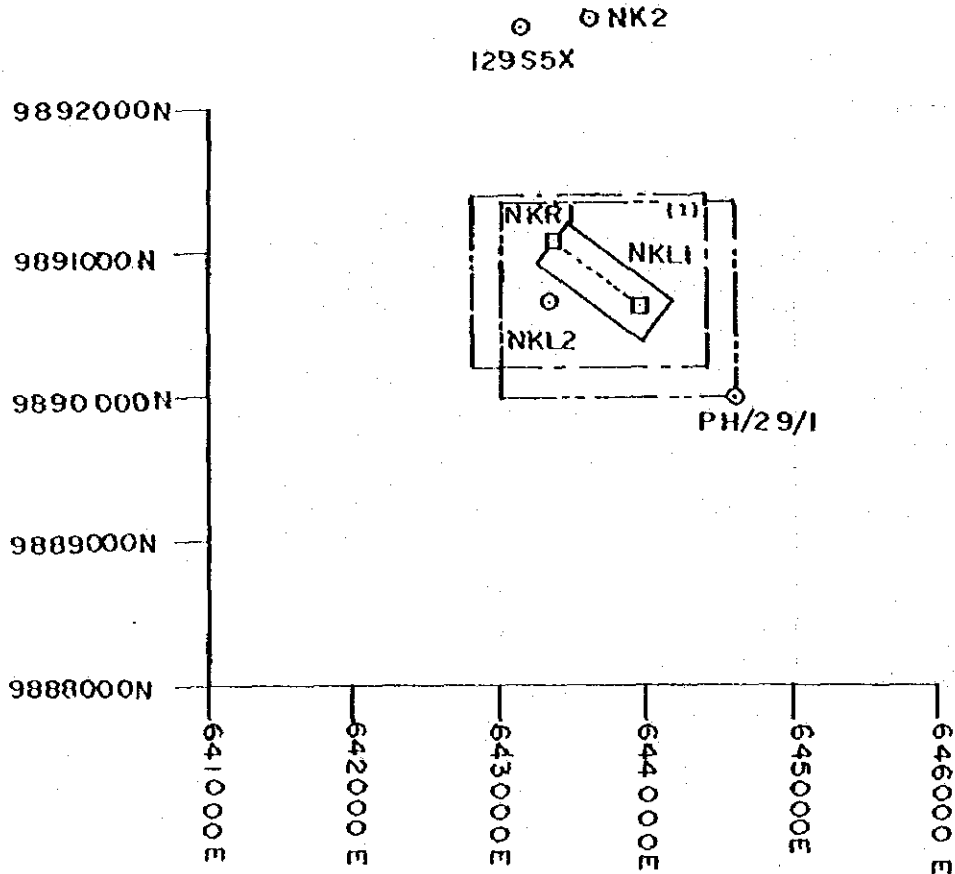


Namba Kodero dams site

Photo Scale : 1:12,500
 Photo No. : 1308 - 1309
 Mapping Scale : 1:2,000
 Mapping Area : 0.22 sq.km



LEGEND

- Mapping Area in Scale 1:2,000
- - - Sheet Size : A1 Size
- - - Coverage of Aerial Photo
- - - Profile Section Line of Axis of Dam
- △ Permanent Points
- Photo Control Points
- Profile Points

Figure K4.16

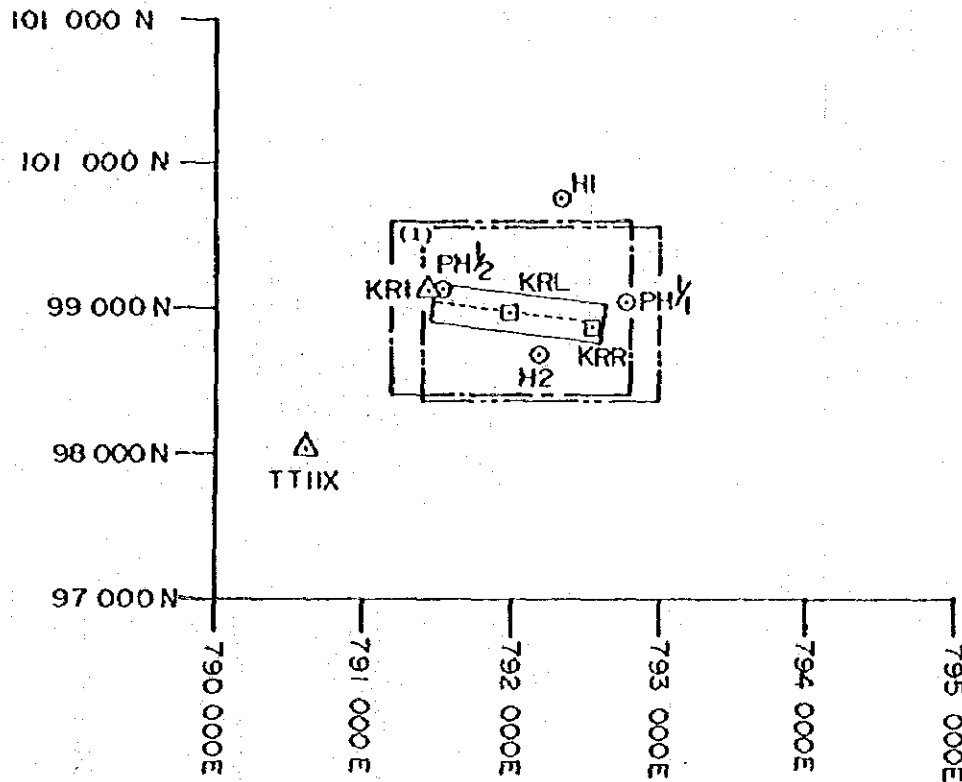
S= 1:50,000

Photo Control and Mapping Diagram
 of Proposed Namba Kodero Damsite

THE STUDY
 ON
 THE NATIONAL WATER MASTER PLAN
 JAPAN INTERNATIONAL COOPERATION AGENCY

Kerio-A dansite

Photo Scale : 1:10,000
 Photo No. : 733- 734
 Mapping Scale : 1: 2,000
 Mapping Area : 0.21 sq.km



LEGEND

- Mapping Area in Scale 1:2,000
- Sheet Size : A1 Size
- Coverage of Aerial Photo
- Profile Section Line of Axis of Dam
- △ Permanent Points
- Photo Control Points
- Profile Points

Figure K4.17

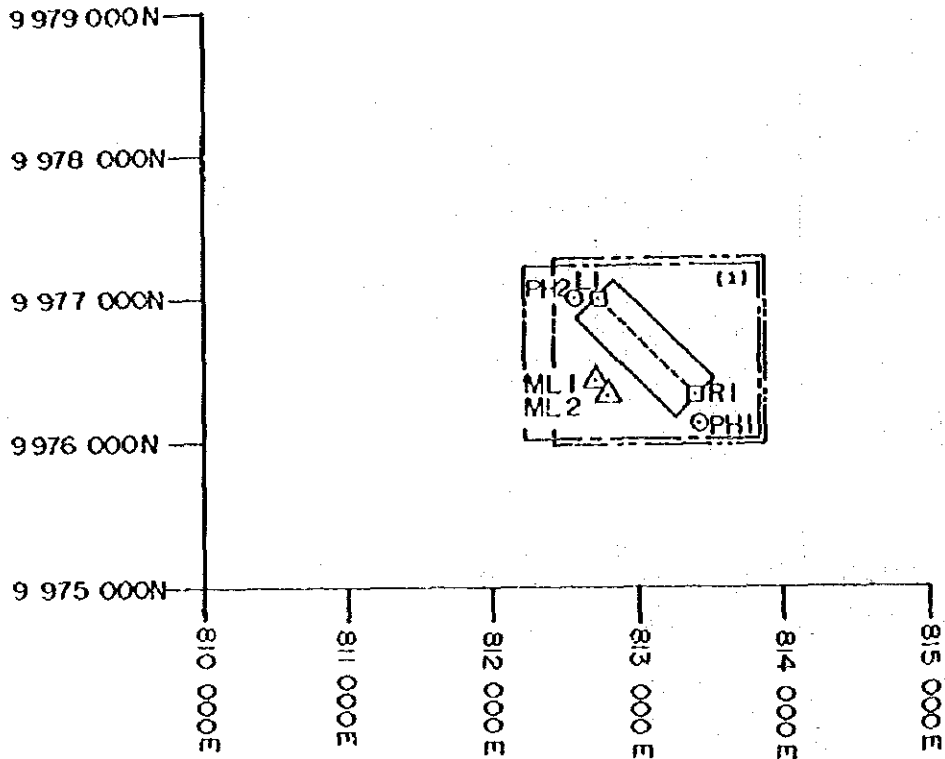
S= 1:50,000

Photo Control and Mapping Diagram
 of Proposed Kerio-A Damsite

THE STUDY
 ON
 THE NATIONAL WATER MASTER PLAN
 JAPAN INTERNATIONAL COOPERATION AGENCY

Molo dansite

Photo Scale : 1:10,000
 Photo No. : 1038 - 1040
 Mapping Scale : 1: 2,000
 Mapping Area : 0.25 sq.km



LEGEND

- Mapping Area in Scale 1:2,000
- Sheet Size : A1 Size
- Coverage of Aerial Photo
- Profile Section Line of Axis of Dam
- △ Permanent Points
- Photo Control Points
- Profile Points

Figure K4.18

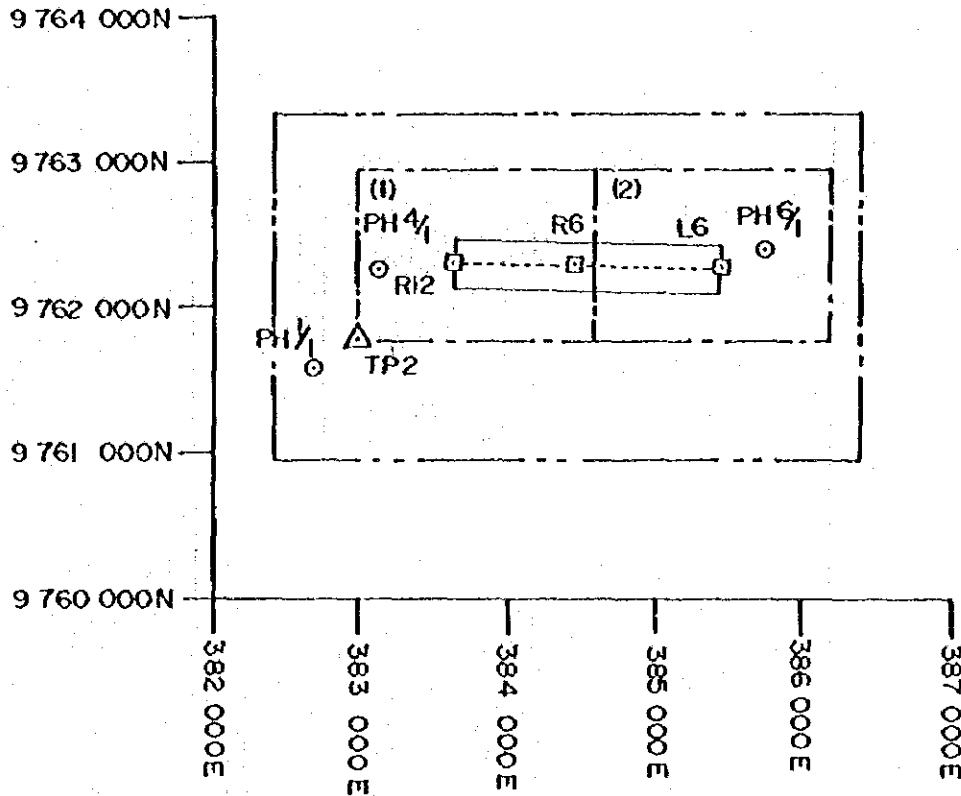
S= 1:50,000

Photo Control and Mapping Diagram
 of Proposed Molo Dansite

THE STUDY
 ON
 THE NATIONAL WATER MASTER PLAN
 JAPAN INTERNATIONAL COOPERATION AGENCY

Yatta damsite

Photo Scale : 1:20,000
 Photo No. : 432 - 433
 Mapping Scale : 1:2,000
 Mapping Area : 0.46 sq.km



LEGEND

- Mapping Area in Scale 1:2,000
- Sheet Size : A1 Size
- Coverage of Aerial Photo
- Profile Section Line of Axis of Dam
- △ Permanent Points
- Photo Control Points
- Profile Points

Figure K4.19

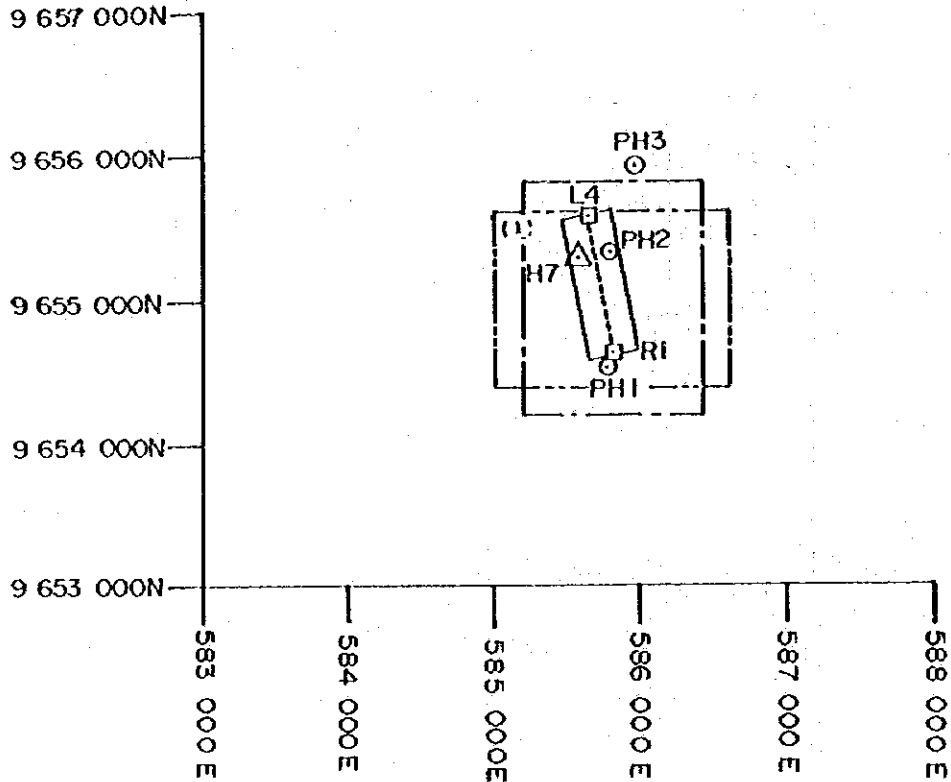
S= 1:50,000

Photo Control and Mapping Diagram
 of Proposed Yatta Damsite

THE STUDY
 ON
 THE NATIONAL WATER MASTER PLAN
 JAPAN INTERNATIONAL COOPERATION AGENCY

Baricho damsite

Photo Scale : 1:10,000
 Photo No. : 6091 - 6092
 Mapping Scale : 1:2,000
 Mapping Area : 0.25 sq.km



LEGEND

- Mapping Area in Scale 1:2,000
- - - Sheet Size : A1 Size
- - - Coverage of Aerial Photo
- - - Profile Section Line of Axis of Dam
- △ Permanent Points
- Photo Control Points
- Profile Points

Figure K4.20

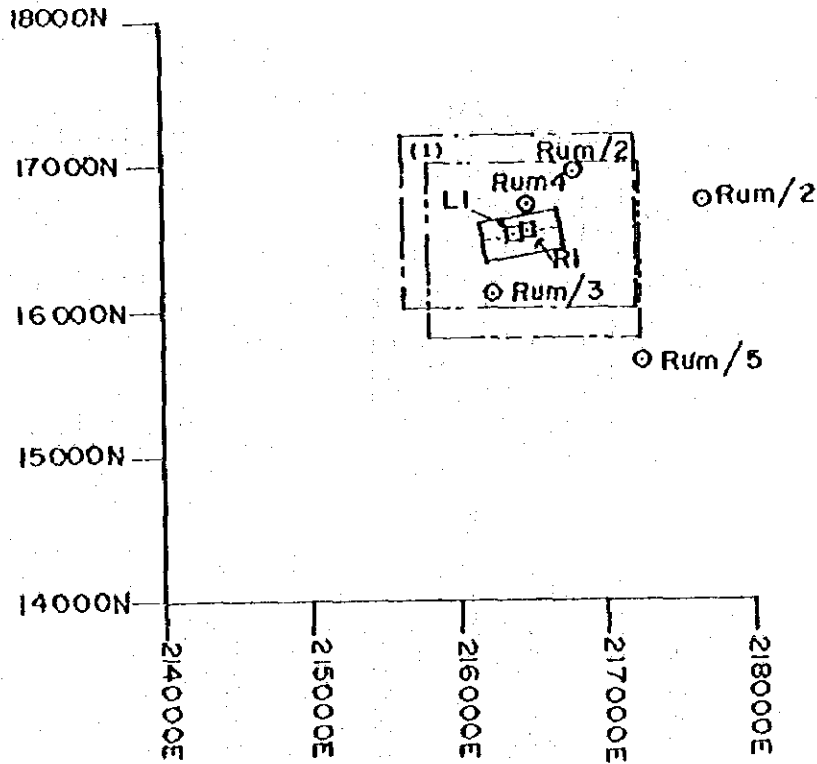
S= 1:50,000

Photo Control and Mapping Diagram
 of Proposed Baricho Damsite

THE STUDY
 ON
 THE NATIONAL WATER MASTER PLAN
 JAPAN INTERNATIONAL COOPERATION AGENCY

Rumuruti dansite

Photo Scale : 1:10,000
 Photo No. : 1019 - 1021
 Mapping Scale : 1:2,000
 Mapping Area : 0.10 sq. km



LEGEND

- Mapping Area in Scale 1:2,000
- Sheet Size : A1 Size
- Coverage of Aerial Photo
- - - - Profile Section Line of Axis of Dam
- △ Permanent Points
- Photo Control Points
- Profile Points

Figure K4.21

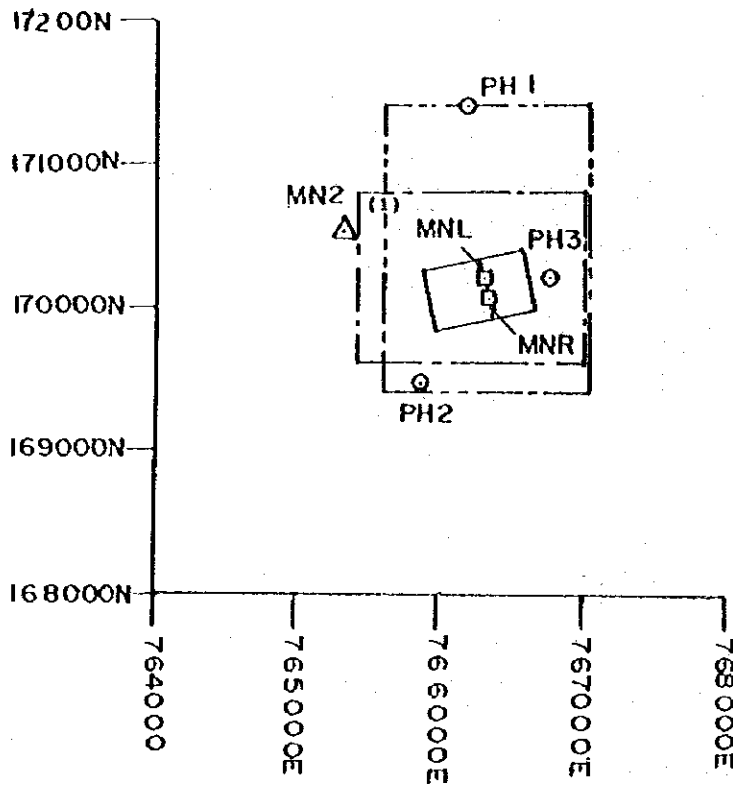
S= 1:50,000

Photo Control and Mapping Diagram
 of Proposed Rumuruti Dansite

THE STUDY
 ON
 THE NATIONAL WATER MASTER PLAN
 JAPAN INTERNATIONAL COOPERATION AGENCY

Marun damsite

Photo Scale : 1:12,500
 Photo No. : 9979 - 9980
 Mapping Scale : 1:2,000
 Mapping Area : 0.20 sq.km



LEGEND

- Mapping Area in Scale 1:2,000
- - - Sheet Size : A1 Size
- - - Coverage of Aerial Photo
- - - Profile Section Line of Axis of Dam
- △ Permanent Points
- Photo Control Points
- Profile Points

Figure K4.22

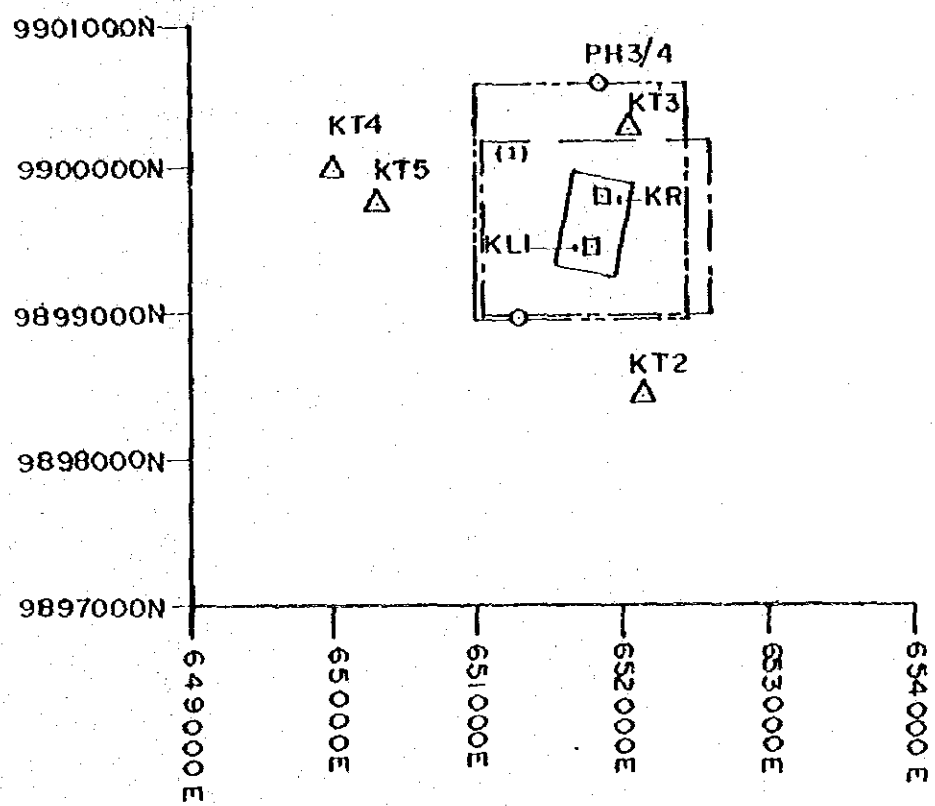
S= 1:50,000

Photo Control and Mapping Diagram
 of Proposed Marun Damsite

THE STUDY
 ON
 THE NATIONAL WATER MASTER PLAN
 JAPAN INTERNATIONAL COOPERATION AGENCY

Katieno dams site

Photo Scale : 1:12,500
 Photo No. : 446 - 447
 Mapping Scale : 1: 2,000
 Mapping Area : 0.07 sq.km



LEGEND

- Mapping Area in Scale 1:2,000
- Sheet Size : A1 Size
- Coverage of Aerial Photo
- Profile Section Line of Axis of Dam
- △ Permanent Points
- Photo Control Points
- Profile Points

Figure K4.23

S= 1:50,000

Photo Control and Mapping Diagram
 of Proposed Katieno Damsite

THE STUDY
 ON
 THE NATIONAL WATER MASTER PLAN
 JAPAN INTERNATIONAL COOPERATION AGENCY



Sheet Name: Baricho Damsite

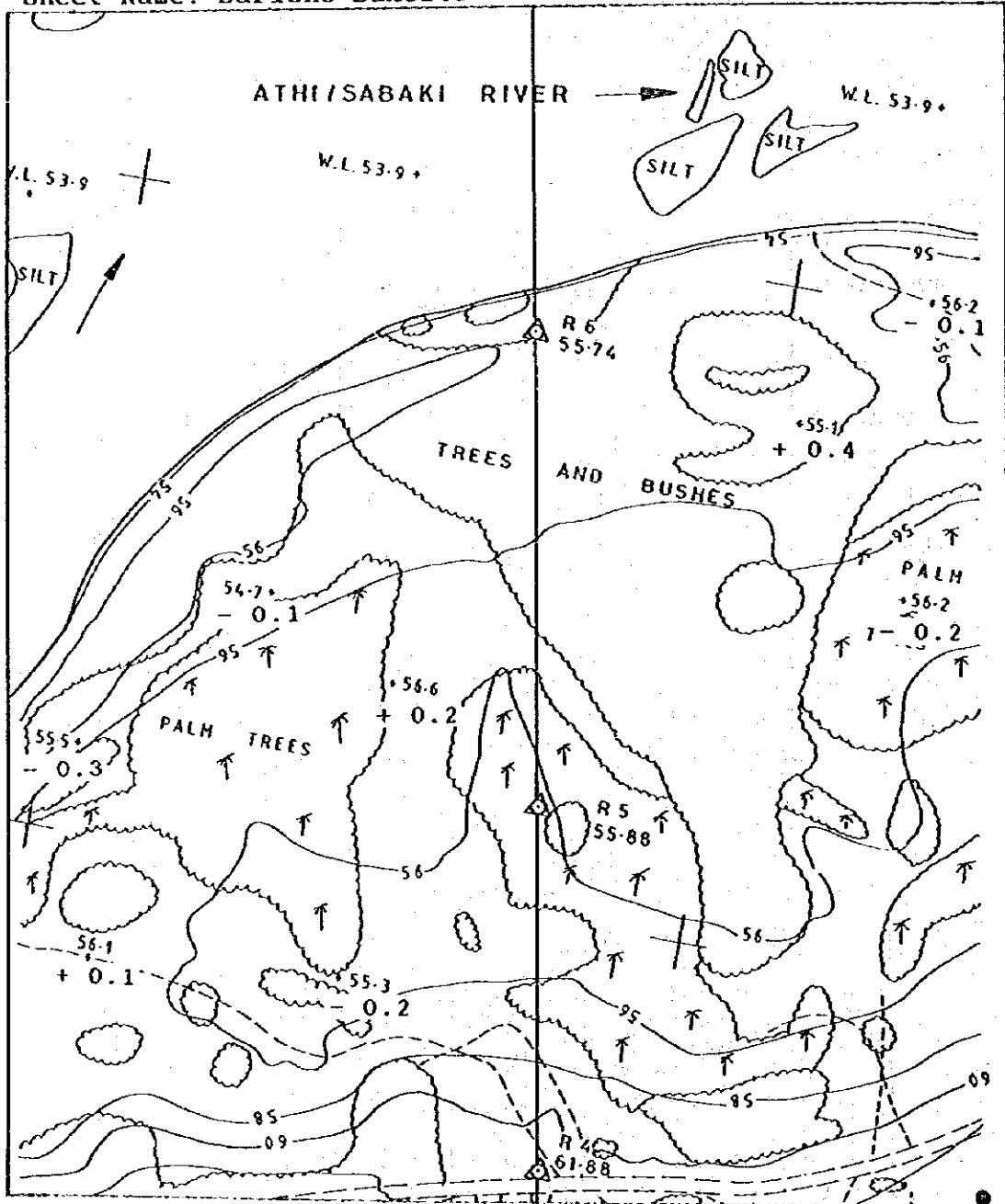


Figure K7.1

S= 1/2,000

Difference of Spot Height (1/4)

THE STUDY
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THE NATIONAL WATER MASTER PLAN
JAPAN INTERNATIONAL COOPERATION AGENCY



Sheet Name: Baricho Dansite

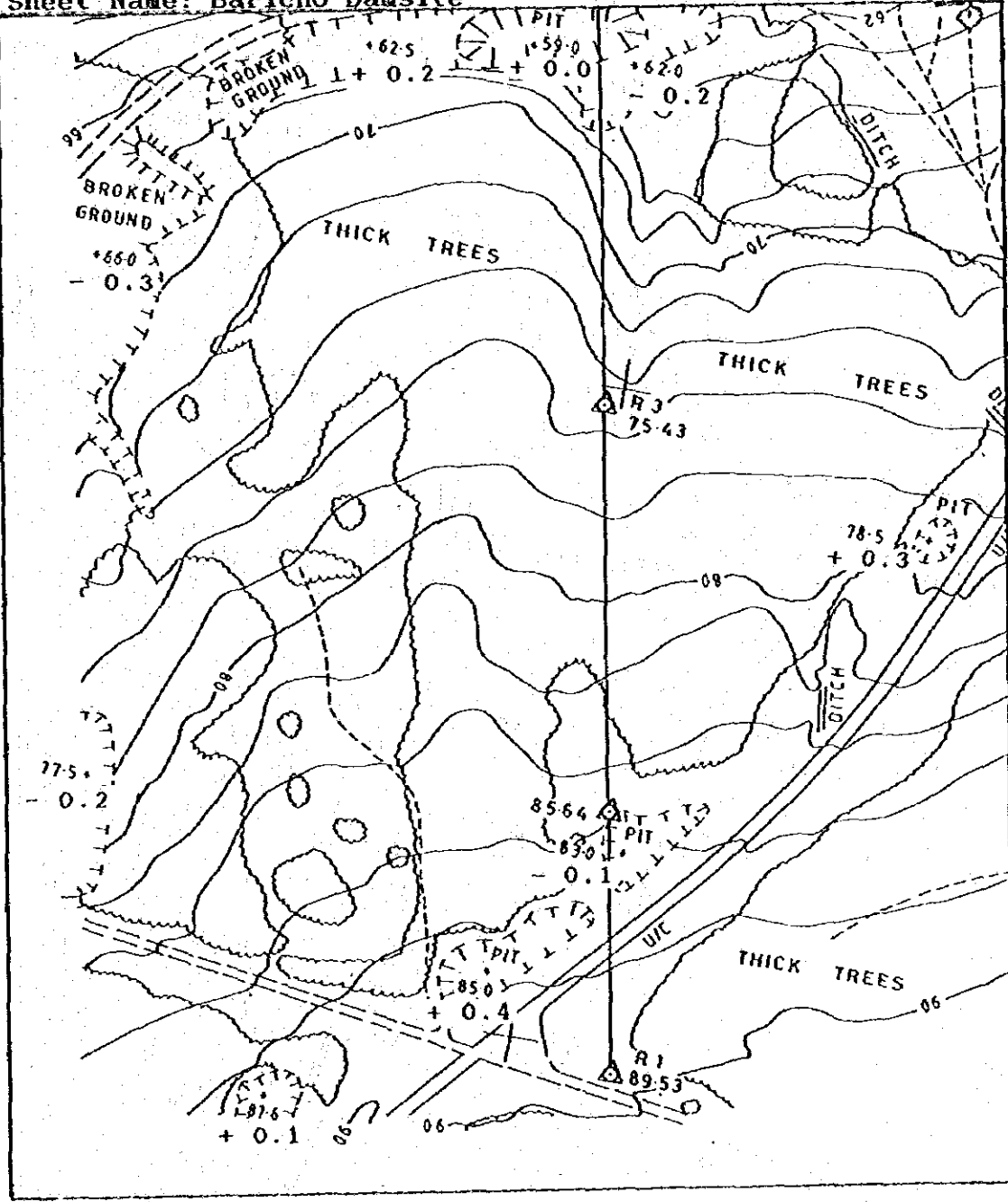


Figure K7.2

Difference of Spot Height (2/4)

S= 1/2,000

THE STUDY
ON
THE NATIONAL WATER MASTER PLAN
JAPAN INTERNATIONAL COOPERATION AGENCY



Sheet Name: Rambula Dansite

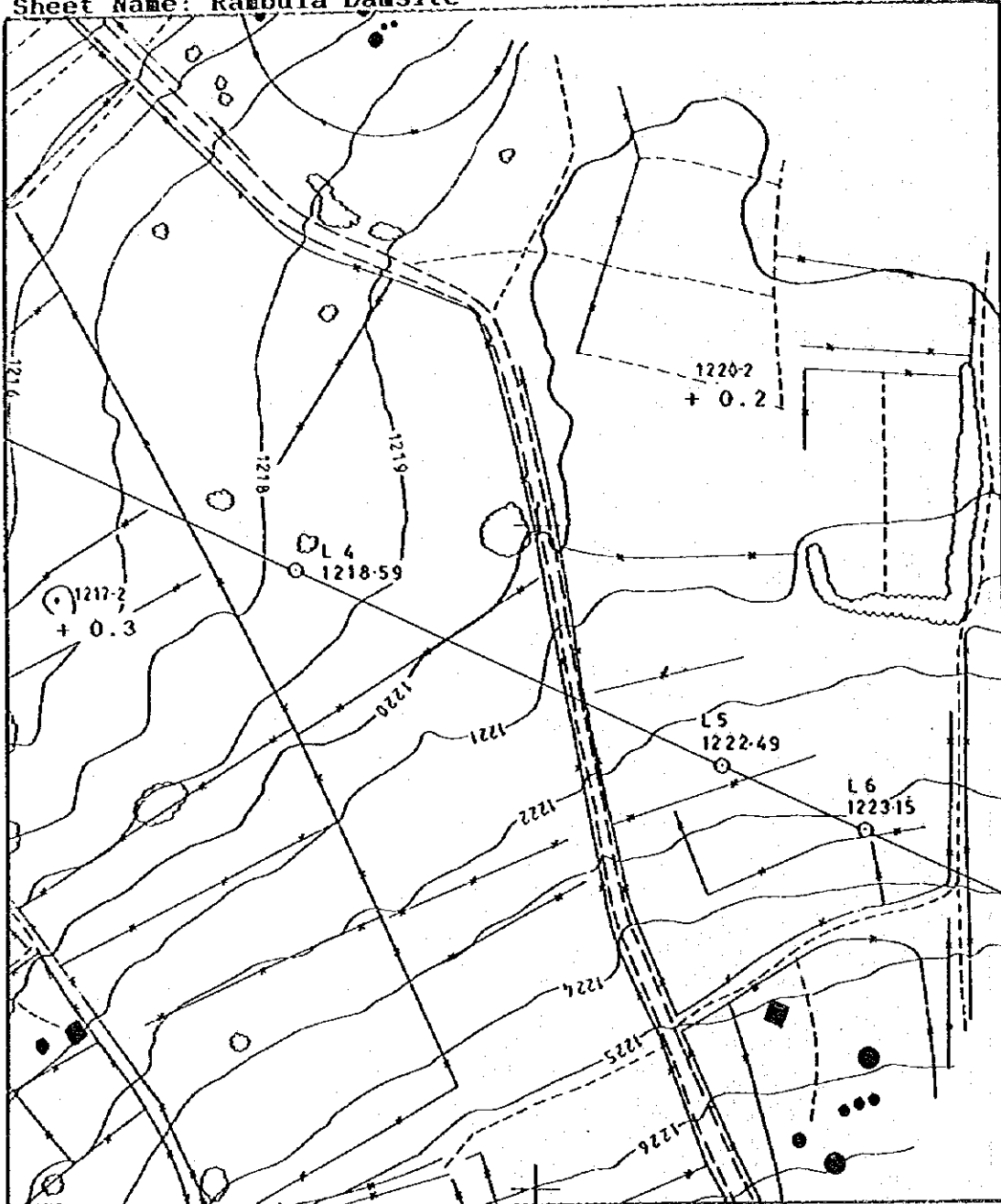


Figure K7.3

Difference of Spot Height (3/4)

S= 1/2,000

THE STUDY
ON
THE NATIONAL WATER MASTER PLAN
JAPAN INTERNATIONAL COOPERATION AGENCY



Sheet Name: Rambula Dansite

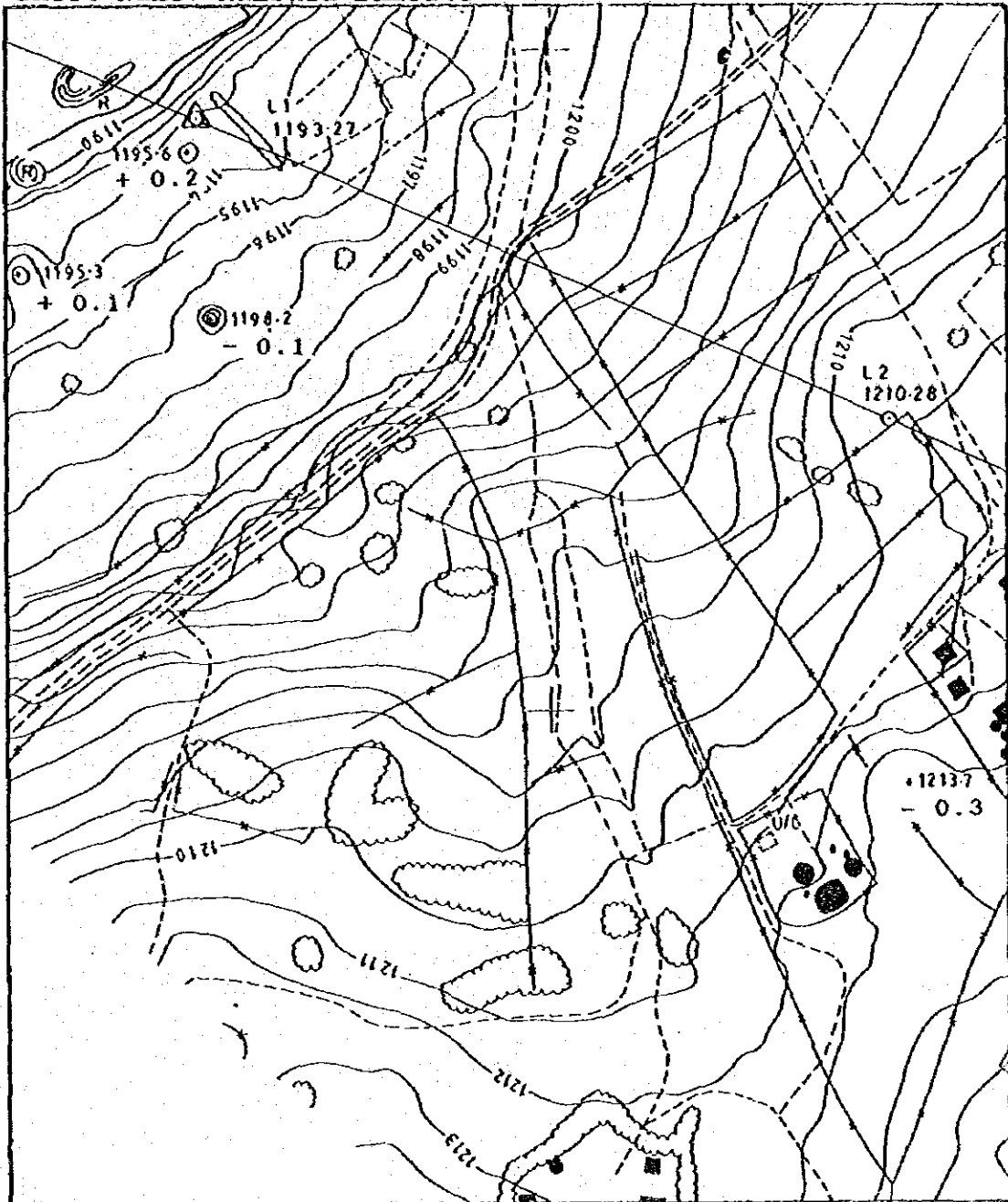


Figure K7.4

Difference of Spot Height (4/4)

S= 1/2,000

<p>THE STUDY ON THE NATIONAL WATER MASTER PLAN JAPAN INTERNATIONAL COOPERATION AGENCY</p>

APPENDIXES

SURVEY OUTPUT
TOPOGRAPHIC MAP FOR 11 DAMSITES 1:2,000

1.	Rambula Damsite	2 sheets
2.	Gogo Damsite	1 sheet
3.	Mushagumbo Damsite	1 sheet
4.	Namba Koderø Damsite	1 sheet
5.	Kerio-A Damsite	1 sheet
6.	Molo Damsite	1 sheet
7.	Yatta Damsite	2 sheets
8.	Baricho Damsite	1 sheet
9.	Rumuruti Damsite	1 sheet
10.	Morun Damsite	1 sheet
11.	Katieno Damsite	1 sheet

THE STUDY
ON
THE NATIONAL WATER MASTER PLAN

Scale 1:2000

RAMBULA DAM SITE

SHEET INDEX



LEGEND

Tarmac Road	=====
Medium Road	====
Pathway Line	-----
Waterable Track	- - - - -
Footpath
Stream, Water	~~~~~
Penal Hedge	-----
Cultivation	=====
Grass	=====
Cattle, Embankment	=====
Bridge	=====
Reservoir, Reservoir	=====
Reservoir	=====
Rocks	=====
Multiple land slides	=====
Cuts	=====
Pond	=====
River and stream	=====
Intermittent streams	=====
Fossil, Fossils	=====
Traverse Point, Principal Point	=====
Spot Height	=====
Contours with elevation	=====
Form Lines	=====

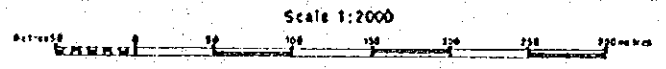
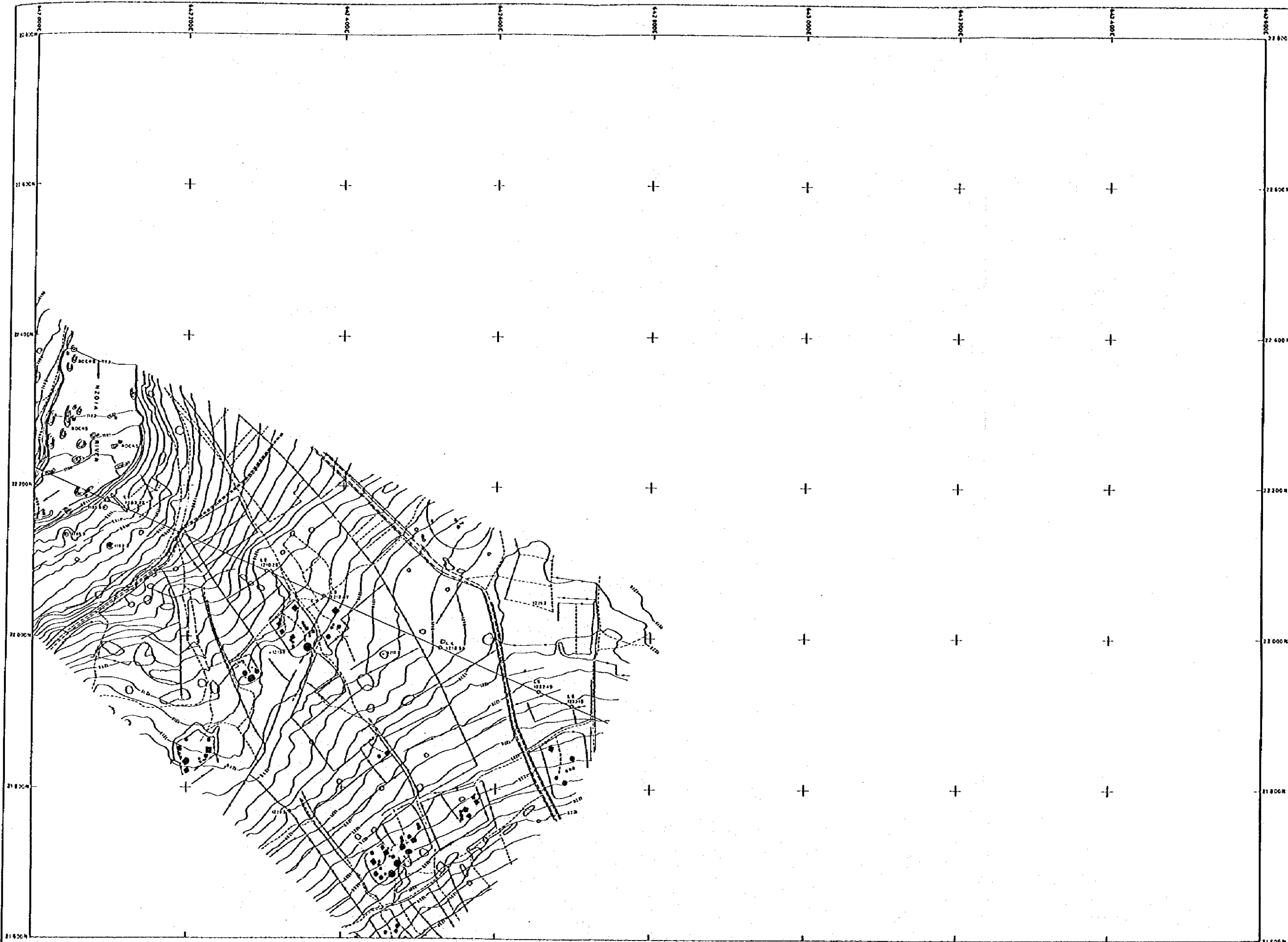
DATUM INFORMATION

PLAN AND HEIGHTS BASED ON A LOCAL DATUM

MAP HISTORY

GROUND CONTROL AND PHOTOGRAMMETRIC CORRELATION FROM EXISTING AERIAL PHOTOGRAPHY UNDERTAKEN BY PHOTOGRAM INTERNATIONAL INC. FOR JAPAN INTERNATIONAL COOPERATION AGENCY.

JAPAN INTERNATIONAL COOPERATION AGENCY



THE STUDY
ON
THE NATIONAL WATER MASTER PLAN

Scale 1: 2000

BAMBULA DAM SITE

SHEET INDEX



LEGEND

Topped Road	=====
Unimproved Road	-----
Railway Line	====+====
Motorable Track	-----
Highway	-----
Power Line	-----
Acres, Ridge	-----
Cultivation	=====
Barley	=====
Cutting, Embankment	=====
Bridge	=====
Basement, Pipework	=====
Structure	=====
Wells	=====
Provision land slide	=====
Cuttings	=====
Pool	=====
Rivers and streams	=====
Intermittent streams	=====
Reservoir, Tank	=====
Spring Point, Principal Point	=====
Spot Height	=====
Contours 50, 100, 150m	=====
Power Lines	=====

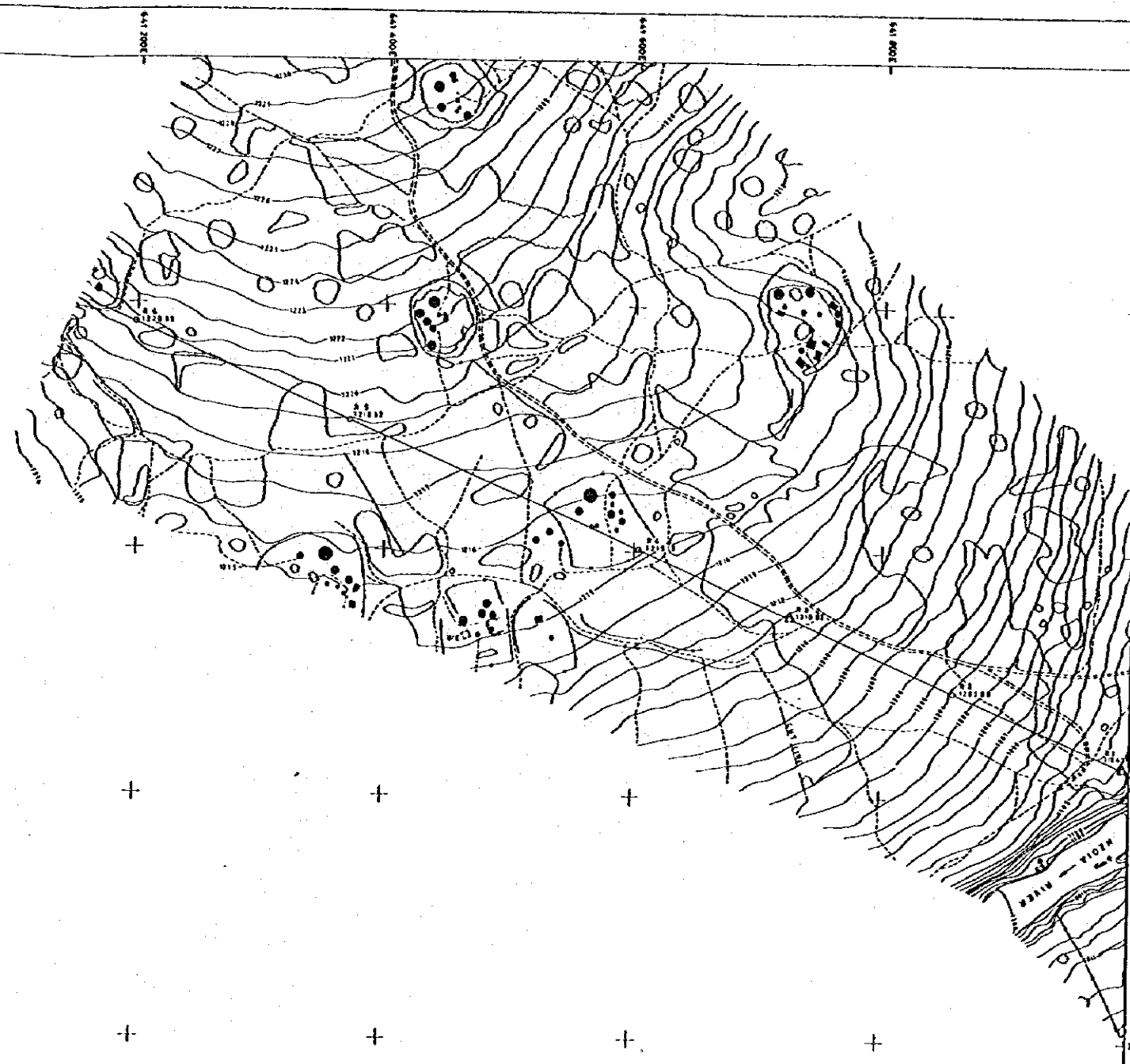
DAJUM INFORMATION

PLANS AND HEIGHTS BASED ON A LOCAL DATUM

MAP HISTORY

GROUND CONTROL AND PHOTOGRAMMETRIC COMPARISON FROM BEST AVAILABLE AERIAL PHOTOGRAPHIC INFORMATION BY PHOTOGRAM INTERNATIONAL INC. FOR JAPAN INTERNATIONAL COOPERATION AGENCY.

JAPAN INTERNATIONAL COOPERATION AGENCY



THE STUDY
ON
THE NATIONAL WATER MASTER PLAN

Scale 1:2000

GONGO DAM SITE



LEGEND

Trunk Road	=====
Minor Road	-----
Railway Line	—+—+—+—+—
Waterable Wash	- - - - -
Forest	
Haystack, Hut	■ ■ ■ ■
Place, Village	□
Cultivation	▭
Scarp	▲ ▲ ▲ ▲
Cutting, Embankment	▬ ▬ ▬ ▬
Bridge	—+—+—+—+—
Beach, Pier, Quay	—+—+—+—+—
Revetment	—+—+—+—+—
Rocks	⊖ ⊖ ⊖
Pre-fallen slide	
Cliffs	
Pond	○
River and stream	—+—+—+—+—
Tidal stream	—+—+—+—+—
Forest, trees	○ ○ ○ ○
Survey Point, Principal Point	△
Spot Height	1215.6
Contours 2.5 m. (8 ft.)	—+—+—+—+—
Form Line	—+—+—+—+—

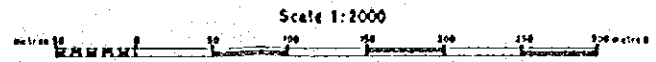
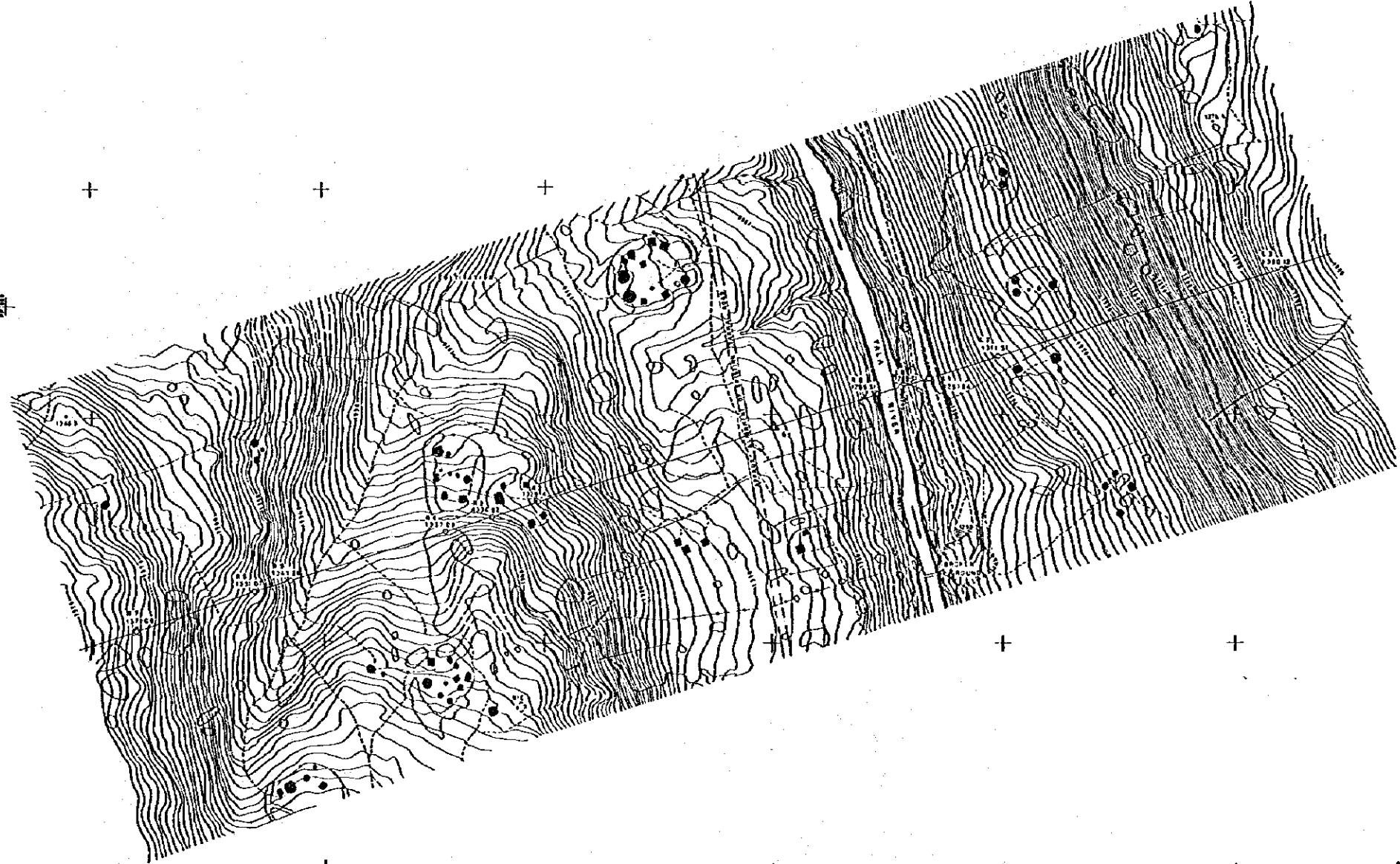
DATUM INFORMATION

PLAN AND HEIGHTS BASED ON A LOCAL DATUM

MAP HISTORY

GROUND CONTROL AND PHOTOGRAMMETRIC CORRELATION FROM EXISTING AERIAL PHOTOGRAPHY UNDERTAKEN BY PHOTOGRAM INTERNATIONAL INC FOR JAPAN INTERNATIONAL COOPERATION AGENCY.

JAPAN INTERNATIONAL COOPERATION AGENCY



THE STUDY
ON
THE NATIONAL WATER MASTER PLAN

Scale 1:2000

MUSHAGUMBO DAM SITE



LEGEND

Topographic Base	=====
Marsh Base	=====
Railway Line	=====
Motorable Track	-----
Pathway
Water, 10/10	
Field, 10/10	-----
Cultivation	=====
Quarry	=====
Cutting, Embankment	=====
Bridge	=====
Structure, Precast	=====
Structure	=====
Well	=====
Multiple land slide	=====
Cut	=====
Pond	=====
River and stream	=====
Indicative stream	=====
Forest, Tree	=====
Inverse Point, Principal Point	=====
Spot Height	=====
Contours of 10 Metres	=====
Flow Line	=====

DATUM INFORMATION

PLAN AND HEIGHTS BASED ON A LOCAL DATUM

MAP HISTORY

BOUND CONTROL AND PHOTOGRAMMETRIC COMPILATION FROM RAISING AERIAL PHOTOGRAPHY OBTAINED BY PHOTONAP INTERNATIONAL INC FOR JAPAN INTERNATIONAL COOPERATION AGENCY.

JAPAN INTERNATIONAL COOPERATION AGENCY



Scale 1:2000



THE STUDY
ON
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Scale 1:2000

NAMBA KODERO DAM SITE



LEGEND

Terrace Road	=====
Major Road	====
Minor Road	-----
Railway Line	—+—+—+—+—
Material Track	- - - - -
Powerline	—•—•—•—•—
House, Hut	□
Wind Mill	⊕
Cultivation	▭
Shrub	⊘
Cutting Embankment	
Bridge	—+—+—+—
Reservoir, Pond, Well	○
Well	⊙
Rock	⊖
Artificial Sand pile	
Cliff	⊖
Pond	⊖
River and Stream	—+—+—+—
Intermittent Stream	—+—+—+—
Forest, Park	⊖
Special Point, Principal Point	⊖
Spot Height	—1964
Contours 25m. Interval	—1964
Farm Lines	—1964

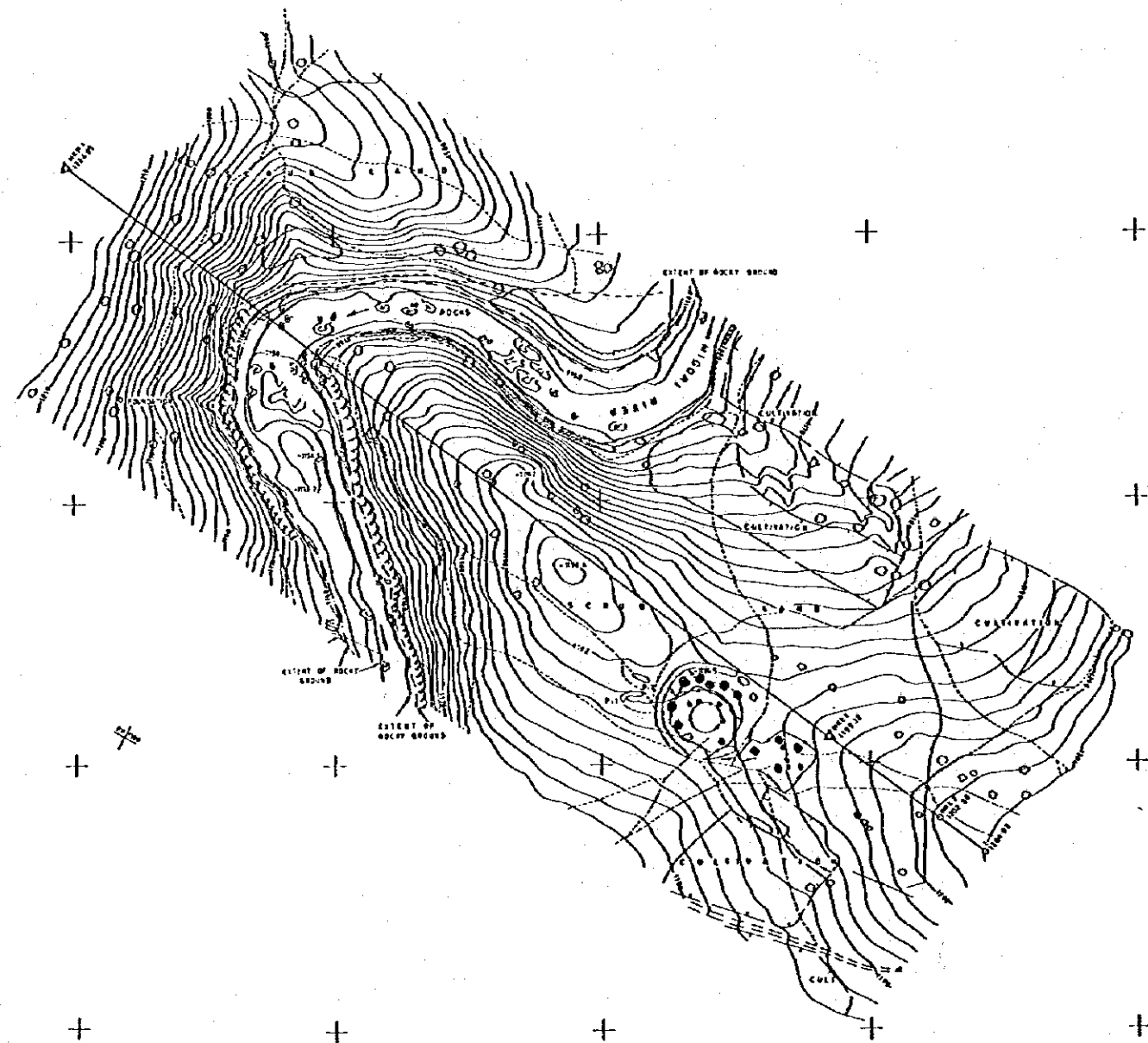
DATUM INFORMATION

PLAN AND HEIGHTS BASED ON A LOCAL DATUM

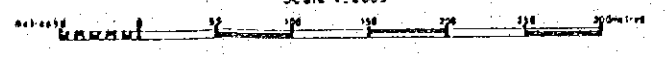
MAP HISTORY

GROUND CONTROL AND PHOTOGRAMMETRIC COMPLETION FROM EXISTING AERIAL PHOTOGRAPHY UNDERTAKEN BY PHOTONAV INTERNATIONAL INC FOR JAPAN INTERNATIONAL COOPERATION AGENCY.

JAPAN INTERNATIONAL COOPERATION AGENCY



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THE STUDY
ON
THE NATIONAL WATER MASTER PLAN

Scale 1:2000

NERIO A DAM SITE



LEGEND

Tarmac Road	=====
Wetland Area	-----
Railway Line	====+====
Motorable Track	-----
Pathway	-----
Boundary, Hole	=====
Fence, Hedge	-----
Cultivation	=====
Quarry	=====
Cutting, Embankment	=====
Bridge	=====
Barometer, Spherometer	=====
Reservoir	=====
Ditch	=====
Pond	=====
Stream and stream	=====
Gradient stream	=====
Forest, trees	=====
Traverse Point, Principal Point	=====
Spot Height	=====
Contour Interval Indication	=====
Flow Line	=====

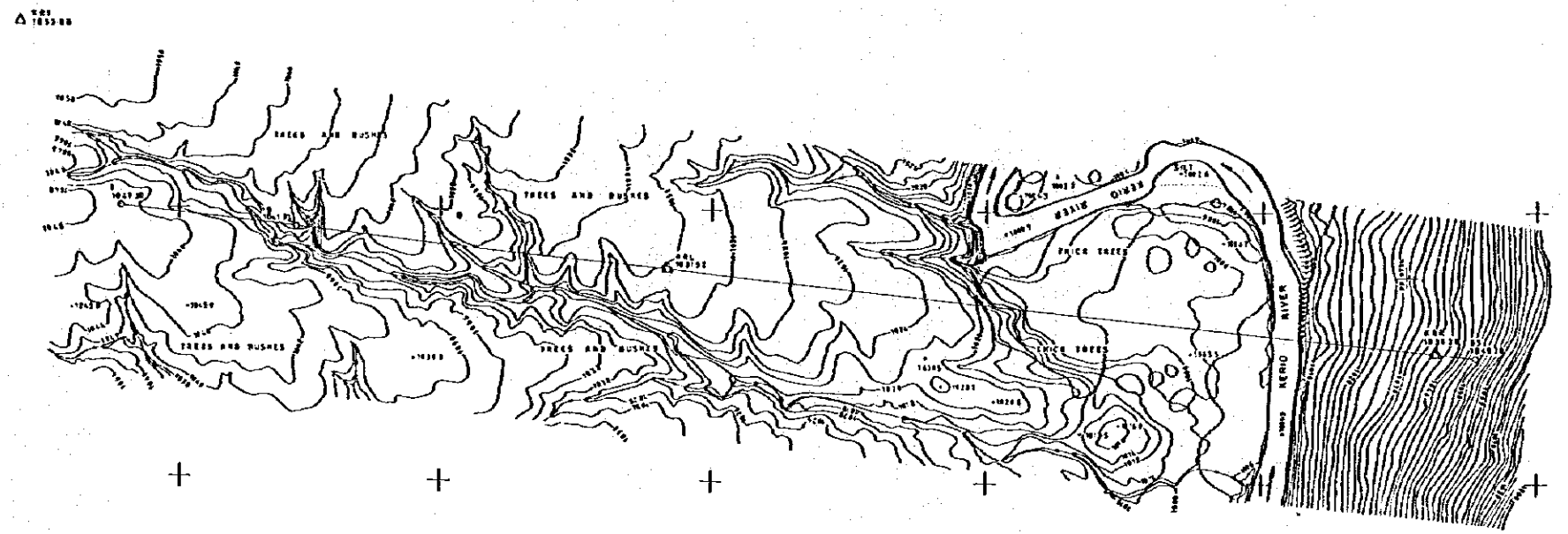
DATUM INFORMATION

PLAN AND HEIGHTS BASED ON A LOCAL DATUM

MAP HISTORY

BOUNDARY CONTROL AND PHOTOGRAMMETRIC COMPILED FROM EXISTING AERIAL PHOTOGRAPHY UNDERTAKEN BY PHOTOGRAM INTERNATIONAL INC FOR JAPAN INTERNATIONAL COOPERATION AGENCY.

JAPAN INTERNATIONAL COOPERATION AGENCY



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THE STUDY
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THE NATIONAL WATER MASTER PLAN

Scale 1:2000

MOLO DAM SITE



LEGEND

Trunk Road	
Minor Road	
Railway Line	
Motorable Track	
Footpath	
House, Hut	
Fence, Hedge	
Cultivation	
Quarry	
Cutting, Embankment	
Bridge	
Watercourse	
Revetment	
weir	
Gracile land slide	
Dike	
Pool	
Wells and Springs	
Subsided stream	
Forest, Trees	
Water Point, Principal Point	
Spot Height	
Contours 10 to 200 M	
Form Lines	

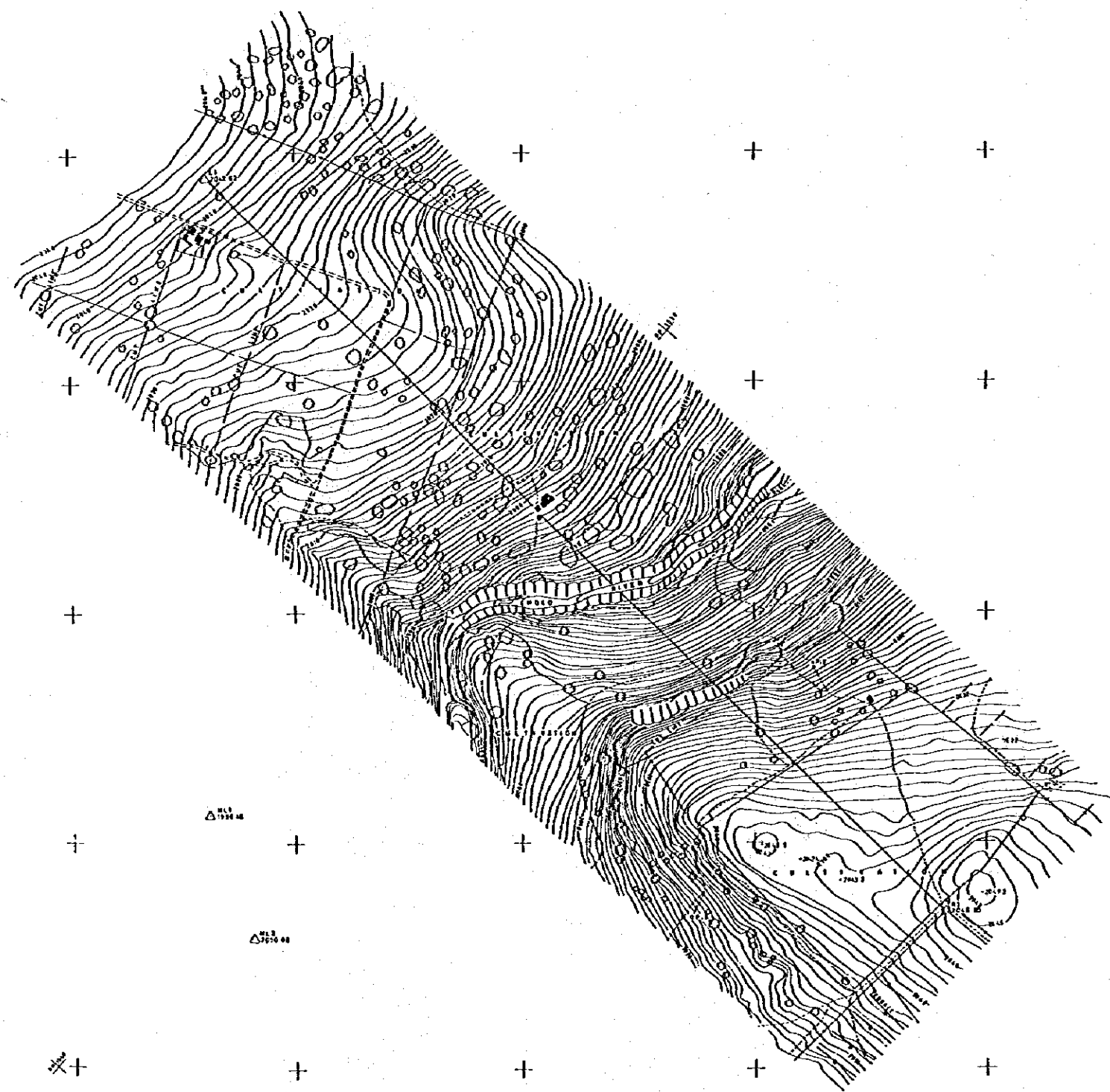
DATUM INFORMATION

PLAN AND HEIGHTS BASED ON A LOCAL DATUM

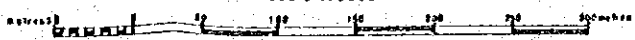
MAP HISTORY

AERIAL PHOTOGRAPHY (SEPT 1950) GROUND CONTROL AND PHOTOGRAMMETRIC COMPUTATION UNDERTAKEN BY PHOTOGRAM INTERNATIONAL INC FOR JAPAN INTERNATIONAL COOPERATION AGENCY.

JAPAN INTERNATIONAL COOPERATION AGENCY



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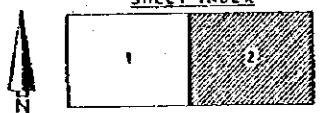


THE STUDY
ON
THE NATIONAL WATER MASTER PLAN

Scale 1:2000

YATTA DAM SITE

SHEET INDEX



LEGEND

Tarmac Road	=====
Murum Road	=====
Railway Line	=====
Motorable Track	-----
Footpath	-----
Hazard, Hole	
Fence, Hedge	-----
Cultivation	=====
Grass	=====
Cutting, Embankment	=====
Bridge	=====
Waterfall, Spillway	=====
Settlement	=====
Rocks	=====
Artificial Sand ridge	=====
Cliff	=====
Pond	=====
Ditch and Stream	=====
Intermittent Stream	=====
Forest, Bush	=====
Sandstone Dam, Damaged Dam	=====
Spot Height	=====
Contours by interpolation	=====
Boundaries	=====

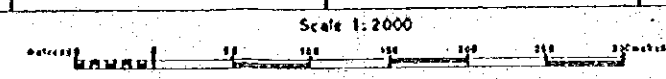
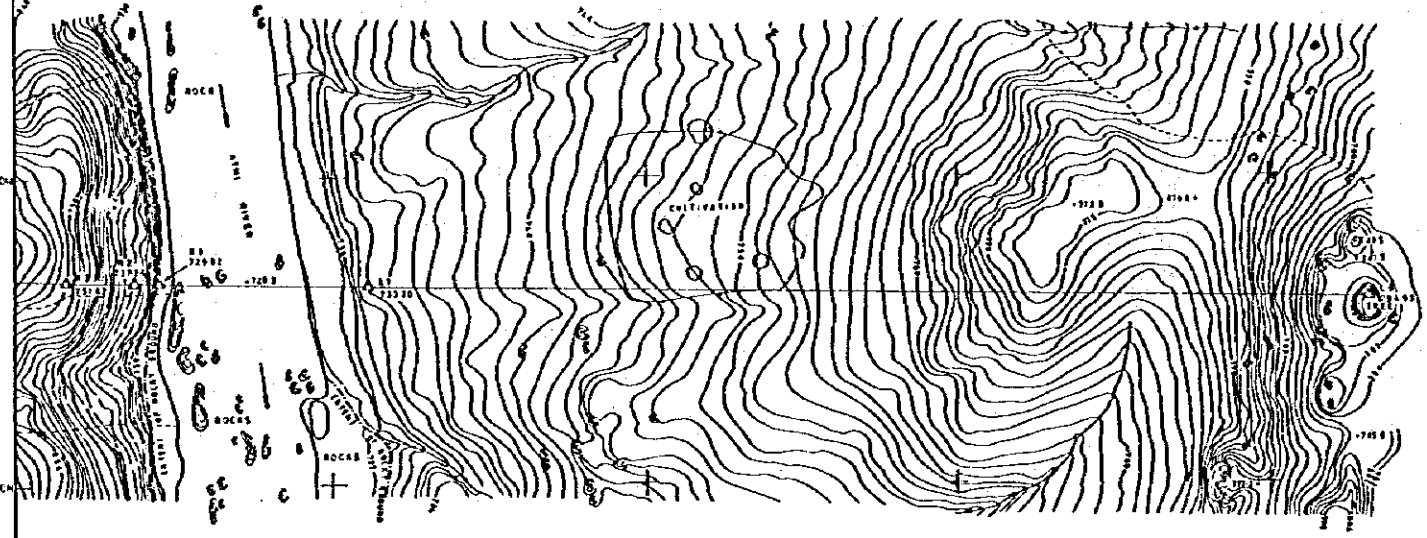
DATUM INFORMATION

PLAN AND HEIGHTS BASED ON A LOCAL DATUM

MAP HISTORY

GROUND CONTROL AND PHOTOGRAMMETRIC CORRECTION FROM EXISTING AERIAL PHOTOGRAPHY UNDERTAKEN BY PHOTOGRAM INTERNATIONAL INC FOR JAPAN INTERNATIONAL COOPERATION AGENCY

JAPAN INTERNATIONAL COOPERATION AGENCY



THE STUDY
ON
THE NATIONAL WATER MASTER PLAN

Scale 1: 2000

YAITA DAM SITE

SHEET INDEX



LEGEND

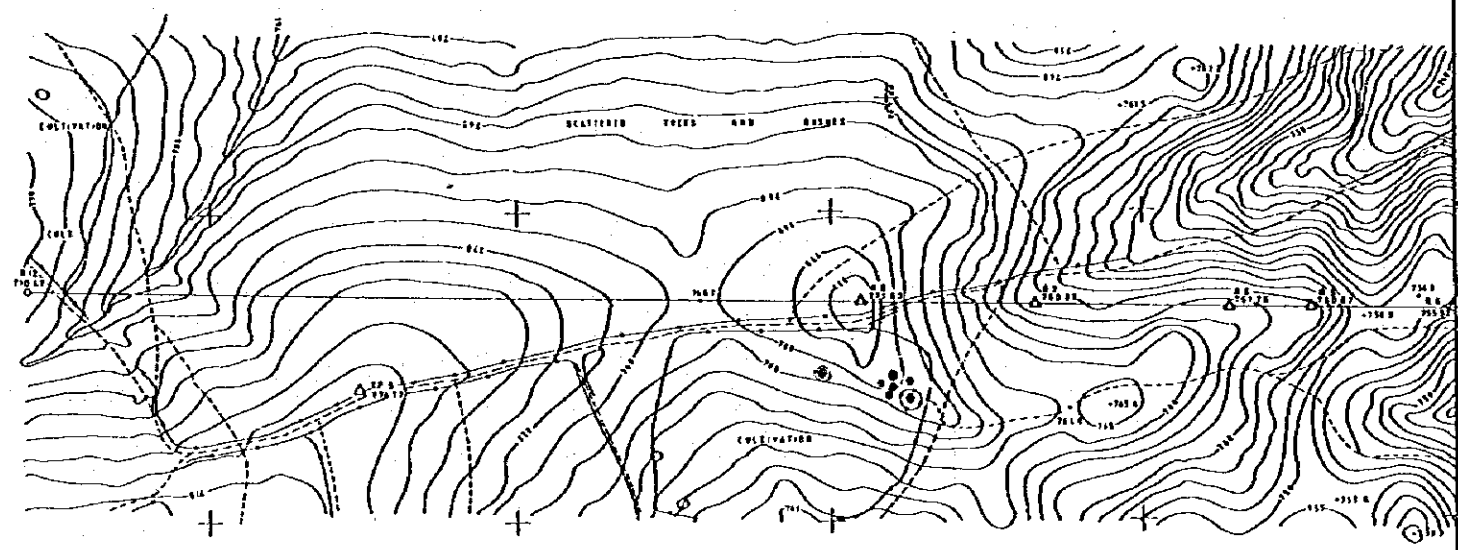
Turned Road	=====
Normal Road	=====
Railway Line	-----
Natural Water	-----
Canal	-----
Marsh, Wet	
Fence, Hedge	---+---
Cultivation	
Quarry	
Cutting, Embankment	
Bridge	====
Embankment, Spillway	
Settlement	
Rock	
Precipice and slide	
Cliff	
Pond	
Wells and Springs	
Intermittent streams	
Forest, Trees	
Shaded Palm, Cyclical Palm	
Spot Height	
Contours with spot height	
Form Lines	

DATUM INFORMATION

PLAN AND HEIGHTS BASED ON A LOCAL DATUM

MAP HISTORY

GROUND CONTROL AND PHOTOGRAMMETRIC COMPILED FROM BESTING AERIAL PHOTOGRAPHY UNDERTAKEN BY PHOTOGRAMMETRIC INTERNATIONAL INC FOR JAPAN INTERNATIONAL COOPERATION AGENCY.



THE STUDY
ON
THE NATIONAL WATER MASTER PLAN

Scale 1:2000

BARICHO DAM SITE



LEGEND

Thick Bush	
Mulm Area	
Railway Line	
Motorable Road	
Footpath	
House, Hut	
Fence, Hedge	
Cultivation	
Quarry	
Cutting, Embankment	
Bridge	
Drainage, Pipecutting	
Pavement	
Well	
Principal land slide	
Cleft	
Ford	
River and stream	
Intermittent stream	
Forest, tree	
Stream dam, Principal Point	
Spot Height	
Contours of 2m interval	
Farm lines	

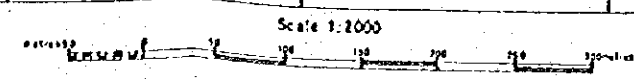
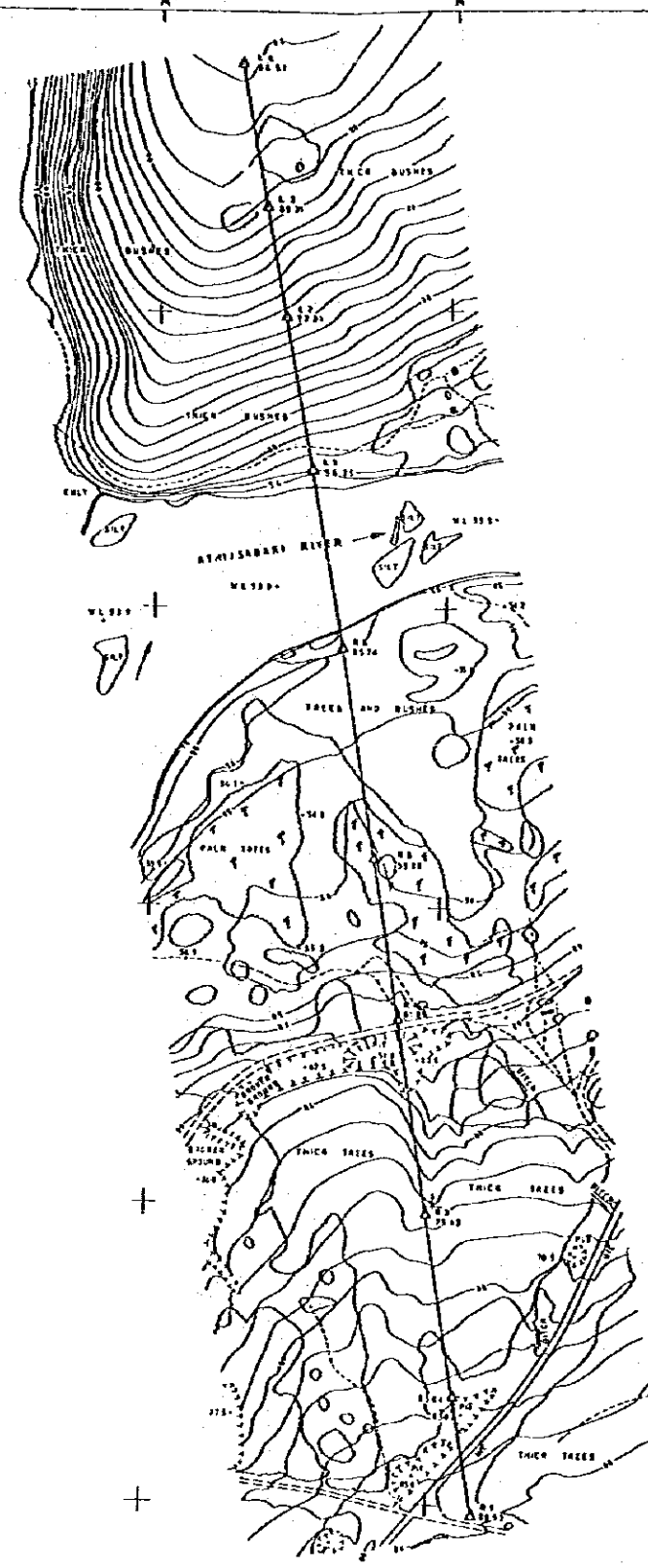
DATUM INFORMATION

PLAN AND HEIGHTS BASED ON A LOCAL DATUM

MAP HISTORY

GROUND CONTROL AND PHOTOGRAMMETRIC CORRELATION FROM EXISTING AERIAL PHOTOGRAPHY UNDERTAKEN BY PHOTOMAP INTERNATIONAL INC FOR JAPAN INTERNATIONAL COOPERATION AGENCY.

JAPAN INTERNATIONAL COOPERATION AGENCY



THE STUDY
ON
THE NATIONAL WATER MASTER PLAN

Scale 1:2000

RUMURUTI DAM SITE



LEGEND

Trunk Road	=====
Branch Road	=====
Railway Line	-----
Motorable Track	-----
Footpath	-----
Gravels, mps	■ ■ ■ ■
Fence, Hedge	-----
Cultivation	▭
Orchard	▭
Cutting, Embankment	▭
Bridge	▭
Enclosed, paddocks	▭
Reservoir	▭
Bank	▭
Shade to land slope	▭
Cliff	▭
Pond	▭
River and stream	▭
Intermittent stream	▭
Forest, trees	▭
Traverse Point, Picnic Point	▭
Spot height	▭
Contours 500m, Index 100	▭
Flow Lines	▭

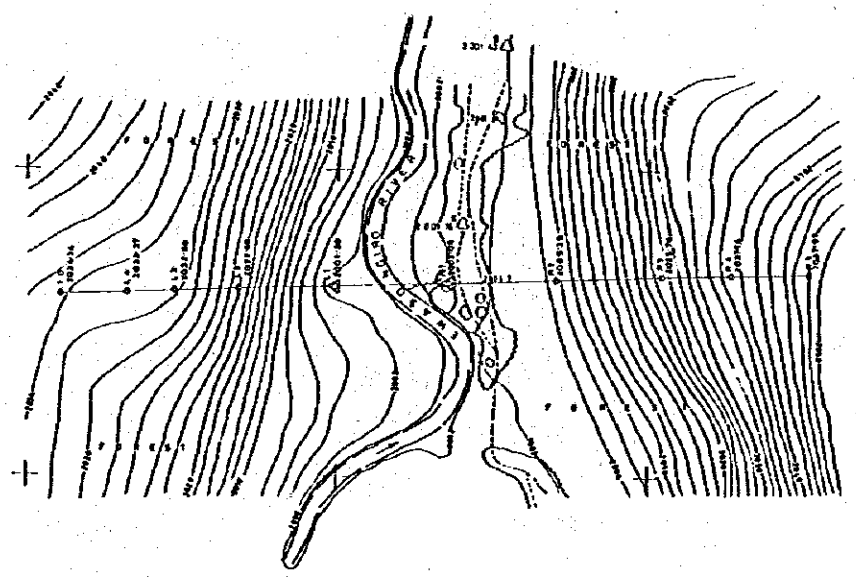
DATUM INFORMATION

PLAN AND HEIGHTS BASED ON A LOCAL DATUM

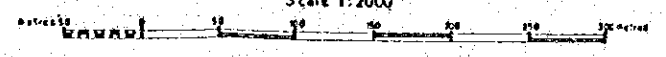
MAP HISTORY

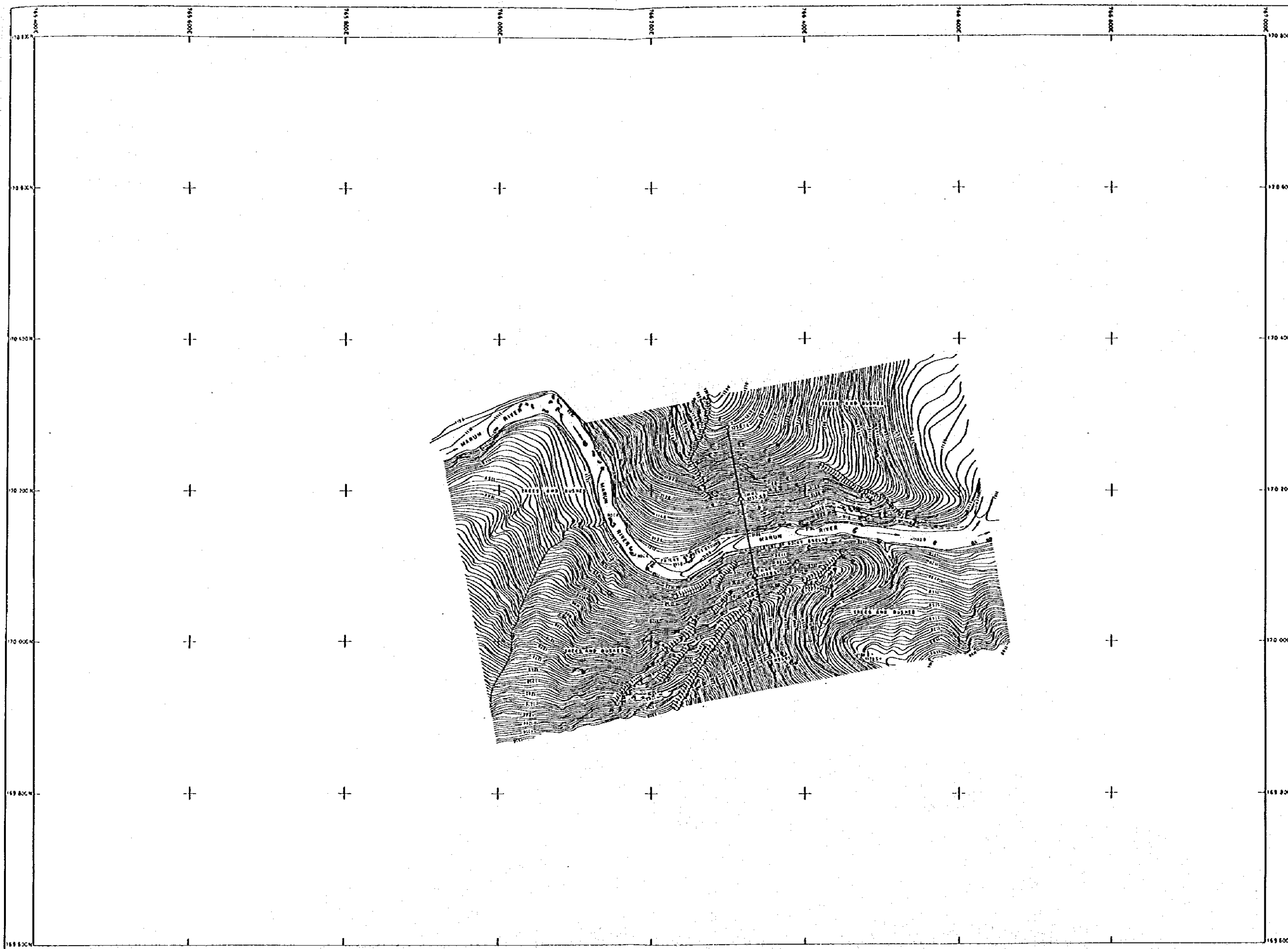
AERIAL PHOTOGRAPHS (SEPT 1958) GROUND CONTROL AND PHOTOGRAMMETRIC COMPILATION UNDERTAKEN BY PHOTOAIR INTERNATIONAL INC FOR JAPAN INTERNATIONAL COOPERATION AGENCY.

JAPAN INTERNATIONAL COOPERATION AGENCY



Scale 1:2000





THE STUDY
ON
THE NATIONAL WATER MASTER PLAN

Scale 1:2000

MORUN DAM SITE



LEGEND

Tarmac Road	=====
Murum Road	=====
Railway Line	=====
Motorable Track	-----
Footpath	-----
Fences, Walls	
Fence, Hedge	-----
Cultivation	=====
Quarry	=====
Cutting, Embankment	=====
Bridge	=====
Reservoir, Dam	=====
Reservoir	=====
Rocks	=====
Produce and other	=====
Cities	=====
Ford	=====
Arms and stores	=====
Indigenous houses	=====
Forest trees	=====
Tracing post, Principal Post	=====
Spot Height	=====
Contours (Elevation)	=====
Power Lines	=====

DATUM INFORMATION

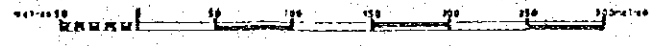
PLAN AND HEIGHTS BASED ON A LOCAL DATUM

MAP HISTORY

GROUND CONTROL AND PHOTOGRAMMETRIC COMPILATION FROM EXISTING AERIAL PHOTOGRAPHS UNDERTAKEN BY PHOTOGRAM INTERNATIONAL INC FOR JAPAN INTERNATIONAL COOPERATION AGENCY.

JAPAN INTERNATIONAL COOPERATION AGENCY

Scale 1:2000



THE STUDY
ON
THE NATIONAL WATER MASTER PLAN

Scale 1: 2000

KATIENO DAM SITE



LEGEND

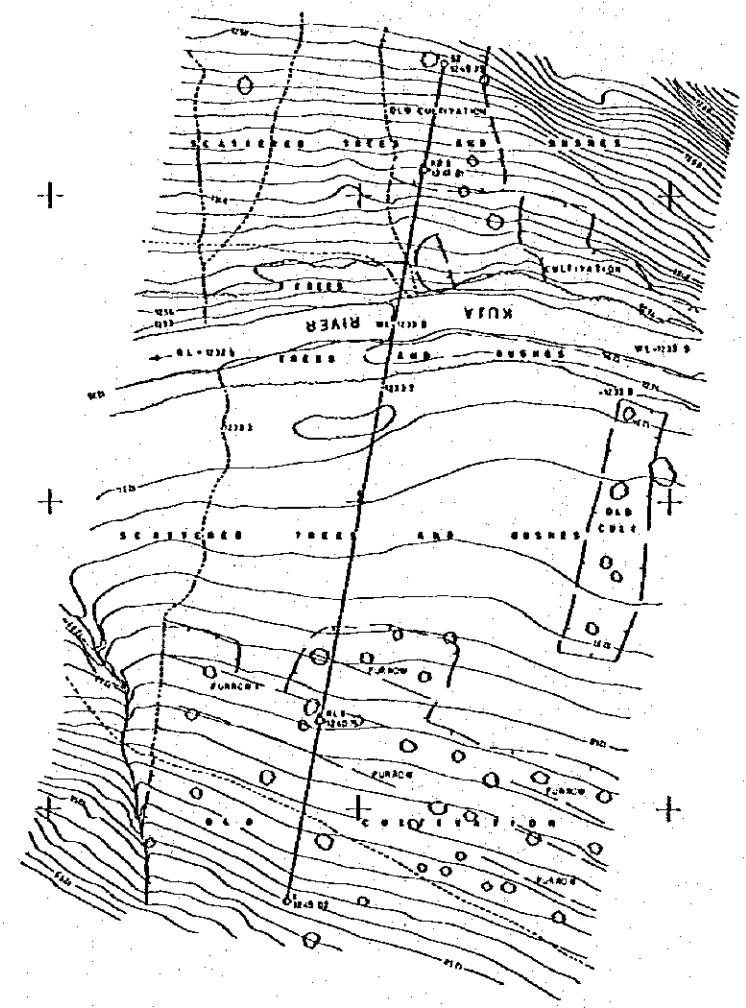
Township	=====
Municipal Bound	=====
Railway Line	=====
Motorable Track	-----
Highway	-----
Power, W.P.	=====
Water, Ridge	-----
Cultivation	=====
Barley	=====
Cotton, Embroidery	=====
Bridge	=====
Reservoir, Pond, etc.	=====
Boundary	=====
Rock	=====
Practice land ridge	=====
Culvert	=====
Pond	=====
River and stream	=====
Intermittent stream	=====
Forest, Trees	=====
Triangulation Point, Bench Mark Point	=====
Spot Height	=====
Contours 10 to 1000 ft.	=====
Farm Lines	=====

DATUM INFORMATION

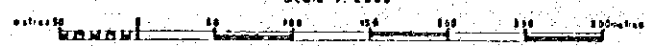
PLAN AND HEIGHTS BASED ON A LOCAL DATUM

MAP HISTORY

GROUND CONTROL AND PHOTOGRAMMETRIC CORRECTION FROM EXISTING AERIAL PHOTOGRAPHY OBTAINED BY PHOTONIC INTERNATIONAL INC FOR JAPAN INTERNATIONAL COOPERATION AGENCY.



Scale 1: 2000



JAPAN INTERNATIONAL COOPERATION AGENCY

