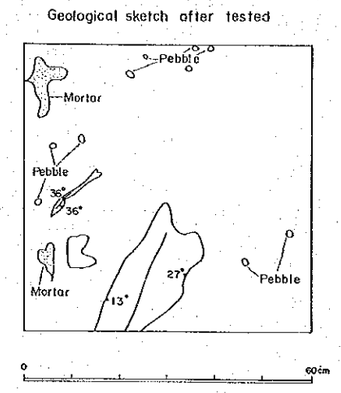
FIG- E.30

BS 13 1st LOADING N = 18 ton θ=17°



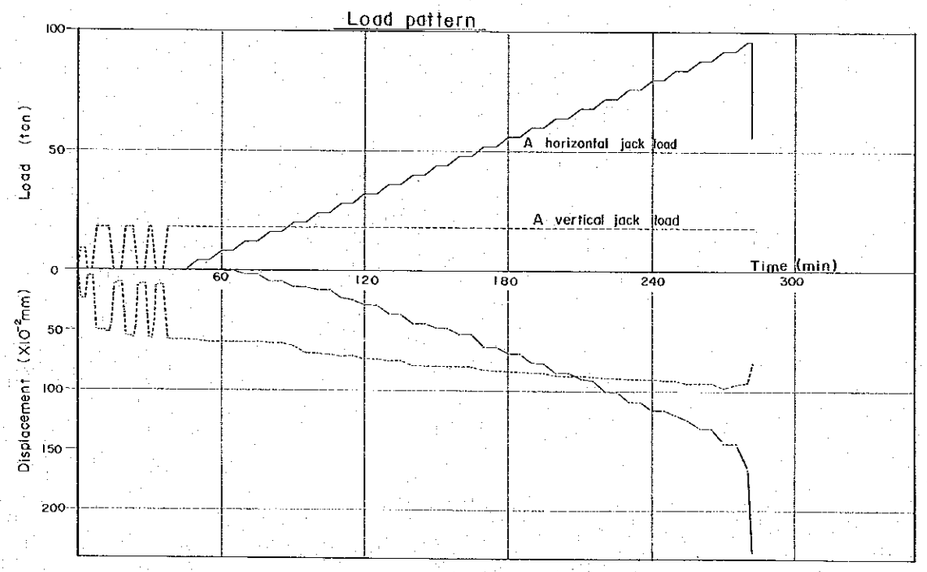


Force (S 1°E)



Rock type : Sand stone.

Note : White gray. massive. coarse sandstone with some small pebbles.



Time-displacement curve

FIG- E.30 : BLOCK SHEAR TEST RECORD, BS-13

HIS MAJESTY'S GOVERNMENT OF NEPAL
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POWER DEVELOPMENT PROJECT
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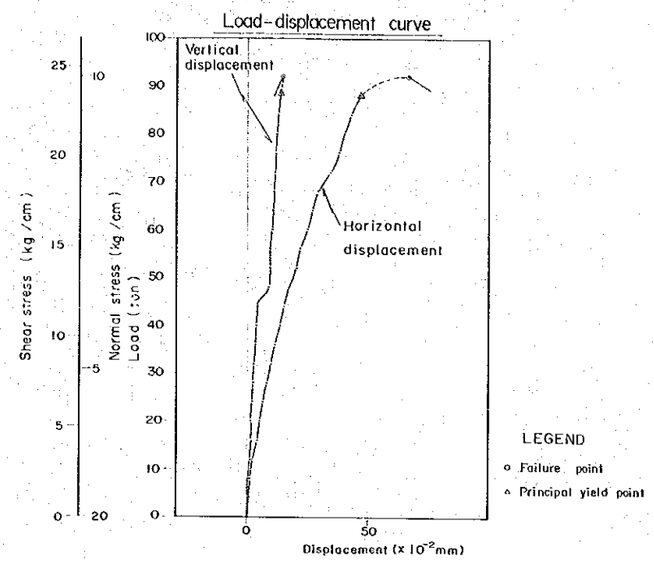
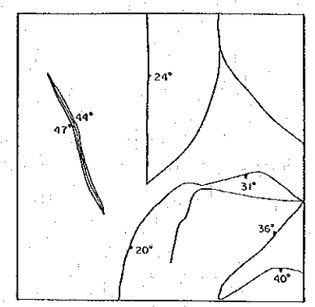
FIG- E.31

BS 14 Ist LOADING N=9 ton θ=17°

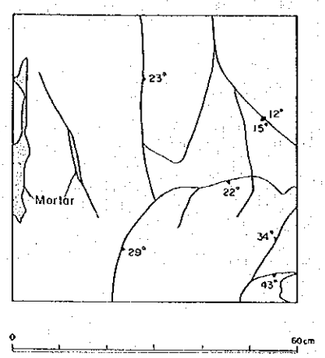


Geological sketch before testing



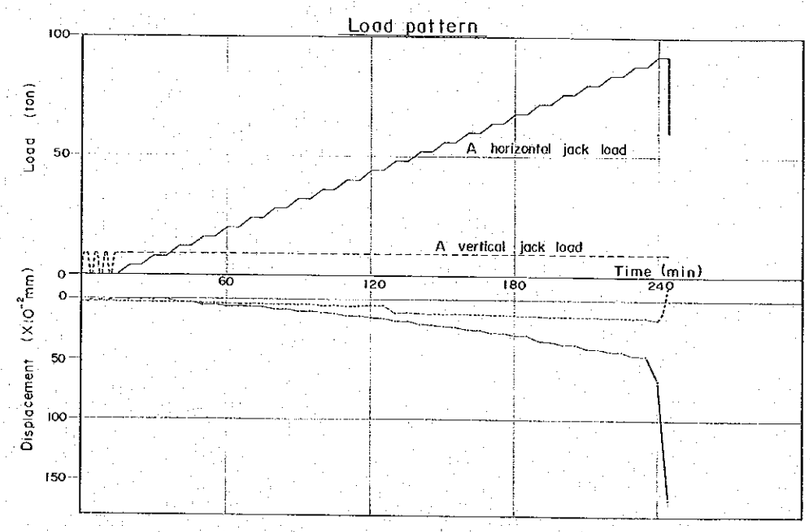
Force (S16°E)

Geological sketch after tested



Rock type : Sand stone.

Note : White gray, massive, coarse sandstone.



Time-displacement curve

FIG- E.31 : BLOCK SHEAR TEST RECORD, BS-14

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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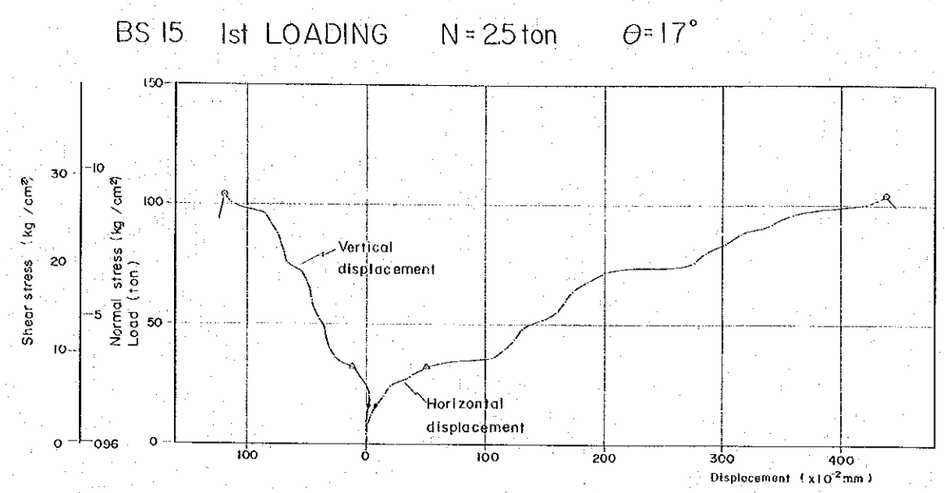
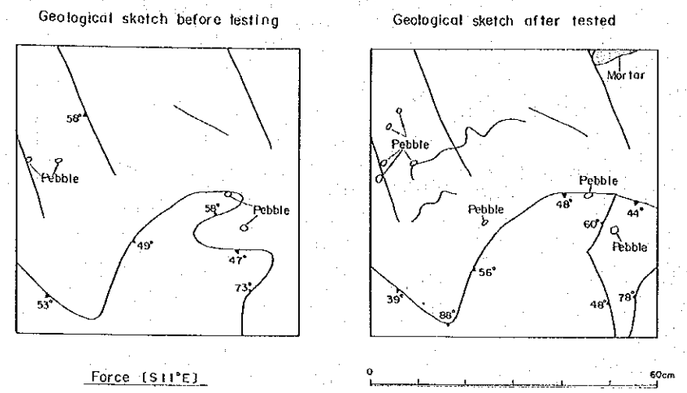
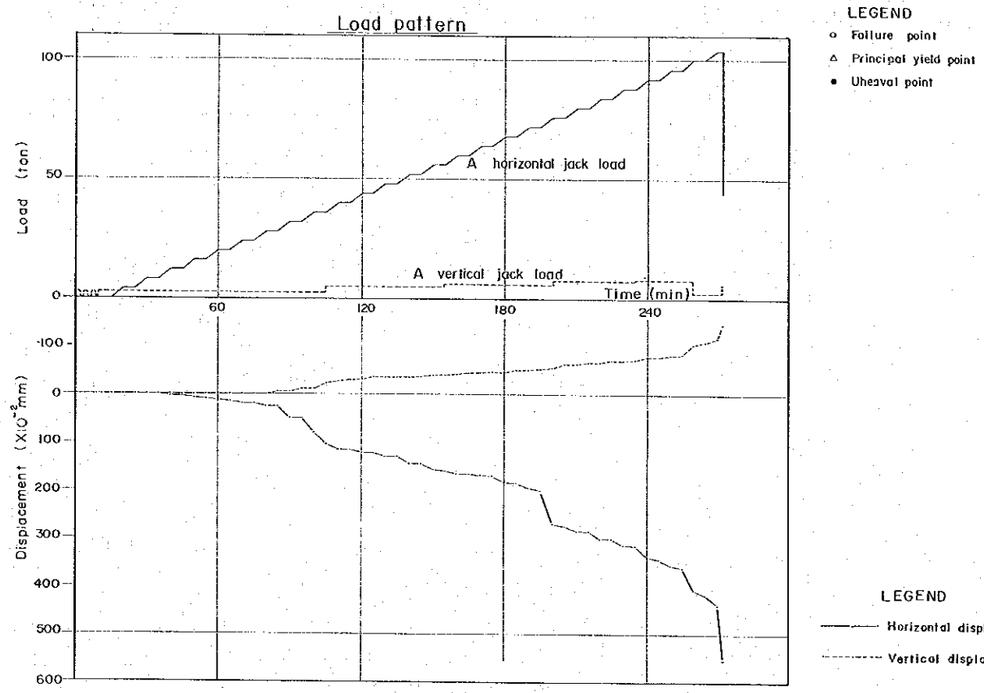
FIG- E.32





Rock type : Sand stone.

Note : White gray. massive. coarse sandstone with some small pebbles.



Time-displacement curve

FIG- E.32 : BLOCK SHEAR TEST RECORD, BS-15

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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FIG-E.33

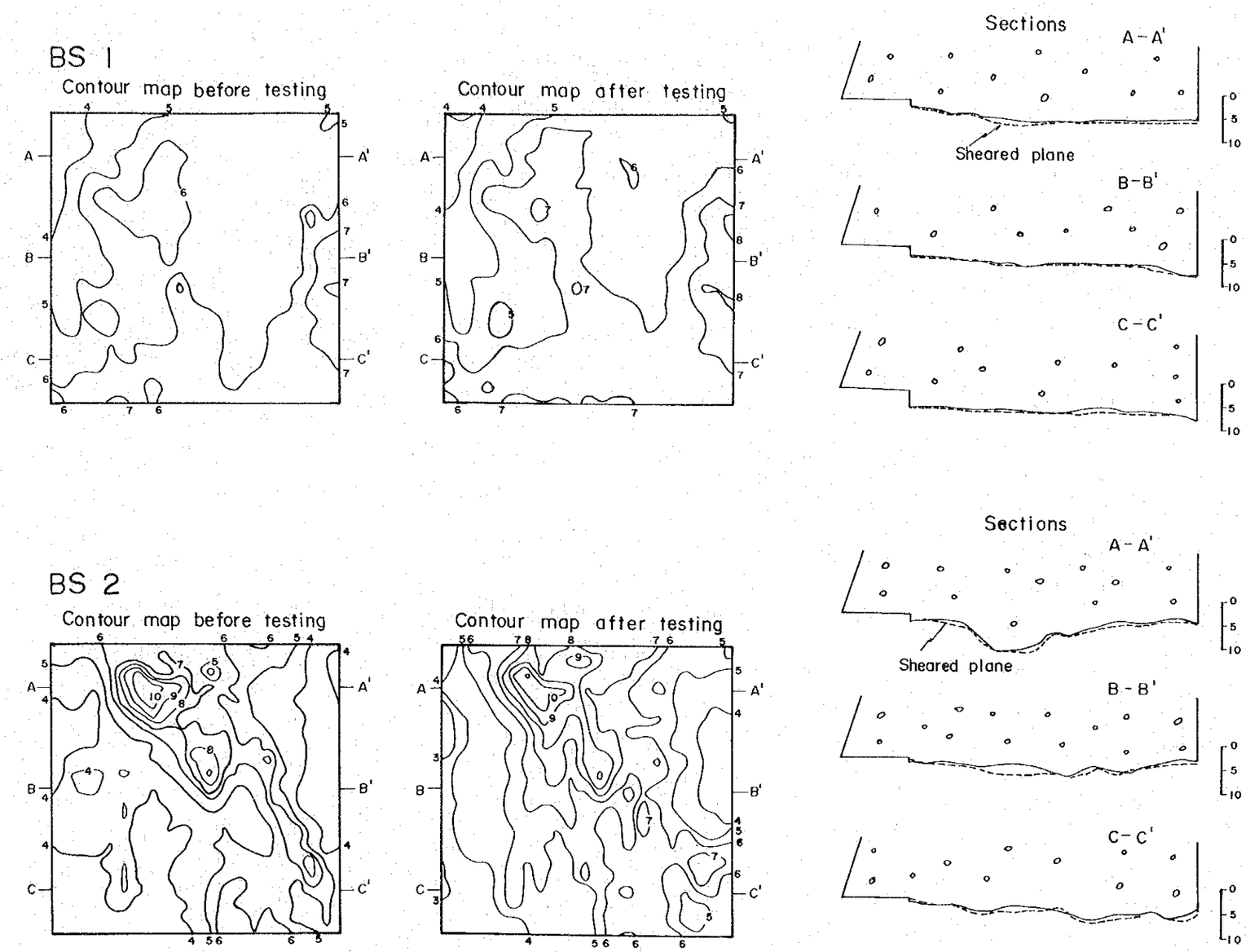

FIG-E.33 : BLOCK SHEAR TEST,
CONTOUR MAP OF TEST PLANES.(1)

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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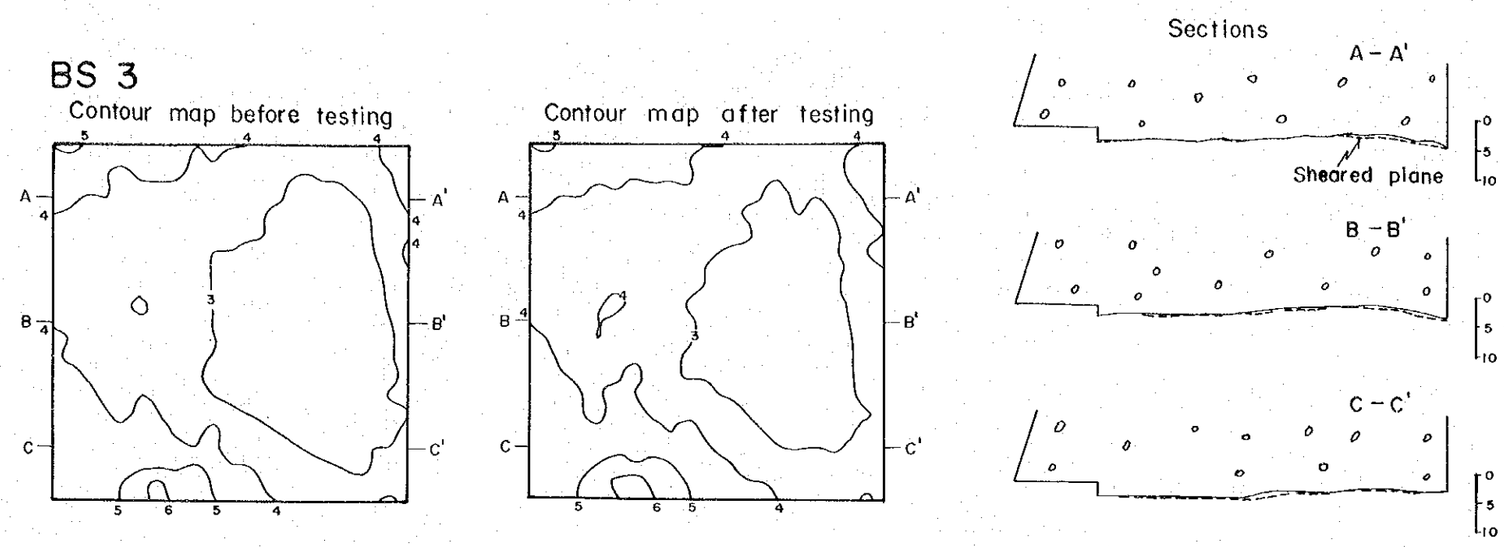
FIG-E.34



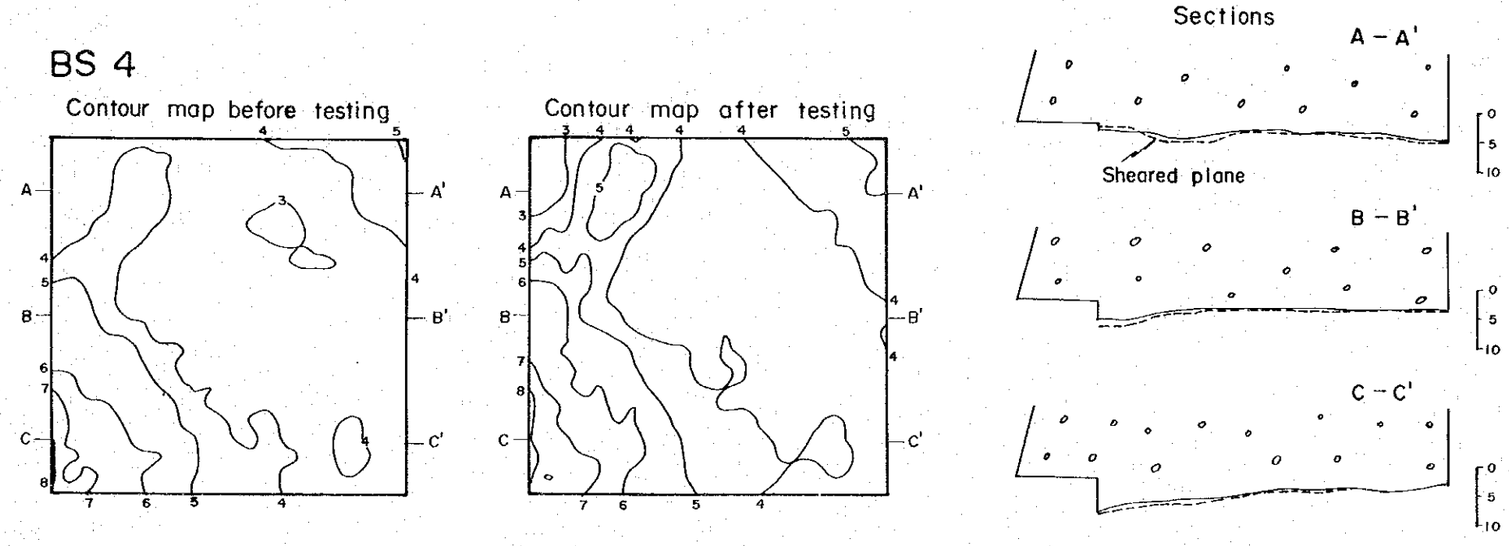


FIG-E.34 : BLOCK SHEAR TEST,
CONTOUR MAP OF TEST PLANES.(2)

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
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FIG-E.35

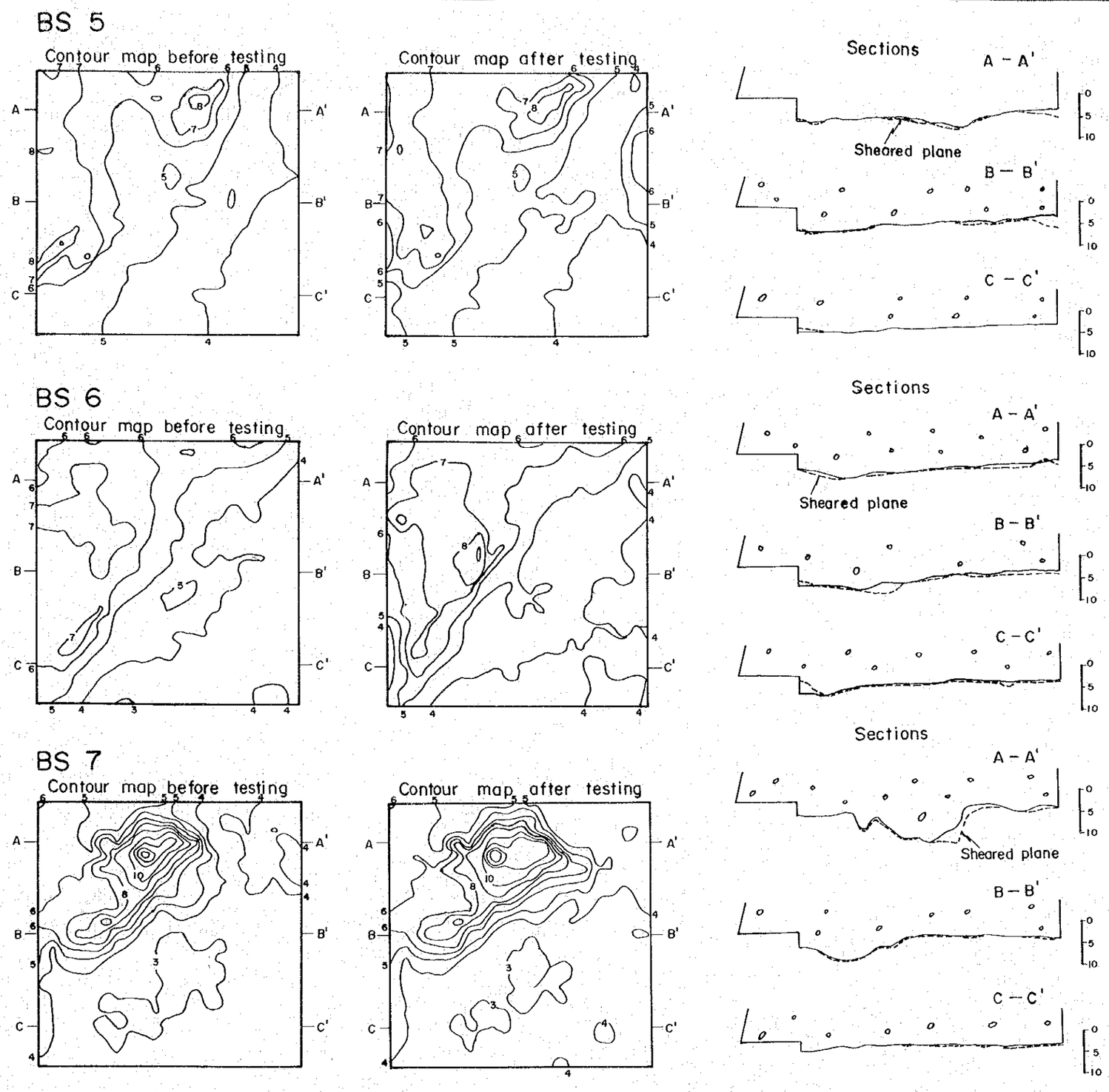

FIG-E.35 : BLOCK SHEAR TEST, CONTOUR MAP OF TEST PLANES.(3)

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
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FIG-E.36

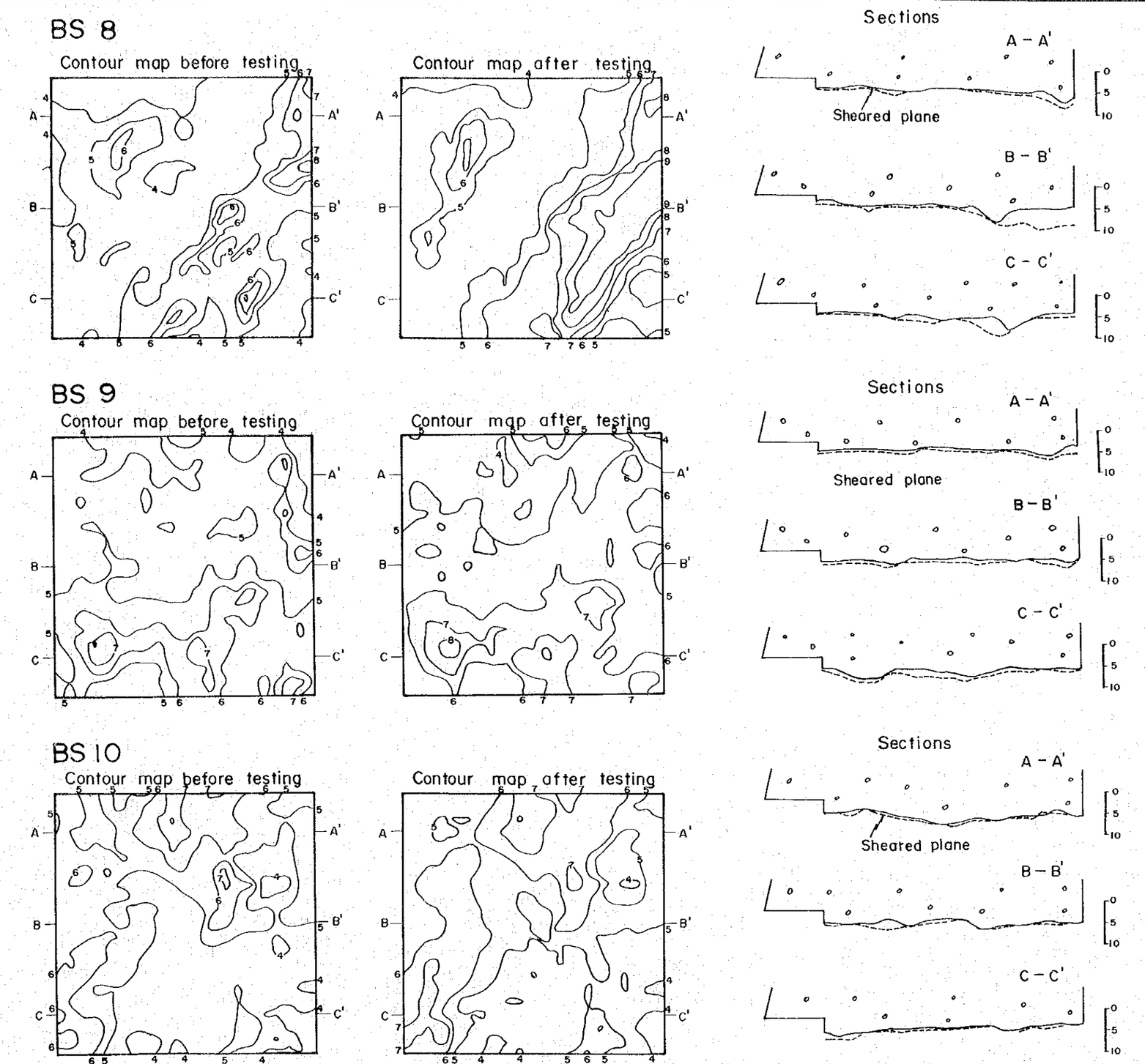

FIG-E.36 : BLOCK SHEAR TEST, CONTOUR MAP OF TEST PLANES.(4)

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
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FIG-E.37

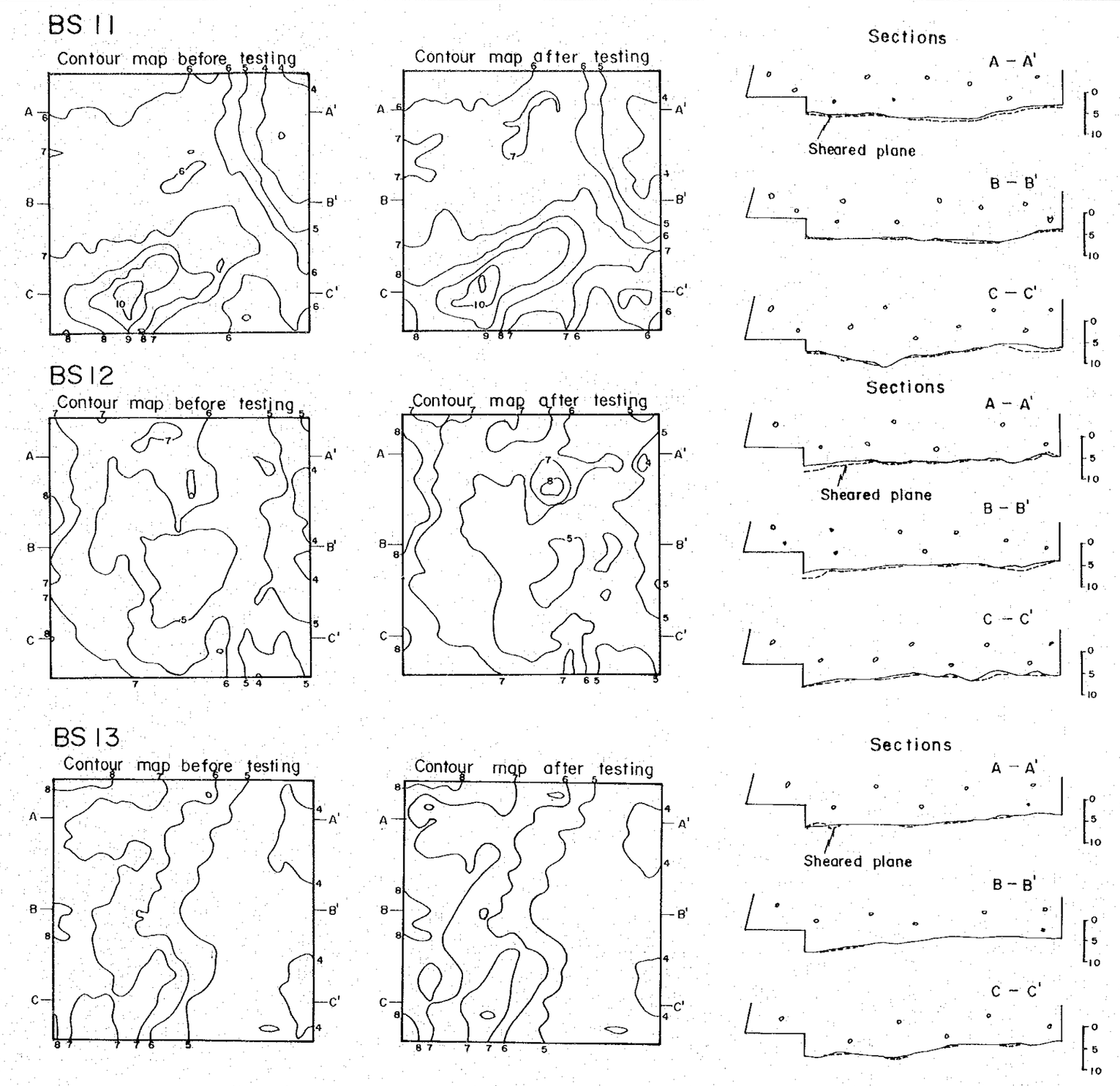

FIG-E.37 : BLOCK SHEAR TEST, CONTOUR MAP OF TEST PLANES.(5)

HIS MAJESTY'S GOVERNMENT OF NEPAL
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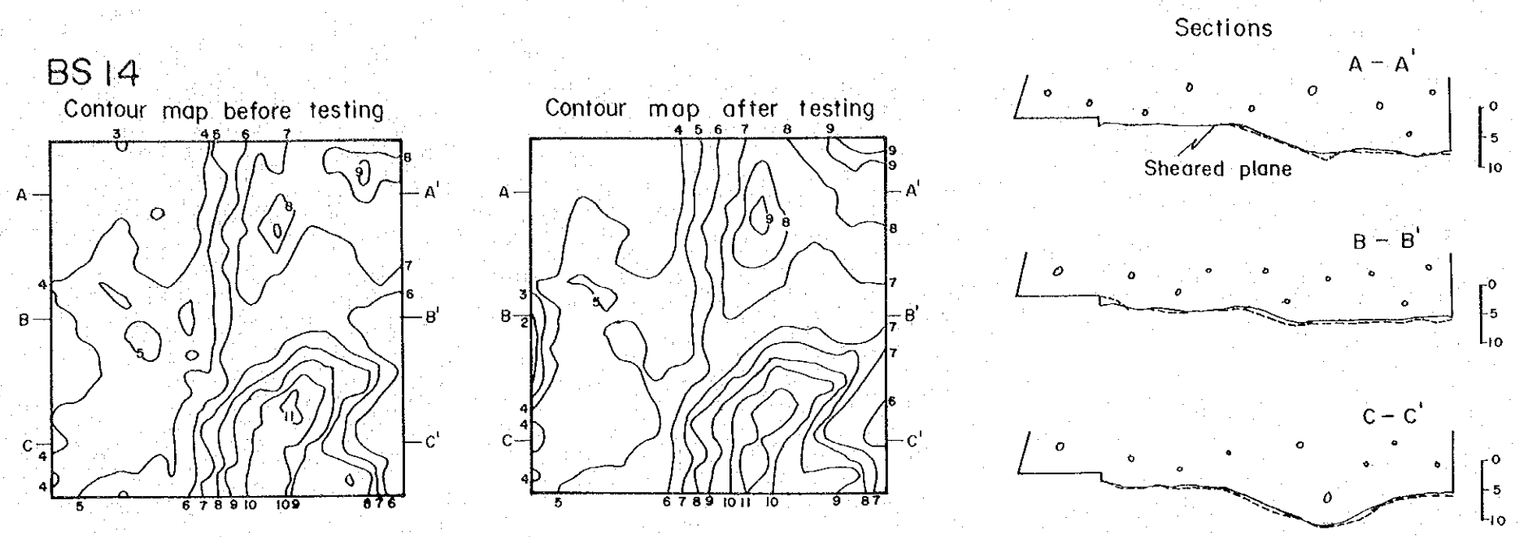
FIG-E.38



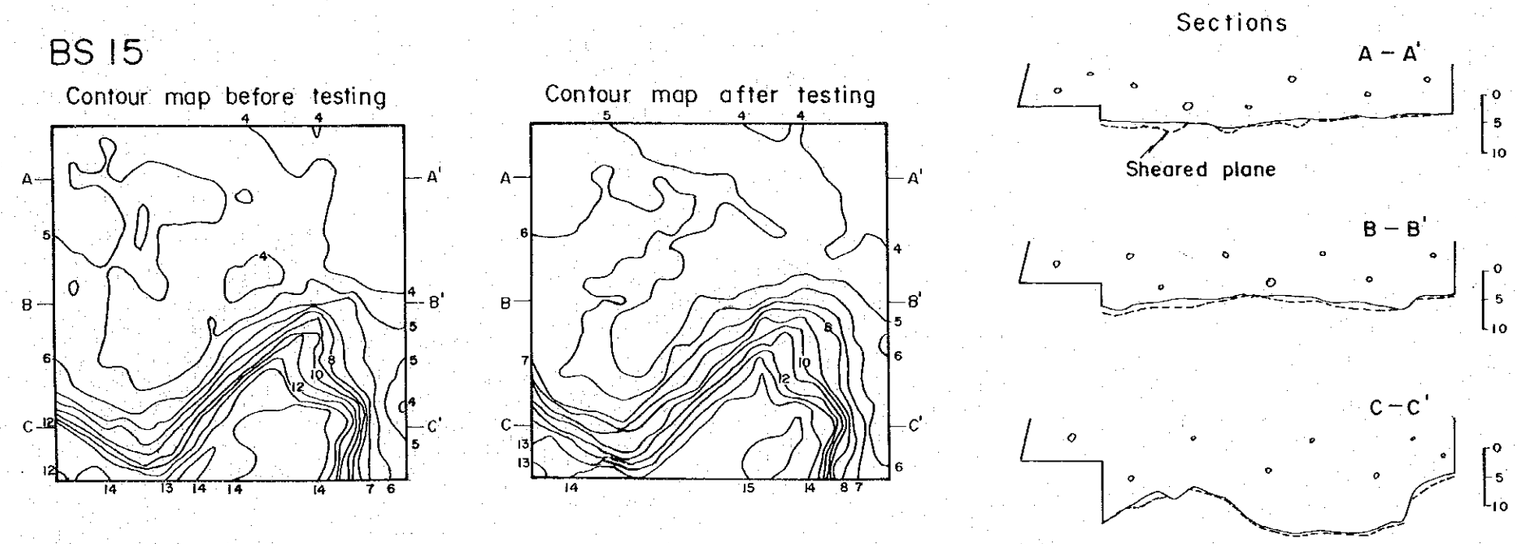


FIG-E.38 : BLOCK SHEAR TEST,
CONTOUR MAP OF TEST PLANES.(6)

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
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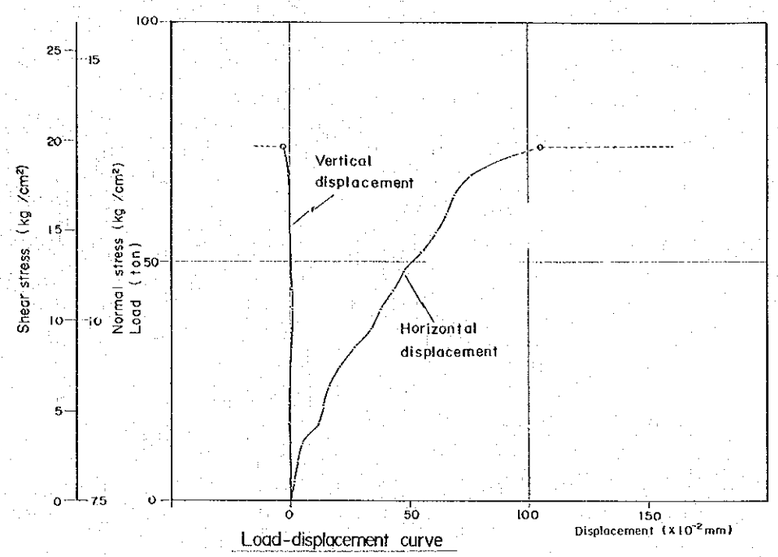
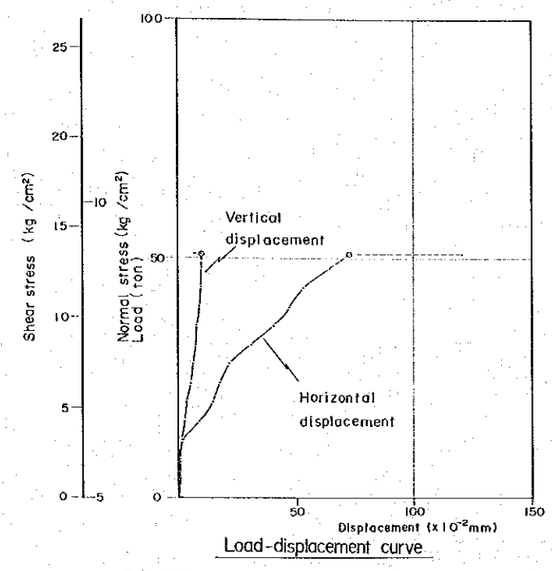
FIG- E.39

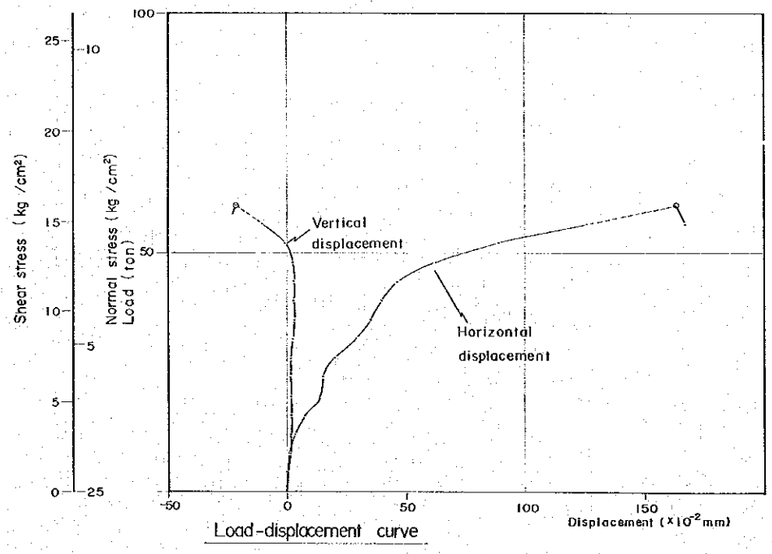
BS 12 2nd LOADING N=27ton θ=17°



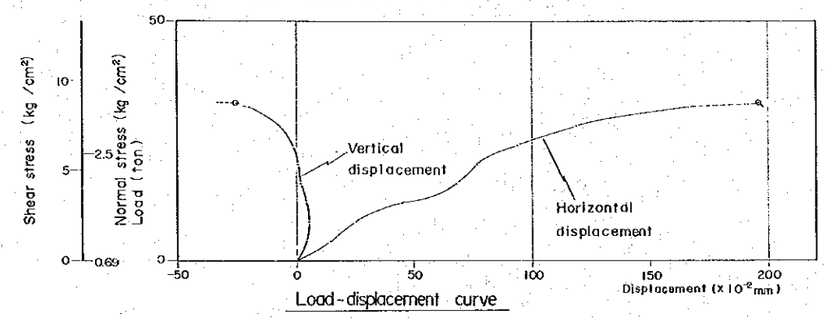
BS 13 2nd LOADING N=18 ton θ=17°



BS 14 2nd LOADING N=9ton θ=17°



BS 15 2nd LOADING N=2.5ton θ=17°



LEGEND

o Failured point

FIG- E.39 : FRICTION TEST RECORD, BS-12, 13, 14, AND 15

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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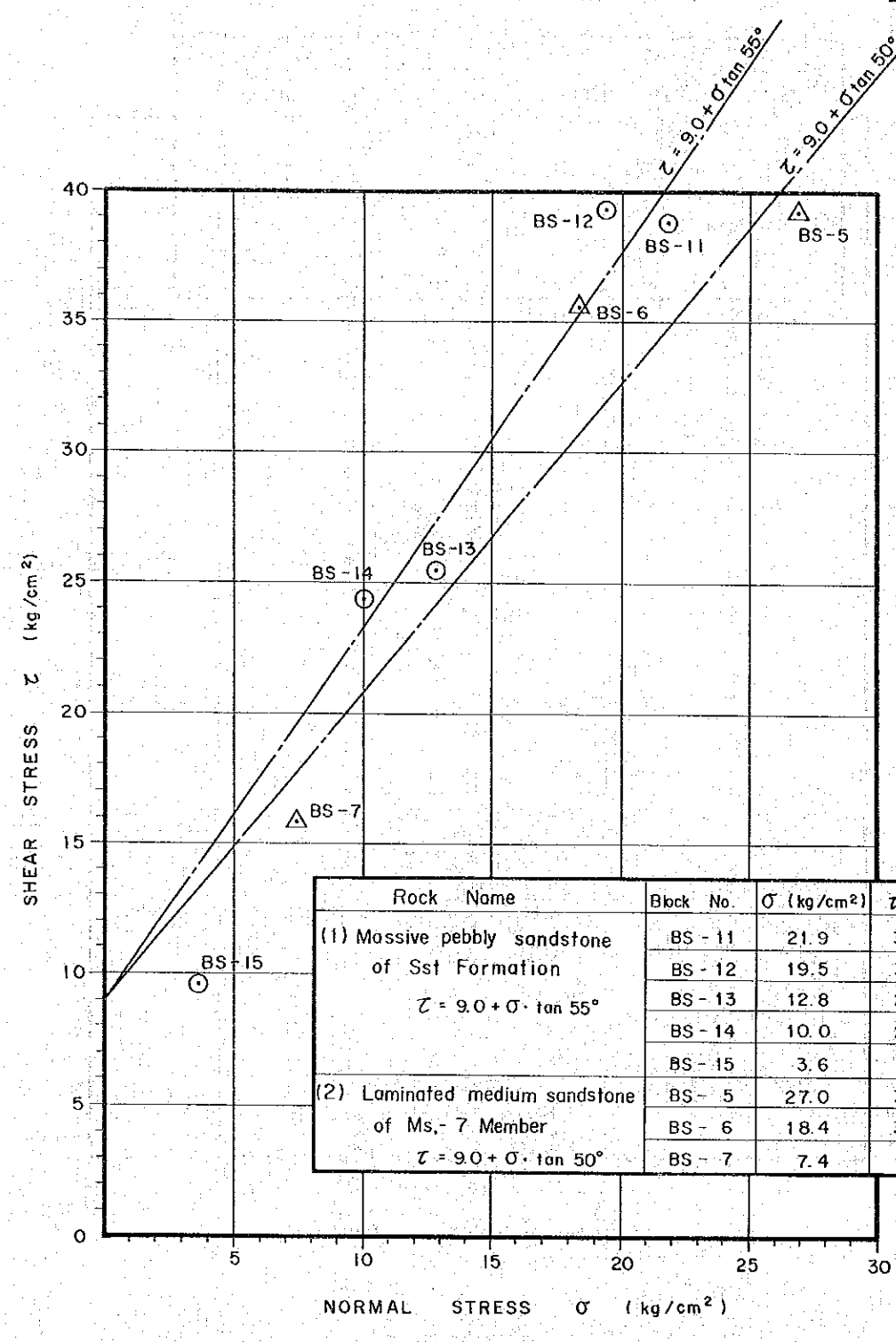
FIG-E.40



Rock Name	Block No.	σ (kg/cm²)	τ (kg/cm²)
(1) Massive pebbly sandstone of Sst Formation $\tau = 9.0 + \sigma \cdot \tan 55°$	BS - 11	21.9	38.8
	BS - 12	19.5	39.3
	BS - 13	12.8	25.5
	BS - 14	10.0	24.4
	BS - 15	3.6	9.6
(2) Laminated medium sandstone of Ms,- 7 Member $\tau = 9.0 + \sigma \cdot \tan 50°$	BS - 5	27.0	39.3
	BS - 6	18.4	35.6
	BS - 7	7.4	15.9

FIG-E.40 : NORMAL STRESS-SHEAR STRESS PLOT(1)
BLOCK NOS.5 TO 7 AND 11 TO 15

HIS MAJESTY'S GOVERNMENT OF NEPAL
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FIG-E.41

Rock Name	Block No.	σ (kg/cm²)	τ (kg/cm²)
(3) Massive medium sandstone of Ms - 7 Member $\tau = 8.0 + \sigma \cdot \tan 40°$	BS-1	26.8	22.3
	BS-2	23.1	26.6
	BS-3	17.3	23.9
	BS-4	8.8	18.1
(4) Mudstone of At - 7 Member $\tau = 6.5 + \sigma \cdot \tan 37°$	BS-8	21.2	20.2
	BS-9	14.0	21.2
	BS-10	4.8	7.4

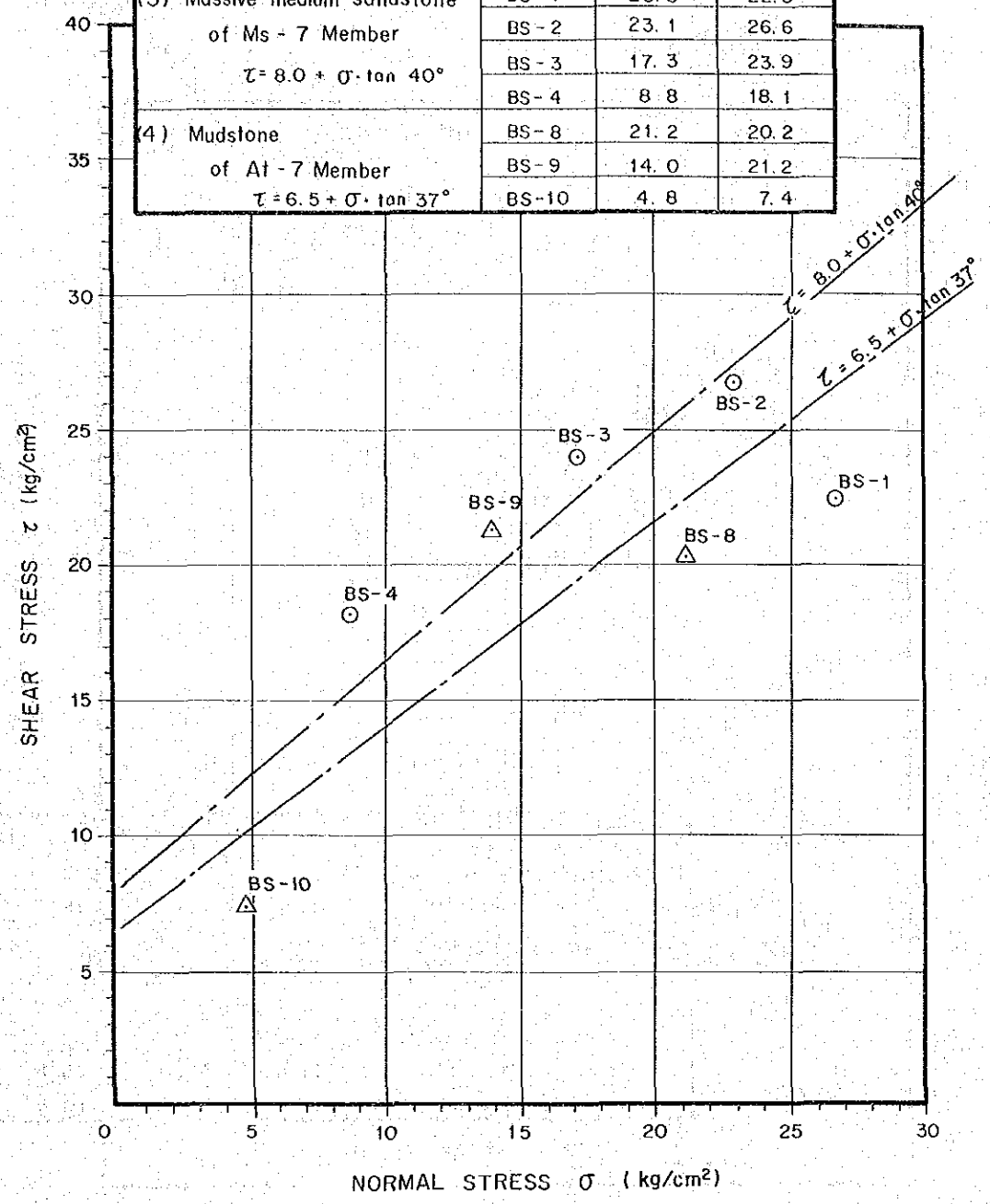

FIG-E.41 : NORMAL STRESS-SHEAR STRESS PLOT(2)
BLOCK NOS.1 TO 4 AND 8 TO 10

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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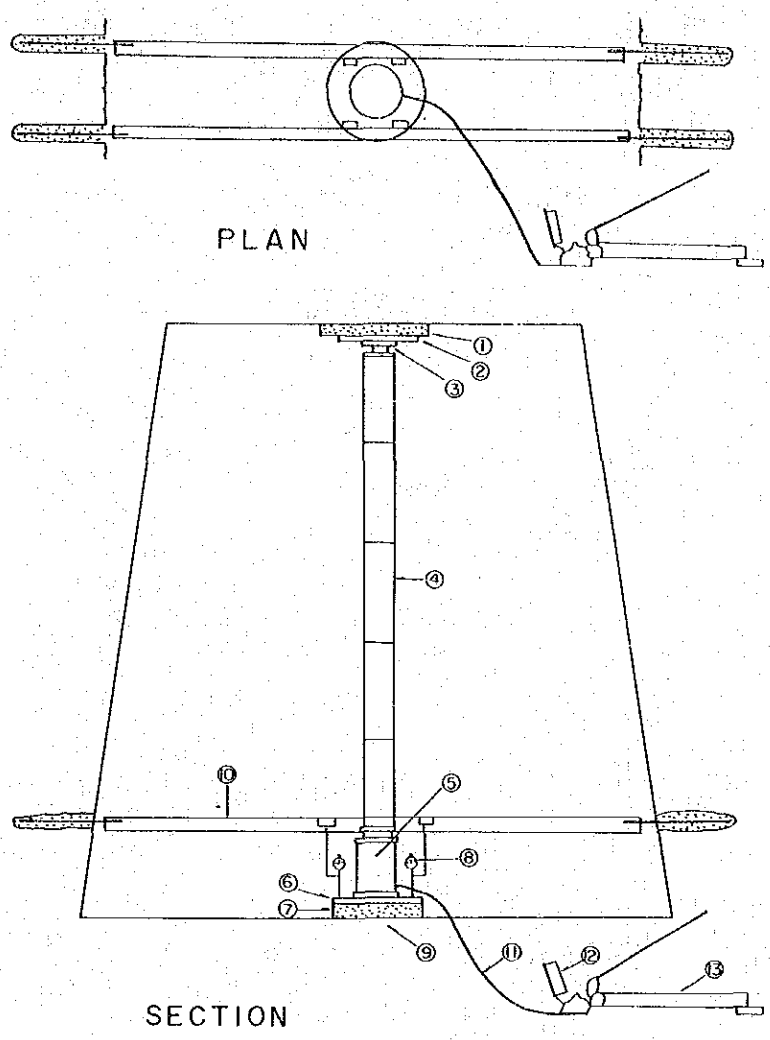
FIG-E.42



①	Mortar	⑧	Dial gauge
②	Plate	⑨	Rock
③	Universal head	⑩	Angle
④	Pipe saports	⑪	Hydraulic rubber hose
⑤	Hydraulic jack	⑫	Pressure gauge
⑥	Plate	⑬	Hand pump for jack
⑦	Mortar		

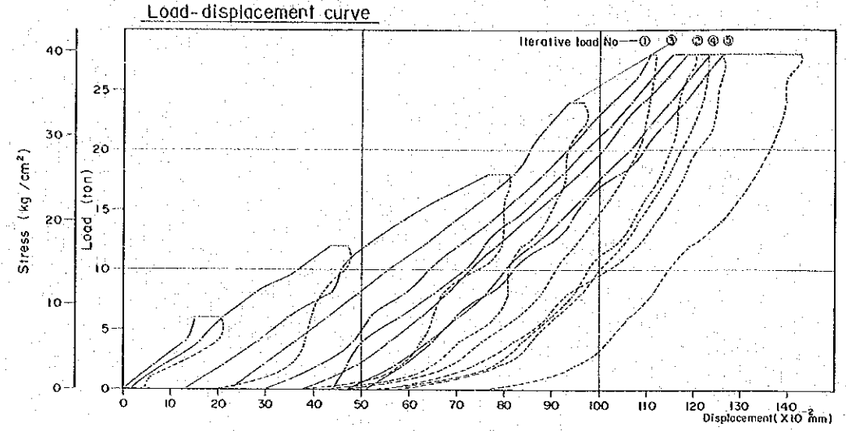
FIG-E.42 : THE PLATE LOADING TEST ARRANGEMENTS

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
FEASIBILITY REPORT
JAPAN INTERNATIONAL COOPERATION AGENCY

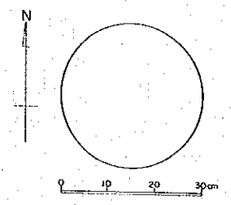
FIG- E.43

PL I Ø = 30cm (706.9cm²)

Load-displacement curve



Geological sketch of loading plane



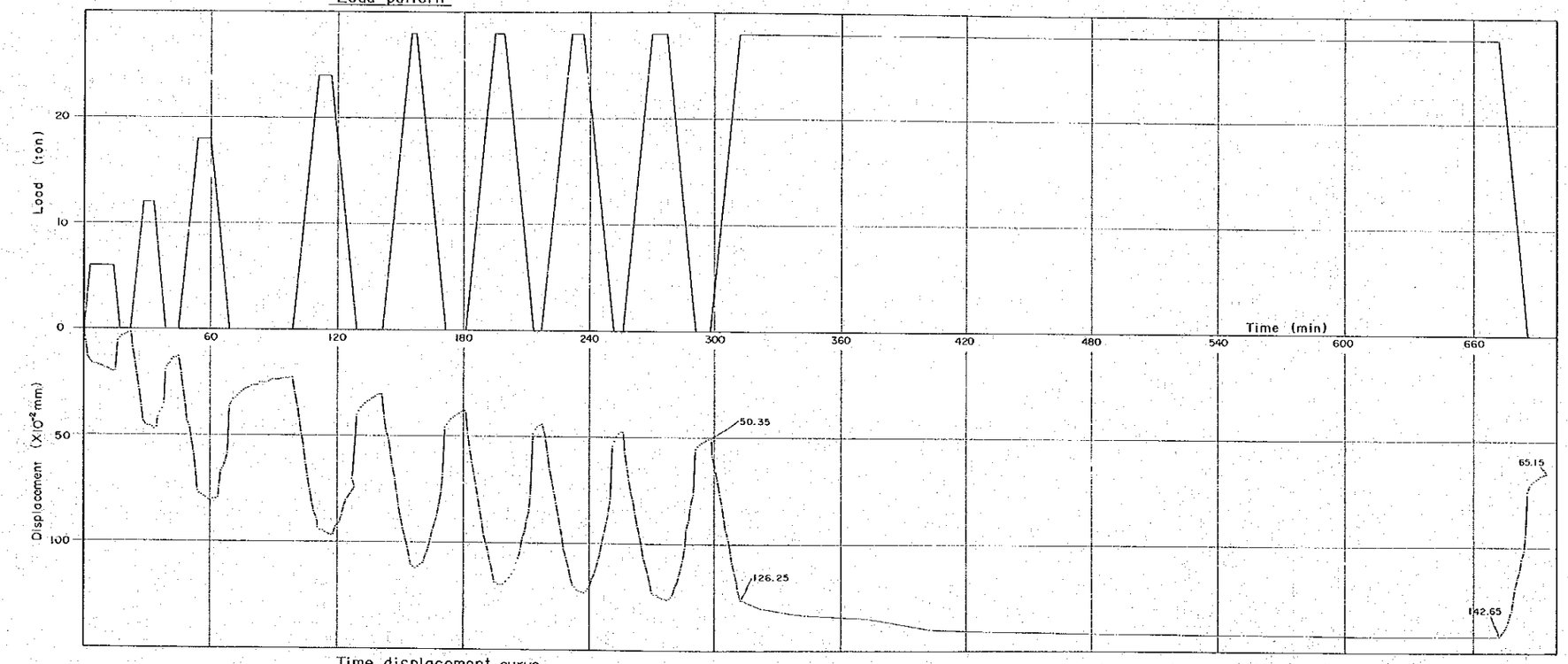
Rock type : Sand stone

Note : White gray, medium sandstone, massive and micaceous.

Test results

Iterative loading No.	Modulus of elasticity (kg/cm²) on the tangential slope	Modulus of elasticity (kg/cm²) on the secant slope	Modulus of deformation (D) kg/cm²
1	12,788	10,849	
2	14,124	10,846	
3	14,085	12,263	
4	14,259	11,464	
5	14,815	11,532	
Average	14,014	11,391	7,446

Load pattern



Time-displacement curve

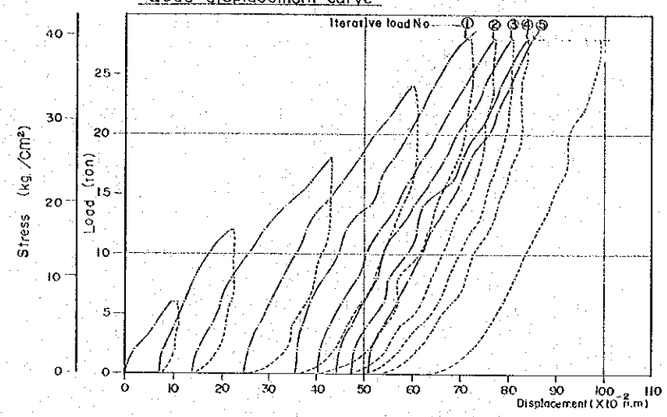
FIG- E.43 : PLATE LOADING TEST, PL-1

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
FEASIBILITY REPORT
JAPAN INTERNATIONAL COOPERATION AGENCY

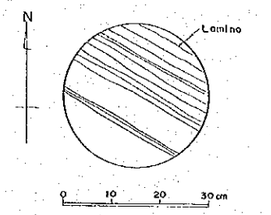
FIG- E.44

PL 2 Φ=30cm (706.9cm²)

Load-displacement curve



Geological sketch of loading plane



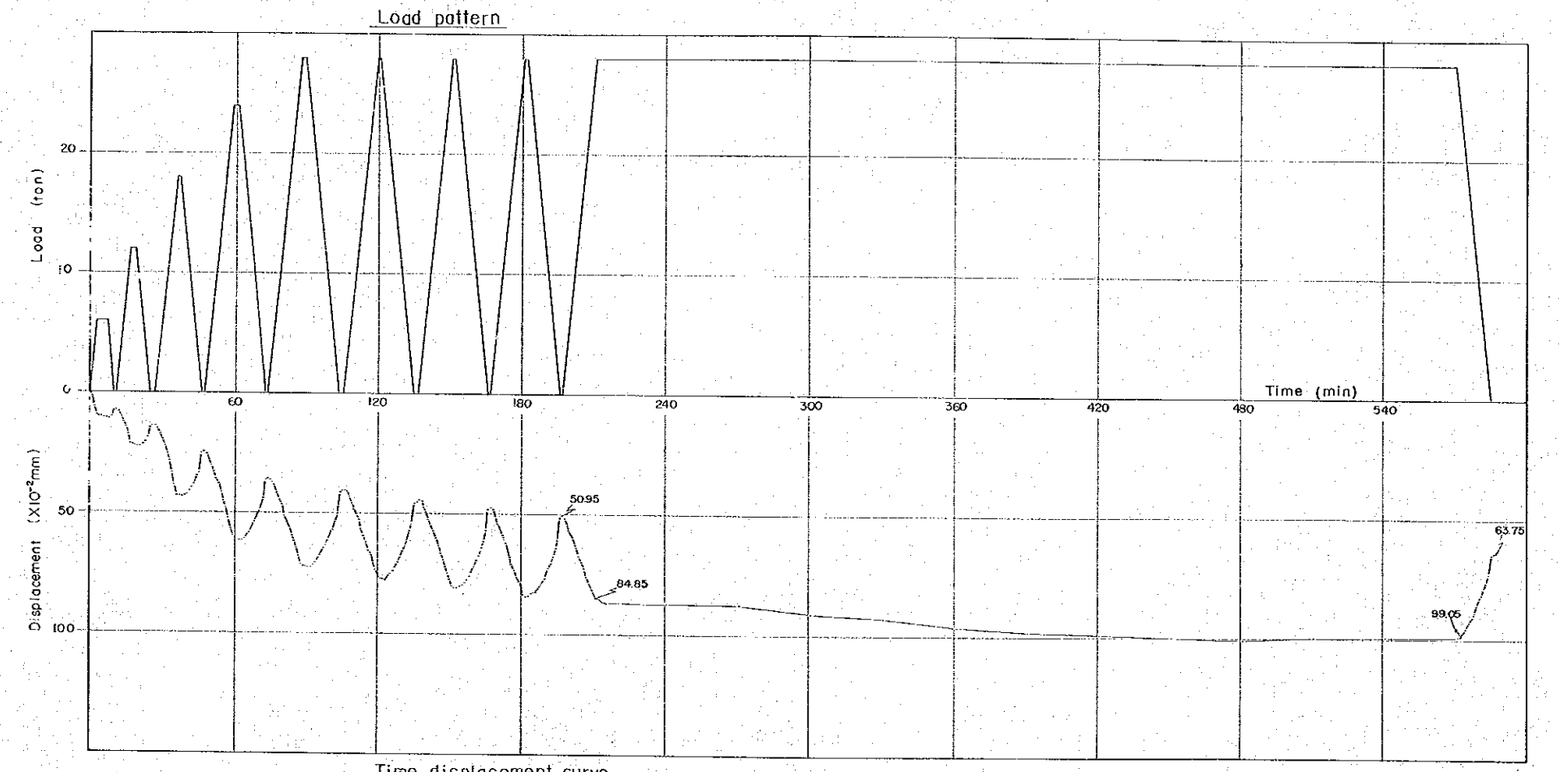
Rock type : Sand stone

Note : White gray.
medium sandstone.
micaceous and laminated.

Test results

Iterative loading No.	Modulus of elasticity (kg/cm²) on the tangential slope	on the secant slope	Modulus of deformation (D) kg/cm²
1	21,216	24,665	
2	22,026	24,188	
3	22,796	24,493	
4	24,510	24,272	
5	26,455	25,811	
Average	23,401	24,686	11,129

Load pattern



Time-displacement curve

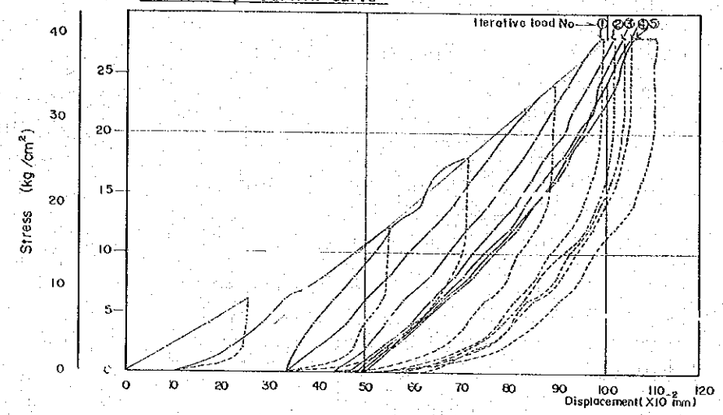
FIG- E.44 : PLATE LOADING TEST, PL-2

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
FEASIBILITY REPORT
JAPAN INTERNATIONAL COOPERATION AGENCY

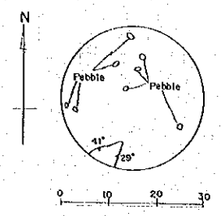
FIG- E.45

PL 3 ϕ = 30 cm (706.9 cm²)

Load-displacement curve



Geological sketch of loading plane



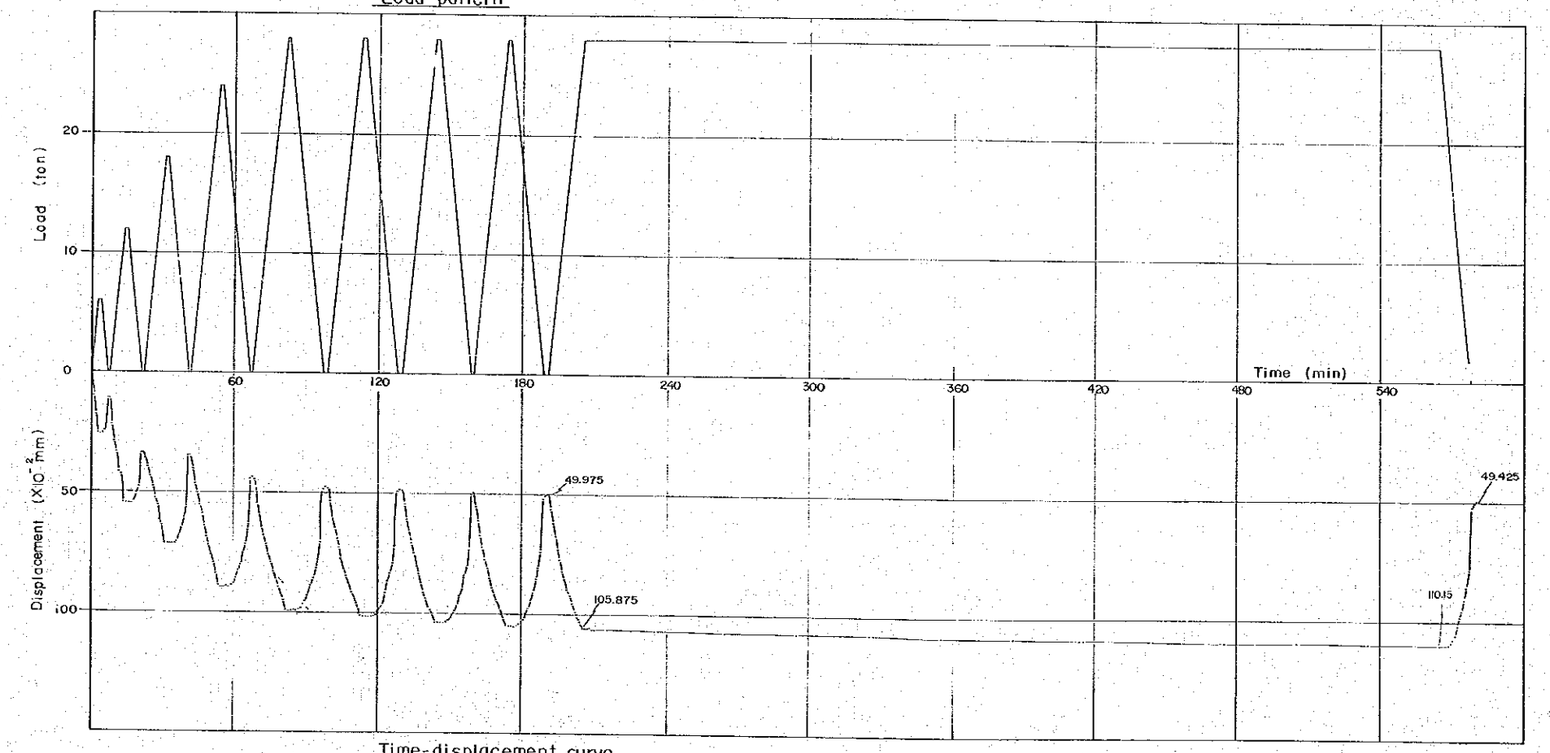
Rock type : Sand stone

Note : White gray, massive coarse sandstone with some small pebbles.

Test results

Iterative loading No.	Modulus of elasticity (kg/cm²) on the tangential slope	Modulus of elasticity (kg/cm²) on the secant slope	Modulus of deformation (D) kg/cm²
1	21,186	15,844	
2	22,124	16,249	
3	23,810	16,018	
4	25,338	15,780	
5	20,202	15,563	
Average	22,532	15,909	10,925

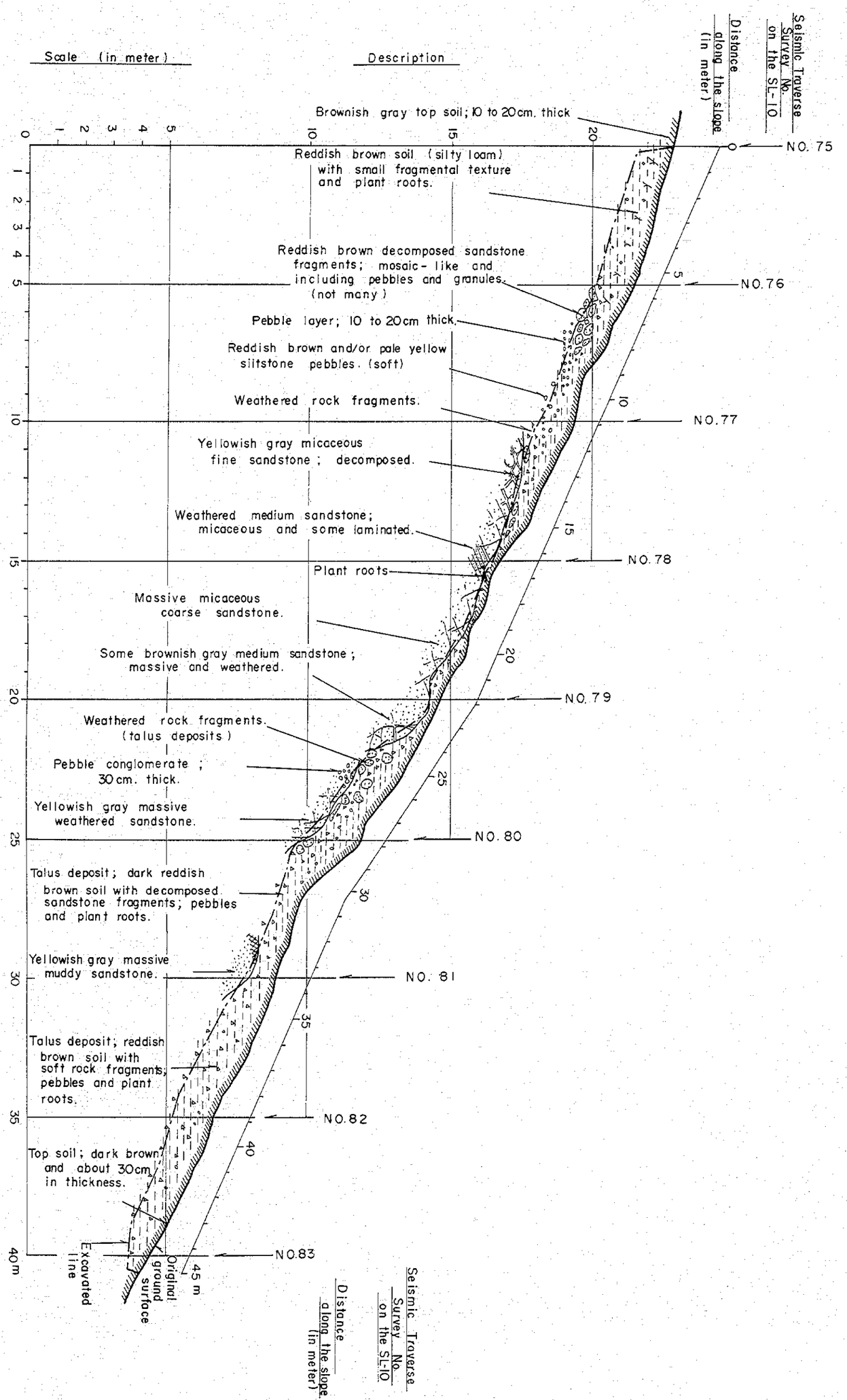
Load pattern



Time-displacement curve

FIG- E.45 : PLATE LOADING TEST, PL-3

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
FEASIBILITY REPORT
JAPAN INTERNATIONAL COOPERATION AGENCY


Scale (in meter)
Description
Seismic Traverse Survey No. on the SL-10
Distance along the slope (in meter)
Brownish gray top soil; 10 to 20cm. thick
Reddish brown soil (silty loam) with small fragmental texture and plant roots.
Reddish brown decomposed sandstone fragments; mosaic-like and including pebbles and granules. (not many)
Pebble layer; 10 to 20cm thick.
Reddish brown and/or pale yellow siltstone pebbles. (soft)
Weathered rock fragments.
Yellowish gray micaceous fine sandstone; decomposed.
Weathered medium sandstone; micaceous and some laminated.
Plant roots
Massive micaceous coarse sandstone.
Some brownish gray medium sandstone; massive and weathered.
Weathered rock fragments. (talus deposits)
Pebble conglomerate; 30cm. thick.
Yellowish gray massive weathered sandstone.
Talus deposit; dark reddish brown soil with decomposed sandstone fragments; pebbles and plant roots.
Yellowish gray massive muddy sandstone.
Talus deposit; reddish brown soil with soft rock fragments, pebbles and plant roots.
Top soil; dark brown and about 30cm in thickness.
Excavated line
Original ground surface
NO. 75
NO. 76
NO. 77
NO. 78
NO. 79
NO. 80
NO. 81
NO. 82
NO. 83
40 m
45 m

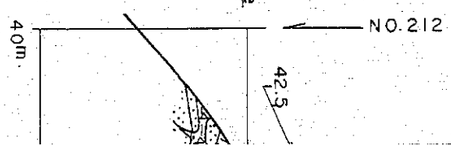

Seismic Traverse Survey No. on the SL-10
Distance along the slope (in meter)
NO. 212
40m.
42.5

FIG-E.46

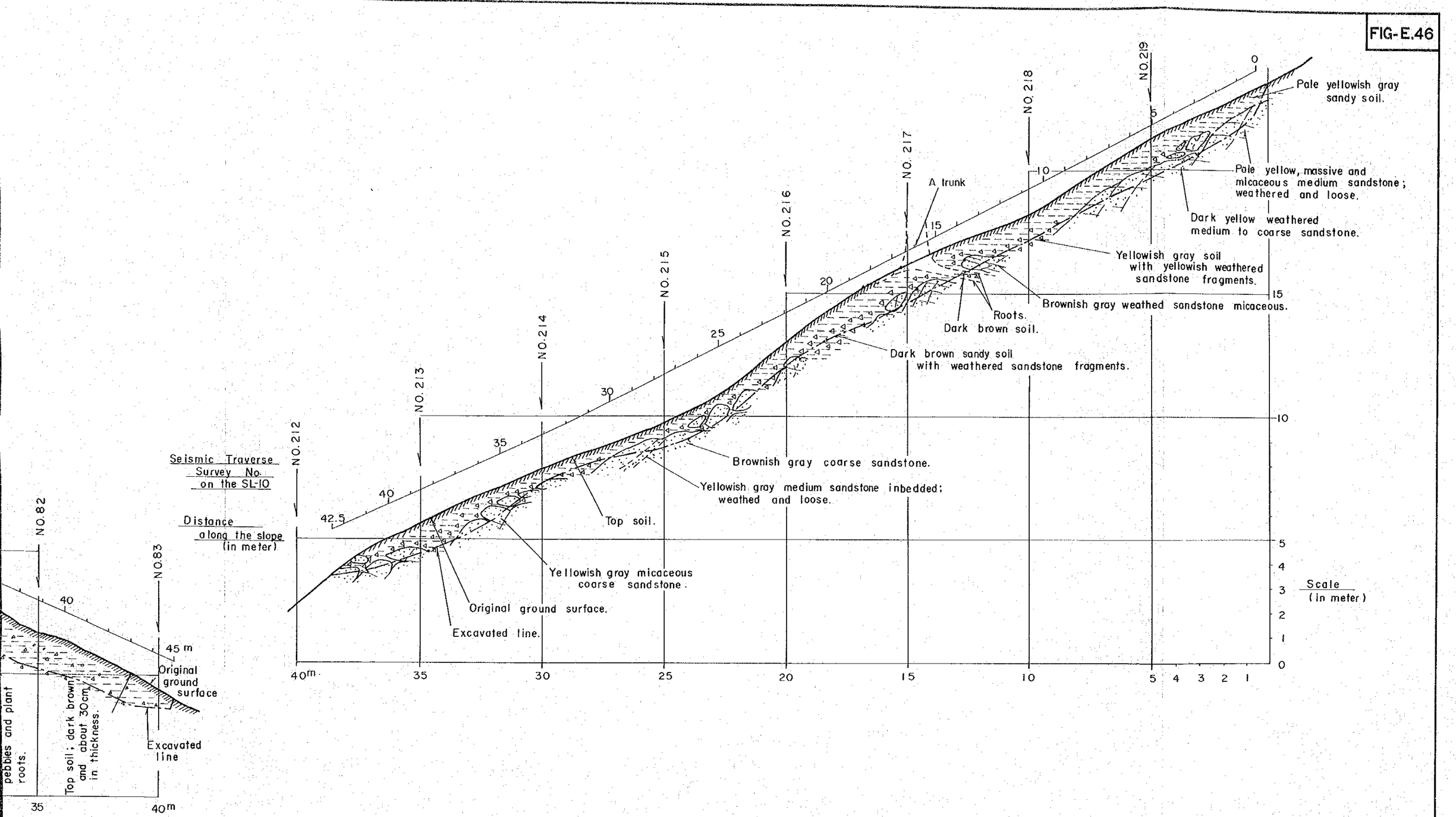


FIG- E.46 : GEOLOGICAL PROFILES OF TEST TRENCHES TR-1 AND TR-2 (DAM SITE B)

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC POWER DEVELOPMENT PROJECT
FEASIBILITY REPORT
JAPAN INTERNATIONAL COOPERATION AGENCY

FIG- E.47

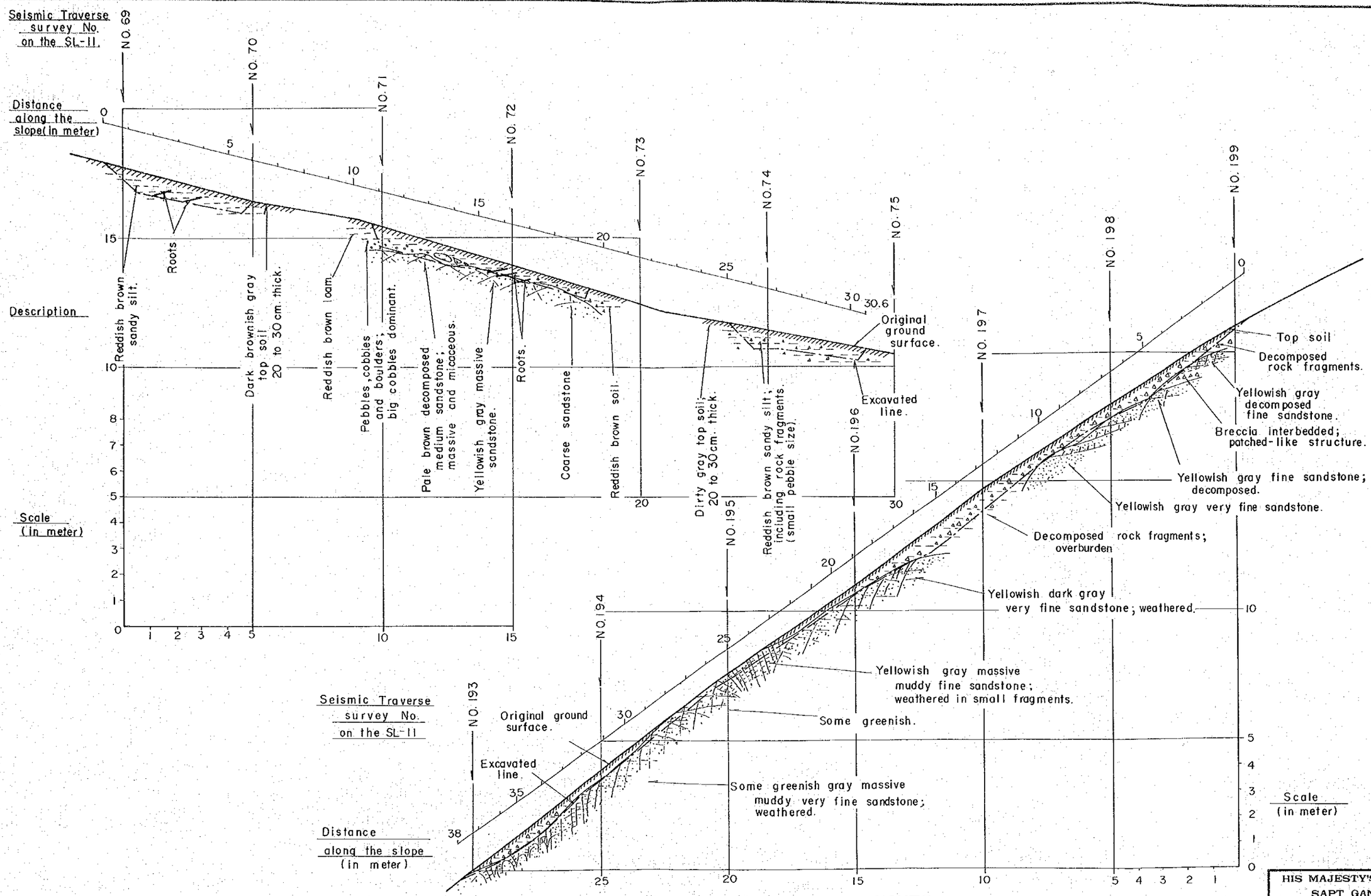
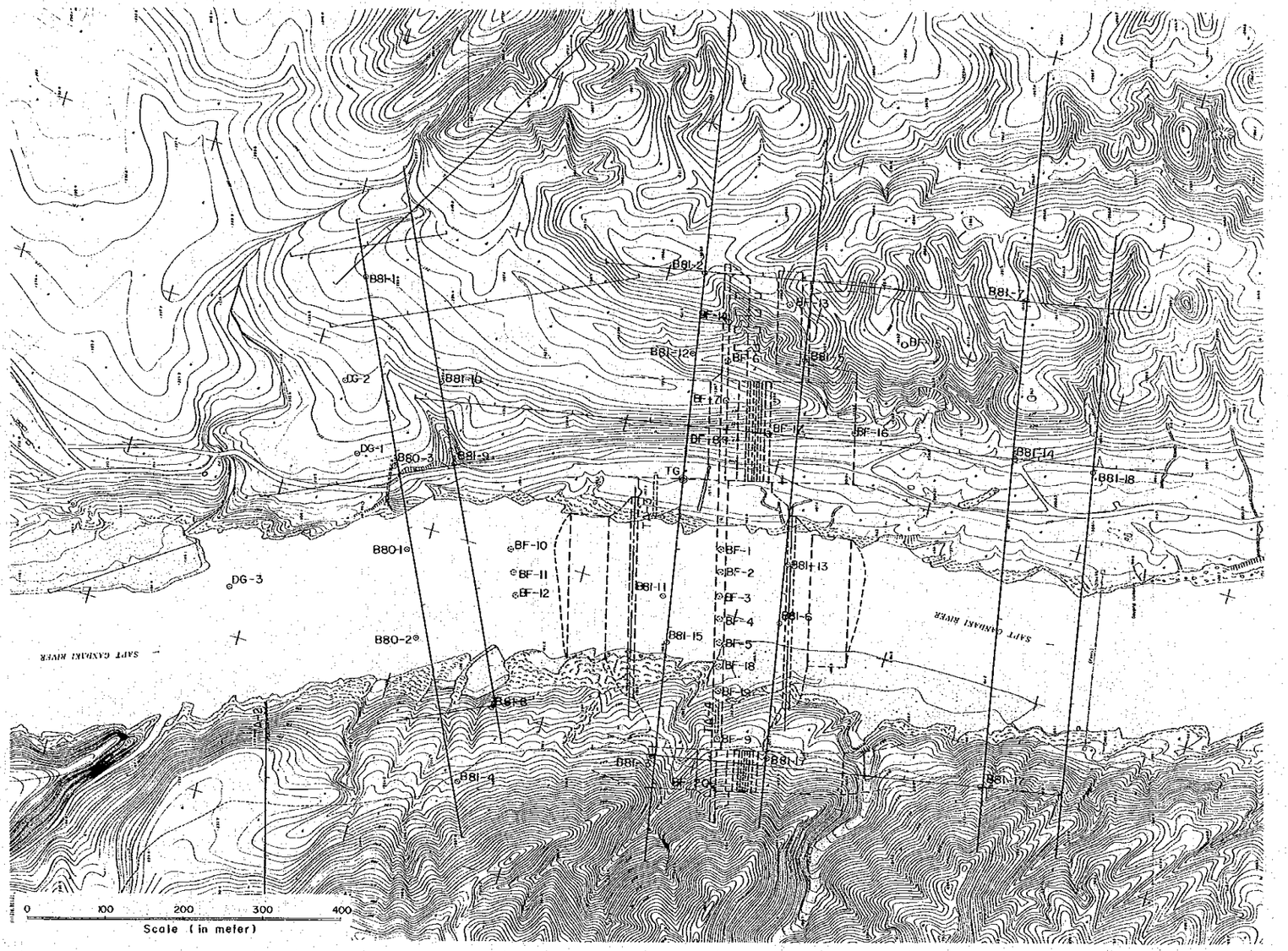


FIG- E.47: GEOLOGICAL PROFILE OF TEST TRENCHES TR-3 AND TR-4 (DAM SITE C)

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC POWER DEVELOPMENT PROJECT
FEASIBILITY REPORT

JAPAN INTERNATIONAL COOPERATION AGENCY

FIG- E.48



Explanation

⊙ : Core drilling

Borehole No. drilled in or before the feasibility study.

DG -1 to 3
B80-1 to 3
B81 -1 to 18

Borehole No. to be drilled in future investigation.

BF -1 to 20

Test Adit

Adit No. excavated in the feasibility study.

TA-1 and 2

Adit No. to be excavated in future investigation.

TA-3 and 4

FIG- E.48 : FUTURE INVESTIGATION PLAN

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
FEASIBILITY REPORT

JAPAN INTERNATIONAL COOPERATION AGENCY

ATTACHMENTS

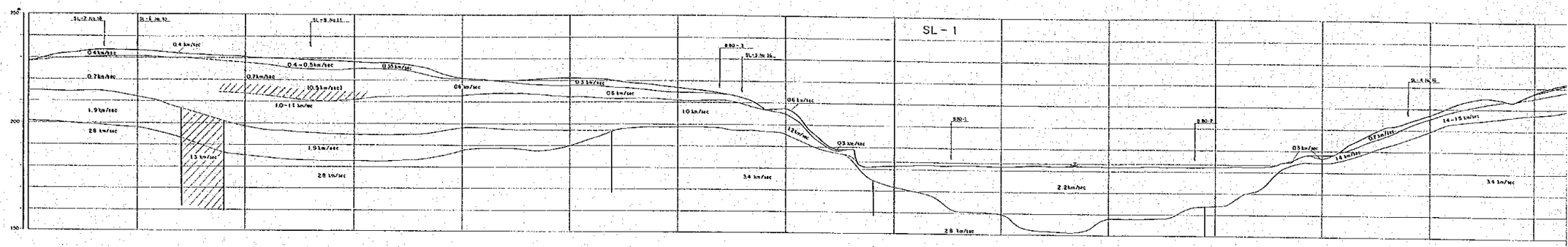
I

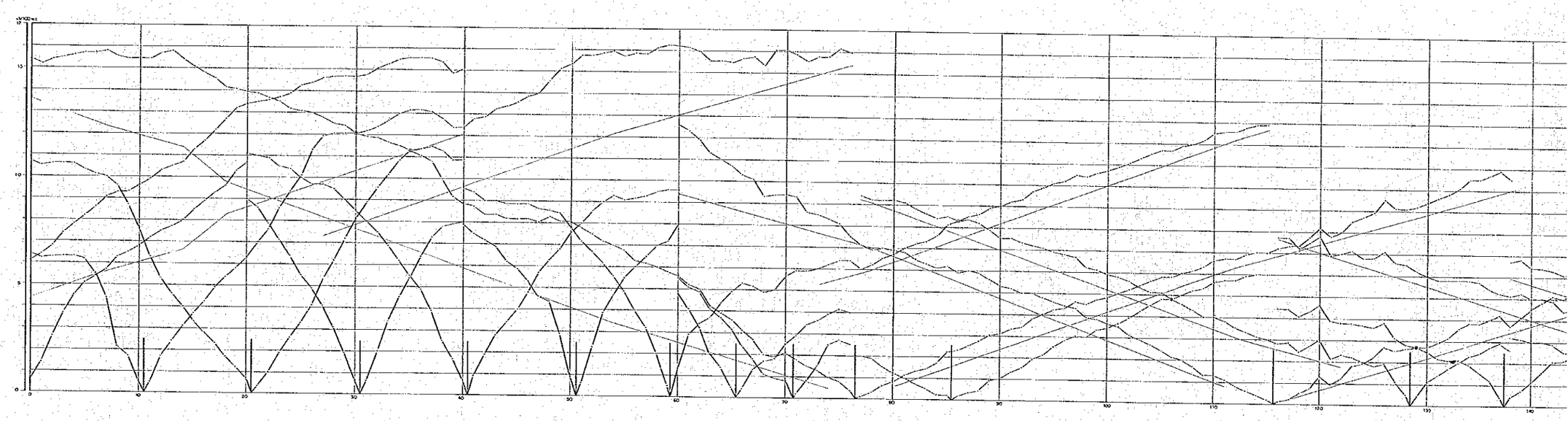
SEISMIC REFRACTION PROFILE;

TIME-DISTANCE PLOT

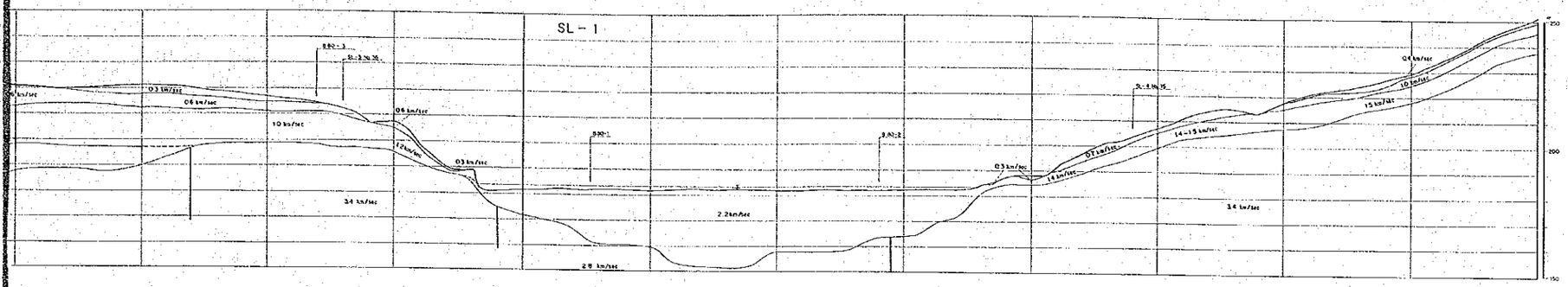
AND

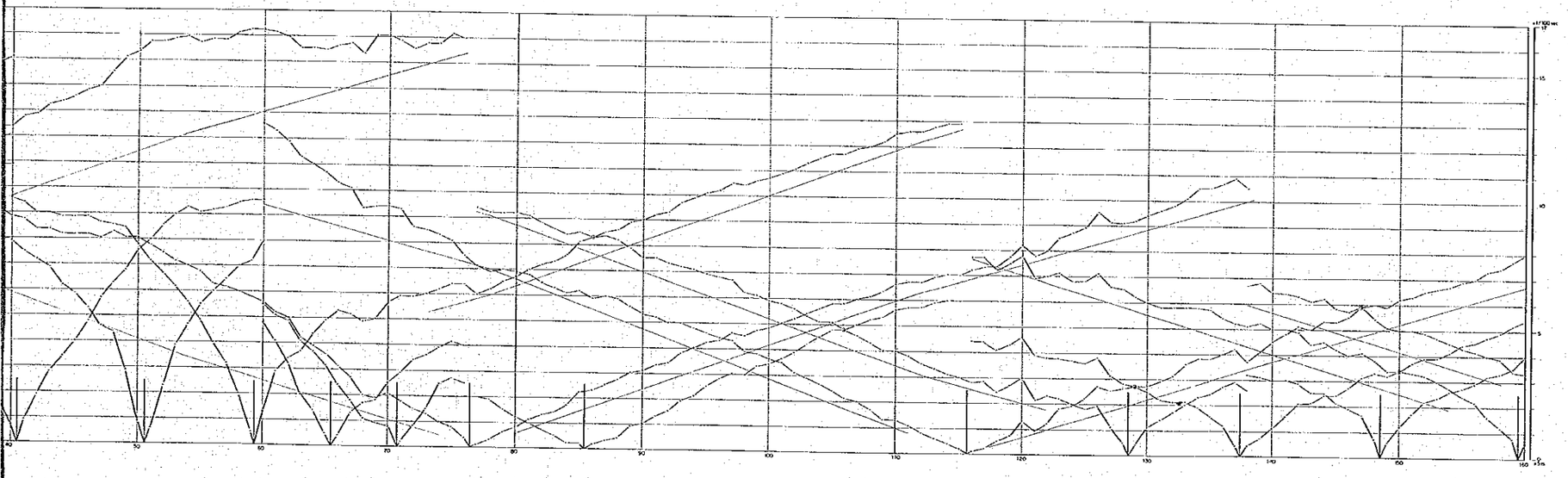
INTERPRETATION (16 SHEETS)


SL - 1
250
200
150
0.4 km/sec
0.4 - 0.5 km/sec
0.7 km/sec
1.9 km/sec
2.8 km/sec
1.3 km/sec
1.0 km/sec
3.4 km/sec
2.2 km/sec
1.4 - 1.5 km/sec
3.4 km/sec


15
10
5
0
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140

NO. I-1





SEISMIC REFRACTION PROFILE

TIME-DISTANCE PLOT

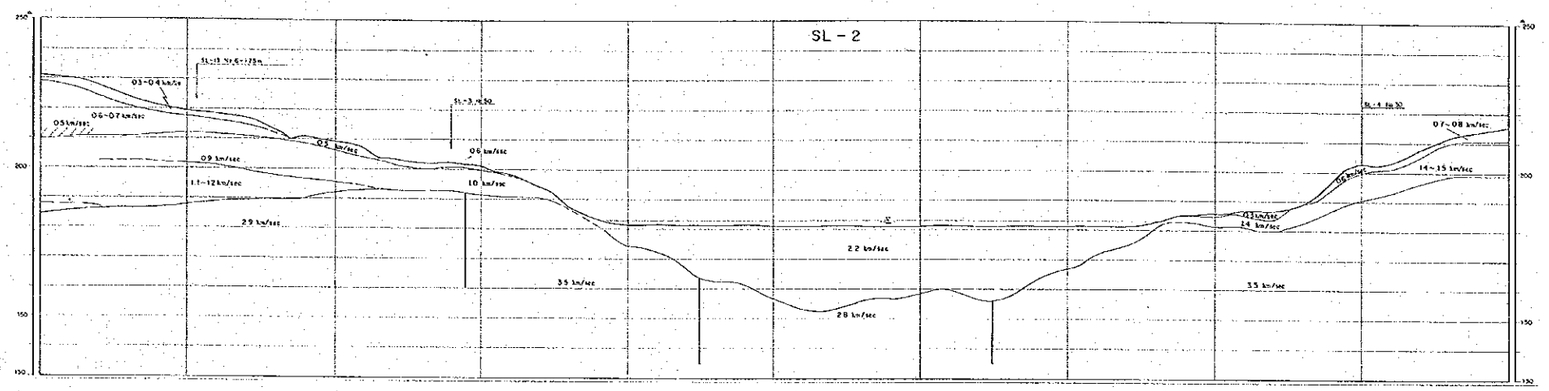
AND

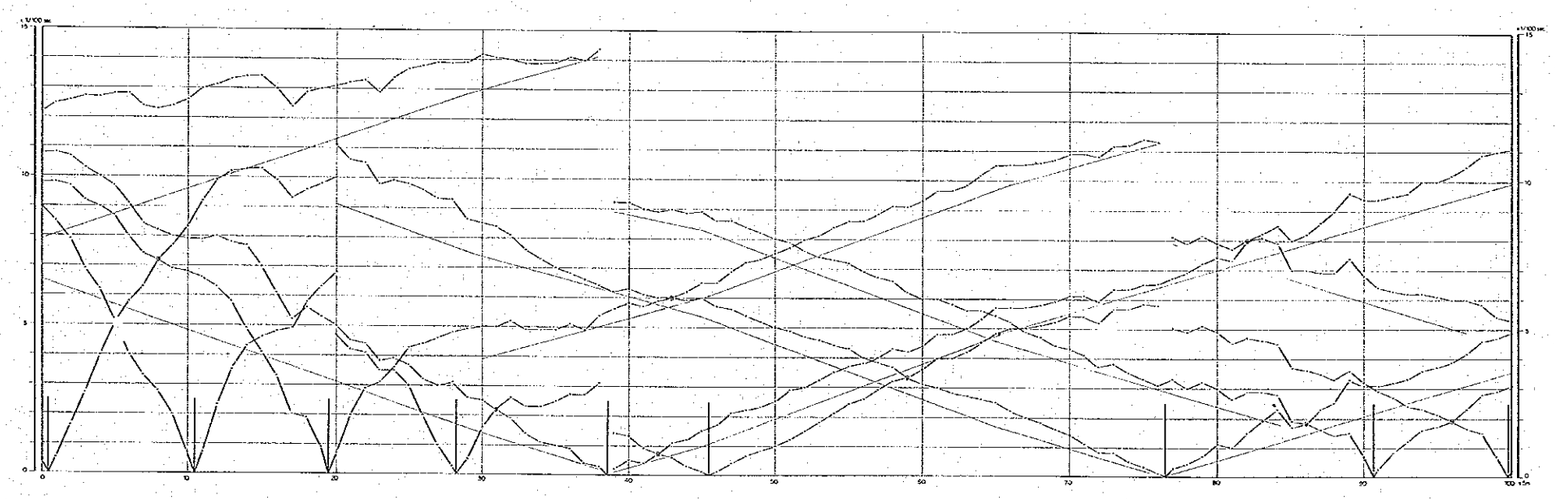
INTERPRITATION

PROFILE NO. SL-1

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
FEASIBILITY REPORT
JAPAN INTERNATIONAL COOPERATION AGENCY

NO. I-2





SEISMIC REFRACTION PROFILE

TIME-DISTANCE PLOT

AND

INTERPRITATION

PROFILE NO. SL-2

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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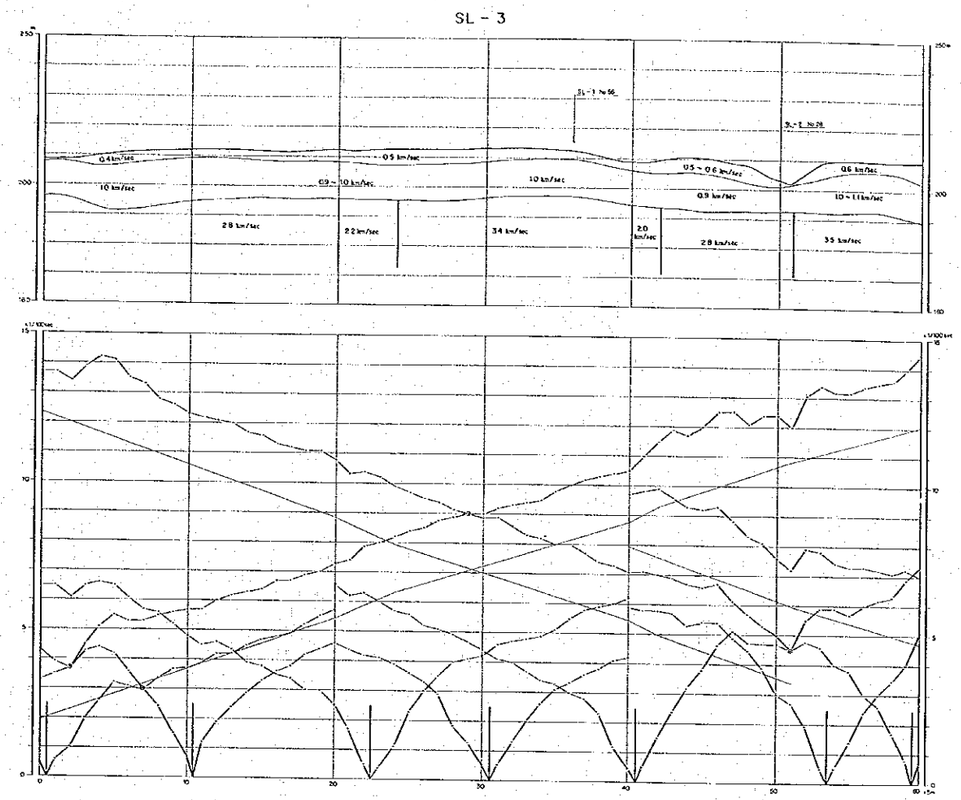
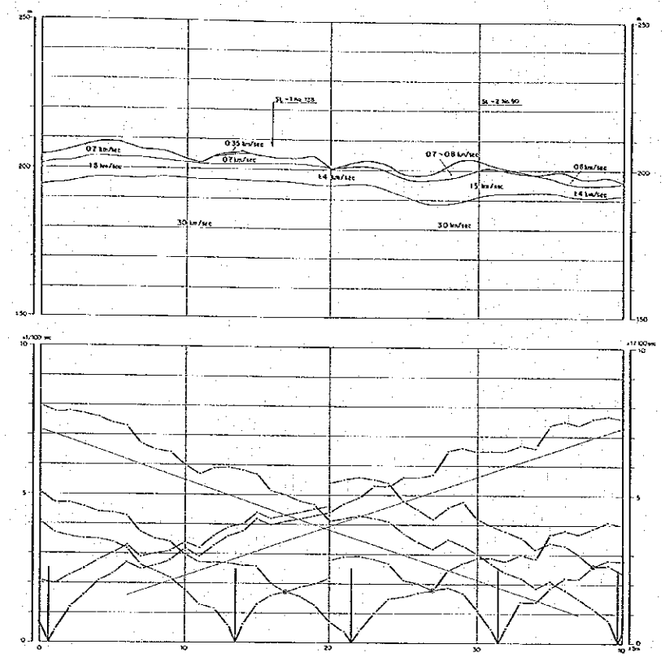
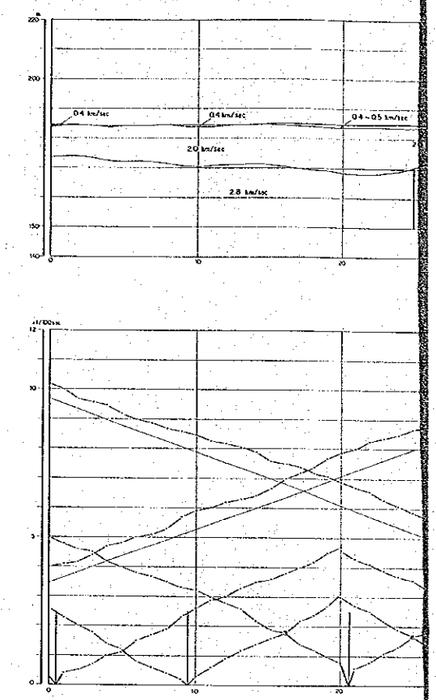
SL - 3



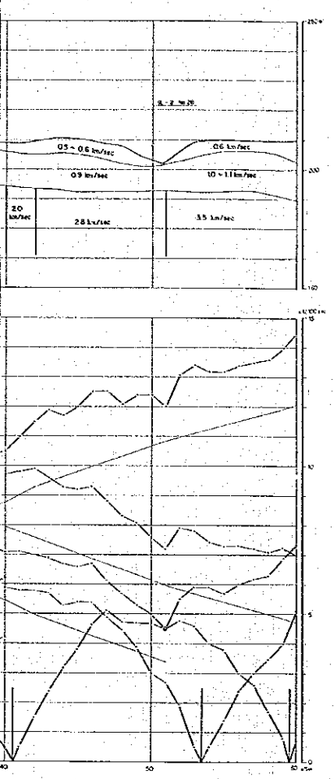
SL - 4



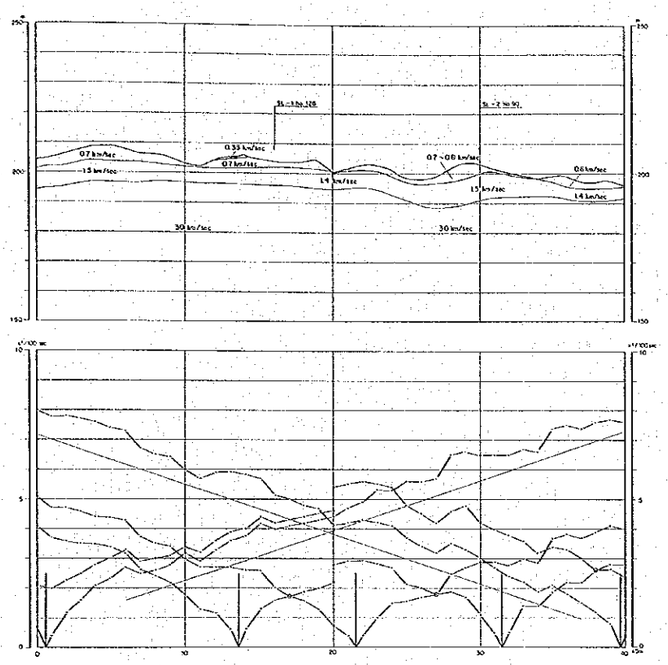
SL - 5



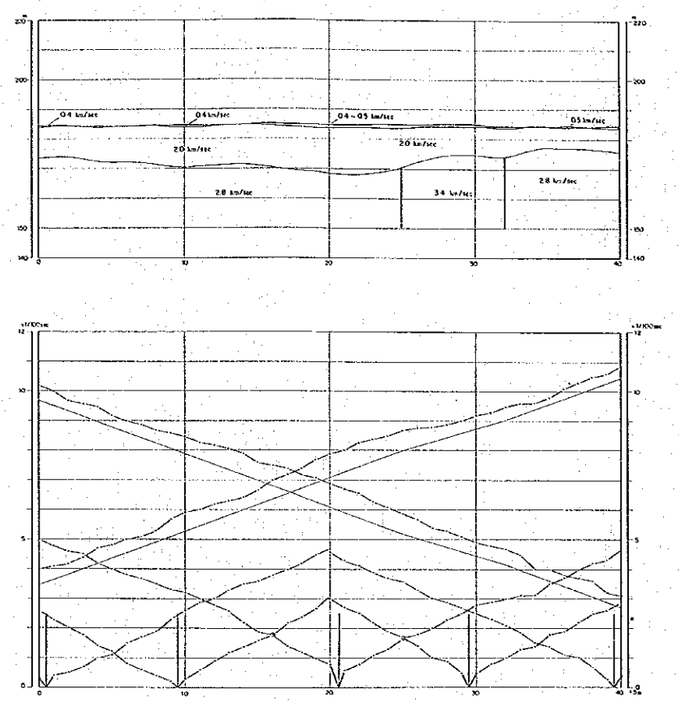
NO. I-3



SL - 4



SL - 5



SEISMIC REFRACTION PROFILES

TIME-DISTANCE PLOT

AND

INTERPRITATION

PROFILE NOS. SL-3,SL-4 AND SL-5

HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
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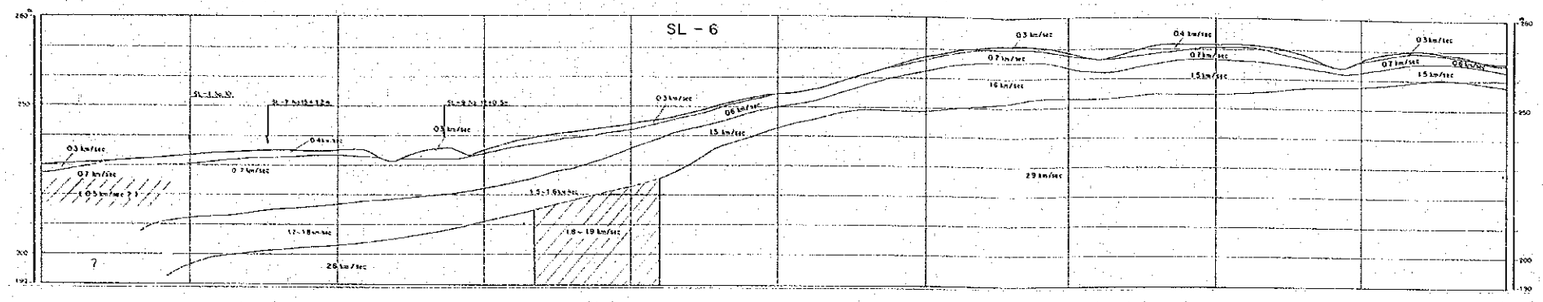
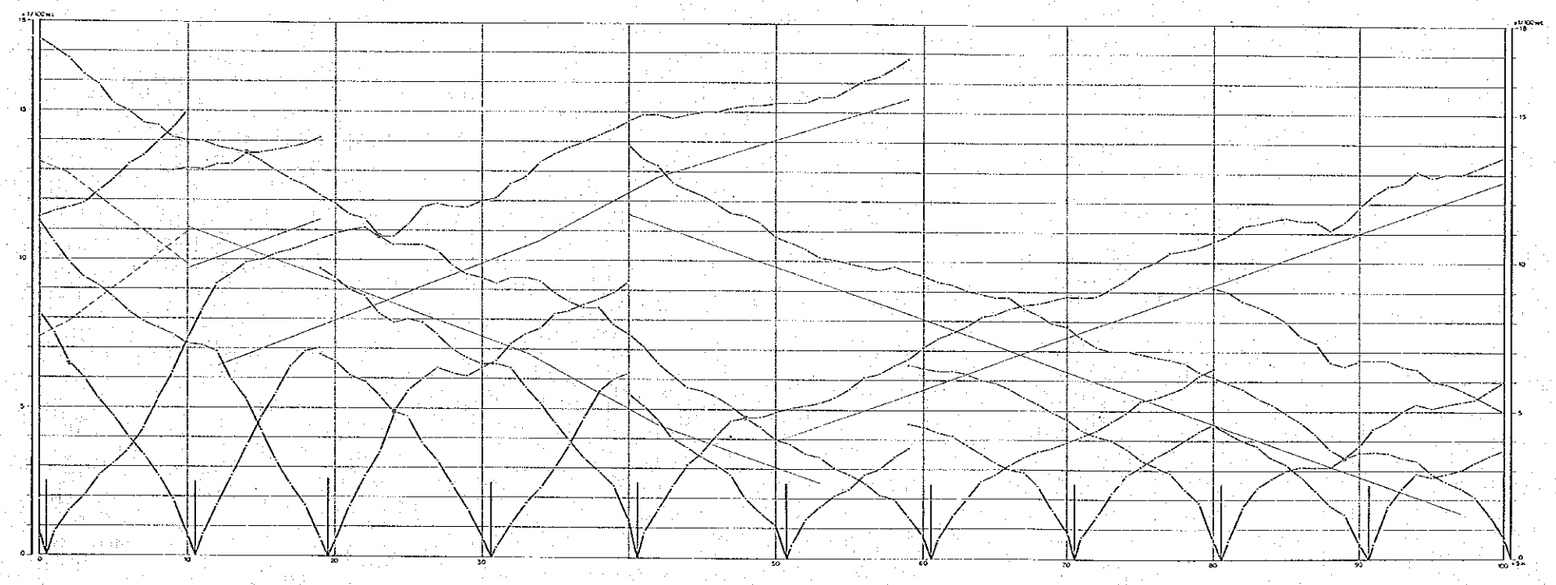
NO. I-4





SEISMIC REFRACTION PROFILE

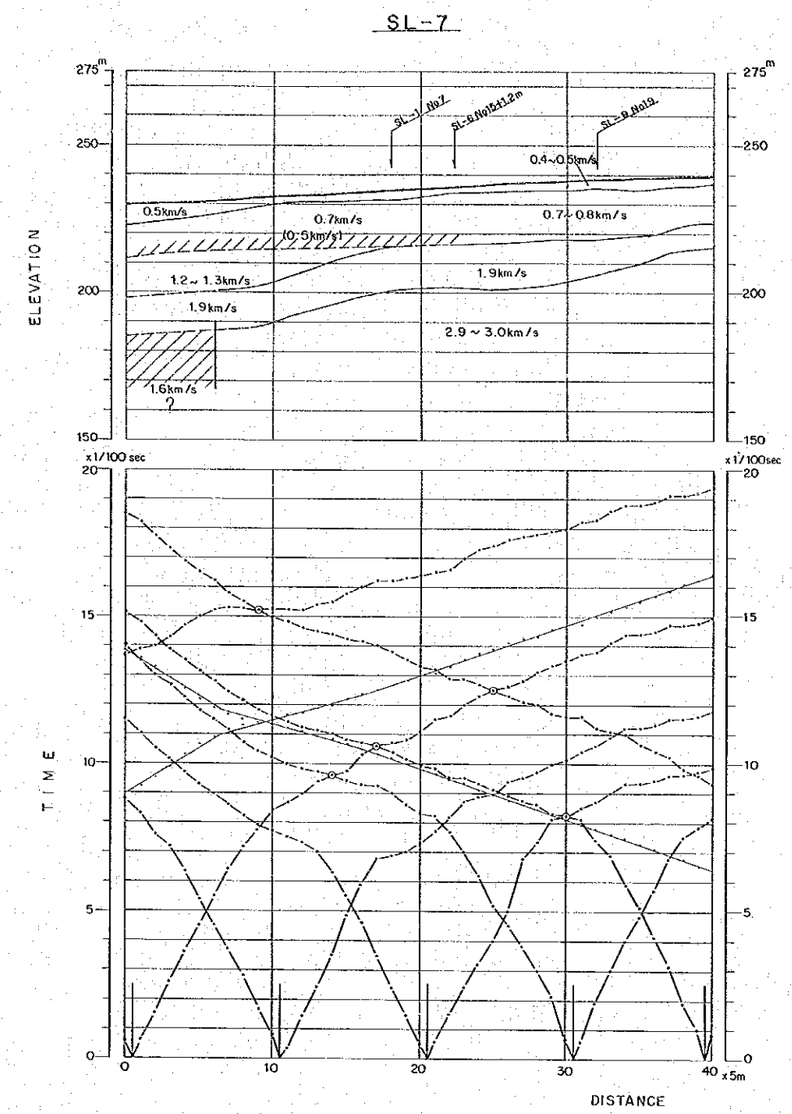
TIME-DISTANCE PLOT

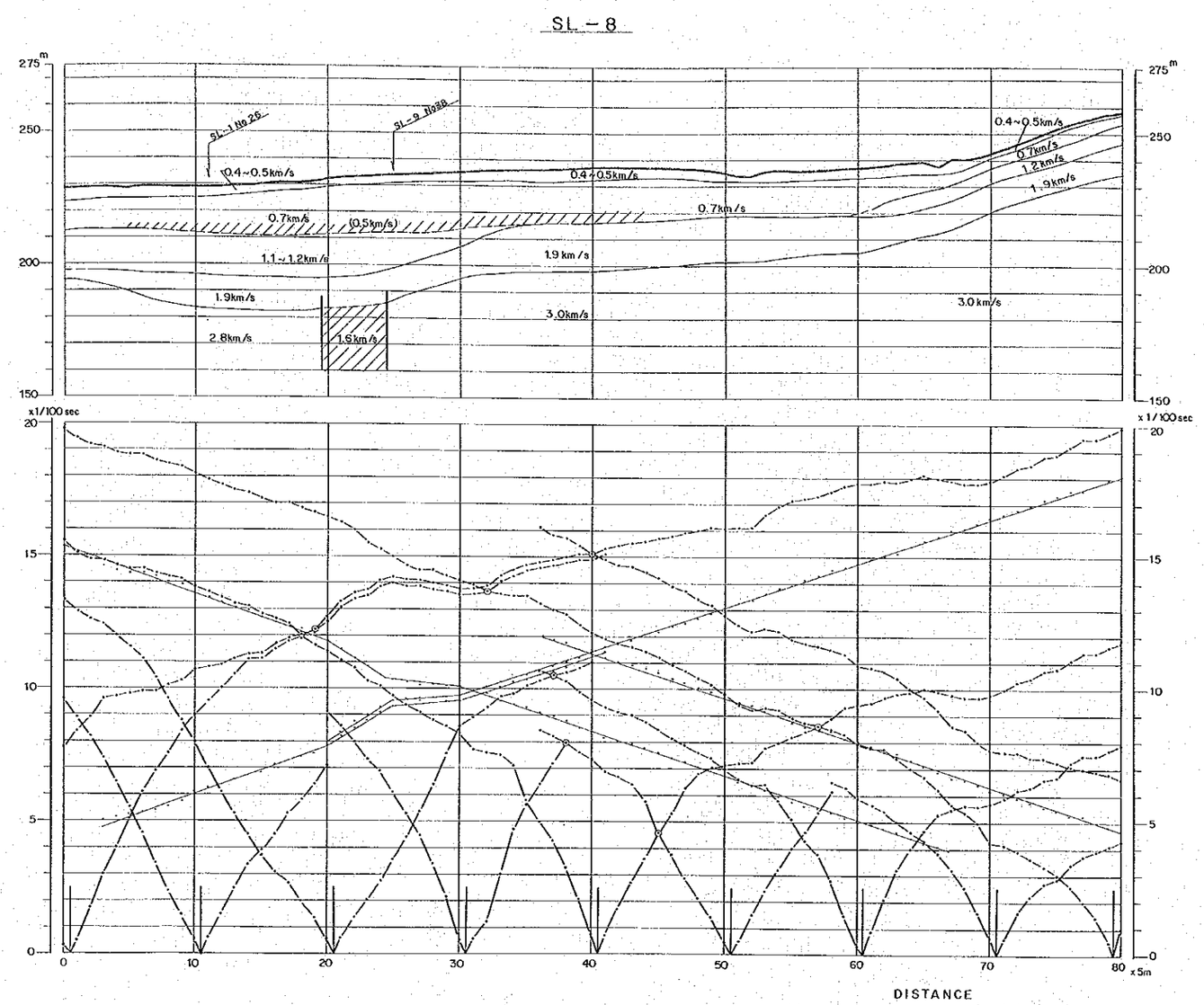
AND

INTERPRITATION

PROFILE NO. SL-6

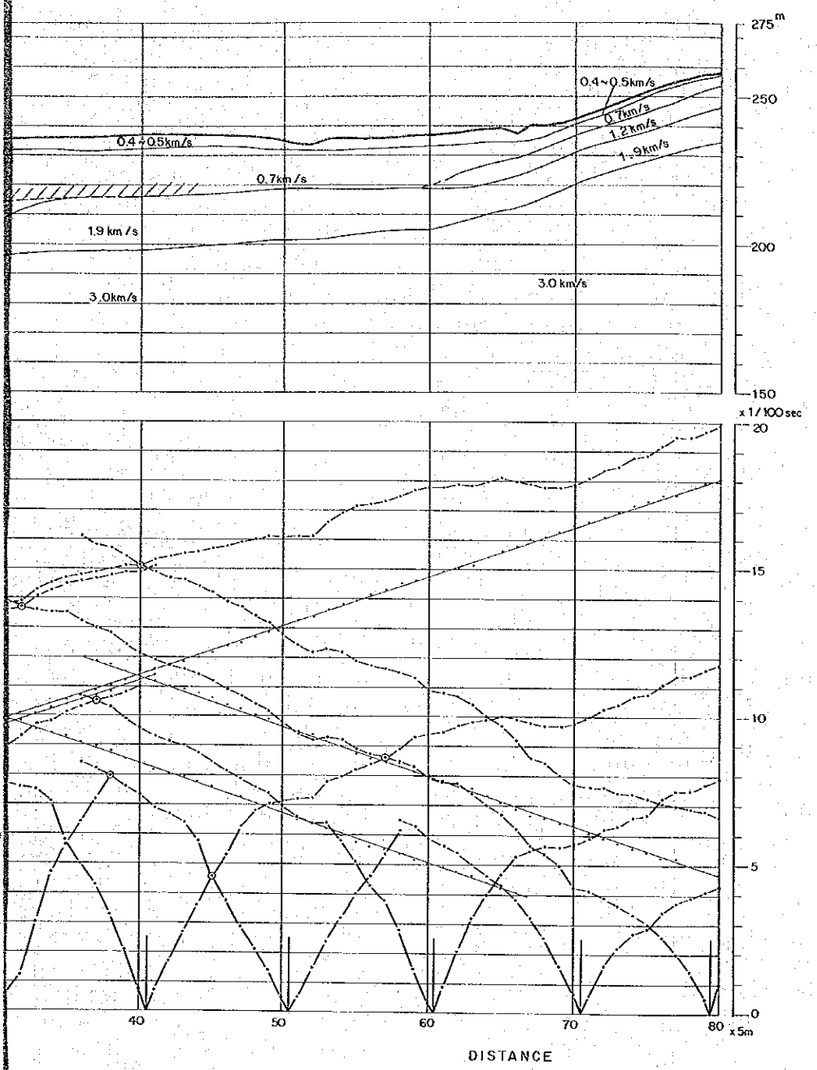
HIS MAJESTY'S GOVERNMENT OF NEPAL
SAPT GANDAKI HYDROELECTRIC
POWER DEVELOPMENT PROJECT
FEASIBILITY REPORT
JAPAN INTERNATIONAL COOPERATION AGENCY


SL-7
SL-1 No7
SL-8 No7+1.2m
SL-9 No19
0.4~0.5km/s
0.5km/s
0.7km/s
(0.5km/s)
0.7~0.8km/s
1.2~1.3km/s
1.9km/s
1.9km/s
2.9~3.0km/s
1.6km/s
?
ELEVATION
TIME
x1/100 sec
DISTANCE
x5m

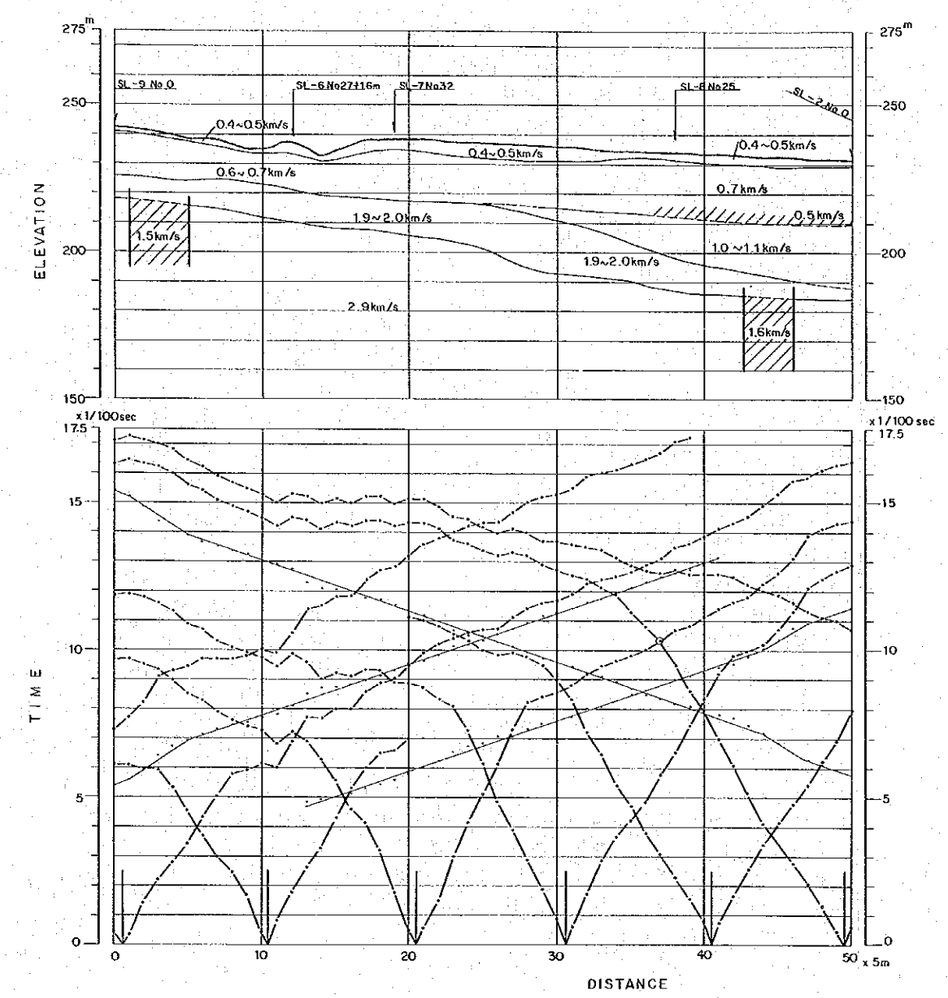

SL-8
SL-1 No 26
SL-9 No38
0.4~0.5km/s
0.4~0.5km/s
0.4~0.5km/s
0.7km/s
1.2km/s
1.9km/s
0.7km/s
(0.5km/s)
0.7km/s
1.1~1.2km/s
1.9km/s
1.9km/s
3.0km/s
3.0km/s
2.8km/s
1.6km/s
ELEVATION
TIME
x1/100 sec
DISTANCE
x5m

NO. I-5

SL − 8



SL − 9



SEISMIC REFRACTION PROFILES

TIME-DISTANCE PLOT

AND

INTERPRITATION

PROFILE NOS. SL-7,SL-8 AND SL-9

HIS MAJESTY'S GOVERNMENT OF NEPAL
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