

THE REPUBLIC OF THE PHILIPPINES

R E P O R T

FOR

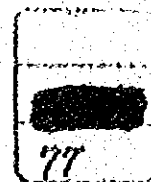
THE FLOOD FORECASTING SYSTEMS

IN THE AGNO, BICOL AND CAGAYAN RIVER BASINS

— APPENDIX —

AUGUST 1977

JAPAN INTERNATIONAL COOPERATION AGENCY



219
7.1

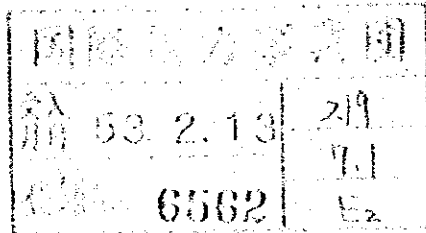
THE REPUBLIC OF THE PHILIPPINES
REPORT
FOR
THE FLOOD FORECASTING SYSTEMS
IN THE AGNO, BICOL AND CAGAYAN RIVER BASINS

— APPENDIX —

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AUGUST 1977

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REPORT
for
THE FLOOD FORECASTING SYSTEMS
IN THE AGNO, BICOL AND CAGAYAN RIVER BASIN
— APPENDIX —
— CONTENTS —

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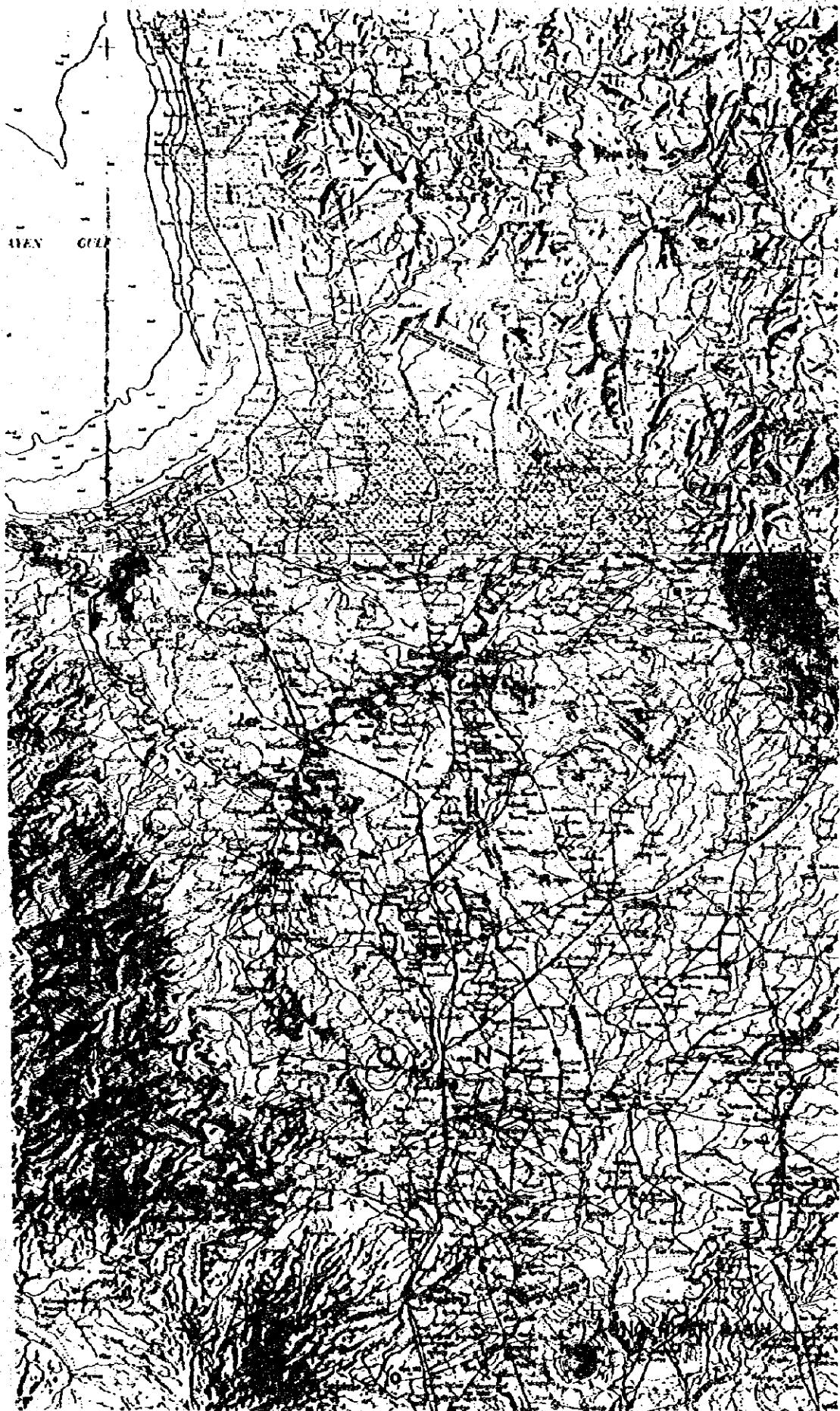
APPENDIX 1

Location Map for Gaging Stations, Repeater Stations and Sub-centers

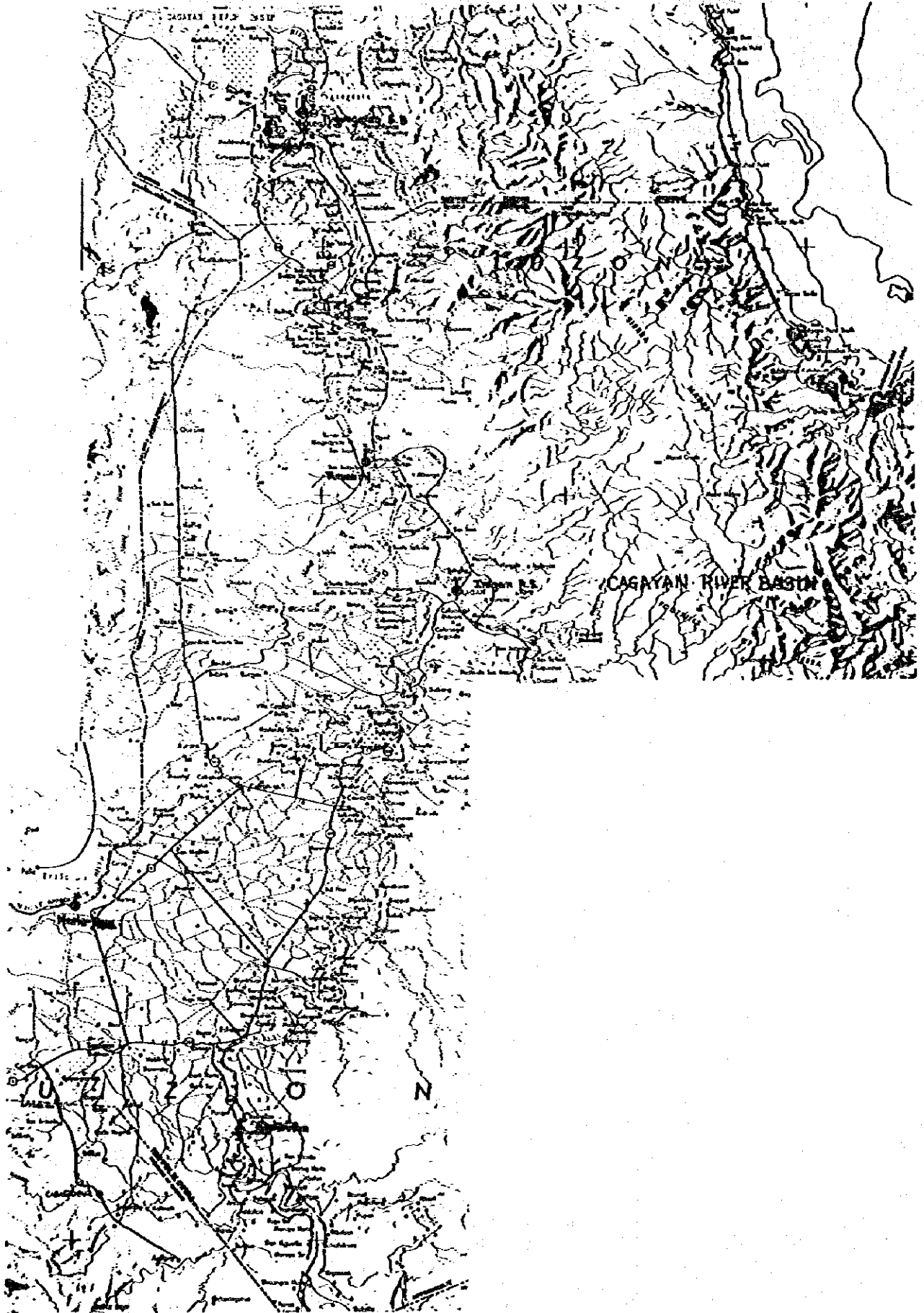
The Agno River Basin

The Bicol River Basin

The Cagayan River Basin







APPENDIX 2

**Sketch of Proposed Site for Gaging Stations, Repeater Stations
and Sub-centers.**

The Agno River Basin

The Bicol River Basin

The Cagayan River Basin

RIVER NAME

Agno

STATION NAME

Deliman

STAGE

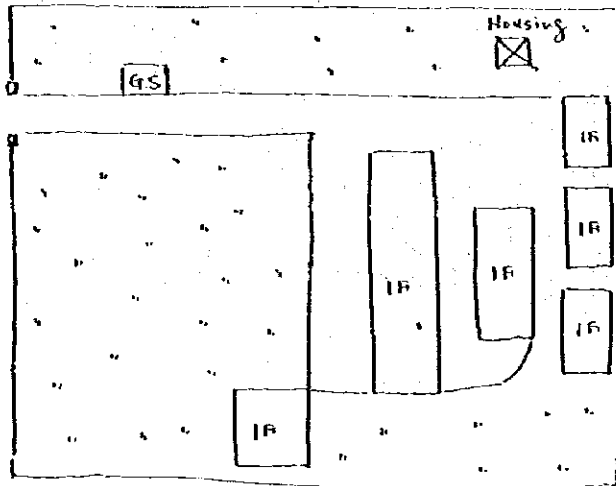
Repeater Station

SKETCH

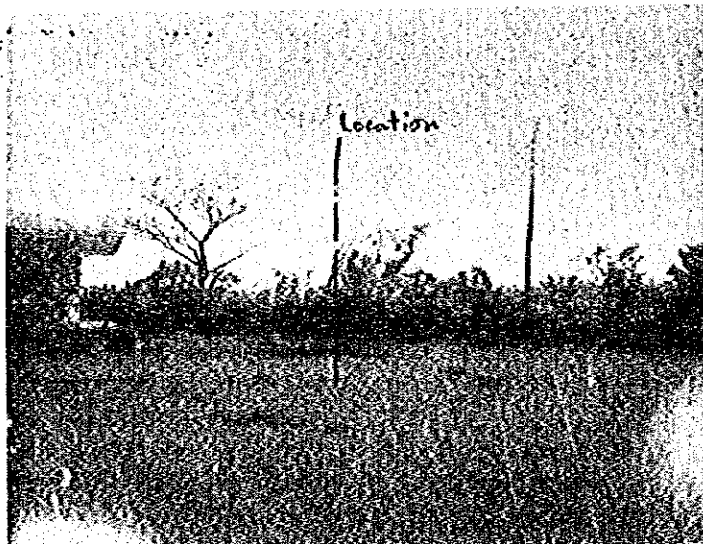
PLAN

CROSS SECTION

N



PHOTO



INSTALLATION

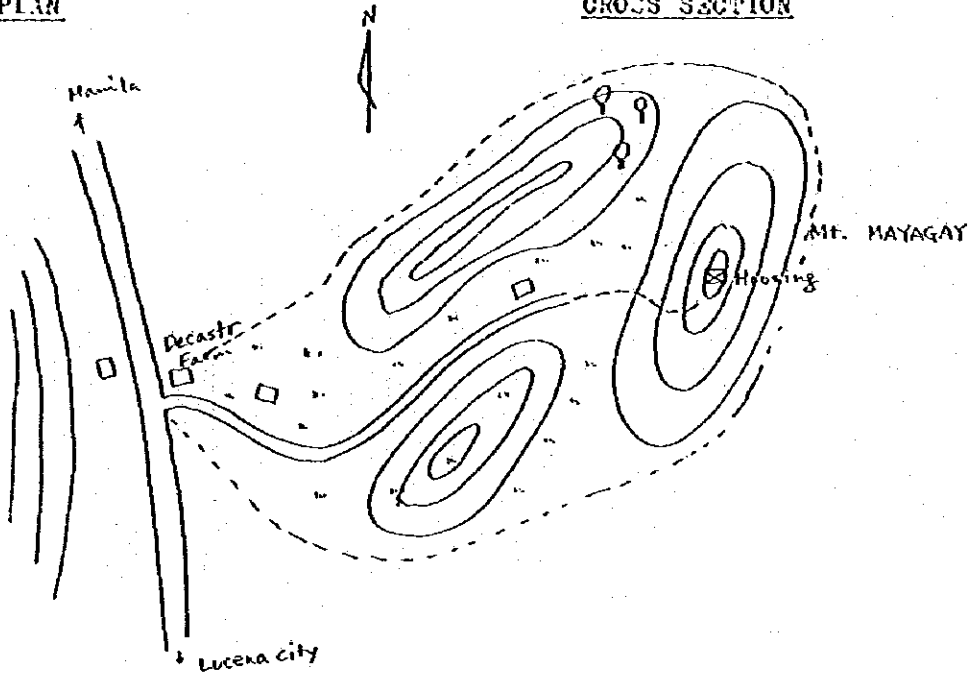
- * Housing 5x5^m
- * Triangular tower 30^m

RIVER NAME	Agno	STATION NAME	Tanay	STAGE
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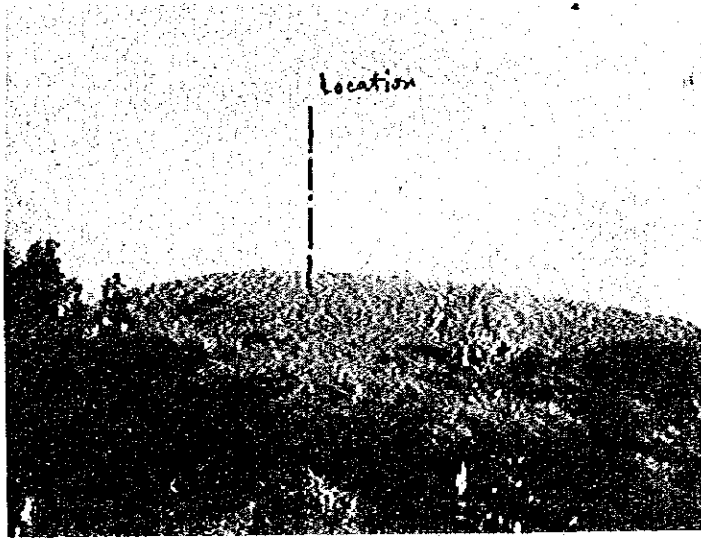
SKETCH

PLAN

CROSS SECTION



PHOTO



INSTALLATION

- Housing 5x5m
- Triangular tower 30"

RIVER NAME

Agno

STATION NAME

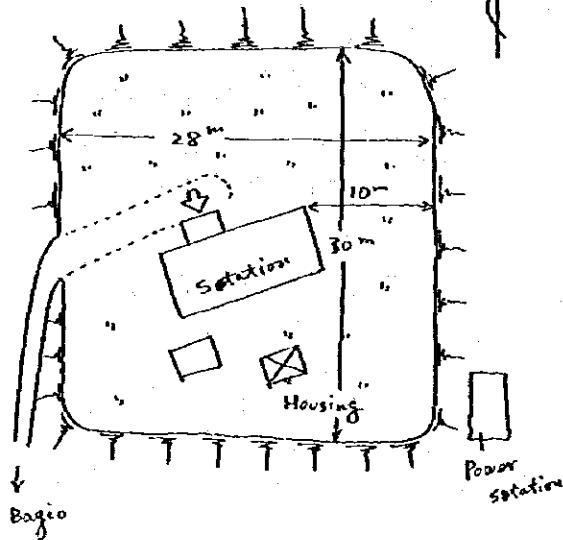
Sto. Tomas

STAGE

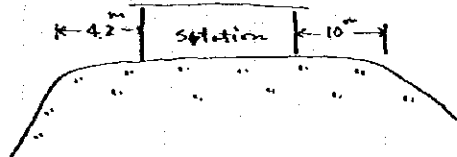
Repeater Station

SKECH

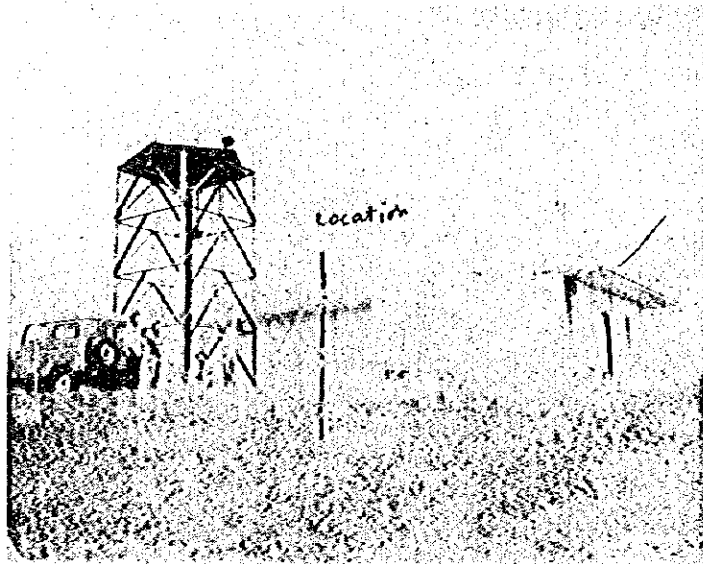
PLAN



CROSS SECTION



PHOTO



INSTALLATION

- Housing 5x5m
- Triangular tower 30m

RIVER NAME *Agno*

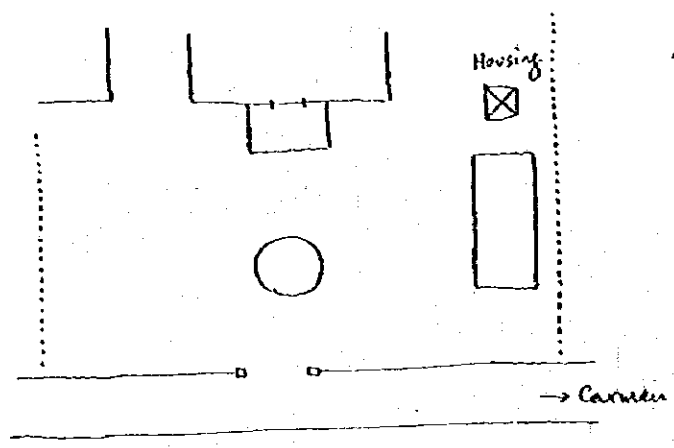
STATION NAME *Carmen*

STAGE *sub center*

SKECH

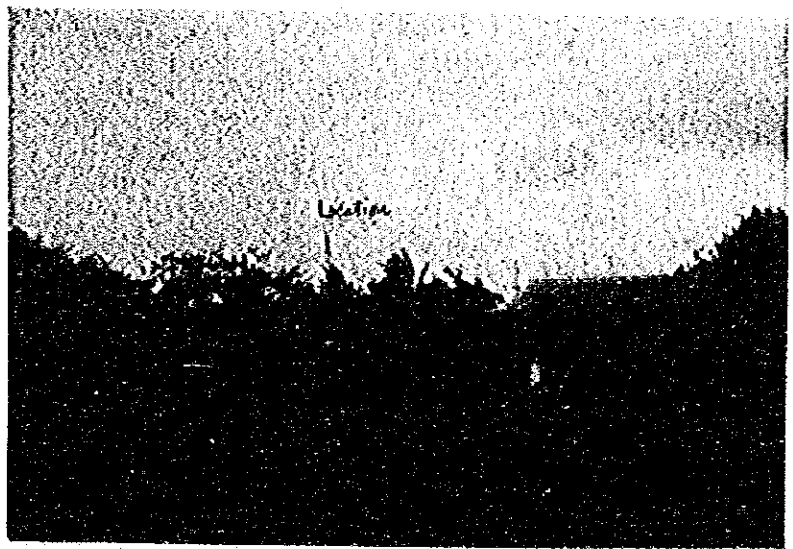
PLAN

CROSS SECTION



Agno Flood control system center

PHOTO



INSTALATION

- Housing 10x20m
- Stell tower 35m

RIVER NAME

Agno

STATION NAME

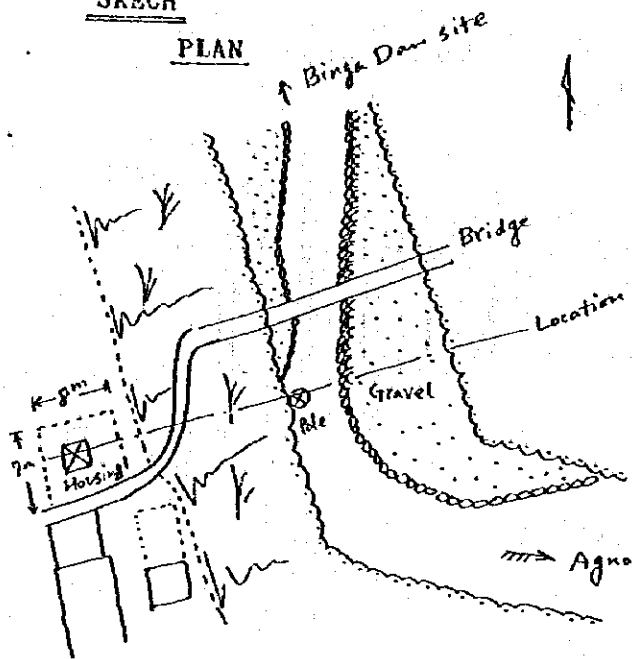
Binga Dam

STAGE

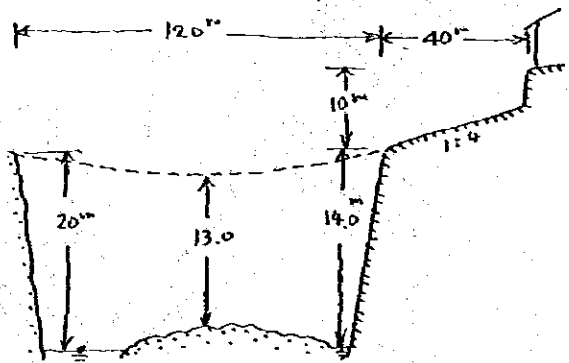
Water level,
Rainfall

SKECH

PLAN



CROSS SECTION



PHOTO



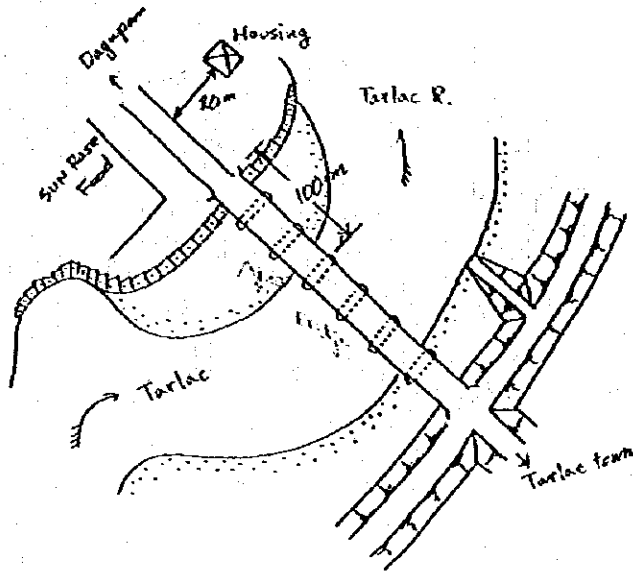
INSTALATION

- Housing 2.5 x 2.5
- Pole type 35m (PVC pipe cover)
- Rainfall gaging
- Tele pole 10m
- Fence
- Site cost

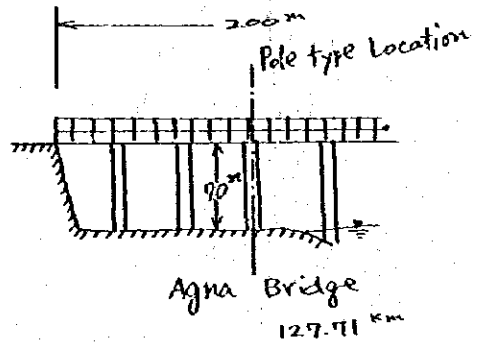
RIVER NAME	Ayno Tarlac	STATION NAME	Tibag (Tarlac)	STAGE	Water level, Rainfall, discharge
------------	----------------	--------------	----------------	-------	-------------------------------------

SKETCH

PLAN



CROSS SECTION



PHOTO



INSTALATION

- Housing 2.5 x 2.5^m
- Pole type (10.5 m)
- Rainfall gaging
- Fence
- tele pole 10m
- Current meter
- Site cost

RIVER NAME

Tarlac
(Aguo)

STATION NAME

Bamban (Future)

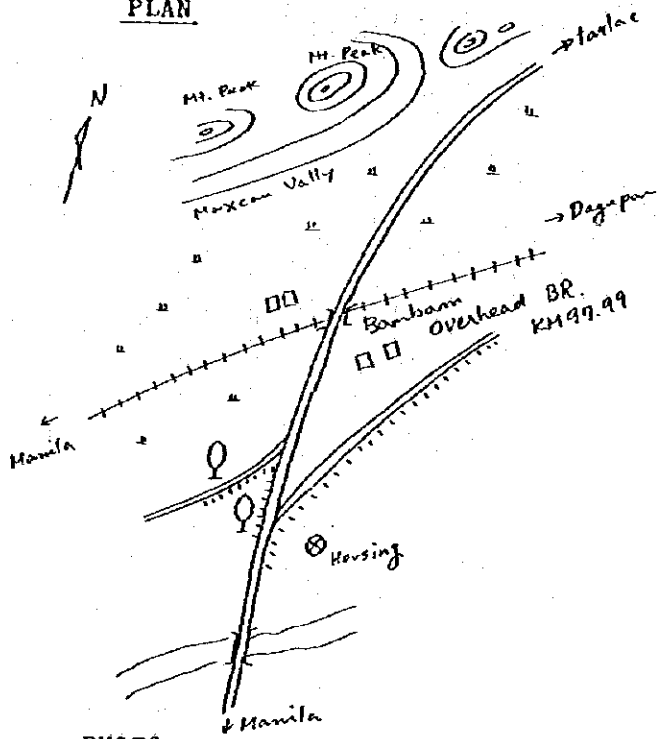
STAGE

Rainfall

SKECH

PLAN

CROSS SECTION



PHOTO



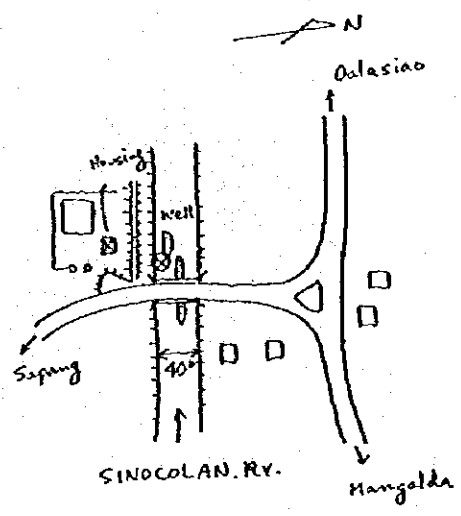
INSTAATION

- Housing 1.8 x 1.5
- Rainfall gaging
- Fence
- Tele pole 10m

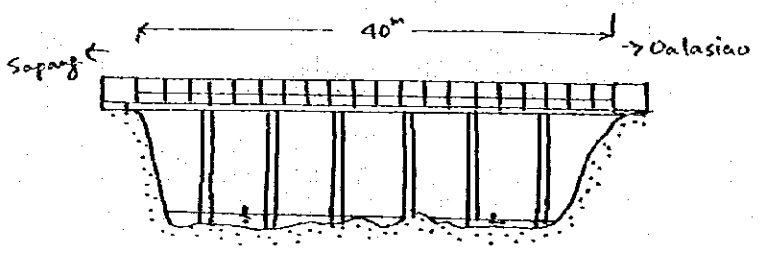
RIVER NAME	Agno SINOCOLAN	STATION NAME	Sta. Barbara	STAGE	Water level, Rainfall, discharge
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SKETCH

PLAN

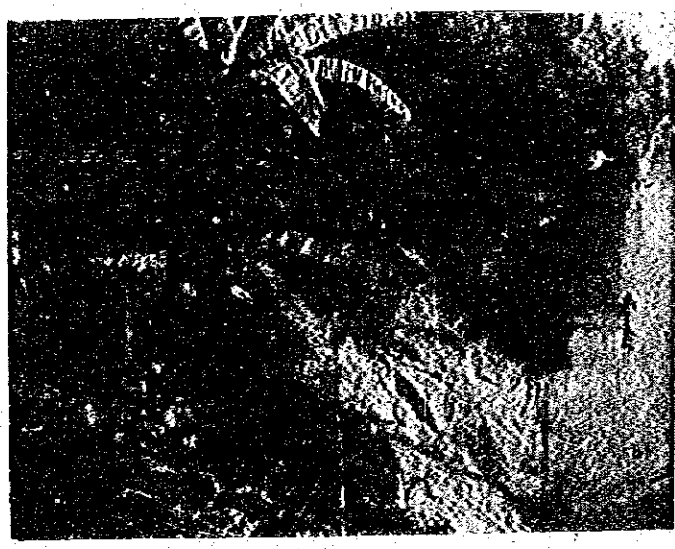


GROSS SECTION



Gov. D. MARAHBA BRIDGE
Reconstructed 1949
SINOCOLAN RIVER

PHOTO



INSTALLATION

- Housing 2.5x2.5
- site cost
- Well type
- Float type (SUIKEN 62)
- Rainfall gaging
- tele pole 10m
- VACUUM PUMP
- Current meter

RIVER NAME

Agno

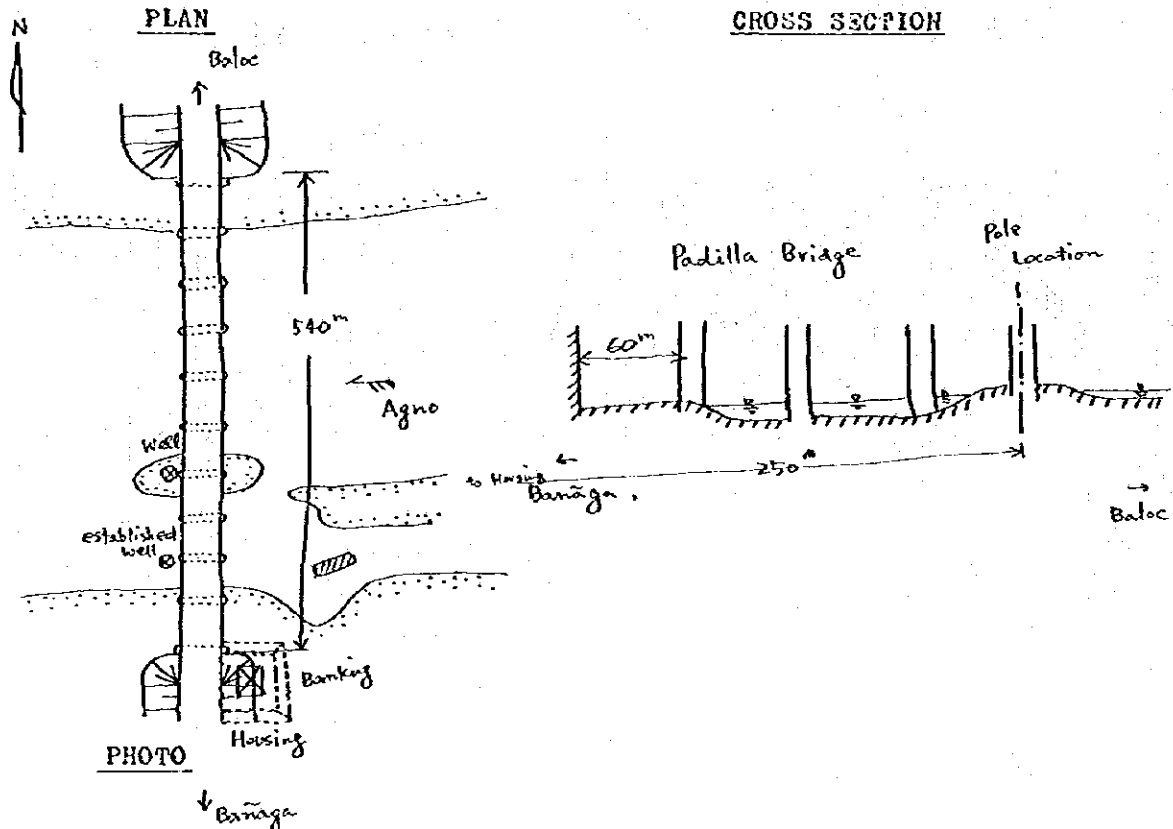
STATION NAME

Bañaga

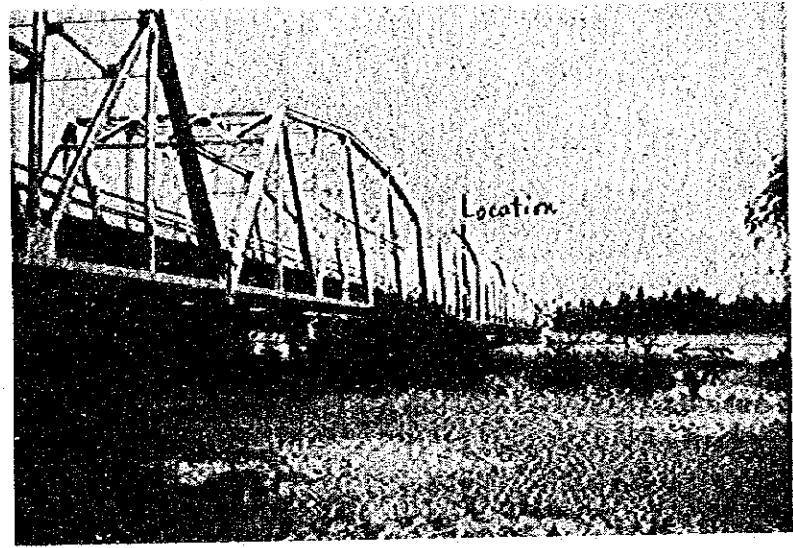
STAGE

Water level & Rainfall

SKECH



PHOTO

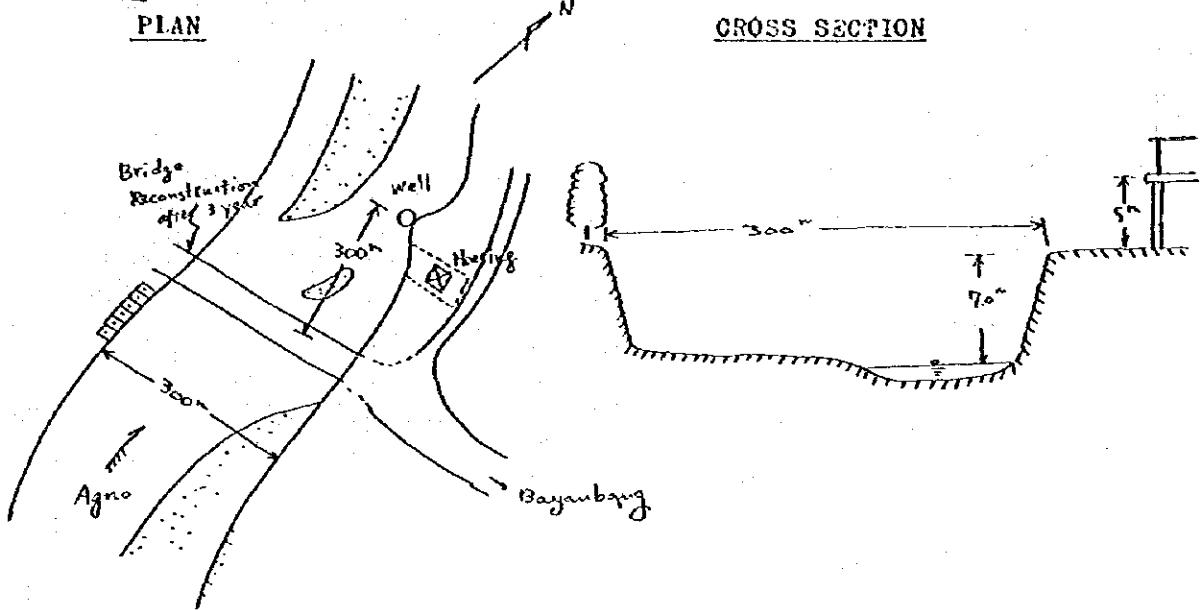


INSTALATION

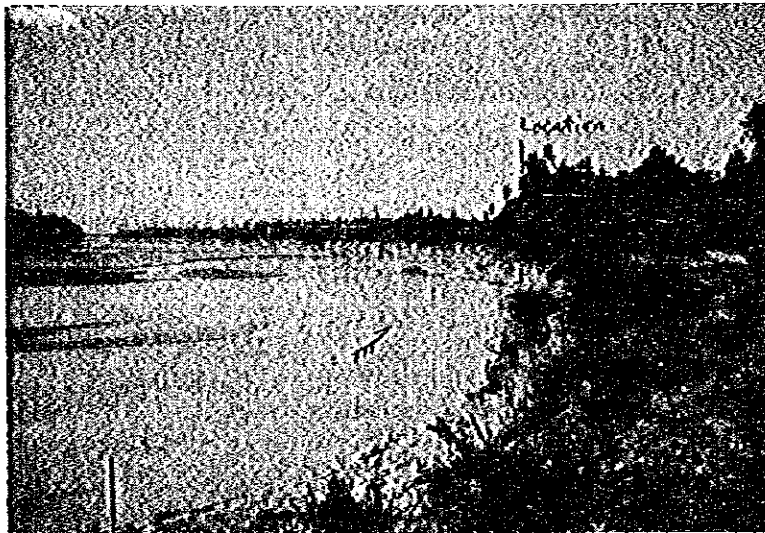
- Housing 2.5 x 2.5
- Bill type
- Float type (Gurken 70)
- Banking (6m)
- Fence
- Tele pole
- Site cost

RIVER NAME	Agno	STATION NAME	Wa Wa	STAGE	Water level, Rainfall, discharge
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SKECH



PHOTO

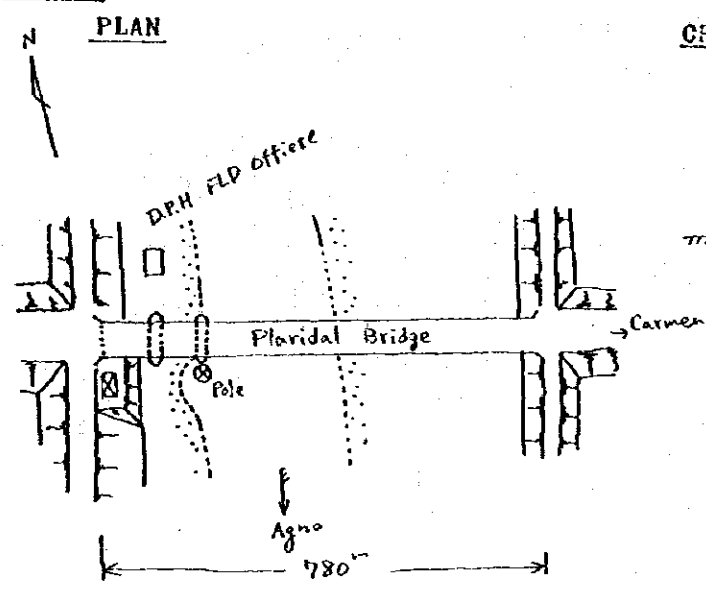


INSTALATION

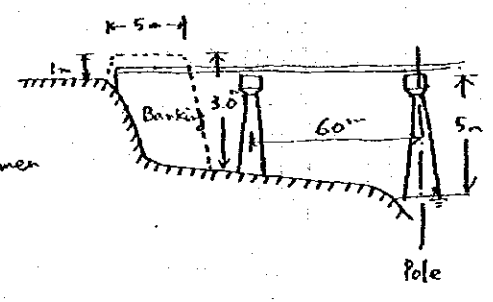
- Well type
- Vacuum pump
- Housing 2.5x2.5
Footing (5.0m)
- Float type (SUIKEN 62)
- Rainfall gaging
- Current meter.
- tele pole 10m
- site cost

RIVER NAME	Agno	STATION NAME	Carmen Rosales	STAGE	Water level, Rainfall, discharge
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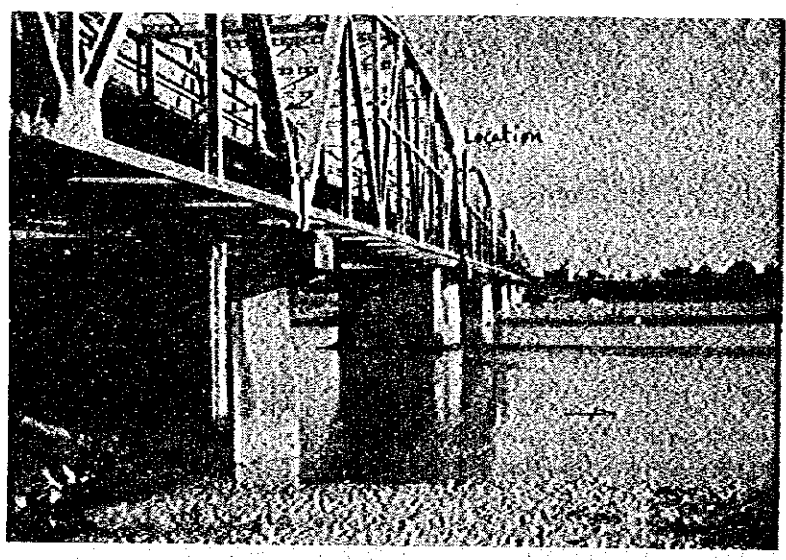
SKECH



CROSS SECTION



PHOTO



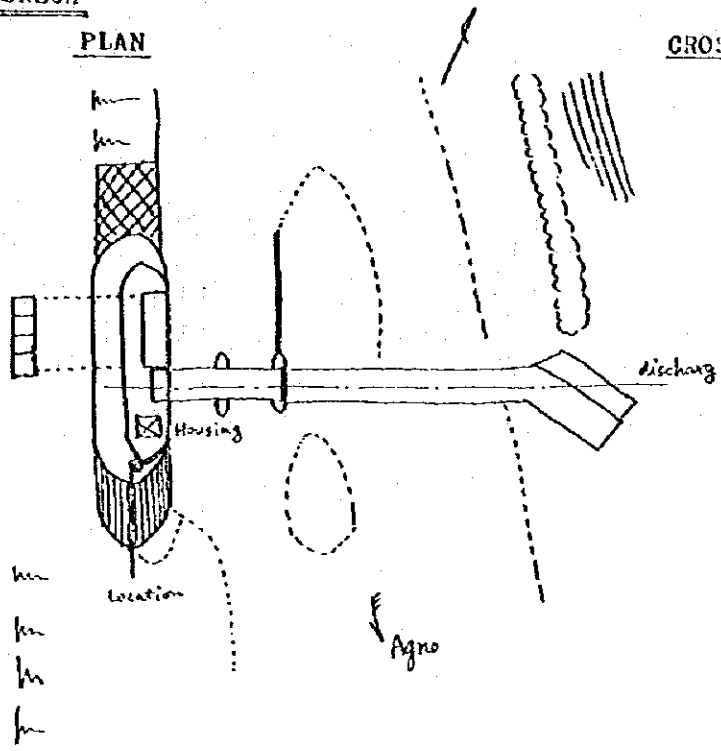
INSTALATION

- Pole type 9m
- Rainfall gaging
- Housing 2.5x2.5
- Tele pole 10m
- Fence
- Banking

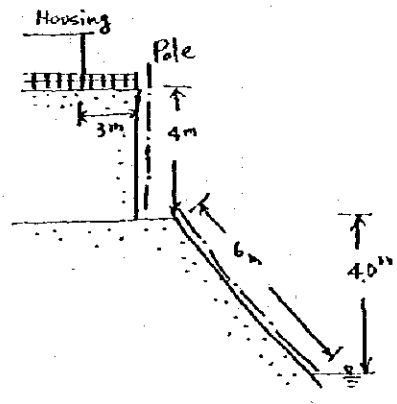
RIVER NAME	Agno	STATION NAME	San Roque	STAGE	Water level & Rainfall, discharge
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SKECH

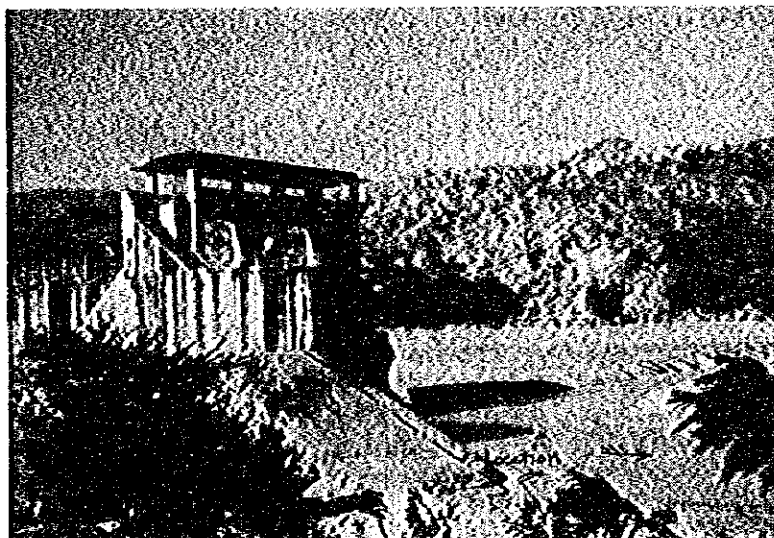
PLAN



CROSS SECTION



PHOTO



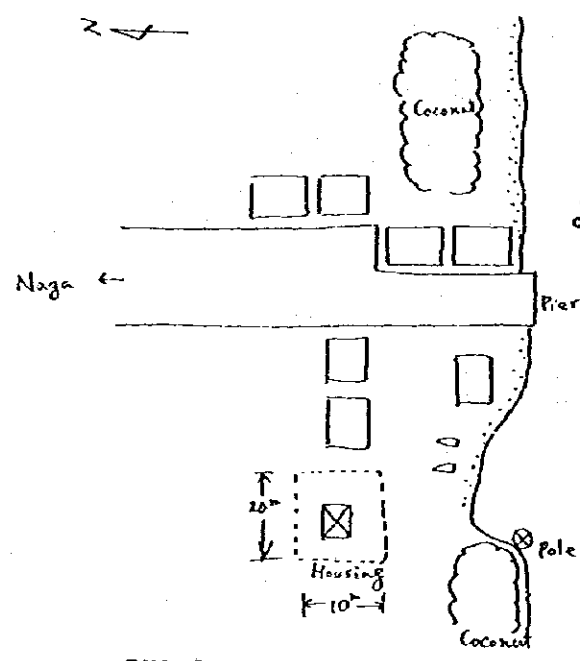
INSTALATION

- Pole type 10"
- Dropper
- Housing 2.5x2.5
- tele pole 10m
- Rainfall gaging

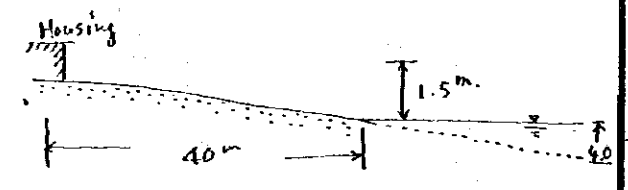
RIVER NAME	Bicol	STATION NAME	Barangay	STAGE	Water level (tide) Rain-fall
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SKECH

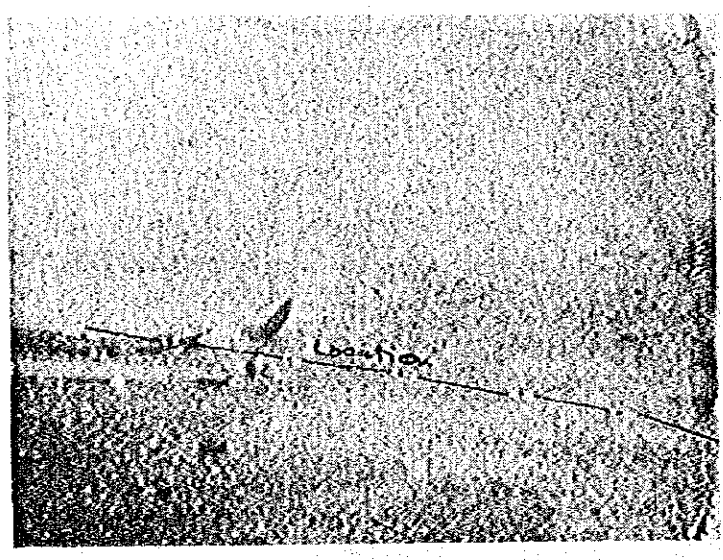
PLAN



CROSS SECTION



PHOTO

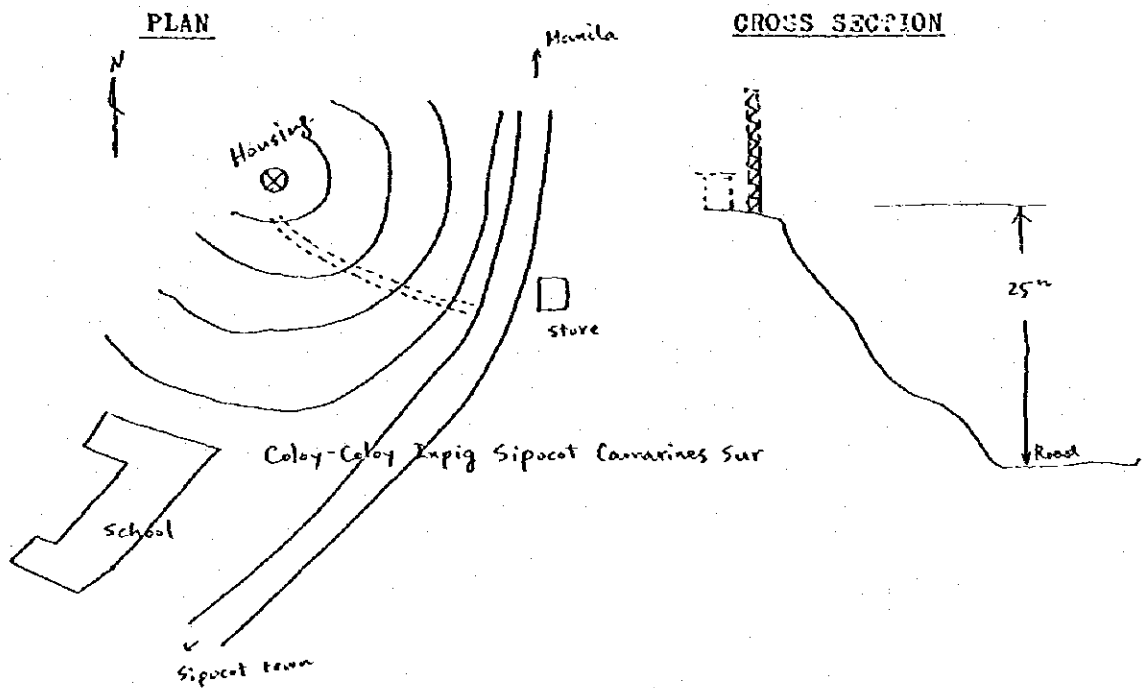


INSTALATION

- Housing 1.8 x 1.8
- Pole type 7m
- tele pole 10m
- Fence

RIVER NAME	Bicol Sipocot	STATION NAME	Sipocot Reporter station (No. 2)	STAGE	Reporter station
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SKETCH



PHOTO



INSTALATION

- Housing 5x5 m
- Fence
- site cost
- Triangular tower 30m

RIVER NAME

Bicol

STATION NAME

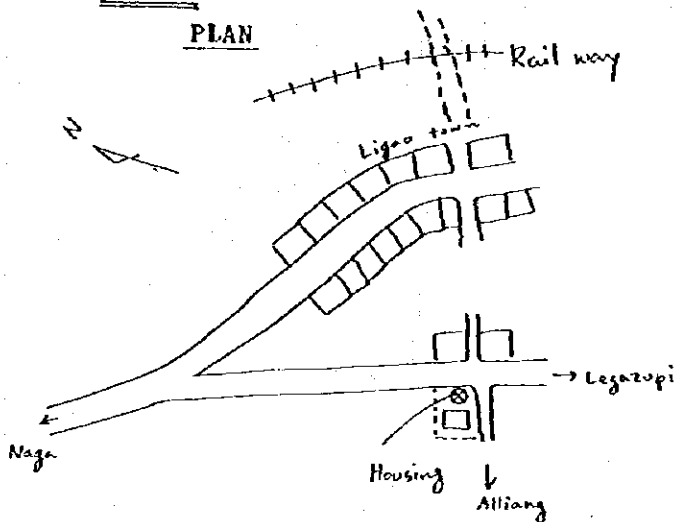
Ligao

STAGE

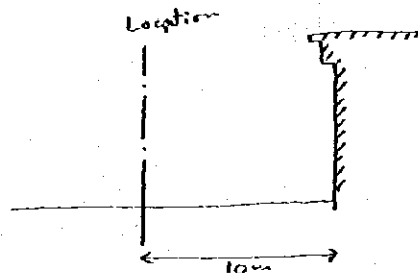
Rainfall

SKECH

PLAN



CROSS SECTION



PHOTO

Ligao town



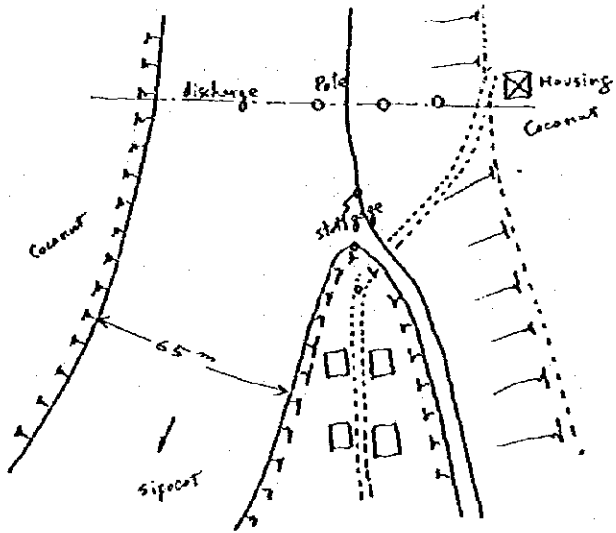
INSTALATION

- Housing 1.8 x 1.8
- tele pole 10m
- Fence
- Rainfall gaging
- site cost

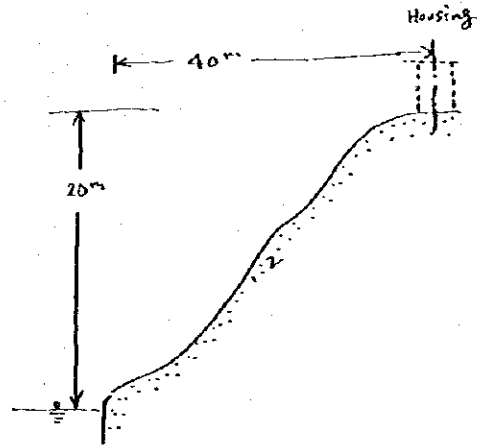
RIVER NAME	Bicol Sipocot	STATION NAME	Sipocot	STAGE	Water Level, Rainfall, discharge,
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SKECH

PLAN



CROSS SECTION



PHOTO



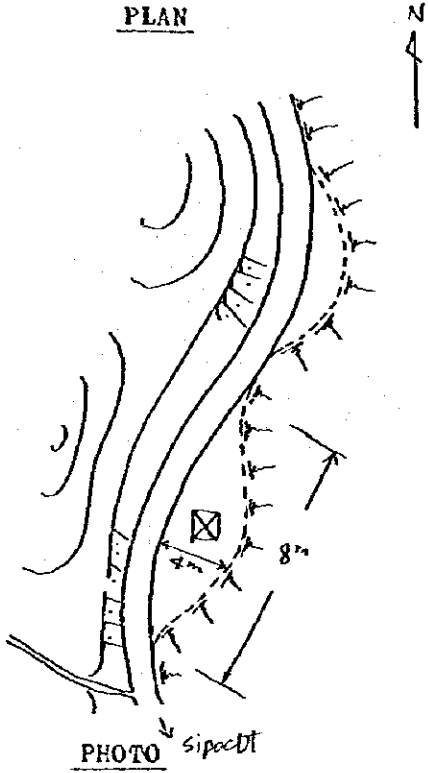
INSTALATION

- Pole type (Takuwa 18^m)
- Housing 2.5x2.5
- tele pole 10^m
- Rainfall gaging
- current meter
- Fence

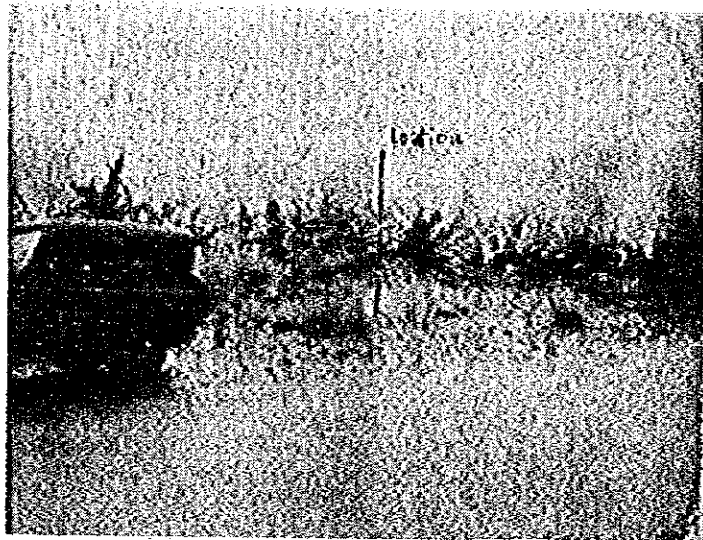
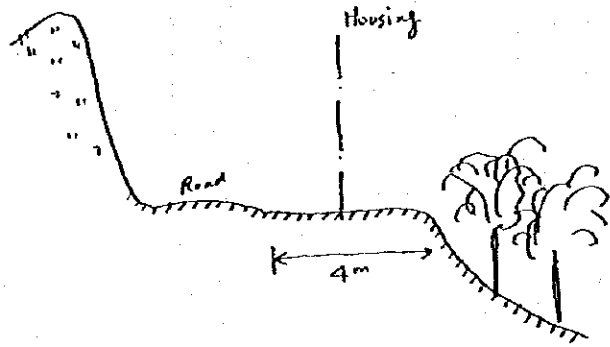
RIVER NAME	Bicol Sipocot	STATION NAME	Napolidan	STAGE	Rainfall
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SKECH

PLAN



CROSS SECTION



INSTALATION

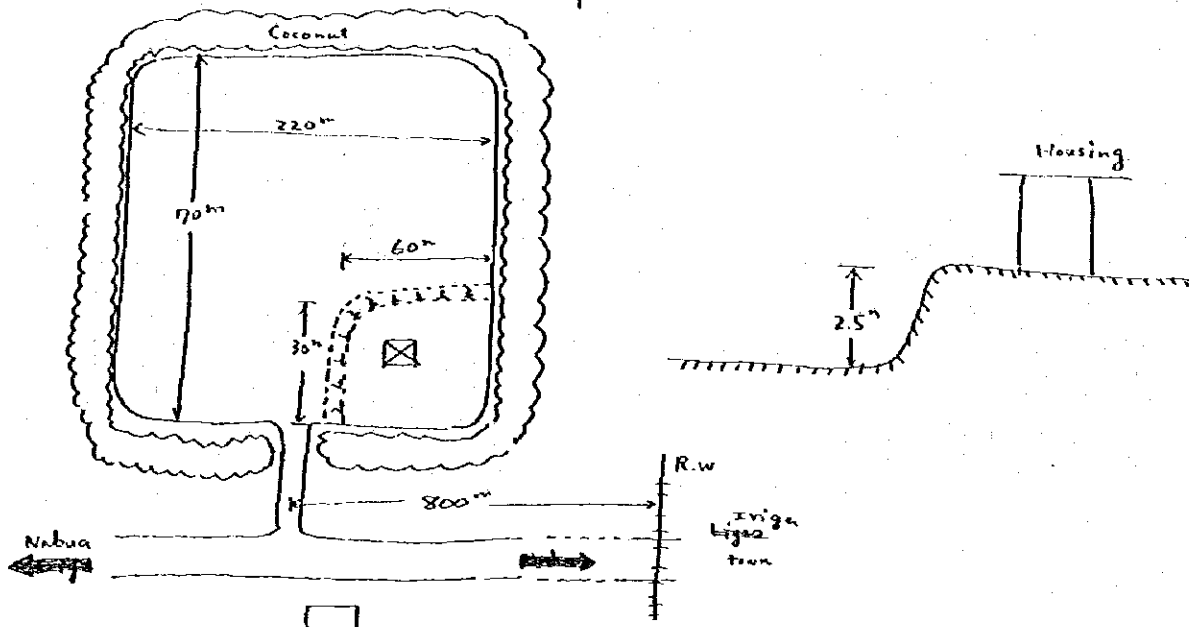
- Housing 1.8 x 1.8
- tele pole 10m
- Rainfall gaging
- Fence

RIVER NAME	Bicol	STATION NAME	Triga Re. S	STAGE	Rep. Station
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SKETCH

PLAN

CROSS SECTION



PHOTO

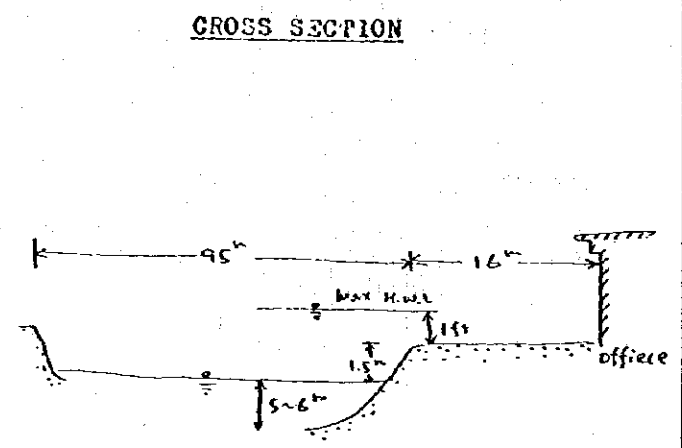
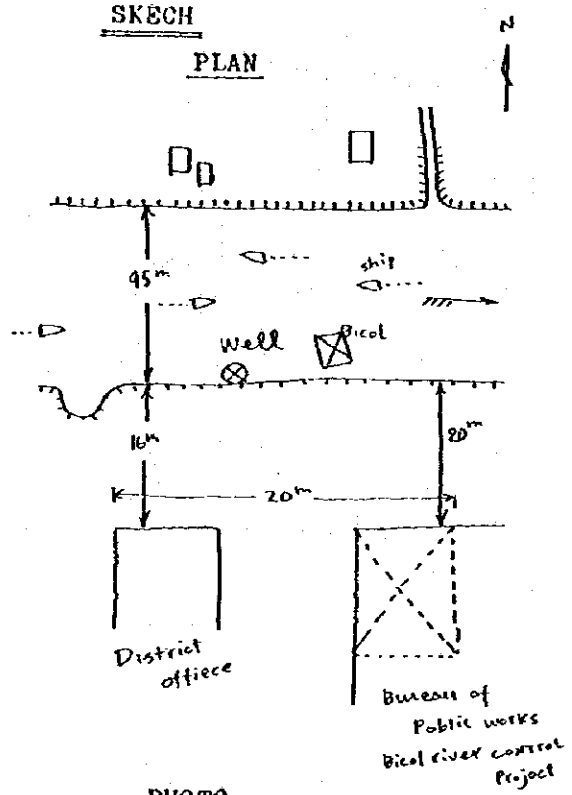
Girl Scouts BLD.



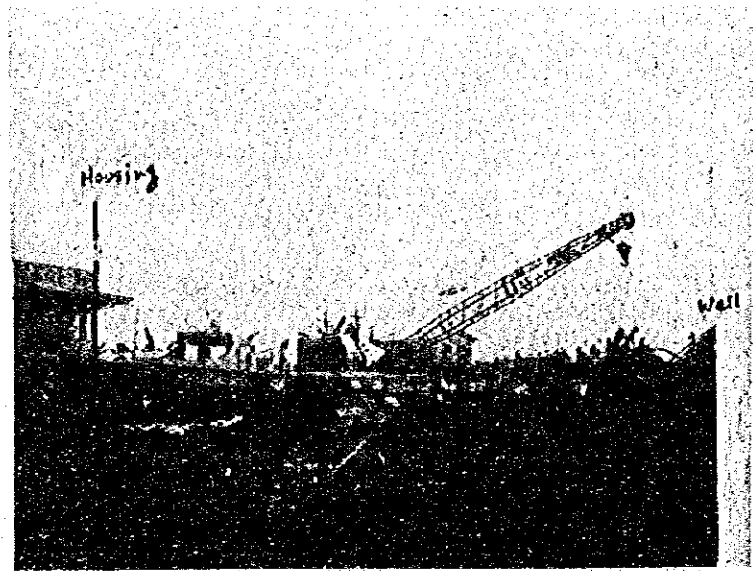
INSTALLATION

- Housing 5 x 5^m
- Triangular tower 30^m
- Fence
- Site cost

RIVER NAME	Bicol	STATION NAME	Camaligan (Naga sub center)	STAGE	Water Level Rainfall discharge
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PHOTO

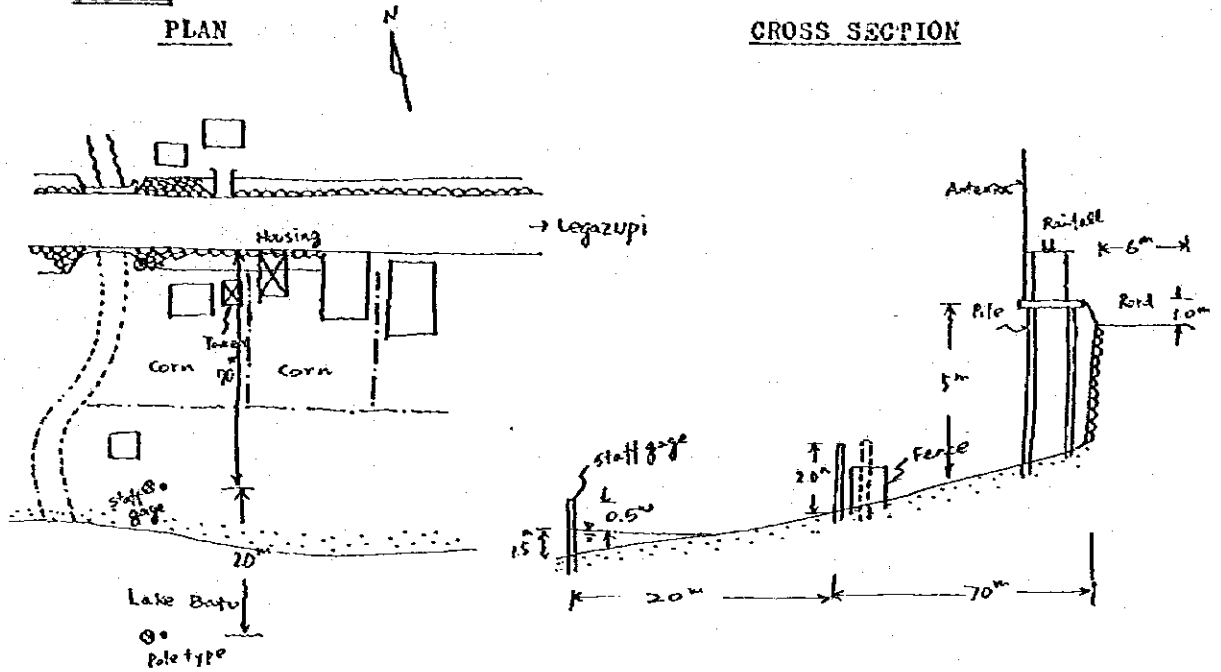


INSTALATION

- Housing (sub center) 10x2 x 2F
- Steel tower 35'
- well type
- Flood type (SUKEN 70)
- Rainfall gaging
- discharge Mabulo Bridge
- Current meter
- Vacuum pump

RIVER NAME	Bicol	STATION NAME	Bato (Lake)	STAGE	Water Level & Rainfall
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SKECH



PHOTO

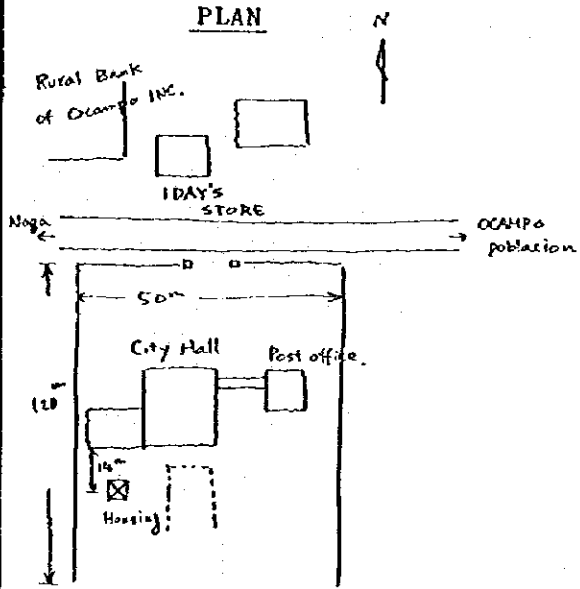


INSTALATION

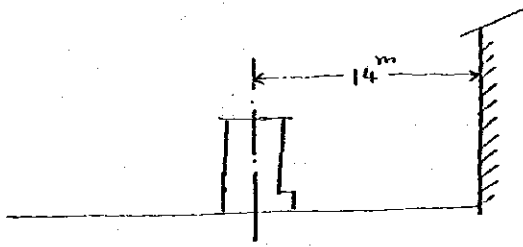
- Pole type water level gaging (Takuwa 8m)
- Rainfall gaging
- Housing 2.5x2.5
- Pile 10m Footing
- Tele pole 10m
- Fence
- Site cost 58/m²

RIVER NAME	Bicol	STATION NAME	OCAMPO	STAGE	Rainfall
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SKETCH



CROSS SECTION



PHOTO



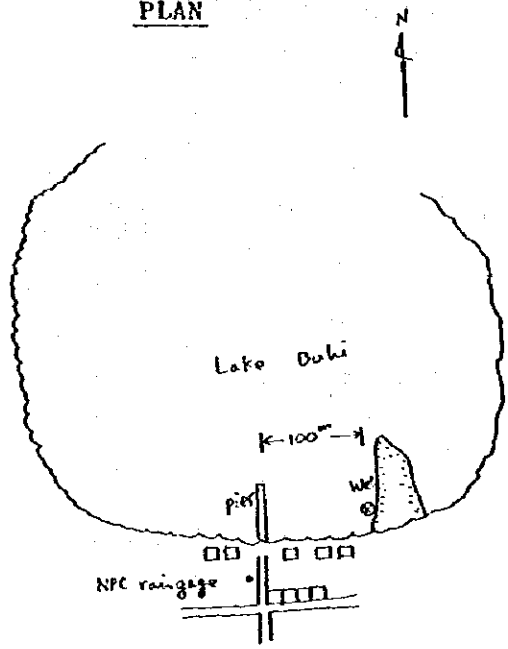
INSTALATION

- Housing 1.8 x 1.8
- Tele pole 10m
- Rainfall gaging
- Fence

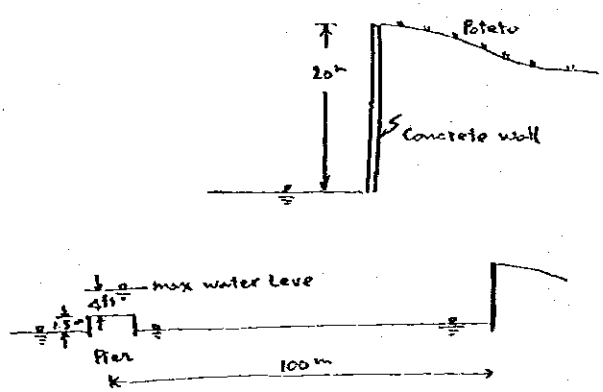
RIVER NAME	Bicol	STATION NAME	Buhi	STAGE	Water level & Rainfall
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SKECH

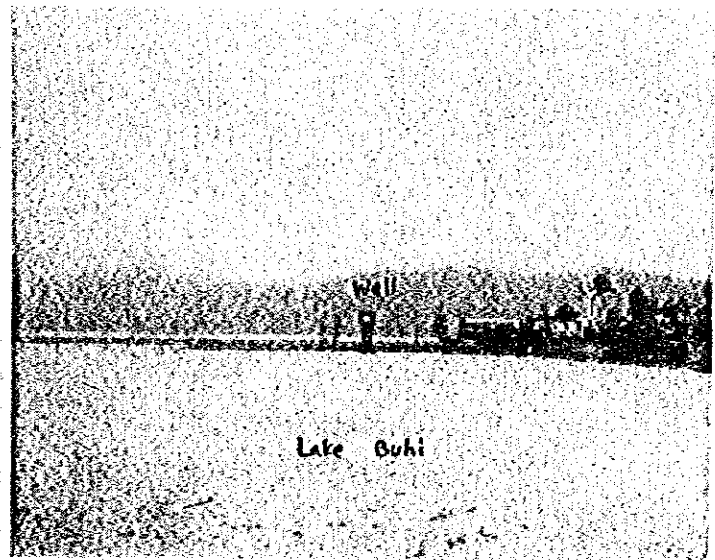
PLAN



CROSS SECTION



PHOTO



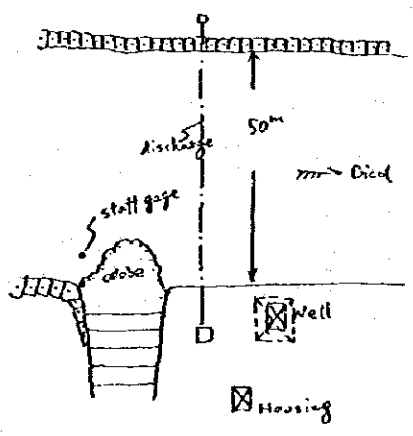
INSTALATION

- Well type
- Float type water level gaging (BUIKEN 62)
- Housing 1.8x1.8
- Rainfall gaging
- Tele pole 10m
- Fence.

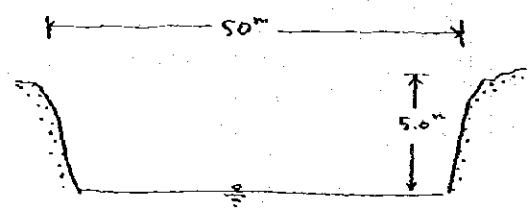
RIVER NAME	Bicol	STATION NAME	OMBao	STAGE	Water level Rainfall	discharge
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SKECH

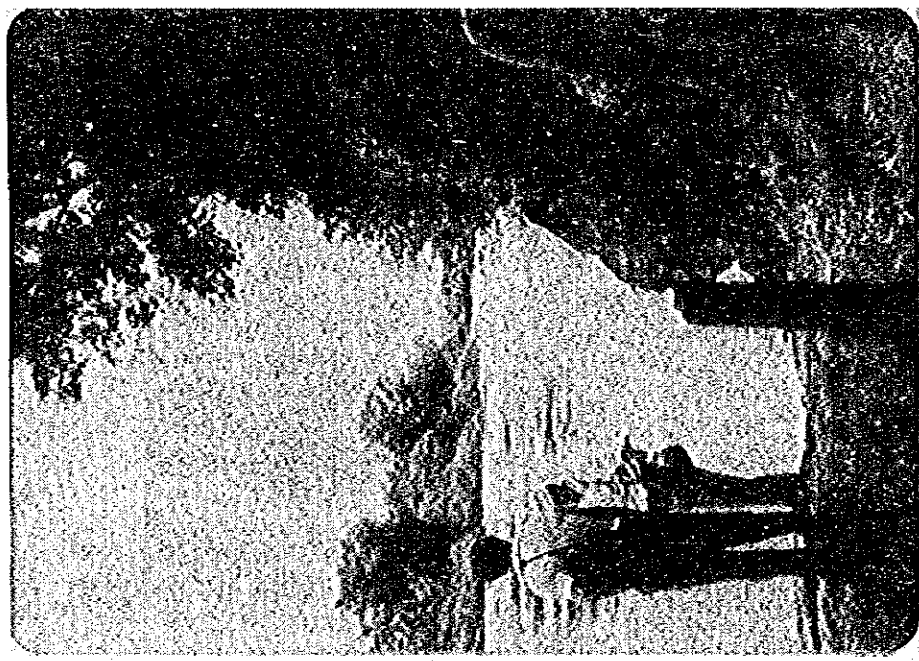
PLAN



CROSS SECTION



PHOTO



INSTALLATION

- Well type
- Float type (SUIKEN 62)
- Rainfall gaging
- Housing 1.8x1.8
- Tele pole 10m
- Fence
- Vacuum pump
- Current meter
- Site cost

RIVER NAME

Cagayan

STATION NAME

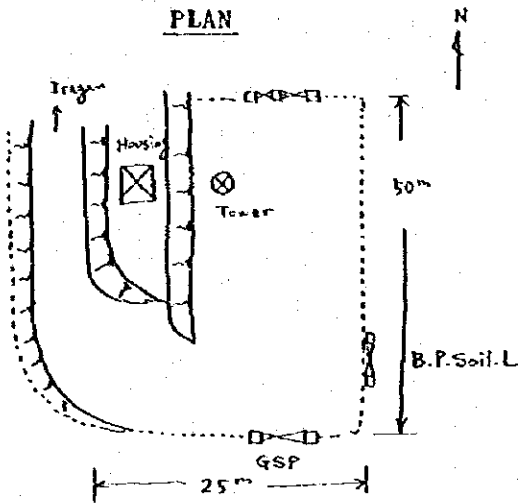
Imgan R.S

STAGE

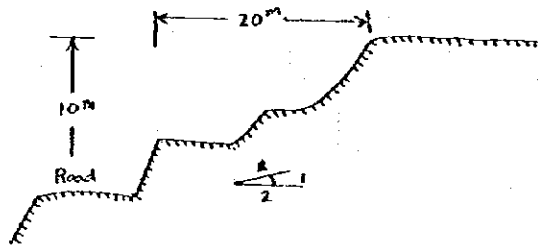
Reporter. station

SKETCH

PLAN



CROSS SECTION



PHOTO



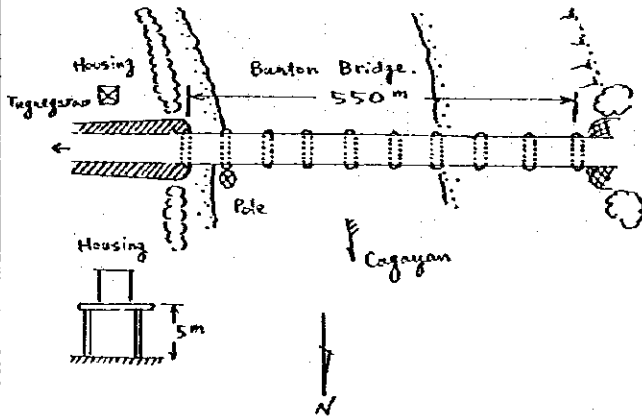
INSTALATION

- Housing 5x5m
- Triangular tower 30m

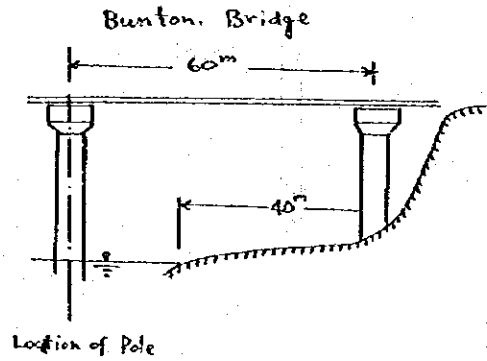
RIVER NAME	Cagayan	STATION NAME	Tuquegarao	STAGE	Water level & Rainfall
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SKECH

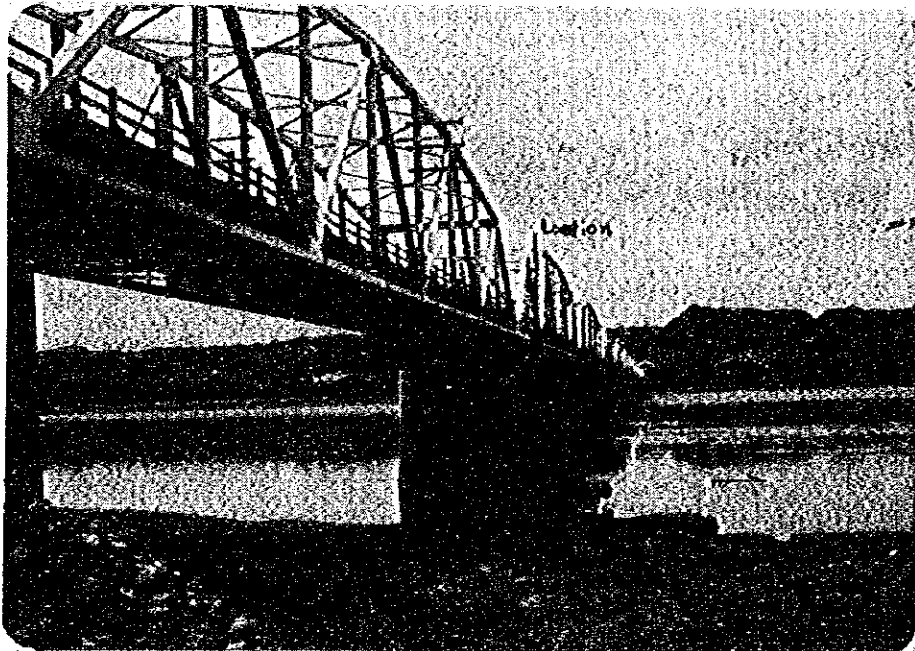
PLAN



CROSS SECTION



PHOTO

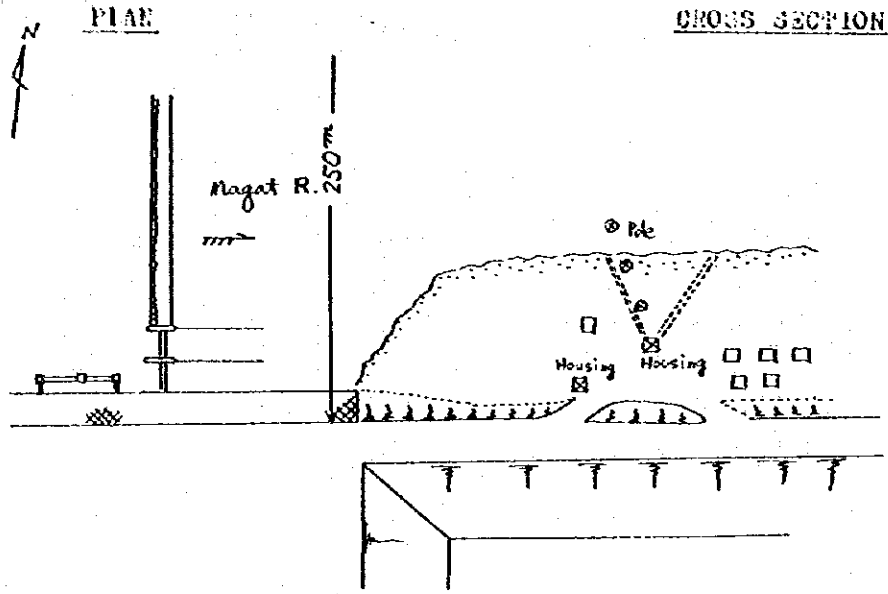


INSTALLATION

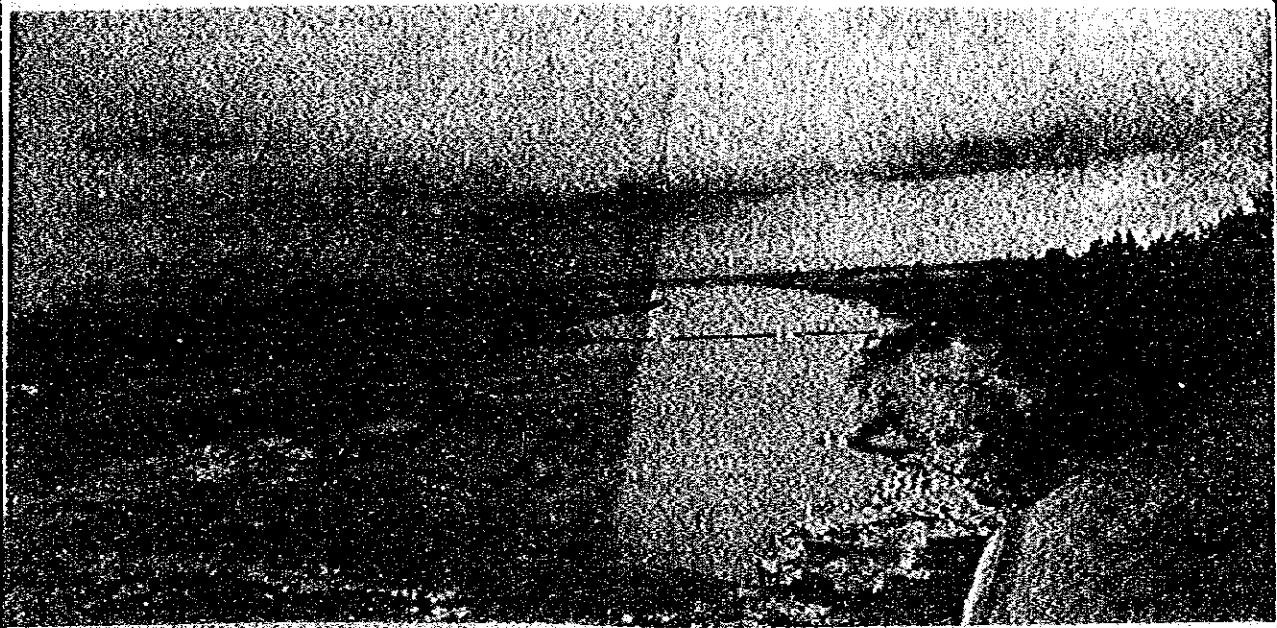
- Rainfall gaging
- Pole type water level gaging (Takuwa 12m)
- Housing 2.5x2.5
- Talap
- Footing
- Site cost
- Tele pole 10m

RIVER NAME	Cagayan Magat	STATION NAME	Maris Dam	STAGE	Water level & Rainfall
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SKETCH



PHOTO



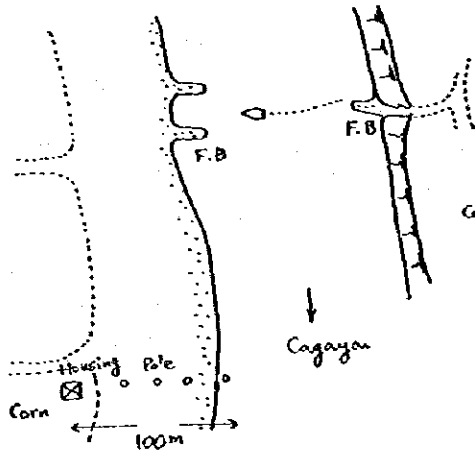
INSTALLATION

- Rainfall gaging
- Poll type Water Level gaging (Takoma 10^m)
- Tele pole 10^m
- Fence
- Housing 2.5 x 2.5 (reconstruction)
- Housing 2.5 x 2.5

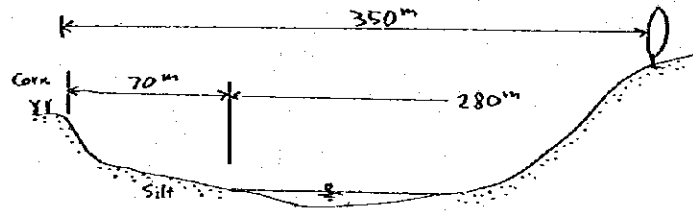
RIVER NAME	Cagayan	STATION NAME	Tamauni	STAGE	Water level & Rainfall
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SKECH

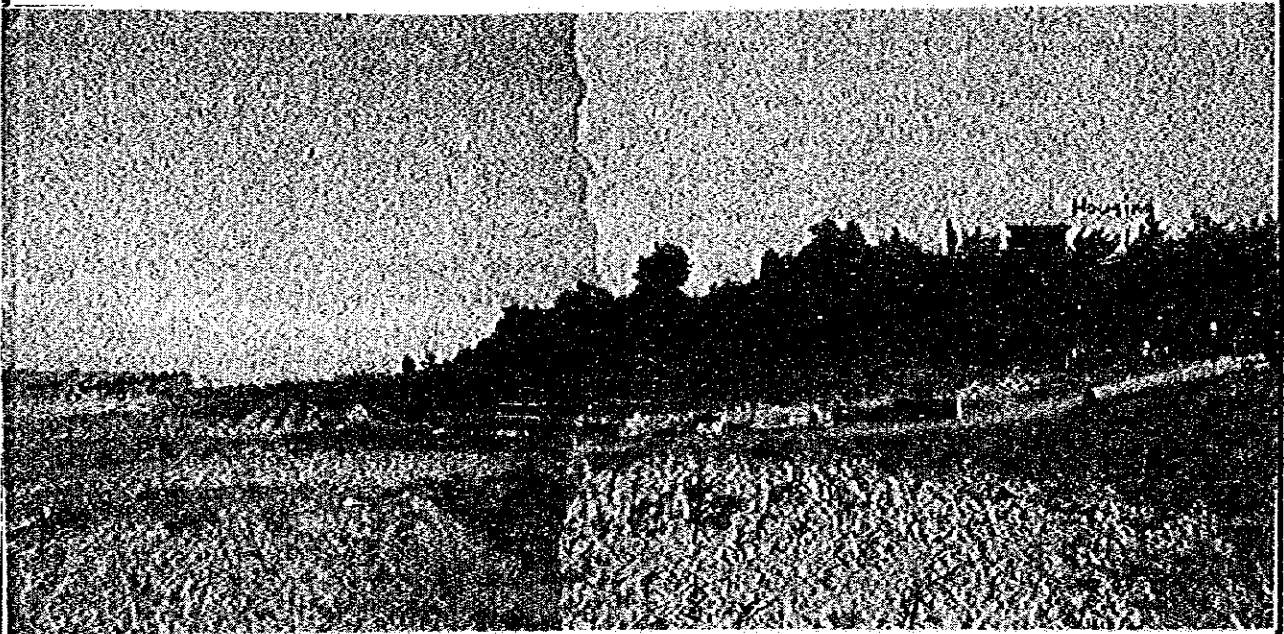
PLAN



CROSS SECTION



PHOTO



INSTALATION

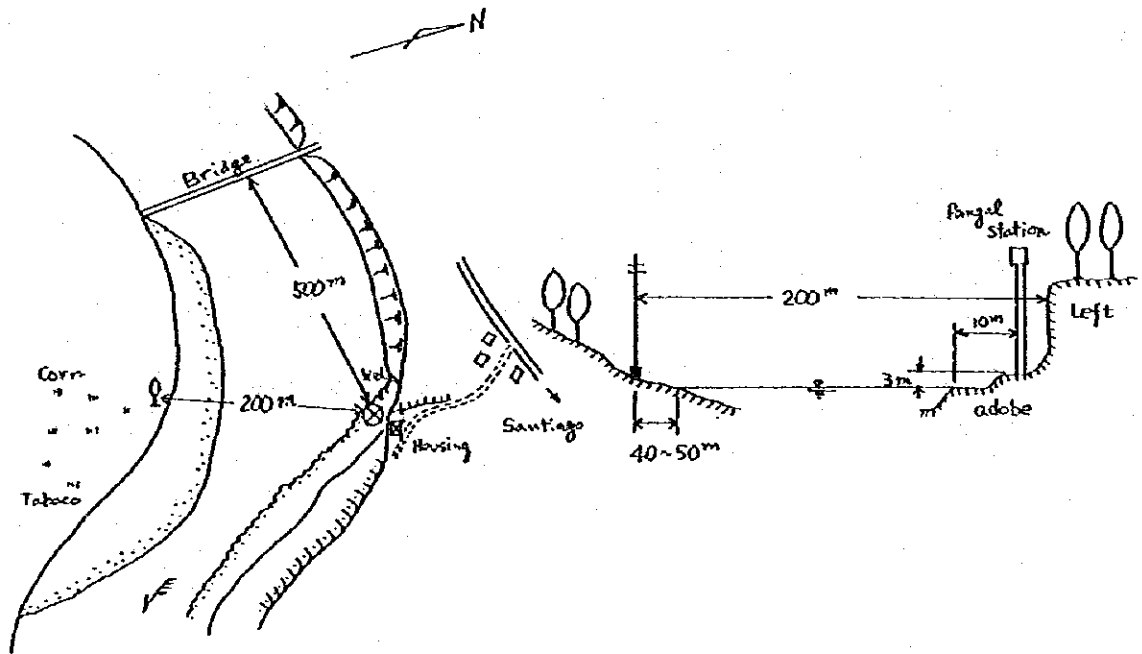
- Rainfall gaging
- Pole type water level gaging (Takuwa 15M)
- Tele pole 10m
- Housing 2.5x2.5
- Site cost
- Fence

RIVER NAME	STATION NAME	DESCRIPTION	STAGE
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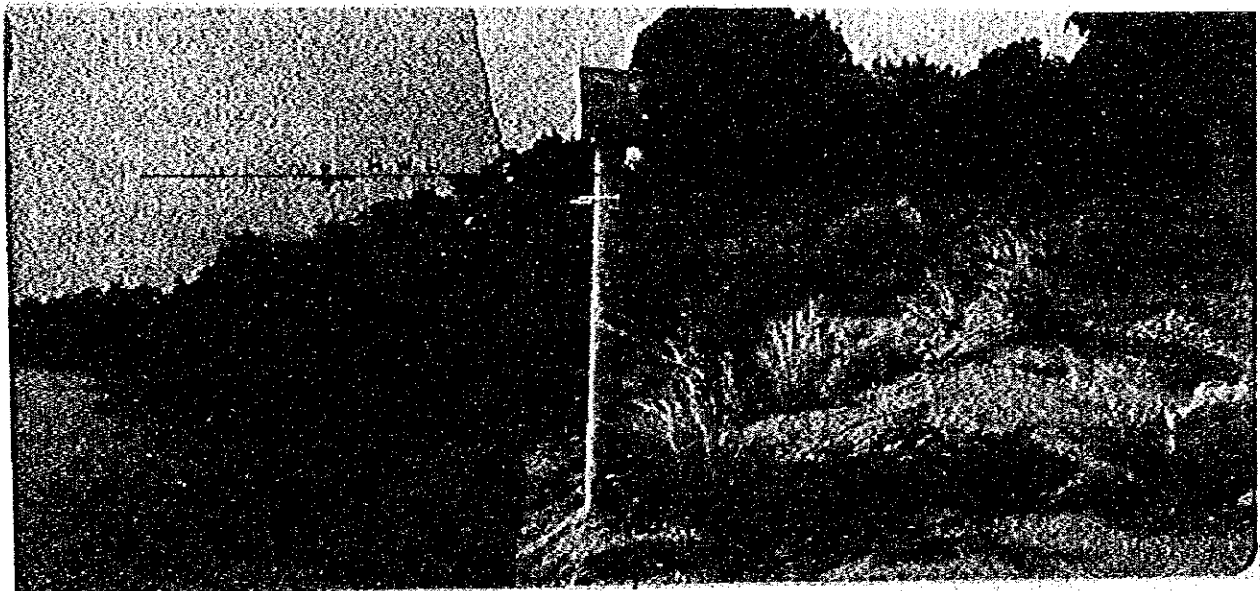
SKETCH

PLAN

CROSS SECTION



PHOTO



INSTALATION

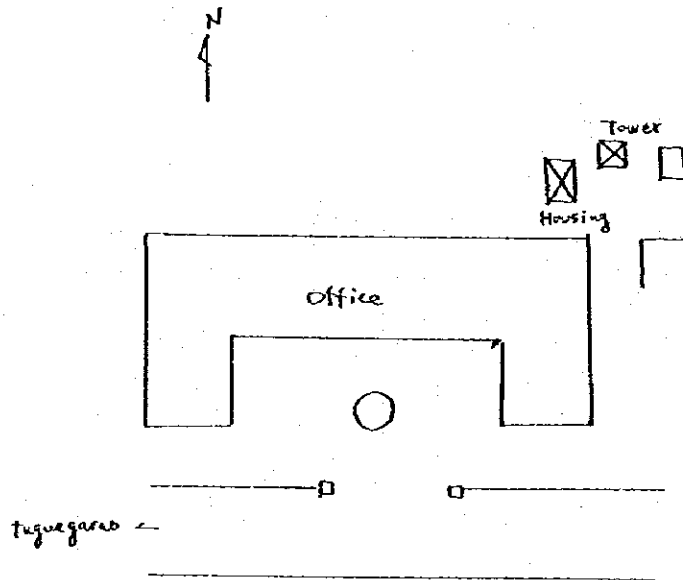
- Rainfall gaging
- Float type Water level gaging (SUIKEN 62)
- Triangular tower 30m
- Housing 1.8x1.8
- Vacuum pump
- Fence

RIVER NAME	Cagayan	STATION NAME	Tuguegarao Sub center	STAGE	Sub center
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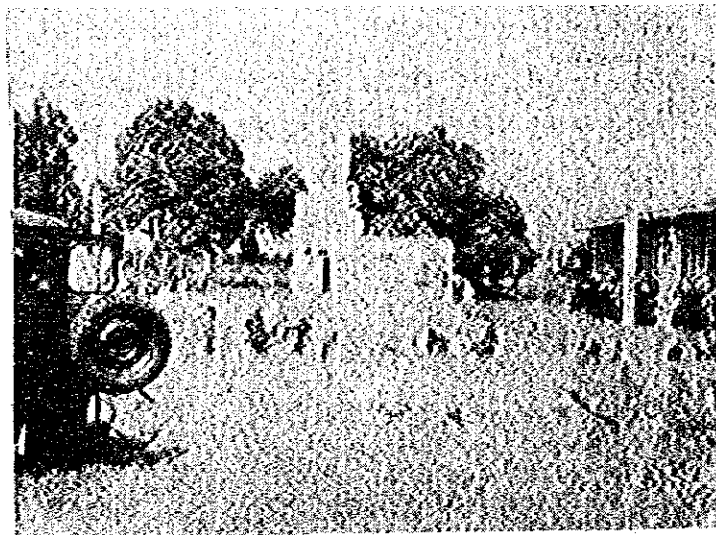
SKECH

PLAN

CROSS SECTION



PHOTO



INSTALATION

- Housing 10x8m
- Steel tower 35m

